COUNTY OF RIVERSIDE
ENVIRONMENTAL ASSESSMENT FORM: INITIAL STUDY

Environmental Assessment (CEQ / EA) Number: CEQ200014
Project Case Type (s) and Number(s): PUP200001
Lead Agency Name: County of Riverside Planning Department
Address: 4080 Lemon Street 12th Floor, Riverside, CA 92501
Contact Person: Kathleen Mitchell
Telephone Number: (951) 955-6646
Applicant's Name: Rincon Consultants for Anza Electric Cooperative, Inc.
Applicant's Address: 11801 Pierce Street, Suite 200, Riverside California 92505

I. PROJECT INFORMATION

Project Description: The proposed project is in Riverside County, California, as shown in Figure 1. The project components would be located primarily within the rights-of-way of CA State Route 371 (SR 371) in the unincorporated community of Anza, California. The remainder of the project alignment would be located within existing Anza Electric Cooperative (AEC) utility easements that are generally north of SR 371 and along existing local roadways. In addition, the project proposes a new substation, the Bautista Substation, near the intersection of Bautista Road and SR 371.The project location and alignment are shown in Figure 2. The project site includes Assessor's Parcel Number (APN) 576-060-040 for the proposed Bautista Substation and 96 parcels for the proposed transmission line replacement alignment, as shown in Figure 2; and the project is within the United States Geological Survey (USGS) *Cahuilla Mountain and Anza Lake, California* 7.5-minute topographic quadrangles.

AEC's existing land-based utilities systems in the project area consist of wooden utility poles, approximately 35 to 45 feet in height with single- or three-phase crossarm mounted distribution lines attached. The existing poles currently carry electric power distribution lines. The project site is defined as the footprint of the existing electrical utilities system components and the approximately 3.1-mile-long corridor along SR 371 and local roadways for the new upgrades that will be installed on existing poles. The project area is defined as the 50-foot-wide access corridor along SR 371 and the 40-foot-wide access corridor along local roadways, the construction laydown areas, and the access roads that would be used for construction.

The project would replace the lines with approximately 3.1 miles of realigned 34.5-kilovolt transmission lines and would construct the Bautista Substation. The new transmission line would be strung on existing utilities poles and the proposed Bautista Substation would consist of electrical distribution facilities. The project alignment would not be located on Cahuilla Reservation or U.S. Forest Service lands. Construction of all project components would occur over approximately seven months. Construction activities would occur Monday through Friday within the County's allowed construction hours, which are 6:00 a.m. and 6:00 p.m., during the months of June through September and 7:00 a.m. and 6:00 p.m., during the months of October through May. No soil import or export would be required. Once completed, operational activities would generally be limited to maintenance and inspection. The project would operate continuously, seven days a week. The project would not require a dedicated operations staff. Maintenance and inspection activities are anticipated to occur once a year for each project component (i.e., once for the substation and once for the transmission line).

The new alignment starts east of the proposed Bautista Substation and proceeds along SR 371 for approximately 3.1 miles, ending at the intersection of Kirby Road and SR 371, where it would connect to an existing transmission line. Given the scope of the project, the project site has multiple zoning designations, including R-R-2.5, R-R-5 and R-R-20 (Rural Residential); C-1/CP (General Commercial); C-P-S (Scenic Highway Commercial); M-M (Manufacturing – Medium); and M-SC (Manufacturing – Service Commercial). The project site has multiple General Plan land use designations, including Rural Residential, Rural Community – Estate Density Residential, Rural Community – Very Low Density Residential, Agriculture, Light Industrial, and Commercial Retail.

A. Type of Project: Site Specific ☒; Countywide ☐; Community ☐; Policy ☐.

B. Total Project Area:

Residential Acres: 0	**Lots:** 0	**Units:** 0	**Projected No. of Residents:** 0
Commercial Acres: 0	**Lots:** 0	**Sq. Ft. of Bldg. Area:** 0	**Est. No. of Employees:** 0
Industrial Acres: 0	**Lots:** 0	**Sq. Ft. of Bldg. Area:** 0	**Est. No. of Employees:** 0
Other:			

C. Assessor's Parcel No(s): 576-060-040 (Substation) See attached for Transmission Lines

Street References: The project components would be located primarily within the rights-of-way of CA State Route 371 (SR 371). The remainder of the project alignment would be located within existing AEC utility easements that are generally north of SR 371 and along existing local roadways. The proposed Bautista Substation would be located on Bautista Road, just north of its intersection with SR 371.

D. Section, Township & Range Description or reference/attach a Legal Description: Section 20, Township 7 South, Range 3 East

E. Brief description of the existing environmental setting of the project site and its surroundings: The project is located within the unincorporated community of Anza, Riverside County, California. The Cahuilla Mountains are located to the northwest, Thomas Mountains are located to the north and northeast, and the Cahuilla Reservation is located to the south of the project area. As stated above, the project alignment would be located generally north of SR 371 and along existing local roadways. The project area is located in the Anza Valley Policy Area of eastern Riverside County, which is governed by the County of Riverside Board of Supervisors.

F. Other Public Agency Involvement and Required Permits: County of Riverside – Public Use Permit

II. APPLICABLE GENERAL PLAN AND ZONING REGULATIONS

A. General Plan Elements/Policies:

1. Land Use: The Land Use Element (2021a) of the County's General Plan includes a number of policies to address and guide the ultimate pattern of development. The following policies apply to the project:

- **Policy LU 2.1** Accommodate land use development in accordance with the patterns and distribution of use and density depicted on the General Plan Land Use Map (Figure LU-1) and the Area Plan Land Use Maps, in accordance with the following:
  - a. Provide a land use mix at the countywide and area plan levels based on projected need and supported by evaluation of impacts to the environment, economy, infrastructure, and services.
  - c. Provide for a broad range of land uses, intensities, and densities, including a range of residential, commercial, business, industry, open space, recreation, and public facilities uses.
- **Policy LU 5.2** Monitor the capacities of infrastructure and services in coordination with service providers, utilities, and outside agencies and jurisdictions to ensure that growth does not exceed acceptable levels of service.
- **Policy LU 5.4** Ensure that development and conservation land uses do not infringe upon existing essential public facilities and public utility corridors, which include county regional landfills, fee owned rights-of-way and permanent easements, whose true land use is that of public facilities. This policy will ensure that the public facilities designation governs over what otherwise may be inferred by the large-scale general plan maps.
- **Policy LU 7.2** Notwithstanding the Public Facilities designation, public facilities shall also be allowed in any other land use designation except for the Open Space-Conservation and Open Space-Conservation Habitat land use designations. For purposes of this policy, a public facility shall include all facilities operated by the federal government, the State of California, the County of Riverside, any special district governed by or operating within the County of Riverside or any city, and all facilities operated by any combination of these agencies.
- **Policy LU 8.1** Accommodate the development of a balance of land uses that maintain and enhance Riverside County's fiscal viability, economic diversity, and environmental integrity.
- **Policy LU 14.5** Require new or relocated electric or communication distribution lines, which would be visible from Designated and Eligible State and Country Scenic Highways, to be placed underground.
- **Policy LU 21.3** Ensure that development does not adversely impact the open space and rural character of the surrounding area.
- **Policy LU 31.1** Accommodate the development of public facilities in areas appropriately designated by the General Plan and area plan land use maps.
- **Policy LU 31.2** Protect major public facilities, such as landfill and solid waste processing sites and airports, from the encroachment of incompatible uses.

- **Policy LU 31.3** Require that new public facilities protect sensitive uses, such as schools and residences, from the impacts of noise, light, fumes, odors, vehicular traffic, parking, and operational hazards.
- **Policy LU 31.4** Require that adequate and available circulation facilities, water resources, and sewer facilities exist to meet the demands of the proposed land use.
- **Policy LU 31.5** Require that public facilities be designed to consider their surroundings and visually enhance, not degrade, the character of the surrounding area.
- **Policy LU 31.6** Ensure that development and conservation land uses do not infringe upon existing essential public facilities and public utility corridors, which include Riverside County regional landfills, fee owned rights-of-way and permanent easements, whose true land is that of Public Facilities. This policy will ensure that the public facilities designation governs over what otherwise may be inferred by the large-scale General Plan maps.
- **Policy LU 31.7** Due to the scale of General Plan and Area Plan maps and the size of the county, utility easements and linear rights-of-way that are narrow in width are not depicted on General Plan and Area Plan maps. These features need to be taken into consideration in the review of applications to develop land and proposals to preserve land for conservation.

2. Circulation: The Circulation Element (2020) of the County's General Plan identifies transportation routes, needs, and issues that impact the County's transportation system. The document includes a number of policies that coordinate the circulation system with the General Plan and area land use maps and provides direction and strategies on reaching Countywide transportation goals as they apply to the performance of the circulation system. The following policies apply to the project:

- **Policy C 1.4** Utilize existing infrastructure and utilities to maximum extent practicable and provide for the logical, timely, and economically efficient extension of infrastructure and services.
- **Policy C 3.17** Ensure dedications are made, where necessary, for additional rights-of-way or easements outside the road rights-of-way that are needed to establish slope stability, or drainage and related structures. These dedications shall be made by land dividers or developers to the responsible agency during the land division and land use review process.
- **Policy C 6.1** Provide dedicated and recorded public access to all parcels of land, except as provided for under the statutes of the State of California.
- **Policy C 25.1** Promote and encourage efficient provisions of utilities such as water, wastewater, and electricity that support Riverside County's Land Use Element at buildout.

3. Multipurpose Open Space: The County of Riverside General Plan Multipurpose Open Space (OS) Element (2015) contains county-wide guidance for the protection of parks and open space. The OS Element includes the following policies that apply to the project:

- **Policy OS 7.3** Encourage conservation of productive agricultural lands and preservation of prime agricultural lands.
- **Policy OS 7.5** Encourage the combination of agriculture with other compatible open space uses in order to provide an economic advantage to agriculture. Allow by right, in areas designated Agriculture, activities related to the production of food and fiber, and support uses incidental and secondary to the on-site agricultural operation.
- **Policy C 16.4** Require that all development proposals located along a planned trail or trails provide access to, dedicated trail easements or rights-of-way, and construct their fair share portion of the trails system. Evaluate the locations of existing and proposed trails within and adjacent to each development proposal and ensure that the appropriate easements are established to preserve planned alignments and trail heads.
- **Policy C 16.6** Examine the use of public access utility easements for trail linkages to the regional trails system and/or other open space areas, as feasible. These potential corridors include, but are not limited to, the rights-of-way for:
- **Policy OS 18.1** Preserve multi-species habitat resources in the County of Riverside through the enforcement of the provisions of applicable MSHCP's and through implementing related Riverside County policies
- **Policy OS 18.3** Prohibit the planting or introduction of invasive, non-native species to watercourses, their banks, riparian areas, or buffering setbacks.

4. **Safety:** The Safety Element (2021) of the County's General Plan includes a number of policies to address and reduce geological hazards, such as seismic hazards and slope and soil instability hazards. The following policies apply to the project:

   - **Policy S 1.1** Mitigate hazard impacts through adoption and strict enforcement of current building codes, which will be amended as necessary when local deficiencies are identified.
   - **Policy S 1.3** Continue to enforce penalties against grading without permits and ensure the restoration of degraded land. Continue to educate the public about the benefits of grading with permits and the penalties for grading without them. If the penalties are later determined to be ineffective, explore whether the levying of greater penalties would be more effective in deterring illegal grading and ensuring the proper restoration of damaged lands.
   - **Policy S 2.1** Minimize fault rupture hazards through enforcement of Alquist-Priolo Earthquake Fault Zoning Act provisions and the following policies:

     a. Require geologic studies or analyses for critical structures, lifelines, high-occupancy, schools, and high-risk structures, within 0.5 miles of all Quaternary to historic faults shown on the Earthquake Fault Studies Zones map. The County geologist shall review and make recommendations based on the results to reduce the potential risk.

   - **Policy S 2.2** Require geological and geotechnical investigations in areas with potential for earthquake-induced liquefaction, landslides, or settlement, for any building proposed for human occupancy and any structure whose damage would cause harm, except for accessory structures/buildings, as determined by County officials. Any studies or surveys should be prepared/completed by a state-licensed professional..
   - **Policy S 4.1** All development and construction within Fire Hazard Severity Zones shall be reviewed by the Riverside County Fire Department and Building and Safety Department for consistency with the following requirements before the issuance of any building permits:

     a. All proposed development and construction shall meet minimum state, county, and local standards and other legal requirements for fire safety, as defined in the Riverside County Building or Fire Codes, or by County zoning, or as dictated by the Building Official or the Transportation Land Management Agency, based on building type, design, occupancy, and use.

     b. In addition to the standards and guidelines of the California Building Code, California Fire Code, the Riverside County Code of Ordinances, Title 14 of the California Code of Regulations, and other appropriate fire safety provisions, developments shall incorporate additional standards for high-risk, high-occupancy, and dependent facilities where appropriate under the Riverside County Fire Code (Ordinance No. 787) Ordinance. These shall include assurance that structural and nonstructural architectural elements of the building will not impede emergency egress for fire safety staffing/personnel, equipment, and apparatus; nor hinder evacuation from fire, including potential blockage of stairways or fire doors.

     c. Proposed development and construction in Fire Hazard Severity Zones shall provide secondary public access, in accordance with Riverside County ordinances, where required. There shall be multiple points of ingress and egress that allow for emergency response vehicle access. Points of access shall also include visible street addresses and signs and sufficient water supplies, infrastructure for structural fire suppression, and other applicable local and state requirements.

     e. Proposed development and construction in Fire Hazard Severity Zones shall provide a defensible space or fuel modification zones to be located, designed, constructed, and maintained to provide adequate defensibility from wildfires.

     f. Prior to the approval of all parcel maps and tentative maps, the County shall require, as a condition of approval and as feasible and appropriate, the developer meet or exceed the State Responsibility Area Fire Safe Regulations and the Fire Hazard Reduction Around Buildings and Structures Regulations, particularly those regarding road standards for ingress, egress, and fire equipment access (see Gov. Code, Section 66474.02.)

   - **Policy S 4.5** Require proposed development in High or Very High Fire Hazard Severity Zones be located where fire and emergency services are available or will be constructed as part of the proposed development activities, to the extent such locations are available. These services should meet the minimum response times as established by the Riverside County Fire Department.
   - **Policy S 6.16** Promote strengthening of planned and existing utilities and lifelines, the retrofit and rehabilitation of existing weak structures, and the relocation of certain critical facilities.

5. **Noise:** The Riverside County General Plan Noise Element (2015) contains policies to protect sensitive land uses to noise impacts and incorporates land use compatibility standards for noise exposure. The following policies apply to the project:

   - **Policy 1.5** Prevent and mitigate the adverse impacts of excessive noise exposure on the residents, employees, visitors, and noise-sensitive uses of Riverside County.
   - **Policy 9.1** Enforce all noise sections of the State Motor Vehicle Code.
   - **Policy 13.1** Minimize the impacts of construction noise on adjacent uses within acceptable practices.
   - **Policy 13.2** Ensure that construction activities are regulated to establish house of operation in order to prevent and/or mitigate the generation of excessive or adverse noise impacts on surrounding areas
   - **Policy 13.4** Require that all construction equipment utilizes noise reduction features (e.g. mufflers and engine shrouds) that are no less effective than those originally installed by the manufacturer.

6. **Housing:** There are no policies in the Riverside County General Plan Housing Element (2017) that apply to the project.

7. **Air Quality:** The Riverside County General Plan Air Quality Element (2018) contains policies to protect sensitive land uses from air quality impacts. The following policies apply to the project:

   - **Policy AQ 2.2** Require site plan designs to protect people and land uses sensitive to air pollution through the use of barriers and/or distance from emissions sources when possible.
   - **AQ 2.3** Encourage the use of pollution control measures such as landscaping, vegetation and other materials, which trap particulate matter or control pollution.
   - **AQ 4.1** Require the use of all feasible building materials/methods which reduce emissions.
   - **AQ 4.5** Require stationary pollution sources to minimize the release of toxic pollutants through:
     a. Design features;
     b. Operating procedures;
     c. Preventive maintenance;
     d. Operator training; and
     e. Emergency response planning.
   - **AQ 4.6** Require stationary air pollution sources to comply with applicable air district rules and control measures. AQ 4.7 To the greatest extent possible, require every project to mitigate any of its anticipated emissions which exceed allowable emissions as established by the SCAQMD, MDAQMD, SCAB, the Environmental Protection Agency and the California Air Resources Board.
   - **AQ 4.9** Require compliance with SCAQMD Rules 403 and 403.1, and support appropriate future measures to reduce fugitive dust emanating from construction sites.
   - **AQ 17.1** Reduce particulate matter from agriculture, construction, demolition, debris hauling, street cleaning, utility maintenance, railroad rights-of-way, and off-road vehicles to the extent possible.
   - **AQ 20.11** Increase energy efficiency of the new developments through efficient use of utilities (water, electricity, natural gas) and infrastructure design. Also, increase energy efficiency through use of energy efficient mechanical systems and equipment.

8. **Healthy Communities:** There are no policies in the Riverside County General Plan Healthy Communities Element (2015) that apply to the project.

   a) **Environmental Justice Summary:** There are no policies in the Riverside County General Plan Environmental Justice Element that apply to the project.

B. General Plan Area Plan(s): Riverside Extended Mountain Area Plan (REMAP)

C. Foundation Component(s): Not Applicable

D. Land Use Designation(s): Rural Residential (RR), Rural Community – Estate Density Residential (RC-EDR), Rural Community – Very Low Density Residential (RC-VLDR), Agriculture (AG), Light Industrial (LI), and Commercial Retail (CR)

E. Overlay(s), if any: Anza Valley Policy Area

F. Policy Area(s), if any: None

G. Adjacent and Surrounding:

1. **General Plan Area Plan(s):** Riverside Extended Mountain Area Plan (REMAP)

2. **Foundation Component(s):** None

3. **Land Use Designation(s):** Rural Residential (RR), Rural Community – Estate Density Residential (RC-EDR), Rural Community – Very Low Density Residential (RC-VLDR), Very Low Density Residential (VLDR), Agriculture (AG), Light Industrial (LI), and Commercial Retail (CR)

4. **Overlay(s), if any:** Anza Valley Policy Area

5. **Policy Area(s), if any:** None

H. Adopted Specific Plan Information

1. **Name and Number of Specific Plan, if any:** None

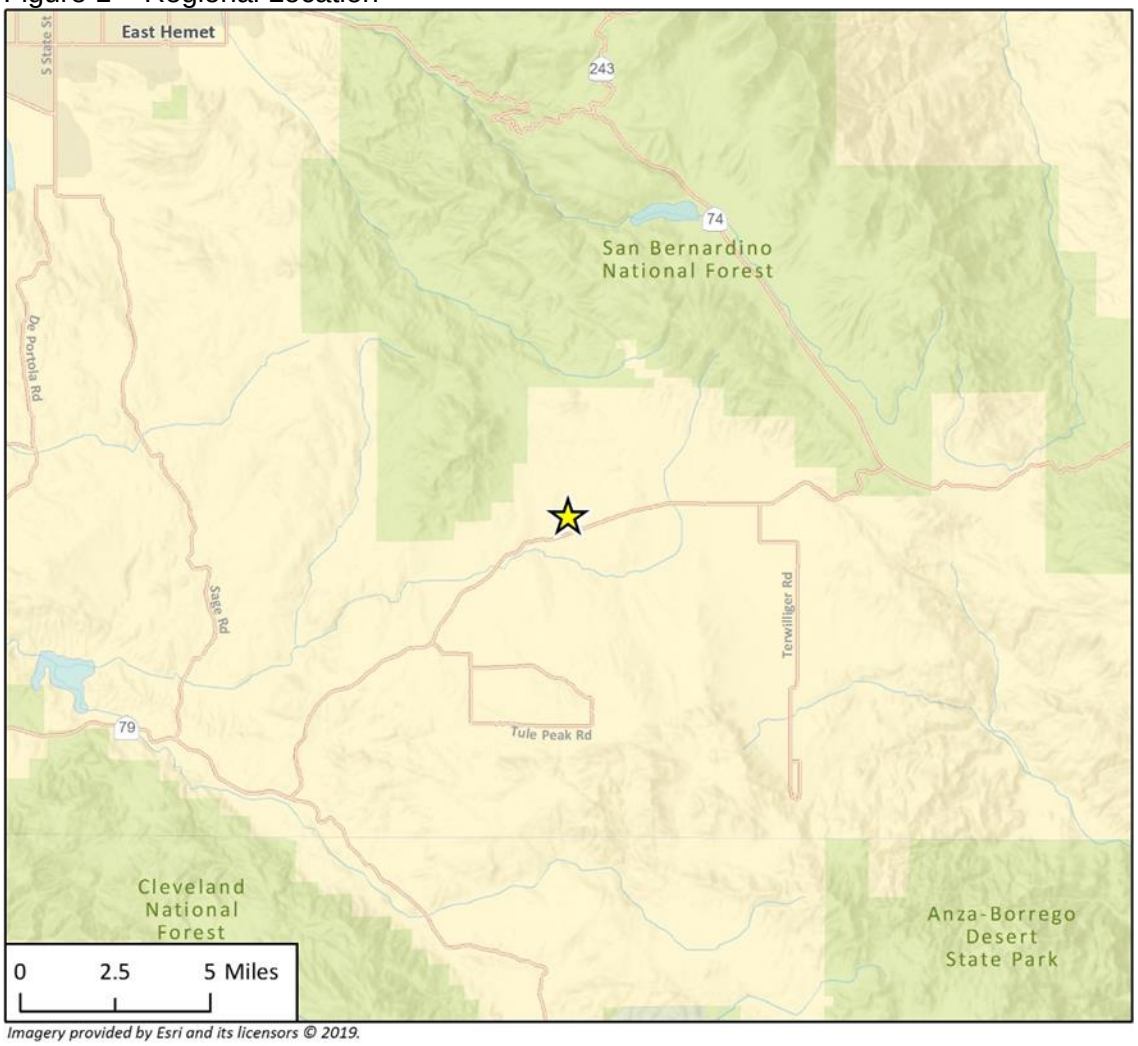
2. **Specific Plan Planning Area, and Policies, if any:** None

I. Existing Zoning: R-R-2 1/2, R-R-5, R-R-20, C-1/C-P, C-P-S, M-M, M-SC

J. Proposed Zoning, if any: None

K. Adjacent and Surrounding Zoning: R-R-1, R-R-2 1/2, R-R-5, R-R-20, R-A-5, C-1/C-P, C-P-S, A-1-10, A-1-2.5, A-2, M-SC, M-M

Figure 1 – Regional Location



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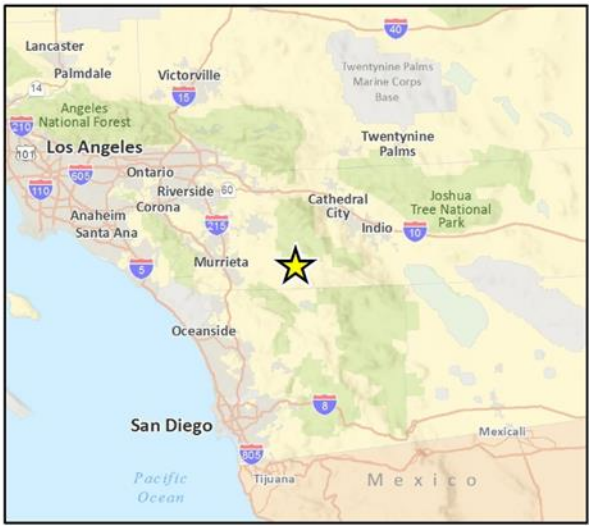
Project Location

N



CEQ / EA No.

Figure 2 – Project Location

CEQ / EA No.

III. ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below (x) would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" or "Less than Significant with Mitigation Incorporated" as indicated by the checklist on the following pages.

☐ Aesthetics	☒ Hazards & Hazardous Materials	☐ Recreation
☐ Agriculture & Forest Resources	☐ Hydrology / Water Quality	☐ Transportation
☐ Air Quality	☐ Land Use / Planning	☒ Tribal Cultural Resources
☒ Archaeological		
☒ Biological Resources	☐ Mineral Resources	☐ Utilities / Service Systems
☐ Cultural Resources	☐ Noise	☒ Wildfire
☐ Energy	☒ Paleontological Resources	☐ Mandatory Findings of Significance
☒ Geology / Soils	☐ Population / Housing	
☐ Greenhouse Gas Emissions	☐ Public Services	

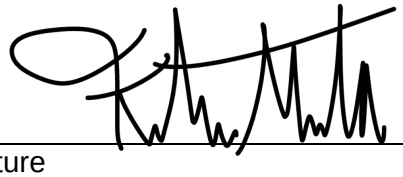
IV. DETERMINATION

On the basis of this initial evaluation:

A PREVIOUS ENVIRONMENTAL IMPACT REPORT/NEGATIVE DECLARATION WAS NOT PREPARED
☐ I find that the proposed project **COULD NOT** have a significant effect on the environment, and a **NEGATIVE DECLARATION** will be prepared.
☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project, described in this document, have been made or agreed to by the project proponent. **A MITIGATED NEGATIVE DECLARATION** will be prepared.
☐ I find that the proposed project MAY have a significant effect on the environment, and an **ENVIRONMENTAL IMPACT REPORT** is required.

A PREVIOUS ENVIRONMENTAL IMPACT REPORT/NEGATIVE DECLARATION WAS PREPARED
☐ I find that although the proposed project could have a significant effect on the environment, **NO NEW ENVIRONMENTAL DOCUMENTATION IS REQUIRED** because (a) all potentially significant effects of the proposed project have been adequately analyzed in an earlier EIR or Negative Declaration pursuant to applicable legal standards, (b) all potentially significant effects of the proposed project have been avoided or mitigated pursuant to that earlier EIR or Negative Declaration, (c) the proposed project will not result in any new significant environmental effects not identified in the earlier EIR or Negative Declaration, (d) the proposed project will not substantially increase the severity of the environmental effects identified in the earlier EIR or Negative Declaration, (e) no considerably different mitigation measures have been identified and (f) no mitigation measures found infeasible have become feasible.
☐ I find that although all potentially significant effects have been adequately analyzed in an earlier EIR or Negative Declaration pursuant to applicable legal standards, some changes or additions are necessary but none of the conditions described in California Code of Regulations, Section 15162 exist. An **ADDENDUM** to a previously certified EIR or Negative Declaration has been prepared and will be considered by the approving body or bodies.
☐ I find that at least one of the conditions described in California Code of Regulations, Section 15162 exist, but I further find that only minor additions or changes are necessary to make the previous EIR adequately apply to the project in the changed situation; therefore a **SUPPLEMENT TO THE ENVIRONMENTAL IMPACT REPORT** is required that need only contain the information necessary to make the previous EIR adequate for the project as revised.

☐ I find that at least one of the following conditions described in California Code of Regulations, Section 15162, exist and **a SUBSEQUENT ENVIRONMENTAL IMPACT REPORT** is required: (1) Substantial changes are proposed in the project which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; (2) Substantial changes have occurred with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or (3) New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete or the negative declaration was adopted, shows any the following:(A) The project will have one or more significant effects not discussed in the previous EIR or negative declaration;(B) Significant effects previously examined will be substantially more severe than shown in the previous EIR or negative declaration;(C) Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measures or alternatives; or,(D) Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR or negative declaration would substantially reduce one or more significant effects of the project on the environment, but the project proponents decline to adopt the mitigation measures or alternatives.



Signature

5/17/23

Date

Kathleen Mitchell

Printed Name

For:
John Hildebrand *Planning Director*

V. ENVIRONMENTAL ISSUES ASSESSMENT

In accordance with the California Environmental Quality Act (CEQA) (Public Resources Code Section 21000-21178.1), this Initial Study has been prepared to analyze the proposed project to determine any potential significant impacts upon the environment that would result from construction and implementation of the project. In accordance with California Code of Regulations, Section 15063, this Initial Study is a preliminary analysis prepared by the Lead Agency, the County of Riverside, in consultation with other jurisdictional agencies, to determine whether a Negative Declaration, Mitigated Negative Declaration, or an Environmental Impact Report is required for the proposed project. The purpose of this Initial Study is to inform the decision-makers, affected agencies, and the public of potential environmental impacts associated with the implementation of the proposed project.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
AESTHETICS Would the project:				
1. Scenic Resources a) Have a substantial effect upon a scenic highway corridor within which it is located?	☐	☐	☐	☒
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings and unique or landmark features; obstruct any prominent scenic vista or view open to the public; or result in the creation of an aesthetically offensive site open to public view?	☐	☐	☒	☐
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage points.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	☒	☐

Source(s): Riverside County General Plan Figure C-8 "Scenic Highways", Riverside Extended Mountain Area Plan (REMAP)

Findings of Fact:

a) No Impact: The project is located along State Route (SR) 371 within the central portion of the Riverside Extended Mountain Area Plan (REMAP). According to Figure C-8, "Scenic Highways" of the Riverside County General Plan Circulation Element (2020), SR 371 is not eligible for nor designated as a State or County Scenic Highway. The closest designated State Scenic Highway is SR 74, which is located approximately 3.3 miles east of the easternmost extent of the project alignment and proposed Bautista Substation. The project site is not visible from SR 74, as potential views are blocked by the San Jacinto Mountains and intervening structures. Therefore, the project would have no impact upon scenic highway corridors.

b) Less than Significant Impact: The project entails replacement of electrical transmission lines on existing, wooden electric utility poles and the construction of a new electrical substation near the intersection of Bautista Road and Cave Rock Road. Impacts to scenic resources would be minimal for the proposed replacement since the project alignment is located on existing roadways and utilities corridors currently in use for similar purposes and the electrical transmission lines would be strung along existing utility poles. The proposed Bautista Substation would be located in a rural area, with nearby land uses primarily consisting of undeveloped land,

scattered residences, a taco shop, and two churches. Views from the project site include distant, background views of the San Jacinto Mountains to the east and Iron Spring Mountain to the south. The proposed Bautista Substation would not substantially block these distant, background views of mountains from the project area. These views would still be available from SR 371 and the existing residences and businesses in the vicinity of the project site. Therefore, the project would not damage scenic resources, including trees, rock outcroppings or unique landmark features, or obstruct a prominent scenic vista or view open to the public. Project impacts would be less than significant.

c) Less than Significant Impact: The project is located in a rural area of Riverside County. Public viewpoints in the vicinity of the project site are primarily from nearby public rights-of-way, such as Bautista Road, Cave Rock Road, and SR 371. As discussed above in response 'b,' the proposed project would be located in existing roadways and utilities corridors currently in use for similar purposes, and new electricity transmission lines would be placed on existing utility poles; therefore, the proposed project would not change the existing visual character of the area. The proposed Bautista Substation would be located near the intersection of Bautista Road and Cave Rock Road and would include a 50-foot vegetation buffer around the facility in order to minimize visual impacts. Land uses immediately surrounding the proposed Bautista Substation site include undeveloped land to the north, undeveloped land and a single-family home to the east, a taco shop and single-family residence to the south, and Bautista Road and undeveloped land to the west. While the proposed Bautista Substation would present a visual change on the site and vicinity given that the site is currently undeveloped, the proposed use would be visually consistent with other uses along SR 371 in the vicinity, which include manufacturing and agricultural facilities. As mentioned above in response 'b,' the proposed Bautista Substation would not interfere with distant, background views of the San Jacinto Mountains from public viewpoints. Therefore, project impacts would be less than significant.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
2. Mt. Palomar Observatory a) Interfere with the nighttime use of the Mt. Palomar Observatory, as protected through Riverside County Ordinance No. 655?	☐	☐	☒	☐

Source(s): GIS database, Ord. No. 655 (Regulating Light Pollution)

Findings of Fact:

a) Less than Significant Impact: The project site is located approximately 16 miles northeast of the Mt. Palomar Observatory. The proposed project would be mounted on existing utility poles and would not require installation of new lighting that could interfere with nighttime use of the Mt. Palomar Observatory. The proposed Bautista Substation is located approximately 16.5 miles northeast of the Mt. Palomar Observatory, within the Zone B classification pursuant to Riverside County Ordinance No. 655. Ordinance No. 655 applies to outdoor lighting. Sites within Zone B are required to use low-pressure sodium lights not exceeding 4,050 lumens and lights must be fully shielded. Additionally, Class I and III lighting within Zone B are required to be turned off

after 11:00 PM, whereas Class II lighting is permitted for use at all times. New outdoor lighting associated with the proposed Bautista Substation would be for operational safety and security purposes and would therefore be considered Class II lighting pursuant to Ordinance No. 655. All new lighting associated with the project would conform with the Class II standards for walkway and outdoor security lighting located in Zone B pursuant to Riverside County Ordinance No. 655. With conformance with the lighting standards, project impacts to the nighttime use of the Mt. Palomar Observatory would be less than significant.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
3. Other Lighting Issues a) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐
b) Expose residential property to unacceptable light levels?	☐	☐	☒	☐

Source(s): On-site Inspection, Project Application Description

Findings of Fact:

a) Less than Significant Impact: New lighting associated with the project would primarily be used for operational safety and security of the proposed Bautista Substation. While the proposed Bautista Substation would incrementally increase lighting levels in the area, there are existing sources of light in the vicinity including roadway lighting and lighting associated with the adjacent business and single-family homes. As discussed above in Section 2 (Mt. Palomar Observatory), project lighting would conform with the standards established in Riverside County Ordinance No. 655, as well as those specified in the Riverside County Municipal Code (RCMC) Chapter 8.80, Outdoor Lighting. Lighting shall be constructed in a manner that prohibits excessive glare and light spillover by utilizing shields or hoods that direct the light in a downward manner. Additionally, a 50-foot vegetation buffer would be maintained around the perimeter of the Bautista Substation site, which would help minimize light intrusion on adjacent properties. Therefore, project compliance with the RCMC and Ordinance No. 655 would minimize potential impacts of new lighting associated with the project, and impacts would be less than significant.

b) Less than Significant Impact: The closest residential structure to the proposed Bautista Substation is located approximately 90 feet south. The next closest residence is separated by undeveloped land and is approximately 490 feet east of the proposed Bautista Substation site. The nearby residential properties would be shielded by a 50-foot vegetation buffer area on the substation site. As discussed above in response ‘a,’ project lighting would comply with all applicable RCMC requirements and would be constructed in a manner that prohibits excessive glare and light spillover by utilizing shields or hoods that direct the light in a downward manner away from the direction of existing residents. Therefore, project lighting would have less than significant impacts to residential properties.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
AGRICULTURE & FOREST RESOURCES Would the project:				
4. Agriculture a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b) Conflict with existing agricultural zoning, agricultural use or with land subject to a Williamson Act contract or land within a Riverside County Agricultural Preserve?	☐	☐	☐	☒
c) Cause development of non-agricultural uses within 300 feet of agriculturally zoned property (Ordinance No. 625 "Right-to-Farm")?	☐	☐	☐	☒
d) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?	☐	☐	☐	☒

Source(s): Riverside County General Plan Figure OS-2 "Agricultural Resources," California Department of Conservation Farmland Mapping and Monitoring Program (FMMP), Riverside County Map My County Parcel Report

Findings of Fact:

a) No Impact: One portion of the proposed transmission line replacement alignment is adjacent to parcels designated as agriculture - the east end of the project alignment along SR 371 between McDonald Lane and Kirby Road. The east end of the project site is adjacent to areas designated as Prime Farmland (California Department of Conservation 2017). As seen on these maps and maps within the County's General Plan, there are lands designated as Farmland of Local Importance and Unique Farmland along the project alignment. However, the project site is located along existing roadways and utility corridors and does not entail converting any land to non-agricultural uses. Therefore, the project would have no impact on important farmlands.

b) No Impact: As stated above, certain portions of the project alignment are adjacent to Prime Farmland, Farmland of Local Importance, and Unique Farmland. The east end of the project alignment along SR 371 between McDonald Land and Kirby Road is located adjacent to a Riverside County Agricultural Preserve. The lands adjacent to the project alignment and the proposed Bautista Substation site are subject to the Williamson Act. Furthermore, the project site is located along existing roadways and utility corridors and does not entail converting any land to non-agricultural uses. Therefore, the project would not conflict with existing agricultural zoning or agricultural use, and the project would have no impact.

c) No Impact: Portions of the project alignment (as identified above in discussion 'a') are located within 300 feet of agriculturally zoned properties. However, the project site is located along existing roadways and utility corridors, the proposed Bautista Substation site is zoned for commercial uses (non-agricultural), and the project does not entail converting any land to non-agricultural uses. All project activities (construction and staging, and operation) would occur in areas currently in use for the same operational uses (electrical utility conveyance, and infrastructure maintenance). The project would not entail development of any agricultural land for new non-agricultural uses. Therefore, the project would have no impact on the development of agriculturally zoned properties.

d) No Impact: As stated above in discussions 'a' through 'c,' the project site is located along existing roadways and utilities corridors, the project would not entail development of any agricultural land for new non-agricultural uses, and the project does not involve other changes in the existing environment which, due to their location or nature, would result in conversion of Farmland, to non-agricultural use. Therefore, the project would have no impact.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
5. Forest	☐	☐	☐	☒
a) 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 Govt. Code section 51104(g))?				
b) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of forest land to non-forest use?	☐	☐	☐	☒

Source(s): Riverside County General Plan Figure OS-3a "Forestry Resources Western Riverside County Parks, Forests, and Recreation Areas," Figure OS-3b "Forestry Resources Eastern Riverside County Parks, Forests, and Recreation Areas," Riverside County Map My County, Project Application Materials

Findings of Fact:

a) through c) No Impact: The project site is not located in areas classified as forest land, according to Riverside County General Plan figures nor as shown on the County's Map My County (GIS viewer; 2021b). The project would not result in the loss or conversion of forest land because the project alignment and proposed Bautista Substation site are located within an existing utility corridor and would utilize existing infrastructure. Therefore, project activities (construction, staging, operation) would be limited to previously disturbed areas. The project does not entail the removal of trees, nor the conversion or loss of forest land due to non-forest use. Therefore, the project would have no impact on existing forest land zoning nor result in the loss or conversion of forest land.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
AIR QUALITY Would the project:				
6. Air Quality Impacts a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b) 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?	☐	☐	☒	☐
c) Expose sensitive receptors, which are located within one (1) mile of the project site, to substantial pollutant concentrations?	☐	☐	☒	☐
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☐	☒

Source(s): Air Quality and Greenhouse Gas Emissions Study (Appendix A), SCAQMD 2016 AQMP, SCAQMD *Final Localized Significance Threshold Methodology* (2008), SCAG 2020 RTP/SCS

Findings of Fact:

a) Less Than Significant Impact: A project may be inconsistent with the South Coast Air Quality Management District's (SCAQMD's) Air Quality Management Plan (AQMP) if it would generate population, housing, or employment growth exceeding forecasts used in the development of the AQMP. With regard to air quality planning, the Southern California Association of Governments (SCAG) has prepared the Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), a long-range transportation plan that uses growth forecasts to project trends for regional population, housing and employment growth to identify regional transportation strategies to address mobility needs. These growth forecasts form the basis for the land use and transportation control portions of the 2016 AQMP.[1] The project would not result in new long-term employees and would not increase housing. Therefore, the project would not result in an exceedance of the population and employment projections uses in the 2016 AQMP.

   In addition, the AQMP provides strategies and measures to reach attainment with the thresholds for 8-hour and 1-hour ozone and $PM_{2.5}$. As shown in Table 1 and Table 2 below under response 'b,' the project would not generate criteria pollutant emissions that would exceed SCAQMD thresholds for ozone precursors (volatile organic compounds [VOC] and nitrogen oxides[NO_X]) and particulate matter measuring 2.5 microns or less in diameter ($PM_{2.5}$). Therefore, the project would be consistent with the AQMP and would have a less than significant impact.

b) Less Than Significant Impact: Pursuant to CEQA Guidelines Section 15064(h)(3), the SCAQMD's approach for assessing cumulative impacts is based on the AQMP forecasts of attainment of ambient air quality standards in accordance with the requirements of the federal and state Clean Air Acts. If the project's mass regional emissions do not exceed the applicable SCAQMD, then the project's criteria pollutant emissions would not be cumulatively considerable.

[1] On September 3, 2020, SCAG's Regional Council formally adopted the 2020-2045 RTP/SCS (titled Connect SoCal). However, the 2016 AQMP was adopted prior to this date and relies on the demographic and growth forecasts of the 2016-2040 RTP/SCS; therefore, these forecasts are utilized in the analysis of the project's consistency with the AQMP.

Construction. Table 1 summarizes the estimated maximum daily emissions of criteria pollutants associated with project construction. As shown below, criteria pollutant emissions would not exceed SCAQMD regional thresholds or LSTs. Because the project would not exceed SCAQMD's regional construction thresholds or LSTs, project construction would not result in a cumulatively considerable net increase of a criteria pollutant and impacts would be less than significant.

Table 1 Project Construction Emissions

	Maximum Emissions (lbs/day)					
	ROG	**NO_x**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
Construction Activities[1, 2]	3.3	31.2	26.5	<0.1	1.4	1.2
SCAQMD Regional Thresholds	75	100	550	150	150	55
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**
Maximum On-site Emissions[3]	3.3	31.2	26.5	<0.1	1.4	1.2
SCAQMD Localized Significance Thresholds (LSTs)	N/A	162	750	N/A	4	3
Threshold Exceeded?	**N/A**	**No**	**No**	**N/A**	**No**	**No**

[1] The modeling assumes project construction would commence as early as 2022, which is conservative because commencing construction at a later date would result in lower emissions than those estimated herein due to the fact that construction equipment and vehicles become more efficient and generate less pollutant emissions over time as more stringent federal and state regulations phase in.

[2] Estimated construction emissions were not adjusted to account for the effects of the federal Safer Affordable Fuel-Efficient Vehicles Rule because this rule only affects passenger car and light-duty truck emissions. These vehicle types would only be utilized during project construction for worker commutes, which comprise a small fraction of the project's construction emissions. Therefore, the federal Safer Affordable Fuel-Efficient Vehicles Rule would have a *de minimis* impact on the project's construction emissions and would not have the potential to cause total construction emissions to exceed the SCAQMD regional thresholds.

[3] Maximum on-site emissions are conservatively assumed to be equivalent to total maximum daily emissions. In actuality, on-site emissions would be lower because they only include those emissions that would occur from on-site sources on the project site, such as heavy construction equipment, and exclude off-site emissions from sources, such as construction worker vehicle trips and material delivery trips.

Notes: See Appendix A for modeling results. Some numbers may not add up precisely to the numbers indicated due to rounding.

Operational. Table 2 summarizes the project's operational emissions, which are limited to vehicles associated with inspection and maintenance. As shown below, the emissions generated by operation of the project would not exceed SCAQMD regional thresholds for criteria pollutants. Therefore, the project would not result in a cumulatively considerable net increase of criteria pollutants, and impacts would be less than significant.

Table 2 Project Operational Emissions

Emission Source	Maximum Daily Emissions (lbs/day)					
	ROG	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Mobile[1]	<0.1	<0.1	0.2	<0.1	<0.1	<0.1
Project Emissions	<0.1	<0.1	0.2	<0.1	<0.1	<0.1
SCAQMD Regional Thresholds	55	55	550	150	150	55
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**

[1] Estimated mobile emissions were not adjusted to account for the effects of the federal Safer Affordable Fuel-Efficient Vehicles Rule because it would have a *de minimis* impact on the project's mobile emissions and would not have the potential to cause total operational emissions to exceed the SCAQMD regional thresholds.

Notes: See Appendix A for modeling results. Some numbers may not add up precisely to the numbers indicated due to rounding.

c) Less Than Significant Impact:

Criteria Air Pollutant Emissions. As discussed in Appendix A, criteria air pollutant emissions can decrease local air quality and result in adverse effects on human health when air pollutant emissions exceed significance thresholds, which are based on federal and state ambient air quality standards. For instance, exposure to elevated concentrations of ozone can result in respiratory and eye irritation and possible changes in lung functions. At high concentrations, carbon monoxide reduces the amount of oxygen in the blood, causing heart difficulty in people with chronic diseases, reduced lung capacity, and impaired mental abilities. Nitrogen dioxide can worsen respiratory diseases, such as asthma, over short periods of exposure, which causes respiratory symptoms including coughing, wheezing, or difficulty breathing. Lastly, when inhaled into the deepest part of the lungs, particulate matter can cause permanent lung damage and further damage health by interfering with the body's mechanisms for clearing the respiratory tract or by acting as carriers of an absorbed toxic substance.

While these pollutants can cause potentially adverse health effects when they are emitted in substantial amounts, emissions generated during project construction would not exceed the SCAQMD regional or localized significance thresholds, as discussed earlier under item (b). The localized significance thresholds were specifically developed in response to concern regarding exposure of individuals to criteria pollutants in local communities and are designed to be protective of local public health (SCAQMD 2008b). Furthermore, construction activities would be moving along the transmission line alignment and therefore would only expose any given sensitive receptor to elevated criteria air pollutant emissions for several days or weeks at a time rather than the entire seven-month duration of construction activities. Moreover, after construction is complete, two annual maintenance and inspection events would occur per year and would involve approximately four annual roundtrip vehicle trips, which would result in *de minimis* criteria air pollutant emissions. Therefore, the project would not expose sensitive receptors to substantial concentrations of criteria air pollutants or the associated adverse health effects. Impacts would be less than significant.

Toxic Air Contaminants. Construction-related activities would result in temporary project-generated emissions of diesel particulate matter (DPM) exhaust emissions from off-road, heavy-duty diesel equipment for site preparation, grading, structural steel work, pole installation, collector line installation, and other construction activities. DPM was identified as a toxic air contaminant (TAC) by the California Air Resources Board (CARB) in 1998. The potential cancer risk from the inhalation of DPM (discussed in the following paragraphs) outweighs the potential non-cancer health impacts (CARB 2017).

Generation of DPM from construction projects typically occurs in a single area for a short period. Project construction would occur over approximately seven months. The dose to which the receptors are exposed is the primary factor used to determine health risk. Dose is a function of the concentration of a substance or substances in the environment and the extent of exposure that person has with the substance. Dose is positively correlated with time, meaning that a longer exposure period would result in a higher exposure level for the Maximally Exposed Individual. The risks estimated for a Maximally Exposed Individual are higher if a fixed exposure occurs over a longer period of time. According to the OEHHA, health risk assessments, which determine the exposure of sensitive receptors to toxic emissions, should be based on a 70-year exposure period; however, such assessments should be limited to the period/duration of activities associated with the project. Thus, the duration of proposed construction activities (i.e., seven months) is approximately two percent of the total exposure period used for 30-year health risk calculations. Current models and methodologies for conducting health-risk assessments are associated with longer-term exposure periods of 9, 30, and 70 years, which do not correlate well with the temporary and highly variable nature of construction activities, resulting in difficulties in producing accurate estimates of health risk (Bay Area Air Quality Management District 2017). In addition, construction activities would be moving along the transmission line alignment and therefore would only occur near any given sensitive receptor for several days or weeks at a time rather than the entire seven-month duration of construction activities.

The maximum particulate matter emissions would occur during site preparation and grading activities. These activities would last for approximately three months. PM emissions would decrease for the remaining construction period because construction activities such as building construction and architectural coating would require less construction equipment. While the maximum DPM emissions associated with site preparation and grading activities would only occur for a portion of the overall construction period, these activities represent the worst-case condition for the total construction period. This would represent less than one percent of the total exposure period for health risk calculation, and, as mentioned earlier, these activities would only occur near any given sensitive receptor along the transmission line alignment for a fraction of this three-month duration as construction activities progress along the alignment. Therefore, given the aforementioned discussion, DPM generated by project construction would not create conditions where the probability is greater than one in one million of contracting cancer for the Maximally Exposed Individual or to generate ground-level concentrations of non-carcinogenic TACs that exceed a Hazard Index greater than one for the Maximally Exposed Individual. Furthermore, the project does not include components that would generate substantial TAC emissions during operation. This project impact would be less than significant.

CO Hotspots. A carbon monoxide (CO) hotspot is a localized concentration of CO that is above a CO ambient air quality standard. Localized CO hotspots can occur at intersections with heavy peak hour traffic. Specifically, hotspots can be created at intersections where traffic levels are sufficiently high such that the local CO concentration exceeds the federal one-hour standard of 35.0 ppm or the federal and state eight-hour standard of 9.0 ppm (CARB 2016). The SCAB is in conformance with state and federal CO standards. In 2020, the Palm Springs-Fire Station monitoring station detected an 8-hour maximum CO concentration of 0.5 ppm, which is substantially below the state and federal standards (United States Environmental Protection Agency [U.S. EPA] 2021a). The project would result in CO emissions of approximately 26.5 pounds per day during construction and 0.2 pounds per day during operation, both of which would be well below the 550 pounds-per-day threshold. Based on the low background level of CO in the project area, improving vehicle emissions standards for new cars in accordance with state and federal regulations, and the project's low level of operational CO emissions, the project would not create new hotspots or contribute substantially to existing hotspots, and impacts would be less than significant.

d) No Impact: Other air emissions generated by project construction and operation that were not previously discussed under items (b) and (c) would be limited to odorous emissions. For construction activities, odors would be temporary in nature and are subject to SCAQMD Rule 402, *Nuisance*. Construction activities would be temporary and transitory and associated odors would cease upon construction completion. Accordingly, the project would not create objectionable odors affecting a substantial number of people during construction, and short-term impacts would be less than significant. Common sources of operational odor complaints include sewage treatment plants, landfills, recycling facilities, and agricultural uses. The project would not include any of these uses or other odor-generating components. The project does not include any residential or commercial uses that would generate solid waste, and the project would not generate solid waste during project operation (further discussed below in Section 42, Solid Waste). Therefore, the project would have no impact from operational odors.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
BIOLOGICAL RESOURCES Would the project:				
7. Wildlife & Vegetation a) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state conservation plan?	☐	☐	☐	☒
b) Have a substantial adverse effect, either directly or through habitat modifications, on any endangered, or threatened species, as listed in Title 14 of the California Code of Regulations (Sections 670.2 or 670.5) or in Title 50, Code of Federal Regulations (Sections 17.11 or 17.12)?	☐	☒	☐	☐
c) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U. S. Wildlife Service?	☐	☒	☐	☐
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☒	☐
e) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U. S. Fish and Wildlife Service?	☐	☒	☐	☐
f) Have a substantial adverse effect on State or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☒	☐	☐
g) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒

Source(s): GIS database, Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP), Rincon Consultants Biological Resources Assessment Report (Rincon 2021a; Appendix B), Rincon Consultants MSHCP Consistency Analysis and Habitat Assessment Report (Rincon 2021b; Appendix B)

In October 2021, Rincon Consultants, Inc. (Rincon) prepared two technical reports for the project to document existing conditions along the transmission line corridor, evaluate the potential for project-related impacts to biological resources during implementation of the project, and evaluate project consistency with the Western Riverside County MSHCP. As part of these assessments, a field reconnaissance survey of the project area was conducted on October 10 and 11, 2019 to document existing site conditions and the potential presence of sensitive biological resources, including sensitive plant and wildlife species, sensitive plant communities, jurisdictional waters and wetlands, and habitat for nesting birds. The study area consisted of the linear alignment of the existing poles plus a 100-foot-wide swath (50 feet to either side of the exiting pole alignment). The survey was performed by walking and driving along the study area to characterize the existing biological resources present (e.g., vegetative communities, potential presence of sensitive species and/or habitats, and presence of

potentially jurisdictional waters). Where portions of the study area were inaccessible on foot (e.g., private property and fenced areas), the biologists visually inspected these areas with binoculars. In addition, a live-trapping program for LAPM was conducted by Cereus Environmental biologist Mr. Jason Berkley (SCP: SC-00187) and Rincon biologist Ms. Sarah Toback from August 30 to September 3, 2021 within the parcel proposed for development of the Bautista Substation (APN 576-060-040).[2] Surveys were conducted in accordance with the protocols set forth by the Western Riverside County Regional Conservation Authority. The findings of fact below rely on the results of these studies and associated field surveys. The full studies are available in Appendix B of this document.

Findings of Fact:

a) No Impact: The project site is located within the Western Riverside County MSHCP. The project site is not located within a survey area for amphibians, burrowing owl, Narrow Endemic Plant Species, or Criteria Area Plant Species. Additionally, no vernal pool or fairy shrimp habitat was documented within the project site and no direct impacts to riparian/riverine areas are anticipated to occur with project implementation. However, two parcels are located within the survey area for Los Angeles pocket mouse (*Perognathus longimembris brevinasus;* LAPM). Both of the project parcels within the LAPM survey area contain varying levels of suitable habitat. However, the project would not result in direct impacts to APN 576-060-009 (located immediately north of SR 371 approximately 970 feet west of the Bautista Substation parcel) and would not remove suitable habitat at this location. Pole sites at these this parcel would be accessed temporarily on foot and in vehicles. Potential temporary impacts from project construction activities include crushing of vegetation to access poles. No permanent direct impacts from these activities would occur at this parcel; therefore, no further actions are required pursuant to the MSHCP. The project would result in grading and clearing at the parcel proposed for development of the Bautista Substation (APN 576-060-040). Due to the proximity to a recent 2015 California Natural Diversity Database (CNDDB) occurrence and suitable habitat conditions on site, a live-trapping study was completed at this parcel for MSHCP compliance. The LAPM trapping study was negative at this parcel; therefore, no further actions related to LAPM are required pursuant to the MSHCP.

   The project would be primarily restricted to the existing 3.1-mile transmission line corridor in addition to the Bautista Substation parcel. The project relies heavily on existing infrastructure, and as such would involve minimal ground disturbance (e.g., temporary crushing of vegetation to access pole sites). Development of the Bautista Substation parcel would require the removal of approximately 1.0 acre of redshank chaparral, resulting in the only direct impacts of the project. This portion of redshank chaparral represents 9.17 percent of the redshank chaparral found in the project site. Additionally, this vegetation community is locally abundant in the adjacent area outside of the project site, and the removal of approximately 9.17 percent of this community within the project site would not result in the removal of a substantial amount of habitat regionally. Furthermore, the species that this vegetation community may support would not be substantially impacted due to the abundance of this vegetation community both within the immediate vicinity (i.e., within the project site) and regionally. Lastly, the Bautista Substation parcel is located within the Western Riverside County MSHCP and is not within a criteria cell, thus indicating that this vegetation community has not been targeted for conservation in this portion of the plan area.

   No vernal pool or fairy shrimp habitat was documented within the project site, and no direct impacts to riparian/riverine areas would occur. Furthermore, the project would not result in impacts to the urban/wildlands interface nor wildlife corridors and linkages. As such, no further

[2] Two parcels within the project area (APN 576-060-040 and 576-060-009) require LAPM habitat assessment surveys. (See Figure E-4 in Appendix E). However, the project would not result in direct impacts or remove suitable habitat at APN 576-060-009; therefore, this parcel was not included in the LAPM survey.

actions are required pursuant to the MSHCP for these resources. Therefore, there is no conflict with or impact to the MSHCP and the project is consistent with its provisions. No impact would occur.

b), c) Less than Significant Impact with Mitigation Incorporated: As discussed in the Biological Resources Assessment and MSHCP Consistency Analysis and Habitat Assessment Reports, several special status plants and animals are known to exist in the project vicinity. Full details are provided in these reports, which are summarized below (see Appendix B for full reports).

Special Status Plants

Fifty special status plants have been previously documented within five miles of the project area, but none were observed during the reconnaissance survey. While many of the existing poles are located along roads (paved and unpaved), there is potential for temporary impacts during project construction while working at existing pole locations that occur where special status plant species may be supported. Construction activities, such as vehicles driving and parking, and the foot traffic of crews, could incidentally crush special status plant species. While some of these plants may suffer some structural damage, mortality would not necessarily occur. The project includes grading of the parcel proposed for development of the Bautista Substation and removal of redshank chaparral vegetation on site. This parcel does not contain vegetation and soils suitable for supporting Mojave tarplant. Therefore, the proposed project would not result in potentially significant impacts to federally and/or state listed plants. However, if special status plants are encountered, implementation of Mitigation Measures BIO-1 and BIO-2, which require pre-construction surveys and avoidance of individuals if detected, would reduce project impacts to less-than-significant levels because project effects within suitable habitat would be limited and not likely to substantially reduce local populations or their ability to persist once the project is complete. Therefore, the project would have less-than-significant impacts to special status plants with mitigation incorporated.

Special Status Wildlife

Thirteen special status wildlife species have been previously documented within five miles of the project area. Direct impacts at the Bautista Substation parcel would include grading of the site and removal of vegetation, including redshank chaparral. Redshank chaparral is not the preferred habitat for the three listed special status wildlife species with a moderate or high potential to occur (quino checkerspot butterfly [*Euphydryas editha quino*], southwestern willow flycatcher [*Empidonax traillii extimus*], and Stephen's kangaroo rat [*Dipodomys stephensi*]). Therefore, it is unlikely that construction of the proposed Bautista Substation would affect these species. Throughout the remainder of the project site, potential indirect impacts would include temporary crushing of vegetation and increased sound levels during project construction. These activities could temporarily displace terrestrial and avian special status species if vegetation crushing occurs within the species' preferred habitats. Quino checkerspot butterfly and Stephen's kangaroo rat may occur in the big sagebrush scrub habitat present within the project site, while the southwestern willow flycatcher may occur in the Goodding's willow – red willow habitat. Implementation of Mitigation Measures BIO-1, BIO-2, BIO-3, BIO-4, and BIO-5, which require pre-construction surveys and avoidance of individuals if detected as well as standard construction best management practices (BMPs), would reduce potential temporary impacts to special status wildlife species to less-than significant-levels because project effects within suitable habitat would be limited and not likely to substantially reduce local populations or their ability to persist once the project is complete.

Several common bird species protected by California Fish and Game Code (CFGC) 3503 and the Migratory Bird Treaty Act (MBTA) may nest in trees and shrubs within the project site and immediate vicinity. Construction may result in direct or indirect impacts to nesting bird species, should they be present within and/or in the immediate vicinity of areas of disturbance at the time of construction. Impacts to nesting birds could occur if nests with eggs or young are present

within the proposed disturbance area during project implementation, which may cause direct impacts to the nest, and/or failure or abandonment of the nest. Implementation of Mitigation Measures BIO-1 and BIO-4 would address compliance with CFGC 3503 and the MBTA. Therefore, the project would have a less-than-significant impact to special status wildlife species with mitigation incorporated.

d) Less than Significant Impact: The project site is surrounded by undeveloped land and open land areas providing a multitude of wildlife movement options throughout the project site and adjacent areas regionally. Implementation of the project would not significantly alter existing wildlife movement patterns because the project site is located in existing roadways and utilities corridors that are currently used for similar purposes (i.e., electrical transmission lines). Therefore, project impacts would be less than significant.

e) Less than Significant Impact with Mitigation Incorporated: Riparian habitat (Goodding's willow – red willow) (Rank S3) and redshank chaparral (Rank S3) have been identified within the project site. Rank S3 vegetation communities are considered vulnerable to extirpation or extinction by the California Department of Fish and Wildlife (CDFW). As discussed under item (a), redshank chaparral would be permanently impacted at the Bautista Substation project site. This impact would be limited to 1.0 acre, which represents approximately 9.17 percent of the redshank chaparral found at the project site. Additionally, this vegetation community is locally abundant in the adjacent region outside of the project area and the removal of 9.17 percent of it within the project site would not result in the removal of a substantial amount of habitat regionally. Furthermore, species that this vegetation community may support would not be substantially impacted due to the abundance of this vegetation community both within the immediate vicinity of the project site and regionally. Lastly, the Bautista Substation parcel is located within the western Riverside County MSHCP and is not within a criteria cell, thus indicating that this vegetation community has not been targeted for conservation in this portion of the plan area. Therefore, removal of approximately 1.0 acre of redshank chaparral (i.e., 9.17 percent of the redshank chaparral within the project site) would not be a substantial adverse impact on the natural community or on the species it may support.

   For the remainder of the project site, any surface ground disturbance would be temporary in nature due to equipment trucks accessing the project site along existing roadways and utilities corridors of the project alignment. The project does not propose any permanent structures in areas that could support riparian habitats; therefore, direct impacts to riparian habitat (including Goodding's willow-red willow) would not occur. Temporary impacts may include the crushing of vegetation to gain access to the existing pole sites, which would not be considered a significant impact. However, construction activities could result in indirect impacts (e.g., oil leaks from vehicles) that could cause potentially significant impacts to riparian habitats. Therefore, implementation of Mitigation Measures BIO-1 and BIO-6 would be required to minimize indirect impacts to riparian communities. Impacts to riparian communities would be less than significant with mitigation incorporated.

f) Less than Significant Impact with Mitigation Incorporated: Jurisdictional waters and wetlands (e.g., Cahuilla Creek and Hamilton Creek) are present on or adjacent to the project site. The erosional feature located at the Bautista Substation parcel is non-jurisdictional because it only carries water during precipitation events along Bautista Road and onto the parcel for approximately 100 feet before it dissipates with no connection to other waters. The project is not expected to directly impact jurisdictional waters because no permanent structures are proposed in these areas. However, construction activities could result in indirect impacts (e.g., oil leaks from vehicles, soil erosion) that could affect downstream waters and be potentially significant. Implementation of Mitigation Measures BIO-1 and BIO-5, which require a Workers Environmental Awareness Program and construction BMPs, would reduce potential indirect impacts to less-than-significant levels.

g) No Impact: No trees are proposed for removal during project activities. Construction of the project would not remove native trees that occur on parcels or properties greater than 0.5 acre

in size, located in areas above 5,000 feet in elevation and within unincorporated areas. All portions of the project area are located below 5,000 feet in elevation. Therefore, the County of Riverside Ordinance No. 559 does not apply to the project, and no impact would occur.

Mitigation:

BIO-1 Workers Environmental Awareness Program

A pre-construction training shall be conducted for all construction employees, prior to the start of construction activities. A workers environmental awareness program shall be produced by a qualified biologist containing information to inform construction supervisors, workers, and inspectors of sensitive resources that have a moderate to high potential of occurrence along the project route, to explain their importance and sensitivity to disturbance, to review regulatory protections afforded to these resources, and to describe the project design features and mitigation measures adopted for the project. Training shall identify individual responsibilities regarding these resources, and communication procedures should sensitive resources exist or be found in the project area vicinity.

BIO-2 Pre-construction Focused Plant Surveys

Focused surveys for sensitive plant species shall be conducted during the appropriate blooming period prior to the start of construction at pole sites, access points, and the proposed Bautista substation. Surveys shall be conducted by a qualified biologist using CDFW protocol survey standards.[3] Any individual of a sensitive status species shall be clearly flagged for avoidance by construction activities. If a listed special status plant species, such as Mojave tarplant, cannot be avoided by proposed construction, a CDFW incidental take permit would be required for plant removal. Any permitted removal of a sensitive plant species shall require mitigation per CDFW requirements.

BIO-3 Pre-construction Special Status Wildlife Species Survey

A biological monitor shall oversee implementation of avoidance and minimization measures prior and during project activities. The biological monitor shall be knowledgeable and experienced in the biology and natural history of special status terrestrial species potentially present at the project area. The biological monitor shall monitor project activities that involve the potential disturbance of sensitive species habitat. The biological monitor shall conduct pre-construction clearance surveys no more than three days prior to the initiation of ground disturbance and vegetation removal. If any terrestrial species are identified on site, they shall be captured and relocated offsite beyond the construction zone. The biological monitor shall have authority to immediately stop any project activity that does not comply with project permits and/or to order any reasonable measure to avoid the unauthorized take of an individual species.

BIO-4 Nesting Bird Surveys

If feasible, removal of vegetation shall be scheduled to occur in the fall and winter (between September 1 and January 31), after fledging and before the initiation of the nesting season. For construction activities occurring during the nesting season (generally February 1 to August 31), surveys for nesting birds covered by the CFGC and the MBTA shall be conducted by a qualified biologist no more than seven days prior to vegetation removal. The surveys shall include the disturbance area plus a 100-foot buffer around the site, as feasible without trespassing on private lands. If active nests are located, construction work shall be conducted outside a buffer zone from the nest to be determined by the qualified biologist. The buffer shall be a minimum of 50 feet for non-raptor bird species and at least 100 feet for raptor species, or as determined by a qualified biologist. Larger buffers may be required depending upon the status of the nest and the construction activities occurring in the vicinity of the nest. The buffer area(s) shall be closed to all construction personnel

[3] CDFW. 2022. Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities. Available at: https://www.wildlife.ca.gov/Conservation/Survey-Protocols.

and equipment until the adults and young are no longer reliant on the nest site. A qualified biologist shall confirm that breeding/nesting is completed, and young have fledged the nest prior to removal of the buffer. If buffer zones are determined to be infeasible, a full-time qualified biological monitor shall be on site to monitor construction within the buffer zones to ensure active nests and nesting birds are not impacted.

BIO-5 Construction Best Management Practices
The following BMPs shall be followed by construction personnel during all construction activities:

- All food-related trash items such as wrappers, cans, bottles, and food scraps generated during proposed project construction shall be cleaned up daily and disposed of in closed containers only.
- If vehicle or equipment maintenance is necessary, it shall be performed in the designated staging areas.
- During construction, heavy equipment shall be operated in accordance with BMPs.
- Any observation of a dead, injured, or entrapped listed species shall immediately be reported to the biological monitor.
- A biological monitor must delineate all environmentally sensitive area locations with flagging or staking. All personnel on the project site must avoid all established environmentally sensitive areas.
- Vehicles and equipment must remain on approved work and staging areas.

BIO-6 Erosion Controls and Hazardous Materials Spill Prevention and Contingency Plan

Erosion controls shall be used where necessary along the project route. The most likely situations for use of these controls would be when construction activities occur near storm drains, streams, steep slopes, and other sensitive habitat areas. Control measures that may be used include silt fences, sandbags, certified weed-free straw wattles and straw bales, and other control measures as needed. Construction vehicles would also be equipped with a vacuum pump for all ground disturbing activities to assist in the removal of wet soil.

In addition, a Hazardous Materials Spill Prevention and Contingency Plan (SPCP) shall be implemented. The plan shall evaluate potential spill scenarios, identify avoidance and prevention measures, and outline appropriate response actions. To avoid and/or minimize potential impacts to water quality and other sensitive habitats, the following Best Management Practices shall also be implemented:

- Materials shall be stored on impervious surfaces or plastic ground covers to prevent any spills or leakage. Construction materials and spoils shall be protected from stormwater runoff using temporary perimeter sediment barriers such as berms, silt fences, fiber rolls, covers, sand/gravel bags, and straw bale barriers, as appropriate.
- All vehicles and equipment shall be in good working condition and free of leaks. The contractor shall prevent oil, petroleum products, or any other pollutants from contaminating the soil or entering a watercourse (dry or otherwise).
- All re-fueling, cleaning, and maintenance of equipment shall occur at least 100-feet from potentially jurisdictional waters.
- Adequate spill prevention and response equipment shall be maintained on site and readily available to implement to ensure minimal impacts to aquatic environments.

Monitoring: The project applicant under supervision of the qualified Biologist as applicable, shall be responsible for ensuring implementation of the above mitigation measures.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
CULTURAL RESOURCES Would the project:				
8. Historic Resources a) Alter or destroy a historic site?	☐	☐	☐	☒
b) Cause a substantial adverse change in the significance of a historical resource, pursuant to California Code of Regulations, Section 15064.5?	☐	☐	☐	☒

Source(s): On-site Inspection, Project Application Materials, Rincon Consultants Cultural Resources Assessment (Rincon 2022; Appendix C)

Rincon completed a Phase I cultural resources assessment, which included a cultural resources records search, Sacred Lands File search, a combined pedestrian and windshield survey of the project alignment conducted in January 2020, and preparation of a report according to the Archaeological Resources Management Report guidelines and in compliance with the requirements of CEQA (Appendix C). The project alignment was surveyed using transects oriented from the western end of the alignment to the eastern end of the alignment and spaced 10 meters apart. Rincon's archaeologists examined all exposed ground surface for artifacts (e.g., flaked stone tools, tool-making debris, stone milling tools, ceramics, fire-affected rock), ecofacts (marine shell and bone), soil discoloration that might indicate the presence of a cultural midden, soil depressions, and features indicative of the former presence of structures or buildings (e.g., standing exterior walls, postholes, foundations) or historic debris (e.g., metal, glass, ceramics). Ground disturbances such as burrows and drainages were visually inspected. Photographs documenting the project site are maintained at Rincon's Redlands office. The complete report can be found in Appendix C of this document.

Findings of Fact:
a) and b) Less than significant impact: The cultural resource records search and combined pedestrian and windshield survey identified no previously recorded historic sites or historical resources within the proposed project. Therefore, no impacts to historic sites and historical resources would occur.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
9. Archaeological Resources				
a) Alter or destroy an archaeological site?	☐	☒	☐	☐
b) Cause a substantial adverse change in the significance of an archaeological resource, pursuant to California Code of Regulations, Section 15064.5?	☐	☒	☐	☐
c) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☒	☐	☐

Source(s): On-Site Inspection, Project Application Materials, Rincon Consultants Cultural Resources Assessment (Rincon 2022; Appendix C)

As discussed in Section 8, *Historic Resources*, Rincon completed a Phase I cultural resources assessment, which included a cultural resources records search, Sacred Lands File search, a combined pedestrian and windshield survey of the project alignment conducted in January 2020, and preparation of a report according to the Archaeological Resources Management Report guidelines and in compliance with the requirements of CEQA (Appendix C). The project alignment was surveyed using transects oriented from the western end of the alignment to the eastern end of the alignment and spaced 10 meters apart.

Rincon's archaeologists examined all exposed ground surface for artifacts (e.g., flaked stone tools, tool-making debris, stone milling tools, ceramics, fire-affected rock), ecofacts (marine shell and bone), soil discoloration that might indicate the presence of a cultural midden, soil depressions, and features indicative of the former presence of structures or buildings (e.g., standing exterior walls, postholes, foundations) or historic debris (e.g., metal, glass, ceramics). Ground disturbances such as burrows and drainages were visually inspected. Locational data was collected using a Geo7X Trimble. Photographs documenting the project site are maintained at Rincon's Redlands office. The complete report can be found in Appendix C of this document.

Findings of Fact:

a) and b) Less than Significant Impact with Mitigation Incorporated: The cultural resources assessment identified one previously recorded archeological site within the project alignment. No resources were identified at the proposed Bautista Substation parcel. The one identified resource is further described below:

- **P-33- 020869 (CA-RIV-10793).** Site P-33-020869 is a previously recorded multicomponent site revisited by Rincon as part of this project. Rincon observed mortars, slicks, and an accompanying benchmark survey marker. This site is located south of SR 371 and appears to be in the same condition as documented in 2011. No new features, artifacts or significant degradation of the site or its components was identified. No new features, artifacts, or significant degradation of the site or its components were identified during the course of fieldwork.

Site P-33-020869 (CA-RIV-10793) is within the project alignment but would be avoided because no construction or ground-disturbing activities would occur within the boundaries of the site. Nevertheless, based on the known resource within the project alignment and the sensitivity of the area, implementation of Mitigation Measures ARC-1 through ARC-6 would be required to reduce potential impacts to archaeological resources during ground disturbing activities to less-than-significant levels.

c) The cultural resources assessment did not find evidence of any potential human remains in the vicinity of the proposed project or Bautista Substation. In the event than unanticipated human remains are discovered during project construction, implementation of Mitigation Measure ARC-7 would be required to reduce potential impacts to less-than-significant levels.

Mitigation:

ARC-1 Environmental Constraints Sheet

Prior to final map approval, the developer/applicant shall provide evidence to the Riverside County Planning Department that an Environmental Constraints Sheet has been included in the Grading Plans. This sheet shall indicate the presence of environment (s) and the requirements for avoidance of P-33-020869 (CA-RIV-10793).

ARC-2 Retain a Project Archaeologist

The project applicant shall retain a project archaeologist, defined as an archaeologist who meets the Secretary of the Interior's Professional Qualifications Standards for archaeology, to carry out all mitigation measures related to archaeological and historic resources. A fully executed copy of the contract shall be submitted to the County Archaeologist to ensure compliance.

ARC-3 Cultural Resources Monitoring Program

A Cultural Resource Monitoring Plan shall be developed in coordination with the consulting tribe(s) that addresses the details of all activities and provides procedures that must be followed in order to reduce the impacts to cultural, tribal cultural, and historic resources to a level that is less than significant as well as address potential impacts to undiscovered buried archaeological resources associated with this project. The plan shall also outline treatment of artifacts in the event cultural resources are identified. The treatment shall be consistent with the County of Riverside's guidance for the disposition of artifacts. A digitally-signed copy of the Monitoring Plan shall be provided to the County Archaeologist to ensure compliance.

Working directly under the Project Archaeologist, an adequate number of qualified Archaeological Monitors shall be present to ensure that all earth moving activities are observed and shall be on-site during all grading activities for areas to be monitored, including off-site improvements. Inspections will vary based on the rate of excavation, the materials excavated, and the presence and abundance of artifacts and features.

The Professional Archaeologist may submit a detailed letter to the County of Riverside during grading requesting a modification to the monitoring program if circumstances are encountered that reduce the need for monitoring.

At the completion of the monitoring program, a Phase IV Cultural Resources Monitoring Report shall be submitted that complies with the Riverside County Planning Department's requirements for such reports for all ground disturbing activities associated with this grading permit. The report shall follow the County of Riverside Planning Department Cultural Resources (Archaeological) Investigations Standard Scopes of Work posted on the TLMA website. The report shall include results of any feature relocation or residue analysis required as well as evidence of the required cultural sensitivity training for the construction staff held during the required pre-grade meeting and evidence that any artifacts have been treated in accordance with procedures stipulated in the Cultural Resources Management Plan.

ARC-4 Native American Monitoring

Prior to the issuance of grading permits, the developer/permit applicant shall enter into agreement(s) with the consulting tribe(s) for Native American Monitor(s). In conjunction with the Archaeological Monitor(s), the Native American Monitor(s) shall attend the pre-grading meeting with the contractors to provide Cultural Sensitivity Training for all construction personnel. In addition, an adequate number

of Native American Monitor(s) shall be on-site during all initial ground disturbing activities and excavation of each portion of the project site including clearing, grubbing, tree removals, grading, and trenching. In conjunction with the Archaeological Monitor(s), the Native American Monitor(s) shall have the authority to temporarily divert, redirect or halt the ground disturbance activities to allow identification, evaluation, and potential recovery of cultural resources. The developer/permit applicant shall submit a fully executed copy of the agreement(s) to the County Archaeologist to ensure compliance with this mitigation measure. Upon verification, the Archaeologist shall clear this mitigation measure. This agreement shall not modify any condition of approval or mitigation measure.

ARC-5 Avoidance and Temporary Fencing
Project-related activities shall avoid cultural resources when feasible. Cultural site P-33-020869 (CA-RIV-10793) is located within the project alignment but will be avoided by the project. Temporary fencing shall be required for the protection of cultural site P-33-020869 (CA-RIV-10793) during grading activities. Prior to commencement of grading or brushing, the Project Archaeologist shall confirm the site boundaries and determine an adequate buffer for protection of the site. The applicant shall direct the installation of fencing under the supervision of the project archaeologist and Native American Monitor. The fencing can be removed only after grading operations have been completed.

ARC-6 Unanticipated Discovery of Cultural Resources
If previously unrecorded cultural resources consisting of a feature and or three or more artifacts in close association with each other are encountered during ground disturbing activities, work within 100 feet of the discovered cultural resource shall halt. A meeting shall be convened between the developer, the Project Archaeologist, the Native American tribal representative (or other appropriate ethnic/cultural group representative), and the County Archaeologist to discuss the significance of the find. At the meeting with the aforementioned parties, a decision is to be made, with the concurrence of the County Archaeologist, as to the appropriate treatment (documentation, recovery, avoidance, etc.) for the cultural resource. Resource evaluations shall be limited to nondestructive analysis. Further ground disturbance shall not resume within the area of the discovery until the appropriate treatment has been accomplished.

ARC-7 Unanticipated Discovery of Human Remains
The discovery of human remains is always a possibility during ground disturbing activities. If human remains are found, the State of California Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the county coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. In the event of an unanticipated discovery of human remains, the county coroner must be notified immediately. If the human remains are determined to be prehistoric, the coroner will notify the Native American Heritage Commission, which will determine and notify a most likely descendant. The most likely descendant shall complete the inspection of the site within 48 hours of being granted access to the site and provide recommendations for treatment.

Monitoring: The applicant, under supervision of the qualified archaeologist, will be responsible for monitoring for compliance with the mitigation measures above.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
ENERGY Would the project:				
10. Energy Impacts a) Result in potentially significant environmental impacts due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	☒	☐
b) Conflict with or obstruct a State or Local plan for renewable energy or energy efficiency?	☐	☐	☐	☒

Source(s): Air Quality and Greenhouse Gas Emissions Study (Appendix A); Energy Calculations (Appendix D)

Findings of Fact:

a) Less than Significant Impact.

Construction Energy Demand. During project construction, energy would be consumed in the form of petroleum-based fuels used to power off-road construction vehicles and equipment on the project site, construction worker travel to and from the project site, and vehicles used to deliver materials to the site. The project would require grubbing, grading, drainage and utilities work, and paving.

The total consumption of gasoline and diesel fuel during project construction was estimated using the assumptions and factors from modeling used to estimate construction air emissions (Appendix A). Table 3 presents the estimated construction phase energy consumption, indicating construction equipment, vendor trips, and worker trips would consume approximately 165,167 gallons of fuel over the project construction period.

Table 3 Estimated Fuel Consumption during Construction

Fuel Type	Gasoline (gallons)	Diesel (gallons)
Diesel Fuel (Construction Equipment)[1]	--	37,447.31
Diesel Fuel (Hauling & Vendor Trips)[2]	--	3,715
Other Petroleum Fuel (Worker Trips)[3]	124,005	--
Total	**124,005**	**41,162**

See Appendix D for energy calculations.

The construction energy estimates represent a conservative estimate as the construction equipment used in each phase of construction was assumed to be operating every day of construction. Construction equipment would be maintained to applicable standards, and construction activity and associated fuel consumption and energy use would be temporary and typical for construction sites. It is also reasonable to assume contractors would avoid wasteful, inefficient, and unnecessary fuel consumption to reduce construction costs. Therefore, the project would not involve the inefficient, wasteful, and unnecessary use of energy during construction, and the construction-phase impact related to energy consumption would be less than significant.

Operational Energy Demand. The project would be upgrading and replacing existing energy infrastructure and would not create additional energy demand itself. The project would have a minor amount of worker trips associated with maintenance; due to the limited number of trips, the energy demand for fuel use from these trips would be negligible. Therefore, the project would not involve the inefficient, wasteful, and unnecessary use of energy during construction, and the construction-phase impact related to energy consumption would be less than significant.

In conclusion, the construction of the project would be temporary and typical of similar projects and would not result in wasteful use energy. Project operation would require negligible energy use for fuel used by workers. increase the use of electricity on-site. Therefore, project operation would not result in wasteful or unnecessary energy consumption and impacts would be less than significant.

b) No Impact. As described above, the project would not result in wasteful or unnecessary energy consumption and therefore would not conflict with a State or Local plan for renewable energy or energy efficiency. No impacts would occur.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
GEOLOGY AND SOILS Would the project directly or indirectly:				
11. Alquist-Priolo Earthquake Fault Zone or County Fault Hazard Zones a) Be subject to 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?	☐	☐	☒	☐

Source(s): Riverside County General Plan Figure S-2 "Earthquake Fault Study Zones"; Cal OES Earthquake Hazards Map; Geotechnical Investigation for the Proposed Bautista Substation (Sladden Engineering 2019; Appendix E)

Findings of Fact:

a) Less than Significant Impact. The closest known active fault is the San Jacinto-Anza Fault, approximately 0.6-mile north of the project area (Sladden Engineering 2019). The maximum earthquake event on this fault is estimated to be 7.2 M. Based on site mapping, literature research and aerial photo review, the geotechnical analysis concludes that the potential for surface fault rupture on this site is considered low (Sladden Engineering 2019). According to Figure S-1 in the Riverside County General Plan Safety Element (2021), the project site is not located in the Alquist-Priolo fault zone, which runs northeast of the project site. The project would include replacement of electricity transmission lines along approximately 3.1 miles of the existing alignment and construction of a new substation. The project entails construction and replacement of utility facilities and does not include building construction for residential or business/commercial uses. Therefore, the project would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death.

   All grading and construction will be conducted in accordance with the current California Building Code. As CBC requirements are applicable to all development, they are not considered mitigation for CEQA implementation purposes. Therefore, the project would have a less than significant impact.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
12. Liquefaction Potential Zone a) Be subject to seismic-related ground failure, including liquefaction?	☐	☐	☐	☒

Source(s): Riverside County General Plan Safety Element (2021) Figure 2 "Liquefaction Zones"; Geotechnical Investigation for the Proposed Bautista Substation (Sladden Engineering 2019; Appendix E)

Findings of Fact:

a) No Impact: The project site is located within an area with low liquefaction potential. According to the geotechnical investigation completed for the project site by Sladden Engineering (2019), the potential for liquefaction to affect this site is considered negligible due to the presence of shallow seated bedrock underlying the site. Therefore, there is low potential for seismic-related ground failure, including liquefaction and the project would have no impact.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
13. Ground-shaking Zone a) Be subject to strong seismic ground shaking?	☐	☐	☒	☐

Source(s): Riverside County General Plan Safety Element Background Technical Report Figure 1-12 ("Earthquake-Induced Slope Instability Map") and Figures 1-15 to 1-24 ("General Ground Shaking Risk" maps); Geotechnical Investigation for the Proposed Bautista Substation (Sladden Engineering 2019; Appendix E)

Findings of Fact:

a) Less than Significant Impact: According to the geotechnical investigation completed for the project site by Sladden Engineering (2019), the project site has been subjected to past ground shaking by faults that traverse the region. The project site could be subject to ground shaking in the event of an earthquake, though ground rupture potential is low (as previously discussed under Section 11, Alquist-Priolo Earthquake Fault Zone or County Fault Hazard Zones). Construction that is included as part of the project would be subject to California Building Code (CBC) requirements pertaining to development, which would mitigate the potential impact to less than significant. As CBC requirements are applicable to all development, they are not considered mitigation for CEQA implementation purposes. Therefore, the project would have a less than significant impact.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
14. Landslide Risk a) 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, collapse, or rockfall hazards?	☐	☐	☐	☒

Source(s): On-site Inspection, Riverside County General Plan Safety Element Background Technical Report Figure 2-3 ("Regions Underlain by Steep Slopes"); Geotechnical Investigation for the Proposed Bautista Substation (Sladden Engineering 2019; Appendix E)

Findings of Fact:

a) No Impact: No steep slopes or slope instability in the form of landslides, rock falls, earthflows or slumps were observed on or adjacent to the project site during a field visit completed in July 2019 (Sladden Engineering 2019). The project site is not located immediately adjacent to any slopes or hillsides. The geotechnical investigation concludes risks associated with slope instability are considered negligible for the project site (Sladden Engineering 2019). Therefore, the project would have no impact.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
15. Ground Subsidence a) 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 ground subsidence?	☐	☐	☒	☐

Source(s): Riverside County General Plan Safety Element Background Technical Report Figure 2-6 ("Documented Subsidence Areas in Riverside County"); Geotechnical Investigation for the Proposed Bautista Substation (Sladden Engineering 2019; Appendix E)

Findings of Fact:

a) Less than Significant Impact: The project site is not located in an area susceptible to subsidence. The geotechnical investigation states that locally, no fissures or other surficial evidence of subsidence were observed at or near the project site (Sladden Engineering 2019). The potential for subsidence is considered negligible for the project site because the project site is underlain by bedrock. Furthermore, construction included as part of the project would comply with CBC requirements pertaining to development. CBC requirements are not considered unique mitigation and therefore are not considered mitigation for CEQA implementation purposes. Therefore, the project would have a less than significant impact.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
16. Other Geologic Hazards a) Be subject to geologic hazards, such as seiche, mudflow, or volcanic hazard?	☐	☐	☐	☒

Source(s): On-site Inspection, Project Application Materials, Geotechnical Investigation for the Proposed Bautista Substation (Sladden Engineering 2019; Appendix E)

Findings of Fact:

a) No Impact: The project site is located approximately 61 miles east of the Pacific Ocean and approximately eight miles south of Lake Hemet, which is located in the Thomas Mountains of the San Bernardino National Forest. The project site is not located immediately adjacent to any impounded bodies of water. Therefore, risks associated with tsunamis and seiches are considered negligible (Sladden Engineering 2019). Based on the relatively flat nature of the project site and the composition of the surface soil, risks associated with debris flow are considered negligible for the project site (Sladden Engineering 2019). Therefore, impacts associated with a seiche, mudflow, or volcano are not anticipated. The project would have no impact.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
17. Slopes a) Change topography or ground surface relief features?	☐	☐	☒	☐
b) Create cut or fill slopes greater than 2:1 or higher than 10 feet?	☐	☐	☒	☐
c) Result in grading that affects or negates subsurface sewage disposal systems?	☐	☐	☒	☐

Source(s): Riverside County 800-Scale Slope Maps, Project Application Materials, Ord. 457 (Building Codes & Fees), Geotechnical Investigation for the Proposed Bautista Substation (Sladden Engineering 2019; Appendix E)

Findings of Fact:

a) Less than Significant Impact: The topography of the project site consists of undulating topography with regional gradients descending to the southeast, with an approximate elevation of 3,975 feet above mean sea level. The elevation of the project site would not be significantly modified as a result of the project. Minor surface grading and leveling would be required for the proposed substation. However, no cut or fill slopes greater than 2:1 or higher than 10 feet would be created. Compliance with the Riverside County Building and Safety Ordinance No. 457 would assure cut or fill slopes are manufactured appropriately. Prior to the issuance of grading permits the County of Riverside requires Building and Safety review of the grading plans to assure the grading plans will not affect or negate subsurface sewage plans. Compliance with Ordinance No. 457 and the CBC would reduce potential impacts due to changes in topography and cut and fill slopes. Therefore, the project would have a less than significant impact.

b) Less than Significant Impact: As described above, the project site is relatively flat and implementation of the project would not entail grading work greater than 2:1 or higher than 10 feet. A slope stability report shall be submitted and approved by the County Geologist for all proposed cut or fill slopes greater than 2:1 or over 10 feet in vertical height, should such earthwork be required. Based on cut and fill and overall project design, the project would have a less than significant impact.

c) Less than Significant Impact: Prior to the issuance of grading permits the County of Riverside requires Building and Safety review of the grading plans to assure the grading plans will not affect or negate subsurface sewage plans (Ord. 457). Therefore, the project would have a less than significant impact.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
18. Soils a) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
b) Be located on expansive soil, as defined in Section 1803.5.3 of the California Building Code (2022), creating substantial direct or indirect risks to life or property?	☐	☐	☒	☐
c) Have soils incapable of adequately supporting use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒

Source(s): Project Application Materials; On-site Inspection; Geotechnical Investigation for the Proposed Bautista Substation (Sladden Engineering 2019; Appendix E)

Findings of Fact:

a) Less than Significant Impact: Topsoil may be lost during grading activities during the construction of the proposed substation; however, this potential loss is not anticipated to be in a manner that would result in significant amounts of soil erosion. Implementation of BMPs would reduce the impact to below a level of significance. Therefore, the project would have a less than significant impact.

b) Less than Significant Impact: According to the geotechnical investigation completed for the project site by Sladden Engineering (2019), site soils generally consist of silty sand. Based on laboratory testing, the materials underlying the site are considered to have a very low expansion potential. Therefore, implementation of the project would have a less than significant impact.

c) No Impact: No plumbing is being proposed as part of this project; the project would install the MONARCH Dry Chemical storage building fire suppression system for the proposed substation, which does not rely on plumbing and overhead sprinklers. Therefore, the project does not necessitate soils capable of adequately supporting septic tanks or alternative water disposal systems, and the project would have no impact.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
19. Wind Erosion and Blowsand from project either on or off site.	☐	☐	☒	☐
d) Be impacted by or result in an increase in wind erosion and blowsand, either on or off site?				

Source(s): Riverside County General Plan Safety Element Background Technical Report Figure 2-11 ("Wind Erosion Susceptibility Map Riverside County"); Riverside County Ord. No. 460, Article XV & Ord. No. 484; Geotechnical Investigation for the Proposed Bautista Substation (Sladden Engineering 2019; Appendix E)

Findings of Fact:

a) Less than Significant Impact: The project site lies within an area susceptible to high levels of wind erosion. The proposed replacement of the electricity transmission lines would not entail the installation of new poles or major groundwork. The proposed substation would decrease the amount of exposed dirt on the substation parcel, which is subject to wind erosion, with the incorporation of the concrete foundation for the control building, transformer, and other substation components as well as crushed rock ground cover over the entire disturbance area of the substation (200-feet x 160-feet) to a depth of four inches. No changes would be made on adjacent properties that would increase wind erosion off-site that would impact this project. As discussed in Section 6, Air Quality, of this document, dust control measures would be implemented to reduce potential impacts associated with wind erosion to less than significant.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
GREENHOUSE GAS EMISSIONS Would the project:				
20. Greenhouse Gas Emissions a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

Source(s): Air Quality and Greenhouse Gas Emissions Study (Appendix A), CARB 2017 Scoping Plan, SCAG 2020 RTP/SCS, County of Riverside Climate Action Plan (CAP) Update (2019)

Findings of Fact:

a) Less Than Significant Impact. The project's greenhouse gas (GHG) emissions model assumed that construction activity would occur over the course of approximately seven months. As shown in Table 4, construction activity for the project would generate an estimated 401 metric tons of carbon dioxide equivalent (MT of CO_2e). When amortized over a 30-year period in accordance with SCAQMD and County of Riverside guidance, construction of the project would generate approximately 13 MT of CO_2e per year.

Table 4 Estimated Construction Emissions of Greenhouse Gases

Activity	Annual Emissions (MT of CO_2e)
Construction[1, 2]	400.8
Amortized over 30 years	**13.4**

[1] The modeling assumes project construction would commence as early as 2022, which is conservative because commencing construction at a later date would result in lower emissions than those estimated herein due to the fact that construction equipment and vehicles become more efficient and generate less pollutant emissions over time as more stringent federal and state regulations phase in.

[2] Estimated construction emissions were not adjusted to account for the effects of the federal Safer Affordable Fuel-Efficient Vehicles Rule because this rule only affects estimated passenger car and light-duty truck emissions. These vehicle types would only be utilized during project construction for worker commutes, which comprise a small fraction of the project's emissions. Therefore, the federal Safer Affordable Fuel-Efficient Vehicles Rule would have a *de minimis* impact on the project's construction emissions and would not have the potential to cause the project's total emissions (i.e., amortized construction emissions in combination with operational emissions) to exceed the County's screening level threshold of 3,000 MT of CO_2e per year (see Table 5).

Notes: Emissions modeling was completed using Road Construction Emissions Model. See Appendix A for modeling results.

Operational emissions would be limited to the two annual inspection and maintenance events. Table 5 combines the construction and operational GHG emissions associated with development of the project. As shown therein, annual project emissions would be approximately 14 MT of CO_2e per year, which would not exceed the County's screening-level threshold of 3,000 MT of CO_2e per year for small projects. The *Riverside County Climate Action Plan* (2019) states the County has determined that small projects that do not generate more than 3,000 MT of CO_2e per year would have less-than-significant GHG emissions impacts if they include energy efficient design measures matching or exceeding the Title 24 requirements in effect as of January 2017 and the water conservation measures that match the California Green Building Standards Code in effect as of January 2017. The energy efficient design and water conservation measures contained in Title 24 and the California

Green Building Standards Code would not apply to the proposed project because it is a utility project that does not include the construction of building structures. Therefore, the Project would be considered a small project under *Riverside County Climate Action Plan* (2019), and it would not generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment. Pursuant to the guidance provided in the *Riverside County Climate Action Plan* (2019), impacts would be less than significant.

Table 5 Combined Annual Emissions of Greenhouse Gases

Emission Source	Annual Emissions MT CO_2e
Construction	13.4
Mobile[1]	0.1
Total Emissions	13.5
County of Riverside Threshold (MT of CO_2e per year)[2]	3,000
Threshold Exceeded?	**No**

[1] Estimated mobile emissions were not adjusted to account for the effects of the federal Safer Affordable Fuel-Efficient Vehicles Rule because it would have a *de minimis* impact on the project's mobile emissions and would not have the potential to cause total project emissions to exceed the County's screening level threshold of 3,000 MT of CO_2e per year.

[2] County of Riverside 2019b

Note: The project does not include the installation of new facilities that would use, contain, or generate fluorinated gases or sulfur hexafluoride; therefore, fluorinated gases and sulfur hexafluoride were not included in the analysis of project emissions.

See Appendix A for modeling results.

b) No Impact.

Several plans and policies have been adopted to reduce GHG emissions in the Project region, including the State's 2017 Climate Change Scoping Plan/Senate Bill 32, the SCAG 2020-2045 RTP/SCS (2021), and the *Riverside County Climate Action Plan* (2019). The project's consistency with these plans is discussed in the following subsections.

County of Riverside Climate Action Plan. The County of Riverside CAP, updated on December 17, 2019, identifies many GHG emissions reduction programs and regulations to meet the County's GHG reduction targets of a 49 percent decrease below 2008 levels by 2030 and an 83 percent decrease below 2008 levels by 2050. The County's targets are consistent with the State's targets of a 40 percent decrease below 1990 levels by 2030 (Senate Bill [SB] 32) and an 80 percent decrease below 1990 levels by 2050 (Executive Order S-3-05; County of Riverside 2019b). As discussed earlier under item (a), the proposed project qualifies as a small project under the *Riverside County Climate Action Plan* (2019). Small projects are considered to be too small to be able to provide the level of GHG emission reductions expected from the Screening Tables or the alternative emission analysis method in the *Riverside County Climate Action Plan*, and, as a result, their GHG emissions impacts are considered to be less than significant as long as these projects incorporate specific energy efficiency and water conservation measures outlined in the CAP. As explained earlier, these energy efficiency and water conservation measures would not apply to the proposed project because it is a utility project that does not include the construction of building structures. Furthermore, none of the local reduction measures contained in the County's CAP would apply to the proposed project. Therefore, because the proposed project is considered a small project screened out from the need for further GHG emissions analysis and mitigation under the CAP, it would not conflict with implementation of this plan. No impact would occur.

SCAG 2020-2045 RTP/SCS. SB 375, signed in August 2008, is a state-level policy directing each of California's 18 major Metropolitan Planning Organizations to prepare a Sustainable

Communities Strategy (SCS) that contains a growth strategy to meet emission targets for inclusion in the Regional Transportation Plan (RTP). The applicable Metropolitan Planning Organization for the project site is SCAG, and project consistency with the goals contained in SCAG's 2020-2045 RTP/SCS is discussed below. SCAG's 2020-2045 RTP/SCS includes a commitment to reduce emissions from transportation sources by promoting compact and infill development to comply with SB 375. The project would not conflict with any of the SCAG's 2020-2045 RTP/SCS goals as outlined in Table 6, and no impact would occur.

Table 6 Consistency with Applicable SCAG RTP/SCS GHG Emission Reduction Strategies

Strategy/Action	Project Consistency
Focus Growth Near Destinations & Mobility Options. ▪ Emphasize land use patterns that facilitate multimodal access to work, educational and other destinations ▪ Focus on a regional jobs/housing balance to reduce commute times and distances and expand job opportunities near transit and along center-focused main streets ▪ Plan for growth near transit investments and support implementation of first/last mile strategies. ▪ Promote the redevelopment of underperforming retail developments and other outmoded nonresidential uses ▪ Prioritize infill and redevelopment of underutilized land to accommodate new growth, increase amenities and connectivity in existing neighborhoods ▪ Encourage design and transportation options that reduce the reliance on and number of solo car trips (this could include mixed uses or locating and orienting close to existing destinations) ▪ Identify ways to "right size" parking requirements and promote alternative parking strategies (e.g., shared parking or smart parking)	**Consistent.** Not applicable as the project is an energy transmission project and would not result in a substantial increase in employment of population.
Promote Diverse Housing Choices. ▪ Preserve and rehabilitate affordable housing and prevent displacement ▪ Identify funding opportunities for new workforce and affordable housing development ▪ Create incentives and reduce regulatory barriers for building context-sensitive accessory dwelling units to increase housing supply ▪ Provide support to local jurisdictions to streamline and lessen barriers to housing development that supports reduction of greenhouse gas emissions	**Consistent.** Not applicable as the project is an energy transmission project and would not result in a substantial increase in employment of population.
Leverage Technology Innovations. ▪ Promote low emission technologies such as neighborhood electric vehicles, shared rides hailing, car sharing, bike sharing and scooters by providing supportive and safe infrastructure such as dedicated lanes, charging and parking/drop-off space ▪ Improve access to services through technology—such as telework and telemedicine as well as other incentives such as a "mobility	**Consistent.** Not applicable as the project is an energy transmission project and would not use electricity.

Strategy/Action	Project Consistency
wallet," an app-based system for storing transit and other multi-modal payments ▪ Identify ways to incorporate "micro-power grids" in communities, for example solar energy, hydrogen fuel cell power storage and power generation	
Support Implementation of Sustainability Policies. ▪ Pursue funding opportunities to support local sustainable development implementation projects that reduce GHG emissions ▪ Support statewide legislation that reduces barriers to new construction and that incentivizes development near transit corridors and stations ▪ Support local jurisdictions in the establishment of Enhanced Infrastructure Financing Districts (EIFDs), Community Revitalization and Investment Authorities (CRIAs), or other tax increment or value capture tools to finance sustainable infrastructure and development projects, including parks and open space ▪ Work with local jurisdictions/communities to identify opportunities and assess barriers to implement sustainability strategies ▪ Enhance partnerships with other planning organizations to promote resources and best practices in the SCAG region ▪ Continue to support long range planning efforts by local jurisdictions ▪ Provide educational opportunities to local decision makers and staff on new tools, best practices and policies related to implementing the Sustainable Communities Strategy	**Consistent.** Not applicable as the project is an energy transmission project and would not use electricity.
Promote a Green Region. ▪ Support development of local climate adaptation and hazard mitigation plans, as well as project implementation that improves community resiliency to climate change and natural hazards ▪ Support local policies for renewable energy production, reduction of urban heat islands and carbon sequestration ▪ Integrate local food production into the regional landscape ▪ Promote more resource efficient development focused on conservation, recycling and reclamation ▪ Preserve, enhance and restore regional wildlife connectivity ▪ Reduce consumption of resource areas, including agricultural land ▪ Identify ways to improve access to public park space.	**Consistent.** Not applicable as the project is an energy transmission project and would not use electricity.

Source: SCAG 2020

2017 Scoping Plan/SB 32. The principal state plan and policy adopted to reduce GHG emissions is Assembly Bill (AB) 32, the California Global Warming Solutions Act of 2006, and the follow up, SB 32. The quantitative goal of AB 32 is to reduce GHG emissions to 1990 levels by 2020 and the goal of SB 32 is to reduce GHG emissions to 40 percent below 1990 levels by 2030. The 2017 Scoping Plan (CARB 2017), which outlines a framework to achieve SB 32's

2030 target, emphasizes innovation, adoption of existing technology, and strategic investment to support its strategies. Statewide plans and regulations in support of these strategies, such as GHG emissions standards for vehicles (AB 1493), the Low Carbon Fuel Standard, and regulations requiring an increasing fraction of electricity to be generated from renewable sources, are being implemented at the statewide level; as such, compliance at a project level would occur as implementation continues statewide. Furthermore, as described in Appendix A, the County's CAP demonstrates that its adopted local reduction measures are sufficient to achieve the GHG reduction target set by SB 32 (40 percent below 1990 levels by 2030). As discussed earlier, the proposed project is considered a small project screened out from the need for further GHG emissions analysis and mitigation under the County's CAP and therefore would not conflict with implementation of the CAP. Because the CAP is directly tied to the State's GHG emission reduction target under SB 32 (and the associated 2017 Scoping Plan), the project would also not conflict with implementation of SB 32 and the 2017 Scoping Plan. No impact would occur.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
HAZARDS AND HAZARDOUS MATERIALS Would the project:				
21. Hazards and Hazardous Materials a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☒	☐	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☒	☐	☐
c) Impair implementation of or physically interfere with an adopted emergency response plan or an emergency evacuation plan?	☐	☐	☒	☐
d) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter (1/4) mile of an existing or proposed school?	☐	☒	☐	☐
e) 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?	☐	☐	☐	☒

Source(s): Project Application Materials; County of Riverside Ord. 348; CA DTSC EnviroStor database; CA SWRCB GeoTracker database; U.S. EPA Superfund Enterprise Management System (SEMS) database

Findings of Fact:

a–b) Less than Significant Impact With Mitigation Incorporated: Although use and disposal of construction materials and substances such as cleaning products, pesticides, etc. are expected during the construction phase of the project, there is limited potential for accidental release of construction-related products in sufficient quantity to pose a significant hazard to people and the environment. Potential impacts could result from vehicle collisions, damage, and general risks associated with the replacement of electricity transmission lines and poles (e.g. fall protection, electric shock). Improper handling or operation of equipment could also create result in spills, which could expose workers and the public to hazardous materials. Implementation of Mitigation Measure HAZ-1 as part of the project design would reduce risks of accidental hazardous materials spill to a less than significant level by providing proper training on risks and cleanup procedures during project construction and operation. Therefore, the project would have a less than significant impact with Mitigation Measure HAZ-1 incorporated.

c) Less than Significant Impact: The project would not physically alter or interfere with existing roadways and rights-of-ways along the proposed transmission line replacement alignment or the proposed substation site. The project proponent would be required to design, construct and maintain structures, roadways, and facilities that comply with applicable local, regional, state and/or federal requirements related to emergency access and evacuation plans. Construction activities which may temporarily restrict vehicular traffic would be required to implement adequate and appropriate measures to facilitate the passage of persons and vehicles to ensure the project does not impair implementation of or physically interfere with an adopted emergency response plan or an emergency evacuation plan. Adherence to applicable emergency access and evacuation plans during project construction and operation would ensure the project has a less than significant impact.

d) Less than Significant Impact with Mitigation Incorporated: The project is located within one-quarter mile of the Anza Valley Christian School (private school; 39200 Foothill Road in Anza), approximately 0.25-mile east from the east end of the project area. The Hamilton School (57550 Mitchell Road in Anza) and Hamilton High School (57430 Mitchell Road in Anza) are located approximately 1.5 miles north of the project alignment along SR 371. No schools are proposed at this time in the vicinity of the project site. The project, which entails replacement of electricity transmission lines and the construction and operation of a substation, would not emit hazardous materials, substances, or waste. Potential impacts would be less than significant with incorporation of Mitigation Measure HAZ-1.

e) No Impact: There are no hazardous waste cleanup sites or facilities located within a one-mile radius of the project area, according to the U.S. EPA's SEMS database (2022) and the California Department of Toxic Substances Control's (DTSC) EnviroStor database (2022). There are three sites listed on the California State Water Resources Control Board's (SWRCB) GeoTracker database (2022) within a one-mile radius of the project area. The following three sites are listed in the GeoTracker database:
   - Valley Auto (58581 Highway 371, Anza): LUST Cleanup Site, cleanup status complete and case closed as of 2002
   - Circle K (56621 Highway 371, Anza): LUST Cleanup Site, cleanup status complete and case closed as of 1998
   - General Telephone (39110 Contreras Road, Anza): LUST Cleanup Site, cleanup status complete and case closed as of 1998

   All three of the sites listed in GeoTracker are closed cases. There are no sources of health hazards known to exist on or within one-mile of the project site. In addition, the project site is not listed as a hazardous materials site. Therefore, no potential exists to expose people to such sources. The project would have no impact.

Mitigation:

HAZ-1 Tasks to Minimize Potential Hazardous Materials Contamination: The applicant shall perform the following tasks to minimize the potential for hazardous materials contamination through the transport, use, or disposal of hazardous materials:

1. Prepare and implement a hazardous material Spill Prevention and Contingency Plan (SPCP) for construction activities. This plan would evaluate potential spill scenarios, identify avoidance and prevention measures, and outline appropriate response actions. Construction workers will be trained to recognize and respond to potential hazardous spill in accordance with the SPCP.
2. Construction equipment will be maintained and kept in standard operating conditions to reduce the likelihood of hazardous spills. Any vehicles with continuous leaks will be removed from the construction site and repaired before being returned to the project operation.
3. Absorbent material or drip pans shall be placed underneath vehicles during maintenance or refueling that occurs on the project site.
4. Hazardous materials will not be stored at the construction site. They will be taken back and stored appropriately at the AEC staging area(s).
5. Hazardous waste generated if a spill occurs will be disposed of according to appropriate state and federal regulation. The appropriate disposal method will depend on the type of hazardous waste. Waste considered hazardous in California will be transported by a Resource Conservation and Recovery Act-certified treatment, storage, and disposal facility and disposed at a Class I hazardous waste landfill.

Monitoring: Monitoring shall be conducted by Building and Safety Department and the Planning Department.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
22. Airports a) Result in an inconsistency with an Airport Master Plan?	☐	☐	☐	☒
b) Require review by the Airport Land Use Commission?	☐	☐	☐	☒
c) For a project located within an airport land use plan or, where such a plan has not been adopted, within two (2) 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?	☐	☐	☐	☒
d) For a project within the vicinity of a private airstrip, or heliport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒

Source(s): Riverside County General Plan Safety Element Background Technical Report Figure 1-22 ("Inventory of Airport Locations in Relation to Ground Shaking Risk"), GIS database, Riverside County Airport Land Use Compatibility Plan Policy

Findings of Fact:

a–d) No Impact: The project site is not located within an airport land use plan area, within two miles of a public airport, nor in the vicinity of a private airstrip or heliport. The nearest public airport is the French Valley Airport, located at 37600 Sky Canyon Drive in Murrieta, California, approximately 27 miles west of the project area. The nearest private airstrip is the Ward Ranch Airport located at 38790 Highway 79 in Warner Springs, California, approximately 12 miles southwest of the project area. Therefore, the project would have no impact on the airport activities or airport-related safety of people residing or working in the project area.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
HYDROLOGY AND WATER QUALITY Would the project:				
23. Water Quality Impacts a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	☐	☒	☐
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☐	☒
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces?	☐	☐	☒	☐
d) Result in substantial erosion or siltation on-site or off-site?	☐	☐	☒	☐
e) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on-site or off-site?	☐	☐	☒	☐
f) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☒	☐
g) Impede or redirect flood flows?	☐	☐	☒	☐
h) In flood hazard, tsunami, or seiche zones, risk the release of pollutants due to project inundation?	☐	☐	☐	☒
i) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☐	☒

Source(s): Riverside County Flood Control District Flood Hazard Report/Condition, Master Drainage Plan for the Anza & Wilson Creek Areas, Anza Area Drainage Plan; Santa Margarita River Watershed Management Area: Water Quality Improvement Plan; Anza Area Groundwater Management Report; Geotechnical Investigation for the Proposed Bautista Substation (Sladden Engineering 2019), Anza Electric Bautista Sub-Station Water Quality Management Plan (Blaine A. Womer Civil Engineering 2020; Appendix F)

Findings of Fact:

a) Less than Significant Impact: Construction of the proposed project would be limited to existing utility rights-of way and would not involve significant soil disturbance; therefore, there would be minimal impacts to erosion and water quality associated with the proposed project. However, excavation, grading, and construction activities associated with the proposed Bautista Substation would result in soil disturbance. As stormwater flows over a construction site, it can pick up sediment, debris, and chemicals, and transport them to receiving water bodies. According to the project's Water Quality Management Plan (WQMP), receiving water bodies include Cahuilla Creek, Wilson Creek, Vail Lake, Temecula Creek, Santa Margarita River, and Santa Margarita Lagoon.

To minimize impacts to receiving water bodies, the proposed project would implement the WQMP and would be required to comply with the National Pollution Discharge Elimination System (NPDES) Construction General Permit and submit a stormwater pollution prevention plan (SWPPP). The SWPPP would minimize the amount of sediment and other pollutants associated with the construction site discharged in stormwater runoff. The Construction General Permit requires operators to implement pollution prevention controls to minimize the discharge of pollutants from stormwater and spilled or leaked materials. Inspections would be conducted on the project site once every seven calendar days, or once every 14 calendar days and within 24 hours of a 0.25-inch storm event. As such, the proposed project would be consistent with water quality standards and waste discharge requirements. In addition, consistent with Mitigation Measure HAZ-1, identified above in Hazards and Hazardous Materials, accidental leaks or accidental spills of hazardous materials that may occur during project construction would be cleaned up and disposed of in accordance with applicable regulations. Therefore, project construction would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality during use of the recycled water.

