# 5.0 ALTERNATIVES SCREENING, IDENTIFICATION, AND IMPACT ANALYSIS

## 5.1 INTRODUCTION

As noted in Section 1.0, *Introduction*, the CSLC, as lead agency under the California Environmental Quality Act (CEQA), is preparing this Environmental Impact Report (EIR) for the proposed Stagecoach Solar Project (Proposed Project). Section 2.0, *Project Description*, provides detailed information on the Project proposed by the Applicant, Aurora Solar, LLC, for lease of State-owned school lands managed by the CSLC.

The State CEQA Guidelines (§ 15126.6, subd. (a))[33] require the CSLC to "describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives." This EIR section describes the screening methodology to identify reasonable alternatives, identifies alternatives eliminated from further consideration, and provides a description and impact analysis of each alternative considered. Section 6.6 identifies the environmentally superior alternative.

## 5.2 SELECTION OF ALTERNATIVES

### 5.2.1 Guidance on Alternatives Development and Evaluation

The State CEQA Guidelines provide the following guidance for evaluating alternatives:

- An EIR need not consider every conceivable alternative to a project. Rather, it must consider a reasonable range of potentially feasible alternatives that will foster informed decision-making and public participation. An EIR is not required to consider alternatives which are infeasible. (§ 15126.6, subd. (a).)
- The discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly. (§ 15126.6, subd. (b).)
- In selecting a range of potential reasonable alternatives to the project, the lead agency shall include those that could feasibly accomplish most of the basic objectives of the project and could avoid or substantially lessen one or more of the significant effects. Among the factors that a lead agency may use to eliminate alternatives from detailed consideration in an EIR are: (i) failure to meet most of the basic project objectives, (ii) infeasibility, or (iii) inability to avoid significant environmental impacts. (§ 15126.6, subd. (c).)

[33] The "State CEQA Guidelines" refers to California Code of Regulations, Title 14, Chapter 3.

- The EIR shall include sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the proposed project. If an alternative would cause one or more significant effects in addition to those that would be caused by the project as proposed, the significant effects of the alternative shall be discussed, but in less detail than the significant effects of the project as proposed. (§ 15126.6, subd. (d).)
- The specific alternative of "no project" shall also be evaluated along with its impact. The purpose of describing and analyzing a no project alternative is to allow decisionmakers to compare the impacts of approving the proposed project with the impacts of not approving the proposed project…. The "no project" analysis shall discuss the existing conditions, as well as what would be reasonably expected to occur in the foreseeable future if the project were not approved. (§ 15126.6, subd. (e)(1) and (2).)

### 5.2.2 Alternatives Screening Methodology

Alternatives to the Proposed Project were identified by the CSLC and proposed by other agencies and the public in comments in response to the Notice of Preparation. These were screened and either retained for further analysis or eliminated as described below. The alternatives screening process consisted of the following steps:

**Step 1:** Define the alternatives to allow comparative evaluation.

**Step 2:** Evaluate each alternative using the following criteria:

- The extent to which the alternative would accomplish most of the basic objectives of the Proposed Project (see Section 1.2, *Proposed Project Objectives*)
- The feasibility of the alternative, considering factors such as site suitability, economic viability, availability of infrastructure, General Plan consistency, and consistency with other applicable plans and regulatory limitations (CEQA; Pub. Resources Code, § 21061.1 defines "feasible" as "capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and technological factors")
- The extent to which the alternative would avoid or lessen one or more of the significant environmental impacts of the Proposed Project

**Step 3:** Determine the suitability of the proposed alternative for full analysis in the EIR based on Steps 1 and 2 above. Alternatives considered unsuitable are eliminated, with appropriate justification, from further consideration. CEQA does not require elimination of a potential alternative based on cost of construction and operation/maintenance.

For the screening analysis, the technical and regulatory feasibility of potential alternatives was assessed at a general level. At the screening stage, potential impacts of the

alternatives or the Proposed Project cannot be evaluated with any measure of certainty; however, elements of the Proposed Project that are likely to be sources of impacts can be identified. The assessment of feasibility was conducted by identifying whether the alternative would be infeasible based on technical or regulatory grounds.

In general, characteristics used to eliminate alternatives from further consideration included:

- Inconsistency with the Proposed Project's purpose and need
- Limited effectiveness in reducing environmental impacts
- Engineering feasibility and safety
- Permitting feasibility
- Potential for adverse effects on biological resources, aesthetics, cultural or tribal resources, or water supply
- Potential for inconsistency with adopted agency plans and policies
- Feasibility when compared to other alternatives under consideration

Feasible alternatives that did not clearly offer the potential to reduce significant environmental impacts of the Proposed Project and infeasible alternatives were not analyzed further. In the final screening step, environmental advantages and disadvantages of the remaining alternatives were carefully weighed with respect to their potential for overall environmental advantage, technical feasibility, and consistency with the Proposed Project objectives.

The State CEQA Guidelines require the consideration of a "no project" alternative and to identify, under specific criteria, an "environmentally superior" alternative. If the environmentally superior alternative is determined to be the no project alternative, the EIR must identify an environmentally superior alternative among the other alternatives (State CEQA Guidelines, § 15126.6, subd. (e)(2)).

### 5.2.3 Summary of Screening Results

Following are the potential alternatives that were eliminated from further consideration (see rationale in Section 5.3, *Alternatives Eliminated from Further Consideration*):

- San Bernardino County Suggested Alternative Project Areas: Trona, Amboy, El Mirage, Hinkley, Kramer Junction
- Bureau of Land Management (BLM) Land Swap Alternative
- Overhead Gen-tie[34] on BLM Land Alternative
- State Route (SR) 247 Underground Gen-tie Alternative

[34] A gen-tie line is an electrical generation intertie line that connects the solar generation plant with a substation.

The following alternatives are described and evaluated in detail in Sections 5.5 through 5.8):

- Solar Generation Plant Alternative at Proposed Location (see Section 5.5):
  - Joshua Tree Avoidance Alternative
- Gen-tie Alternatives (see Section 5.6):
  - Underground Gen-tie Alternative in County Roads
  - Underground Gen-tie Alternative Along Proposed Route
- SCE Calcite Facilities Alternative (see Section 5.7)
  - SCE Calcite Facilities Alternative
- No Project Alternative (as required by CEQA) (see Section 5.8)

## 5.3 ALTERNATIVES ELIMINATED FROM CONSIDERATION

Siting assessments for utility-scale solar projects typically include the following major factors, listed in order of importance:

1. Access to a transmission line (ideally with voltage of 230 kV and within 10 miles of the solar site), with adequate capacity to allow full deliverability of electricity generated into the California Independent System Operator (CAISO) electric grid

2. Appropriate zoning on private land, acceptable BLM land designation, and lack of other development constraints that may exist on State-owned land

3. Large parcel size (generally greater than 80 acres per parcel), generally flat land, and landowner willingness to sell. Private land parcels must be acquired at least via an “option to purchase” agreement.

4. Minimal environmental impacts and constraints, including listed or sensitive species, proximity of residences, visual impacts from sensitive public viewpoints, availability of water for construction dust control, and the potential presence of high value cultural or tribal resources.

The alternatives eliminated, as described in the following parts of Section 5.3, have been found not to meet some or all of these criteria. Sections 5.4 through 5.8 describe the alternatives retained for EIR analysis.

### 5.3.1 San Bernardino County Areas: Trona, Amboy, El Mirage, Hinkley, Kramer Junction

The San Bernardino County Land Use Services Department and other commenters suggested, in comments on the Notice of Preparation (NOP), that consideration be given

to the renewable energy development focus areas supported by the County Board of Supervisors in Resolution No. 2016-20. This Resolution stated:

> *COUNTY indicates its general and tentative support for five (5) of the Development Focus Areas (DFAs) identified in the BLM DRECP LUPA (North of Kramer Junction, Trona, Hinkley, El Mirage, and Amboy)* (San Bernardino County 2016)

**Background on DRECP.** The County Resolution was prepared in response to the analysis and conclusions presented in the Desert Renewable Energy Conservation Program (DRECP) Draft EIR/EIS (published in 2014) and the DRECP Land Use Plan Amendment (LUPA) and Final Environmental Impact Statement (EIS) (published in 2016). Figure 5-1 illustrates the locations of these five areas within San Bernardino County.

The 2016 DRECP LUPA, adopted by the BLM in its Record of Decision (ROD), identifies nearly 400,000 acres of DFAs on BLM-administered lands within the California Desert Conservation Area (CDCA). DFAs are defined in the DRECP as follows:

- **Development Focus Areas.** Locations where renewable energy generation is an allowable use, incentivized, and could be streamlined for approval under the DRECP LUPA. The LUPA will only streamline and provide incentives for renewable energy activities sited in a DFA.

The 2016 LUPA adopted by the BLM defined DFAs only on BLM-administered public lands, because BLM does not have jurisdiction over private land. Within San Bernardino County, the DRECP LUPA defined the largest areas of DFAs in and around Trona (east of Ridgecrest) and north of Kramer Junction. Scattered parcels of DFAs were identified east of Barstow, around Adelanto (including the Hinkley and Victorville areas), and in the Lucerne Valley and Johnson Valley.

Most of the BLM-administered lands in the Amboy area were identified as Variance Process Lands (VPL), defined as follows:

- **Variance Process Lands.** These lands are potentially available for renewable energy development, but projects on Variance Process Lands have minimal streamlining and are not incentivized. Variance Process Lands have a specific set of CMAs [Conservation and Management Actions]. Project Applicants must demonstrate that a proposed activity on Variance Process Lands will avoid, minimize, and/or mitigate sensitive resources as per the CMAs, will be compatible with any underlying BLM land allocation, and per the CMAs be compatible with and not have an adverse effect on the LUPA design and DRECP strategies. Renewable energy applications in Variance Process Lands will follow the process described in the Western Solar Plan Record of Decision, section B.5.

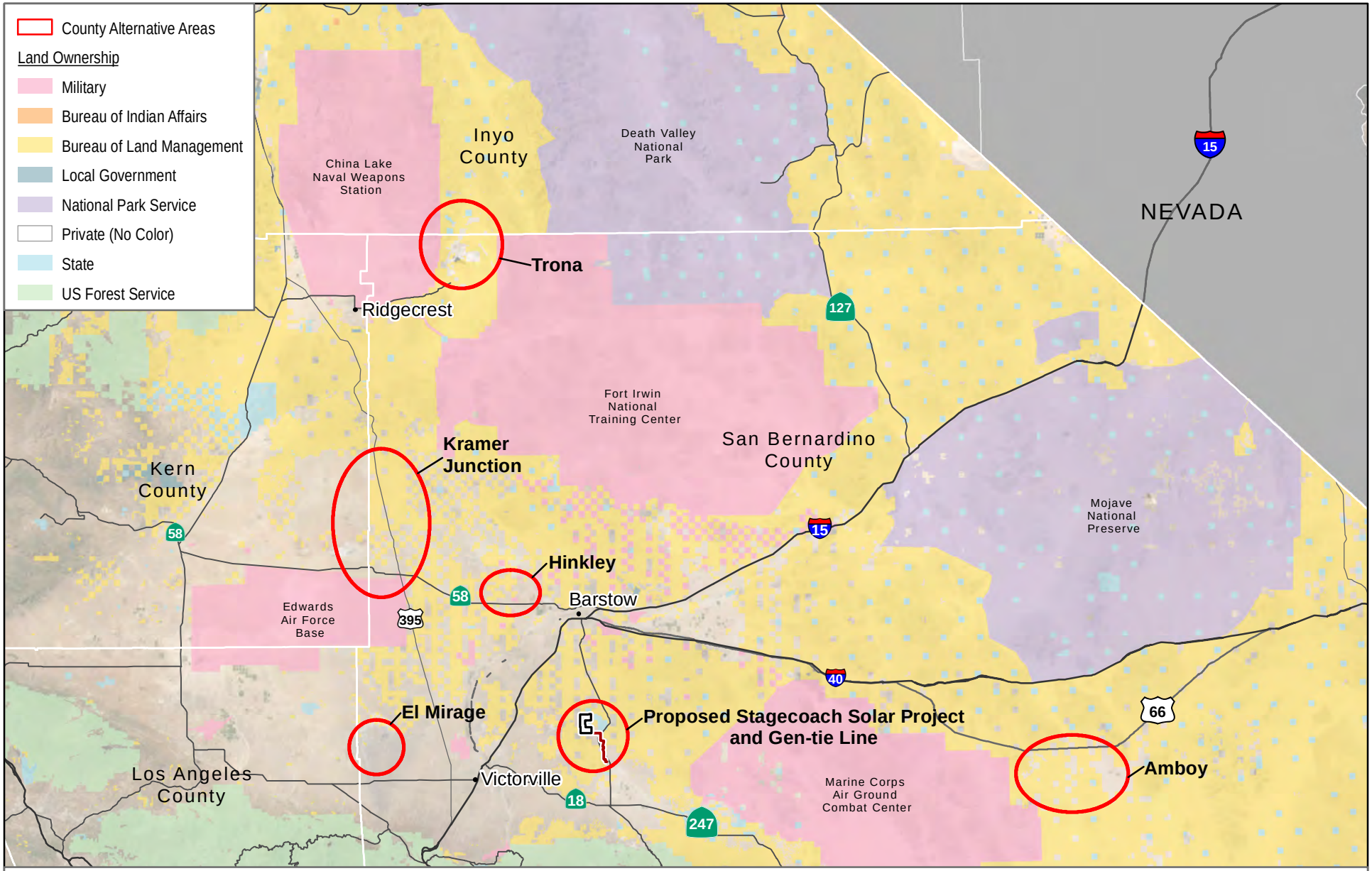



Figure 5-1

San Bernardino County Solar Alternative Areas

The five areas defined as being supported by the San Bernardino County Board of Supervisors have been evaluated for their potential to meet the siting criteria defined above, including relevant BLM siting requirements and the BLM's likely support of a large solar project. The Board of Supervisors suggestions for consideration of Trona, El Mirage, Hinkley, Amboy, and Kramer Junction are eliminated from consideration in this EIR. Each area is described below; all are considered to be infeasible for the reasons presented at the end of each discussion.

#### 5.3.1.1 Trona

Figure 5-2 (San Bernardino County Alternative Areas: Potential Trona Alternative) shows the Trona area, the BLM land designations, and the existing transmission line.

**Description.** The largest area of BLM DFA in San Bernardino County is in the Trona area, primarily overlying Searles Dry Lake. The DFA and the lake are immediately east of the unincorporated towns of Trona, Pioneer Point, and Argus. The lakebed is over 70,000 acres and is heavily disturbed from previous mining activities. The active mines in the area produce minerals from brine solutions from Searles Lake, which fills the entire DFA, to produce boric acid, sodium carbonate, sodium sulfate, several specialty forms of borax, and salt (SVM 2020).

A hypothetical solar project alternative is shown at the north end of the DFA. This area was selected because of its apparently lesser amount of active lakebed mining activity, as compared with the southern area. Also, a solar project at the north end of the DFA would maximize separation distance from BLM's Trona Pinnacles, a National Natural Landmark located just south of the DFA.

**Transmission.** The Trona area is connected to the state's electric grid via an approximately 30-mile-long 115 kV line from the Inyokern Substation. This line serves the mining and residential uses in the Trona area. The 115 kV line is unlikely to be able to export the power generated from a 200 MW solar generation plant, typically connected to the electric grid via a 220 or 230 kV transmission line. The cost of constructing a new 30-mile 220 kV gen-tie line would be high, estimated at over $22 million (Mott MacDonald 2020).

In addition, the right-of-way for a 220 kV line is generally 150 feet wide, and the line would have to pass through the center of the City of Ridgecrest, where there is no existing right-of-way available. Also, if following the existing Southern California Edison (SCE) 115 kV line, up to 13 miles of the line would pass through China Lake Naval Air Weapons Station (NAWS), which may not be permitted. China Lake NAWS is very sensitive to the height of towers in the vicinity due to its low-altitude training flights in the region.

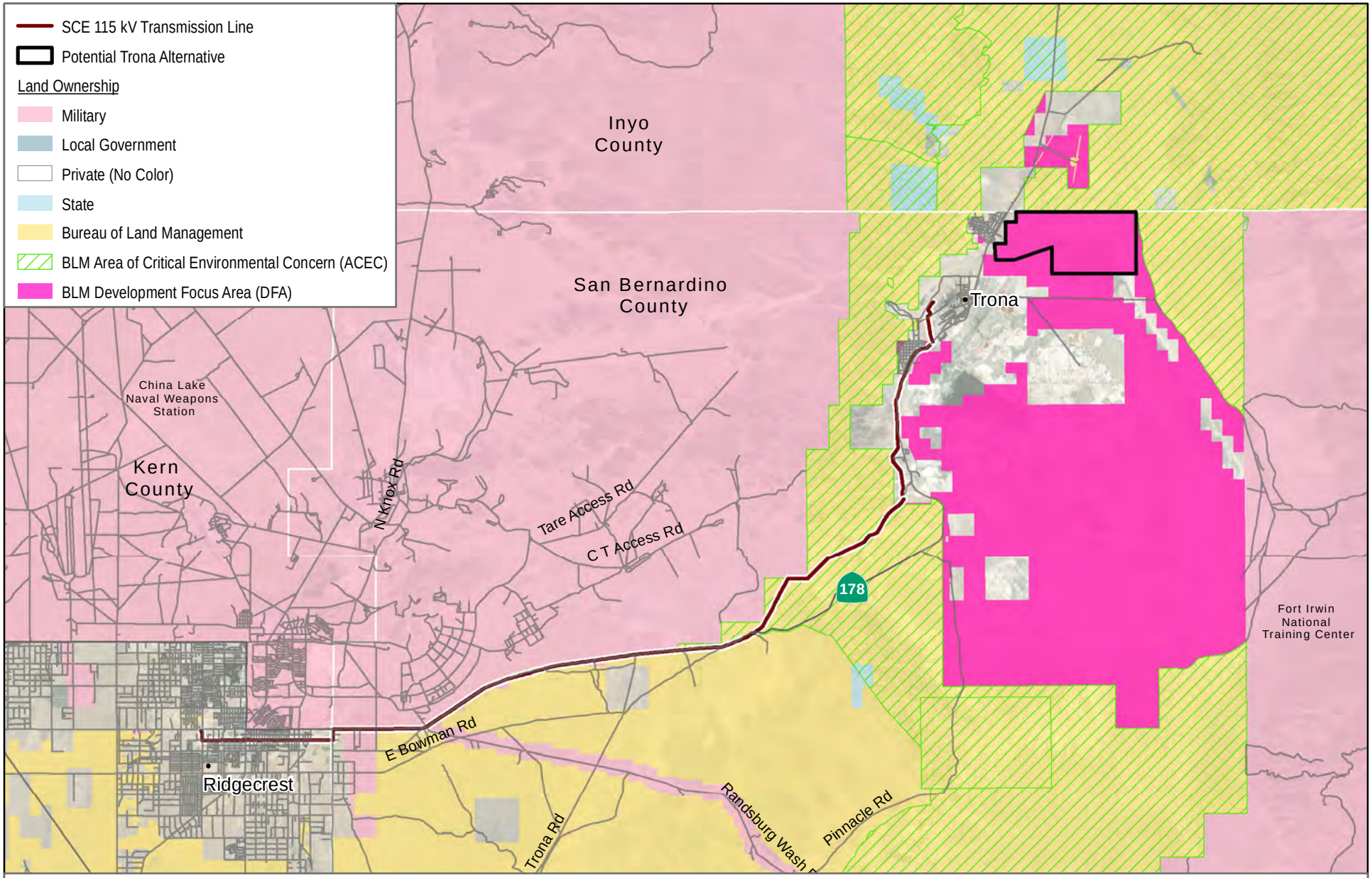



Figure 5-2

San Bernardino County Alternative Areas:
Potential Trona Alternative

Finally, the line would pass through approximately 6.5 miles of the BLM Mohave Ground Squirrel Area of Critical Environmental Concern (ACEC) between Trona and Ridgecrest. Development within this ACEC is constrained in two ways. First, the BLM would have to determine whether a new transmission line right-of way within the ACEC is permissible. The ACEC Management Plan states, "Land use authorization proposals (new, renewal, and amendment) will be analyzed on a case-by-case basis to assess whether they are compatible with the ACEC and its management goals." The goals are focused on protection of Mohave ground squirrel (*Xerospermophilus mohavensis*)[35] habitat and preventing its fragmentation, so a new transmission line appears to be incompatible with these goals. Second, this ACEC's Management Plan limits disturbance to 1 percent of its land area under a "disturbance cap." Whether additional ground disturbance would be allowed depends on BLM's assessment of existing disturbance within each sub-area of the ACEC, and the disturbance that would result from the construction, operation, and maintenance of a new transmission line.

**Environmental Concerns.** Given the existing mines around the lakebed, the aesthetic impacts of a large-scale solar project may not be significant. The major environmental concerns are likely to be the following:

- **Mineral Resources:** Searles Dry Lake is a high priority mineral area for the BLM. In evaluating any development proposal within the California Desert Conservation Area, the BLM is required to implement the CMAs adopted as part of the DRECP. CMA LUPA-MIN-3 defines the Searles Dry Lake area (72,000 surface acres) as a high priority operation area. Because of this designation, CMA LUPA-MIN-2 requires that the mineral resource value must be analyzed in the National Environmental Policy Act (NEPA) document for any potential renewable energy development.
- **Cultural and Tribal Resources:** Traditional Native American use of the Searles Valley area is likely to have resulted in the presence of numerous important tribal and cultural resources. Also, historic mining resources are widespread (CPUC 2012)
- **Paleontology:** The Searles Lake sediments are considered likely to have high sensitivity for fossil resources, including potential large mammals (mammoth, saber-toothed cat, horses, camel) and freshwater invertebrates (CPUC 2012)
- **Air Quality/Dust:** The dry lake is covered with evaporated salts across most of its surface, which create a concern for blowing dust during construction. In addition, this dust may settle on solar panels, potentially reducing electricity production
- **Water Supply and Water Quality:** Water quality is uncertain due to the highly mineralized sediments and the ongoing evaporite mining from these waters and availability of groundwater for dust control has not been investigated

[35] The Mohave ground squirrel is a small day-active rodent endemic to the western Mojave Desert of California. It has one of the smallest geographic ranges of any North American ground squirrel and spends much of the year in underground burrows to avoid the harsh conditions of its desert environment (CDFW 2020a).

- **Transportation and Traffic** and **Public Services and Utilities:** Given the single route of access to the site via SR-178, a solar project in the Trona area would likely experience similar significant impacts regarding construction traffic safety and inhibition of emergency response as defined for the Proposed Project

**Rationale for Elimination.** The Trona site is eliminated because of the high cost and substantial siting challenges associated with constructing a new 30-mile 220 kV transmission line to the Inyokern Substation. As a result, the development of a large solar project in the Trona area is considered infeasible.

#### 5.3.1.2 El Mirage

Figure 5-3 (Potential El Mirage Alternative) shows the El Mirage area and the location of BLM lands and designations.

**Description.** The area surrounding the unincorporated community of El Mirage has some scattered BLM-administered public lands to the north, and entirely private lands to the south. The area is best known for the El Mirage Off-Highway Vehicle (OHV) Recreation Area, which covers nearly all the land north of the community (see Figure 5-3, Potential El Mirage Alternative). The area includes a visitor center and is jointly managed by the County, BLM, and State of California. The County zoning for the entire area north of the community is RC (Resource Conservation); renewable energy facilities could be allowed with a Conditional Use Permit (San Bernardino County Code Title 8, Development Code, Table 82-4).

According to the BLM webpage for the El Mirage OHV Recreation Area (BLM 2020a):

> *The El Mirage Off-Highway Vehicle (OHV) Recreation Area is located in the Mojave Desert on the western edge of San Bernardino County near the Los Angeles County Line. This off-highway vehicle riding area attracts a variety of activities including motorcycles, ATVs, trucks, cars, buggies, land yachts, model airplanes, model rockets, ultra-light aircraft, gyrocopters, parasails, and full-sized aircrafts. The areas of interest include the El Mirage Dry Lake Bed, the Shadow Mountains, the El Mirage Basin, and the Twin Hills area that make up the 24,400-acre project area of public and private land.*

Further protection of the El Mirage OHV Recreation Area was defined in 2019, when the President signed into law Public Law 116-9, the John D. Dingell, Jr. Conservation, Management, and Recreation Act. This law amended the California Desert Protection Act to add Title XIII (OHV Recreation Areas [OHVRAs]), formalizing the Congressional designation of several formal OHVRAs, including the El Mirage OHV Recreation Area. The newly designated OHVRAs were designated as Special Recreation Management Areas (SRMAs) in the BLM CDCA Plan. The Congressional designation and expansion of the El Mirage OHV Recreation Area also removed approximately 1,475 acres in the south-central portion of the Fremont-Kramer ACEC and incorporated them into the El Mirage OHV Recreation Area.

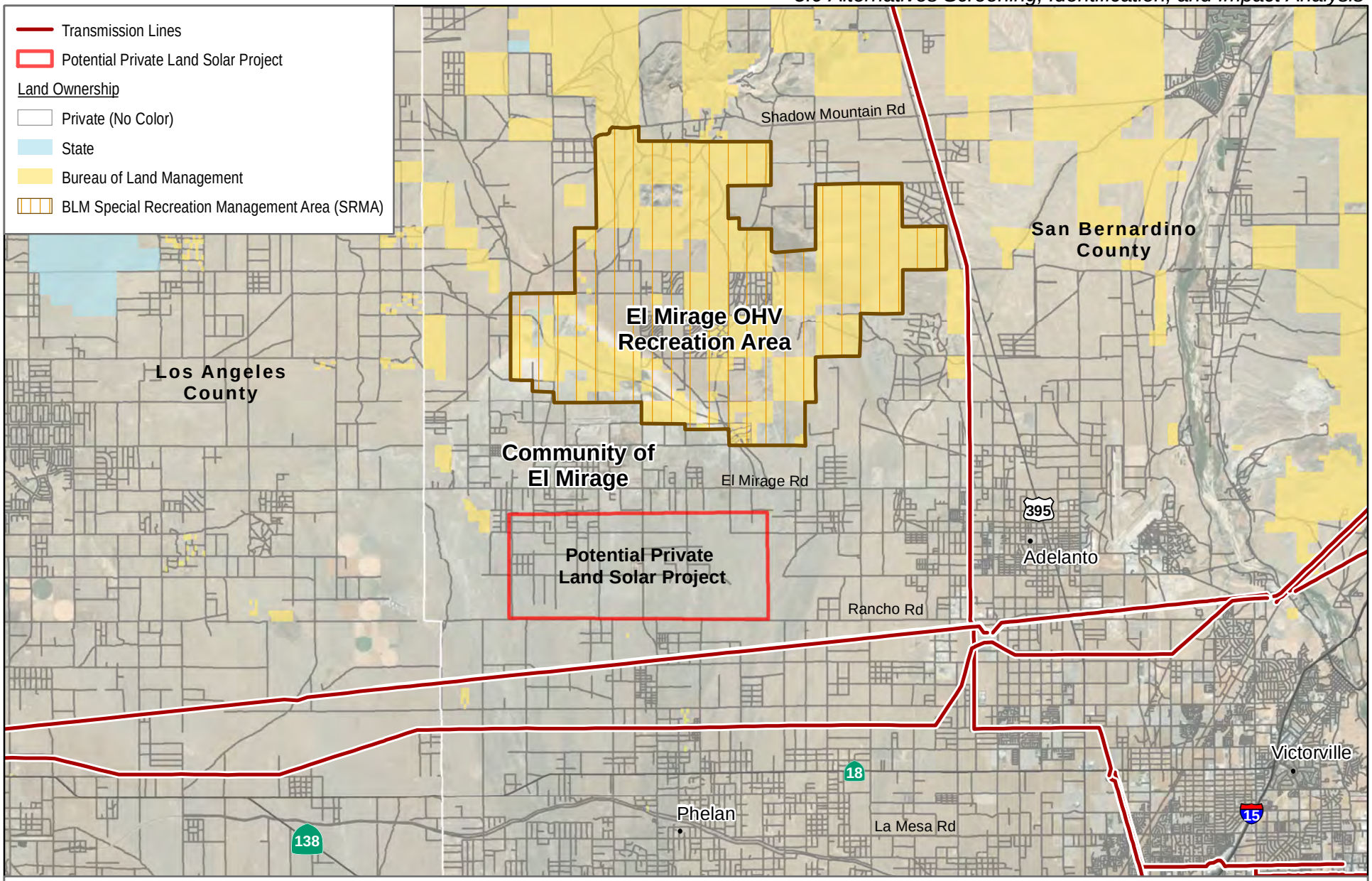



Figure 5-3

Potential El Mirage Alternative

The area south of the community of El Mirage is entirely private land, with scattered residences at a density similar to that of the Lucerne Valley. An area of approximately 10,000 acres is identified in Figure 5-4 (El Mirage Parcel Map). Parcel size varies from 2 to 80 acres; no larger parcels exist and the 80-acre parcels are not contiguous. Many parcels are vacant, but some have residences or other structures. In order to acquire the approximately 2,500 acres required for a utility-scale solar project, a developer would have to assemble more than 60 parcels. Zoning in this area is RL-5 (Rural Living – 5-acre minimum parcel size).

**Transmission.** There is an SCE 220 kV transmission line running north-south, about 10 miles east of central El Mirage. There are several 500 kV transmission lines running east-west, about 4 miles south of El Mirage. The Adelanto Substation is about 11 miles east-southeast of El Mirage. The access to existing transmission lines appears to be acceptable, but it is not known whether there is available capacity on these lines.

**Environmental Concerns.** The major environmental concerns in the area south of El Mirage are associated with the proximity of existing residences to the potential solar project. These residences would be exposed to dust, construction noise, construction traffic, and a substantial change to their viewshed. Also, the entire area is crossed by natural channels, so there appears to be the potential for surface erosion due to the site's location on an alluvial plain at the base of the north face of the San Gabriel Mountains.

No site-specific information was collected about cultural or tribal resources or the availability of groundwater.

**Rationale for Elimination.** Solar development north of El Mirage appears to be infeasible due to the OHV use and recent formal designations under the Dingell Act. South of El Mirage, the land use is rural residential with widely scattered residences. For a commercial solar generation plant to be approved on private land, the County Development Code requires that the Board of Supervisors "… determine that the location of the proposed commercial solar energy facility is appropriate in relation to the desirability and future development of communities, neighborhoods, and rural residential uses, and will not lead to loss of the scenic desert qualities that are key to maintaining a vibrant desert tourist economy." In terms of residential development, this area is similar to the Lucerne Valley, so scoping commenters presumably would have the same concerns for El Mirage residents as they expressed for residents in the Lucerne Valley. As a result, this area would not offer an environmental advantage over the Proposed Project and is eliminated from consideration.

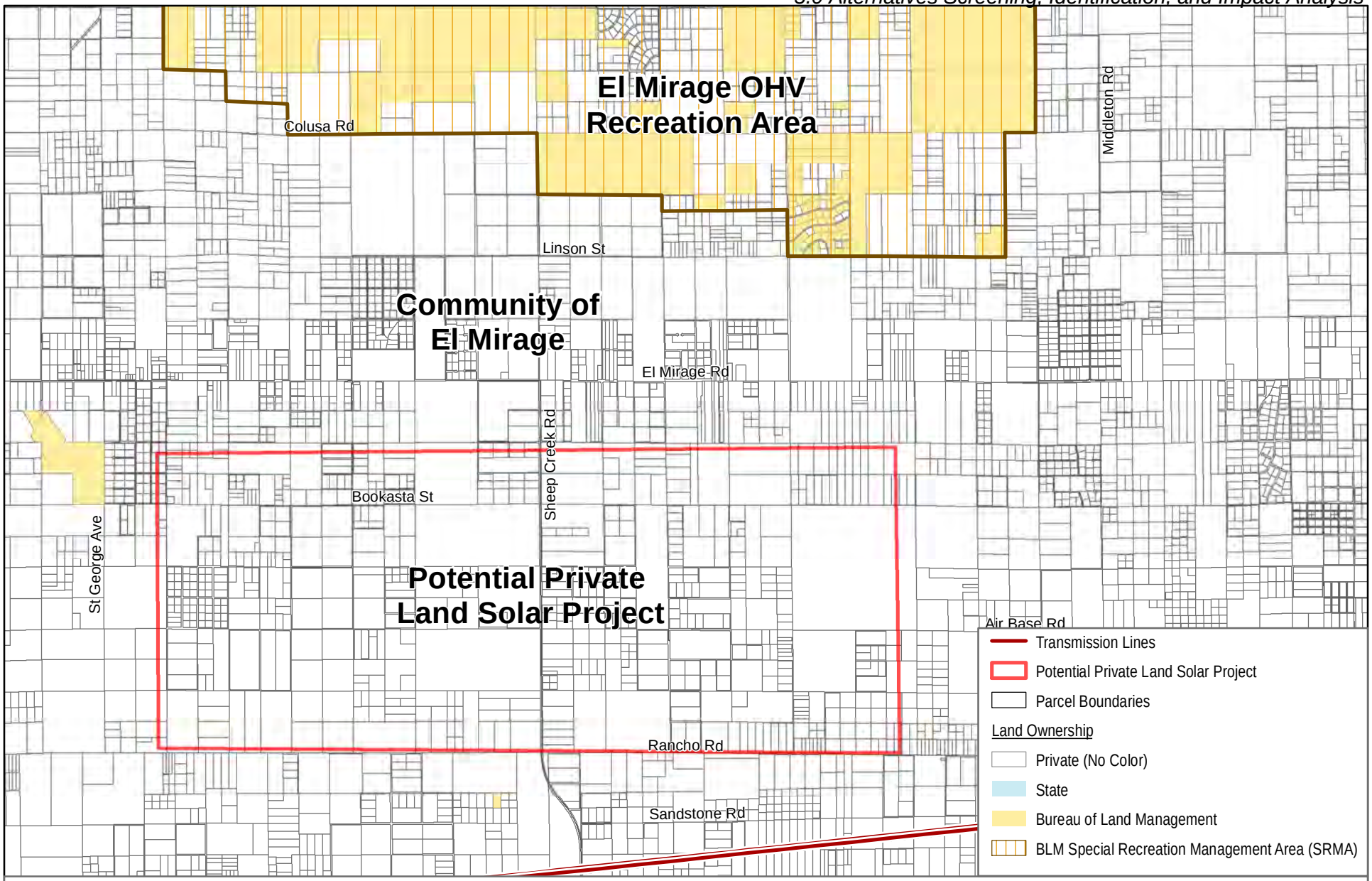



Figure 5-4

El Mirage Parcel Map

#### 5.3.1.3 Amboy

Figure 5-5, Amboy Area Land Ownership and Designations, shows the Amboy area, the BLM land designations, and the surrounding National Monument lands.

**Description.** The town of Amboy is reached via National Trails Highway (Historic Route 66), about 30 miles from the 1-40 Ludlow exit, which is about 50 miles east of Barstow. The small town has a motel and cafe on private land along Route 66 adjacent to the railroad. This area was popular from the 1920s through the 1940s when U.S. Route 66 was heavily used, but after the opening of I-40 in 1973, visitation to Amboy via Route 66 dropped dramatically (Wikipedia 2020).

Most of the Amboy area is BLM-administered land, including the Mojave Trails National Monument. There is a large operating salt mine on Bristol Dry Lake, with operations spread between 3 and 6 miles southeast of town. See Figure 5-5 for land ownership in the Amboy area; this map shows that the Amboy area is now surrounded by the 1.6-million-acre Mojave Trails National Monument, created in February 2016 by Presidential Proclamation. The map also shows the BLM land designations for the Amboy area; most of the BLM lands are defined as VPLs. While these lands are potentially available for renewable energy development, the BLM process for their consideration is considerably more complicated than the process for DFAs, and no VPLs have not yet been developed in the California desert.