The proposed Bautista Substation would include oil containment pits below the transformer equipment to ensure that any leaks or spills would be contained and would not impact receiving bodies of water. In addition, the majority of the proposed Bautista Substation site would be covered in pervious surface, such as crushed rock and natural vegetation. These aspects would minimize the runoff of water on the site to receiving water bodies. In accordance with the project's WQMP, containment pits, crushed rock surface, and drainage infrastructure would be regularly inspected and maintained in order to ensure proper functioning. Therefore, project operation would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality. The project would have a less than significant impact.

b) No Impact: The project does not include plumbing along the proposed transmission line replacement alignment or at the proposed Bautista Substation site. The project does not include residential or commercial uses that would require groundwater supplies. Therefore, the project would have no impact on groundwater supplies or recharge in the project area.

c) Less than Significant Impact. All project construction and operational activities (construction and staging, and operation) for the proposed project would occur in areas currently in use for the same operational uses (electrical utility conveyance and infrastructure maintenance). Construction activities along the project alignment would be limited to the removal or placement of utilities poles, would not include the addition of impervious surfaces, and would not entail changes to existing drainage patterns. Minimal impervious surface would be added to the proposed Bautista Substation site and would be limited to the driveway approaches. Project site plans indicate the use of four inches of pervious, crushed rock surface cover on 32,000 square feet of the proposed Bautista Substation, with the remainder of the 2.28-acre parcel consisting of vegetated, natural areas. This would allow for water infiltration and would not substantially alter the existing drainage pattern of the site or area. Therefore, the project would have a less than significant impact.

d) Less than Significant Impact: Implementation of the project would involve minimal grading and various construction activities on relatively flat terrain. The geotechnical investigation concludes that no signs of flooding or erosion were observed on the project site during field observations, and further risks associated with flooding and erosion would be evaluated and mitigated by the project design Civil Engineer (Sladden Engineering 2019). Standard construction procedures, and federal, state and local regulations implemented in conjunction

with the site's SWPPP and its BMPs required under the NPDES general construction permit, would minimize potential for erosion during construction. These practices would keep substantial amounts of soil material from eroding from the project site and prevent deposition within receiving waters located downstream. The potential for on-site erosion may increase due to grading and excavating activities during the construction phase for the proposed substation. However, BMPs would be implemented for maintaining water quality and reducing erosion (COA 10.BS GRADE.004, 10.BS GRADE.005). Additionally, the WQMP for the proposed Bautista Substation parcel requires that natural areas outside the project footprint remain undisturbed during construction and operation, which will limit the area of disturbance during construction to 0.9-acre of the 2.28-acre site. The WQMP also requires inspections prior to storm events and regular maintenance and of the crushed rock surface and drainage infrastructure during operation of the substation to ensure that they are operating as designed (Blaine A. Womer Civil Engineering 2020). Off-site erosion would not be substantially affected by the project due to the existing paved streets and relatively flat topography that surround the project site. Therefore, the project would have a less than significant impact on increases in water-induced erosion on- or off-site.

e) through g) Less than Significant Impact. As discussed above in responses 'c' and 'd', all project construction and operational activities for the proposed project (construction and staging, and operation) would occur in areas currently in use for the same operational uses (electrical utility conveyance, and infrastructure maintenance). Construction activities along the proposed transmission line replacement alignment would be limited to stringing replacement transmission lines on existing utilities poles, would not include the addition of impervious surfaces, and would not entail changes to existing drainage patterns. Construction activities at the proposed Bautista Substation would only add minimal impervious surface to the site entrances, with the remainder of the site covered in crushed rock or left in its natural condition. The proposed transmission line replacement and Bautista Substation would not substantially increase the rate or amount of surface runoff that would result in flooding on or off site, would not create or contribute to runoff that would exceed the existing capacity of stormwater drainage systems nor substantially contribute to polluted runoff, and would not impede or redirect flood flows. Therefore, the project would have a less than significant impact.

h) No Impact: The project site is located approximately 61 miles east of the Pacific Ocean and approximately eight miles south of Lake Hemet, which is located in the Thomas Mountains of the San Bernardino National Forest. The project site is not located immediately adjacent to any impounded bodies of water. Therefore, risks associated with tsunamis and seiches are considered negligible (Sladden Engineering 2019). Based on the relatively flat nature of the project site and the composition of the surface soil, risks associated with debris flow are considered negligible for the project site (Sladden Engineering 2019). Therefore, impacts associated with a seiche, mudflow, and volcano are not anticipated. The project would have no impact.

i) No Impact. The project site is located in the Santa Margarita River watershed within the Anza drainage area (Riverside County 1988a and 2019a). The project would not generate water pollutants or water quality stressors during project construction or operation; therefore, implementation of the project would not conflict with the water quality improvement goals and strategies outlined in the Santa Margarita River Watershed Water Quality Improvement Plan (County of Riverside 2019a). As stated above in response 'b,' the project does not include residential or commercial uses that would require groundwater supplies; therefore, the project would not conflict with nor obstruct implementation of sustainable groundwater management plans. Therefore, the project would have no impact.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
LAND USE/PLANNING Would the project:				
24. Land Use a) Physically divide an established community?	☐	☐	☒	☐
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒

Source(s): Riverside County General Plan, GIS database, Project Application Materials

Findings of Fact:

a) Less than Significant Impact. As discussed throughout this IS-MND, the proposed project would occur within existing roadways and utilities corridors. No new fences or barriers that could divide an established community would be placed in the project site due to the proposed project. The proposed Bautista Substation site is located on undeveloped land that is surrounded by undeveloped land to the north, undeveloped land and a church to the east, a taco shop and single-family residence to the south, and Bautista Road and undeveloped land to the west. For safety purposes, a fence will be installed around the perimeter of the proposed Bautista Substation. However, as the proposed Bautista Substation site is primarily surrounded by undeveloped land and the fencing around the site would not interfere with access to nearby existing uses, project impacts to the physical arrangement of the community would be less than significant.

a) No Impact. The proposed transmission line replacement alignment crosses multiple Riverside County zoning designations which include Rural Residential (R-R-2 1/2, R-R-5 and R-R-20); General Commercial (C-1/CP); C-P-S (Scenic Highway Commercial); M-M (Manufacturing – Medium); and M-SC (Manufacturing – Service Commercial) and multiple Riverside County General Plan land use designations, such as Rural Residential, Rural Community – Estate Density Residential, Rural Community – Very Low Density Residential, Agriculture, Light Industrial, and Commercial Retail. The proposed project would utilize existing utility poles and would not result in any changes to land use. The zoning designation for the proposed Bautista Substation site (APN: 576-060-040) is R-R-2 1/2 (Rural Residential), and the General Plan land use designation is Rural Community - Estate Density Residential. According to the Riverside County Code of Ordinances Section 17.16.010, structures and facilities necessary and incidental to the development and transmission of electrical power are a permitted use in the R-R zone. Therefore, the project would not conflict with any land use plan, policy, or regulation and there would be no impacts.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
MINERAL RESOURCES Would the project:				
25. Mineral Resources a) Result in the loss of availability of a known mineral resource that would be of value to the region or the residents of the State?	☐	☐	☐	☒
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒
c) Potentially expose people or property to hazards from proposed, existing, or abandoned quarries or mines?	☐	☐	☐	☒

Source(s): Riverside County General Plan Figure OS-6 ("Mineral Resource Zones"), California Geological Survey (CGS) Mineral Land Classification

Findings of Fact:

a) No Impact: According to Figure OS-6 of the Riverside County General Plan, the project site lies in an area that is unstudied. As a result, mineral resources in the project area have yet to be identified. However, the project site is located along existing roadways and utility corridors and does not entail development of new lands. Therefore, the project would not result in the loss of known mineral resources of value to the region or residents of the State, and the project would have no impact.

b) No Impact: As stated above under response 'a,' the project site does not contain any identified mineral resources. Implementation of the project entails replacement of approximately 3.1 miles of existing electricity transmissions lines and construction of the proposed Bautista Substation. The project does not include mining or extensive grading operations that would result in the loss of availability of a locally important mineral resource recovery site identified in the Riverside County General Plan or on the CGS mineral land classification map viewer. Therefore, the project would have no impact.

c) No Impact: As stated above under responses 'a' and 'b,' the project does not include mining or extensive grading operations. There are no active or existing surface mines or State classified or designated mineral resource areas located adjacent to the project site (The Diggings 2021). There were no mining claims on properties adjacent to the project site (The Diggings 2021). The project would not expose people or property to mining hazards since the project site is located along existing roadways and utility corridors. Therefore, the project would have no impacts.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
NOISE Would the project result in:				
26. Airport Noise a) For a project located within an airport land use plan or, where such a plan has not been adopted, within two (2) miles of a public airport or public use airport would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒
b) For a project located within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

Source(s): Riverside County General Plan Safety Element Background Technical Report Figure 1-22 ("Inventory of Airport Locations in Relation to Ground Shaking Risk"), County of Riverside Airport Facilities Map

Findings of Fact:

a) and b). No Impact: There are no airports located in the project area or Anza vicinity. The nearest airport is the Ward Ranch Airport, located approximately 12 miles to the south. Therefore, the project would not expose people working on the project to excessive noise levels from airports or airstrips.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
27. Noise Effects by the Project a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan, noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐
b) Generation of excessive ground-borne vibration or ground-borne noise levels?	☐	☐	☒	☐

Source(s): Noise and Vibration Study (Rincon 2021d; Appendix G), FTA Transit Noise and Vibration Assessment Manual, Riverside County Code

Findings of Fact:

a) Less Than Significant Impact:
Construction. Construction of the project would involve the use of noise-generating equipment during various phases, including transport of personnel and materials to the site, heavy

machinery used in grading and clearing the site, pneumatic post drivers to install foundation supports for solar array modules, as well as equipment used during construction of the proposed solar arrays, infrastructure improvements, and related structures. Emergency diesel generators may be used during construction activities. The project would include the use of up to four pieces of heavy equipment during the construction of the substation and transmission line replacement. Grading and clearing activities are anticipated to require three pieces of heavy equipment. The project would not replace the transmission lines simultaneously with construction of the substation. Construction activities would be subject to Riverside County policies and regulations. Heavy construction activities would normally occur on-site between the hours of 6:00 a.m. and 6:00 p.m. during the months of June through September and 7:00 a.m. and 6:00 p.m. during the months of October through May, which is during the allowed hours for construction listed in Section 9.52.020(I) of the Riverside County Code. Riverside County does not specify a construction noise threshold. Therefore, the Federal Transit Administration's (FTA's) threshold of 80 A-weighted decibels (dBA) equivalent continuous noise level (L_{eq}) for residential land uses is used in the analysis.

Replacement of electricity transmission lines may occur as close as 50 feet from residences to the north and south of the project alignment. Noise levels from maximum construction activities would attenuate to approximately 79 dBA L_{eq} or less at 50 feet. This noise level would be less than the FTA's threshold of 80 dBA L_{eq} for residential land uses. Additionally, noise levels associated with transmission line replacement would be short in duration, as it typically takes one to two days to string new lines at each existing utility pole. Based on the estimated noise levels, these land uses would not be significantly impacted during transmission line replacement. While construction noise would be noticeable, the noise levels identified in this analysis are considered acceptable for construction activities during daytime hours and would not result in adverse impacts to local residents. Therefore, a less than significant impact would occur.

The nearest residence to the proposed Bautista Substation would be approximately 75 feet to the east of the substation pad. Construction of the proposed Bautista Substation would potentially involve the use a backhoe, crane, tractor, and a trencher. Based on the construction activity and a noise attenuation rate of 6 dBA per doubling of distance for point sources of noise, the construction noise levels would attenuate to 79 dBA L_{eq} at 75 feet. This noise level would be less than the FTA's threshold of 80 dBA L_{eq} for residential land uses. Therefore, a less than significant impact would occur.

Construction of the project would increase traffic noise off site from commuting construction workers and from haul trucks bringing materials to and from the project site. Project components would be constructed over a seven-month period. This could expose nearby residences to cumulative noise from construction traffic. This analysis of cumulative effects focuses on the effects of concurrent construction traffic for the worst-case scenario (i.e., traffic generated by the peak construction period). The project would potentially result in 12 daily trips by workers and up to 10 round trips for deliveries. Using a worst-case scenario where worker trips and all vendor deliveries occurred on the same day, the project would increase the average daily traffic (ADT) volume on SR 371 in the vicinity of the project site from 7,100 to 7,122 (Caltrans 2021). Based on these traffic volumes and the relative energy increase associated with the increase ADT, traffic noise levels would increase by less than 1 dBA. This increase is well below the threshold of perception (typically considered 3 dBA) and would not result in a change in traffic noise in the project area. Therefore, the short-term increase in traffic noise from project construction would be less than significant.

Operational. The project would operate continuously, seven days a week. Stationary noise sources during operation would be the proposed transformer at the substation, potential noise from collector lines, and facility maintenance traffic.

Substation. Electrical equipment produces a discrete low-frequency humming noise. The noise from transformers is produced by alternating current flux in the core, which causes it to vibrate. The transformers would be located centrally within the substation. Based on performance specifications for oil–immersed power transformers, the proposed transformer would produce an audible noise level of 74 dBA at 3 feet. At 130 feet (the distance from the proposed transformer to the nearest sensitive receivers), this would attenuate to 41.3 dBA L_{eq}. This noise level would not exceed the County's lowest noise level limit of 45 dBA L_{eq} at the nearest residential property line.

Transmission Line. The proposed project includes the replacement of existing electricity transmission lines with 34.5 kV transmission lines. When a transmission line is in operation, an electric field is generated in the air surrounding the conductors forming a "corona." The corona results from the partial breakdown of the electrical insulating properties of the air surrounding the conductors. When the intensity of the electric field at the surface of the conductor exceeds the insulating strength of the surrounding air, a corona discharge occurs at the conductor surface, representing a small dissipation of heat and energy. Some of the energy may dissipate in the form of small local pressure changes that result in audible noise or in radio or television interference. Audible noise generated by corona discharge is characterized as a hissing or crackling sound that may be accompanied by a 120 Hertz hum.

Slight irregularities or water droplets on the conductor and/or insulator surface accentuate the electric field strength near the conductor surface, thereby making corona discharge and the associated audible noise more likely. Therefore, audible noise from transmission lines is generally a foul weather (wet conductor) phenomenon. However, during fair weather, insects and dust on the conductors can also serve as sources of corona discharge.

The typical noise levels for transmission lines with wet conductors are 33.5 dBA with a 138-kV line, 40.4 dBA with a 240 kV line, and 51.0 dBA with a 356 kV line. The proposed project includes 34.5-kV transmission lines, which would have much lower voltage than those for which wet-weather noise level data is available. Therefore, this analysis conservatively assumes that the proposed transmission lines would produce a noise level consistent with that of a 138-kV transmission line, which would be approximately 33.5 dBA directly below the conductor. A noise level of this magnitude would typically be indistinguishable from background noise in the existing environment and would only occur during infrequent wet weather conditions. Furthermore, this noise level would not exceed the County's lowest noise level limit of 45 dBA $L_{eq,}$ even at residential properties over which the transmission line may pass. Therefore, this impact would be less than significant.

Traffic Noise. Once the project is complete, vehicle trips to the project site would be associated with inspections and maintenance of the substation and transmission line. A significant noise impact would occur if roadway noise would increase by more than 3 dBA. With the relatively minor increase in traffic volumes from project operation (four annual roundtrips), project operation would increase traffic noise levels by less than 1 dBA. As a barely perceptible noise increase is typically considered an increase of 3 dBA, this increase would be imperceptible to the nearest residents. Therefore, the project's noise increases from operational traffic would have a less than significant impact.

b) Less Than Significant Impact.

Construction. Installation of underground (below grade) facilities would be anticipated to generate the highest vibration levels. Below grade activities would require the use of a trencher/backhoe to dig and backfill trenches for installing the ground grid, cables, foundations, footings, and duct banks. Other activities such as grading and facility construction would also

generate vibrations however, these vibrations levels would be less intense and would occur for a shorter duration.

The nearest sensitive receivers to construction activities at the proposed substation site would be residences located approximately 75 feet to the east of the substation pad. Using California Department of Transportation (Caltrans) recommended procedure for applying propagation adjustments (Caltrans 2020), predicted worst-case vibration levels of approximately 0.026 inches per second (in/sec) peak particle velocity (ppv) at the nearest sensitive receiver could occur from excavation and related below grade activities. These vibration levels would not exceed Caltrans' recommended standards with respect to the prevention of structural building damage (0.4 in/sec ppv for residential buildings) or exceed maximum-acceptable-vibration standard with respect to human response (0.24 in./sec. ppv for residences and buildings where people normally sleep) at nearby existing vibration-sensitive land uses (Caltrans 2020).

Table 7 Typical Construction Equipment Vibration Levels

Equipment	ppv at 25 feet (in/sec)
Haul Trucks	0.076
Large Bulldozer	0.089

Source: Caltrans 2020

The nearest sensitive receivers that may be subjected to groundborne vibration or groundborne noise levels from pole installation, wire stringing, and installation of the telecommunication equipment would be residences located along the proposed transmission line route. Residences are situated as close as 50 feet from potential pole installation locations. The use of equipment, such as an auger/drill or backhoe, has the potential to generate groundborne vibrations. Predicted worst-case vibration levels of approximately 0.042 in/sec ppv at the nearest sensitive receiver could occur from drilling. These vibration levels would not exceed Caltrans' recommended standards or the maximum-acceptable-vibration standard with respect to human response (Caltrans 2020). Therefore, construction of the project would result in a less than significant impact related to the generation of groundborne vibration and noise levels.

Operation. Operation of the project would consist of routine maintenance activities and emergency repairs. These activities would be unlikely to produce groundborne vibration. Operation of transformers at the proposed substation could produce groundborne vibration; however, groundborne vibrations would be perceptible only in the immediate vicinity (i.e., less than 25 feet) of the transformer pad, if at all. No other component of the project would generate vibrations during operation. Thus, impacts resulting from the generation of excessive groundborne vibration during operation of the project would be less than significant.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
PALEONTOLOGICAL RESOURCES:				
28. Paleontological Resources a) Directly or indirectly destroy a unique paleontological resource, site, or unique geologic feature?	☐	☒	☐	☐

Source(s): Rincon Consultants Paleontological Resources Assessment Report (Rincon 2021e; Appendix H)

Rincon completed a paleontological resources assessment, which included a geologic map review, description of geologic units or formations underlying the project area, a literature and database review of recorded fossil occurrences, and a museum records search at the Natural History Museum of Los Angeles County. Following the paleontological inventory and assessment, the paleontological sensitivity rating of the geologic units underlying the project area were assigned based on the findings, and the potential impacts to nonrenewable paleontological resources from the project development was determined in accordance with the guidelines of the Society of Vertebrate Paleontology (2010). The results of the paleontological resources assessment and impact analysis were summarized in a Paleontological Resources Assessment Report (Rincon 2020), which is included in Appendix H of this document.

Findings of Fact:

a) Less than significant impact with mitigation. The museum records search conducted for the paleontological resources assessment did not identify any known paleontological resources localities within the bounds of the project area. Additionally, Quaternary alluvial sediments mapped at ground surface in the project area have low paleontological sensitivity. Ground disturbance in these areas would not impact scientifically significant paleontological resources unless it impacts older buried Pleistocene sediments at depth that have high paleontological sensitivity. Quaternary alluvium may be 25 feet thick or more above crystalline bedrock. Therefore, because the proposed project design would rely heavily on existing infrastructure and would involve only minimal surficial ground disturbance, sensitive Pleistocene deposits that may be present in the subsurface are unlikely to be impacted by project ground disturbance activity. Impacts to paleontological resources would not occur during ground disturbance within Mesozoic-Cenozoic igneous and metamorphic bedrock because there is not potential for fossil preservation within those geologic units.

   Based on the analysis described in this assessment, impacts to paleontological resources are not anticipated as a result of the project due to the negligible paleontological resource potential of the geologic units underlying the project area and minimal ground-disturbance proposed. As a result, further paleontological resource management is not recommended. If an unanticipated fossil discovery is made during the course of project development, Mitigation Measure PALEO-1 would require that a Qualified Professional Paleontologist be retained in accordance with the SVP (2010) guidelines to examine the find and to determine if further paleontological resources mitigation is warranted under CEQA.

Mitigation:

PALEO-1 Unanticipated Discovery of Paleontological Resources

In the event a fossil is discovered during construction of the project, excavations within 50 feet of the find shall be temporarily halted or delayed until the discovery is examined by a qualified paleontologist in accordance with SVP standards. The project applicant shall include a standard inadvertent discovery

clause in every construction contract to inform contractors of this requirement. If the find is determined to be significant, the applicant shall retain a project paleontologist, defined as a paleontologist who meets the SVP standards for Qualified Professional Paleontologist, to direct all mitigation measures related to paleontological resources. The Qualified Paleontologist shall design and carry out a data recovery plan consistent with the SVP standards (2010).

Monitoring: No monitoring is required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
POPULATION AND HOUSING Would the project:				
29. Housing a) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
b) Create a demand for additional housing, particularly housing affordable to households earning 80% or less of the County's median income?	☐	☐	☐	☒
c) Induce substantial unplanned 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)?	☐	☐	☐	☒

Source(s): Project Application Materials, Riverside County General Plan Housing Element

Findings of Fact:

a) No Impact: Construction and operation of the project would not displace any existing housing or people in the project site. Some disturbance may occur to homes or residents adjacent to the proposed transmission line replacement alignment during construction activities; however, temporary or permanent displacement of residents would not occur due to project construction or operation. Therefore, the project would have no impact on housing.

b) and c) No Impact: As stated in the project description, the project entails replacement approximately 3.1 miles of electricity transmission lines and construction of the new Bautista Substation. The project does not include any residential or commercial uses that would generate housing or additional infrastructure needs. Project construction would be completed with local and regional contractors licensed for such work, and operation and maintenance of project infrastructure and facilities would be the responsibility of the project proponent, AEC. Therefore, project construction and operation would not generate a substantial demand for additional housing beyond the existing residential stock available in locally in Anza or regionally throughout Eastern Riverside County, nor induce substantial unplanned population growth in the area that would require additional supporting infrastructure. The project would have no impact.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
PUBLIC SERVICES Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services:				
30. Fire Services	☐	☐	☐	☒

Source(s): Riverside County General Plan Safety Element, CAL FIRE, Riverside County Fire Department

Findings of Fact:
No Impact: The County of Riverside contracts with the State of California Department of Forestry and Fire Protection (also known as "CAL FIRE") for fire protection. Under CAL FIRE management, the Riverside County Fire Department (RCFD) operates 95 fire stations and 17 battalions. In addition to serving all areas of Riverside County, the RCFD also serves portions of San Diego and Orange Counties. Fire suppression, emergency medical, rescue, and fire prevention services for urban and wildland fires are all provided by RCFD. The fire station nearest to the project site is Station 29 (56560 SR 371), located on the proposed transmission line replacement alignment at the northeast corner of SR 371 and Contreras Road.

The project does not include any residential or commercial uses that would increase demand for fire services. The proposed transmission line replacement alignment is located in existing roadways and utilities corridors, and the proposed Bautista Substation is located adjacent to existing commercial uses. Access for emergency vehicles may potentially be obstructed by construction activities in the project area. Construction traffic would occur on a temporary basis and may require traffic control and temporary lane closures in certain locations along the project alignment. However, full-lane or shoulder closures would be short-term, would only occur during allowed construction hours, and public notification procedures would be in place to minimize disruption to flow of traffic and to prevent delays for emergency access. Traffic control measures would follow County of Riverside standards and Caltrans requirements lists in the Manual on Uniform Traffic Control Devices (Caltrans 2014). Compliance with applicable County of Riverside and Caltrans standards would ensure the project results in no impacts to fire service-related emergency access along the project alignment during temporary construction activities.

Furthermore, the implementation of fire suppression measures in compliance with the Riverside County Fire Department Fire Protection and Emergency Medical Services Strategic Master Plan. As such, the proposed Bautista Substation would be equipped with the MONARCH Dry Chemical storage building fire suppression system, which would be automatically activated in the event of a fire at the proposed substation. Therefore, the project would result in no impact to fire services.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
31. Sheriff Services	☐	☐	☐	☒

Source(s): Riverside County General Plan, Riverside County Sheriff Department

Findings of Fact:
No Impact: The County of Riverside provides community police operations and maintains correctional facilities in its jurisdiction. There are nine Sheriff Department stations and five adult correction or detention centers located throughout the County. The Sheriff station nearest to the project site is the Hemet Station (43950 Acacia Avenue, Suite B, Hemet), located approximately 17 miles northwest of the project site.

As stated in Section 30, Fire Services, the project does not include any residential or commercial uses that would increase demand for fire services. The project alignment is located in existing roadways and utilities corridors, and the proposed Bautista Substation is located adjacent to existing commercial uses. Access for emergency vehicles may potentially be obstructed by construction activities in the project area. Construction traffic would occur on a temporary basis and may require traffic control and temporary lane closures in certain locations along the project alignment. However, full-lane or shoulder closures would be short-term, would only occur during allowed construction hours, and public notification procedures would be in place to minimize disruption to flow of traffic and to prevent delays for emergency access. Traffic control measures would follow County of Riverside standards and Caltrans requirements lists in the Manual on Uniform Traffic Control Devices (Caltrans 2014). Compliance with applicable County of Riverside and Caltrans standards would ensure the project results in no impacts to sheriff protection service-related emergency access along the project alignment during temporary construction activities. Furthermore, the project would include safety and lighting features to ensure visibility of the proposed Bautista Substation. Therefore, the project would result in no impact to sheriff services.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
32. Schools	☐	☐	☐	☒

Source(s): Hemet School District

Findings of Fact:
No Impact: The public schools nearest to the project site are the Hamilton School for grades K-8 (57550 Mitchell Road in Anza) and the Hamilton High School (57480 Mitchell Road in Anza), located approximately 1.5 miles north of the proposed transmission line replacement alignment. The project does not include residential or commercial uses that would increase demand for schools. The project would have no effect on the demand for schools or other public facilities and therefore would not create a need for new or physically altered facilities. Construction activities would not be proximate to any

schools and would not impact their performance objectives. Therefore, the project would have no impact on schools.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
33. Libraries	☐	☐	☐	☒

Source(s): Riverside County Library System

Findings of Fact:
No Impact: The nearest Riverside County Library System library to the project site is the Anza Library (57480 Mitchell Road in Anza) located approximately 1.5 miles north of the project alignment. As stated in Section 32, *Schools*, the project does not include residential or commercial uses that would increase demand for libraries. The project would have no effect on the demand for libraries or other public facilities and therefore would not create a need for new or physically altered facilities. Construction activities would not be proximate to any libraries and would not impact their performance objectives. Therefore, the project would have no impact on libraries.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
34. Health Services	☐	☐	☐	☒

Source(s): Riverside University Health System, Temecula Valley Hospital

Findings of Fact:
No Impact: The nearest general hospital to the project site is the Temecula Valley Hospital located at 31700 Temecula Parkway in the city of Temecula, approximately 24 miles west of the project site. The nearest public hospital to the project site is the Riverside University Health System Medical Center located at 26520 Cactus Avenue in the city of Moreno Valley, approximately 38 miles northwest of the project site. As stated in Section 32, *Schools*, the project does not include residential or commercial uses that would increase demand for health services.

However, in the event of an emergency during project construction, workers may seek health services from the Temecula Valley Hospital or other health facilities. The number of construction workers anticipated to complete the project would not create a substantial demand for health services due to the temporary nature of construction activities. As standard practice for such utility infrastructure projects, construction contractors for the project would be responsible for providing and implementing a construction management plan which would include procedures for maintaining safe work conditions.

Therefore, the project would have no effect on the demand for health services or other public facilities and therefore would not create a need for new or physically altered facilities. Construction activities would not be proximate to any health service facilities and would not impact their performance objectives. Therefore, the project would have no impact on health services.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
RECREATION Would the project:				
35. Parks and Recreation a) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☒
b) Increase the use of existing neighborhood or regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒
c) Be located within a Community Service Area (CSA) or recreation and park district with a Community Parks and Recreation Plan (Quimby fees)?	☐	☐	☐	☒

Source(s): Riverside County Parks, Anza Civic Improvement League

Findings of Fact:

a) through c) No Impact: The park nearest to the project site is Minor Park, located along SR 371 just west of Contreras Road, adjacent to the project alignment. Minor Park is owned and maintained by the Anza Civic Improvement League, a 501(c)4 non-profit corporation. The project does not include residential and commercial uses that would result in population growth and or attract additional visitors to the area. The project would not increase the use of existing neighborhood and regional parks or other recreational facilities such that physical deterioration of the facility would occur or be accelerated. Construction workers for the project and employees of AEC would likely reside locally in Anza and neighboring communities, and they would have a negligible impact on the use of recreational facilities. People visiting the parks along the project alignment could be impacted or disturbed by the presence of construction activities or noise during project construction. However, construction activities would be temporary and public noticing procedures would be carried out prior to construction activities to reduce disturbance to park uses. The project site is located in existing roadways and utilities corridors, and the project alignment would not traverse Minor Park. Therefore, the project would have no impact on recreational facilities. Furthermore, the project site is not located in a community service area or recreation and park district with a Community Parks and Recreation Plan. Therefore, the project would have no impact on parks and recreational facilities.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
36. Recreational Trails a) Include the construction or expansion of a trail system?	☐	☐	☐	☒

Source(s): Riverside County General Plan Figure C-6 ("Riverside County Trails and Bikeway Systems"), National Park Service

Findings of Fact:

a) No Impact: According to Figure C-6 of the Riverside County General Plan Circulation Element (2020) and trail maps provided by the National Park Service, the historic Juan Bautista de Anza trail traverses Anza on a northwest to southeast axis (National Park Service 2020). The historic range of the Juan Bautista de Anza trail traverses a segment of the project alignment on SR 371 between Bautista Road and Contreras Road. However, the project does not include the construction or expansion of a trail system, nor residential and commercial uses that would increase demand for a trail system. Therefore, the project would have no impact on recreational trails.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
TRANSPORTATION Would the project:				
37. Transportation a) Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?	☐	☐	☒	☐
b) Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	☐	☐	☐	☒
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment)?	☐	☐	☐	☒
d) Cause an effect upon, or a need for new or altered maintenance of roads?	☐	☐	☐	☒
e) Cause an effect upon circulation during the project's construction?	☐	☐	☒	☐
f) Result in inadequate emergency access or access to nearby uses?	☐	☐	☒	☐

Source(s): Riverside County General Plan, Riverside County Congestion Management Program, Caltrans 2017 Traffic Volumes and Highway Design Manual, Project Application Materials

Findings of Fact:

a) Less than Significant Impact: The project would not conflict with a plan, ordinance or policy containing measures of effectiveness for the performance of the circulation system. The operation of the proposed transmission line replacement and Bautista Substation would be located outside of travel lanes of SR 371 and local roadways and would not impact the performance levels of any roadway located within the project area. Construction traffic may be present on a temporary basis, which may require temporary traffic control and temporary closure of one lane of traffic. Although minimal work within lanes is anticipated, it may be necessary to close one travel lane to ensure the safety of construction workers and passing vehicles. Full-lane or shoulder closures would be short-term and occur only during construction hours. Traffic control would be implemented per County of Riverside standards and Caltrans requirements presented in the Manual on Uniform Traffic Control Devices (Caltrans 2014). Therefore, the project would have a less than significant impact.

b) No Impact: To further the State's commitment to the goals of Senate Bill 375, Assembly Bill 32, and Assembly Bill 1358, Senate Bill 743 adds Chapter 2.7, Modernization of Transportation Analysis for Transit-Oriented Infill Projects, to Public Resources Code Section 21099. A key provision of Senate Bill 743 is the replacement of automobile delay with vehicle miles traveled (VMT) as the metric for transportation impacts for all projects evaluated under CEQA. Under Senate Bill 743, the focus of the environmental impacts of transportation shift from driver delay to reduction of GHG emissions, creation of multimodal networks, and promotion of a mix of land uses. As a result, level of service standards become local policy thresholds as adopted among individual agencies rather than CEQA thresholds. CEQA Guidelines Section 15064.3(b), adopted in response to Senate Bill 743, identifies criteria for evaluating transportation impacts. Specifically, the guidelines state VMT exceeding an applicable threshold of significance may indicate a significant impact. The Governor's Office of Planning and Research *Technical Advisory on Evaluating Transportation Impacts in CEQA* (2018) states, "Projects that generate or attract fewer than 110 trips per day generally may be assumed to cause a less-than-significant

VMT impact." The project would generate minimal traffic during operation (maintenance and inspection activities once a year) and would not exceed OPR's screening threshold of 110 trips per day; therefore, the project would have no impact.

c) No Impact: The project site is located on existing roadways and utilities corridors that currently support similar project infrastructure (i.e., electricity transmission lines and poles). The project does not entail any changes to the design, routing, or operation of existing roadways that would substantially increase hazards due to geometric design features. Therefore, the project would have no impact.

d) No Impact: As stated above in response 'c,' the project site is located on existing roadways and utilities corridors that currently support similar project infrastructure (i.e., electricity transmission lines and poles). The project would not affect, require new maintenance roads, nor alter maintenance roads during operation and maintenance. The current alignment is accessed for maintenance via existing roadways, road shoulders, and rights-of-way as needed, which would be the case for the proposed project. Therefore, the project would have no impact.

e) Less than Significant Impact: As stated above in response 'a,' construction traffic may be present on a temporary basis, which may require temporary traffic control and temporary closure of one lane of traffic. Although minimal work within lanes is anticipated, it may be necessary to close one travel lane to ensure the safety of construction workers and passing vehicles. Full-lane or shoulder closures would be short-term and occur only during construction hours. Traffic control would be implemented per County of Riverside standards and Caltrans requirements presented in the Manual on Uniform Traffic Control Devices (Caltrans 2014). Therefore, the project would have a less than significant impact.

f) Less than Significant Impact: As stated above in responses 'c' and 'd,' the project would not alter existing roadways or access to adjacent uses. The project would not alter emergency access along SR 371 and local roadways upon completion. However, as noted in responses 'a' and 'e,' construction traffic may be present on a temporary basis, which may require temporary traffic control and temporary closure of one lane of traffic. Traffic control would be implemented per County of Riverside standards and Caltrans requirements presented in the Manual on Uniform Traffic Control Devices (Caltrans 2014). Therefore, the project would have a less than significant impact.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
38. Bike Trails a) Include the construction or expansion of a bike system or bike lanes?	☐	☐	☐	☒

Source(s): Riverside County General Plan Figure C-6 ("Riverside County Trails and Bikeway Systems")
Findings of Fact:

a) No Impact: According to Figure C-6 of the Riverside County General Plan Circulation Element (2020), there are no bicycle trails located in the project area. The segment of SR 371 in the project site vicinity contains a 10-foot buffer on each side of the travel lanes, demarcated by a

solid white line, which can be used as Class II bicycle lanes following the direction of motor vehicles. However, the project does not include the construction or expansion of bicycle trails or lanes, nor residential and commercial uses that would increase demand for bicycle trails or lanes. Therefore, the project would have no impact on bicycle trails.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
TRIBAL CULTURAL RESOURCES Would the project cause a substantial adverse change in the significance of a Tribal Cultural Resource, defined in Public Resources Code section 21074 as either a site, feature, place, or cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American Tribe, and that is:				
39. Tribal Cultural Resources a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1 (k)?	☐	☒	☐	☐
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1? (In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.)	☐	☒	☐	☐

Source(s): County Archaeologist, AB 52 Tribal Consultation, Rincon Consultants Cultural Resources Assessment (Rincon 2020; Appendix C)

Findings of Fact:

a), b) Less than Significant Impact with Mitigation Incorporated: Changes in the California Environmental Quality Act, effective July 2015, require that the County address a new category of cultural resources – Tribal Cultural Resources – not previously included within the law's purview. Tribal Cultural Resources are those resources with inherent tribal values that are difficult to identify through the same means as archaeological resources. These resources can be identified and understood through direct consultation with the tribes who attach tribal value to the resource. Tribal cultural resources may include Native American archaeological sites, but they may also include other types of resources such as cultural landscapes or sacred places. The appropriate treatment of Tribal Cultural Resources is determined through consultation with tribes.

In compliance with Assembly Bill 52 (AB52), notices regarding this project were mailed to all requesting tribes on July 14, 2021. No response was received from Cahuilla Band of Indians, Soboba Band of Indians, the Pechanga Band of Luiseno Indians, the Ramona Band of Cahuilla Indians, Morongo Band, Colorado River Indian Tribes, Santa Rosa, Rincon Band of Luiseno Indians, or the Pala Band of Mission Indians.

Consultation was requested by the Agua Caliente Band of Cahuilla Indians in a letter dated August 11, 2021. In this letter, Agua Caliente Tribal Historic Preservation Officer Patricia Tuck requested that the property be surveyed for cultural resources and a copy of the results, including the cultural resources records search, be provided to the tribe. In addition, a recommendation was made to have an Agua Caliente-approved monitor present during any ground disturbing activities. The cultural report and the conditions of approval were provided to Agua Caliente on March 01, 2022, and consultation was concluded.

Although no specific Tribal Cultural Resources were identified, the consulting tribe expressed concerns that the project site has the potential for as-yet-unidentified subsurface Tribal Cultural Resources to be present. The tribe requested that an Agua Caliente-approved Native American monitor be present during ground-disturbing activities so that any unanticipated finds would be handled in a timely and culturally appropriate manner. Based on information provided by the consulting tribe, a Native American Monitor will be required to be present during ground disturbing activities for the proposed project as part of Mitigation Measure ARC-4, outlined in Section 9, *Archaeological Resources*.

The project would also be required to adhere to State Health and Safety Code Section 7050.5 in the event that human remains are encountered by ensuring no further disturbance occurs until the County Coroner has made the necessary findings as to origin of the remains. Furthermore, pursuant to Public Resources Code Section 5097.98(b), remains shall be left in place and free from disturbance until a final decision as to the treatment and their disposition has been made. These requirements are included in Mitigation Measure ARC-7, outlined in Section 9, *Archaeological Resources*.

CEQA requires the Lead Agency to address any unanticipated cultural resources discoveries during project construction. Therefore, Mitigation Measure ARC-6 outlined in Section 9, *Archaeological Resources*, which dictates the procedures to be followed should any unanticipated cultural resources be identified during ground disturbing activities, would be required for the proposed project.

With the inclusion of these mitigation measures, impacts to any previously unidentified Tribal Cultural Resources would be less than significant.

Mitigation:
See Mitigation Measures ARC-3, ARC-6, and ARC-7 in Section 9, *Archaeological Resources*.

Monitoring: The applicant, under supervision of the qualified archaeologist and Native American monitor, will be responsible for monitoring for compliance with the mitigation measures above as well as those outlined in Section 9, *Archaeological Resources*.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
UTILITIES AND SERVICE SYSTEMS Would the project:				
40. Water a) Require or result in the relocation or construction of new or expanded water, wastewater treatment, or storm water drainage systems, whereby the construction or relocation would cause significant environmental effects?	☐	☐	☐	☒
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?	☐	☐	☐	☒

Source(s): Project Application Materials

Findings of Fact:

a) and b) No Impact: The project entails replacement of electrical transmission lines on existing utility poles and the construction of a new electrical substation. The project does not include any residential or commercial uses that require the provision of water. The project would not physically alter existing facilities nor result in the construction of new or physically altered facilities. Therefore, the project would have no impact.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
41. Sewer a) Require or result in the construction of new wastewater treatment facilities, including septic systems, or expansion of existing facilities, whereby the construction or relocation would cause significant environmental effects?	☐	☐	☐	☒
b) Result in a determination by the wastewater treatment provider that serves or may service the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☒

Source(s): Project Application Materials

Findings of Fact:

a) and b) No Impact: The project does not include residential or commercial users that would result in the construction or expansion of new wastewater treatment facilities or septic systems. The project does not include uses that would generate wastewater. Therefore, the project would have no impacts to sewer systems.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
42. Solid Waste a) Generate solid waste in excess of State or Local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☒	☐
b) Comply with federal, state, and local management and reduction statutes and regulations related to solid wastes including the CIWMP (County Integrated Waste Management Plan)?	☐	☐	☒	☐

Source(s): Project Application Materials

Findings of Fact:

a) and b) Less than Significant Impact: Construction activities may temporarily generate solid waste, including soil spoils, pavement debris, or other construction waste, which would be disposed of in accordance with all applicable federal, State, and local statutes and regulations. Minimal waste would be associated with the proposed project, as this part of the project would not require ground disturbance or erection of new facilities. All excavated soil generated during construction of the proposed Bautista Substation would be reused on site and would not require any disposal. All inert construction waste would be disposed of at nearby transfer stations that accept construction waste in the area, such as the Anza Transfer Station located approximately 1.8 miles southeast of the project site. Due to the temporary nature of construction and minimal amount of construction waste anticipated, the project would not generate quantities of solid waste that would account for a substantial percentage of the total daily regional permitted capacity available at the Anza Transfer Station or other landfills where project waste may be hauled. Therefore, waste generated by project construction activities would not exceed the available capacity at the landfills serving the project area that would accept debris generated by the project.

As standard practice, the County complies with all applicable laws and regulations related to solid waste generation, collection, and disposal. The project would result in a short-term and temporary increase in solid waste generation during construction but would not substantially affect standard solid waste operations of any landfill accepting waste. Recycling and reuse activities during construction would comply with the California Integrated Waste Management Act of 1989 (AB 939). Once operational, the project would include unmanned facilities and would not generate solid waste. Therefore, solid waste impacts from the project would be less than significant.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
43. Utilities				
Would the project impact the following facilities requiring or resulting in the construction of new facilities or the expansion of existing facilities, whereby the construction or relocation would cause significant environmental effects?				
a) Electricity?	☐	☐	☒	☐
b) Natural gas?	☐	☐	☐	☒
c) Communications systems?	☐	☐	☐	☒
d) Street lighting?	☐	☐	☐	☒
e) Maintenance of public facilities, including roads?	☐	☐	☐	☒
f) Other governmental services?	☐	☐	☐	☒

Source(s): Project Application Materials, Utility Companies

Findings of Fact:

a) Less than Significant Impact: The project would include the replacement of approximately 3.1 miles of electricity transmission lines and construction of a new substation. The proposed transmission line replacement alignment and proposed Bautista Substation would not be located on Cahuilla Reservation or U.S. Forest Service lands. As discussed in Section 10, *Energy*, of this document, the project would not result in a net increase of electricity use. Furthermore, as demonstrated in this IS-MND, overall project impacts would be less than significant or less than significant with mitigation. Upon project completion, no further expansion or alteration of the electrical facilities would be required as a result of this project and impacts related to electric power would be less than significant.

b) No Impact: The project does not include residential or commercial uses that would require natural gas service, and implementation of the project would not involve the relocation of existing natural gas facilities. Therefore, no impact related to natural gas facilities would occur.

c) No Impact: The project would require telecommunications within the proposed Bautista Substation. However, the project area is already served by the requisite telecommunication infrastructure, and no expansion or relocation of telecommunications facilities would be required as a result of the project. Therefore, no impacts related to telecommunications facilities would occur.

d) No Impact: The project would not involve the creation of new roads or streets which would require the expansion of the street lighting system. Therefore, there would be no impacts to street lighting.

e) No Impact: As discussed above in response 'd,' the project would not involve the creation of new roads or streets that would require expanded maintenance to access the project site. Additionally, as explained in Section 37, *Transportation*, of this document, the project would not generate significant increases in traffic in the area because no residential or commercial uses are proposed by the project. The proposed project is located on existing roadways and utilities corridors, which currently support existing uses and are accessed for infrastructure maintenance activities. Therefore, the project would have no impact on the maintenance of public roads and facilities.

f) No Impact: The project does not involve any residential or commercial uses that would increase the population in the area or otherwise require the provision of government services. Therefore, the project would not require the expansion of government services and no impacts would occur.

Mitigation: No mitigation is required.

Monitoring: No monitoring is required.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
WILDFIRE If located in or near a State Responsibility Area ("SRA"), lands classified as very high fire hazard severity zone, or other hazardous fire areas that may be designated by the Fire Chief, would the project:				
44. Wildfire Impacts a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	☐	☒
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☐	☒
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☐	☒
e) Expose people or structures either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?	☐	☒	☐	☐

Source(s): Riverside County General Plan Safety Element Background Technical Report Figure 4-3 ("Wildfire Susceptibility Riverside County"), Riverside County Multi-Jurisdictional Local Hazard Mitigation Plan, Cal OES Fire Risk Map

Findings of Fact:

a) No Impact: The project would not substantially impair implementation of an adopted emergency response or evacuation plan. The project site is located on existing roadways and utilities corridors and would not alter access and traffic patterns on existing roadways as stated in responses under Section 37, *Transportation*. The project does not include residential or commercial uses, for which people or property would be endangered in the event of a wildfire or emergency. Therefore, the project would have no impact.

b) No Impact: According to the Geotechnical Investigation completed by Sladden (2019) for the project, the project site is relatively flat, and excessive grading would not be required to implement the project. There are no factors such as slope, prevailing winds, or otherwise that would exacerbate wildfire risks as a result of the project. The project does not include residential or commercial uses, for which people or property would be exposed to wildfire risks or pollutant concentrations from wildfires. Therefore, the project would have no impact.

c) No Impact: The project site is located on existing roadways and utilities corridors, which would continue to be used to maintain the realigned electricity transmission lines during project operations. The project does not require the installation and subsequent maintenance of additional associated infrastructures that would exacerbate fire risk or result in other environmental impacts. The project includes the installation, maintenance, and operation of the MONARCH Dry Chemical storage building fire suppression system for the proposed Bautista

Substation to extinguish any fires that may occur on or encroach the site. Therefore, the project would have no impact.

d) No Impact: The project entails replacement of electrical transmission lines in existing roadways and utilities corridors and the construction and operation of a new substation. The project site is relatively flat, and excessive grading would not be required to implement the project, as stated above in response 'b.' The project would not substantially alter drainage patterns nor result in substantial stormwater runoff since the proposed transmission line replacement alignment and proposed Bautista Substation would not undergo excessive grading or increases in impermeable surfaces. As such, the proposed project would not contribute to downstream flooding or landslides due to post-fire instability. Bautista Substation. Therefore, the project would have no impact.

e) Less than Significant Impact with Mitigation Incorporated: According to the Riverside County General Plan and the CAL FIRE Hazard Severity Zones Map (2022), the project site is located in moderate and very high fire risk areas in the State Responsibility Area. The project would not expose people or structures to significant risk of loss, injury, or death involving wildland fires because no major structures for residential or office/commercial occupancy would be constructed as part of the project. Furthermore, as stated above in response 'c,' the project includes the installation, maintenance, and operation of the MONARCH Dry Chemical storage building fire suppression system for the proposed Bautista Substation to extinguish any fires that may occur or encroach on the site. Likely fire risks may be from improper use and disposal of cigarettes and construction activities that generate sparks. However, implementation of Mitigation Measure WILD-1 as part of the project design would ensure that risks of wildfires and impacts to people and structures adjacent to the project site are less than significant.

Mitigation:
WILD-1 Wildland Fire Prevention: The applicant shall prepare a Fire Safety Plan, which will include measures for fire hazard training, fire protection equipment, and provisions for smoking in the project area during construction activities and operation.

Monitoring: No monitoring is required

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
MANDATORY FINDINGS OF SIGNIFICANCE Does the Project:				
45. Have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self- sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐

Source(s): Staff Review, Project Application Materials, Rincon Consultants Biological Resources Assessment Report (Rincon 2021b; Appendix B), Rincon Consultants MSHCP Consistency Analysis and Habitat Assessment Report (Rincon 2021c; Appendix B), Geotechnical Investigation for the Proposed Bautista Substation (Sladden Engineering 2019; Appendix E), Rincon Consultants Cultural Resources Assessments (Rincon 2022; Appendix C)

Findings of Fact:

Less than Significant Impact with Mitigation Incorporated: Implementation of the proposed project would not substantially degrade the quality of the environment, substantially reduce the habitat of fish or wildlife species, cause a fish or wildlife populations to drop below self-sustaining levels, threaten to eliminate a plant or animal community, or reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory. As discussed in Section 7, *Biological Resources*, the project involves minimal disturbance to habitat along the proposed project area and would impact less than 1-acre of habitat at the proposed Bautista Substation site. With implementation of Mitigation Measures BIO-1 through BIO-5, all impacts to biological resources would be less than significant. Additionally, as discussed in Section 8, *Historic Resources*, and Section 9, *Archaeological Resources*, potential impacts to previously recorded and unanticipated cultural and archaeological resources would be avoided or minimized to a less than significant level with implementation of mitigation measures ARC-1 to ARC-6. Section 28, *Paleontological Resources*, finds that the project is not likely to impact paleontological resources of scientific significance due to low potential for these resources to occur in the sediments underlying the project area and the minimal ground disturbance associated with the project. Mitigation Measure PALEO-1 would be implemented in order to minimize potential impacts to previously unidentified paleontological resources to a less than significant level. Furthermore, as discussed in Section 39, *Tribal Cultural Resources*, the records search and two responses received during tribal consultation indicate that is unlikely that significant Tribal Cultural Resources exist in the project area. While there would be minimal ground disturbance as part of the project, Mitigation Measure TCR-1 would be implemented in order to minimize potential impacts to previously unidentified Tribal Cultural Resources. Implementation of the previously discussed mitigation measures during construction of the proposed Bautista Substation and transmission line replacement would ensure that any previously undiscovered cultural, archeological, Tribal, or paleontological resources would not be significantly impacted by ground disturbing activities.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
46. Have impacts which are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, other current projects and probable future projects)?	☐	☐	☐	☒

Source(s): Staff Review, Project Application Materials

Findings of Fact:
No Impact: The project does not have impacts which are individually limited, but cumulatively considerable. As described in the discussion of environmental checklist Sections 1 through 44, with respect to all environmental issues, the proposed project would not result in significant and unmitigable impacts to the environment; all anticipated impacts associated with project construction and operation would be either less than significant or less than significant with mitigation incorporated. This is largely due to the fact that project construction activities would be temporary and confined to the existing utility rights-of-way and a one-acre area for the proposed substation. Furthermore, project operational activities would not significantly alter the environmental baseline condition.

Cumulatively considerable impacts could occur if the construction of other projects occurs at the same time as the proposed project and in the same vicinity, such that the effects of similar impacts of multiple projects combine to expose adjacent sensitive receptors to greater levels of impact than would occur under the proposed project. However, there are currently no ongoing, planned, or pending projects in the vicinity of the proposed transmission line replacement or proposed Bautista Substation. As the project would not have significant, unmitigable impacts and no other projects are planned or ongoing in the vicinity, the project would not have impacts that would be cumulatively considerable.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
47. Have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☒	☐

Source(s): Staff Review, Project Application Materials

Findings of Fact:
Less than Significant Impact: The proposed project would not result in environmental effects which would cause substantial adverse effects on human beings, either directly or indirectly. In general, impacts to human beings are associated with air quality, hazards and hazardous materials, and noise impacts. As detailed in the preceding sections, the project would not result, either directly or indirectly, in substantial adverse effects related to air quality or noise. As discussed in Section 21, *Hazards and Hazardous Materials*, project operation will not involve the routine use of extremely hazardous materials and implementation of Mitigation Measure HAZ-1 would minimize the risk for accidental leakages or spills and ensure that any spills would be cleaned according to regulatory requirements. Compliance with applicable rules and regulations during project construction and operation, along with Mitigation

Measure HAZ-1, would reduce potential impacts on human beings related to hazards and hazardous materials to a less than significant level.

VI. EARLIER ANALYSES

Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration as per California Code of Regulations, Section 15063 (c) (3) (D). In this case, a brief discussion should identify the following:

Earlier Analyses Used, if any: N/A

Location Where Earlier Analyses, if used, are available for review:

Location: County of Riverside Planning Department
4080 Lemon Street, 12th Floor
Riverside, CA 92505

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Appendix A

Air Quality and Greenhouse Gas Study

Anza Electric Cooperative Electricity Transmission Line Project

Air Quality and Greenhouse Gas Emissions Study

prepared for

Anza Electric Cooperative, Inc.
58470 U.S. Highway 371
Anza, California 92539

prepared by

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August 2022

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1 Project Description and Impact Summary

1.1 Introduction

This study analyzes the potential air quality and greenhouse gas (GHG) emissions impacts of the proposed construction and operation of the Anza Electric Cooperative Electricity Transmission Line Project (project). Rincon Consultants, Inc. (Rincon) prepared this study under contract to Anza Electric Cooperative, Inc. (AEC). Table 1 provides a summary of project impacts.

Table 1 Summary of Impacts

Impact Statement	Proposed Project's Level of Significance	Applicable Recommendations
Air Quality		
Conflict with or obstruct implementation of the applicable air quality plan?	Less than significant impact	None
Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard?	Less than significant impact	None
Expose sensitive receptors to substantial pollutant concentrations?	Less than significant impact	None
Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	Less than significant impact	None
Greenhouse Gas Emissions		
Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	Less than significant impact	None
Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	No impact	None

Applicable Air Quality Regulations

The project would comply with the following existing requirements and reasonably-anticipated standard conditions based on local, state, or federal regulations and laws required independently of environmental review. These measures are not included as mitigation measures since the project is required to comply with them through state and local regulations.

Fugitive Dust Control

The project would comply with all applicable standards of the South Coast Air Quality Management District (SCAQMD), including the following provisions of Rule 403:

- All unpaved demolition and construction areas shall be wetted at least twice daily during excavation and construction, and temporary dust covers shall be used to reduce dust emissions and meet SCAQMD Rule 403.
- The construction area shall be kept sufficiently dampened to control dust caused by grading and hauling, and at all times provide reasonable control of dust caused by wind.

- All clearing, earth moving, or excavation activities shall be discontinued during periods of high winds (i.e., greater than 15 miles per hour), so as to prevent excessive amounts of dust.
- All dirt/soil shall be secured by trimming, watering, or other appropriate means to prevent spillage and dust.
- All dirt/soil materials transported off-site shall be either sufficiently watered or securely covered to prevent excessive amounts of dust.
- General contractors shall maintain and operate construction equipment so as to minimize exhaust emissions.
- Trucks having no current hauling activity shall not idle but be turned off.
- Exposed surfaces shall be maintained at a minimum soil moisture of 12 percent and vehicle speeds shall be limited to 15 miles per hour on unpaved roads.

Engine Idling

In accordance with Section 2485 of Title 13 of the California Code of Regulations, the idling of all diesel-fueled commercial vehicles (weighing over 10,000 pounds) during construction shall be limited to five minutes at any location.

Engine Emission Standards

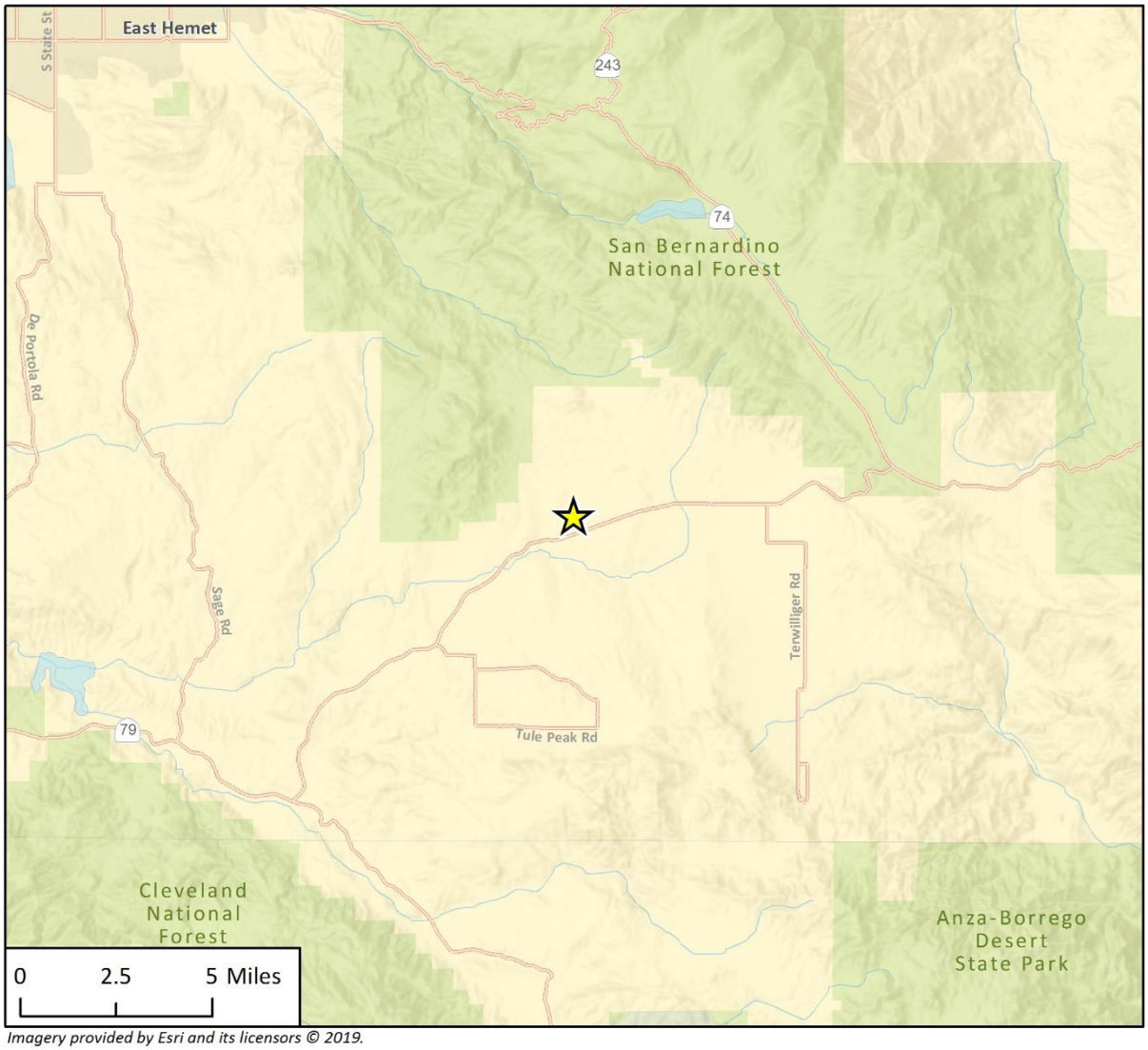
In accordance with Section 93115 of Title 17 of the California Code of Regulations, operation of any stationary, diesel-fueled, compression-ignition engines shall meet specified fuel and fuel additive requirements and emission standards.

1.2 Project Summary

Project Location

The proposed project is in Riverside County, California, as shown in Figure 1. The project components would be located primarily within the rights-of-way of State Route 371 (SR 371) in the unincorporated community of Anza. The remainder of the project alignment would be located within existing AEC utility easements that are generally north of SR 371 and along existing local roadways. The project location and alignment are shown in Figure 2. The project alignment begins east of the proposed Bautista substation and proceeds along SR 371 for approximately 3.1 miles, ending at the intersection of Kirby Road and SR 371, where it would connect to an existing transmission line. The project site includes Assessor's Parcel Number 576-060-040 for the proposed Bautista Substation and 96 parcels for the proposed realignment. Given the scope of the project, the project site has multiple zoning designations, including R-R-2 1/2, R-R-5 and R-R-20 (Rural Residential); C-1/CP (General Commercial); C-P-S (Scenic Highway Commercial); M-M (Manufacturing – Medium); and M-SC (Manufacturing – Service Commercial). The project site also has multiple General Plan land use designations, including Rural Residential, Rural Community – Estate Density Residential, Rural Community – Very Low Density Residential, Agriculture, Light Industrial, and Commercial Retail.

Figure 1 Regional Project Location



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Project Location

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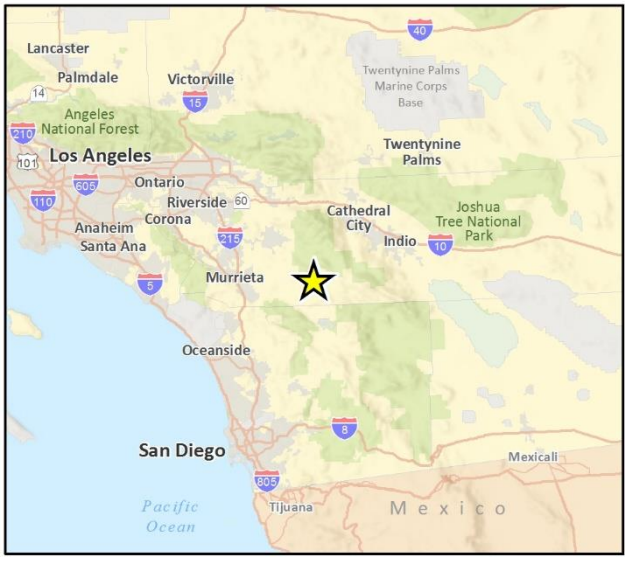

Figure 2 Project Site Location

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Fig2 Project Location 2210707

AEC's existing land-based utilities systems in the project area consist of wooden utility poles, approximately 35 to 45 feet in height with single- or three-phase crossarm mounted distribution lines attached. The existing poles currently carry electric power distribution lines. The project site is defined as the footprint of the existing electrical utilities system components and the approximately four-mile-long corridor along SR 371 and local roadways for the new upgrades that will be installed on existing poles. The project area is defined as the 50-foot wide access corridor along SR 371 and the 40-foot wide access corridor along local roadways, the construction laydown areas, and the access roads that would be used for construction.

Project Description

The project would replace the existing electricity transmission lines with approximately four miles of realigned transmission lines and would construct the Bautista Substation. The new transmission lines would be strung on existing utilities poles. The proposed Bautista Substation would consist of electrical distribution facilities.

Construction Activities

Construction of all project components would occur over approximately 7 months beginning as early as January 2022. Construction of the project would include the following types of activities:

- Site preparation
- Grading and earthwork
- Concrete foundations
- Structural steel work
- Electrical/instrumentation work
- Pole installation
- Collector line installation

According to the project applicant, the project construction work area would encompass approximately 2,500 square feet, or 0.06 acre, of ground disturbance on a daily basis. Construction traffic would access the project from SR 371 and existing local roads. It is estimated that up to four workers per day (during all construction periods) would be required to construct the project. On-road traffic would consist of employee and vendor vehicle trips. It is estimated the project would require approximately one vendor delivery per week during pole placement and substation construction.

Heavy construction is expected to occur between 7:00 a.m. and 5:00 p.m., Monday through Friday. Additional hours may be necessary to make-up schedule deficiencies or to complete critical construction activities. No nighttime activities are anticipated. Materials and supplies would be delivered to the project site by truck. Truck deliveries would normally occur during daylight hours.

Earthmoving activities are expected to be limited to the construction/improvement of necessary access roads and the substation. Final grading may include revegetation with low lying grass or applying earth-binding materials to disturbed areas. No soil import or export would be required.

Operational Activities

Once completed, the project would generally be limited to maintenance and inspection. The project would operate continuously, seven days a week. The project would not require a dedicated operations staff. Maintenance and inspection activities are anticipated to occur once a year.

2 Background

2.1 Air Quality Background

Regional and Local Climate and Meteorology

Regionally, the project site is within the South Coast Air Basin (SCAB), which is bounded by the Pacific Ocean to the west; the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east; and San Diego County to the south. The SCAB includes Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties, in addition to the San Gorgonio Pass area in Riverside County. The regional climate in the SCAB is semi-arid and is characterized by warm summers, mild winters, infrequent seasonal rainfall, moderate daytime onshore breezes, and moderate humidity. Regional air quality in the SCAB is primarily influenced by meteorology and a wide range of emission sources, such as dense population centers, substantial vehicular traffic, and industry.

Regional air pollutant emissions in the SCAB are generated primarily by stationary and mobile sources. Stationary sources can be divided into two major subcategories: point and area sources. Point sources occur at a specific location and are often identified by an exhaust vent or stack. Examples include boilers or combustion equipment that produce electricity or generate heat. Area sources are widely distributed and include such sources as residential and commercial water heaters, painting operations, lawn mowers, agricultural fields, landfills, and some consumer products. Mobile sources refer to emissions from motor vehicles, including tailpipe and evaporative emissions, and are classified as either on-road or off-road. On-road sources may be legally operated on roadways and highways. Off-road sources include aircraft, ships, trains, and self-propelled construction equipment. Air pollutants can also be generated by the natural environment, such as when high winds suspend fine dust particles.

Locally, the predominant wind direction in the vicinity of the project site is from the west and the average wind speed is approximately 5.2 miles per hour (Iowa Environmental Mesonet 2019). The maximum average daily temperature in the project area ranges from approximately 55 degrees Fahrenheit (°F) in December to approximately 86°F in July and August, and the minimum average daily temperature ranges from approximately 29°F in December to 54°F in August. Total precipitation in the project area averages approximately 26.2 inches annually.

Air Quality Regulations

Federal Air Quality Regulations

NATIONAL AMBIENT AIR QUALITY STANDARDS

The Clean Air Act (CAA) was enacted in 1970 and amended in 1977 and 1990 [42 United States Code (USC) 7401] for the purposes of protecting and enhancing the quality of the nation's air resources to benefit public health, welfare, and productivity. In 1971, to achieve the purposes of Section 109 of the CAA [42 USC 7409], the United States Environmental Protection Agency (U.S. EPA) developed primary and secondary National Ambient Air Quality Standards (NAAQS). NAAQS have been designated for the following criteria pollutants of primary concern: ozone, carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulate matter with diameters of up to ten microns

(PM_{10}) and up to 2.5 microns ($PM_{2.5}$), and lead (Pb). The primary NAAQS "in the judgment of the Administrator[1], based on such criteria and allowing an adequate margin of safety, are requisite to protect the public health" and the secondary standards are to "protect the public welfare from any known or anticipated adverse effects associated with the presence of such air pollutant in the ambient air" [42 USC 7409(b)(2)]. The U.S. EPA classifies specific geographic areas as either "attainment" or "non-attainment" areas for each pollutant based on the comparison of measured data with the NAAQS. States are required to adopt enforceable plans, known as a State Implementation Plan (SIP), to achieve and maintain air quality meeting the NAAQS. State plans also must control emissions that drift across state lines and harm air quality in downwind states. Table 2 lists the current federal standards for regulated pollutants.

Table 2 Federal and State Ambient Air Quality Standards

Pollutant	Averaging Time	NAAQS	CAAQS
Ozone	1-Hour	–	0.09 ppm
	8-Hour	0.070 ppm	0.070 ppm
Carbon Monoxide	8-Hour	9.0 ppm	9.0 ppm
	1-Hour	35.0 ppm	20.0 ppm
Nitrogen Dioxide	Annual	0.053 ppm	0.030 ppm
	1-Hour	0.100 ppm	0.18 ppm
Sulfur Dioxide	Annual	–	–
	24-Hour	–	0.04 ppm
	1-Hour	0.075 ppm	0.25 ppm
PM_{10}	Annual	–	20 µg/m^3
	24-Hour	150 µg/m^3	50 µg/m^3
$PM_{2.5}$	Annual	12 µg/m^3	12 µg/m^3
	24-Hour	35 µg/m^3	–
Lead	30-Day Average	–	1.5 µg/m^3
	3-Month Average	0.15 µg/m^3	–

ppm = parts per million; NAAQS = National Ambient Air Quality Standards; CAAQS = California Ambient Air Quality Standards
µg/m^3 = micrograms per cubic meter
Source: California Air Resources Board (CARB) 2016

The SCAQMD is the designated air quality control agency in the SCAB, which is a non-attainment area for the federal standards for ozone and $PM_{2.5}$. The Los Angeles County portion of the SCAB is also designated nonattainment for the federal standard for lead. The SCAB is designated unclassifiable or in attainment for all other federal standards.

[1] The term "Administrator" means the Administrator of the Environmental Protection Agency

SAFER AFFORDABLE FUEL-EFFICIENT VEHICLES RULE

On September 27, 2019, the U.S. E.PA and the National Highway Traffic Safety Administration published the Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule Part One: One National Program. The SAFE Rule Part One revokes California's authority to set its own GHG emissions standards and to adopt its own zero-emission vehicle mandates. On April 30, 2020, the U.S. E.PA and the National Highway Traffic Safety Administration published Part Two of the SAFE Vehicles Rule, which revised corporate average fuel economy and carbon dioxide emissions standards for passenger cars and trucks of model years 2021-2026 such that the standards increase by approximately 1.5 percent each year through model year 2026 as compared to the approximately five percent annual increase required under the 2012 standards (National Highway Traffic Safety Administration 2020). To account for the effects of the SAFE Vehicles Rule, CARB released off-model adjustment factors to adjust criteria air pollutant and GHG emissions outputs from the EMFAC model.

State Air Quality Regulations

CALIFORNIA AMBIENT AIR QUALITY STANDARDS

The California Clean Air Act (CCAA) was enacted in 1988 (California Health and Safety Code §39000 et seq.). Under the CCAA the state has developed the California Ambient Air Quality Standards (CAAQS), which are generally more stringent than the NAAQS. Table 2 lists the current state standards for regulated pollutants. In addition to the federal criteria pollutants, the CAAQS also specify standards for visibility-reducing particles, sulfates, hydrogen sulfide, and vinyl chloride. Similar to the federal CAA, the CCAA classifies specific geographic areas as either "attainment" or "non-attainment" areas for each pollutant, based on the comparison of measured data within the CAAQS. The SCAB is a non-attainment area for the state standards for ozone, PM_{10} and $PM_{2.5}$ (SCAQMD 2016).

TOXIC AIR CONTAMINANTS

A toxic air contaminant (TAC) is an air pollutant that may cause or contribute to an increase in mortality or serious illness or which may pose a present or potential hazard to human health. TACs may result in long-term health effects such as cancer, birth defects, neurological damage, asthma, or genetic damage, or short-term acute effects such as eye watering, respiratory irritation, runny nose, throat pain, and headaches. TACs are considered either carcinogenic or non-carcinogenic based on the nature of the health effects associated with exposure. For carcinogenic TACs, potential health impacts are evaluated in terms of overall relative risk expressed as excess cancer cases per one million exposed individuals. Non-carcinogenic TACs differ in that there is generally assumed to be a safe level of exposure below which no negative health impact is believed to occur. These levels are determined on a pollutant-by-pollutant basis.

TACs include both organic and inorganic chemical substances. One of the main sources of TACs in California is diesel engines that emit exhaust containing solid material known as diesel particulate matter (DPM); however, TACs may be emitted from a variety of common sources, including gasoline stations, motor vehicles, dry cleaners, industrial operations, painting operations, and research and teaching facilities.

In 1983, the California Legislature enacted a program to identify the health effects of TACs and to reduce exposure to these contaminants to protect the public health (Assembly Bill [AB] 1807: Health and Safety Code Sections 39650–39674). The Legislature established a two-step process to address

the potential health effects from TACs. The first step is the risk assessment (or identification) phase. The second step is the risk management (or control) phase of the process.

The California Air Toxics Program establishes the process for the identification and control of TACs and includes provisions to make the public aware of significant toxic exposures and for reducing risk. Additionally, the Air Toxics "Hot Spots" Information and Assessment Act (AB 2588, 1987, Connelly Bill) was enacted in 1987 and requires stationary sources to report the types and quantities of certain substances routinely released into the air. The goals of the Air Toxics "Hot Spots" Act are to collect emission data, identify facilities having localized impacts, ascertain health risks, notify nearby residents of significant risks, and reduce those significant risks to acceptable levels. The Children's Environmental Health Protection Act, California Senate Bill 25 (Chapter 731, Escutia, Statutes of 1999), focuses on children's exposure to air pollutants. The act requires California Air Resources Board (CARB) to review its air quality standards from a children's health perspective, evaluate the statewide air quality monitoring network, and develop any additional air toxic control measures needed to protect children's health.

STATE IMPLEMENTATION PLAN

The SIP is a collection of documents that set forth the state's strategies for achieving the NAAQS. In California, the SIP is a compilation of new and previously submitted plans, programs (such as monitoring, modeling, and permitting), district rules, state regulations, and federal controls. The CARB is the lead agency for all purposes related to the SIP under state law. Local air districts and other agencies, such as the Department of Pesticide Regulation and the Bureau of Automotive Repair, prepare SIP elements and submit them to CARB for review and approval. CARB then forwards SIP revisions to the U.S. EPA for approval and publication in the Federal Register. All of the items included in the California SIP are listed in the Code of Federal Regulations (CFR) at 40 CFR 52.220.

As the regional air quality management district, the SCAQMD is responsible for preparing and implementing the portion of the SIP applicable to the SCAB. The air pollution control district for each county adopts rules, regulations, and programs to attain federal and state air quality standards and appropriates money (including permit fees) to achieve these objectives.

Local Air Quality Regulations

Under state law, the SCAQMD is required to prepare a plan for air quality improvement for pollutants for which the District is in non-compliance. The SCAQMD updates the plan every three years. Each SCAQMD Air Quality Management Plan (AQMP) is an update of the previous plan and has a 20-year horizon. The latest AQMP, the 2016 AQMP, was adopted on March 3, 2017. It incorporates new scientific data and notable regulatory actions that have occurred since adoption of the 2012 AQMP, including the approval of the new federal 8-hour ozone standard of 0.070 parts per million (ppm) that was finalized in 2015. The Final 2016 AQMP addresses several state and federal planning requirements and incorporates new scientific information, primarily in the form of updated emissions inventories, ambient measurements, and meteorological air quality models. The Southern California Association of Governments' (SCAG) projections for socio-economic data (e.g., population, housing, employment by industry) and transportation activities from the 2016 Regional

Transportation Plan/Sustainable Communities Strategy (2016 RTP/SCS) are integrated into the 2016 AQMP.[2]

The plan builds upon the approaches taken in the 2012 AQMP for the attainment of federal PM and ozone standards and highlights the significant amount of reductions to be achieved. It emphasizes the need for interagency planning to identify additional strategies to achieve reductions within the timeframes allowed under the federal CAA, especially in the area of mobile sources. The 2016 AQMP also includes a discussion of emerging issues and opportunities, such as fugitive toxic particulate emissions, zero-emission mobile source control strategies, and the interacting dynamics among climate, energy, and air pollution. The plan also demonstrates strategies for attainment of the new federal 8-hour ozone standard and vehicle miles traveled (VMT) emissions offsets, pursuant to recent U.S. EPA requirements (SCAQMD 2017).

Criteria Pollutants

Ozone

Ozone is produced by a photochemical reaction (triggered by sunlight) between nitrogen oxides (NO_X) and reactive organic gases (ROG[3]). NO_X are formed during the combustion of fuels, while ROG are formed during combustion and evaporation of organic solvents. Because ozone requires sunlight to form, it usually occurs in substantial concentrations between the months of April and October. Ozone is a pungent, colorless, toxic gas with direct health effects on humans including respiratory and eye irritation and possible changes in lung functions. Groups most sensitive to ozone include children, the elderly, people with respiratory disorders, and people who exercise strenuously outdoors.

Carbon Monoxide

CO is a local pollutant that is found in high concentrations near fuel combustion equipment and other sources of CO. The primary source of CO, a colorless, odorless, poisonous gas, is automobile traffic. Therefore, elevated concentrations are usually found near areas of high traffic volumes. The health effects from CO are related to its affinity for hemoglobin in the blood. At high concentrations, CO reduces the amount of oxygen in the blood, causing heart difficulty in people with chronic diseases, reduced lung capacity, and impaired mental abilities.

Nitrogen Dioxide

NO_2 is a byproduct of fuel combustion, with the primary source being motor vehicles and industrial boilers and furnaces. The principal form of nitrogen oxide produced by combustion is nitric oxide (NO), but NO reacts rapidly to form NO_2, creating the mixture of NO and NO_2 commonly called NO_X. NO_2 is an acute irritant. A relationship between NO_2 and chronic pulmonary fibrosis may exist, and an increase in bronchitis in young children at concentrations below 0.3 ppm may occur. NO_2 absorbs

[2] On September 3, 2020, SCAG's Regional Council formally adopted the 2020-2045 RTP/SCS (titled Connect SoCal). However, the 2016 AQMP was adopted prior to this date and relies on the demographic and growth forecasts of the 2016-2040 RTP/SCS; therefore, these forecasts are utilized in the analysis of the project's consistency with the AQMP.

[3] Organic compound precursors of ozone are routinely described by a number of variations of three terms: hydrocarbons (HC), organic gases (OG), and organic compounds (OC). These terms are often modified by adjectives such as total, reactive, or volatile, and result in various acronyms, such as TOG (total organic gases), ROG (reactive organic gases), ROC (reactive organic compounds), and VOC (volatile organic compounds). While most of these differ in some significant way from a chemical perspective, two groups are important from an air quality perspective: non-photochemically reactive in the lower atmosphere, or photochemically reactive in the lower atmosphere (ROG and VOC). SCAQMD uses the term VOC to denote organic precursors.

blue light, gives a reddish-brown cast to the atmosphere, and reduces visibility. It can also contribute to the formation of ozone/smog and acid rain.

Suspended Particulates

Atmospheric particulate matter is comprised of finely divided solids and liquids such as dust, soot, aerosols, fumes, and mists. The particulates that are of particular concern are PM_{10} (small particulate matter which measures no more than 10 microns in diameter) and $PM_{2.5}$ (fine particulate matter which measures no more than 2.5 microns in diameter). The characteristics, sources, and potential health effects associated with PM_{10} and $PM_{2.5}$ can be different. Major man-made sources of PM_{10} are agricultural operations, industrial processes, combustion of fossil fuels, construction, demolition operations, and entrainment of road dust into the atmosphere. Natural sources include windblown dust, wildfire smoke, and sea spray salt. The finer $PM_{2.5}$ particulates are generally associated with combustion processes as well as formation in the atmosphere as a secondary pollutant through chemical reactions. $PM_{2.5}$ is more likely to penetrate deeply into the lungs and poses a serious health threat to all groups, but particularly to the elderly, children, and those with respiratory problems. More than half of the small and fine particulate matter that is inhaled into the lungs remains there, which can cause permanent lung damage. These materials can damage health by interfering with the body's mechanisms for clearing the respiratory tract or by acting as carriers of an absorbed toxic substance.

Current Air Quality

The SCAQMD operates a network of air quality monitoring stations throughout the SCAB. The purpose of the monitoring stations is to measure ambient concentrations of pollutants and determine whether ambient air quality meets the California and federal standards. The nearest monitoring station with available data is the Palm Springs-Fire Station monitoring station located at 590 Racquet Club Avenue in Palm Springs, approximately 21 miles northeast of the project site. Table 3 indicates the number of days that each of the federal and state standards has been exceeded at this monitoring station in each of the last three years for which data is available. At this station, the federal and state 8-hour ozone standards and the state one-hour ozone standard were exceeded each year from 2017 to 2019. In addition, the federal PM_{10} standard was exceeded in 2018, and the state PM_{10} standard was exceeded in 2019. No other state or federal standards were exceeded at the Palm Springs-Fire Station monitoring station.

Table 3 Ambient Air Quality

Pollutant	2018	2019	2020
Ozone (ppm), maximum concentration 8-hours	0.099	0.084	0.094
Number of days of federal and state exceedances (>0.070 ppm)	56	34	49
Ozone (ppm), maximum concentration 1-hour	0.111	0.100	0.119
Number of days of state exceedances (>0.09 ppm)	11	5	9
Carbon Monoxide (ppm), Highest 8-Hour Average	0.8	0.7	0.5
Number of days above CAAQS or NAAQS (>9.0 ppm)	0	0	0
Nitrogen Dioxide (ppm), maximum concentration 1-hour	0.043	0.041	0.047
Number of days of state exceedances (>0.18 ppm)	0	0	0
Number of days of federal exceedances (>0.100 ppm)	0	0	0
Particulate Matter <10 microns ($\mu g/m^3$), maximum concentration 24-hours	422.3	75.6	129.8
Number of days of state exceedances (>50 $\mu g/m^3$)	0	6	*
Number of days of federal exceedances (>150 $\mu g/m^3$)	2	0	*
Particulate Matter <2.5 microns ($\mu g/m^3$), maximum concentration 24-hours	30.2	15.5	23.9
Estimated number of days of federal exceedances (>35 $\mu g/m^3$)	0	0	0

* = Insufficient data is available to determine the value.
Source: CARB 2021a and U.S. EPA 2021a

Sensitive Receptors

CARB and the Office of Environmental Health Hazard Assessment (OEHHA) have identified the following groups of individuals as the most likely to be affected by air pollution: the elderly over 65, children under 14, infants (including in utero in the third trimester of pregnancy), and persons with cardiovascular and chronic respiratory diseases such as asthma, emphysema, and bronchitis (CARB 2005, OEHHA 2015). Some land uses are considered more sensitive to air pollution than others due to the types of population groups or activities involved and are referred to as sensitive receptors. Examples of these sensitive receptors are residences, schools, hospitals, religious facilities, and daycare centers.

The closest sensitive receptors include single-family residences located approximately 25 feet south of the proposed transmission line alignment along SR 371, primarily between Hamilton Drive and 125 feet west of Hill Street. There is also a residential property located approximately 40 feet to the east of the proposed substation fence line.

2.2 Greenhouse Gas Emissions Background

Greenhouse Gas Overview

Gases that absorb and re-emit infrared radiation in the atmosphere are called greenhouse gases (GHGs). The gases that are widely seen as the principal contributors to human-induced climate change include carbon dioxide (CO_2), methane (CH_4), nitrous oxides (N_2O), fluorinated gases such as hydrofluorocarbons (HFCs) and perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). Water vapor is excluded from the list of GHGs because it is short-lived in the atmosphere, and its atmospheric concentrations are largely determined by natural processes, such as oceanic evaporation.

GHGs are emitted by both natural processes and human activities. Of these gases, CO_2 and CH_4 are emitted in the greatest quantities from human activities. Emissions of CO_2 are largely byproducts of fossil fuel combustion, whereas CH_4 largely results from off-gassing associated with agricultural practices and landfills.

Man-made GHGs, many of which have greater heat-absorption potential than CO_2, include fluorinated gases and SF_6 (U.S. EPA 2021b). However, the project does not include the installation of new facilities that would use, contain, or generate fluorinated gases or SF_6; therefore, fluorinated gases are not analyzed further in this document. Different types of GHGs have varying global warming potentials (GWPs). The GWP of a GHG is the potential of a gas or aerosol to trap heat in the atmosphere over a specified timescale (generally, 100 years). Because GHGs absorb different amounts of heat, a common reference gas (CO_2) is used to relate the amount of heat absorbed to the amount of the gas emissions, referred to as "carbon dioxide equivalent" (CO_2e), and is the amount of a GHG emitted multiplied by its GWP. Carbon dioxide has a 100-year GWP of one. By contrast, CH_4 has a GWP of 30, meaning its global warming effect is 30 times greater than carbon dioxide on a molecule per molecule basis (Intergovernmental Panel on Climate Change [IPCC] 2021)[4] N_2O has a global warming potential of 273 (IPCC 2021).

Greenhouse Gas Emissions Inventory

Federal

Total United States (U.S.) GHG emissions were 6,558 MMT of CO_2e in 2019. Emissions decreased by 1.7 percent from 2018 to 2019; since 1990, total U.S. emissions have increased by an average annual rate of 0.06 percent for a total increase of 1.8 percent between 1990 and 2019. The decrease from 2018 to 2019 reflects the combined influences of several long-term trends, including population changes, economic growth, energy market shifts, technological changes such as improvements in energy efficiency, and decrease carbon intensity of energy fuel choices. In 2019, the industrial and transportation end-use sectors accounted for 30 percent and 29 percent, respectively, of nationwide GHG emissions while the commercial and residential end-use sectors accounted for 16 percent and 15 percent of nationwide GHG emissions, respectively, with electricity emissions distributed among the various sectors (U.S. EPA 2021b).

California

Based on CARB's California Greenhouse Gas Inventory for 2000-2019, California produced 418.2 MMT of CO_2e in 2019. The major source of GHG emissions in California is the transportation sector, which comprises 40 percent of the state's total GHG emissions. The industrial sector is the second largest source, comprising 21 percent of the state's GHG emissions while electric power accounts for approximately 14 percent (CARB 2021b). The magnitude of California's total GHG emissions is due in part to its large size and large population compared to other states. However, a factor that reduces California's per capita fuel use and GHG emissions as compared to other states is its relatively mild climate. In 2016, the State of California achieved its 2020 GHG emission reduction target of reducing emissions to 1990 levels as emissions fell below 431 MMT of CO_2e (CARB 2021b). The annual 2030 statewide target emissions level is 260 MMT of CO_2e (CARB 2017a).

[4] The Intergovernmental Panel on Climate Change's (2021) *Sixth Assessment Report* determined that methane has a GWP of 30. However, the 2017 Climate Change Scoping Plan published by CARB uses a GWP of 25 for methane, consistent with the Intergovernmental Panel on Climate Change's (2007) *Fourth Assessment Report*. Therefore, this analysis utilizes a GWP of 25.

Regional

RIVERSIDE COUNTY CLIMATE ACTION PLAN

The County of Riverside CAP, updated on December 17, 2019, identifies many GHG emissions reduction programs and regulations to meet the County's GHG reduction targets of a 49 percent decrease below 2008 levels by 2030 and an 83 percent decrease below 2008 levels by 2050. The County's targets are consistent with the State's targets of a 40 percent decrease below 1990 levels by 2030 (Senate Bill 32) and an 80 percent decrease below 1990 levels by 2050 (Executive Order S-3-05; County of Riverside 2019).

Potential Effects of Climate Change

Globally, climate change has the potential to affect numerous environmental resources through potential impacts related to future air temperatures and precipitation patterns. Scientific modeling predicts that continued GHG emissions at or above current rates would induce more extreme climate changes during the 21st century than were observed during the 20th century. Long-term trends have found that each of the past three decades has been warmer than all the previous decades in the instrumental record, and the decade from 2000 through 2010 has been the warmest. The observed global mean surface temperature for the decade from 2006 to 2015 was approximately 0.87°C (0.75°C to 0.99°C) higher than the global mean surface temperature over the period from 1850 to 1900. Furthermore, several independently analyzed data records of global and regional Land-Surface Air Temperature (LSAT) obtained from station observations agree that LSAT as well as sea surface temperatures have increased. Due to past and current activities, anthropogenic GHG emissions are increasing global mean surface temperature at a rate of 0.2°C per decade. In addition to these findings, there are identifiable signs that global warming is currently taking place, including substantial ice loss in the Arctic over the past two decades (IPCC 2014; 2018).

According to *California's Fourth Climate Change Assessment*, statewide temperatures from 1986 to 2016 were approximately 1°F to 2°F higher than those recorded from 1901 to 1960. Potential impacts of climate change in California may include loss in water supply from snowpack, sea level rise, more extreme heat days per year, more large forest fires, and more drought years (State of California 2018a). While there is growing scientific consensus about the possible effects of climate change at a global and statewide level, current scientific modeling tools are unable to predict what local impacts may occur with a similar degree of accuracy. In addition to statewide projections, *California's Fourth Climate Change Assessment* includes regional reports that summarize climate impacts and adaptation solutions for nine regions of the state as well as regionally-specific climate change case studies (State of California 2018a), including for the greater Los Angeles region that includes where the project is located in eastern Los Angeles County (State of California 2018b). Below is a summary of some of the potential effects that could be experienced statewide and in the southern California region as a result of climate change.

Air Quality

Higher temperatures, which are conducive to air pollution formation, could worsen air quality in California. Climate change may increase the concentration of ground-level ozone, but the magnitude of the effect, and therefore its indirect effects, are uncertain. As temperatures have increased in recent years, the area burned by wildfires throughout the state has increased, and wildfires have been occurring at higher elevations in the Sierra Nevada Mountains (State of California 2018a). If higher temperatures continue to be accompanied by an increase in the

incidence and extent of large wildfires, air quality would worsen. However, if higher temperatures are accompanied by wetter, rather than drier conditions, the rains would tend to temporarily clear the air of particulate pollution and reduce the incidence of large wildfires, thereby ameliorating the pollution associated with wildfires. Additionally, severe heat accompanied by drier conditions and poor air quality could increase the number of heat-related deaths, illnesses, and asthma attacks throughout the state (California Natural Resources Agency 2009).

In the southern California region, changes in meteorological conditions under climate change will affect future air quality. Regional stagnation conditions may occur more often in the future, which would increase pollutant concentrations (State of California 2018b). Hotter future temperatures will act to increase surface ozone concentrations both due to chemistry producing more ozone and higher rates of biogenic emissions, while increases of water vapor also influence chemistry by increasing ozone production in already polluted areas

Water Supply

Analysis of paleoclimatic data (such as tree-ring reconstructions of stream flow and precipitation) indicates a history of naturally and widely varying hydrologic conditions in California and the west, including a pattern of recurring and extended droughts. Uncertainty remains with respect to the overall impact of climate change on future precipitation trends and water supplies in California. For example, many southern California cities have experienced their lowest recorded annual precipitation twice within the past decade; however, in a span of only two years, Los Angeles experienced both its driest and wettest years on record (California Department of Water Resources [DWR] 2008). This uncertainty regarding future precipitation trends complicates the analysis of future water demand, especially where the relationship between climate change and its potential effect on water demand is not well understood. However, the average early spring snowpack in the western United States, including the Sierra Nevada Mountains, decreased by about 10 percent during the last century. During the same period, sea level rose over 5.9 inches along the central and southern California coast (State of California 2018a). The Sierra snowpack provides the majority of California's water supply by accumulating snow during the state's wet winters and releasing it slowly during the state's dry springs and summers. A warmer climate is predicted to reduce the fraction of precipitation falling as snow and result in less snowfall at lower elevations, thereby reducing the total snowpack (DWR 2008; State of California 2018a). The State of California projects that average spring snowpack in the Sierra Nevada and other mountain catchments in central and northern California will decline by approximately 66 percent from its historical average by 2050 (State of California 2018a).

Like the rest of the state, the southern California region is expected to face a challenging combination of decreased water supply and increased water demand (State of California 2018b). Greater interannual variability of rainfall and sharp decreases in snowpack will create surface water limitations for the region. Although the effect of climate change on average precipitation in the region is still unclear, more frequent occurrences of extreme events similar to the 2011-2016 drought could significantly decrease groundwater recharge, which is essential for the sustainability of agriculture in the region since the vast majority of water used in agriculture in the region is groundwater from local wells. Furthermore, higher temperatures mean that dry years will more quickly develop into severe drought conditions.

Hydrology

As discussed above, climate change could potentially affect the amount of snowfall, rainfall, and snowpack; the intensity and frequency of storms; flood hydrographs (flash floods, rain or snow events, coincidental high tide and high runoff events); sea level rise and coastal flooding; coastal erosion; and the potential for saltwater intrusion.

In the southern California region, despite small changes in average precipitation, dry and wet extremes are both expected to increase. By the late 21st century, the wettest day of the year is expected to increase across most of the region. Increased frequency and severity of atmospheric river events are also projected to occur for this region.

Ecosystems and Wildlife

Climate change and the potential resulting changes in weather patterns could have ecological effects on a global and local scale. Increasing concentrations of GHGs are likely to accelerate the rate of climate change. Scientists project that the annual average maximum daily temperatures in California could rise by 4.4 to 5.8°F in the next 50 years and by 5.6 to 8.8°F in the next century (State of California 2018a). Soil moisture is likely to decline in many regions, and intense rainstorms are likely to become more frequent. Rising temperatures could have four major impacts on plants and animals related to (1) timing of ecological events; (2) geographic distribution and range; (3) species' composition and the incidence of nonnative species within communities; and (4) ecosystem processes, such as carbon cycling and storage (Parmesan 2006; State of California 2018a).

Many of the impacts identified above would impact ecosystems and wildlife in the southern California region. Increases in wildfire would further remove sensitive habitat; increased severity in droughts would potentially starve plants and animals of water; and sea level rise will affect sensitive coastal ecosystems.

Greenhouse Gas Regulations

Federal Regulations

FEDERAL CLEAN AIR ACT

The U.S. Supreme Court in *Massachusetts et al. v. Environmental Protection Agency et al*. ([2007] 549 U.S. 05-1120) held that the U.S. EPA has the authority to regulate motor-vehicle GHG emissions under the federal Clean Air Act. The U.S. EPA issued a Final Rule for mandatory reporting of GHG emissions in October 2009. This Final Rule applies to fossil fuel suppliers, industrial gas suppliers, direct GHG emitters, and manufacturers of heavy-duty and off-road vehicles and vehicle engines, and requires annual reporting of emissions. In 2012, the U.S. EPA issued a Final Rule that establishes the GHG permitting thresholds that determine when CAA permits under the New Source Review Prevention of Significant Deterioration (PSD) and Title V Operating Permit programs are required for new and existing industrial facilities.

In 2014, the U.S. Supreme Court in *Utility Air Regulatory Group v. EPA* (134 S. Ct. 2427 [2014]) held that U.S. EPA may not treat GHGs as an air pollutant for purposes of determining whether a source is a major source required to obtain a PSD or Title V permit. The Court also held that PSD permits that are otherwise required (based on emissions of other pollutants) may continue to require limitations on GHG emissions based on the application of Best Available Control Technology (BACT).

SAFER AFFORDABLE FUEL-EFFICIENT VEHICLES RULE

On September 27, 2019, the U.S. E.PA and the National Highway Traffic Safety Administration published the SAFE Vehicles Rule Part One: One National Program. The SAFE Rule Part One revokes California's authority to set its own GHG emissions standards and to adopt its own zero-emission vehicle mandates. On April 30, 2020, the U.S. E.PA and the National Highway Traffic Safety Administration published Part Two of the SAFE Vehicles Rule, which revised corporate average fuel economy and CO_2 emissions standards for passenger cars and trucks of model years 2021-2026 such that the standards increase by approximately 1.5 percent each year through model year 2026 as compared to the approximately five percent annual increase required under the 2012 standards (National Highway Traffic Safety Administration 2020). To account for the effects of the SAFE Vehicles Rule, CARB released off-model adjustment factors to adjust criteria air pollutant and GHG emissions outputs from the EMFAC model.

California Regulations

CARB is responsible for the coordination and oversight of state and local air pollution control programs in California. California has numerous regulations aimed at reducing the state's GHG emissions. These initiatives are summarized below.

CALIFORNIA ADVANCED CLEAN CARS PROGRAM

AB 1493 (2002), California's Advanced Clean Cars program (referred to as "Pavley"), requires CARB to develop and adopt regulations to achieve "the maximum feasible and cost-effective reduction of GHG emissions from motor vehicles." On June 30, 2009, U.S. EPA granted the waiver of CAA preemption to California for its GHG emission standards for motor vehicles beginning with the 2009 model year. Pavley I regulates model years from 2009 to 2016 and Pavley II, which is now referred to as "LEV (Low Emission Vehicle) III GHG" regulates model years from 2017 to 2025. The Advanced Clean Cars program coordinates the goals of the Low Emissions Vehicles (LEV), Zero Emissions Vehicles (ZEV), and Clean Fuels Outlet programs, and would provide major reductions in GHG emissions. By 2025, when the rules will be fully implemented, new automobiles will emit 34 percent fewer GHGs and 75 percent fewer smog-forming emissions from their model year 2016 levels (CARB 2011).

CALIFORNIA GLOBAL WARMING SOLUTIONS ACT OF 2006

California's major initiative for reducing GHG emissions is outlined in AB 32, the "California Global Warming Solutions Act of 2006," which was signed into law in 2006. AB 32 codifies the statewide goal of reducing GHG emissions to 1990 levels by 2020 and requires CARB to prepare a Scoping Plan that outlines the main state strategies for reducing GHGs to meet the 2020 deadline. In addition, AB 32 requires CARB to adopt regulations to require reporting and verification of statewide GHG emissions. Based on this guidance, CARB approved a 1990 statewide GHG level and 2020 limit of 427 MMT of CO_2e. The Scoping Plan was approved by CARB on December 11, 2008 and included measures to address GHG emission reduction strategies related to energy efficiency, water use, and recycling and solid waste, among other measures. Many of the GHG reduction measures included in the Scoping Plan (e.g., Low Carbon Fuel Standard, Advanced Clean Car standards, and Cap-and-Trade) have been adopted since approval of the Scoping Plan.

In May 2014, CARB approved the first update to the AB 32 Scoping Plan. The 2013 Scoping Plan Update defined CARB's climate change priorities for the next five years and set the groundwork to reach post-2020 statewide goals. The update highlighted California's progress toward meeting the

"near-term" 2020 GHG emission reduction goals defined in the original Scoping Plan. It also evaluated how to align the state's longer-term GHG reduction strategies with other state policy priorities, including those for water, waste, natural resources, clean energy, transportation, and land use (CARB 2018).

SENATE BILL 32

Senate Bill (SB) 32, signed into law on September 8, 2016, extends AB 32 by requiring the state to further reduce GHGs to 40 percent below 1990 levels by 2030 (the other provisions of AB 32 remain unchanged). On December 14, 2017, CARB adopted the 2017 Scoping Plan, which provides a framework for achieving the 2030 target. The 2017 Scoping Plan relies on the continuation and expansion of existing policies and regulations, such as the Cap-and-Trade Program, as well as implementation of recently adopted policies and policies, such as SB 350 and SB 1383 (see below). The 2017 Scoping Plan also puts an increased emphasis on innovation, adoption of existing technology, and strategic investment to support its strategies. As with the 2013 Scoping Plan Update, the 2017 Scoping Plan does not provide project-level thresholds for land use development. Instead, it recommends that local governments adopt policies and locally-appropriate quantitative thresholds consistent with statewide per capita goals of six metric tons (MT) of CO_2e by 2030 and two MT of CO_2e by 2050 (CARB 2017a). As stated in the 2017 Scoping Plan, these goals may be appropriate for plan-level analyses (city, county, subregional, or regional level), but not for specific individual projects because they include all emissions sectors in the state (CARB 2017a).

SENATE BILL 97

SB 97, signed in August 2007, acknowledges that climate change is an environmental issue that requires analysis in California Environmental Quality Act (CEQA) documents. In March 2010, the California Natural Resources Agency (Resources Agency) adopted amendments to the State CEQA Guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions. The adopted guidelines give lead agencies the discretion to set quantitative or qualitative thresholds for the assessment and mitigation of GHG and climate change impacts.

SENATE BILL 375

SB 375, signed in August 2008, enhances the state's ability to reach AB 32 goals by directing CARB to develop regional GHG emission reduction targets to be achieved from passenger vehicles by 2020 and 2035. In addition, SB 375 directs each of the state's 18 major Metropolitan Planning Organizations (MPOs) to prepare a "sustainable communities strategy" (SCS) that contains a growth strategy to meet these emission targets for inclusion in the Regional Transportation Plan (RTP). On March 22, 2018, CARB adopted updated regional targets for reducing GHG emissions from 2005 levels by 2020 and 2035. SCAG was assigned targets of an 8 percent reduction in GHGs from transportation sources by 2020 and a 19 percent reduction in GHGs from transportation sources by 2035. In the SCAG region, SB 375 also provides the option for the coordinated development of subregional plans by the subregional councils of governments and the county transportation commissions to meet SB 375 requirements.

SENATE BILL 1383

Adopted in September 2016, SB 1383 requires CARB to approve and begin implementing a comprehensive strategy to reduce emissions of short-lived climate pollutants. The bill requires the strategy to achieve the following reduction targets by 2030:

- Methane – 40 percent below 2013 levels
- Hydrofluorocarbons – 40 percent below 2013 levels
- Anthropogenic black carbon – 50 percent below 2013 levels

The bill also requires the California Department of Resources Recycling and Recovery (CalRecycle), in consultation with the CARB, to adopt regulations that achieve specified targets for reducing organic waste in landfills.

SENATE BILL 100

Adopted on September 10, 2018, SB 100 supports the reduction of GHG emissions from the electricity sector by accelerating the state's Renewables Portfolio Standard Program, which was last updated by SB 350 in 2015. SB 100 requires electricity providers to increase procurement from eligible renewable energy resources to 33 percent of total retail sales by 2020, 60 percent by 2030, and 100 percent by 2045.

EXECUTIVE ORDER B-55-18

On September 10, 2018, Governor Brown issued Executive Order B-55-18, which established a new statewide goal of achieving carbon neutrality by 2045 and maintaining net negative emissions thereafter. This goal is in addition to the existing statewide GHG reduction targets established by SB 375, SB 32, SB 1383, and SB 100.

CALIFORNIA INTEGRATED WASTE MANAGEMENT ACT (ASSEMBLY BILL 341)

The California Integrated Waste Management Act of 1989, as modified by AB 341, requires each jurisdiction's source reduction and recycling element to include an implementation schedule that shows: (1) diversion of 25 percent of all solid waste by January 1, 1995, through source reduction, recycling, and composting activities; (2) diversion of 50 percent of all solid waste on and after January 1, 2000; and (3) diversion of 75 percent of all solid waste by 2020, and annually thereafter. CalRecycle is required to develop strategies to implement AB 341, including source reduction.

Regional Regulations

SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS

SCAG is the regional planning agency for Los Angeles, Orange, Ventura, Riverside, San Bernardino, and Imperial Counties, and addresses regional issues relating to transportation, the economy, community development and the environment. SCAG coordinates with various air quality and transportation stakeholders in Southern California regarding compliance with the federal and state air quality requirements, including the Transportation Conformity Rule and other applicable federal, state, and air district laws and regulations. As the federally designated MPO for the six-county Southern California region, SCAG is required by law to develop transportation activities that conform to, and are supportive of, the goals of regional and state air quality plans to attain NAAQS. In addition, SCAG is a co-producer with the SCAQMD of the transportation strategy and transportation control measure sections of the AQMP for the SCAB.

With regard to future growth, SCAG adopted the 2016 RTP/SCS in April 2016, which provides population, housing, and employment projections for cities under its jurisdiction. The growth projections in the 2016 RTP/SCS are based in part on projections originating under county and city general plans. These growth projections were utilized in the preparation of the air quality forecasts

and consistency analysis included in the 2016 AQMP.[5] SCAG formally adopted the 2020-2045 RTP/SCS on September 3, 2020 to provide a roadmap for sensible ways to expand transportation options, improve air quality and bolster Southern California's long-term economic viability. The 2020-2045 RTP/SCS builds upon the progress made through implementation of the 2016-2040 RTP/SCS and includes ten goals focused on promoting economic prosperity, improving mobility, protecting the environment, and supporting healthy/complete communities.

[5] On September 3, 2020, SCAG's Regional Council formally adopted the 2020-2045 RTP/SCS (titled Connect SoCal). However, the 2016 AQMP was adopted prior to this date and relies on the demographic and growth forecasts of the 2016-2040 RTP/SCS; therefore, these forecasts are utilized in the analysis of the project's consistency with the AQMP.

3 Impact Analysis

3.1 Methodology

Criteria pollutant and GHG emissions for project construction and operation were calculated using the Sacramento Metropolitan Air Quality Management District's (SMAQMD) Road Construction Emissions Model, Version 9.0 (SMAQMD 2018). The Road Construction Emissions Model calculates fugitive PM dust, exhaust, and off-gas emissions from grubbing/land clearing, grading/excavation, drainage/utilities/sub-grade, and paving activities associated with construction projects that are linear in nature (e.g., road or levee construction, pipeline installation, transmission lines). Although the proposed project is not located with the jurisdiction of SMAQMD, the Road Construction Emissions Model is an industry-accepted tool for estimating emissions associated with linear projects throughout California. The input data and subsequent construction and operation emission estimates for the proposed project are discussed below. Road Construction Emissions Model output files for the project are included in Appendix A to this report.

Construction Emissions

Project construction would primarily generate temporary criteria pollutant and GHG emissions from construction equipment operation on-site, construction worker vehicle trips to and from the site, and from export of materials off-site. Project construction is assumed to commence in January 2022 and conclude in July 2022. The quantity, duration, and the intensity of construction activity influences the amount of construction emissions and their related pollutant concentrations that occur at any one time. The emission forecasts modeled for this report reflect the project applicant's anticipated construction schedule. No soil import or export would be required. According to the project applicant, the project construction work area would encompass approximately 2,500 square feet, or 0.06 acre, of ground disturbance work on a daily basis. Based on information provided by the project applicant, the model included the following construction equipment for each phase, all of which were assumed to be operational for eight hours a day:

- Site preparation: one rubber-tired dozer (247 horsepower [hp]), one rubber-tired loader (203 hp), and one backhoe (97 hp)
- Grading and earthwork: one rubber-tired loader (203 hp), one skid steer loader (65 hp), and one backhoe (97 hp)
- Concrete foundations, structure steel work, electrical/instrumentation work, pole installation, and collector line installation: one crane (231 hp), two pulling rigs (classified as Off-Highway Trucks in the model; 402 hp), one bucket truck (classified as Off-Highway Truck in the model; 402 hp), one tensioner (classified as Other Construction Equipment in the model; 172 hp), one plate compactor (8 hp), one rough terrain forklift (100 hp), two backhoes (97 hp), and one trencher (78 hp)
- Paving/Restoration: one paving equipment (132 hp)

The Road Construction Emissions Model has the ability to calculate reductions in construction emissions from the effects of dust control and diesel-engine classifications for on and off-road sources. Emissions calculations assume application of water during grading in compliance with

SCAQMD Rule 403, Fugitive Dust. Watering twice daily would achieve a 55 percent reduction in PM_{10} and $PM_{2.5}$ emissions.

Based on the life expectancy of the proposed equipment, total construction GHG emissions resulting from the project are amortized over 30 years and added to operational GHG emissions in accordance with SCAQMD and County of Riverside guidance (SCAQMD 2008a; County of Riverside 2019).

Operational Emissions

Criteria air pollutants would be generated during operation of the proposed project. The operator would inspect the proposed transmission lines at least once a year by driving along the line routes. Similarly, the substation components would require routine maintenance approximately once per year. Exhaust emissions would be generated from vehicles used during these routine inspection and maintenance activities. It is assumed inspection and maintenance would include two vehicles. Based on the anticipated maintenance, the project is anticipated to result in four annual round trips.

3.2 Significance Thresholds

Air Quality

To determine whether a project would result in a significant impact to air quality, Appendix G of the *CEQA Guidelines* requires consideration of whether a project would:

1. Conflict with or obstruct implementation of the applicable air quality plan
2. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard
3. Expose sensitive receptors to substantial pollutant concentrations
4. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people

Regional Significance Thresholds

The SCAQMD recommends quantitative regional significance thresholds for temporary construction activities and long-term project operation in the SCAB, shown in Table 4.

Table 4 SCAQMD Regional Significance Thresholds

Construction Thresholds	Operational Thresholds
75 pounds per day of ROG	55 pounds per day of ROG
100 pounds per day of NO_X	55 pounds per day of NO_X
550 pounds per day of CO	550 pounds per day of CO
150 pounds per day of SO_X	150 pounds per day of SO_X
150 pounds per day of PM_{10}	150 pounds per day of PM_{10}
55 pounds per day of $PM_{2.5}$	55 pounds per day of $PM_{2.5}$

Source: SCAQMD 2015

Localized Significance Thresholds

In addition to the above regional thresholds, the SCAQMD has developed Localized Significance Thresholds (LSTs) in response to the Governing Board's Environmental Justice Enhancement Initiative (1-4), which was prepared to update the *CEQA Air Quality Handbook* (1993). LSTs were devised in response to concern regarding exposure of individuals to criteria pollutants in local communities and have been developed for NO_X, CO, PM_{10}, and $PM_{2.5}$. LSTs represent the maximum emissions from a project that will not cause or contribute to an air quality exceedance of the most stringent applicable federal or state ambient air quality standard at the nearest sensitive receptor, taking into consideration ambient concentrations in each source receptor area (SRA), distance to the sensitive receptor, and project size. LSTs have been developed for emissions in construction areas up to five acres in size. However, LSTs only apply to emissions in a fixed stationary location and are not applicable to mobile sources, such as cars on a roadway (SCAQMD 2008b). As such, LSTs are typically applied only to construction emissions because the majority of operational emissions are associated with project-generated vehicle trips.

The SCAQMD provides LST lookup tables for project sites that measure one, two, or five acres. If a site is greater than five acres, SCAQMD recommends a dispersion analysis be performed. According to the project applicant, project construction would disturb an area of approximately 0.06 acres on a daily basis; therefore, the LST lookup values for a one-acre construction site were utilized. LSTs are provided for receptors at a distance of 82 to 1,640 feet from the project disturbance boundary to the sensitive receptors. Construction activity would occur approximately 25 feet south of the closest sensitive receptors, an existing single-family residence. According to the SCAQMD's publication, *Final LST Methodology*, projects with boundaries located closer than 82 feet to the nearest receptor should use the LSTs for receptors located at 82 feet. Therefore, the analysis below uses the LST values for 82 feet. In addition, the project is located in SRA-25 (Lake Elsinore). LSTs for construction in SRA-25 on a one-acre site with a receptor 82 feet away are shown in Table 5.

Table 5 SCAQMD LSTs for Construction (SRA-25)

Pollutant	Allowable Emissions for a One-acre Site in SRA-25 for a Receptor 82 Feet Away (lbs/day)
Gradual conversion of NO_X to NO_2	162
CO	750
PM_{10}	4
$PM_{2.5}$	3

Source: SCAQMD 2009

Greenhouse Gas Emissions

Based on Appendix G of the *CEQA Guidelines*, impacts related to GHG emissions from the project would be significant if the project would:

- Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment
- Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases

In addition, *CEQA Guidelines* Section 15064.4(b) states that a lead agency should consider the following factors, among others, when assessing the significance of impacts from GHG emissions on the environment:

- The extent to which the project may increase or reduce GHG emissions as compared to the existing environmental setting;
- Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project; and
- The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions. Such requirements must be adopted by the relevant public agency through a public review process and must reduce or mitigate the project's incremental contribution of GHG emissions.

The County's CAP establishes a screening level threshold of 3,000 MT of CO_2e per year to define small projects that would result in less-than-significant GHG emissions impacts if they incorporate specific energy efficiency and water conservation measures (County of Riverside 2019). The CAP demonstrates that its adopted local reduction measures are sufficient to achieve GHG reduction targets set by SB 32 (40 percent below 1990 levels by 2030) and Executive Order S-3-05 (80 percent below 1990 levels by 2050).

The County's CAP is intended to serve as the programmatic tiering document for the purposes of CEQA within the County for GHG emissions, by which applicable projects will be reviewed. If a proposed project can demonstrate it is consistent with applicable emissions limits and reduction measures included in the CAP, the project's environmental review pertaining to GHG impacts may be streamlined as allowed by CEQA Guidelines Sections 15152 and 15183.5" (County of Riverside 2018). Given that the County's CAP was adopted for the purposes of determining impact significance for the purposes of CEQA, this analysis determines the significance of GHG impacts based on consistency with the County's CAP and other applicable plans and policies intended to reduce GHG emissions and evaluates project emissions in light of the County's screening level threshold for small projects.

3.3 Impact Analysis

Air Quality

CEQA Appendix G Air Quality Threshold 1
Conflict with or obstruct implementation of the applicable air quality plan *(Less Than Significant)*.

A project may be inconsistent with the AQMP if it would generate population, housing, or employment growth exceeding forecasts used in the development of the AQMP. With regard to air quality planning, SCAG has prepared the RTP/SCS, a long-range transportation plan that uses growth forecasts to project trends for regional population, housing and employment growth to identify regional transportation strategies to address mobility needs. These growth forecasts form the basis for the land use and transportation control portions of the 2016 AQMP.[6] The project would not result in new long-term employees and would not increase housing. Therefore, the project would not result in an exceedance of the population and employment projections uses in the 2016 AQMP.

[6] On September 3, 2020, SCAG's Regional Council formally adopted the 2020-2045 RTP/SCS (titled Connect SoCal). However, the 2016 AQMP was adopted prior to this date and relies on the demographic and growth forecasts of the 2016-2040 RTP/SCS; therefore, these forecasts are utilized in the analysis of the project's consistency with the AQMP.

In addition, the AQMP provides strategies and measures to reach attainment with the thresholds for 8-hour and 1-hour ozone and $PM_{2.5}$. As shown in Table 6 and Table 7 under Impact AQ-2, the project would not generate criteria pollutant emissions that would exceed SCAQMD thresholds for ozone precursors (VOC and NO_X) and $PM_{2.5}$.

Given the aforementioned, the project would be consistent with the AQMP and would have a less than significant impact.

CEQA Appendix G Air Quality Threshold 2
Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard *(Less Than Significant)*.

Pursuant to CEQA Guidelines Section 15064(h)(3), the SCAQMD's approach for assessing cumulative impacts is based on the AQMP forecasts of attainment of ambient air quality standards in accordance with the requirements of the federal and state Clean Air Acts. If the project's mass regional emissions do not exceed the applicable SCAQMD, then the project's criteria pollutant emissions would not be cumulatively considerable.

Construction

Table 6 summarizes the estimated maximum daily emissions (lbs) of pollutants associated with construction of the proposed project. As shown below, ROG, NO_X, CO, SO_2, PM_{10}, and $PM_{2.5}$ emissions would not exceed SCAQMD regional thresholds or LSTs. Because the project would not exceed SCAQMD's regional construction thresholds or LSTs, project construction would not result in a cumulatively considerable net increase of a criteria pollutant and impacts would be less than significant.

Table 6 Project Construction Emissions

	Maximum Emissions (lbs/day)					
	ROG	**NO_x**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
Construction Year 2022[1]	3.3	31.2	26.5	<0.1	1.4	1.2
SCAQMD Regional Thresholds	75	100	550	150	150	55
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**
Maximum On-site Emissions[2]	3.3	31.2	26.5	<0.1	1.4	1.2
SCAQMD Localized Significance Thresholds (LSTs)	N/A	162	750	N/A	4	3
Threshold Exceeded?	**N/A**	**No**	**No**	**N/A**	**No**	**No**

[1] Estimated construction emissions were not adjusted to account for the effects of the federal SAFE Vehicles Rule because this rule only affects passenger car and light-duty truck emissions. These vehicle types would only be utilized during project construction for worker commutes, which comprise a small fraction of the project's construction emissions. Therefore, the federal SAFE Vehicles Rule would have a *de minimis* impact on the project's construction emissions and would not have the potential to cause total construction emissions to exceed the SCAQMD regional thresholds.

[2] Maximum on-site emissions are conservatively assumed to be equivalent to total maximum daily emissions. In actuality, on-site emissions would be lower because they only include those emissions that would occur from on-site sources on the project site, such as heavy construction equipment, and exclude off-site emissions from sources such as construction worker vehicle trips and material delivery trips.

Notes: See Appendix A for modeling results. Some numbers may not add up precisely to the numbers indicated due to rounding.

Operational

Table 7 summarizes the project's operational emissions, which are limited to vehicles associated with inspection and maintenance. As shown below, the emissions generated by operation of the proposed project would not exceed SCAQMD regional thresholds for criteria pollutants. Therefore, the project would not result in a cumulatively considerable net increase of criteria pollutants, and impacts would be less than significant.

Table 7 Project Operational Emissions

	Maximum Daily Emissions (lbs/day)					
Emission Source	**ROG**	**NO_X**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
Mobile[1]	< 0.1	< 0.1	0.2	< 0.1	< 0.1	< 0.1
Project Emissions	< 0.1	< 0.1	0.2	< 0.1	< 0.1	< 0.1
SCAQMD Regional Thresholds	55	55	550	150	150	55
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**

[1] Estimated mobile emissions were not adjusted to account for the effects of the federal SAFE Vehicles Rule because it would have a *de minimis* impact on the project's mobile emissions and would not have the potential to cause total operational emissions to exceed the SCAQMD regional thresholds.

Notes: See Appendix A for modeling results. Some numbers may not add up precisely to the numbers indicated due to rounding.

CEQA Appendix G Air Quality Threshold 3
Expose sensitive receptors to substantial pollutant concentrations *(Less Than Significant)*.

Criteria Air Pollutant Emissions

As discussed in Section 2.1, *Air Quality Background*, criteria air pollutant emissions can decrease local air quality and result in adverse effects on human health when air pollutant emissions exceed significance thresholds, which are based on federal and state ambient air quality standards. For instance, exposure to elevated concentrations of ozone can result in respiratory and eye irritation and possible changes in lung functions. At high concentrations, CO reduces the amount of oxygen in the blood, causing heart difficulty in people with chronic diseases, reduced lung capacity, and impaired mental abilities. Nitrogen dioxide can worsen respiratory diseases, such as asthma, over short periods of exposure, which causes respiratory symptoms including coughing, wheezing, or difficulty breathing. Lastly, when inhaled into the deepest part of the lungs, particulate matter can cause permanent lung damage and further damage health by interfering with the body's mechanisms for clearing the respiratory tract or by acting as carriers of an absorbed toxic substance.

While these pollutants can cause potentially adverse health effects when they are emitted in substantial amounts, emissions generated during project construction would not exceed the SCAQMD regional or localized significance thresholds, as discussed earlier under Air Quality Threshold 2. The LSTs were specifically developed in response to concern regarding exposure of individuals to criteria pollutants in local communities and are designed to be protective of local public health (SCAQMD 2008b). Furthermore, construction activities would be moving along the transmission line alignment and therefore would only expose any given sensitive receptor to elevated criteria air pollutant emissions for several days or weeks at a time rather than the entire seven-month duration of construction activities. Moreover, after construction is complete, two

annual maintenance and inspection events would occur per year and would involve approximately four annual roundtrip vehicle trips, which would result in *de minimis* criteria air pollutant emissions. Therefore, the project would not expose sensitive receptors to substantial concentrations of criteria air pollutants or the associated adverse health effects. Impacts would be less than significant.

Toxic Air Contaminants

Construction-related activities would result in temporary project-generated emissions of DPM exhaust emissions from off-road, heavy-duty diesel equipment for site preparation, grading, structural steel work, pole installation, collector line installation, and other construction activities. DPM was identified as a TAC by CARB in 1998. The potential cancer risk from the inhalation of DPM (discussed in the following paragraphs) outweighs the potential non-cancer health impacts (CARB 2017b).

Generation of DPM from construction projects typically occurs in a single area for a short period. Construction of the proposed project would occur over approximately seven months. The dose to which the receptors are exposed is the primary factor used to determine health risk. Dose is a function of the concentration of a substance or substances in the environment and the extent of exposure that person has with the substance. Dose is positively correlated with time, meaning that a longer exposure period would result in a higher exposure level for the Maximally Exposed Individual. The risks estimated for a Maximally Exposed Individual are higher if a fixed exposure occurs over a longer period of time. According to the OEHHA, health risk assessments, which determine the exposure of sensitive receptors to toxic emissions, should be based on a 70-year exposure period; however, such assessments should be limited to the period/duration of activities associated with the project. Thus, the duration of proposed construction activities (i.e., seven months) is approximately two percent of the total exposure period used for 30-year health risk calculations. Current models and methodologies for conducting health-risk assessments are associated with longer-term exposure periods of 9, 30, and 70 years, which do not correlate well with the temporary and highly variable nature of construction activities, resulting in difficulties in producing accurate estimates of health risk (Bay Area Air Quality Management District [BAAQMD] 2017). In addition, construction activities would be moving along the transmission line alignment and therefore would only occur near any given sensitive receptor for several days or weeks at a time rather than the entire seven-month duration of construction activities.

The maximum PM_{10} and $PM_{2.5}$ emissions would occur during site preparation and grading activities. These activities would last for approximately three months. PM emissions would decrease for the remaining construction period because construction activities such as pole and collector line installation would require less construction equipment. While the maximum DPM emissions associated with site preparation and grading activities would only occur for a portion of the overall construction period, these activities represent the worst-case condition for the total construction period. This would represent less than one percent of the total exposure period for health risk calculation, and, as mentioned earlier, these activities would only occur near any given sensitive receptor along the transmission line alignment for a fraction of this three-month duration as construction activities progress along the alignment. Therefore, given the aforementioned, DPM generated by project construction would not create conditions where the probability is greater than one in one million of contracting cancer for the Maximally Exposed Individual or to generate ground-level concentrations of non-carcinogenic TACs that exceed a Hazard Index greater than one for the Maximally Exposed Individual. Furthermore, the project does not include components that would generate substantial TAC emissions during operation. This impact would be less than significant.

Carbon Monoxide Hotspots

A CO hotspot is a localized concentration of CO that is above a CO ambient air quality standard. Localized CO hotspots can occur at intersections with heavy peak hour traffic. Specifically, hotspots can be created at intersections where traffic levels are sufficiently high such that the local CO concentration exceeds the federal one-hour standard of 35.0 ppm or the federal and state eight-hour standard of 9.0 ppm (CARB 2016).

The SCAB is in conformance with state and federal CO standards. In 2020, the Palm Springs-Fire Station monitoring station detected an 8-hour maximum CO concentration of 0.5 ppm, which is substantially below the state and federal standards (U.S. EPA 2021a). The proposed project would result in CO emissions of approximately 26.5 pounds per day during construction and 0.2 pounds per day during operation, both of which would be well below the 550 pounds-per-day threshold. Based on the low background level of CO in the project area, improving vehicle emissions standards for new cars in accordance with state and federal regulations, and the project's low level of operational CO emissions, the project would not create new hotspots or contribute substantially to existing hotspots, and impacts would be less than significant.

CEQA Appendix G Air Quality Threshold 4
Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people *(Less Than Significant)*.

Other air emissions generated by project construction and operation that were not previously discussed under Thresholds 2 and 3 would be limited to odorous emissions. For construction activities, odors would be temporary in nature and are subject to SCAQMD Rule 402, *Nuisance*. Construction activities would be temporary and transitory and associated odors would cease upon construction completion. Accordingly, the proposed project would not result in other emissions, such as those leading to odors, adversely affecting a substantial number of people. Short-term impacts would be less than significant.

Common sources of operational odor complaints include sewage treatment plants, landfills, recycling facilities, and agricultural uses. The proposed project would not include any of these uses or other odor-generating components. Therefore, operation of the proposed project would not result in other emissions, such as those leading to odors, adversely affecting a substantial number of people. No operational impacts would occur.

Greenhouse Gas Emissions

CEQA Appendix G Greenhouse Gas Emissions Threshold 1
Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment *(Less Than Significant)*.

The project would involve removal and construction of electrical transmission lines and development of a substation intended to serve the surrounding community. It was assumed that construction activity would begin as early as January 2022 with completion as early as July 2022. As shown in Table 8, construction activity for the project would generate an estimated 401 MT of CO_2e per year. When amortized over a 30-year period, construction of the project would generate approximately 13 MT of CO_2e per year.

Table 8 Estimated Construction Emissions of Greenhouse Gases

Construction Year	Annual Emissions (MT of CO_2e)
2022	400.8
Amortized over 30 years[1]	13.4

[1] Estimated construction emissions were not adjusted to account for the effects of the federal SAFE Vehicles Rule because this rule only affects estimated passenger car and light-duty truck emissions. These vehicle types would only be utilized during project construction for worker commutes, which comprise a small fraction of the project's emissions. Therefore, the federal SAFE Vehicles Rule would have a *de minimis* impact on the project's construction emissions and would not have the potential to cause total amortized construction emissions in combination with operational emissions to exceed the County's screening level threshold of 3,000 MT of CO_2e per year (see Table 9).

Notes: Emissions modeling was completed using Road Construction Emissions Model. See Appendix A for modeling results.

Operational emissions would be limited to the two annual inspection and maintenance events. Table 9 combines the estimated construction and operational GHG emissions associated with development of the project. As shown therein, annual emissions from the proposed project would be approximately 14 MT of CO_2e per year, which would not exceed the County's screening-level threshold of 3,000 MT of CO_2e per year for small projects. The *Riverside County Climate Action Plan* (2019) states the County has determined that small projects that do not generate more than 3,000 MT of CO_2e per year would have less-than-significant GHG emissions impacts if they include energy efficient design measures matching or exceeding the Title 24 requirements in effect as of January 2017 and the water conservation measures that match the California Green Building Standards Code in effect as of January 2017. The energy efficient design and water conservation measures contained in Title 24 and the California Green Building Standards Code would not apply to the proposed project because it is a utility project that does not include the construction of building structures. Therefore, the Project would be considered a small project under *Riverside County Climate Action Plan* (2019), and it would not generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment. Pursuant to the guidance provided in the *Riverside County Climate Action Plan* (2019), impacts would be less than significant.

Table 9 Combined Annual Emissions of Greenhouse Gases

Emission Source	Annual Emissions (MT of CO_2e)
Construction	13.4
Mobile[1]	0.1
Total Emissions	**13.5**
County of Riverside Threshold (MT of CO_2e per year)[2]	3,000
Exceed Threshold?	No

[1] Estimated mobile emissions were not adjusted to account for the effects of the federal SAFE Vehicles Rule because it would have a *de minimis* impact on the project's mobile emissions and would not have the potential to cause total project emissions to exceed the County's screening level threshold of 3,000 MT of CO_2e per year.

[2] Source: County of Riverside 2019

See Appendix A for modeling results.

CEQA Appendix G Greenhouse Gas Emissions Threshold 2
Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases (No Impact).

Several plans and policies have been adopted to reduce GHG emissions in the Project region, including the State's 2017 Climate Change Scoping Plan/Senate Bill 32, the SCAG 2020-2045 RTP/SCS (2021), and the *Riverside County Climate Action Plan* (2019). The project's consistency with these plans is discussed in the following subsections.

County of Riverside CAP

As discussed earlier under GHG Emissions Threshold 1, the proposed project qualifies as a small project under the *Riverside County Climate Action Plan* (2019). Small projects are considered to be too small to be able to provide the level of GHG emission reductions expected from the Screening Tables or the alternative emission analysis method in the *Riverside County Climate Action Plan*, and, as a result, their GHG emissions impacts are considered to be less than significant as long as these projects incorporate specific energy efficiency and water conservation measures outlined in the CAP. As explained earlier, these energy efficiency and water conservation measures would not apply to the proposed project because it is a utility project that does not include the construction of building structures. Furthermore, none of the local reduction measures contained in the County's CAP would apply to the proposed project. Therefore, because the proposed project is considered a small project screened out from the need for further GHG emissions analysis and mitigation under the CAP, it would not conflict with implementation of this plan. No impact would occur.

SCAG 2020-2045 RTP/SCS

As detailed in Section 2.2, *Greenhouse Gas Emissions Background*, SB 375 is a state-level policy directing each of California's 18 major MPO to prepare a SCS that contains a growth strategy to meet emission targets for inclusion in the RTP. The applicable MPO for the project site is SCAG, and project consistency with the goals contained in SCAG's 2016-2040 RTP/SCS is discussed below.

The SCAG's 2020-2045 RTP/SCS is forecast to help California reach its GHG reduction goals. According to the 2020-2045 RTP/SCS, the updated targets for the SCAG region are 8 percent below 2005 per capita emission levels by 2020 (this value is unchanged from the previous 2020 CARB target) and 19 percent below 2005 per capita emissions levels by 2035. The revised 2035 target is higher than the previous CARB target of 13 percent for the SCAG region. The 2020-2045 RTP/SCS includes implementation strategies for focusing growth near destinations and mobility options, promoting diverse housing choices, leveraging technology innovations, supporting implementation of sustainability policies, and promoting a green region. The project's consistency with the 2020-2045 RTP/SCS is discussed in Table 10. As shown therein, the proposed project would be consistent with the GHG emission reduction strategies contained in the 2020-2045 RTP/SCS. No impact would occur.

Table 10 Consistency with Applicable SCAG RTP/SCS GHG Emission Reduction Strategies

Strategy/Action	Project Consistency
Focus Growth Near Destinations & Mobility Options. ▪ Emphasize land use patterns that facilitate multimodal access to work, educational and other destinations ▪ Focus on a regional jobs/housing balance to reduce commute times and distances and expand job opportunities near transit and along center-focused main streets ▪ Plan for growth near transit investments and support implementation of first/last mile strategies. ▪ Promote the redevelopment of underperforming retail developments and other outmoded nonresidential uses ▪ Prioritize infill and redevelopment of underutilized land to accommodate new growth, increase amenities and connectivity in existing neighborhoods ▪ Encourage design and transportation options that reduce the reliance on and number of solo car trips (this could include mixed uses or locating and orienting close to existing destinations) ▪ Identify ways to "right size" parking requirements and promote alternative parking strategies (e.g. shared parking or smart parking)	**Consistent.** Not applicable as the project is an energy transmission project and would not result in a substantial increase in employment of population.
Promote Diverse Housing Choices. ▪ Preserve and rehabilitate affordable housing and prevent displacement ▪ Identify funding opportunities for new workforce and affordable housing development ▪ Create incentives and reduce regulatory barriers for building context-sensitive accessory dwelling units to increase housing supply ▪ Provide support to local jurisdictions to streamline and lessen barriers to housing development that supports reduction of greenhouse gas emissions	**Consistent.** Not applicable as the project is an energy transmission project and would not result in a substantial increase in employment of population.
Leverage Technology Innovations. ▪ Promote low emission technologies such as neighborhood electric vehicles, shared rides hailing, car sharing, bike sharing and scooters by providing supportive and safe infrastructure such as dedicated lanes, charging and parking/drop-off space ▪ Improve access to services through technology—such as telework and telemedicine as well as other incentives such as a "mobility wallet," an app-based system for storing transit and other multi-modal payments ▪ Identify ways to incorporate "micro-power grids" in communities, for example solar energy, hydrogen fuel cell power storage and power generation	**Consistent.** Not applicable as the project is an energy transmission project and would not use electricity.
Support Implementation of Sustainability Policies. ▪ Pursue funding opportunities to support local sustainable development implementation projects	**Consistent.** Not applicable as the project is an energy transmission project and would not use electricity.

Strategy/Action	Project Consistency
that reduce GHG emissions ▪ Support statewide legislation that reduces barriers to new construction and that incentivizes development near transit corridors and stations ▪ Support local jurisdictions in the establishment of Enhanced Infrastructure Financing Districts (EIFDs), Community Revitalization and Investment Authorities (CRIAs), or other tax increment or value capture tools to finance sustainable infrastructure and development projects, including parks and open space ▪ Work with local jurisdictions/communities to identify opportunities and assess barriers to implement sustainability strategies ▪ Enhance partnerships with other planning organizations to promote resources and best practices in the SCAG region ▪ Continue to support long range planning efforts by local jurisdictions ▪ Provide educational opportunities to local decision makers and staff on new tools, best practices and policies related to implementing the Sustainable Communities Strategy	
Promote a Green Region. ▪ Support development of local climate adaptation and hazard mitigation plans, as well as project implementation that improves community resiliency to climate change and natural hazards ▪ Support local policies for renewable energy production, reduction of urban heat islands and carbon sequestration ▪ Integrate local food production into the regional landscape ▪ Promote more resource efficient development focused on conservation, recycling and reclamation ▪ Preserve, enhance and restore regional wildlife connectivity ▪ Reduce consumption of resource areas, including agricultural land ▪ Identify ways to improve access to public park space.	**Consistent.** Not applicable as the project is an energy transmission project and would not use electricity.

Source: SCAG 2020

2017 Scoping Plan/Senate Bill 32

The principal State plan and policy adopted to reduce GHG emissions is AB 32, the California Global Warming Solutions Act of 2006, and the follow up, SB 32. The quantitative goal of AB 32 is to reduce GHG emissions to 1990 levels by 2020 and the goal of SB 32 is to reduce GHG emissions to 40 percent below 1990 levels by 2030. The 2017 Scoping Plan, which outlines a framework to achieve SB 32's 2030 target, emphasizes innovation, adoption of existing technology, and strategic investment to support its strategies. Statewide plans and regulations in support of these strategies, such as GHG emissions standards for vehicles (AB 1493), the Low Carbon Fuel Standard, and regulations requiring an increasing fraction of electricity to be generated from renewable sources, are being implemented at the statewide level; as such, compliance at a project level would occur as

implementation continues statewide. Furthermore, as described in Section 2.2, *Greenhouse Gas Emissions Background*, the County's CAP demonstrates that its adopted local reduction measures are sufficient to achieve the GHG reduction target set by SB 32 (40 percent below 1990 levels by 2030). As discussed earlier, the proposed project is considered a small project screened out from the need for further GHG emissions analysis and mitigation under the County's CAP and therefore would not conflict with implementation of the CAP. Because the CAP is directly tied to the State's GHG emission reduction target under SB 32 (and the associated 2017 Scoping Plan), the project would also not conflict with implementation of SB 32 and the 2017 Scoping Plan. No impact would occur.

4 Conclusions and Recommendations

Construction and operation of the project would not exceed any established air quality or GHG emissions thresholds of conflict with any applicable plans or policies relating to air quality or reduction of GHG emissions. Furthermore, the project would comply with all applicable air quality regulatory requirements, as detailed in Section 1, *Project Description and Impact Summary*. Such measures include fugitive dust control pursuant to SCAQMD Rule 403; engine idling restrictions pursuant to Section 2485, Title 13 of the California Code of Regulations; and engine emissions standards pursuant to Section 93115, Title 17 of the California Code of Regulations. As detailed above, with adherence to existing regulatory requirements, the project would not result in significant air quality or GHG related impacts.

5 References

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Appendix A

Modeling Output Files

Road Construction Emissions Model, Version 9.0.0

Daily Emission Estimates for -> AEC Electricity Transmission Line Project - Construction

Project Phases (Pounds)	ROG (lbs/day)	CO (lbs/day)	NOx (lbs/day)	Total PM10 (lbs/day)	Exhaust PM10 (lbs/day)	Fugitive Dust PM10 (lbs/day)	Total PM2.5 (lbs/day)	Exhaust PM2.5 (lbs/day)	Fugitive Dust PM2.5 (lbs/day)	SOx (lbs/day)	CO2 (lbs/day)	CH4 (lbs/day)	N2O (lbs/day)	CO2e (lbs/day)
Grubbing/Land Clearing	1.35	8.01	13.98	0.65	0.65	0.00	0.58	0.58	0.00	0.02	2,067.92	0.57	0.05	2,095.53
Grading/Excavation	0.58	5.82	6.11	0.26	0.26	0.00	0.23	0.23	0.00	0.01	1,441.27	0.36	0.04	1,462.14
Drainage/Utilities/Sub-Grade	3.31	26.52	31.15	1.39	1.39	0.00	1.24	1.24	0.00	0.08	7,416.68	2.04	0.21	7,530.31
Paving	0.23	3.21	2.22	0.12	0.12	0.00	0.10	0.10	0.00	0.01	728.45	0.13	0.03	741.63
Maximum (pounds/day)	3.31	26.52	31.15	1.39	1.39	0.00	1.24	1.24	0.00	0.08	7,416.68	2.04	0.21	7,530.31
Total (tons/construction project)	0.20	1.57	1.85	0.08	0.08	0.00	0.07	0.07	0.00	0.00	435.17	0.12	0.01	441.81

Notes:

Project Start Year ->	2022
Project Length (months) ->	7
Total Project Area (acres) ->	6
Maximum Area Disturbed/Day (acres) ->	0
Water Truck Used? ->	Yes

	Total Material Imported/Exported Volume (yd^3/day)		Daily VMT (miles/day)			
Phase	Soil	Asphalt	Soil Hauling	Asphalt Hauling	Worker Commute	Water Truck
Grubbing/Land Clearing	0	0	0	0	240	40
Grading/Excavation	0	0	0	0	240	40
Drainage/Utilities/Sub-Grade	0	0	0	200	240	40
Paving	0	0	0	0	240	40

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns G and H. Total PM2.5 emissions shown in Column I are the sum of exhaust and fugitive dust emissions shown in columns J and K.

CO2e emissions are estimated by multiplying mass emissions for each GHG by its global warming potential (GWP), 1 , 25 and 298 for CO2, CH4 and N2O, respectively. Total CO2e is then estimated by summing CO2e estimates over all GHGs.

Total Emission Estimates by Phase for -> AEC Electricity Transmission Line Project - Construction

Project Phases (Tons for all except CO2e. Metric tonnes for CO2e)	ROG (tons/phase)	CO (tons/phase)	NOx (tons/phase)	Total PM10 (tons/phase)	Exhaust PM10 (tons/phase)	Fugitive Dust PM10 (tons/phase)	Total PM2.5 (tons/phase)	Exhaust PM2.5 (tons/phase)	Fugitive Dust PM2.5 (tons/phase)	SOx (tons/phase)	CO2 (tons/phase)	CH4 (tons/phase)	N2O (tons/phase)	CO2e (MT/phase)
Grubbing/Land Clearing	0.01	0.04	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.37	0.00	0.00	10.46
Grading/Excavation	0.01	0.05	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.21	0.00	0.00	12.15
Drainage/Utilities/Sub-Grade	0.18	1.46	1.71	0.08	0.08	0.00	0.07	0.07	0.00	0.00	407.92	0.11	0.01	375.73
Paving	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.67	0.00	0.00	2.46
Maximum (tons/phase)	0.18	1.46	1.71	0.08	0.08	0.00	0.07	0.07	0.00	0.00	407.92	0.11	0.01	375.73
Total (tons/construction project)	0.20	1.57	1.85	0.08	0.08	0.00	0.07	0.07	0.00	0.00	435.17	0.12	0.01	400.80

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns G and H. Total PM2.5 emissions shown in Column I are the sum of exhaust and fugitive dust emissions shown in columns J and K.

CO2e emissions are estimated by multiplying mass emissions for each GHG by its global warming potential (GWP), 1 , 25 and 298 for CO2, CH4 and N2O, respectively. Total CO2e is then estimated by summing CO2e estimates over all GHGs.

The CO2e emissions are reported as metric tons per phase.

Road Construction Emissions Model, Version 9.0.0

Daily Emission Estimates for -> AEC Electricity Transmission Line Project - Operation

Project Phases (Pounds)	ROG (lbs/day)	CO (lbs/day)	NOx (lbs/day)	Total PM10 (lbs/day)	Exhaust PM10 (lbs/day)	Fugitive Dust PM10 (lbs/day)	Total PM2.5 (lbs/day)	Exhaust PM2.5 (lbs/day)	Fugitive Dust PM2.5 (lbs/day)	SOx (lbs/day)	CO2 (lbs/day)	CH4 (lbs/day)	N2O (lbs/day)	CO2e (lbs/day)
Grubbing/Land Clearing	0.01	0.20	0.02	0.01	0.01	0.00	0.00	0.00	0.00	0.00	58.60	0.00	0.00	59.10
Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum (pounds/day)	0.01	0.20	0.02	0.01	0.01	0.00	0.00	0.00	0.00	0.00	58.60	0.00	0.00	59.10
Total (tons/construction project)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.06

Notes:

Project Start Year ->	2022
Project Length (months) ->	2
Total Project Area (acres) ->	6
Maximum Area Disturbed/Day (acres) ->	0
Water Truck Used? ->	Yes

	Total Material Imported/Exported Volume (yd^3/day)		Daily VMT (miles/day)			
Phase	Soil	Asphalt	Soil Hauling	Asphalt Hauling	Worker Commute	Water Truck
Grubbing/Land Clearing	0	0	0	0	80	0
Grading/Excavation	0	0	0	0	0	0
Drainage/Utilities/Sub-Grade	0	0	0	0	0	0
Paving	0	0	0	0	0	0

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns G and H. Total PM2.5 emissions shown in Column I are the sum of exhaust and fugitive dust emissions shown in columns J and K.

CO2e emissions are estimated by multiplying mass emissions for each GHG by its global warming potential (GWP), 1 , 25 and 298 for CO2, CH4 and N2O, respectively. Total CO2e is then estimated by summing CO2e estimates over all GHGs.

Total Emission Estimates by Phase for -> AEC Electricity Transmission Line Project - Operation

Project Phases (Tons for all except CO2e. Metric tonnes for CO2e)	ROG (tons/phase)	CO (tons/phase)	NOx (tons/phase)	Total PM10 (tons/phase)	Exhaust PM10 (tons/phase)	Fugitive Dust PM10 (tons/phase)	Total PM2.5 (tons/phase)	Exhaust PM2.5 (tons/phase)	Fugitive Dust PM2.5 (tons/phase)	SOx (tons/phase)	CO2 (tons/phase)	CH4 (tons/phase)	N2O (tons/phase)	CO2e (MT/phase)
Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.05
Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum (tons/phase)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.05
Total (tons/construction project)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.05

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns G and H. Total PM2.5 emissions shown in Column I are the sum of exhaust and fugitive dust emissions shown in columns J and K.

CO2e emissions are estimated by multiplying mass emissions for each GHG by its global warming potential (GWP), 1 , 25 and 298 for CO2, CH4 and N2O, respectively. Total CO2e is then estimated by summing CO2e estimates over all GHGs.

The CO2e emissions are reported as metric tons per phase.

Appendix B

Biological Resources Assessment and MSHCP Consistency Analysis and Habitat Assessment

Anza Electric Cooperative Electricity Transmission Line Project

Biological Resources Assessment

prepared for

Anza Electric Cooperative, Inc.
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October 2021

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1 Introduction

Rincon Consultants, Inc. (Rincon) prepared this Biological Resources Assessment (BRA) report to document existing conditions along the proposed transmission line corridor and at the proposed substation site and to evaluate the potential for project-related impacts to biological resources during implementation of the Anza Electric Cooperative, Inc.'s (AEC) Electricity Transmission Line Project (project). The County of Riverside (County) is the project's lead agency. The project is within the 500-square mile existing AEC service territory within western Riverside County.

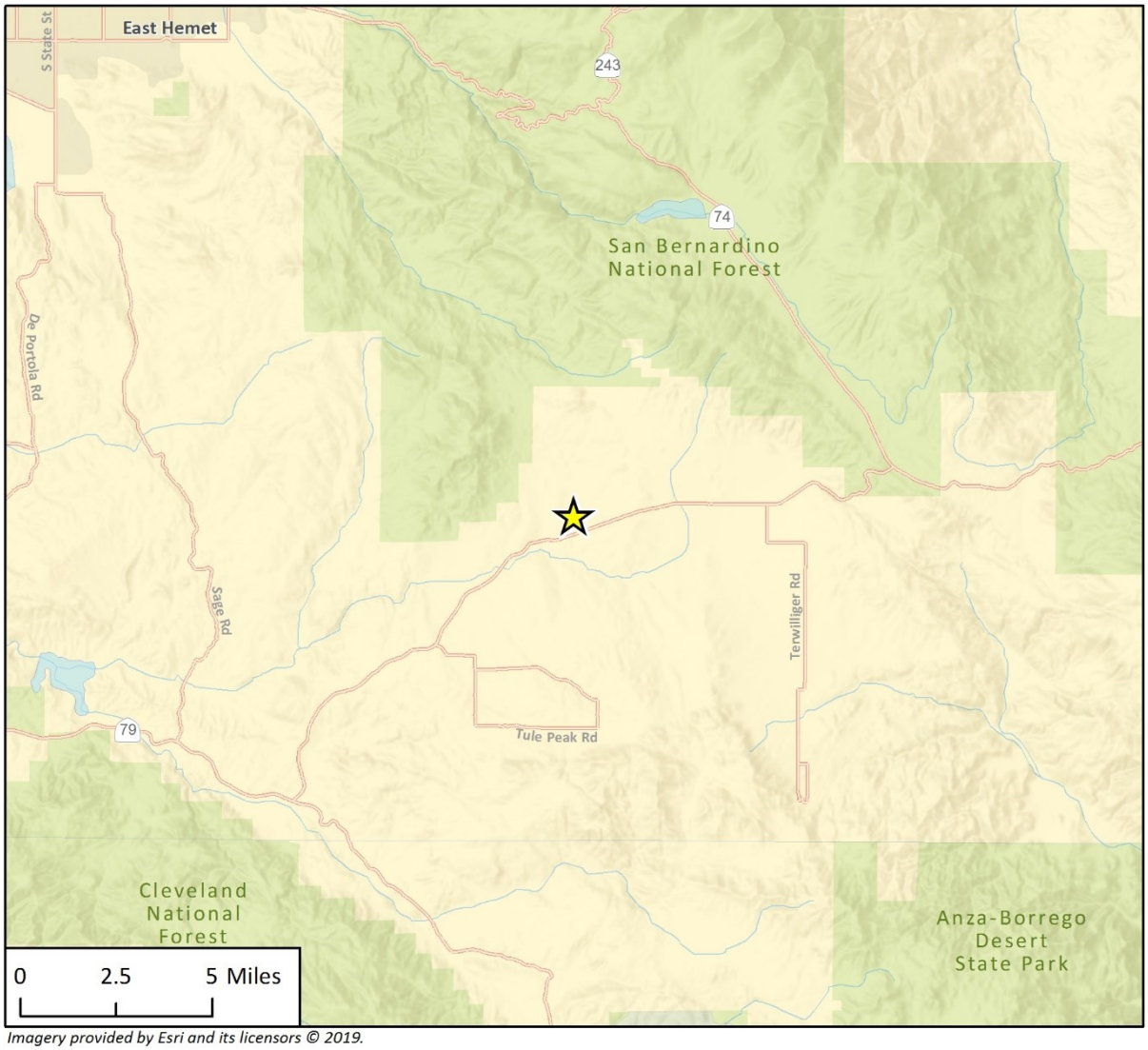
1.1 Project Location

The proposed project is located in Riverside County, California, as shown in Figure 1. The project components would be located primarily within the rights-of-way of State Route 371 (SR 371) in the unincorporated community of Anza. The remainder of the project alignment would be located within existing AEC utility easements that are generally north of SR 371 and along existing local roadways. The proposed replacement transmission line alignment would traverse 96 parcels. In addition, the project proposes a new substation, the Bautista substation, on Assessor's Parcel Number (APN) 576-060-040 near the intersection of Bautista Road and SR 371. The project site is within the United States Geological Survey (USGS) Cahuilla Mountain and Anza Lake, California 7.5-minute topographic quadrangles. The project alignment would not be located on Cahuilla Reservation or U.S. Forest Service lands.

The project location and alignment are shown in Figure 2. The project alignment starts east of the proposed Bautista sub-station and proceeds along SR 371 for approximately four miles, ending at Tony Lappos substation. Given the scope of the project, the project area has multiple zoning designations, including R-R 2.5, RR-5 and RR-20 (Rural Residential); C-1/CP (General Commercial); C-P-S (Scenic Highway Commercial); M-M (Manufacturing – Medium); and M-SC (Manufacturing-Service Commercial). The project area also has multiple General Plan land use designations, including Rural Residential, Rural Community – Estate Density Residential, Rural Community – Very Low Density Residential, Agriculture, City, Light Industrial, and Commercial Retail.

AEC's existing land-based utilities systems in the project area consist of wooden utility poles that are approximately 35 to 45 feet in height with single- or three-phase crossarm mounted distribution lines attached. The existing poles currently carry electric power distribution lines. The project site is defined as the footprint of the existing electrical utilities system components and the approximately four-mile-long corridor along SR 371 and local roadways for the new upgrades that will be installed on existing poles. The project area is defined as the 50-foot wide access corridor along SR 371 and the 40-foot wide access corridor along local roadways, the construction laydown areas, and the access roads that would be used for construction. For the purposes of this report, the biological survey area (BSA) is defined as the linear alignment of the existing poles plus a buffer of 50 feet on either side of the existing pole alignment (100 feet in total).

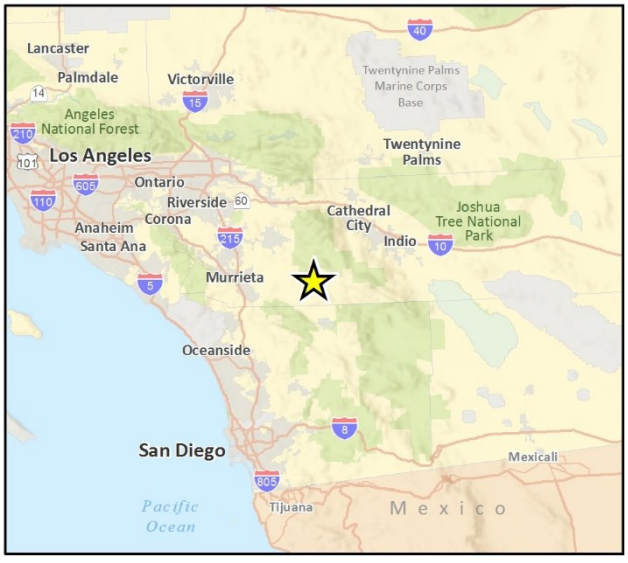
Figure 1 Regional Location Map



Imagery provided by Esri and its licensors © 2019.

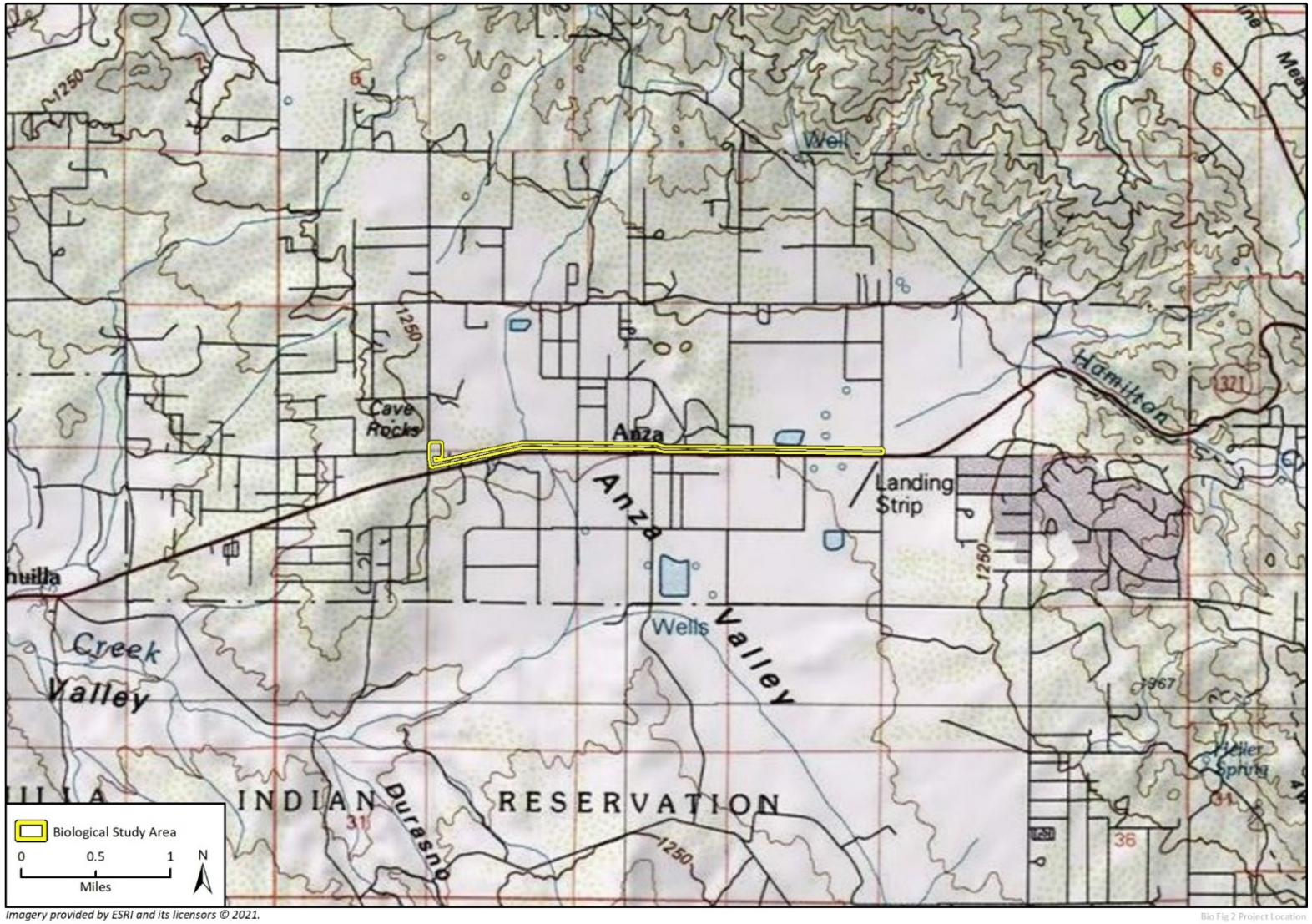
Project Location

N



Bio Fig 1 Regional Location

Figure 2 Local Vicinity Map



1.2 Proposed Project

The project would replace the existing distribution lines with approximately four miles of realigned transmission lines and construct the Bautista substation. The new transmission line would be strung on existing utilities poles, and the proposed Bautista substation would consist electrical distribution facilities.

2 Regulatory Overview

Regulated or sensitive resources studied and analyzed herein include special status plant and wildlife species, nesting birds and raptors, special status vegetation communities, jurisdictional waters and wetlands, wildlife movement, and locally protected resources, such as protected trees.

2.1 Environmental Statutes

For this report, potential impacts to biological resources were analyzed based on the following statutes:

- California Environmental Quality Act (CEQA)
- Federal Endangered Species Act (ESA)
- California Endangered Species Act (CESA)
- Federal Clean Water Act (CWA)
- California Fish and Game Code (CFGC)
- Migratory Bird Treaty Act (MBTA)
- The Bald and Golden Eagle Protection Act
- Porter-Cologne Water Quality Control Act (Porter-Cologne Act)
- Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP)

See Appendix A for more details on the regulatory environment.

2.2 Guidelines for Determining CEQA Significance

The following threshold criteria, as defined by the CEQA Guidelines Appendix G Initial Study Checklist, were used to evaluate potential environmental effects. Based on these criteria, the proposed project would have a significant effect on biological resources if it would:

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.

c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional or State habitat conservation plan.

3 Methodology

Biological conditions within the BSA were evaluated by confirming applicable regulations, policies, and standards; reviewing biological literature and querying available databases pertinent to the BSA and vicinity; and conducting a reconnaissance-level biological survey of BSA. The methods employed are described in detail below. The findings and opinions conveyed in this report are based on this methodology.

3.1 Literature Review

Prior to conducting the biological field survey for this BRA, Rincon reviewed a variety of literature to obtain baseline information about the biological resources with potential to occur at the BSA and in the surrounding areas. Rincon conducted queries of several relevant databases that provide information about occurrences of special status biological resources:

- California Department of Fish and Wildlife (CDFW) California Natural Diversity Data Base (CNDDB) (CDFW 2021a)
- CDFW Biogeographic Information and Observation System (CDFW 2021b)
- United States Fish and Wildlife Service (USFWS) Critical Habitat Mapper (USFWS 2021a)
- USFWS Information for Planning and Consultation (IPaC) query (USFWS 2021b)
- USFWS National Wetlands Inventory (NWI) (USFWS 2021c)
- United States Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS) Web Soil Survey (USDA NRCS 2021a)
- Calfora What Grows Here (Calflora 2021)
- California Native Plant Society (CNPS) Online Inventory of Rare and Endangered Plants of California (CNPS 2021), queried for the U.S. Geologic Survey's *Cahuilla Mountain* and *Anza*, *California* 7.5-minute topographic quadrangles
- Western Riverside County Species Habitat Conservation Plan (County of Riverside 2004)

3.2 Reconnaissance Survey

On October 10 and 11, 2019, Rincon biologists Ryan Gilmore and Brooke Pickett conducted a general biological reconnaissance survey of the BSA to document existing site conditions and the potential presence of sensitive biological resources, including sensitive plant and wildlife species, sensitive plant communities, jurisdictional waters and wetlands, and habitat for nesting birds. While a formal jurisdictional delineation was not performed, locations of potentially jurisdictional features were mapped. The survey was performed by walking and driving along the BSA to characterize the existing biological resources present (e.g., vegetative communities, potential presence of sensitive species and/or habitats, and presence of potentially jurisdictional waters). Where portions of the survey area were inaccessible on foot (e.g., private property and fenced areas), the biologists visually inspected these areas with binoculars (10 x 40). Weather conditions were sunny and clear with temperatures in the 60s to 70s degrees Fahrenheit with variable winds ranging from one to five miles per hour.

Vegetation Community and Land Cover Mapping

Vegetation communities observed on site were mapped on a site-specific aerial photograph. Vegetation was generally classified using the systems provided in the Preliminary Descriptions of the Terrestrial Communities of California (Holland 1986), and modified using A Manual of California Vegetation, Second Edition (MCV) (Sawyer et al. 2009) as necessary to reflect the existing site conditions).

Flora

All plant species observed in the study area were noted, and plants that could not be identified in the field were identified later using taxonomic keys. The reconnaissance survey included a directed search for sensitive plants that would have been apparent at the time of the survey. Floral nomenclature for native and non-native plants follows Baldwin et al. (2012) as updated by The Jepson Online Interchange (University of California Berkeley 2021). For ornamental plants, nomenclature follows USDA PLANTS Database (USDA 2021b), and for special-status plants, nomenclature follows Baldwin et al. (2012) and California Native Plant Society (CNPS 2021). A complete list of all the plants observed on site during the biological field survey is provided in Appendix C.

Fauna

Animal species observed directly or detected from calls, tracks, scat, nests, or other signs were documented. Zoological nomenclature for birds is in accordance with the California Bird Records Committee *Official California Checklist* (2021); for mammals using *Mammals of California* (Wilson and Reeder 2005); and for amphibians and reptiles using Society for the Study of Amphibians and Reptiles' *Checklist of the Standard English & Scientific Names of Amphibians & Reptiles* (2017). A complete list of all the wildlife observed onsite during the biological reconnaissance survey is presented in Appendix C.

Jurisdictional Waters

Aerial imagery and the NWI (USFWS 2021c) were reviewed to identify potentially jurisdictional features that may be considered riparian/riverine habitat or under the jurisdiction of United States Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB), or CDFW. Features identified during the literature review were located and inspected in the field during the biological reconnaissance survey. While a formal jurisdictional delineation was not performed, the biologists mapped approximate limits of the ordinary high-water marks with a Trimble GPS by walking the perimeter of each potentially jurisdictional feature.

Survey Limitations

The survey was conducted outside of the typical blooming period for most of the common and special status plant species expected to occur in the BSA. Additionally, the biological survey was conducted during the fall. Therefore, potentially occurring overwintering species, spring migrants and certain breeding birds may not have been observed. As the survey was performed during the day, identification of nocturnal animals was limited to sign if present on site. The potential presence of special status species is based on a literature review, existing site conditions and a general biological field survey to assess habitat suitability. This survey did not include focused protocol-level surveys for special status plant or animal species; however, a live-trapping program for the Los

Angeles pocket mouse ((LAPM; *Perognathus longimembris brevinasus*) was conducted separately, as described further in Section 3.3, *Los Angeles Pocket Mouse Survey*.

3.3 Los Angeles Pocket Mouse Survey

A live-trapping program for LAPM was conducted by Cereus Environmental biologist Mr. Jason Berkley (SCP: SC-00187) and Rincon biologist Ms. Sarah Toback from August 30 to September 3, 2021 within the parcel proposed for development of the Bautista substation (APN 576-060-040).[1] Surveys were conducted in accordance with the protocols set forth by the Western Riverside County Regional Conservation Authority (RCA 2021). Weather conditions during the survey are included below in Table 1. The live-trapping program was conducted over five consecutive nights using 12-inch Sherman live traps baited with millet. The traps were placed at approximately 15- meter intervals throughout the parcel. Seven rows were set with six traps each for a total of 42 traps. Each row was assigned an identifying letter (A through F), and each trap in the rows was assigned a number (one through six). The northernmost and southernmost trap lines were marked with pin flags, and the remaining traps were flagged with reflective tape tied to nearby vegetation. Traps were checked once near midnight and again at sunrise. Traps were reset with fresh bait as needed and closed following the second check. The traps were reopened one to three hours before sunset the following evening. The species, sex, and weight were identified for captured animals. Animals were marked on the top of the head using a washable marker to indicate the recapture of an animal, then released at the trap site. All traps, excess bait, pin flags, and reflective tape were removed from the parcel at the conclusion of the final dawn check.

Table 1 LAPM Survey Weather Conditions

Date	Cloud Cover	Night Temperature (°F)	Wind Speed (mph)
08/30/2021	Clear	75	0
08/31/2021	Cloudy	68	0
09/01/2021	Cloudy	61	0
09/02/2021	Clear	55	0
09/03/2021	Clear	60	0

°F = degrees Fahrenheit; mph = miles per hour

3.4 Special Status Species Assessment

Local, state, and federal agencies regulate special status species and may require an assessment of their presence or potential presence to be conducted on site prior to the approval of proposed development on a property. Rincon compiled a complete list of special status species previously documented within a five-mile radius of the BSA from the CNDDB query and a nine-quad radius from the CNPS query, then conducted an analysis to determine which of these special status species have the potential to occur within the BSA. The habitat requirements for each regionally-occurring special status species were assessed and compared to the type and quality of habitats observed on site during the biological field survey. Conclusions regarding which special status species have the

[1] Two parcels within the project area (APN 576-060-040 and 576-060-009) require LAPM habitat assessment surveys. (See Figure E-4 in Appendix E). However, the project would not result in direct impacts or remove suitable habitat at APN 576-060-009; therefore, this parcel was not included in the LAPM survey.

potential to occur on site were based on the background research and literature review previously mentioned as well as the data collected in the field during the reconnaissance survey. Several regionally-occurring special status species were removed from the list due to lack of suitable habitat, lack of appropriate soils, range in elevation, and/or known geographic distribution. Appendix D provides the complete list of all special status resources with records in the CNDDB and CNPS within a five-mile radius of the BSA and a nine USGS topographic quadrangle query for the BSA.

Assessments for the potential occurrence of special status species are based upon known ranges, habitat preferences for the species, species occurrence records from the CNDDB species occurrence records from other sites near the BSA, and previous reports for the BSA. The potential for each special status species to occur in the BSA was evaluated according to the following criteria:

- **No Potential.** Habitat on and adjacent to the BSA is clearly unsuitable for the species requirements (foraging, breeding, cover, substrate, elevation, hydrology, plant community, site history, disturbance regime).
- **Low Potential.** Few of the habitat components meeting the species requirements are present, and/or the majority of habitat on and adjacent to the BSA is unsuitable or of very poor quality. The species is not likely to be found in the BSA.
- **Moderate Potential.** Some of the habitat components meeting the species requirements are present, and/or only some of the habitat within or adjacent to the BSA is unsuitable. The species has a moderate probability of being found in the BSA.
- **High Potential.** All of the habitat components meeting the species requirements are present and/or most of the habitat on or adjacent to the BSA is highly suitable. The species has a high probability of being found in the BSA.
- **Present.** Species is observed in the BSA or has been recorded (e.g., CNDDB, other reports) in the BSA recently (within the last five years).

For the purpose of this report, special status species are those plants and animals listed, proposed for listing, or candidates for listing as Threatened or Endangered by the USFWS under the ESA; those listed as Threatened, Endangered, or Rare by the CDFW under CESA or the Native Plant Protection Act; those designated as Fully Protected species by the State; those recognized as Species of Special Concern (SSC) by the CDFW; Covered Species identified in the MSHCP; and plants occurring on lists 1 and 2 of the CNPS California Rare Plant Rank (CRPR) system per the following definitions:

- **CRPR 1A** = Plants presumed extirpated in California and either rare or extinct elsewhere;
- **CRPR 1B** = Plants rare, threatened, or endangered in California and elsewhere;
- **CRPR 2A** = Plants presumed extirpated in California but common elsewhere; and
- **CRPR 2B** = Plants rare, threatened, or endangered in California but more common elsewhere.

Additionally, CNPS assigns the following threat codes:

- **0.1** - Seriously threatened in California (over 80 percent of occurrences threatened/high degree and immediacy of threat);
- **0.2** - Moderately threatened in California (20 to 80 percent of occurrences threatened/moderate degree and immediacy of threat); and
- **0.3** - Not very threatened in California (less than 20 percent of occurrences threatened/low degree and immediacy of threat or no current threats known).

In addition, special status species and vegetation communities are ranked globally (G) and sub-nationally (S) 1 through 5 based on NatureServe's (2010) methodologies:

- **G1 or S1:** Critically Imperiled Globally or Subnationally (state)
- **G2 or S2:** Imperiled Globally or Subnationally (state)
- **G3 or S3:** Vulnerable to extirpation or extinction Globally or Subnationally (state)
- **G5 or S5:** Secure Globally or Subnationally (state)
- **?:** Inexact Numeric Rank
- **T:** Infraspecific Taxon (subspecies, varieties, and other designations below the level of species)
- **Q:** Questionable taxonomy that may reduce conservation priority

Based on the agency database and literature review, and the results of the biological reconnaissance survey of the BSA, Rincon conducted a habitat assessment for 63 special status species (50 special status plant species and 13 special status animal species). Each of the 63 special status species was evaluated for its potential to occur in the BSA, and the evaluation is included in Appendix D.

4 Existing Biological Conditions

This section summarizes the results of the literature review and data collected in the field. Discussions regarding the general environmental setting, vegetation communities present, plant and wildlife species observed, special status species issues, and other biological resource constraints on the BSA are presented below. Representative photographs of the BSA are provided in Appendix B.

4.1 Regional Environmental Setting

The project is located in the southwestern portion of Riverside County along SR 371 and is surrounded by the Cahuilla Mountains (Cahuilla Mountain, 5,635 feet) to the northwest, the Santa Rosa Mountains (Toro Peak, 8,715 feet) approximately nine miles to the southeast, and Rouse Ridge-Thomas Mountain (Thomas Mountain, 6,825 feet) approximately one mile to the northeast. The site is relatively level with gentle slopes in some areas. The BSA elevation ranges from 3,965 feet at the western end to 3,980 feet at the eastern end. SR 371 connects with the greater Los Angeles area to the west, the greater San Diego area to the southwest, and Coachella Valley to the east. SR 371 provides regional access for the surrounding communities, including the unincorporated community of Anza.

The BSA is located in Anza Valley, which is the land between the Cahuilla Mountains to the north, the Iron Springs Mountains to the south, and Rouse Ridge-Thomas Mountain to the northeast. Anza Valley is a long, dry valley bordered by sagebrush and chaparral vegetation communities, with scattered residential, agricultural, and commercial developments throughout. Additionally, the project is bordered by the San Bernardino National Forest to the north and the Cahuilla Indian Reservation to the south.

4.2 Hydrology

The BSA is within the approximate 750-square mile Santa Margarita River Watershed. The Santa Margarita River Watershed spans from portions of the San Jacinto Mountains, Palomar Mountains, Santa Ana Mountains, to the cities of Temecula, Murrieta, Wildomar, and emptying into the Pacific Ocean as it passes through the Marine Corps Base Camp Pendleton. One major river (Santa Margarita River) and three creeks (Cahuilla Creek, Murrieta Creek, and Temecula Creek) drain the San Margarita Watershed.

At the eastern end of the BSA, Hamilton Creek crosses under the SR 371 and connects into Cahuilla Creek. Figure E-1 in Appendix E depicts the locations of the observed potential jurisdictional features mapped during the biological reconnaissance survey. No water was observed within any of the features at the time of the survey.

It should be noted that ephemeral drainages serve as important wildlife corridors connecting various vegetation habitats and elevation ranges. These corridors within the BSA likely provide regional connectivity for wildlife.

4.3 Soils

Thirteen mapped soil map units occur throughout the BSA (USDA NRCS 2021): Anza loam (2 to 8 percent slopes), Anza fine sandy loam (2 to 8 percent slopes), Bishop silt loam, Calpine loam (2 to 8 percent slopes, eroded), Calpine sandy loam (2 to 8 percent slopes, eroded, Crouch sandy loam (8 to 15 percent slopes, eroded), Crouch rocky sandy loam (8 to 25 percent slopes, eroded), Mottsville loamy sand (2 to 8 percent slopes), Mottsvile sandy loam (2 to 8 percent slopes), Mottsville sandy loam (8 to 15 percent slopes), Tollhouse rocky course sandy loam (8 to 50 percent slopes, eroded), Tollhouse sandy loam (5 to 15 percent slopes, eroded), and Tujunga loamy sand (0 to 8 percent slopes). These 13 soil map units can be grouped into seven series and are detailed below as well as mapped on Figure E-2 in Appendix E.

Anza Loam

Anza loam and Anza fine sandy loam were found onsite. The Anza series consists of well drained soils that form from alluvium igneous and metamorphic rock in alluvial fans. Slopes range from two to eight percent at elevations ranging from 3,400 to 5,200 feet. Most of these soils typically support agriculture and grazing lands.

Bishop Silt Loam

Bishop silt loam occurs on floodplains and alluvial fans with slopes of zero to two percent. The Bishop series soils are deep, poorly drained and usually support pastureland, meadow grasses, sedges, and clover.

Calpine Sandy Loam

Calpine loam and Calpine sandy loam two to eight percent slopes are found onsite. Calpine series soils consist of very deep, well drained soils that form in granitic alluvium. Calpine soils usually occur on alluvial fans, fan remnants, and stream terraces with slopes from zero to 15 percent. These soils are used mainly for livestock grazing, but also irrigated agriculture, mountain big sagebrush (*Artemisia tridentata*), antelope bitterbrush (*Purshia tridentata*), Thurber's needlegrass (*Achnatherum thurberianum*), and Indian ricegrass (*Oryzopsis hymenoides*).

Crouch Sandy Loam

Crouch rocky sandy loam and Crouch sandy loam eight to 15 percent slopes are found onsite. Crouch series soils consist of deep, well drained soils that form in material weathered from granite. These soils occur in mountainous uplands with slopes of eight to 75 percent. Crouch soils are used for rangeland or watershed, vegetation is mainly annual grasses and forbs with stands of timber in higher elevations.

Mottsville Loamy Sand

Mottsville loamy sand two to eight percent slopes, Mottsville sandy loam two to eight percent slopes, and Mottsville sandy loam eight to 15 percent slopes are found onsite. Mottsville series soils consist of very deep, excessively drained soils that form in granitic alluvium. These soils are on alluvial fans, fan remnants, and fan aprons with slopes of zero to 15 percent. Mottsville soils are used for rangeland and urban development, any vegetation is typically mountain big sagebrush,

antelope bitterbrush, Anderson's peachbrush (*Prunus andersonii*), and needlegrass (*Achnatherum* sp.).

Tollhouse Rocky Course Sandy Loam

Both Tollhouse rocky course sandy loam and sandy loam are found on site. Tollhouse series consist of shallow, excessively drained soils that form in material weathered from granite rock. These soils are on strongly sloping and very steep mountain slopes. Tollhouse soils are used for wildlife, watershed, and limited grazing. Vegetation in these soils includes chaparral whitethorn (*Ceanothus* sp.), manzanita (*Arctostaphylos* sp.), California laurel (*Umbellularia californica),* live oak (*Quercus* sp.), California buckeye (*Aesculus californica*), and some naturalized grasses and forbs.

Tujunga Loamy Sand

Tujunga series consist of very deep, excessively drained soils that form in alluvium from granite. These soils exist on alluvial fans, floodplains, and urban areas, with slopes of zero to 12 percent. Tujunga soils are used for grazing, citrus, grapes, fruits, development, shrubs, annual grasses, and forbs.

4.4 Vegetation Communities and Land Cover

Eight vegetation communities/land cover types were mapped in the BSA (Figure E-3 in Appendix E; Table 2). These consist of redshank chaparral, big sagebrush scrub, riparian woodlands, upland mustards and other ruderal forbs, non-native grassland, agriculture, disturbed, and urban/developed. A complete list of all the plants observed on site during the biological field survey is provided in Appendix C.

Table 2 Vegetation Communities and Land Cover

Vegetation Community/Land Cover Type (Holland Code)	Sensitive	Acreage	Percentage of Total Acres
Redshank Chaparral (37501)	Yes	10.91	13.8%
Upland Mustards and Other Ruderal Forbs (42011)	No	5.27	6.7%
Disturbed	No	17.13	21.7%
Urban/Developed	No	25.94	32.8%
Agriculture	No	15.66	19.7%
Big Sagebrush Scrub (35110)	No	2.53	3.2%
Riparian Woodlands (61216)	Yes	1.44	1.8%
Non-Native Grassland (42200)	No	0.28	0.3%

Redshank Chaparral (37501)

Areas mapped as redshank chaparral have redshank (*Adenostoma sparsifolium*) as a dominant or co-dominant species within the shrub canopy. Other species may include chamise (*Adenostoma fasciculatum*), Eastwood's manzanita (*Arctostaphylos glandulosa*), bigberry manzanita (*Arctostaphylos glauca*)*,* hoaryleaf ceanothus (*Ceanothus crassifolius*)*,* California buckwheat (*Eriogonum fasciculatum*)*,* chaparral yucca (*Hesperoyucca whipplei*)*,* laurel sumac (*Malosma laurina*)*,* and Mojave yucca (*Yucca schidigera*). The shrub canopy is typically less than five meters tall

and open to intermittent in density, while the herbaceous layer is typically sparse. In some cases, both redshank and chamise represent 30 to 60 percent relative cover in the shrub canopy, with abundant hoaryleaf ceanothus. This vegetation type typically occurs on shallow to deep soils derived from alluvial or bedrock. This vegetation type is a sensitive community state ranked as S3 by CDFW.

This community occurs throughout the site primarily within the western portion of the BSA. A large stand is present north of SR 371 between Bautista Road and Ivan Drive. This vegetation type is dominated by red shank and often found adjacent to chamise chaparral and California buckwheat scrub. In some areas the red shank has an understory of chamise, California buckwheat, and non-native grasses. This vegetation community consists of approximately 10.91 acres and constitutes 13.8 percent of the total area of the BSA.

Upland Mustards and Other Ruderal Forbs (42011)

Areas mapped as upland mustards and other ruderal forbs have black mustard (*Brassica nigra*), artichoke thistle (*Cynara cardunculus*), false caper (*Euphorbia terracina*), shortpod mustard (*Hirschfeldia incana*), dyer's woad (*Isatis tinctoria*) or similar ruderal forbs as dominant vegetation in the herbaceous layer. Emergent trees and shrubs may be present at low cover.

This community occurs throughout the site adjacent to disturbed soils and agricultural fields. It is primarily characterized by black mustard and sheep sorrel (*Rumex acetosella*). This vegetation community consists of approximately 5.27 acres and constitutes 6.7 percent of the total area of the BSA.

Disturbed

Disturbed areas are defined as locations where soils have been disturbed during construction or other urban-related activities. This land cover type is not formally recognized as an official vegetation community. Disturbed areas generally consist of sites that have undergone prior grading and/or off-highway-vehicle recreational use and unimproved access roads. This includes areas that are heavily disked and unvegetated. Most disturbed sites occur on private property as land that has been cleared by property owners. This land cover consists of approximately 17.13 acres and constitutes 21.7 percent of the total area of the BSA.

Urban

Urban/developed mapped locations include areas where development such as business, parks, homes and paved roads occur within the BSA. These areas have been constructed upon or otherwise physically altered to an extent that native vegetation is no longer supported. Developed land in the BSA primarily consists of houses scattered throughout the alignment, but mainly along SR 371 at the eastern edge of the BSA. This land cover type consists of approximately 25.94 acres and constitutes 32.8 percent of the total area of the BSA.

Agriculture

Areas mapped as agriculture included grazed pastures and fallow fields. This land cover type occurs along the SR 371 at the eastern edge of the BSA. It consists of approximately 15.66 acres and constitutes 19.7 percent of the total area of the BSA.

Big Sagebrush Scrub (35110)

Areas mapped as big sagebrush scrub have big sagebrush (*Artemisia tridentata*) as a dominant or co-dominant species within the shrub canopy. Other species may include brittlebush (*Encelia* spp.), goldenbush or rabbitbrush (*Ericameria* spp.), and California buckwheat. This vegetation type occurs on plains, alluvial fans, valley bottoms, and dry washes where soils are well drained.

This community is evenly scattered throughout the BSA as small, thick patches of big sagebrush surrounded by upland mustards and other ruderal forbs or California buckwheat scrub habitat. It consists of approximately 2.53 acres and constitutes 3.2 percent of the total area of the BSA.

Riparian Woodlands (Goodding's Willow – Red Willow) (61216)

This vegetation community typically grows along features such as rivers, creeks, streams, and lake edges. It can consist of a wide variety of species, such as red willow (*Salix laevigata*), Goodding's black willow (*Salix gooddingii*), arroyo willow (*Salix lasiolepis*), sandbar willow (*Salix exigua*), California sycamore (*Platanus racemosa*), Fremont cottonwood (*Populus fremontii*), blue elderberry (*Sambucus nigra* ssp. *caerulea*), and mulefat (*Baccharis salicifolia*). The tree canopy is typically over 30 meters (~100 feet) in height and is open to continuous in density. The shrub layer is also open to continuous in density, while the herbaceous layer is variable. This vegetation type is a sensitive vegetation community state ranked as a S3.

This community occurs along one drainage within the eastern portion of the BSA. This vegetation community consists of approximately 1.44 acres and constitutes 1.8 percent of the total area of the BSA.

Non-native Grassland (42200)

This vegetation community type includes open grasslands composed primarily of annual plant species. Introduced annual grasses, such as soft chess (*Bromus hordeaceus*), ripgut brome (*Bromus diandrus*), red brome (*Bromus madritensis* ssp. *rubens*), and brome fescue (*Festuca bromoides*) are typically the dominant plant species. Common forbs can include filaree (*Erodium* spp.), turkey mullein (*Croton setigerus*), true clover (*Trifolium* spp.), bur clover (*Medicago* spp.), and many others.

This community occurs in the western portion of the BSA and is characterized mainly by red brome and wild oats (*Avena fatua*). This vegetation community consists of approximately 0.28 acre and constitutes 0.3 percent of the total area of the BSA.

4.5 Wildlife Observed

Vegetation in the BSA provides habitat for many wildlife species, including suitable nesting habitat for a wide variety of bird species, including common raptors. Avian wildlife species observed flying over the BSA during the biological reconnaissance survey included Cooper's hawk (*Accipiter cooperii*), red-tailed hawk (*Buteo jamaicensis*), American kestrel (*Falco sparverius*), phainopepla (*Phainopepla nitens*), and European starling (*Sturnus vulgaris*). Avian wildlife species observed foraging throughout the BSA included California quail (*Callipepla californica*). Other wildlife observed included California ground squirrel (*Otospermophilus beecheyi*), coyote (*Canis latrans*), and Pacific gopher snake (*Pituophis catenifer catenifer*). A complete list of all the wildlife observed on site during the biological reconnaissance survey is presented in Appendix C.

5 Special Status Biological Resources

This section discusses special status biological resources observed within the BSA and evaluates the potential for the BSA to support other sensitive resources. Appendix D provides the complete list of all special status resources with records in the CNDDB and CNPS within a five-mile radius of the BSA and a nine-USGS topographic quadrangle query for the BSA.

5.1 Special Status Plant and Wildlife Species

Based on the agency database and literature review and the results of the biological reconnaissance survey of the BSA, Rincon conducted a habitat assessment for 63 special status species (50 special status plant species and 13 special status animal species). Each of the 63 species was evaluated for its potential to occur in the BSA (see Appendix D).

Special Status Plants

Fifty special status plant species are known to occur in the vicinity of the BSA based on the results of the literature review. These species and their potential for occurrence are summarized in Appendix D. Twenty-six species were determined to have no potential to occur due to a lack of habitat, unsuitable soils, and/or the BSA's location outside of the known distribution and/or elevation range of the species (e.g., special status plants that are associated with coastal habitats, serpentine soils, or highly alkaline soils that are not present in the BSA). Of the 24 remaining special status plant species, 20 were determined to have a moderate to high potential to occur in the BSA; chaparral sand-verbena (*Abronia villosa* var. *aurita*), San Diego milk-vetch (*Astragalus oocarpus*), Parish's chaenactis (*Chaenactic parishii*), Parry's spineflower (*Chorizanthe parryi* var. *parryi*), long-spined spineflower (*Chorizanthe polygonoides* var. *longispina*), white-bracted spineflower (*Chorizanthe xanti* var. *leucotheca*), Mojave tarplant (*Deinandra mohavensis*), vanishing wild buckwheat (*Eriogonum evanidum*), San Diego sunflower (*Hulsea californica*), Warner Springs lessingia (*Lessingia glandulifera var. tomentosa*), desert beauty (*Linanthus bellus*), Orcutt's linanthus (*Linanthus orcuttii*), Hall's monardella (*Monardella macrantha* ssp. *hallii*), San Felipe monardella (*Monardella nana* ssp. *leptosiphon*), California beardtongue (*Penstemon californicus*), Latimer's woodland-gilia (*Saltugilia latimeri*), southern mountains skullcap (*Scutellaria bolanderi* ssp. *austromontana*), desert spike-moss (*Selaginella eremophila*), white-margined oxytheca (*Sidotheca emarginata*), and southern jewelflower (*Streptanthus campestris*). (Appendix D). Four species were determined to have a low potential to occur in the BSA.; California ayenia (*Ayenia compacta*), Nevin's barberry (*Berberis nevinii*), San Jacinto mariposa lily (*Calochortus palmeri* var. *munzii*), and Palmer's mariposa-lily (*Calochortus palmeri var. palmeri*). Of these species, one is a State endangered species (Mojave Tarplant) and is discussed further below. The remaining species with potential to occur on site are identified in the CRPR but are not federally or state listed.

Listed Plant Species with Potential to Occur

The following plant species has been listed under CESA and has a high potential to occur in the BSA.

MOJAVE TARPLANT

Mojave tarplant is a State endangered species and a CRPR 1B.3 species that can be found in riparian scrub, coastal scrub, and chaparral. Specific habitat features include low sand bars in river beds;

mostly in riparian areas or in ephemeral grassy areas on mesic soils. The known elevational limit is 2,099 to 5,248 feet. The BSA has a high potential to support Mojave tarplant due to the presence of high-quality coastal scrub, riparian scrub, suitable soils, as well as the site's location within the known elevation range of the species. The parcel proposed for development of the Bautista substation is the only location within the BSA that would experience direct impacts from the proposed project. However, this parcel does not contain the mesic soils required by the species. Elsewhere within the remainder of the BSA, the species has high potential to occur within areas containing mesic soils. However, no direct impacts would occur in these areas because only temporary access will be required for construction.

Special Status Wildlife

Thirteen special status wildlife species are known to occur in the vicinity of the BSA based on the results of the literature review (Appendix D). Four species were determined to have no potential to occur due to a lack of habitat, and/or the BSA's location outside of the known distribution and/or elevation range of the species. A total of eight special status wildlife species were determined to have a moderate or high potential to occur in the BSA; Stephens' kangaroo rat (*Dipodomys stephensi*), Los Angeles pocket mouse (*Perognathus longimembris brevinasus*), southern, southwestern willow flycatcher (*Empidonax traillii extimus*), prairie falcon (*Falco mexicanus*), California glossy snake (*Arizona elegans occidentalis*), coast horned lizard (*Phrynosoma blainvillii*), coast patch-nosed snake (*Salvadora hexalepis virgultea*), southern California legless lizard (*Anniella stebbinsi*) and quino checkerspot butterfly (*Euphydryas editha quino*). Four species have a low potential to occur in the BSA; San Diego black-tailed jackrabbit (*Lepus californicus bennettii*), American badger (*Taxidea taxus*), Crotch bumble bee (*Bombus crotchii*), and western spadefoot (*Spea hammondii*). These species and their potential for occurrence are summarized in Appendix D. Three of these species are federally or state-listed species (quino checkerspot butterfly, southwestern willow flycatcher, and Stephens' kangaroo rat) and discussed further below. Species that are protected by the MSHCP were not included in the potential to occur analysis but are outlined under Section 5.6, *Habitat Conservation Plans*.

Listed Wildlife Species with Potential to Occur

The following three wildlife species have been listed under the federal and/or state ESAs and have a moderate to high potential to occur in the BSA.

QUINO CHECKERSPOT BUTTERFLY

Quino checkerspot butterfly is a federally endangered species and the western portion of the BSA is within USFWS's recommended survey area for the species (USFWS 2014).[2] Adults prefer openings within chaparral and coastal sage shrublands. Suitable sunny openings exist within chaparral and sage shrubland at various locations within the BSA. There are four CNDDB records within five miles of the BSA. The most recent CNDDB record is from 2002. Additionally, there are multiple records of one of the primary larval host plants, white snapdragon (*Antirrhinum coulterianum*) in Anza Valley north of the BSA; however, these records are from the Cahuilla Mountains at elevations exceeding those within the project area (Calflora 2021). The BSA is located approximately 0.4 mile southwest of USFWS-designated critical habitat for the species (USFWS 2021a). This USFWS-designated habitat is north of Wheeler Road. The BSA has a high potential to support Quino checkerspot butterfly due

[2] Surveys were not conducted for this species because ground disturbance within the survey area would be limited to existing utility poles, and no vegetation removal would occur.

to the presence of high quality habitat (such as big sagebrush scrub), proximity to larval host plants, critical habitat within the vicinity of the BSA, and multiple semi-recent CNDDB records of occurrence. No host plants were observed in the BSA during the reconnaissance survey.

SOUTHWESTERN WILLOW FLYCATCHER

The southwestern willow flycatcher is a federally and state endangered species. Adults prefer willow riparian habitat with a dense understory. Marginally suitable habitat (Goodding's Willow – Red Willow) is present within the BSA. There is a single 2001 CNDDB record existing approximately 2.4 miles north of the BSA. The BSA has a moderate potential to support southwestern willow flycatcher due to the presence of marginally suitable habitat within the BSA and proximity to a semi-recent record of occurrence.

STEPHENS' KANGAROO RAT

The Stephens' kangaroo rat is a federally and state endangered species. Adults prefer primarily annual and perennial grasslands, but they can also occur in coastal scrub and sagebrush with sparse canopy cover. This species prefers buckwheat, chamise, brome grass, and filaree (*Erodium cicutarium*). Suitable, though generally disturbed, big sagebrush scrub habitat is present at various locations in the BSA and there is one CNDDB records existing within five miles of the BSA. The most recent CNDDB record is from 1998 and is located approximately 4.2 miles south of the BSA. The BSA has a moderate potential to support Stephens' kangaroo rat due to the presence of suitable habitat within the BSA and proximity to semi-recent records of occurrence.

5.2 Sensitive Plant Communities

A sensitive plant community is one that is ranked statewide as S1, S2, or S3, which is a labeling system based on the number and size of remaining occurrences and recognized threats (CDFW 2021c). Two sensitive plant communities exist within the BSA: southern cottonwood willow riparian forest and redshank chaparral. Southern cottonwood willow riparian forest community (rank S3) is present within the eastern portion of the BSA, south of Cain Road. The Holland definition of "southern cottonwood willow riparian forest" includes the arroyo willow, black willow, Fremont cottonwood, mixed willow, and pacific willow series (Holland 1986). Redshank chaparral (rank S3) is present within the western portion of the BSA, particularly along portions of SR 317 east of Bautista Road. The definition of "redshank chaparral" includes redshank, chamise, manzanita ceanothus, California buckwheat, and chaparral yucca (Holland 1986).

5.3 Jurisdictional Waters and Wetlands

While a formal jurisdictional waters delineation was not conducted as part of this assessment, several potentially jurisdictional water and wetland features were identified within the BSA (USFWS 2021c). These features were mapped in the field using a GPS unit and are shown in Figure E-1 in Appendix E. These include, from west to east, Cahuilla Creek with multiple unnamed tributaries, and Hamilton Creek. These features likely exist on periodic ephemeral flows following precipitation events. However, no water was present at the time of the survey. Hamilton Creek contains approximately 1.44 acres of Goodding's willow- red willow vegetation. The remaining potentially jurisdictional features do not contain riparian vegetation.

According to the National Wetlands Inventory map viewer multiple freshwater forested/shrub wetland, riverine, and freshwater emergent wetlands habitats occur in the vicinity of the BSA (USFWS 2021c). Riverine habitat includes all wetlands and deepwater habitats contained within a channel, with two exceptions: (1) wetlands dominated by trees, shrubs, persistent emergents, emergent mosses, or lichens, and (2) habitats with water containing ocean-derived salts of 0.5 parts per thousand (ppt) or greater. A channel is an open conduit either naturally or artificially created which periodically or continuously contains moving water, or which forms a connecting link between two bodies of standing water (USFWS 2021c). Freshwater emergent wetlands include all nontidal wetlands dominated by trees, shrubs, persistent emergents, emergent mosses or lichens, and all such wetlands that occur in tidal areas where salinity due to ocean-derived salts is below 0.5 ppt. It also includes wetlands lacking such vegetation (USFWS 2021c). Freshwater forested/shrub wetland is similar to freshwater emergent wetlands but is characterized by woody vegetation that is six meters (approximately 20 feet) or greater in height (USFWS 2021c). Figure E-1 in Appendix E depicts the locations within the BSA of the observed potential jurisdictional features mapped during the biological reconnaissance survey.

A single erosional feature was observed at the parcel proposed for development of the Bautista substation. During precipitation events, water sheet flows along Bautista Road and onto the site via an excavated soil cut, approximately one-foot in width. The erosional feature runs approximately 100 feet into the project area and dissipates with no connection to other waters.

5.4 Wildlife Movement

Wildlife movement corridors, or habitat linkages, are generally defined as connections between habitat patches that allow for physical and genetic exchange between otherwise isolated animal populations. Such linkages may serve a local purpose, such as providing a linkage between foraging and denning areas, or they may be regional in nature. Some habitat linkages may serve as migration corridors, wherein animals periodically move away from an area and then subsequently return.

Wildlife movement corridors can be both large and small scale. The BSA is not located within a Conservation Planning Linkage, which are habitat connectivity linkages mapped in the California Essential Habitat Connectivity map that are based on species-specific models and represent the best connections between core natural areas to maintain habitat connectivity (CDFW 2021b). Other ephemeral drainages in the BSA could also serve as small-scale wildlife corridors. Ephemeral drainages provide corridors between changes in vegetation community types and elevation ranges.

5.5 Resources Protected by Local Policies and Ordinances

County of Riverside – Ordinance No. 559: Regulating the Removal of Trees

The County of Riverside Ordinance No. 559 regulates native trees that occur on parcels or properties greater than one-half acre in size, located in areas above 5,000 feet in elevation and within unincorporated areas. All portions of the BSA are located below 5,000 feet in elevation. Therefore, the County of Riverside Ordinance No. 559 does not apply to the project. Additionally, activities conducted by a public utility, subject to the jurisdiction of the Public Utilities Commission or any other constituted public agency, where, to construct and maintain safe operation of facilities under their jurisdiction, trees are removed, pruned, topped, or braced are exempt.

5.6 Habitat Conservation Plans

Western Riverside County Multiple Species Habitat Conservation Plan

The MSHCP is a comprehensive, multi-jurisdictional Habitat Conservation Plan (HCP) focusing on Conservation of species and their associated Habitats in Western Riverside County. The entire project area is located with the MSHCP. The proposed project does not occur within a survey area for amphibians, burrowing owl, Narrow Endemic Plant Species, or Criteria Area Plant Species. However, two parcels (APNs 576-060-040 and 576-060-009) are located within the survey area for LAPM (Figure E-4 in Appendix E).

Both of the subject parcels within the LAPM survey area contain varying levels of suitable habitat. However, the project would not result in direct impacts to APN 576-060-009 and would not remove suitable habitat at this location. The pole sites at this parcel would be accessed temporarily on foot and by vehicles. Potential temporary impacts from these activities would include crushing of vegetation to access poles. However, no permanent direct impacts would occur at this parcel; therefore, a LAPM survey was not conducted for this parcel. The project would result in grading and clearing at the parcel proposed for development of the Bautista substation (APN 576-060-040); therefore, a LAPM live-trapping study was conducted at this parcel, the results of which are discussed further in Section 5.6.1, *Los Angeles Pocket Mouse Survey Results*.

In addition, assessments for riparian/riverine habitat, riparian/riverine species and vernal pool/fairy shrimp habitat as well as the urban/wildlands interface were conducted. The project does not propose to impact riparian/riverine habitat and riparian/riverine species, and the BSA does not contain vernal pool/fairy shrimp habitat. In addition, the project area is not located within a criteria cell or adjacent to public quasi-public (PQP) lands, so the MSHCP guidelines regarding urban and wildlands interface were not considered.

Los Angeles Pocket Mouse Survey Results

As discussed in Section 3.3, *Los Angeles Pocket Mouse Survey*, a LAPM live-trapping survey was conducted from August 30 to September 3, 2021. No LAPM were trapped during these efforts. Three common species were trapped during the survey, including Dulzura kangaroo rat (*Dipodomys simulans*), deer mouse (*Peromyscus maniculatus*), and an individual California towhee (*Melozone crissalis*). Trapped individuals were marked and released each night. The results from the LAPM survey, including the total number of unique and recaptured animals from each trap line, are summarized below in Table 3.

Table 3 Trapping Results for the Los Angeles Pocket Mouse Survey

Trap Line	Trap Nights	Number of DIPSIM Captured	Number of PERMAN Captured
A	35	2 (7)	4 (5)
B	35	2 (4)	3 (1)
C	35	1 (2)	0 (0)
D	35	1 (10)	0 (1)
E	35	2 (4)	0 (0)
F	35	2 (3)	1 (5)
Total	**210**	**10 (30)**	**8 (12)**

trap nights = number of traps set multiplied by the number of nights deployed

(#) = number of recaptured individuals (for example, in trap line A, two unique individuals were trapped and seven previously-marked individuals were trapped)

DIPSIM: *Dipodomys simulans* (Dulzura kangaroo rat)

PERMAN: *Peromyscus maniculatus* (deer mouse)

6 Project Impacts and Mitigation Measures

The criteria used to evaluate potential project-related impacts to biological resources are presented in Section 2.1 This section discusses the possible adverse impacts to biological resources that may occur from implementation of the project and recommends appropriate avoidance, minimization, and mitigation measures that would reduce those impacts to less than significant levels.

6.1 Special Status Species

The proposed project would have a significant effect on biological resources if it would:

a) *Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.*

Special Status Plants

As discussed in Section 5.1, *Special Status Plant and Wildlife Species*, 50 special status plants have been previously documented within five miles of the BSA. While many of the poles are located along roads (paved and unpaved), there is potential for some temporary impacts to occur during construction activities at poles that occur where special status plant species may be supported. Construction activities, such as vehicles driving and parking, and the foot traffic of crews, could incidentally crush special status plant species. While some of these plants may suffer some structural damage, mortality would not necessarily occur. The project includes grading of the parcel proposed for development of the Bautista substation and removal of redshank chaparral vegetation on site. This parcel does not contain vegetation and soils suitable for supporting Mojave tarplant. Therefore, the proposed project would not likely result in potentially significant impacts to federally and/or state listed plants. However, if these special status plants are encountered during grading and vegetation removal, direct impacts could occur. Implementation of Mitigation Measures (MM) BIO-1 and BIO-2 is recommended to address these impacts. With the implementation of these measures, impacts to special status plants would be less than significant because project effects within suitable habitat would be limited and not likely to substantially reduce local populations or their ability to persist once the project is complete.

Special Status Wildlife

As discussed above in Section 5.1, *Special Status Plant and Wildlife Species*, 13 special status wildlife species have been previously documented within five miles of the BSA. Direct impacts at the Bautista substation parcel would include the grading of the site and removal of vegetation, including redshank chaparral. Redshank chaparral is not the preferred habitat for the three listed special status wildlife species with a moderate or high potential to occur in the BSA (quino checkerspot butterfly, southwestern willow flycatcher, and Stephens' kangaroo rat). Therefore, it is unlikely that construction of Bautista substation will affect these species. Throughout the remainder of the BSA, potential indirect impacts would include temporary crushing of vegetation and increased sound levels. These activities could displace terrestrial and avian special status species if vegetation crushing occurs within the species' preferred habitats. As previously discussed, quino checkerspot

butterfly and Stephens' kangaroo rat may occur in the big sagebrush scrub habitat present within the BSA, while the southwestern willow flycatcher may occur in the Goodding's willow-red willow habitat. Therefore, the proposed project could result in impacts to special status wildlife species, and implementation of MM BIO-1 through BIO-5 is recommended. With the implementation of these measures, impacts to these species would be less than significant because project effects within suitable habitat would be limited and not likely to substantially reduce local populations or their ability to persist once the project is complete.

Additionally, several common bird species protected by CFGC Section 3503 and the MBTA may nest in trees and shrubs within the BSA. Construction may result in direct or indirect impacts to nesting bird species, should they be present within and/or in the immediate vicinity of areas of disturbance at the time of construction. Impacts to nesting birds could occur if nests with eggs or young are present within the proposed disturbance area during project implementation that may cause direct impact to the nest, and/or failure or abandonment of the nest. Implementation of MM BIO-1 and BIO-4 would address compliance with CFGC Section 3503 and the MBTA.

Recommended Mitigation Measures

BIO-1 Workers Environmental Awareness Program

A pre-construction training should be conducted for all construction employees, prior to the start of construction activities. A workers environmental awareness program will be produced by a qualified biologist containing information to inform construction supervisors, workers, and inspectors of sensitive resources that have a moderate to high potential of occurrence along the project route, to explain their importance and sensitivity to disturbance, to review regulatory protections afforded to these resources, and to describe the project design features and mitigation measures adopted for the project. Training would identify individual responsibilities regarding these resources, and communication procedures should sensitive resources exist or be found in the project area vicinity.

BIO-2 Pre-construction Focused Plant Surveys

Focused surveys for sensitive plant species should be conducted during the appropriate blooming period prior to the start of construction at pole sites, access points, and the Bautista substation. Surveys should be conducted by a qualified biologist using CDFW protocol survey standards (CDFW 2021d). Any individual of a special status species would be clearly flagged for avoidance by construction activities. If a listed special status plant species, such as Mojave tarplant, cannot be avoided by proposed construction, a CDFW incidental take permit would be required for plant removal. Any permitted removal of a listed plant species would require mitigation per CDFW requirements.

BIO-3 Pre-construction Special Status Wildlife Species Survey and Monitoring

A biological monitor should oversee implementation of avoidance and minimization measures prior and during project activities. The biological monitor should be knowledgeable and experienced in the biology and natural history of special status terrestrial species potentially present at the project area. The biological monitor should monitor project activities that involve the potential disturbance of sensitive species habitat. The biological monitor should conduct pre-construction clearance surveys no more than three days prior to the initiation of ground disturbance and vegetation removal. If any terrestrial species are identified on site, they should be captured and relocated offsite beyond the construction zone. The biological monitor should have authority to immediately

stop any project activity that does not comply with project permits and/or to order any reasonable measure to avoid the unauthorized take of an individual species.

BIO-4 Nesting Bird Surveys

If feasible, removal of vegetation should be scheduled to occur in the fall and winter (between September 1 and January 31), after fledging and before the initiation of the nesting season. For construction activities occurring during the nesting season (generally February 1 to August 31), surveys for nesting birds covered by the CFGC and the MBTA should be conducted by a qualified biologist no more than seven days prior to vegetation removal. The surveys should include the disturbance area plus a 100-foot buffer around the site, as feasible without trespassing on private lands. If active nests are located, construction work should be conducted outside a buffer zone from the nest to be determined by the qualified biologist. The buffer should be a minimum of 50 feet for non-raptor bird species and at least 100 feet for raptor species, or as determined by a qualified biologist. Larger buffers may be required depending upon the status of the nest and the construction activities occurring in the vicinity of the nest. The buffer area(s) should be closed to all construction personnel and equipment until the adults and young are no longer reliant on the nest site. A qualified biologist should confirm that breeding/nesting is completed, and young have fledged the nest prior to removal of the buffer. If buffer zones are determined to be infeasible, a full-time qualified biological monitor should be onsite to monitor construction within the buffer zones to ensure active nests and nesting birds are not impacted.

BIO-5 Construction Best Management Practices

The following best management practices (BMPs) should be followed by construction personnel during all construction activities:

- All food-related trash items such as wrappers, cans, bottles, and food scraps generated during proposed project construction should be cleaned up daily and disposed of in closed containers only.
- If vehicle or equipment maintenance is necessary, it should be performed in the designated staging areas.
- During construction, heavy equipment should be operated in accordance with BMPs.
- Any observation of a dead, injured, or entrapped listed species should immediately be reported to the biological monitor.
- A biological monitor must delineate all environmentally sensitive area locations with flagging or staking. All personnel on the project site must avoid all established environmentally sensitive areas.
- Vehicles and equipment must remain on approved work and staging areas.

6.2 Sensitive Plant Communities

The proposed project would have a significant effect on biological resources if it would:

b) Have a substantial adverse impact 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 Wildlife or US Fish and Wildlife Service.

As discussed in Section 5.2, *Sensitive Plant Communities*, Riparian habitat (Goodding's willow – red willow) (Rank S3) and redshank chaparral (Rank S3) were identified in the BSA. Rank S3 vegetation communities are considered vulnerable to extirpation or extinction by CDFW.

Redshank chaparral would be permanently impacted at the Bautista substation parcel. This impact would be limited to approximately 1.0 acre, which represents 9.17 percent of the redshank chaparral found in the BSA. Additionally, this vegetation community is locally abundant in the adjacent area outside of the BSA, and the removal of approximately 9.17 percent of this community within the BSA would not result in the removal of a substantial amount of habitat regionally. Furthermore, the species that this vegetation community may support would not be substantially impacted due to the abundance of this vegetation community both within the immediate vicinity (i.e., within the BSA) and regionally. Lastly, the Bautista substation parcel is located within the Western Riverside County MSHCP and is not within a criteria cell, thus indicating that this vegetation community has not been targeted for conservation in this portion of the plan area (refer to Section 6.6, *Conservation Plans*, for a discussion of MSHCP consistency). Therefore, the removal of 1.0 acre of redshank chaparral (i.e., approximately 9.17 percent of the redshank chaparral within the BSA) would not be considered a substantial adverse impact on the natural community or to the species it would support.

In the remainder of the BSA, the proposed surface ground disturbance would be associated with equipment accessing the project area along existing roadways, which would be temporary in nature. No improvements or new access roads are proposed.

The project does not propose any permanent structures in areas that could support riparian habitats; therefore, direct impacts to riparian habitat (including Goodding's willow – red willow) would not occur. Temporary impacts may include the crushing of vegetation to gain access to the existing pole sites, which would not be considered a substantial adverse impact. However, construction activities could result in indirect impacts (e.g., oil leaks from vehicles) that could cause potentially significant effects to riparian habitats. Implementation of MM BIO-1 (listed in Section 6.1, *Special Status Species*) and BIO-6 would minimize indirect impacts to riparian communities. With the implementation of these measures, impacts to riparian communities would be less than significant.

Recommended Mitigation Measure

BIO-6 Erosion Controls and Hazardous Materials Spill Prevention and Contingency Plan

Erosion controls should be used where necessary along the project route. The most likely situations for use of these controls would be when construction activities occur near storm drains, streams, steep slopes, and other sensitive habitat areas. Control measures that may be used include silt fences, sand bags, certified weed-free straw wattles and straw bales, and other control measures as

needed. construction vehicles would also be equipped with a vacuum pump for all ground disturbing activities to assist in the removal of wet soil.

In addition, a Hazardous Materials Spill Prevention and Contingency Plan (SPCP) should be implemented. The plan should evaluate potential spill scenarios, identify avoidance and prevention measures, and outline appropriate response actions. To avoid and/or minimize potential impacts to water quality and other sensitive habitats, the following Best Management Practices should also be implemented:

- Materials should be stored on impervious surfaces or plastic ground covers to prevent any spills or leakage. Construction materials and spoils should be protected from stormwater runoff using temporary perimeter sediment barriers such as berms, silt fences, fiber rolls, covers, sand/gravel bags, and straw bale barriers, as appropriate.
- All vehicles and equipment should be in good working condition and free of leaks. The contractor should prevent oil, petroleum products, or any other pollutants from contaminating the soil or entering a watercourse (dry or otherwise).
- All re-fueling, cleaning, and maintenance of equipment should occur at least 100-feet from potentially jurisdictional waters.
- Adequate spill prevention and response equipment should be maintained on site and readily available to implement to ensure minimal impacts to aquatic environments**.**

6.3 Jurisdictional Waters and Wetlands

The proposed project would have a significant effect on biological resources if it would:

c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.

As discussed in Section 5.3, *Jurisdictional Waters and Wetlands*, jurisdictional waters and wetlands (e.g., Cahuilla Creek and Hamilton Creek) are present within or adjacent to the BSA. The erosional feature located at the Bautista substation parcel is non-jurisdictional because it only carries water during precipitation events along Bautista Road and onto the parcel for approximately 100 feet before it dissipates with no connection to other waters. The project is not expected to directly impact jurisdictional waters as no permanent structures are proposed in these areas. However, construction activities could result in indirect impacts (e.g., oil leaks from vehicles, soil erosion) that could affect downstream waters and be potentially significant. Implementation of MMs BIO-1 and BIO-5, above, would reduce these potential indirect impacts to less than significant.

6.4 Wildlife Movement

The proposed project would have a significant effect on biological resources if it would:

d) Interfere substantially with the movement of any resident or migratory fish or wildlife species or with established resident or migratory wildlife corridors or impede the use of wildlife nursery sites.

The project area is surrounded by undeveloped land and open land areas providing a multitude of wildlife movement options throughout the BSA and adjacent areas regionally. Implementation of

the project would not significantly alter existing wildlife movement patterns given and impacts would be less than significant. No mitigation measures are recommended.

6.5 Local Policies and Ordinances

The proposed project would have a significant effect on biological resources if it would:

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

No trees are proposed for removal during project activities. Construction of the proposed project would not remove native trees that occur on parcels or properties greater than one-half acre in size, located in areas above 5,000 feet in elevation and within unincorporated areas. All portions of the BSA are below 5,000 feet in elevation. Therefore, County of Riverside Ordinance No. 559 does not apply to the project, and no impact would occur. No mitigation measures are recommended.

6.6 Conservation Plans

The proposed project would have a significant effect on biological resources if it would:

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state habitat conservation plan.

The BSA is located within the western Riverside County MSHCP. An MSHCP Consistency Analysis and Habitat Assessment Report was prepared for the project given the project's location within the MSCHP Plan Area (Rincon 2021). The report was completed to document existing site conditions and to determine potential impacts to sensitive biological resources for consistency with the MSHCP. As discussed in Section 5.6, *Habitat Conservation Plans*, the proposed project does not occur within a survey area for amphibians, burrowing owl, Narrow Endemic Plant Species, or Criteria Area Plant Species. However, two parcels in the project area are located within the survey area for LAPM, which are evaluated in the MSHCP Consistency Analysis. In addition, the MSHCP Consistency Analysis also includes assessments for riparian/riverine habitat, riparian/riverine species and vernal pool/fairy shrimp habitat as well as the urban/wildlands interface.

Both of the project parcels within the LAPM survey area contain varying levels of suitable habitat. However, the project would not result in direct impacts to APN 576-060-009 and would not remove suitable habitat at this location. Pole sites at this parcel would be accessed temporarily on foot and vehicles. Potential temporary impacts from these activities would include crushing of vegetation to access poles. However, no permanent direct impacts would occur at this parcel; therefore, no further actions are required pursuant to the MSHCP. The project would result in grading and clearing at the parcel proposed for development of the Bautista substation (APN 576-060-040). Due to the proximity to a recent 2015 CNDDB occurrence and suitable habitat conditions, a live-trapping study was completed at this parcel for MSHCP compliance. As discussed in Section 5.6.1, *Los Angeles Pocket Mouse Survey Results*, the LAPM trapping study was negative at this parcel; therefore, no further actions are required pursuant to the MSHCP.

The proposed project would be primarily restricted to the existing four-mile transmission line corridor in addition to the Bautista substation parcel. The project relies heavily on existing infrastructure and would involve minimal ground disturbance (e.g., temporary crushing of vegetation to access pole sites). Development at the Bautista substation parcel would require the removal of approximately 1.0 acre of redshank chaparral, resulting in the only direct impacts of the

project. No vernal pool or fairy shrimp habitat was documented within the BSA, and as discussed in Section 6.2, *Sensitive Plant Communities*, no direct impacts to riparian/riverine areas would occur. Furthermore, as discussed in Section 6.4, *Wildlife Movement*, the project would not result in impacts to the urban/wildlands interface nor wildlife corridors and linkages. As such, no further actions are required pursuant to the MSHCP for these resources. Therefore, no impact related to consistency with the MSHCP would occur.

7 Limitations, Assumptions, and Use Reliance

This Biological Resources Assessment has been performed in accordance with professionally accepted biological investigation practices conducted at this time and in this geographic area. The biological investigation is limited by the scope of work performed. Biological surveys for the presence or absence of certain taxa have been conducted as part of this assessment but were not performed during a particular blooming period, nesting period, or particular portion of the season when positive identification would be expected if present, and, therefore, cannot be considered definitive. The biological surveys are limited also by the environmental conditions present at the time of the surveys. In addition, general biological (or protocol) surveys do not guarantee that the organisms are not present and will not be discovered in the future within the site. In particular, mobile wildlife species could occupy the site on a transient basis or re-establish populations in the future. Our field studies were based on current industry practices, which change over time and may not be applicable in the future. No other guarantees or warranties, expressed or implied, are provided. The findings and opinions conveyed in this report are based on findings derived from site reconnaissance, jurisdictional areas, review of CNDDB RareFind5, and specified historical and literature sources. Standard data sources relied upon during the completion of this report, such as the CNDDB, may vary with regard to accuracy and completeness. In particular, the CNDDB is compiled from research and observations reported to CDFW that may or may not have been the result of comprehensive or site-specific field surveys. Although Rincon believes the data sources are reasonably reliable, Rincon cannot and does not guarantee the authenticity or reliability of the data sources it has used. Additionally, pursuant to our contract, the data sources reviewed included only those that are practically reviewable without the need for extraordinary research and analysis.

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Appendix A

Regulatory Guidance

Regulatory Guidance

Special status habitats are vegetation types, associations, or sub-associations that support concentrations of special status plant or wildlife species, are of relatively limited distribution, or are of particular value to wildlife.

Listed species are those taxa that are formally listed as endangered or threatened by the federal government (e.g., U.S. Fish and Wildlife Service [USFWS]), pursuant to the Federal Endangered Species Act (FESA) or as endangered, threatened, or rare (for plants only) by the State of California (i.e., California Fish and Game Commission), pursuant to the California Endangered Species Act or the California Native Plant Protection Act. Some species are considered rare (but not formally listed) by resource agencies, organizations with biological interests/expertise (e.g., Audubon Society, CNPS, The Wildlife Society), and the scientific community.

The following is a summary of the regulatory context under which biological resources are managed at the federal, state, and local levels. Many federal and state statutes provide a regulatory structure that guides the protection of biological resources. Agencies with the responsibility for protection of biological resources within the project area include:

- U.S. Army Corps of Engineers (wetlands and other waters of the United States);
- Regional Water Quality Control Board (waters of the State);
- U.S. Fish and Wildlife Service (federally listed species and migratory birds);
- California Department Fish and Wildlife (riparian areas and other waters of the State, state-listed species);
- Riverside County (Western Riverside County Multiple Species Habitat Conservation Plan [MSHCP])

U.S. Army Corps of Engineers

Under Section 404 of the Clean Water Act, the U.S. Army Corps of Engineers (USACE) has authority to regulate activities that could discharge fill of material or otherwise adversely modify wetlands or other “waters of the United States.” Perennial and intermittent creeks are considered waters of the United States if they are hydrologically connected to other jurisdictional waters. The USACE also implements the federal policy embodied in Executive Order 11990, which is intended to result in no net loss of wetland value or acres. In achieving the goals of the Clean Water Act, the USACE seeks to avoid adverse impacts and offset unavoidable adverse impacts on existing aquatic resources. Any fill or adverse modification of wetlands that are hydrologically connected to jurisdictional waters would require a permit from the USACE prior to the start of work. Typically, when a project involves impacts to waters of the United States, the goal of no net loss of wetland acres or values is met through compensatory mitigation involving creation or enhancement of similar habitats.

Regional Water Quality Control Board

The State Water Resources Control Board (SWRCB) and the local Central Coast Regional Water Quality Control Board (RWQCB) have jurisdiction over "waters of the State," pursuant to the Porter-Cologne Water Quality Control Act, which are defined as any surface water or groundwater, including saline waters, within the boundaries of the State. The SWRCB has issued general Waste Discharge Requirements (WDRs) regarding discharges to "isolated" waters of the State (Water Quality Order No. 2004-0004-DWQ, Statewide General Waste Discharge Requirements for Dredged or Fill Discharges to Waters Deemed by the U.S. Army Corps of Engineers to be Outside of Federal Jurisdiction). The Central Coast RWQCB enforces actions under this general order for isolated waters not subject to federal jurisdiction, and is also responsible for the issuance of water quality certifications pursuant to Section 401 of the Clean Water Act for waters subject to federal jurisdiction.

United States Fish and Wildlife Service

The USFWS implements the Migratory Bird Treaty Act (16 United States Code [USC] Section 703-711) and the Bald and Golden Eagle Protection Act (16 USC Section 668). The USFWS and National Marine Fisheries Service (NMFS) share responsibility for implementing the Federal Endangered Species Act (FESA) (16 USC § 153 et seq.). The USFWS generally implements the FESA for terrestrial and freshwater species, while the NMFS implements the FESA for marine and anadromous species. Projects that would result in "take" of any federally listed threatened or endangered species are required to obtain permits from the USFWS or NMFS through either Section 7 (interagency consultation with a federal nexus) or Section 10 (Habitat Conservation Plan) of FESA, depending on the involvement by the federal government in permitting and/or funding of the project. The permitting process is used to determine if a project would jeopardize the continued existence of a listed species and what measures would be required to avoid jeopardizing the species. "Take" under federal definition means to harass, harm (which includes habitat modification), pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. Proposed or candidate species do not have the full protection of FESA; however, the USFWS and NMFS advise project applicants that they could be elevated to listed status at any time.

California Department of Fish and Wildlife

The California Department of Fish and Wildlife (CDFW) derives its authority from the Fish and Game Code of California. The California Endangered Species Act (CESA) (Fish and Game Code Section 2050 et. seq.) prohibits take of state listed threatened, endangered or fully protected species. Take under CESA is restricted to direct mortality of a listed species and does not prohibit indirect harm by way of habitat modification. The CDFW also prohibits take for species designated as Fully Protected under the Code.

California Fish and Game Code sections 3503, 3503.5, and 3511 describe unlawful take, possession, or destruction of birds, nests, and eggs. Fully protected birds (Section 3511) may not be taken or possessed except under specific permit. Section 3503.5 of the Code protects all birds-of-prey and their eggs and nests against take, possession, or destruction of nests or eggs.

Species of Special Concern (SSC) is a category used by the CDFW for those species which are considered to be indicators of regional habitat changes or are considered to be potential future protected species. Species of Special Concern do not have any special legal status except that which

may be afforded by the Fish and Game Code as noted above. The SSC category is intended by the CDFW for use as a management tool to include these species into special consideration when decisions are made concerning the development of natural lands. The CDFW also has authority to administer the Native Plant Protection Act (NPPA) (Fish and Game Code Section 1900 et seq.). The NPPA requires the CDFW to establish criteria for determining if a species, subspecies, or variety of native plant is endangered or rare. Under Section 1913(c) of the NPPA, the owner of land where a rare or endangered native plant is growing is required to notify the department at least 10 days in advance of changing the land use to allow for salvage of plant.

Perennial and intermittent streams and associated riparian vegetation, when present, also fall under the jurisdiction of the CDFW. Section 1600 et seq. of the Fish and Game Code (Lake and Streambed Alteration Agreements) gives the CDFW regulatory authority over work within the stream zone consisting of, but not limited to, the diversion or obstruction of the natural flow or changes in the channel, bed, or bank of any river, stream or lake.

Western Riverside County Multiple Species Habitat Conservation Plan

The Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) is a comprehensive, multi-jurisdictional Habitat Conservation Plan (HCP) focusing on Conservation of species and their associated Habitats in Western Riverside County. This Plan is one of several large, multi-jurisdictional habitat-planning efforts in Southern California with the overall goal of maintaining biological and ecological diversity within a rapidly urbanizing region. Large-scale HCP planning efforts have been completed in San Diego and Orange Counties and a similar effort is underway in the Coachella Valley. The MSHCP will allow the County of Riverside (the County) and its Cities to better control local land-use decisions and maintain a strong economic climate in the region while addressing the requirements of the State and federal Endangered Species Acts.

The MSHCP will serve as an HCP pursuant to Section 10(a)(1)(B) of the federal Endangered Species Act of 1973 (FESA), as well as a Natural Communities Conservation Plan (NCCP) under the NCCP Act of 2001. The MSHCP will be used to allow the participating jurisdictions to authorize “Take” of plant and wildlife species identified within the Plan Area. The USFWS and CDFW (hereafter “Wildlife Agencies”) have authority to regulate the Take of Threatened, Endangered, and rare Species. Under the MSHCP, the Wildlife Agencies will grant “Take Authorization” for otherwise lawful actions -- such as public and private Development that may incidentally Take or harm individual species or their Habitat outside of the MSHCP Conservation Area -- in exchange for the assembly and management of a coordinated MSHCP Conservation Area.

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Appendix B

Representative Site Photographs

Photograph 1. Upland mustard and other ruderal forbs, facing south.

Photograph 2. Dense redshank, facing northwest.

Photograph 3. California buckwheat scrub with big sagebrush scrub behind, facing northwest.

Photograph 4. Bautista substation and redshank chaparral, facing north. Bautista Road on immediate left.

Photograph 5. Bautista substation and erosional feature created from sheet flow off of Bautista Road in the distance, facing northwest.

Photograph 6. Concrete drainage along SR 371 that connects to Cahuilla Creek, facing northeast.

Photograph 7. Cahuilla Creek crossing. Note poles span the entire creek without contact.

Photograph 8. Hamilton Creek, facing east along the eastern end of the BSA.