**Transmission.** The Amboy area's electricity needs appear to be served only by a distribution level system with a small substation. The transmission lines that would need to be accessed to export power generated from Amboy would connect with one of the following lines, both shown on Figure 5-6 (Amboy Area Existing Transmission Lines):

- **SCE 220 kV Iron Mountain-Camino** – 35 miles east/southeast, requiring a crossing of about 8 miles of the Mojave Trails National Monument, then 13 miles across the Old Woman Mountains Wilderness (where new transmission rights-of-way would generally be prohibited)
- **SCE 500 kV Mojave-Lugo** – 27 miles north/northwest, through 16 miles of the Monument and 12 miles through the National Park Service (NPS) Mojave National Preserve (where new transmission rights-of-way would likely be prohibited)

As a result, a 220 kV gen-tie line serving Amboy is not feasible for several reasons:

- This 27- to 35-mile length for a gen-tie is infeasible due to its cost. Construction of a new 30-mile 220 kV gen-tie line is estimated at over $22 million (Mott MacDonald 2020).
- Amboy is surrounded by National Monument lands, so a solar project in the Amboy area would require a new transmission line through the Monument, which is unlikely to be approved

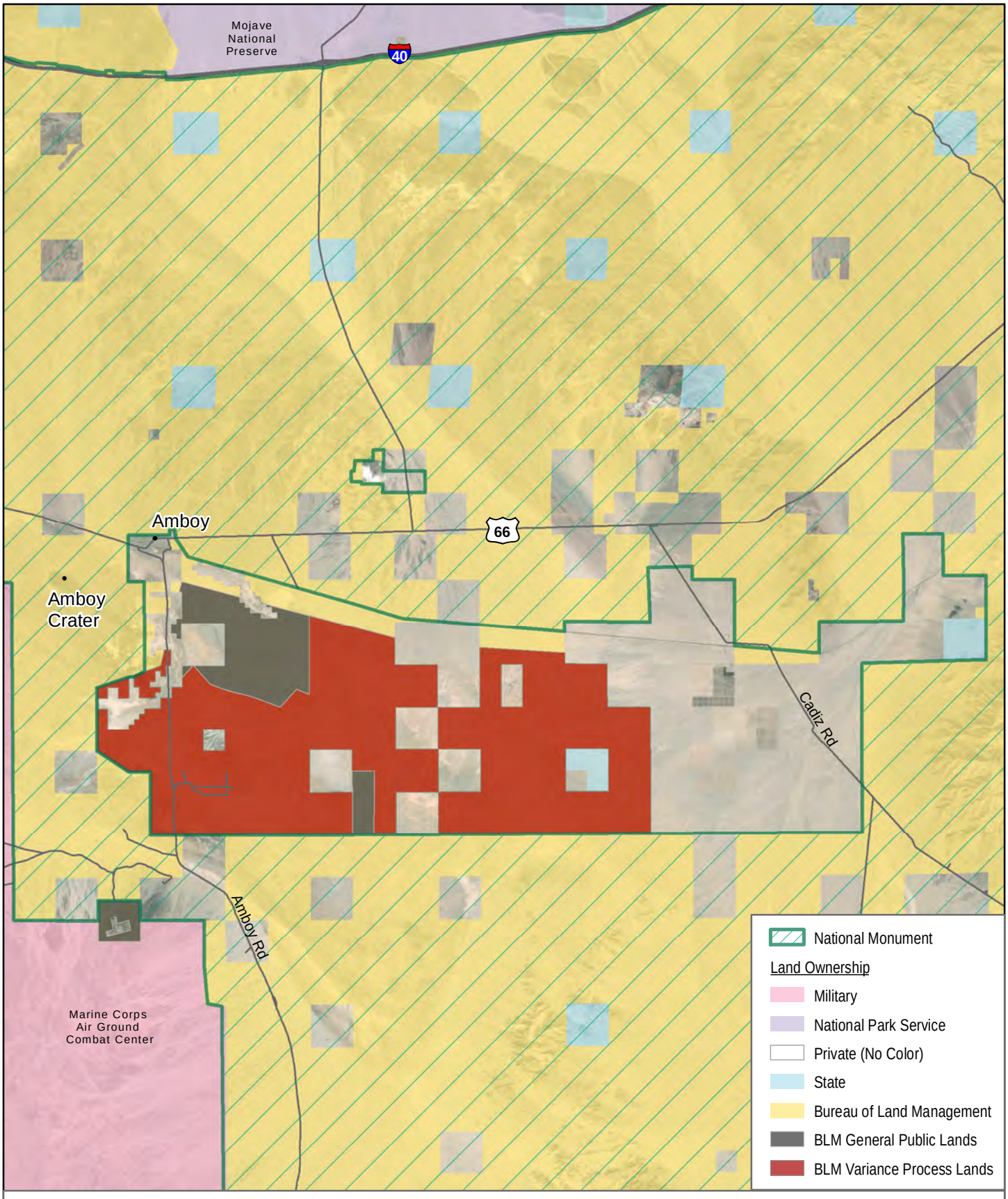



Figure 5-5

Amboy Area
Land Ownership and Designations

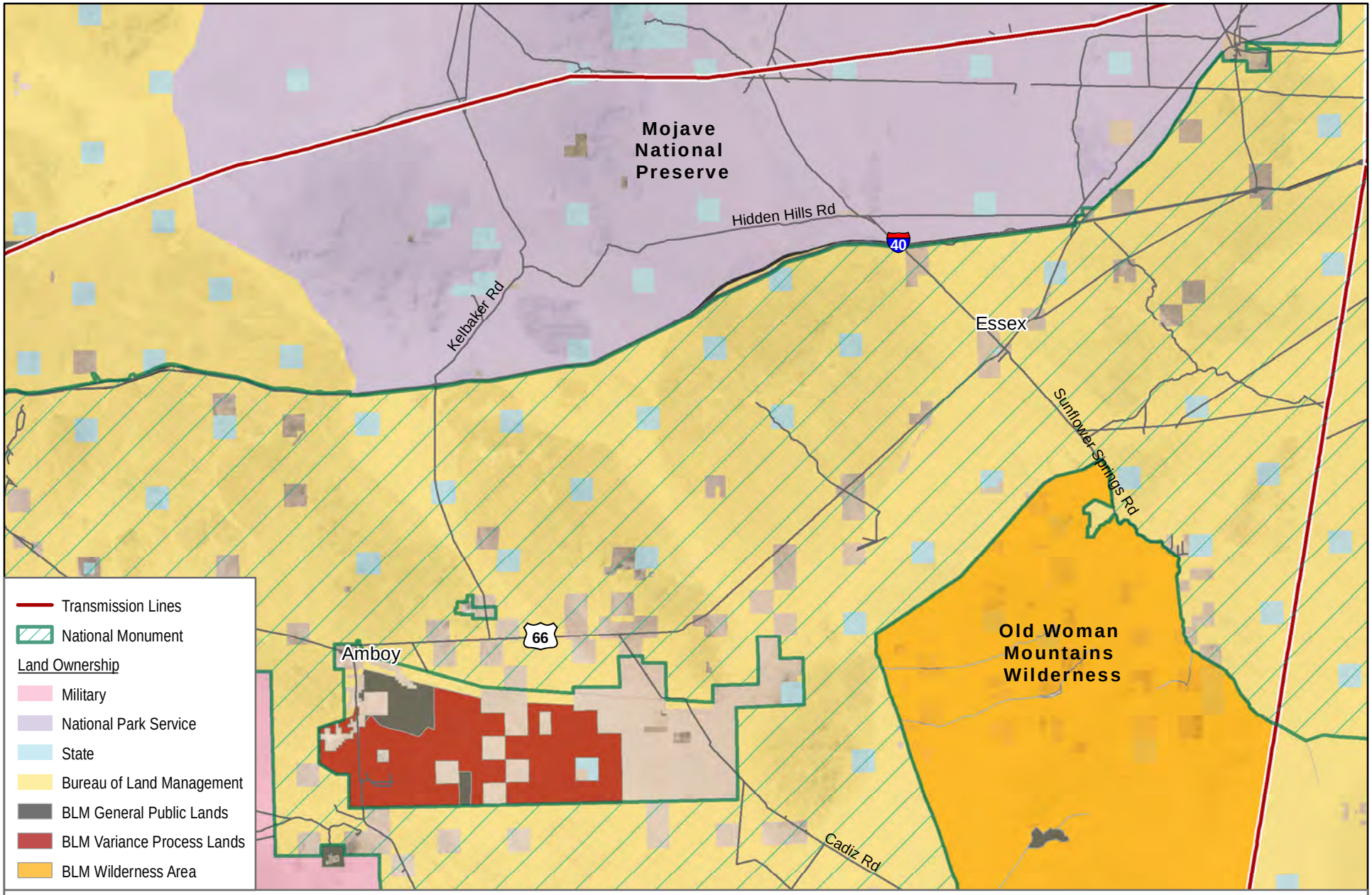



Figure 5-6

Amboy Area
Existing Transmission Lines

- Beyond the National Monument lands that surround Amboy, an Amboy solar project gen-tie would have to pass through either Congressionally designated Wilderness or the NPS Mojave National Preserve. Neither option is viable.

**Environmental Concerns.** The most important environmental constraints in the Amboy area are driven by the need to protect the Mojave Trails National Monument from direct and indirect impacts. As described above, the monument surrounds the Amboy area. In addition, the following environmental issues are of concern:

- **Aesthetics/Light and Glare:** Two unique and valuable resources are near Amboy. First is the Amboy Crater (a symmetrical volcanic cinder cone located southwest of the town of Amboy), which was designated as a National Natural Landmark in 1973. The trail to the crater was designated by the Secretary of the Interior as a National Recreational Trail in October 2020 (NPS 2020). Views from this nationally designated trail would be degraded by a large solar project, but there is already a large highly visible salt mine in the Amboy area. Second, the Amboy area is surrounded by the 2016-designated Mojave Trails National Monument, spanning 1.6 million acres of federal lands, including more than 350,000 acres of already Congressionally designated wilderness. It is a stunning mosaic of rugged mountain ranges, ancient lava flows, and spectacular sand dunes. The monument contains the longest remaining undeveloped stretch of Route 66 and some of the best-preserved sites from the World War II-era Desert Training Center. It connects the Mojave National Preserve with Joshua Tree National Park (BLM 2020b).
- **Mineral Resources:** Bristol Dry Lake is a high priority mineral area for the BLM. In evaluating any development proposal within the California Desert Conservation Area, the BLM is required to implement the CMAs adopted as part of the DRECP. CMA LUPA-MIN-3 defines the Bristol Lake area (3,500 acres) as a high priority operation area. Because of this designation, CMA LUPA-MIN-2 requires that the mineral resource value must be analyzed in a BLM-prepared NEPA document for any potential renewable energy development in this area.
- **Air Quality/Dust:** The dry lake is covered with evaporated salts across most of its surface, which create a concern for blowing dust during construction. In addition, this dust may settle on solar panels, potentially reducing electricity production.
- **Water Supply and Water Quality** is uncertain due to the highly mineralized sediments and the ongoing salt mining from these waters

No site-specific information was gathered on cultural, tribal, or paleontological resources in the Amboy area.

**Rationale for Elimination.** While the VPL designation means that solar development would be considered by the BLM, the transmission interconnection options (if they have available capacity) are too far away to be considered feasible. In addition, new transmission would have to pass through National Monument, Wilderness, and National Park lands, which would create other permitting obstacles.

#### 5.3.1.4 Hinkley

Figure 5-7 shows the Hinkley area, the BLM land and its designations, and transmission lines.

**Description.** A hypothetical 1,920-acre solar project site has been identified that includes 1,170 acres of BLM land designated as DFA and 750 acres of private land, as shown on Figure 5-7. This site is between 1 and 4 miles northwest of central Hinkley, and between 1 and 3 miles north of SR-58. The northern boundary of this alternative site would be about 4 miles southeast of the existing Abengoa Solar Project, located on private land just north of an SCE transmission corridor.

The DFA is crossed by a dirt road (with a BLM ROW grant) and also by a rail line (Burlington Northern Santa Fe [BNSF]), both of which would require avoidance and development setbacks, reducing the amount of land available for solar arrays. Crossing of the rail line for construction and operation would have to be arranged with BNSF.

There are 750 acres of private land adjacent to the northern DFA parcel. The private land appears to be vacant and consists of two large parcels, but it is unknown if the owners of this land would be willing to sell or lease to a solar developer. These parcels are shown on Figure 5-8, but given the uncertainty about their availability, they are not included in the acreage for this potential alternative.

Figure 5-8 shows that there are other private parcels south of those identified for solar development in this potential alternative, but this land is not considered viable for solar development because it is subdivided into parcels ranging from 2 to 40 acres. The numerous small parcels are illustrated on Figure 5-8. As many as 100 parcels may need to be acquired. There are also a few isolated residential properties in this southern area. Zoning is RL-5 or RL-40 (Rural Living, 5-acre or 40-acre minimum).

There is a high likelihood of development approval only for the BLM DFA parcels (1,170 acres). Using an estimate of 10 acres per MW (which allows for inclusion of an on-site substation, battery storage facilities, access roads, and potential setbacks from biological or cultural resources), these two DFA parcels would accommodate less than 120 MW of solar arrays (not the 200 MW included in the Proposed Project). The additional 750 acres of private land would be needed to have adequate land for a 200 MW project, but that land may not be available for sale or lease.

**Transmission.** The Hinkley Alternative area is located about 3 miles south of existing SCE 115 kV and 220 kV transmission lines that run east-west from the Coolwater Substation to the Kramer Substation. The existing Abengoa Solar Project interconnects to this line. The hypothetical gen-tie line shown on Figure 5-7 would be located on BLM-administered public lands for about 1.5 miles and on private lands (assuming rights could be obtained) for about 1.5 miles.

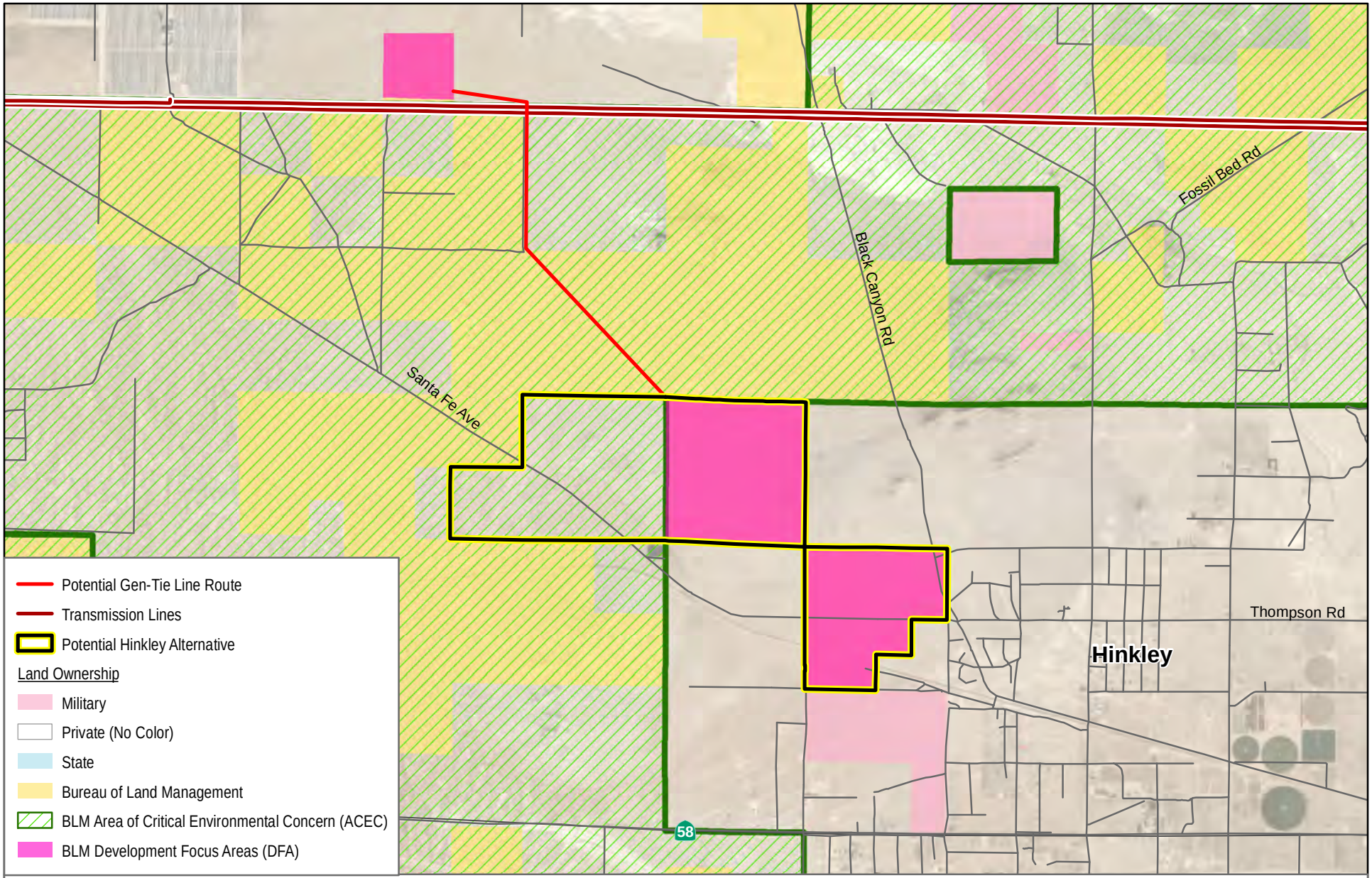



Figure 5-7

Potential Hinkley Alternative

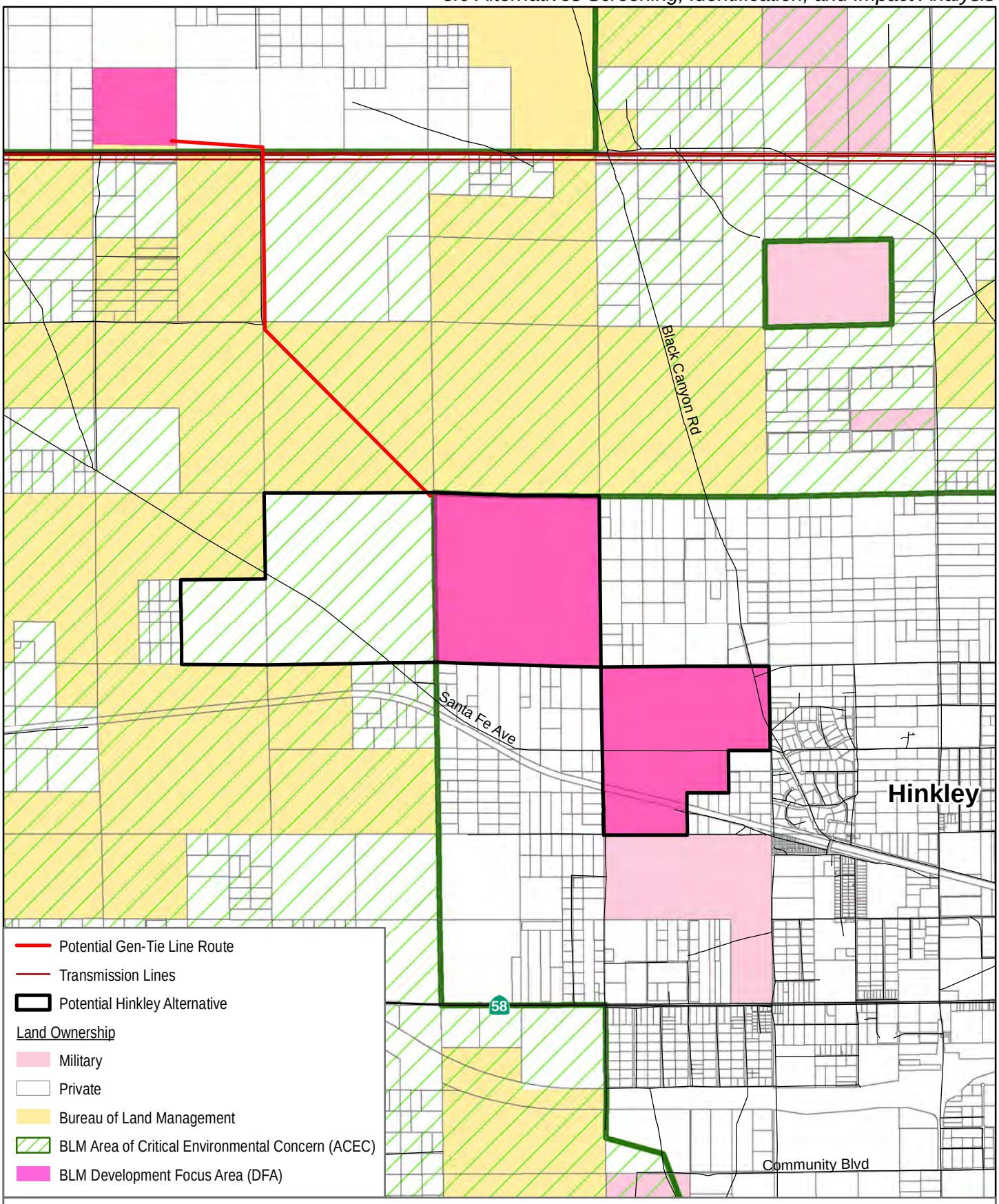



Figure 5-8

Hinkley Area Parcel Map

In order to reach the existing SCE line from the potential Hinkley Alternative, a new gen-tie line would have to cross about 1.5 miles of the very large BLM Superior-Cronese ACEC, which covers over 330,000 acres and has a very low (0.5 percent) disturbance cap (the ACEC is shown with green hatching on Figure 5-7). This ACEC was created primarily to protect lands defined for protection of desert tortoise (*Gopherus agassizii)* in the U.S. Fish and Wildlife Service (USFWS) Desert Tortoise Recovery Plan and includes high density desert tortoise population and habitat linkages. The ACEC Management Plan states that "Land use authorization proposals (new, renewal, and amendment) will be analyzed on a case-by-case basis to assess whether they are compatible with the ACEC and its management goals."

The feasibility of a gen-tie line crossing the ACEC is questionable because it is not clear whether the BLM would allow the gen-tie line to cross the ACEC. In addition, rights for the primary gen-tie line would have to be obtained from two private landowners. If avoidance of the ACEC were required, the gen-tie line would have to be built around the east side of the ACEC, requiring rights across 20-30 individual private parcels of from 10 to 180 acres.

**Feasibility.** As described above, the feasibility of this alternative is uncertain, due to (a) the amount of private land that would have to be acquired from small parcel landowners, and (b) the need for the gen-tie line to cross the BLM Superior-Cronese ACEC, which may not be permitted by the BLM, or acquisition of rights to use private parcels, which may not be forthcoming.

**Environmental Impacts.** The Hinkley Alternative area is at the eastern edge of the Mohave Ground Squirrel Population Area, as defined in the California Department of Fish and Wildlife (CDFW) Conservation Strategy (CDFW 2019b). MGS is defined as a Threatened Species by the CDFW. Mohave ground squirrel surveys would be required; they are expensive and season-specific. Mitigation would likely be required with potential avoidance of occupied habitat within the DFA. BLM's Conservation and Management Action (CMA) DFA-VPL-BIO-IFS-2 (below) would be implemented.

- **DFA-VPL-BIO-IFS-2:** Within the Mohave ground squirrel range configure solar panel and wind turbine arrays to allow areas of native vegetation that will facilitate Mohave ground squirrel movement through the project site. This may include raised and/or rotating solar panels or open space between rows of panels or turbines. Fences surrounding sites should be permeable for Mohave ground squirrels.

The DFA is also adjacent to protected areas for desert tortoise (the Superior-Cronese ACEC), and the following BLM CMA for desert tortoise protection would be required:

- **DFA-VPL-BIO-IFS-1:** To the maximum extent practicable (see Glossary of Terms [in the BLM DRECP LUPA]), activities will be sited in previously disturbed areas, areas of low-quality habitat, and areas with low habitat intactness in desert tortoise linkages and the Ord-Rodman TCA, identified in Appendix D [to the BLM DRECP LUPA]

No site-specific data was gathered on cultural or paleontological resources in the Hinkley area, nor on the availability of water for dust control.

Groundwater quality is a significant concern in the area, based on its contamination by hexavalent chromium between 1952 and 1966 (Lahontan 2021). Hinkley (also known as the “Erin Brockovich town”) is the town from which a group of residents won a direct-action arbitration against Pacific Gas and Electric (PG&E) in 1996 (Grist 2019). PG&E used hexavalent chromium, also known as chromium 6, to fight corrosion in cooling tower water. The wastewater from the cooling towers was discharged to unlined ponds at the site, where some of the wastewater percolated to the groundwater, resulting in hexavalent chromium contamination. The chromium affects an area of groundwater at least 8 miles long and 2 miles wide; the area is south of SR-58 and over 2 miles southeast of the DFA parcels.

**Rationale for Elimination.** The Hinkley Alternative is eliminated because the size of the BLM DFAs is inadequate for a 200 MW solar project with battery storage, and the private land is not known to be available for project use. There are additional feasibility concerns about the construction of a gen-tie line through an ACEC or multiple private parcels.

#### 5.3.1.5 Kramer Junction

The Kramer Junction area was evaluated as an alternative in the San Bernardino County EIR for the Daggett Solar Power Project (San Bernardino County 2019b). This 2019 study found the alternative site to be feasible, but not environmentally superior to other sites, and the proposed Daggett Solar Power Project was approved. However, the County EIR did not fully consider the feasibility challenges presented by the BLM CMAs adopted as part of the DRECP, as discussed below.

**Description.** The BLM defines its land north and west of Kramer Junction (at the intersection of SR-58 and U.S. 395) as DFA (see Figure 5-9). The DFA extends along the west side of U.S. 395 for about 14 miles. Much of this DFA is characterized by low rolling hills, not ideal for solar development due to the extensive grading that would likely be required. The northernmost part of the DFA is flatter and the hypothetical Kramer Junction Alternative would be located at this northern end of the DFA as shown in Figure 5-9. The area outlined on the map includes about 2,600 acres.

This potential solar project site location adjacent to U.S. 395 would be easily accessed for construction. Also, a major transmission corridor runs along the eastern edge of the site (just west of U.S. 395). The solar field would be entirely on BLM-managed public lands, and there are no apparent residences within several miles of the site.

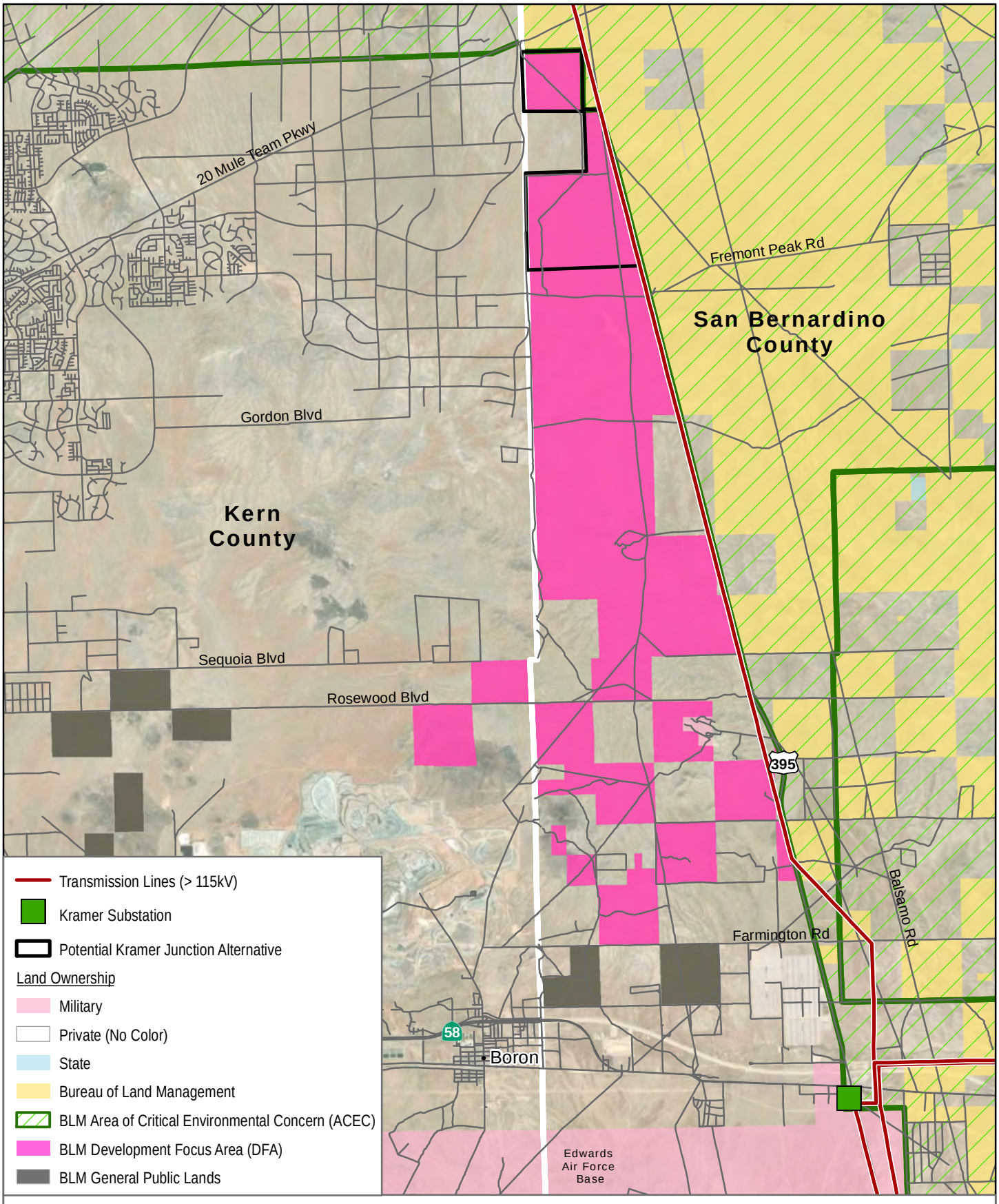



**Figure 5-9**

Potential Kramer Junction Alternative

A solar project in the Kramer Junction DFA might be able to be constructed with an on-site substation and no off-site gen-tie line. An on-site substation could be constructed to allow interconnection to one of the existing SCE lines that parallels the east side of the site. If this is not feasible due to the available capacity of those lines, a new 14-mile-long gen-tie line would have to be constructed to the Kramer Substation, crossing both BLM-managed and private lands.

**Transmission.** The individual BLM DFA parcels shown in Figure 5-9 are located from 4 to 15 miles north of the SCE Kramer Substation (which is at the southwest corner of the SR-58/U.S. 395 intersection). There are two SCE transmission lines running along the west side of U.S. 395 (the east side of the hypothetical solar site):

- SCE Coso-Kramer 220 kV
- SCE Inyokern-Kramer 115 kV

The available capacity of these lines is not known and would require a planning study to be prepared in response to an interconnection application filed with SCE and the CAISO. The California Public Utilities Commission (CPUC) and the BLM are currently evaluating a proposed upgrade to the 115 kV line, as described on the CPUC's Ivanpah-Control Project website (CPUC 2021), so additional capacity may be available after this upgrade is completed in several years.

It is also not known whether the Kramer Substation has available space for interconnection of a new 220 kV transmission line or the additional 200 MW that would be generated in this location.

As described above, while transmission lines are present on the site, transmission line capacity is not known, and the capacity of the Kramer Substation to accept additional generation is not known.

Feasibility of gen-tie line construction, if a new line to the Kramer Substation is required, is uncertain. As shown in Figure 5-9, the land ownership pattern between the potential solar field and the Kramer Substation is a checkerboard pattern. A gen-tie line following either the west side of U.S. 395 or the route shown on Figure 5-9 (with the line crossing to the east side of the highway to avoid the existing solar field) would require acquisition of rights across about 8 miles of private land and 6 miles of BLM-administered land. The BLM-managed lands along U.S. 395 are within a designated section 368 energy corridor and in BLM Utility Corridor P (defined in the CDCA Plan). Acquisition of rights on private land may be challenging if landowners are not willing to sell.

Environmental Impacts

The Kramer Junction Alternative was also evaluated as an alternative in the San Bernardino County EIR for the Daggett Solar Power Project. The Daggett Solar Project was approved by the San Bernardino County Board of Supervisors in December of 2019. Portions of the

environmental analysis presented here rely on information in that EIR (San Bernardino County 2019b).

**Aesthetics/Light and Glare.** This alternative would result in development of the solar generation plant within an undisturbed desert area. There is an existing solar thermal (parabolic trough) facility approximately 12 miles south of the alternative site, and an existing boron mine approximately 9 miles southwest of the alternative site. The BLM defines the visual quality of the alternative site and surrounding area as Visual Resource Inventory Class III where maintenance of visual quality has high value (BLM 2021).

A transmission corridor containing a high voltage transmission line, a sub-transmission line, gas pipeline, fiber optic cable, and distribution lines, runs parallel to the west side of U.S. 395. Construction of a solar project at the Kramer Junction Alternative site would result in changes in existing views from US-395 and from adjacent BLM Fremont-Kramer ACEC and Red Mountain SRMA. Existing views towards the alternative site from U.S. 395 are currently dominated by undeveloped desert landscape with scrub shrub vegetation and mountains in the background.

The alternative solar project at this location would replace views of the open desert with views of a solar generation plant. The gen-tie line for the alternative could be very short, with an on-site substation interconnection, or it may require a new 14-mile line to the Kramer Substation. The project itself would not substantially obstruct or interrupt views of the surrounding landscape; however, the level of contrast to the existing undisturbed landscape would be moderate to moderately high because the solar generation plant would be highly visible from adjacent U.S. 395, even though west of the transmission corridor. Given the currently undeveloped landscape (west of the transmission corridor), the resulting impact on visual quality would potentially be significant and unavoidable.

An alternative solar project in this location would also introduce similar new sources of lighting and glare to the area as would the Proposed Project. All lighting would be installed in accordance with County standard for nighttime lighting. No residences are located near the alternative site and solar panels would not direct glare towards the adjacent highways due to the angle of the solar panels relative to the highways. Impacts from light and glare would be less than significant.

The Kramer Junction Alternative would still have significant and unavoidable impacts on aesthetics. However, these impacts would be less severe than those of the Proposed Project due to the lack of industrial elements in the Lucerne Valley area, while the Kramer Junction area already has major transmission infrastructure present. The Proposed Project would be located in a less developed landscape which is visible from an eligible scenic highway.

**Biological Resources.** The Kramer Junction Alternative would have the potential to affect special-status wildlife and plant species, including direct impacts to habitat. State and

federally listed species occur in and around the site including desert tortoise and Mohave ground squirrel. State species of special concern that are documented in the vicinity include burrowing owl (*Athene cunicularia*), Townsend's big-eared bat (*Corynorhinus townsendii*), and American badger (*Taxidea taxus*).

BLM sensitive plant species documented in the vicinity include, desert cymopterus (*Cymopterus deserticola*), Barstow woolly sunflower (*Eriophyllum mohavense*), Beaver Dam breadroot (*Pediomelum castoreum*), recurved larkspur (*Delphinium recurvatum*), Red Rock Canyon monkeyflower (*Erythranthe rhodopetra*), Red Rock poppy (*Eschscholzia minutiflora ssp. twisselmannii*), and sagebrush loeflingia (*Loeflingia squarrosa var. artemisiarum*) (CNDDB 2021).

This alternative would have similar impacts to the Proposed Project with respect to effects on habitat and special-status plants and wildlife, including desert tortoise. However, this site is located in proximity to known populations of Mohave ground squirrel, and would result in substantial loss of habitat. It would likely require Mohave ground squirrel surveys to define potential avoidance areas; the areas that may be required for avoidance are unknown but may be substantial, requiring solar development to be spread across a larger area to develop the 200 MW of the Proposed Project.

BLM's DRECP LUPA included Appendix D (Conservation and Management Action Implementation Support and Maps), Figure D-18 (Mohave Ground Squirrel Important Areas) and defines most of the Kramer Junction DFA area as a "Key Population Center" for Mohave ground squirrel, and the area just north of it is "Linkage." BLM would require specific mitigation for impacts to this species, including compliance with the CMAs presented in Table 5-1 (references to the Glossary and Appendix D refer to the DRECP LUPA) (BLM 2016b).

**Table 5-1. BLM CMAs for Mohave Ground Squirrel (From BLM DRECP LUPA)**

| CMAs | Compliance Concerns |
|---|---|
| **LUPA-BIO-IFS-35: Protocol surveys** (see Glossary of Terms) **are required** for activities in Mohave ground squirrel key population centers and linkages as indicated in Appendix D [of the BLM DRECP LUPA]. Results of protocol surveys will be provided to BLM and CDFW to consult on, as appropriate, for third party activities. | DRECP LUPA Figure D-19 shows that protocol surveys would be required in the Kramer Junction DFA. These surveys are very expensive and time-consuming. |

**Table 5-1. BLM CMAs for Mohave Ground Squirrel (From BLM DRECP LUPA)**

| CMAs | Compliance Concerns |
|---|---|
| **LUPA-BIO-IFS-36:** Activities in Mohave ground squirrel key population centers, as identified in Appendix D [of the BLM DRECP LUPA], requiring an Environmental Impact Statement are required to assess the effect of the activity on the long-term function of the affected key population center.<br>Activities within a key population center, as identified in Appendix D [of the BLM DRECP LUPA], must be designed to avoid adversely impacting the long-term function of the affected key population center. | Required avoidance of adverse impacts to the long-term function of the key population center may constrain availability of developable land. |
| **LUPA-BIO-IFS-37:** Activities in key population centers will be **sited in previously disturbed areas,** areas of low habitat quality and in areas with low habitat intactness, to the maximum extent practicable (see Glossary of Terms [for BLM DRECP LUPA]). | There are few disturbed areas within the DFAs in the Kramer Junction area. If solar development must occur within disturbed areas, there is not adequate land for a 200 MW project. |
| **LUPA-BIO-IFS-38: Disturbance of suitable habitat** from activities, requiring an EA or EIS, within the Mohave ground squirrel key population centers and linkages (as identified in Appendix D [of the BLM DRECP LUPA]) **will not occur during the typical dormant season** (August 1 through February 28) unless absence is inferred and supported by protocol surveys or other available data during the previous active season. | Disturbance may occur only from March 1 through July 31. This is not a feasible timeframe for construction of a 200 MW solar project, given the typical 18-month required construction timeframe without seasonal constraints. |

**Table 5-1. BLM CMAs for Mohave Ground Squirrel (From BLM DRECP LUPA)**

| CMAs | Compliance Concerns |
|---|---|
| **LUPA-BIO-IFS-39:** During the typical active Mohave ground squirrel season (February 1 through August 31), **conduct clearance surveys throughout the site, immediately prior to initial ground disturbance** in the areas depicted in Appendix D [of the BLM DRECP LUPA]. In the cleared areas, perform monitoring to determine if squirrels have entered cleared areas. Contain ground disturbance to within areas cleared of squirrels.<br><br>**Detected occurrences of Mohave ground squirrel will be flagged and avoided, with a minimum avoidance area of 50 feet,** until the squirrels have moved out of harm's way. A designated biologist (see Glossary of Terms [for BLM DRECP LUPA]) may also actively move squirrels out of harm's way. | The required clearance surveys completed immediately prior to ground disturbance would be very challenging to implement while also constructing a large solar project. |
| **LUPA-BIO-IFS-40:** Activities sited **in a Mohave ground squirrel linkage** (see Appendix D [of the BLM DRECP LUPA]) that may impact the linkage are required to analyze the potential effects on connectivity through the linkage. The activity must be designed to maintain the function of the linkage after construction/implementation and during project/activity operations. Linkage function will be assessed by considering pre- and post-activity ability of the area to support resident Mohave ground squirrels and provide for dispersal of their offspring to key population centers outside the linkage, and dispersal through the linkage between key population centers.<br><br>Activities that occur in Mohave ground squirrel linkages shown in Appendix D [of the BLM DRECP LUPA] must be configured and located in a manner that does not diminish Mohave ground squirrel populations in the linkage. | The Kramer Junction DFA is primarily within a Mohave ground squirrel Key Population Center but also in linkage areas. |

**Table 5-1. BLM CMAs for Mohave Ground Squirrel (From BLM DRECP LUPA)**

| CMAs | Compliance Concerns |
|---|---|
| **LUPA-BIO-IFS-41:** For any ground-disturbing (e.g., vegetation removal, earthwork, trenching) activities, occurrences of Mohave ground squirrel will be flagged and avoided, with a minimum avoidance area of 50 feet, until the squirrels have moved out of harm's way. A designated biologist (see Glossary of Terms [for BLM DRECP LUPA]) may also actively move squirrels out of harm's way. | The required avoidance areas would be very challenging to comply with while also constructing a large solar project. |

In addition to the CMAs defined in Table 5-1, more significant constraint to development of this DFA is its location in the center of the CDFW's designated habitat for the Mohave ground squirrel. The first development challenges are described in the following two CMAs:

- **DFA-BIO-IFS4:** This CMA prohibits renewable energy applications within this DFA until after the CDFW publication of a final Mojave Ground Squirrel Conservation Strategy. In August of 2019, this strategy document was published (CDFW 2019b). However, the CMA also prohibits development until Kern and San Bernardino Counties "… complete county General Plan amendments/updates that include renewable energy development and Mohave ground squirrel conservation on nonfederal land in the West Mojave ecoregion." (BLM 2016a and 2016b) These have not been prepared; they were required within 5 years, and the timeframe ends in the fall of 2021.
- **DFA-BIO-IFS-5:** This CMA states that after the planning criteria in DFA-BIO-IFS-4 are met, the BLM would reevaluate the Mohave ground squirrel key population center. Depending on County actions, the BLM may eliminate the "North of Edwards" DFA and change the area's designation to "General Public Lands," which require a more complex development process.

If compliance with the two CMAs described above could be achieved, there is a second set of CMAs that apply to a solar project in this area, as described under Biological Resources (below). Compliance would be onerous, time-consuming and would likely further constrain the amount of land on which the BLM could allow development.

A project developed within the Kramer Junction DFA would require compliance with NEPA and all applicable CMAs. Full biological and cultural resources surveys would be required before the start of the NEPA process; this process would likely take one to 2 years to complete. CEQA compliance would be required also in order for the developer to obtain permits from CDFW. Both CEQA and NEPA compliance are feasible, but the NEPA component and the BLM and Department of the Interior review processes can add an additional year or two to the typical CEQA-only process.

**Noise and Proximity of Residences.** There are no residences near this alternative or along the gen-tie line route to the Kramer Substation, if a new gen-tie line were required.

**Traffic and Transportation.** A solar project of 2,600 acres would require a similar construction workforce as needed for the Proposed Project, but U.S. 395 provides substantially better access and on paved roads. Construction vehicles would have to pass through the Kramer Junction intersection, and left turns off of U.S. 395 into the site would require temporary traffic controls. Traffic impacts would be substantially reduced in comparison to the Proposed Project due to the elimination of the 30-mile drive through Apple Valley and Lucerne Valley and the 2.5-mile drive on unpaved Lucerne Valley Cutoff.

**BLM Grazing Rights.** According to Figure D-21 of DRECP LUPA Appendix D, the Kramer Junction area is within a BLM grazing allotment. The allotment name is Monolith-Cantil (CA05007; BLM 2021); it is 15,544 acres and it overlies nearly all of the BLM DFA parcels in the Kramer Junction area. Full-time grazing is not compatible with large-scale solar since the vegetation otherwise available for grazing animals would be removed or cut, and the solar field would be fenced to exclude cattle. As a result, BLM authorization of a solar project within this grazing allotment would eliminate about 2,600 acres of grazing land from an existing allotment.