Appendix C

Plant and Wildlife Species Observed

Scientific Name	Common Name	Status	Native or Introduced
Birds			
Accipiter cooperii	Cooper's hawk	WL	Native
Aphelocoma californica	California scrub-jay	None	Native
Buteo jamaicensis	red-tailed hawk	None	Native
Callipepla californica	California quail	None	Native
Colaptes auratus	northern flicker	None	Native
Corvus corax	common raven	None	Native
Falco sparverius	American kestrel	None	Native
Geococcyx californianus	greater roadrunner	None	Native
Mimus polyglottos	northern mockingbird	None	Native
Passerculus sandwichensis	Savannah sparrow	None	Native
Phainopepla nitens	phainopepla	None	Native
Psaltriparus minimus	bushtit	None	Native
Sayornis saya	Say's phoebe	None	Native
Sturnella neglecta	Western meadowlark	None	Native
Sturnus vulgaris	European starling	None	Native
Thryomanes bewickii	Bewick's wren	None	Native
Toxostoma redivivum	California thrasher	None	Native
Zenaida macroura	mourning dove	None	Native
Zonotrichia leucophrys	white-crowned sparrow	None	Native
Mammals			
Canis latrans	coyote	None	Native
Otospermophilus beecheyi	California ground squirrel	None	Native
Sylvilagus audubonii	desert cottontail	None	Native
Reptiles			
Pituophis catenifer	pacific gopher snake	None	Native
Plants			
Adenostoma fasciculatum	chamise	None	Native
Adenostoma sparsifolium	redshank	None	Native
Agrostis scabra	rough bent	None	Native
Ambrosia acanthicarpa	flatspine burr ragweed	None	Native
Arctostaphylos glauca	bigberry manzanita	None	Native
Artemisia dracunculus	wild tarragon	None	Native
Artemisia tridentata	big sage	None	Native
Avena fatua	wildoats	None	Introduced
Baccharis salicifolia	mule fat	None	Native
Batis maritima	saltwort	None	Native
Berberis vulgaris	common barberry	None	Introduced
Brassica nigra	black mustard	None	Introduced
Bromus madritensis	red brome	None	Introduced

Scientific Name	Common Name	Status	Native or Introduced
Ceanothus perplexans	cupped leaf ceanothus	None	Native
Centromadia pungens	common tarweed	None	Native
Chrysothamnus viscidiflorus	green rabbitbrush	None	Native
Croton californicus	California croton	None	Native
Cylindropuntia acanthocarpa	buck horn cholla	None	Native
Eriodictyon trichocalyx	yerba santa	None	Native
Eriogonum fasciculatum	buckwheat	None	Native
Eriogonum wrightii	Wright's buckwheat	None	Native
Eucalyptus camaldulensis	red gum	None	Introduced
Forestiera pubescens	desert olive	None	Native
Heliotropium curassavicum	salt heliotrope	None	Native
Hesperoyucca whipplei	chaparral yucca	None	Native
Lactuca virosa	wild lettuce	None	Introduced
Lepidospartum squamatum	scalebroom	None	Native
Nicotiana attenuata	coyote tobacco	None	Native
Opuntia basilaris	beaver tail cactus	None	Native
Phalaris aquatica	harding grass	None	Introduced
Populus fremontii	Fremont cottonwood	None	Native
Prunus ilicifolia	hollyleaf cherry	None	Native
Pseudognaphalium californicum	ladies' tobacco	None	Native
Quercus Cornelius-mulleri	scrub oak	None	Native
Rhamnus ilicifolia	hollyleaf redberry	None	Native
Rumex acetosella	sheep sorrel	None	Introduced
Rumex crispus	curly dock	None	Introduced
Salix lasiolepis	arroyo willow	None	Native
Salix gooddingii	Goodding's willow	None	Native
Salvia columbariae	chia sage	None	Native
Solidago spp.	Canada goldenrod	None	Native
Stephanomeria pauciflora	desert wirelettuce	None	Native
Suaeda nigra	bush seepweed	None	Native
Tamarix ramosissima	tamarisk	None	Introduced
Yucca aloifolia	Spanish dagger yucca	None	Native

Appendix D

Potential Special Status Species

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Project Area	Habitat Suitability/ Observations
Plants and Lichens				
Abronia villosa var. *aurita* chaparral sand-verbena	None/None G5T2?/S2 1B.1	Annual herb. Blooms Jan-Sept. Occurs in chaparral, coastal scrub. Sandy areas of the South Coast and Sonoran Desert Floristic Provinces. 80-1600m (260-5250ft).	High	Sandy soil, appropriate elevation, and high-quality chaparral is present within the BSA.
Allium marvinii Yucaipa onion	None/None G1/S1 1B.2	Chaparral. In openings on clay soils. 850-1070 m. Blooms Apr-May.	Not Expected	The BSA is outside the known elevation range of this species.
Almutaster pauciflorus alkali marsh aster	None/None G4/S1S2 2B.2	Meadow and seeps. Alkaline. 60-765 m. Blooms Jun-Oct.	Not Expected	The BSA is outside the known elevation range of this species.
Ambrosia pumila San Diego ambrosia	FE/None G1/S1 1B.1	Chaparral, coastal scrub, valley and foothill grassland. Sandy loam or clay soil; sometimes alkaline. In valleys; persists where disturbance has been superficial. Sometimes on margins or near vernal pools. 3-580 m. Blooms Apr-Oct.	Not Expected	The BSA is outside the known elevation range of this species.
Astragalus hornii var. *hornii* Horn's milk-vetch	None/None GUT1/S1 1B.1	Meadows and seeps, playas. Lake margins, alkaline sites. 75-350 m. Blooms May-Oct.	Not Expected	The BSA is outside the known elevation range of this species.
Astragalus oocarpus San Diego milk-vetch	None/None G2?/S2? 1B.2	Chaparral, cismontane woodland. Openings in chaparral or on gravelly flats and slopes in thin oak woodland. 120-1795 m. Blooms May-Aug.	Moderate	Suitable chaparral habitat is present within the BSA. However, gravelly flats and slopes in oak woodlands are not present within the BSA.
Astragalus pachypus var. *jaegeri* Jaeger's milk-vetch	None/None G4T1/S1 1B.1	Coastal scrub, chaparral, valley and foothill grassland, cismontane woodland. Dry ridges and valleys and open sandy slopes; often in grassland and oak-chaparral. 365-1040 m. Blooms Dec-Jun.	Not Expected	The BSA is outside the known elevation range of this species.
Atriplex parishii Parish's brittlescale	None/None G1G2/S1 1B.1	Vernal pools, chenopod scrub, playas. Usually on drying alkali flats with fine soils. 4-1420 m. Blooms Jun-Oct.	Not Expected	Suitable vernal pools, chenopod scrub, and playas are not present within the BSA.
Ayenia compacta California ayenia	None/None G4/S3 2B.3	Mojavean desert scrub, Sonoran desert scrub. Sandy and gravelly washes in the desert; dry desert canyons. 60-1830 m. Blooms Mar-Apr.	Low	Marginally suitable sandy washes are present within the BSA.
Berberis nevinii Nevin's barberry	FE/SE G1/S1 1B.1	Chaparral, cismontane woodland, coastal scrub, riparian scrub. On steep, N-facing slopes or in low grade sandy washes. 90-1590 m. Blooms (Feb)Mar-Jun.	Low	Chaparral habitat is present within the BSA. However, suitable steep, north-facing slopes are not present within the BSA.

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Project Area	Habitat Suitability/ Observations
Boechera johnstonii Johnston's rockcress	None/None G1/S1 1B.2	Chaparral, lower montane coniferous forest. Often on eroded clay soils. With Adenostoma, Quercus wislizenii. 1365-2590 m. Blooms Feb-Jun.	Not Expected	High quality chaparral is present in several areas but clay soil is not present onsite and the elevation of the BSA exceeds the known range for the species.
Calochortus palmeri var. *munzii* San Jacinto mariposa-lily	None/None G3T3/S3 1B.2	Lower montane coniferous forest, chaparral, meadows and seeps. Seen in open Jeffrey pine forest as well as in chaparral. 940-1815 m. Blooms Apr-Jul.	Low	High quality chaparral is present within the BSA and species has been found at lower elevations, though this species is generally found at higher elevation montane habitats.
Calochortus palmeri var. *palmeri* Palmer's mariposa-lily	None/None G3T2/S2 1B.2	Meadows and seeps, chaparral, lower montane coniferous forest. Vernally moist places in yellow-pine forest, chaparral. 195-2530 m. Blooms Apr-Jul.	Low	High quality chaparral is present within the BSA; however, vernally moist places in yellow-pine forest does not occur within the BSA.
Castilleja lasiorhyncha San Bernardino Mountains owl's-clover	None/None G2?/S2? 1B.2	Meadows and seeps, pebble plain, upper montane coniferous forest, chaparral, riparian woodland. Mesic to drying soils in open areas of stream and meadow margins or in vernally wet areas. 1140-2320 m. Blooms May-Aug.	Not Expected	Suitable streams, meadows, and vernally wet areas do not occur within the BSA.
Centromadia pungens ssp. *laevis* smooth tarplant	None/None G3G4T2/S2 1B.1	Valley and foothill grassland, chenopod scrub, meadows and seeps, playas, riparian woodland. Alkali meadow, alkali scrub; also in disturbed places. 5-1170 m. Blooms Apr-Sep.	Not Expected	The habitat types and soils are not present within the BSA. Additionally, the BSA elevation is slightly higher than required by this species.
Chaenactis parishii Parish's chaenactis	None/None G3G4/S3 1B.3	Chaparral. Rocky sites. 670-2135 m. Blooms May-Jul.	High	Suitable chaparral and grassland habitats are present within the BSA.
Chloropyron maritimum ssp. *maritimum* salt marsh bird's-beak	FE/SE G4?T1/S1 1B.2	Occurs in coastal dunes and coastal salt marshes and swamps. This species blooms between May and October, and typically occurs at elevations ranging from 0-30 meters.	Not Expected	The BSA is outside the known elevation range of this species.
Chorizanthe parryi var. *parryi* Parry's spineflower	None/None G3T2/S2 1B.1	Coastal scrub, chaparral, cismontane woodland, valley and foothill grassland. Dry slopes and flats; sometimes at interface of 2 vegetation types, such as chaparral and oak woodland. Dry, sandy soils. 90-1220 m. Blooms Apr-Jun.	High	Both high quality chaparral and riparian habitat are present within the BSA. In addition, appropriate elevation and sandy or rocky openings are present onsite.

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Project Area	Habitat Suitability/ Observations
Chorizanthe polygonoides var. *longispina* long-spined spineflower	None/None G5T3/S3 1B.2	Chaparral, coastal scrub, meadows and seeps, valley and foothill grassland, vernal pools. Gabbroic clay. 30-1630 m. Blooms Apr-Jul.	High	High quality chaparral and sandy wash habitat are present within the BSA.
Chorizanthe xanti var. *leucotheca* white-bracted spineflower	None/None G4T3/S3 1B.2	Mojavean desert scrub, pinyon and juniper woodland, coastal scrub (alluvial fans). Sandy or gravelly places. 365-1830 m. Blooms Apr-Jun.	High	High quality coastal scrub (big sagebrush) is present within the BSA. In addition, appropriate elevation and sandy or gravelly soils are present onsite.
Deinandra mohavensis Mojave tarplant	None/SE G2/S2 1B.3	Riparian scrub, coastal scrub, chaparral. Low sand bars in river bed; mostly in riparian areas or in ephemeral grassy areas. 640-1645 m. Blooms (Jan-May)Jun-Oct.	High	Both high quality chaparral and riparian habitat are present within the BSA. In addition, appropriate elevation and mesic soils are present onsite.
Delphinium hesperium ssp. *cuyamacae* Cuyamaca larkspur	None/SR G4T2/S2 1B.2	Lower montane coniferous forest, meadows and seeps, vernal pools. Usually found in low, moist areas within meadows. 1215-1855 m. Blooms May-Jul.	Not Expected	Suitable coniferous forest, meadows, seeps, and vernal pools do not occur within the BSA.
Dieteria canescens var. *ziegleri* Ziegler's aster	None/None G5T1/S1 1B.2	Lower montane coniferous forest, upper montane coniferous forest. Dry ridges scattered under pines, along roadsides, and in dry, somewhat disturbed clearings. 1520-2440 m. Blooms Jul-Oct.	Not Expected	The BSA is outside the known elevation range of this species.
Dodecahema leptoceras slender-horned spineflower	FE/SE G1/S1 1B.1	Chaparral, cismontane woodland, coastal scrub (alluvial fan sage scrub). Flood deposited terraces and washes; associates include Encelia, Dalea, Lepidospartum, etc. Sandy soils. 200-765 m. Blooms Apr-Jun.	Not Expected	The BSA is outside the known elevation range of this species.
Eriogonum evanidum vanishing wild buckwheat	None/None G2/S1 1B.1	Chaparral, cismontane woodland, lower montane coniferous forest, pinyon and juniper woodland. Sandy sites. 975-2240 m.Blooms Jul-Oct.	High	High quality chaparral is present within the BSA. In addition, appropriate elevation and sandy or gravelly soils are present onsite.
Euphorbia arizonica Arizona spurge	None/None G5/S3 2B.3	Sonoran desert scrub. Sandy soils. 150-900 m. Blooms Mar-Apr.	Not Expected	The BSA is outside the known elevation range of this species.
Galium angustifolium ssp. *jacinticum* San Jacinto Mountains bedstraw	None/None G5T2?/S2? 1B.3	Lower montane coniferous forest. Open mixed forest. 1190-2440 m. Blooms Jun-Aug.	Not Expected	Suitable habitat (coniferous forest), does not occur within the BSA.

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Project Area	Habitat Suitability/ Observations
Galium californicum ssp. *primum* Alvin Meadow bedstraw	None/None G5T2/S2 1B.2	Chaparral, lower montane coniferous forest. Grows in shade of trees and shrubs at the lower edge of the pine belt, in pine forest-chaparral ecotone. Granitic, sandy soils. 1460-1830 m. Blooms May-Jul.	Not Expected	The BSA is outside the known elevation range of this species.
Heuchera hirsutissima shaggy-haired alumroot	None/None G3/S3 1B.3	Subalpine coniferous forest, upper montane coniferous forest. Often near large rocks. Granitic substrate. 1065-3200 m.Blooms (May)Jun-Jul.	Not Expected	Suitable subalpine coniferous forest and upper montane coniferous forest habitats do not occur within the BSA.
Hulsea californica San Diego sunflower	None/None G3/S3 1B.3	Chaparral, lower montane coniferous forest, upper montane coniferous forest. Burns, clearings, or openings in chaparral and pine-oak woodland. 365-1860 m. Blooms Apr-Jun.	High	Suitable chaparral habitat is present within the BSA.
Jaffueliobryum raui Rau's jaffueliobryum moss	None/None G4/S2 2B.3	Alpine dwarf scrub, chaparral, Mojavean desert scrub, Sonoran desert scrub. Dry openings, rock crevices. On dry sandstone or limestone. 425-2015 m.	Not Expected	Suitable chaparral habitat is present within the BSA; however, suitable sandstone and limestone substrates do not occur on site.
Lasthenia glabrata ssp. *coulteri* Coulter's goldfields	None/None G4T2/S2 1B.1	Annual herb. Blooms February to June. Coastal salt marshes, playas, valley and foothill grassland, vernal pools. Usually found on alkaline soils in playas, sinks, and grasslands. 1-1400m (3-4595ft).	Not Expected	Suitable habitat (marshes, playas, vernal pools) are not present within the BSA.
Leptosiphon floribundus ssp. *hallii* Santa Rosa Mountains leptosiphon	None/None G4T1T2/S1S2 1B.3	Sonoran desert scrub, pinyon and juniper woodland. Desert canyons. 910-2290 m. Blooms May-Jul(Nov)	Not Expected	Suitable desert canyon habitat does not occur within the BSA.
Lessingia glandulifera var. *tomentosa* Warner Springs lessingia	None/None G4?T2/S2 1B.1	Chaparral. Along roadsides, sandy soil, in high desert chaparral. 835-1220 m. Blooms Aug-Oct.	High	Suitable chaparral habitat, sandy soils, and roadsides occur within the BSA.
Lilium parryi lemon lily	None/None G3/S3 1B.2	Lower montane coniferous forest, meadows and seeps, riparian forest, upper montane coniferous forest. Wet, mountainous terrain; generally in forested areas; on shady edges of streams, in open boggy meadows & seeps. 625-2930 m. Blooms Jul-Aug.	Not Expected	Suitable habitat (lower montane coniferous forest, meadows, seeps, wet terrain) does not occur within the BSA.
Limnanthes alba ssp. *parishii* Parish's meadowfoam	None/SE G4T2/S2 1B.2	Lower montane coniferous forest, meadows and seeps, vernal pools. Vernally moist areas and temporary seeps of highland meadows and plateaus; often bordering lakes and streams. 605-1805 m. Blooms Apr-Jun.	Not Expected	Suitable habitat (lower montane coniferous forest, meadows, seeps, vernal pools) does not occur within the BSA.
Linanthus bellus desert beauty	None/None G2G3/S2 2B.1	Chaparral. Dry slopes and flats; open sandy spots in chaparral, mostly in loamy coarse sandy decomposed granite soil types. 915-1405 m. Blooms Apr-May.	High	Suitable chaparral habitat and granitic soils occur within the BSA.

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Project Area	Habitat Suitability/ Observations
Linanthus orcuttii Orcutt's linanthus	None/None G3/S2 1B.3	Chaparral, lower montane coniferous forest, pinyon and juniper woodland. Sometimes in disturbed areas; often in gravelly clearings. 850-2775 m. Blooms May-Jun.	High	Suitable chaparral habitat and disturbed areas occur within the BSA.
Matelea parvifolia spear-leaf matelea	None/None G5/S3 2B.3	Mojavean desert scrub, Sonoran desert scrub. Dry rocky ledges and slopes. 360-1440 m. Blooms Mar-May(Jul).	Not Expected	Suitable dry rocky ledges and slope do not occur within the BSA.
Monardella macrantha ssp. *hallii* Hall's monardella	None/None G5T3/S3 1B.3	Broadleafed upland forest, chaparral, lower montane coniferous forest, cismontane woodland, valley and foothill grassland. Dry slopes and ridges in openings. 700-1800 m. Blooms Jun-Oct.	High	Suitable chapparal habitat is present within the BSA.
Monardella nana ssp. *leptosiphon* San Felipe monardella	None/None G4G5T2Q/S2 1B.2	Chaparral, lower montane coniferous forest. Sometimes in openings and fuelbreaks or in the understory of forest or chaparral. 850-2425 m. Blooms Jun-Jul.	High	Suitable chapparal habitat is present within the BSA.
Penstemon californicus California beardtongue	None/None G3/S2 1B.2	Chaparral, lower montane coniferous forest, pinyon and juniper woodland. Stony slopes and shrubby openings; sandy or granitic soils. 240-2290 m. Blooms May-Jun(Aug).	High	Suitable chaparral habitat and open, sandy areas are present within the BSA.
Saltugilia latimeri Latimer's woodland-gilia	None/None G3/S3 1B.2	Chaparral, Mojavean desert scrub, pinyon and juniper woodland. Rocky or sandy substrate; sometimes in washes, sometimes limestone. 120-2200 m. Blooms Mar-Jun.	High	Suitable chapparal habitat and sandy substrates are present within the BSA.
Scutellaria bolanderi ssp. *austromontana* southern mountains skullcap	None/None G4T3/S3 1B.2	Chaparral, cismontane woodland, lower montane coniferous forest. In gravelly soils on streambanks or in mesic sites in oak or pine woodland. 425-2000 m. Blooms Jun-Aug.	High	Suitable chapparal habitat is present within the BSA.
Selaginella eremophila desert spike-moss	None/None G4/S2S3 2B.2	Sonoran desert scrub, chaparral. Shaded sites, gravelly soils; crevices or among rocks. 225-1570 m. Blooms (May)Jun-Jul	High	Suitable chapparal habitat is present within the BSA.
Sidotheca emarginata white-margined oxytheca	None/None G3/S3 1B.3	Chaparral, lower montane coniferous forest, pinyon and juniper woodland. Gravelly to rocky soil in the San Jacinto and Santa Rosa mtns. 1215-2625 m. Blooms (Feb)Apr-Jul(Aug).	High	High quality dense Fremont cottonwoods are found onsite, along with gravelly/rocky soils and appropriate elevation.
Stemodia durantifolia purple stemodia	None/None G5/S2 2B.1	Sonoran desert scrub. Sandy soils; mesic sites. 35-385 m. Blooms (Jan)Apr-Dec.	Not Expected	The BSA is outside the known elevation range of this species.
Streptanthus campestris southern jewelflower	None/None G3/S3 1B.3	Chaparral, lower montane coniferous forest, pinyon and juniper woodland. Open, rocky areas. 605-2590 m. Blooms (Apr)May-Jul.	High	High quality chaparral, open rocky areas, and appropriate elevation are found onsite.

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Project Area	Habitat Suitability/ Observations
Symphyotrichum defoliatum San Bernardino aster	None/None G2/S2 1B.2	Meadows and seeps, cismontane woodland, coastal scrub, lower montane coniferous forest, marshes and swamps, valley and foothill grassland. Vernally mesic grassland or near ditches, streams and springs; disturbed areas. 3-2045 m. Blooms Jul-Nov.	Not Expected	Suitable habitat (meadows, seeps, cismontane woodland, marshes, swamps) are not present within the BSA.
Thysanocarpus rigidus rigid fringepod	None/None G1G2/S1 1B.2	Pinyon and juniper woodland. Dry, rocky slopes and ridges of oak and pine woodland in arid mountain ranges. 425-2165. Blooms Feb-May.	Not Expected	Suitable oak and pine woodlands are not present within the BSA.
Invertebrates				
Bombus crotchii Crotch bumble bee	None/SCE G3G4/S1S2	Coastal California east to the Sierra-Cascade crest and south into Mexico. Food plant genera include *Antirrhinum, Phacelia, Clarkia, Dendromecon, Eschscholzia*, and *Eriogonum*.	Low	Low quality grasslands, sage scrub, and suitable food occur within the BSA. However, the most recent CNDDB record was from 1963 and the exact location is unknown.
Euphydryas editha quino quino checkerspot butterfly	FE/None G5T1T2/S1S2	Sunny openings within chaparral & coastal sage shrublands in parts of Riverside & San Diego counties. Hills and mesas near the coast. Need high densities of food plants *Plantago erecta*, *P. insularis*, and *Orthocarpus purpurescens*.	High	High quality chaparral habitat is present within the BSA. In addition, USFWS Critical Habitat for this species occurs within 5 miles of the BSA.
Amphibians				
Spea hammondii western spadefoot	None/None G2G3/S3 SSC	Occurs primarily in grassland habitats, but can be found in valley-foothill hardwood woodlands. Vernal pools are essential for breeding and egg-laying.	Low	Low quality grassland habitat occurs within the BSA. Vernal pools essential for breeding are absent from the BSA.
Reptiles				
Anniella stebbinsi Southern California legless lizard	None/None G3/S3 SSC	Generally south of the Transverse Range, extending to northwestern Baja California. Occurs in sandy or loose loamy soils under sparse vegetation. Disjunct populations in the Tehachapi and Piute Mountains in Kern County. Variety of habitats; generally in moist, loose soil. They prefer soils with a high moisture content.	Moderate	Suitable chaparral and sage scrub habitats occur within the BSA. However, soils with a high moisture content are limited within the BSA.
Arizona elegans occidentalis California glossy snake	None/None G5T2/S2 SSC	Patchily distributed from the eastern portion of San Francisco Bay, southern San Joaquin Valley, and the Coast, Transverse, and Peninsular ranges, south to Baja California. Generalist reported from a range of scrub and grassland habitats, often with loose or sandy soils.	High	Suitable sage scrub habitat is present within the BSA. In addition, there are two CNDDB records from 2013 located along SR 371.

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Project Area	Habitat Suitability/ Observations
Phrynosoma blainvillii coast horned lizard	None/None G3G4/S3S4 SSC	Frequents a wide variety of habitats, most common in lowlands along sandy washes with scattered low bushes. Open areas for sunning, bushes for cover, patches of loose soil for burial, and abundant supply of ants and other insects.	High	Suitable sandy substrates with scattered bushes occur within the BSA.
Birds				
Empidonax traillii extimus southwestern willow flycatcher	FE/SE G5T2/S1	Riparian woodlands in Southern California.	Moderate	Marginally suitable riparian habitat is present within the BSA. In addition, USFWS Critical Habitat for this species is located within 5 miles of the BSA.
Falco mexicanus prairie falcon	None/None G5/S4 WL	Inhabits dry, open terrain, either level or hilly. Breeding sites located on cliffs. Forages far afield, even to marshlands and ocean shores.	Moderate	Marginally suitable grassland and agricultural habitat are present within the BSA. However, no rock outcrops used for nesting exist near the BSA.
Progne subis purple martin	None/None G5/S3 SSC	Inhabits woodlands, low elevation coniferous forest of Douglas-fir, ponderosa pine, and Monterey pine. Nests in old woodpecker cavities mostly; also in human-made structures. Nest often located in tall, isolated tree/snag.	Not Expected	Suitable habitat (woodlands, coniferous forest) does not occur within the BSA.
Mammals				
Dipodomys stephensi Stephens' kangaroo rat	FE/ST G2/S2	Found primarily in annual and perennial grasslands, but also occurs in coastal scrub and sagebrush with sparse canopy cover. Prefers buckwheat, chamise, brome grass and filaree. Will burrow into firm soil and use the burrows of California ground squirrels and pocket gophers. Occurs only in southern California.	Moderate	Marginally suitable grassland habitat is present within the BSA. The nearest CNDDB record is from 1998 and is located approximately 4.2 miles south of the BSA.
Lepus californicus bennettii San Diego black-tailed jackrabbit	None/None G5T3T4/S3S4 SSC	Occurs in Los Angeles, San Bernardino, Riverside, and San Diego Counties of southern California. Typically found in open shrub habitats. Will also occur in woodland habitats with open understory adjacent to shrublands.	Low	Limited preferred shrub habitat is present within the BSA. The nearest CNDDB record is from 2001 and is located approximately 4.5 miles south of the BSA.
Perognathus longimembris brevinasus Los Angeles pocket mouse	None/None G5T2/S1S2 SSC	Lower elevation grasslands and coastal sage communities in and around the Los Angeles Basin. Open ground with fine, sandy soils. May not dig extensive burrows, hiding under weeds and dead leaves instead.	High	High quality sandy wash habitat and agricultural fields are present within the BSA. The nearest CNDDB record is from 2015 and was located along SR 371 within the BSA.

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Project Area	Habitat Suitability/ Observations
Taxidea taxus American badger	None/None G5/S3 SSC	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. Needs sufficient food, friable soils and open, uncultivated ground. Preys on burrowing rodents. Digs burrows.	Low	Marginally suitable grassland habitat is present within the BSA; however, the only CNDDB record is from 1924 and was recorded approximately 1.75 miles west of the BSA.

Regional Vicinity refers to within a 5-mile and 9-quad search radius of site.

Status (Federal/State)

FE = Federal Endangered
SE = State Endangered
ST = State Threatened
SCE = State Candidate Endangered
SR = State Rare
SSC = CDFW Species of Special Concern
WL = CDFW Watch List

CRPR (CNPS California Rare Plant Rank)

1B = Rare, Threatened, or Endangered in California and elsewhere
2B= Rare, Threatened, or Endangered in California, but more common elsewhere

CRPR Threat Code Extension

.1 = Seriously endangered in California (>80% of occurrences threatened/ high degree and immediacy of threat)
.2 = Moderately threatened in California (20-80% of occurrences threatened/ moderate degree and immediacy of threat)
.3 = Not very endangered in California (<20% of occurrences threatened/ low degree and immediacy of threat)

Other Statuses

G1 or S1 Critically Imperiled Globally or Subnationally (state)
G2 or S2 Imperiled Globally or Subnationally (state)
G3 or S3 Vulnerable to extirpation or extinction Globally or Subnationally (state)
G4/5 or S4/5 Apparently secure, common and abundant

Additional notations may be provided as follows

T – Intraspecific Taxon (subspecies, varieties, and other designations below the level of species)
Q – Questionable taxonomy that may reduce conservation priority
? – Inexact numeric rank

Appendix E

Figures

Figure E-1 Potential Jurisdictional Features

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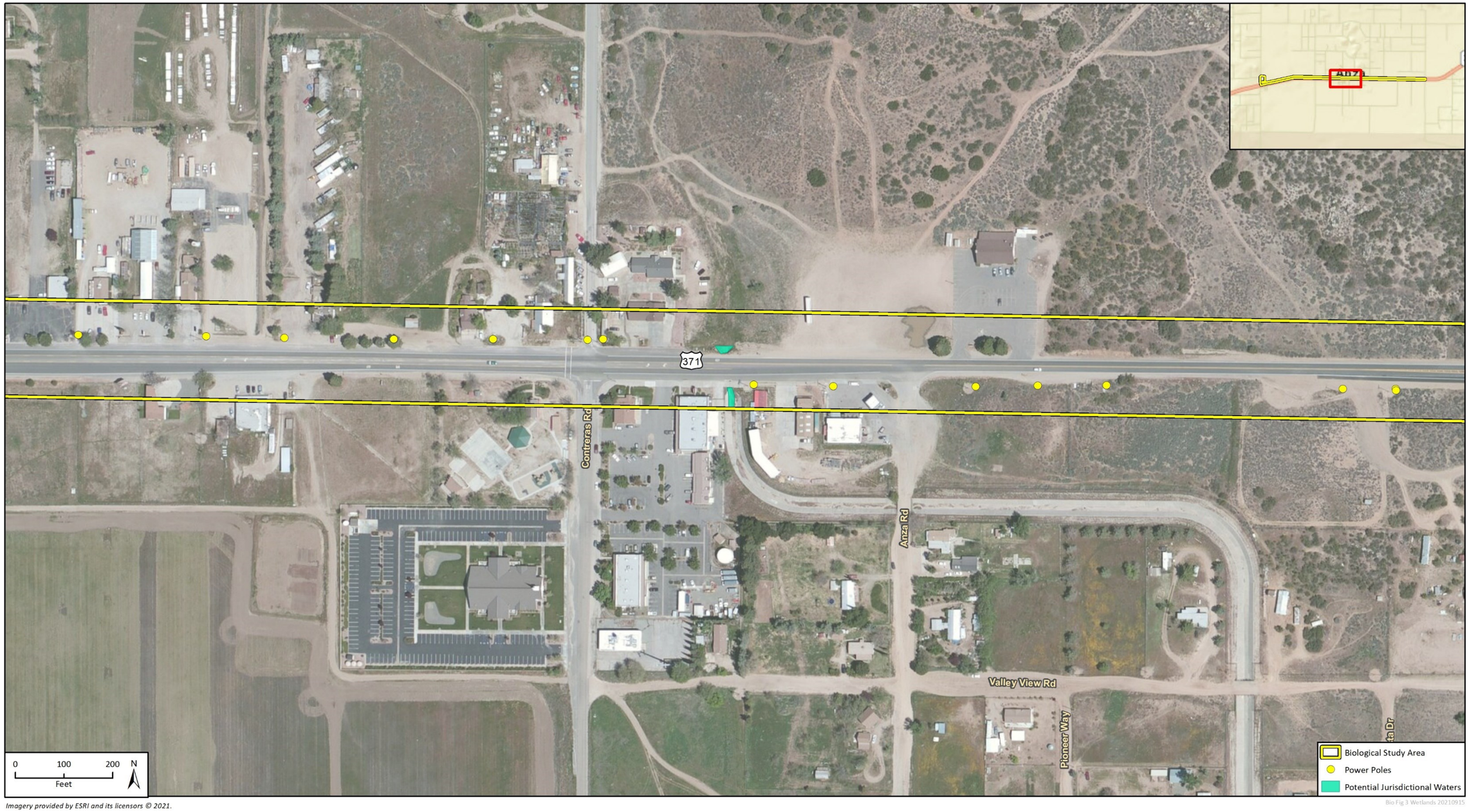

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Bio Fig 3 Wetlands 20210915

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Bio Fig 3 Wetlands 20210915

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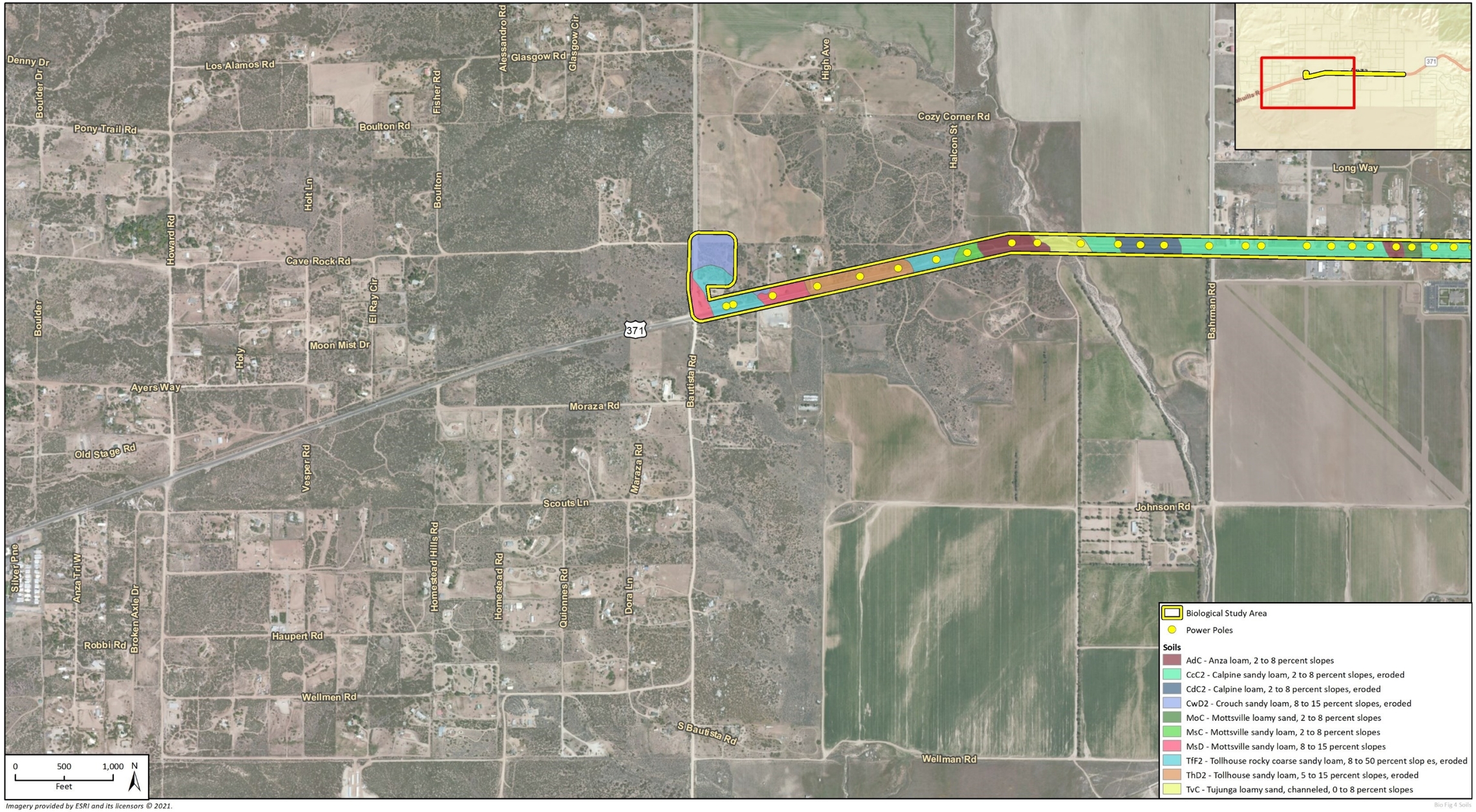
Bio Fig 3 Wetlands 20210915

Figure E-2 Soils



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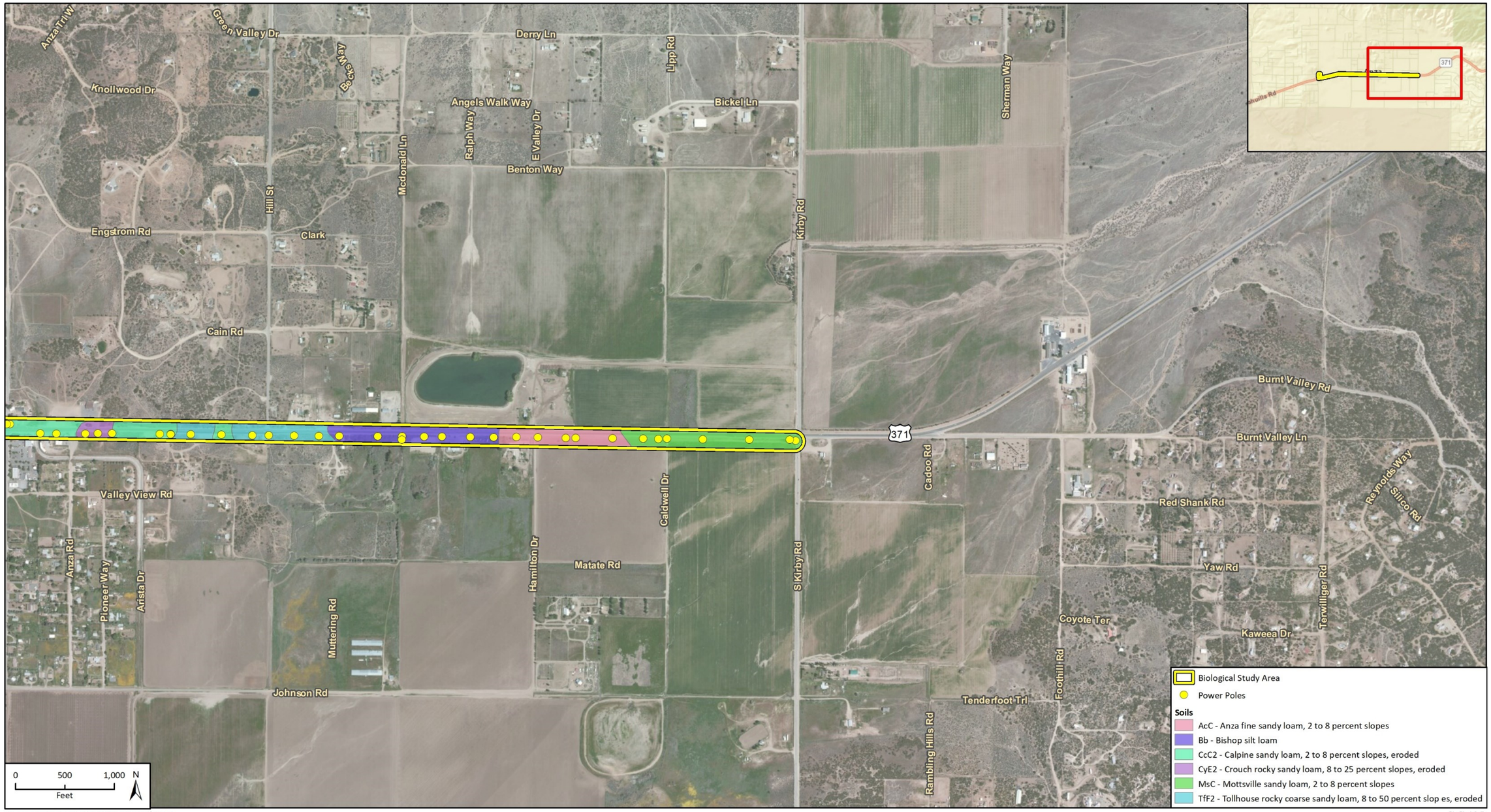
Soil data provided by SSURGO, 2019.

Bio Fig 4 Soils



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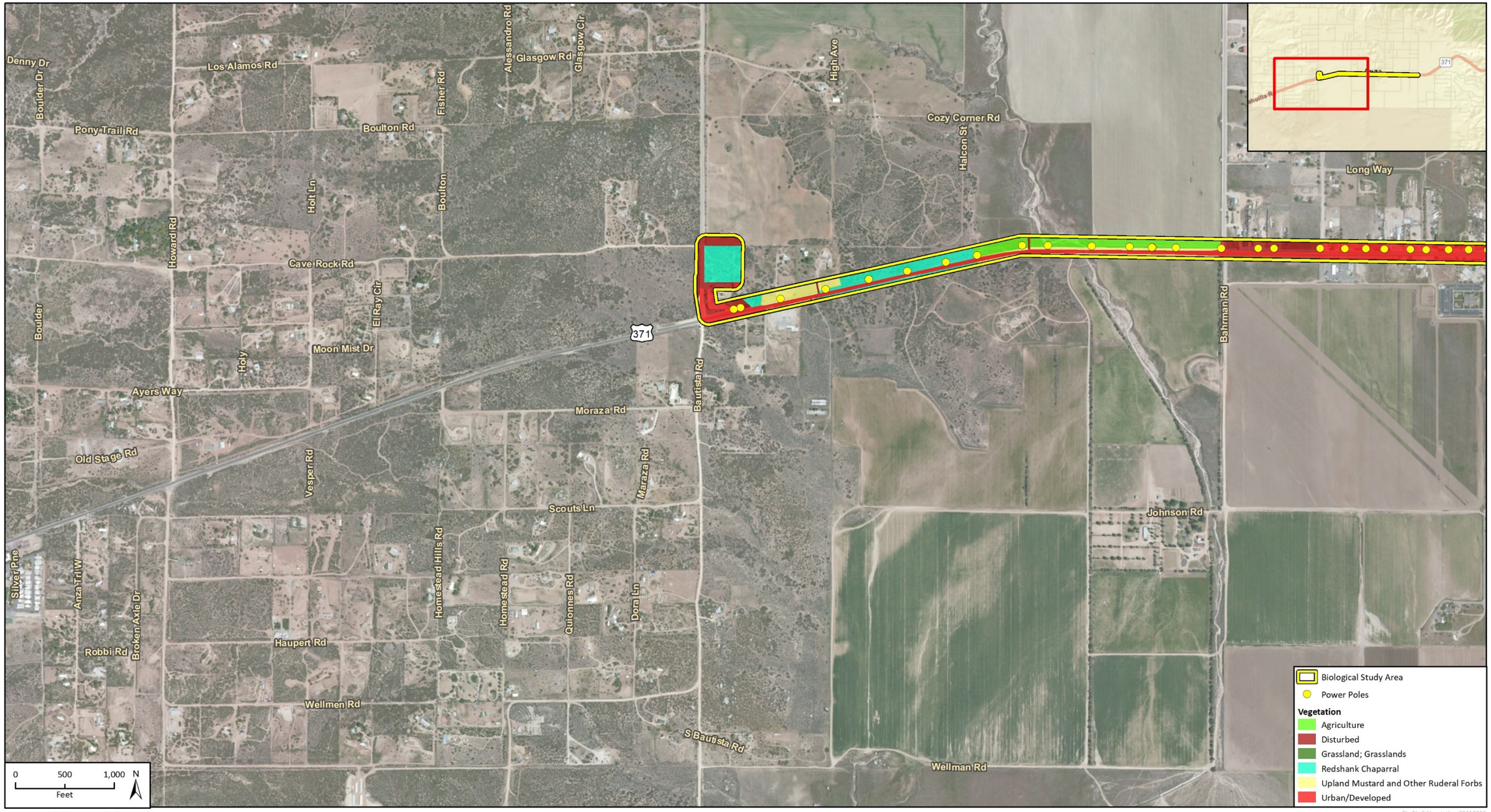
Soil data provided by SSURGO, 2019.

Bio Fig 4 Soils

Figure E-3 Vegetation Communities



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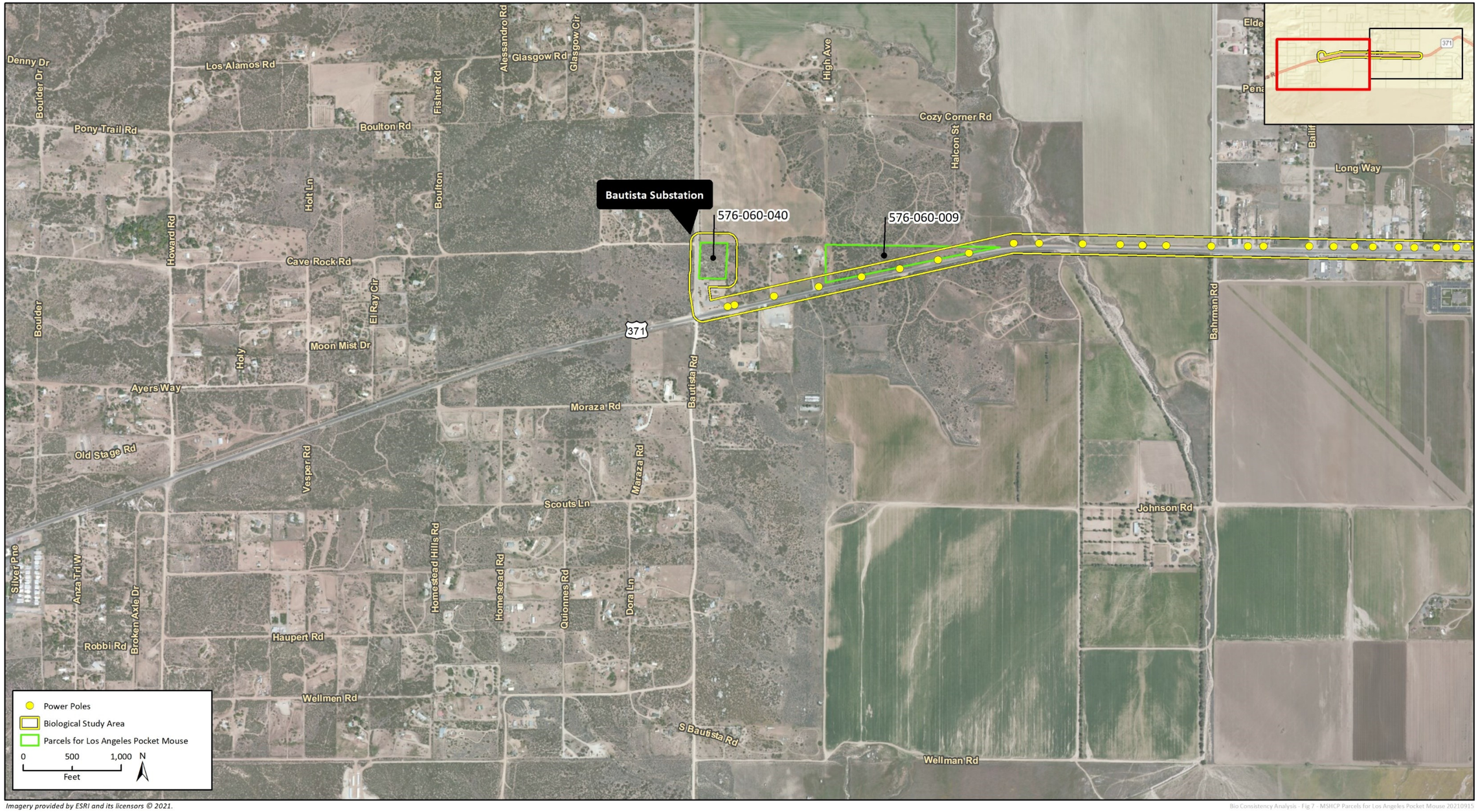
Bio Fig 5 Vegetation 20210915

Figure E-4 MSHCP Parcels for Los Angeles Pocket Mouse



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Bio Consistency Analysis - Fig 7 - MSHCP Parcels for Los Angeles Pocket Mouse 20210915

Anza Electric Cooperative Electricity Transmission Line Project

MSHCP Consistency Analysis and Habitat Assessment

prepared for

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December 2021

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Executive Summary

This Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) Consistency Analysis and Habitat Assessment Report was prepared for the Anza Electric Cooperative's (AEC) Electricity Transmission Line Project (project) given the project's location within the MSCHP Plan Area. The report was completed to document existing site conditions and to determine potential impacts to sensitive biological resources for the purpose of evaluating project consistency with the MSHCP. The project area is located in the unincorporated community of Anza in Riverside County, California, primarily within the rights-of-way of State Route 371 (SR 371). Rincon Consultants, Inc. (Rincon) understands the project would deactivate approximately four miles of existing electricity transmission lines and replace the lines with approximately four miles of realigned transmission lines and construction of the approximately 1.0-acre Bautista substation.

The Regional Conservation Authority (RCA) MSHCP information tool was queried using the parcel information for the project area to determine potential MSHCP sensitive species survey and conservation requirements for the project. The proposed project does not occur within a survey area for amphibians, burrowing owl, Narrow Endemic Plant Species, or Criteria Area Plant Species. However, two parcels are located within the survey area for Los Angeles pocket mouse (*Perognathus longimembris brevinasus;* LAPM). In addition, this MSHCP Consistency Analysis also includes assessments for riparian/riverine habitat, riparian/riverine species and vernal pool/fairy shrimp habitat as well as the urban/wildlands interface.

Both of the subject parcels within the LAPM survey area contain varying levels of suitable habitat. However, the project would not result in direct impacts to one of these parcels (Assessor's Parcel Number 576-060-009) and would not remove suitable habitat at this location. Pole sites at this parcel would be accessed temporarily on foot and vehicles. Potential temporary impacts from these activities include crushing of vegetation to access poles. Because no permanent direct impacts are expected, no further actions are anticipated to be required pursuant to the MSHCP. The project would result in grading and clearing at the parcel proposed for development of the Bautista substation (Assessor's Parcel Number 576-060-040). Due to the proximity to a recent 2015 California Natural Diversity Database (CNDDB) occurrence and suitable habitat conditions, a live-trapping study was completed at this parcel for MSHCP compliance. The LAPM live-trapping study was negative at the Bautista substation parcel; therefore, no further actions are anticipated to be required pursuant to the MSHCP for LAPM.

The proposed project would be primarily restricted to the existing four-mile transmission line along with the Bautista substation parcel. The project relies heavily on existing infrastructure and would involve minimal ground disturbance (e.g., temporary crushing of vegetation to access pole sites). The Bautista substation would require the removal of approximately 1.0-acre of redshank chaparral, resulting in the only direct impacts for the project. No vernal pool or fairy shrimp habitat was documented within the project area, and no direct impacts to riparian/riverine areas are proposed. Furthermore, the project does not propose any impacts to the urban/wildlands interface nor wildlife corridors and linkages. As such, no further actions are required pursuant to the MSHCP for these resources, and the project is consistent with MSHCP conservation goals.

1 Introduction

This report documents the findings of a Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) Consistency Analysis and Habitat Assessment to comply with the MSHCP requirements. This assessment describes existing site conditions and includes a discussion of potential impacts to sensitive biological resources for the Anza Electric Cooperative's (AEC) Electricity Transmission Line Project (project), located in the unincorporated community of Anza, Riverside County, California (Figure 1). The report also contains the results of an MSHCP-required analysis of potential project-related impacts to the project area.

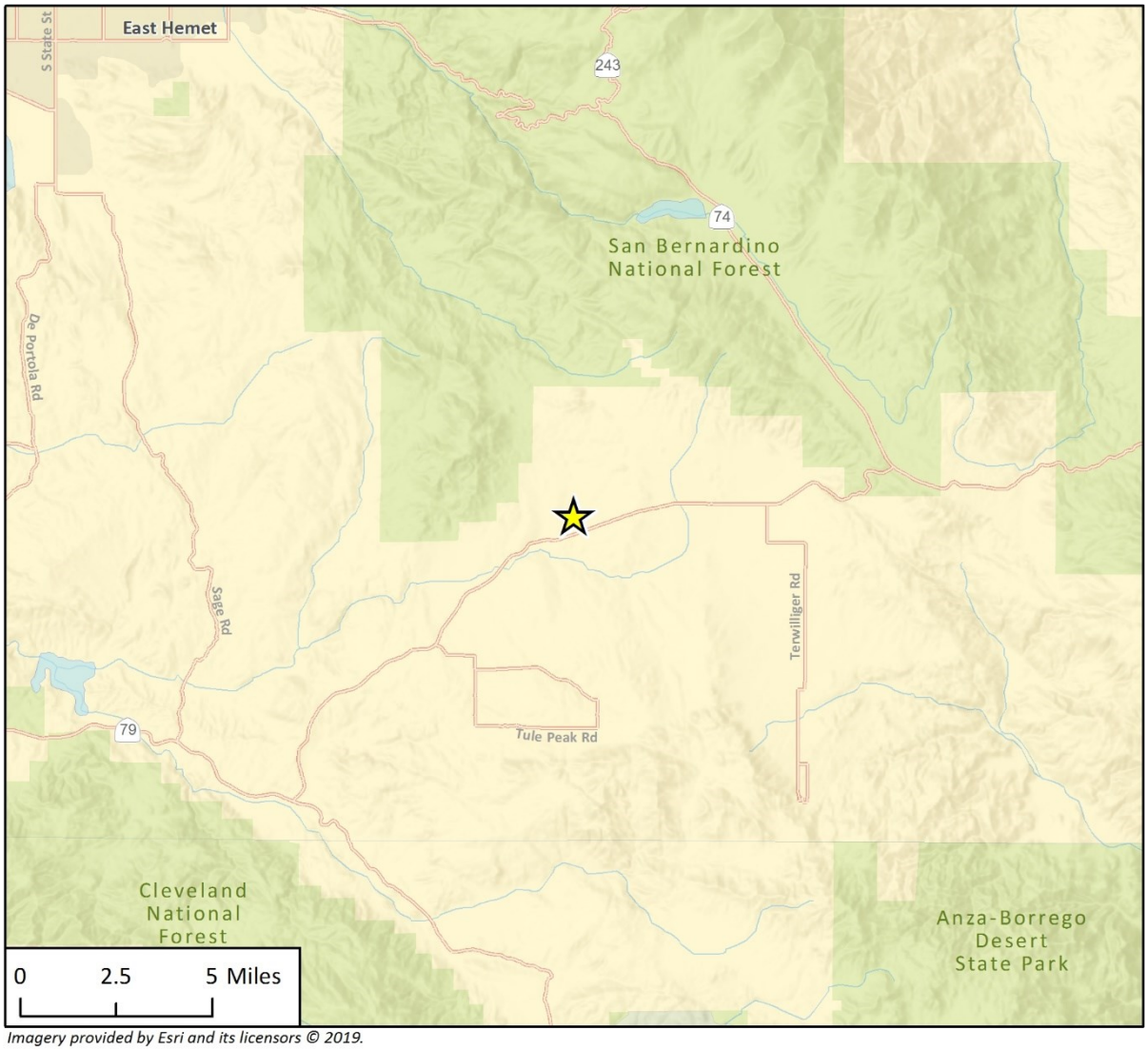
1.1 Project Location

The proposed project is in Riverside County, California, as shown in Figure 1. The project components would be located primarily within the rights-of-way of State Route 371 (SR 371) in the unincorporated community of Anza. The remainder of the project alignment would be located within existing AEC utility easements that are generally north of SR 371 and along existing local roadways. The proposed replacement transmission line alignment would traverse 96 parcels. In addition, the project proposes a new substation, the Bautista substation, on Assessor's Parcel Number (APN) 576-060-040 near the intersection of Bautista Road and SR 371. The project site is within the United States Geological Survey (USGS) Cahuilla Mountain and Anza Lake, California 7.5-minute topographic quadrangles. The project alignment would not be located on Cahuilla Reservation or U.S. Forest Service lands.

The project location and alignment are shown in Figure 2. The project alignment starts east of the proposed Bautista sub-station and proceeds along SR 371 for approximately four miles, ending at Tony Lappos substation (Figure 3). Given the scope of the project, the project area has multiple zoning designations, including R-R 2.5, RR-5 and RR-20 (Rural Residential); C-1/CP (General Commercial); C-P-S (Scenic Highway Commercial); M-M (Manufacturing – Medium); and M-SC (Manufacturing- Service Commercial). The project area also has multiple General Plan land use designations, including Rural Residential, Rural Community – Estate Density Residential, Rural Community – Very Low Density Residential, Agriculture, City, Light Industrial, and Commercial Retail.

AEC's existing land-based utilities systems in the project area consist of wooden utility poles that are approximately 35 to 45 feet in height with single- or three-phase crossarm mounted distribution lines attached. The existing poles currently carry electric power distribution lines. The project site is defined as the footprint of the existing electrical utilities system components and the approximately four-mile-long corridor along SR 371 and local roadways for the new upgrades that will be installed on existing poles. The project area is defined as the 50-foot wide access corridor along SR 371 and the 40-foot wide access corridor along local roadways, the construction laydown areas, and the access roads that would be used for construction. For the purposes of this report, the biological survey area (BSA) is defined as the linear alignment of the existing poles plus a buffer of 50 feet on either side of the existing pole alignment (100 feet in total).

Figure 1 Project Location



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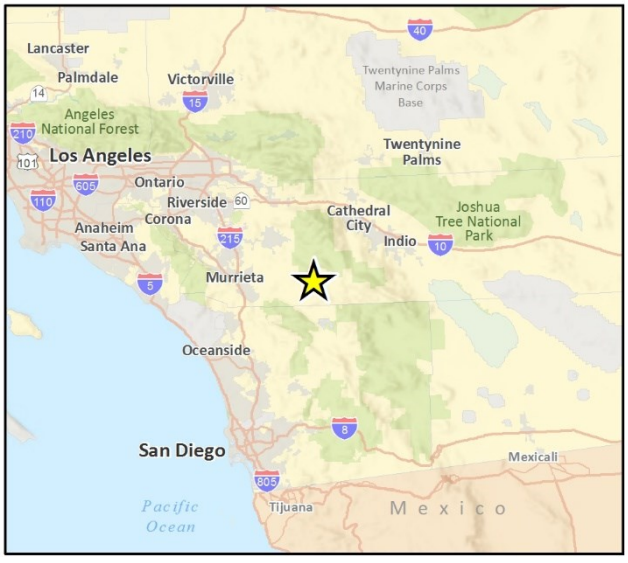
Project Location

N



Bio Fig 1 Regional Location

Figure 2 Topographic Map Location of Project Area

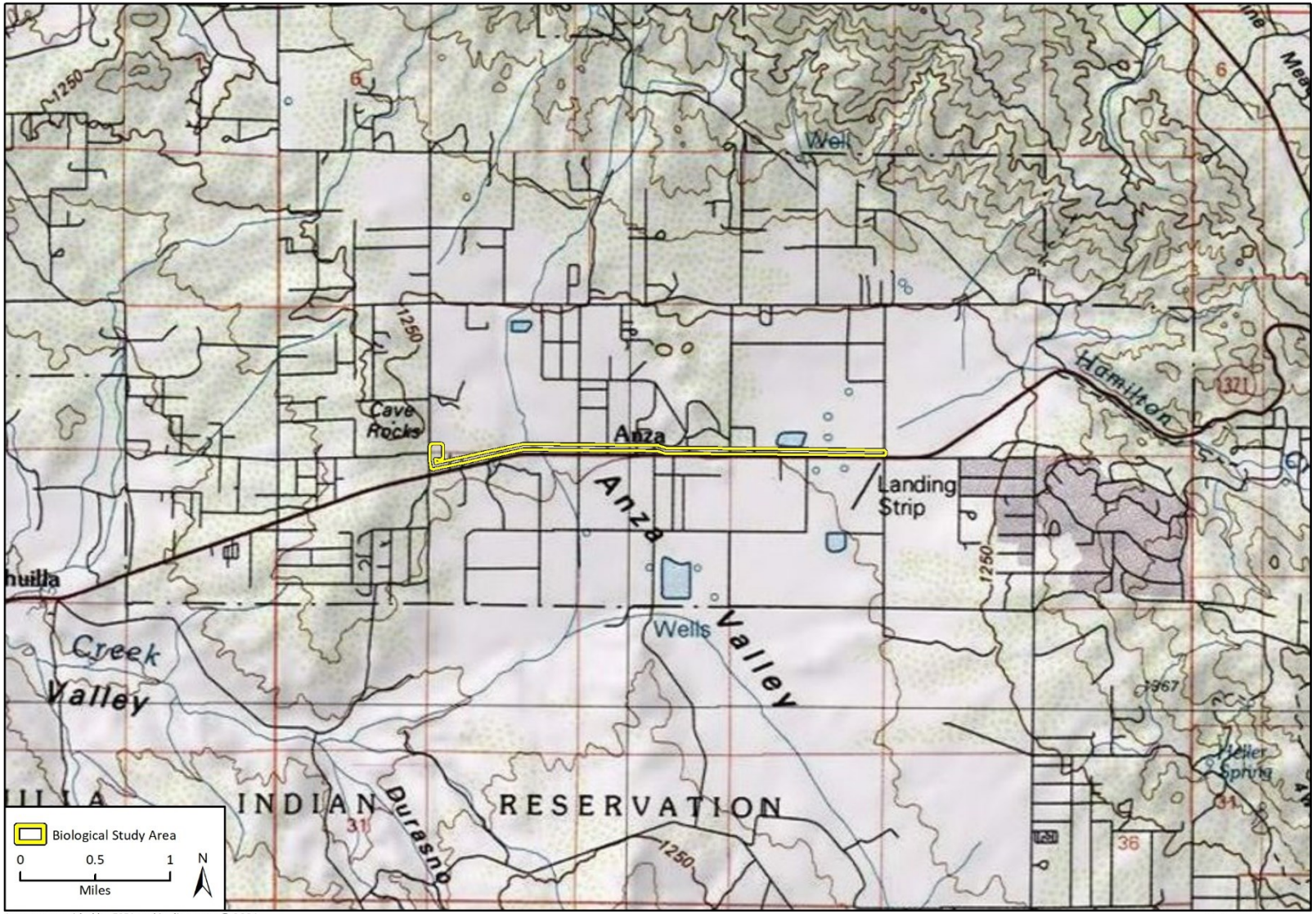
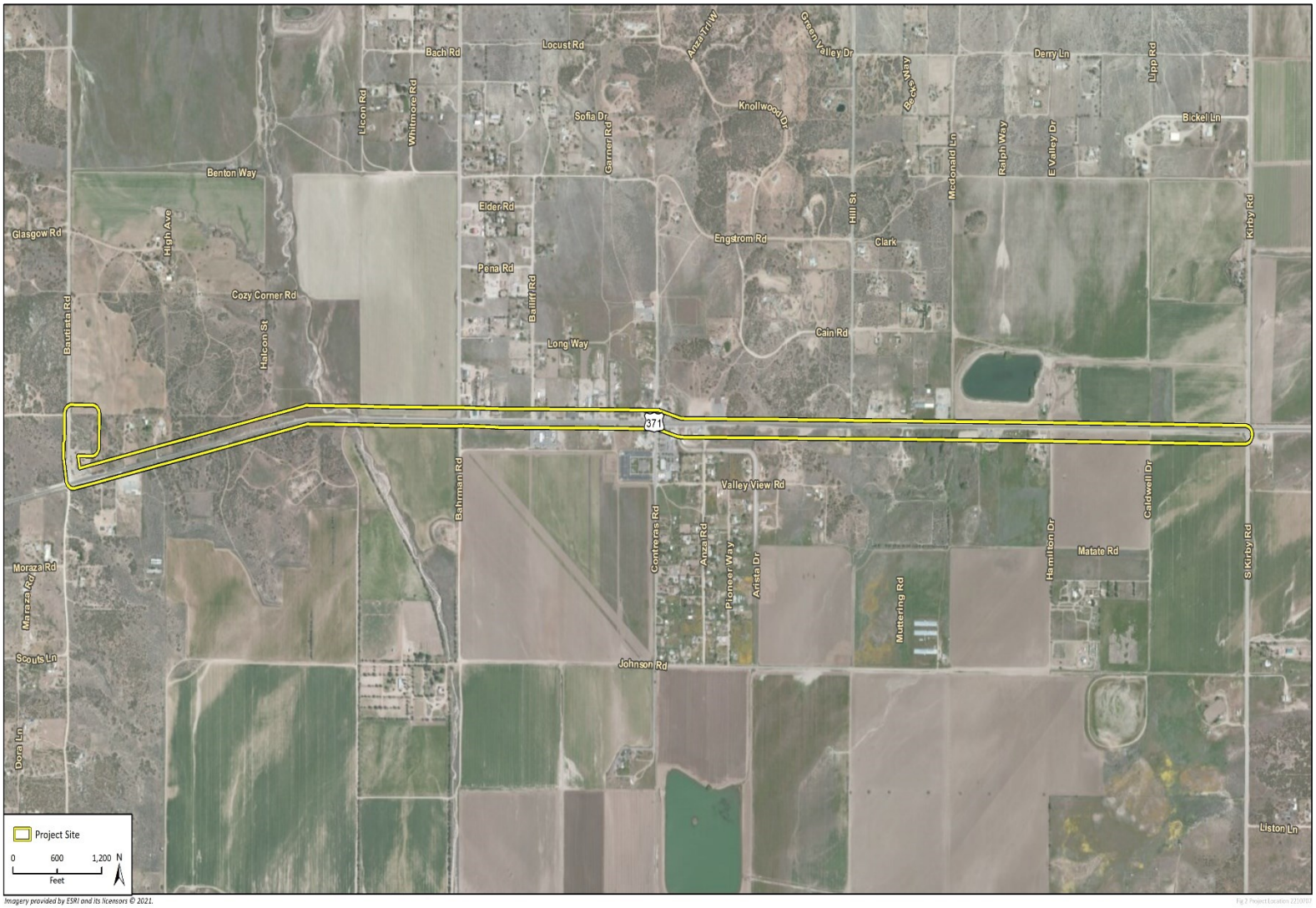


Figure 3 Location of Project Area



1.2 Project Description

The project would replace the existing distribution lines with approximately four miles of realigned transmission lines and construct the Bautista substation. The new transmission line would be strung on existing utilities poles, and the proposed Bautista substation would consist of electrical distribution facilities. No new utility poles would be constructed.

2 Methodology

2.1 Western Riverside County MSHCP Consistency Analysis

The proposed project was analyzed to determine its consistency with the requirements set forth in the MSHCP. The RCA information tool was queried using the parcel information for the BSA to determine potential MSHCP sensitive species survey and conservation requirements for the project. According to the RCA information tool, the MSHCP identifies two of the 97 parcels that comprise the project area as requiring habitat assessments and other focused surveys (Appendix A).

To ensure consistency with the requirements set forth in the MSHCP (County of Riverside 2003), the project area was assessed, and geographic information systems (GIS) software was used to map the site in relation to MSHCP areas, including criteria cells, conservation areas, and wildlife movement corridors and linkages; study areas for plant, bird, mammal, and amphibian species; Criteria Area Species Study Area (CASSA); and the Narrow Endemic Plant Study Area (NEPSA).

The MSHCP also requires an assessment of the potentially significant project effects on riparian/riverine areas and vernal pools, if applicable. According to the MSHCP, documentation for the assessment shall include mapping and a description of the functions and values of the mapped areas with respect to the species listed in Section 6.1.2, Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools, on the MSHCP. An assessment of potential indirect impacts to existing or proposed MSHCP conservation areas that may exist on or adjacent to the site through an urban/wildlands interface analysis must also be included.

2.2 Literature Review

Prior to the field visit, a literature review was conducted to establish the environmental and regulatory setting of the proposed project. The background and literature review included review of the U.S. Department of Agriculture (USDA) *Soil Survey for the Western Riverside Area* (2021a), *Cahuilla Mountain* and *Anza*, *California* USGS 7.5-minute topographic quadrangle, literature detailing the habitat requirements of subject species, aerial photographs (Google Earth 2021), and topographic maps. The MSHCP, species accounts, and other reference materials were reviewed for habitat assessment requirements as well as habitat suitability elements for special status species. The primary objective of the habitat assessment was to evaluate the project area's potential to support special status species as well as to determine the applicability of other MSHCP and California Environmental Quality Act (CEQA) requirements as they pertain to the proposed project.

The California Department of Fish and Wildlife's (CDFW) California Natural Diversity Database (CNDDB; CDFW 2021b), Biogeographic Information and Observation System (BIOS; CDFW 2021c) and United States Fish and Wildlife Service (USFWS) Critical Habitat Portal (USFWS 2021a) were reviewed to determine if any special status wildlife, plant or vegetation communities were previously recorded within five miles of the project area. The *National Wetlands Inventory* (NWI; USFWS 2021b) was reviewed to determine if any wetland and/or non-wetland waters had been previously documented and mapped on or in the vicinity of the proposed project area. Other resources included the California Native Plant Society (CNPS) online *Inventory of Rare and*

Endangered Plants of California (2021), CDFW *Special Animals List* (2021a), and CDFW *Special Vascular Plants, Bryophytes, and Lichens List* (2021d).

2.3 Field Reconnaissance Surveys

A field reconnaissance survey of the BSA was conducted to document existing site conditions and the potential presence of sensitive biological resources, including sensitive plant and wildlife species, sensitive plant communities, jurisdictional waters and wetlands, and habitat for nesting birds. On October 10 and 11, 2019, Rincon biologists Ryan Gilmore and Brooke Pickett conducted a general biological reconnaissance survey of the BSA. The survey was performed by walking and driving along the BSA to characterize the existing biological resources present (e.g., vegetative communities, potential presence of sensitive species and/or habitats, and presence of potentially jurisdictional waters). Where portions of the BSA were inaccessible on foot (e.g., private property and fenced areas), the biologists visually inspected these areas with binoculars (10 x 40). Weather conditions were sunny and clear with temperatures in the 60s to 70s degrees Fahrenheit.

Identification of potentially jurisdictional aquatic resources during the reconnaissance survey included any potential wetlands and non-wetland waters that may constitute waters of the United States, waters of the State, streambeds, and/or riparian/riverine or vernal pool resources. During the survey, field staff noted general site characteristics, documented vegetation, and took representative photographs.

Vegetation Mapping

Vegetation communities observed on site were mapped on a site-specific aerial photograph. Vegetation was generally classified using the systems provided in the *Preliminary Descriptions of the Terrestrial Communities of California* (Holland 1986), and modified using *A Manual of California Vegetation, Second Edition* (MCV) (Sawyer et al. 2009) as necessary to reflect the existing site conditions.

Flora

All plant species observed in the BSA were noted, and plants that could not be identified in the field were identified later using taxonomic keys. The reconnaissance survey included a directed search for sensitive plants that would have been apparent at the time of the survey. Floral nomenclature for native and non-native plants follows Baldwin et al. (2012) as updated by The Jepson Online Interchange (Jepson Herbarium 2021*).* For ornamental plants, nomenclature follows U.S. Department of Agriculture (USDA) PLANTS Database (USDA 2021b), and for special status plants follows Baldwin et al. (2012) and California Native Plant Society (CNPS 2021).

Fauna

Animal species observed directly or detected from calls, tracks, scat, nests, or other signs were documented. Zoological nomenclature for birds is in accordance with the American Ornithologists' Union Check-list of North American Birds (2021); for mammals using Mammals of California (Wilson and Reeder 2005); and for amphibians and reptiles using Society for the Study of Amphibians and Reptiles' (2021) Checklist of the Standard English & Scientific Names of Amphibians & Reptiles.

Riparian/Riverine Habitat Assessment

MSHCP Section 6.1.2, Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools, describes the process through which protection of riparian/riverine areas, vernal pools, and fairy shrimp species will occur within the MSHCP Plan Area. Protection of these resources is important for a number of MSHCP conservation objectives. An assessment of a project's potentially significant effects on riparian/riverine areas, vernal pools, and fairy shrimp habitat is required. Guidelines for determining whether or not these resources exist on site are described as follows:

- **Riparian/Riverine Areas** are described by the MSHCP as "lands which contain habitat dominated by trees, shrubs, persistent emergent, or emergent mosses and lichens which occur close to or which depend upon soil moisture from a nearby fresh water source or areas with fresh water flow during all or a portion of the year." Riparian/riverine areas under the MSHCP also include drainage areas that are vegetated or have upland (non-riparian/riverine) vegetation that drain directly into an area that is described for conservation under the MSHCP (or areas already conserved).
- **Vernal Pools** are described by the MSHCP as "seasonal wetlands that occur in depression areas that have wetland indicators of all three parameters (soils, vegetation, and hydrology) during the wetter portion of the growing season but normally lack wetland indictors of hydrology and /or vegetation during the drier portion of the growing season."
- **Listed Fairy Shrimp Habitat** is described in the MSHCP as habitat for Riverside fairy shrimp (*Streptocephalus woottoni*), vernal pool fairy shrimp (*Branchinecta lynchi*), or Santa Rosa Plateau fairy shrimp (*Linderiella santarosae*), and includes ephemeral pools, artificially created habitat, and/or other features determined appropriate by a qualified biologist.

In addition, Section 6.1.2 of the MSHCP states:

> "With the exception of wetlands created for the purpose of providing wetlands habitat or resulting from human actions to create open waters or from the alteration of natural stream courses, areas demonstrating characteristics as described above which are artificially created are not included in these definitions."

If found, riparian/riverine habitat and vernal pools within the BSA were identified, mapped, and recorded during the field reconnaissance survey.

Los Angeles Pocket Mouse Habitat Assessment

The Los Angeles pocket mouse (LAPM; *Perognathus longimembris brevinasus)* habitat assessment was conducted on October 10, 2019. The LAPM is a CDFW Species of Special Concern (SSC). Rincon biologists, Ryan Gilmore and Brooke Pickett, observed the entire survey area (i.e., two subject parcels, where accessible) to identify potential burrows, sign, and suitable habitat. Areas of particular interest included all sandy areas characterized by low growing vegetation, grasslands, and shrub lands with low density shrub cover. Access to adjacent properties was not granted. Potential burrows, LAPM individuals, and/or sign (if observed) were recorded and mapped using Global Positions System (GPS) coordinates. A live-trapping program for LAPM was conducted separately, as described further in Section 2.4, *Los Angeles Pocket Mouse Survey*.

2.4 Los Angeles Pocket Mouse Survey

A live-trapping program for LAPM was conducted by Cereus Environmental biologist Mr. Jason Berkley (SCP: SC-00187) and Rincon biologist Ms. Sarah Toback from August 30 to September 3, 2021 within the Bautista substation parcel (APN 576-060-040). Surveys were conducted in accordance with the protocols set forth by the Western Riverside County Regional Conservation Authority (RCA 2021). Weather conditions during the survey are included below in Table 1. The live-trapping program was conducted over five consecutive nights using 12-inch Sherman live traps baited with millet. The traps were placed at approximately 15- meter intervals throughout the parcel. Seven rows were set with six traps each for a total of 42 traps (Figure D-5 in Appendix D). Each row was assigned an identifying letter (A through F), and each trap in the rows was assigned a number (one through six). The northernmost and southernmost trap lines were marked with pin flags, and the remaining traps were flagged with reflective tape tied to nearby vegetation. Traps were checked once near midnight and again at sunrise. Traps were reset with fresh bait as needed and closed following the second check. The traps were reopened one to three hours before sunset the following evening. The species, sex, and weight were identified for captured animals. Animals were marked on the top of the head using a washable marker to indicate the recapture of an animal, then released at the trap site. All traps, excess bait, pin flags, and reflective tape were removed from the parcel at the conclusion of the final dawn check. The results of the survey are provided in Section 4.4, *MSHCP Section 6.3.2 – Additional Surveys*, of this report.

Table 1 LAPM Survey Weather Conditions

Date	Cloud Cover	Night Temperature (°F)	Wind Speed (mph)
08/30/2021	Clear	75	0
08/31/2021	Cloudy	68	0
09/01/2021	Cloudy	61	0
09/02/2021	Clear	55	0
09/03/2021	Clear	60	0

°F = degrees Fahrenheit; mph = miles per hour

3 Existing Conditions

This section summarizes the results of the literature review and data collected in the field. Discussions regarding the general environmental setting, vegetation communities present, plant and wildlife species observed, special status species issues, and other biological resource constraints on the BSA are presented below. Representative photographs of the BSA are provided in Appendix B.

3.1 Regional Environmental Setting

The project is located in the southwestern portion of Riverside County along SR 371 and is surrounded by the Cahuilla Mountains (Cahuilla Mountain, 5,635 feet) to the northwest, the Santa Rosa Mountains (Toro Peak, 8,715 feet) approximately nine miles to the southeast, and Rouse Ridge-Thomas Mountain (Thomas Mountain, 6,825 feet) approximately one mile to the northeast. The site is relatively level, with gentle slopes in some areas. The BSA elevation ranges from 3,418 feet at the eastern extreme to 4,011 feet at the western extreme. SR 371 connects with the greater Los Angeles area to the west, the greater San Diego area to the southwest, and Coachella Valley to the east. SR 371 provides regional access for the surrounding communities, including the unincorporated community of Anza.

The BSA is located in Anza Valley, which is the land between the Cahuilla Mountains to the north, the Iron Springs Mountains to the south, and Rouse Ridge-Thomas Mountain to the northeast. Anza Valley is a long, dry valley bordered by sagebrush and chaparral vegetation types, with scattered residential, agricultural, and commercial developments throughout. Additionally, the project is bordered by the San Bernardino National Forest to the north and the Cahuilla Indian Reservation to the south.

3.2 Hydrology

The BSA is within the approximate 750-square mile Santa Margarita River Watershed. The Santa Margarita River Watershed spans from portions of the San Jacinto Mountains, Palomar Mountains, Santa Ana Mountains, to the cities of Temecula, Murrieta, Wildomar, and emptying into the Pacific Ocean as it passes through the Marine Corps Base Camp Pendleton. One major river (Santa Margarita River) and three creeks (Cahuilla Creek, Murrieta Creek, and Temecula Creek) drain the San Margarita Watershed.

At the eastern end of the BSA, Hamilton Creek crosses under the SR 371 and connects into Cahuilla Creek. Figure D-1 in Appendix D depicts the locations of the observed riparian/riverine features mapped during the biological reconnaissance survey. No water was observed within any of the features at the time of the survey.

3.3 Soils

Thirteen mapped soil map units occur throughout the BSA (USDA NRCS 2021): Anza loam (2 to 8 percent slopes), Anza fine sandy loam (2 to 8 percent slopes), Bishop silt loam, Calpine loam (2 to 8 percent slopes, eroded), Calpine sandy loam (2 to 8 percent slopes, eroded, Crouch sandy loam (8 to 15 percent slopes, eroded), Crouch rocky sandy loam (8 to 25 percent slopes, eroded), Mottsville

loamy sand (2 to 8 percent slopes), Mottsvile sandy loam (2 to 8 percent slopes), Mottsville sandy loam (8 to 15 percent slopes), Tollhouse rocky course sandy loam (8 to 50 percent slopes, eroded), Tollhouse sandy loam (5 to 15 percent slopes, eroded), and Tujunga loamy sand (0 to 8 percent slopes). These 13 soil map units can be grouped into seven series and are detailed below as well as mapped on Figure D-2 in Appendix D.

Anza Loam

Anza loam and Anza fine sandy loam were found onsite. The Anza series consists of well drained soils that form from alluvium igneous and metamorphic rock in alluvial fans. Slopes range from two to eight percent at elevations ranging from 3,400 to 5,200 feet. Most of these soils typically support agriculture and grazing lands.

Bishop Silt Loam

Bishop silt loam occurs on floodplains and alluvial fans with slopes of zero to two percent. The Bishop series soils are deep, poorly drained and usually support pasture land, meadow grasses, sedges, and clover.

Calpine Sandy Loam

Calpine loam and Calpine sandy loam two to eight percent slopes are found onsite. Calpine series soils consist of very deep, well drained soils that form in granitic alluvium. Calpine soils usually occur on alluvial fans, fan remnants, and stream terraces with slopes zero to 15 percent. These soils are used mainly for livestock grazing, but also irrigated agriculture, mountain big sagebrush (*Artemisia tridentata*), antelope bitterbrush (*Purshia tridentata*), Thurber's needlegrass (*Achnatherum thurberianum*), and Indian ricegrass (*Oryzopsis hymenoides*).

Crouch Sandy Loam

Crouch rocky sandy loam and Crouch sandy loam eight to 15 percent slopes are found onsite. Crouch series soils consist of deep, well drained soils that form in material weathered from granite. These soils occur in mountainous uplands with slopes of eight to 75 percent. Crouch soils are used for rangeland or watershed, vegetation is mainly annual grasses and forbs with stands of timber in higher elevations.

Mottsville Loamy Sand

Mottsville loamy sand two to eight percent slopes, Mottsville sandy loam two to eight percent slopes, and eight to 15 percent slopes are found onsite. Mottsville series soils consist of very deep, excessively drained soils that form in granitic alluvium. These soils are on alluvial fans, fan remnants, and fan aprons with slopes of zero to 15 percent. Mottsville soils are used for rangeland and urban development, any vegetation is typically mountain big sagebrush, antelope bitterbrush, Anderson's peachbrush (*Prunus andersonii*), and needlegrass (*Achnatherum* sp.).

Tollhouse Rocky Course Sandy Loam

Both Tollhouse rocky course sandy loam and sandy loam are found onsite. Tollhouse series consist of shallow, excessively drained soils that form in material weathered from granite rock. These soils are on strongly sloping and very steep mountain slopes. Tollhouse soils are used for wildlife, watershed, and limited grazing. Vegetation in these soils includes chaparral whitethorn (*Ceanothus*

sp.), manzanita (*Arctostaphylos* sp.), California laurel (*Umbellularia californica),* live oak (*Quercus* sp.), California buckeye (*Aesculus californica*), and some naturalized grasses and forbs.

Tujunga Loamy Sand

Tujunga series consist of very deep, excessively drained soils that form in alluvium from granite. These soils exist on alluvial fans, floodplains, and urban areas, with slopes of zero to 12 percent. Tujunga soils are used for grazing, citrus, grapes, fruits, development, shrubs, annual grasses, and forbs.

3.4 Vegetation Communities and Land Cover

Eight vegetation communities/land cover types were mapped in the BSA (Figure D-3 in Appendix D; Table 2). These consist of redshank chaparral, big sagebrush scrub, riparian woodlands, upland mustards and other ruderal forbs, non-native grassland, agriculture, disturbed, and urban/developed. A complete list of all the plants observed on site during the biological field survey is provided in Appendix C.

Table 2 Vegetation Communities and Land Cover

Vegetation Community/Land Cover Type (Holland Code)	Sensitive	Acreage	Percentage of Total Acres
Redshank Chaparral (37501)	Yes	10.91	13.8%
Upland Mustards and Other Ruderal Forbs (42011)	No	5.27	6.7%
Disturbed	No	17.13	21.7%
Urban/Developed	No	25.94	32.8%
Agriculture	No	15.66	19.7%
Big Sagebrush Scrub (35110)	No	2.53	3.2%
Riparian Woodlands (61216)	Yes	1.44	1.8%
Non-Native Grassland (42200)	No	0.28	0.3%

Redshank Chaparral (37501)

Areas mapped as redshank chaparral have redshank (*Adenostoma sparsifolium*) as a dominant or co-dominant species within the shrub canopy. Other species may include chamise (*Adenostoma fasciculatum*), Eastwood's manzanita (*Arctostaphylos glandulosa*), bigberry manzanita (*Arctostaphylos glauca*), hoaryleaf ceanothus (*Ceanothus crassifolius*), California buckwheat (*Eriogonum fasciculatum*), chaparral yucca (*Hesperoyucca whipplei*), laurel sumac (*Malosma laurina*), and Mojave yucca (*Yucca schidigera*). The shrub canopy is typically less than five meters tall and open to intermittent in density, while the herbaceous layer is typically sparse. In some cases, both redshank and chamise represent 30 to 60 percent relative cover in the shrub canopy, with abundant hoaryleaf ceanothus. This vegetation type typically occurs on shallow to deep soils derived from alluvial or bedrock. This vegetation type is a sensitive community state ranked as a S3 by CDFW.

This community occurs throughout the site primarily within the western portion of the BSA. A large stand is present north of SR 371 between Bautista Road and Ivan Drive. This vegetation type is dominated by redshank and often found adjacent to chamise chaparral and California buckwheat

scrub. In some areas the redshank has an understory of chamise, California buckwheat, and non-native grasses. This vegetation community consists of approximately 10.91 acres and constitutes 13.1 percent of the total area of the BSA.

Upland Mustards and Other Ruderal Forbs (42011)

Areas mapped as upland mustards and other ruderal forbs have black mustard (*Brassica nigra*), artichoke thistle (*Cynara cardunculus*), false caper (*Euphorbia terracina*), shortpod mustard (*Hirschfeldia incana*), dyer's woad (*Isatis tinctoria*) or similar ruderal forbs as dominant vegetation in the herbaceous layer. Emergent trees and shrubs may be present at low cover.

This community occurs throughout the site adjacent to disturbed soils and agricultural fields. It is primarily characterized by black mustard and sheep sorrel (*Rumex acetosella*). This vegetation community consists of approximately 5.27 acres and constitutes 6.7 percent of the total area of the BSA.

Disturbed

Disturbed areas are defined as locations where soils have been disturbed during construction or other urban-related activities. This land cover type is not formally recognized as an official vegetation community. Disturbed areas generally consist of sites that have undergone prior grading and/or off-highway-vehicle recreational use and unimproved access roads. This includes areas that are heavily disked and unvegetated. Most disturbed sites occur on private property as land that has been cleared by property owners. This land cover consists of approximately 17.13 acres and constitutes 21.7 percent of the total area of the BSA.

Urban/Developed

Urban/developed mapped locations include areas where development such as business, parks, homes and paved roads occur within the BSA. These areas have been constructed upon or otherwise physically altered to an extent that native vegetation is no longer supported. Developed land in the BSA primarily consists of houses scattered throughout the alignment, but mainly along SR 371 at the eastern edge of the BSA. This land cover type consists of approximately 25.94 acres and constitutes 32.8 percent of the total area of the BSA.

Agriculture

Areas mapped as agriculture included grazed pastures and fallow fields. This land cover type occurs along the SR 371 at the eastern edge of the BSA. It consists of approximately 15.66 acres and constitutes 19.7 percent of the total area of the BSA.

Big Sagebrush Scrub (35110)

Areas mapped as big sagebrush scrub have big sagebrush (*Artemisia tridentata*) as a dominant or co-dominant species within the shrub canopy. Other species may include brittlebush (*Encelia* spp.), goldenbush or rabbitbrush (*Ericameria* spp.), and California buckwheat. This vegetation type occurs on plains, alluvial fans, valley bottoms, and dry washes where soils are well drained.

This community is evenly scattered throughout the BSA as small, thick patches of big sagebrush surrounded by upland mustards and other ruderal forbs or California buckwheat scrub habitat. It consists of 2.53 acres and constitutes approximately 3.2 percent of the total area of the BSA.

Riparian Woodlands (Goodding's Willow – Red Willow) (61216)

This vegetation community typically grows along features such as rivers, creeks, streams, and lake edges. It can consist of a wide variety of species, such as red willow (*Salix laevigata*), Goodding's black willow (*Salix gooddingii*), arroyo willow (*Salix lasiolepis*), sandbar willow (*Salix exigua*), California sycamore (*Platanus racemosa*), Fremont cottonwood (*Populus fremontii*), blue elderberry (*Sambucus nigra* ssp. *caerulea*), and mulefat (*Baccharis salicifolia*). The tree canopy is typically over 30 meters (approximately 100 feet) in height and is open to continuous in density. The shrub layer is also open to continuous in density, while the herbaceous layer is variable. This vegetation type is a sensitive vegetation community state ranked as S3.

This community occurs along one drainage within the eastern portion of the BSA. This vegetation community consists of approximately 1.44 acres and constitutes 1.8 percent of the total area of the BSA.

Non-native Grassland (42200)

This vegetation community type includes open grasslands composed primarily of annual plant species. Introduced annual grasses, such as soft chess (*Bromus hordeaceus*), ripgut brome (*Bromus diandrus*), red brome (*Bromus madritensis* ssp. *rubens*), and brome fescue (*Festuca bromoides*) are typically the dominant plant species. Common forbs can include filaree (*Erodium* spp.), turkey mullein (*Croton setigerus*), true clover (*Trifolium* spp.), and bur clover (*Medicago* spp.).

This community occurs in the western portion of the BSA and is characterized mainly by red brome and wildoats (*Avena fatua*). This vegetation community consists of 0.28-acre and constitutes 0.3% of the total area of the BSA.

3.5 Wildlife Observed

Vegetation in the BSA provides habitat for many wildlife species, including suitable nesting habitat for a wide variety of bird species, including common raptors. Avian wildlife species observed flying over the site during the biological reconnaissance survey included Cooper's hawk (*Accipiter cooperii*), red-tailed hawk (*Buteo jamaicensis*), American kestrel (*Falco sparverius*), phainopepla (*Phainapepla nitens*), and European starling (*Sturnus vulgaris*). Avian wildlife species observed foraging throughout the site included California quail (*Callipepla californica*). Other wildlife observed included California ground squirrel (*Otospermophilus beecheyi*), coyote (*Canis latrans*), and Pacific gopher snake (*Pituophis catenifer catenifer*). A complete list of all the wildlife observed on site during the biological reconnaissance survey is presented in Appendix C. Cooper's hawk is on the CDFW State Watch List.

4 Western Riverside County MSHCP Consistency Analysis Results

4.1 MSHCP Requirements

The MSHCP establishes habitat assessment requirements for certain species of plants, birds, mammals, and amphibians. The proposed project is located within the Riverside Extended Mountain Area Plan (REMAP). It is not located within a Cell group or Criteria Cell, but it is within the Sage Habitat Management Unit. Two of the 97 parcels included in the project area occurs within the required survey area for LAPM. The project area does not occur within any required amphibian, avian, Criteria Area Species, Narrow Endemic Species, or other mammal habitat assessment areas.

This habitat assessment addresses the sensitive biological resources to occur within the BSA. The habitat assessment addresses the presence/absence of riparian/riverine areas and vernal pools in the BSA, includes an urban/wildlands interface analysis, and identifies any migratory corridors and linkages located on or near of the BSA.

4.2 MSHCP Section 6.1.2 - Riparian/Riverine, Vernal Pool Areas and Fairy Shrimp Habitat Assessment

Section 6.1.2 of the MSHCP describes the process to protect species associated with riparian/riverine areas and vernal pools. As defined in the MSHCP, riparian/riverine areas are lands which contain habitat dominated by trees, shrubs, persistent emergents, or emergent mosses and lichens, which occur close to or depend on a nearby freshwater source or areas that contain a freshwater flow during all or a portion of the year. These areas may support one or more species listed in Section 6.1.2 of the MSHCP. Potential drainages on site were inspected for riparian habitat characteristics such as dominance of hydrophytic vegetation, suitable topography and hydrology, suitable soil substrate, and the suitability to support associated species.

Based upon the findings of Rincon's reconnaissance survey, several drainages are present within the BSA (Figure D-1 in Appendix D). While no surface water was present within any of these drainages during the field survey, one of the drainages would meet the MSHCP definition of riparian/riverine habitat due to the presence of riparian vegetation with connections to Cahuilla Creek. Rincon has preliminarily determined these features are likely under the jurisdiction of the United States Army Corps of Engineers, Regional Water Quality Control Board, and/or CDFW. However, the project would avoid these features; as such, no direct impacts to riparian/riverine resources are anticipated. However, construction activities could result in indirect impacts (e.g., oil leaks from vehicles, soil erosion) that could affect downstream waters, which could be potentially significant. Implementation of the best management practices (BMPs) as outlined in Appendix C of the MSHCP would reduce these potential indirect impacts.

A single erosional feature created by a roadside water bar was observed at the Bautista substation parcel. During precipitation events, storm water sheet flows along Bautista Road and onto the site via an approximately one-foot-wide excavated soil cut along the road edge. The resulting erosional feature is approximately two feet wide and runs approximately 100 feet into the site before it dissipates. The erosional ditch does not connect to other waters and does not drain into areas

designated for conservation under the MSHCP. Furthermore, this ditch does not provide wetland habitat, did not result from human actions to create open waters or from the alteration of natural stream courses, and does not contain habitat dominated by trees, shrubs, persistent emergents, or emergent mosses and lichens, and is therefore excluded from the MSHCP definitions of riparian/riverine areas and vernal pools. Additionally, the ditch described does not contain suitable habitat for MSHCP-covered species that occur in riparian/riverine areas (e.g., least Bell's vireo [*Vireo bellii pusillus*], southwestern willow flycatcher [*Empidonax traillii extimus*], western yellow-billed cuckoo [*Coccyzus americanus occidentalis*], etc.). For these reasons, the ditch has been determined to not provide any function or value to these MSHCP-covered species.

Vernal pools are depressions in areas with an impermeable layer that results in ponded water and are typically characterized by endemic plant species. The soil texture typically contains higher amounts of fine silts and clays with lower percolation rates. Pools that retain water for a sufficient length of time will develop hydric cells. Hydric cells form when the soil is saturated from flooding for extended periods of time and anaerobic conditions develop. No vernal pools or fairy shrimp habitat was observed within the BSA. The BSA is underlain by typically well-drained sandy soils, and no areas of ponding or evidence of standing water were observed during the field reconnaissance survey. The BSA does not contain habitat or soils conducive to supporting vernal pools or fairy shrimp. Therefore, no vernal pool or fairy shrimp habitat occurs within the BSA, and no further actions related to vernal pools are required pursuant to the MSHCP.

4.3 MSHCP Section 6.1.3 – Narrow Endemic Plant Species

Section 6.1.3 of the MSHCP focuses on the protection of narrow endemic plant species. No surveys are required for plants listed under this section.

4.4 MSHCP Section 6.3.2- Additional Surveys

Section 6.3.2 of the MSHCP describes additional surveys that may be needed for certain species in conjunction with MSHCP implementation in order to achieve coverage of these species. The only species surveys required under Section 6.3.2 in relation to the project is the Los Angeles Pocket Mouse (LAPM; *Perognathus longimembris brevinasus).*

The LAPM () is a small, heteromyid rodent occurring in the coastal basins of southern California from the San Jacinto and Temecula Valleys to Aguanga, Warner Pass, Vail, and Temecula. Habitat for LAPM includes lower elevation grassland, alluvial sage scrub, and coastal sage scrub. The species is typically found in sandy washes and windblown sand. Like all pocket mice, this species hibernates in the winter, generally from October to February, and will become torpid when deprived of food for 24-36 hours. They will periodically emerge from hibernation to feed on seed caches stored in their burrows. Their main food source includes seeds as well as forbs, and they will occasionally consume arthropods and larva. The main threat to LAPM is habitat loss by agricultural, suburban, and urban development.

According to the MSHCP Information tool, live-trapping surveys are required within suitable habitat for LAPM pursuant to the MSHCP within the following project parcel: 576-060-040 and 576-060-009 (Figure D-4 in Appendix D). According to the CNDDB, LAPM has been found in one location within

the BSA in 2015 on Parcel 576-060-037. This location consists of a tributary of Cahuilla Creek and contains Tujunga loamy sandy soils.

Both of the subject parcels located within the project area contain varying levels of suitable habitat for LAPM. Project activities proposed within one of those parcels would not result in direct impacts to LAPM or its habitat as the activities would not result in removal of suitable habitat. Potential temporary impacts from these activities include crushing of vegetation to access poles. As most work is expected to be completed from existing roads, and LAPM would likely be underground, during daylight hours, the potential for impacts is low. Nonetheless, the BMPs outlined in Appendix C of the MSHCP should be implemented to further reduce potential impacts. These BMPs include: avoidance of the removal native vegetation, minimization of disturbance to native vegetation, use of existing access points, having a qualified biologist flag off riverine areas for avoidance (if possible), and having a qualified biologist present to monitor construction activities within suitable habitat to avoid incidental death of LAPM (pre-construction LAPM clearance sweeps). At this parcel no permanent direct impacts are expected; therefore, no further actions beyond BMP implementation are recommended pursuant to the MSHCP.

The Bautista substation parcel (APN 576-060-040) would be mostly graded and cleared for the construction of the substation with approximately 0.29-acre of the northern portion of the parcel preserved. Due to the proximity to the recent 2015 CNDDB occurrence and suitable habitat conditions, it was determined that this parcel could have potential to support LAPM. The parcel contains sandy loam soils onsite. Therefore, a live-trapping study was completed prior to development of this site for MSHCP compliance.

Los Angeles Pocket Mouse Survey Results

As discussed in Section 2.4, *Los Angeles Pocket Mouse Survey*, a LAPM live-trapping survey was conducted from August 30 to September 3, 2021. No LAPM were trapped during these efforts. Three common species were trapped during the survey, including Dulzura kangaroo rat (*Dipodomys simulans*), deer mouse (*Peromyscus maniculatus*), and an individual California towhee (*Melozone crissalis*). Trapped individuals were marked and released each night. The results from the LAPM survey, including the total number of unique and recaptured animals from each trap line, are summarized below in Table 3.

Table 3 Trapping Results for the Los Angeles Pocket Mouse Survey

Trap Line	Trap Nights	Number of DIPSIM Captured	Number of PERMAN Captured
A	35	2 (7)	4 (5)
B	35	2 (4)	3 (1)
C	35	1 (2)	0 (0)
D	35	1 (10)	0 (1)
E	35	2 (4)	0 (0)
F	35	2 (3)	1 (5)
Total	**210**	**10 (30)**	**8 (12)**

trap nights = number of traps set multiplied by the number of nights deployed

(#) = number of recaptured individuals (for example, in trap line A, two unique individuals were trapped and seven previously-marked individuals were trapped)

DIPSIM: *Dipodomys simulans* (Dulzura kangaroo rat)

PERMAN: *Peromyscus maniculatus* (deer mouse)

Given the negative results of the LAPM trapping survey, no further actions are anticipated to be required pursuant to the MSHCP for LAPM.

4.5 Urban/Wildlands Interface Guidelines

According to Section 6.1.4 of the MSHCP, the Urban/Wildlands Interface Guidelines are intended to address indirect effects associated with locating development in proximity to the MSHCP Conservation Area. Consistency with these guidelines must be considered for projects within or near the criteria cells or other special status habitats, such as public quasi-public (PQP) Reserves or other areas set aside for conservation purposes. The project area is located approximately 2.35 miles away from the nearest criteria cell 5835. Additionally, the project is not located immediately adjacent to PQP lands. As a result, the MSHCP guidelines regarding urban and wildlands interface were not considered.

The project would primarily involve the installation of a replacement transmission line to be strung on existing utility poles with minimal ground disturbance that would be limited to temporary access of workers and vehicles. Project activities are anticipated to be restricted to daylight hours. Additionally, noise generated as a result of construction activities due to equipment and workers is expected to be temporary and would be limited to waking hours. Additionally, the only direct impacts would occur at the Bautista substation through removal of approximately 1.0 acre of redshank chaparral. (Approximately 0.29 acre would be preserved.) The Bautista substation parcel is located approximately 100 feet southeast from PQP parcel 573-340-015, which is managed by the Bureau of Land Management (BLM). This parcel is on the western side of Bautista Road, outside of the project area, and has no natural connection to the project area. Therefore, no direct impacts would occur at this parcel.

4.6 Migratory Corridors and Linkages

Wildlife movement corridors, or habitat linkages, are generally defined as connections between habitat patches that allow for physical and genetic exchange between otherwise isolated animal populations. Such linkages may serve a local purpose, such as providing a linkage between foraging and denning areas, or they may be regional in nature. Some habitat linkages may serve as migration corridors, wherein animals periodically move away from an area and then subsequently return.

Wildlife movement corridors can be both large and small scale. The BSA is not located within a Conservation Planning Linkage, which are habitat connectivity linkages mapped in the California Essential Habitat Connectivity map that are based on species-specific models and represent the best connections between core natural areas to maintain habitat connectivity (CDFW 2021b).

The only direct project impacts that would occur would result from construction of the Bautista substation at APN 576-060-040, which is limited in size and adjacent to open space connections. Therefore, no substantial impacts to wildlife movement would occur within the proposed project area, and no further actions related to migratory corridors and linkages are required pursuant to the MSHCP.

4.7 MSHCP Consistency

Given implementation of BMPs to reduce indirect impacts to riparian/riverine resources (outlined in Appendix C of the MSHCP) and the negative results of the LAPM live-trapping study at the Bautista substation parcel, the project would be consistent with the MSHCP goals for the enhancement maintenance of biological diversity and ecosystem processes while allowing future economic growth.

5 Limitations, Assumptions, and Use Reliance

An MSHCP consistency analysis and habitat assessment has been performed in accordance with professionally accepted biological investigation practices conducted at this time and in this geographic area. The biological investigation is limited by the scope of work performed. In addition, general biological (or protocol) surveys do not guarantee that the organisms are not present and will not be discovered in the future within the site. In particular, mobile wildlife species could occupy the site on a transient basis or re-establish populations in the future. Additionally, plants may not be identifiable outside the normal blooming period and it may not be possible to detect them during surveys. Plants could also become present if environmental conditions change, such as rain events, and dormant individual blooms. Our field studies were based on current industry practices, which change over time and may not be applicable in the future. No other guarantees or warranties, expressed or implied, are provided. The findings and opinions conveyed in this report are based on findings derived from site reconnaissance, jurisdictional areas, review of CNDDB RareFind5, and specified historical and literature sources. Standard data sources relied upon during the completion of this report, such as the CNDDB, may vary with regard to accuracy and completeness. In particular, the CNDDB is compiled from research and observations reported to CDFW that may or may not have been the result of comprehensive or site-specific field surveys. Although Rincon believes the data sources are reasonably reliable, Rincon cannot and does not guarantee the authenticity or reliability of the data sources it has used. Additionally, pursuant to our contract, the data sources reviewed included only those that are practically reviewable without the need for extraordinary research and analysis.

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7 Certification and List of Preparers

I hereby certify that the statements furnished above and in the attached exhibits present data and information required for this biological evaluation, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief.

Date: October 2021 Signed: Sarah Toback

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Appendix A

The Riverside County Integrated Project (RCIP) Conservation Summary Report

Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP)

APN	Cell	Cell Group	Acres	Area Plan	Sub Unit
576-300-002	None	None	1.9346913	REMAP Plan	None
576-280-036	None	None	0.8281418	REMAP Plan	None
572-030-006	None	None	20.088948	REMAP Plan	None
572-030-008	None	None	19.931509	REMAP Plan	None
572-030-026	None	None	79.739841	REMAP Plan	None
572-160-017	None	None	17.969218	REMAP Plan	None
572-190-003	None	None	166.96392	REMAP Plan	None
572-210-001	None	None	5.0065908	REMAP Plan	None
572-160-007	None	None	9.3151185	REMAP Plan	None
572-100-031	None	None	20.139152	REMAP Plan	None
575-120-005	None	None	4.7837003	REMAP Plan	None
572-220-001	None	None	29.316241	REMAP Plan	None
572-110-034	None	None	9.4350159	REMAP Plan	None
572-290-002	None	None	3.152323	REMAP Plan	None
572-150-022	None	None	39.421181	REMAP Plan	None
572-160-001	None	None	99.952357	REMAP Plan	None
576-060-009	None	None	7.8213648	REMAP Plan	None
572-270-004	None	None	4.3822234	REMAP Plan	None
572-310-001	None	None	39.074575	REMAP Plan	None
572-120-001	None	None	316.82525	REMAP Plan	None
572-150-007	None	None	605.80349	REMAP Plan	None
572-150-010	None	None	18.883575	REMAP Plan	None
572-110-026	None	None	2.1115265	REMAP Plan	None
572-090-042	None	None	5.0833641	REMAP Plan	None
572-110-005	None	None	0.1442841	REMAP Plan	None
572-030-018	None	None	6.004248	REMAP Plan	None
572-030-019	None	None	2.0053497	REMAP Plan	None
572-190-001	None	None	640.51478	REMAP Plan	None
572-090-031	None	None	5.8899865	REMAP Plan	None
572-110-008	None	None	14.898308	REMAP Plan	None
572-110-011	None	None	4.7950424	REMAP Plan	None
572-090-033	None	None	5.0248188	REMAP Plan	None
572-090-034	None	None	5.0253275	REMAP Plan	None
572-110-010	None	None	9.1669019	REMAP Plan	None
572-090-043	None	None	5.0777997	REMAP Plan	None
572-090-044	None	None	5.1233556	REMAP Plan	None
572-110-043	None	None	4.2620955	REMAP Plan	None
572-090-045	None	None	5.2221622	REMAP Plan	None

APN	Cell	Cell Group	Acres	Area Plan	Sub Unit
572-100-047	None	None	4.9935419	REMAP Plan	None
572-100-010	None	None	5.0717866	REMAP Plan	None
572-100-011	None	None	5.0428972	REMAP Plan	None
572-290-010	None	None	4.7054348	REMAP Plan	None
572-100-012	None	None	10.201801	REMAP Plan	None
572-290-008	None	None	4.7100086	REMAP Plan	None
572-100-030	None	None	5.2153913	REMAP Plan	None
572-150-011	None	None	19.25812	REMAP Plan	None
572-250-001	None	None	78.905311	REMAP Plan	None
572-270-022	None	None	3.4342025	REMAP Plan	None
572-270-002	None	None	3.243566	REMAP Plan	None
572-230-007	None	None	6.9035458	REMAP Plan	None
572-030-005	None	None	10.073985	REMAP Plan	None
572-030-004	None	None	10.093668	REMAP Plan	None
572-160-018	None	None	18.04738	REMAP Plan	None
572-160-011	None	None	14.557243	REMAP Plan	None
572-090-032	None	None	4.9635472	REMAP Plan	None
572-110-012	None	None	26.835693	REMAP Plan	None
572-110-016	None	None	5.2783739	REMAP Plan	None
572-110-017	None	None	5.1518006	REMAP Plan	None
572-110-014	None	None	20.945548	REMAP Plan	None
572-110-033	None	None	8.7781075	REMAP Plan	None
572-110-025	None	None	2.2599405	REMAP Plan	None
572-110-035	None	None	9.7354902	REMAP Plan	None
572-220-003	None	None	28.880852	REMAP Plan	None
576-060-025	None	None	1.1388102	REMAP Plan	None
576-060-024	None	None	1.0466497	REMAP Plan	None

Habitat Assessments

Habitat assessment shall be required and should address at a minimum potential habitat for the following species.

APN	Amphibia Species	Burrowing Owl	Criteria Area Species	Mammalian Species	Narrow Endemic Plant Species	Special Linkage Area
576-060-040	No	No	No	Los Angeles Pocket Mouse	No	No
576-060-009	No	No	No	Los Angeles Pocket Mouse	No	No

Criteria Area Species

The project area is not in a criteria area species study area.

Background

The final MSHCP was approved by the County Board of Supervisors on June 17, 2003. The federal and state permits were issued on June 22, 2004 and implementation of the MSHCP began on June 23, 2004.

For more information concerning the MSHCP, contact your local city or the County of Riverside for the unincorporated areas. Additionally, the Western Riverside County Regional Conservation Authority (RCA), which oversees all the cities and County implementation of the MSHCP, can be reached at:

Western Riverside County Regional Conservation Authority
3403 10th Street, Suite 320
Riverside, California 92501
Phone: (951) 955-9700
Fax: (951) 955-8873
www.wrc-rca.org

Introduction

As urbanization has increased within western Riverside County, state and federal regulations have required that public and private developers obtain "Take permits" from Wildlife Agencies for impacts to endangered, threatened, and rare species and their Habitats. This process, however, has resulted in costly delays in public and private Development projects and an assemblage of unconnected Habitat areas designated on a project-by-project basis. This piecemeal and uncoordinated effort to mitigate the effects of Development does not sustain wildlife mobility, genetic flow, or ecosystem health, which require large, interconnected natural areas.

A variety of capitalized terms are used in this report. Definitions for those terms are provided at the end of this report.

The MSHCP is a criteria-based plan, focused on preserving individual species through Habitat conservation. The MSHCP is one element of the Riverside County Integrated Project (RCIP), a comprehensive regional planning effort begun in 1999. The purpose of the RCIP is to integrate all

aspects of land use, transportation, and conservation planning and implementation in order to develop a comprehensive vision for the future of the County. The overall goal of the MSHCP is rooted in the RCIP Vision Statement and supporting policy directives. The MSHCP will enhance maintenance of biological diversity and ecosystem processes while allowing future economic growth. Preserving a quality of life characterized by well-managed and well-planned growth integrated with an open-space system is a component of the RCIP vision. The MSHCP proposes to conserve approximately 500,000 acres and 146 different species. Approximately 347,000 acres are anticipated to be conserved on existing Public/Quasi-Public Lands, with additional contributions on approximately 153,000 acres from willing sellers. The overall goal of the MSHCP can be supported by the following:

- **Biological Goal:** In the MSHCP Plan Area, conserve Covered Species and their Habitats.
- **Economic Goal:** Improve the future economic development in the County by providing an efficient, streamlined regulatory process through which Development can proceed in an efficient way. The MSHCP and the General Plan will provide the County with a clearly articulated blueprint describing where future Development should and should not occur.
- **Social Goal:** Provide for permanent open space, community edges, and recreational opportunities, which contribute to maintaining the community character of Western Riverside County.