BLM CMA LUPA-LIVE-4 would apply to solar development within an active grazing allotment:

- **LUPA-LIVE-4:** If the BLM determines that the grazing allotment is to be put to a different public purpose than grazing, follow the notification requirements outlined in the Grazing Regulations at 43 CFR 4110.4-2(b) and BLM Instruction Memorandum (IM) 2011-181 (BLM 2011), or future policy replacing IM 2011-181

The notification defined above requires that the grazing permittee/lessee be given 2 years' prior notification before the grazing permit/lease may be cancelled. In addition, the BLM IM 2011-181 states that "The right-of-way (ROW) applicant and the permittee/lessee should be strongly encouraged to enter into an agreement that addresses mitigation and compensation strategies to be submitted concurrent with the POD [BLM-required Plan of Development], but the BLM will not directly participate in these discussions." This would result in additional cost to develop a solar project on a site with active grazing, as well as potentially an additional development delay due to the notification timeframe.

**Rationale for Elimination.** The BLM-administered land in the Kramer Junction area does not have nearby residences, and there is a nearby transmission corridor. Both of these factors would be advantageous in comparison with the Proposed Project's location. However, the capacity of the nearby transmission line and the Kramer Substation to accommodate 200 MW of new generation is unknown. In addition, development of a solar generation facility within this BLM "North of Edwards" DFA is not currently feasible. At this time, developers cannot comply with the relevant BLM CMAs, so BLM would not be able to accept development applications. Even if applications could be accepted by the BLM, a

developer would have to comply with a series of specific requirements related to protection of the Mohave ground squirrel that may limit the amount of land that could be developed. In addition. Therefore, this alternative is eliminated from detailed consideration.

### 5.3.2 BLM Land Exchange Alternative

**Background.** Several scoping comments suggested that the CSLC should exchange the lands that it currently owns in the Lucerne Valley area with BLM lands that have a comparatively lower habitat value and are further from areas of residential development. These commenters suggest that a land exchange would allow these Lucerne Valley lands to be preserved, while still allowing the State to achieve development of renewable energy by encouraging solar development in other areas. The scoping comments included the following suggestions:

- **Town of Apple Valley:** The proposed project is located in an ecologically sensitive site that is inappropriate for large-scale development. Alternatives that must be evaluated are the development of an alternative location with lower resource values and the feasibility of completing land swap with the BLM for lands within an established Development Focus Area.
- **Desert Tortoise Council:** Another alternative should be to exchange/sell the land at the location of the proposed project and acquire land with fewer sensitive biological resources, and closer to where the demand for electricity is
- **Neil Nadler:** The Trona Alternative could be analyzed as a land exchange between the CSLC and the BLM

#### 5.3.2.1 Description

In October 1994, the California Desert Protection Act (CDPA) was approved by Congress and signed into law, designating 3.6 million acres in Southern California as federal wilderness and 4 million acres in Southern California for inclusion in the national park system. A total of 442 parcels (approximately 251,000 acres) of fee-owned school lands and more than 100 parcels encumbered by the State's reservation of mineral interests were initially identified as within the CDPA boundaries. Section 707 of the CDPA authorizes exchanging school lands within CDPA-designated areas for federal lands located elsewhere. The CSLC is compensated for the exchange of its fee and mineral interests on a value-for-value basis, as determined by fair market appraisals.

The CDPA authorized the BLM to implement land exchanges with the CSLC. Five exchanges were completed during the 1990s, resulting in the transfer of more than 66,000 acres of school lands to the BLM and deposits totaling more than $14.7 million into the School Land Bank Fund (CSLC 2020).

Potential land exchanges between the BLM and the CSLC have been addressed in two processes in the past 30 years.

**California Desert Protection Act.** As summarized above, the CDPA authorized exchanges of school lands with federal lands.

**DRECP.** The DRECP process designated BLM lands for conservation and renewable energy development. The DRECP also defined a potential State-federal land exchange. Appendix F to the BLM DRECP LUPA is "Proposed Land Exchange with the State of California." In Section F.2 (Background), Appendix F states:

- *The lands the BLM acquires will consolidate Federal ownership to allow for better management of the NCL units and other BLM managed lands. The BLM will convey Federal lands to the California State Lands Commission (CSLC), acting as Trustee, to consolidate State lands to be used for renewable energy development. The CSLC intends to acquire renewable energy projects to help generate revenue for the State of California in accordance with the School Land Bank Act and Assembly Bill 982.*

The CSLC issued a press release in October 2015 announcing "a historic agreement to pursue an exchange of State school lands with federal lands. The exchange, slated to be executed in phases, will protect conservation lands, facilitate renewable energy development, and provide revenue benefiting California's retired teachers" (CSLC 2015).

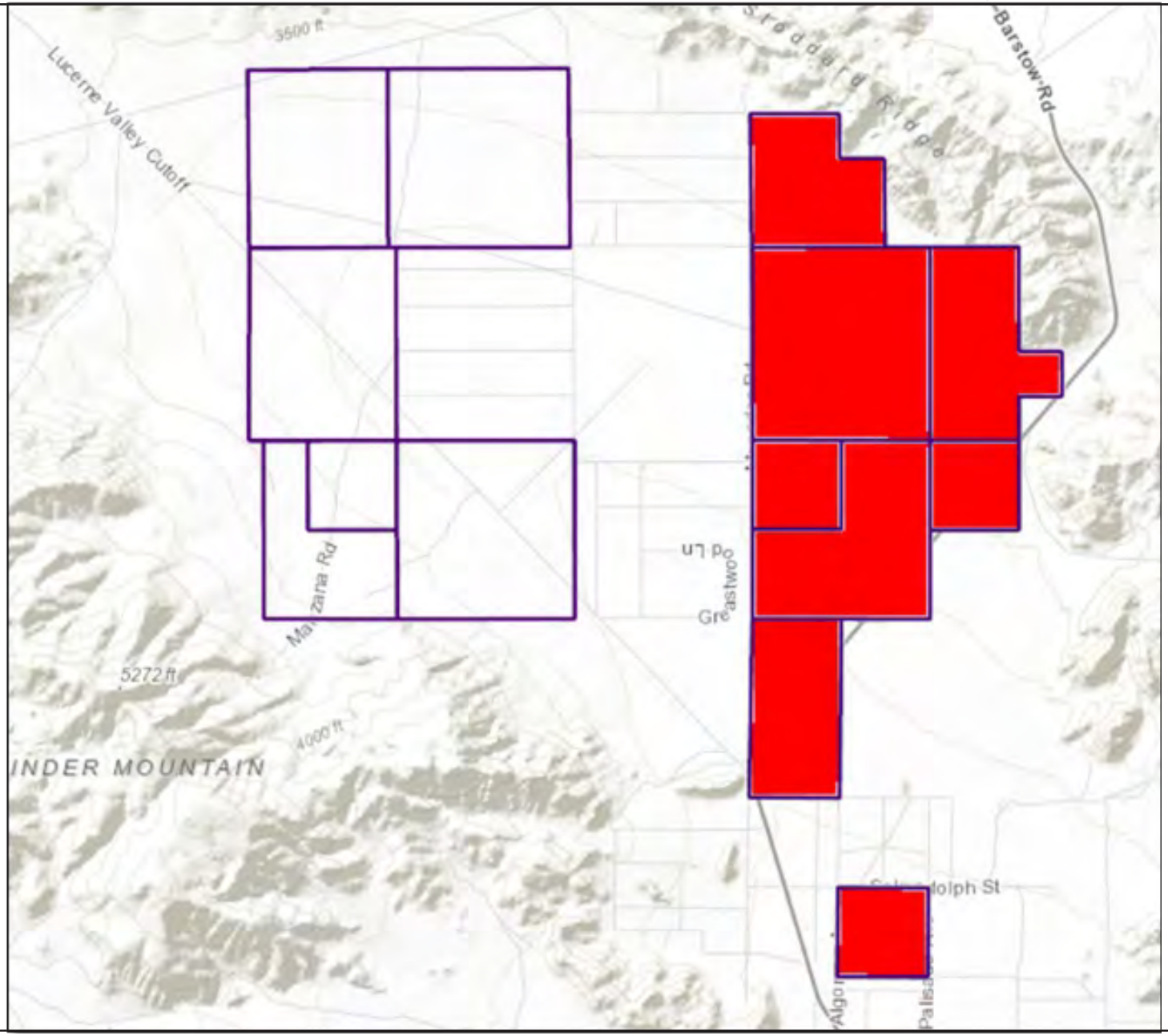
Attachment 1 to DRECP LUPA Appendix F (BLM 2016f) also includes a signed Memorandum of Agreement between the BLM and the CSLC, a copy of the School Land Bank Act (Assembly Bill [AB] 982, Skinner, Chapter 485, Statutes of 2011), and a feasibility study of the proposed land exchange. The proposal was that the State would acquire operating solar generation projects, providing revenue to the State. The projects defined in Appendix F were:

- Desert Sunlight Project (550 MW, now operating in Riverside County)
- Lucerne Valley Solar Project, proposed by Chevron Energy Solutions (San Bernardino County), which was approved by the BLM in 2010. The project was not issued permits by the CDFW and was never constructed.

Most of the parcels proposed for exchange were State school land sections that are currently isolated within BLM-administered public lands. However, in the Lucerne Valley area, a large area of State lands was under consideration for a land exchange from the State to the BLM. This included approximately 2,600 acres located approximately 1.6 miles east of the Proposed Project site.

Figure 5-10 shows the location of a potential exchange area in the Lucerne Valley, as shown in the Databasin DRECP Gateway[36] (Databasin 2021). This map shows the State lands proposed for Stagecoach Solar Generation Plant to the west (purple boundaries) and illustrates the boundary of the potential exchange in red.

[36] The DRECP Gateway (located at https://drecp.databasin.org/) is a collaborative data storage and mapping site that allows viewing and creation of maps and use of shared datasets.




Parcel boundaries around State lands.

Parcels identified in the DRECP LUPA for potential exchange with the BLM.

Source: Source: DRECP Databasin 2021.

**Figure 5-10**

**Area of Proposed DRECP Land Exchange**

The DRECP LUPA Appendix F also presents lists of parcels to be considered for future phases of land exchanges.

Status of the DRECP Land Exchange

At the end of 2016, then-Interior Secretary Sally Jewell and Governor Jerry Brown executed a Memorandum of Understanding regarding renewable energy in California which, among other provisions, directed the State and the Department of the Interior to continue to maintain the Renewable Energy Action Team, place priority on processing applications for renewable energy development in areas that are consistent with the DRECP, and complete the Phase 1 land exchange proposal by December 31, 2018. However, the Phase I land exchange was not completed by this date due to shifting priorities of the federal administration (CSLC 2020).

In 2021, CSLC staff initiated discussion with the BLM again under the new federal administration and hopes to revisit the lists of parcels and potentially move the exchange. However, these discussions are very preliminary.

BLM Process for Land Exchanges

The BLM defines its land exchange process in its Land Exchange Handbook (BLM 2005). It is a complicated and time-consuming process, requiring assessment of feasibility, consideration of mineral values, sharing of costs, considering environmental impacts, valuation analysis and appraisal, and a process for decision, protests, and appeals. Chapter 13 deals specifically with “Exchanges Involving State Governments.”

The process generally takes several years to implement and is not feasible within the timeline required for consideration of alternatives to the Stagecoach Facilities.

#### 5.3.2.2 Rationale for Elimination

This alternative is eliminated from consideration in this EIR for the following reasons:

- The timeframe required for implementing a land exchange is long, as illustrated by the DRECP exchange, which was approved in concept in 2015 but has not been implemented 6 years later. Therefore, it could not be completed in a timeframe that would be reasonable for consideration of siting the proposed Stagecoach Solar Generation Plant at a different location.
- The DRECP process did not conceive of an exchange that would transfer BLM land to the State to develop for solar generation, but instead, would give the State income from currently operating solar projects on BLM land

CEQA requires that alternatives to a proposed project be feasible for implementation. While there is a defined process for land exchanges between the BLM and the State, it is cumbersome and time-consuming. Because the land exchange process would require

many years of agency processes and interaction with an uncertain result, a land exchange could not be implemented within a reasonable timeframe or with any certainty. As a result, this Applicant could not pursue development in accordance with its objectives and contract obligations.

### 5.3.3 Overhead Gen-tie on BLM Land Alternative

#### 5.3.3.1 Description

When the Proposed Project was initially designed by the Applicant, its gen-tie line route was primarily located on BLM land west of State Route 247 (SR-247, or Barstow Road). That route was defined because it would avoid existing residences and would be less visible than a route on private land. However, this route was abandoned by the Applicant in favor of the currently proposed gen-tie line after the BLM adopted the DRECP LUPA, which prohibits new rights-of-way in these lands.

#### 5.3.3.2 Rationale for Elimination

In 2016, the BLM adopted the DRECP as a Land Use Plan Amendment to the California Desert Conservation Area Plan, resulting in re-definition of permitted uses of the lands west of SR-247. The BLM lands west of SR-247 are now defined as ACECs and their Management Plans (presented in Appendix A to the DRECP LUPA) do not allow new rights-of-way.

Therefore, the installation of an overhead gen-tie on BLM-administered land west of SR-247 for an overhead gen-tie line is infeasible.

### 5.3.4 SR-247 Underground Gen-tie Alternative

#### 5.3.4.1 Description

An underground line buried below Lucerne Valley Cutoff and SR-247 would not create a hazard to motorists and is technically feasible to construct. This would be an approximately 5.5-mile route, as compared to the proposed 9.1-mile route. Figure 5-11 shows a proposed route for the SR-247 Underground Gen-tie Alternative between the proposed Stagecoach Solar Generation Plant and SCE Calcite Facilities.

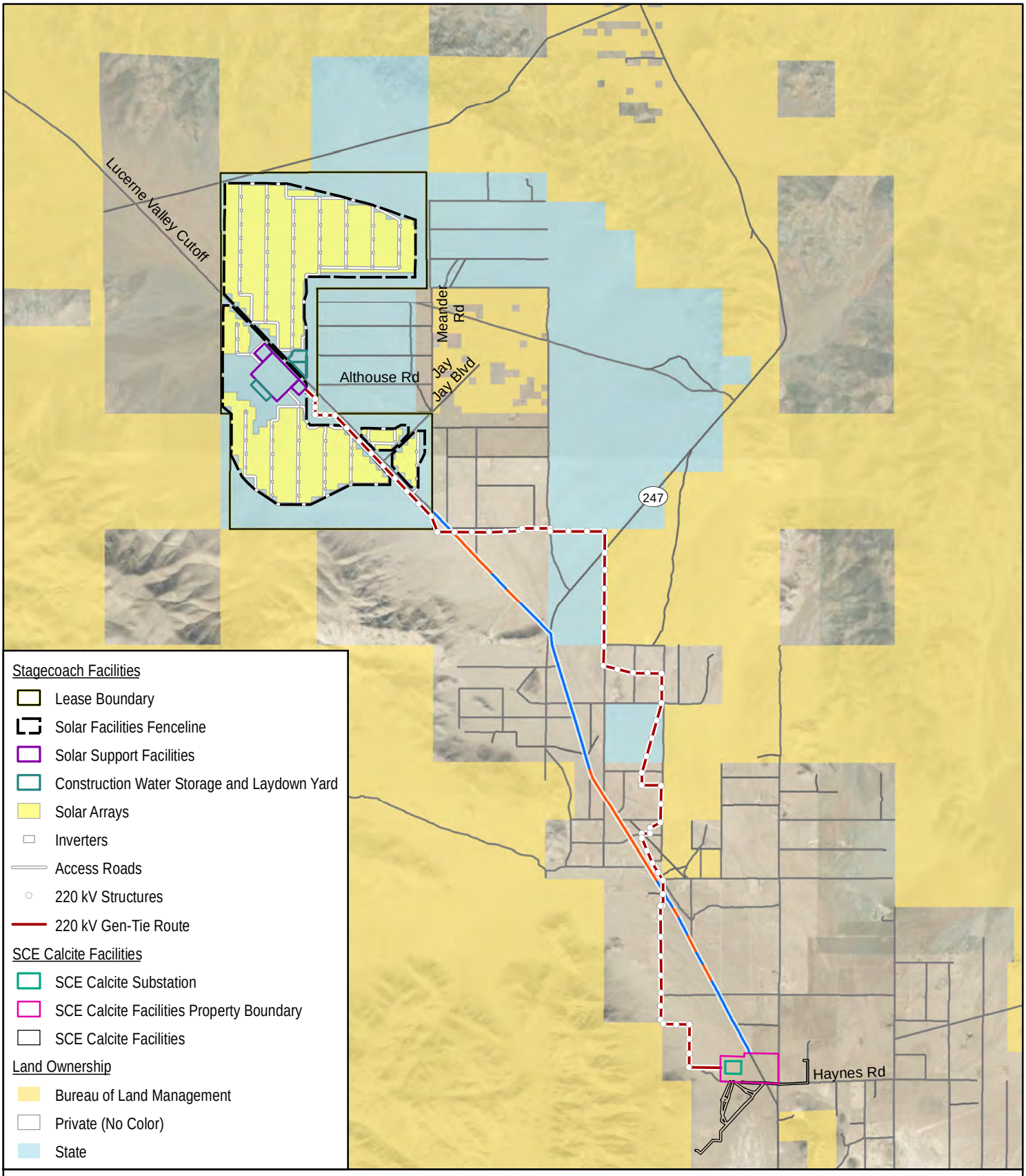



**Figure 5-11**

**SR-247** Underground Gen-Tie Alternative

The underground route along these two roadways was considered because an overhead route following these roads would not be feasible. The most direct overhead gen-tie line route between the Stagecoach Solar Generation Plant and the SCE Calcite Facilities would be to follow two roads: Lucerne Valley Cutoff and SR-247. An overhead route following SR-247 would be infeasible because it would require that poles be installed within areas under County or Caltrans jurisdiction, respectively. Poles at the edge of these roads would pose a driving hazard and would not be allowed by Caltrans on SR-247. The use of the Caltrans ROW along SR-247 for an overhead gen-tie line is infeasible because Caltrans does not have easement rights along the entire route, and existing Caltrans rights extend only to the edge of the graded shoulder, where poles would be too close to the roadway. As a result, an underground route within these roadways was considered.

#### 5.3.4.2 Rights and Access

Many roads in the project vicinity are within either dedicated ROWs or prescriptive easements, defined as follows:

- Dedicated ROWs are public lands managed by an agency that can issue permits for additional uses, such as a utility line
- Prescriptive easements occur where the continuous use of the land over a prescribed period of time establishes an ongoing continuing right for that use. The land itself is not acquired by the user. For example, a prescriptive easement can be created by using a particular route across one property to reach another property over time (generally 5 years); this use establishes the right to continue the use of that access route via the prescriptive easement. Under a prescriptive easement the land traversed remains the property of the original owner.

The northernmost 1.5 miles of this alternative would be buried in the unpaved Lucerne Valley Cutoff. The road is 25 to 30 feet wide, and connects SR-247 with Interstate 15, via Stoddard Wells Road, Stoddard Valley Road, and Hodge Road. The Lucerne Valley Cutoff is entirely a County Maintained Road under the jurisdiction of the County Department of Public Works. For private utilities, the County requires a franchise agreement[37] to install utilities in its roads, and it can issue permits for installation.

Both Lucerne Valley Cutoff and SR-247 are installed within prescriptive easements along portions of their lengths. There are approximately 7 parcels along Lucerne Valley Cutoff and approximately 25 parcels along SR-247. Within County-maintained roads that are within a prescriptive easement (not a dedicated ROW), it would also be required to obtain agreements with the underlying property owner to install a gen-tie line in the road segment.

[37] A franchise agreement is a negotiated contract between a city or county and an electric service provider that grants the utility the right to use the land in exchange for a fee or other services.

As shown in Figure 5-11, approximately 4.0 miles of the route would be within the ROW for SR-247, which is a State highway under Caltrans jurisdiction. Approximately 1.5 miles of this highway segment are within dedicated Caltrans ROW and approximately 2.5 miles of this segment are in prescriptive easements (where the underlying land is not owned by Caltrans). Caltrans has limited ability to issue encroachment permits[38] in prescriptive areas because it operates and maintains the road while not owning the land. Generally, the underlying property owner of the prescriptive area must agree to any encroachment in the land used by Caltrans.

The southernmost 0.5 miles of the gen-tie line into the SCE Calcite Facilities could be overhead, from a transition structure west of SR-247, or could remain underground within the SR-247 ROW to a transition structure just outside of the substation itself.

In summary, permission to install an underground gen-tie line in public ROW along Lucerne Valley Cutoff and SR-247 would be needed from the agency having jurisdiction over each road. For locations where the road is in a prescriptive easement, permission for a gen-tie line to be installed would require both a Caltrans encroachment permit and a grant by the property owner.

#### 5.3.4.3 Rationale for Elimination

Construction of an underground 220 kV line is technically feasible and has been done in other locations. This alternative is eliminated because of the anticipated challenges to obtaining rights to use the entire underground route. While it is theoretically possible to obtain the rights required to install an underground line along Lucerne Valley Cutoff and SR-247, there is no guarantee that Caltrans (approximately 1.5 miles) and the other 32 landowners with prescriptive easements (approximately 2.5 miles in five separate segments) would allow such an installation. Any one of the approximately 32 landowners refusing an easement would make the entire alternative infeasible.

## 5.4 ALTERNATIVES EVALUATED IN THIS EIR

Four alternatives, including the No Project Alternative, are identified for full evaluation and comparison to the Proposed Project. The alternatives are as follows:

- Section 5.5: Joshua Tree Avoidance Alternative
- Section 5.6: Gen-tie Alternatives (two alternatives)
- Section 5.7: SCE Calcite Facilities Alternative
- Section 5.8: No Project Alternative

[38] An encroachment permit is required for the placement of a facility or completion of an activity within, under, or over the State highway ROWs. For example, these permits are required for utility installation, excavations, vegetation planting or trimming, surveys, mail boxes, driveways, and commercial filming activities.

Potential impacts for each alternative are evaluated for the following resource areas where impacts of the Proposed Project are most severe:

- **Aesthetics/Light and Glare:** Conflict with existing setting and visibility from protected areas (addressed for the Proposed Project in Section 4.1)
- **Biological Resources:** Potential effects on protected species, habitat linkages, and habitats (addressed in Section 4.2)
- **Noise:** Proximity of residences or other sensitive noise receptors (addressed in Section 4.12)
- **Traffic and Transportation:** Site access routes and constraints (addressed in Section 4.17)

Analysis of the following additional resource areas was added for certain alternatives:

- **Cultural Resources** surveys were completed for the Underground Gen-tie Alternative in County Roads, and the results are summarized in Section 5.6.1
- **Electric and Magnetic Fields** are described for the Underground Gen-tie Alternative in County Roads and the Underground Gen-tie Alternative Along Proposed Route

The following resource areas are also important in analysis of large solar projects, but are not considered in the comparison of most alternatives (except as described above) for the following reasons:

- **Air Quality:** Section 4.2 identifies certain air emissions to be significant and unavoidable impacts. These impacts are assumed to be very similar for all solar projects of similar size, so they are not addressed in the comparison of alternatives.
- **Cultural and Tribal Resources:** While cultural resources and Native American concerns can result in significant impacts in desert projects requiring extensive ground disturbance, the extent of these impacts cannot be defined without surveys and consultation with Native American tribes
- **Hydrology and Water Quality:** The availability of water for construction dust control (addressed in Section 4.10) is of similar concern in most areas of the desert due to constrained groundwater supplies

## 5.5 JOSHUA TREE AVOIDANCE ALTERNATIVE

In September 2020, the California Fish and Game Commission (Commission) approved a one-year listing of the western Joshua tree (*Yucca brevifolia*) as a candidate for Threatened species status, protected under the California Endangered Species Act (CDFW 2020c). The action started a status review for the Joshua tree; the Commission now expects to issue a report in April of 2022 (CDFW 2021).

Surveys of the Proposed Project site documented approximately 578 Joshua trees within the boundaries of the proposed solar generation plant and 10 additional trees were documented within a 50-foot buffer outside the project fence line; approximately 398 Joshua trees would be removed for construction of the proposed solar generation plant. Because of the recent listing of this species, an alternative has been developed to relocate some of the solar arrays within the Proposed Project boundaries to avoid the areas with the densest populations of the western Joshua Tree. This alternative is shown on Figure 5-12a, and the habitat and land cover are illustrated in Figure 5-12b.

#### 5.5.1.1 Description

This alternative would eliminate solar panels in the two Project areas with the densest populations of Joshua trees. This design would reduce the loss of Joshua trees by about 80 percent compared with the Proposed Project (resulting in a loss of approximately 160 Joshua trees, 238 fewer than the Proposed Project). Under this alternative, the Project area within the fence line would be approximately 1,859 acres (compared to 1,880 acres for the Proposed Project shown in Figure 2-2b). The on-site substation, O&M facility, and battery storage facilities would also be rearranged to minimize the loss of Joshua trees.

#### 5.5.1.2 Feasibility

This alternative is feasible.

#### 5.5.1.3 Environmental Impacts

<u>Aesthetics/Light and Glare</u>

The layout of project facilities in the Joshua Tree Avoidance Alternative would not change the severity of the aesthetic impacts described in Section 4.1.4.1. For drivers on Lucerne Valley Cutoff, there would be a reduction in visual impact because panels would be set back from road on the north side of the road and the dense area of Joshua trees retained. However, in this alternative, the panels would extend further south on alluvial fans that rise in elevation to the south. These panels would be visible to drivers on southbound SR-247 and to recreationists near the Sawtooth Canyon Campground. Overall, the visual impact of the solar field would remain significant and unavoidable.

All mitigation measures (MMs) recommended for the Proposed Project would also apply to this alternative.

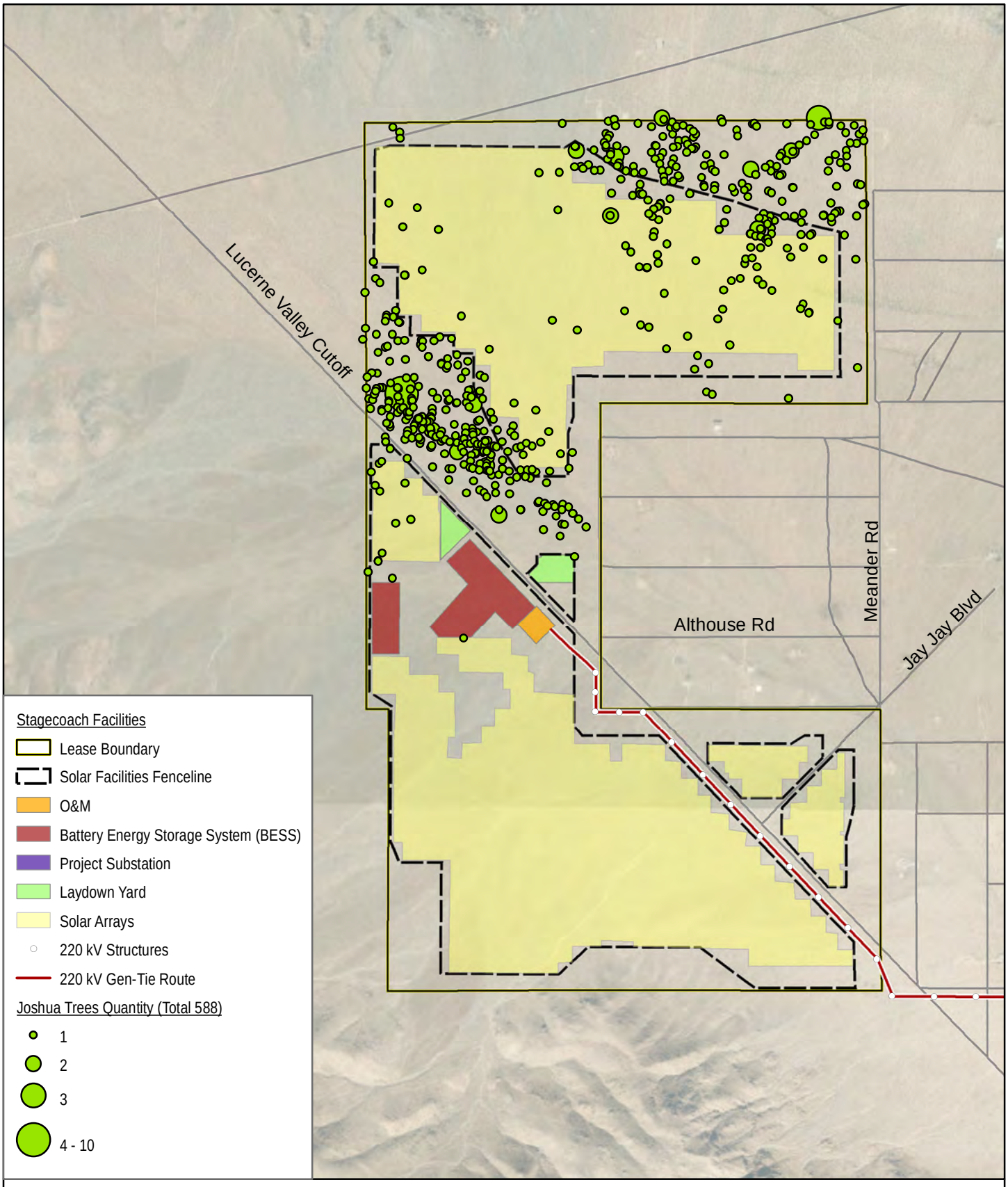



**Figure 5-12a**

**Joshua Tree Avoidance Alternative**

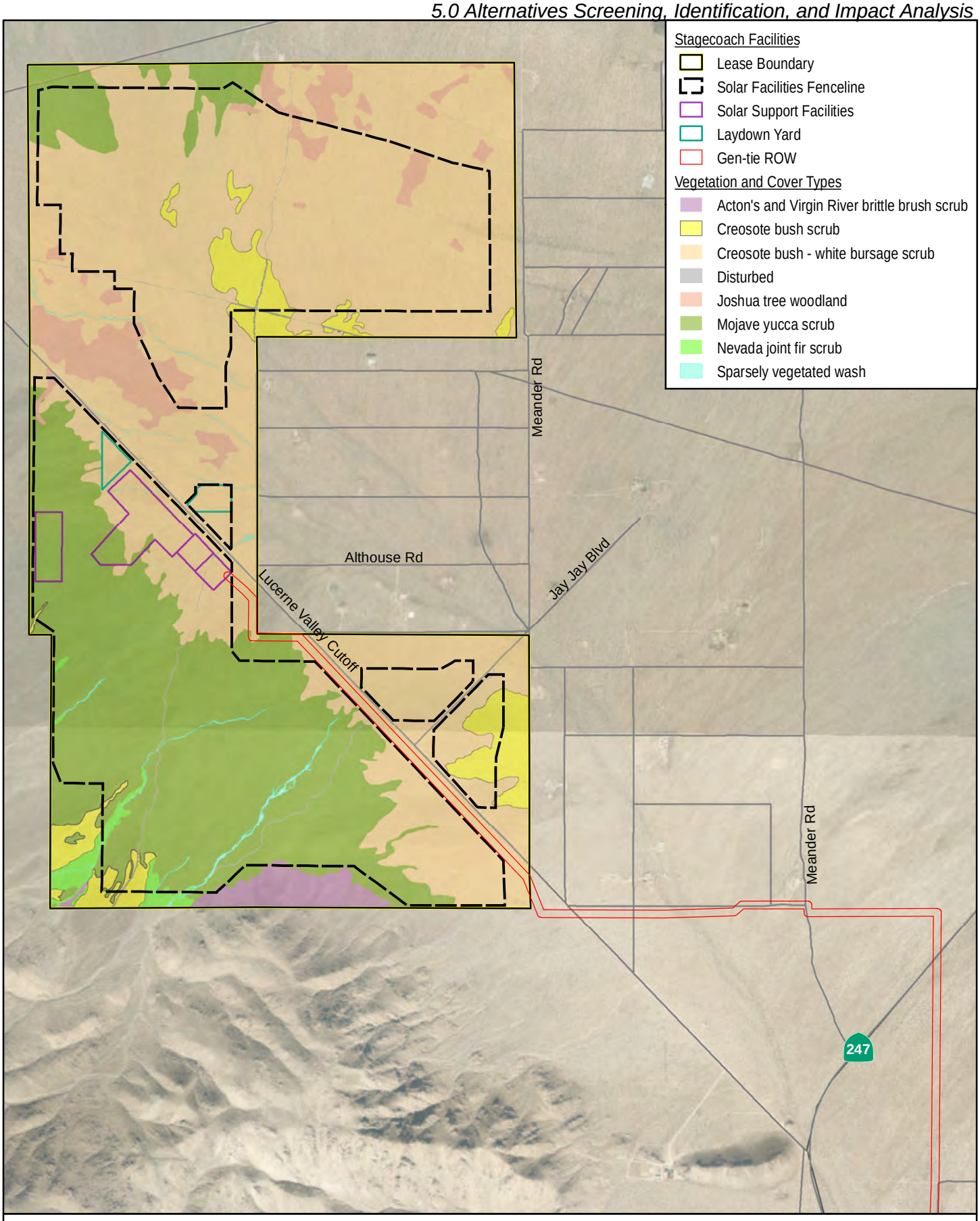



Figure 5-12b
Vegetation and Land Cover:
Joshua Tree Avoidance Alternative

Biological Resources

As illustrated in Figure 5-12a, the Joshua Tree Avoidance Alternative would reduce impacts on the recently listed western Joshua tree. While avoiding the majority of the trees within the State lease area, approximately 160 trees would still be removed for project construction. This impact is described in Section 4.3.4.1 under Impact BIO-2. The analysis concludes that while the solar generation plant would result in loss of Joshua trees, the impact would be less than significant because of mitigation measures that would require the Applicant to purchase and conserve compensation lands.

While this alternative would reduce the loss of Joshua trees in comparison with the Proposed Project, the reconfiguration of the solar generation plant results in extending the solar arrays approximately 1,500 further south within the State land parcels. This extension of Project disturbance reduces foraging habitat for raptors in the southern area but would open an equivalent space in the dense Joshua tree woodland north of Lucerne Valley Cutoff. Figure 4.3-4a (Special Status Wildlife Avian Observations [Solar Field]) shows that potential golden eagle nests are located in the mountains both north and south of the Stagecoach Solar Generation Plant. The impacts of this alternative on special status avian species, including golden eagles, would be similar to those of the Proposed Project (less than significant with implementation of mitigation measures).

The Joshua Tree Avoidance Alternative would eliminate construction in an area where biological surveys found evidence that burrowing owls were present, and where surveys identified potential burrows. This alternative's extension of the solar arrays to the south would not affect areas where there was evidence showing that burrowing owls are expected to be present. As a result, this alternative would also reduce impacts to burrowing owls in comparison with the Proposed Project.

All of the mitigation measures presented in Section 4.3, *Biological Resources*, would also be required for this Joshua Tree Avoidance Alternative. In particular, the following mitigation measures from Impacts BIO-1 and BIO-3 would ensure that impacts to special status plants and avian species would be less than significant:

- MM BIO-1a: Implement Biological Monitoring
- MM BIO-1b: Implement Worker Environmental Awareness Training
- MM BIO-1c: Minimize Impact and Protect Identified Vegetation and Habitat
- MM BIO-1d: Weed Management
- MM BIO-1e: Revegetation
- MM BIO-1f: Protect Important Plants
- MM BIO-1g: Compensate for Loss of Natural Habitat
- MM BIO-3e: Avoid Effects on Burrowing Owl
- MM BIO-3f: Bird and Bat Protection

In addition to the mitigation measures listed above that would protect vegetation and habitat, all other mitigation measures recommended for the Proposed Project would also apply to this alternative.

As described in Section 4.3, *Biological Resources*, all impacts of the Proposed Project would be less than significant with implementation of the mitigation measures listed in Table 4.3-2 (Impact and Mitigation Measure Summary). The Joshua Tree Avoidance Alternative would also result in impacts that are less than significant, with implementation of the same mitigation measures. However, this alternative provides a substantial reduction of impacts to Joshua trees and it also reduces potential effects in areas that have been occupied by burrowing owls.

Noise and Proximity of Residences

Noise impacts would be the same as described for the Proposed Project (see Section 4.12.4.1). The impact is found to be less than significant with implementation of four mitigation measures: MM NOI-1a (Construction Restrictions), MM NOI-1b (Public Notification Process), MM NOI-1c (Noise Complaint Process), and MM NOI-1d (Operational Noise Performance Standard). All mitigation measures recommended for the Proposed Project would also apply to this alternative.

Traffic and Transportation

Transportation and traffic impacts would be the same as described for the Proposed Project (see Section 4.17.4.1). Impact TRA-1 (project traffic volumes) would be significant and unavoidable, even with implementation of MM TRA-1 (Construction Traffic Control Plan). Impact TRA-3 (increased roadway hazards) would be less than significant with implementation of MM TRA-3a (Repair roadways damaged by construction activities). These mitigation measures recommended for the Proposed Project would also apply to this alternative.

## 5.6 GEN-TIE ALTERNATIVES

The Proposed Project would require a 220 kV gen-tie line that would be on approximately 60 steel towers averaging 80 feet tall. Based on the Applicant's ability to obtain permission for the gen-tie line on private property, the route would follow a somewhat indirect 9.1-mile route between the solar field and the SCE Calcite Facilities (see Figure 2-3). There is no other large industrial development in the Lucerne Valley, and there are no high voltage transmission lines north of the existing SCE Pisgah-Lugo transmission line corridor (which crosses SR-247 just south of Haynes Road and the proposed SCE Calcite Substation site).

The proposed overhead line would be highly visible and out of character with the sparsely developed, low-density residential character of the valley. The aesthetics analysis

(Section 4.1) concludes that the gen-tie line would create a significant visual impact in the currently undeveloped desert setting. The impact would be especially severe in the northern half of the line because the line would be more visually prominent than it would be in the southern segment (where it crosses to the west side of SR-247).

An alternative to the proposed highly visible overhead gen-tie line would be to install the transmission line underground for all or part of its length. Installation of underground 220 kV or 230 kV lines has been done elsewhere where the visual impact would be severe or in areas where there is inadequate access to or space for an overhead right-of-way. Underground construction is much more expensive than overhead lines, and the construction process requires more ground disturbance, so it is not feasible in all cases.