This report has been generated to summarize the guidance in the MSHCP Plan that pertains to this property. Guidelines have been incorporated in the MSHCP Plan to allow applicants to evaluate the application of the MSHCP Criteria within specific locations in the MSHCP Plan Area. Guidance is provided through Area Plan Subunits, Cell Criteria, Cores and Linkages and identification of survey requirements. The guidance and Criteria incorporate flexibility at a variety of levels. The information within this report is composed of three parts: a summary table, Reserve Assembly guidance and survey requirements within the MSHCP Plan Area. The summary table provides specific information on this property to help determine whether it is located within the MSHCP Criteria Area or any study areas. The Reserve Assembly guidance provides direction on assembly of the MSHCP Conservation Area if the property is within the Criteria Area. The survey requirements section describes the surveys that must be conducted on the property if Habitat is present for certain identified species within the Criteria Area or mapped study areas.

Reserve Assembly Guidance within the Criteria Area

The Reserve Assembly guidance only pertains to properties that are within the Criteria Area. Please check the summary table to determine whether this property is within the Criteria Area. If it is located inside of the Criteria Area, please read both this section and the section about survey requirements within the MSHCP Plan Area. If the property is located outside the Criteria Area, only read the survey requirements within the MSHCP Plan Area section.

The Area Plan Subunits, Cell Criteria and Cores and Linkages provide guidance on assembly of the MSHCP Conservation Area. The Area Plan Subunits section lists Planning Species and Biological Issues and Considerations that are important to Reserve Assembly within a specific Area Plan Subunit. The Cell Criteria identify applicable Cores or Linkages and describe the focus of desired conservation within a particular Cell or Cell Group. Cores and Linkages guidance includes dimensional data and biological considerations within each identified Core or Linkage.

The following is the Area Plan text and Cell Criteria that pertains specifically to this property. The Area Plan text includes the target acreage for conservation within the entire Area Plan,

identification of Cores and Linkages within the entire Area Plan and Area Plan Subunit Planning Species and Biological Issues and Considerations. It is important to keep in mind that the Area Plan Subunits, Cell Criteria and Cores and Linkages are drafted to provide guidance for a geographic area that is much larger than an individual property. The guidance is intended to provide context for an individual property and, therefore, all of the guidance and Criteria do not apply to each individual property.

REMAP Area Plan

This section identifies target acreages, applicable Cores and Linkages, Area Plan Subunits and Criteria for the REMAP Area Plan. For a summary of the methodology and map resources used to develop the target acreages and Criteria for the MSHCP Conservation Area, including this Area Plan, see Section 3.3.12.

Target Acreages

The target conservation acreage range for the REMAP Area Plan is 192,315 – 209,385 acres; it is composed of approximately 150,915 acres of existing Public/Quasi-Public Lands and 41,400 – 58,470 acres of Additional Reserve Lands.

Applicable Cores and Linkages

The MSHCP Conservation Area comprises a variety of existing and proposed Cores, Linkages, Constrained Linkages and Noncontiguous Habitat Blocks (referred to here generally as "Cores and Linkages"). The Cores and Linkages listed below are within the REMAP Area Plan. For descriptions of these Cores and Linkages and more information about the biologically meaningful elements of the MSHCP Conservation Area within the REMAP Area Plan, see Section 3.2.3, and MSHCP Volume II, Section A.

Cores and Linkages within the REMAP Area Plan

- Contains a portion of Proposed Core 4
- Contains a portion of Proposed Core 5
- Contains all of Proposed Core 6
- Contains a large portion of Proposed Core 7
- Contains a small portion of Proposed Linkage 11
- Contains a portion of Proposed Linkage 13
- Contains a portion of Proposed Linkage 14
- Contains all of Proposed Linkage 15
- Contains all of Proposed Linkage 16

Descriptions of Planning Species, Biological Issues and Considerations and Criteria for each Area Plan Subunit within the REMAP Area Plan are presented later in this section. These descriptions, combined with the descriptions of the Cores and Linkages referred to above, provide information about biological issues to be considered in conjunction with Reserve Assembly within the REMAP Area Plan. As noted in Section 3.1, the Area Plan boundaries established as part of the Riverside County General Plan were selected to provide an organizational framework for the Area Plan Subunits and Criteria. While these boundaries are not biologically based, unlike the Cores and Linkages, they relate specifically to General Plan boundaries and the jurisdictional boundaries of

incorporated Cities and were selected to facilitate implementation of the MSHCP in the context of existing institutional and planning boundaries.

Area Plan Subunits

The REMAP Area Plan is divided into seven Subunits. For each Subunit, target conservation acreages are established along with a description of the Planning Species, Biological Issues and Considerations, and Criteria for each Subunit. For more information regarding specific conservation objectives for the Planning Species, see Section 9.0. Subunit boundaries are depicted on the Cells and Cell Groupings map displays (Figures 3-24 and 3-25 of the REMAP Area Plan). Table 3-13 presents the Criteria for the REMAP Area Plan.

Surveys within the MSHCP Plan Area

Of the 146 species covered by the MSHCP, no surveys will be required by applicants for public and private projects for 106 of these Covered Species. Covered Species for which surveys may be required by applicants for public and private Development projects include 4 birds, 3 mammals, 3 amphibians, 3 crustaceans, 14 Narrow Endemic Plants, and 13 other sensitive plants within the Criteria Area. Of these 40 species, study area maps are provided for 34 species, and surveys will be undertaken within suitable Habitat areas in locations identified on these maps in the MSHCP Plan. The remaining six species are associated with riparian/riverine areas and vernal pools and include least Bell's vireo, southwestern willow flycatcher, western yellow-billed cuckoo, Riverside fairy shrimp, Santa Rosa Plateau fairy shrimp, and vernal pool fairy shrimp. Although there are no study area maps for these six species, surveys for these species, if necessary, will be undertaken as described below. It is the goal of the MSHCP to provide for conservation of Covered Species within the approximately 500,000 acre MSHCP Conservation Area (comprised of approximately 347,000 acres of existing Public/Quasi-Public Lands and 153,000 acres of new conservation on private lands). Conservation that may be identified to be desirable as a result of survey findings is not intended to increase the overall 500,000 acres of conservation anticipated under the MSHCP. Please refer to Section 6.0 of the MSHCP Plan, Volume I for more specific information regarding species survey requirements.

As projects are proposed within the MSHCP Plan Area, an assessment of the potentially significant effects of those projects on riparian/riverine areas and vernal pools will be performed as currently required by the California Environmental Quality Act (CEQA) using available information augmented by project-specific mapping. If the mapping identifies suitable habitat for any of the six species associated with riparian/riverine areas and vernal pools listed above and the proposed project design does not incorporate avoidance of the identified habitat, focused surveys for these six species will be conducted, and avoidance and minimization measures will be implemented in accordance with the species-specific objectives for these species. For more specific information regarding survey requirements for species associated with riparian/riverine areas and vernal pools, please refer to Section 6.1.2 of the MSHCP Plan, Volume I.

Habitat conservation is based on the particular habitat requirements of each species as well as the known distribution data for each species. The existing MSHCP database does not, however, provide the level of detail sufficient to determine the extent of the presence or distribution of Narrow Endemic Plant Species within the MSHCP Plan Area. Since conservation planning decisions for these plant species will have a substantial effect on their status, additional information regarding the presence of these plant species must be gathered during the long-term implementation of the MSHCP to ensure that appropriate conservation of the Narrow Endemic Plants occurs. For more

specific information regarding survey requirements for Narrow Endemic Plants, please refer to Section 6.1.3 of the MSHCP Plan, Volume I.

In addition to the Narrow Endemic Plant Species, additional surveys may be needed for certain species in conjunction with Plan implementation in order to achieve coverage for these species. The MSHCP must meet the Federal Endangered Species Act issuance criteria for Habitat Conservation Plans (HCP) which require, among other things, that the HCP disclose the impacts likely to result from the proposed Taking, and measures the applicant will undertake to avoid, minimize and mitigate such impacts. For these species in which coverage is sought under the MSHCP, existing available information is not sufficient to make findings necessary to satisfy these issuance criteria for Take authorization. Survey requirements are incorporated in the MSHCP to provide the level of information necessary to receive coverage for these species in the MSHCP.

Efforts have been made prior to approval of the MSHCP and will be made during the early baseline studies to be conducted as part of the MSHCP management and monitoring efforts to collect as much information as possible regarding the species requiring additional surveys. As data are collected and conclusions can be made regarding the presence of occupied Habitat within the MSHCP Conservation Area for these species, it is anticipated that survey requirements may be modified or waived. Please refer to Sections 6.1.3 and 6.3.2 of the MSHCP Plan, Volume I for more specific information regarding survey requirements.

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Appendix B

Site Photographs

Photograph 1. Upland mustard and other ruderal forbs, facing south.

Photograph 2. Dense redshank, facing northwest.

Photograph 3. California buckwheat scrub with big sagebrush scrub behind, facing northwest.

Photograph 4. Bautista substation and redshank chaparral, facing north. Bautista Road on immediate left.

Photograph 5. Bautista substation and erosional feature created from sheet flow off of Bautista Road in the distance, facing northwest.

Photograph 6. Concrete drainage along SR 371 that connects to Cahuilla Creek, facing northeast.

Photograph 7. Cahuilla Creek crossing. Note poles span the entire creek without contact.

Photograph 8. Hamilton Creek, facing east along the eastern end of the BSA.

Appendix C

Observed Species Lists from Reconnaissance Survey

Scientific Name	Common Name	Status	Native or Introduced
Birds			
Accipiter cooperii	Cooper's hawk	MSHCP covered species; CDFW Watch List	Native
Aphelocoma californica	California scrub-jay	None	Native
Buteo jamaicensis	red-tailed hawk	None	Native
Callipepla californica	California quail	None	Native
Colaptes auratus	northern flicker	None	Native
Corvus corax	common raven	None	Native
Falco sparverius	American kestrel	None	Native
Geococcyx californianus	greater roadrunner	None	Native
Mimus polyglottos	northern mockingbird	None	Native
Passerculus sandwichensis	Savannah sparrow	None	Native
Phainopepla nitens	phainopepla	None	Native
Psaltriparus minimus	bushtit	None	Native
Sayornis saya	Say's phoebe	None	Native
Sturnella neglecta	Western meadowlark	None	Native
Sturnus vulgaris	European starling	None	Native
Thryomanes bewickii	Bewick's wren	None	Native
Toxostoma redivivum	California thrasher	None	Native
Zenaida macroura	mourning dove	None	Native
Zonotrichia leucophrys	white-crowned sparrow	None	Native
Mammals			
Canis latrans	coyote	None	Native
Otospermophilus beecheyi	California ground squirrel	None	Native
Sylvilagus audubonii	desert cottontail	None	Native
Reptiles			
Pituophis catenifer	pacific gopher snake	None	Native
Plants			
Adenostoma fasciculatum	chamise	None	Native
Adenostoma sparsifolium	redshank	None	Native
Agrostis scabra	rough bent	None	Native
Ambrosia acanthicarpa	flatspine burr ragweed	None	Native
Arctostaphylos glauca	bigberry manzanita	None	Native
Artemisia dracunculus	wild tarragon	None	Native
Artemisia tridentata	big sage	None	Native
Avena fatua	wildoats	None	Introduced
Baccharis salicifolia	mule fat	None	Native
Batis maritima	saltwort	None	Native
Berberis vulgaris	common barberry	None	Introduced
Brassica nigra	black mustard	None	Introduced
Bromus madritensis	red brome	None	Introduced

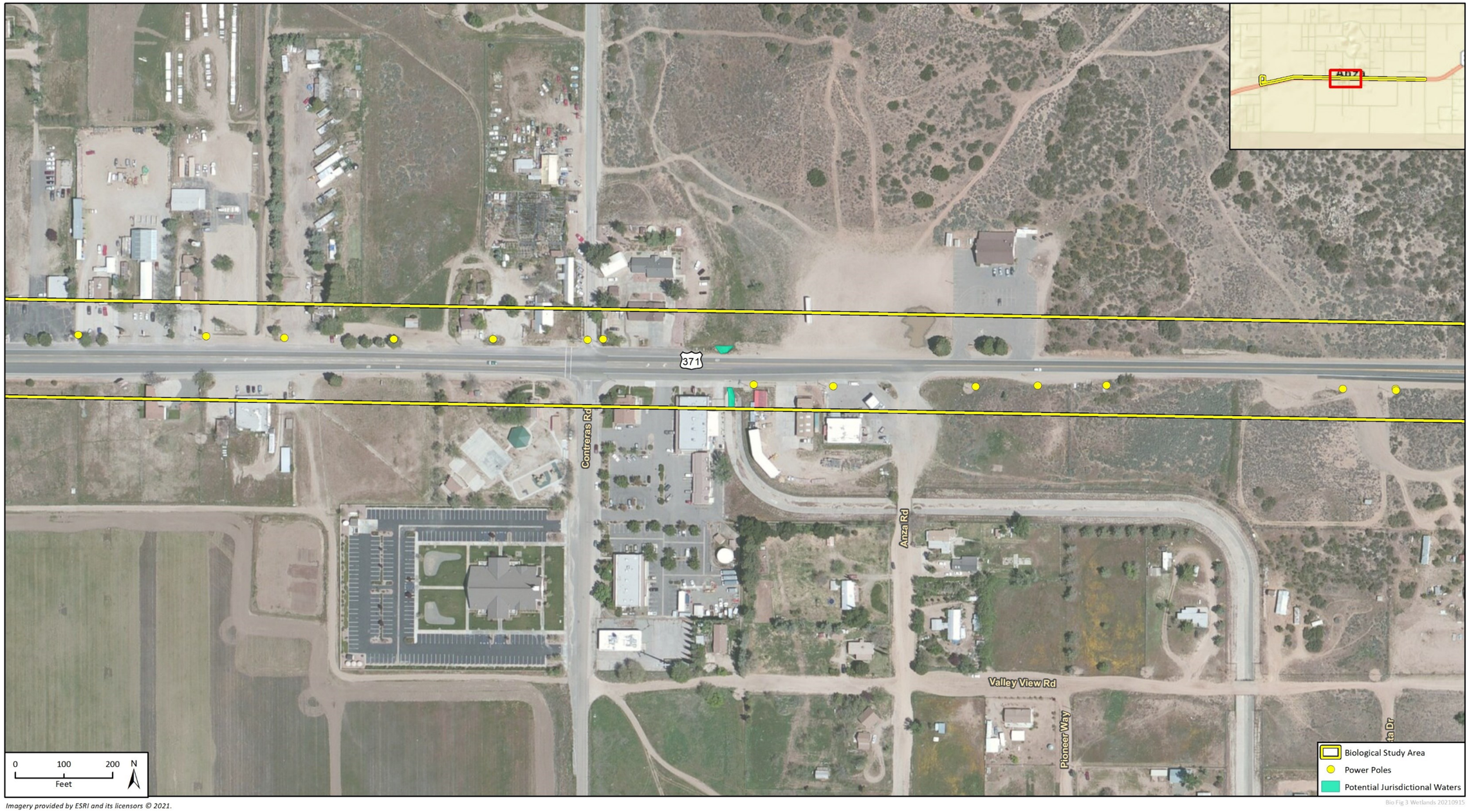
Scientific Name	Common Name	Status	Native or Introduced
Ceanothus perplexans	cupped leaf ceanothus	None	Native
Centromadia pungens	common tarweed	None	Native
Chrysothamnus viscidiflorus	green rabbitbrush	None	Native
Croton californicus	California croton	None	Native
Cylindropuntia acanthocarpa	buck horn cholla	None	Native
Eriodictyon trichocalyx	yerba santa	None	Native
Eriogonum fasciculatum	buckwheat	None	Native
Eriogonum wrightii	Wright's buckwheat	None	Native
Eucalyptus camaldulensis	red gum	None	Introduced
Forestiera pubescens	desert olive	None	Native
Heliotropium curassavicum	salt heliotrope	None	Native
Hesperoyucca whipplei	chaparral yucca	None	Native
Lactuca virosa	wild lettuce	None	Introduced
Lepidospartum squamatum	scalebroom	None	Native
Nicotiana attenuata	coyote tobacco	None	Native
Opuntia basilaris	beaver tail cactus	None	Native
Phalaris aquatica	harding grass	None	Introduced
Populus fremontii	Fremont cottonwood	None	Native
Prunus ilicifolia	hollyleaf cherry	None	Native
Pseudognaphalium californicum	ladies' tobacco	None	Native
Quercus Cornelius-mulleri	scrub oak	None	Native
Rhamnus ilicifolia	hollyleaf redberry	None	Native
Rumex acetosella	sheep sorrel	None	Introduced
Rumex crispus	curly dock	None	Introduced
Salix gooddingii	Goodding's willow	None	Native
Salix lasiolepis	arroyo willow	None	Native
Salvia columbariae	chia sage	None	Native
Solidago spp.	Canada goldenrod	None	Native
Stephanomeria pauciflora	desert wirelettuce	None	Native
Suaeda nigra	bush seepweed	None	Native
Tamarix ramosissima	tamarisk	None	Introduced
Yucca aloifolia	Spanish dagger yucca	None	Native

Appendix D

Additional Figures

Figure D-1 Riparian/Riverine Features

Imagery provided by ESRI and its licensors © 2021.



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Bio Fig 3 Wetlands 20210915

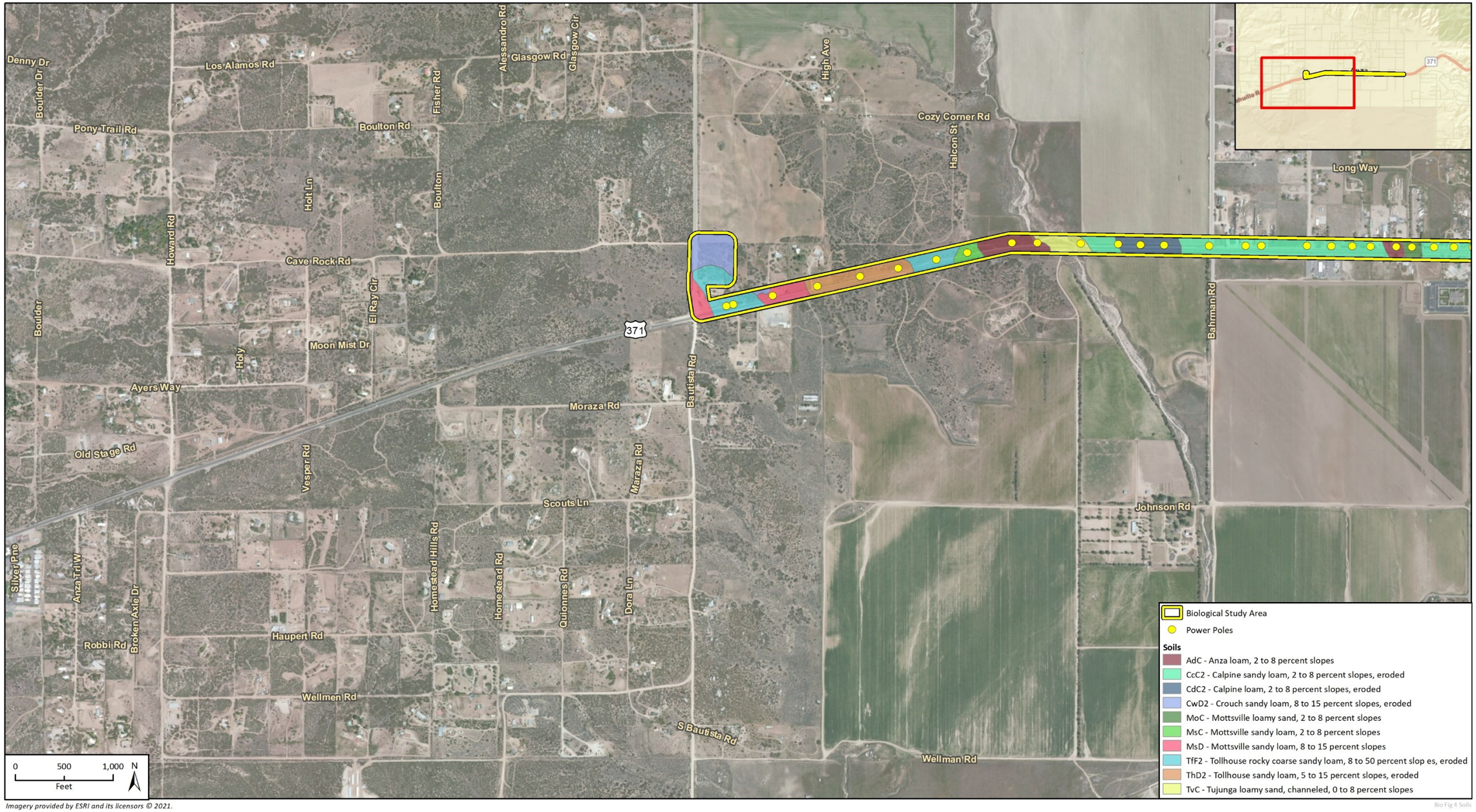
Imagery provided by ESRI and its licensors © 2021.

Bio Fig 3 Wetlands 20210915

Imagery provided by ESRI and its licensors © 2021.

Bio Fig 3 Wetlands 20210915

Figure D-2 Soils



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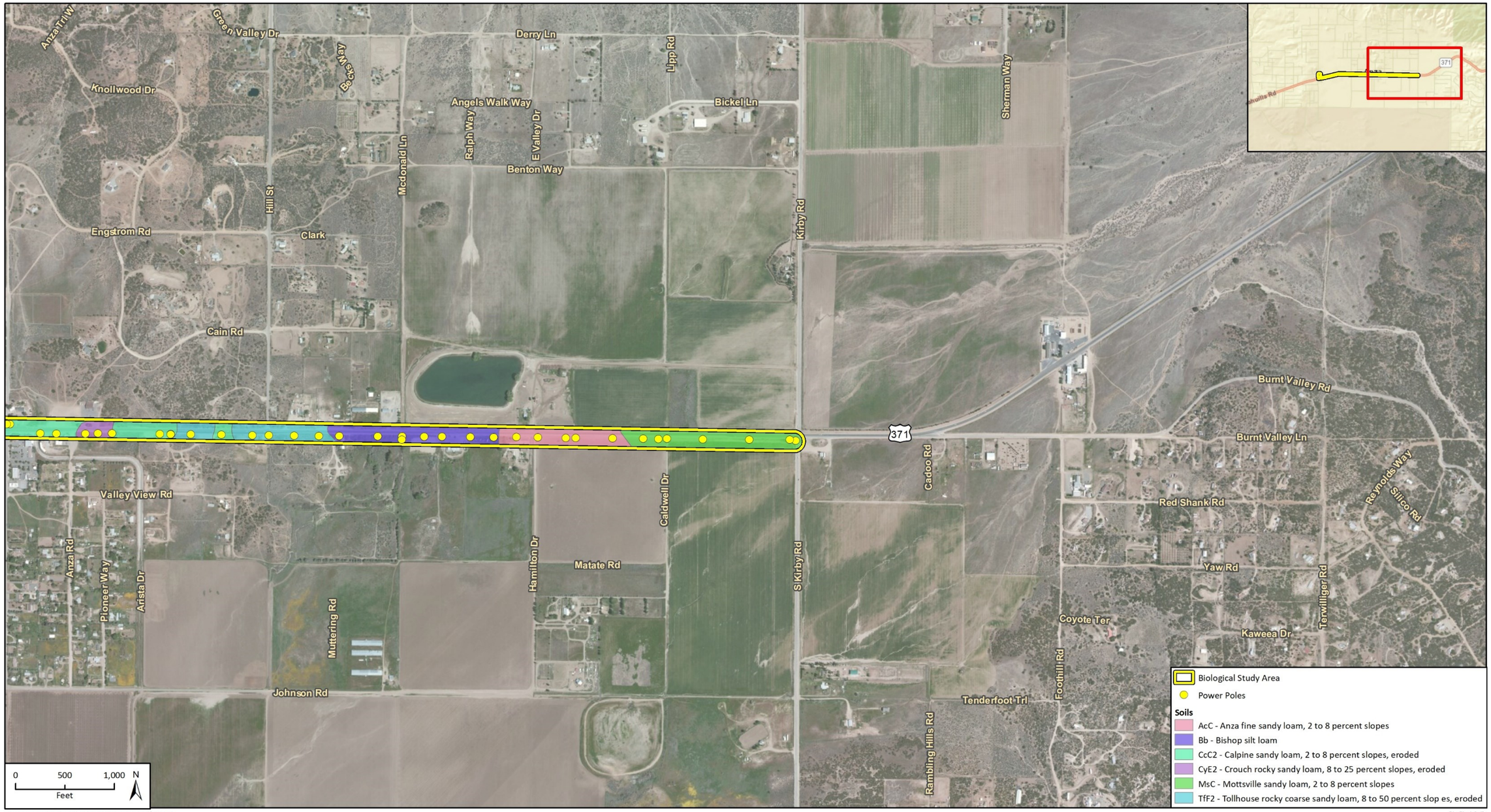
Soil data provided by SSURGO, 2019.

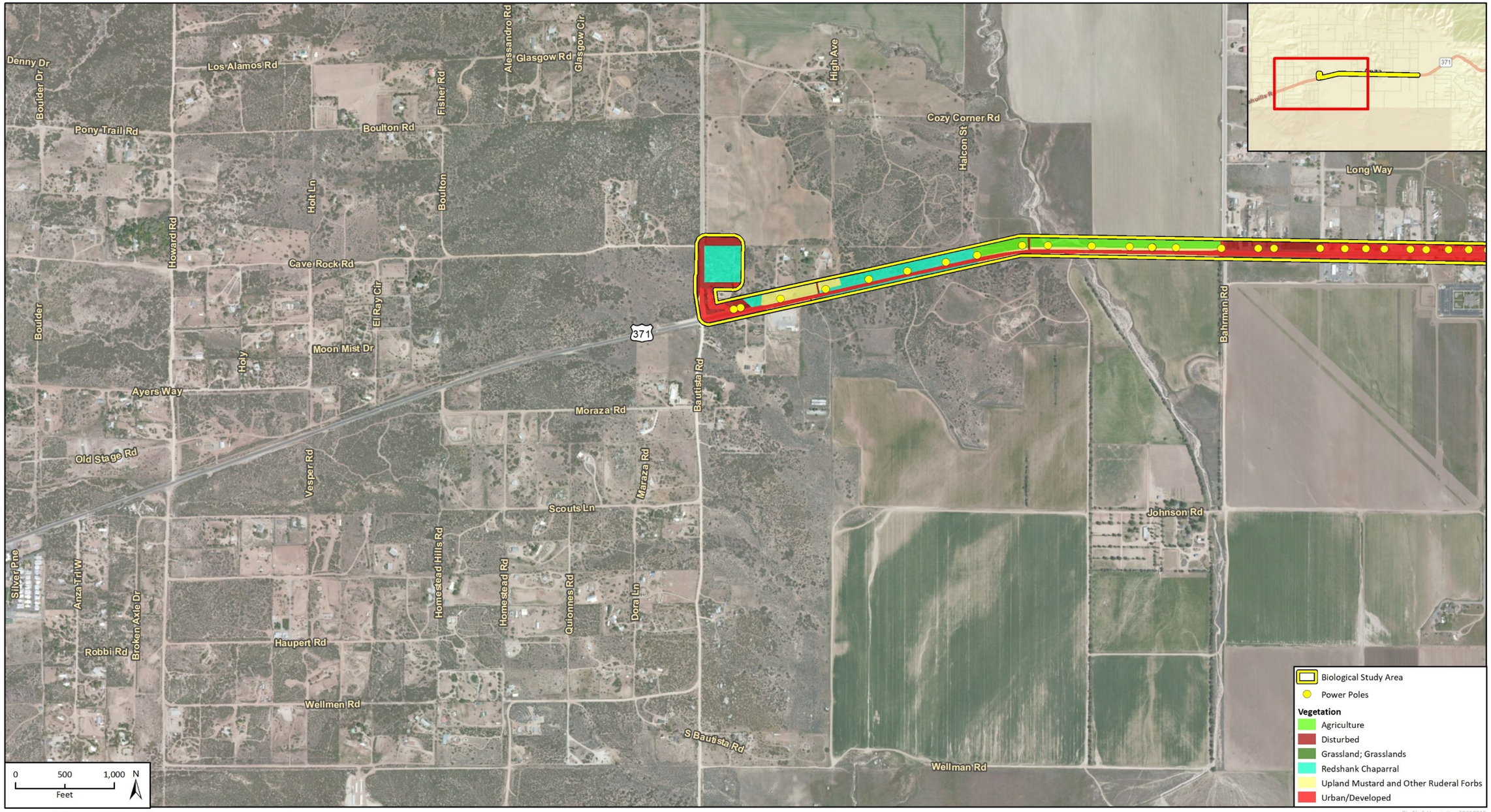
Bio Fig 4 Soils



Imagery provided by ESRI and its licensors © 2021.
Soil data provided by SSURGO, 2019.

Bio Fig 4 Soils

Figure D-3 Vegetation Communities



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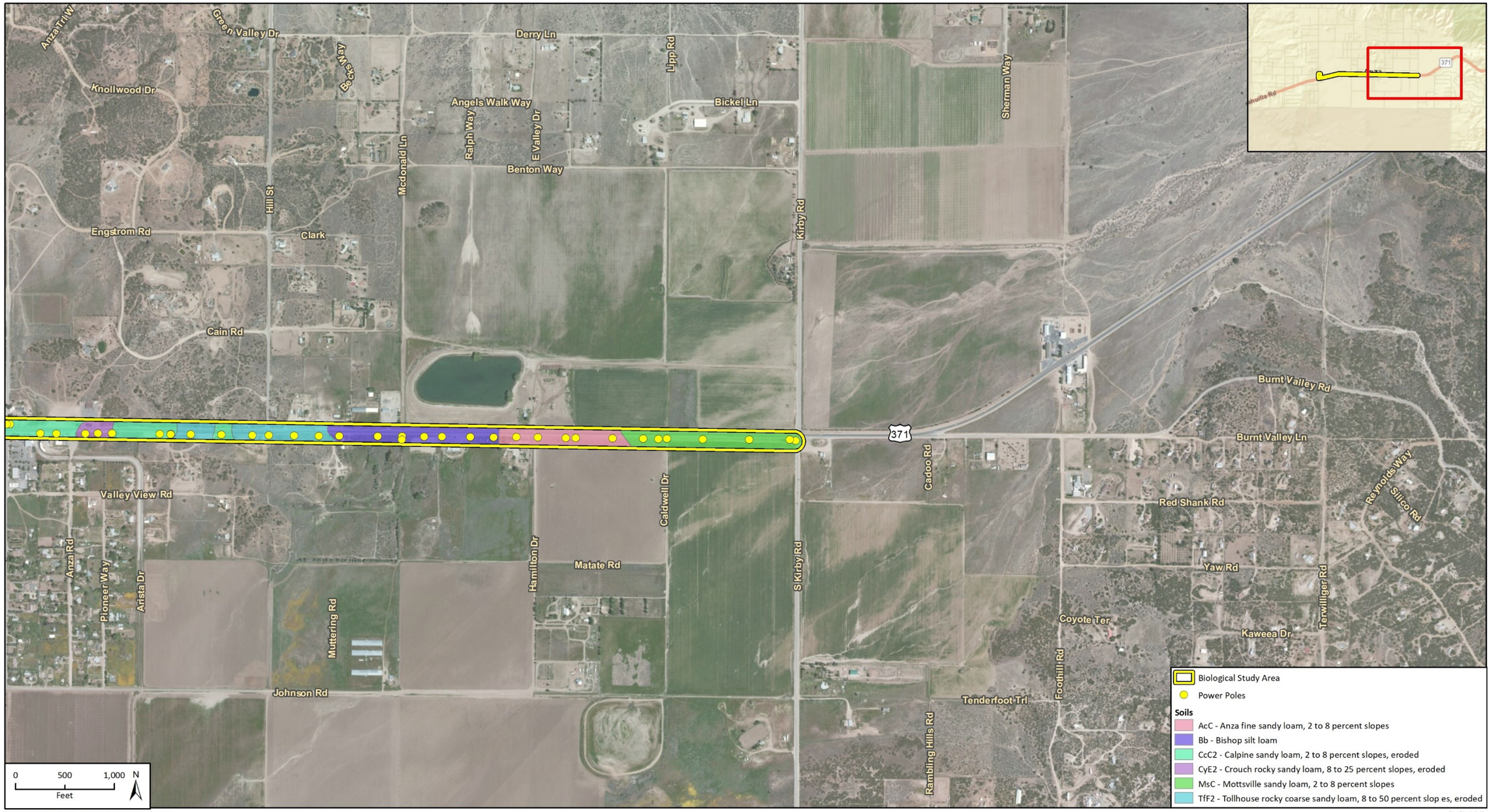

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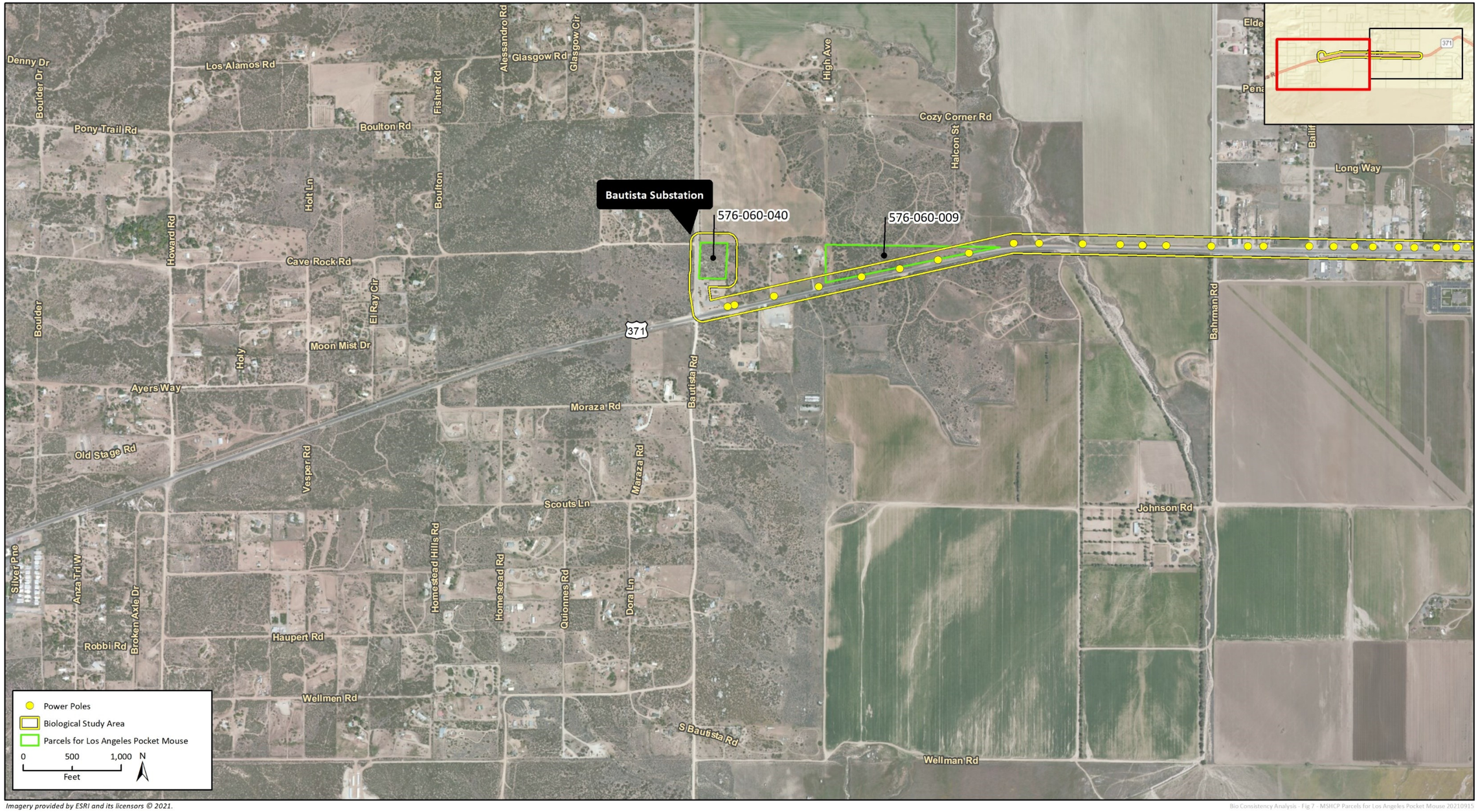
Soil data provided by SSURGO, 2019.

Bio Fig 4 Soils

Figure D-4 MSHCP Parcels for Los Angeles Pocket Mouse



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Bio Consistency Analysis - Fig 7 - MSHCP Parcels for Los Angeles Pocket Mouse 20210915

Figure D-5 Los Angeles Pocket Mouse Trapping Grid

Appendix C

Cultural Resources Assessment (CONFIDENTIAL)

This document contains sensitive and confidential information concerning Native American site locations and components and is not intended for general distribution. Archaeological site locations are exempted from the California Public Records Act, as specified in Government Code 6254.10, and from the Freedom of Information Act (Exemption 3), under the legal authority of both the National Historic Preservation Act (PL 102-574, Section 304[a]) and the Archaeological Resources Protection Act (PL 96-95, Section 9[a]). Sections of this report contain maps and other sensitive information.

Appendix D

Energy Calculations

AEC Electricity Transmission Line Project

Last Updated: 7/13/2021

Compression-Ignition Engine Brake-Specific Fuel Consumption (BSFC) Factors **[1]**:

HP: 0 to 100	0.0588	HP: Greater than 100	0.0529

Values above are expressed in gallons per horsepower-hour/BSFC.

CONSTRUCTION EQUIPMENT

Construction Equipment	#	Hours per Day	Horsepower	Load Factor	Construction Phase	Fuel Used (gallons)
Rubber Tired Dozer	1	8	247	0.40	Grubbing	459.58
Tractors/Loaders/Backhoes	2	8	97	0.37	Grubbing	371.19
Tractors/Loaders/Backhoes	2	8	97	0.37	Grading	616.18
Skid Steer	1	8	65	0.38	Grading	212.03
Crawler Tractor	1	8	212	0.41	Drainage	4,043.16
Plate Compactor	1	8	8	0.38	Drainage	157.21
Forklifts	1	8	89	0.40	Drainage	1,840.97
Tractors/Loaders/Backhoes	2	8	97	0.37	Drainage	3,711.92
Trencher	1	8	78	0.30	Drainage	1,210.07
Pavers	1	8	132	0.42	Paving	170.20
					Total Fuel Used	**12,792.52**
						(Gallons)

Construction Phase	Days of Operation
Grubbing	11
Grading Phase	18.26
Drainage	110
Paving Phase	7.26
Total Days	146.52

WORKER TRIPS

Constuction Phase	MPG [2]	Trips	Trip Length (miles)	Fuel Used (gallons)
Grubbing	24.4	240	20.0	2163.93
Grading Phase	24.4	240	20.0	3592.13
Drainage	24.4	240	20.0	21639.34
Paving Phase	24.4	240	20.0	1428.20
			Total	**28,823.61**

HAULING AND VENDOR TRIPS

Trip Class	MPG [2]	Trips	Trip Length (miles)	Fuel Used (gallons)
HAULING TRIPS				
Grubbing	7.5	0	20.0	0.00
Grading Phase	7.5	0	20.0	0.00

Drainage	7.5	73		20.0	193.60
Paving Phase	7.5	0		20.0	0.00
			0	**Total**	**193.60**
		VENDOR TRIPS			
Grubbing	7.5	2		20.0	58.67
Grading Phase	7.5	2		20.0	97.39
Drainage	7.5	2		20.0	586.67
Paving Phase	7.5	2		20.0	38.72
				Total	**781.44**

Total Gasoline Consumption (gallons)	**28,823.61**
Total Diesel Consumption (gallons)	**13,767.56**

Sources:

[1] United States Environmental Protection Agency. 2018. Exhaust and Crankcase Emission Factors for Nonroad Compression-Ignition Engines in MOVES2014b. July 2018. Available at: https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P100UXEN.pdf.

[2] United States Department of Transportation, Bureau of Transportation Statistics. 2019. National Transportation Statistics 2019. Available at: https://www.bts.gov/topics/national-transportation-statistics.

Appendix E

Geotechnical Report

GEOTECHNICAL INVESTIGATION
PROPOSED BAUTISTA SUBSTATION
APN 576-060-024 & 025
SEC CAVE ROCK ROAD & BAUTISTA ROAD
ANZA AREA
RIVERSIDE COUNTY, CALIFORNIA

-Prepared By-

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800 E. Florida Avenue, Hemet, CA 92543 (951) 766-8777 Fax (951) 766-8778

September 17, 2019

Project No. 644-19036
19-09-073

Anza Electric Cooperative, Inc.
P.O. Box 391909
Anza, California 92539

Subject: Geotechnical Investigation

Project: Proposed Bautista Substation
APN 576-060-024 & 025
SEC Cave Rock Road and Bautista Road
Anza Area
Riverside County, California

Sladden Engineering is pleased to present the results of the geotechnical investigation performed for the Bautista Substation proposed for the site located on the southeast corner of Cave Rock Road and Bautista Road in the Anza area of Riverside County, California. Our services were completed in accordance with our proposal for geotechnical engineering services dated June 19, 2019 and your authorization to proceed with the work. The purpose of our investigation was to explore the subsurface conditions at the site in order to provide recommendations for foundation design and site preparation. Evaluation of environmental issues and hazardous wastes was not included within the scope of services provided.

The opinions, recommendations and design criteria presented in this report are based on our field exploration program, laboratory testing and engineering analyses. Based on the results of our investigation, it is our professional opinion that the proposed project should be feasible from a geotechnical perspective provided that the recommendations presented in this report are implemented in design and carried out through construction.

We appreciate the opportunity to provide service to you on this project. If you have any questions regarding this report, please contact the undersigned.

Respectfully submitted,
SLADDEN ENGINEERING

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Principal Geologist

CERTIFIED ENGINEERING GEOLOGIST
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SER/mc
Copies: 4/Addressee

GEOTECHNICAL INVESTIGATION
PROPOSED BAUTISTA SUBSTATION
APN 576-060-024 & 025
SEC CAVE ROCK ROAD & BAUTISTA ROAD
ANZA AREA
RIVERSIDE COUNTY, CALIFORNIA

September 17, 2019
TABLE OF CONTENTS

INTRODUCTION

This report presents the results of the geotechnical investigation performed by Sladden Engineering (Sladden) for the Bautista Substation proposed for the site located on the southeast corner of Cave Rock Road and Bautista Road in the Anza area of Riverside County, California. The site is formally identified as APNs 576-060-024 and 576-060-025 and is located at approximately 33.5547 degrees north latitude and 116.7003 degrees west longitude. The approximate location of the site is indicated on the Site Location Map (Figure 1).

Our investigation was conducted in order to evaluate the engineering properties of the subsurface materials, to evaluate their *in-situ* characteristics, and to provide engineering recommendations and design criteria for site preparation, foundation design and the design of various site improvements. This study also includes a review of published and unpublished geotechnical and geological literature regarding seismicity at and near the subject site.

PROJECT DESCRIPTION

Based on the Conceptual Grading and Site Plan (Womer, 2018), it is our understanding that the proposed project will consist of constructing an electric service sub-station on the currently vacant property. The preliminary plans indicated that the proposed electric substation will include transformers, oil containment pits, feeder units, transmission and distribution poles and associated site improvements. We expect that the entire substation suface will be covered in 4-inch crushed rock. In order to construct a level building area, fill slopes on the order of two horizontal to one vertical (2H:1V) slopes will be required. Rip-rap slope protection is proposed for the northern portion of the building area and concrete v-ditches and drain pipes are proposed for the eastern portion of the building area.

For our analyses we expect that the proposed substation components will consist of a steel frame structures supported on conventional shallow spread footings or drilled pier foundations and concrete slabs-on-grade.

Grading will be limited to minor cuts and fills within the building area in order to accomplish the desired pad elevation and to provide adequate gradients for site drainage. This does not include the removal and re-compaction of the primary foundation bearing soil within the building areas. Upon completion of precise grading plans, Sladden should be retained in order to ensure that the recommendations presented within in this report are incorporated into the design of the proposed project.

SCOPE OF SERVICES

The purpose of our investigation was to determine pertinent engineering characteristics of the surface and near surface soil and bedrock in order to develop foundation design criteria and recommendations for site preparation. Exploration of the site was achieved by excavating five (5) exploratory test pits to bedrock refusal depths between approximately two (2) and seven (7) feet below the existing ground surface (bgs). Specifically, our site characterization consisted of the following tasks:

- Site reconnaissance to assess the existing surface conditions on and adjacent to the site.
- Excavating five (5) exploratory test pits to bedrock refusal depths between approximately two (2) and seven (7) feet bgs in order to characterize the subsurface soil and bedrock conditions. Representative samples of the soil were classified in the field and retained for laboratory testing and engineering analyses.
- Performing laboratory testing on selected samples to evaluate their engineering characteristics.
- Reviewing geologic literature and discussing geologic hazards.
- Performing engineering analyses to develop recommendations for foundation design and site preparation.
- The preparation of this report summarizing our work at the site.

SITE CONDITIONS

The project site is located on the southeast corner of Cave Rock Road and Bautista Road in the Anza area of Riverside County, California. The site consists of two parcels totaling approximately 2.28 acres of undeveloped land. The parcels are formally identified by the County of Riverside as APNs 576-060-024 & 576-060-025. At the time of our field investigation, the site was undeveloped and covered in thick native vegetation.

The subject site consists of undulating topography with regional gradients descending to the southeast. The subject site is bounded by a developed property to the south (Yibertos Taco Shop), undeveloped land to the east, Bautista Road to the west and a private gravel driveway (Anza Valley Christian Fellowship) to the north.

Based on our review of the Anza 7.5-Minute Quadrangle Map (USGS, 2018) the site is situated at an approximate elevation of 3,975 feet above mean sea level (MSL).

No natural ponding of water or surface seeps were observed at or near the site during our investigation conducted on July 25, 2019. Site drainage appears to be controlled via sheet flow and surface infiltration. Regional drainage is provided by Cahuilla Creek and associated tributaries located to the southwest of the site.

GEOLOGIC SETTING

The project site is located in the Peninsular Ranges Physiographic Province of California. The Peninsular Ranges are mountainous areas that extend from the western edge of the continental borderland to the Salton Trough and from the Transverse Ranges Physiographic Province in the north to the tip of Baja California in the south. The Peninsular Ranges Physiographic Province is characterized by northwest-trending topographic and structural features that locally include the San Jacinto Structural Block. The San Jacinto Structural Block is a northwest-southeast trending elongated structural block bounded on the southwest by the San Jacinto Fault and by the San Andreas Fault Zone to the northeast. The province is characterized by elongated, northwest-southeast trending mountain ranges and valleys and is truncated at its northern margin by the east-west grain of the Transverse Ranges. Mountainous areas of the Peninsular Ranges Physiographic Province generally consist of Igneous, metasedimentary and metavolcanic rocks. However, plutonic rocks of the Southern California Batholith are the dominant basement rock exposed (Jahns, 1954).

The site has been mapped by Rogers (1965) to be immediately underlain by Mesozoic-age granitic rocks consisting of tonalite and diorite (gr^t). The regional geologic setting for the site vicinity is presented on the Regional Geologic Map (Figure 2).

SUBSURFACE CONDITIONS

The subsurface conditions at the site were investigated by excavating five (5) exploratory test pits to depths between approximately two (2) and seven (7) feet bgs. The approximate locations of the test pits are illustrated on the Exploration Location Photograph (Figure 3). The test pits were excavated using a track-mounted John Deere excavator equipped with a 24-inch wide bucket. A Geologist of Sladden was on-site to log the materials encountered and retrieve samples for laboratory testing and engineering analyses.

During our field investigation, a thin mantle of alluvium (Qal) consisting of silty sand was encountered overlying intrusive bedrock. The surface soil appeared yellowish brown in in-situ color, dry, and fine to coarse-grained. Underlying the surface soil and extending to maximum depths explored, intrusive bedrock was encountered (gr). Bedrock was encountered within each of the test pits excavated and appeared moderately hard, moderately storing and highly weathered. Generally, the underlying earth materials observed within the test pits appeared to have adequate strength for the anticipated foundation loads at relatively shallow exploration depths.

The final logs represent our interpretation of the contents of the field logs, and the results of the laboratory observations and tests of the field samples. The final test pit logs are included in Appendix A of this report. The stratification lines represent the approximate boundaries between soil types although the transitions may be gradual.

Groundwater was not encountered to a maximum explored depth of approximately seven (7) feet bgs during our field investigation conducted on July 25, 2019. Due to the shallow bedrock conditions, it is our opinion that groundwater should not be a factor during construction of the proposed project.

SEISMICITY AND FAULTING

The southwestern United States is a tectonically active and structurally complex region, dominated by northwest trending dextral faults. The faults of the region are often part of complex fault systems, composed of numerous subparallel faults which splay or step from main fault traces. Strong seismic shaking could be produced by any of these faults during the design life of the proposed project.

We consider the most significant geologic hazard to the project to be the potential for moderate to strong seismic shaking that is likely to occur during the design life of the project. The proposed project is located in the highly seismic Southern California region within the influence of several fault systems that are considered to be active or potentially active. An active fault is defined by the State of California as a "sufficiently active and well defined fault" that has exhibited surface displacement within the Holocene epoch (about the last 11,000 years). A potentially active fault is defined by the State as a fault with a history of movement within Pleistocene time (between 11,000 and 1.6 million years ago).

As previously stated, the site has been subjected to strong seismic shaking related to active faults that traverse through the region. Some of the more significant seismic events near the subject site within recent times include: M6.0 North Palm Springs (1986), M6.1 Joshua Tree (1992), M7.3 Landers (1992), M6.2 Big Bear (1992), M7.1 Hector Mine (1999) and M7.1 Ridgecrest (2019).

Table 1 lists the closest known potentially active faults that was generated in part using the EQFAULT computer program (Blake, 2000), as modified using the fault parameters from The Revised 2002 California Probabilistic Seismic Hazard Maps (Cao et al, 2003). This table does not identify the probability of reactivation or the on-site effects from earthquakes occurring on any of the other faults in the region.

TABLE 1
CLOSEST KNOWN ACTIVE FAULTS

Fault Name	Distance (Km)	Maximum Event
San Jacinto - Anza	3.1	7.2
San Jacinto – Coyote Creek	20.9	6.8
San Jacinto – San Jacinto Valley	28.8	6.9
Elsinore - Julian	33.3	7.1
Elsinore - Temecula	35.1	6.8
Earthquake Valley	42.9	**7.0
San Andreas - San Bernardino	44.7	*7.5
San Andreas - Southern	44.7	*7.2
San Andreas - Coachella	45.7	*7.2

*8.2 for multiple segment rupture
**Probable Magnitude based on SCEDC (2018)

2016 CBC SEISMIC DESIGN PARAMETERS

Sladden has reviewed the 2016 California Building Code (CBC) and summarized the current seismic design parameters for the proposed structures. The seismic design category for a structure may be determined in accordance with Section 1613 of the 2016 CBC or ASCE7. According to the 2016 CBC, Site Class C may be used to estimate design seismic loading for the proposed structures. The 2016 CBC Seismic Design Parameters are summarized below (SEAC, 2019). The project Design Map Reports are included within Appendix C.

Risk Category (Table 1.5-1): II
Site Class (Table 1613.3.2): C
S_S (Figure 1613.3.1): 1.912g
S_1 (Figure 1613.3.1): 0.849g
F_a (Table 1613.3.3(1)): 1.0
F_v (Table 1613.5.3(2)): 1.3
S_{MS} (Equation 16-37 {F_a X S_S}): 1.912g
S_{M1} (Equation 16-38 {F_v X S_1}): 1.104g
S_{DS} (Equation 16-39 {2/3 X S_{MS}}): 1.275g
S_{D1} (Equation 16-40 {2/3 X S_{M1}}): 0.736g
Seismic Design Category: E

GEOLOGIC HAZARDS

The subject site is located in an active seismic zone and will likely experience strong seismic shaking during the design life of the proposed project. In general, the intensity of ground shaking will depend on several factors including: the distance to the earthquake focus, the earthquake magnitude, the response characteristics of the underlying materials, and the quality and type of construction. Geologic hazards and their relationship to the site are discussed below.

I. Surface Rupture. Surface rupture is expected to occur along preexisting, known active fault traces. However, surface rupture could potentially splay or step from known active faults or rupture along unidentified traces. Based on our review of Rogers (1965), Jennings (1994), CDMG (1974) and RCPR (2019), known faults are not mapped on or projecting towards the site. The site is not located within a State of California delineated fault zone. In addition, no signs of active surface faulting were observed during our review of non-stereo digitized photographs of the site and site vicinity (Google, 2019). Finally, no signs of active surface fault rupture or secondary seismic effects (lateral spreading, lurching etc.) were identified on-site during our field investigation. Therefore, it is our opinion that risks associated with primary surface ground rupture should be considered "low".

II. Ground Shaking. The site has been subjected to past ground shaking by faults that traverse through the region. Strong seismic shaking from nearby active faults is expected to produce strong seismic shaking during the design life of the proposed project. A probabilistic approach was employed to the estimate the peak ground acceleration (a_{max}) that could be experienced at the site. Based on the USGS Unified Hazard Tool (USGS, 2019) shear wave velocity (Vs30) of 360 m/s, the site could be subjected to ground motions on the order of 0.54g. The peak ground acceleration at the site is judged to have a 475 year return period and a 10 percent chance of exceedence in 50 years.

III. Liquefaction. Liquefaction is the process in which loose, saturated granular soil loses strength as a result of cyclic loading. The strength loss is a result of a decrease in granular sand volume and a positive increase in pore pressures. Generally, liquefaction can occur if all of the following conditions apply: liquefaction-susceptible soil, groundwater within a depth of 50 feet or less, and strong seismic shaking.

Based on the presence of shallow seated bedrock underlying the site, risks associated with liquefaction and liquefaction related hazards should be considered negligible.

IV. Tsunamis and Seiches. Because the site is situated at an inland elevated location, and is not immediately adjacent to any impounded bodies of water, risks associated with tsunamis and seiches are considered negligible.

V. Slope Failure, Landsliding, Rock Falls. No signs of slope instability in the form of landslides, rock falls, earthflows or slumps were observed at or near the subject site. The site is not located immediately adjacent to any slopes or hillsides. As such, risks associated with slope instability should be considered negligible.

VI. Expansive Soil. Generally, the near surface soil on the site consists of silty sand (SM). Based on the results of our laboratory testing (EI=10), the materials underlying the site are considered to have a "very low" expansion potential.

VII. Static Settlement. Static settlement resulting from the anticipated foundation loads should be minimal provided that the recommendations included in this report are considered in foundation design and construction. The estimated ultimate static settlement is calculated to be approximately 1 inch when using the recommended bearing pressures. As a practical matter, differential static settlement between footings can be assumed as one-half of the total settlement.

VIII. Subsidence. Land subsidence can occur in valleys where aquifer systems have been subjected to extensive groundwater pumping, such that groundwater pumping exceeds groundwater recharge. Generally, pore water reduction can result in a rearrangement of skeletal grains and could result in elastic (recoverable) or inelastic (unrecoverable) deformation of an aquifer system.

Locally, no fissures or other surficial evidence of subsidence were observed at or near the subject site. Because the site is underlain by bedrock, the potential for subsidence is considered "negligible".

IX. Debris Flows. Debris flows are viscous flows consisting of poorly sorted mixtures of sediment and water and are generally initiated on slopes steeper than approximately six horizontal to one vertical (6H:1V) (Boggs, 2001). Based on the flat nature of the site and the composition of the surface soil, we judge that risks associated with debris flows should be considered remote.

d. Shrinkage and Subsidence. Volumetric shrinkage of the material that is excavated and replaced as controlled compacted fill should be anticipated. We estimate that this shrinkage should be less than 15 percent. Subsidence of the surfaces that are scarified and compacted should be between 1 and 2 tenths of a foot. This will vary depending upon the type of equipment used, the moisture content of the soil at the time of grading and the actual degree of compaction attained

CONVENTIONAL SHALLOW SPREAD FOOTINGS

The proposed substation components may be supported on conventional shallow spread footings. All footings should be founded upon properly engineered fill soil and should have a minimum embedment depth of 12 inches measured from the lowest adjacent finished grade. Continuous footings and isolated pad footings should have minimum widths of 12 inches and 24 inches, respectively. Continuous footings and isolated pad footings placed on compact engineered fill soil may be designed using allowable bearing pressures of 1800 and 2000 pounds per square foot (psf), respectively. Allowable increases of 250 psf for each additional 1 foot in width and 250 psf for each additional 6 inches in depth may be utilized, if desired. The maximum allowable bearing pressure should be 3000 psf.

The allowable bearing pressure may be increased by one-third when considering transient live loads, including seismic and wind forces. All footings should be reinforced in accordance with the project structural engineer's recommendations.

Based on the allowable bearing pressures recommended above, total settlement of the shallow footings are anticipated to be less than one-inch provided that foundation preparation conforms to the recommendations described in this report. Differential settlement is anticipated to be approximately half the total settlement for similarly loaded footings spaced up to approximately 40 feet apart.

Lateral load resistance for the spread footings will be developed by passive soil pressure against the sides of the footings below grade and by friction acting at the base of the concrete footings bearing on compacted fill. An allowable passive pressure of 300 psf per foot of depth may be used for design purposes. An allowable coefficient of friction 0.45 may be used for dead and sustained live loads to compute the frictional resistance of the footing placed directly on compacted fill. Under seismic and wind loading conditions, the passive pressure and frictional resistance may be increased by one-third.

All footing excavations should be observed by a representative of the project geotechnical consultant to verify adequate embedment depths prior to placement of forms, steel reinforcement or concrete. The excavations should be trimmed neat, level and square. All loose, disturbed, sloughed or moisture-softened soils and/or any construction debris should be removed prior to concrete placement. Excavated soil generated from footing and/or utility trenches should not be stockpiled within the building envelope or in areas of exterior concrete flatwork.

SLABS-ON-GRADE

In order to provide uniform and adequate support, concrete slabs-on-grade must be placed on properly compacted engineered fill soil as outlined in the previous sections of this report. The slab subgrade should remain near optimum moisture content and should not be permitted to dry prior to concrete placement. Slab subgrades should be firm and unyielding. Disturbed soil should be removed and replaced with engineered fill soil compacted to a minimum of 90 percent relative compaction.

Slab thickness and reinforcement should be determined by the structural engineer. All slab reinforcement should be supported on concrete chairs to ensure that reinforcement is placed at slab mid-height.

Slabs with moisture sensitive surfaces or equipment should be underlain with a moisture vapor retarder consisting of a polyvinyl chloride membrane such as 10-mil visqueen, or equivalent. All laps within the membrane should be sealed and at least 2 inches of clean sand should be placed over the membrane to promote uniform curing of the concrete. To reduce the potential for punctures, the membrane should be placed on a pad surface that has been graded smooth without any sharp protrusions. If a smooth surface can not be achieved by grading, consideration should be given to placing a 1-inch thick leveling course of sand across the pad surface prior to placement of the membrane.

DRILLED PIERS

We anticipate that the proposed transmission and distribution poles will be supported upon cast-in-place concrete drilled pier/pile foundations. We expect that drilled pier foundations approximately 12 to 24 inches in diameter may be considered to support some of the substation structures. The following structural values are provided to assist in drilled pier/pile design. A minimum drilled pier depth of 5 feet is recommended.

Allowable end bearing soil pressure at 5 feet:
a. Static: DL+LL---------- 3 ksf
b. Seismic event: DL+LL+EQ ---------- 4 ksf

Allowable passive pressure:
a. Surface to 1 foot ---------- Zero
b. Between 1 foot and 10 feet ---------- 250 psf/ft.

Allowance for skin friction ---------- 250 psf
(Ignore upper 1 foot)
Angle of internal friction, between 1 foot and 12 feet --------32 degrees

Effective unit weight of the site soil:
a. Surface to 5 feet ----------133 pcf

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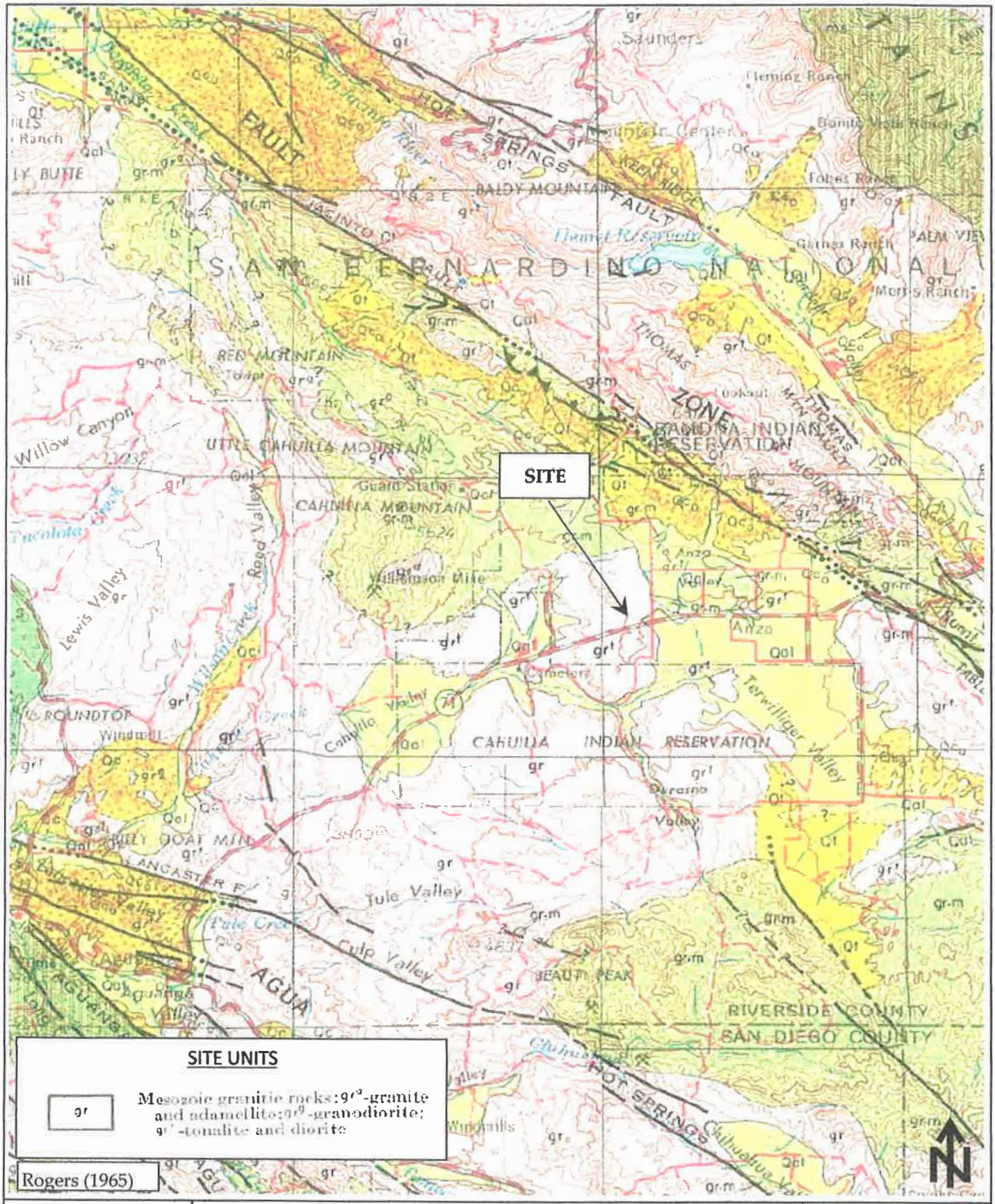
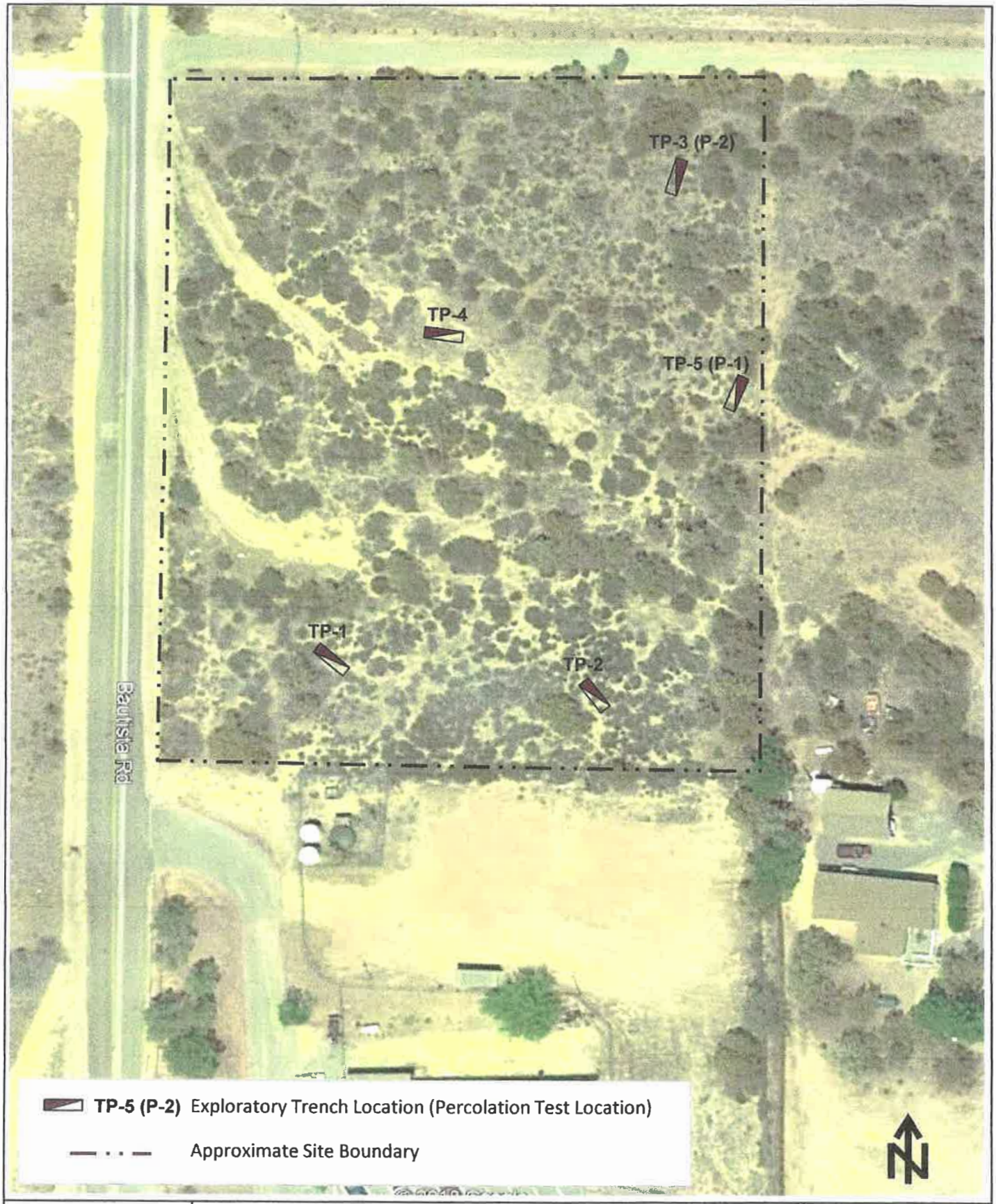
FIGURES

SITE LOCATION MAP
REGIONAL GEOLOGIC MAP
EXPLORATION LOCATION PHOTOGRAPH
SITE PLAN

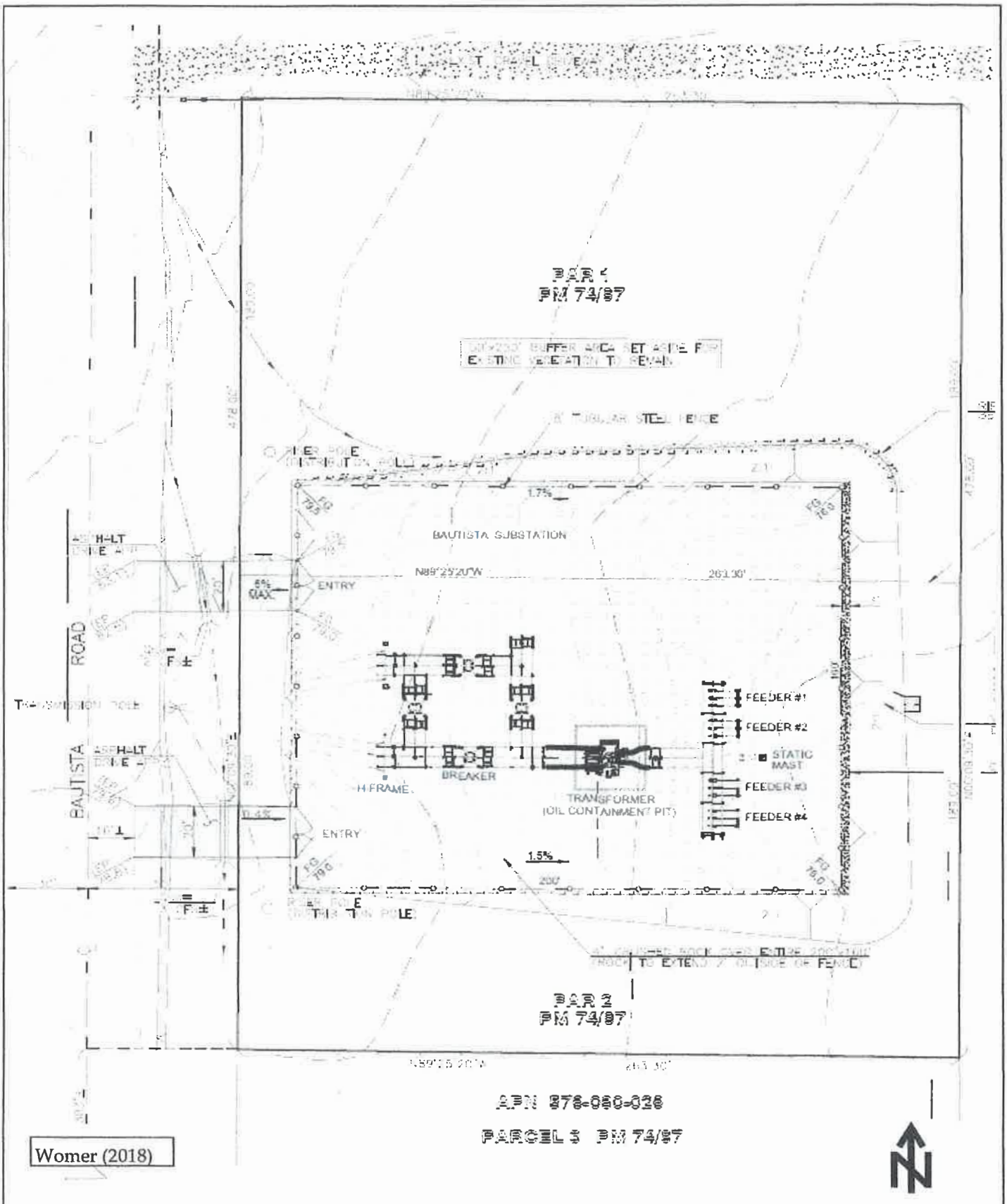
Sladden Engineering	SITE LOCATION MAP	FIGURE 1
	Project Number: 644-19036	
	Report Number: 19-09-073	
	Date: September 17, 2019	



Sladden Engineering	REGIONAL GEOLOGIC MAP	FIGURE 2
	Project Number: 644-19036	
	Report Number: 19-09-073	
	Date: September 17, 2019	



Sladden Engineering	EXPLORATION LOCATION PHOTOGRAPH		FIGURE 3
	Project Number:	644-19036	
	Report Number:	19-09-073	
	Date:	September 17, 2019	



Sladden Engineering	SITE PLAN	FIGURE 4
	Project Number: 644-19036	
	Report Number: 19-09-073	
	Date: September 17, 2019	

APPENDIX A

FIELD EXPLORATION

APPENDIX A

FIELD EXPLORATION

For our field investigation, five (5) exploratory test pits were excavated on July 25, 2019 utilizing a track mounted John Deere excavator equipped with a 24-inch wide bucket. Continuous logs of the materials encountered were made by a representative of Sladden Engineering. Materials encountered in the test pits were classified in accordance with the Unified Soil Classification System that is presented in this appendix.

Bulk samples were obtained from the excavations and samples were then transported to our laboratory for further observations and testing.

LOG OF TEST PIT: TP - 1

Soil Interval Depth (Feet bgs)	Soil Sample Designation	Soil Sample Depth (Feet bgs)	SOIL DESCRIPTION
0.0-1.0			Silty Sand (SM); yellowish brown, dry, fine- to coarse-grained with gravel and rootlets (Qal).
1.0-3.0			Bedrock (granitoid); moderately hard, moderately strong, highly weathered; readily breaks down to SM soil type.
			No Groundwater or Seepage Encountered Test pit terminated at 3.0 feet below ground surface.

GRAPHIC REPRESENTATION

SCALE: N/A **BEARING: N42E** **WALL:** West

Test Pit Number: TP-1	Date: 7/25/2019	**Sladden Engineering**
Elevation: 3975 Ft. msl	Equipment: Track-Mounted Excavator	Project: Bautista Substation, Anza, CA
Lat/Long: 33.5544/-116.7004	Logged By: S. Doyle/J. Minor	Project No.: 644-19036

LOG OF TEST PIT: TP -2

Soil Interval Depth (Feet bgs)	Soil Sample Designation	Soil Sample Depth (Feet bgs)	SOIL DESCRIPTION
0.0-1.0			Silty Sand (SM); yellowish brown, dry, fine- to coarse-grained with gravel and rootlets (Qal).
1.0-2.0			Bedrock (granitoid); moderately hard, moderately strong, highly weathered; readily breaks down to SM soil type.
			No Groundwater or Seepage Encountered Test pit terminated at 2.0 feet below ground surface.

GRAPHIC REPRESENTATION

SCALE: N/A **BEARING: N40W** **WALL:** West

Test Pit Number: TP-2	Date: 7/25/2019	**Sladden Engineering**
Elevation: 3975 Ft. msl	Equipment: Track-Mounted Excavator	Project: Bautista Substation, Anza, CA
Lat/Long: 33.5543/-116.7000	Logged By: S. Doyle/J. Minor	Project No.: 644-19036

LOG OF TEST PIT: TP – 3 (P-2)

Soil Interval Depth (Feet bgs)	Soil Sample Designation	Soil Sample Depth (Feet bgs)	SOIL DESCRIPTION
0.0-1.0			Silty Sand (SM); yellowish brown, dry, fine- to coarse-grained with gravel and rootlets (Qal).
1.0-4.0			Bedrock (granitoid); moderately hard, moderately strong, highly weathered; readily breaks down to SM soil type.
			No Groundwater or Seepage Encountered Test pit terminated at 4.0 feet below ground surface.

GRAPHIC REPRESENTATION

SCALE: N/A **BEARING: N10E** **WALL:** West

Test Pit Number: TP-3 (P-2)	Date: 7/25/2019	**Sladden Engineering**
Elevation: 3975 Ft. msl	Equipment: Track-Mounted Excavator	Project: Bautista Substation, Anza, CA
Lat/Long: 33.5549/-116.6998	Logged By: S. Doyle/J. Minor	Project No.: 644-19036

LOG OF TEST PIT: TP - 4

Soil Interval Depth (Feet bgs)	Soil Sample Designation	Soil Sample Depth (Feet bgs)	SOIL DESCRIPTION
0.0-3.0			Silty Sand (SM); yellowish brown, dry, fine- to coarse-grained with gravel and rootlets (Qal).
3.0-7.0			Bedrock (granitoid); moderately hard, moderately strong, highly weathered; readily breaks down to SM soil type.
			No Groundwater or Seepage Encountered Test pit terminated at 7.0 feet below ground surface.

GRAPHIC REPRESENTATION

SCALE: N/A **BEARING: N80W** **WALL**: South

Test Pit Number: TP-4	Date: 7/25/2019	**Sladden Engineering**
Elevation: 3975 Ft. msl	Equipment: Track-Mounted Excavator	Project: Bautista Substation, Anza, CA
Lat/Long: 33.5550/-116.7001	Logged By: S. Doyle/J. Minor	Project No.: 644-19036

LOG OF TEST PIT: TP – 5 (P-1)

Soil Interval Depth (Feet bgs)	Soil Sample Designation	Soil Sample Depth (Feet bgs)	SOIL DESCRIPTION
0.0-1.0			Silty Sand (SM); yellowish brown, dry, fine- to coarse-grained with gravel and rootlets (Qal).
1.0-2.0			Bedrock (granitoid); moderately hard, moderately strong, highly weathered; readily breaks down to SM soil type.
			No Groundwater or Seepage Encountered Test pit terminated at 2.0 feet below ground surface.

GRAPHIC REPRESENTATION

SCALE: N/A **BEARING: N18E** **WALL**: West

Test Pit Number: TP-5 (P-1)	Date: 7/25/2019	**Sladden Engineering**
Elevation: 3975 Ft. msl	Equipment: Track-Mounted Excavator	Project: Bautista Substation, Anza, CA
Lat/Long: 33.5547/-116.6997	Logged By: S. Doyle/J. Minor	Project No.: 644-19036

APPENDIX B

LABORATORY TESTING

Sladden Engineering
450 Egan Avenue, Beaumont CA 92223 (951) 845-7743 Fax (951) 845-8863

Maximum Density/Optimum Moisture

ASTM D698/D1557

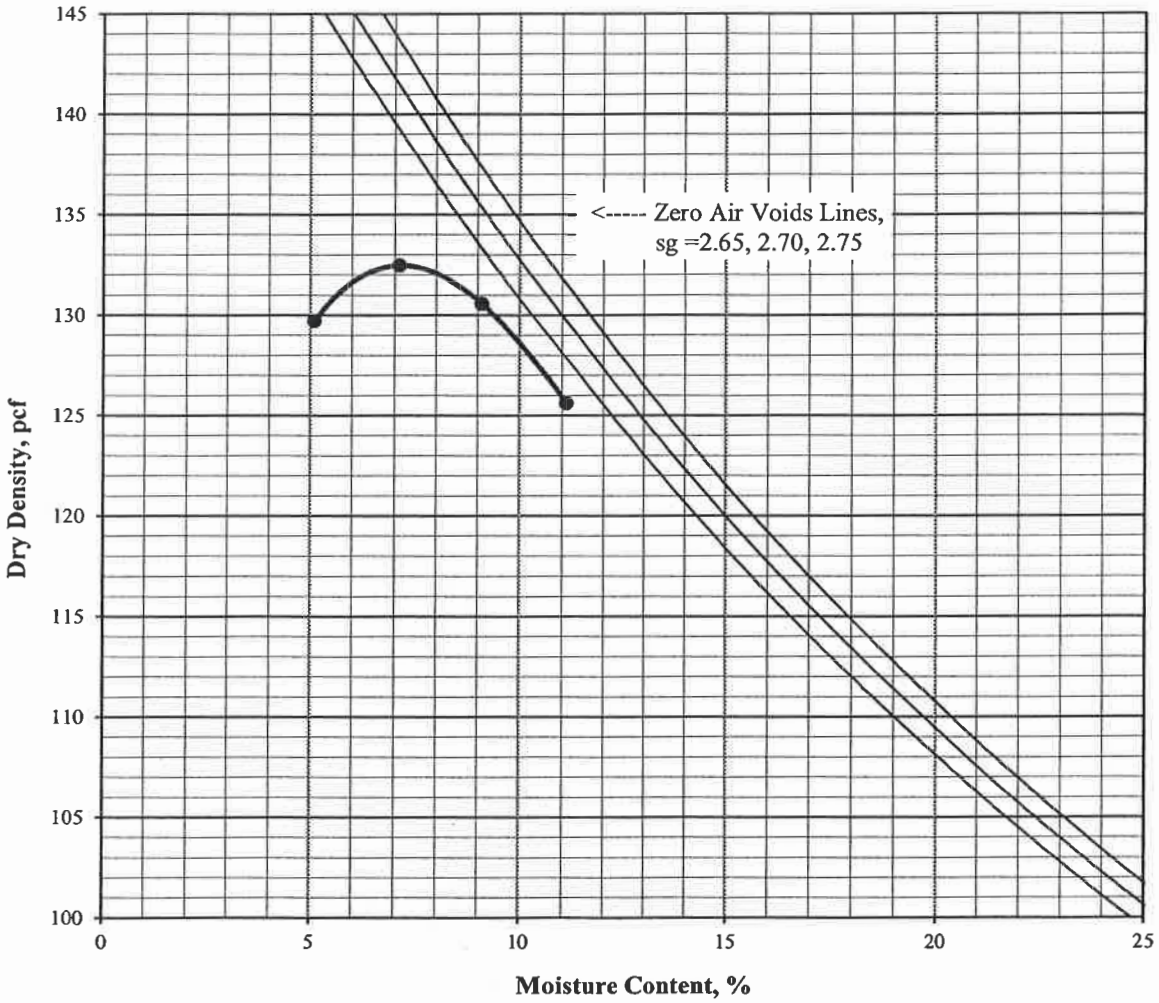
Project Number: 644-19036
Project Name: Bautista Substation
Lab ID Number: LN6-19394
Sample Location: TP-1-3; Bulk 1
Description: Dark Brown Silty Sand (SM)

August 13, 2019

ASTM D-1557 A
Rammer Type: Machine

Maximum Density: 132.5 pcf
Optimum Moisture: 7.5%

Sieve Size	% Retained
3/4"	
3/8"	
#4	0.2



Sladden Engineering
450 Egan Avenue, Beaumont, CA 92223 (951) 845-7743 Fax (951) 845-8863

Expansion Index

ASTM D 4829

Job Number: 644-19036
Job Name: Bautista Substation
Lab ID Number: LN6-19394
Sample ID: TP-1-3; Bulk 1
Soil Description: Dark Brown Silty Sand (SM)

August 13, 2019

Wt of Soil + Ring:	600.1
Weight of Ring:	192.0
Wt of Wet Soil:	408.1
Percent Moisture:	6.9%
Sample Height, in	0.95
Wet Density, pcf:	130.2
Dry Denstiy, pcf:	121.8

% Saturation:	48.6

Expansion **Rack # 2**

Date/Time	8/7/2019	3:25 PM
Initial Reading	0.0000	
Final Reading	0.0098	

Expansion Index **10**

(Final - Initial) x 1000

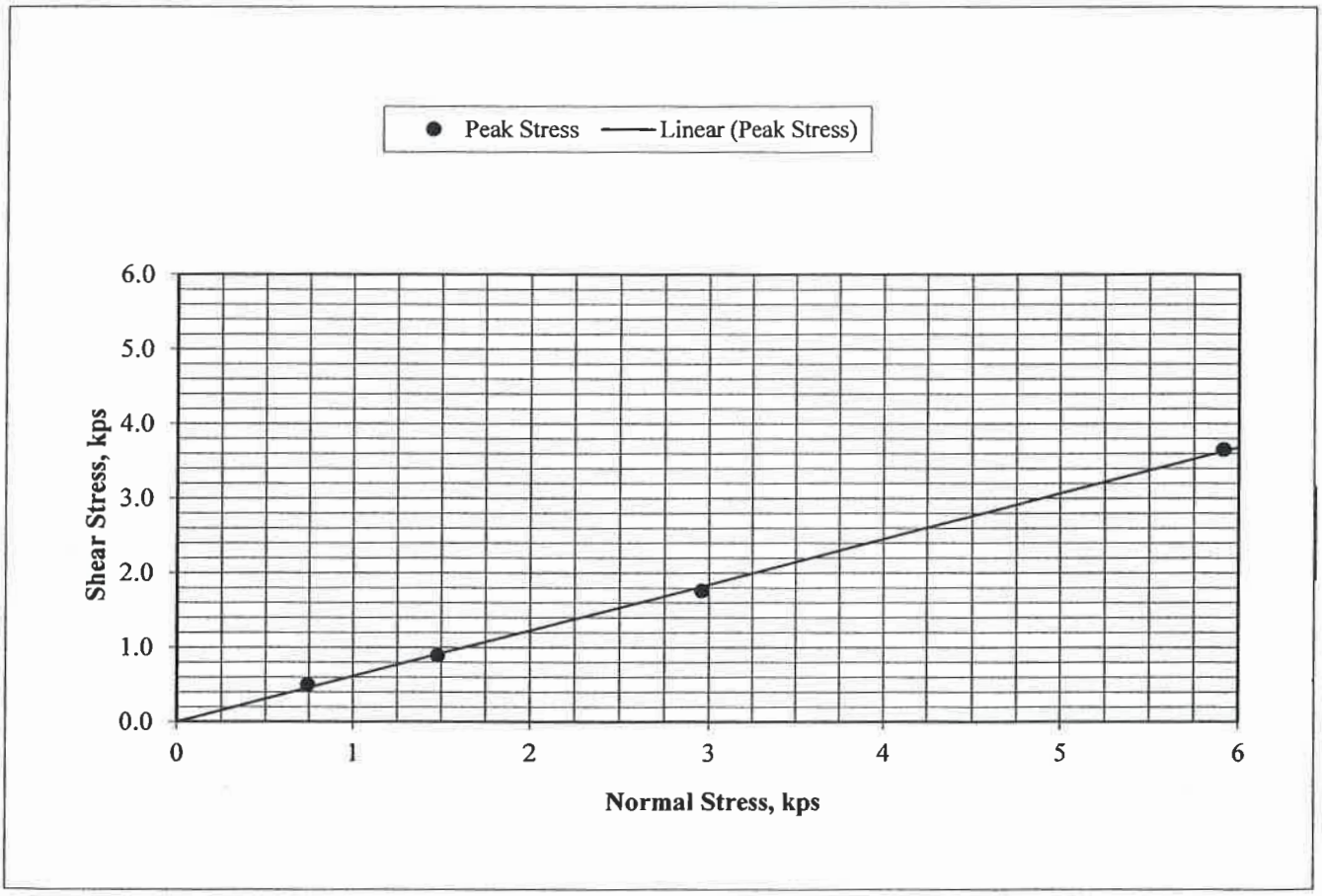
Sladden Engineering

450 Egan Avenue, Beaumont, CA 92223 (951) 845-7743 Fax (951) 845-8863

Direct Shear ASTM D 3080-04
(modified for unconsolidated condition)

Job Number:	644-19036		August 13, 2019
Job Name	Bautista Substation	Initial Dry Density:	119.4 pcf
Lab ID No.	LN6-19394	Initial Mosture Content:	7.5 %
Sample ID	TP-1-3; Bulk 1	Peak Friction Angle (Ø):	32°
Classification	Dark Brown Silty Sand (SM)	Cohesion (c):	0 psf
Sample Type	Remolded @ 90% of Maximum Density		

Test Results	1	2	3	4	Average
Moisture Content, %	13.8	13.8	13.8	13.8	13.8
Saturation, %	90.4	90.4	90.4	90.4	90.4
Normal Stress, kps	0.739	1.479	2.958	5.916	
Peak Stress, kps	0.500	0.892	1.762	3.654	



Job Number:	644-19036
Job Name:	Bautista Substation
Date:	8/13/2019

Moisture Adjustment		Remolded Shear Weight	
Wt of Soil:	1,000	Max Dry Density:	132.5
Moist As Is:	2.9	Optimum Moisture:	7.5
Moist Wanted:	7.5		
ml of Water to Add:	44.7	Wt Soil per Ring, g:	154.2

UBC

Sladden Engineering
450 Egan Avenue, Beaumont, CA 92223 (951) 845-7743 Fax (951) 845-8863

Gradation

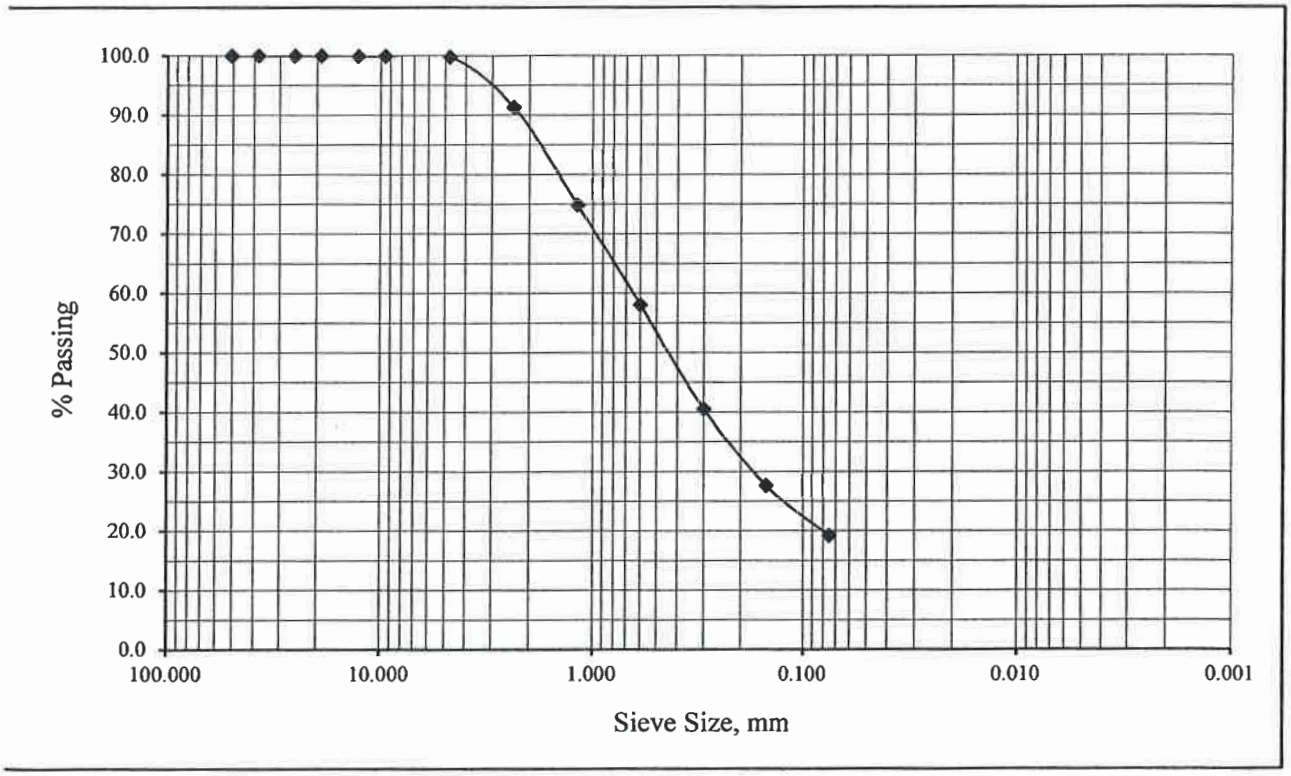
ASTM C117 & C136

Project Number: 644-19036
Project Name: Bautista Substation
Lab ID Number: LN6-19394
Sample ID: TP-1-3; Bulk 1

August 13, 2019

Soil Classification: SM

Sieve Size, in	Sieve Size, mm	Percent Passing
2"	50.8	100.0
1 1/2"	38.1	100.0
1"	25.4	100.0
3/4"	19.1	100.0
1/2"	12.7	100.0
3/8"	9.53	99.9
#4	4.75	99.8
#8	2.36	91.3
#16	1.18	74.9
#30	0.60	58.1
#50	0.30	40.5
#100	0.15	27.6
#200	0.075	19.2



Sladden Engineering

6782 Stanton Ave., Suite A, Buena Park, CA 90621 (714) 523-0952 Fax (714) 523-1369
45090 Golf Center Pkwy, Suite F, Indio CA 92201 (760) 863-0713 Fax (760) 863-0847
450 Egan Avenue, Beaumont, CA 92223 (951) 845-7743 Fax (951) 845-8863

Date: August 13, 2019

Account No.: 644-19036

Customer: Anza Electric Cooperative, Inc.

Location: APNs 575-060-024, 025, SEC Cave Rock Road & Bautista Road, Anza Area

Analytical Report

Corrosion Series

	pH per CA 643	Soluble Sulfates per CA 417 ppm	Soluble Chloride per CA 422 ppm	Min. Resistivity per CA 643 ohm-cm
TP-1-3	7.7	240	50	6100

APPENDIX C

SEISMIC DESIGN REPORT
DEAGGREGATION OUTPUT

OSHPD

Bautista Substation

Latitude, Longitude: 33.554734, -116.700301

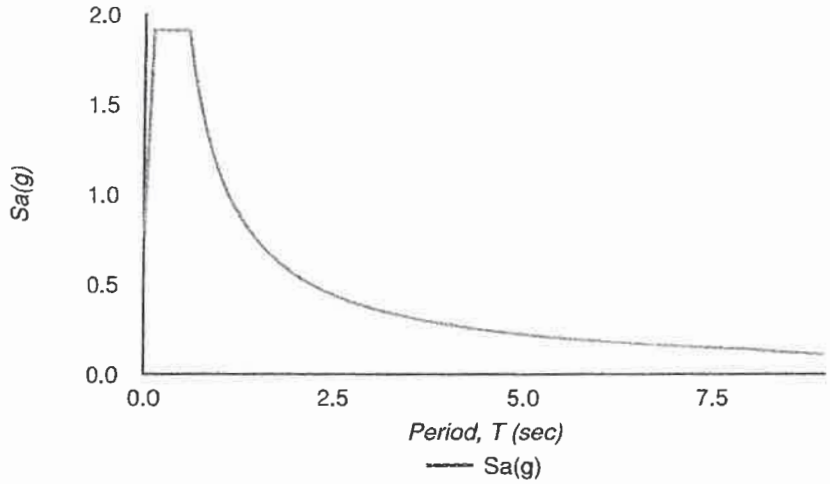
Date	9/17/2019, 3:24:09 PM
Design Code Reference Document	ASCE7-10
Risk Category	II
Site Class	C - Very Dense Soil and Soft Rock

Type	Value	Description
S_S	1.912	MCE_R ground motion. (for 0.2 second period)
S_1	0.849	MCE_R ground motion. (for 1.0s period)
S_{MS}	1.912	Site-modified spectral acceleration value
S_{M1}	1.104	Site-modified spectral acceleration value
S_{DS}	1.275	Numeric seismic design value at 0.2 second SA
S_{D1}	0.736	Numeric seismic design value at 1.0 second SA

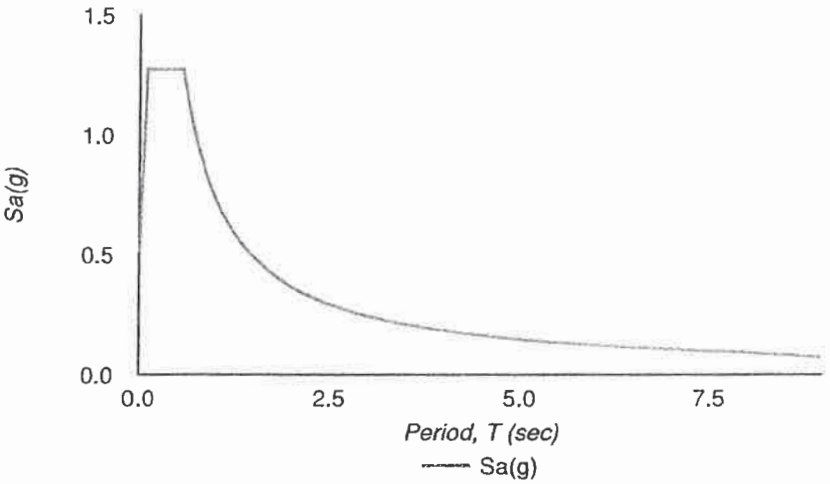
Type	Value	Description
SDC	E	Seismic design category
F_a	1	Site amplification factor at 0.2 second
F_v	1.3	Site amplification factor at 1.0 second
PGA	0.745	MCE_G peak ground acceleration
F_{PGA}	1	Site amplification factor at PGA
PGA_M	0.745	Site modified peak ground acceleration
T_L	8	Long-period transition period in seconds
SsRT	2.439	Probabilistic risk-targeted ground motion. (0.2 second)
SsUH	2.568	Factored uniform-hazard (2% probability of exceedance in 50 years) spectral acceleration
SsD	1.912	Factored deterministic acceleration value. (0.2 second)
S1RT	1.007	Probabilistic risk-targeted ground motion. (1.0 second)
S1UH	1.101	Factored uniform-hazard (2% probability of exceedance in 50 years) spectral acceleration.
S1D	0.849	Factored deterministic acceleration value. (1.0 second)
PGAd	0.745	Factored deterministic acceleration value. (Peak Ground Acceleration)
C_{RS}	0.95	Mapped value of the risk coefficient at short periods

Type	Value	Description
C_{R1}	0.915	Mapped value of the risk coefficient at a period of 1 s

MCER Response Spectrum



Design Response Spectrum



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U.S. Geological Survey - Earthquake Hazards Program

Unified Hazard Tool

Please do not use this tool to obtain ground motion parameter values for the design code reference documents covered by the U.S. Seismic Design Maps web tools (e.g., the International Building Code and the ASCE 7 or 41 Standard). The values returned by the two applications are not identical.

^ Input

Edition

Dynamic: Conterminous U.S. 2014 ...

Spectral Period

Peak Ground Acceleration

Latitude

Decimal degrees

33.554734

Time Horizon

Return period in years

475

Longitude

Decimal degrees, negative values for western longitudes

-116.700301

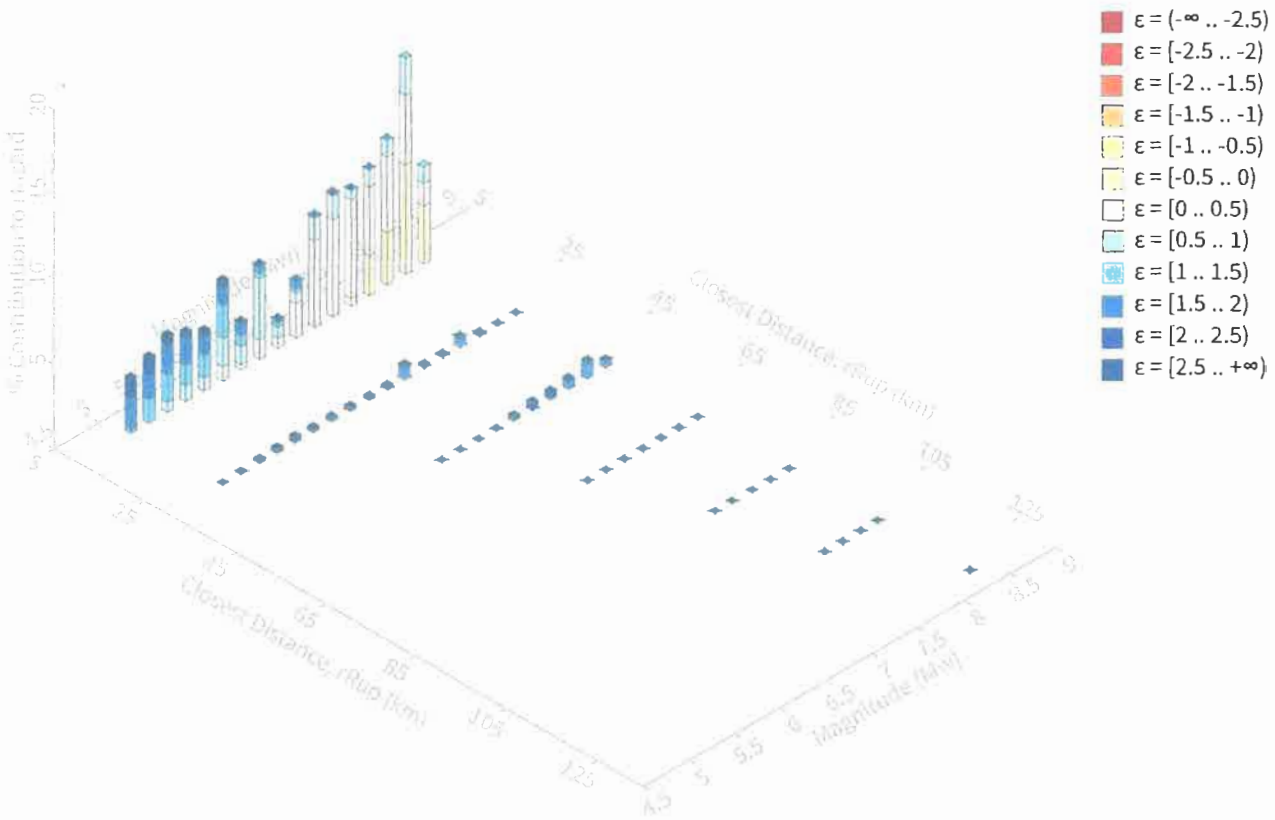
Site Class

360 m/s (C/D boundary)

Deaggregation

Component

Total



Summary statistics for, Deaggregation: Total

Deaggregation targets

Return period: 475 yrs
Exceedance rate: 0.0021052632 yr^{-1}
PGA ground motion: 0.54387778 g

Recovered targets

Return period: 498.0231 yrs
Exceedance rate: 0.002007939 yr^{-1}

Totals

Binned: 100 %
Residual: 0 %
Trace: 0.13 %

Mean (over all sources)

m: 7.03
r: 8.48 km
ε_0: 0.71 σ

Mode (largest m-r bin)

m: 8.1
r: 4.69 km
ε_0: 0.09 σ
Contribution: 12.79 %

Mode (largest m-r-ε_0 bin)

m: 8.11
r: 4.61 km
ε_0: -0.09 σ
Contribution: 6.45 %

Discretization

r: min = 0.0, max = 1000.0, Δ = 20.0 km
m: min = 4.4, max = 9.4, Δ = 0.2
ε: min = -3.0, max = 3.0, Δ = 0.5 σ

Epsilon keys

ε0: [-∞ .. -2.5)
ε1: [-2.5 .. -2.0)
ε2: [-2.0 .. -1.5)
ε3: [-1.5 .. -1.0)
ε4: [-1.0 .. -0.5)
ε5: [-0.5 .. 0.0)
ε6: [0.0 .. 0.5)
ε7: [0.5 .. 1.0)
ε8: [1.0 .. 1.5)
ε9: [1.5 .. 2.0)
ε10: [2.0 .. 2.5)
ε11: [2.5 .. +∞]

Deaggregation Contributors

Source Set ↳ Source	Type	r	m	ϵ_0	lon	lat	az	%
UC33brAvg_FM31	System							34.05
San Jacinto (Anza) rev [3]		4.61	7.63	0.19	116.671°W	33.588°N	36.02	29.90
San Andreas (San Gorgonio Pass-Garnet Hill) [4]		41.17	7.92	1.88	116.538°W	33.899°N	21.40	1.05
UC33brAvg_FM32	System							33.71
San Jacinto (Anza) rev [3]		4.61	7.63	0.19	116.671°W	33.588°N	36.02	29.76
San Andreas (San Gorgonio Pass-Garnet Hill) [4]		41.17	7.92	1.88	116.538°W	33.899°N	21.40	1.05
UC33brAvg_FM31 (opt)	Grid							16.12
PointSourceFinite: -116.700, 33.604		7.48	5.64	1.15	116.700°W	33.604°N	0.00	2.23
PointSourceFinite: -116.700, 33.604		7.48	5.64	1.15	116.700°W	33.604°N	0.00	2.23
PointSourceFinite: -116.700, 33.649		11.05	5.76	1.59	116.700°W	33.649°N	0.00	1.60
PointSourceFinite: -116.700, 33.649		11.05	5.76	1.59	116.700°W	33.649°N	0.00	1.60
PointSourceFinite: -116.700, 33.613		8.04	5.71	1.21	116.700°W	33.613°N	0.00	1.60
PointSourceFinite: -116.700, 33.613		8.04	5.71	1.21	116.700°W	33.613°N	0.00	1.60
PointSourceFinite: -116.700, 33.658		11.45	5.90	1.56	116.700°W	33.658°N	0.00	1.11
PointSourceFinite: -116.700, 33.658		11.45	5.90	1.56	116.700°W	33.658°N	0.00	1.11
UC33brAvg_FM32 (opt)	Grid							16.12
PointSourceFinite: -116.700, 33.604		7.48	5.64	1.15	116.700°W	33.604°N	0.00	2.23
PointSourceFinite: -116.700, 33.604		7.48	5.64	1.15	116.700°W	33.604°N	0.00	2.23
PointSourceFinite: -116.700, 33.649		11.05	5.76	1.59	116.700°W	33.649°N	0.00	1.60
PointSourceFinite: -116.700, 33.649		11.05	5.76	1.59	116.700°W	33.649°N	0.00	1.60
PointSourceFinite: -116.700, 33.613		8.04	5.71	1.21	116.700°W	33.613°N	0.00	1.60
PointSourceFinite: -116.700, 33.613		8.04	5.71	1.21	116.700°W	33.613°N	0.00	1.59
PointSourceFinite: -116.700, 33.658		11.45	5.90	1.56	116.700°W	33.658°N	0.00	1.11
PointSourceFinite: -116.700, 33.658		11.45	5.90	1.56	116.700°W	33.658°N	0.00	1.11

Appendix F

Water Quality Management Plan

Project Specific
Water Quality Management Plan

For: Anza Electric Bautista Sub-Station

Northeast corner of State Highway 371 and Bautista Road (APN 576-060-040)

DEVELOPMENT NO.
DESIGN REVIEW NO. PAR190017

Prepared for:

Anza Electric Cooperative, Inc.
P. O. Box 391909
Anza, CA 92539
(951) 763-4333

Prepared by:

Blaine Womer
Blaine A. Womer Civil Engineering
41555 East Florida Avenue, Suite G
Hemet, CA 92544
(951) 658-1727

WQMP Preparation/Revision Date: January 23, 2020

OWNER'S CERTIFICATION

This project-specific Water Quality Management Plan (WQMP) has been prepared for:

Anza Electric Cooperative, Inc.

by Blaine A. Womer Civil Engineering for the project known as **Anza Electric Bautista Sub-Station** near the **northeast corner of State Highway 371 and Bautista Road**.

This WQMP is intended to comply with the requirements of County of Riverside for **Anza Electric Bautista Sub-Station**, which includes the requirement for the preparation and implementation of a project-specific WQMP.

The undersigned, while owning the property/project described in the preceding paragraph, shall be responsible for the implementation of this WQMP and will ensure that this WQMP is amended as appropriate to reflect up-to-date conditions on the site. This WQMP will be reviewed with the facility operator, facility supervisors, employees, tenants, maintenance and service contractors, or any other party (or parties) having responsibility for implementing portions of this WQMP. At least one copy of this WQMP will be maintained at the project site or project office in perpetuity.

The undersigned is authorized to certify and to approve implementation of this WQMP. The undersigned is aware that implementation of this WQMP is enforceable under Riverside County Water Quality Ordinance (Municipal Code Section 13.12.01).

If the undersigned transfers its interest in the subject property/project, its successor in interest the undersigned shall notify the successor in interest of its responsibility to implement this WQMP.

"I, the undersigned, certify under penalty of law that the provisions of this WQMP have been reviewed and accepted and that the WQMP will be transferred to future successors in interest."

PENDING APPROVAL

Owner's Signature	Date
Owner's Printed Name	Owner's Title/Position

P. O. Box 391909
Anza, CA 92539
(951) 763-4333

Contents

I. Project Description

Instructions:

The project description shall be completely and accurately described in narrative form. In the field provided on page A-3, describe and with supporting figures (maps or exhibits), where facilities will be located, what activities will be conducted and where, what kinds of materials will be used and/or stored, how and where materials will be delivered, and the types of wastes that will be generated. The following information shall be described and/or addressed in the "Project Description" section of the project-specific WQMP:

- Project owner and WQMP preparer;
- Project location;
- Project size;
- Standard Industrial Classification (SIC), if applicable;
- Location of facilities;
- Activities and location of activities;
- Materials Storage and Delivery Areas;
- Wastes generated by project activities.

Project Owner: Anza Electric Cooperative, Inc.
P. O. Box 391909
Anza, CA 92539
(951) 763-4333

WQMP Preparer: Blaine Womer, President
Blaine A. Womer Civil Engineering
41555 East Florida Avenue, Suite G
Hemet, CA 92544
(951) 658-1727

Project Site Address:	No Address Located 383 feet North of the intersection of State Highway 371 and Bautista Road, east side of Bautista Road
Planning Area/ Community Name/ Development Name:	Anza Anza Anza Electric Bautista Sub-Station
APN Number(s):	576-060-040
Thomas Bros. Map:	Page 904, Grid F-4
Project Watershed:	Santa Margarita
Sub-watershed:	Anza HSA
Project Site Size:	2.28 Acres

Standard Industrial Classification (SIC) Code: 4931

Formation of Home Owners' Association (HOA) or Property Owners Association (POA):

Y ☐ N ☒

Additional Permits/Approvals required for the Project

AGENCY	Permit required
State Department of Fish and Game, 1601 Streambed Alteration Agreement	Y ☐ N ☒
State Water Resources Control Board, Clean Water Act (CWA) section 401 Water Quality Certification	Y ☐ N ☒
US Army Corps of Engineers, CWA section 404 permit	Y ☐ N ☒
US Fish and Wildlife, Endangered Species Act section 7 biological opinion	Y ☐ N ☒
Other *(please list in the space below as required)*	

The Anza Electric Bautista Sub-Station Project Description:

The proposed project, subject to the WQMP, is part of an approximately 13 mile transmission line upgrade for the Anza Electric Cooperative. The project is an electric sub-station consisting of a pre-manufactured equipment room and electrical distribution facilities. These improvements are shown on the WQMP Site Plan. The property contains 2.28 acre and is located on the east side of Bautista Road, approximately 383 feet north of the centerline of State Highway 371. The only impervious surface proposed on the site are the drive approaches. The balance of the improved area is 4-inch crushed rock.

Appendix A of this project-specific WQMP includes a complete copy of the final Conditions of Approval. Appendix B of this project-specific WQMP shall include:

1. A Vicinity Map identifying the project site and surrounding planning areas in sufficient detail to allow the project site to be plotted on Co-Permittee base mapping; and
2. A Site Plan for the project. The Site Plan included as part of Appendix B depicts the following project features:
    - Location and identification of all structural BMPs, including Treatment Control BMPs.
    - Landscaped areas.
    - Paved areas and intended uses (i.e., parking, outdoor work area, outdoor material storage area, sidewalks, patios, tennis courts, etc.).
    - Number and type of structures and intended uses (i.e., buildings, tenant spaces, dwelling units, community facilities such as pools, recreation facilities, tot lots, etc.).
    - Infrastructure (i.e., streets, storm drains, etc.) that will revert to public agency ownership and operation.
    - Location of existing and proposed public and private storm drainage facilities (i.e., storm drains, channels, basins, etc.), including catch basins and other inlets/outlet structures. Existing and proposed drainage facilities should be clearly differentiated.
    - Location(s) of Receiving Waters to which the project directly or indirectly discharges.
    - Location of points where onsite (or tributary offsite) flows exit the property/project site.
    - Proposed drainage areas boundaries, including tributary offsite areas, for each location where flows exits the property/project site. Each tributary area should be clearly denoted.
    - Pre- and post-project topography.

Appendix G of this project-specific WQMP shall include copies of CC&Rs, Covenant and Agreements, and/or other mechanisms used to ensure the ongoing operation, maintenance, funding, transfer and implementation of the project-specific WQMP requirements.

II. Site Characterization

Land Use Designation or Zoning: Land Use, CR; Zoning, C-1/C-P

Current Property Use: Vacant

Proposed Property Use: Electric Sub-Station

Availability of Soils Report: Y ☒ N ☐ *Note: A soils report is required if infiltration BMPs are utilized. Attach report in Appendix E.*

Phase 1 Site Assessment: Y ☐ N ☒ *Note: If prepared, attached remediation summary and use restrictions in Appendix H.*

Receiving Waters for Urban Runoff from Site

Instructions:

On the following page, list in order of upstream to downstream, the receiving waters that the project is tributary to. Continue to fill each row with the receiving water's 303(d) listed impairments, designated beneficial uses, and proximity, if any, to a RARE beneficial use.

Receiving Waters for Urban Runoff from Site

Receiving Waters	303(d) List Impairments	Designated Beneficial Uses	Proximity to RARE Beneficial Use
Cahuilla Creek Hydrologic Unit Numbers 2.71, 2.72, 2.73	NA, Metals, Nutrients, Turbidity	MUN, AGR, IND, PROC, GWR, REC1, REC2, WARM, WILD	Not Designated as Rare
Wilson Creek Hydrologic Unit Number 2.81	NA, Metals, Nutrients, Turbidity	MUN, AGR, IND, PROC, GWR, REC1, REC2, WARM, COLD, WILD	Not Designated as Rare
Vail Lake Hydrologic Unit Number 2.81	NA, Metals, Nutrients, Turbidity	MUN, AGR, IND, PROC, GWR, REC1, REC2, WARM, WILD	Not Designated as Rare
Temecula Creek Hydrologic Unit Numbers 2.81, 2.51, 2.52	Nitrogen, Phosphorus, Total Dissolved Solids	MUN, AGR, IND, PROC, GWR, REC1, REC2, WARM, WILD	Not Designated as Rare
Santa Margarita River 2.21	Phosphorus, Metals, Nutrients, Turbidity	MUN, AGR, IND, REC1, REC2, WARM, COLD, WILD, RARE	34 Miles
Santa Margarita Lagoon 2.11	Eutrophic, Metals, Nutrients, Turbidity	MUN, AGR, IND, REC1, REC2, WARM, COLD, WILD, RARE	28 Acres

III. Pollutants of Concern

Potential pollutants associated with Urban Runoff from the proposed project must be identified. Exhibit B of the WQMP provides brief descriptions of typical pollutants associated with Urban Runoff and a table that associates typical potential pollutants with types of development (land use). It should be noted that at the Co-Permittees discretion, the Co-Permittees may also accept updated studies from the California Association of Stormwater Quality Agencies (CASQA), USEPA, SWRCB and/or other commonly accepted agencies/associations acceptable to the Co-Permittee for determination of Pollutants of Concern associated with given land use. Additionally, in identifying Pollutants of Concern, the presence of legacy pesticides, nutrients, or hazardous substances in the site's soils as a result of past uses and their potential for exposure to Urban Runoff must be addressed in project-specific WQMPs. The Co-Permittee may also require specific pollutants commonly associated with urban runoff to be addressed based on known problems in the watershed. The list of potential Urban Runoff pollutants identified for the project must be compared with the pollutants identified as causing an impairment of Receiving Waters, if any. To identify pollutants impairing proximate Receiving Waters, each project proponent preparing a project-specific WQMP shall, at a minimum, do the following:

1. For each of the proposed project discharge points, identify the proximate Receiving Water for each discharge point, using hydrologic unit basin numbers as identified in the most recent version of the Water Quality Control Plan for the Santa Ana River Basin or the San Diego Region.
2. Identify each proximate identified above that is listed on the most recent list of Clean Water Act Section 303(d) list of impaired water bodies, which can be found at website www.swrcb.ca.gov/tmdl/303d_lists.html. List all pollutants for which the proximate Receiving Waters are impaired.
3. Compare the list of pollutants for which the proximate Receiving Waters are impaired with the pollutants expected to be generated by the project.

Urban Runoff Pollutants:

Type of Development	Sediment/ Turbidity	Nutrients	Organic Compounds	Trash & Debris	Oxygen Demanding Substances	Bacteria & Viruses	Oil & Grease	Pesticides	Metals
Detached Residential Development	P	P	N	P	P	P	P	P	N
Attached Residential Development	P	P	N	P	P(1)	P	P(2)	P	N
Commercial/Industrial Development	P(1)	P(1)	P(5)	P	P(1)	P(3)	P	P(1)	P
Automotive Repair Shops	N	N	P(4,5)	P	N	N	P	N	P
Restaurants	N	N	N	P	P	P	P	N	N
Hillside Development	P	P	N	P	P	P	P	P	N
Parking Lots	P(1)	P(1)	P(4)	P	P(1)	P(6)	P	P(1)	P
Streets, Highways & Freeways	P	P(1)	P(4)	P	P(1)	P(6)	P	P(1)	P

Abbreviations:
P=Potential N=Not Potential
Notes:
(1) A potential Pollutant if landscaping or open area exists on the Project site.
(2) A potential Pollutant if the project includes uncovered parking areas.
(3) A potential Pollutant if land use involves animal waste.
(4) Specifically, Petroleum hydrocarbons.
(5) Specifically, Solvents.
(6) Bacterial indicators are routinely detected in pavement runoff.

Pollutants	Listed for Receiving Waters	Potential Pollutants from Site	Pollutants of Concern
Sediments/Turbidity	X	X	X
Nutrients, Phosphorus	X	X	X
Organic Compounds			
Trash and Debris		X	
Oxygen Demanding Substances		X	
Bacteria and Viruses, Pathogens			
Oil and Grease		X	
Pesticides			
Metals	X	X	X

This site does not contain any or propose to contain any legacy pollutants such as PCB's, lead, mercury, etc.

IV. Hydrologic Conditions of Concern

Impacts to the hydrologic regime resulting from the Project may include increased runoff volume and velocity; reduced infiltration; increased flow frequency, duration, and peaks; faster time to reach peak flow; and water quality degradation. Under certain circumstances, changes could also result in the reduction in the amount of available sediment for transport; storm flows could fill this sediment-carrying capacity by eroding the downstream channel. These changes have the potential to permanently impact downstream channels and habitat integrity. A change to the hydrologic regime of a Project's site would be considered a hydrologic condition of concern if the change would have a significant impact on downstream erosion compared to the pre-development condition or have significant impacts on stream habitat, alone or as part of a cumulative impact from development in the watershed.

This project-specific WQMP must address the issue of Hydrologic Conditions of Concern unless one of the following conditions are met:

- **Condition A:** Runoff from the Project is discharged directly to a publicly-owned, operated and maintained MS4; the discharge is in full compliance with Co-Permittee requirements for connections and discharges to the MS4 (including both quality and quantity requirements); the discharge would not significantly impact stream habitat in proximate Receiving Waters; and the discharge is authorized by the Co-Permittee.
- **Condition B:** The project disturbs less than 1 acre. The disturbed area calculation should include all disturbances associated with larger plans of development.
- **Condition C:** The project's runoff flow rate, volume, velocity and duration for the post-development condition do not exceed the pre-development condition for the 2-year, 24-hour and 10-year 24-hour rainfall events. This condition can be achieved by minimizing impervious area on a site and incorporating other site-design concepts that mimic pre-development conditions. This condition must be substantiated by hydrologic modeling methods acceptable to the Co-Permittee.

  This Project meets the following condition: Condition 'B'

  Supporting engineering studies, calculations, and reports are included in Appendix C.

	2 year – 24 hour		10 year – 24 hour	
	Precondition	**Post-condition**	**Precondition**	**Post-condition**
Discharge (cfs)	N/A	N/A	N/A	N/A
Velocity (fps)	N/A	N/A	N/A	N/A
Volume (cubic feet)	N/A	N/A	N/A	N/A
Duration (minutes)	N/A	N/A	N/A	N/A

V. Best Management Practices

V.1 Site Design BMPs

Project proponents shall implement Site Design concepts that achieve each of the following:

1) Minimize Urban Runoff
2) Minimize Impervious Footprint
3) Conserve Natural Areas
4) Minimize Directly Connected Impervious Areas (DCIAs)

The project proponent should identify the specific BMPs implemented to achieve each Site Design concept and provide a brief explanation for those Site Design concepts considered not applicable.

Instructions:

In field below, provide narrative describing which site design concepts were incorporated into project plans. If the project proponent implements a Co-Permittee approved alternative or equally-effective Site Design BMP not specifically described below, the Site Design BMP checkbox in Table I should be marked and an additional description indicating the nature of the BMP and how it addresses the Site Design concept should be provided. Continue with completion of Table 1.

Note: *The Co-Permittees general plan or other land use regulations/documents may require several measures that are effectively site design BMPs (such as minimization of directly connected impervious areas and/or setbacks from natural stream courses). The Project Proponent should work with Co-Permittee staff to determine if those requirements may be interpreted as site design BMPs for use in this table/narrative. See Section 4.5.1 of the WQMP for additional guidance on Site Design BMPs.*

Following Table 1: if a particular Site Design BMP concept is found to be not applicable, please provide a brief explanation as to why the concept cannot be implemented. Also include descriptions explaining how each ***included*** *BMP will be implemented. In those areas where Site Design BMPs require ongoing maintenance, the inspection and maintenance frequency, the inspection criteria, and the entity or party responsible for implementation, maintenance, and/or inspection shall be described. The location of each Site Design BMP must also be shown on the WQMP Site Plan included in Appendix B.*

The proposed project only impacts 0.9 acres of the 2.28 gross acres. The balance is left natural consisting largely of sage brush. Impervious areas have been minimized through the design of a crushed rock surface for the sub-station equipment. The minimal runoff that will discharge from the crushed rock surface will be intercepted by a concrete v-ditch at the east end of the project, and discharged to the natural area east of the project footprint.

Table 1. Site Design BMPs

Design Concept	Technique	Specific BMP	Included: Yes	Included: No	Included: N/A
Site Design Concept 1	*Minimize Urban Runoff*	Maximize the permeable area (See Section 4.5.1 of the WQMP).	☒	☐	☐
		Incorporate landscaped buffer areas between sidewalks and streets.	☐	☐	☒
		Maximize canopy interception and water conservation by preserving existing native trees and shrubs, and planting additional native or drought tolerant trees and large shrubs.	☒	☐	☐
		Use natural drainage systems.	☒	☐	☐
		Where soils conditions are suitable, use perforated pipe or gravel filtration pits for low flow infiltration.	☐	☐	☒
		Construct onsite ponding areas or retention facilities to increase opportunities for infiltration consistent with vector control objectives.	☐	☐	☒
		Other comparable and equally effective site design concepts as approved by the Co-Permittee (Note: Additional narrative required to describe BMP and how it addresses Site Design concept).	☒	☐	☐

1. No sidewalks proposed.
2. No need due to crushed rock surface.
3. No need due to crushed rock surface.
4. Other comparable and equally effective site design concepts: crushed rock pavement surface for sub-station project footprint.

Table 1. Site Design BMPs (Cont.)

Design Concept	Technique	Specific BMP	Included: Yes	Included: No	Included: N/A
Site Design Concept 2	Minimize Impervious Footprint	Maximize the permeable area (See Section 4.5.1 of the WQMP).	☒	☐	☐
		Construct walkways, trails, patios, overflow parking lots, alleys, driveways, low-traffic streets and other low -traffic areas with open-jointed paving materials or permeable surfaces, such as pervious concrete, porous asphalt, unit pavers, and granular materials.	☐	☐	☒
		Construct streets, sidewalks and parking lot aisles to the minimum widths necessary, provided that public safety and a walk able environment for pedestrians are not compromised.	☐	☐	☒
		Reduce widths of street where off-street parking is available.	☐	☐	☒
		Minimize the use of impervious surfaces, such as decorative concrete, in the landscape design.	☒	☐	☐
Site Design Concept 3	Conserve Natural Areas	Other comparable and equally effective site design concepts as approved by the Co-Permittee (Note: Additional narrative required describing BMP and how it addresses Site Design concept).	☐	☐	☒
		Conserve natural areas (See WQMP Section 4.5.1).	☒	☐	☐
		Maximize canopy interception and water conservation by preserving existing native trees and shrubs, and planting additional native or drought tolerant trees and large shrubs.	☒	☐	☐
		Use natural drainage systems.	☒	☐	☐
		Other comparable and equally effective site design concepts as approved by the Co-Permittee (Note: Additional narrative required describing BMP and how it addresses Site Design concept).	☐	☐	☒

1. No walkways, trails, etc.
2. No proposed streets/sidewalks.
3. No proposed streets.
4. No other comparable site design concepts required.
5. No other comparable site design concepts required.

Table 1. Site Design BMPs (Cont.)

Design Concept	Technique	Specific BMP	Included: Yes	Included: No	Included: N/A
Site Design Concept 4	Minimize Directly Connected Impervious Areas (DCIAs)	Residential and commercial sites must be designed to contain and infiltrate roof runoff, or direct roof runoff to vegetative swales or buffer areas, where feasible.	☐	☐	☒
		Where landscaping is proposed, drain impervious sidewalks, walkways, trails, and patios into adjacent landscaping.	☐	☐	☒
		Increase the use of vegetated drainage swales in lieu of underground piping or imperviously lined swales.	☐	☐	☒
		Rural swale system: street sheet flows to vegetated swale or gravel shoulder, curbs at street corners, culverts under driveways and street crossings.	☐	☐	☒
		Urban curb/swale system: street slopes to curb; periodic swale inlets drain to vegetated swale/biofilter.	☐	☐	☒
		Dual drainage system: First flush captured in street catch basins and discharged to adjacent vegetated swale or gravel shoulder, high flows connect directly to MS4s.	☐	☐	☒
		Design driveways with shared access, flared (single lane at street) or wheel strips (paving only under tires); or, drain into landscaping prior to discharging to the MS4.	☐	☐	☒
		Uncovered temporary or guest parking on private residential lots may be paved with a permeable surface, or designed to drain into landscaping prior to discharging to the MS4.	☐	☐	☒
		Where landscaping is proposed in parking areas, incorporate landscape areas into the drainage design.	☐	☐	☒
		Overflow parking (parking stalls provided in excess of the Co-Permittee's minimum parking requirements) may be constructed with permeable paving.	☐	☐	☒
		Other comparable and equally effective design concepts as approved by the Co-Permittee (Note: Additional narrative required describing BMP and how it addresses Site Design concept).	☐	☐	☒

None of the design concepts above are applicable to the sub-station project.

Project Site Design BMPs:

Education materials shall be provided to the owner and operators.

1. Maintenance of the crushed rock surface and drainage infrastructure shall be performed on a regular basis to assure operation as designed.

2. Natural areas outside of the project footprint shall remain undisturbed throughout construction and operation.

V.2 Source Control BMPs

Instructions: *Complete Table 2.*

Table 2. Source Control BMPs

BMP Name	Check One		If not applicable, state brief reason
	Included	Not Applicable	
Non-Structural Source Control BMPs			
Education for Property Owners, Operators, Tenants, Occupants, or Employees	☒	☐	
Activity Restrictions	☐	☒	AEC operation only
Irrigation System and Landscape Maintenance	☐	☒	No proposed landscape
Common Area Litter Control	☐	☒	No common area
Street Sweeping Private Streets and Parking Lots	☐	☒	No proposed streets
Drainage Facility Inspection and Maintenance	☒	☐	
Structural Source Control BMPs			
MS4 Stenciling and Signage	☐	☒	No MS4 facility
Landscape and Irrigation System Design	☐	☒	No proposed landscape
Protect Slopes and Channels	☒	☐	
Provide Community Car Wash Racks	☐	☒	None proposed
Properly Design:	☐	☐	
Fueling Areas	☐	☒	No fueling area
Air/Water Supply Area Drainage	☐	☒	No air/water supply
Trash Storage Areas	☐	☒	No trash storage
Loading Docks	☐	☒	No loading docks
Maintenance Bays	☐	☒	No maintenance bays
Vehicle and Equipment Wash Areas	☐	☒	No wash areas
Outdoor Material Storage Areas	☐	☒	No storage areas
Outdoor Work Areas or Processing Areas	☐	☒	No work or processing areas
Provide Wash Water Controls for Food Preparation Areas	☐	☒	No food prep areas

Instructions: *Provide narrative below describing how each* ***included*** *BMP will be implemented, the implementation frequency, inspection and maintenance frequency, inspection criteria, and the entity or party responsible for implementation, maintenance, and/or inspection. The location of each structural BMP must also be shown on the WQMP Site Plan included in Appendix B.*

1. Education materials shall be provided to the owner and operators.
2. V-ditch and drain pipe shall be inspected and maintained on a regular basis and prior to a rain event.
3. Maintain slopes and inspect regularly for erosion.

Appendix D includes copies of the educational materials that will be used in implementing this project-specific WQMP.

V.3 TREATMENT CONTROL BMPS

Instructions:

1. *Provide narrative below describing each Treatment Control BMP. Include location, identify the sizing criteria [i.e., Urban Runoff quality design flow (QBMP) or the Urban Runoff quality design volume (VBMP), preliminary design calculations, for sizing BMPs, maintenance procedures, and the frequency of maintenance procedures necessary to sustain BMP effectiveness. The location of each Treatment Control BMP must also be shown on the Site Plan included in Appendix B.*
2. *Complete Table 3: Treatment Control BMP Selection Matrix*

   Directions for completing Table 3:

   - *For each pollutant of concern enter "yes" if identified using Exhibit B (Riverside County WQMP - General Categories of Pollutants of Concern per the instructions specified in Section III of this Template), or "no" if not identified for the project.*
   - *Check the boxes of selected BMPs that will be implemented for the project to address each pollutant of concern from the project as identified using Exhibit B. Treatment Control BMPs must be selected and installed with respect to identified pollutant characteristics and concentrations that will be discharged from the site.*
   - *For any identified pollutants of concern not listed in the Treatment Control BMP Selection Matrix, provide an explanation (in space below) of how they will be addressed by Treatment Control BMPs.*
3. *In addition to completing Table 3, provide detailed descriptions on the location, implementation, installation, and long-term O&M of planned Treatment* Control BMPs.

For identified pollutants of concern that are ***causing an impairment in receiving waters****, the project WQMP shall incorporate one or more Treatment Control BMPs of medium or high effectiveness in reducing those pollutants. It is the responsibility of the project proponent to demonstrate, and document in the project WQMP, that all pollutants of concern will be fully addressed. The Agency may require information beyond the minimum requirements of this WQMP to demonstrate that adequate pollutant treatment is being accomplished.*

Supporting engineering calculations for Q_{BMP} and/or V_{BMP}, and Treatment Control BMP design details are included in Appendix F.

Note*: Projects that will utilize infiltration-based Treatment Control BMPs (e.g., Infiltration Basins, Infiltration Trenches, Porous Pavement) must include a copy of the property/project soils report as Appendix E to the project-specific WQMP. The selection of a Treatment Control BMP (or BMPs) for the project must specifically consider the effectiveness of the Treatment Control BMP for pollutants identified as causing an impairment of Receiving Waters to which the project will discharge Urban Runoff.*

None proposed.

Table 3: Treatment Control BMP Selection Matrix [1]

Pollutant of Concern	Treatment Control BMP Categories[2]							
	Veg. Swale & Veg. Filter Strips[3]	Detention Basins[4]	Infiltration Basins, Infiltration Trenches, & Porous Pavement[5]	Wet Ponds or Wetlands[6]	Sand Filter or Media Filters	Water Quality Inlets	Hydrodynamic Separator Systems [7]	Manufactured / Proprietary Devices[8]
Sediment/Turbidity Y☐ N☐	H/M ☐	M ☐	H/M ☐	H/M ☐	H/M ☐	L ☐	H/M (L for turbidity) ☐	U ☐
Nutrients Y☐ N☐	L ☐	M ☐	H/M ☐	H/M ☐	L/M ☐	L ☐	L ☐	U ☐
Organic Compounds Y☐ N☐	U ☐	U ☐	U ☐	U ☐	H/M ☐	L ☐	L ☐	U ☐
Trash & Debris Y☐ N☐	L ☐	M ☐	U ☐	U ☐	H/M ☐	M ☐	H/M ☐	U ☐
Oxygen Demanding Substances Y☐ N☐	L ☐	M ☐	H/M ☐	H/M ☐	H/M ☐	L ☐	L ☐	U ☐
Bacteria & Viruses Y☐ N☐	U ☐	U ☐	H/M ☐	U ☐	H/M ☐	L ☐	L ☐	U ☐
Oils & Grease Y☐ N☐	H/M ☐	M ☐	U ☐	U ☐	H/M ☐	M ☐	L/M ☐	U ☐
Pesticides (non-soil bound) Y☐ N☐	U ☐	U ☐	U ☐	U ☐	U ☐	L ☐	L ☐	U ☐
Metals Y☐ N☐	H/M ☐	M ☐	H ☐	H ☐	H ☐	L ☐	L ☐	U ☐

Abbreviations:

L: Low removal efficiency H/M: High or medium removal efficiency U: Unknown removal efficiency

Notes:

(1) Periodic performance assessment and updating of the guidance provided by this table may be necessary.

(2) Project applicants should base BMP designs on the Riverside County Stormwater Quality Best Management Practice Design Handbook. However, project applicants may also wish to reference the California Stormwater BMP Handbook – New Development and Redevelopment (www.cabmphandbooks.com). The Handbook contains additional information on BMP operation and maintenance.

(3) Includes grass swales, grass strips, wetland vegetation swales, and bioretention.

(4) Includes extended/dry detention basins with grass lining and extended/dry detention basins with impervious lining. Effectiveness based upon minimum 36-48-hour drawdown time.

(5) Projects that will utilize infiltration-based Treatment Control BMPs (e.g., Infiltration Basins, Infiltration Trenches, Porous Pavement, etc.) must include a copy of the property/project soils report as Appendix E to the project-specific WQMP. The selection of a Treatment Control BMP (or BMPs) for the project must specifically consider the effectiveness of the Treatment Control BMP for pollutants identified as causing an impairment of Receiving Waters to which the project will discharge Urban Runoff.

(6) Includes permanent pool wet ponds and constructed wetlands.

(7) Also known as hydrodynamic devices, baffle boxes, swirl concentrators, or cyclone separators.

(8) Includes proprietary stormwater treatment devices as listed in the CASQA Stormwater Best Management Practices Handbooks, other stormwater treatment BMPs not specifically listed in this WQMP, or newly developed/emerging stormwater treatment technologies.

V.4 Equivalent Treatment Control Alternatives

Not Applicable

V.5 Regionally-Based Treatment Control BMPs

Not Applicable

VI. Operation and Maintenance Responsibility for Treatment Control BMPs

Operation and maintenance (O&M) requirements for all structural Source Control and Treatment Control BMPs shall be identified in the project-specific WQMP. The project-specific WQMP shall address the following:

- Identification of each BMP that requires O&M.
- Thorough description of O&M activities, the O&M process, and the handling and placement of any wastes.
- BMP start-up dates.
- Schedule of the frequency of O&M for each BMP.
- Identification of the parties (name, address, and telephone number) responsible for O&M, including a written agreement with the entities responsible for O&M. This agreement can take the form of a Covenant and Agreement recorded by the Project Proponent with the County Recorder, HOA or POA CC&Rs, formation of a maintenance district or assessment district or other instrument sufficient to guarantee perpetual O&M. The preparer of this project-specific WQMP should carefully review Section 4.6 of the WQMP prior to completing this section of the project-specific WQMP.
- Self-inspections and record-keeping requirements for BMPs (review local specific requirements regarding self-inspections and/or annual reporting), including identification of responsible parties for inspection and record- keeping.
- Thorough descriptions of water quality monitoring, if required by the Co-Permittee.

Instructions: *Identify below all operations and maintenance requirements, as described above, for each structural BMP. Where a public agency is identified as the funding source and responsible party for a Treatment Control BMP, a copy of the written agreement stating the public agency's acceptance of these responsibilities must be provided in Appendix G.*

There are no treatment control BMPs proposed for the site, however, the crushed rock project surface and minor drainage facilities will be maintained by the Anza Electric Cooperative. Operation and Maintenance details will be provided in the Final WQMP.

VII. Funding

A funding source or sources for the O&M of each Treatment Control BMP identified in the project-specific WQMP must be identified. By certifying the project-specific WQMP, the Project applicant is certifying that the funding responsibilities have been addressed and will be transferred to future owners. One example of how to adhere to the requirement to transfer O&M responsibilities is to record the project-specific WQMP against the title to the property.

Funding for maintenance of the site will be provided by the Anza Electric Cooperative. Details of the funding required for maintenance will be provided in the Final WQMP.

Appendix A

Conditions of Approval

Planning Commission Resolution _____

Dated _____

Conditions of Approval not yet available

Appendix B

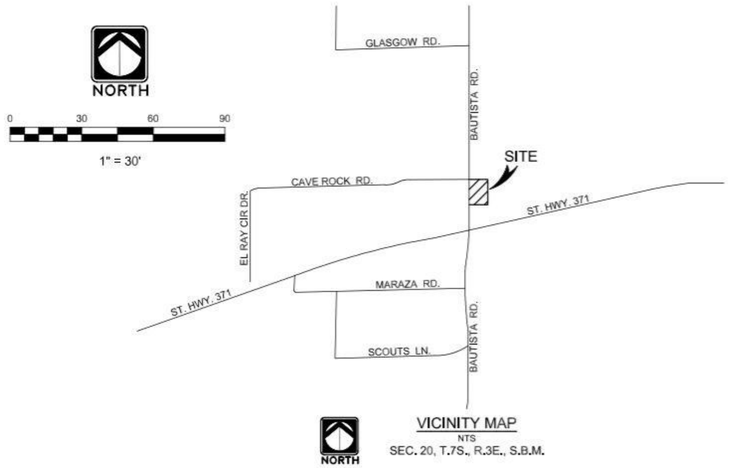
Vicinity Map, Receiving Waters Map and WQMP Site Plan

WQMP EXHIBIT A-1
VICINITY MAP

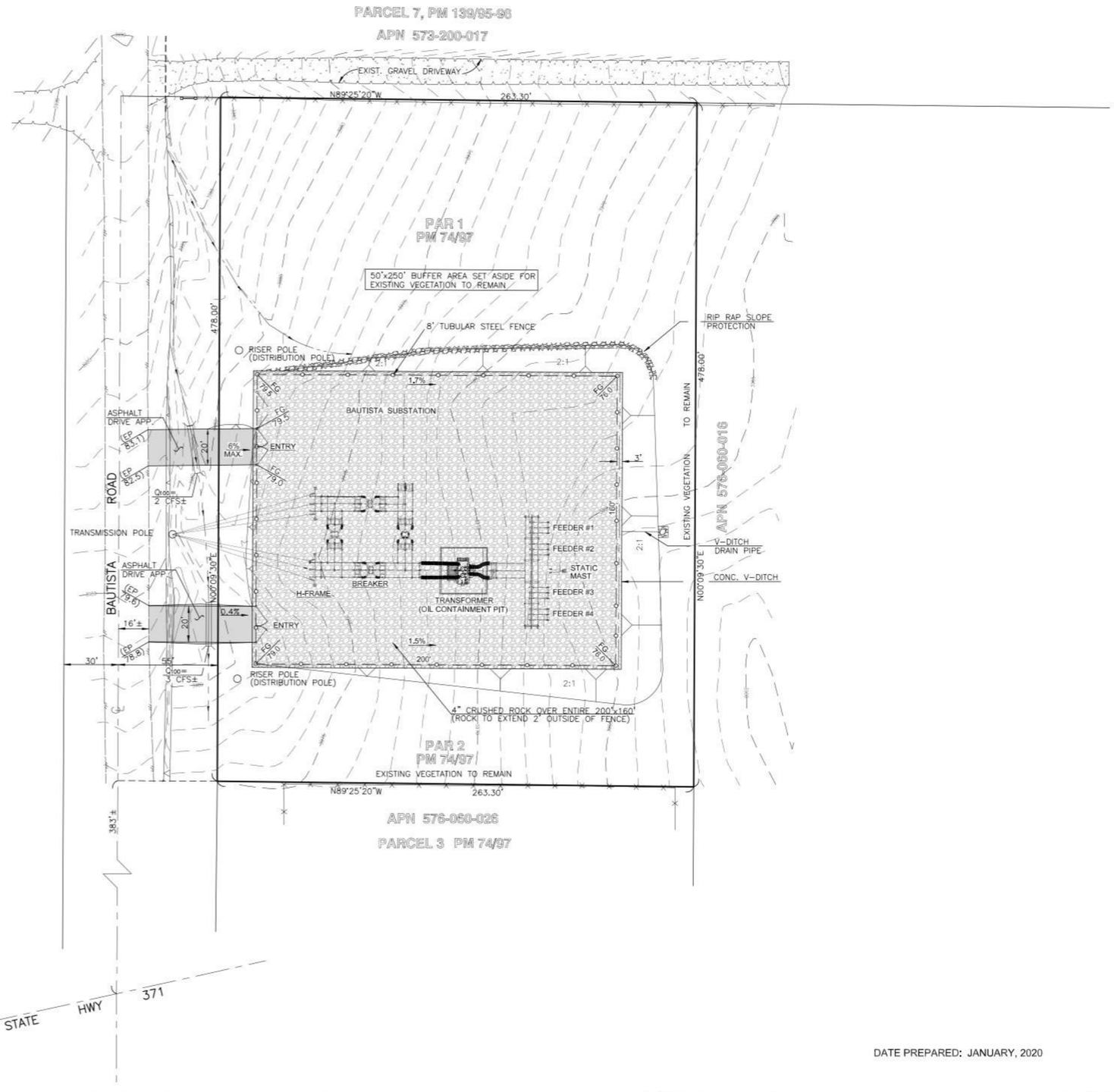
BLAINE A. WOMER
CIVIL ENGINEERING
• PLANNING
• SURVEYING
• CIVIL ENGINEERING
• PUBLIC WORKS
Homet, CA. 92544, 41555 E Florida Ave., Suite G, Phone (951)658-1727 Fax (951)658-9347
Park City, UT 84098, 3133 Deep Canyon Dr. #202, Phone/Fax (435)615-1469

NORTH


SITE
Murrieta
215
WILSON
CREEK
VAIL
LAKE
CAHUILLA
CREEK
SANTA MARGARITA
RIVER
Temecula
TEMECULA
CREEK
79
Warner Springs
SANTA MARGARITA
LAGOON
15
5
Oceanside
Vista
76



VICINITY MAP
NTS
SEC. 20, T.7S., R.3E., S.B.M.



OWNER/APPLICANT
ANZA ELECTRIC COOPERATIVE
P.O. BOX 391909
ANZA CA. 92539
(951) 763-4333

ASSESSOR'S PARCEL NOs.
576-060-040

PROJECT DESCRIPTION
ELECTRIC SUB-STATION.

DATE PREPARED: JANUARY, 2020

RECMD | COUNTY OVERSITE ENGINEER | REGISTRATION # | DATE SIGNED

APPROVED AS TO CONFORMANCE WITH APPLICABLE COUNTY STANDARDS AND PRACTICES.

DIGALERT
DIAL BEFORE YOU DIG
TOLL FREE 1-800-227-2600
TWO WORKING DAYS BEFORE YOU DIG
A PUBLIC SERVICE BY UNDERGROUND SERVICE ALERT

NOTE:
WORK CONTAINED WITHIN THESE PLANS SHALL NOT COMMENCE UNTIL AN ENCROACHMENT PERMIT AND/OR A GRADING PERMIT HAS BEEN ISSUED.

The private engineer signing these plans is responsible for assuring the accuracy and acceptability of the design hereon. In the event of discrepancies arising after county approval or during construction, the private engineer shall be responsible for determining an acceptable solution and revising the plans for approval by the county.

MARK	BY	DATE	REVISIONS	APPR.	DATE
				ENGINEER	COUNTY

SEAL-ENGINEER

BLAINE A. WOMER
CIVIL ENGINEERING
• PLANNING
• SURVEYING
• CIVIL ENGINEERING
• PUBLIC WORKS

Hemet, CA, 92544, 41555 E Florida Ave., Suite G, Phone (951)658-7727 Fax (951)658-2047
Park City, UT 84098, 9133 Cove Canyon Dr. #302, Phone/Fax (435)615-1489

PREPARED BY: _____ R.C.E. NO. _____ DATE _____

BENCHMARK:

SCALE: H: _____ V: _____

COUNTY OF RIVERSIDE

ANZA ELECTRIC COOPERATIVE INC.
BAUTISTA SUB-STATION
WQMP SITE PLAN

SHEET NO. 1 OF 1 SHTS

FOR: ANZA ELECTRIC CO-OP.

W.O.

COUNTY FILE NO.

Appendix C

Supporting Detail Related to Hydraulic Conditions of Concern

Not Applicable

Appendix D

Educational Materials

Outdoor Equipment Maintenance SC-32

Description

Outside process equipment operations and maintenance can contaminate stormwater runoff. Activities, such as grinding, painting, coating, sanding, degreasing or parts cleaning, landfills and waste piles, solid waste treatment and disposal, are examples of process operations that can lead to contamination of stormwater runoff. Source controls for outdoor process equipment operations and maintenance include reducing the amount of waste created, enclosing or covering all or some of the equipment, installing secondary containment, and training employees.

Approach

Pollution Prevention

- Perform the activity during dry periods.
- Use non-toxic chemicals for maintenance and minimize or eliminate the use of solvents.

Suggested Protocols

- Consider enclosing the activity in a building and connecting the floor drains to the sanitary sewer.
- Cover the work area with a permanent roof.
- Minimize contact of stormwater with outside process equipment operations through berming and drainage routing (runon prevention). If allowed, connect process equipment area to public sewer.
- Dry clean the work area regularly.

Training

- Train employees to perform the activity during dry periods only and to use less or non-toxic materials.
- Train employee and contractors in proper techniques for spill containment and cleanup. The employee should have the tools and knowledge to immediately begin cleaning up a spill if one should occur.

Objectives

- Cover
- Contain
- Educate
- Reduce/Minimize
- Product Substitution

Targeted Constituents

Sediment	✓
Nutrients	
Trash	✓
Metals	✓
Bacteria	
Oil and Grease	✓
Organics	✓
Oxygen Demanding	

CASQA California Stormwater Quality Association

Spill Response and Prevention

- Refer to SC-11, Spill Prevention, Control & Cleanup
- Keep your spill prevention control and countermeasure (SPCC) plan up-date, and implement accordingly.
- Have spill cleanup materials readily available and in a known location.
- Cleanup spills immediately and use dry methods if possible.
- Properly dispose of spill cleanup material.

Other Considerations

- Space limitations may preclude enclosing some equipment.
- Storage sheds often must meet building and fire code requirements.

Requirements

Costs

- Costs vary depending on the complexity of the operation and the amount of control necessary for stormwater pollution control.
- Providing cover may be expensive.

Maintenance

- Conduct routine preventive maintenance, including checking process equipment for leaks.
- Clean the storm drain system regularly.

Supplemental Information

Further Detail of the BMP

Hydraulic/Treatment Modifications

In some cases it may be necessary to capture and treat polluted stormwater. If the municipality does not have its own process wastewater treatment system, consider discharging to the public sewer system. Use of the public sewer might be allowed under the following conditions:

- If the activity area is very small (less than a few hundred square feet), the local sewer authority may be willing to allow the area to remain uncovered with the drain connected to the public sewer.
- It may be possible under unusual circumstances to connect a much larger area to the public sewer, as long as the rate of stormwater discharges does not exceed the capacity of the wastewater treatment plant. The stormwater could be stored during the storm and then transferred to the public sewer when the normal flow is low, such as at night.

References and Resources

California's Nonpoint Source Program Plan http://www.swrcb.ca.gov/nps/index.html

Clark County Stormwater Pollution Control Manual
http://www.co.clark.wa.us/pubworks/bmpman.pdf

King County Stormwater Pollution Control Manual http://dnr.metrokc.gov/wlr/dss/spcm.htm

Santa Clara Valley Urban Runoff Pollution Prevention Program http://www.scvurppp.org

The Stormwater Managers Resource Center http://www.stormwatercenter.net/

Appendix E

Soils Report

GEOTECHNICAL INVESTIGATION

PROPOSED BAUTISTA SUBSTATION

APN 576-060-024 & 025

SEC CAVE ROCK ROAD & BAUTISTA ROAD

ANZA AREA

RIVERSIDE COUNTY, CALIFORNIA

-Prepared By-

Sladden Engineering

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(760) 772-3893

Sladden Engineering

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800 E. Florida Avenue, Hemet, CA 92543 (951) 766-8777 Fax (951) 766-8778

September 17, 2019

Project No. 644-19036
19-09-073

Anza Electric Cooperative, Inc.
P.O. Box 391909
Anza, California 92539

Subject: Geotechnical Investigation

Project: Proposed Bautista Substation
APN 576-060-024 & 025
SEC Cave Rock Road and Bautista Road
Anza Area
Riverside County, California

Sladden Engineering is pleased to present the results of the geotechnical investigation performed for the Bautista Substation proposed for the site located on the southeast corner of Cave Rock Road and Bautista Road in the Anza area of Riverside County, California. Our services were completed in accordance with our proposal for geotechnical engineering services dated June 19, 2019 and your authorization to proceed with the work. The purpose of our investigation was to explore the subsurface conditions at the site in order to provide recommendations for foundation design and site preparation. Evaluation of environmental issues and hazardous wastes was not included within the scope of services provided.

The opinions, recommendations and design criteria presented in this report are based on our field exploration program, laboratory testing and engineering analyses. Based on the results of our investigation, it is our professional opinion that the proposed project should be feasible from a geotechnical perspective provided that the recommendations presented in this report are implemented in design and carried out through construction.

We appreciate the opportunity to provide service to you on this project. If you have any questions regarding this report, please contact the undersigned.

Respectfully submitted,
SLADDEN ENGINEERING

Matthew J. Cohrt
Principal Geologist

CERTIFIED ENGINEERING GEOLOGIST
MATTHEW J. COHRT
2634
STATE OF CALIFORNIA

Brett L. Anderson
Principal Engineer

REGISTERED PROFESSIONAL ENGINEER
BRETT L. ANDERSON
No. C45389
CIVIL ENGINEERING
STATE OF CALIFORNIA

SER/mc
Copies: 4/Addressee

GEOTECHNICAL INVESTIGATION
PROPOSED BAUTISTA SUBSTATION
APN 576-060-024 & 025
SEC CAVE ROCK ROAD & BAUTISTA ROAD
ANZA AREA
RIVERSIDE COUNTY, CALIFORNIA

September 17, 2019
TABLE OF CONTENTS

INTRODUCTION

This report presents the results of the geotechnical investigation performed by Sladden Engineering (Sladden) for the Bautista Substation proposed for the site located on the southeast corner of Cave Rock Road and Bautista Road in the Anza area of Riverside County, California. The site is formally identified as APNs 576-060-024 and 576-060-025 and is located at approximately 33.5547 degrees north latitude and 116.7003 degrees west longitude. The approximate location of the site is indicated on the Site Location Map (Figure 1).

Our investigation was conducted in order to evaluate the engineering properties of the subsurface materials, to evaluate their *in-situ* characteristics, and to provide engineering recommendations and design criteria for site preparation, foundation design and the design of various site improvements. This study also includes a review of published and unpublished geotechnical and geological literature regarding seismicity at and near the subject site.

PROJECT DESCRIPTION

Based on the Conceptual Grading and Site Plan (Womer, 2018), it is our understanding that the proposed project will consist of constructing an electric service sub-station on the currently vacant property. The preliminary plans indicated that the proposed electric substation will include transformers, oil containment pits, feeder units, transmission and distribution poles and associated site improvements. We expect that the entire substation suface will be covered in 4-inch crushed rock. In order to construct a level building area, fill slopes on the order of two horizontal to one vertical (2H:1V) slopes will be required. Rip-rap slope protection is proposed for the northern portion of the building area and concrete v-ditches and drain pipes are proposed for the eastern portion of the building area.

For our analyses we expect that the proposed substation components will consist of a steel frame structures supported on conventional shallow spread footings or drilled pier foundations and concrete slabs-on-grade.

Grading will be limited to minor cuts and fills within the building area in order to accomplish the desired pad elevation and to provide adequate gradients for site drainage. This does not include the removal and re-compaction of the primary foundation bearing soil within the building areas. Upon completion of precise grading plans, Sladden should be retained in order to ensure that the recommendations presented within in this report are incorporated into the design of the proposed project.

SCOPE OF SERVICES

The purpose of our investigation was to determine pertinent engineering characteristics of the surface and near surface soil and bedrock in order to develop foundation design criteria and recommendations for site preparation. Exploration of the site was achieved by excavating five (5) exploratory test pits to bedrock refusal depths between approximately two (2) and seven (7) feet below the existing ground surface (bgs). Specifically, our site characterization consisted of the following tasks:

- Site reconnaissance to assess the existing surface conditions on and adjacent to the site.
- Excavating five (5) exploratory test pits to bedrock refusal depths between approximately two (2) and seven (7) feet bgs in order to characterize the subsurface soil and bedrock conditions. Representative samples of the soil were classified in the field and retained for laboratory testing and engineering analyses.
- Performing laboratory testing on selected samples to evaluate their engineering characteristics.
- Reviewing geologic literature and discussing geologic hazards.
- Performing engineering analyses to develop recommendations for foundation design and site preparation.
- The preparation of this report summarizing our work at the site.

SITE CONDITIONS

The project site is located on the southeast corner of Cave Rock Road and Bautista Road in the Anza area of Riverside County, California. The site consists of two parcels totaling approximately 2.28 acres of undeveloped land. The parcels are formally identified by the County of Riverside as APNs 576-060-024 & 576-060-025. At the time of our field investigation, the site was undeveloped and covered in thick native vegetation.

The subject site consists of undulating topography with regional gradients descending to the southeast. The subject site is bounded by a developed property to the south (Yibertos Taco Shop), undeveloped land to the east, Bautista Road to the west and a private gravel driveway (Anza Valley Christian Fellowship) to the north.

Based on our review of the Anza 7.5-Minute Quadrangle Map (USGS, 2018) the site is situated at an approximate elevation of 3,975 feet above mean sea level (MSL).

No natural ponding of water or surface seeps were observed at or near the site during our investigation conducted on July 25, 2019. Site drainage appears to be controlled via sheet flow and surface infiltration. Regional drainage is provided by Cahuilla Creek and associated tributaries located to the southwest of the site.

GEOLOGIC SETTING

The project site is located in the Peninsular Ranges Physiographic Province of California. The Peninsular Ranges are mountainous areas that extend from the western edge of the continental borderland to the Salton Trough and from the Transverse Ranges Physiographic Province in the north to the tip of Baja California in the south. The Peninsular Ranges Physiographic Province is characterized by northwest-trending topographic and structural features that locally include the San Jacinto Structural Block. The San Jacinto Structural Block is a northwest-southeast trending elongated structural block bounded on the southwest by the San Jacinto Fault and by the San Andreas Fault Zone to the northeast. The province is characterized by elongated, northwest-southeast trending mountain ranges and valleys and is truncated at its northern margin by the east-west grain of the Transverse Ranges. Mountainous areas of the Peninsular Ranges Physiographic Province generally consist of Igneous, metasedimentary and metavolcanic rocks. However, plutonic rocks of the Southern California Batholith are the dominant basement rock exposed (Jahns, 1954).

The site has been mapped by Rogers (1965) to be immediately underlain by Mesozoic-age granitic rocks consisting of tonalite and diorite (gr^t). The regional geologic setting for the site vicinity is presented on the Regional Geologic Map (Figure 2).

SUBSURFACE CONDITIONS

The subsurface conditions at the site were investigated by excavating five (5) exploratory test pits to depths between approximately two (2) and seven (7) feet bgs. The approximate locations of the test pits are illustrated on the Exploration Location Photograph (Figure 3). The test pits were excavated using a track-mounted John Deere excavator equipped with a 24-inch wide bucket. A Geologist of Sladden was on-site to log the materials encountered and retrieve samples for laboratory testing and engineering analyses.

During our field investigation, a thin mantle of alluvium (Qal) consisting of silty sand was encountered overlying intrusive bedrock. The surface soil appeared yellowish brown in in-situ color, dry, and fine to coarse-grained. Underlying the surface soil and extending to maximum depths explored, intrusive bedrock was encountered (gr). Bedrock was encountered within each of the test pits excavated and appeared moderately hard, moderately storing and highly weathered. Generally, the underlying earth materials observed within the test pits appeared to have adequate strength for the anticipated foundation loads at relatively shallow exploration depths.

The final logs represent our interpretation of the contents of the field logs, and the results of the laboratory observations and tests of the field samples. The final test pit logs are included in Appendix A of this report. The stratification lines represent the approximate boundaries between soil types although the transitions may be gradual.

Groundwater was not encountered to a maximum explored depth of approximately seven (7) feet bgs during our field investigation conducted on July 25, 2019. Due to the shallow bedrock conditions, it is our opinion that groundwater should not be a factor during construction of the proposed project.

SEISMICITY AND FAULTING

The southwestern United States is a tectonically active and structurally complex region, dominated by northwest trending dextral faults. The faults of the region are often part of complex fault systems, composed of numerous subparallel faults which splay or step from main fault traces. Strong seismic shaking could be produced by any of these faults during the design life of the proposed project.

We consider the most significant geologic hazard to the project to be the potential for moderate to strong seismic shaking that is likely to occur during the design life of the project. The proposed project is located in the highly seismic Southern California region within the influence of several fault systems that are considered to be active or potentially active. An active fault is defined by the State of California as a "sufficiently active and well defined fault" that has exhibited surface displacement within the Holocene epoch (about the last 11,000 years). A potentially active fault is defined by the State as a fault with a history of movement within Pleistocene time (between 11,000 and 1.6 million years ago).

As previously stated, the site has been subjected to strong seismic shaking related to active faults that traverse through the region. Some of the more significant seismic events near the subject site within recent times include: M6.0 North Palm Springs (1986), M6.1 Joshua Tree (1992), M7.3 Landers (1992), M6.2 Big Bear (1992), M7.1 Hector Mine (1999) and M7.1 Ridgecrest (2019).

Table 1 lists the closest known potentially active faults that was generated in part using the EQFAULT computer program (Blake, 2000), as modified using the fault parameters from The Revised 2002 California Probabilistic Seismic Hazard Maps (Cao et al, 2003). This table does not identify the probability of reactivation or the on-site effects from earthquakes occurring on any of the other faults in the region.

TABLE 1
CLOSEST KNOWN ACTIVE FAULTS

Fault Name	Distance (Km)	Maximum Event
San Jacinto - Anza	3.1	7.2
San Jacinto – Coyote Creek	20.9	6.8
San Jacinto – San Jacinto Valley	28.8	6.9
Elsinore - Julian	33.3	7.1
Elsinore - Temecula	35.1	6.8
Earthquake Valley	42.9	**7.0
San Andreas - San Bernardino	44.7	*7.5
San Andreas - Southern	44.7	*7.2
San Andreas - Coachella	45.7	*7.2

*8.2 for multiple segment rupture
**Probable Magnitude based on SCEDC (2018)

2016 CBC SEISMIC DESIGN PARAMETERS

Sladden has reviewed the 2016 California Building Code (CBC) and summarized the current seismic design parameters for the proposed structures. The seismic design category for a structure may be determined in accordance with Section 1613 of the 2016 CBC or ASCE7. According to the 2016 CBC, Site Class C may be used to estimate design seismic loading for the proposed structures. The 2016 CBC Seismic Design Parameters are summarized below (SEAC, 2019). The project Design Map Reports are included within Appendix C.

Risk Category (Table 1.5-1): II
Site Class (Table 1613.3.2): C
Ss (Figure 1613.3.1): 1.912g
S1 (Figure 1613.3.1): 0.849g
Fa (Table 1613.3.3(1)): 1.0
Fv (Table 1613.5.3(2)): 1.3
Sms (Equation 16-37 {Fa X Ss}): 1.912g
Sm1 (Equation 16-38 {Fv X S1}): 1.104g
SDS (Equation 16-39 {2/3 X Sms}): 1.275g
SD1 (Equation 16-40 {2/3 X Sm1}): 0.736g
Seismic Design Category: E

GEOLOGIC HAZARDS

The subject site is located in an active seismic zone and will likely experience strong seismic shaking during the design life of the proposed project. In general, the intensity of ground shaking will depend on several factors including: the distance to the earthquake focus, the earthquake magnitude, the response characteristics of the underlying materials, and the quality and type of construction. Geologic hazards and their relationship to the site are discussed below.

I. Surface Rupture. Surface rupture is expected to occur along preexisting, known active fault traces. However, surface rupture could potentially splay or step from known active faults or rupture along unidentified traces. Based on our review of Rogers (1965), Jennings (1994), CDMG (1974) and RCPR (2019), known faults are not mapped on or projecting towards the site. The site is not located within a State of California delineated fault zone. In addition, no signs of active surface faulting were observed during our review of non-stereo digitized photographs of the site and site vicinity (Google, 2019). Finally, no signs of active surface fault rupture or secondary seismic effects (lateral spreading, lurching etc.) were identified on-site during our field investigation. Therefore, it is our opinion that risks associated with primary surface ground rupture should be considered "low".

II. Ground Shaking. The site has been subjected to past ground shaking by faults that traverse through the region. Strong seismic shaking from nearby active faults is expected to produce strong seismic shaking during the design life of the proposed project. A probabilistic approach was employed to the estimate the peak ground acceleration (a_{max}) that could be experienced at the site. Based on the USGS Unified Hazard Tool (USGS, 2019) shear wave velocity (Vs30) of 360 m/s, the site could be subjected to ground motions on the order of 0.54g. The peak ground acceleration at the site is judged to have a 475 year return period and a 10 percent chance of exceedence in 50 years.

III. Liquefaction. Liquefaction is the process in which loose, saturated granular soil loses strength as a result of cyclic loading. The strength loss is a result of a decrease in granular sand volume and a positive increase in pore pressures. Generally, liquefaction can occur if all of the following conditions apply: liquefaction-susceptible soil, groundwater within a depth of 50 feet or less, and strong seismic shaking.

Based on the presence of shallow seated bedrock underlying the site, risks associated with liquefaction and liquefaction related hazards should be considered negligible.

IV. Tsunamis and Seiches. Because the site is situated at an inland elevated location, and is not immediately adjacent to any impounded bodies of water, risks associated with tsunamis and seiches are considered negligible.

V. Slope Failure, Landsliding, Rock Falls. No signs of slope instability in the form of landslides, rock falls, earthflows or slumps were observed at or near the subject site. The site is not located immediately adjacent to any slopes or hillsides. As such, risks associated with slope instability should be considered negligible.

VI. Expansive Soil. Generally, the near surface soil on the site consists of silty sand (SM). Based on the results of our laboratory testing (EI=10), the materials underlying the site are considered to have a "very low" expansion potential.

VII. Static Settlement. Static settlement resulting from the anticipated foundation loads should be minimal provided that the recommendations included in this report are considered in foundation design and construction. The estimated ultimate static settlement is calculated to be approximately 1 inch when using the recommended bearing pressures. As a practical matter, differential static settlement between footings can be assumed as one-half of the total settlement.

VIII. Subsidence. Land subsidence can occur in valleys where aquifer systems have been subjected to extensive groundwater pumping, such that groundwater pumping exceeds groundwater recharge. Generally, pore water reduction can result in a rearrangement of skeletal grains and could result in elastic (recoverable) or inelastic (unrecoverable) deformation of an aquifer system.

Locally, no fissures or other surficial evidence of subsidence were observed at or near the subject site. Because the site is underlain by bedrock, the potential for subsidence is considered "negligible".

IX. Debris Flows. Debris flows are viscous flows consisting of poorly sorted mixtures of sediment and water and are generally initiated on slopes steeper than approximately six horizontal to one vertical (6H:1V) (Boggs, 2001). Based on the flat nature of the site and the composition of the surface soil, we judge that risks associated with debris flows should be considered remote.

d. Shrinkage and Subsidence. Volumetric shrinkage of the material that is excavated and replaced as controlled compacted fill should be anticipated. We estimate that this shrinkage should be less than 15 percent. Subsidence of the surfaces that are scarified and compacted should be between 1 and 2 tenths of a foot. This will vary depending upon the type of equipment used, the moisture content of the soil at the time of grading and the actual degree of compaction attained

CONVENTIONAL SHALLOW SPREAD FOOTINGS

The proposed substation components may be supported on conventional shallow spread footings. All footings should be founded upon properly engineered fill soil and should have a minimum embedment depth of 12 inches measured from the lowest adjacent finished grade. Continuous footings and isolated pad footings should have minimum widths of 12 inches and 24 inches, respectively. Continuous footings and isolated pad footings placed on compact engineered fill soil may be designed using allowable bearing pressures of 1800 and 2000 pounds per square foot (psf), respectively. Allowable increases of 250 psf for each additional 1 foot in width and 250 psf for each additional 6 inches in depth may be utilized, if desired. The maximum allowable bearing pressure should be 3000 psf.

The allowable bearing pressure may be increased by one-third when considering transient live loads, including seismic and wind forces. All footings should be reinforced in accordance with the project structural engineer's recommendations.

Based on the allowable bearing pressures recommended above, total settlement of the shallow footings are anticipated to be less than one-inch provided that foundation preparation conforms to the recommendations described in this report. Differential settlement is anticipated to be approximately half the total settlement for similarly loaded footings spaced up to approximately 40 feet apart.

Lateral load resistance for the spread footings will be developed by passive soil pressure against the sides of the footings below grade and by friction acting at the base of the concrete footings bearing on compacted fill. An allowable passive pressure of 300 psf per foot of depth may be used for design purposes. An allowable coefficient of friction 0.45 may be used for dead and sustained live loads to compute the frictional resistance of the footing placed directly on compacted fill. Under seismic and wind loading conditions, the passive pressure and frictional resistance may be increased by one-third.

All footing excavations should be observed by a representative of the project geotechnical consultant to verify adequate embedment depths prior to placement of forms, steel reinforcement or concrete. The excavations should be trimmed neat, level and square. All loose, disturbed, sloughed or moisture-softened soils and/or any construction debris should be removed prior to concrete placement. Excavated soil generated from footing and/or utility trenches should not be stockpiled within the building envelope or in areas of exterior concrete flatwork.

SLABS-ON-GRADE

In order to provide uniform and adequate support, concrete slabs-on-grade must be placed on properly compacted engineered fill soil as outlined in the previous sections of this report. The slab subgrade should remain near optimum moisture content and should not be permitted to dry prior to concrete placement. Slab subgrades should be firm and unyielding. Disturbed soil should be removed and replaced with engineered fill soil compacted to a minimum of 90 percent relative compaction.

Slab thickness and reinforcement should be determined by the structural engineer. All slab reinforcement should be supported on concrete chairs to ensure that reinforcement is placed at slab mid-height.

Slabs with moisture sensitive surfaces or equipment should be underlain with a moisture vapor retarder consisting of a polyvinyl chloride membrane such as 10-mil visqueen, or equivalent. All laps within the membrane should be sealed and at least 2 inches of clean sand should be placed over the membrane to promote uniform curing of the concrete. To reduce the potential for punctures, the membrane should be placed on a pad surface that has been graded smooth without any sharp protrusions. If a smooth surface can not be achieved by grading, consideration should be given to placing a 1-inch thick leveling course of sand across the pad surface prior to placement of the membrane.

DRILLED PIERS

We anticipate that the proposed transmission and distribution poles will be supported upon cast-in-place concrete drilled pier/pile foundations. We expect that drilled pier foundations approximately 12 to 24 inches in diameter may be considered to support some of the substation structures. The following structural values are provided to assist in drilled pier/pile design. A minimum drilled pier depth of 5 feet is recommended.

Allowable end bearing soil pressure at 5 feet:

a. Static: DL+LL ---------- 3 ksf
b. Seismic event: DL+LL+EQ ---------- 4 ksf

Allowable passive pressure:

a. Surface to 1 foot ---------- Zero
b. Between 1 foot and 10 feet ---------- 250 psf/ft.

Allowance for skin friction ---------- 250 psf
(Ignore upper 1 foot)
Angle of internal friction, between 1 foot and 12 feet -------32 degrees

Effective unit weight of the site soil:

a. Surface to 5 feet ----------133 pcf

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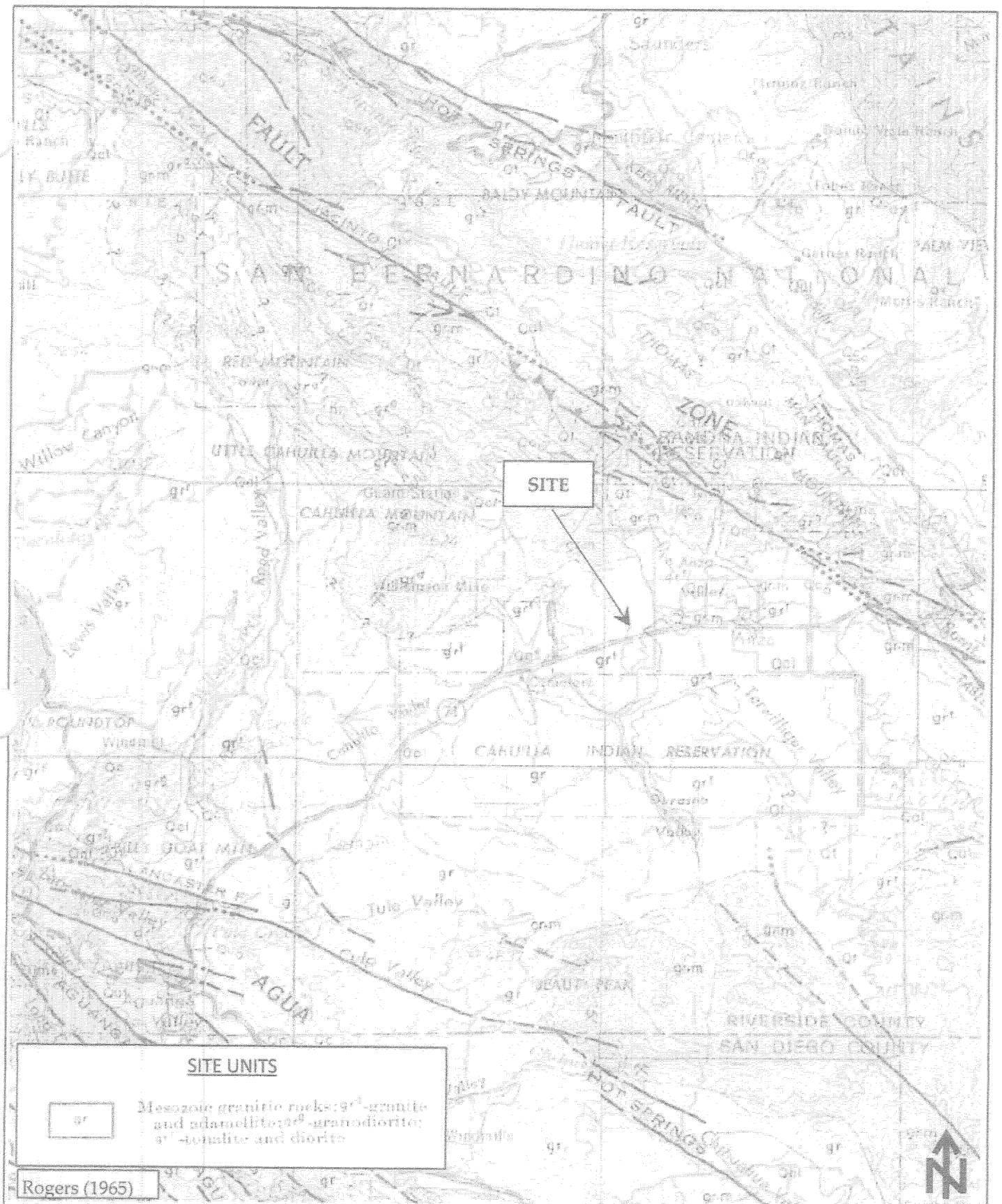
FIGURES

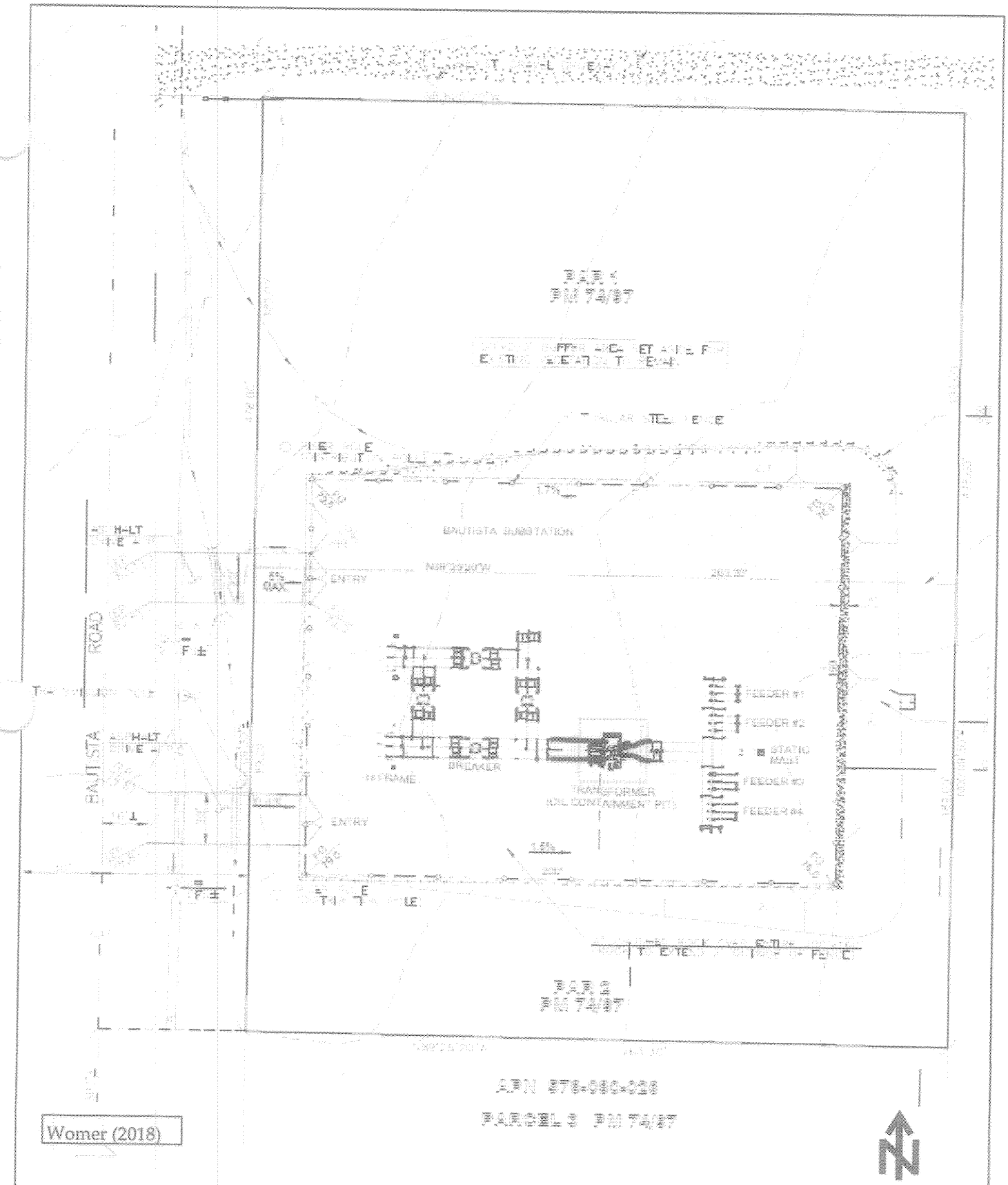
SITE LOCATION MAP
REGIONAL GEOLOGIC MAP
EXPLORATION LOCATION PHOTOGRAPH
SITE PLAN

	SITE LOCATION MAP	FIGURE
Sladden Engineering	Project Number: 644-19036 Report Number: 19-09-073 Date: September 17, 2019	1



Sladden Engineering	REGIONAL GEOLOGIC MAP	FIGURE
	Project Number: 644-19036	2
	Report Number: 19-09-073	
	Date: September 17, 2019	

Sladden Engineering	EXPLORATION LOCATION PHOTOGRAPH	FIGURE
	Project Number: 644-19036	3
	Report Number: 19-09-073	
	Date: September 17, 2019	



Sladden Engineering

SITE PLAN

Project Number:	644-19036
Report Number:	19-09-073
Date:	September 17, 2019

FIGURE

4

APPENDIX A

FIELD EXPLORATION

APPENDIX A

FIELD EXPLORATION

For our field investigation, five (5) exploratory test pits were excavated on July 25, 2019 utilizing a track mounted John Deere excavator equipped with a 24-inch wide bucket. Continuous logs of the materials encountered were made by a representative of Sladden Engineering. Materials encountered in the test pits were classified in accordance with the Unified Soil Classification System that is presented in this appendix.

Bulk samples were obtained from the excavations and samples were then transported to our laboratory for further observations and testing.

LOG OF TEST PIT: TP - 1

Soil Interval Depth (Feet bgs)	Soil Sample Designation	Soil Sample Depth (Feet bgs)	SOIL DESCRIPTION
0.0-1.0			Silty Sand (SM); yellowish brown, dry, fine- to coarse-grained with gravel and rootlets (Qal).
1.0-3.0			Bedrock (granitoid); moderately hard, moderately strong, highly weathered; readily breaks down to SM soil type.
			No Groundwater or Seepage Encountered Test pit terminated at 3.0 feet below ground surface.

GRAPHIC REPRESENTATION

SCALE: N/A BEARING: N42E WALL: West

Test Pit Number: TP-1	Date: 7/25/2019	**Sladden Engineering**
Elevation: 3975 Ft. msl	Equipment: Track-Mounted Excavator	Project: Bautista Substation, Anza, CA
Lat/Long: 33.5544/-116.7004	Logged By: S. Doyle/J. Minor	Project No.: 644-19036

LOG OF TEST PIT: TP -2

Soil Interval Depth (Feet bgs)	Soil Sample Designation	Soil Sample Depth (Feet bgs)	SOIL DESCRIPTION
0.0-1.0			Silty Sand (SM); yellowish brown, dry, fine- to coarse-grained with gravel and rootlets (Qal).
1.0-2.0			Bedrock (granitoid); moderately hard, moderately strong, highly weathered; readily breaks down to SM soil type.
			No Groundwater or Seepage Encountered Test pit terminated at 2.0 feet below ground surface.

GRAPHIC REPRESENTATION

SCALE: N/A BEARING: N40W WALL: West

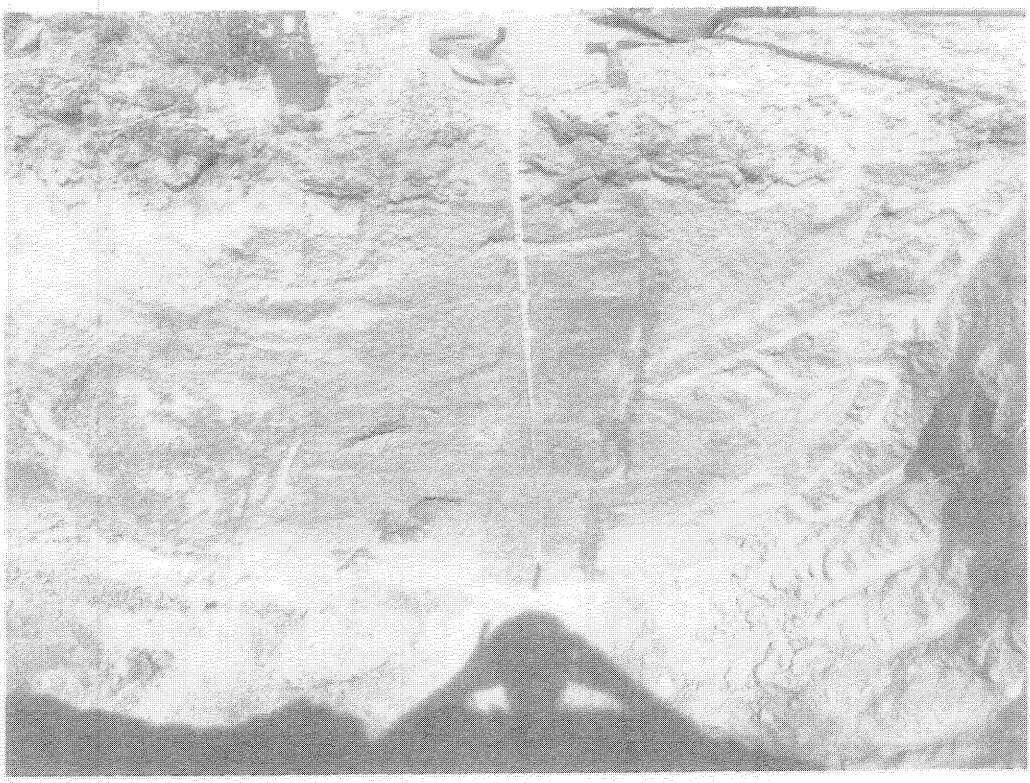
Test Pit Number: TP-2	Date: 7/25/2019	**Sladden Engineering**
Elevation: 3975 Ft. msl	Equipment: Track-Mounted Excavator	Project: Bautista Substation, Anza, CA
Lat/Long: 33.5543/-116.7000	Logged By: S. Doyle/J. Minor	Project No.: 644-19036

LOG OF TEST PIT: TP – 3 (P-2)

Soil Interval Depth (Feet bgs)	Soil Sample Designation	Soil Sample Depth (Feet bgs)	SOIL DESCRIPTION
0.0-1.0			Silty Sand (SM); yellowish brown, dry, fine- to coarse-grained with gravel and rootlets (Qal).
1.0-4.0			Bedrock (granitoid); moderately hard, moderately strong, highly weathered; readily breaks down to SM soil type.
			No Groundwater or Seepage Encountered Test pit terminated at 4.0 feet below ground surface.

GRAPHIC REPRESENTATION

SCALE: N/A BEARING: N10E WALL: West



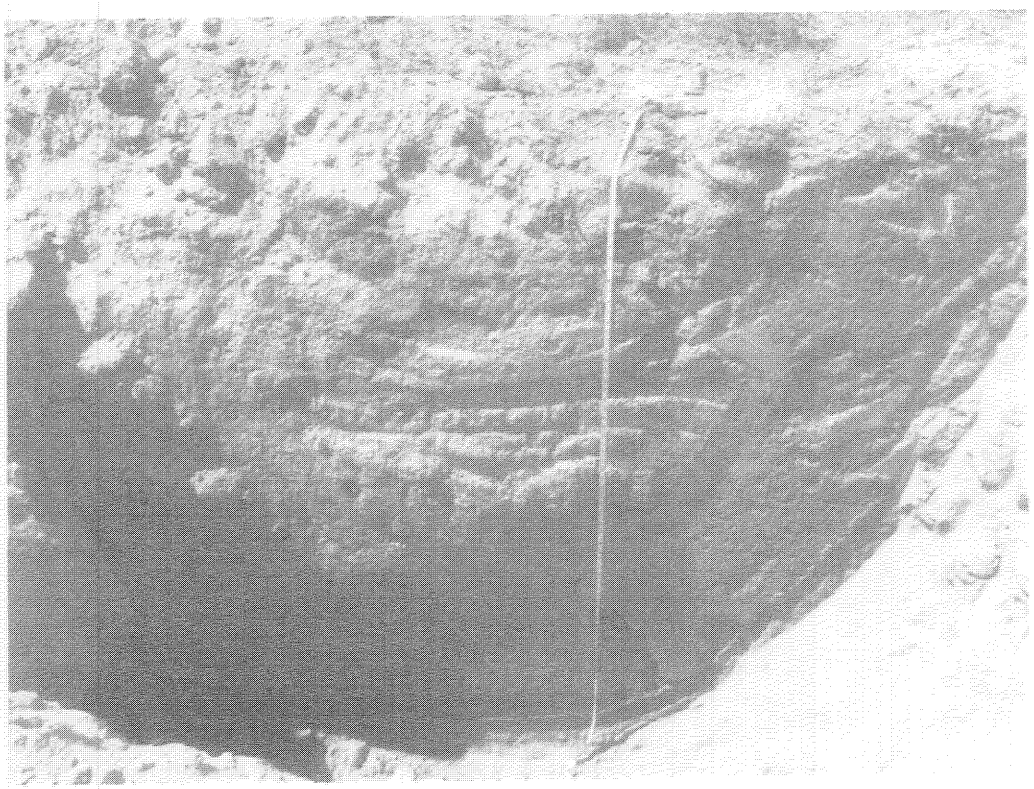
Test Pit Number: TP-3 (P-2)	Date: 7/25/2019	**Sladden Engineering**
Elevation: 3975 Ft. msl	Equipment: Track-Mounted Excavator	Project: Bautista Substation, Anza, CA
Lat/Long: 33.5549/-116.6998	Logged By: S. Doyle/J. Minor	Project No.: 644-19036

LOG OF TEST PIT: TP - 4

Soil Interval Depth (Feet bgs)	Soil Sample Designation	Soil Sample Depth (Feet bgs)	SOIL DESCRIPTION
0.0-3.0			Silty Sand (SM); yellowish brown, dry, fine- to coarse-grained with gravel and rootlets (Qal).
3.0-7.0			Bedrock (granitoid); moderately hard, moderately strong, highly weathered; readily breaks down to SM soil type.
			No Groundwater or Seepage Encountered Test pit terminated at 7.0 feet below ground surface.

GRAPHIC REPRESENTATION

SCALE: N/A BEARING: N80W WALL: South



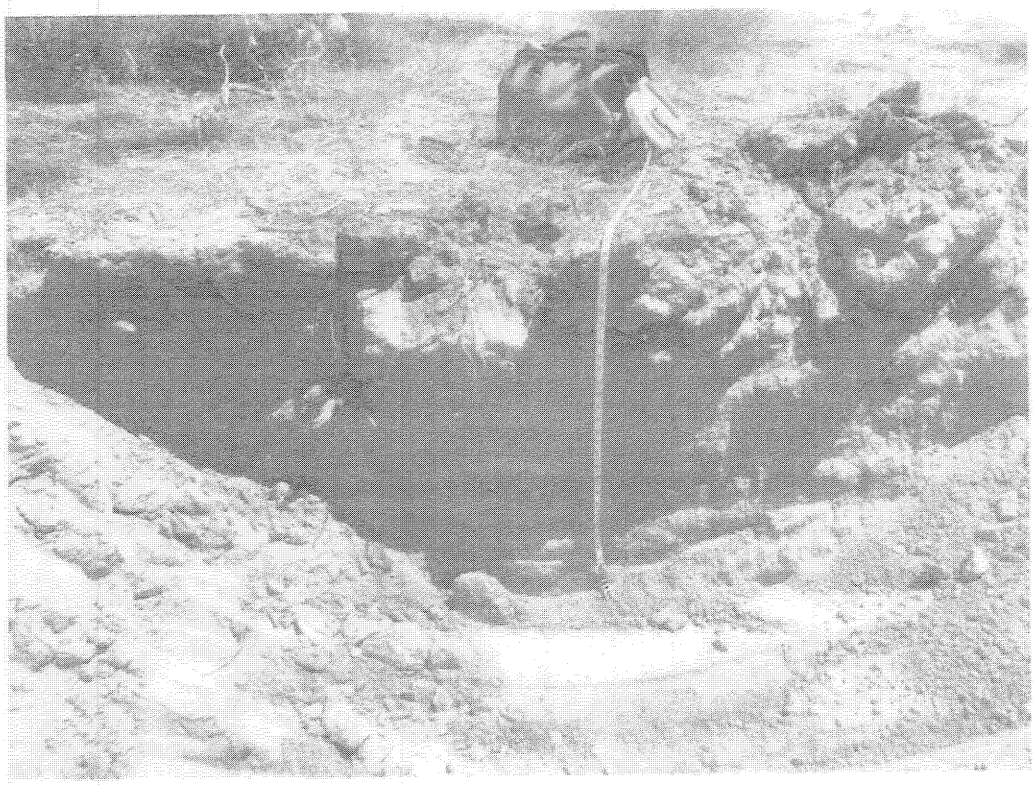
Test Pit Number: TP-4	Date: 7/25/2019	**Sladden Engineering**
Elevation: 3975 Ft. msl	Equipment: Track-Mounted Excavator	Project: Bautista Substation, Anza, CA
Lat/Long: 33.5550/-116.7001	Logged By: S. Doyle/J. Minor	Project No.: 644-19036

LOG OF TEST PIT: TP – 5 (P-1)

Soil Interval Depth (Feet bgs)	Soil Sample Designation	Soil Sample Depth (Feet bgs)	SOIL DESCRIPTION
0.0-1.0			Silty Sand (SM); yellowish brown, dry, fine- to coarse-grained with gravel and rootlets (Qal).
1.0-2.0			Bedrock (granitoid); moderately hard, moderately strong, highly weathered; readily breaks down to SM soil type.
			No Groundwater or Seepage Encountered Test pit terminated at 2.0 feet below ground surface.

GRAPHIC REPRESENTATION

SCALE: N/A BEARING: N18E WALL: West



Test Pit Number: TP-5 (P-1)	Date: 7/25/2019	**Sladden Engineering**
Elevation: 3975 Ft. msl	Equipment: Track-Mounted Excavator	Project: Bautista Substation, Anza, CA
Lat/Long: 33.5547/-116.6997	Logged By: S. Doyle/J. Minor	Project No.: 644-19036

APPENDIX B

LABORATORY TESTING

Sladden Engineering
450 Egan Avenue, Beaumont CA 92223 (951) 845-7743 Fax (951) 845-8863

Maximum Density/Optimum Moisture

ASTM D698/D1557

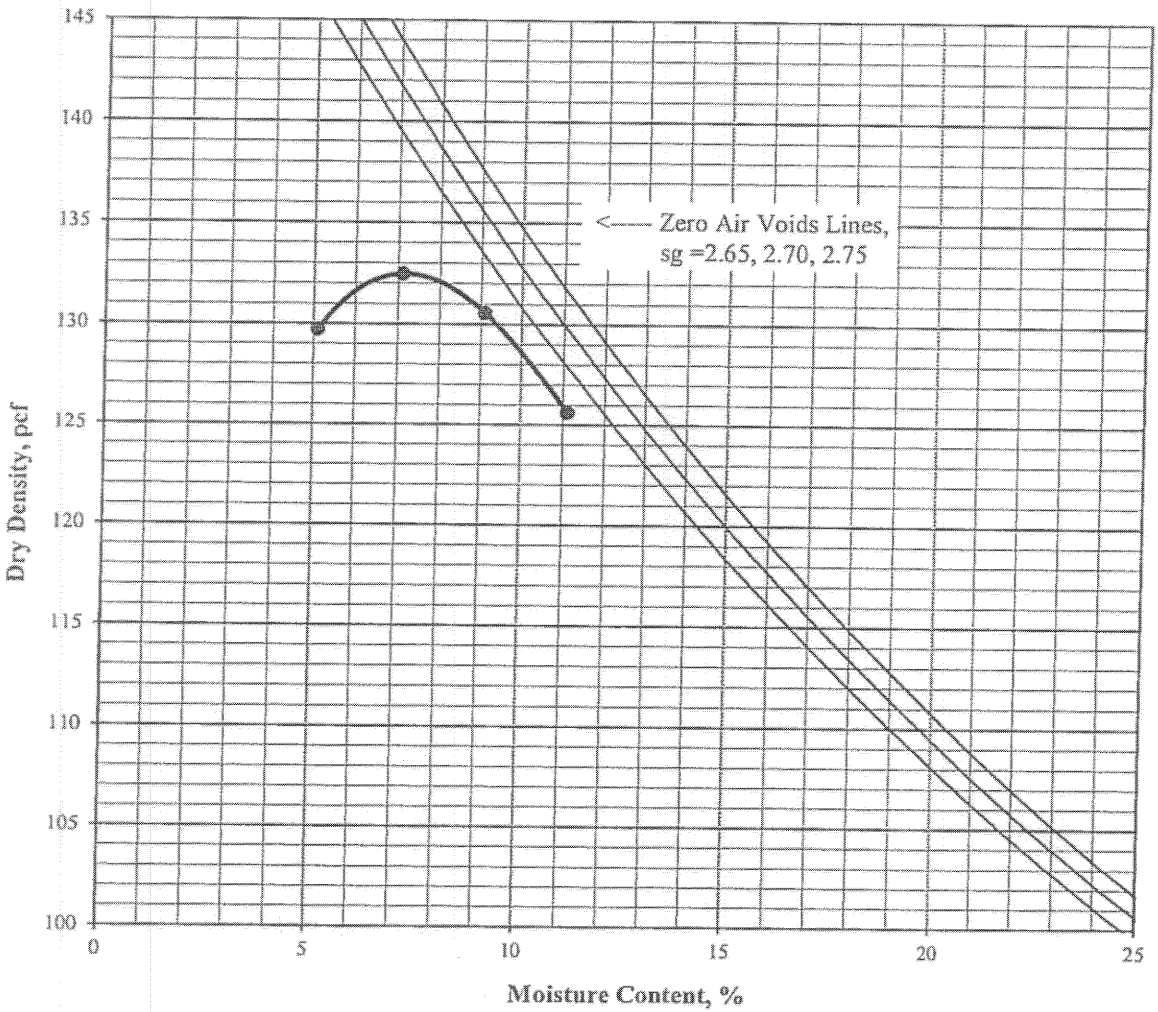
Project Number: 644-19036
Project Name: Bautista Substation
Lab ID Number: LN6-19394
Sample Location: TP-1-3; Bulk 1
Description: Dark Brown Silty Sand (SM)

August 13, 2019

ASTM D-1557 A
Rammer Type: Machine

Maximum Density: 132.5 pcf
Optimum Moisture: 7.5%

Sieve Size	% Retained
3/4"	
3/8"	
#4	0.2



Sladden Engineering
450 Egan Avenue, Beaumont, CA 92223 (951) 845-7743 Fax (951) 845-8863

Expansion Index

ASTM D 4829

August 13, 2019

Job Number:	644-19036
Job Name:	Bautista Substation
Lab ID Number:	LN6-19394
Sample ID:	TP-1-3; Bulk 1
Soil Description:	Dark Brown Silty Sand (SM)

Wt of Soil + Ring:	600.1
Weight of Ring:	192.0
Wt of Wet Soil:	408.1
Percent Moisture:	6.9%
Sample Height, in	0.95
Wet Density, pcf:	130.2
Dry Denstiy, pcf:	121.8

% Saturation:	48.6

Expansion **Rack # 2**

Date/Time	8/7/2019	3:25 PM
Initial Reading	0.0000	
Final Reading	0.0098	

Expansion Index **10**

(Final - Initial) x 1000

Sladden Engineering

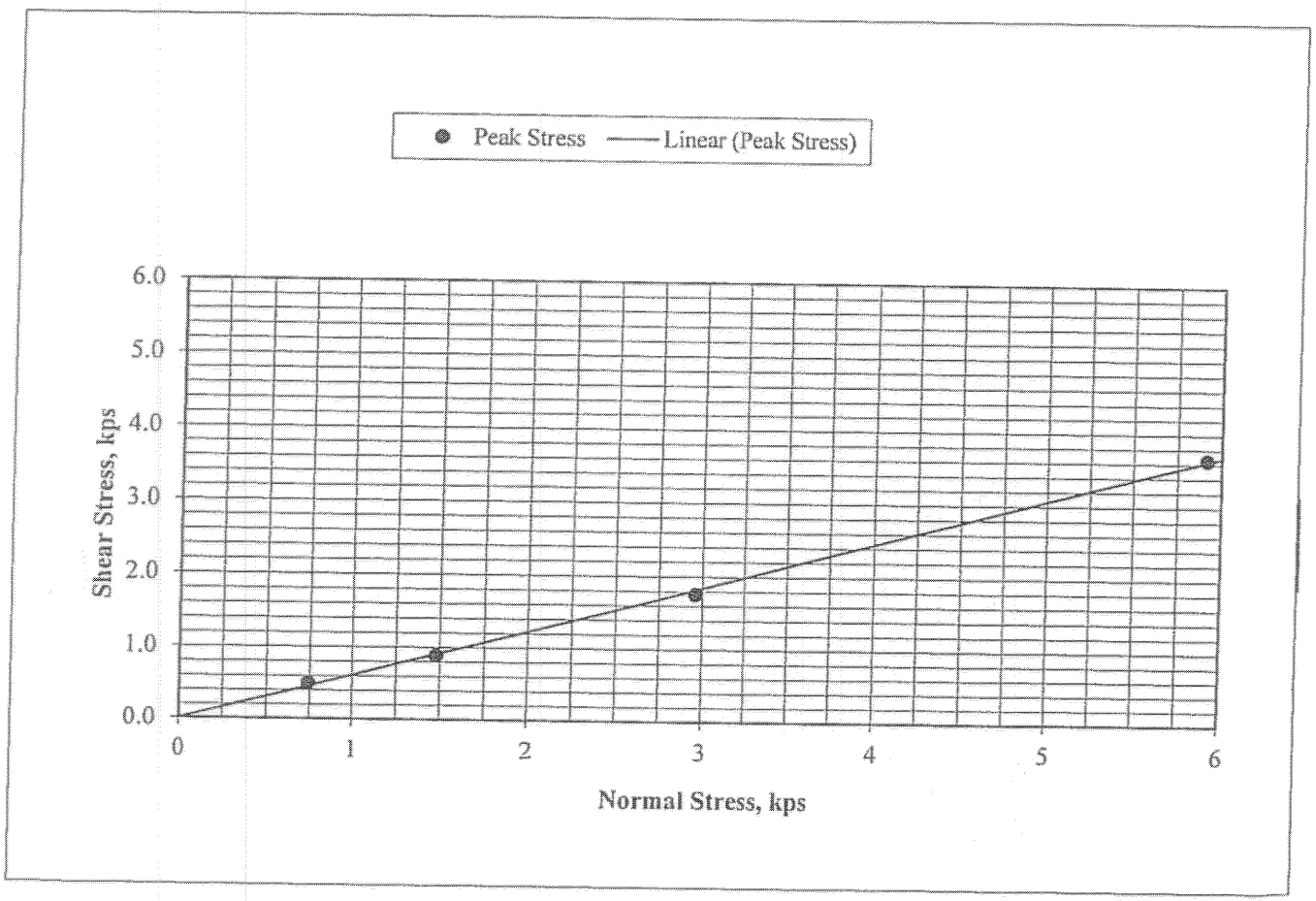
450 Egan Avenue, Beaumont, CA 92223 (951) 845-7743 Fax (951) 845-8863

Direct Shear ASTM D 3080-04
(modified for unconsolidated condition)

Job Number:	644-19036
Job Name	Bautista Substation
Lab ID No.	LN6-19394
Sample ID	TP-1-3; Bulk 1
Classification	Dark Brown Silty Sand (SM)
Sample Type	Remolded @ 90% of Maximum Density

August 13, 2019
Initial Dry Density: 119.4 pcf
Initial Mosture Content: 7.5 %
Peak Friction Angle (Ø): 32°
Cohesion (c): 0 psf

Test Results	1	2	3	4	Average
Moisture Content, %	13.8	13.8	13.8	13.8	13.8
Saturation, %	90.4	90.4	90.4	90.4	90.4
Normal Stress, kps	0.739	1.479	2.958	5.916	
Peak Stress, kps	0.500	0.892	1.762	3.654	



Job Number:	644-19036
Job Name:	Bautista Substation
Date:	8/13/2019

Moisture Adjustment

Wt of Soil:	1,000
Moist As Is:	2.9
Moist Wanted:	7.5
ml of Water to Add:	44.7

Remolded Shear Weight

Max Dry Density:	132.5
Optimum Moisture:	7.5
Wt Soil per Ring, g:	154.2

UBC

Sladden Engineering
450 Egan Avenue, Beaumont, CA 92223 (951) 845-7743 Fax (951) 845-8863

Gradation

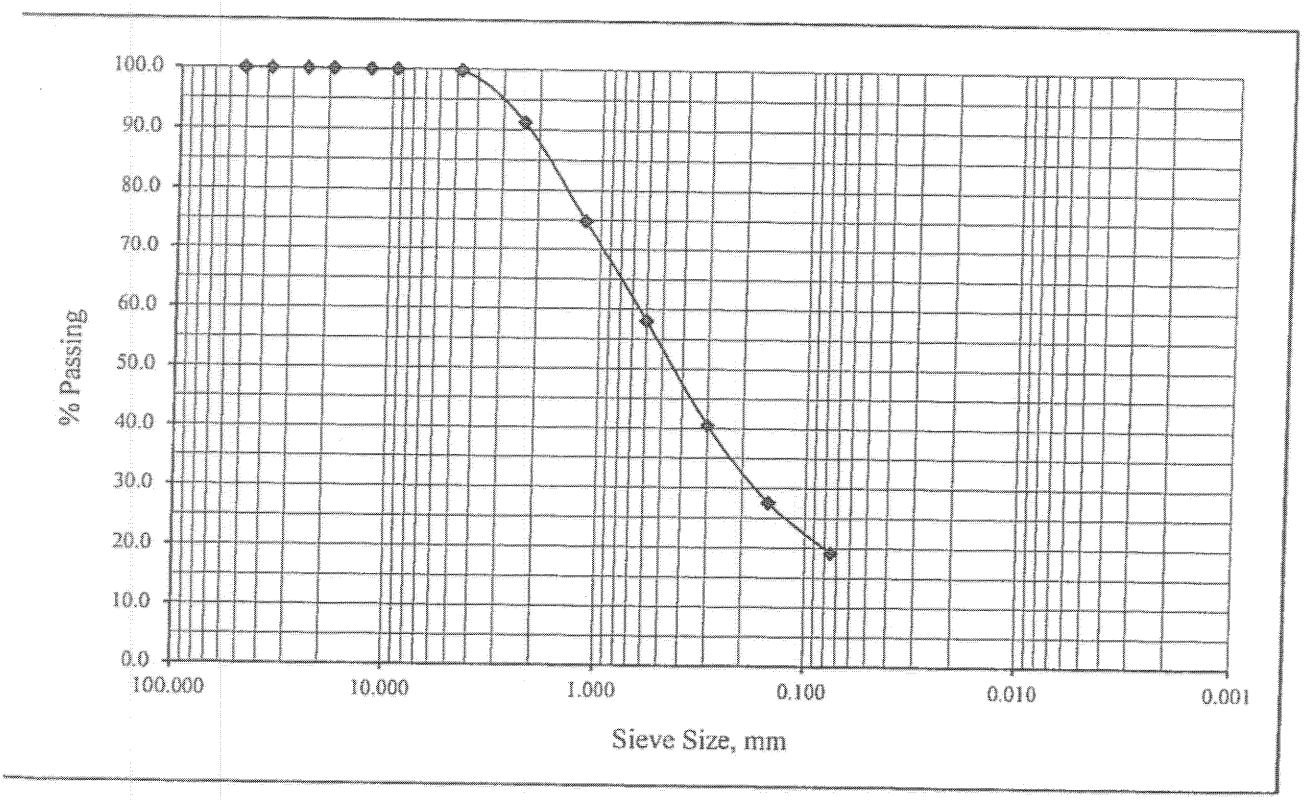
ASTM C117 & C136

Project Number: 644-19036
Project Name: Bautista Substation
Lab ID Number: LN6-19394
Sample ID: TP-1-3; Bulk 1

August 13, 2019

Soil Classification: SM

Sieve Size, in	Sieve Size, mm	Percent Passing
2"	50.8	100.0
1 1/2"	38.1	100.0
1"	25.4	100.0
3/4"	19.1	100.0
1/2"	12.7	100.0
3/8"	9.53	99.9
#4	4.75	99.8
#8	2.36	91.3
#16	1.18	74.9
#30	0.60	58.1
#50	0.30	40.5
#100	0.15	27.6
#200	0.075	19.2



Sladden Engineering

6782 Stanton Ave., Suite A, Buena Park, CA 90621 (714) 523-0952 Fax (714) 523-1369
45090 Golf Center Pkwy, Suite F, Indio CA 92201 (760) 863-0713 Fax (760) 863-0847
450 Egan Avenue, Beaumont, CA 92223 (951) 845-7743 Fax (951) 845-8863

Date: August 13, 2019

Account No.: 644-19036

Customer: Anza Electric Cooperative, Inc.

Location: APNs 575-060-024, 025, SEC Cave Rock Road & Bautista Road, Anza Area

Analytical Report

Corrosion Series

	pH per CA 643	Soluble Sulfates per CA 417 ppm	Soluble Chloride per CA 422 ppm	Min. Resistivity per CA 643 ohm-cm
TP-1-3	7.7	240	50	6100

APPENDIX C

SEISMIC DESIGN REPORT
DEAGGREGATION OUTPUT

OSHPD

Bautista Substation

Latitude, Longitude: 33.554734, -116.700301

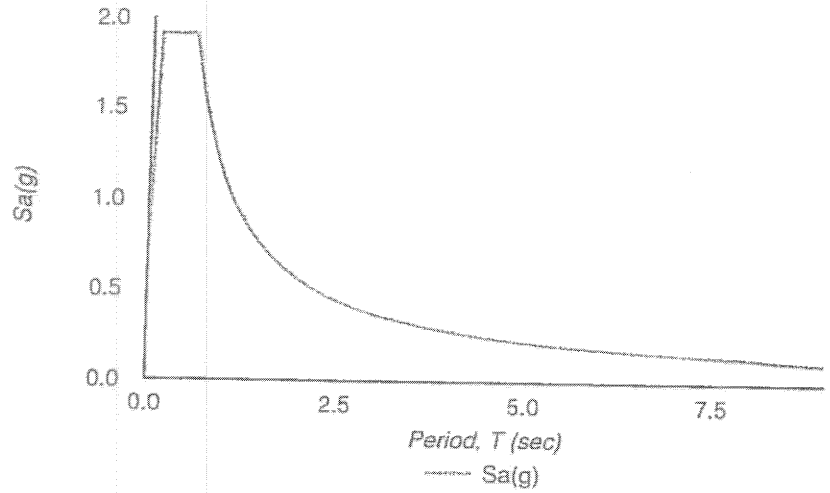
Date	9/17/2019, 3:24:09 PM
Design Code Reference Document	ASCE7-10
Risk Category	II
Site Class	C - Very Dense Soil and Soft Rock

Type	Value	Description
S_S	1.912	MCE_R ground motion. (for 0.2 second period)
S_1	0.849	MCE_R ground motion. (for 1.0s period)
S_{MS}	1.912	Site-modified spectral acceleration value
S_{M1}	1.104	Site-modified spectral acceleration value
S_{DS}	1.275	Numeric seismic design value at 0.2 second SA
S_{D1}	0.736	Numeric seismic design value at 1.0 second SA

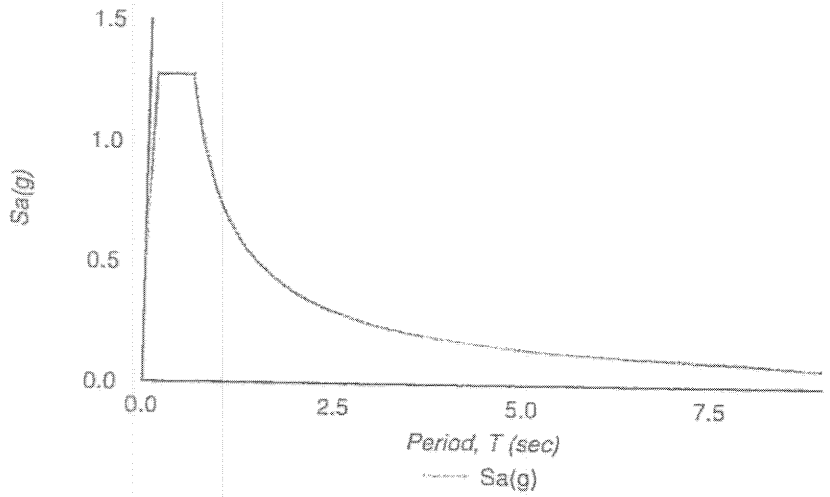
Type	Value	Description
SDC	E	Seismic design category
F_a	1	Site amplification factor at 0.2 second
F_v	1.3	Site amplification factor at 1.0 second
PGA	0.745	MCE_G peak ground acceleration
F_{PGA}	1	Site amplification factor at PGA
PGA_M	0.745	Site modified peak ground acceleration
T_L	8	Long-period transition period in seconds
SsRT	2.439	Probabilistic risk-targeted ground motion. (0.2 second)
SsUH	2.568	Factored uniform-hazard (2% probability of exceedance in 50 years) spectral acceleration
SsD	1.912	Factored deterministic acceleration value. (0.2 second)
S1RT	1.007	Probabilistic risk-targeted ground motion. (1.0 second)
S1UH	1.101	Factored uniform-hazard (2% probability of exceedance in 50 years) spectral acceleration.
D	0.849	Factored deterministic acceleration value. (1.0 second)
GAd	0.745	Factored deterministic acceleration value. (Peak Ground Acceleration)
C_{RS}	0.95	Mapped value of the risk coefficient at short periods

Type	Value	Description
C_{R1}	0.915	Mapped value of the risk coefficient at a period of 1 s

MCER Response Spectrum



Design Response Spectrum



U.S. Geological Survey - Earthquake Hazards Program

Unified Hazard Tool

Please do not use this tool to obtain ground motion parameter values for the design code reference documents covered by the U.S. Seismic Design Maps web tools (e.g., the International Building Code and the ASCE 7 or 41 Standard). The values returned by the two applications are not identical.

^ Input

Edition

Dynamic: Conterminous U.S. 2014 ...

Spectral Period

Peak Ground Acceleration

Latitude

Decimal degrees

33.554734

Time Horizon

Return period in years

475

Longitude

Decimal degrees, negative values for western longitudes

-116.700301

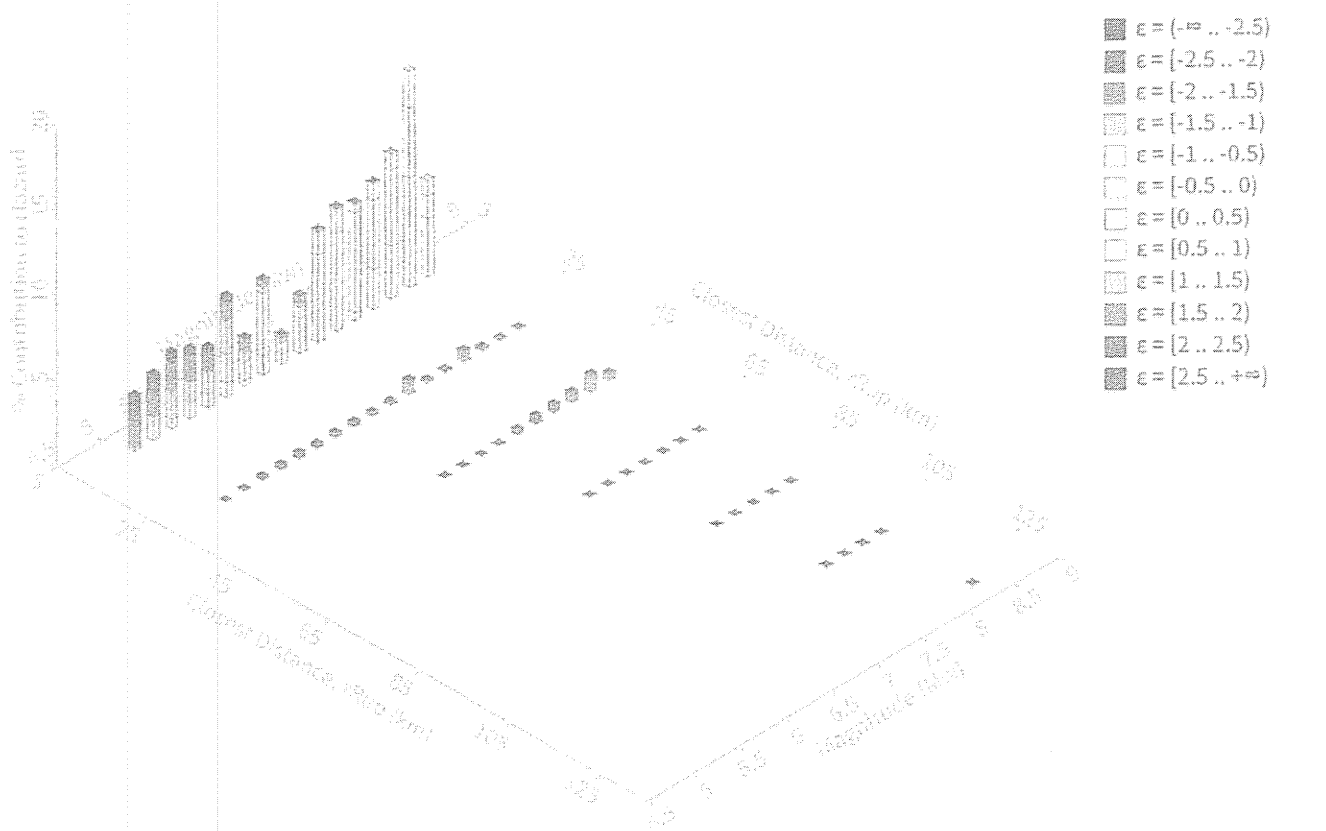
Site Class

360 m/s (C/D boundary)

Deaggregation

Component

Total



Summary statistics for, Deaggregation: Total

Deaggregation targets

Return period: 475 yrs
Exceedance rate: 0.0021052632 yr^{-1}
PGA ground motion: 0.54387778 g

Recovered targets

Return period: 498.0231 yrs
Exceedance rate: 0.002007939 yr^{-1}

Totals

Binned: 100 %
Residual: 0 %
Trace: 0.13 %

Mean (over all sources)

m: 7.03
r: 8.48 km
ε_0: 0.71 σ

Mode (largest m-r bin)

m: 8.1
r: 4.69 km
ε_0: 0.09 σ
Contribution: 12.79 %

Mode (largest m-r-ε_0 bin)

m: 8.11
r: 4.61 km
ε_0: -0.09 σ
Contribution: 6.45 %

Discretization

r: min = 0.0, max = 1000.0, Δ = 20.0 km
m: min = 4.4, max = 9.4, Δ = 0.2
ε: min = -3.0, max = 3.0, Δ = 0.5 σ

Epsilon keys

ε0: [-∞ .. -2.5)
ε1: [-2.5 .. -2.0)
ε2: [-2.0 .. -1.5)
ε3: [-1.5 .. -1.0)
ε4: [-1.0 .. -0.5)
ε5: [-0.5 .. 0.0)
ε6: [0.0 .. 0.5)
ε7: [0.5 .. 1.0)
ε8: [1.0 .. 1.5)
ε9: [1.5 .. 2.0)
ε10: [2.0 .. 2.5)
ε11: [2.5 .. +∞]

Deaggregation Contributors

Source Set ↳ Source	Type	r	m	ε_0	lon	lat	az	%
UC33brAvg_FM31	System							34.05
San Jacinto (Anza) rev [3]		4.61	7.63	0.19	116.671°W	33.588°N	36.02	29.90
San Andreas (San Gorgonio Pass-Garnet Hill) [4]		41.17	7.92	1.88	116.538°W	33.899°N	21.40	1.05
UC33brAvg_FM32	System							33.71
San Jacinto (Anza) rev [3]		4.61	7.63	0.19	116.671°W	33.588°N	36.02	29.76
San Andreas (San Gorgonio Pass-Garnet Hill) [4]		41.17	7.92	1.88	116.538°W	33.899°N	21.40	1.05
UC33brAvg_FM31 (opt)	Grid							16.12
PointSourceFinite: -116.700, 33.604		7.48	5.64	1.15	116.700°W	33.604°N	0.00	2.23
PointSourceFinite: -116.700, 33.604		7.48	5.64	1.15	116.700°W	33.604°N	0.00	2.23
PointSourceFinite: -116.700, 33.649		11.05	5.76	1.59	116.700°W	33.649°N	0.00	1.60
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PointSourceFinite: -116.700, 33.613		8.04	5.71	1.21	116.700°W	33.613°N	0.00	1.60
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PointSourceFinite: -116.700, 33.658		11.45	5.90	1.56	116.700°W	33.658°N	0.00	1.11
PointSourceFinite: -116.700, 33.658		11.45	5.90	1.56	116.700°W	33.658°N	0.00	1.11
UC33brAvg_FM32 (opt)	Grid							16.12
PointSourceFinite: -116.700, 33.604		7.48	5.64	1.15	116.700°W	33.604°N	0.00	2.23
PointSourceFinite: -116.700, 33.604		7.48	5.64	1.15	116.700°W	33.604°N	0.00	2.23
PointSourceFinite: -116.700, 33.649		11.05	5.76	1.59	116.700°W	33.649°N	0.00	1.60
PointSourceFinite: -116.700, 33.649		11.05	5.76	1.59	116.700°W	33.649°N	0.00	1.60
PointSourceFinite: -116.700, 33.613		8.04	5.71	1.21	116.700°W	33.613°N	0.00	1.60
PointSourceFinite: -116.700, 33.613		8.04	5.71	1.21	116.700°W	33.613°N	0.00	1.59
PointSourceFinite: -116.700, 33.658		11.45	5.90	1.56	116.700°W	33.658°N	0.00	1.11
PointSourceFinite: -116.700, 33.658		11.45	5.90	1.56	116.700°W	33.658°N	0.00	1.11

Appendix F

Treatment Control BMP Sizing Calculations and Design Details

Not Applicable

Appendix G

Agreements – CC&Rs, Covenant and Agreements and/or Other Mechanisms for ensuring ongoing Operation, Maintenance, Funding and Transfer of Requirements for this project-specific WQMP

Not Available at this time
To Be Included in the F-WQMP

Appendix H

Phase 1 Environmental Site Assessment – Summary of Site Remediation Conducted and Use Restrictions

Not Available

Appendix G

Noise and Vibration Study

Anza Electric Cooperative Electricity Transmission Line Project

Noise and Vibration Study

prepared for

Anza Electric Cooperative, Inc.
58470 U.S. Highway 371
Anza, California 92539

prepared by

Rincon Consultants, Inc.
301 9th Street, Suite 109
Redlands, California 92374

August 2022

RINCON CONSULTANTS, INC.
Environmental Scientists | Planners | Engineers
rinconconsultants.com

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Tables

Figures

Appendices

1 Project Description and Impact Summary

1.1 Introduction

This study analyzes the potential noise and vibration impacts of the proposed Anza Electric Cooperative Electricity Transmission Line Project (project). Rincon Consultants, Inc. located within the unincorporated Riverside County. (Rincon) prepared this study under contract to Anza Electric Cooperative, Inc. (AEC) for use by Riverside County, the lead agency. The study evaluates the short- and long-term impacts of the project to noise-sensitive receivers. Table 1 provides a summary of project impacts.