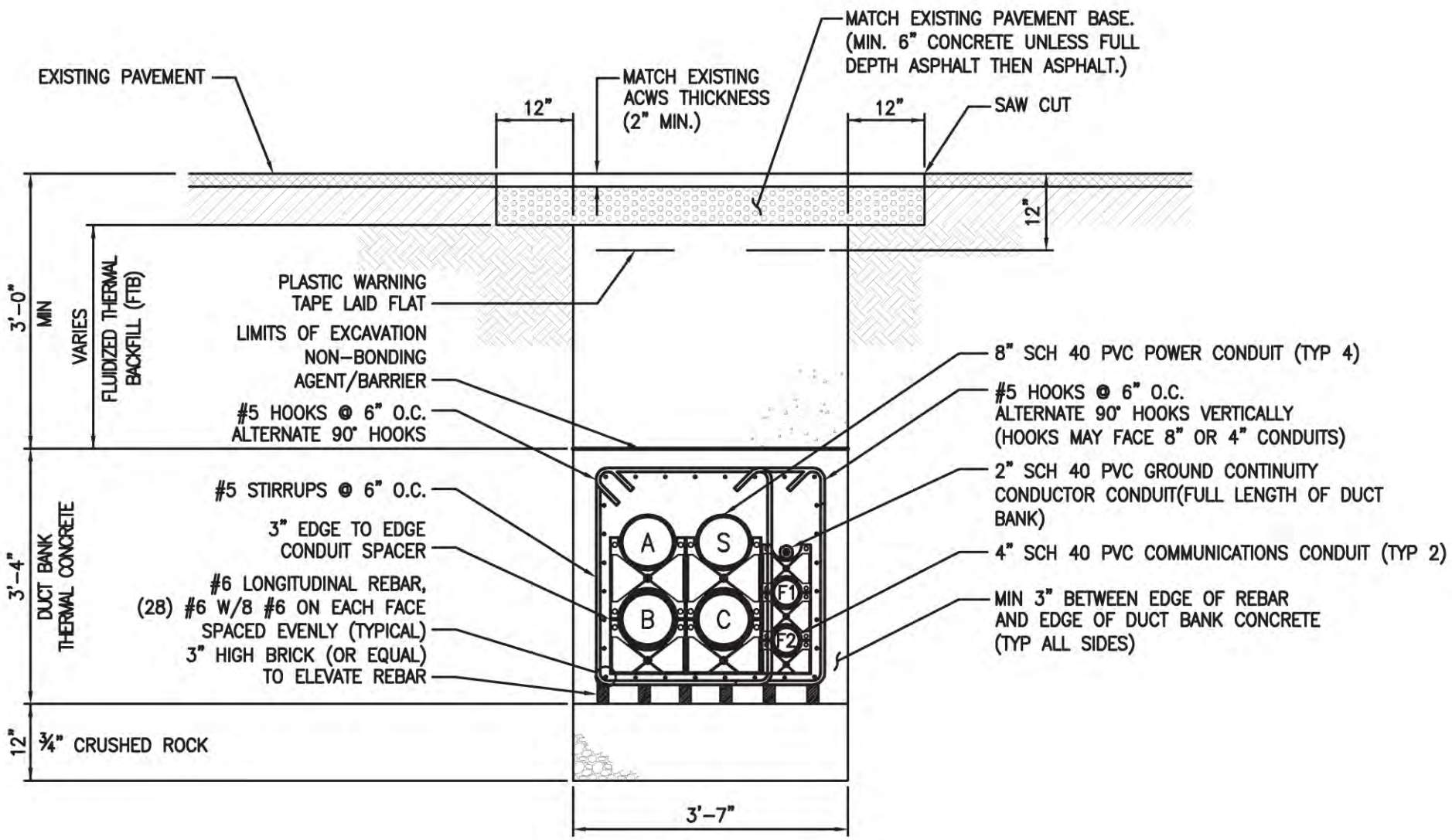
An underground gen-tie line alternative would eliminate the need for overhead conductor and towers, and tower foundations. However, underground installation would require more material (e.g., concrete for the duct bank, soil and crushed rock for fill and cover) and more ground disturbance than an overhead gen-tie line. During construction, an underground alternative would require greater use of water for dust control and for concrete production than an overhead line.

Design of an Underground Transmission Line

The design of an underground transmission line would require installation of the conductors in a buried concrete-encased duct bank. A typical duct bank would be installed via a trench that would be 3 to 4 feet wide, and the duct bank would be buried about 3 feet below the ground surface. To splice segments of conductor together, splice vaults would be required approximately every 1,000 feet. Figures 5-13a and 5-13b illustrate typical duct banks and splice vaults.

Two riser poles would be required, one at each end of the underground segment, allowing the conductors to transition between overhead and underground. Riser poles are wider than typical gen-tie line structures because the conductors are attached to the sides of the poles themselves as the conductors travel from the ground to the overhead support arms; see Figure 5-13c. For a single-circuit 220 kV line, the riser poles would be approximately 100 to 120 feet tall. One riser pole would be required at each end of the underground route segment to allow the conductors to transition from underground to overhead.

A paved or unpaved road would be required along the line to allow access for maintenance and repair. Construction would require ground disturbance for the length of the trench and access would be required from either existing roads or new roads.




**SECTION 1**

TYPICAL REINFORCED DUCT BANK
SCALE: NOT TO SCALE

**Figure 5-13a**
**Typical Duct Bank**

Source: PG&E, 2012.

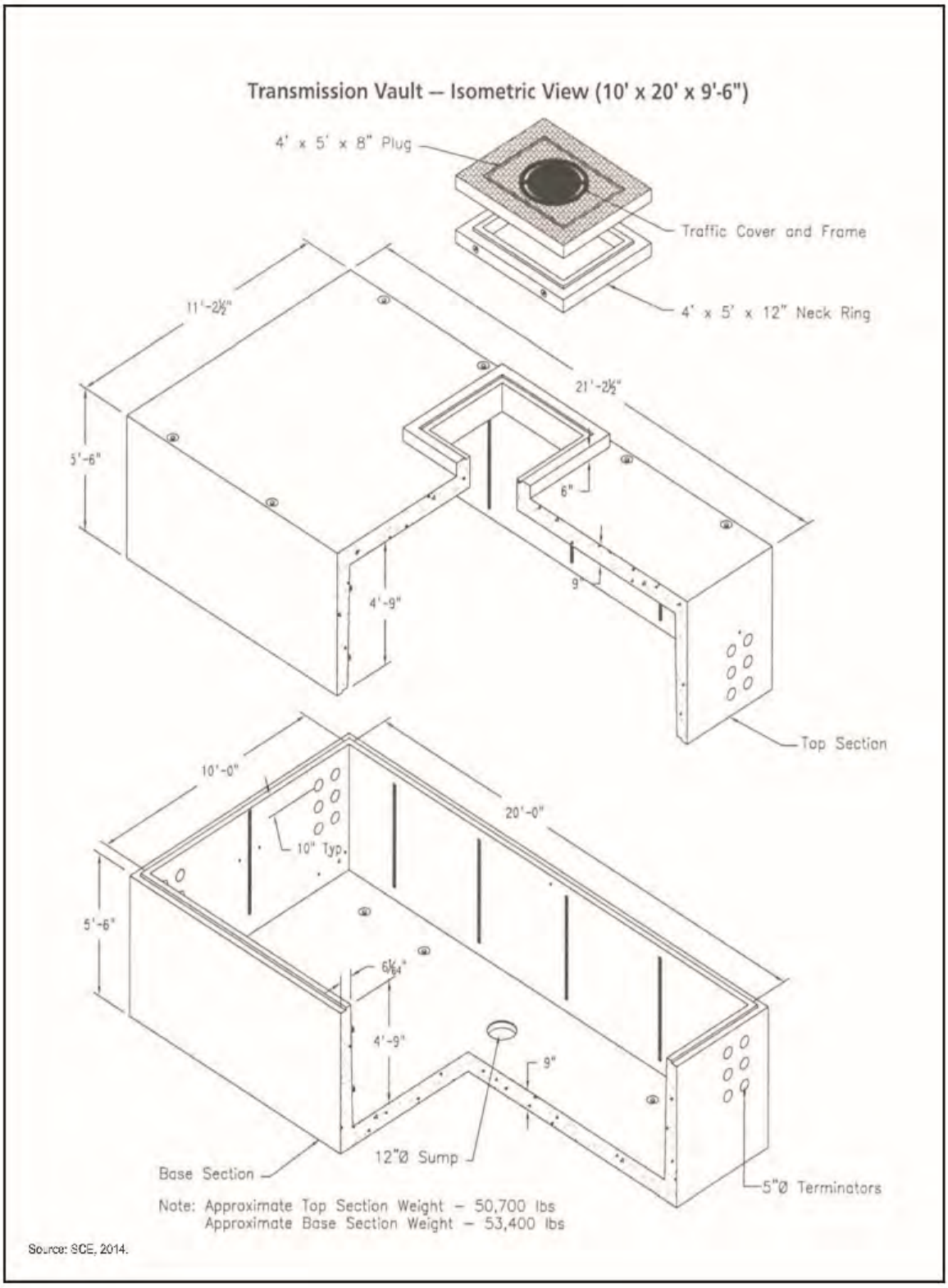



**Figure 5-13b Typical Underground Transmission Vault**



These poles allow the transition of conductors from underground to overhead.

Source: Google Earth Street View 2021.

**Figure 5-13c**

**Riser Pole Photographs**

Construction Process

**Riser Poles.** One riser pole would be installed at each end of the 6-mile underground segment. As described above, these poles would be wider than the typical gen-tie line structures. They would also require deeper foundations due to the additional stress on the structure resulting from the fact that the overhead conductors extend in only one direction, because the conductors would be underground in the other direction.

**Trenching and Duct Bank Installation.** To match the required capacity of the Proposed Project's overhead single-circuit 220 kV transmission line, the underground system would require the installation of a single cable for each of the three phases of the 220 kV line. Cables would be installed in a buried concrete-encased duct bank system (approximately 3 feet wide and 3 feet high; see Figure 5-13a). The concrete duct banks would be installed in a trench of up to 4 feet wide and 6 feet deep, allowing 3 feet of cover over the duct bank.

During construction, roads in which the underground line is installed would have to be closed, and detours would be required where trenching crosses existing roadways. During non-work hours, any open trench would be covered by either heavy-duty plywood (in non-traffic areas) or steel plates (in roadways).

A permanent access road along the underground segment would likely be required because access to the underground structures and the duct bank route must be readily available for maintenance or repair.

**Vault Installation.** Buried vaults for cable splicing would be installed at regular intervals along the entire underground alignment for this alternative. These vaults would house equipment and splices for the underground circuits. Because there is a practical limit to the length of cable that can be pulled in one section, vaults generally would be located about every 800 feet along the alignment. In addition, due to the requirements for cable pulling to the steel riser poles (allowing the underground segment to transition to overhead at each end of the underground segment), the first set of splicing vaults must be placed within 200 feet of the riser poles (CPUC 2016).

Given the length of the underground alternatives being evaluated (6 to 8 miles) A total of 40 or 50 vaults are anticipated to be required. Vaults would be prefabricated and would be constructed of steel-reinforced concrete, with dimensions of approximately 20 feet long by 10 feet wide by 10 feet deep. The vaults would be designed to withstand the maximum credible earthquake in the Proposed Project area. During operations, manholes located at finished grade level would provide for access to the vaults so that operations personnel could access the underground cables for maintenance, inspections, and repairs.

The total excavation footprint for a vault would be approximately 26 feet long by 12 feet wide and 12 feet deep. Installation of each vault would include the following activities:

- Excavation and shoring of the vault pit
- Delivery and installation of the vault
- Backfill and compaction followed by restoration of the excavated area

**Conductor (Cable) Pulling.** After the conduit system and the riser poles have been constructed, the cable would be installed. Starting at one end, cable is pulled from the first vault up through the riser pole. Cable is then pulled through to the next vault, and so on, until the last length of cable has been pulled through the last riser pole. Once installed, the cable is ready to be spliced, terminated, tested, and energized. This would require the installation of one cable per phase, resulting in the use of three of the available conduits in the duct bank leaving one or more spare conduits in the duct bank.

**Cable Splicing and Termination.** After cable installation is completed, the cables would be spliced at each vault. A splice trailer would be located directly above the vaults' manhole openings for easy access by workers. A mobile power generator would be located directly behind the trailer.

Once cable is installed the vault must be kept dry to ensure that unfinished splices are not contaminated with water or impurities. Normal splicing would be 8 to 10 hours per day with some workers remaining after hours to maintain splicing conditions and guard against vandalism and theft. These conditions are essential to maintaining quality control through completion of splicing. As splicing is completed at a vault, the splicing apparatus setup is moved to the next vault location and the splicing is resumed.

Operations and Maintenance

Regular maintenance would be required for the underground system, generally on an annual basis. This would be accomplished through visual inspections of the cable and splices installed in each vault. Inspections would require approximately several days of work with a two-person crew in a pick-up truck.

In the event of an underground cable failure (e.g., from a cable defect or damage to the protective covering), it is likely that the failure would cause collateral damage to other cables and/or splices nearby. Such failures typically result in extensive repair efforts, which could include replacing sections of conduit banks. Typically, these repairs require multiple days of construction, as well as the complete replacement of cable sections. During restoration work, impacts similar those during original construction may occur.

**Cost.** The cost of an underground line is substantially greater than the cost of an overhead line due to the more extensive construction effort and different materials. The Applicant provided an analysis of a potential underground line that would follow the entire proposed overhead route (Mott MacDonald 2020); this underground line was estimated as costing 6 to 10 times more than an overhead line (ranging from $40 to $68 million). Cost varies

based on terrain, ease of access, and construction methods. The underground alternatives considered in this EIR would be installed in essentially flat terrain with easy access.

Under CEQA, an alternative is not eliminated only because it may have greater cost.

**Rights-of-Way.** Installation of an underground line would require easements or other ROW agreements with all landowners for a route across private land, and rights would need to be acquired from Caltrans and/or the County for rights along or across roads.

The County defines two types of rights-of-way on its "County Maintained Road System (CMRS)" online viewer (San Bernardino County 2021):

1. **County Maintained Roads:** These roads are shown in yellow on the County's CMRS viewer. Rights to install an underground transmission line in these roads requires a Franchise Agreement with the County's Department of Public Works and, depending on the type of easements, may also require that the Applicant obtain permission directly from private landowners.

2. **Non-County Maintained Roads:** These roads are identified in the County's CMRS viewer by areas between defined private land parcels. In the CMRS these have no Assessor's Parcel Number. Rights to install an underground transmission line in these roads requires a Franchise Agreement with the County's Department of Public Works, and/or permission from adjacent landowners. The County has no defined process for obtaining permission from private landowners (San Bernardino County 2017b).

**Underground Alternatives Evaluated.** Three potential underground alternative routes have been defined. One was eliminated from consideration (see Section 5.3.4). The two remaining routes can be assembled by segment into different combinations that mix underground and overhead route segments, and a range of ownership and easement types, as shown in Table 5-2.

**Table 5-2. Gen-tie Line Alternatives**

| Alternative | | Length | Land Ownership or Road Jurisdiction | | | |
|---|---|---|---|---|---|---|
| | | | State Land | Private Parcel Easement | County Maintained Roads | Non-County Maintained Roads |
| **Proposed Gen-tie Line Route** (all overhead, or combination of overhead and underground) | | 9.1 mi. | 1.5 mi. | 7.6 mi. | 0 | 0 |
| **Underground Gen-tie Alternative in County Roads** | Underground Segment | 6.0 mi. | 0.4 mi. | 0 | 2.5 mi. | 3.1 mi. |
| | Overhead Segments | 2.6 mi. | 1.5 mi. | 1.5 mi. | 0 | 0 |

### 5.6.1 Underground Gen-tie Alternative in County Roads

Description

As described for the SR-247 Underground Gen-tie Alternative (Section 5.3.4), the most direct route between the solar project and the SCE Calcite Facilities would be to follow Lucerne Valley Cutoff and SR-247. However, to avoid challenges in obtaining rights from Caltrans and to use of the lands underlying Caltrans' and the County's prescriptive easements, an alternative underground route following County roads is defined. This route would require Caltrans permits only to cross its ROW, not to have facilities installed longitudinally within it. This route is illustrated in Figure 5-14a; it would include 1.5 miles of overhead line starting at the Stagecoach on-site substation, and about 1 mile of overhead line going into the SCE Calcite Substation, but 6 miles of the route would be underground.

Table 5-3 lists the residences within about 1,000 feet of the roads in which this alternative would be installed. These potential residences are identified by their Map ID letter on Figure 5-14b.

**Southern Area.** The Spiel Street/Palisade Avenue crossing of SR-247 defines the division of the northern and southern segments of the proposed overhead gen-tie line. The preliminary analysis of the southern segment of the proposed overhead route is that it would create less severe adverse visual impacts because it would be viewed from the east, with mountains behind it as a backdrop, and as it approaches the existing Pisgah-Lugo transmission corridor approximately 1 mile to the south.

**Northern Area.** The EIR's preliminary visual resources analysis notes that the northern segment of the proposed overhead line (north of the Spinel Street/Palisade Avenue crossing of SR-247) would have the most severe visual impact due to the lack of existing structures and the expansive views in the northern area. The County Roads alternative would be underground through the entire northern area, except for the first 1.5 miles where the line would be within the solar field area. The retention of this overhead segment is intended to reduce the cost of the alternative.

- At the southeast corner of the solar field, adjacent to Lucerne Valley Cutoff Road (a County-maintained road), a riser pole would be installed to take the line underground for 1.5 miles to the intersection of Lucerne Valley Cutoff with SR-247
    - An alternate route segment is available for this segment: If rights cannot be acquired to install the underground line within this roadway segment (because of limited County rights-of-way), the initial underground route segment would follow the proposed Gen-tie Line ROW for 1.5 miles to the intersection of Johnson Road and Algoman Road)

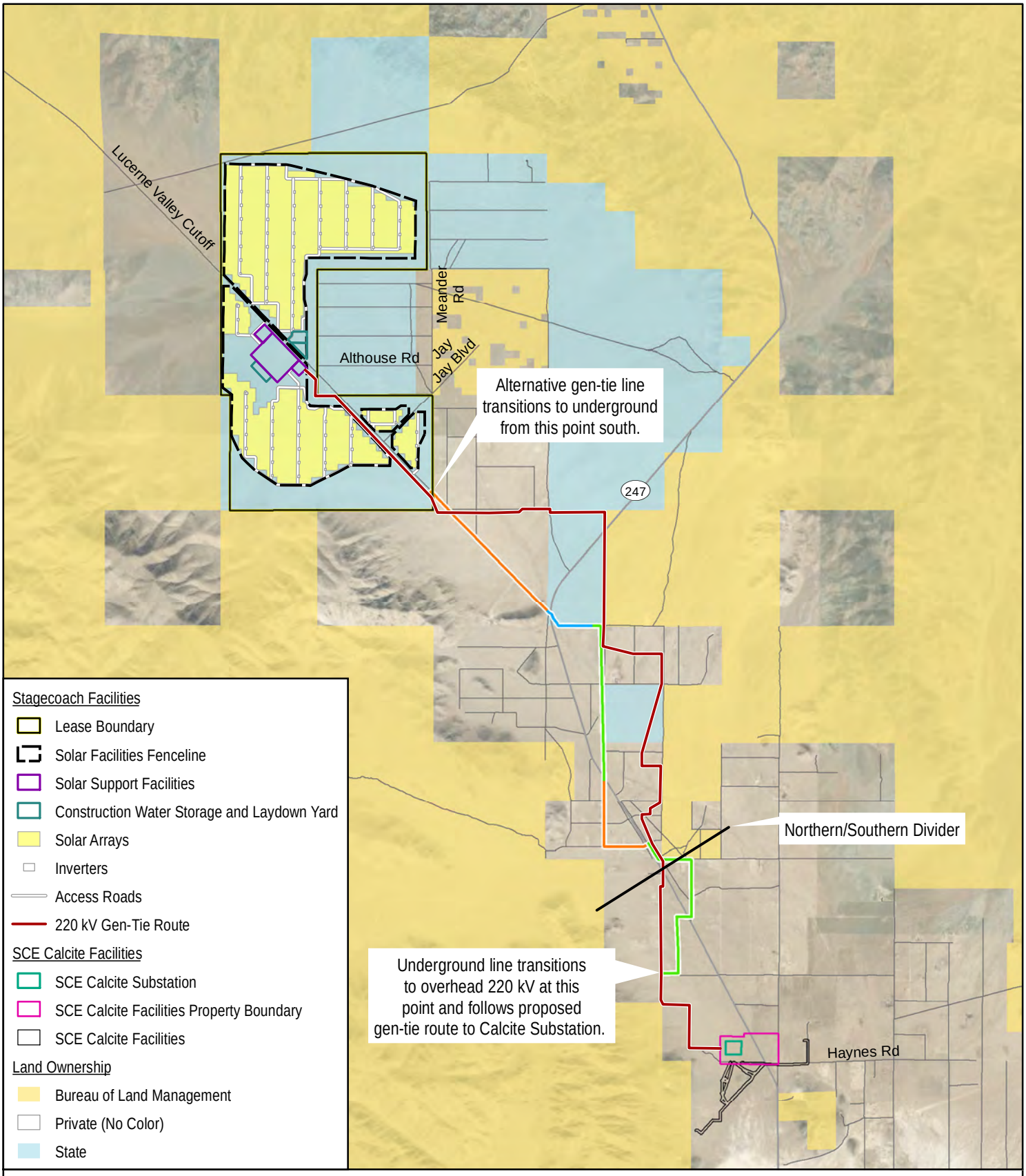



Figure 5-14a

Underground Gen-Tie Alternative in County Roads

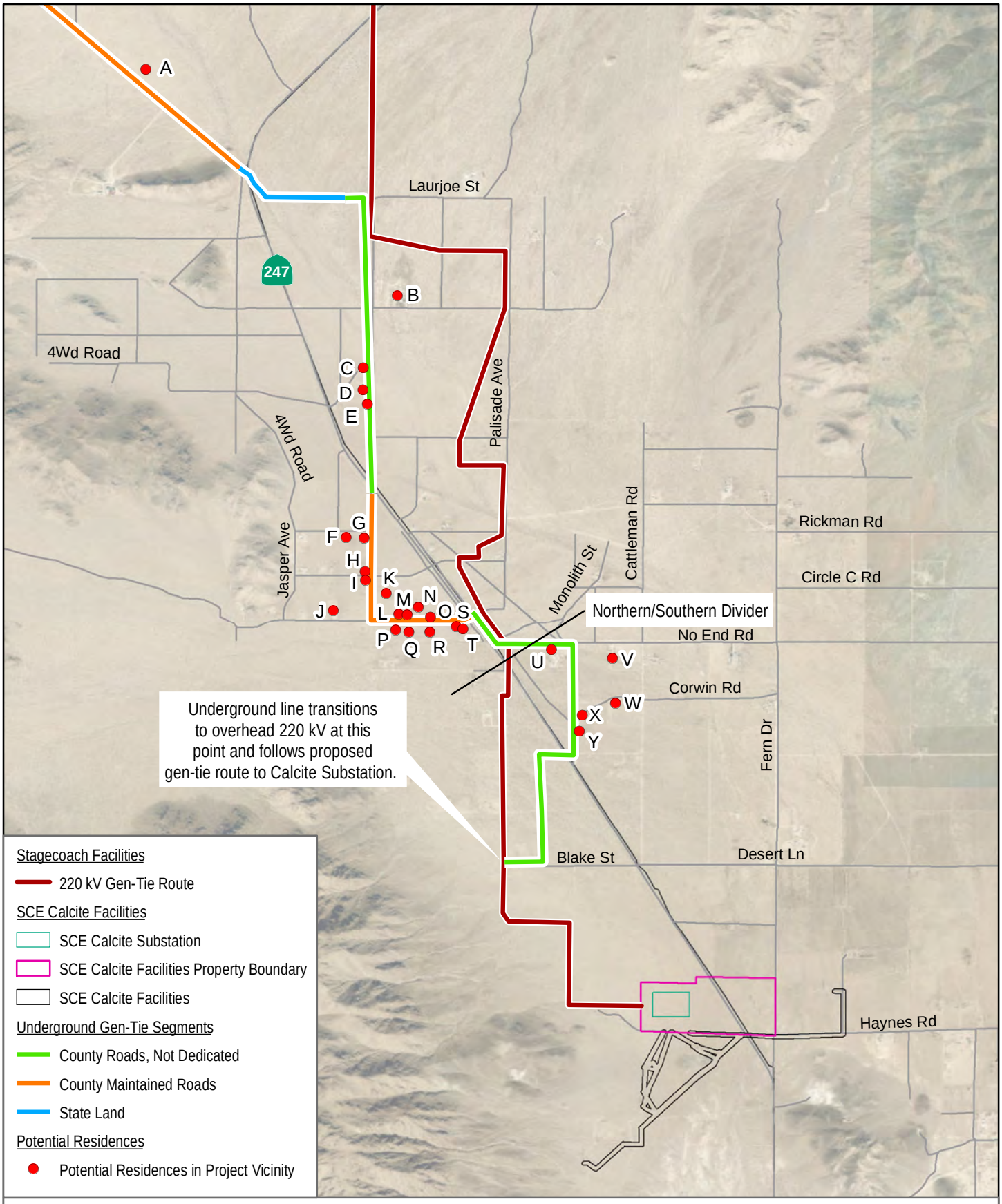



Figure 5-14b

Potential Residences Along Underground Gen-tie Alternative in County Roads

| Table 5-3. Underground Gen-tie Alternative in County Roads: Residences | | |
|---|---|---|
| **Map ID#** | **Street or Intersection** | **Distance to Potential Residence (feet)** |
| A | Lucerne Valley Cutoff | 270 |
| B | Selmadolph Street and Algoman Ave. | 530 |
| C | Algoman Ave. (Access from Barstow Rd.) | 180 |
| D | Algoman Ave. (Access from Barstow Rd.) | 190 |
| E | Algoman Ave. (Access from Barstow Rd.) | 70 |
| F | Brucite Street | 440 |
| G | Algoman Ave. and Brucite Street | 80 |
| H | Brucite Street and Algoman Ave. | 70 |
| I | Algoman Ave. and Brucite Street | 70 |
| J | Spinel Street | 650 |
| K | Brucite Street and Algoman Ave. | 300 |
| L | Spinel Street | 160 |
| M | Spinel Street | 160 |
| M | Spinel Street | 300 |
| O | Spinel Street | 100 |
| P | Spinel Street | 180 |
| Q | Spinel Street | 250 |
| R | Spinel Street | 260 |
| S | Spinel Street | 70 |
| T | Spinel Street | 170 |
| U | No End Road and Cummings Road | 90 |
| V | No End Road and Cattleman Road | 710 |
| W | Corwin Road | 770 |
| X | Cummings Road and Corwin Road | 150 |
| Y | Cummings Road | 100 |

Source: Google Earth

The northern 4.4-mile segment of the Underground Gen-tie Alternative in County Roads would be installed in both County maintained roads and non-County maintained roads, as shown on Figure 5-14a. The route would be as follows:

- The line would be overhead, as proposed, for approximately 1.5 miles where it would be within the solar field

- At this intersection the route would cross under SR-247and continue east on State-owned land for approximately 0.4 miles. It would follow existing dirt roads southeast for about 700 feet before turning east (paralleling Johnson Street) for 0.4 miles into Laurjoe Street or Johnson Street.
- The route would turn south in Algoman Avenue (a non-County maintained road) and follow this road for 1.3 miles to cross to the west side of SR-247. The route would remain in this road for another 0.6 miles to Spinel Street.
- The route would turn east in County-maintained Spinel Street for 0.4 miles, crossing to the east side of SR-247 where the road name changes to Palisade Avenue

The southern segment (2.5 miles) would be entirely in non-County-maintained roads, as follows:

- It would turn southeast from Palisade Avenue into Barstow Outer Highway East, paralleling SR-247 for about 800 feet
- Then turn east on Corwin Road (also called No End Road) for about 1,500 feet
- Then turn south on Cummings Road for 0.5 miles to Papago Road
- It would turn west in Papago Road for about 700 feet
- Then south in an unnamed County road ROW for 0.5 miles to reach Waalew Road
- It would turn west in Waalew Road for approximately 660 feet to its intersection with an unnamed road. The route would transition to an overhead riser pole and follow approximately 1.1 miles of the southernmost part of the proposed overhead ROW into the SCE Calcite Facilities.

Rights and Access

As described in the introduction, the County roads considered in this alternative would be either *County-Maintained Roads* or *Non-County-Maintained Roads*. Because this alternative would be installed primarily within County roads, it appears that rights for installation of this route would be obtained from the County. The CSLC would grant rights for use of the 1.9-mile segment across State-owned land (including 1.5 miles within the Stagecoach Solar Generation Plant boundaries).

Feasibility

Assuming the County's ability to grant rights is confirmed, this alternative is feasible. The cost would be five to ten times higher than the cost of an overhead line, but based on State CEQA Guidelines, higher cost is not a reason to eliminate consideration of an alternative in an EIR.

Environmental Impacts

Aesthetics/Light and Glare

The Underground Gen-tie Alternative in County Roads would retain about 1.5 miles of overhead line at the north end of the route and about 1 mile overhead at the south end. The most visible 6.6 miles of the proposed overhead gen-tie line, including the northern and southern crossings of SR-247 and its ROW past several residences, would be eliminated and replaced with underground segments. This alternative would substantially reduce the significant visual impacts of the gen-tie line and is strongly preferred for aesthetics. However, the underground gen-tie route would not eliminate the significant and unavoidable visual impacts associated with the Stagecoach Solar Generation Plant or the SCE Calcite Facilities.

Construction of the underground line would be more intense than construction of the overhead line, resulting in more equipment being present along the ROW and potentially additional dust.

Biological Resources

Because the underground alternative would follow County road rights-of-way, most of the area that would be temporarily disturbed for construction is already disturbed (unpaved roads). Some of the County rights-of-way are not maintained or graded, so these areas would require grading and establishment of a new unpaved road after installation of the underground line.

Typically, an underground transmission line disturbs more habitat than an overhead line due to the need to install the underground conductors in a continuous trench. In this case, the Applicant's assumptions for the proposed overhead line (see Table 2-1, Section 2) include grading and installation of an unpaved access road within a 150-foot-wide ROW for 9.1 miles. In comparison, the underground ROW maintained for operational access would not exceed 40 feet wide.

The impacts of this alternative would be similar to the Proposed Project with respect to desert tortoise, special-status plants, and jurisdictional waters. One Class 4 desert tortoise burrow was observed along the underground gen-tie alignment at the northern end near the solar generation plant. No special-status plants were observed. The alternative would impact generally the same area of jurisdictional waters.

Impact BIO-5 (Create a substantial collision and electrocution risk for birds or bats) would be substantially reduced for the underground alternative.

All mitigation measures recommended for the Proposed Project would also apply to this alternative. The Proposed Project and this alternative would result in similar impact severity under CEQA (less than significant with mitigation).

Cultural Resources

A cultural resources survey of the underground ROW was completed in March 2021, and a Supplemental Report to the Cultural Resources report for the Proposed Project was prepared (Aspen 2021). The survey and associated research defined five cultural resources within the area of the underground alternative. One resource was previously recorded and four were newly identified. None of the resources are recommended as being eligible for the California Register of Historic Resources.

All mitigation measures recommended in Section 4.4.4.1, *Cultural Resources*, would be implemented also for this alternative. Implementation of MM CUL-1d (Archaeological Monitoring) and MM CUL-1e (Unanticipated Discoveries) would be especially important because trenching required for installation of the underground line has the potential to uncover buried resources. The likelihood of discovering unanticipated resources is considered to be similar to that of the proposed gen-tie line (with its 150-foot-wide and 9.1-mile-long access road). Overall, the impact severity and mitigation measures described in Section 4.4, *Cultural Resources*, would be the same for this alternative as for the Proposed Project.

Noise and Proximity of Residences

The underground route would require construction in County roads, passing approximately 25 potential residences within 800 feet, as defined in Table 5-3. While more residences would be located along the underground route than the overhead route, the line itself would not be visible to these residents since it would be located in underground duct banks.

According to the San Bernardino County Development Code, construction noise and vibration would be exempt from standards in the Code, if conducted between 7:00 a.m. and 7:00 p.m. Monday through Saturday, except federal holidays (Chapter 83.01.080 and 83.01.090). Accordingly, gen-tie line construction activities would not be subject to community noise standards in the County Development Code. However, County policies require implementation of acceptable practices to minimize the effects of adverse construction noise.

MM NOI-1a (Construction Restrictions), recommended for the solar generation plant (Section 4.12.4.1) would require the Applicant to control noise in a manner consistent with the County Development Code, and MM NOI-1b (Public Notification Process) and MM NOI-1c (Noise Complaint Process) would require the Project implement best practices for engaging the surrounding community to avoid potential noise complaints. With these measures, the impact of gen-tie line construction noise relative to applicable community noise standards would be less than significant.

While short-term construction noise would occur during installation of the underground line, the underground alternative would eliminate the corona noise that can be associated with

overhead transmission lines in some conditions during their operational life. Overall, the impact severity and mitigation measures described in Section 4.12, *Noise and Vibration*, would be the same for this alternative as for the Proposed Project.

Traffic and Transportation

Construction of an underground line would require different types and locations of construction equipment and workforce than for an overhead line. In addition, the location of the construction activity would be shifted from the proposed gen-tie ROW, with rights already acquired by the Applicant, to County-road ROWs.

Overall, the traffic on non-project roads is expected to be similar for both the overhead and underground gen-tie line options. The impact severity and mitigation measures described in Section 4.17, *Traffic and Transportation*, would be the same for this alternative as for the Proposed Project.

Electric and Magnetic Fields

Section 4.9.4.2, *Hazards and Hazardous Materials, Gen-tie Line*, describes the electric and magnetic fields generated by high voltage transmission lines. Underground lines also generate these fields, and due to the reduced distance between the conductors and the potential receptor (e.g., a person walking on the road), the magnetic fields can be substantially higher for an underground line (potentially 60 to 80 milligauss directly over the line). However, the field strength of an underground line declines steeply with distance from the line, so at about 50 feet from the line the field strength would be very low (likely below 5 milligauss). For comparison, the magnetic field strength 20 feet away from an electric distribution line on wood poles, as exist in the central area of Lucerne Valley, ranges from 2 to 10 milligauss, and could be up to 70 milligauss directly below a distribution line (PPL Electric 2021).

Residences along the roads in which the Underground Gen-tie Alternative in County Roads would be installed are set back from 60 to over 100 feet from the edge of the road right-of-way. As described above, at these distances, the electric and magnetic fields would be substantially reduced due to the distance from the underground line.

### 5.6.2 Underground Gen-tie Alternative Along Proposed Route

Description

This underground alternative route would follow all or part of the route of the proposed overhead 220 kV gen-tie route, as shown on Figure 5-15. Due to the greater visual sensitivity of the northern portion of the route, this alternative is also divided into the northern and southern segments. Either the entire 9.1-mile-long route could be installed underground in the ROW already acquired by the Applicant, or only the northern segment could be installed underground, leaving the southern segment overhead, as proposed.

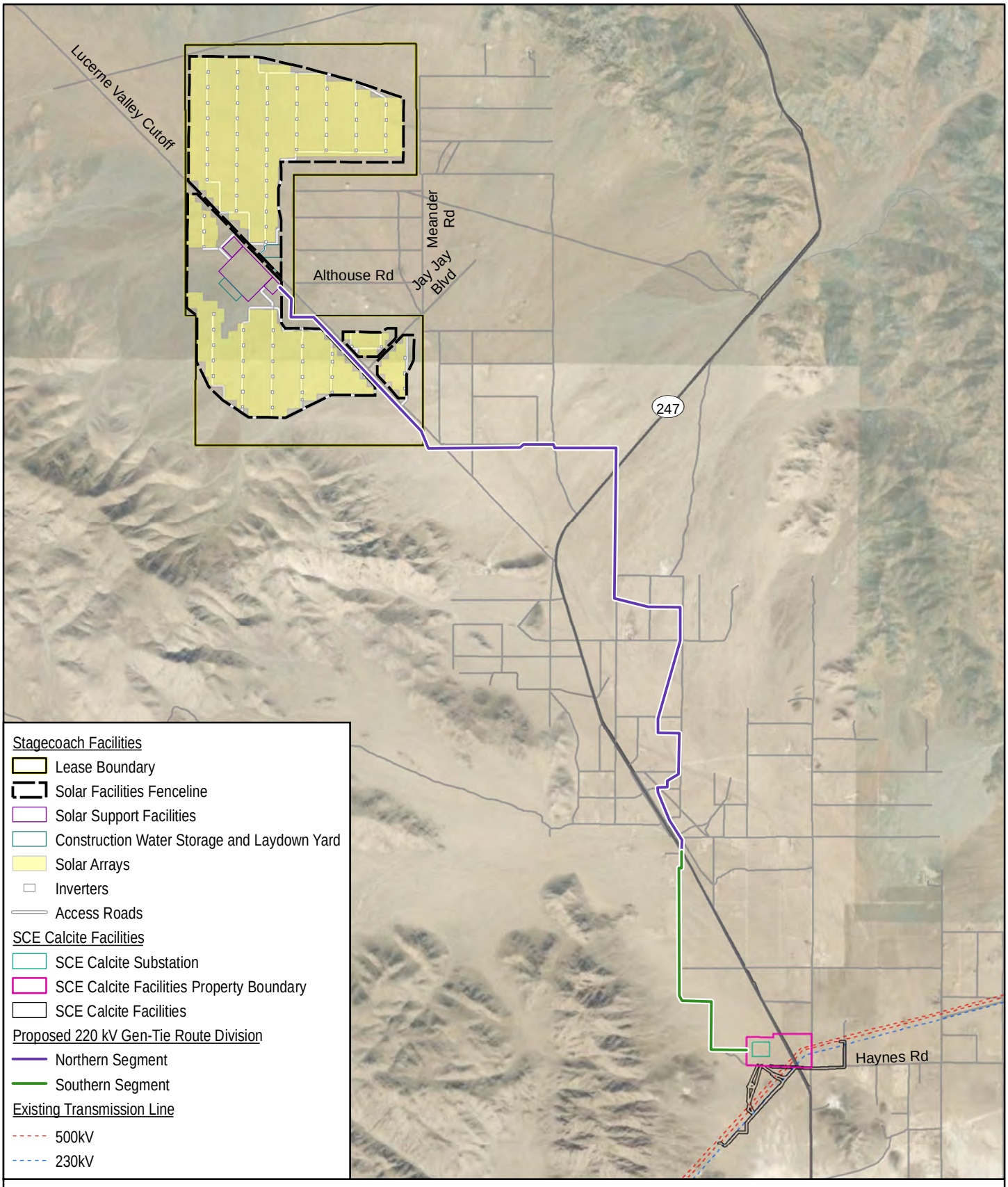



Figure 5-1**5**

Underground Gen-Tie **Alternative** Along Proposed Route

**Northern Segment.** This approximately 6.9-mile-long northern segment would involve installing an underground line from the solar field to line's crossing of SR-247, just south of Palisade Avenue. The line would be installed underground within the overhead ROW easement for which the Applicant has already obtained easement rights.

**Southern Segment.** This 2.2-mile segment is less visually sensitive than the northern area and could remain overhead. It would follow the proposed overhead ROW from its intersection with Palisade Road, south to the SCE Calcite Facilities.

Feasibility

The use of the Applicant's overhead ROW for an underground line would likely be feasible. The Applicant has already obtained options for an overhead easement and a permanent access road across the private lands, so those easements would have to be evaluated for underground installation rights.

Environmental Impacts

Aesthetics/Light and Glare

As described for the Underground Gen-tie Alternative in County Roads, installation of any part of the proposed overhead gen-tie line in underground ducts would reduce the significant visual effects of the proposed overhead line. Overall, the Stagecoach Facilities would still have significant and unavoidable impacts due to the presence of the solar generation plant, the overhead portions of the gen-tie line, and the SCE Calcite Facilities.

Biological Resources

The biological resources impacts of installing the gen-tie line underground would be very similar to those described in Section 4.3.4.2, *analysis of proposed gen-tie line for biological resources*. That analysis assumed the loss of all habitat within the 150-foot ROW of the 9.1-mile-long route.

Impact BIO-5 (Create a substantial collision and electrocution risk for birds or bats) would be substantially reduced for the underground alternative, depending on how much of the line was installed underground.

All mitigation measures recommended for the Proposed Project would also apply to this alternative. The Proposed Project and this alternative would result in similar impact severity under CEQA (less than significant with mitigation).

Noise and Proximity of Residences

The noise impacts of this alternative would be similar to those described for the Proposed Project gen-tie line, and the same receptors would be affected, as defined in Section 4.12.4.2,

*Noise and Vibration*. However, the more intense construction activities required for a continuous trench along the entire gen-tie line route would result in greater construction noise impacts when the trenching activity was near each residence.

The underground alternative would eliminate the corona noise that is sometimes associated with overhead transmission lines during certain conditions during their operational life. Overall, the impact severity and mitigation measures described in Section 4.12, *Noise and Vibration*, would be the same for this alternative as for the Proposed Project.

Traffic and Transportation

Construction of an underground line would require different types and locations of construction equipment and workforce than needed for an overhead line. Overall, the traffic on non-project roads is expected to be similar for both the Proposed Project (overhead gen-tie line) and the underground gen-tie options. The mitigation measures described in Section 4.17, *Traffic and Transportation*, would still apply to this alternative as they would for the Proposed Project.

Electric and Magnetic Fields

Section 4.9.4.2, *Hazards and Hazardous Materials, Gen-tie Line* describes the electric and magnetic fields generated by high voltage transmission lines. Underground lines also generate these fields, and due to the reduced distance between the conductors and the potential receptor (e.g., a person walking on the road), the magnetic fields can be substantially higher for an underground line (potentially 60 to 80 milligauss directly over the line). However, the field strength declines steeply with distance from the line so at about 50 feet from the line the field strength would be very low (likely below 5 milligauss).

Residences along the proposed gen-tie route are set back over 200 feet from the edge of the gen-tie line ROW. As described above, at these distances, the electric and magnetic fields would be substantially reduced (likely to below 5 milligauss) due to the distance from the underground line.

## 5.7 SCE CALCITE FACILITIES ALTERNATIVE

### 5.7.1.1 Environmental Impact Analysis

The SCE Calcite Facilities Alternative would not modify the solar project facilities or the gen-tie line, except that the Stagecoach Gen-tie Line would be about one-half mile shorter than the proposed route, and the SCE 220 kV loop-in to the Pisgah-Lugo transmission corridor would be about one-half mile longer.

#### 5.7.1.2 Description

An alternative location for the SCE Calcite Facilities would be on an approximately 40-acre property immediately northwest of the proposed substation site property. The alternative substation would be similar to the proposed substation but would be approximately 1,000 feet northwest of the proposed site. See Figure 5-16, and Section 8 of Appendix E. Compared to the proposed substation site, the alternate site would be slightly closer to the solar field and slightly farther from the interconnection with SCE's Lugo-Pisgah No. 1 230 kV transmission line. This alternative would result in an approximately 0.5-mile shorter gen-tie line and a somewhat longer interconnection to SCE's Lugo-Pisgah line. Both sites would be accessed by an extension of Haynes Road from SR-247 and would have similar equipment within the substation.

The differences between the proposed substation site and the alternative site are that the SCE Calcite Facilities Alternative would:

- Be approximately 1,500 feet west of SR-247 as compared to approximately 500 feet west of SR-247 for the proposed site
- Require an additional 2,600 feet of access road from SR-247 to the alternate site as compared to the proposed site (4,500 vs 1,900 feet)
- Require two to four fewer Stagecoach Gen-tie Line poles
- Require two additional SCE 230 kV transmission interconnect poles to support approximately 1,500 feet of additional transmission line to loop the Lugo-Pisgah line into and out of the alternative substation
- Require approximately 1,000 feet more of new overhead distribution line but approximately 700 feet less of underground distribution line than the Proposed Project

Environmental Impacts

<u>Aesthetics/Light and Glare</u>

Like the proposed SCE Calcite Facilities site, the SCE Calcite Facilities Alternative would include development of the substation in an undeveloped desert landscape. The substation would be located northwest of the proposed substation and 1,000 feet further west of SR-247.

Figure 5-17 presents a visual simulation of the substation, as viewed from SR-247 (KOP 6). For comparison, the existing view from this site is shown in Figure 4.1-7a (SCE Calcite Facilities Existing View), and the simulation of the proposed substation site is presented in Figure 4.1-7b (SCE Calcite Facilities Simulation) in Section 4.1, *Aesthetics/Light and Glare*. The viewpoint in Figure 4.1-7a is representative of the views of the SCE Calcite Facilities Alternative site, providing a panoramic field of view that encompasses the alternative substation site.

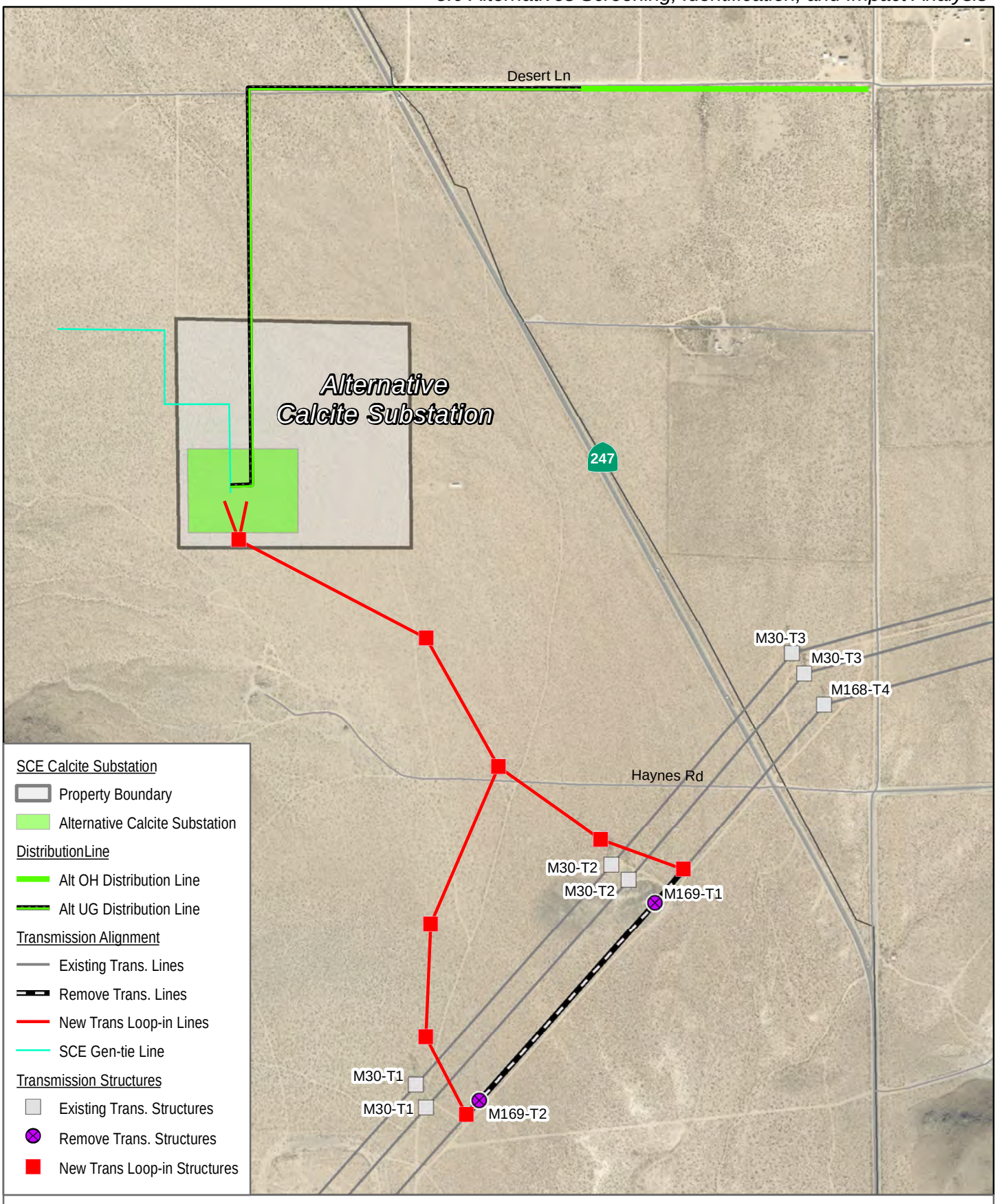



**Figure 5-16**

SCE Calcite **Facilities** Alternative


This panoramic image presents a **Visual Simulation** of the **Alternative SCE Calcite Substation** from **KOP 6** on southbound State Route 247, approximately 0.84 mile north of the intersection with Haynes Road. The alternative substation site is located approximately 0.2 mile northwest of the proposed substation site and closer to KOP 6. Although the discussion of the proposed substation simulation presented in Figure 4.1-7B is also applicable to this alternative site simulation, there are two notable differences. While the alternative site is situated in a slightly less exposed location with a more immediate terrain backdrop compared to the proposed site, it is closer to KOP 6 and so, appears more visually prominent. Also, the alternative substation would still require the seven transmission poles in the immediate vicinity of the proposed substation site to connect to the Lugo-Pisgah No. 1 line. So the alternative substation facilities would appear slightly more spread out across the landscape when viewed from KOP 6.

**KOP 6**
**SCE Calcite Facilities Alternative**
**Visual Simulation**

**Stagecoach Solar Project EIR**
**Visual Resources**
**Figure 5-17**

As shown in the simulation (Figure 5-17), and similar to the Proposed SCE Calcite Facilities, the SCE Calcite Facilities Alternative would result in the introduction of a visually prominent and structurally complex electric transmission facility with its associated industrial character and structural contrast into the predominantly natural desert landscape of the central portion of Lucerne Valley. The notable exception to the natural landscape is the existing high-voltage electric transmission line system south of both SCE Calcite Facilities sites. As with the Proposed SCE Calcite Facilities, the Alternative SCE Calcite Facilities would also connect to the Lugo-Pisgah No. 1 line, which is the southernmost transmission facility in the existing transmission line corridor. However, the alternative substation would be slightly farther away from SR-247 and closer to, and more backdropped by, the ridge that descends to the valley floor shown along the right side of the image. As a result, the alternative substation appears less exposed and more integrated to the background landform, reducing its overall visual prominence. However, because the alternative substation would still need to connect to the Lugo-Pisgah No. 1 line, the seven interconnect poles in the vicinity of the proposed substation would still be required, as would the connection between the alternative substation and those interconnect poles. The visual result would be that the alternative substation facilities would appear more spread out across the landscape and introduce slightly more structural contrast compared to the proposed substation.

In the context of the existing landscape, the alternative substation would exhibit Moderate to High visual contrast. The substation in the foreground would appear visually co-dominant with the valley floor, background landforms, and existing transmission line facilities and would noticeably impair views of the background valley floor, adjacent ridges, and more distant San Bernardino Mountains. The structurally complex facility would attract the attention of the casual observer on SR-247, and view blockage of higher value landscape features (e.g., adjacent ridge, background valley floor, and mountains) would be Moderate to High. Combining the Moderate to High visual contrast, co-dominant structural prominence, and Moderate to High view blockage results in an overall Moderate to High degree of visual change, which in the context of the existing landscape's High visual sensitivity, results in a visual effect that would be significant and unavoidable under CEQA Significance Criterion (c), degradation of existing visual character or quality. Implementation of MM ALG-6 (Surface Treatment and Design of Project Structures and Buildings) is recommended as it would reduce the visual contrast associated with visually discordant structural features and industrial character, though the impact would remain significant.

Overall, because the proposed SCE Calcite Facilities location is closer to SR-247, the alternative site is slightly preferred for its reduced impacts to aesthetics. However, the aesthetic impact of the long-term presence of the substation facilities (Impact ALG-6) would remain significant and unavoidable, as it would be for the proposed substation site. All other impacts and mitigation measures presented in Section 4.1.4.3, *Aesthetics/Light and Glare*, *SCE Calcite Facilities,* would be the same as the proposed SCE Calcite Facilities site.

Biological Resources

Biological resource surveys completed for the Proposed Project also covered the SCE Calcite Facilities Alternative. The resources at the alternative site are essentially the same as those at the proposed SCE Calcite Facilities site. There were no sensitive plant or wildlife resources defined within the boundaries of either site; both sites would result in the loss of undisturbed creosote bush scrub within desert tortoise habitat. All mitigation measures recommended for the Proposed Project (summarized in Section 4.3.6) would also be implemented for the alternative site, and with implementation of these measures, impacts to biological resources would be less than significant.

Noise and Proximity of Residences

The alternative substation location would be closer to one potential residence, located about 1,000 feet west of the substation alternative. The distribution line connection for the alternative substation would terminate at the intersection of Waalew Road and Fern Road, where additional potential residences are located. Overall, the impact severity and mitigation measures described in Section 4.12, *Noise and Vibration*, would be the same for this alternative as for the Proposed Project.

Traffic and Transportation

There would be no difference in traffic because both potential substation sites would use the same access off of SR-247. The mitigation measures described in Section 4.17, *Traffic and Transportation*, would still apply to this alternative as they would for the Proposed Project, and the impact severity would be the same.

## 5.8 NO PROJECT ALTERNATIVE

### 5.8.1.1 Description

Pursuant to State CEQA Guidelines section 15126.6, subdivision (e), the purpose of describing and analyzing a No Project Alternative is to provide decision makers with comparative information regarding the impacts of approving a project versus not approving a project. The No Project Alternative considers existing environmental conditions as well as what would reasonably be expected to occur in the foreseeable future if the Proposed Project is not approved, based on current plans and other available information about expected future conditions.

Under the No Project Alternative, the CSLC lease requested by the Applicant would not be approved. The state-owned school lands managed by CSLC would not be graded and fenced, and the solar field and battery storage facilities, O&M building, substation, and associated equipment would not be constructed or installed. The gen-tie line between the solar generation plant site and the proposed SCE Calcite Facilities would not be built. The SCE Calcite Facilities would not be developed to serve the project and the interconnection between the SCE substation and SCE's existing Lugo-Pisgah 220 kV transmission line would not be made.

#### 5.8.1.2 Environmental Impact Analysis

The No Project Alternative would avoid all impacts from the construction, operation, maintenance, and decommissioning of the Stagecoach Facilities. As a result, there would be no direct or cumulative impacts to the resources evaluated in Section 4 of this EIR. However, if the Project is not constructed, the State would not realize the beneficial impacts of the Project related to long-term reduction of greenhouse gas emissions from non-renewable (fossil fuel) energy generation.

The No Project Alternative would also prevent the CSLC from using this land to assist California utilities in meeting their obligations under California's Renewable Portfolio Standard (RPS).[39] The CSLC supports the State's initiatives such as Senate Bill (SB) 100 (Nunez, Chapter 312, Statutes of 2018) and AB 32 (Nunez, Chapter 448, Statutes of 2006, the California Global Warming Solutions Act), to increase renewable energy and reducing greenhouse gas (GHG) emissions, respectively. The No Project Alternative would not allow the installation of the renewable solar generation project on these State lands, preventing consistency with the CSLC 2021-2025 Strategic Plan.

In addition, the No Project Alternative would prevent the CSLC from using this land to provide revenue from the Proposed Project for State Teacher's Retirement Fund. As stated in Section 1.3, the CSLC is responsible for proactively managing and enhancing State properties in order to provide revenue for the fund. The CSLC is also required to identify new, sustainable, equitable, and responsible revenue streams, including consideration of CSLC-driven project requests for proposals with desired revenue-generating activities like solar generation. However, if the Proposed Project or an alternative is not approved, the CSLC would retain the option to evaluate a future lease proposal for the State school lands for a different solar project, or for other purposes.

The No Project Alternative would not allow the Applicant to meet any of its Project objectives, which include assisting California utilities in meeting their obligations under California's RPS. Similarly, the Applicant would not be supporting California in meeting GHG emissions reduction goal as required by AB 32 or assisting California in transitioning the transportation sector to zero-emission vehicles by 2035 under Executive Order N-79-20, signed by Governor Newsom on September 23, 2020.

If the SCE Calcite Facilities are not constructed, SCE would not have the ability to interconnect the Stagecoach Facilities or other solar projects in the Lucerne Valley area. However, because San Bernardino County has adopted the Renewable Energy Conservation Element, including Policy 4.10 (as discussed in Section 4.11, *Land Use and Planning*, Impact LU-2), the development of utility-scale renewable energy projects on private land in the Lucerne Valley is not permissible.

[39] The RPS is a State program intended to advance the use of renewable energy but setting continuously escalating renewable energy procure targets for the State's electric utility providers.

# 6.0 OTHER REQUIRED CEQA ISSUES AND ENVIRONMENTALLY SUPERIOR ALTERNATIVE

As noted in this Environmental Impact Report (EIR), Aurora Solar, LLC (Aurora Solar or Applicant), a wholly owned subsidiary of Avangrid Renewables, has applied to the California State Lands Commission (CSLC) for lease of State-owned school lands on which to construct and operate the Stagecoach Facilities, a solar generation project and a 220 kV transmission generation intertie line (gen-tie line). The Stagecoach Solar Generation Plant would be located within a lease area that would cover 3,570 acres. The Stagecoach Gen-tie Line would run approximately 9.1 miles, connecting the Stagecoach Solar Generation Plant to the proposed Southern California Edison (SCE) Calcite Facilities, which would be owned and operated by SCE.

The SCE Calcite Facilities are evaluated as part of the Proposed Project because electricity generated by the Stagecoach Facilities would be interconnected to the substation. The impacts of construction and operation of this substation are fully evaluated in this EIR in order to support SCE's application to the California Public Utilities Commission (CPUC) for permission to construct the substation. The CPUC will use this EIR to support its decision on whether to approve the substation.

As lead agency under the California Environmental Quality Act (CEQA), the CSLC prepared this EIR to evaluate the potential significant environmental effects associated with the Proposed Project. The description of the Project components is provided in Section 2.0, *Project Description*.

The State CEQA Guidelines[40] state in part that an EIR shall:

- Identify and focus on the significant environmental effects of a proposed project (State CEQA Guidelines, § 15126.2, subd. (a))
- Describe any significant impacts, including those that can be mitigated but not reduced to a level of insignificance (State CEQA Guidelines, § 15126.2, subd. (b))
- Identify significant irreversible environmental changes that would be caused by a proposed project should it be implemented (State CEQA Guidelines, § 15126.2, subd. (c))
- Identify effects found not to be significant (State CEQA Guidelines, § 15128)
- Identify any growth-inducing impacts of a proposed project such as the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment (State CEQA Guidelines, § 15126.2, subd. (d))

[40] The "State CEQA Guidelines" refers to California Code of Regulations, Title 14, Chapter 3.

These elements are discussed in Sections 6.1 through 6.5 below. Section 6.6 presents a comparison of the Proposed Project with the alternatives evaluated in Chapter 5.

## 6.1 SIGNIFICANT ENVIRONMENTAL EFFECTS THAT CANNOT BE AVOIDED

The significant environmental impacts anticipated as a result of the Proposed Project, along with mitigation measures (MMs) to reduce or avoid significant impacts are discussed in Section 4.0, *Environmental Impact Analysis*. State CEQA Guidelines, section 15126.2, subdivision (b), requires that an EIR describe any significant impacts that cannot be avoided, even with the implementation of feasible MMs. The significant unavoidable impacts (i.e., impacts that cannot be reduced to a less than significant level with mitigation) are listed below for the Stagecoach Facilities (Section 6.1.1) and the SCE Calcite Facilities (Section 6.1.2). These significant and unavoidable impacts include effects on aesthetics, air quality, cultural resources, land use and planning, and transportation and traffic. Some would exist only during construction (short-term impacts), and some would occur during the life of project operation (long-term impacts).

### 6.1.1 Significant and Unavoidable Impacts: Stagecoach Facilities

- **Aesthetics/Light and Glare Impact ALG-2:** Creation of visual contrast due to vegetation removal (long-term impact)
- **Aesthetics/Light and Glare Impact ALG-6:** Long-term presence of the Proposed Project would result in landscape changes that degrade existing visual character or quality (long-term impact)
- **Air Quality Impact AQ-1:** Air pollutant emissions from construction and O&M (short-term construction impact from PM10)
- **Air Quality Impact AQ-3:** Exposure of sensitive receptors to substantial pollutants concentrations (short-term construction impact from criteria air pollutants and toxic air contaminants)
- **Cultural Resources Impact CUL-1:** The Proposed Project (gen-tie line only) could cause a substantial adverse change in the significance of a historical resource pursuant to State California Environmental Quality Act (CEQA) Guidelines section 15064.5 (long-term indirect effect)
- **Energy Impact EN-2:** The Stagecoach Solar Generation Plant and Gen-tie Line would conflict with or obstruct a State or local plan for renewable energy or energy efficiency (County's adopted Renewable Energy and Conservation Element (RECE))
- **Land Use and Planning Impact LU-2:** The Stagecoach Solar Generation Plant and Gen-tie Line would conflict with the County's adopted Renewable Energy and Conservation Element (RECE)
- **Public Services, Utilities, and Service System Impact PSU-1**: The County's population would not increase due to construction and operation of the Stagecoach

Facilities, and they would not create the need for new public service facilities. However, emergency response times may be severely inhibited by construction traffic (short-term impact during construction).

- **Traffic and Transportation Impact TRA-1:** Proposed Project traffic volumes, or temporary road or travel lane closures, would substantially affect the circulation system (short-term impact during construction)
- **Traffic and Transportation Impact TRA-4:** Proposed Project activities would affect emergency vehicle response (short-term impact during construction)

### 6.1.2 Significant and Unavoidable Impacts: SCE Calcite Facilities

- **Aesthetics/Light and Glare Impact ALG-6:** Long-term presence of the Proposed Project would result in landscape changes that degrade existing visual character or quality (long-term impact)
- **Air Quality Impact AQ-1:** Air pollutant emissions from construction and O&M (short-term construction impact from PM10)
- **Energy Impact EN-2:** The SCE Calcite Facilities would conflict with or obstruct a State or local plan for renewable energy or energy efficiency
- **Land Use and Planning Impact LU-2:** The SCE Calcite Facilities would conflict with the County's adopted RECE
- **Public Services, Utilities, and Service System Impact PSU-1**: (If constructed concurrently with the Stagecoach Facilities) The County's population would not increase due to construction and operation of the SCE Calcite Facilities, and they would not create the need for new public service facilities. However, emergency response times may be severely inhibited by construction traffic (short-term impact during construction).
- **Traffic and Transportation Impact TRA-1:** (If constructed concurrently with the Stagecoach Facilities) Traffic volumes associated with construction of the SCE Calcite Facilities would substantially affect the circulation system (short-term impact during construction)
- **Traffic and Transportation Impact TRA-4:** (If constructed concurrently with the Stagecoach Facilities) SCE Calcite Facilities construction activities would affect emergency vehicle response (short-term impact during construction)

Due to these significant and unavoidable impacts, approval of the Proposed Project would require the CSLC to adopt a Statement of Overriding Considerations stating the specific reasons to support its action, in compliance with State CEQA Guidelines, section 15093. The CPUC will also weigh these impacts in its consideration of the SCE Calcite Facilities.

## 6.2 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES

Significant irreversible environmental changes that would be involved with a proposed project may include the following (State CEQA Guidelines, § 15126.2, subd. (c)):

- Uses of non-renewable resources during the initial and continued phases of the project, which would be irreversible because a large commitment of such resources makes removal or non-use thereafter unlikely
- Primary impacts and, particularly, secondary impacts which commit future generations to similar uses
- Irreversible damage, which may result from environmental accidents associated with the project

The purpose of the Proposed Project is to generate renewable energy for approximately 40 years, displacing generation from non-renewable sources (e.g., natural gas, oil, or coal). Construction activities would require short-term use of fossil fuels; however, in the context of local, regional, and global energy consumption, the proposed use of non-renewable fossil fuels associated with Proposed Project implementation would not be considered a large commitment for the use of such resources and would not contribute to the continued use of and reliance upon such non-renewable resources.

Implementation of the Proposed Project would result in various forms of environmental damage to the land from construction activities. This damage would occur during construction of the Proposed Project and would likely persist throughout the 40-year operational period and until the site is fully restored and revegetated. In the desert environment, this type of damage can take many years to recover.

As described in Section 4.9, *Hazards and Hazardous Materials*, hazardous materials typical of construction projects would be used and stored in construction staging areas (e.g., gasoline, diesel fuel, oil, lubricants, paints, solvents, detergents, degreasers, pesticides, herbicides). Hazardous materials could be released during construction as a result of improper handling, accidental spills or leaks, and/or due to leaking equipment or vehicles and could result in soil or water contamination. MM HAZ-1 (Hazardous Materials Training and Management Plan) requires specific processes and response procedures to minimize these effects, but the potential for hazardous leaks to affect soil and water quality occur remains.

## 6.3 GROWTH-INDUCING IMPACTS

State CEQA Guidelines section 15126.2, subdivision (d), states that growth-inducing impacts of the project must be discussed in the EIR. In general terms, a project may induce spatial, economic, or population growth in a geographic area if it meets any one of the four criteria identified below:

- Removal of an impediment to growth (e.g., establishment of an essential public service or the provision of new access to an area)
- Economic expansion or growth (e.g., changes in revenue base or employment expansion)
- Establishment of a precedent-setting action (e.g., an innovation, a change in zoning, or general plan amendment approval)
- Development or encroachment in an isolated area or one adjacent to open space

Significant growth-inducing impacts could also occur if a project provides infrastructure or service capacity to accommodate growth levels beyond those permitted by local or regional plans and policies.

Scoping comments requested that the EIR address the relationship of the SCE Calcite Facilities to the Stagecoach Facilities and define additional development that may occur due to the construction of the SCE Calcite Facilities.

The Proposed Project would involve the construction and operation of the solar field and gen-tie line. This EIR also evaluates the proposed SCE Calcite Facilities, which are under the jurisdiction of the CPUC. The potential growth-inducing effects of these two components are considered separately in Sections 6.3.1 and 6.3.2.

### 6.3.1 Stagecoach Facilities and Gen-tie Line

**Population Growth.** The construction and operation of the Stagecoach Facilities are not likely to induce growth, either in population levels or in infrastructure development in the Proposed Project area. As described in Section 4.11, *Population and Housing*, there would be few operational staff supporting the Proposed Project, and this level of staffing would not affect populations levels.

The 2020 Census showed that San Bernardino County grew by 7.1 percent between 2010 and 2019 (U.S. Census 2021a). For comparison, population grew by 6.1 percent statewide and by 7.4 percent nationally. While population is affected by births and deaths, population changes in California are driven primarily by economic conditions that vary from year to year. These conditions most significantly affect the rates of migration in and out of the state (US News 2021).

**Growth in Renewable Energy Development.** The Stagecoach Gen-tie Line, proposed as a 220 kV single-circuit line, may have capacity to carry additional generation (beyond the 200 megawatt (MW) for the Proposed Project) to the SCE Calcite Facilities. Since the gen-tie line is being constructed and paid for by the Applicant, Aurora Solar LLC, the presence of the line may allow for construction of additional generation facilities that could also use the existing gen-tie line. The available capacity would depend on the conductor used and the structure design (i.e., it could be designed to allow addition of a second circuit later).

Due to County planning restrictions contained in the Renewable Energy and Conservation Element (RECE) of the County's General Plan (see discussion in Section 4.11, *Land Use and Planning*), solar development in the northern Lucerne Valley could occur only on State-owned land or on Bureau of Land Management (BLM) land that is designated for renewable energy development, but not on private land. There is one BLM Development Focus Area (DFA) in the northern Lucerne Valley; it is located just east of the proposed solar generation plant and is less than 600 acres total, but as shown in Figure 2-3 (Land Management and Ownership), the DFA is noncontiguous, as it includes numerous private land inholdings. This pattern of BLM land would be nearly impossible to develop for solar energy.

There are also approximately 4,000 acres of other State-owned land within 2 miles of the Proposed Project that are not included in the current development plan. If the Proposed Project is approved by the CSLC and a land exchange for the remaining undeveloped State-owned land is not implemented, solar project developers may be interested in the potential for installing additional solar projects on the remaining State-owned lands in this area. As described in Section 5.3.2, *BLM Land Exchange Alternative*, and illustrated in Figure 5-10, over 2,500 acres of this State-owned land (east of the Proposed Project) were proposed for exchange with BLM. However, this exchange has not been implemented, and the path to implementing an exchange is not yet clear. If the land remains in State ownership, additional solar development proposals could be made to the State, either using the existing gen-tie line or following the proposed gen-tie line path to the proposed SCE Calcite Facilities. This could result in the addition of an approximately 250 MW solar generation plant.

**Conclusion.** The construction of the Proposed Project may facilitate other solar projects on approximately 4,600 acres of State-owned or BLM-administered public lands. However, population growth in California is not constrained by availability of electric power. As described above, population growth is driven more by economic factors, and solar projects have very small operational staffing requirements. Therefore, the development of the Proposed Project itself would be unlikely to induce population growth.

### 6.3.2 SCE Calcite Facilities

The proposed SCE Calcite Facilities would allow the electricity generated at the Stagecoach Solar Generation Plant to flow into the State's electric grid. The existing Lugo-Pisgah transmission corridor is located just south of the proposed SCE Calcite Substation.

The proposed SCE Calcite Facilities were first evaluated in a 2018 Draft EIR prepared by San Bernardino County, which considered the proposed Ord Mountain Solar Project (San Bernardino County 2018a). As described in Section 3, *Cumulative Scenario*, there are a total of three solar projects that have identified the SCE Calcite Substation as their points of interconnection: Ord Mountain Solar LLC, Sienna Solar (North, South, East and West), and Calcite Solar I – Lendlease Energy Development LLC (see Table 3-1 in Section 3). All

three were proposed to be located on private land and would require County approval of Conditional Use Permits. None of the three are being actively evaluated by the County at this time, and it appears unlikely that they could be approved and constructed given the RECE policy that was implemented after these projects were proposed. As a result, the SCE Calcite Facilities are not expected to induce growth in solar projects on private lands. As discussed in Section 6.3.1, it is possible that about 250 MW of additional solar development on State-owned or BLM-administered lands near the Proposed Project would be facilitated by the availability of an interconnection at the SCE Calcite Substation.

Scoping commenters suggested that the construction of the SCE Calcite Facilities would facilitate another future application from SCE for a new transmission system like the Coolwater-Lugo Transmission Project (CLTP; SCE 2021b). The CLTP did not originally include a substation in the Calcite Substation area, but it did include one south of Apple Valley (Desert View Substation). There is no current data as to whether the presence of the SCE Calcite Facilities would affect the likelihood of other future transmission expansion through the Lucerne Valley area.

The only other renewable energy resource in the Lucerne Valley vicinity is wind. A proposed 84 MW wind project was proposed on BLM-administered public lands about 4 miles west of the proposed SCE Calcite Substation in 2010, but it was withdrawn in 2013 due to the presence of golden eagle nests in the vicinity (Basin and Range Watch 2021). Because the Desert Renewable Energy Conservation Plan (DRECP) has designated nearly all of the land surrounding the Lucerne Valley as either Area of Critical Environmental Concern (ACEC) or for dedicated recreation use, additional renewable energy development on BLM-administered land is unlikely.

The SCE Calcite Facilities would be unstaffed and would not require that SCE hire additional personnel. The facilities would be maintained and operated by existing employees. Therefore, no new employees would be required, and no new population growth would result from the presence of the new substation.

Residences in the Lucerne Valley are currently adequately served by the existing SCE electric distribution system from the SCE Thorn Substation (on SR-247 just north of Old Woman Springs Road), and this substation is connected to the SCE Cottonwood Substation (approximately 7 miles southeast of the center of the Lucerne Valley community). Neither the Stagecoach Facilities nor the SCE Calcite Facilities would interconnect with the distribution lines that serve local load.

In conclusion, as described for the Stagecoach Facilities (Section 6.3.1), the presence of the SCE Calcite Facilities would be unlikely to lead to construction of additional infrastructure or housing that would encourage population growth.

## 6.4 ENERGY CONSERVATION

Section 4.6 addresses energy use and energy conservation.

## 6.5 KNOWN AREAS OF CONTROVERSY OR UNRESOLVED ISSUES

State CEQA Guidelines, section 15123, subdivision (b)(2) requires EIRs to contain a brief summary of areas of known controversy including issues raised by agencies and the public. The public has expressed a wide range of concerns about the proposed Stagecoach Facilities and the SCE Calcite Facilities. During public scoping for the Proposed Project, agencies and the public defined the following major concerns:

- **San Bernardino County policy conflict.** Commenters stated that the County's Renewable Energy and Conservation Element would not allow a solar project on this land, if it were private land, and the CSLC should consider this in its decision-making
- **Potential impacts to desert tortoise and other sensitive species.** The undeveloped site is in a natural condition and is occupied with desert tortoise and other sensitive species. The Proposed Project would result in loss of habitat and potentially death or injury to sensitive wildlife due to construction and operation vehicles.
- **Potential blockage of wildlife movement corridors.** The Stagecoach Facilities would block a portion of defined movement corridors for desert tortoise and other wildlife
- **SCE Calcite Facilities could induce other growth in the area.** The construction of the SCE Calcite Facilities could facilitate other future solar energy projects because the cost of the substation itself would have been paid by the Stagecoach developers
- **SR-247 is a State-Eligible Scenic Highway,** but it has not yet been formally designated by Caltrans. The highway is currently a County-Designated Scenic Highway.
- The community has lower income so **environmental justice** concerns should be analyzed
- The **Apple Valley Multi-Species Habitat Conservation Plan** is in development, and this Proposed Project would conflict with its goals
- **Ground disturbance** will result in windblown dust and soil erosion. Uncontrolled dust could expose people to Valley Fever spores.
- **Availability of groundwater** is constrained, and the Proposed Project would require a large amount of water for dust control
- **Greenhouse gas emissions** from the Proposed Project could result from conversion of land from open space and vehicle emissions

Appendix C, *Index to Public Scoping Comments*, identifies concerns raised during the EIR scoping period, which include additional concerns about the Proposed Project's potential effects to the desert environment, effects on biological resources, impacts related to environmental justice, noise and dust impacts, and others.

## 6.6 COMPARISON OF PROPOSED PROJECT AND ALTERNATIVES AND ENVIRONMENTALLY SUPERIOR ALTERNATIVE

State CEQA Guidelines, section 15126.6, subdivision (e)(2), states, in part, that an EIR shall identify an environmentally superior alternative among the other alternatives "if the environmentally superior alternative is the 'No Project' alternative." Tables 6-1a, 6-1b, and 6-1c (at the end of this section) compare the Proposed Project impacts with those of the alternatives.

Chapter 4 of this EIR defines a wide range of impacts, including several significant and unavoidable impacts that cannot be avoided by the Proposed Project or the other alternatives. The No Project Alternative would avoid all impacts from the construction, operation, maintenance, and decommissioning of the Proposed Project. In the analysis of an industrial facility, typically the No Project Alternative would be environmentally superior as it would avoid the direct impacts associated with construction and operation. However, the No Project Alternative would not realize the long-term, beneficial impacts of the Project to air quality and greenhouse gas emissions through the use of renewable energy generation replacing fossil fuel generation. The No Project Alternative does not have the potential to meet any of the Proposed Project objectives. However, as described in Section 6.6.2 below, the No Project Alternative is environmentally superior to the other alternatives evaluated in this EIR.

Among the other alternatives for each project component, the Environmentally Superior Alternatives are as follows:

- For the solar generation plant, the Joshua Tree Avoidance Alternative would have less severe impacts in comparison with the Proposed Project
- For the gen-tie line, the Underground Gen-Tie Alternative in County Roads would have the fewest impacts overall, primarily by eliminating the most severe aesthetics impacts of the gen-tie line and by using existing disturbed rights-of-way
- The SCE Calcite Facilities Alternative is preferred over the proposed location due to its somewhat less visible location

### 6.6.1 Proposed Project

The following are brief descriptions of the proposed Stagecoach Facilities and the SCE Calcite Facilities (see detailed descriptions in Section 2, *Project Description*).

### Stagecoach Facilities

The Proposed Project would include the following primary components:

- Solar PV modules (also referred to as solar panels) and inverters, with generating capacity of up to 200 MW at the point of interconnect
- An underground and overhead 34.5 kV collection system linking the PV modules to the onsite collector substation
- A 5-acre 34.5 kV/220 kV substation within the Stagecoach Solar Generation Plant boundaries
- A 5,000-square-foot operations and maintenance (O&M) facility
- A battery energy storage system covering up to 56 acres and with approximately 200-800 MW hours of capacity
- New access roads within the fence line of the Proposed Project area
- New access roads to enter the Proposed Project area
- Fencing and site security systems
- Permanent groundwater wells or an on-site water tank using water transported from off-site for the O&M building and to facilitate washing of the PV modules
- An approximately 9.1-mile-long 220 kV generation intertie transmission line (Stagecoach Gen-tie Line) to interconnect the Stagecoach Solar Generation Plant with the SCE Calcite Substation
- A fiber optic line from the Stagecoach Solar Generation Plant substation to the SCE Calcite Substation within the Stagecoach Gen-tie Line right-of way (ROW; installed mostly underground, with a few overhead segments on wood poles)

Construction of the Stagecoach Facilities would take approximately 18 months. The operating life of the project is anticipated to be 40 years. Following operation, all facilities would be removed in accordance with a Decommissioning Plan filed with the CSLC.

### SCE Calcite Facilities

The SCE Calcite Facilities are proposed by SCE to interconnect electrical generation facilities in the region to the SCE electrical system. These facilities would be designed, constructed, owned, operated, and maintained by SCE and fall under the permitting jurisdiction of the CPUC. Among other authorizations and approvals, the SCE Calcite Facilities would require a discretionary Permit to construct from the CPUC. Because the SCE Calcite Substation is needed to deliver electricity from the Stagecoach Solar Generation Plant, construction and operation of the proposed SCE Calcite Substation and the associated interconnection facilities are considered part of the Proposed Project for purposes of environmental review in this EIR.

The proposed SCE Calcite Facilities would be located on and adjacent to an approximately 75-acre parcel that extends on the west and east sides of SR-247, directly north of Haynes Road, in San Bernardino County. The main components of the proposed SCE Calcite Facilities are:

- The SCE Calcite Substation with a 220 kV switchyard on approximately 7 acres along with approximately 4 additional acres for drainage, grading, and an access road
- Transmission structures to loop-in the Lugo-Pisgah No. 1 220 kV transmission line into SCE Calcite Substation adding a total of approximately 5,000 feet of new transmission line (two lines of approximately 2,500 feet located adjacent to one another, creating the Calcite-Lugo and Calcite-Pisgah 220 kV transmission lines)
- Structures to connect the Stagecoach Gen-tie Line into the SCE Calcite Substation
- Approximately 700 feet of 12 kV overhead distribution line and approximately 3,100 feet of underground distribution line (connecting the existing distribution system along Haynes Road to the SCE Calcite Substation) to provide temporary power for construction and permanent substation light and power
- Fiber optic communication cables, equipment, and associated structures for required duplication of communications systems. The telecommunication facilities would include a Remedial Action Scheme, which is a protective system providing rapid automated response to outages and unplanned system events.

See Tables 6-1a, 6-1b, and 6-1c (at the end of Section 6), and Section 5.0, *Project Alternatives Analysis*, for details on impacts and mitigation relevant to each alternative.

### 6.6.2 No Project Alternative

Under the No Project Alternative the following activities would not occur if the CSLC does not approve the Proposed Project or any other alternative under consideration:

- Approval of a State Lease to allow for the construction and operation of the Stagecoach Solar Generation Plant, including the components defined in Section 6.6.1
- Construction and operation of the Stagecoach Gen-tie Line
- Because the CPUC will consider approval of the SCE Calcite Facilities in a separate proceeding, the CPUC may approve that substation even in the CSLC does not approve the Stagecoach Facilities. However, if the State lease for the Stagecoach Facilities is not approved by the CSLC, the CPUC may be less likely to approve the SCE Calcite Facilities.

The following is a comparison of the No Project Alternative to potential impacts of the Proposed Project.