Table 1 Summary of Impacts

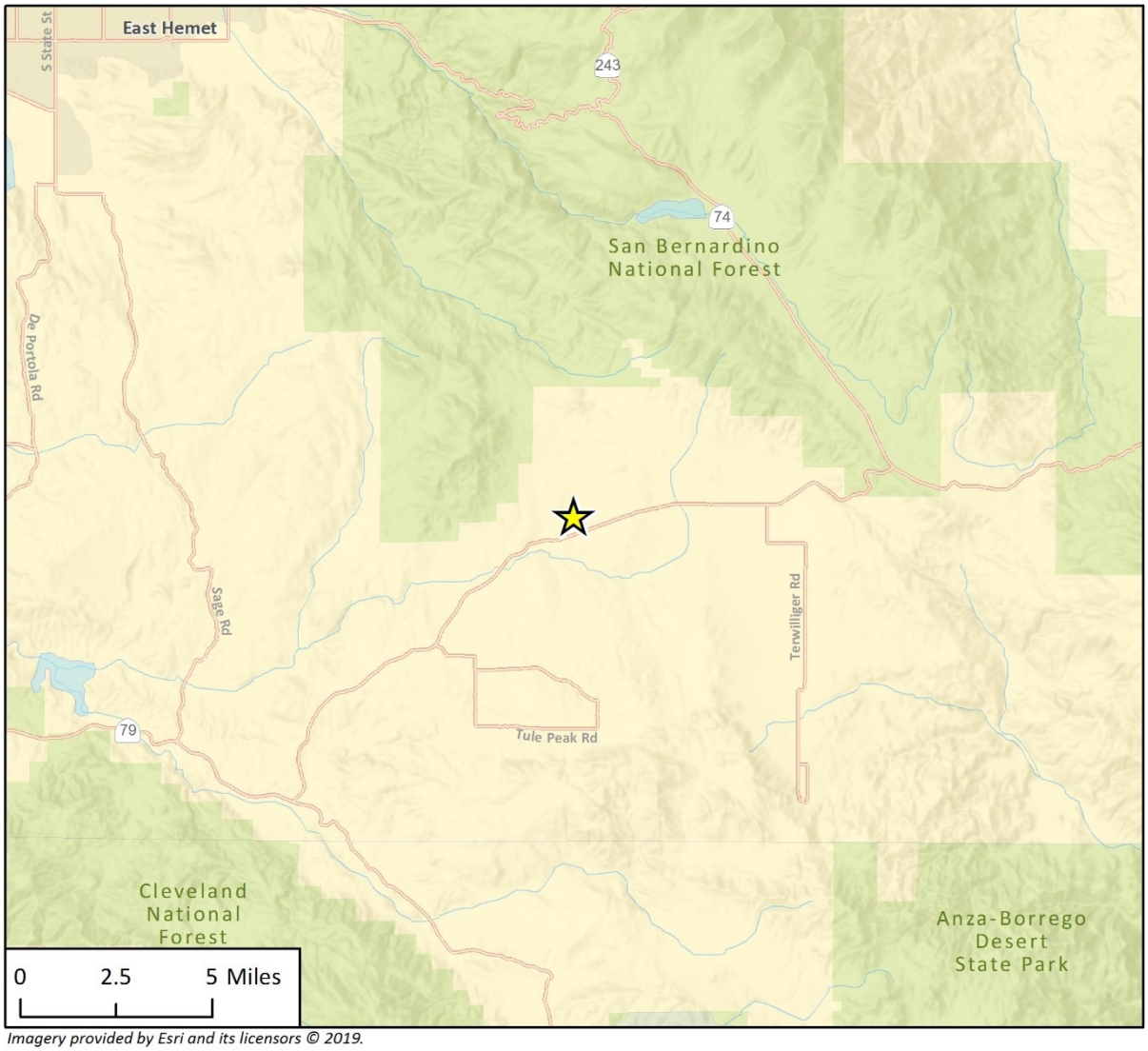
Impact Statement	Proposed Project's Level of Significance	Applicable Recommendations
A substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	Less than significant impact	None
Generation of excessive groundborne vibration or groundborne noise levels?	Less than significant impact	None
For a project located within the vicinity of a private airstrip or 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, exposure of people residing or working in the project area to excessive noise levels?	No impact	None

1.2 Project Summary

Project Location

The proposed project is in Riverside County, California, as shown in Figure 1. The project components would be located primarily within the rights-of-way of CA State Route 371 (SR 371) in the unincorporated community of Anza, California. The remainder of the project alignment would be located within existing AEC utility easements that are generally north of SR 371 and along existing local roadways. The project location and alignment are shown in Figure 2. The project alignment begins east of the proposed Bautista substation and proceeds along SR 371 for approximately 3.1 miles, ending at the intersection of Kirby Road and SR 371, where it would connect to an existing transmission line. The project site includes Assessor's Parcel Number 576-060-040 for the proposed Bautista Substation and 96 parcels for the proposed realignment. Given the scope of the project, the project site has multiple zoning designations, including R-R-2.5, R-R-5 and R-R-20 (Rural Residential); C-1/CP (General Commercial); C-P-S (Scenic Highway Commercial); M-M (Manufacturing – Medium); and M-SC (Manufacturing – Service Commercial). The project site also has multiple General Plan land use designations, including Rural Residential, Rural Community – Estate Density Residential, Rural Community – Very Low Density Residential, Agriculture, Light Industrial, and Commercial Retail.

Figure 1 Regional Project Location



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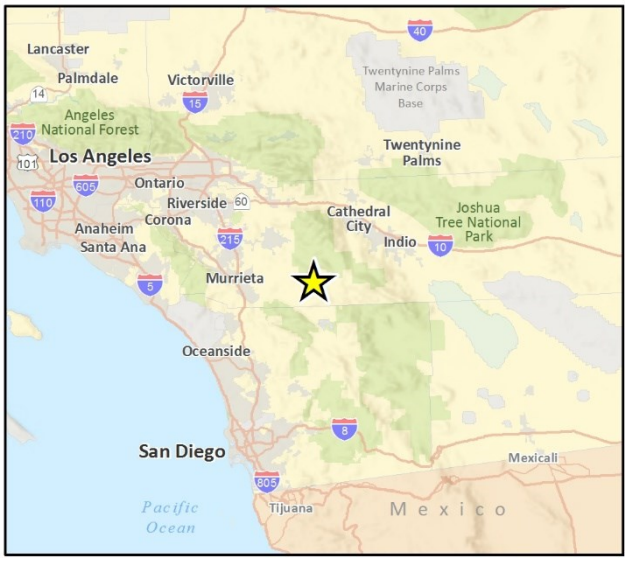
Project Location

N



Bio Fig 1 Regional Location

Figure 2 Project Site Location

Imagery provided by ESRI and its licensors © 2021.

Fig 2 Project Location 2210707

AEC's existing land-based utilities systems in the project area consist of wooden utility poles, approximately 35 to 45 feet in height with single- or three-phase crossarm mounted distribution lines attached. The existing poles currently carry electric power distribution lines. The project site is defined as the footprint of the existing electrical utilities system components and the approximately 3.1-mile-long corridor along SR 371 and local roadways for the new upgrades that will be installed on existing poles. The project area is defined as the 50-foot-wide access corridor along SR 371 and the 40-foot-wide access corridor along local roadways, the construction laydown areas, and the access roads that would be used for construction.

Project Description

The project would replace the existing electricity transmission lines with approximately 3.1 miles of realigned 34.5-kilovolt (kV) transmission lines and would construct the Bautista Substation. The new transmission lines would be strung on existing utilities poles. The proposed Bautista Substation would consist of electrical distribution facilities; the preliminary site layout for the substation is shown in Figure 3.

Construction Activities

Construction of all project components would occur over approximately 7 months beginning as early as January 2022. Construction of the project would include the following types of activities:

- Site preparation
- Grading and earthwork
- Concrete foundations Structural steel work
- Electrical/instrumentation work
- Pole installation
- Collector line installation

Construction traffic would access the project from SR 371 and existing local roads. It is estimated that up to four workers per day (during all construction periods) would be required to construct the project. On-road traffic would consist of employee and vendor vehicle trips. It is estimated the project would require five vendor deliveries during the pole placement and substation construction.

Construction activities would occur Monday through Friday within the County's allowed construction hours, which are 6:00 a.m. and 6:00 p.m., during the months of June through September and 7:00 a.m. and 6:00 p.m., during the months of October through May. No nighttime activities are anticipated. Materials and supplies would be delivered to the project site by truck. Truck deliveries would normally occur during daylight hours.

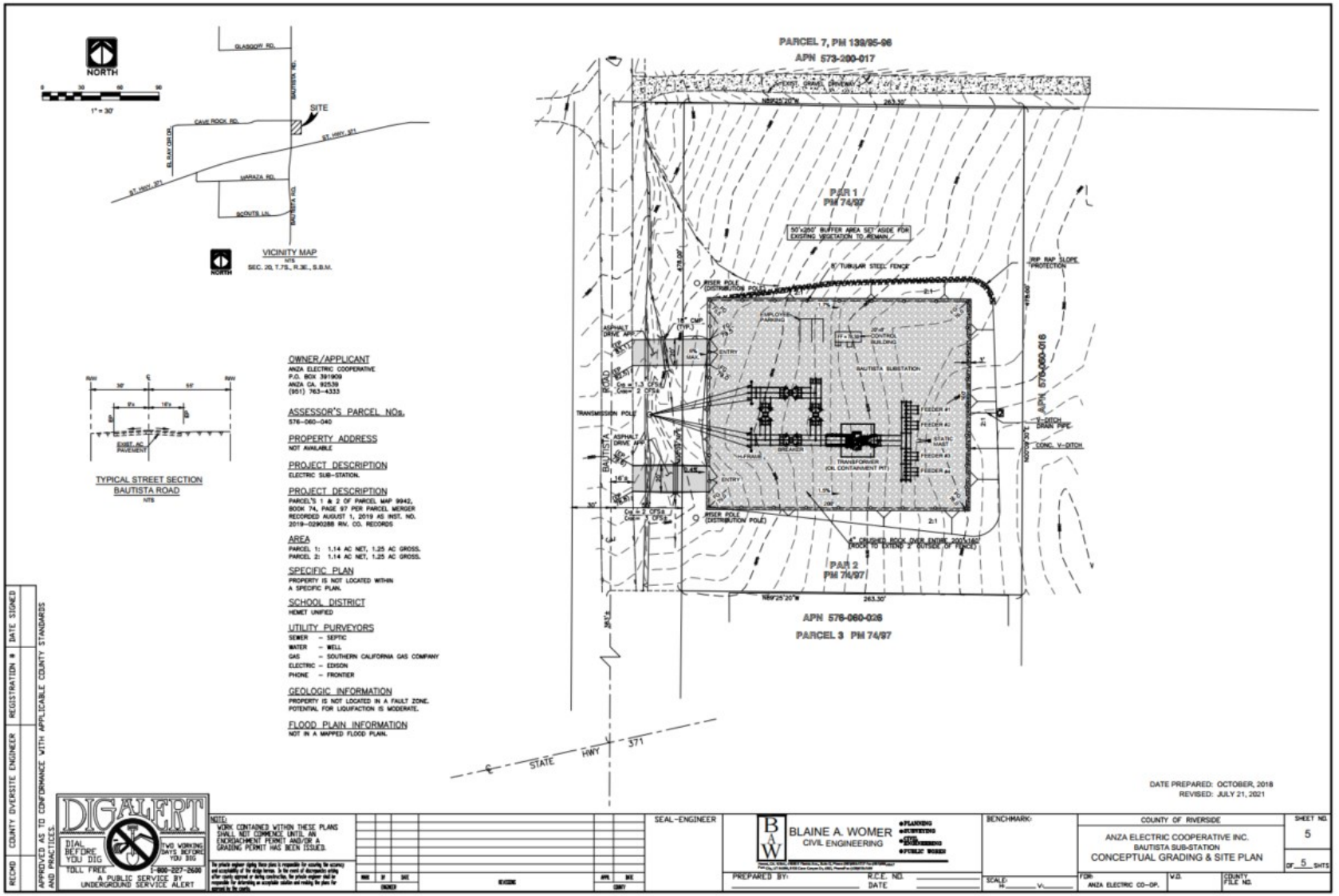
Earthmoving activities are expected to be limited to the construction/improvement of necessary access roads and the substation. Final grading may include revegetation with low lying grass or applying earth-binding materials to disturbed areas.

Operational Activities

Once completed, the project would generally be limited to maintenance and inspection. The project would operate continuously, seven days a week. The project would not require a dedicated operations staff. Maintenance and inspection activities are anticipated to occur once a year. Noise

sources during operation would consist of the proposed transformer at the substation, potential noise from collector lines, and facility maintenance traffic.

Figure 3 Preliminary Substation Layout



2 Background

2.1 Overview of Sound Measurement

Sound is a vibratory disturbance created by a moving or vibrating source, which is capable of being detected by the hearing organs. Noise is defined as sound that is loud, unpleasant, unexpected, or undesired and may therefore be classified as a more specific group of sounds. The effects of noise on people can include general annoyance, interference with speech communication, sleep disturbance, and, in the extreme, hearing impairment (Caltrans 2013).

In technical terms, sound levels are described as either a "sound power level" or a "sound pressure level," which while easily confused are two distinct characteristics of sound. Both share the same unit of measure, the decibel (dB). However, the sound power level, expressed as L_w, is the energy converted into sound by the source. As sound energy travels through the air, it creates a sound wave in the air that exerts pressure on receivers such as an eardrum or microphone, which is called the sound pressure level (SPL). Sound measurement instruments only measure SPL, and limits used in standards are generally SPL. Modeling uses the L_w of noise sources to calculate the SPL at a distance.

Noise levels are commonly measured in dB using the A-weighted sound pressure level (dBA). The A-weighting scale is an adjustment to the actual sound pressure levels so that they are consistent with the human hearing response, which is most sensitive to frequencies around 4,000 Hertz and less sensitive to frequencies around and below 100 Hertz (Kinsler, et. al. 1999). Decibels are measured on a logarithmic scale that quantifies sound intensity in a manner similar to the Richter scale used to measure earthquake magnitudes. A doubling of the energy of a noise source, such as doubling of the amount of traffic, would increase the noise level by 3 dB; dividing the energy in half would result in a 3 dB decrease (Crocker 2007).

Human perception of noise has no simple correlation with sound energy: the perception of sound is not linear in terms of dBA or in terms of sound energy. Two sources do not "sound twice as loud" as one source. It is widely accepted that the average healthy ear can barely perceive changes of 3 dBA, increase or decrease (i.e., twice the sound energy); that a change of 5 dBA is readily perceptible (approximately three times the sound energy); and that an increase (or decrease) of 10 dBA sounds twice (half) as loud ([10.5x the sound energy] Crocker 2007).

Sound changes in both level and frequency spectrum as it travels from the source to the receiver. The most obvious change is the decrease in level as the distance from the source increases. The manner by which noise reduces with distance depends on factors such as the type of sources (e.g., point or line), the path the sound will travel, site conditions, and obstructions. Noise levels from a point source typically attenuate, or drop off, at a rate of 6 dBA per doubling of distance (e.g., construction, industrial machinery, ventilation units). Noise from a line source (e.g., roadway, pipeline, railroad) typically attenuates at about 3 dBA per doubling of distance (Caltrans 2013). The propagation of noise is also affected by the intervening ground, known as ground absorption. A hard site, such as a parking lot or smooth body of water, receives no additional ground attenuation and the changes in noise levels with distance (drop-off rate) result from simply the geometric spreading of the source. An additional ground attenuation value of 1.5 dBA per doubling of distance applies to a soft site (e.g., soft dirt, grass, or scattered bushes and trees) (Caltrans 2013). Noise levels may also be reduced by intervening structures; the amount of attenuation provided by this "shielding" depends on the size of the object, the composition of the object, and the frequencies of the noise levels. Natural terrain

features such as hills and dense woods, and man-made features such as buildings and walls, can significantly alter noise levels. Generally, any large structure blocking the line of sight will provide at least a 5-dBA reduction in source noise levels at the receiver (Federal Highway Administration [FHWA] 2017). Structures can substantially reduce interior exposure to exterior noise as well. The FHWA's guidelines indicate that modern building construction generally provides an exterior-to-interior noise level reduction of 20 to 35 dBA with closed windows.

The impact of noise is not a function of loudness alone. The time of day when noise occurs and the duration of the noise are also important factors of project noise impact. Most noise that lasts for more than a few seconds is variable in its intensity. Consequently, a variety of noise descriptors have been developed. One of the most frequently used noise metrics is the equivalent noise level (L_{eq}); it considers both duration and sound power level. L_{eq} is defined as the single steady A-weighted level equivalent to the same amount of energy as that contained in the actual fluctuating levels over time. Typically, L_{eq} is summed over a one-hour period. L_{max} is the highest root mean squared (RMS) sound pressure level within the sampling period, and L_{min} is the lowest RMS sound pressure level within the measuring period (Crocker 2007).

Noise that occurs at night tends to be more disturbing than that occurring during the day. Community noise is usually measured using Day-Night Average Level (L_{dn}), which is the 24-hour average noise level with a +10 dBA penalty for noise occurring during nighttime (10:00 p.m. to 7:00 a.m.) hours. The relationship between the peak-hour L_{eq} value and the L_{dn} depends on the distribution of noise sources during the day, evening, and night.

2.2 Vibration

Groundborne vibration of concern in environmental analysis consists of the oscillatory waves that move from a source through the ground to adjacent structures. The number of cycles per second of oscillation makes up the vibration frequency, described in terms of Hz. The frequency of a vibrating object describes how rapidly it oscillates. The normal frequency range of most groundborne vibration that can be felt by the human body is from a low of less than 1 Hz up to a high of about 200 Hz (Crocker 2007).

While people have varying sensitivities to vibrations at different frequencies, in general they are most sensitive to low-frequency vibration. Vibration in buildings, such as from nearby construction activities, may cause windows, items on shelves, and pictures on walls to rattle. Vibration of building components can also take the form of an audible low-frequency rumbling noise, referred to as groundborne noise (FTA 2018). Although groundborne vibration is sometimes noticeable in outdoor environments, it is almost never annoying to people who are outdoors. The primary concern from vibration is that it can be intrusive and annoying to building occupants and vibration-sensitive land uses.

Vibration energy spreads out as it travels through the ground, causing the vibration level to diminish with distance away from the source. High-frequency vibrations diminish much more rapidly than low frequencies, so low frequencies tend to dominate the spectrum at large distances from the source. Discontinuities in the soil strata can also cause diffractions or channeling effects that affect the propagation of vibration over long distances (Caltrans 2020). When a building is impacted by vibration, a ground-to-foundation coupling loss will usually reduce the overall vibration level. However, under rare circumstances, the ground-to-foundation coupling may actually amplify the vibration level due to structural resonances of the floors and walls.

Vibration amplitudes are usually expressed in peak particle velocity (ppv) or RMS vibration velocity. The ppv and RMS velocity are normally described in inches per second (in/sec). The ppv is defined as the maximum instantaneous positive or negative peak of a vibration signal (Caltrans 2020). Caltrans developed a guidance manual for specifically assessing vibration impacts associated with construction and also compiled vibration research and recommended limits for vibration based on the source. Table 2 summarizes the vibration limits recommended by the American Association of State Highway and Transportation Officials for structural damage to buildings.

Table 2 Maximum Vibration Levels for Preventing Damage

Type of Situation	In./sec. ppv
Historic sites or other critical locations	0.1
Residential buildings, plastered walls	0.2–0.3
Residential buildings in good repair with gypsum board walls	0.4–0.5
Engineered structures, without plaster	1.0–1.5

Source: Caltrans 2020

In addition to the potential for building damage, the human body to responds to vibration signals. However, unlike buildings, which are rigid, it takes some time for the human body to respond to visitation. In a sense, a building responds to the instantaneous movement while the human body responds to average vibration amplitude, which similar to noise levels, is measured as rms. The averaging of the particle generally results in the rms conservatively being equivalent to 71 percent of the ppv. Thus, human annoyance usually results in a more restrictive vibration limit than structural damage limits.

Numerous studies have been conducted to characterize the human response to vibration. Vibration significance in humans ranges from approximately 0.0013 in./sec. ppv (0.0003 in. sec. rms), which is the typical background vibration-velocity level, to 0.4 in./sec. ppv (0.1 in./sec. rms), the general threshold where minor damage can occur in fragile buildings (FTA 2018). The general human response to different levels of groundborne vibration velocity levels is described in Table 3 and Table 4.

Table 3 Human Response to Steady State Vibration

Human Response	In./sec. ppv
Very disturbing	3.6 (at 2 Hz)–0.4 (at 20 Hz)
Disturbing	0.7 (at 2 Hz)–0.17 (at 20 Hz)
Strongly perceptible	0.10
Distinctly perceptible	0.035
Slightly perceptible	0.012

Source: Caltrans 2020

Table 4 Human Response to Transient Vibration

Human Response	In./sec. ppv
Severe	2.0
Strongly perceptible	0.9
Distinctly perceptible	0.24
Barely perceptible	0.035

Source: Caltrans 2020

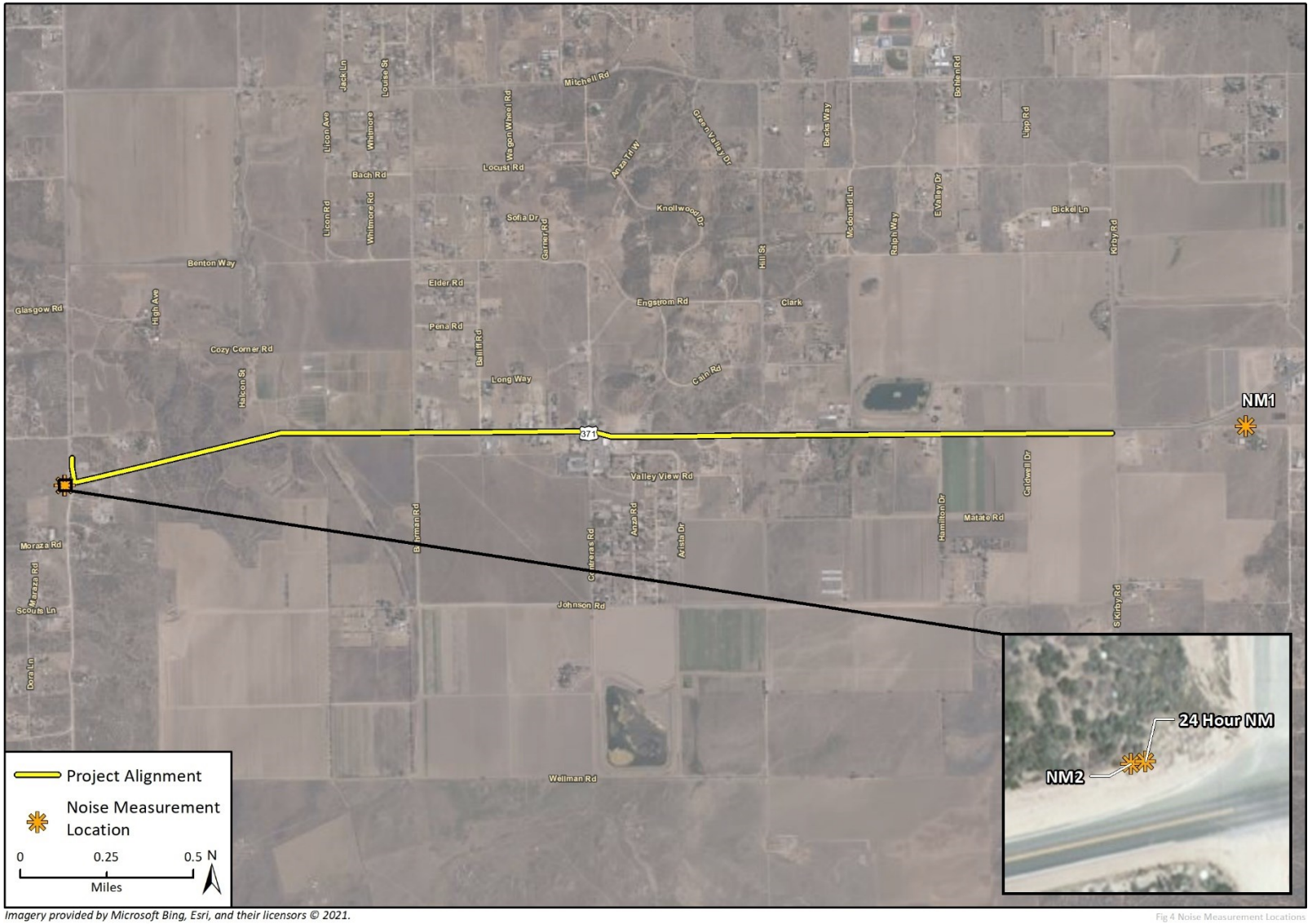
For purposes of assessing vibrations impacts to humans, vibrations would potentially be significant if vibration levels exceeded distinctly perceptible levels in occupied off-site structures, i.e., in excess of 0.035 in./sec. ppv from project operation or in excess of 0.24 in./sec. ppv from project related construction. Regardless of whether a structure is occupied, a vibration level in excess 1.5 in./sec. ppv at any structure could result in adverse impacts.

2.3 Existing Project Area Noise Levels

The project site is located in a rural desert environment with scattered rural residential uses. The primary sources of noise on-site noise and in the surrounding area is motor vehicles, wind, and fauna (birds, small mammals, etc.). The greatest vehicle noise would occur from vehicles on the main thoroughfare (SR 371). Additional noise sources in the area include aircraft associated with the occasional fly overs.

To evaluate existing noise levels in the area, two 15-minute noise measurements (ST1 and ST2) and one 24-hour noise measurement (LT1) were taken along the project alignment and near the proposed substation on November 12 and 13, 2019, using an ANSI Type II integrating sound level meter. Figure 4 shows the locations of the noise measurements. The noise measurement locations were chosen to provide a representative range of ambient noise levels across the project site and in the nearby area, especially near existing noise-sensitive residences and roadways. The short-term noise measurement results are shown in Table 5, and the long-term results are shown in Table 6. Based on the long-term measurement, the proposed substation site and nearby properties close to SR 371 are exposed to noise levels between 48 and 71 dBA L_{eq} depending on the time of day. Assuming standard distance attenuation for a line source (i.e., the highway) of 3 dBA per doubling of distance, the exterior use area of the nearest sensitive receiver, located approximately 180 feet from the centerline of SR 371, is exposed to noise levels between 42 and 65 dBA L_{eq} depending on the time of day. Detailed noise measurement outputs are included in Appendix A.

Figure 4 Noise Measurement Locations



Imagery provided by Microsoft Bing, Esri, and their licensors © 2021.

Fig 4 Noise Measurement Locations

Table 5 Noise Monitoring Results in the Project Site Vicinity – Short Term

Measurement Number	Measurement Location	Sample Times	Noise Level (dBA L_{eq})[1]
1	South East Corner of SR 371 and Burnt Valley Road	12:10 – 12:25 p.m.	56.7
2	Southwest corner of SR 371 and Bautista Road (LT1 Location)	10:19 – 10:34 a.m.	65.5

See Figure 4 for noise measurement locations.

[1] The equivalent noise level (L_{eq}) is defined as the single steady A-weighted level that is equivalent to the same amount of energy as that contained in the actual fluctuating levels over a period of time (essentially, the average noise level). For these measurements, the L_{eq} was over a 15-minute period.

Source: Rincon Consultants, short-term measurements conducted on November 12, 2019, using ANSI Type II Integrating sound level meter. See Appendix A.

Table 6 Project Site Noise Monitoring Results – Long Term

Time	dBA L_{eq}	Time	dBA L_{eq}
10:00	68.0	22:00	65.7
11:00	67.8	23:00	63.5
12:00	67.5	0:00	52.0
13:00	67.9	1:00	65.7
14:00	67.9	2:00	48.1
15:00	67.7	3:00	60.6
16:00	68.9	4:00	61.6
17:00	67.8	5:00	64.6
18:00	64.2	6:00	67.3
19:00	61.0	7:00	71.0
20:00	64.3	8:00	68.7
21:00	62.7	9:00	69.7

See Figure 4 for noise measurement location.

Source: Rincon Consultants, long-term measurement conducted on November 12-13, 2019, using ANSI Type II Integrating sound level meter. See Appendix A.

2.4 Regulatory Setting

Riverside County Noise Element

The County of Riverside has adopted a Noise Element of the General Plan to control and abate environmental noise, and to protect the citizens of County of Riverside from excessive exposure to noise. The Noise Element specifies the maximum allowable exterior noise levels for new developments impacted by transportation noise sources such as arterial roads, freeways, airports and railroads. In addition, the Noise Element identifies several polices to minimize the impacts of excessive noise levels throughout the community, and establishes noise level requirements for all land uses. To protect County of Riverside residents from excessive noise, the Noise Element contains the following policies related to the project:

N 1.1 Protect noise-sensitive land uses from high levels of noise by restricting noise-producing land uses from these areas. If the noise-producing land use cannot be relocated, then noise buffers such as setbacks, landscaping, or block walls shall be used.

N 1.3 Consider the following uses noise-sensitive and discourage these uses in areas in excess of 65 CNEL:

- Schools
- Hospitals
- Rest Homes
- Long Term Care Facilities
- Mental Care Facilities
- Residential Uses
- Libraries
- Passive Recreation Uses
- Places of Worship

N 1.5 Prevent and mitigate the adverse impacts of excessive noise exposure on the residents, employees, visitors, and noise-sensitive uses of Riverside County. N 1.7 Require proposed land uses, affected by unacceptable high noise levels, to have an acoustical specialist prepare a study of the noise problems and recommend structural and site design features that will adequately mitigate the noise problem.

N 4.1 Prohibit facility-related noise, received by any sensitive use, from exceeding the following worst-case noise levels: a. 45 dBA 10-minute L_{eq} between 10:00 p.m. and 7:00 a.m.; b. 65 dBA 10-minute Leq between 7:00 a.m. and 10:00 p.m.

N 13.1 Minimize the impacts of construction noise on adjacent uses within acceptable standards.

N 13.2 Ensure that construction activities are regulated to establish hours of operation in order to prevent and/or mitigate the generation of excessive or adverse impacts on surrounding areas.

N 13.3 Condition subdivision approval adjacent to developed/occupied noise-sensitive land uses (see policy N 1.3) by requiring the developer to submit a construction-related noise mitigation plan to the City for review and approval prior to issuance of a grading permit. The plan must depict the location of construction equipment and how the noise from this equipment will be mitigated during construction of this project, through the use of such methods as:

I. Temporary noise attenuation fences;

II. Preferential location and equipment; and iii. Use of current noise suppression technology and equipment.

Riverside County Municipal Code

Chapter 9.52 of the Riverside County Code pertains to noise control within the County's boundaries. The County's Municipal Code establishes exterior noise limits for non-transportation noise sources by receiving land use. Table 7 outlines the County's exterior noise level standards.

Construction

To control noise impacts associated with the construction of the proposed project, the County has established limits to the hours of operation. Section 9.52.020 of the County's Noise Regulation ordinance indicates that noise associated with any private construction activity located within one-quarter of a mile from an inhabited dwelling is considered exempt between the hours of 6:00 a.m. and 6:00 p.m., during the months of June through September, and 7:00 a.m. and 6:00 p.m., during the months of October through May. Neither the County's General Plan nor Municipal Code establish quantifiable construction noise levels limits.

To evaluate whether the project will generate a substantial periodic increase in short-term noise levels at off-site sensitive receiver locations, this analysis uses a construction-related noise level threshold based on the FTA's *Transit Noise and Vibration Assessment Manual* recommended noise level criteria for determining construction noise impacts as outlined in Table 8.

Table 7 Riverside County Code Noise Level Standards

General Plan Foundation Component	General Plan Land Use Designation	General Plan Land Use Designation Name	Density (ac)	Maximum Decibel Level	
				7:00 a.m. - 10:00 p.m.	10:000 p.m. - 7:00 a.m.
Community Development	EDR	Estate Density Residential	2	55	45
	VLDR	Very Low density Residential	1	55	45
	LDR	Low Density Residential	1/2	55	45
	MDR	Medium Density Residential	2-5	55	45
	MHDR	Medium High Density Residential	5-8	55	45
	HDR	High Density Residential	8-14	55	45
	VHDR	Very High Density Residential	14-20	55	45
	H'TDR	Highest Density Residential	20+	55	45
	CR	Retail Commercial		65	55
	CO	Office Commercial		65	55
	CT	Tourist Commercial		65	55
	CC	Community Center		65	55
	LI	Light Industrial		75	55
	HI	Heavy Industrial		75	75
	BP	Business Park		65	45
	PF	Public Facility		65	45
	SP	Specific Plan-Residential		55	45
		Specific Plan-Commercial		65	55
		Specific Plan-Light Industrial		75	55
		Specific Plan-Heavy Industrial		75	75
Rural Community	EDR	Estate Density Residential	2	55	45
	VLDR	Very Low Density Residential	1	55	45
	LDR	Low Density Residential	1/2	55	45
Rural	RR	Rural Residential	5	45	45
	RM	Rural Mountainous	10	45	45
	RD	Rural Desert	10	45	45
Agriculture	AG	Agriculture	10	45	45
Open Space	C	Conservation		45	45
	CH	Conservation Habitat		45	45
	REC	Recreation		45	45
	RUR	Rural	20	45	45
	W	Watershed		45	45
	MR	Mineral Resources		75	45

Source: Riverside County Code Section 9.52.040

Table 8 Construction Noise Criteria

Land Use	dBA L_{eq} 8-hour	
	Day	Night
Residential	80	70
Commercial	85	85
Industrial	90	90

Source: FTA 2018

3 Impact Analysis

3.1 Methodology

The project is located in a rural area, with nearby noise-sensitive receivers being single-family residences along the transmission line alignment and near the proposed substation. The nearest residences are approximately 50 feet from the proposed transmission line alignment, and the nearest residence to the substation is approximately 130 feet from the proposed transformer. For the analysis, it is assumed that transmission line alignment construction would move approximately 600 foot per day.

Construction Noise

The FHWA's software program Roadway Construction Noise Model (RCNM) was used to estimate construction noise at nearby sensitive receivers. Construction noise modeling results are provided in Appendix B. The types of construction equipment that would be used on-site were provided by AEC. RCNM provides reference noise levels at the standard distance of 50 feet and estimates noise levels at nearby sensitive receivers based on a standard noise attenuation rate of 6 dB per doubling of distance. In addition, RCNM does not consider topography or other environmental factors that attenuate noise. The average noise levels (L_{eq}) from all combined equipment were modeled at the nearest noise-sensitive receivers. Noise levels were modeled from the use of equipment at the substation parcel and the transmission line alignment. Based on the construction data provided by AEC, construction would occur sequentially, and no phases would overlap. It is estimated that a maximum of four employees would be required for each phase of construction and up to five material deliveries would be required.

On-Site Operational Noise

Propagation of stationary noise sources was based on ISO Standard 9613-2, "Attenuation of Sound during Propagation Outdoors, Part 2: General Method of Calculation." The assessment methodology assumes that all receivers would be downwind of stationary sources. This is a worst-case assumption for total noise impacts, since, in reality only some receivers would be downwind at any one time.

Operational noise sources from the project include the substation transformer, transmission lines, and the facility maintenance. Details of each source are provided under Section 3.2.

Operational Traffic Noise

Vehicle trips generated by project operational activities are estimated based on existing and existing plus project traffic volumes. The ongoing maintenance and inspection is estimated to result in four annual roundtrips for two employees, or two roundtrips per employee per year.

3.2 Significance Thresholds

To determine whether a project would have a significant noise impact, Appendix G of the CEQA Guidelines requires consideration of whether a project would result in:

1. A substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;
2. Generation of excessive groundborne vibration or groundborne noise levels; and/or
3. For a project located within the vicinity of a private airstrip or 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, exposure of people residing or working in the project area to excessive noise levels.

Construction Noise

For purposes of analyzing construction noise impacts from this project, the FTA *Transit Noise and Vibration Impact Assessment Manual* (FTA 2018) detailed analysis construction noise criteria were used. The FTA provides reasonable criteria for assessing construction noise impacts based on the potential for adverse community reaction. For residential uses, the daytime noise threshold is 80 dBA L_{eq} for an 8-hour period (FTA 2018). In addition, Section 9.52.020 of the County's Noise Regulation ordinance indicates that noise associated with any private construction activity located within one-quarter of a mile from an inhabited dwelling is subject to the exterior noise limits established by the County's Noise Regulation ordinance (see Table 7) between the hours of 6:00 p.m. and 6:00 a.m., during the months of June through September, and 6:00 p.m. and 7:00 a.m. during the months of October through May.

On-Site Operational Noise

Operational noise would result in a significant impact if it would exceed Riverside County's standards (shown in Table 7) for exterior noise at the nearest noise-sensitive receivers. The operational noise limits used in this analysis are set at reasonable levels at which a substantial noise level increase as compared to ambient noise levels would occur. Operational noise limits are lower than construction noise limits to account for the fact that permanent noise level increases associated with continuous operational noise sources typically result in adverse community reaction at lower magnitudes of increase than temporary noise level increases associated with construction activities that occur during daytime hours and do not affect sleep. Furthermore, these noise limits are tailored to specific land uses; for example, the noise limits for residential land uses are lower than those for commercial land uses. The difference in noise limits for each land use indicates that the noise limits inherently account for typical ambient noise levels associated with each land use. Therefore, an increase in ambient noise levels that exceeds these absolute limits would also be considered a substantial increase above ambient noise levels. As such, a separate evaluation of the magnitude of noise level increases over ambient noise levels would not provide additional analytical information regarding noise impacts and therefore is not included in this analysis.

Operational Traffic Noise

As discussed in Section 2.1, *Overview of Sound Measurement*, the average healthy ear can barely perceive an increase of up to 3 dBA in noise levels, and a change of 5 dBA is readily perceptible. Based on this information, off-site traffic noise impacts would be significant if project-related traffic

would result if the project would increase off-site traffic noise levels by 3 dBA or greater. Generally, a doubling of traffic (i.e., a doubling of the sound energy) would result in a 3 dBA increase.

Vibration

Riverside County does not have adopted limits for determining significance of vibration impacts on structures or persons from construction. Caltrans has developed limits for the assessment of vibrations from transportation and construction sources. The Caltrans vibration limits are reflective of standard practice for analyzing vibration impacts on structures from continuous and intermittent sources. The Caltrans *Transportation and Construction Vibration Guidance Manual* (Caltrans 2020) identifies two impact criteria for buildings and humans: Table 9 presents the impact criteria for buildings, and Table 10 presents the impact criteria for humans. For this analysis, this criteria is used for determining vibration impacts.

Table 9 Caltrans Vibration Damage Potential

	Maximum ppv (in./sec.)	
Human Response	**Transient Sources**	**Continuous/Frequent Intermittent Sources**
Extremely fragile historic buildings, ruins, ancient monuments	0.12	0.08
Fragile buildings	0.2	0.1
Historic and some old buildings	0.5	0.25
Older residential structures	0.5	0.3
New residential structures	1.0	0.5
Modern industrial/commercial buildings	2.0	0.5

Note: Transient sources create a single isolated vibration event, such as blasting or drop balls. Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.

ppv = peak particle velocity; in./sec. = inches per second

Source: Caltrans 2020

Table 10 Caltrans Vibration Annoyance Potential

	Maximum ppv (in./sec.)	
Human Response	**Transient Sources**	**Continuous/Frequent Intermittent Sources**
Severe	0.04	0.01
Strongly perceptible	0.25	0.04
Distinctly perceptible	0.9	0.10
Barely perceptible	2.0	0.4

Note: Transient sources create a single isolated vibration event, such as blasting or drop balls. Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.

ppv = peak particle velocity; in./sec. = inches per second

Source: Caltrans 2020

3.3 Impact Analysis

CEQA Appendix G Noise Threshold 1
Would the proposed project generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Construction Noise

Construction of the project would involve the use of noise-generating equipment during various phases, heavy machinery used to replace transmission lines and construct the substation. Table 11 shows the noise levels associated with heavy construction equipment at a reference distance of 50 feet from the source. As shown in this table, noise levels at this distance can range from about 74 to 85 dBA, depending upon the types of equipment in operation at any given time and phase of construction (FHWA 2006). The highest noise levels during construction would likely result from grading and clearing the substation sites and transmission line alignment.

Table 11 Typical Construction Equipment Noise Levels

Equipment	Acoustical Usage Factor (%)[1]	Measured L_{max} (dBA at 50 feet)
Augur Drill Rig	20	84
Backhoe	40	78
Compactor (ground)	20	83
Concrete Mixer Truck	40	85
Crane	16	85
Dozer	40	82
Dump Truck	40	76
Excavator	40	81
Flat Bed Truck	40	74
Front End Loader	40	79
Generator	50	81
Grader	40	83
Pickup Truck	40	75
Pneumatic Tools	50	85
Roller	20	80
Scraper	40	84
Warning Horn	5	83
Welder/Torch	40	74

[1] The average fraction of time each piece of construction equipment is operating at full power (i.e., its loudest condition) during a construction operation.

Source: FHWA 2006

Project components would be constructed over seven-months, with 39 days of grading and clearing activities, 60 days of transmission line removal and replacement, and 50 days of construction associated with the substation. Based on information provided by AEC, the project would include the use of up to four pieces of heavy equipment during the construction of the substation and transmission line placement. Grading and clearing activities are anticipated to require three pieces of heavy equipment. As discussed in the project description, the project would not replace the

transmission lines simultaneously with construction of the substation. Construction activities would be subject to Riverside County policies and regulations. Heavy construction activities would normally occur on-site between the hours of 6:00 a.m. and 6:00 p.m., during the months of June through September and 7:00 a.m. and 6:00 p.m., during the months of October through May, which is during the allowed hours for construction listed in Section 9.52.020(I) of the Riverside County Code.

Replacement of electricity transmission lines may occur as close as 50 feet from residences. Noise levels from maximum construction activities would attenuate to approximately 77 dBA L_{eq} or less at 50 feet and maximum noise levels would reach up to 81 L_{max}. These noise levels would be less than the identified threshold of 80 dBA L_{eq} for residential land uses. Additionally, noise levels associated with transmission line replacement would be short in duration, as it typically takes one to two days to string new lines at each existing utility pole. Based on the estimated noise levels, these land uses would not be significantly impacted during transmission line replacement. While construction noise would be noticeable, the noise levels identified in this analysis are considered acceptable for construction activities during daytime hours and would not result in adverse impacts to local residents. Therefore, a less than significant impact would occur.

The nearest residence to the substation construction would be approximately 75 feet to the east of the substation pad. Construction of the substation would potentially involve the use a backhoe, crane, tractor, and a trencher. Based on the construction activity and a noise attenuation rate of 6 dBA per doubling of distance for point sources of noise, the construction noise levels would attenuate to 79 dBA L_{eq} at 75 feet and would result in a maximum noise level of 81 dBA L_{max}. These noise levels would be less than the identified threshold of 80 dBA L_{eq} for residential land uses. Therefore, a less than significant impact would occur.

Construction Traffic Noise

Construction of the project would increase traffic noise offsite from commuting construction workers and from haul trucks bringing materials to and from the project site. Project components would be constructed over a seven-month period. This could expose nearby residences to cumulative noise from construction traffic. This analysis of cumulative effects focuses on the effects of concurrent construction traffic for the worst-case scenario (i.e., traffic generated by the peak construction period). The project would potentially result in 12 daily trips by workers and up to 10 round trips for deliveries. Using a worst case scenario where worker trips and all vendor deliveries occurred on the same day, the project would increase the average daily traffic (ADT) volume on SR 371 in the vicinity of the project site from 7,100 to 7,122 (Caltrans 2019). Based on these traffic volumes and the relative energy increase associated with the increase ADT, traffic noise levels would increase by less than 1 dBA. This increase is well below the threshold of perception (typically considered 3 dBA) and would not result in a change in traffic noise in the project area. Therefore, the short-term increase in traffic noise from project construction would be less than significant.

On-Site Operational Noise

The project would operate continuously, seven days a week. Stationary noise sources during operation would be the proposed transformer at the substation, potential noise from collector lines, and facility maintenance traffic.

Substation

Electrical equipment produces a discrete low-frequency humming noise. The noise from transformers is produced by alternating current flux in the core, which causes it to vibrate. The transformers would

be located centrally within the substation. Based on performance specifications for oil–immersed power transformers, the proposed transformer would produce an audible noise level of 74 dBA at 3 feet (see Appendix C for performance specifications). At 130 feet (the distance between the transformer and the nearest residential property line), this would attenuate to 41.3 dBA L_{eq}. This noise level would not exceed the County's lowest noise level limit of 45 dBA L_{eq} at the nearest residential property line.

Transmission Line

The proposed project includes the replacement of existing electricity transmission lines with 34.5 kV transmission lines. When a transmission line is in operation, an electric field is generated in the air surrounding the conductors forming a "corona". The corona results from the partial breakdown of the electrical insulating properties of the air surrounding the conductors. When the intensity of the electric field at the surface of the conductor exceeds the insulating strength of the surrounding air, a corona discharge occurs at the conductor surface, representing a small dissipation of heat and energy. Some of the energy may dissipate in the form of small local pressure changes that result in audible noise or in radio or television interference. Audible noise generated by corona discharge is characterized as a hissing or crackling sound that may be accompanied by a 120 Hz hum.

Slight irregularities or water droplets on the conductor and/or insulator surface accentuate the electric field strength near the conductor surface, thereby making corona discharge and the associated audible noise more likely. Therefore, audible noise from transmission lines is generally a foul weather (wet conductor) phenomenon. However, during fair weather, insects and dust on the conductors can also serve as sources of corona discharge.

The typical noise levels for transmission lines with wet conductors are shown in Table 12. The proposed project includes 34.5-kV transmission lines, which would have much lower voltage than those for which wet-weather noise level data is available. Therefore, this analysis conservatively assumes that the proposed transmission lines would produce a noise level consistent with that of a 138-kV transmission line, which would be approximately 33.5 dBA directly below the conductor (see Table 12). A noise level of this magnitude would typically be indistinguishable from background noise in the existing environment and would only occur during infrequent wet weather conditions. Furthermore, this noise level would not exceed the County's lowest noise level limit of 45 dBA $L_{eq,}$ even at residential properties over which the transmission line may pass. Therefore, this impact would be less than significant.

Table 12 Transmission Line Voltage and Audible Noise Level

Line Voltage (kV)	Audible Noise Level Directly Below the Conductor (dBA)
138	33.5
240	40.4
356	51.0

Source: California Public Utilities Commission 2009

Operational Traffic Noise

Once the project is complete, vehicle trips to the project site would be associated with inspections and maintenance of the substation and transmission line. A significant noise impact would occur if roadway noise would increase by more than 3 dBA. With the relatively minor increase in traffic

volumes from project operation (four annual roundtrips), project operation would increase traffic noise levels by less than 1 dBA. As a barely perceptible noise increase is typically considered an increase of 3 dBA, this increase would be imperceptible to the nearest residents. Therefore, the project's noise increases from operational traffic would have a less than significant impact.

CEQA Appendix G Noise Threshold 2
Would the proposed project generate excessive groundborne vibration or groundborne noise levels?

Construction

Installation of underground (below grade) facilities would be anticipated to generate the highest vibration levels. Below grade activities would require the use of a trencher/backhoe to dig and backfill trenches for installing the ground grid, cables, foundations, footings, and duct banks. Other activities such as grading and facility construction would also generate vibrations, however, these vibrations levels would be less intense and would occur for a shorter duration.

The nearest sensitive receivers to construction activities at the proposed substation site would be residences located approximately 75 feet to the east of the substation pad. Using Caltrans recommended procedure for applying propagation adjustments to the reference levels in Table 13, predicted worst-case vibration levels of approximately 0.026 in/sec ppv at the nearest sensitive receiver could occur from excavation and related below grade activities. These vibration levels would not exceed Caltrans' recommended standards with respect to the prevention of structural building damage (0.4 in/sec ppv for residential buildings) or exceed maximum-acceptable-vibration standard with respect to human response (0.24 in./sec. ppv for residences and buildings where people normally sleep) at nearby existing vibration-sensitive land uses (Caltrans 2020).

Table 13 Typical Construction Equipment Vibration Levels

Equipment	ppv at 25 feet (in/sec)
Haul Trucks	0.076
Large Bulldozer	0.089

Source: Caltrans 2020

The nearest sensitive receivers that may be subjected to groundborne vibration or groundborne noise levels from pole installation, wire stringing, and installation of the telecommunication equipment would be residences located along the proposed transmission line route. Residences are situated as close as 50 feet from potential pole installation locations. The use of equipment, such as an auger/drill or backhoe, has the potential to generate groundborne vibrations. Using Caltrans recommended procedure for applying propagation adjustments to the reference levels in Table 13, predicted worst-case vibration levels of approximately 0.042 in/sec ppv at the nearest sensitive receiver could occur from drilling. These vibration levels would not exceed Caltrans' recommended standards or the maximum-acceptable-vibration standard with respect to human response (Caltrans 2020). Therefore, construction of the proposed project would result in a less than significant impact related to the generation of groundborne vibration and noise levels.

Operation

Operation of the proposed project would consist of routine maintenance activities and emergency repairs. These activities would be unlikely to produce groundborne vibration. Operation of transformers at the proposed substation could produce groundborne vibration; however, groundborne vibrations would be perceptible only in the immediate vicinity (i.e., less than 25 feet) of the transformer pad, if at all. No other component of the proposed project would generate vibrations during operation. Thus, impacts resulting from the generation of excessive groundborne vibration during operation of the proposed project would be less than significant.

CEQA Appendix G Noise Threshold 3
For a project located within the vicinity of a private airstrip or 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 the exposure of people residing or working in the project area to excessive noise levels?

There are no airports located in the project area or Anza vicinity. The nearest airport is the Ward Ranch Airport, located approximately 12 miles to the south. Therefore, the project would not expose people working on the project to excessive noise levels from airports or airstrips. No impact would occur.

4 Conclusions

The project would generate both temporary construction-related noise and long-term noise associated with operation of the project. Construction noise would not exceed applicable noise limits at the nearby residential land uses and impacts from construction noise would be less than significant.

Operational activities on the project site would generate noise levels up to approximately 41 dBA L_{eq} during the daytime and nighttime at adjacent properties. The operational noise from the substation transformer would not exceed County's property line limits. Noise from on-site noise sources would be less than significant.

Project-generated traffic would generate an increase of less than 1 dBA along local roadways. This is below the threshold of 3 dBA; therefore, the off-site traffic noise increase would be less than significant.

The project would generate groundborne vibration during construction. Groundborne vibration would not exceed the applicable vibration threshold at the nearest structures, and construction-related vibration impacts would be less than significant.

The project would not expose people working on the project to excessive noise levels from airports or airstrips due to the substantial distance between the project alignment and the nearest airport.

Given the aforementioned, the project as designed would result in less than significant impacts, and no mitigation is necessary.

5 References

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Appendix A

On-Site Noise Measurement Data

- Freq Weight : A
- Time Weight : SLOW
- Level Range : 40-100
- Max dB : 95.1 - 2019/11/12 13:02:12
- Level Range : 40-100
- SEL : 119.3
- Leq : 70.0
-

24-hour

No.s	Date Time	(dB)
1	2019/11/12 10:02:21	70.8
2	2019/11/12 10:03:21	70.9
3	2019/11/12 10:04:21	50.1
4	2019/11/12 10:05:21	52.9
5	2019/11/12 10:06:21	59.4
6	2019/11/12 10:07:21	58.6
7	2019/11/12 10:08:21	70.5
8	2019/11/12 10:09:21	60.0
9	2019/11/12 10:10:21	71.3
10	2019/11/12 10:11:21	69.1
11	2019/11/12 10:12:21	55.6
12	2019/11/12 10:13:21	71.7
13	2019/11/12 10:14:21	46.0
14	2019/11/12 10:15:21	59.4
15	2019/11/12 10:16:21	73.5
16	2019/11/12 10:17:21	67.6
17	2019/11/12 10:18:21	63.1
18	2019/11/12 10:19:21	63.1
19	2019/11/12 10:20:21	69.1
20	2019/11/12 10:21:21	74.3
21	2019/11/12 10:22:21	70.9
22	2019/11/12 10:23:21	60.4
23	2019/11/12 10:24:21	60.5
24	2019/11/12 10:25:21	66.7
25	2019/11/12 10:26:21	37.3
26	2019/11/12 10:27:21	72.2
27	2019/11/12 10:28:21	58.1
28	2019/11/12 10:29:21	51.8
29	2019/11/12 10:30:21	66.1
30	2019/11/12 10:31:21	67.0
31	2019/11/12 10:32:21	47.2
32	2019/11/12 10:33:21	41.3
33	2019/11/12 10:34:21	75.9
34	2019/11/12 10:35:21	73.0
35	2019/11/12 10:36:21	66.8
36	2019/11/12 10:37:21	55.5
37	2019/11/12 10:38:21	62.2
38	2019/11/12 10:39:21	42.6
39	2019/11/12 10:40:21	50.7
40	2019/11/12 10:41:21	43.8
41	2019/11/12 10:42:21	72.9
42	2019/11/12 10:43:21	60.5
43	2019/11/12 10:44:21	56.9
44	2019/11/12 10:45:21	32.1
45	2019/11/12 10:46:21	63.9
46	2019/11/12 10:47:21	44.9
47	2019/11/12 10:48:21	69.5
48	2019/11/12 10:49:21	68.4
49	2019/11/12 10:50:21	69.8
50	2019/11/12 10:51:21	73.3
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1350	2019/11/13	08:31:21	70.9
1351	2019/11/13	08:32:21	39.4
1352	2019/11/13	08:33:21	67.6
1353	2019/11/13	08:34:21	48.0
1354	2019/11/13	08:35:21	68.5
1355	2019/11/13	08:36:21	69.6
1356	2019/11/13	08:37:21	61.8
1357	2019/11/13	08:38:21	69.6
1358	2019/11/13	08:39:21	56.8
1359	2019/11/13	08:40:21	39.6
1360	2019/11/13	08:41:21	54.5
1361	2019/11/13	08:42:21	54.3
1362	2019/11/13	08:43:21	40.0
1363	2019/11/13	08:44:21	72.5
1364	2019/11/13	08:45:21	69.7
1365	2019/11/13	08:46:21	50.8
1366	2019/11/13	08:47:21	49.0
1367	2019/11/13	08:48:21	72.9
1368	2019/11/13	08:49:21	68.2
1369	2019/11/13	08:50:21	44.0
1370	2019/11/13	08:51:21	66.7
1371	2019/11/13	08:52:21	38.5
1372	2019/11/13	08:53:21	36.6

1373	2019/11/13	08:54:21	64.3
1374	2019/11/13	08:55:21	79.1
1375	2019/11/13	08:56:21	76.6
1376	2019/11/13	08:57:21	68.3
1377	2019/11/13	08:58:21	66.7
1378	2019/11/13	08:59:21	40.7
1379	2019/11/13	09:00:21	32.2
1380	2019/11/13	09:01:21	61.5
1381	2019/11/13	09:02:21	73.4
1382	2019/11/13	09:03:21	66.8
1383	2019/11/13	09:04:21	63.1
1384	2019/11/13	09:05:21	80.2
1385	2019/11/13	09:06:21	47.4
1386	2019/11/13	09:07:21	63.0
1387	2019/11/13	09:08:21	51.7
1388	2019/11/13	09:09:21	63.5
1389	2019/11/13	09:10:21	71.9
1390	2019/11/13	09:11:21	74.2
1391	2019/11/13	09:12:21	59.3
1392	2019/11/13	09:13:21	63.5
1393	2019/11/13	09:14:21	52.6
1394	2019/11/13	09:15:21	56.5
1395	2019/11/13	09:16:21	64.1
1396	2019/11/13	09:17:21	73.2
1397	2019/11/13	09:18:21	48.6
1398	2019/11/13	09:19:21	64.2
1399	2019/11/13	09:20:21	62.8
1400	2019/11/13	09:21:21	62.7
1401	2019/11/13	09:22:21	59.7
1402	2019/11/13	09:23:21	71.1
1403	2019/11/13	09:24:21	57.4
1404	2019/11/13	09:25:21	47.9
1405	2019/11/13	09:26:21	65.2
1406	2019/11/13	09:27:21	66.9
1407	2019/11/13	09:28:21	62.0
1408	2019/11/13	09:29:21	49.9
1409	2019/11/13	09:30:21	77.7
1410	2019/11/13	09:31:21	72.5
1411	2019/11/13	09:32:21	72.3
1412	2019/11/13	09:33:21	54.3
1413	2019/11/13	09:34:21	64.0
1414	2019/11/13	09:35:21	80.7
1415	2019/11/13	09:36:21	65.6
1416	2019/11/13	09:37:21	67.9
1417	2019/11/13	09:38:21	46.0
1418	2019/11/13	09:39:21	53.8
1419	2019/11/13	09:40:21	72.0
1420	2019/11/13	09:41:21	55.1
1421	2019/11/13	09:42:21	59.8
1422	2019/11/13	09:43:21	59.5
1423	2019/11/13	09:44:21	52.8
1424	2019/11/13	09:45:21	63.8
1425	2019/11/13	09:46:21	62.0
1426	2019/11/13	09:47:21	64.7
1427	2019/11/13	09:48:21	50.5
1428	2019/11/13	09:49:21	53.4
1429	2019/11/13	09:50:21	56.1
1430	2019/11/13	09:51:21	70.3
1431	2019/11/13	09:52:21	58.2
1432	2019/11/13	09:53:21	63.8
1433	2019/11/13	09:54:21	54.4
1434	2019/11/13	09:55:21	54.5
1435	2019/11/13	09:56:21	60.2
1436	2019/11/13	09:57:21	74.6
1437	2019/11/13	09:58:21	65.6
1438	2019/11/13	09:59:21	70.2
1439	2019/11/13	10:00:21	59.7
1440	2019/11/13	10:01:21	47.0

NM1

- Freq Weight : A
- Time Weight : SLOW
- Level Range : 30-90
- Max dB : 74.1 - 2019/11/12 12:22:58
- Level Range : 30-90
- SEL : 86.2
- Leq : 56.7
-

No.s	Date Time	(dB)
1	2019/11/12 12:10:32	42.7
2	2019/11/12 12:10:35	44.6
3	2019/11/12 12:10:38	50.3
4	2019/11/12 12:10:41	56.5
5	2019/11/12 12:10:44	68.7
6	2019/11/12 12:10:47	58.1
7	2019/11/12 12:10:50	49.4
8	2019/11/12 12:10:53	43.1
9	2019/11/12 12:10:56	35.6
10	2019/11/12 12:10:59	33.1
11	2019/11/12 12:11:02	34.5
12	2019/11/12 12:11:05	32.4
13	2019/11/12 12:11:08	29.3
14	2019/11/12 12:11:11	28.5
15	2019/11/12 12:11:14	30.3
16	2019/11/12 12:11:17	31.3
17	2019/11/12 12:11:20	28.7
18	2019/11/12 12:11:23	27.4
19	2019/11/12 12:11:26	26.6
20	2019/11/12 12:11:29	26.5
21	2019/11/12 12:11:32	26.6
22	2019/11/12 12:11:35	27.4
23	2019/11/12 12:11:38	26.9
24	2019/11/12 12:11:41	26.7
25	2019/11/12 12:11:44	26.8
26	2019/11/12 12:11:47	26.7
27	2019/11/12 12:11:50	28.3
28	2019/11/12 12:11:53	26.9
29	2019/11/12 12:11:56	26.5
30	2019/11/12 12:11:59	27.4
31	2019/11/12 12:12:02	26.2
32	2019/11/12 12:12:05	26.7
33	2019/11/12 12:12:08	28.1
34	2019/11/12 12:12:11	27.6
35	2019/11/12 12:12:14	29.6
36	2019/11/12 12:12:17	32.8
37	2019/11/12 12:12:20	34.8
38	2019/11/12 12:12:23	30.9
39	2019/11/12 12:12:26	28.3
40	2019/11/12 12:12:29	30.7
41	2019/11/12 12:12:32	31.0
42	2019/11/12 12:12:35	31.4
43	2019/11/12 12:12:38	35.9
44	2019/11/12 12:12:41	41.8
45	2019/11/12 12:12:44	48.8
46	2019/11/12 12:12:47	70.6
47	2019/11/12 12:12:50	65.4
48	2019/11/12 12:12:53	55.5
49	2019/11/12 12:12:56	48.1
50	2019/11/12 12:12:59	42.1
51	2019/11/12 12:13:02	38.7
52	2019/11/12 12:13:05	33.8
53	2019/11/12 12:13:08	32.2
54	2019/11/12 12:13:11	39.3
55	2019/11/12 12:13:14	43.2
56	2019/11/12 12:13:17	50.0
57	2019/11/12 12:13:20	71.5
58	2019/11/12 12:13:23	64.2
59	2019/11/12 12:13:26	56.0
60	2019/11/12 12:13:29	49.1
61	2019/11/12 12:13:32	42.5
62	2019/11/12 12:13:35	39.3
63	2019/11/12 12:13:38	35.9
64	2019/11/12 12:13:41	32.7
65	2019/11/12 12:13:44	32.6
66	2019/11/12 12:13:47	29.9
67	2019/11/12 12:13:50	27.2
68	2019/11/12 12:13:53	28.3
69	2019/11/12 12:13:56	27.2
70	2019/11/12 12:13:59	26.2
71	2019/11/12 12:14:02	26.4
72	2019/11/12 12:14:05	26.7
73	2019/11/12 12:14:08	27.8
74	2019/11/12 12:14:11	28.7
75	2019/11/12 12:14:14	27.0
76	2019/11/12 12:14:17	27.0
77	2019/11/12 12:14:20	28.1
78	2019/11/12 12:14:23	27.0
79	2019/11/12 12:14:26	28.7
80	2019/11/12 12:14:29	31.2
81	2019/11/12 12:14:32	30.3
82	2019/11/12 12:14:35	30.0
83	2019/11/12 12:14:38	33.4
84	2019/11/12 12:14:41	35.1
85	2019/11/12 12:14:44	34.5

86	2019/11/12	12:14:47	38.3
87	2019/11/12	12:14:50	45.5
88	2019/11/12	12:14:53	50.3
89	2019/11/12	12:14:56	66.9
90	2019/11/12	12:14:59	66.6
91	2019/11/12	12:15:02	56.6
92	2019/11/12	12:15:05	45.0
93	2019/11/12	12:15:08	35.0
94	2019/11/12	12:15:11	31.4
95	2019/11/12	12:15:14	28.4
96	2019/11/12	12:15:17	27.0
97	2019/11/12	12:15:20	25.9
98	2019/11/12	12:15:23	26.5
99	2019/11/12	12:15:26	26.9
100	2019/11/12	12:15:29	27.1
101	2019/11/12	12:15:32	28.0
102	2019/11/12	12:15:35	29.2
103	2019/11/12	12:15:38	33.0
104	2019/11/12	12:15:41	33.7
105	2019/11/12	12:15:44	29.4
106	2019/11/12	12:15:47	27.9
107	2019/11/12	12:15:50	28.1
108	2019/11/12	12:15:53	29.2
109	2019/11/12	12:15:56	30.8
110	2019/11/12	12:15:59	43.0
111	2019/11/12	12:16:02	46.0
112	2019/11/12	12:16:05	55.7
113	2019/11/12	12:16:08	73.2
114	2019/11/12	12:16:11	64.3
115	2019/11/12	12:16:14	54.5
116	2019/11/12	12:16:17	43.7
117	2019/11/12	12:16:20	36.8
118	2019/11/12	12:16:23	34.8
119	2019/11/12	12:16:26	34.4
120	2019/11/12	12:16:29	34.5
121	2019/11/12	12:16:32	33.7
122	2019/11/12	12:16:35	28.4
123	2019/11/12	12:16:38	26.8
124	2019/11/12	12:16:41	26.3
125	2019/11/12	12:16:44	26.8
126	2019/11/12	12:16:47	27.0
127	2019/11/12	12:16:50	33.0
128	2019/11/12	12:16:53	33.1
129	2019/11/12	12:16:56	34.5
130	2019/11/12	12:16:59	31.6
131	2019/11/12	12:17:02	34.3
132	2019/11/12	12:17:05	38.0
133	2019/11/12	12:17:08	35.4
134	2019/11/12	12:17:11	31.9
135	2019/11/12	12:17:14	31.8
136	2019/11/12	12:17:17	31.1
137	2019/11/12	12:17:20	33.1
138	2019/11/12	12:17:23	35.2
139	2019/11/12	12:17:26	34.7
140	2019/11/12	12:17:29	32.0
141	2019/11/12	12:17:32	29.2
142	2019/11/12	12:17:35	28.3
143	2019/11/12	12:17:38	29.5
144	2019/11/12	12:17:41	30.0
145	2019/11/12	12:17:44	32.0
146	2019/11/12	12:17:47	30.7
147	2019/11/12	12:17:50	31.2
148	2019/11/12	12:17:53	30.4
149	2019/11/12	12:17:56	28.8
150	2019/11/12	12:17:59	28.2
151	2019/11/12	12:18:02	30.3
152	2019/11/12	12:18:05	31.7
153	2019/11/12	12:18:08	34.1
154	2019/11/12	12:18:11	37.7
155	2019/11/12	12:18:14	41.1
156	2019/11/12	12:18:17	43.5
157	2019/11/12	12:18:20	44.1
158	2019/11/12	12:18:23	42.7
159	2019/11/12	12:18:26	41.0
160	2019/11/12	12:18:29	42.3
161	2019/11/12	12:18:32	41.2
162	2019/11/12	12:18:35	37.8
163	2019/11/12	12:18:38	35.6
164	2019/11/12	12:18:41	37.9
165	2019/11/12	12:18:44	34.5
166	2019/11/12	12:18:47	36.5
167	2019/11/12	12:18:50	34.2
168	2019/11/12	12:18:53	34.2
169	2019/11/12	12:18:56	38.7
170	2019/11/12	12:18:59	36.4
171	2019/11/12	12:19:02	36.1
172	2019/11/12	12:19:05	34.3
173	2019/11/12	12:19:08	44.0
174	2019/11/12	12:19:11	36.4
175	2019/11/12	12:19:14	35.9
176	2019/11/12	12:19:17	37.5
177	2019/11/12	12:19:20	38.6
178	2019/11/12	12:19:23	38.1
179	2019/11/12	12:19:26	36.9
180	2019/11/12	12:19:29	36.4
181	2019/11/12	12:19:32	34.1
182	2019/11/12	12:19:35	33.0
183	2019/11/12	12:19:38	32.7
184	2019/11/12	12:19:41	32.6

185	2019/11/12	12:19:44	33.6
186	2019/11/12	12:19:47	33.0
187	2019/11/12	12:19:50	32.2
188	2019/11/12	12:19:53	31.5
189	2019/11/12	12:19:56	31.3
190	2019/11/12	12:19:59	32.0
191	2019/11/12	12:20:02	33.4
192	2019/11/12	12:20:05	33.3
193	2019/11/12	12:20:08	36.7
194	2019/11/12	12:20:11	37.1
195	2019/11/12	12:20:14	36.3
196	2019/11/12	12:20:17	33.9
197	2019/11/12	12:20:20	34.3
198	2019/11/12	12:20:23	34.1
199	2019/11/12	12:20:26	36.9
200	2019/11/12	12:20:29	46.4
201	2019/11/12	12:20:32	61.6
202	2019/11/12	12:20:35	67.3
203	2019/11/12	12:20:38	56.9
204	2019/11/12	12:20:41	47.9
205	2019/11/12	12:20:44	42.3
206	2019/11/12	12:20:47	41.7
207	2019/11/12	12:20:50	36.6
208	2019/11/12	12:20:53	34.8
209	2019/11/12	12:20:56	34.2
210	2019/11/12	12:20:59	37.0
211	2019/11/12	12:21:02	39.3
212	2019/11/12	12:21:05	39.1
213	2019/11/12	12:21:08	39.5
214	2019/11/12	12:21:11	37.9
215	2019/11/12	12:21:14	44.1
216	2019/11/12	12:21:17	50.8
217	2019/11/12	12:21:20	66.9
218	2019/11/12	12:21:23	64.8
219	2019/11/12	12:21:26	55.4
220	2019/11/12	12:21:29	50.9
221	2019/11/12	12:21:32	44.3
222	2019/11/12	12:21:35	38.2
223	2019/11/12	12:21:38	39.8
224	2019/11/12	12:21:41	39.8
225	2019/11/12	12:21:44	38.2
226	2019/11/12	12:21:47	37.1
227	2019/11/12	12:21:50	35.2
228	2019/11/12	12:21:53	36.2
229	2019/11/12	12:21:56	38.3
230	2019/11/12	12:21:59	35.7
231	2019/11/12	12:22:02	35.4
232	2019/11/12	12:22:05	34.4
233	2019/11/12	12:22:08	32.8
234	2019/11/12	12:22:11	37.7
235	2019/11/12	12:22:14	35.6
236	2019/11/12	12:22:17	34.7
237	2019/11/12	12:22:20	34.7
238	2019/11/12	12:22:23	36.6
239	2019/11/12	12:22:26	35.4
240	2019/11/12	12:22:29	33.7
241	2019/11/12	12:22:32	31.4
242	2019/11/12	12:22:35	32.9
243	2019/11/12	12:22:38	31.9
244	2019/11/12	12:22:41	35.9
245	2019/11/12	12:22:44	34.4
246	2019/11/12	12:22:47	39.4
247	2019/11/12	12:22:50	47.2
248	2019/11/12	12:22:53	53.1
249	2019/11/12	12:22:56	73.8
250	2019/11/12	12:22:59	65.0
251	2019/11/12	12:23:02	55.1
252	2019/11/12	12:23:05	47.6
253	2019/11/12	12:23:08	40.4
254	2019/11/12	12:23:11	36.2
255	2019/11/12	12:23:14	39.5
256	2019/11/12	12:23:17	40.1
257	2019/11/12	12:23:20	39.2
258	2019/11/12	12:23:23	40.0
259	2019/11/12	12:23:26	43.4
260	2019/11/12	12:23:29	59.2
261	2019/11/12	12:23:32	67.8
262	2019/11/12	12:23:35	60.2
263	2019/11/12	12:23:38	52.2
264	2019/11/12	12:23:41	47.9
265	2019/11/12	12:23:44	44.4
266	2019/11/12	12:23:47	42.8
267	2019/11/12	12:23:50	37.7
268	2019/11/12	12:23:53	35.9
269	2019/11/12	12:23:56	36.5
270	2019/11/12	12:23:59	35.2
271	2019/11/12	12:24:02	34.5
272	2019/11/12	12:24:05	35.6
273	2019/11/12	12:24:08	39.0
274	2019/11/12	12:24:11	40.9
275	2019/11/12	12:24:14	38.2
276	2019/11/12	12:24:17	37.5
277	2019/11/12	12:24:20	39.0
278	2019/11/12	12:24:23	37.8
279	2019/11/12	12:24:26	39.0
280	2019/11/12	12:24:29	35.9
281	2019/11/12	12:24:32	39.6
282	2019/11/12	12:24:35	40.6
283	2019/11/12	12:24:38	47.2

284	2019/11/12	12:24:41	63.4
285	2019/11/12	12:24:44	70.0
286	2019/11/12	12:24:47	61.0
287	2019/11/12	12:24:50	51.1
288	2019/11/12	12:24:53	42.5
289	2019/11/12	12:24:56	44.6
290	2019/11/12	12:24:59	41.3
291	2019/11/12	12:25:02	42.0
292	2019/11/12	12:25:05	45.0
293	2019/11/12	12:25:08	42.1
294	2019/11/12	12:25:11	37.7
295	2019/11/12	12:25:14	38.7
296	2019/11/12	12:25:17	39.7
297	2019/11/12	12:25:20	38.5
298	2019/11/12	12:25:23	44.9
299	2019/11/12	12:25:26	38.4
300	2019/11/12	12:25:29	36.6

NM2

- Freq Weight : A
- Time Weight : SLOW
- Level Range : 40-100
- Max dB : 83.4 - 2019/11/12 10:20:51
- Level Range : 40-100
- SEL : 95.1
- Leq : 65.5
-

No.s	Date Time	(dB)
1	2019/11/12 10:19:24	61.3
2	2019/11/12 10:19:27	63.8
3	2019/11/12 10:19:30	66.0
4	2019/11/12 10:19:33	64.0
5	2019/11/12 10:19:36	62.5
6	2019/11/12 10:19:39	57.9
7	2019/11/12 10:19:42	53.5
8	2019/11/12 10:19:45	55.8
9	2019/11/12 10:19:48	67.0
10	2019/11/12 10:19:51	65.1
11	2019/11/12 10:19:54	58.7
12	2019/11/12 10:19:57	48.8
13	2019/11/12 10:20:00	41.1
14	2019/11/12 10:20:03	38.0
15	2019/11/12 10:20:06	39.0
16	2019/11/12 10:20:09	41.1
17	2019/11/12 10:20:12	46.2
18	2019/11/12 10:20:15	51.9
19	2019/11/12 10:20:18	71.7
20	2019/11/12 10:20:21	67.4
21	2019/11/12 10:20:24	57.3
22	2019/11/12 10:20:27	55.7
23	2019/11/12 10:20:30	72.8
24	2019/11/12 10:20:33	72.4
25	2019/11/12 10:20:36	71.3
26	2019/11/12 10:20:39	71.2
27	2019/11/12 10:20:42	74.5
28	2019/11/12 10:20:45	74.8
29	2019/11/12 10:20:48	77.7
30	2019/11/12 10:20:51	76.6
31	2019/11/12 10:20:54	67.4
32	2019/11/12 10:20:57	58.2
33	2019/11/12 10:21:00	53.0
34	2019/11/12 10:21:03	59.8
35	2019/11/12 10:21:06	74.5
36	2019/11/12 10:21:09	62.8
37	2019/11/12 10:21:12	55.1
38	2019/11/12 10:21:15	66.6
39	2019/11/12 10:21:18	70.6
40	2019/11/12 10:21:21	59.5
41	2019/11/12 10:21:24	65.7
42	2019/11/12 10:21:27	60.6
43	2019/11/12 10:21:30	67.6
44	2019/11/12 10:21:33	58.9
45	2019/11/12 10:21:36	50.8
46	2019/11/12 10:21:39	49.9
47	2019/11/12 10:21:42	63.6
48	2019/11/12 10:21:45	76.2
49	2019/11/12 10:21:48	69.0
50	2019/11/12 10:21:51	57.9
51	2019/11/12 10:21:54	71.2
52	2019/11/12 10:21:57	65.4
53	2019/11/12 10:22:00	54.8
54	2019/11/12 10:22:03	46.0
55	2019/11/12 10:22:06	39.6
56	2019/11/12 10:22:09	39.6
57	2019/11/12 10:22:12	42.1
58	2019/11/12 10:22:15	51.6
59	2019/11/12 10:22:18	64.1
60	2019/11/12 10:22:21	59.6
61	2019/11/12 10:22:24	73.1
62	2019/11/12 10:22:27	62.4
63	2019/11/12 10:22:30	51.0
64	2019/11/12 10:22:33	45.8
65	2019/11/12 10:22:36	49.4
66	2019/11/12 10:22:39	69.9
67	2019/11/12 10:22:42	69.2
68	2019/11/12 10:22:45	69.2
69	2019/11/12 10:22:48	57.6
70	2019/11/12 10:22:51	55.3
71	2019/11/12 10:22:54	65.6
72	2019/11/12 10:22:57	61.7
73	2019/11/12 10:23:00	66.2
74	2019/11/12 10:23:03	61.7
75	2019/11/12 10:23:06	55.5
76	2019/11/12 10:23:09	52.0
77	2019/11/12 10:23:12	53.1
78	2019/11/12 10:23:15	51.3
79	2019/11/12 10:23:18	51.8
80	2019/11/12 10:23:21	62.1
81	2019/11/12 10:23:24	66.5
82	2019/11/12 10:23:27	58.2
83	2019/11/12 10:23:30	52.9
84	2019/11/12 10:23:33	49.5
85	2019/11/12 10:23:36	58.3

86	2019/11/12	10:23:39	68.5
87	2019/11/12	10:23:42	64.6
88	2019/11/12	10:23:45	54.3
89	2019/11/12	10:23:48	46.5
90	2019/11/12	10:23:51	53.8
91	2019/11/12	10:23:54	62.0
92	2019/11/12	10:23:57	56.8
93	2019/11/12	10:24:00	68.6
94	2019/11/12	10:24:03	69.6
95	2019/11/12	10:24:06	60.1
96	2019/11/12	10:24:09	53.4
97	2019/11/12	10:24:12	67.7
98	2019/11/12	10:24:15	65.7
99	2019/11/12	10:24:18	63.6
100	2019/11/12	10:24:21	58.3
101	2019/11/12	10:24:24	61.8
102	2019/11/12	10:24:27	71.1
103	2019/11/12	10:24:30	68.4
104	2019/11/12	10:24:33	57.9
105	2019/11/12	10:24:36	50.7
106	2019/11/12	10:24:39	61.4
107	2019/11/12	10:24:42	69.3
108	2019/11/12	10:24:45	62.1
109	2019/11/12	10:24:48	55.0
110	2019/11/12	10:24:51	69.7
111	2019/11/12	10:24:54	58.6
112	2019/11/12	10:24:57	55.7
113	2019/11/12	10:25:00	65.2
114	2019/11/12	10:25:03	53.4
115	2019/11/12	10:25:06	42.9
116	2019/11/12	10:25:09	43.4
117	2019/11/12	10:25:12	52.0
118	2019/11/12	10:25:15	72.6
119	2019/11/12	10:25:18	67.0
120	2019/11/12	10:25:21	55.1
121	2019/11/12	10:25:24	56.9
122	2019/11/12	10:25:27	65.0
123	2019/11/12	10:25:30	60.7
124	2019/11/12	10:25:33	55.7
125	2019/11/12	10:25:36	51.8
126	2019/11/12	10:25:39	60.7
127	2019/11/12	10:25:42	66.1
128	2019/11/12	10:25:45	69.1
129	2019/11/12	10:25:48	65.8
130	2019/11/12	10:25:51	73.0
131	2019/11/12	10:25:54	63.5
132	2019/11/12	10:25:57	53.0
133	2019/11/12	10:26:00	67.8
134	2019/11/12	10:26:03	62.8
135	2019/11/12	10:26:06	70.8
136	2019/11/12	10:26:09	73.2
137	2019/11/12	10:26:12	69.7
138	2019/11/12	10:26:15	66.7
139	2019/11/12	10:26:18	63.9
140	2019/11/12	10:26:21	63.7
141	2019/11/12	10:26:24	63.4
142	2019/11/12	10:26:27	64.8
143	2019/11/12	10:26:30	61.1
144	2019/11/12	10:26:33	58.1
145	2019/11/12	10:26:36	53.4
146	2019/11/12	10:26:39	48.5
147	2019/11/12	10:26:42	48.3
148	2019/11/12	10:26:45	45.7
149	2019/11/12	10:26:48	45.5
150	2019/11/12	10:26:51	45.4
151	2019/11/12	10:26:54	42.3
152	2019/11/12	10:26:57	37.0
153	2019/11/12	10:27:00	33.9
154	2019/11/12	10:27:03	33.9
155	2019/11/12	10:27:06	33.9
156	2019/11/12	10:27:09	32.5
157	2019/11/12	10:27:12	31.9
158	2019/11/12	10:27:15	31.8
159	2019/11/12	10:27:18	31.7
160	2019/11/12	10:27:21	31.9
161	2019/11/12	10:27:24	32.0
162	2019/11/12	10:27:27	33.1
163	2019/11/12	10:27:30	32.7
164	2019/11/12	10:27:33	33.3
165	2019/11/12	10:27:36	45.0
166	2019/11/12	10:27:39	64.5
167	2019/11/12	10:27:42	65.2
168	2019/11/12	10:27:45	59.2
169	2019/11/12	10:27:48	53.3
170	2019/11/12	10:27:51	48.0
171	2019/11/12	10:27:54	45.8
172	2019/11/12	10:27:57	43.4
173	2019/11/12	10:28:00	44.0
174	2019/11/12	10:28:03	41.3
175	2019/11/12	10:28:06	36.9
176	2019/11/12	10:28:09	37.1
177	2019/11/12	10:28:12	39.6
178	2019/11/12	10:28:15	58.3
179	2019/11/12	10:28:18	67.7
180	2019/11/12	10:28:21	73.0
181	2019/11/12	10:28:24	69.2
182	2019/11/12	10:28:27	63.5
183	2019/11/12	10:28:30	56.9
184	2019/11/12	10:28:33	50.7

185	2019/11/12	10:28:36	52.1
186	2019/11/12	10:28:39	71.4
187	2019/11/12	10:28:42	65.1
188	2019/11/12	10:28:45	54.9
189	2019/11/12	10:28:48	68.5
190	2019/11/12	10:28:51	59.5
191	2019/11/12	10:28:54	48.6
192	2019/11/12	10:28:57	42.3
193	2019/11/12	10:29:00	47.0
194	2019/11/12	10:29:03	69.1
195	2019/11/12	10:29:06	59.3
196	2019/11/12	10:29:09	68.2
197	2019/11/12	10:29:12	56.6
198	2019/11/12	10:29:15	63.8
199	2019/11/12	10:29:18	60.4
200	2019/11/12	10:29:21	56.0
201	2019/11/12	10:29:24	55.6
202	2019/11/12	10:29:27	59.8
203	2019/11/12	10:29:30	65.9
204	2019/11/12	10:29:33	67.0
205	2019/11/12	10:29:36	66.9
206	2019/11/12	10:29:39	65.1
207	2019/11/12	10:29:42	65.6
208	2019/11/12	10:29:45	58.5
209	2019/11/12	10:29:48	53.4
210	2019/11/12	10:29:51	49.6
211	2019/11/12	10:29:54	47.0
212	2019/11/12	10:29:57	44.9
213	2019/11/12	10:30:00	41.0
214	2019/11/12	10:30:03	38.0
215	2019/11/12	10:30:06	38.0
216	2019/11/12	10:30:09	37.5
217	2019/11/12	10:30:12	36.3
218	2019/11/12	10:30:15	35.5
219	2019/11/12	10:30:18	42.7
220	2019/11/12	10:30:21	44.3
221	2019/11/12	10:30:24	50.3
222	2019/11/12	10:30:27	68.1
223	2019/11/12	10:30:30	68.8
224	2019/11/12	10:30:33	61.6
225	2019/11/12	10:30:36	54.7
226	2019/11/12	10:30:39	67.2
227	2019/11/12	10:30:42	59.7
228	2019/11/12	10:30:45	60.1
229	2019/11/12	10:30:48	62.4
230	2019/11/12	10:30:51	70.4
231	2019/11/12	10:30:54	60.0
232	2019/11/12	10:30:57	57.6
233	2019/11/12	10:31:00	70.5
234	2019/11/12	10:31:03	69.6
235	2019/11/12	10:31:06	58.9
236	2019/11/12	10:31:09	50.0
237	2019/11/12	10:31:12	44.6
238	2019/11/12	10:31:15	53.6
239	2019/11/12	10:31:18	71.6
240	2019/11/12	10:31:21	59.8
241	2019/11/12	10:31:24	62.0
242	2019/11/12	10:31:27	62.3
243	2019/11/12	10:31:30	55.7
244	2019/11/12	10:31:33	50.9
245	2019/11/12	10:31:36	67.2
246	2019/11/12	10:31:39	57.4
247	2019/11/12	10:31:42	46.2
248	2019/11/12	10:31:45	41.5
249	2019/11/12	10:31:48	64.6
250	2019/11/12	10:31:51	65.6
251	2019/11/12	10:31:54	57.0
252	2019/11/12	10:31:57	64.9
253	2019/11/12	10:32:00	68.7
254	2019/11/12	10:32:03	64.6
255	2019/11/12	10:32:06	57.8
256	2019/11/12	10:32:09	54.2
257	2019/11/12	10:32:12	64.4
258	2019/11/12	10:32:15	59.4
259	2019/11/12	10:32:18	52.7
260	2019/11/12	10:32:21	67.2
261	2019/11/12	10:32:24	65.1
262	2019/11/12	10:32:27	63.1
263	2019/11/12	10:32:30	54.6
264	2019/11/12	10:32:33	68.2
265	2019/11/12	10:32:36	61.5
266	2019/11/12	10:32:39	56.3
267	2019/11/12	10:32:42	52.1
268	2019/11/12	10:32:45	47.6
269	2019/11/12	10:32:48	65.0
270	2019/11/12	10:32:51	67.4
271	2019/11/12	10:32:54	58.5
272	2019/11/12	10:32:57	53.6
273	2019/11/12	10:33:00	51.0
274	2019/11/12	10:33:03	67.0
275	2019/11/12	10:33:06	60.6
276	2019/11/12	10:33:09	49.2
277	2019/11/12	10:33:12	41.0
278	2019/11/12	10:33:15	48.4
279	2019/11/12	10:33:18	59.1
280	2019/11/12	10:33:21	50.1
281	2019/11/12	10:33:24	42.4
282	2019/11/12	10:33:27	45.2
283	2019/11/12	10:33:30	63.6

284	2019/11/12	10:33:33	63.5
285	2019/11/12	10:33:36	72.8
286	2019/11/12	10:33:39	66.1
287	2019/11/12	10:33:42	66.3
288	2019/11/12	10:33:45	73.7
289	2019/11/12	10:33:48	70.3
290	2019/11/12	10:33:51	61.9
291	2019/11/12	10:33:54	61.0
292	2019/11/12	10:33:57	59.8
293	2019/11/12	10:34:00	63.0
294	2019/11/12	10:34:03	55.4
295	2019/11/12	10:34:06	46.6
296	2019/11/12	10:34:09	42.1
297	2019/11/12	10:34:12	40.0
298	2019/11/12	10:34:15	38.3
299	2019/11/12	10:34:18	37.7
300	2019/11/12	10:34:21	36.5

Appendix B

Construction Noise Modeling Output Files

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 08/06/2021
Case Description: AEC ETL Project - Substation

**** Receptor #1 ****

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Residences	Residential	65.0	45.0	45.0

Equipment

Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Backhoe	No	40		77.6	75.0	0.0
Crane	No	16		80.6	75.0	0.0
Tractor	No	40	84.0		75.0	0.0
Excavator	No	40		80.7	75.0	0.0

Results

Noise Limits (dBA)

Noise Limit Exceedance (dBA)

Equipment	Calculated (dBA) Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq	Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq
Backhoe	74.0	70.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Crane	77.0	69.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	80.5	76.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Excavator	77.2	73.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	80.5	79.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 08/06/2021
Case Description: AEC ETL Project - Transmission Line

**** Receptor #1 ****

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Residences	Residential	65.0	45.0	45.0

Description	Impact Device	Usage (%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Backhoe	No	40		77.6	50.0	0.0
Crane	No	16		80.6	50.0	0.0
Man Lift	No	20		74.7	50.0	0.0

Results

Noise Limits (dBA)

Noise Limit Exceedance (dBA)

Equipment	Calculated (dBA) Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq	Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq
Backhoe	77.6	73.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Crane	80.6	72.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Man Lift	74.7	67.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	80.6	76.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Appendix C

Transformer Performance Specifications

Brantly Substation transformer information.

Transformer to be supplied by SPX

Via, Gary

From: Sibley, Craig
Sent: Wednesday, January 07, 2015 8:41 AM
To: Via, Gary
Subject: FW: Order Acknowledgement GT-02220 Danville Power & Light | PO 24164
Attachments: 2220-OA-SUM.pdf; Quote 70004100 City of Danville.pdf; 70004100-10-QPS.pdf

Gary,

The first attachment is the order acknowledgement and pages 17 & 18 of the second attachment list the manufactures assembly responsibilities. I think this will clarify work to be done in the bid package.

From: Jordan Tyler [mailto:jtyler@bradleyelectro.com]
Sent: Monday, January 05, 2015 1:51 PM
To: Sibley, Craig
Subject: FW: Order Acknowledgement GT-02220 Danville Power & Light | PO 24164

Craig,

Here is the original quote. Please look over it carefully as it details warranty, installation, and storage. I think I am going to try to come down there in a couple days. Let me know if that works for you. Thanks.

Jordan Tyler
Bradley Electro Sales Corp.
Western Virginia & W. Virginia
(540)-797-4040- Cell

ORDER ACKNOWLEDGEMENT

05/02/2014 12:05:45

SPX TRANSFORMER SOLUTIONS

SOLD TO:

DANVILLE POWER & LIGHT
PO Box 3300
DANVILLE VA 24543
USA

SHIP TO:

DANVILLE POWER & LIGHT
BRANTLY SUBSTATION
UTILITY SERVICE CENTER
1040 MONUMENT ST
DANVILLE VA 24541
USA

Project Number:	Order Number:
GT-02220	2220
Purchase Order Number:	**Purchase Order Date:**
P024164	04/11/2014
Order Date:	**Quote Number:**
05/02/2014	70004100
Specification No:	**Specification Date:**
BRANTLEY SUB 18/24/30	02/20/2014
Estimated Shipping Date:	**Warranty:**
10/03/2014	5 Year Warranty

Bradley Electro Sales Corp.	**Sales Contact**	**Contact Phone**	**Contact Email**
Sales Representative	Jordan Tyler	540-797-4040	jtyler@bradleyelectro.com
SPX Transformer Solutions	**Contact**	**Phone**	**Email**
Order Coordinator	Meredith Adams	919-580-3255	meredith.adams@spx.com
Project Manager	Stephen Perkins	919-581-1645	stephen.perkins@spx.com
Warranty Manager	Roy Davis	919-580-3215	roy.davis@spx.com

Item No	Specification	Quantity Ordered	Amount
10	Transformer, 18.000/24.000/30.000, 69.000kVD-12.470kVY, 3 phase, 65/65C,UZD LTC	1.00	$525,785.00

Approval drawing scheduled due date: 07/21/14

Subtotal before Taxes: $525,785.00

Unit will be Designed, Manufactured, Tested, Shipped, Sold, and Invoiced in accordance with Waukesha Electric Systems Quotation.

SPX Transformer Solutions, Inc. Terms and Conditions of Sale apply to this order unless other terms have been agreed upon in writing by Waukesha and Buyer.

Please advise within five (5) business days if estimated ship date or delivery date is not acceptable.

SPX Waukesha will provide all labor and equipment to assemble this transformer, vacuum fill (if applicable), test in accordance with our standard field installation policy and procedures, and to facilitate activation of the applicable warranty. Unless specifically noted, prices do not include the use of union labor.

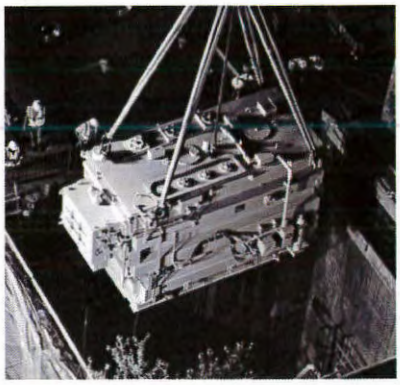
To schedule this work, please contact our service department at least three (3) weeks in advance of the planned start date by calling 1-800-758-4384 and ask for Field Service Department.

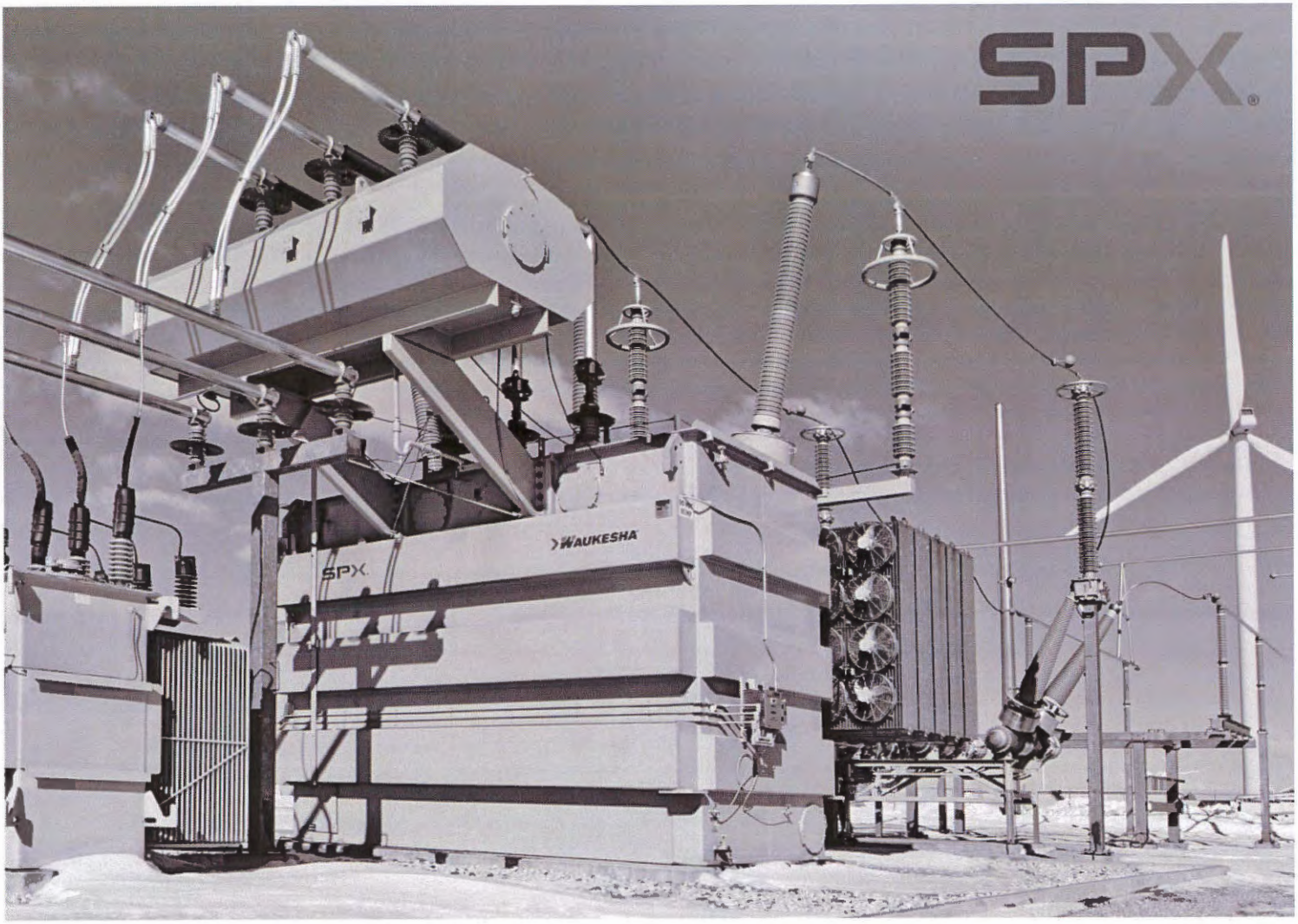
If this order is taxable, taxes will be applied on the invoice issued at the time of shipment.

For order tracking information, log into Windows into Waukesha® at www.spxwaukesha.com. To get started, select the "Windows into Waukesha" link at the top of the home page screen, then "Request Account" under the ENTER button for 24/7/365 access to key milestone dates on your orders.

ISO9001:2008 CERTIFIED

WAUKESHA®





WAUKESHA®

DANVILLE POWER & LIGHT

SPX Waukesha Quotation # 70004100

4/2/2014

City of Danville

IFB 13/14-0105 Bid Proposal – Revised for addendum 1

In compliance with Invitation to Bid No.13/14-105 and subject to all conditions thereof and attached hereto, the undersigned offers and agrees if this bid be accepted to furnish any and **all** of the items or services for the sum of:

COMMODITY AMOUNT

18/24/30MVA 69kV – 12.47/7.2kV GRDY Two Winding LTC Medium Power Transformer Spec. No. BH1819
NOTE: INFORMATION REQUESTED IN SEC 21 SHOULD BE COMPLETED

Offering: Make: 18/24/30 MVA Delivery ARO: 26-30 wks aro

A. Purchase Price = $ 525,785.00 EA

B. No load losses: 13.0 KW X $4,400.00/KW = $ $57,200.00 at 18 MVA

C. Load losses: 71.3 KW X $1,300.00/KW = $ $92,690.00 at 18 MVA

D. Auxiliary losses: 1.8 KW X $940.00/KW = $ $1,692.00 at 30 MVA

Total Owning Cost (A + B + C + D) = $ 677,367.00

The undersigned Bidder acknowledges receipt of the following addenda, which have been considered in the preparation of this Bid:

No. 1 Dated 3/27/14

No. _____ Dated _____

Company Name SPX Transformer Solutions Date 4/1/14

Address 400 South Prairie Ave.

Waukesha, WI 53186
Zip Code

Signature Cheryl Shanovich AFFIX COMPANY SEAL (if applicable)

Signature (Printed) Cheryl Shanovich

Title Sr. Application Engineer

Phone 262-513-0618 Fax 262-521-0198

Commonwealth of Virginia State Corporation Commission Identification Number F1281171

City of Danville
Virginia

J. Gary Via, CPPO
Director of Purchasing

PO Box 3300
Danville, VA 24543
Phone (434) 799-6528
Fax (434) 799-5102
e-mail: viajg@ci.danville.va.us

March 27, 2014
IFB 13-14-105
"Brantly Substation Transformer"
Addendum No. 1

Please note the following changes:

1. Section 5.5 should read : Impedance 8.5 % @ **18** MVA (HV-LV)

2. Corrected bid proposal sheets are attached revising the loss evaluations to:

   No-Load losses @ 20 deg C:

   At 18 MVA: 13.0 KW x $ **4,400.00** * /KW = $57,200.00

   Load losses @ 85 deg C:

   At 18 MVA: 71.3 KW x **$ 1,300.00** * /KW = $92,690.00

   Auxiliary losses:

   At 30 MVA:1.8 KW x **$940.00** * /KW = $1,692.00

3. Section 11.0 should be as follows:

   11.0 Current Transformers

   Multi-ratio bushing type current transformers for relaying service shall be furnished as described below:

   Each high voltage bushing:

   11.1.1 Qty 1, 600 /5 MR, with accuracy of C 800 .
   11.1.2 Qty 1, 600 /5 MR, with accuracy of C 800 .
   11.1.3 Qty 1, 600 /5 MR, with accuracy of C_____.

   Each low voltage bushing:

   11.2.1 Qty 1, 2000 /5 MR, with accuracy of C 800 .
   11.2.2 Qty 1, 2000 /5 MR, with accuracy of C 800 .

11.2.3 Qty 1 , 2000 /5 MR, with accuracy of C 800 .

11.3 Low voltage neutral bushing:

11.3.1 Qty 1 , 600 /5 MR, with accuracy of C 800 .

11.3.2 Qty 1 , 600 /5 MR, with accuracy of C 800 .

11.4 All Current Transformers shall have fully distributed windings and a minimum Thermal Rating Factor of 2.0

All other specifications remain the same.

J. Gary Via, Director of Purchasing

Company Name: SPX Transformer Solutions Signature: Cheryl Shanovich

Address: 401 South Prairie Ave. Signature: Cheryl Shanovich
(Printed)

Waukesha, WI 53186 Title: Sr. Application Engineer
City State Zip Code

Date: 4/1/14 e-mail address: cheryl.shanovich@spx.com

Phone No: 262-513-0618 Fax No: 262-521-0198

maintaining full load indefinitely

20.11 An automatic recharging dehydrating breather shall be located at operator level for ease of maintenance.

20.12 LTC performance shall be based on entire range of operations (+/-16) and maximum nameplate rating unless otherwise specified by the owner.

21.0 Please complete the following information to help us evaluate your proposal more thoroughly:

Main Coil Design: Round or Rectangular? Round

Type of windings:
HV: Disk or Helical: Disc

LV: Disk or Helical: Helical

Regulating Voltage Winding:
Tapped or Fully Distributed? Fully Distributed

Preventive Auto Transformer design:
Round or Rectangular? N/A

Winding Disc or Helical? N/A

Series Transformer coil design:
Round or Rectangular? Round

Winding Disc or Helical? Inner = Disc, Outer = Helix

Series Transformer coil design:
Round or Rectangular? -

Winding Disc or Helical? -

Type of LTC: UZD Resistive? Yes

Expected Number of Operations Before Contact Replacement: 500,000

Series Transformer Ratio: 5.6:1

Can the LTC be manually operated without de-energizing the transformer? Yes

LTC operation Constant Flux Voltage Variation Operation Warranty:
State the length of the warranty period: 5 Years

Is in/out coverage included & for how long? Yes, covered for 1 year

Does the warranty cover all accessories as well as the core & coil? Yes

Shipment:

Will transformer ship oil filled? No

F.O.B. destination: Yes/No FOB Pad

Proposed destination: Per spec, Danville, VA

Nearest Rail Siding/Site/Pad Pad

Short Circuit Design:

Does the winding design assume an infinite buss where the fault current is limited only by the impedance of the transformer? Yes

Does the short circuit design consider single phase line to ground fault conditions? Yes

22.0 DATA TO BE SUPPLIED WITH VENDOR PROPOSAL

22.1 Typical design (including outline) drawings of the units bid must be included with the bid proposal.

23.0 DATA TO BE SUPPLIED BY THE SUCCESSFUL BIDDER

23.1 Three (3) instruction booklets containing complete descriptive information and a parts list showing catalog numbers, quantities and diagrams to be included with each unit. Also three (3) sets of drawings for each unit to include, but not be limited to, the following:

23.2 Nameplate

23.3 Outline

23.4 Applicable detail drawings

24.0 DELIVERY

24.1 Date of shipment from the factory and the location of the factory to be supplied with the bid proposal on each unit quoted.

24.2 Transformers to be delivered to City of Danville Electric Division, 1040 Monument Street, Danville, Virginia 24541. All shipments to be marked "FLAT BED ONLY".

25.0 LOSS EVALUATION

25.1 Losses will be evaluated according to the formula shown below. Manufacturer shall provide the necessary information at the time of bid opening to perform the loss evaluation. This loss information should be based on 85 deg. C. at 100% voltage using "guaranteed loss" figures; i.e., the average of the losses of the units involved shall not exceed quoted values and the losses

of any individual unit shall not exceed the tolerances in Table 16, ANSI Standard C57.12.00.

25.2 In the event that the actual tested losses of the quoted transformer(s) exceed by 10% the guaranteed loss values quoted in the proposal, the purchase price of the unit(s) shall be reduced by the evaluated cost of the difference between actual and guaranteed losses.

18/24/30 KVA UNITS(S):

25.3 No-Load losses:

13.0 KW x $ 4,400.00 * /KW = $57,200.00

25.4 Copper losses:

71.3 KW x $ 1,300.00 * /KW = $92,690.00

25.5 Bid price (each unit) = $525,785.00

25.6 Total evaluated cost (i+ii+iii) = $675,675.00 *Note, this does not include the aux losses.

SPX Waukesha Quotation

4/2/2014

DANVILLE POWER & LIGHT
1040 MONUMENT STREET
DANVILLE, VA 24543

Inquiry	IFB 13/14-105 - Brantley Substation Transformer
Quote Number	70004100
Specification Document(s)	BRANTLEY SUB 18/24/30 MVA

CONTACT INFORMATION

Channel Partner
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Bradley Electro Sales Corp.
TEL 804-320-8005
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Territory General Manager
Matthew Webb
SPX Transformer Solutions, Inc.
TEL 919-581-1643
FAX 919-580-3254
matt.webb@spx.com

QUOTE SUMMARY

Item Number	10
Price Per Unit	$525,785.00
Quantity	1
Rating Information	18/24/30 MVA, ONAN/ONAF/ONAF, 3 Phase, 60 Hz., 65 Degree C rise, 69.00 kV DELTA To 12.47 kV WYE with UZD LTC. NOTE: Impedance is 8.5% at 18 MVA.
Shipment Lead Time	**Current lead times are 26-30** weeks after receipt and acceptance of a written purchase order in our office, subject to plant loading at the time of receipt of order. If required, alternate shipment may be available. Please consult the Channel Partner, Application Engineer or Territory General Manager identified in the CONTACT INFORMATION shown in this quotation.
Payment Terms	Quoted Prices do not include sales, use, excise or any other taxes. Any taxes imposed shall be the responsibility of customer and will be invoiced accordingly. **Option 1:** Firm Pricing Payment terms, subject to credit approval, are: 30% to be invoiced with Order Acknowledgment (Due Net 30 days from date of invoice) 30% to be invoiced when released to Manufacturing (Due Net 30 days from date of invoice) 30% to be invoiced at time of shipment (Due Net 30 days from date of invoice) 10% to be invoiced upon shipment of the transformer (Due Net 30 days from date of delivery)

Option 2: Price Adjustment Policy
At the time of final invoicing, Waukesha will provide an updated selling price based upon the change in material costs for copper, core steel, plate steel, mineral oil, and paper insulation since the time of quotation. The final selling price will be (adjusted upwards or downwards) using the indices identified below and the latest available at time of shipment. Payment terms, subject to credit approval, are 100% Due Net 30 Days from date of invoice (Shipment.)

The following material indices are the base indices for this quotation:

Material	Name	Value	Unit	Index Date
Copper	HG-Comex	304.65	cents/lb	03/31/2014
Core Steel	WES	1.0	$/unit	03/31/2014
Plate Steel	AMM No. 1 Heavy Melt: Chicago	375.00	$/gross ton	03/31/2014
Oil	West Texas Crude Index	101.58	$/42-gal barrel	03/31/2014
Paper	PIX U.S. NBSK	1019.86	$/ton	03/31/2014

ADDERS

Short Circuit Testing	TBD
~~Design Review at SPX (travel expenses are not included)~~	~~$1,950.00 per design~~

DRAWINGS

Approval drawings will be provided within 10-12 weeks after issue date of SPX Waukesha Order Acknowledgment. Quoted Shipment Lead Time includes 1 week for customer to review and return approval drawings.

For orders requiring drawing approval, a release to immediately proceed with production must be returned to SPX Waukesha within 1 week after drawing submittal to maintain scheduled date.

OIL

Oil is included in the quoted transformer price. If oil is shipped separately, pricing includes shipment/delivery of the oil within sixty (60) days of shipment of the transformer. After that date, customer will be invoiced for any cost exceeding **$5.75**/gallon.

PRICE POLICY

The above quoted prices are for shipment shown, subject to the following conditions:

- Factory acceptance of a written purchase order or contract, within the validity period of this quotation.
- There will be a 1-½% charge per month of the unpaid balance beginning 15 days after the due date of invoice. The amount charged shall not be in excess of the applicable usurious rate.

SHIPMENT

The above quoted transformer will be shipped dry air filled by truck, F.O.B. to your specified pad, providing no unusual circumstances unknown to SPX Waukesha are present, such as no existing roads, impassable conditions, extreme grade or anything else which would prevent SPX Waukesha from delivering to the transformer site, and providing that free access is available to allow SPX Waukesha to unload the equipment on the pad, without obstructions such as existing fencing, overhead lines, insufficiently compacted soil (necessitating matting), oil containment pits or dikes around pad, debris, etc. Any additional costs resulting from the above stated possible conditions will be charged to the customer.

FIELD SERVICE

Field Service Installation, fill and testing is included in the quoted transformer price. If service has not been performed within ninety (90) days after shipment of the transformer, customer may be responsible for any increase in SPX Waukesha Service Field Service rates. Details of the services to be provided are included as an attachment to this quotation.

TERMS & CONDITIONS

The enclosed SPX Transformer Solution's **Transformer Terms and Conditions of Sale** are an integral part of this offer, and shall apply except as otherwise agreed to in writing by an authorized employee of SPX Waukesha. **Alternate Terms and Conditions are subject to negotiation.**

Seller shall in no event be liable for any indirect, special or consequential damages whatsoever, whether grounded in tort (including negligence), strict liability, or contract. Under no circumstances shall Seller's liability to Buyer exceed the contract price for the specific goods and services upon which the claim is based. Any action for breach of contract or otherwise must be commenced within one year after the cause of action has accrued.

SPX Transformer Solutions reserves the right to correct clerical and administrative errors in this quotation, and other related documents.

WARRANTY

The above transformer is quoted with the **SPX Transformer Solutions' Five Year Power Transformer Warranty** in lieu of all others specified, expressed or implied. To qualify for the SPX Waukesha Five Year Warranty, a SPX Waukesha Service representative ***must be*** present at the time the transformer is dressed out, and both the primary and secondary must be protected from surges with arresters mounted on the transformer tank.

In addition to the above, full compliance to the SPX Waukesha Instruction Manual is required to validate the warranty. A complete Instruction Manual is provided in the control box of every SPX Waukesha Power Transformer.

COMMERCIAL NOTES & COMMENTS

1. The SPX Transformer Solutions Warranty requires that suitable Lightning Arresters be mounted on the transformer tank and connected to all windings (phase connections) whenever the transformer is energized. Failure to provide these Lightning Arresters will nullify the Five Year Warranty.