- Significant and unavoidable aesthetic impacts of the Proposed Project would not occur under the No Project Alternative, and there would be no effect on the State Eligible Scenic Highway (SR-247)
- The Proposed Project would result in significant air quality impacts as a result of construction vehicle emissions, even with implementation of MMs for dust control and emissions controls on construction vehicles; these emissions would not occur with the No Project Alternative
- The loss of habitat for sensitive biological resources would result from construction of the Stagecoach Facilities and the SCE Calcite Facilities. There would be some obstruction of wildlife movement corridors, and the potential for overhead wires and facilities to result in avian collision or electrocution. All impacts would be less than significant with implementation of 14 MMs for the Proposed Project. Impact reduction relies on acquisition of compensation lands (MM BIO-1g) to be managed permanently for habitat conservation. None of these impacts would occur with the No Project Alternative.
- Construction of the Proposed Project would not directly affect known cultural or paleontological resources, but an indirect effect would result from the presence of the gen-tie line along a segment of Barstow Road, a resource listed in the California Register of Historic Resources. Construction of the Stagecoach Facilities and the SCE Calcite Facilities may affect currently unknown resources or human remains. None of these impacts would occur with the No Project Alternative. Seven MMs identified for the Proposed Project would reduce other impacts from the Proposed Project to less than significant.
- No specific impacts of the Proposed Project to tribal cultural resources have been identified, and MMs developed through coordination with the San Manuel Band of Mission Indians define appropriate treatment of currently unknown resources that may be found during construction. No impacts to tribal cultural resources would occur with the No Project Alternative.
- The conflict with the County General Plan's RECE would not occur if the Proposed Project is not constructed; this conflict results in significant and unavoidable impacts related to energy policy and land use policy.
- The beneficial reduction of greenhouse gas emissions from fossil fueled power generation facilities that would result from operation of the Proposed Project would not occur with the No Project Alternative
- Construction and operation of the Proposed Project would require use or exposure of hazardous materials and the potential discovery of unexploded ordnance. These impacts would be less than significant with implementation of seven MMs. In addition, the presence of the gen-tie line could create interference and would increase electric and magnetic fields. These impacts that would not occur with the No Project Alternative.

- The construction and operation of the Proposed Project would disturb nearly 2,000 acres of currently natural desert land that would be unaffected with the No Project Alternative. The project would result in soil erosion and modified surface water flow. These effects would be less than significant with implementation of two MMs for geology and soils and one for hydrology.
- The Proposed Project would also require use of groundwater for construction dust control; this would be avoided under the No Project Alternative. Mitigation would be required for assessment of the Project's contribution to cumulative groundwater level decline.
- Construction and operation of the Proposed Project would result in noise experienced by nearby residents. Implementation of four MMs would ensure that these impacts would be less than significant, but the No Project Alternative would not add new noise to the environment.
- Emergency response times may be severely inhibited by Proposed Project construction traffic. One MM for traffic and transportation would reduce the effect but the impact would remain significant and unavoidable. The No Project Alternative would not create traffic impacts.
- Construction traffic impacts of the Proposed Project would be significant even with implementation of mitigation, due to the large number of vehicles needing access to the site during the 18-month construction period and the potentially hazardous site access from SR-247. Three MMs would be required. The No Project Alternative would not create any traffic impacts.
- Construction and operation of the Proposed Project would increase the risk of wildfire due to the vehicles and activities that would be present on the site. One MM would be required to ensure adequate risk reduction and fire response; the impact would be less than significant. Under the No Project Alternative, no additional wildfire risk would occur.

The No Project Alternative is environmentally superior to the Proposed Project.

### 6.6.3 Joshua Tree Avoidance Alternative

This alternative would be constructed within the same State lease boundary as the Proposed Project. As a result, most impacts defined in Chapter 4 of this EIR would be the same for the Joshua Tree Avoidance Alternative as for the Proposed Project. This alternative layout shifts many solar arrays to the south, as shown in Figure 2-2b (Proposed Solar Field) and Figure 5-12a (Joshua Tree Alternative). Overall, a similar acreage of currently undisturbed desert would be graded for panel and facility installation.

The following environmental disciplines would have different impacts for the Joshua Tree Avoidance Alternative as compared with the Proposed Project:

- The aesthetics impact of the two site designs would not be substantially different from the somewhat distant viewpoints evaluated in Section 4.1. Impacts ALG-2 (Creation of visual contrast due to vegetation removal) and ALG-6 (Long-term presence of the Project would result in landscape changes that degrade existing visual character or quality) would remain significant and unavoidable. However, there would be an aesthetic benefit to the much greater setback of the solar panels in the alternative design from the north side of Lucerne Valley Cutoff Road, where development would be eliminated to protect a large area of Joshua tree woodland.
- The impacts of both the Proposed Project and the Joshua Tree Avoidance Alternative would be less than significant with mitigation for Impact BIO-2 (affecting state or federally listed threatened or endangered plants). The major difference between this alternative and the Proposed Project is that most of the Joshua trees that would be removed for the Proposed Project would be retained in this alternative (see Figure 5-12a). The high value of the western Joshua tree is acknowledged by the September 22, 2020, listing of the species by the California Fish and Game Commission as a candidate threatened species under the California Endangered Species Act. The Joshua Tree Avoidance Alternative would reduce the removal of Joshua trees from approximately 398 trees with the Proposed Project to approximately 160 trees for this alternative.

The Joshua Tree Avoidance Alternative is preferred over the Proposed Project.

### 6.6.4 Underground Gen-tie Alternative in County Roads

This alternative would be made up of three segments, as illustrated in Figure 5-14a:

- Approximately 1.5 miles of the proposed overhead gen-tie line at the north end (within the Stagecoach Solar Generation Plant area)
- Approximately 6 miles of underground gen-tie line
- Approximately 1.1 miles of the proposed overhead gen-tie line at its southernmost terminus (into the SCE Calcite Substation)

The underground segment would result in the elimination of the most highly visible portion of the proposed gen-tie line, including its two overhead crossings of SR-247. This alternative would require installation of 6 miles of the route underground in State-owned land (0.4 miles) and County road rights-of-way (5.6 miles), which would be expensive. Construction would be disruptive to nearby residents.

The construction impacts of the proposed Stagecoach Gen-tie Line would not be insignificant. This line would also require construction of a 9-mile access road parallel to the overhead high-voltage transmission line, as well as a separate and parallel telecommunications line.

Impacts associated with a number of resources would be somewhat more severe for the Underground Gen-tie Alternative in County Roads than the proposed Stagecoach Gen-tie Line, due to the more intense construction process associated with trenching. These resource areas include cultural resources, cultural tribal resources, energy, geology and soils, greenhouse gas emissions, noise, paleontology, population and housing, public services, and traffic and transportation. However, the significance of the impacts for each of these resource areas would be the same as for the Proposed Project, and the same MMs would apply as recommended for the Proposed Project.

The following impacts of the Underground Gen-tie Alternative in County Roads would differ from those of the Proposed Project:

- **Aesthetics/Light and Glare** impacts would be substantially reduced by elimination of 6 miles of the proposed overhead line. The overall aesthetic impact would remain significant and unavoidable for the Stagecoach Solar Generation Plant and the SCE Calcite Facilities due to the changes to the existing visual setting, but there would be major improvement in the visual quality between these two facilities.
- **Air quality** impacts would remain significant and unavoidable during construction, and would be somewhat more severe, given the trenching required for installation of the underground gen-tie line. However, these emissions would remain only a small component of overall emissions when compared to those resulting from the construction of the solar generation plant itself.
- The same types of **biological resources** would be affected, but because this alternative would primarily use existing, already disturbed ROWs along unpaved County roads, new ground disturbance would be reduced. In addition, the elimination of 6 miles of overhead lines would reduce some of the risk of avian electrocution and collision with the gen-tie line. Overall, impacts would be less severe than with the Proposed Project, but they would still require the same MMs to ensure that impacts are less than significant.
- **Hazards and hazardous materials** concerns would be the same as the proposed gen-tie line (less than significant with implementation of seven MMs), except that the levels of electric and magnetic fields (EMFs) would be higher during operation on the roads in which the line would be installed underground. Best management practices are recommended to reduce EMF levels.

Overall, the Underground Gen-tie Alternative in County Roads is preferred to the Proposed Stagecoach Gen-tie Line.

### 6.6.5 Underground Gen-tie Alternative Along Proposed Route

This underground alternative route would follow all or part of the route of the proposed overhead 220 kV gen-tie route, as shown on Figure 5-15. Either the entire 9.1-mile-long route could be installed underground in the ROW already acquired by the Applicant, or

only the northern segment could be installed underground, leaving the southern segment overhead, as proposed.

Impacts associated with the following resources would be more severe due to the trenching required for installation of the underground gen-tie line, but all would remain less than significant with implementation of the same MMs as recommended for the Proposed Project: cultural resources, cultural tribal resources, energy, geology and soils, greenhouse gas emissions, land use and planning, noise, paleontology, population and housing, public services, recreation, traffic and transportation, and wildfire.

The following impacts of this alternative would differ from those of the Proposed Project:

- **Aesthetics/Light and Glare** impacts would be substantially reduced by elimination of any portion of the proposed overhead line. The overall aesthetic impact would remain significant and unavoidable for the Stagecoach Solar Generation Plant and the SCE Calcite Facilities due to the changes to the existing visual setting, but there would be major improvement in the visual quality between these two facilities.
- **Air quality** impacts would remain significant and unavoidable during construction, and would be somewhat more severe, given the intensity of gen-tie line construction. However, these emissions would remain only a small component of overall emissions when compared to those resulting from the construction of the solar generation plant itself.
- The same types **of biological resources** would be affected, but because this alternative would primarily follow the route of the proposed Stagecoach Gen-tie Line, new ground disturbance would be required along the length of the route (unlike the Underground Gen-tie Alternative in County Roads), as this alternative would not follow existing disturbed roadways. In addition, the elimination of any portion of the overhead lines would reduce the risk of avian electrocution and collision with the gen-tie line. Overall, impacts would be less severe than with the Proposed Project, but the same MMs would be required to ensure that impacts are less than significant.
- **Hazards and hazardous materials** concerns would be the same as the proposed gen-tie line (less than significant with 7 MMs), except that the levels of EMFs would be higher during operation on the roads in which the line would be installed underground. Best management practices are recommended to reduce EMF levels.

Overall, the Underground Gen-tie Alternative Along Proposed Route is preferred to the proposed Stagecoach Gen-tie Line. However, given its longer length and the lack of existing continuous roads along this route, this alternative is less preferred than the Underground Gen-tie Alternative in County Roads.

### 6.6.6 SCE Calcite Facilities Alternative

An alternative location for the SCE Calcite Substation would be on an approximately 40-acre property immediately northwest of the proposed substation site property. The alternative substation would be similar to the proposed substation but would be approximately 1,000 feet northwest of the proposed site. The locations of the other SCE components (i.e., distribution line for substation power, telecommunications facilities, and access roads) would be located between the existing Lugo-Pisgah transmission corridor and the alternative substation site.

The alternative site would result in no difference in impact for nearly all disciplines evaluated for the proposed site. However, for aesthetics, the alternative substation site appears less exposed and more integrated to the background landform, reducing its overall visual prominence. Even with the reduced severity of the aesthetic impact, the impact would remain significant and unavoidable.

Overall, because the proposed SCE Calcite Facilities location is closer to SR-247, the alternative site is slightly preferred over the Proposed Project site for its reduced impacts to aesthetics.

| Table 6-1a. Comparison of Alternatives: Solar Generation Plant | | | |
|---|---|---|---|
| | Impact Class[1] | | |
| Impact | Proposed Project | No Project Alternative | Joshua Tree Avoidance Alternative |
| **SECTION 4.1 AESTHETICS** | | | |
| **Impact ALG-1:** Introduction of visually discordant construction equipment, vehicles, materials, and workforce | **LTSM** | **NI** | **LTSM** |
| **Impact ALG-2:** Creation of visual contrast due to vegetation removal | **SU** | **NI** | **SU** |
| **Impact ALG-3:** Creation of visual contrast associated with the marking of natural features | **LTSM** | **NI** | **LTSM** |
| **Impact ALG-4:** Creation of visual contrast associated with fugitive dust, waste, and trash | **LTSM** | **NI** | **LTSM** |
| **Impact ALG-5:** Creation of new sources of substantial light or glare such as nighttime illumination | **LTSM** | **NI** | **LTSM** |
| **Impact ALG-6:** Long-term presence of the Project would result in landscape changes that degrade existing visual character or quality | **SU** | **NI** | **SU** |
| **SECTION 4.2 AIR QUALITY** | | | |
| **Impact AQ-1:** Air pollutant emissions from construction and O&M | **SU** | **NI** | **SU** |
| **Impact AQ-2:** Consistency with regional air quality plans | **LTSM** | **NI** | **LTSM** |
| **Impact AQ-3:** Exposure of sensitive receptors to substantial pollutant concentrations | **SU** | **NI** | **SU** |
| **Impact AQ-4:** Creation of objectionable odors affecting a substantial number of people | **LTS** | **NI** | **LTS** |

[1] Impact Class Abbreviations: **SU**: Significant and Unavoidable. **LTSM**: Less than Significant with Mitigation. **LTS**: Less than Significant. **B:** Beneficial. **NI**: No Impact.

| Table 6-1a. Comparison of Alternatives: Solar Generation Plant | | | |
|---|---|---|---|
| | Impact Class[1] | | |
| Impact | Proposed Project | No Project Alternative | Joshua Tree Avoidance Alternative |
| **SECTION 4.3 BIOLOGICAL RESOURCES** | | | |
| **Impact BIO-1:** Substantially reduce habitat for a fish or wildlife species | **LTSM** | **NI** | **LTSM** |
| **Impact BIO-2:** Substantially affect state or federally listed threatened or endangered plants, California Rare Plant Rank 1 or 2 plants, or locally significant populations of other non-listed special-status plants by causing take of a listed species or degrading occupied habitat or designated critical habitat, or substantially reduce the number or restrict the range of a listed species | **LTSM** | **NI** | **LTSM (Less than Proposed)** |
| **Impact BIO-3:** Substantially affect state fully protected wildlife species, state or federally listed threatened or endangered wildlife, California Species of Special Concern, or state ranked S1, S2, or S3 special-status wildlife by causing take or degrading occupied habitat or designated critical habitat, or substantially reduce the number or restrict the range of a listed species or cause the local population to drop below self-sustaining levels | **LTSM** | **NI** | **LTSM** |
| **Impact BIO-4:** Cause take of protected nesting birds, including nestlings or eggs, through direct impacts to the nest or substantial nearby disturbance which could cause nest abandonment | **LTSM** | **NI** | **LTSM** |
| **Impact BIO-5:** Create a substantial collision and electrocution risk for birds or bats | **LTSM** | **NI** | **LTSM** |

[1] Impact Class Abbreviations: **SU**: Significant and Unavoidable. **LTSM**: Less than Significant with Mitigation. **LTS**: Less than Significant. **B:** Beneficial. **NI**: No Impact.

| Table 6-1a. Comparison of Alternatives: Solar Generation Plant | | | |
|---|---|---|---|
| | Impact Class[1] | | |
| **Impact** | **Proposed Project** | **No Project Alternative** | **Joshua Tree Avoidance Alternative** |
| **Impact BIO-6:** Remove or degrade substantial acreage of riparian vegetation or sensitive vegetation communities identified as S1, S2, or S3, such that the community could be eliminated or its structure or function in the vicinity of the project would be substantially affected | **LTSM** | **NI** | **LTSM** |
| **Impact BIO-7:** Substantially impact jurisdictional wetlands or waters of the U.S. or waters of the state such that ecological structure or function of jurisdictional features in the vicinity of the project would be substantially affected | **LTSM** | **NI** | **LTSM** |
| **Impact BIO-8:** 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 | **LTSM** | **NI** | **LTSM** |
| **Impact BIO-9:** Conflict with local policies or ordinances protecting biological resources | **LTSM** | **NI** | **LTSM** |
| **Impact BIO-10:** Conflict with provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan | **NI** | **NI** | **NI** |
| **SECTION 4.4 CULTURAL RESOURCES** | | | |
| **Impact CUL-1:** The Project could cause a substantial adverse change in the significance of a historical resource pursuant to State CEQA Guidelines, § 15064.5 | **LTSM** | **NI** | **LTSM** |

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| Table 6-1a. Comparison of Alternatives: Solar Generation Plant | | | |
|---|---|---|---|
| | Impact Class[1] | | |
| **Impact** | **Proposed Project** | **No Project Alternative** | **Joshua Tree Avoidance Alternative** |
| **Impact CUL-2:** The Project could cause a substantial adverse change in the significance of a unique archaeological resource pursuant to State CEQA Guidelines, § 15064.5 | **LTSM** | **NI** | **LTSM** |
| **Impact CUL-3:** The Project could disturb human remains, including those interred outside of formal cemeteries | **LTSM** | **NI** | **LTSM** |
| **SECTION 4.5 CULTURAL RESOURCES – TRIBAL** | | | |
| **Impact TCR-1:** Change the Significance of a Tribal Cultural Resource as defined in Public Resources Code section 21074, that is either eligible for or listed in the California Register of Historical Resources or in a local register or is determined by the lead agency to be significant | **LTSM** | **NI** | **LTSM** |
| **SECTION 4.6 ENERGY** | | | |
| **Impact EN-1:** Wasteful, inefficient, or unnecessary consumption of energy resources during construction or operation and maintenance | **LTS** | **NI** | **LTS** |
| **Impact EN-2:** Conflict with or obstruct a State or local plan for renewable energy or energy efficiency | **SU** | **NI** | **SU** |
| **SECTION 4.7 GEOLOGY AND SOILS** | | | |
| **Impact GEO-1:** Damage or injury from fault rupture | **NI** | **NI** | **NI** |
| **Impact GEO-2:** Strong earthquake-induced ground shaking could result in damage to project structures and/or injury to people | **LTS** | **NI** | **LTS** |
| **Impact GEO-3:** Project structures could be damaged by seismically induced liquefaction phenomena | **LTS** | **NI** | **LTS** |

[1] Impact Class Abbreviations: **SU**: Significant and Unavoidable. **LTSM**: Less than Significant with Mitigation. **LTS**: Less than Significant. **B:** Beneficial. **NI**: No Impact.

| Table 6-1a. Comparison of Alternatives: Solar Generation Plant | | | |
|---|---|---|---|
| | Impact Class[1] | | |
| Impact | Proposed Project | No Project Alternative | Joshua Tree Avoidance Alternative |
| **Impact GEO-4:** Seismically induced landslides or slope failures could damage project structures or expose workers to injury | **LTS** | **NI** | **LTS** |
| **Impact GEO-5:** Construction and operation of the Project could trigger or accelerate soil erosion | **LTSM** | **NI** | **LTSM** |
| **Impact GEO-6:** Slope failures, such as landslides, could be triggered by project construction | **LTS** | **NI** | **LTS** |
| **Impact GEO-7:** Unsuitable soils result in damage to project structures | **LTSM** | **NI** | **LTSM** |
| **Impact GEO-8:** Soils could be incapable of supporting a Septic System | **LTS** | **NI** | **LTS** |
| **SECTION 4.8 GREENHOUSE GAS EMISSIONS** | | | |
| **Impact GHG-1:** GHG emissions from project activities | **LTS** | **NI** | **LTS** |
| **Impact GHG-2:** Consistency with applicable GHG plan, policy, or regulation | **NI** | **NI** | **NI** |
| **SECTION 4.9 HAZARDS AND HAZARDOUS MATERIALS** | | | |
| **Impact HAZ-1:** Spill or release of hazardous materials occurs during construction, operation, or maintenance of the project | **LTSM** | **NI** | **LTSM** |
| **Impact HAZ-2:** Encountering unexploded ordnance or military munitions and explosives of concern (UXO or MEC) | **LTSM** | **NI** | **LTSM** |
| **Impact HAZ-3:** Unknown environmental contamination could be encountered during construction | **LTSM** | **NI** | **LTSM** |

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| Table 6-1a. Comparison of Alternatives: Solar Generation Plant | | | |
|---|---|---|---|
| | Impact Class[1] | | |
| Impact | Proposed Project | No Project Alternative | Joshua Tree Avoidance Alternative |
| **Impact HAZ-4:** Valley fever spores could be mobilized | **LTSM** | **NI** | **LTSM** |
| **SECTION 4.10 HYDROLOGY AND WATER QUALITY** | | | |
| **Impact HWQ-1:** The Proposed Project would violate water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality | **LTSM** | **NI** | **LTSM** |
| **Impact HWQ-2:** The Proposed Project would substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level | **LTS** | **NI** | **LTS** |
| **Impact HWQ-3:** The Proposed Project would substantially alter the existing drainage patterns by altering the course of a stream or waterway or through the addition of impervious surfaces, allowing substantial erosion, siltation, increased surface runoff on- or off-site, or affecting flood flows | **LTSM** | **NI** | **LTSM** |
| **Impact HWQ-4:** The Proposed Project would be located in flood hazard zones, resulting in risk of release of pollutants due to site inundation | **LTSM** | **NI** | **LTSM** |
| **Impact HWQ-5:** The Proposed Project would conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan | **NI** | **NI** | **NI** |
| **SECTION 4.11 LAND USE AND PLANNING** | | | |
| **Impact LU-1:** The Proposed Project would physically divide an established community | **LTS** | **NI** | **LTS** |

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| Table 6-1a. Comparison of Alternatives: Solar Generation Plant | | | |
|---|---|---|---|
| | Impact Class[1] | | |
| Impact | Proposed Project | No Project Alternative | Joshua Tree Avoidance Alternative |
| **Impact LU-2:** The Proposed Project would not 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 | **SU** | **NI** | **SU** |
| **SECTION 4.12 NOISE AND VIBRATION** | | | |
| **Impact NOI-1:** Construction and operation noise levels in excess of applicable community noise standards | **LTSM** | **NI** | **LTSM** |
| **Impact NOI-2:** Construction noise impacts in excess of ambient noise levels | **LTSM** | **NI** | **LTSM** |
| **Impact NOI-3:** Operational noise impacts in excess of ambient noise levels | **LTSM** | **NI** | **LTSM** |
| **Impact NOI-4:** Vibration impacts to sensitive receptors | **LTS** | **NI** | **LTS** |
| **SECTION 4.13 PALEONTOLOGICAL RESOURCES** | | | |
| **Impact PAL-1:** The Proposed Project could destroy a unique paleontological resource or sit | **LTSM** | **NI** | **LTSM** |
| **SECTION 4.14 POPULATION AND HOUSING** | | | |
| **Impact POP-1:** Project construction and operation would induce substantial population growth in an area, either directly or indirectly | **LTS** | **NI** | **LTS** |
| **Impact POP-2:** Project construction and operation would displace substantial numbers of people or existing housing, necessitating the construction of replacement housing elsewhere | **LTS** | **NI** | **LTS** |

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| Table 6-1a. Comparison of Alternatives: Solar Generation Plant | | | |
|---|---|---|---|
| | Impact Class[1] | | |
| Impact | Proposed Project | No Project Alternative | Joshua Tree Avoidance Alternative |
| **SECTION 4.15 PUBLIC SERVICES, UTILITIES, AND SERVICE SYSTEMS** | | | |
| **Impact PSU-1:** Project construction and operation would result in adverse physical impacts associated with the provision of or need for new or altered governmental facilities or would inhibit maintenance of acceptable service ratios and response times for public services | **SU** | **NI** | **SU** |
| **Impact PSU-2:** Project construction and operation would require new or relocated utilities and service systems and/or place demands on local water, wastewater, and solid waste facilities in excess of their capacities | **LTS** | **NI** | **LTS** |
| **SECTION 4.16 RECREATION** | | | |
| **Impact REC-1:** Increase the use of recreational areas such that substantial physical deterioration of the area would occur or be accelerated | **LTSM** | **NI** | **LTSM** |
| **Impact REC-2:** Disrupt or prevent access to designated recreational areas or disturb users of recreational resources | **LTSM** | **NI** | **LTSM** |
| **SECTION 4.17 TRAFFIC AND TRANSPORTATION** | | | |
| **Impact TRA-1:** Project traffic volumes, or temporary road or travel lane closures, would substantially affect the circulation system | **SU** | **NI** | **SU** |
| **Impact TRA-2:** Project activities would substantially increase vehicle miles travelled | **LTS** | **NI** | **LTS** |

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| Table 6-1a. Comparison of Alternatives: Solar Generation Plant | | | |
|---|---|---|---|
| | Impact Class[1] | | |
| Impact | Proposed Project | No Project Alternative | Joshua Tree Avoidance Alternative |
| **Impact TRA-3:** Project activities or features would substantially increase roadway hazards from roadway damage or incompatible uses | **LTSM** | **NI** | **LTSM** |
| **Impact TRA-4:** Project activities would affect emergency vehicle response | **SU** | **NI** | **SU** |
| **SECTION 4.18 WILDFIRE** | | | |
| **Impact WIL-1:** Require the installation or maintenance of 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 increased wildfire risk | **LTSM** | **NI** | **LTSM** |
| **Impact WIL-2:** Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires | **LTSM** | **NI** | **LTSM** |

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| Table 6-1b. Comparison of Alternatives: Gen-tie Line | | | | |
|---|---|---|---|---|
| | Impact Class[1] | | | |
| Impact | Proposed Gen-tie Line | No Project Alternative | Under-ground Alternative in County Roads | Under-ground Alternative Along Proposed ROW |
| **SECTION 4.1 AESTHETICS** | | | | |
| **Impact ALG-1:** Introduction of visually discordant construction equipment, vehicles, materials, and workforce | **LTSM** | **NI** | **LTSM** | **LTSM** |
| **Impact ALG-2:** Creation of visual contrast due to vegetation removal | **SU** | **NI** | **SU** | **SU** |
| **Impact ALG-3:** Creation of visual contrast associated with the marking of natural features | **LTSM** | **NI** | **LTSM** | **LTSM** |
| **Impact ALG-4:** Creation of visual contrast associated with fugitive dust, waste, and trash | **LTSM** | **NI** | **LTSM** | **LTSM** |
| **Impact ALG-5:** Creation of new sources of substantial light or glare such as nighttime illumination | **LTSM** | **NI** | **LTSM** | **LTSM** |
| **Impact ALG-6:** Long-term presence of the Project would result in landscape changes that degrade existing visual character or quality | **SU** | **NI** | **SU (Less than Proposed)** | **SU (Less than Proposed)** |
| **SECTION 4.2 AIR QUALITY** | | | | |
| **Impact AQ-1:** Air pollutant emissions from construction and O&M | **SU** | **NI** | **SU (More than Proposed)** | **SU (More than Proposed)** |
| **Impact AQ-2:** Consistency with regional air quality plans | **LTSM** | **NI** | **LTSM** | **LTSM** |

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| Table 6-1b. Comparison of Alternatives: Gen-tie Line | | | | |
|---|---|---|---|---|
| | Impact Class[1] | | | |
| Impact | Proposed Gen-tie Line | No Project Alternative | Under-ground Alternative in County Roads | Under-ground Alternative Along Proposed ROW |
| **Impact AQ-3:** Exposure of sensitive receptors to substantial pollutant concentrations | **LTSM** | **NI** | **LTSM** | **LTSM** |
| **Impact AQ-4:** Creation of objectionable odors affecting a substantial number of people | **LTS** | **NI** | **LTS** | **LTS** |
| **SECTION 4.3 BIOLOGICAL RESOURCES** | | | | |
| **Impact BIO-1:** Substantially reduce habitat for a fish or wildlife species | **LTSM** | **NI** | **LTSM** | **LTSM** |
| **Impact BIO-2:** Substantially affect state or federally listed threatened or endangered plants, California Rare Plant Rank 1 or 2 plants, or locally significant populations of other non-listed special-status plants by causing take of a listed species or degrading occupied habitat or designated critical habitat, or substantially reduce the number or restrict the range of a listed species | **LTSM** | **NI** | **LTSM** | **LTSM** |
| **Impact BIO-3:** Substantially affect state fully protected wildlife species, state or federally listed threatened or endangered wildlife, California Species of Special Concern, or state ranked S1, S2, or S3 special-status wildlife by causing take or degrading occupied habitat or designated critical habitat, or substantially reduce the number or restrict the range of a listed species or cause the local population to drop below self-sustaining levels | **LTSM** | **NI** | **LTSM** | **LTSM** |

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| Table 6-1b. Comparison of Alternatives: Gen-tie Line | | | | |
|---|---|---|---|---|
| | Impact Class[1] | | | |
| Impact | Proposed Gen-tie Line | No Project Alternative | Under-ground Alternative in County Roads | Under-ground Alternative Along Proposed ROW |
| **Impact BIO-4:** Cause take of protected nesting birds, including nestlings or eggs, through direct impacts to the nest or substantial nearby disturbance which could cause nest abandonment | **LTSM** | **NI** | **LTSM** | **LTSM** |
| **Impact BIO-5:** Create a substantial collision and electrocution risk for birds or bats | **LTSM** | **NI** | **LTSM (Less than Proposed)** | **LTSM (Less then Proposed)** |
| **Impact BIO-6:** Remove or degrade substantial acreage of riparian vegetation or sensitive vegetation communities identified as S1, S2, or S3, such that the community could be eliminated or its structure or function in the vicinity of the project would be substantially affected | **NI** | **NI** | **NI** | **NI** |
| **Impact BIO-7:** Substantially impact jurisdictional wetlands or waters of the U.S. or waters of the state such that ecological structure or function of jurisdictional features in the vicinity of the project would be substantially affected | **LTSM** | **NI** | **LTSM** | **LTSM** |
| **Impact BIO-8:** 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 | **LTSM** | **NI** | **LTSM (Less than Proposed)** | **LTSM (Less than Proposed)** |
| **Impact BIO-9:** Conflict with local policies or ordinances protecting biological resources | **LTSM** | **NI** | **LTSM** | **LTSM** |

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| Table 6-1b. Comparison of Alternatives: Gen-tie Line | | | | |
|---|---|---|---|---|
| | Impact Class[1] | | | |
| Impact | Proposed Gen-tie Line | No Project Alternative | Under-ground Alternative in County Roads | Under-ground Alternative Along Proposed ROW |
| **Impact BIO-10:** Conflict with provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan | **NI** | **NI** | **NI** | **NI** |
| **SECTION 4.4 CULTURAL RESOURCES** | | | | |
| **Impact CUL-1:** The Project could cause a substantial adverse change in the significance of a historical resource pursuant to State CEQA Guidelines, § 15064.5 | **SU** | **NI** | **SU** | **SU** |
| **Impact CUL-2:** The Project could cause a substantial adverse change in the significance of a unique archaeological resource pursuant to State CEQA Guidelines, § 15064.5 | **LTSM** | **NI** | **LTSM** | **LTSM** |
| **Impact CUL-3:** The Project could disturb human remains, including those interred outside of formal cemeteries | **LTSM** | **NI** | **LTSM** | **LTSM** |
| **SECTION 4.5 CULTURAL RESOURCES – TRIBAL** | | | | |
| **Impact TCR-1:** Change the Significance of a Tribal Cultural Resource, as defined in Public Resources Code section 21074, that is either eligible for or listed in the California Register of Historic Resources or in a local register or is determined by the lead agency to be significant | **LTSM** | **NI** | **LTSM** | **LTSM** |

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| Table 6-1b. Comparison of Alternatives: Gen-tie Line | | | | |
|---|---|---|---|---|
| | Impact Class[1] | | | |
| Impact | Proposed Gen-tie Line | No Project Alternative | Under-ground Alternative in County Roads | Under-ground Alternative Along Proposed ROW |
| **SECTION 4.6 ENERGY** | | | | |
| **Impact EN-1:** Wasteful, inefficient, or unnecessary consumption of energy resources during construction or operation and maintenance | **LTS** | **NI** | **LTS** | **LTS** |
| **Impact EN-2:** Conflict with or obstruct a State or local plan for renewable energy or energy efficiency | **SU** | **NI** | **SU** | **SU** |
| **SECTION 4.7 GEOLOGY AND SOILS** | | | | |
| **Impact GEO-1:** Damage or injury from fault rupture | **NI** | **NI** | **NI** | **NI** |
| **Impact GEO-2:** Strong earthquake-induced ground shaking could result in damage to project structures and/or injury to people | **LTS** | **NI** | **LTS** | **LTS** |
| **Impact GEO-3:** Project structures could be damaged by seismically induced liquefaction phenomena | **LTS** | **NI** | **LTS** | **LTS** |
| **Impact GEO-4:** Seismically induced landslides or slope failures could damage project structures or expose workers to injury | **LTS** | **NI** | **LTS** | **LTS** |
| **Impact GEO-5:** Construction and operation of the Project could trigger or accelerate soil erosion | **LTSM** | **NI** | **LTSM** | **LTSM** |
| **Impact GEO-6:** Slope failures, such as landslides, could be triggered by project construction | **LTS** | **NI** | **LTS** | **LTS** |

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| Table 6-1b. Comparison of Alternatives: Gen-tie Line | | | | |
|---|---|---|---|---|
| | Impact Class[1] | | | |
| Impact | Proposed Gen-tie Line | No Project Alternative | Under-ground Alternative in County Roads | Under-ground Alternative Along Proposed ROW |
| **Impact GEO-7:** Unsuitable soils result in damage to project structures | **LTSM** | **NI** | **LTSM** | **LTSM** |
| **SECTION 4.8 GREENHOUSE GAS EMISSIONS** | | | | |
| **Impact GHG-1:** GHG emissions from project activities | **LTS** | **NI** | **LTS** | **LTS** |
| **Impact GHG-2:** Consistency with applicable GHG plan, policy, or regulation | **NI** | **NI** | **NI** | **NI** |
| **SECTION 4.9 HAZARDS AND HAZARDOUS MATERIALS** | | | | |
| **Impact HAZ-1:** Spill or release of hazardous materials occurs during construction, operation, or maintenance of the project | **LTSM** | **NI** | **LTSM** | **LTSM** |
| **Impact HAZ-2:** Encountering unexploded ordnance or military munitions and explosives of concern (UXO or MEC) | **LTSM** | **NI** | **LTSM** | **LTSM** |
| **Impact HAZ-3:** Unknown environmental contamination could be encountered during construction | **LTSM** | **NI** | **LTSM** | **LTSM** |
| **Impact HAZ-4:** Valley fever spores could be mobilized | **LTSM** | **NI** | **LTSM** | **LTSM** |
| **Impact HAZ-5:** Gen-tie Line could cause interference with radio, television, communications, or electronic equipment | **LTSM** | **NI** | **LTSM** | **LTSM** |
| **Issue HAZ-6:** Electric and magnetic fields would be increased with presence of the Stagecoach Gen-tie Line | **NI** | **NI** | **NI (Greater)** | **NI (Greater)** |

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| Table 6-1b. Comparison of Alternatives: Gen-tie Line | | | | |
|---|---|---|---|---|
| | Impact Class[1] | | | |
| Impact | Proposed Gen-tie Line | No Project Alternative | Under-ground Alternative in County Roads | Under-ground Alternative Along Proposed ROW |
| **SECTION 4.10 HYDROLOGY AND WATER QUALITY** | | | | |
| **Impact HWQ-1:** The Proposed Project would violate water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality | **LTSM** | **NI** | **LTSM** | **LTSM** |
| **Impact HWQ-2:** The Proposed Project would substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level | **LTS** | **NI** | **LTS** | **LTS** |
| **Impact HWQ-3:** The Proposed Project would substantially alter the existing drainage patterns by altering the course of a stream or waterway or through the addition of impervious surfaces, allowing substantial erosion, siltation, increased surface runoff on- or off-site, or affecting flood flows | **LTS** | **NI** | **LTS** | **LTS** |
| **Impact HWQ-4:** The Proposed Project would be located in flood hazard zones, resulting in risk of release of pollutants due to site inundation | **LTSM** | **NI** | **LTSM** | **LTSM** |
| **Impact HWQ-5:** The Proposed Project would conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan | **NI** | **NI** | **NI** | **NI** |

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| Table 6-1b. Comparison of Alternatives: Gen-tie Line | | | | |
|---|---|---|---|---|
| | Impact Class[1] | | | |
| Impact | Proposed Gen-tie Line | No Project Alternative | Under-ground Alternative in County Roads | Under-ground Alternative Along Proposed ROW |
| **SECTION 4.11 LAND USE AND PLANNING** | | | | |
| **Impact LU-1:** The Proposed Project would physically divide an established community | **LTS** | **NI** | **LTS** | **LTS** |
| **Impact LU-2:** The Proposed Project would not 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 | **SU** | **NI** | **SU** | **SU** |
| **SECTION 4.12 NOISE AND VIBRATION** | | | | |
| **Impact NOI-1:** Construction and operation noise levels in excess of applicable community noise standards | **LTSM** | **NI** | **LTSM** | **LTSM** |
| **Impact NOI-2:** Construction noise impacts in excess of ambient noise levels | **LTSM** | **NI** | **LTSM** | **LTSM** |
| **Impact NOI-3:** Operational noise impacts in excess of ambient noise levels | **LTS** | **NI** | **LTS** | **LTS** |
| **Impact NOI-4:** Vibration impacts to sensitive receptors | **LTS** | **NI** | **LTS** | **LTS** |
| **SECTION 4.13 PALEONTOLOGICAL RESOURCES** | | | | |
| **Impact PAL-1:** The Proposed Project could destroy a unique paleontological resource or site | **LTSM** | **NI** | **LTSM** | **LTSM** |

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|---|---|---|---|---|
| | Impact Class[1] | | | |
| Impact | Proposed Gen-tie Line | No Project Alternative | Under-ground Alternative in County Roads | Under-ground Alternative Along Proposed ROW |
| **SECTION 4.14 POPULATION AND HOUSING** | | | | |
| **Impact POP-1:** Project construction and operation would induce substantial population growth in an area, either directly or indirectly | **LTS** | **NI** | **LTS** | **LTS** |
| **Impact POP-2:** Project construction and operation would displace substantial numbers of people or existing housing, necessitating the construction of replacement housing elsewhere | **LTS** | **NI** | **LTS** | **LTS** |
| **SECTION 4.15 PUBLIC SERVICES, UTILITIES, AND SERVICE SYSTEMS** | | | | |
| **Impact PSU-1:** Project construction and operation would result in adverse physical impacts associated with the provision of or need for new or altered governmental facilities or would inhibit maintenance of acceptable service ratios and response times for public services | **SU** | **NI** | **SU** | **SU** |
| **Impact PSU-2:** Project construction and operation would require new or relocated utilities and service systems and/or place demands on local water, wastewater, and solid waste facilities in excess of their capacities | **LTS** | **NI** | **LTS** | **LTS** |

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| Table 6-1b. Comparison of Alternatives: Gen-tie Line | | | | |
|---|---|---|---|---|
| | Impact Class[1] | | | |
| Impact | Proposed Gen-tie Line | No Project Alternative | Under-ground Alternative in County Roads | Under-ground Alternative Along Proposed ROW |
| **SECTION 4.16 RECREATION** | | | | |
| **Impact REC-1:** Increase the use of recreational areas such that substantial physical deterioration of the area would occur or be accelerated | **LTS** | **NI** | **LTS** | **LTS** |
| **Impact REC-2:** Disrupt or prevent access to designated recreational areas or disturb users of recreational resources | **LTS** | **NI** | **LTS** | **LTS** |
| **SECTION 4.17 TRAFFIC AND TRANSPORTATION** | | | | |
| **Impact TRA-1:** Project traffic volumes, or temporary road or travel lane closures, would substantially affect the circulation system | **SU** | **NI** | **SU** | **SU** |
| **Impact TRA-2:** Project activities would substantially increase vehicle miles travelled | **LTS** | **NI** | **LTS** | **LTS** |
| **Impact TRA-3:** Project activities or features would substantially increase roadway hazards from roadway damage or incompatible uses | **LTSM** | **NI** | **LTSM** | **LTSM** |
| **Impact TRA-4:** Project activities would affect emergency vehicle response | **LTSM** | **NI** | **LTSM** | **LTSM** |

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| Table 6-1b. Comparison of Alternatives: Gen-tie Line | | | | |
|---|---|---|---|---|
| | Impact Class[1] | | | |
| Impact | Proposed Gen-tie Line | No Project Alternative | Under-ground Alternative in County Roads | Under-ground Alternative Along Proposed ROW |
| **SECTION 4.18 WILDFIRE** | | | | |
| **Impact WIL-1:** Require the installation or maintenance of 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 increased wildfire risk | **LTSM** | **NI** | **LTSM** | **LTSM** |
| **Impact WIL-2:** Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires | **LTSM** | **NI** | **LTSM** | **LTSM** |

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| Table 6-1c. Comparison of Alternatives: SCE Calcite Facilities | | | |
|---|---|---|---|
| | Impact Class[1] | | |
| Impact | Proposed SCE Calcite Facilities | No Project Alternative | SCE Calcite Facilities Alternative |
| **SECTION 4.1 AESTHETICS** | | | |
| **Impact ALG-1:** Introduction of visually discordant construction equipment, vehicles, materials, and workforce | **LTSM** | **NI** | **LTSM** |
| **Impact ALG-2:** Creation of visual contrast due to vegetation removal | **NI** | **NI** | **NI** |
| **Impact ALG-3:** Creation of visual contrast associated with the marking of natural features | **LTSM** | **NI** | **LTSM** |
| **Impact ALG-4:** Creation of visual contrast associated with fugitive dust, waste, and trash | **LTSM** | **NI** | **LTSM** |
| **Impact ALG-5:** Creation of new sources of substantial light or glare such as nighttime illumination | **LTSM** | **NI** | **LTSM** |
| **Impact ALG-6:** Long-term presence of the Project would result in landscape changes that degrade existing visual character or quality | **SU** | **NI** | **SU (Less than Proposed)** |
| **SECTION 4.2 AIR QUALITY** | | | |
| **Impact AQ-1:** Air pollutant emissions from construction and O&M | **SU** | **NI** | **SU** |
| **Impact AQ-2:** Consistency with regional air quality plans | **LTSM** | **NI** | **LTSM** |
| **Impact AQ-3:** Exposure of sensitive receptors to substantial pollutant concentrations | **LTSM** | **NI** | **LTSM** |
| **Impact AQ-4:** Creation of objectionable odors affecting a substantial number of people | **LTS** | **NI** | **LTS** |

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| Table 6-1c. Comparison of Alternatives: SCE Calcite Facilities | | | |
|---|---|---|---|
| | Impact Class[1] | | |
| Impact | Proposed SCE Calcite Facilities | No Project Alternative | SCE Calcite Facilities Alternative |
| **SECTION 4.3 BIOLOGICAL RESOURCES** | | | |
| **Impact BIO-1:** Substantially reduce habitat for a fish or wildlife species | **LTSM** | **NI** | **LTSM** |
| **Impact BIO-2:** Substantially affect state or federally listed threatened or endangered plants, California Rare Plant Rank 1 or 2 plants, or locally significant populations of other non-listed special-status plants by causing take of a listed species or degrading occupied habitat or designated critical habitat, or substantially reduce the number or restrict the range of a listed species | **LTSM** | **NI** | **LTSM** |
| **Impact BIO-3:** Substantially affect state fully protected wildlife species, state or federally listed threatened or endangered wildlife, California Species of Special Concern, or state ranked S1, S2, or S3 special-status wildlife by causing take or degrading occupied habitat or designated critical habitat, or substantially reduce the number or restrict the range of a listed species or cause the local population to drop below self-sustaining levels | **LTSM** | **NI** | **LTSM** |
| **Impact BIO-4:** Cause take of protected nesting birds, including nestlings or eggs, through direct impacts to the nest or substantial nearby disturbance which could cause nest abandonment | **LTSM** | **NI** | **LTSM** |
| **Impact BIO-5:** Create a substantial collision and electrocution risk for birds or bats | **LTSM** | **NI** | **LTSM** |

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| Table 6-1c. Comparison of Alternatives: SCE Calcite Facilities | | | |
|---|---|---|---|
| | Impact Class[1] | | |
| Impact | Proposed SCE Calcite Facilities | No Project Alternative | SCE Calcite Facilities Alternative |
| **Impact BIO-6:** Remove or degrade substantial acreage of riparian vegetation or sensitive vegetation communities identified as S1, S2, or S3, such that the community could be eliminated or its structure or function in the vicinity of the project would be substantially affected | **NI** | **NI** | **NI** |
| **Impact BIO-7:** Substantially impact jurisdictional wetlands or waters of the U.S. or waters of the state such that ecological structure or function of jurisdictional features in the vicinity of the project would be substantially affected | **LTSM** | **NI** | **LTSM** |
| **Impact BIO-8:** 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 | **LTS** | **NI** | **LTS** |
| **Impact BIO-9:** Conflict with local policies or ordinances protecting biological resources | **LTSM** | **NI** | **LTSM** |
| **Impact BIO-10:** Conflict with provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan | **NI** | **NI** | **NI** |
| **SECTION 4.4 CULTURAL RESOURCES** | | | |
| **Impact CUL-1:** The Project could cause a substantial adverse change in the significance of a historical resource pursuant to State CEQA Guidelines, § 15064.5 | **LTSM** | **NI** | **LTSM** |

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| Table 6-1c. Comparison of Alternatives: SCE Calcite Facilities | | | |
|---|---|---|---|
| | Impact Class[1] | | |
| Impact | Proposed SCE Calcite Facilities | No Project Alternative | SCE Calcite Facilities Alternative |
| **Impact CUL-2:** The Project could cause a substantial adverse change in the significance of a unique archaeological resource pursuant to State CEQA Guidelines, § 15064.5 | **LTSM** | **NI** | **LTSM** |
| **Impact CUL-3:** The Project could disturb human remains, including those interred outside of formal cemeteries | **LTSM** | **NI** | **LTSM** |
| **SECTION 4.5 CULTURAL RESOURCES – TRIBAL** | | | |
| **Impact TCR-1:** Change the Significance of a Tribal Cultural Resource, as defined in Public Resources Code section 21074, that is either eligible for or listed in the California Register of Historic Resources or in a local register or is determined by the lead agency to be significant | **LTSM** | **NI** | **LTSM** |
| **SECTION 4.6 ENERGY** | | | |
| **Impact EN-1:** Wasteful, inefficient, or unnecessary consumption of energy resources during construction or operation and maintenance | **LTS** | **NI** | **LTS** |
| **Impact EN-2:** Conflict with or obstruct a State or local plan for renewable energy or energy efficiency | **SU** | **NI** | **SU** |
| **SECTION 4.7 GEOLOGY AND SOILS** | | | |
| **Impact GEO-1:** Damage or injury from fault rupture | **NI** | **NI** | **NI** |
| **Impact GEO-2:** Strong earthquake-induced ground shaking could result in damage to project structures and/or injury to people | **LTS** | **NI** | **LTS** |
| **Impact GEO-3:** Project structures could be damaged by seismically induced liquefaction phenomena | **LTS** | **NI** | **LTS** |

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| Table 6-1c. Comparison of Alternatives: SCE Calcite Facilities | | | |
|---|---|---|---|
| | Impact Class[1] | | |
| Impact | Proposed SCE Calcite Facilities | No Project Alternative | SCE Calcite Facilities Alternative |
| **Impact GEO-4:** Seismically induced landslides or slope failures could damage project structures or expose workers to injury | **NI** | **NI** | **NI** |
| **Impact GEO-5:** Construction and operation of the Project could trigger or accelerate soil erosion | **LTSM** | **NI** | **LTSM** |
| **Impact GEO-6:** Slope failures, such as landslides, could be triggered by project construction | **NI** | **NI** | **NI** |
| **Impact GEO-7:** Unsuitable soils result in damage to project structures | **LTSM** | **NI** | **LTSM** |
| **SECTION 4.8 GREENHOUSE GAS EMISSIONS** | | | |
| **Impact GHG-1:** GHG emissions from project activities | **LTS** | **NI** | **LTS** |
| **Impact GHG-2:** Consistency with applicable GHG plan, policy, or regulation | **LTS** | **NI** | **LTS** |
| **SECTION 4.9 HAZARDS AND HAZARDOUS MATERIALS** | | | |
| **Impact HAZ-1:** Spill or release of hazardous materials occurs during construction, operation, or maintenance of the project | **LTSM** | **NI** | **LTSM** |
| **Impact HAZ-3:** Unknown environmental contamination could be encountered during construction | **LTSM** | **NI** | **LTSM** |
| **Impact HAZ-4:** Valley fever spores could be mobilized | **LTSM** | **NI** | **LTSM** |

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| Table 6-1c. Comparison of Alternatives: SCE Calcite Facilities | | | |
|---|---|---|---|
| | Impact Class[1] | | |
| Impact | Proposed SCE Calcite Facilities | No Project Alternative | SCE Calcite Facilities Alternative |
| **SECTION 4.10 HYDROLOGY AND WATER QUALITY** | | | |
| **Impact HWQ-1:** The Proposed Project would violate water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality | **LTSM** | **NI** | **LTSM** |
| **Impact HWQ-2:** The Proposed Project would substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level | **LTS** | **NI** | **LTS** |
| **Impact HWQ-3:** The Proposed Project would substantially alter the existing drainage patterns by altering the course of a stream or waterway or through the addition of impervious surfaces, allowing substantial erosion, siltation, increased surface runoff on- or off-site, or affecting flood flows | **LTSM** | **NI** | **LTSM** |
| **Impact HWQ-4:** The Proposed Project would be located in flood hazard zones, resulting in risk of release of pollutants due to site inundation | **LTSM** | **NI** | **LTSM** |
| **Impact HWQ-5:** The Proposed Project would conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan | **NI** | **NI** | **NI** |
| **SECTION 4.11 LAND USE AND PLANNING** | | | |
| **Impact LU-1:** The Proposed Project would physically divide an established community | **LTS** | **NI** | **LTS** |

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| Table 6-1c. Comparison of Alternatives: SCE Calcite Facilities | | | |
|---|---|---|---|
| | Impact Class[1] | | |
| Impact | Proposed SCE Calcite Facilities | No Project Alternative | SCE Calcite Facilities Alternative |
| **Impact LU-2:** The Proposed Project would not 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 | **SU** | **NI** | **SU** |
| **SECTION 4.12 NOISE AND VIBRATION** | | | |
| **Impact NOI-1:** Construction and operation noise levels in excess of applicable community noise standards | **LTSM** | **NI** | **LTSM** |
| **Impact NOI-2:** Construction noise impacts in excess of ambient noise levels | **LTSM** | **NI** | **LTSM** |
| **Impact NOI-3:** Operational noise impacts in excess of ambient noise levels | **LTSM** | **NI** | **LTSM** |
| **Impact NOI-4:** Vibration impacts to sensitive receptors | **LTS** | **NI** | **LTS** |
| **SECTION 4.13 PALEONTOLOGICAL RESOURCES** | | | |
| **Impact PAL-1:** The Proposed Project could destroy a unique paleontological resource or site | **LTSM** | **NI** | **LTSM** |
| **SECTION 4.14 POPULATION AND HOUSING** | | | |
| **Impact POP-1:** Project construction and operation would induce substantial population growth in an area, either directly or indirectly | **NI** | **NI** | **NI** |
| **Impact POP-2:** Project construction and operation would displace substantial numbers of people or existing housing, necessitating the construction of replacement housing elsewhere | **NI** | **NI** | **NI** |

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| Table 6-1c. Comparison of Alternatives: SCE Calcite Facilities | | | |
|---|---|---|---|
| | Impact Class[1] | | |
| Impact | Proposed SCE Calcite Facilities | No Project Alternative | SCE Calcite Facilities Alternative |
| **SECTION 4.15 PUBLIC SERVICES, UTILITIES, AND SERVICE SYSTEMS** | | | |
| **Impact PSU-1:** Project construction and operation would result in adverse physical impacts associated with the provision of or need for new or altered governmental facilities or would inhibit maintenance of acceptable service ratios and response times for public services | **SU** | **NI** | **SU** |
| **Impact PSU-2:** Project construction and operation would require new or relocated utilities and service systems and/or place demands on local water, wastewater, and solid waste facilities in excess of their capacities | **LTS** | **NI** | **LTS** |
| **SECTION 4.16 RECREATION** | | | |
| **Impact REC-1:** Increase the use of recreational areas such that substantial physical deterioration of the area would occur or be accelerated | **LTS** | **NI** | **LTS** |
| **Impact REC-2:** Disrupt or prevent access to designated recreational areas or disturb users of recreational resources | **LTS** | **NI** | **LTS** |
| **SECTION 4.17 TRAFFIC AND TRANSPORTATION** | | | |
| **Impact TRA-1:** Project traffic volumes, or temporary road or travel lane closures, would substantially affect the circulation system | **SU** | **NI** | **SU** |
| **Impact TRA-2:** Project activities would substantially increase vehicle miles travelled | **LTS** | **NI** | **LTS** |

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| Table 6-1c. Comparison of Alternatives: SCE Calcite Facilities | | | |
|---|---|---|---|
| | Impact Class[1] | | |
| **Impact** | **Proposed SCE Calcite Facilities** | **No Project Alternative** | **SCE Calcite Facilities Alternative** |
| **Impact TRA-3:** Project activities or features would substantially increase roadway hazards from roadway damage or incompatible uses | **LTSM** | **NI** | **LTSM** |
| **Impact TRA-4:** Project activities would affect emergency vehicle response | **SU** | **NI** | **SU** |
| **SECTION 4.18 WILDFIRE** | | | |
| **Impact WIL-1:** Require the installation or maintenance of 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 increased wildfire risk | **LTSM** | **NI** | **LTSM** |
| **Impact WIL-2:** Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires | **LTSM** | **NI** | **LTSM** |

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# 7.0 MITIGATION MONITORING PROGRAM

As the lead agency under the California Environmental Quality Act (CEQA), the California State Lands Commission (CSLC) is required to adopt a program for reporting or monitoring the implementation of mitigation measures. As lead agency for the Stagecoach Facilities (Proposed Project), the CSLC will also ensure the implementation of the adopted mitigation measures defined in this Environmental Impact Report (EIR). This lead agency responsibility originates in Public Resources Code section 21081.6, subdivision (a) (Findings), and the State CEQA Guidelines[41] sections 15091, subdivision (d) (Findings) and 15097 (Mitigation Monitoring or Reporting).

## 7.1 MONITORING AUTHORITY

The purpose of a Mitigation Monitoring Program (MMP) is to ensure that measures adopted to mitigate or avoid significant impacts are implemented. A MMP can be a working guide to facilitate the implementation of the mitigation measures and associated monitoring, compliance, and reporting activities. CSLC staff may delegate duties and responsibilities for monitoring to environmental monitors or consultants as deemed necessary, and some monitoring responsibilities may be assumed by responsible agencies, such as affected jurisdictions and cities. The number of construction monitors assigned to the Proposed Project will depend on the number of concurrent construction activities and their locations. CSLC staff will ensure that appropriate agency reviews and approvals are obtained, that each person delegated any duties or responsibilities is qualified to monitor compliance, and that it is aware of and has approved any deviation from the MMP.

## 7.2 ENFORCEMENT RESPONSIBILITY

The CSLC, as lead agency, is responsible for enforcing the procedures adopted for monitoring through the environmental monitor. Any assigned environmental monitor shall note problems with monitoring, notify appropriate agencies or individuals about any problems, and report the problems to CSLC staff or its designee.

## 7.3 MITIGATION COMPLIANCE RESPONSIBILITY

The CSLC is responsible for successfully implementing all the mitigation measures in the MMP and shall ensure that these requirements are met by all construction contractors and field personnel. Standards for successful mitigation also are implicit in many mitigation measures that include such requirements as obtaining permits or avoiding a specific impact entirely. Other mitigation measures include detailed success criteria. Additional mitigation success thresholds may be established by applicable agencies with jurisdiction through the permit process and through the review and approval of specific plans for the implementation of mitigation measures.

[41] The “State CEQA Guidelines” refers to California Code of Regulations, Title 14, Chapter 3.

## 7.4 GENERAL MONITORING PROCEDURES

### 7.4.1 Environmental Monitors

Many of the monitoring procedures will be conducted prior to or during the construction phase of the Proposed Project. CSLC staff and its environmental monitor(s) are responsible for integrating the mitigation monitoring procedures into the construction process in coordination with the contractor. To oversee the monitoring procedures and to ensure success, the environmental monitor must be on site during that portion of construction that has the potential to create a significant environmental impact or other impact for which mitigation is required. The environmental monitor is responsible for ensuring that all procedures specified in the monitoring program are followed.

### 7.4.2 General Reporting Procedures

Site visits and specified monitoring procedures performed by other individuals will be reported to the environmental monitor. A monitoring record form will be submitted to the environmental monitor by the individual conducting the visit or procedure so that details of the visit can be recorded and progress tracked by the environmental monitor. A checklist will be developed and maintained by the environmental monitor to track all procedures required for each mitigation measure and to ensure that the timing specified for the procedures is adhered to. The environmental monitor will note any problems that may occur and take appropriate action to rectify the problems.

### 7.4.3 Public Access to Records

The public is allowed access to records and reports used to track the monitoring program. Monitoring records and reports will be made available for public inspection by the CSLC or its designee on request.

## 7.5 MITIGATION MONITORING PLAN

This section presents the mitigation measures for each environmental discipline that requires mitigation measures. Impacts that do not require mitigation are not included (see *Executive Summary* Tables ES-2a, ES-2b, and ES-2c for a summary description of all Proposed Project impacts). The following information is presented for each mitigation measure:

- **Impact** (impact number and title)
- **Mitigation Measure** (full text of the measure)
- **Location** (where the impact occurs and the mitigation measure should be applied). The following location abbreviations are used in the Mitigation Monitoring Plan:
    - **SSGP**: Stagecoach Solar Generation Plant
    - **SGTL**: Stagecoach Gen-tie Line
    - **SCF**: SCE Calcite Facilities

- **Monitoring/reporting action** (the action to be taken by the monitor or lead agency)
- **Effectiveness criteria** (how the agency can know if the measure is effective)
- **Responsible Party**
- **Timing** (before, during, or after construction; during operation, etc.)

## AESTHETICS/LIGHT AND GLARE

**Impact ALG-5: Creation of new sources of substantial light or glare such as nighttime illumination**

**MM ALG-5: Minimize Night Lighting at Project Facilities.** The Applicant shall avoid night lighting where possible and minimize its use under all circumstances. To ensure this, the Applicant shall implement the following requirements for both construction and operation:

- Illumination of the Project and its immediate vicinity shall be minimized
- Lamps and reflectors are to be fully shielded with sufficient cutoff angles such that they are not visible from beyond the construction site or facility including any off-site security buffer areas
- Lighting shall emphasize the use of low-pressure sodium (LPS) or amber light-emitting diode (LED) lighting
- Lighting shall not cause excessive reflected glare and shall not illuminate the nighttime sky, except for required Federal Aviation Administration (FAA) aircraft safety lighting (which, if required, shall be an on-demand, audio-visual warning system that is triggered by radar technology)
- Creation of sky glow caused by project lighting shall be avoided
- All permanent light sources shall be below 3,500 Kelvin color temperature (warm white) and shall be full cutoff fixtures
- All security lighting is to be motion activated only through the use of passive infrared sensors and controlled as specific zones such that only targeted areas are illuminated

***Location:*** SSGP, SGTL, and SCF
***Monitoring/Reporting Action:*** Implement night lighting requirements
***Effectiveness Criteria:*** Reduce impacts of night lighting visual effects
***Responsible Party:*** Applicant and/or contractor
***Timing:*** During construction and operation

**Impact ALG-6: Long-term presence of the Project would result in landscape changes that degrade existing visual character or quality**

**MM ALG-6: Surface Treatment and Design of Project Structures and Buildings.** To the extent commercially feasible, the Applicant shall treat the surfaces of all non-temporary large Project structures and buildings visible to the public and all gen-tie structures such that: (a) their colors minimize visual intrusion and contrast by blending with (matching) the existing characteristic landscape colors; (b) their colors and finishes do not create excessive glare; and (c) their colors and finishes are consistent with local policies and ordinances. Gen-tie Line conductors shall be non-specular and non-reflective, and the insulators shall be non-reflective and non-refractive. The Applicant shall implement the following requirements:

- Carefully consider the selection of color(s) and finishes based on the characteristic landscape. Colors will be field tested using the actual distances from the KOPs to the proposed structures, using the proposed colors painted on representative surfaces.
- Color treatment shall be applied to all major Project structures and buildings; the gen-tie line towers and/or poles; and walls or fencing
- Develop a procedure to ensure proper color treatment maintenance for the life of the Project
- Minimize the number of structures and combine different activities in one structure, where possible. Use natural, self-weathering materials and chemical treatments on surfaces to reduce color contrast. Bury all or part of structures to the extent practical. Use natural appearing forms to complement the characteristic landscape. Screen the structure from view by using natural landforms and vegetation. Reduce the line contrast created by straight edges.

***Location:*** SSGP, SGTL, and SCF
***Monitoring/Reporting Action:*** Implement surface treatment requirements
***Effectiveness Criteria:*** Reduce impacts of visual intrusion and glare, and increase consistency with local policies
***Responsible Party:*** Applicant and/or contractor
***Timing:*** During construction

**AIR QUALITY**

**Impact AQ-1: Air pollutant emissions from construction and O&M**

**MM AQ-1a: Fugitive Dust Control.** Prior to the issuance of grading permits, the Applicant shall submit a Dust Control Plan to the Mojave Desert Air Quality Management District (MDAQMD), the County, and the CSLC for review and approval. The plan shall describe the fugitive dust control measures which would be implemented and monitored at all

locations of proposed project construction. The plan shall comply with the mitigation measures described in the Fugitive Dust Control Rules enforced by the MDAQMD (Rule 403), San Bernardino County Development Code sections 83.01.040 and 84.29.035, as well as the existing State Implementation Plan available for PM10 and PM2.5. The plan shall be incorporated into all contracts and contract specifications for construction work and operation of onsite activities. The plan shall outline the steps to be taken to minimize fugitive dust generated by construction and operation of onsite activities by:

- Describing each active operation that may result in the generation of fugitive dust.
- Identifying all sources of fugitive dust, e.g., earthmoving, storage piles, vehicular traffic.
- Describing the control measures to be applied to each of the sources identified. The descriptions shall be sufficiently detailed to demonstrate that the best available control measures required by air districts for solar projects are used.
- Providing the following control measures, in addition to or as listed in the applicable rules, but not limited to:
    - Manage and limit disturbance of ground surfaces from vehicle traffic, excavation, grading, vegetation removal, or other activities to lower the potential for soil detachment and reduce dust transport. Maximize the use of compaction methods rather than the removal of topsoil other than in areas where excavation or grading are required. This process referred to as mow-and-roll (agricultural land) or plate-and-roll (native vegetation) lessens the level of ground disturbance and leaves the root system in place for quicker regeneration of vegetative cover.
    - Watering will occur at a minimum of three times daily on disturbed soil areas with active operations, including maintenance and access vehicular roads and parking areas, unless dust is otherwise controlled by rainfall or use of a chemical dust palliative, gravel, asphaltic pavement, or other approved dust control measure sufficient to minimize visible fugitive dust from vehicular travel and wind erosion and comply with MDAQMD Rule 403. Actions, including sweeping sealed roads, use of stabilized construction/facility entrances, and, if needed, using one or more entrance/exit vehicle tire wash apparatuses, shall be taken to prevent project-related track-out. Any project-related track-out must be cleaned within 24 hours.
    - Water conservation may be achieved by using a non-toxic chemical dust palliative or soil weighting agent. Non-water-based soil stabilizers shall be as efficient as or more efficient for fugitive dust control than Air Resources Board (ARB)-approved soil stabilizers and shall not increase any other environmental impacts, including loss of vegetation, adverse odors, or emissions of ozone precursor reactive organic gases (ROG) or volatile organic compounds (VOC).

- Use natural vegetation to stabilize disturbed or otherwise unstable surfaces to the extent feasible.
- All clearing, grading, earth moving, and excavation activities will cease during period of winds greater than 20 miles per hour (averaged over one hour), or when dust plumes of 20 percent or greater opacity impact public roads, occupied structures, or neighboring property, and in conformance with MDAQMD regulations.
- An adequate wind barrier shall be provided where the boundary of a new commercial solar energy generation facility will be located within one-quarter mile of a primary residential structure, to reduce potentially blowing dust in the direction of the residence during construction and ongoing operation of the commercial solar energy generation facility.
- A water truck shall be used to maintain most disturbed surfaces and to actively spread water during visible dust episodes to minimize visible fugitive dust and limit emissions to 20 percent opacity in areas where grading occurs, within the staging areas, and on any unpaved roads. For projects with exposed sand or fines deposits (and for projects that expose such soils through earthmoving), chemical stabilization or covering with a stabilizing layer of gravel may be required to eliminate visible dust/sand from sand/fines deposit, if water application does not achieve stabilization. Other controls could include application of hydromulch (with seed for re-establishment of vegetation), application of soil binders, or the use of soil cement for particularly unstable areas.
- Minimize the idling time of diesel-powered construction equipment to 5 minutes, except in extreme heat events where workers require conditioned air to avoid health and safety issues.
- All trucks and equipment, including their tires, shall be washed off prior to leaving the site.
- On-site vehicle speed shall be limited to 15 miles per hour.
- The following signage shall be erected not later than the commencement of construction:
- A minimum 48-inch-high by 96-inch-wide sign containing the following information shall be located within 50 feet of each project site entrance, meeting the specified minimum text height, black text on white background, on 1-inch A/C laminated plywood board, with the lower edge between 6 and 7 feet above grade, with the contact name of a responsible official for the site and a local or toll-free number that is accessible 24 hours per day.

"Site Name" (4-inch text)

"Project Name/Project Number" (4-inch text)

IF YOU SEE DUST COMING FROM THIS PROJECT, CALL: (4-inch text)

[Contact Name]. PHONE NUMBER: XXX-XXX-XXXX (6-inch text)

IF YOU DO NOT RECEIVE A RESPONSE, PLEASE CALL the MDAQMD at 1-800-635-4617. (3-inch text)

- The Applicant or its designated representative shall obtain prior approval from the MDAQMD prior to any deviations from fugitive dust control measures specified in the approved Air Quality Construction Management Plan. A justification statement used to explain the technical and safety reason(s) for the substitute dust control measures required shall be submitted to the appropriate agency for review.
- The provisions of the Fugitive Dust Control Plan shall also apply to project decommissioning activities.

***Location:*** SSGP, SGTL, and SCF
***Monitoring/Reporting Action:*** Prepare Dust Control Plan for the Mojave Desert Air Quality Management District, the County, and the CSLC for review and approval
***Effectiveness Criteria:*** Minimize fugitive dust and reduce impacts associated with air quality
***Responsible Party:*** Applicant and/or contractor
***Timing:*** Prior to and during construction, O&M, and decommissioning

**MM AQ-1b: Control On-Site Off-Road Equipment Emissions.** The Applicant, when entering into construction contracts or when procuring off-road equipment or vehicles for on-site construction or O&M activities, shall ensure that only new model year equipment or vehicles are obtained. The following measures would be included with contract or procurement specifications:

- All construction diesel engines not registered under California Air Resources Board's Statewide Portable Equipment Registration Program, with a rating of 50 hp or higher shall meet the Tier 4 California Emission Standards for Off-Road Compression-Ignition Engines, as specified in California Code of Regulations, title 13, section 2423, subdivision (b)(1), unless a good faith effort demonstrates that such engine is not available for a particular item of equipment. In the event that a Tier 4 engine is not available for any off-road equipment larger than 50 hp, a Tier 3 engine shall be used or that equipment shall be equipped with retrofit controls to reduce exhaust emissions of nitrogen oxides (NOx) and diesel particulate matter (DPM) to no more than Tier 3 levels unless certified by the engine manufacturers that the use of such devices is not practical for specific engine types.
- All diesel-fueled engines used in the construction of the facility shall have clearly visible tags showing that the engine meets the standards of this measure.

- All equipment and trucks used in the construction or O&M of the facility shall be properly maintained and the engines tuned to the engine manufacturer's specifications.
- All diesel heavy construction equipment shall not idle for more than 5 minutes. Vehicles that need to idle as part of their normal operation (such as concrete trucks) are exempted from this requirement.

***Location:*** SSGP, SGTL, and SCF
***Monitoring/Reporting Action:*** Compliance
***Effectiveness Criteria:*** Minimize impacts associated with air quality
***Responsible Party:*** Applicant and/or contractor
***Timing:*** During construction, O&M, and decommissioning

**BIOLOGICAL RESOURCES**

**Impact BIO-1: Substantially reduce habitat for a fish or wildlife species**

**MM BIO-1a: Implement Biological Monitoring.** Monitoring to ensure conformance with conditions of approval, including effective protection and avoidance of biological resources, shall be implemented by the Applicant (Aurora Solar LLC for the Solar Generation Plant and Stagecoach Gen-tie Line and Southern California Edison (SCE) for the Calcite Facilities) as follows:

Biological Monitoring Team. During construction and decommissioning the Applicant shall employ or contract with a biological monitoring team to oversee project activities. Any activity that may impact vegetation, wildlife, and sensitive resources will be monitored to ensure compliance with all mitigation measures for biological resources. The biological monitoring team will consist of:

- **Lead Biologist:** The Applicant shall assign a Lead Biologist, approved by the California State Lands Commission (CSLC), as the primary point of contact for the CSLC and resource agencies regarding biological resources mitigation and compliance. The Lead Biologist will be under contract to the Applicant and will serve as principal point of contact to the CSLC regarding implementation and compliance with biological resources measures throughout construction, O&M, and decommissioning.
- **Biological Monitor:** Biological monitors will be overseen by the Lead Biologist and will perform any required surveys, ground disturbance and construction monitoring, wildlife monitoring, inspections, marking sensitive resource buffers, and revegetation monitoring during project activities. Biological monitors will include trained desert tortoise monitors (MM BIO-3c), nest monitors (MM BIO-3f) and other specialists as appropriate to any given measure.

- **Authorized Desert Tortoise Biologist:** For desert tortoise protection measures (MM BIO-3c), Avangrid will nominate one or more qualified individuals to serve as Authorized Desert Tortoise Biologist for the solar plant and gen-tie line, for approval by the U.S. Fish and Wildlife Service (USFWS)

The Applicant shall provide the resumes of each member of the proposed Biological Monitoring Team to the CSLC for approval prior to onset of ground-disturbing activities. Each member of The Biological Monitoring Team will have demonstrated expertise with the biological resources within the project region. Each member of the Biological Monitoring Team will have authority to halt any activities in any area if it is determined that the activity, if continued, would cause an unauthorized adverse impact to biological resources.

The duties of the Biological Monitoring Team will vary during the construction, O&M, and decommissioning phases, based on the biological monitoring tasks needed for compliance during each phase. The Biological Monitoring Team will be used mostly during construction; however, some intermittent inspections or monitoring may be needed during O&M and decommissioning. Biological monitoring during O&M will not necessitate a full team, but the Applicant will ensure all required biological monitoring and reporting (e.g., revegetation and avian mortality monitoring) are completed as specified in MMs below. During O&M, an Applicant staff member serving as compliance manager may perform the administrative duties of the Lead Biologist, by overseeing qualified Biological Monitors, to ensure compliance with biological mitigation measures, such as overseeing inspections for entrapped wildlife and fence condition, reporting dead or injured wildlife, and avoiding nesting birds. Qualifications for monitors during O&M and lead agency review of resumes will be as described above.

In general, the duties of the Lead Biologist will include, but will not be limited to:

- Regular, direct communication with representatives of the CSLC, and other agencies, as appropriate. The Lead Biologist (or, the Applicant's compliance manager during O&M) shall immediately notify the CSLC and applicable resource agencies in writing of dead or injured special-status species, or of any non-compliance with biological mitigation measures or permit conditions.
- Train and supervise Biological Monitors, including desert tortoise monitors, nest monitors, and construction monitors
- Conduct or oversee Worker Environmental Awareness Program (WEAP) training (MM BIO-1b)
- During construction and decommissioning, clearly mark and inspect sensitive biological resource areas in compliance with regulatory terms and conditions

- Oversee wildlife clearance surveys, monitoring of ground disturbance and grading, and other biological monitoring requirements. Ensure that all biological monitoring is completed properly and on schedule.
- Conduct or oversee bi-weekly compliance inspections during ground disturbing activities and communicate any remedial actions needed (i.e., trash, fence, weed maintenance; wildlife mortality) to maintain compliance with mitigation measures

Reporting. The Lead Biologist (or the Applicant's compliance manager during O&M) shall report regularly to the CSLC to document the status of compliance with biological mitigation measures.

During construction and decommissioning:

- Provide weekly verbal or written updates to the CSLC with any information pertinent to the CSLC, to resource agencies, or to state or federal permits for biological resources
- Prepare and submit monthly and annual compliance reports to include a summary of project activities that occurred, biological resources surveys and monitoring that were performed, any sensitive or noteworthy species observed, weed infestations removed, and non-compliance issues and remedial actions that were implemented

During O&M:

- Conduct quarterly compliance inspections and reporting, to be submitted to the CSLC, to document the condition of exclusion fencing, wildlife mortality, and any biological resource issues of note

***Location:*** SSGP, SGTL, and SCF
***Monitoring/Reporting Action:*** Monitoring to ensure effective protection and avoidance of biological resources.
***Effectiveness Criteria:*** Reduce impacts to wildlife and special-status species
***Responsible Party:*** Applicant and/or contractor
***Timing:*** During construction, O&M, and decommissioning phases.

**MM BIO-1b: Implement Worker Environmental Awareness Training.** To ensure worker understanding and conformance with conditions of approval, including effective protection and avoidance of biological resources, the Lead Biologist shall prepare and implement a Worker Environmental Awareness Program (WEAP) during construction, O&M, and decommissioning. The Applicant shall be responsible for ensuring that all workers at the site receive WEAP training prior to beginning work on the project and throughout construction and operations. The WEAP shall be available in English and Spanish. The Applicant shall submit the WEAP to the CSLC for approval prior to implementation. The WEAP shall:

- Be developed by or in consultation with the Lead Biologist and consist of an on-site or training center presentation with supporting written material and electronic media, including photographs of protected species, available to all participants
- Provide an explanation of the function of flagging that designates authorized work areas; specify the prohibition of soil disturbance or vehicle travel outside designated areas
- Discuss general safety protocols such as vehicle speed limits, hazardous substance spill prevention and containment measures, and fire prevention and protection measures
- Review mitigation and biological permit requirements
- Explain the sensitivity of the vegetation and habitat within and adjacent to work areas, and proper identification of these resources
- Discuss the federal and state Endangered Species Acts, Bald and Golden Eagle Protection Act, and the Migratory Bird Treaty Act and the consequences of non-compliance with these acts
- Discuss the locations and types of sensitive biological resources on the project site and adjacent areas and explain the reasons for protecting these resources
- Inform participants that no snakes, other reptiles, birds, bats, or any other wildlife will be harmed or harassed
- Place special emphasis on species that may occur on the project site and/or gen-tie lines, including special-status plants, desert tortoise, burrowing owl, golden eagle, nesting birds, desert kit fox, American badger, and burro deer
- Specify guidelines for avoiding rattlesnakes and reporting rattlesnake observations to ensure worker safety and avoid killing or injuring rattlesnakes. Wherever feasible, rattlesnakes must be safely removed from the work area using appropriate snake handling equipment, including a secure storage container for transport.
- Describe workers' responsibilities for avoiding the introduction of invasive weeds onto the project site and surrounding areas, describe the Integrated Weed Management Plan
- Provide contact information for the Lead Biologist and instructions for notification of any vehicle-wildlife collisions or dead or injured wildlife species encountered during project-related activities.
- Include a training acknowledgment form to be signed by each worker indicating that they received training and will abide by the guidelines.
- Desert Tortoise Education Requirements: Prior to the start of construction activities, a desert tortoise education program shall be presented by the Lead Biologist to all personnel who will be present on Project work areas. Following the start of

construction, any new employee shall be required to complete the tortoise education program prior to working on-site. At a minimum, the tortoise education program shall cover the following topics:

- A detailed description of the desert tortoise, including color photographs
- The distribution and general behavior of the desert tortoise
- Sensitivity of the species to human activities
- The protection the desert tortoise receives under the state and federal Endangered Species Acts, including prohibitions and penalties incurred for violation
- The protective measures being implemented to conserve the desert tortoise during construction activities
- Procedures and a point of contact if a desert tortoise is observed on-site

***Location:*** SSGP, SGTL, and SCF
***Monitoring/Reporting Action:*** Provide WEAP to CSLC staff for review and approval and evidence of training attendance
***Effectiveness Criteria:*** Reduce impacts to wildlife and special-status species
***Responsible Party:*** Applicant and/or contractor
***Timing:*** **During construction, O&M, and decommissioning phases.**

**MM BIO-1c: Minimize Impact and Protect Identified Vegetation and Habitat.** Prior to ground-disturbing activities during construction, O&M, or decommissioning, authorized work areas shall be clearly delineated. These areas shall include, but are not limited to, staging areas, access roads, and sites for temporary placement of construction materials and spoils. Delineation may be implemented with common orange vinyl “fencing” or staking to clearly identify the limits of work and shall be verified by the Lead Biologist. No paint or permanent discoloring agents shall be applied to rocks or vegetation (to indicate surveyor construction activity limits or for any other purpose). Fencing/staking shall remain in place for the duration of the ground-disturbing activity and while construction vehicles are driving on-site. Spoils shall be stockpiled in disturbed areas. All disturbances, vehicles, and equipment shall be confined to the fenced/flagged areas.

Low-Impact Site Preparation. Native vegetation will be allowed to recover from rootstocks and seed bank wherever facilities do not require permanent vegetation removal (e.g., access roads, foundations, paved areas, or fire clearance requirements) within the perimeter fenceline of the solar plant and under solar arrays. Vegetation height and density will be managed as needed for O&M and fire safety, but vegetation management will otherwise focus on maintaining habitat and soil conditions.

Upon completion of construction, O&M, or decommissioning activities in any given area, all unused materials, equipment, staking and flagging, and refuse shall be removed and

properly disposed of, including wrapping material, cables, cords, wire, boxes, rope, broken equipment parts, twine, strapping, buckets, and metal or plastic containers. Any unused or leftover hazardous products shall be properly disposed of off-site.

***Location:*** SSGP, SGTL, and SCF
***Monitoring/Reporting Action:*** Delineation of work areas to prevent disturbance of wildlife habitat
***Effectiveness Criteria:*** Reduce impacts to soils, vegetation, and root systems to protect wildlife habitat
***Responsible Party:*** Applicant and/or contractor
***Timing:*** Prior to and during construction, O&M, and decommissioning

**MM BIO-1d: Weed Management.** The Applicant shall prepare and implement an Integrated Weed Management Plan (IWMP) to minimize or prevent invasive weeds from infesting the site or spreading into surrounding habitat during construction, O&M, and decommissioning. The plan must be submitted to the CSLC staff for review and approval a minimum of 60 days prior to the start of construction activities. The IWMP shall identify weed species occurring or potentially occurring in the project area, means to prevent their introduction or spread (e.g., vehicle cleaning and inspections), monitoring methods to identify infestations, and herbicides or manual methods that may be used for control or eradication. Herbicide use shall be avoided in Environmentally Sensitive Areas (ESAs). The IWMP shall also require monthly and annual reporting during construction and decommissioning, which shall identify weeds found, the control mechanisms used, and the success of the effort. For additional details on reporting, see MM BIO-1a. The Lead Biologist shall oversee timely implementation of the IWMP and manual or chemical removal measures to control or eradicate invasive weeds.

***Location:*** SSGP, SGTL, and SCF
***Monitoring/Reporting Action:*** Prepare Integrated Weed Management Plan, and submit to the CSLC staff for review and approval.
***Effectiveness Criteria:*** Minimize non-native infestations in wildlife habitat.
***Responsible Party:*** Applicant and/or contractor
***Timing:*** Prior to construction, O&M, and decommissioning phases.

**MM BIO-1e: Revegetation.** The Applicant shall prepare and implement a Revegetation Plan, to be submitted to the CSLC staff for review and approval a minimum of 60 days prior to the start of construction activities. The Plan shall be implemented in areas temporarily impacted during construction and operation. Any additional acreage disturbed during O&M or decommissioning will also be subject to revegetation according to the terms of the Revegetation Plan. The Lead Biologist shall oversee implementation of the Revegetation Plan to meet success criteria and prevent further degradation of areas temporarily disturbed by project activities. Pre-disturbance habitat values would not be restored, but off-site compensation would offset the loss in habitat value.