2. Customer requested Adders shall be added to the transformer price and they shall be payable in accordance with agreed upon payment terms unless otherwise stated by SPX Transformer Solutions in writing.

COMMERCIAL EXCEPTIONS

Exceptions to IFB 13/14-105 – 3.0 Supplemental General Conditions:

3.7 Patents; - Insert the following after "equitable" in the 4th line:

provided that Vendor's obligations hereunder shall not apply to any suit or action that results from Vendor's compliance with City's specifications, design or instructions, or from City's combination of Vendor's work with other goods or services.

3.9 Performance – The following modifications shall apply to this section:

- Insert the following between "Vendor" and "the City" in the 1st line:

  ...City shall give Vendor written notice of default and shall give Vendor a reasonable opportunity to initiate a cure to such default. If Vendor does not initiate and diligently pursue such cure, then....

- Insert the following at the end of this clause:

  Any delay, suspension or termination of an order for the City's convenience will be subject to Vendor's Cancellation and Delay Policy, as attached to Vendor's quote.

3.14 Indemnification – The following modifications shall apply to this section:

- Insert "third party" between "any" and "claims" in the 4th line.
- Delete "including workers' compensation claims" from the 4th and 5th lines.
- Insert "negligent" before "operations" at the beginning of the 6th line.
- Insert "negligent" between "including" and "operations" in the 6th line.
- Insert "negligent" between "and' and "acts" in the 7th line.

3.14 c. - The following modifications shall apply to this section:

- Insert "acts of the City" after "Public Enemy" in the 3rd line.
- Modify the 4th line to read as: ...Government, quarantine restrictions, ~~general~~ strikes **and labor disputes** ~~through the trade~~ or...
- Insert the following after "the Vendor" in the 5th line:

  In the event of any such delay, the date of performance shall be extended for a period equal to the time lost by reason of delay, plus a reasonable time for resuming performance.

3.14 d. - The following modifications shall apply to this section:

- Insert "third" between "or" and "party" in the 2nd line.
- Insert "third party" between "to" and "property" in the 4th line.
- Delete "either" from the 4th line.
- Insert "negligent" between "the" and "performance" in the 4th line.
- Delete from "or that may be" in the 5th line to the end of this section.

3.14 e. – Delete "solely" from the 3rd line.

Insert the following new sections:

3.17 Warranty

Vendor's Five Year Power Transformer Warranty shall apply in lieu of all other warranties, express or implied.

3.18 Changes

Any change or modification to these terms or any order under these terms shall require a change order, to be signed by Vendor and City, prior to the implementation of any proposed change.

3.19 Title and Risk of Loss.

Title and risk of loss shall transfer to City when equipment is delivered to the shipping destination. City shall advise Vendor and carrier of any observable damage or irregularity pursuant to Vendor's Receiving Instructions. Defects and non-conformances reported after acceptance of delivery shall be corrected in accordance with Vendor's warranty.

3.20 Limitation of Liability.

Vendor shall in no event be liable for any indirect, special or consequential damages whatsoever, under any theory of relief, including without limitation, breach of warranty, breach of contract, tort (including negligence), strict liability, or otherwise, arising out of or related to Vendor's acts or omissions. Under no circumstances shall Vendor's liability to City exceed the contract price for the specific goods and services upon which the claim is based. Any action for breach of contract or otherwise must be commenced within one year after the cause of action has accrued.

TECHNICAL NOTES & COMMENTS

1. **Regarding this quoted Replacement Transformer:** SPX Waukesha has to incorporate the site requirements with the information provided to offer a design that will meet Form, Function and Fit criteria. However, it may not be possible to manufacture a transformer today that can exactly replace the previous transformer. Replacement of the previous transformer with a new unit may call for modifications of connections, structures and other systems, and the cost for such work is not included in the price quoted. The proposed transformer base and radiators may overhang beyond the existing foundation and it shall be the customer's responsibility to verify the load bearing capability of the foundation for the transformer quoted.

2. SPX Waukesha provides unpainted galvanized radiators for all its transformers. Compared to conventional painted radiators, galvanized units provide superior protection against rust and corrosion, reducing transformer maintenance time while extending radiator life.

3. Non-conformances and defects will be addressed per the provisions of the applicable SPX Waukesha warranty.

4. The quoted price includes the standard SPX Waukesha paint finish system. The paint finish on tank will comply with C57.12.28 paint requirements while the cooling radiators will be unpainted and constructed of hot-dipped, galvanized steel. Reference attachment *Transformer Paint Systems* for additional clarification.

5. SPX Transformer Solutions uses inhibited mineral oil meeting ANSI / ASTM D-3487 in its transformers. Oil is purchased only from approved sources and for each approved source, oil has been tested and proven to meet the ANSI / ASTM D-3487 values. Ergon Refining Hyvolt-II **inhibited** Type-II mineral oil with less than 2 PPM PCB content. Specification and MSDS are attached to proposal. Oil meeting other specific customer requirements may be available upon request.

6. For system voltages less than or equal to 69 kV, guaranteed bushing C2 P.F. levels are less than or equal to 1.26%.

LOSS GUARANTEE

In accordance with ANSI Standard C57.12.00-2006 Section 5.9, No-load (core) loss guarantee on the enclosed performance specification(s) is based on the standard reference temperature of 20°C. Load (winding) loss guarantee is at the standard reference temperature of 85°C on 65°C rise rated transformers (or 75°C on 55/65°C rise rated transformers).

SPX Waukesha tests no-load and load losses with less than 1.0% measurement error. These measurement errors are determined by a calibration system that is traceable to the National Institute of Standards and Technology (formerly the National Bureau of Standards) using methods described in NIST's Technical Note 1204.

☑ AWARD OF CONTRACT

In the event that the transformer contract is awarded to SPX Transformer Solutions, please provide the following text on the purchase order to help expedite order processing: **Unit(s) will be Designed, Manufactured, Tested, Shipped, Sold and Invoiced in accordance with SPX Transformer Solutions' Quotation 70004100, dated 4/2/2014.**

BID VALIDITY

Due to the rapid change in the cost of commodities required to manufacture power transformers, this proposal will remain in effect for 60 days, unless changed in the interim by written notice. Extensions to the 60-day validity will be considered, as required, to facilitate the order process.

Sincerely,
SPX Transformer Solutions, Inc.

Cheryl Shanovich

Cheryl Shanovich
Sr. Application Engineer

ENCLOSURES

SPX
TRANSFORMER SOLUTIONS

Performance Specification

FOR: 1105 DANVILLE POWER & LIGHT

Quotation No: 70004100 **Item No:** 000010 **Project Name:** 18/24/30 MVA Transformer

TRANSFORMER RATINGS

Phase	3	Cooling	HV Volts		XV Volts		YV Volts		ZV (TV) Volts	
Frequency	60	Class	69,000	--	12,470	--	--	--	--	--
Temp Rise °C	65		Delta	--	Wye	--	--	--	--	--
Insulating	Oil	ONAN	18.00	--	18.00	--	--	--	--	--
		ONAF	24.00	--	24.00	--	--	--	--	--
		ONAF	30.00	--	30.00	--	--	--	--	--

ADDITIONAL TAP VOLTAGES

Terminal	Style	Taps or KV	Capacity
HV	DETC	+ 2 / - 2 @ 2.500 %	FULL
XV	UZD	+ 16 / - 16 @ 0.625 %	REDUCED

PERCENT IMPEDANCE VOLTS

%	Windings	At MVA
8.50	H-X	18.0
--	H-Y	--
--	X-Y	--

AUXILIARY LOSSES AND SOUND LEVEL

MVA	Class	Cooling	Sound Level dB
18.00	ONAN	--	71
24.00	ONAF	900	73
30.00	ONAF	1,800	74

The above values for cooling loss do not include ancillary equipment (heaters, control devices, etc.) losses of 2,000 watts

INSULATION LEVELS (KV)

Terminal	Winding		Bushing
HV Line	350	--	350
HV Neutral	--		--
XV Line	110	--	110
XV Neutral	110		110
YV Line	--	--	--
YV Neutral	--		--
ZV (TV) Line	--	--	--
ZV (TV) Neutral	--		--

PERFORMANCE BASED ON A LOADING OF

HV Winding	69,000	Volts @	18.00	MVA
XV Winding	12,470	Volts @	18.00	MVA
YV Winding	--	Volts @	--	MVA
ZV (TV) Winding	--	Volts @	--	MVA

EFFICIENCIES Base MVA (ONAN) = 100%

Load	100%	75%	50%	25%
Percent	99.53	99.61	99.66	99.61

REGULATION

Power Factor	Percent Regulation
1.0	0.75
0.9	4.33
0.8	5.61

PERFORMANCE_DATA No Load Temp: 20 °C/ Load Loss Temp: 85 °C

Exciting Current (Percent) and Loss (Watts)

Excitation	Exciting Current(%)	No Load Loss	Load Loss	Total Loss
100%	.500	13,000	71,300	84,300

MECHANICAL DATA - Not for Construction

Dimensions are in inches & weights are in pounds (approx.values)

Outline Drawing Number:

Shipping: Dry by Truck

	Base	Assembled	Shipping
Height (A)	--	174	144
Width (B)	170	191	191
Depth (C)	78	186	108
Height Over Cover (D)	--	144	144

	Weight (lbs)
Core and Coils	54,825
Tank and Fittings	32,313
Liquid (5,550 gallons)	41,625
Total Weight	128,763
Shipping Weight, Heaviest Piece	77,886

WAUKESHA®

SPX | WAUKESHA

Effective December 2011

Transformer Terms & Conditions of Sale

1. **ACCEPTANCE, GOVERNING PROVISIONS, AND CANCELLATIONS**. No orders shall be binding upon Seller until accepted in writing by Seller at its headquarters office or at its plant handling and processing such orders. Seller's acceptance of Buyer's order is conditioned upon Buyer's assent that the terms and conditions set forth herein shall be deemed as part of such order. No modified or other conditions will be recognized by Seller unless specifically agreed to in writing, and failure of Seller to object to provisions contained in any purchase order or other communication from Buyer shall not be construed as a waiver of these conditions nor an acceptance of any such provisions. No order accepted by Seller may be altered or modified by Buyer unless agreed to in writing by Seller, and no such order may be canceled or terminated by Buyer except with the written consent of Seller and upon payment of Seller's loss, damage and expense arising from such cancellation or termination as defined in Seller's Cancellation and/or Delay Policy. Any agreement of purchase or sale shall be construed in accordance with the laws of Wisconsin, without reference to principles of conflicts of law.

2. **PRICE POLICY**. Prices shall be as stated in Seller's quotation, prices shall be valid for the duration of the quotation and only for shipment within the quoted leadtime.

3. **TERMS OF PAYMENT**. Terms of payment are specified in Seller's quotation, and payments are due net thirty (30) days from date of invoice. Seller shall charge 1-1/2% per month of the unpaid invoice amount beginning thirty-one (31) days after date of invoice, but the amount shall not exceed any rate prohibited by applicable law. In the event there are any negotiated changes made to the order that result in a negotiated change in price that is (a) greater than or equal to ten percent (10%) of the price of the affected unit, excluding applicable taxes, freight, rigging or other ancillary charges, or (b) greater than or equal to one-hundred thousand dollars ($100,000.00), then Customer shall be invoiced for the lesser of such amount at the time of the agreed-upon change, and payment shall be due upon receipt of said invoice. Any other negotiated changes made to the order that result in a negotiated change in price shall be debited or credited on the final invoice. Buyer shall provide Seller with any Buyer-specific invoice requests at the time the order is placed.

4. **TAXES**. Price does not include sales, use, excise or other taxes, for which Buyer assumes liability wherever applicable to the order, unless otherwise agreed in writing. Buyer shall provide any tax exemption certificate(s) or direct pay permit(s) at the time the order is placed.

5. **FREIGHT**. Except as otherwise stated in Seller's quotation, prices for freight shall be F.O.B. jobsite or nearest railsiding, freight prepaid and allowed, to the jobsite or nearest railsiding. Buyer shall be responsible for providing a readily accessible shipping destination without obstructions at or to the jobsite. Title and risk of loss shall transfer to Buyer when equipment is delivered to the shipping destination. Buyer shall advise Seller and carrier of any observable damage or irregularity pursuant to Seller's Receiving Instructions. Defects and non-conformances reported after delivery shall be corrected in accordance with Seller's warranty. Any detention charges by the carrier are Buyer's responsibility.

6. **DELIVERY**. Seller shall not be liable for any loss or damage as a result of any delay in shipment, delivery or installation due to any cause, whether at Seller's operations or at the operations of a supplier or subcontractor to Seller, beyond Seller's reasonable control, including, without limitation: flood, hurricane, or other act of God; act of Buyer; embargo or other governmental act, regulation, order or request; fire; theft; accident; strike, slowdown, or labor dispute; war; riot; delay in transportation; inability to obtain necessary labor, materials or manufacturing facilities. In the event of any such delay, the date of performance shall be extended for a period equal to the time lost by reason of delay, plus a reasonable time for resuming performance. If shipping or progress of work is delayed or interrupted for any cause for which Buyer is directly, or indirectly responsible and additional costs (including storage costs) are incurred by Seller due to such delays, Buyer shall reimburse Seller for such added costs.

7. **INSTALLATION**. All equipment shall be installed by and at the expense of Buyer unless otherwise agreed in writing. Assistance in initial operation of certain equipment and instruction of operators may be given as normally required. Additional assistance requested by Buyer shall be chargeable at standard rates plus living and travel expenses, unless otherwise agreed in writing.

8. **WARRANTIES**. Seller warrents the equipment to be free from defects in material and workmanship for a period of one (1) year after delivery by Seller. If within such period any such equipment or parts shall be proved to Seller's satisfaction to be defective, such equipment or parts shall be repaired or replaced at Seller's option, with all removal and installation to be at Buyer's expense. Seller's obligation hereunder shall be limited to such repair or replacement, F.O.B. its factory, and shall be conditioned upon Seller's receiving written notice of any alleged defect within ten (10) days after its discovery and at Seller's option, return of such equipment or parts prepaid to its factory.

   This warranty shall not apply to equipment or parts that have been subjected to negligence, accident, damage by circumstances beyond Seller's reasonable control, or improper operation, maintenance or storage, or modification by Buyer.

   For this warranty to be valid, Seller requires that all windings be protected from surges with arresters mounted on the transformer tank. Any other location must be approved by Seller.

   Under no circumstances will Seller be responsible for damage in excess of the sale price to Buyer for the goods and/or services for which damages are claimed.

   THE FOREGOING WARRANTIES ARE IN LIEU OF ALL OTHER EXPRESS OR IMPLIED WARRANTIES (EXCEPT TITLE) INCLUDING, WITHOUT LIMITATION, WARRANTIES OF MERCHANTABILITY AND FITNESS FOR PURPOSE, AND STATE SELLER'S ENTIRE AND EXCLUSIVE LIABILITY AND BUYER'S EXCLUSIVE REMEDY.

   SELLER SHALL NOT BE LIABLE FOR ANY INDIRECT, INCIDENTAL, SPECIAL OR CONSEQUENTIAL, DAMAGES WHATSOEVER.

9. **LIMITATION OF LIABILITY**. Except as specifically provided in Article 10, Seller shall in no event be liable to Buyer or Buyer's customer for any indirect, incidental, special or consequential damages whatsoever, under any theory of relief, including, without limitation, breach of warranty, breach of contract, tort (including negligence), and strict liability, arising out of or related to Seller's acts or omissions. Under no circumstances shall Seller's liability to Buyer exceed the contract price for the specific goods and services upon which such liability is based. Any action for breach of contract or otherwise must be commenced within one (1) year after the cause of action has accrued.

10. **PATENTS AND COPYRIGHTS**. If Buyer receives a claim that any equipment or part thereof (herein called "Product") manufactured by Seller infringes a U.S. Patent or Copyright, Buyer shall promptly notify Seller in writing and give Seller information, assistance and exclusive authority to evaluate, defend, and settle such claim. Seller shall then at its own expense and option (a) settle such claim; (b) procure for Buyer the right to use such Product; (c) replace or modify it to avoid infringement; (d) remove it and refund the purchase price less accrued depreciation; or (e) defend against such claim. Provided such timely notice, information, assistance and authority have been given by Buyer to Seller, should any court of competent jurisdiction hold such Product to constitute infringement, Seller shall pay any costs and damages finally awarded on account of such infringement and, if the use of such Product is enjoined, Seller shall take at its option one or more of the actions under (b), (c) or (d) above. With respect to any product not manufactured by Seller, the patent indemnity, if any, given by the manufacturer thereof shall apply in place of the foregoing indemnity.

    The foregoing indemnity shall not apply to (i) any claim that arises out of Seller's compliance with the specification, design or instructions of Buyer or (ii) any claim of infringement resulting from Buyer's use of Product in combination with other equipment and materials not furnished by Seller. Buyer shall hold Seller harmless and indemnified against all such claims. The rights and obligations of the parties with respect to Patents and Copyrights are solely and exclusively as stated herein.

11. **SUBSTITUTES, CHANGES AND IMPROVEMENTS**. Factors beyond Seller's control and the need for continuing improvement of its goods may require changes in its goods from time to time. Seller reserves the right to make reasonable changes of goods of any kind without notice, and to deliver revised designs or models of goods against any order, unless the right is specifically waived in writing. Seller shall have no responsibility whatever with respect to changes made by the manufacturer of goods sold but not manufactured by Seller. Buyer's requested order changes are subject to Seller's prior written approval and to adjustments in price, scheduling and other affected terms and conditions, which shall be documented in a writing signed by both parties before such change order shall be implemented by Seller.

12. **RETURNS**. Goods may not be returned for credit until and unless Seller has given consent in writing to accept them. Materials not normally stocked by Seller will not be accepted for credit allowance except at Seller's option. Materials returned without Seller's approval will be credited at Seller's evaluation. A minimum 15% restocking charge, plus freight charge, will be imposed on the return of stock items when such returns are authorized by Seller.

13. **CANCELLATION AND DELAY**. Any delay, suspension or cancellation of an order by Buyer shall be subject to Seller's Cancellation and Delay Policy.

SPX | WAUKESHA

Effective December 2011

Five Year Power Transformer Warranty

SPX Transformer Solutions, Inc., hereafter referred to as SPX Waukesha, warrants to the original purchaser that the complete transformer, together with all parts included in the original purchase (the "Transformer"), has been designed in accordance with the specifications of the original purchaser and that the Transformer will be free from defects in material and workmanship under normal use and service for a period of five (5) years from the date of arrival of the Transformer at its destination from the factory. SPX Waukesha's liability under this warranty does not extend to defects caused by vandalism, improper installation, improper maintenance, alterations by purchaser, purchaser-furnished materials, or improper operation. For this warranty to be valid, SPX Waukesha requires that all windings be protected from surges with arresters mounted on the transformer tank. Any other location must be approved by SPX Waukesha.

A Customer Service Representative must be present during field assembly, vacuum filling (if required) and inspection of the installation prior to energization. In the event that the Transformer is relocated, a Customer Service Representative must be present during field re-assembly, vacuum-filling (if required) and inspection of the re-installation prior to re-energization.

Purchaser forfeits the provisions of the Five Year Warranty if either of these service requirements is not followed.

If any part is found to contain defects in material and/or workmanship during the five year warranty period, SPX Waukesha's liability and Purchaser's remedies under this warranty shall be limited solely to repair or replacement, at SPX Waukesha's option, of the defective part. Decision on the method and extent of repairs rests solely with SPX Waukesha. Purchaser shall give SPX Waukesha prompt written notice of any claim hereunder. SPX Waukesha shall be given a reasonable opportunity to investigate all claims, and no parts may be returned to SPX Waukesha without authorization and instructions from the Customer Service Department.

During the first year, this warranty covers any freight within the 48 contiguous states by common carrier in full. This warranty also covers the cost of removal from the site and reinstallation after repair, subject to a limit of 10% of the original selling price. Costs of moving structures or associated equipment are excluded. During the last four years, transportation, moving and reinstallation costs are excluded from this warranty.

Under no circumstances will SPX Waukesha be responsible for damage in excess of the sale price to Purchaser for the goods and/or services for which damages are claimed.

THIS WARRANTY IS EXCLUSIVE AND IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. SPX WAUKESHA SHALL NOT BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES OR EXPENSES OF ANY KIND, INCLUDING LOSS OF PROFITS.

In the event a performance bond is provided as part of the contract to which this warranty applies, the Surety's liability shall be limited to one (1) year from the date of delivery of the Transformer. The remaining four (4) year warranty period is solely the obligation of SPX Waukesha.

Assembly, Vacuum Filling & Testing: Units Shipped Without Oil

applicable for transformers < 60 MVA based rating and < 230kV

If included in the quoted price or selected as an "adder" as outlined in the proposal, Waukesha® Service crews and equipment will perform the transformer installation once the transformer has been placed on the pad. Assembly and testing work will include the following:

ASSEMBLY

- Install, connect and tape, as necessary, all bushings
- Hang and brace radiators and/or fans
- Mount oil preservation system, if required
- Mount lightning arresters, if required
- Mount control cabinet, if required
- Mount any miscellaneous items removed for shipment
- Check all internal clearances including DETC and LTC (if equipped) for proper alignment and timing
- Hang any conduit removed for shipment; pull and terminate associated wiring

OIL FILLING

- Elevate core/coil temperature, if necessary
- Conduct vacuum leak test
- Vacuum fill in accordance with SPX Transformer Solutions' Instruction Leaflet Document No. 2011
- Pull vacuum at a level of 1 Torr (1,000 micron,1mm of Hg) or less and hold for a minimum of 8 hours
- Vacuum fill transformer oil while maintaining a vacuum level of 5 Torr or less
- Pull tail vacuum for 1 hour after completing filling
- Fill conservator tank or activate nitrogen system, as appropriate for transformer design

TESTING

As specified in SPX Transformer Solutions' Pre-operational Testing Instruction Booklet No. 2012, the minimum acceptance tests include the following:

- Bushing power factor and capacitance
- Core megger
- Transformer turns ratio
- Insulation power factor
- Insulation resistance
- Functional check of unit control cabinet
- Oil test after filling
  1. Moisture content
  2. Power factor
  3. Dielectric strength
  4. Flash and fire point (FR3™ units only)

See next page for Scope Clarifications.

SCOPE CLARIFICATIONS

For all transformer installations, the following apply:

- Purchaser shall be responsible for switching, lock out and grounding of any equipment necessary to establish safe work area.
- Purchaser shall provide suitable, free, clear, unlimited and compacted access route, roads and area around work location for access of service equipment.
- Purchaser shall connect all external protection, control and relay wiring, as required.
- Purchaser shall connect all external bushing terminations or bus work, as required.
- Purchaser shall assemble any deluge systems, as required.
- SPX Waukesha will compile all crating and waste material in designated area; however, purchaser shall be responsible for disposal of solid wastes.
- Purchaser shall provide drum and dispose of all waste, flush and scrap oil generated in execution of work.
- Purchaser shall provide communication and sanitation facilities.
- No provisions have been included for secondary oil containment as may be required for compliance to local site SPCC programs.
- No provisions have been included for Union Labor requirements.
- Any site specific or customer required access and/or safety training is not included in pricing and would be billed at applicable field service rates.
- If Envirotemp™ FR3™ is included in this quotation, acceptance test results of FR3™ fluid will differ from the typical values of transformers filled with mineral oil. Insulation power factor values are expected to increase and insulation resistance values are expected to decrease when compared to test values with mineral oil insulation system.
- If Envirotemp™ FR3™ is included in this quotation, Purchaser shall be responsible for disposal of all totes/drums utilized for make-up and flush oil that is generated during course of project. SPX Waukesha can arrange for disposal upon request at additional cost.

Should additional requirements, tests and/or processing procedures apply, please contact SPX Transformer Solutions' Service group for pricing at 800.758.4384.

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TC09-0811B

SPX | WAUKESHA

Escalation Example

CUSTOMER NAME: Enter Customer Name	INITIAL SELLING PRICE: $600,000
CUSTOMER P.O.#: Enter Customer P.O. #	FINAL SELLING PRICE: $587,234
[LOCATION] UNIT #: Enter Unit #	% PRICE ADJUSTMENT: -2.13%

		QUOTED BASELINE *(FROM QUOTATION)*	DATE OF INVOICE *(SHIPMENT)*		
MATERIAL	**INDEX USED**	17-Apr-12	23-Oct-12	**ADJUSTMENT MULTIPLIER**	**% OF SALES PRICE**
COPPER	HG-Comex	364.40	357.60	0.9813	9%
CORE STEEL	SPX Transformer Solutions	1.00	1.00	1.0000	9%
PLATE STEEL PRODUCTS	AMM No. 1 Heavy Melt: Chicago	405.00	310.00	0.7654	6%
OIL *(if furnished)*	West Texas Crude Index	104.20	86.67	0.8318	2%
PAPER INSULATION	PIX U.S. NBSK Index	895.12	846.83	0.9461	4%

Cancellation / Delay Policy

1. Cancellation of an order will be accepted after the purchaser has given written notice. If the cancellation occurs during the period from the date of order entry to twelve (12) weeks after order acknowledgement, the cancellation charges will be the actual work hours expended on the job performed at a rate of $250 per hour or a minimum of five percent (5%) of the purchase price, whichever is greater.

2. If the cancellation occurs after approval drawings have been issued by SPX Waukesha, the termination charge will be thirty percent (30%) of the purchase price.

3. Notwithstanding items 1 and 2 above, if the order is cancelled twenty six (26) weeks or less prior to shipment, the cancellation charge shall be one hundred percent (100%) of the purchase price.

4. If the order is suspended or shipment is delayed twenty six (26) weeks or less prior to the scheduled ship date, the equipment will be completed, invoiced, and stored at the customer's expense in accordance with the terms of SPX Waukesha's Storage Policy and Customer shall issue the required storage documentation.

5. If a request to delay shipment changes the scheduled ship date, a mutually agreed upon adjustment to the base price may be necessary.

SPX | WAUKESHA

Transformer Storage Policy

Purchaser - Company Name

SPX Waukesha Order / Transformer Unit No.

SPX Transformer Solutions, Inc. has limited facilities for storing new transformers and any related equipment (collectively the "Transformer") in the event that the customer cannot accept delivery upon completion of manufacture. The facilities are intended only for short-term outdoor storage. Therefore, increased rates apply for storage exceeding three months.

1) In order to comply with SPX Corporation's company-wide accounting policy for bill-and-hold transactions, **SPX Transformer Solutions must receive from the customer a signed Request for Storage, per the attached form, submitted on the customer's letterhead, prior to placing any equipment into storage.** Notification to SPX Transformer Solutions is defined as receipt of the signed Request for Storage at our offices.

2) The Request for Storage must state that title and risk of ownership of the Transformer transfer to the customer at the time the Transformer is placed into storage. The warranty period for any Transformer placed in storage starts upon arrival at the destination or six months after completion of manufacture, whichever occurs first.

3) Storage by SPX Transformer Solutions is contingent upon the availability of storage space at the facility. SPX Transformer Solutions may require the customer to accept shipment from storage after 3 months in storage, upon 30 days prior notice.

4) The charge to move the Transformer into and out of storage is **$4,000 in / $4,000 out**.

5) Storage periods greater than 30 days will result in monthly storage fees. One-half percent of the Transformer price shall be charged for each month, or portion of a month, of storage. The minimum charge for storage shall be **$1,500 per month**. After three months in storage, the monthly rate increases to one percent of the Transformer price (**$3,000 per month minimum**). The Request for Storage also grants SPX Transformer Solutions a security interest in the Transformer to secure payment of the purchase price and storage fees.

6) The Transformer will be invoiced to the customer when the Transformer is placed into storage. Storage fees will also be invoiced to the customer on a monthly basis.

7) Terms of payment are Net 30 Days from date of invoice.

8) For storage periods greater than 90 days, the delivery charges are subject to review at the time of shipment from storage. If there are any increases in freight or rigging rates or oil-filling costs from the time the equipment is invoiced to the time it is actually shipped out of storage, customer will be invoiced and required to pay the additional costs.

9) SPX Transformer Solutions requests four weeks advance notification for shipping out of storage to ensure that shipping preparations are completed in time to meet the designated ship date. If the anticipated date for removing a Transformer from storage changes, the customer shall request in writing that SPX Transformer Solutions grant an extension to the new anticipated removal date and provide the reasons for requesting an extension.

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TQ03-0028

SPX | WAUKESHA

Request for Storage

(this request must be submitted on purchaser's letterhead)

_____
Purchaser - Company Name

_____
Purchaser Address

_____
Purchaser Address

Date: _____

CHECK APPLICABLE MANUFACTURING/STORAGE LOCATION:

☐ **SPX Transformer Solutions, Inc.**
400 S. Prairie Ave.
Waukesha, WI 53186

☐ **SPX Transformer Solutions, Inc.**
2701 US Highway 117 South
Goldsboro, NC 27530

ATTN: _____
Sales Operations

REF: **Purchase Order No.** _____

SPX Waukesha Order / Transformer Unit No. _____

[Insert Customer name], located in **[insert customer location]** is not ready to use power transformer purchased on the above referenced purchase order and, therefore, requests that SPX Transformer Solutions, Inc. store the transformer at its location.

Please bill and store the transformer for us as of **[insert date, 20__]**. We accept title and risks of ownership of the listed transformer as of the related invoice date and normal payment terms begin on that date. We expect shipment will be required by **[insert anticipated shipment date]**.

We have received the SPX Transformer Solutions Storage Policy and agree to the terms of the policy. Please invoice us for the applicable storage fees on a monthly basis.

Sincerely yours,

_____
Signature

_____
Type or Print Name

_____
Title

Transformer Oil Specification

(as received from refiner)

SPX Waukesha's standard is **inhibited mineral oil with 0.3% DBPC (oxidation inhibitor)**. Oil meeting other specific customer requirements may be available upon request.

Oil is purchased only from approved domestic sources, and for each approved source, oil has been tested and proven to meet the following specification values:

KEY PROPERTIES	ASTM TEST METHOD	ANSI / ASTM D-3487 LIMITS
Physical Properties		
Color	D1500	0.5 max
Flash point, °C	D92	145 min
Interfacial tension @ 25°C (dynes/centimeter)	D971	40 min
Pour point, °C	D97	–40 max
Specific gravity @ 15°C/15°C	D1298	0.91 max
Viscosity, SSU/cSt @	D88 / D445	
100°C		36 / 3.0 max
40°C		66 / 12.0 max
0°C		350 / 76.0 max
Polychlorinated Biphenyls (PCBs) ppm	D-4059	Not Detectable
Visual appearance	D1524	Clear and Bright
Chemical Properties		
Aniline point, °C	D611	63–84
Approved antioxidant content, wt %	D2668, D1473	0.30 max
Corrosive sulfur [1] Test to be run for 48 hours @ 150°C	D1275B [1]	Non-Corrosive
Moisture, ppm	D1315, D1533	35 max*
Neutralization number, mg KOH/g of oil	D974	0.03 max
Oxidation stability Method A (acid / sludge test)	D2440	
72 hours		
sludge, wt %		0.10 max
Neutralization value, mg KOH/g		0.30 max
164 hours		
sludge, wt %		0.20 max
Neutralization value, mg KOH/g		0.40 max

*35 ppm max as received from refiner; SPX Waukesha dehumidifies to lower value for installation in transformer.

Continued on next page.

KEY PROPERTIES	ASTM TEST METHOD	ANSI/ASTM D-3487 LIMITS
Electrical Properties		
Dielectric breakdown voltage at 60 hertz		
Disc electrodes, kV	D877	30 min
VDE electrodes, kV		
@ 0.040-in. gap or	D1816*	28 min
@ 0.080-in. gap	D1816*	56 min
Dielectric breakdown voltage 25°C impulse conditions, kV		
Needle (negative)-to-sphere (grounded)	D3300	
@ 1-in gap		145 min
Power factor at 60 hertz, % at:		
25°C	D924	0.05 max
100°C	D924	0.30 max
Gassing Tendency @ 80°C (µL/min)	D-2300 B	+ 30 max

*D1816 only applies to new oil that has been filtered, dehumidified and degassified.

Oil shall be PCB-free to existing current law. Properties as listed are only attainable on new oil as received from the refinery. It is expected that oil contained in equipment as received from the manufacturer when properly sampled from such equipment usually exhibits characteristics slightly different from those obtained from new oil, which has not been in contact with apparatus constructional materials. In such cases, the oil should be evaluated per IEEE C57.106 (most recent release) for acceptance and maintenance of insulating oil in equipment.

IN-PLANT QUALITY CONTROL

In addition to extensive testing by an independent testing laboratory to determine approved sources of supply, SPX Waukesha performs acceptance tests on each shipment of oil received.

SPX Waukesha receives oil at its plants in dedicated tank cars and trucks. Upon arrival, acceptance testing is performed before the oil is unloaded into a SPX Waukesha storage tank. Prior to filling a transformer, oil is degassified and dehumidified, passed through Fullers earth and refiltered at various points in the process.

Transformer Paint Systems

SPX Transformer Solutions, Inc. (SPX Waukesha) provides as standard a coating system that exceeds the requirements of ANSI C57 12.28, "Enclosure Integrity—Above-Ground Pad-Mounted Enclosures" Specification (the specification for pad mounted equipment). The coating system consists of an epoxy primer with a polyurethane topcoat. This process has been both lab tested and field evaluated.

The coating system processes used for the transformer are as follows:

SUBSTRATE
Hot rolled low alloy steel.

SURFACE PREPARATION
The performance of a coating system is highly dependent upon the condition of the surface to which the coating is applied. All sharp edges, scale, weld spatter and surface irregularities shall be removed by shot blasting, hand grinding, sanding or other appropriate manufacturing procedures.

Shot blasted per SSPC-SP6 (Commercial Blast Cleaning) then detergent washed with an iron phosphate conversion coating and a non-chrome seal.

-or-

Blast to SSPC-SP10 (near white) condition and apply paint within 24 hours.

COATING PROCEDURE
Interior of tank and tank cover are coated using a white, two-part, oil-resistant epoxy enamel. The exterior surfaces are first painted using a two-part epoxy primer then top coated using a two-part urethane enamel. All coating materials are applied using plural component equipment that automatically measures and mixes the paint systems to eliminate operator error. The coatings are then force cured to produce a uniform cured coating.

COATING RESULT
Interior coating compatible with transformer oil per ASTM 3455; 3 mil exterior coating capable of meeting ANSI C57.12.28

The two-component coatings used for painted surfaces have a high crosslink density and an exceptional barrier property characteristic. Two-component systems develop full corrosion resistance at a 2 mil total film thickness (primer and topcoat); in fact, the mechanical properties of any organic coating will deteriorate as the thickness approaches 5 mils. For these reasons, the SPX Waukesha paint system exhibits optimal performance at a nominal 3 mil thickness (range 3–5 mils).

NOTE: Radiators are purchased from an outside supplier and are hot dip galvanized or painted to meet the customer's specification.

See next page for paint system test results.

October 8, 2012

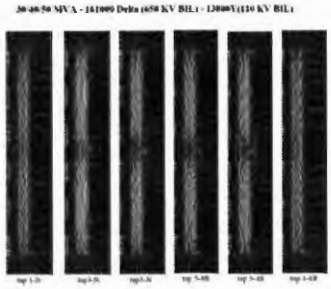
EXTERIOR PAINT SYSTEM PERFORMANCE

TEST	ASTM TEST METHOD	RESULTS
Adhesion	D-3359-B	No Removal
Salt Spray	B-117	1500 Hrs, 1/32" Loss of Adhesion
Humidity	D2247	1000 Hrs @ 40°C; No Blisters
Impact	D-2794	160 in/lbs., No Chipping
U-V Resistance	G-53	500 Hrs, Less than 15% Gloss Change
Taber Abrasion	D-4060	More than 3,000 Cycles @ 3 Mils
Oil Resistance	72 Hrs @ 100°C	No Effect
Thermal Aging	1,000 Hrs @ 120°C	No Effect
Pencil Hardness	D-3363	2-H After 2 Weeks
VOCs	D-2369	3.5 #/gal.

Short Circuit Testing

DESIGN

All SPX Waukesha transformers are designed with state-of-the-art tools and manufactured in our factories per strict quality assurance plans to ensure survival through even the worst-case faults. To start, worst-case fault currents are determined assuming infinite bus supply (zero system impedance) for single line to ground as well as three phase faults at the transformer terminals. Using this fault current, all designs are analyzed with detailed stress calculations for worst case combinations of tap positions (LTC and DETC) for all known failure modes. These stresses are then compared to known strengths for each of the failure modes and must have acceptable design margins as set by SPX Waukesha.



MANUFACTURING

All windings are manufactured with rectangular, electrolytic-grade copper conductor or epoxy-bonded, continuously transposed cable (CTC). Radial spacers are locked to strips fastened to the winding cylinders. These radial spacers and other support blocks in the pressure column are manufactured from high density, pre-compressed pressboard or laminated wood. Other specialized components—angle/cap rings, coil collars and static ring insulation—are manufactured from molded grade, soft pressboard as required.

Fully Distributed Regulating Voltage Winding

After the windings are completed, they are thoroughly dried using hot air. After removal from the dryout chamber, coils are hydraulically pressed successively using a predetermined force then pressed again using the clamping force they will experience when fully assembled. When required, radial spacers are adjusted to achieve the required design height, maintaining the design's "electrical center" of the windings for ampere-turn balance, stray flux and axial force mitigation.

The coils are clamped in place by first applying a precise, hydraulic force which compresses the windings to the design height as verified in the coil sizing operation (as described in the paragraph above). In this condition, the coils are fastened in place to maintain a compressive force as specified by SPX Waukesha engineering. Verifying exact clamping pressure and winding height in this manner helps guarantee a finished product that conforms to what was designed in engineering.

The entire clamping technique and underlying scientific principles on which it is based are major contributors to the outstanding SPX Waukesha service record.

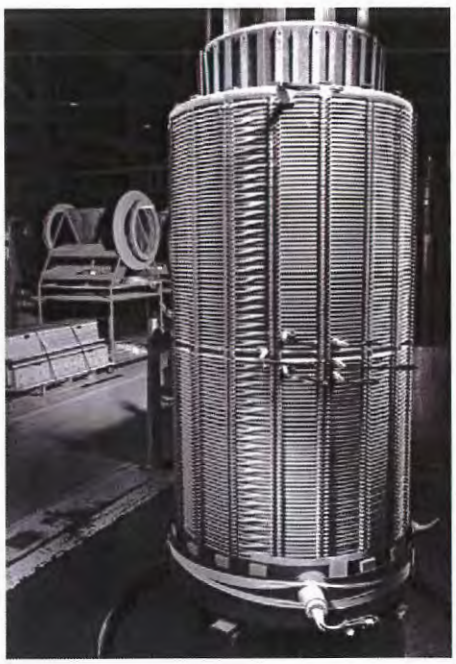
See next page for a list of transformers tested for short-circuit at high power laboratories.

SPX WAUKESHA SHORT CIRCUIT TEST LIST:

MVA RATING	HV RATING	LV RATING	MANUFACTURING PLANT LOCATION
0.833	67 kV Delta	12.47 kV Wye	Wisconsin
5 / 6.25	24.4 kV Delta	4.16 kV Wye	Wisconsin
5 / 6.25	26.4 kV Delta	4.16 kV Wye	Wisconsin
5 / 6.25	59.58 kV Wye	10.66 kV Wye	Wisconsin
5 / 6.25	67 kV Delta	12.47 kV Wye	Wisconsin
7.5 / 9.375	69 kV Delta	12.47 kV Wye	Wisconsin
7.5 / 9.375	138 x 69 kV Delta	26.4 X 13.2 kV Wye	Wisconsin
12 / 16 / 20	66 kV Delta	14.4 kV Wye	Wisconsin
15 / 20	67 kV Delta	12.47 kV Wye	Wisconsin
15 / 20 / 25	69 kV Delta	12.47 kV Wye	Wisconsin
1.0	12.47 kV Delta	4.8 kV Wye	North Carolina
3.75	23 kV Delta	4.8 kV Wye	North Carolina
5.0	34.4 kV Delta	12.47 kV Delta	North Carolina
5.0	69 kV Delta	12.47 kV Delta	North Carolina
7.5	23 kV Delta	12.47 kV Wye	North Carolina
7.5	115 kV Delta	13.2 kV Wye	North Carolina
10.0	43.8 kV Delta	24.9 X 12.47 kV Wye	North Carolina
5 / 6.2	34.5 kV Delta	12.47 kV Wye	California
15 / 20	67 kV Delta	12.5 kV Wye	California
15 / 20	67 kV Delta	12.5 kV Wye	California
15 / 20 / 25	120 kV Delta	13.2 kV Wye	California
15 / 20 / 25	120 kV Delta	13.2 kV Wye	California
18	39.5 kV Delta	4.8 kV Delta	California
30	230 kV Delta	55.2 kV Delta	California

Helical Winding with CTC

Continuous Disk Winding with Copper Magnet Wire



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TC07-1008A

SPX®

WAUKESHA® SERVICE

Transformer Service Solutions to 765kV

AVAILABLE FOR ALL MANUFACTURERS' UNITS

The Waukesha® Service team focuses on maintaining performance quality, reliability and life of transformers and load tap changers throughout your electric power system — whether manufactured by SPX Waukesha or other suppliers. Our mission is simple: to keep your transformers up and running with responsive and cost-effective service and maintenance support 24 / 7 / 365.

TRANSFORMER INSTALLATION & LOGISTICS

- Heavy Hauling
- Rigging
- Assembly
- Oil Filling
- Acceptance Testing
- Relocation

TRANSFORMER TESTING SERVICES

- Insulation Resistance
- Power Factor
- Transformer Turns Ratio
- Winding Resistance
- CT Testing
- Leakage Reactance
- Winding Excitation & Alarm Checks
- Gauge Calibration
- Sweep Frequency Response Analysis
- Dissolved Gas Analysis & General Chemistry Test
- Materials Analysis

TRANSFORMER MAINTENANCE

- Inspections
- Component Addition & Replacement
- Regasketing
- Leak Repairs
- Life Extension
- Oil Preservation System Upgrades
- Control Upgrades
- Retrofits

TRANSFORMER OIL PROCESSING

- Field Dry Out
- Vacuum Filling
- Hot Oil Processing
- Cryogenic Drying (Cold Traps)
- Fullers Earth Reclamation
- On-Line Dehumidification
- Natural Ester Retrofills

SPARE PARTS

- Bushings / Arresters
- Cooling Equipment
- Gauges / Controls
- Gaskets
- Transformer Health Products®
- LTC Parts

TRAINING SERVICES

- LTC Training
- Maintenance Training
- Testing Training
- Print Reading
- Oil Processing Training

LTC MAINTENANCE

- All Manufacturers
- Inspections
- Overhauls
- Upgrade Kits
- Filtration Installation
- Core Replacement
- Vacuum Retrofits

ENGINEERING SERVICES

- Condition Assessment Studies
- Life Assessment Studies
- Thermal Uprate Studies
- Component Retrofits
- Failure Analysis
- Feasibility Studies
- Technical Supervision

Contact us for additional information or quotation on our extensive range of services:

CALL **800-758-4384** | VISIT **www.waukeshaservice.com**

Emergency Service Available 24/7/365: 888-365-24X7

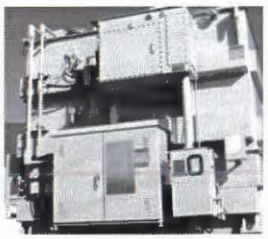
WAUKESHA®

2701 US HWY 117 SOUTH | GOLDSBORO, NC 27530-0915

TRANSFORMERS | SERVICE | TRAINING | COMPONENTS

SRV-065 (Rev. 4/12)

SPX®

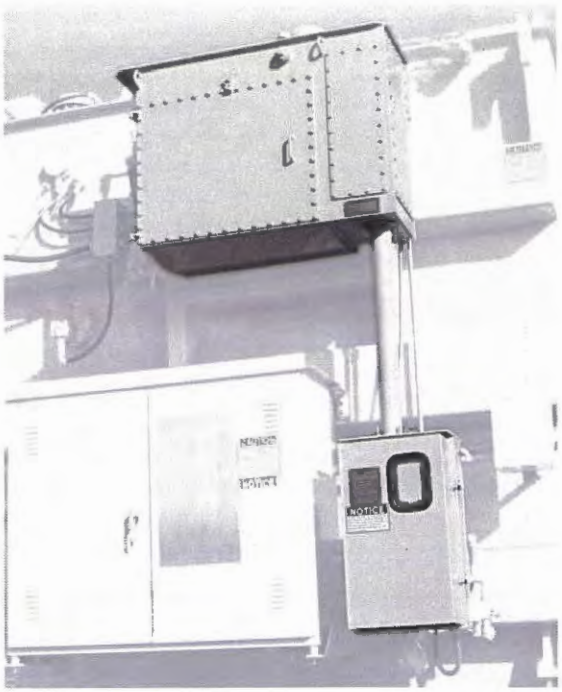


WAUKESHA® COMPONENTS

Waukesha® UZD®

THE SERVICE-PROVEN LOAD TAP CHANGER!

With more than 6,500 units installed, Waukesha's UZD Load Tap Changers boast an excellent field performance record. Design improvements made in the 1990s reduced the already low failure rate to one of the lowest in our industry, reduced maintenance costs and increased maintenance intervals. When compared to the cost of downtime, out-of-service operation and costly repairs, the UZD LTC system is a cost-effective way to keep your transformer operating as smoothly as the day it was installed!

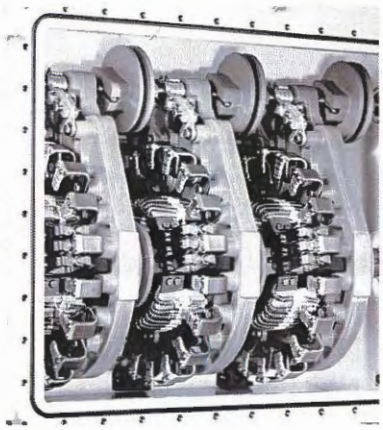


A load tap changer, regardless of manufacturer, is a complex engineered device with numerous moving parts requiring precise engineering, correct material selection and controlled manufacturing to operate reliably for a long period of time.

In many cases, the true reliability of a load tap changer becomes evident only when a transformer has been in service for several years and the load tap changer accumulates 100,000 plus mechanical operations.

Since the UZD's initial introduction in 1970, it has accumulated in excess of 110,000 YEARS of operational service and an estimated 550 MILLION switching operations. Ongoing continuous improvement programs, in coordination with our customers, resulted in several design enhancements that help increase overall operational life as well as virtually eliminate a need to perform maintenance inside the oil compartment.

KEY ADVANTAGES OF THE WAUKESHA® UZD® LOAD TAP CHANGER



Re-Engineered Reversing Switch and Current Collector ("Bow-tie") System
Since the re-engineered reversing switch and current collector system were introduced in 1997, no known failures due to coking have occurred.

Silver-Plated Copper Contacts with Tungsten Copper Inserts
Stationary contacts for long life and low temperature rise.

Resistive Bridging
High-speed operation results in extremely low contact wear and manageable levels of arcing by-products. For optimal results, we recommend applying an oil filtration system.

LTC and Series Transformer System
For applications with greater than 600 ampere current ratings, a series transformer is recommended to allow for an optimal volts/turn design of the main transformer windings, even step regulation and smaller leads while facilitating a reduction in current through the LTC contacts for less contact wear and longer life; a power-class series transformer design is recommended for high reliability.

Spring Drive Mechanism
Stored energy system delivers split-second operation for minimum arcing time; in addition, each tap change is uniform and unaffected by possible auxiliary voltage fluctuations.

OTHER NOTABLE FEATURES OF THE WAUKESHA® UZD® LTC

Single Set of Spare Contact Parts

Due to the design flexibility of the series transformer, we utilize a single model LTC across a wide range of transformer voltage and power ratings.

Easy to Maintain with Few Moving Parts

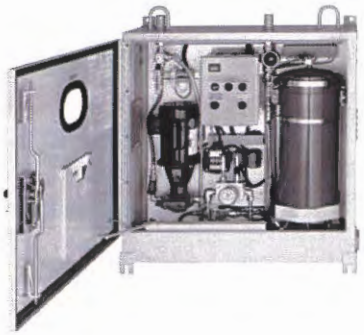
A single collector arm incorporates both the arcing contacts and tap selector contacts which reduces linkages, wear points and potential maintenance.

RECOMMENDED ACCESSORIES

Clean, dry oil increases dielectric strength, thereby reducing arcing time. The accessories below help keep carbon particles, metal particles and moisture out of tap changer oil:

OF2 Oil Filtration System

Designed to remove carbon and metallic particles produced during normal LTC operation. The system includes an adjustable timer for customized configuration and a 1/2 HP, fully enclosed, continuous run rated, auto-thermal resetting motor.



Another feature of the OF2 is a tilt-out, tool-free filter replacement system which allows the filter cartridge to be changed without disconnecting oil lines or reversing the pump—dirty oil stays in the filter while LTC compartment oil stays clean. Additionally, our OF2 ships standard with a unique, high-efficiency, depth-type filter that offers long element life and provides the capability to filter more efficiently than pleated-type models. The system is also adaptable to a variety of industry standard filters. Other features include low flow and high pressure alarms, anti-condensation cabinet heater and remote system shut down relay.

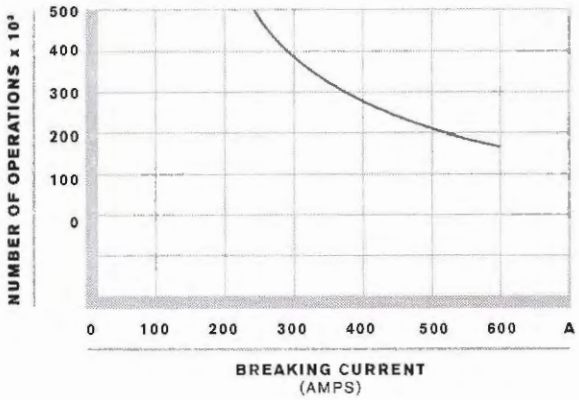
ARDB2 Auto-Recharging Dehydrating Breather

Automatic recharging of silica gel maintains peak drying performance and reduces maintenance costs by eliminating the need for periodic replacement/disposal of saturated silica gel.

CONTACT LIFE

Predicted contact life of the selector switches' fixed and moving contacts is shown below. Since most transformers are not consistently operated at maximum nameplate rating, some tap changes will be made at lower currents. These lower currents allow for less contact erosion due to arcing, so contact life may be longer than what is illustrated on this curve.

PREDICTED CONTACT LIFE WITH BREAKING CURRENTS



WAUKESHA® UZD® LOAD TAP CHANGER

System Designed for High Reliability and Low Total Operating Costs

- Economical LTC solution to total transformer cost
- Well accepted in the US market
- Now available for sale to transformer manufacturers

Contact us for more information. To download an order form, technical manual, field maintenance manual and/or technical paper, visit our website.

CALL **800-338-5526**
VISIT **www.waukeshacomponents.com**

WAUKESHA®

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SPX®

TRANSFORMER HEALTH PRODUCTS

WAUKESHA® COMPONENTS

2ND GENERATION

Load Tap Changer Oil Filtration Systems

REDUCE OIL-RELATED MAINTENANCE COSTS AND IMPROVE RELIABILITY

Our second generation oil filtration systems are designed to be installed on most LTC models to remove carbon and metallic particles produced during normal LTC operation, keeping oil in peak condition with minimal maintenance.

For flexible operation, the system includes an adjustable timer which allows customers to configure the system to their specifications — daily, every other day, weekly or every other week in intervals of two, four, eight and 24 hours. Since filter replacement does not require pump reversal OR any disconnection of oil lines, the dirty oil stays in the filter while system oil stays clean and in peak condition (a convenient filter canister drain valve is included).

2ND GENERATION OIL FILTRATION SYSTEM: OF2

Easier to Install and Maintain

Our standard OF2 system's design allows for easy installation and is equipped with a swing-out filter canister that makes filter replacements a quicker task.

Unique High-Efficiency Filter Design with Tilt-Out Easy Filter Change System

Our depth-type filter uses a flow path parallel with the center tube instead of the conventional outside-to-inside flow. This flow path forces oil through a greater depth of filter material for more efficient filtration. See back side for more information on this unique filter design and photo to the right demonstrating easy filter change-out process.

Minimum Turbulence in Reservoir

Pump maintains a flow rate of 1.0 GPM to minimize turbulence in the tank.

Filter Adapter Kit Available for Alternate Style Manufacturer Cartridges

More Economical

High efficiency filter reduces LTC mechanical wear which can minimize equipment failure and downtime. Economical purchase price combined with less frequent filter replacement can save you money.*

** Actual filter life varies depending on transformer loading and frequency of LTC operations and tap changer model.*

Customizable 2nd Generation Oil Filtration System: OF2

SEE BACK SIDE FOR PART NUMBER CONFIGURATION TOOL.

CUSTOMIZE YOUR OWN SYSTEM

The OF2 oil filtration system has been designed to meet the filtration demands of higher oil volume load tap changers while providing customization flexibility to meet individual customer specifications. The system is adaptable to a variety of industry standard filters and always ships complete with the following:

- 1/2 HP, fully enclosed, continuous run rated, auto-thermal, resetting motor
- High performance depth filter
- 5+ gallon leak-catch sump with sump alarm
- Low flow alarm
- High pressure alarm
- Anti-condensation cabinet heater
- Tilt-out, tool-free filter change system
- Visual flow indicator which can be monitored without opening the cabinet
- 0–160 psi, oil-filled pressure gage
- Customer selectable run-time and interval timer
- Run-time bypass switch
- Remote system shut down relay
- Heavy duty circuit breaker on incoming power
- 120 VAC operation

OPTIONAL FEATURES

- 240 VAC Operation
- Alternate Filter Selection
- Additional 4–20 mA Flow Transmitter
- Additional 4–20 mA Pressure Transmitter
- Filter Canister Heater System
- LTC Entrance Tube with or without Hose
- Stainless Steel Cabinet

Particle/Moisture removal performance is dependent on make/model of customer-specified oil filter cartridge.

With the appropriate filter installed, the OF2 system can remove dissolved water, extremely fine carbon and metallic particles to maintain peak performance of LTC oil, extend the life of your equipment and lengthen the period between maintenance intervals.

Build Your Own Part Number Using Configuration Below

Oil Filtration Systems

O	F	2	-	X	X	X	X	X	X	X

SYSTEM TYPE

STANDARD SYSTEM (120VAC) STEEL NEMA 3R CAB 1/2 HP MOTOR 5 GAL LEAK SUMP OIL LEAK DETECTION TILT OUT FILTER CANISTER VISUAL FLOW INDICATOR 0-100 PSI, OIL FILLED, GAGE RUN INTERVAL TIMER RUN TIMER BYPASS SWITCH RUN-TIME METER REMOTE SHUTDOWN AUTO RESTART WITH POWER FAILURE (1030-1393 CAB.)	A
SAME AS OPTION "A" EXCEPT WITH STAINLESS STEEL CAB (1030-1656 CAB.)	B
SAME AS OPTION "A" EXCEPT FOR 240VAC OPERATION 240VAC - 120VAC TRANSFORMER CONVERSION WIRING	C
SAME AS OPTION "A" EXCEPT WITH STAINLESS STEEL CAB & 240VAC OPERATION 240VAC - 120VAC TRANSFORMER CONVERSION WIRING	D

PUMP CAPACITY

1 GAL PER MIN. MECH. SEALS INTEGRAL BYPASS	0

FILTER PACKAGE

WAUKESHA STAN. 7 X 18 DEPTH COMO ELEMENT 1030-1508	0
7 X 18 DEPTH COMO ELEMENT -D 1030-1542	1
7 X 18 DEPTH FILMAX ELEMENT 1030-1385	2

LOW FLOW / LEAK ALARMS

STANDARD LOW FLOW & LEAK DETECTION WITH LOCAL LED INDICATOR AND ALARM CONTACTS	0
SAME AS OPTION "0" EXCEPT WITH FLOW TRANSMITTER (4-20 ma) 1030-1530	1

HIGH PRESSURE ALARMS

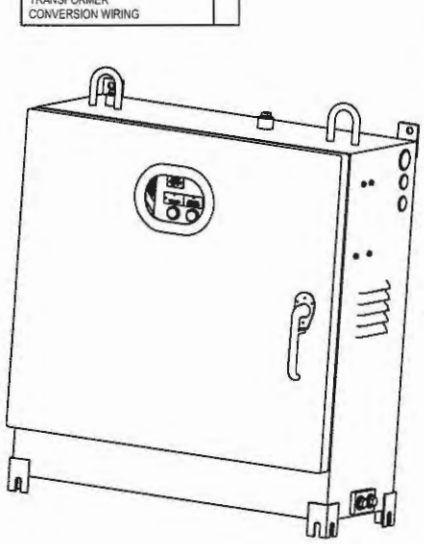
STANDARD HIGH PRESSURE DETECTION WITH LOCAL, WINDOW VISIBLE, LED INDICATOR SYSTEM SHUTDOWN, AND ALARM CONTACT	0
SAME AS OPTION "0" EXCEPT WITH PRESSURE TRANSMITTER (4-20 ma)	1

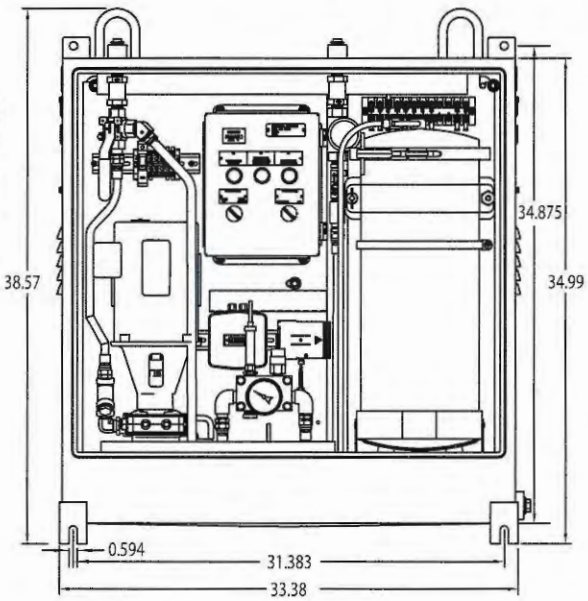
AMBIENT TEMPERATURE RANGE

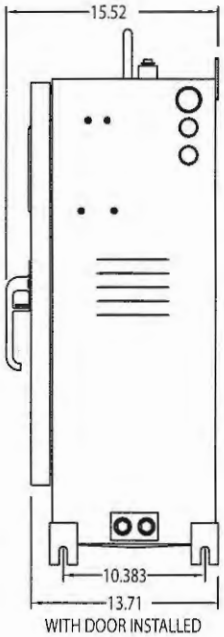
-50° C TO 50° C AMBIENT HI-RECOVERY 200/400W ANTI-CONDENSATION HEATING	0

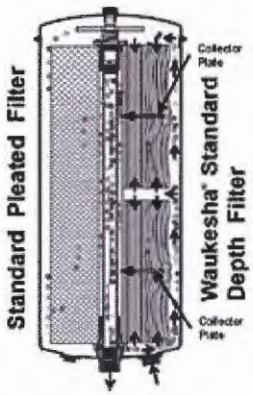
PIPING

NONE	0
ENTRANCE TUBE ONLY 1030-014K	1
ENTRANCE TUBE AND HOSE 1030-048K	2









WAUKESHA® STANDARD FILTER OFFERS LONG FILTER ELEMENT LIFE

SPX Transformer Solutions' depth-type filter element (in Standard OF2 System) features a unique fluid flow path: fluid runs parallel with the center tube (axial flow) rather than the conventional outside-to-inside flow (radial flow) of most pleated-type filters. The depth of fluid flow is optimized and provides the capability to filter more efficiently than pleated-type filters. Filter media is constructed as four rolls of filter paper. Oil flows between the layers of media until it reaches one of two collector plates. The collector plates route oil to the center of the element where it is discharged out of the element. The depth filter media has a much greater resistance to flow from outside to center (radial flow) than it does between the layers (axial flow) of filter material. Integrity of the filter element is maintained even as it accumulates contaminants and the Delta-p (pressure across the filter) goes up. Hydraulic pressure of the fluid compressing the layers of media together prevents a channel from forming that could allow oil to pass through the element unfiltered.

REMOVES BOTH DIRT AND MOISTURE

- Filter material is dried cellulose fiber
- Optional –D filter can decrease water to under 5 PPM with multiple passes
- Micron rating: 1.0
- Rated for particles as well as free and emulsified water
- Total water holding capacity: 0.5 kg
- Beta X rating: >25 at 3 microns
- High rate of absorption enables oil to be reduced from 200 to less than 25 PPM in one pass using the optional –D filter element

WAUKESHA®

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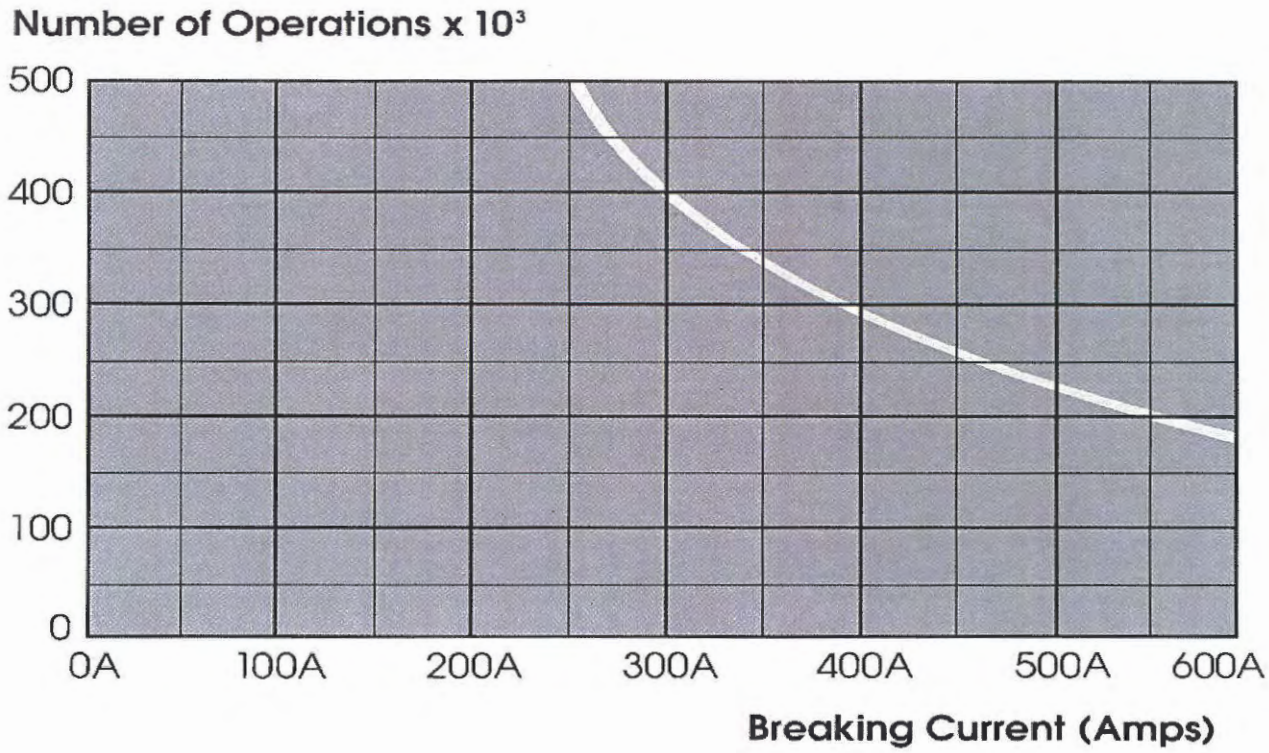
WAUKESHA® UZD CONTACT LIFE CURVE



SPX
TRANSFORMER SOLUTIONS

Performance Specification

FOR: 1105 DANVILLE POWER & LIGHT

Quotation No: 70004100 **Item No:** 000010 **Project Name:** 18/24/30 MVA Transformer

TRANSFORMER RATINGS

Phase	3
Frequency	60
Temp Rise ^{O}C	65
Insulating	Oil

Cooling	HV Volts		XV Volts		YV Volts		ZV (TV) Volts	
Class	69,000	--	12,470	--	--	--	--	--
	Delta	--	Wye	--	--	--	--	--
ONAN	18.00	--	18.00	--	--	--	--	--
ONAF	24.00	--	24.00	--	--	--	--	--
ONAF	30.00	--	30.00	--	--	--	--	--

ADDITIONAL TAP VOLTAGES

Terminal	Style	Taps or KV	Capacity
HV	DETC	+ 2 / - 2 @ 2.500 %	FULL
XV	UZD	+ 16 / - 16 @ 0.625 %	REDUCED

PERCENT IMPEDANCE VOLTS

%	Windings	At MVA
8.50	H-X	18.0
--	H-Y	--
--	X-Y	--

AUXILIARY LOSSES AND SOUND LEVEL

MVA	Class	Cooling	Sound Level dB
18.00	ONAN	--	71
24.00	ONAF	900	73
30.00	ONAF	1,800	74

The above values for cooling loss do not include ancillary equipment (heaters, control devices, etc.) losses of 2,000 watts

INSULATION LEVELS (KV)

Terminal	Winding		Bushing
HV Line	350	--	350
HV Neutral	--		--
XV Line	110	--	110
XV Neutral	110		110
YV Line	--	--	--
YV Neutral	--		--
ZV (TV) Line	--	--	--
ZV (TV) Neutral	--		--

PERFORMANCE BASED ON A LOADING OF

HV Winding	69,000	Volts @	18.00	MVA
XV Winding	12,470	Volts @	18.00	MVA
YV Winding	--	Volts @	--	MVA
ZV (TV) Winding	--	Volts @	--	MVA

EFFICIENCIES Base MVA (ONAN) = 100%

Load	100%	75%	50%	25%
Percent	99.53	99.61	99.66	99.61

REGULATION

Power Factor	Percent Regulation
1.0	0.75
0.9	4.33
0.8	5.61

PERFORMANCE_DATA No Load Temp: 20 ^{O}C/ Load Loss Temp: 85 ^{O}C

Exciting Current (Percent) and Loss (Watts)

Excitation	Exciting Current(%)	No Load Loss	Load Loss	Total Loss
100%	.500	13,000	71,300	84,300

MECHANICAL DATA - Not for Construction

Dimensions are in inches & weights are in pounds (approx.values)

Outline Drawing Number:

Shipping: Dry by Truck

	Base	Assembled	Shipping
Height (A)	--	174	144
Width (B)	170	191	191
Depth (C)	78	186	108
Height Over Cover (D)	--	144	144

	Weight (lbs)
Core and Coils	54,825
Tank and Fittings	32,313
Liquid (5,550 gallons)	41,625
Total Weight	128,763
Shipping Weight, Heaviest Piece	77,886

WAUKESHA®

Appendix H

Paleontological Resources Assessment

Anza Electric Cooperative Electricity Transmission Line Project (Project No. PUP200001)

Paleontological Resources Assessment

prepared for

Anza Electric Cooperative, Inc.
58470 U.S. Highway 371
Anza, California 92539

prepared by

Rincon Consultants, Inc.
250 East 1st Street, Suite 1400
Los Angeles, California 90012

August 2021

RINCON CONSULTANTS, INC.
Environmental Scientists | Planners | Engineers
rinconconsultants.com

J. DiCenzo and J. Mendieta

2021 *AEC Electricity Transmission Line Project Paleontological Resources Assessment*. Rincon Consultants Project No. 17-05071. Report on file with the CPUC.

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Figures

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Executive Summary

Purpose and Scope

Rincon Consultants, Inc. (Rincon) was retained by Anza Electric Cooperative, Inc. (AEC) to conduct a paleontological resources assessment of the Anza Electric Cooperative Electricity Transmission Line Project (the project) in Riverside County, California. This study has been prepared in conformance with the California Environmental Quality Act (CEQA) and includes a records search, literature review, and paleontological sensitivity assessment consistent with the professional standards of the Society of Vertebrate Paleontology (SVP 2010). The purpose of the literature review and records search was to identify the geologic unit(s) underlying the project area and to determine whether previously recorded paleontological localities occur either within the project boundaries or within the same geologic unit elsewhere. Using the results of the literature review and records search, the paleontological resource potential of the project area was determined in accordance with the SVP (2010) guidelines.

Results of Investigation

Published geologic mapping indicates that the project area is underlain by Mesozoic metamorphic and plutonic igneous bedrock and younger Quaternary alluvium. A records search for paleontological locality data within the project area and the vicinity was obtained from the Natural History Museum of Los Angeles County, and online records were reviewed at the University of California's Museum of Paleontology, the Paleobiology Database, and Neogene Mammal Mapping Portal. According to the museum record searches, no vertebrate fossil localities have been previously recorded directly in the project boundary or nearby within deposits of younger Quaternary alluvium. Based on this assessment, the project area is determined to have low to no potential for paleontological resources and the likelihood of impacting scientifically significant vertebrate fossils as a result of project construction is low.

Recommendations

Impacts to paleontological resources are not anticipated as a result of the project due to the negligible paleontological resource potential of the geologic units underlying the project area. As a result, further paleontological resource management is not recommended. In the event that an unanticipated fossil discovery is made during the course of project development, a Qualified Professional Paleontologist should be retained in accordance with the SVP (2010) guidelines to examine the find and to determine if further paleontological resources mitigation is warranted to satisfy the requirements of CEQA.

1 Introduction

Paleontological resources (i.e., fossils) are the remains or traces of prehistoric life. Fossils are typically preserved in layered sedimentary rocks and the distribution of fossils across the landscape is controlled by the distribution and exposure of the fossiliferous sedimentary rock units at and near the surface. Construction-related impacts that typically affect or have the potential to affect paleontological resources include mass excavation operations, drilling/borehole excavations, trenching/tunneling, and grading.

This Paleontological Resources Assessment provides a list of the geologic formations mapped at the surface within the project site and formations that underlie those mapped at the surface that may be impacted by construction excavations. The assessment also provides a description of the formations, including types of fossils known to occur within the formations (if any), the paleontological sensitivity for each formation, a review of relevant agency regulations, an assessment of potential impacts from project development, and recommended mitigation measures for the protection and recovery of significant fossils that may be impacted, if any.

1.1 Project Location and Description

The project components as shown in Figure 1 would be located primarily within existing AEC utility easements that are generally north of State Route 371 (SR 371) and along existing local roadways in the unincorporated community of Anza, California. In addition, the project proposes a new substation, the Bautista substation, near the intersection of Bautista Road and SR 371. The project location and alignment are shown in Figure 2. The project site includes Assessor's Parcel Numbers 576-060-040 for the proposed Bautista substation and 96 parcels for the project realignment. The project is depicted on United States Geological Survey (USGS) *Cahuilla Mountain* and *Anza Lake*, *California* 7.5-minute topographic quadrangles.

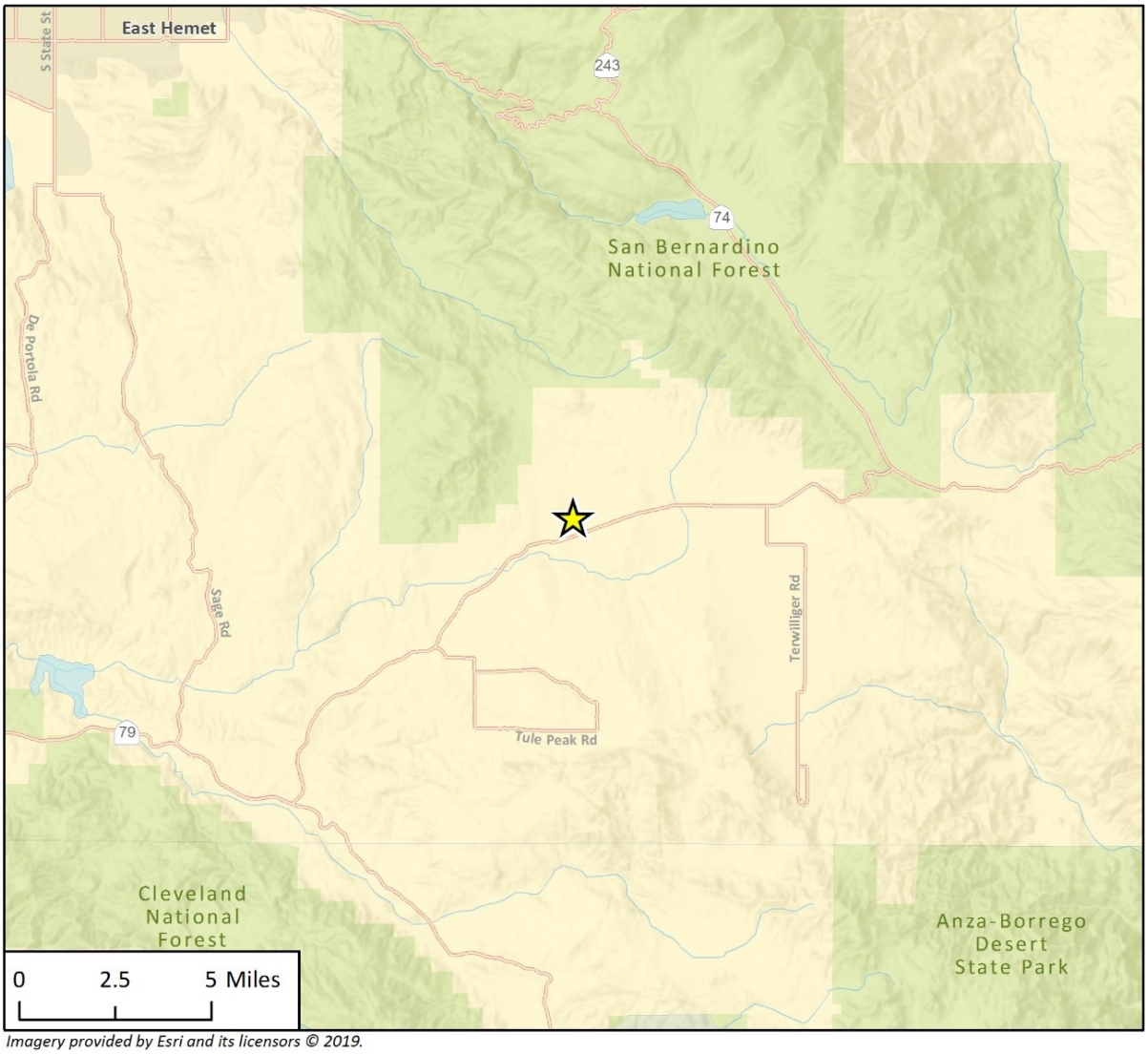
AEC's existing land-based utilities systems in the project area consist of wooden utility poles, approximately 35 to 45 feet in height with single- or three-phase crossarm mounted distribution lines attached. The existing poles currently carry electric power distribution lines. The project site is defined as the footprint of the existing electrical utilities system components and the approximate four-mile-long corridor along SR 371 and local roadways for the new upgrades that will be installed on existing poles. The project area is defined as the 50-foot-wide access corridor along SR 371 and the 40-foot-wide access corridor along local roadways, the construction laydown areas, and the access roads that would be used for construction.

The project would replace the lines with approximately four miles of realigned transmission lines and would construct the Bautista Substation. The new transmission line would be strung on existing utilities poles, and the new alignment would not be located on Cahuilla Reservation or U.S. Forest Service lands. The proposed Bautista Substation would consist of a premanufactured equipment room and electrical distribution facilities.

The new alignment begins east of the proposed Bautista Substation and proceeds along SR 371 for approximately four miles, ending at Tony Lappos substation. Given the scope of the project, the project site has multiple zoning designations, including R-R 2.5, RR-5 and RR-20 (Rural Residential); C-1/CP (General Commercial); C-P-S (Scenic Highway Commercial); M-M (Manufacturing – Medium); and M-SC (Manufacturing- Service Commercial). The project site has multiple General Plan land use

designations, including Rural Residential, Rural Community – Estate Density Residential, Rural Community – Very Low Density Residential, Agriculture, City, Light Industrial, and Commercial Retail.

Figure 1 Project Vicinity Map



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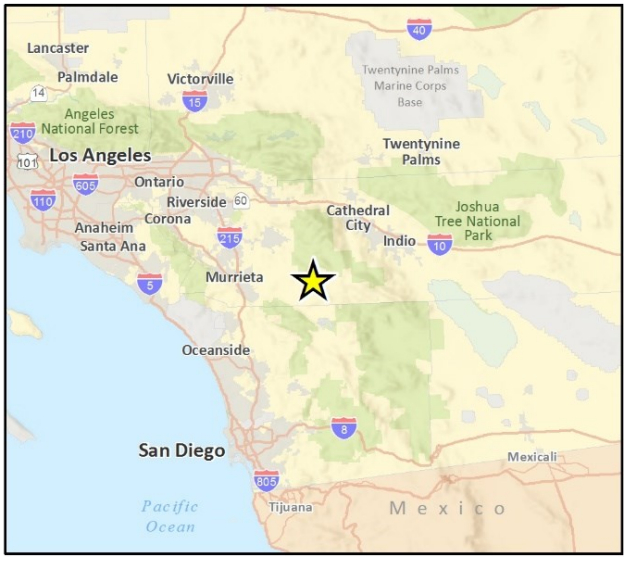
Project Location

N



Bio Fig 1 Regional Location

Figure 2 Project Location

2 Regulations

Paleontological resources (i.e., fossils) are considered nonrenewable scientific resources because once destroyed, they cannot be replaced. As such, paleontological resources are afforded protection under various federal, state, and local laws, ordinances, regulations, and standards. Regulations applicable to potential paleontological resources in the project area are summarized below.

2.1 State

The following California regulations provide guidance with respect to paleontological resources.

California Environmental Quality Act

CEQA requires that public agencies and private interests identify the potential environmental consequences of their proposed projects on any object or site considered to be a historical resource of California (California Public Resources Code [PRC], section 21084.1, California Code of Regulations Title 14, section 15064.5). Appendix G of the *State CEQA Guidelines* (California Code of Regulations Title 14, Chapter 3) provides an Environmental Checklist of questions including a single question related to paleontological resources (Section VII.f) as follows: "Would the project directly or indirectly destroy a unique paleontological resource or site…?"

CEQA does not define "a unique paleontological resource or site." However, the Society of Vertebrate Paleontology (SVP) has defined a "significant paleontological resource" in the context of environmental review. The SVP (2010) defines a Significant Paleontological Resource as:

> Fossils and fossiliferous deposits, here defined as consisting of identifiable vertebrate fossils, large or small, uncommon invertebrate, plant, and trace fossils, and other data that provide taphonomic, taxonomic, phylogenetic, paleoecologic, stratigraphic, and/or biochronologic information. Paleontological resources are considered to be older than recorded human history and/or older than middle Holocene (i.e., older than about 5,000 radiocarbon years) [p. 11].

The loss of paleontological resources that meet the criteria outlined above (i.e., are considered a significant paleontological resource) would be considered a significant impact under CEQA, and the CEQA lead agency is responsible for ensuring that paleontological resources are protected in compliance with CEQA and other applicable statutes.

Public Resources Code Section 5097.5

Section 5097.5 of the PRC states:

> No person shall knowingly and willfully excavate upon, or remove, destroy, injure or deface any historic or prehistoric ruins, burial grounds, archaeological or vertebrate paleontological site, including fossilized footprints, inscriptions made by human agency, or any other archaeological, paleontological or historical feature on public lands, except with the express permission of the public agency having jurisdiction over such lands. Violation of this section is a misdemeanor.

As used in this PRC section, “public lands” means lands owned by, or under the jurisdiction of, the state or any city, county, district, authority, or public corporation, or any agency thereof. Consequently, public agencies are required to comply with PRC 5097.5 for their own activities, including construction and maintenance, as well as for permit actions undertaken by others.

2.2 Regional and Local

Paleontological resources are addressed under the Multipurpose Open Space Element of the Riverside County General Plan (County of Riverside 2015), policies OS 19.6 through 19.9, which state the following:

> **OS 19.6:** Whenever existing information indicates that a site proposed for development has high paleontological sensitivity as shown on Figure OS-8, a paleontological resource impact mitigation program (PRIMP) shall be filed with the County Geologist prior to site grading. The PRIMP shall specify the steps to be taken to mitigate impacts to paleontological resources.
>
> **OS 19.7:** Whenever existing information indicates that a site proposed for development has low paleontological sensitivity as shown on Figure OS-8, no direct mitigation is required unless a fossil is encountered during site development. Should a fossil be encountered, the County Geologist shall be notified and a paleontologist shall be retained by the project proponent. The paleontologist shall document the extent and potential significance of the paleontological resources on the site and establish appropriate mitigation measures for further site development.
>
> **OS 19.8:** Whenever existing information indicates that a site proposed for development has undetermined paleontological sensitivity as shown on Figure OS-8, a report shall be filed with the County Geologist documenting the extent and potential significance of the paleontological resources on site and identifying mitigation measures for the fossil and for impacts to significant paleontological resources prior to approval of that department.
>
> **OS 19.9:** Whenever paleontological resources are found, the County Geologist shall direct them to a facility within Riverside County for their curation, including the Western Science Center in the City of Hemet [OS-51].

The *Safeguard Artifacts Being Excavated in Riverside County* (SABER) policy enacted in October 2011 by the County Board of Supervisors mandates that any paleontological resources found or unearthed in Riverside County be curated at the Western Science Center in Hemet.

3 Resource Assessment Guidelines

Paleontological resources are limited, nonrenewable resources of scientific, cultural, and educational value and are afforded protection under CEQA. This assessment satisfies CEQA (13 PRC, 2100 et seq.) and PRC Section 5097.5 (Stat. 1965, c 1136, p. 2792) requirements, and follows guidelines and significance criteria specified by the Society of Vertebrate Paleontology (SVP) (2010).

3.1 Paleontological Sensitivity

Paleontological sensitivity refers to the potential for a geologic unit to produce scientifically significant fossils. Direct impacts to paleontological resources occur when earthwork activities, such as grading or trenching, cut into the geologic deposits (e.g., formations) within which fossils are buried and physically destroy the fossils. Because fossils are the remains of prehistoric animal and plant life, they are nonrenewable. Such impacts have the potential to be significant and, under CEQA guidelines, may require mitigation.

Significant paleontological resources are fossils or assemblages of fossils that are unique, unusual, rare, diagnostically important, or are common but have the potential to provide valuable scientific information for evaluating evolutionary patterns and processes, or which could improve our understanding of paleochronology, paleoecology, paleophylogeography, or depositional histories. New or unique specimens can provide new insights into evolutionary history; however, additional specimens of even well represented lineages can be equally important for studying evolutionary pattern and process, evolutionary rates, and paleophylogeography. Even unidentifiable material can provide useful data for dating geologic units if radiocarbon dating is possible. As such, common fossils (especially vertebrates) may be scientifically important, and therefore considered significant.

Paleontological sensitivity is determined by rock type, history of the geologic unit in producing significant fossils, and previously recorded fossil localities from that unit. Paleontological sensitivity is derived from the known fossil data collected from the entire geologic unit, not just from any one specific survey. The SVP system outlined in the SVP *Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources* (SVP 2010) is the generally accepted paleontological sensitivity classification scheme for projects on non-federal lands in California. Rincon has characterized the paleontological sensitivity for this project according to the SVP (2010) procedures, as described below.

The SVP (2010) describes sedimentary rock units as having high, low, undetermined, or no potential for containing significant nonrenewable paleontological resources. This criterion is based on rock units within which vertebrate or significant invertebrate fossils have been determined by previous studies to be present or likely to be present. The SVP (2010) sensitivity categories are described below (given here verbatim):

I. **High Potential.** Rock units from which vertebrate or significant invertebrate, plant, or trace fossils have been recovered are considered to have a high potential for containing additional significant paleontological resources. Rocks units classified as having high potential for producing paleontological resources include, but are not limited to, sedimentary formations and some volcaniclastic formations (e. g., ashes or tephras), and some low-grade metamorphic rocks which contain significant paleontological resources anywhere within their geographical extent, and sedimentary rock units temporally or

lithologically suitable for the preservation of fossils (e. g., middle Holocene and older, fine-grained fluvial sandstones, argillaceous and carbonate-rich paleosols, cross-bedded point bar sandstones, fine-grained marine sandstones, etc.). Paleontological potential consists of both (a) the potential for yielding abundant or significant vertebrate fossils or for yielding a few significant fossils, large or small, vertebrate, invertebrate, plant, or trace fossils and (b) the importance of recovered evidence for new and significant taxonomic, phylogenetic, paleoecologic, taphonomic, biochronologic, or stratigraphic data. Rock units which contain potentially datable organic remains older than late Holocene, including deposits associated with animal nests or middens, and rock units which may contain new vertebrate deposits, traces, or trackways are also classified as having high potential.

II. **Undetermined Potential.** Rock units for which little information is available concerning their paleontological content, geologic age, and depositional environment are considered to have undetermined potential. Further study is necessary to determine if these rock units have high or low potential to contain significant paleontological resources. A field survey by a qualified professional paleontologist (see “definitions” section in this document) to specifically determine the paleontological resource potential of these rock units is required before a paleontological resource impact mitigation program can be developed. In cases where no subsurface data are available, paleontological potential can sometimes be determined by strategically located excavations into subsurface stratigraphy.

III. **Low Potential.** Reports in the paleontological literature or field surveys by a qualified professional paleontologist may allow determination that some rock units have low potential for yielding significant fossils. Such rock units will be poorly represented by fossil specimens in institutional collections, or based on general scientific consensus only preserve fossils in rare circumstances and the presence of fossils is the exception not the rule, e. g. basalt flows or Recent colluvium. Rock units with low potential typically will not require impact mitigation measures to protect fossils.

IV. **No Potential.** Some rock units have no potential to contain significant paleontological resources, for instance high-grade metamorphic rocks (such as gneisses and schists) and plutonic igneous rocks (such as granites and diorites). Rock units with no potential require no protection nor impact mitigation measures relative to paleontological resources.

4 Methods

Paleontological resources are not found in "soil" but are contained within the geologic deposits or bedrock that underlies the soil layer. Therefore, to determine whether a given project area has the potential to contain significant fossil resources at the subsurface, it is necessary to review relevant scientific literature to determine the geology and stratigraphy of the area. For this assessment, published geologic maps, fossil locality data, and literature were reviewed to identify the geologic units present at and below the surface within the project area boundaries, assess the paleontological sensitivity of the geologic units identified, and to determine the potential impacts to non-renewable paleontological resources from project development.

The online paleontological collections database of the University of California Museum of Paleontology (UCMP), the Paleobiology Database (PBDB), and Neogene Mammal Mapping Portal (NEOMAP) were reviewed to identify known fossil localities in Riverside County from geologic formations similar to those identified in the project area. Rincon requested a formal paleontological locality search from the Natural History Museum of Los Angeles County (LACM) on January 15, 2018.

Following the paleontological inventory and assessment, the paleontological sensitivity ratings of the geological units were assigned based on the findings of the record search and literature review. Based on the paleontological sensitivity findings, the potential impact to nonrenewable paleontological resources from project development was determined in accordance with the professional standards of the SVP (2010).

5 Description of Resources

5.1 Regional Geology

The project area is located in the Peninsular Ranges geomorphic province of California (California Geological Survey 2002). The northwest-southeast oriented Peninsular Ranges extend 125 miles from the Los Angeles Basin to the tip of Baja California. The Peninsular Ranges are bounded by the Elsinore fault zone and the Colorado Desert and on the east and the Pacific Coast on the west (Morton and Miller 2006). The highest point in the range is San Jacinto Peak at 10,805 feet above mean sea level (Norris and Webb 1990). The project area is within the Cahuilla—Anza Valley, southeast of Cahuilla Mountain, south of the San Jacinto Mountains, and northwest of the Santa Rosa Mountains within the Perris Block, a relatively stable rectangular structural unit positioned between the Elsinore and San Jacinto fault zones. Specifically, the project area is on the eastern boundary of the Perris Block, situated immediately west of the right-lateral strike-slip San Jacinto fault zone, which runs northwest through the Peninsular Ranges from Imperial County to San Bernardino County. The geology near the project area is dominated by uplifted Cretaceous plutonic rocks of the Peninsular Ranges Batholith and unroofed Mesozoic metasedimentary rocks capped by widespread late Cenozoic fluvial, alluvial fan, and valley deposits (Dibblee and Minch 2008; Morton and Miller 2006). Refer to Figure 3 for the regional geology.

5.2 Geology and Paleontology of the Project Area

The project area is mapped at a scale of 1:62,500 by Dibblee and Minch (2008). According to the published geologic map, the project area is underlain by Mesozoic metamorphic bedrock (ms), Cretaceous plutonic rocks (qdi), and Quaternary alluvial deposits (Qa) (refer to Figure 4 for project geology). Table 1 summarizes the timescale of these geologic units.

Table 1 Geologic Timescale

Era	Period	Epoch	Age (millions of years ago)*
Cenozoic	Quaternary	Holocene	Recent – 0.0117
		Pleistocene	0.0117 – 2.58
	Neogene (Tertiary)	Pliocene	2.58 – 5.33
		Miocene	5.33 – 23.03
	Paleogene (Tertiary)	Oligocene	23.03 – 33.9
		Eocene	33.9 – 56.0
		Paleocene	56.0 – 66.0
Mesozoic	Cretaceous	Early/Late	66.0 – 145.0
	Jurassic	Early/Middle/Late	145.0 – 201.3
	Triassic	Early/Middle/Late	201.3 – 252.17

*Numerical ages based on Global Boundary Stratotype Section and Points (GSSP) for their lower boundaries, as ratified by the International Commission on Stratigraphy, in Cohen et al. (2013).

Plutonic igneous rock of the Peninsular Ranges batholith, mapped within the western and central portions of the project area, was emplaced during the Cretaceous approximately 97 million years ago (Dibblee and Minch 2008; Matti and Morton 2000). Subsequent uplift since the Late Cretaceous period has exposed the granitic rock at the surface of the project area. Lithologies exposed at the surface of the project area include quartz diorite to granodiorite (qdi). The plutonic igneous rock intrudes into older Mesozoic schist (ms) and marble (ml) metamorphic bedrock. Plutonic igneous and high-grade metamorphic rock have no potential for fossilized remains due to the extreme heat and pressure of formation.

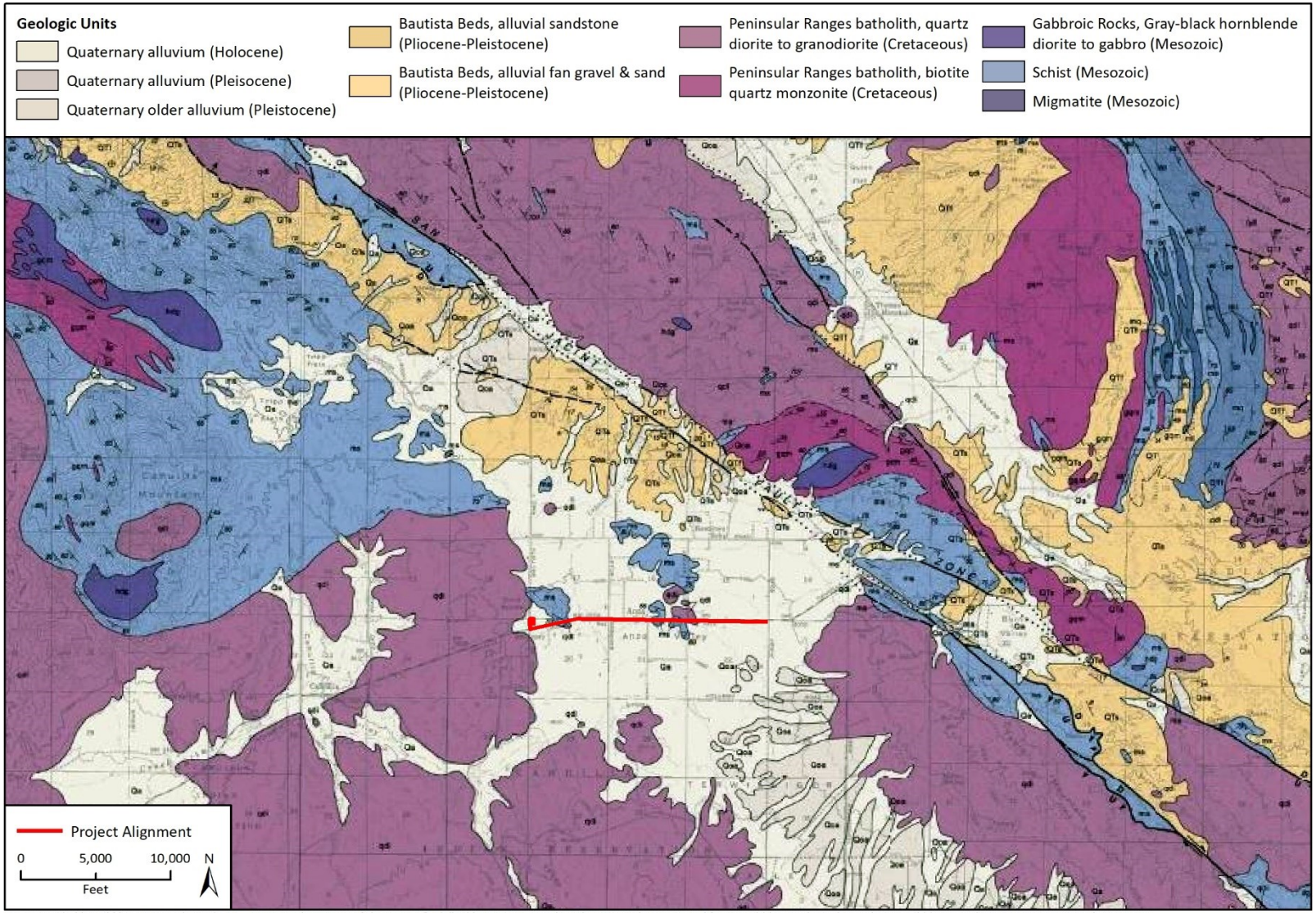
The metamorphic and igneous bedrock units are unconformably overlain by unconsolidated Quaternary alluvial deposits (Qa) composed of sand, silt, and abundant coarse gravel derived from the surrounding crystalline bedrock. The Quaternary alluvium accumulated in thin to relatively thick deposits during the Holocene along recently active stream channels, valleys, and alluvial fans and locally overlies older alluvium (Morton and Miller 2006)., The thickness of Quaternary alluvial deposits mapped along the project alignment in the Cahuilla—Anza Valley may reach up to 25 feet above crystalline bedrock or older buried Pleistocene alluvial sediments.

Quaternary alluvial sediments are typically too young to contain fossilized material (SVP 2010). However, the Quaternary older alluvium that potentially underlies the younger alluvium in the project area and is locally exposed along the mountain flanks to the east of the project alignment, may have the potential for preserved fossils. Similar Pleistocene age alluvial, fluvial and lacustrine deposits have proven to yield scientifically significant paleontological resources in Riverside County. West of the project site near Lakeview, a diverse assemblage of fossil resources has been recovered including *Mammuthus* (mammoth), *Smilodon* (sabre-toothed cat), *Equus* (extinct horse), cf. *Bison antiquus* (bison), and numerous small mammals, reptiles, invertebrates, and plant remains (Springer et al. 2009).

5.3 Locality Record Search Results

A search of the paleontological locality records at the LACM resulted in no previously recorded fossil localities from Holocene deposits within the project boundary or vicinity (McLeod 2018). According to LACM collection records, the closest vertebrate locality was recorded within older Quaternary alluvium, similar to Pleistocene deposits that may underlie the younger alluvium in the project area. Locality 7261 was identified less than 30 miles west of the project area near Temecula and yielded fossil specimens of mammoth and bison from an unspecified depth below ground surface. A supplemental review was conducted of the museum records maintained in the UCMP, PBDB, and NEOMAP online collections databases, which do not contain records for vertebrate fossil localities in Holocene alluvium within the project boundary or vicinity.

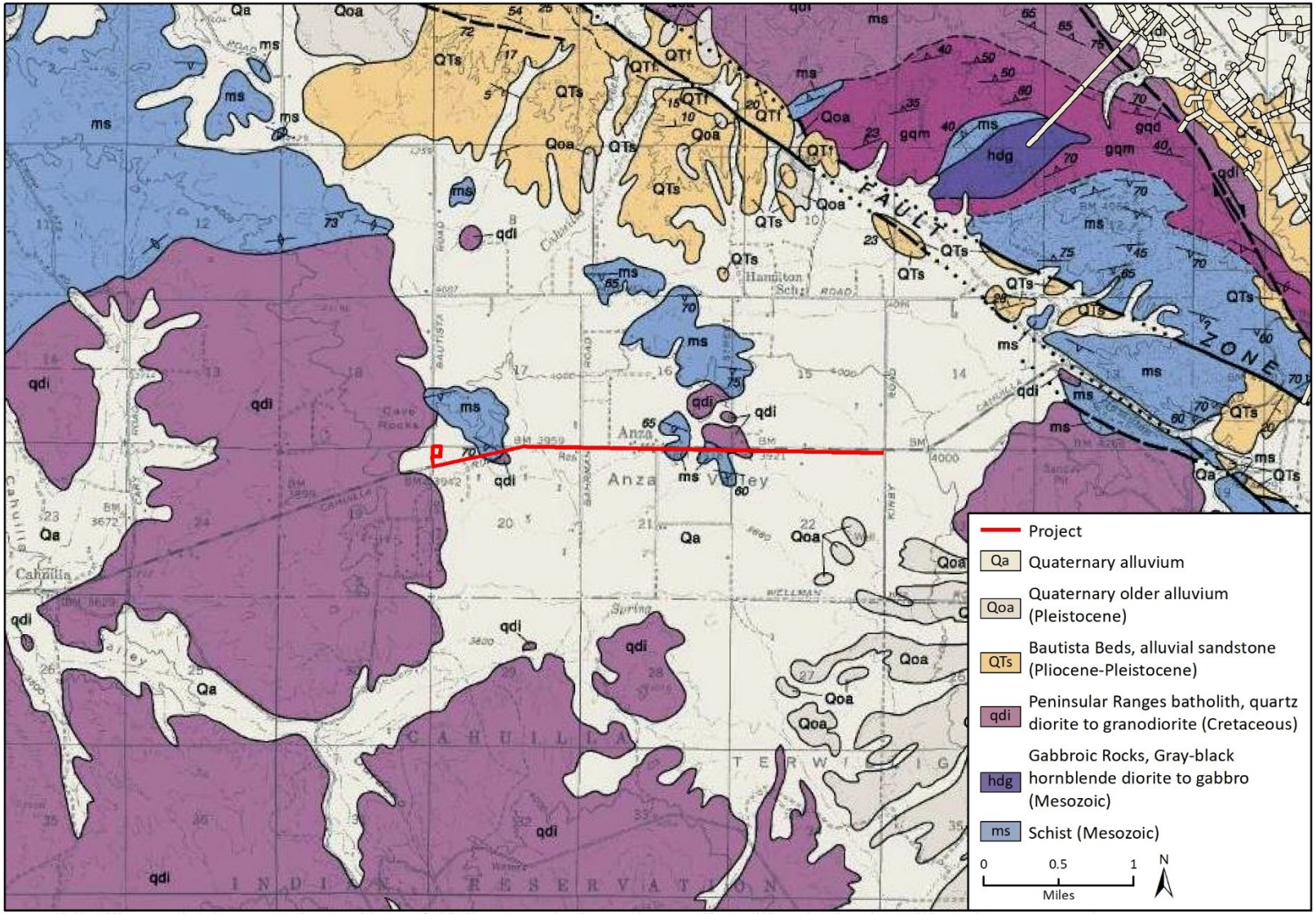
Figure 3 Regional Geology



Data provided by Dibblee, T.W., and Minch, J.A., 2008, Geologic map of the Hemet & Idyllwild 15 minute quadrangles, Riverside County, California: Dibblee Geological Foundation, Dibblee Foundation Map DF-371, scale 1:62,500.

Figure 2 Regional Geology near the Project Area

Figure 4 Geologic Units in the Project Area



Data provided by Dibblee, T.W., and Minch, J.A., 2008, Geologic map of the Hemet & Idyllwild 15 minute quadrangles, Riverside County, California: Dibblee Geological Foundation, Dibblee Foundation Map DF-371, scale 1:62,500.

Figure 3 Geologic Units in the Project Area 20200213

6 Evaluation, Impacts, and Recommendations

6.1 Paleontological Sensitivity Evaluation

Based on the literature review and records search results, the paleontological sensitivity of the geologic units mapped in the project area were determined in accordance with criteria set forth by the SVP (2010). The Quaternary alluvial deposits in the project area have a low paleontological resource potential because they are too young to preserve fossilized remains. The Cretaceous plutonic igneous and Mesozoic metamorphic bedrock have no potential for fossilized remains due to the extreme heat and pressure during formation. In addition, according to the Riverside County General Plan (2015) Paleontological Sensitivity Figure OS-8, the project area is entirely underlain by geologic units with a low potential for paleontological resources. The paleontological sensitivity ratings of the geologic units underlying the project area per the SVP (2010) and Riverside County (2015) guidelines are shown below in Table 2 and depicted in Figure 5.

Table 2 Geologic Units and Paleontological Sensitivity within the Project Area

Age	Geologic Unit(s)	Paleontological Resource Potential (SVP 2010)	Paleontological Resource Sensitivity (Riverside County 2008)
Mesozoic-Cenozoic	Igneous and metamorphic bedrock (qdi and ms)	None	Low
Holocene	Quaternary alluvium (Qa)	Low	Low

6.2 Impacts

Paleontological resources are nonrenewable and are vulnerable to impacts from development-related activities. Fossils provide important information for our understanding of past environments, the history of life, past species diversity, how species respond to climate change, and many other lines of scientific inquiry. Impacts to fossils and fossil localities, and loss of fossils from looting or other destructive activity at fossil sites results in the direct loss of scientific data and directly impacts the ability to conduct scientific research on evolutionary patterns and geological processes. Construction and grading activities associated with any development that will impact previously undisturbed, paleontologically sensitive geologic deposits have the potential for the destruction of significant paleontological resources.

Quaternary alluvial sediments mapped at ground surface in the project area have low paleontological sensitivity. Ground disturbance in these areas would not impact scientifically significant paleontological resources unless it reaches into older buried Pleistocene sediments that have high paleontological sensitivity (McLeod 2018). Impacts to paleontological resources would not occur during ground disturbance within Mesozoic-Cenozoic igneous and metamorphic bedrock because there is not potential for fossil preservation within those geologic units.

Quaternary alluvium may be 25 feet thick or more above crystalline bedrock or older buried Pleistocene alluvial sediments along the project alignment in the Cahuilla—Anza Valley. Therefore, because the proposed project design would rely heavily on existing infrastructure and would involve

only minimal surficial ground disturbance, sensitive Pleistocene deposits that may be present in the subsurface are unlikely to be impacted by project ground disturbance activity.

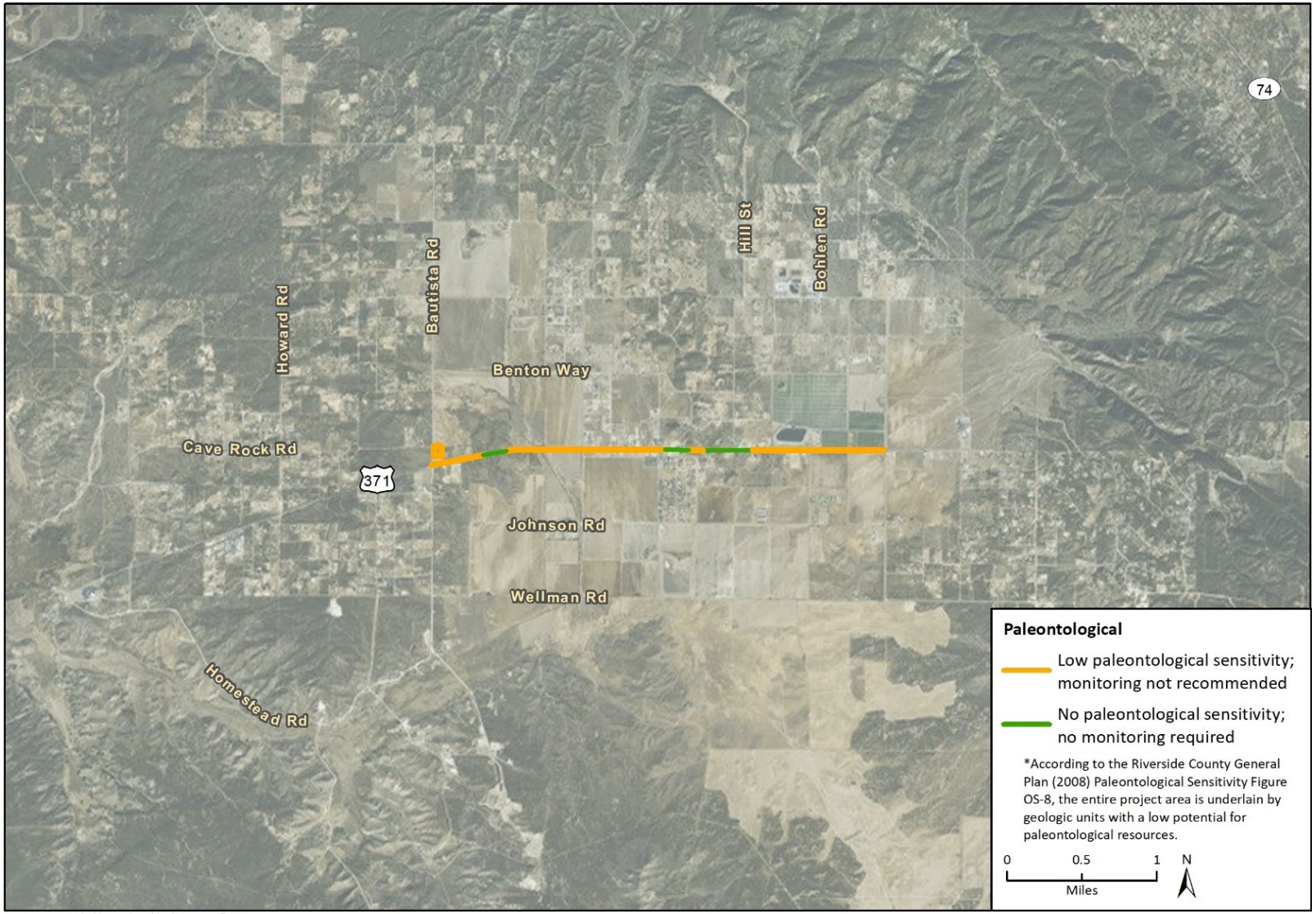
Based on the analysis described in this assessment, impacts to paleontological resources are not anticipated as a result of the project due to the negligible paleontological resource potential of the geologic units underlying the project area. As a result, further paleontological resource management is not recommended. If an unanticipated fossil discovery is made during the course of project development, a Qualified Professional Paleontologist should be retained in accordance with the SVP (2010) guidelines to examine the find and to determine if further paleontological resources mitigation is warranted under CEQA.

6.3 Recommendations

The following recommendation would address potential unanticipated discovery of intact paleontological resources during project implementation. This recommendation would apply to all phases of project construction and would ensure that any unanticipated significant fossils present on-site are preserved. Implementation of the following recommendation would further reduce already less than significant project impact to paleontological resources under CEQA:

- **Unanticipated Discovery of Paleontological Resources**. In the event a fossil is discovered during construction of the project, excavations within 50 feet of the find shall be temporarily halted or delayed until the discovery is examined by a qualified paleontologist in accordance with Society of Vertebrate Paleontology standards. The project applicant shall include a standard inadvertent discovery clause in every construction contract to inform contractors of this requirement. If the find is determined to be significant, the applicant shall retain a project paleontologist, defined as a paleontologist who meets the SVP standards for Qualified Professional Paleontologist, to direct all mitigation measures related to paleontological resources. The Qualified Paleontologist shall design and carry out a data recovery plan consistent with the SVP standards (2010).

Figure 5 Paleontological Sensitivity in the Project Area



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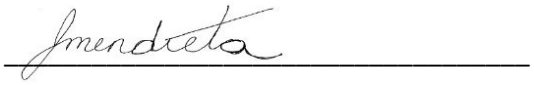

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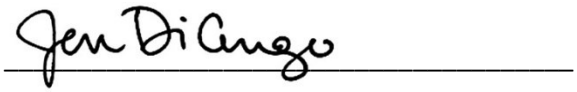

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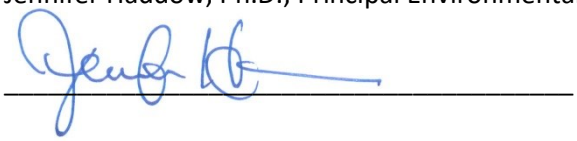

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