The Revegetation Plan shall detail the methods to implement the following restoration/revegetation requirements.

- **Revegetation of temporarily impacted sites.** Upon completion of construction, areas that are temporarily impacted during construction will be revegetated with native desert species. The Revegetation Plan shall specify methods to prevent or minimize further site degradation; stabilize soils; maximize the likelihood of vegetation recovery over time (for areas supporting native vegetation); and minimize soil erosion, dust generation, and weed invasions. The nature of revegetation shall differ according to each disturbed area, its pre-disturbance condition, and the nature of the construction disturbance. The Revegetation Plan shall include: (a) soil preparation measures, including locations and methods of recontouring, decompacting, imprinting, or other treatments; (b) details for topsoil storage, as applicable; (c) plant material collection and acquisition guidelines, including guidelines for salvaging, storing, and handling plants from the project site, as well as obtaining replacement plants from outside the project area (plant materials shall be limited to locally occurring native species from local sources); (d) a plan drawing or schematic depicting the temporary disturbance areas (drawing of "typical" gen-tie structure sites will be appropriate); (e) time of year that the planting or seeding will occur and the methodology of the planting; (f) a description of the irrigation, if used; (g) success criteria; and (h) a monitoring program to measure the success criteria, commensurate with the Plan's goals, (i) contingency measures for failed revegetation efforts not meeting success criteria.

***Location:*** SSGP, SGTL, and SCF
***Monitoring/Reporting Action:*** Provide Revegetation Plan to CSLC staff for review and approval
***Effectiveness Criteria:*** Reduce impacts to wildlife and special-status species
***Responsible Party:*** Applicant and/or contractor
***Timing:*** **Prior to, and during construction, O&M, and decommissioning activities**

**MM BIO-1f: Protect Important Plants.** Due to the Joshua tree's California Endangered Species Act (CESA) status as a candidate for listing, and the Beaver Indian breadroot (CRPR 1B) occurrence within the proposed Calcite Facilities area, the Applicant will reduce Project effects on Joshua tree and Beaver Indian breadroot impacts through one or a combination of the following strategies. If the California Fish and Game Commission determines that Joshua tree listing is not warranted and the western Joshua tree is neither a candidate for listing nor elevated to California Rare Plant Rank (CRPR) 1B status prior to the start of solar field construction, then Joshua tree impacts would be mitigated through habitat compensation (MM BIO-1g: Compensate for Loss of Natural Habitat) and the following measures would not be required.

- **Avoidance.** Where Joshua trees or Beaver Indian breadroot exist within the project fenceline but are not within the disturbance footprint of the solar arrays or support

facilities, project site preparation and construction shall minimize impacts by minimizing or avoiding soil compaction within a radius of 10 feet (3 meters) surrounding each plant.

- **Salvage of Joshua Tree and Beaver Indian breadroot.** The Applicant shall consult with a qualified horticulture specialist regarding the success of salvage efforts for these species. If the strategy has been shown to be feasible and certain Joshua trees and/or breadroot have been judged suitable for relocation, the Applicant shall prepare and implement a Salvage and Relocation Plan (SRP) for Joshua Tree or Beaver Indian breadroot (as applicable based on presence of these plants), to be submitted to CSLC staff for review and approval at least 60 days prior to disturbance of any occupied habitat. The Applicant shall contract with a qualified entity with experience and qualifications, to salvage the Joshua trees or Beaver Indian breadroot judged suitable for relocation, and transfer them to a suitable location outside the project footprint. The Lead Biologist shall oversee implementation of the SRP. The SRP shall include methods to salvage and replant Joshua tree and breadroot specimens found on the site; define the season for salvaging the plants; specify methods for salvage, storage, and re-planting them; define locations for re-planting; and state appropriate monitoring and success criteria for the salvage work. Planting sites shall be selected in coordination with the CSLC and California Department of Fish and Wildlife (CDFW) to ensure avoidance of excessive disturbance to existing habitat. For Joshua trees, planting sites will be prioritized as follows:

    1. Temporary disturbance areas within the project site scheduled for revegetation or restoration
    2. Previously disturbed areas within suitable habitat on off-site public lands
    3. Previously disturbed areas within suitable habitat on off-site private lands
    4. Landscaping sites on public lands (e.g., public parks)
    5. Landscaping areas on private lands

- **Horticultural Propagation and Off-site Introduction.** If the CSLC, in coordination with CDFW and the Applicant, agree that salvage and relocation is not feasible for Joshua trees or Beaver Indian breadroot, then the Applicant shall consult with a qualified entity, to develop and implement an appropriate experimental propagation and relocation strategy.

***Location:*** SSGP, SGTL, and SCF
***Monitoring/Reporting Action:*** Avoidance, Salvage of Joshua Tree and Beaver Indian breadroot, and Horticultural Propagation and Off-site Introduction.
***Effectiveness Criteria:*** Reduce impacts to important plants
***Responsible Party:*** Applicant and/or contractor
***Timing:*** **Prior to and during construction**

**MM BIO-1g: Compensate for Loss of Natural Habitat.** The Applicant shall acquire and protect, in perpetuity, compensation habitat to offset loss of natural habitat. Habitat acquisition and protection may be conducted through a CDFW approved mitigation bank or another approved third party, or may be carried out by the Applicant itself. The preliminary acreages are presented in Table 4.3-1, but final acreages shall be based upon final calculation of impacted acreage for the approved project design. Acreages will be adjusted as appropriate for the approved alternative and for design modifications made after approval.

Compensation shall be provided for impacts to the following resources, at the specified ratios (acres acquired and preserved to acres impacted):

- **Desert tortoise habitat.** Suitable desert tortoise habitat is found throughout the proposed solar facility site, gen-tie route, and SCE Calcite Facilities area. Compensation for loss of this habitat shall be at a 1:1 ratio (i.e., one acre of compensation habitat of comparable quality for each acre of permanent or temporary disturbance).
- **Joshua tree woodland and Indian breadroot habitat.** Compensation shall be at a 1.5:1 ratio (i.e., 1.5 acres of occupied compensation habitat for each acre of impacted occupied habitat), and based on the acreage of occupied Joshua trees or Indian breadroot habitat lost in Project construction. Occupied habitat will be defined either according to the definition used by the CDFW Incidental Take Permit (ITP) or, if there is no ITP, as a 200-foot radius surrounding all Joshua trees or Indian breadroot plants. Compensation habitat must support the target species in densities comparable to the habitat lost during construction. If compensation habitat with comparable densities of the target plants is not available, greater acreage will be required so that sufficient habitat shall be acquired to protect 1.5 Joshua trees or Indian breadroots for each individual removed for construction. Any compensation habitat for these plants that is also suitable habitat for desert tortoise will be credited toward the overall desert tortoise habitat compensation requirement.

If any additional acreage of desert tortoise habitat or Joshua tree woodland is disturbed during O&M or decommissioning, that disturbance will also be compensated at the same ratios unless those resources are no longer considered sensitive at that time.

Criteria for the acquisition, initial protection and habitat improvement, and long-term maintenance and management of compensation lands shall include all the following: Provide habitat value that is comparable to the habitat impacted, taking into consideration soils, vegetation, topography, human-related disturbance, invasive species, wildlife movement opportunity, proximity to other protected lands, management feasibility, and other habitat values. Mitigation may be “nested” or “layered,” to the extent that it meets habitat requirements for multiple species that will or may be impacted by the Project.

The Applicant shall provide funding or bonding for the acquisition in fee title or in easement, initial habitat improvements and long-term maintenance and management of the compensation lands prior to construction activities on native habitat. Within 18 months of completing construction, the Applicant or an approved third party shall prepare a compensation plan, identifying the proposed mitigation bank or compensation lands, and specifying the land ownership, conservation easement terms, long-term management, and responsibility for funding or endowment. The compensation plan shall be submitted for review and approval to the CSLC. The CSLC shall consult with CDFW and USFWS to ensure that the mitigation will support any permits and authorizations to be issued by either agency.

***Location:*** SSGP, SGTL, and SCF
***Monitoring/Reporting Action:*** Acquire compensation habitat, and compensation plan submitted for review and approval to the CSLC.
***Effectiveness Criteria:*** Offset permanent and long-term impacts to desert tortoise and Joshua tree habitat
***Responsible Party:*** CDFW approved mitigation bank, or Applicant
***Timing:*** Prior to and during construction

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|---|---|
| **Impact BIO-3:** | **Substantially affect state fully protected wildlife species, state or federally listed threatened or endangered wildlife, California Species of Special Concern, or state ranked S1, S2, or S3 special-status wildlife by causing take or degrading occupied habitat or designated critical habitat, or substantially reduce the number or restrict the range of a listed species or cause the local population to drop below self-sustaining levels** |

**MM BIO-3a: Protect Wildlife Resources.** The Applicant shall undertake the following measures to avoid or minimize impacts to wildlife during construction, O&M, and decommissioning. The Lead Biologist shall oversee implementation of all measures, which are subject to review and approval by the CSLC.

- *Wildlife avoidance.* Project activities shall minimize interference with wildlife (include ground-dwelling species, birds, bats) by allowing animals to escape from a work site prior to disturbance; conducting pre-construction surveys and exclusion measures for certain species as specified in other measures.
- *Avoid use of toxic substances.* Soil bonding and weighting agents used for dust suppression on unpaved surfaces shall be non-toxic to wildlife and plants.
- *Water*. Potable and non-potable water sources such as tanks, ponds, and pipes shall be covered or otherwise secured to prevent animals (including birds) from entering. Prevention methods may include storing water within closed tanks or covering open tanks with 2 centimeter netting, unless local fire policy states otherwise. Dust abatement shall use the minimum amount of water on dirt roads and construction

areas to meet safety and air quality standards. Water sources (e.g., hydrants, tanks, etc.) shall be managed to prevent puddles or ponding and periodic inspection should occur by biological monitors.

- *Trash*. All trash and food-related waste shall be contained in vehicles or covered trash containers inaccessible to ravens, coyotes, or other wildlife and removed from the site regularly.
- *Workers.* Workers shall not feed wildlife or bring pets, except for Americans With Disabilities Act (ADA) compliance animals, to the Project site. Except for law enforcement personnel, no workers or visitors to the site shall bring firearms or weapons.
- *Wildlife netting or exclusion fencing.* The Applicant may install temporary or permanent netting or fencing around equipment, work areas, or Project facilities to prevent wildlife exposure to hazards such as toxic materials, vehicle strikes, or to prevent birds from nesting on equipment or facilities. Bird deterrent netting shall be maintained free of holes and shall be deployed and secured on the equipment in a manner that, insofar as possible, prevents wildlife from becoming trapped inside the netted area or within the excess netting. If bird deterrents are installed, the biological monitor shall inspect netting twice daily, at the beginning and close of each workday. The biological monitor shall inspect exclusion fence (if installed) weekly.
- *Wildlife entrapment.* Project-related excavations shall be secured to prevent wildlife entry and entrapment. Holes and trenches shall be backfilled, securely covered, or fenced. Excavations that cannot be fully secured shall incorporate wildlife ramp or other means to allow trapped animals to escape. At the end of each workday, a biological monitor shall ensure that excavations have been secured or provided with appropriate means for wildlife escape. Biological monitors shall periodically inspect areas with high vehicle activity (e.g., roads, parking lots) for animals in harm's way and relocate them if necessary.
- *All pipes or other construction materials or supplies* shall be covered or capped in storage or laydown areas to prevent bird or other wildlife entry into pipes. No pipes or tubing will be left open either temporarily or permanently, except during use or installation. Any construction pipe, culvert, or other hollow materials shall be inspected for wildlife before it is moved, buried, or capped.
- *Dead or injured wildlife* shall be reported to USFWS (for federally listed species and migratory birds) and CDFW (for State listed species or other special-status wildlife) and/or the local animal control agency (for other wildlife species), as appropriate, by the Lead Biologist (or the Applicant's compliance manager during O&M). For special-status species or injured animals, reporting will be as soon as possible and no longer than 24 hours of discovery. For common species, reporting may be delayed until the next regular workday. For migratory birds, reporting will be as above or in accordance with an applicable USFWS Special Purpose Utility Permit. The carcass shall be

safely moved out of the road or work area and removed for disposal or preserved as directed by the agency. If an animal is entrapped, a biological monitor or compliance manager shall free the animal if feasible, or work with construction crews to free it, in compliance with safety requirements, or work with animal control or CDFW to resolve the situation.

- *Pest control.* No anticoagulant rodenticides, such as Warfarin and related compounds (indandiones and hydroxycoumarins), may be used within the project site, on off-site project facilities and activities, or in support of any other project activities.

***Location:*** SSGP, SGTL, and SCF
***Monitoring/Reporting Action:*** Implement measures to avoid or minimize impacts to wildlife during construction, O&M, and decommissioning. Measures are subject to review and approval by the CSLC
***Effectiveness Criteria:*** Reduce impacts to wildlife and special-status species
***Responsible Party:*** Applicant and/or contractor
***Timing:*** During construction, O&M, and decommissioning activities

**MM BIO-3b: Relocate Special-status Wildlife Species.** The Applicant shall prepare and implement a wildlife relocation plan to ensure that special-status wildlife species, including desert tortoise, burrowing owl, American badger, and desert kit fox, are safely avoided or relocated off the Project site prior to and during construction.

The Lead Biologist shall oversee implementation of the plan. The wildlife relocation plan shall conform to USFWS guidelines (USFWS 2020) for desert tortoise surveys, avoidance, and relocation, and CDFW staff guidance for burrowing owl, American badger, and desert kit fox passive relocation, including scheduling to avoid disturbance to natal dens or burrows.

The wildlife relocation plan will specify methodologies for pre-construction wildlife clearance surveys on the proposed solar fields and gen-tie routes; monitoring or tracking special-status species, burrows, or dens that may be located during the surveys; construction of off-site artificial burrows if needed; avoidance to allow for wildlife to safely move out of harm's way, or methods for localized "out of harm's way"; desert tortoise relocation; passive relocation methods for burrowing owl or desert kit fox; qualifications of field personnel who may handle desert tortoises; and follow-up monitoring of translocated animals.

The wildlife relocation plan shall specify detailed methods for passive relocation of burrowing owls, including construction of replacement burrows on land controlled by the Applicant if needed, and monitoring and management of the passive relocation including a three-year monitoring program.

The plan shall include protocols for communication with CDFW and USFWS for any relocations that may be needed during O&M.

The Plan must be reviewed and approved by the CSLC, USFWS, and CDFW at least 90 days prior to the start of ground-disturbing activities.

***Location:*** SSGP, SGTL, and SCF
***Monitoring/Reporting Action:*** Prepare and implement Wildlife Relocation Plan in accordance with USFWS and CDFW guidelines
***Effectiveness Criteria:*** Avoid direct mortality and reduce impacts to special-status wildlife species
***Responsible Party:*** Applicant
***Timing:*** Prior to and during construction

**MM BIO-3c: Protect Desert Tortoise.** No desert tortoise may be handled or relocated without authorization from USFWS and CDFW. The Applicant shall obtain incidental take authorization from both agencies to address any potential take of desert tortoise, including authorization to handle or translocate desert tortoise. Desert tortoises would be handled or translocated according to a wildlife relocation plan, to be prepared as specified in MM BIO-3b (Relocate Special-status Wildlife Species), pending approval by both agencies.

Authorized Personnel Roles and Titles. As defined in MM BIO-1a, Avangrid shall designate a USFWS Authorized Biologist to implement the desert tortoise protection measures. The Authorized Biologist may (or may not) also serve as the project's Lead Biologist.

The Applicant shall employ one or more desert tortoise monitors who are qualified to conduct desert tortoise clearance surveys and who will be on-site during all construction. The desert tortoise monitors' qualifications will be subject to review and approval by the CSLC. Qualifications may include work as a compliance monitor on a project in desert tortoise habitat, work on desert tortoise trend plot or transect surveys, conducting surveys for desert tortoise, or other research or field work on desert tortoise. Attendance at a training course endorsed by the agencies (e.g., Desert Tortoise Council tortoise training workshop) is a supporting qualification.

The Authorized Biologist or Lead Biologist shall direct one or more desert tortoise monitors to conduct pre-construction clearance surveys for each work area, watch for tortoises wandering into the construction areas, check under vehicles, and examine excavations and other potential pitfalls for entrapped animals.

The Authorized Biologist or Lead Biologist will be responsible for overseeing compliance with desert tortoise protective measures and for coordination with resource agencies. The Authorized Biologist and Lead Biologist will have the authority to halt any Project activities that may risk take of a desert tortoise or that may be inconsistent with adopted mitigation measures or permit conditions. Neither the Authorized Biologist nor any other project employee or contractor may bar or limit any communications between CSLC, CDFW, or USFWS staff and any project biologist, biological monitor, or contracted biologist. Upon notification by the desert tortoise monitor or another biological monitor of any

noncompliance the Authorized Biologist or Lead Biologist shall ensure that appropriate corrective action is taken.

Actions to Protect Desert Tortoise. The Applicant shall be responsible for implementing the following requirements, under direction of the Lead Biologist.

- *Preconstruction Clearance Survey.* Transects will be spaced 15 feet apart. Clearance will be considered complete after two successive 100 percent coverage surveys have been conducted without finding any desert tortoises. Clearance surveys must be conducted during the active season for desert tortoises (April through May or September through October). If a tortoise or an occupied tortoise burrow is located during clearance surveys, work activities will proceed only at the site and within a suitable buffer area after the tortoise has either moved away of its own accord, or if it has been translocated off the site under authorization by the USFWS and CDFW.
- *Tortoise exclusion fencing.* Prior to construction of solar and substation facilities, desert tortoise exclusion fencing or an effective border with below ground footing shall be installed around the solar facility and substation, and maintained throughout the life of the project. The fence shall adhere to USFWS design guidelines, where applicable. The Authorized Biologist or Lead Biologist shall oversee a clearance survey within the tortoise fence to ensure no tortoises are in the fenced area according to USFWS pre-construction survey protocol (USFWS 2009). Any potentially occupied burrows shall be avoided until monitoring or field observations (e.g., with a motion-activated camera or fiber-optic mounted video camera) determines absence. If live tortoises or an occupied tortoise burrow are identified in the work area, tortoises shall be relocated under authorization by USFWS and CDFW or allowed to leave on their own accord before enclosing the fence. Once installed, exclusion fencing shall be inspected at least monthly and within 24 to 48 hours following all substantial rain events (i.e., rainfall that causes surface flow in washes that cross the fenceline), and corrective action taken if needed to maintain it. Fencing around each work area shall include a “cattle guard” or desert tortoise exclusion gate at each entry point. This gate shall remain closed, except when vehicles are entering or leaving the project area. If deemed necessary to leave the gate open for extended periods of time (e.g., during high traffic periods), the gate may be left open as long as a desert tortoise monitor is present to observe tortoise activity in the vicinity.
- *Work Within Unfenced Areas.* Any work conducted in an area that is not fenced to exclude desert tortoises (i.e., gen-tie work areas) must be monitored at all times by a desert tortoise monitor who will stop work if a tortoise enters the work area. Work activities will proceed only at the site and within a suitable buffer area after the tortoise has either moved away of its own accord, or if it has been translocated off-site under authorization by the USFWS and CDFW. Work sites with potential hazards to desert tortoise (e.g., auger holes, steep-sided depressions, trenches) that are outside of the desert tortoise exclusion fencing shall be covered, fenced by installing

exclusionary fencing, or not left unfilled overnight. Makeshift ramps may be placed in holes to allow wildlife to escape.

- *Lucerne Valley Cutoff Monitoring and Avoidance.* Beginning when exclusion fencing is installed along Lucerne Valley Cutoff and continuing through the life of the project, Biological Monitors shall inspect the area between the fencelines to identify and relocate (if needed) any desert tortoise that may be within the narrow area and at risk of road mortality.
- *Inspect for Tortoises Under Vehicles.* During construction, O&M, and decommissioning the ground beneath vehicles parked outside of desert tortoise exclusion fencing shall be inspected immediately prior to the vehicle being moved. If a tortoise is found beneath a vehicle, the vehicle shall not be moved until the desert tortoise leaves of its own accord.
- *Protect Tortoises on Roads.* During construction and O&M, speed limits of 15 mph would be enforced. If a tortoise is observed on or near access roads or work and maintenance areas, vehicles shall stop to allow the tortoise to move away from the road on its own.
- *Stop Work After Tortoise Observations.* During construction, O&M, and decommissioning, any time a tortoise is observed within or near a work or maintenance site, Project work activities may proceed at the site and within a suitable buffer area only after the tortoise has either moved away of its own accord, or if it has been translocated off the site under authorization by the USFWS and CDFW. If a tortoise is observed outside of exclusion fencing, construction shall stop, and the tortoise shall be allowed to move out of the area on its own. If a tortoise or tortoise burrow is observed within the exclusion fencing, construction in the vicinity shall stop, pending translocation of the tortoise or other action as authorized by USFWS and CDFW.
- *Dead or Injured Specimens.* Upon locating a dead or injured tortoise, the Applicant or its agent shall immediately notify the Palm Springs or Ventura Fish and Wildlife Office by telephone within three days of the finding. Written notification to USFWS must be made within five days of the finding. The information provided must include the date and time of the finding or incident (if known), location of the carcass or injured animal, a photograph, cause of death, if known, and other pertinent information.
- *Conditions Requiring Cessation of Work.* The Authorized Biologist and Lead Biologist shall have the authority to halt all Project activities that are in violation of mitigation measures or that may result in take of a desert tortoise. The following incidents will require immediate cessation of any Project activities that could harm a desert tortoise: (1) location of a desert tortoise within a work area; (2) imminent threat of injury or death to a desert tortoise; (3) unauthorized handling of a desert tortoise, regardless of intent; (4) operation of construction equipment or vehicles outside a Project area cleared of desert tortoise, except on designated roads; and (5) conducting any construction activity without a biological monitor where one is required.

***Location:*** SSGP, SGTL, and SCF
***Monitoring/Reporting Action:*** Desert tortoise pre-construction clearance surveys, compliance monitoring, inspections, and relocation
***Effectiveness Criteria:*** Avoid direct impacts to desert tortoise
***Responsible Party:*** Applicant
***Timing:*** Prior to and during construction

**MM BIO-3d: Protect Desert Kit Fox and American Badger.** This measure supplements MM-BIO-3b (Wildlife Relocation) by specifying further protective measures regarding desert kit fox and American badger.

Relocation. Under direction of the Lead Biologist, biological monitors shall conduct pre-construction surveys for desert kit fox and American badger no more than 30 days prior to initiation of construction activities. Surveys shall also consider the potential presence of dens within 100 feet of the project boundary (including utility corridors and access roads) and shall be performed for each phase of construction if the Project is constructed in phases. If dens are detected each den shall then be further classified as inactive, potentially active, or definitely active. Inactive dens directly impacted by construction activities shall be excavated by hand and backfilled to prevent reuse. Potentially active dens directly impacted by construction activities shall be monitored by the Biological Monitor for three consecutive nights using a tracking medium such as diatomaceous medium or fire clay and/or infrared camera stations at the entrance. If no tracks are observed in the tracking medium or no photos of the target species are captured after three nights, the den shall be excavated and backfilled by hand. If tracks are observed, dens shall be fitted with the one-way trap doors to encourage animals to move off-site. After 48 hours post installation, the den shall be excavated by hand and collapsed. Dens shall be collapsed prior to construction of the perimeter fence, to allow animals the opportunity to move off-site without impediment. If an active natal den is detected on the site, the CDFW shall be contacted within 24 hours. The course of action would depend on the age of the pups, location of the den site, status of the perimeter fence, and the pending construction activities proposed near the den. A 50 foot no disturbance buffer shall be maintained within the project boundary around all potential dens. A 100-foot no disturbance buffer is required around known dens. Buffers around natal dens would be identified in coordination with CDFW. Alternatively, a designated biologist authorized by CDFW shall trap and remove animals from occupied dens and move them off-site into appropriate habitat.

Minimize Likelihood of Transmitting Distemper. Additionally, the following measures are required to minimize the likelihood of distemper transmission:

- Any kit fox hazing activities that include the use of animal repellents such as coyote urine must be cleared through the CDFW prior to use

- Any documented kit fox mortality shall be reported to the CDFW by the Lead Biologist within 24 hours of identification. If a dead kit fox is observed, it shall be retained and protected from scavengers to the maximum extent practicable until the CDFW determines if the collection of necropsy samples is justified.

***Location:*** SSGP, SGTL, and SCF
***Monitoring/Reporting Action:*** Pre-construction clearance surveys, compliance monitoring, inspections, and relocation
***Effectiveness Criteria:*** Avoid direct impacts to desert kit fox and American Badger
***Responsible Party:*** Applicant
***Timing:*** Prior to and during construction

**MM BIO-3e: Avoid Effects on Burrowing Owl.** Burrowing owl protection and relocation shall incorporate the following requirements:

- Pre-construction surveys for burrowing owls, possible burrows, and sign of owls (e.g., pellets, feathers, white wash) shall be conducted throughout each work area no more than 14 days prior to construction
- Should any of the pre-construction surveys identify burrowing owl or active burrows within the solar facility, the Lead Biologist will coordinate with the Construction Contractor to implement avoidance and set-back distances. Disturbance of owls or occupied burrows during the breeding season (February 1 through August 31) will not be permitted.
- Any unoccupied suitable burrows within the project disturbance footprint shall be excavated and filled in under the supervision of the Lead Biologist prior to site preparation
- See also MM BIO-3b regarding burrowing owls, as discussed in the wildlife relocation plan

***Location:*** SSGP, SGTL, and SCF
***Monitoring/Reporting Action:*** Pre-construction clearance surveys, compliance monitoring, inspections, and avoidance of nesting season
***Effectiveness Criteria:*** Avoid direct impacts to burrowing owl
***Responsible Party:*** Applicant
***Timing:*** Prior to and during construction

**MM BIO-3f: Bird and Bat Protection.** The Applicant will prepare and implement the following two documents to define and minimize potential impacts to protected birds and bats. Both documents must be reviewed and approved by CSLC staff prior to any vegetation clearing or ground disturbing activities.

**1. Bird and Bat Conservation Strategy (BBCS).** The Applicant shall prepare and implement a BBCS to avoid or minimize take of protected birds or special-status bats that

may nest on the site or may be vulnerable to collision with project components. The Lead Biologist shall oversee implementation of the BBCS. The BBCS shall identify potential hazards to birds during construction, O&M, and decommissioning phases of the project and specify measures to recognize, minimize, or avoid those hazards. The BBCS shall articulate the Applicant's commitments to reduce risk to birds and bats. Over the course of construction and O&M, progress and challenges that are encountered may necessitate review or revision of the BBCS, on mutual agreement among the Applicant and the CSLC.

The goals of the BBCS are to:

- Provide an organized and cost-effective framework for compliance with state and federal laws and policies protecting birds and special-status bats
- Specify record keeping, reporting, and communication procedures to document compliance
- Foster a sense of stewardship with the Applicant and on-site staff

*Mortality Monitoring and Adaptive Management.* The BBCS shall specify monitoring and conservation measures to be implemented by the Applicant to document bird or special-status bat mortality that may result from bird injury or mortality caused by collision with project components, including gen-tie line collisions. The BBCS shall include:

- A statement of the Applicant's understanding of the importance of bird and bat safety and management's commitment to remain in compliance with relevant laws
- Documentation of conservation measures to be implemented through design and operations to minimize bird and bat fatalities at the solar plant and gen-tie line
- Consistent, practical and up-to-date direction to O&M staff on how to avoid, reduce, and monitor bird and bat fatalities
- A 2 year O&M monitoring and reporting program for potential bird and bat fatalities
- Identification of fatality thresholds that, if surpassed, would trigger adaptive management measures such as changes to Project O&M
- An adaptive management framework to be applied if thresholds are surpassed

**2. Nesting Bird Management Plan.** The Applicant shall prepare and implement a Nesting Bird Management Plan, to include nest surveys, avoidance and protection measures, and a reporting schedule. The project will either avoid vegetation clearing during the nesting season, or conduct pre-construction nest surveys of potential habitat and implement no-disturbance buffer areas around active nests.

Pre-activity surveys for active nests will be conducted by one or more biological monitors at the direction of the Lead Biologist. The biologists' qualifications will be subject to review and approval by the CSLC. Nest surveys shall be conducted for all project activities

throughout the nesting season, identified here as beginning January 1 for raptors and hummingbirds and February 1 for other species, and continuing through August 15.

Nest surveys shall be completed at each work site no more than 7 days prior to initiation of site preparation or construction activities. Nest surveys shall cover all work sites, including the solar facility, substation, and gen-tie, and adjacent off-site habitat areas equivalent to the final NBMP buffer distances (or 1,200 feet for raptors and 250 feet for other species). If adjacent properties are not accessible to the field biologists, the off-site nest surveys may be conducted with binoculars. Any changes to survey areas will be determined in coordination with CDFW and USFWS through the NBMP.

The NBMP may identify species-specific buffer distances or variable distances, depending on activity levels (e.g., driving past the nest to access work sites may be less disruptive than foundation construction). At each active nest, a biological monitor will establish and mark a buffer area surrounding the nest, as outlined in the NBMP. Construction activities that could disrupt nesting behavior will be excluded within the buffer area. If buffers are not defined in the NBMP, buffer distances shall be 1,200 feet for most raptor (non-eagle) nests and 250 feet for most other species (including American kestrel). For golden eagles, a one-mile buffer around active nests shall be maintained per USFWS nest buffer guidelines (USFWS 2021). The golden eagle buffer may be reduced in coordination with USFWS when the nest is not in use or activities are not in line-of-sight of the nest. Any changes to buffer distances from the NBMP will be determined in coordination with CDFW and USFWS.

The extent of nest protection shall be based on proposed construction activities, species, human activities already underway when the nest is initiated (e.g., a house finch nest built in the eaves of an occupied structure would warrant less avoidance or protection than a loggerhead shrike nest build in native shrubland), topography, vegetation cover, and other factors. The avoidance and protection measures shall remain in effect until the nest is no longer active.

If for any reason a bird nest must be removed during the nesting season, the Applicant or its agent shall notify the CDFW and USFWS and retain written documentation of the correspondence. Nests will be removed only if they are inactive, or if an active nest presents a hazard to work activities, as defined in the NBMP.

***Location:*** SSGP, SGTL, and SCF
***Monitoring/Reporting Action:*** Prepare and implement a BBCS, and would identify adaptive management measures
***Effectiveness Criteria:*** Avoid direct impacts to birds and bat
***Responsible Party:*** Applicant
***Timing:*** Prior to and during construction

**MM BIO-3g: Implement Protective Designs for Collector Line and Gen-tie Lines.** Gen-tie line support structures and other facility structures shall be designed in compliance with current APLIC (2006, 2012) standards and practices to discourage their use by raptors for perching or nesting (e.g., by use of anti-perching devices) in high use areas. This design would also reduce the potential for increased predation of special-status species, such as the desert tortoise.

The following measures shall be implemented to minimize collision and electrocution:

- Mechanisms to visually warn birds (permanent markers or bird flight diverters) shall be placed on gen-tie lines at regular intervals in high risk areas to prevent birds from colliding with the lines
- To the extent practicable, the use of guy wires shall be avoided because they pose a collision hazard for birds and bats. Necessary guy wires shall be clearly marked with bird flight diverters to reduce the probability of collision.
- Shield wires shall be marked with devices that have been scientifically tested and found to significantly reduce the potential for bird collisions
- Gen-tie lines shall maintain sufficient distance between all conductors and grounded components to prevent potential for electrocution of the largest birds that may occur in the area (e.g., golden eagle and turkey vulture)

***Location:*** SSGP, SGTL, and SCF
***Monitoring/Reporting Action:*** Implement designs in compliance with current APLIC standards to minimize collision and electrocution hazard
***Effectiveness Criteria:*** Avoid direct impacts to large birds
***Responsible Party:*** Applicant
***Timing:*** Prior to construction

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| **Impact BIO-7:** | **Substantially impact jurisdictional wetlands or waters of the U.S. or waters of the State such that ecological structure or function of jurisdictional features in the vicinity of the project would be substantially affected** |

**MM BIO-7a: Protect Streambeds and Watersheds.** At least 60 days prior to the start of ground-disturbing activities or O&M activities in jurisdictional waters of the State, the Applicant shall obtain a Lake and Streambed Alteration Agreement from the CDFW and applicable authorization from the Colorado River Regional Water Quality Control Board.

The Applicant shall implement the following Best Management Practices (BMPs) to minimize adverse impacts to streambeds and watersheds.

- During construction and O&M, vehicles and equipment shall not be operated in ponded or flowing water except as specified by resource agencies

- The Applicant shall minimize road building, construction activities, and vegetation clearing within ephemeral drainages to the extent feasible
- The Applicant shall prevent water containing mud, silt, or other pollutants from grading or other activities from entering ephemeral drainages or being placed in locations that may be subjected to high storm flows
- Spoil sites shall not be located within 30 feet from the boundaries of drainages or in locations that may be subjected to high storm flows, where spoils might be washed back into drainages
- Raw cement/concrete or washings thereof, asphalt, paint or other coating material, oil or other petroleum products, or any other substances that could be hazardous to vegetation or wildlife resources, resulting from Project-related activities, shall be prevented from contaminating the soil and/or entering ephemeral drainages. The Applicant shall ensure that safety precautions specified by this measure, as well as all other safety requirements of other measures and permit conditions are followed during all phases of the Project.
- When operations are completed, any excess materials or debris shall be removed from the work area. No rubbish shall be deposited within 150 feet of the high-water mark of any drainage during construction, operation, and decommissioning the Project.
- No equipment maintenance shall occur within 150 feet of any category 3, 4, or 5 streambed or any streambed greater than 10 feet wide and no petroleum products or other pollutants from the equipment shall be allowed to enter these areas or enter any off-site State-jurisdictional waters under any flow.
- With the exception of the drainage control system installed for the Project, the installation of bridges, culverts, or other structures will be such that water flow (velocity and low flow channel width) is not impaired. Bottoms of temporary culverts will be placed at or below stream channel grade.
- No broken concrete, debris, soil, silt, sand, bark, slash, sawdust, rubbish, or other organic or earthen material from any construction, maintenance, or associated activity of whatever nature will be allowed to enter into, or be placed where it may be washed by rainfall or runoff into, off-site State-jurisdictional waters
- During construction and O&M, stationary equipment such as motors, pumps, generators, and welders located within or adjacent to a drainage will be positioned over drip pans. Stationary heavy equipment will have suitable containment to handle a catastrophic spill/leak. Clean up equipment such as brooms, absorbent pads, and skimmers will be on-site prior to the start of construction.

***Location:*** SSGP, SGTL, and SCF
***Monitoring/Reporting Action:*** Obtain a Lake and Streambed Alteration Agreement from the CDFW and authorization from the Colorado River Regional Water Quality Control Board, and implement Best Management Practices
***Effectiveness Criteria:*** Minimize adverse impacts to streambeds and watersheds
***Responsible Party:*** Applicant
***Timing:*** Prior to and during construction

## CULTURAL RESOURCES

**Impact CUL-1: The Project could cause a substantial adverse change in the significance of a historical resource pursuant to State CEQA Guidelines, § 15064.5**

**MM CUL-1a: Retain a Cultural Resources Specialist.** Prior to the start of construction, the Applicant shall propose a Cultural Resources Specialist (CRS) to manage and direct implementation of all cultural resources requirements during construction. The CRS shall have training and background that conforms to the U.S. Secretary of Interior's Professional Qualifications Standards, as published in Title 36, Code of Federal Regulations, part 61 (36 C.F.R., part 61). The CRS shall be retained by the Applicant to supervise monitoring of construction excavations and to prepare the project's Cultural Resources Management Plan (see MM CUL-1b) for the approved project. The CRS shall be an archaeologist with demonstrated prior experience in the southern California desert and previous experience working with southern California Tribal Nations. A copy of the CRS' qualifications shall be provided to the CSLC for review and approval at least 60 days before the start of construction.

***Location:*** SSGP, SGTL, and SCF
***Monitoring/Reporting Action:*** Retain a CSLC-approved CRS to supervise monitoring and prepare a Cultural Resources Management Plan
***Effectiveness Criteria:*** Reduce adverse impacts to Cultural Resources
***Responsible Party:*** Applicant
***Timing:*** Prior to and during construction

**MM CUL-1b: Prepare and Implement a Cultural Resources Monitoring Plan.** Prior to start of construction, the Applicant shall develop a Cultural Resource Monitoring Plan (CRMP) that addresses the details of all activities and provides procedures that must be followed in order to reduce the impacts to cultural and historic resources to a level that is less than significant as well as address potential impacts to undiscovered buried archaeological resources and Tribal cultural resources associated with the approved Project. Specifics requirements of the CRMP are:

- The CRMP shall be provided to the CSLC and the SMBMI representative for review and approval at least 60 days before the start of construction

- The CRMP shall incorporate the results of preconstruction geoarchaeological testing including any project-related design or route changes that would successfully result in resource avoidance. Based on the geoarchaeological test results, the CRMP shall define the level of archaeological monitoring that is recommended.
- The CRMP shall specify the level of tribal participation in monitoring, the qualifications for archaeological monitors, the handling of discoveries, and the process for evaluating unanticipated resources (as defined in MM CUL-1e)

The CRMP shall include provisions for treatment of cultural resources that are Native American in nature consistent with MM TCR-1b (Treatment of Cultural Resources; see Section 4.5, *Cultural Resources – Tribal)*

***Location:*** SSGP, SGTL, and SCF
***Monitoring/Reporting Action:*** Prepare a Cultural Resource Monitoring Plan to be approved by the CSLC and the San Manuel Band of Mission Indians
***Effectiveness Criteria:*** Reduce adverse impacts to Cultural Resources
***Responsible Party:*** Applicant
***Timing:*** Prior to construction

**MM CUL-1c: Develop and Implement Cultural Resources Environmental Awareness Training.** Prior to ground disturbance, the CSLC-approved CRS will provide Cultural Sensitivity Training for all construction personnel. Training shall include a brief review of the cultural sensitivity of the Project and the surrounding area; what resources could potentially be identified during earthmoving activities; the protocols that apply in the event unanticipated cultural resources are identified, including who to contact and appropriate avoidance measures until the find(s) can be properly evaluated; and any other appropriate protocols. This is a mandatory training, and all construction personnel must attend prior to beginning work on the project site. A copy of the agreement and a copy of the sign in sheet shall be kept ensuring compliance with this mitigation measure.

***Location:*** SSGP, SGTL, and SCF
***Monitoring/Reporting Action:*** CSLC-approved CRS will provide Cultural Sensitivity Training
***Effectiveness Criteria:*** Reduce adverse impacts to Cultural Resources
***Responsible Party:*** Applicant
***Timing:*** Prior to construction

**MM CUL-1d: Archaeological Monitoring.** Due to the heightened cultural sensitivity of the proposed project area, one or more California State Lands Commission staff-approved archaeological monitors with at least 3 years of regional experience in archaeology, shall be present for all ground-disturbing activities that occur within the proposed Project area (which includes, but is not limited to, tree/shrub removal and planting, clearing/grubbing, grading, excavation, trenching, compaction, fence/gate removal and installation, drainage

and irrigation removal and installation, hardscape installation [benches, signage, boulders, walls, seat walls, fountains, etc.], and archaeological work). A sufficient number of archaeological monitors, under the direction of the CRS, shall be present each workday to ensure that simultaneously occurring ground disturbing activities receive appropriate levels of monitoring coverage, as defined in the CRMP (MM CUL-1b) and in MM TCR-1a (Tribal Monitoring) in Section 4.5, Cultural – Tribal Resources. The archaeological monitor(s) shall complete daily monitoring forms. The archaeological monitor(s), in coordination with the CRS, will have the authority to increase or decrease the monitoring effort should the monitoring results indicate that a change is warranted.

***Location:*** SSGP, SGTL, and SCF
***Monitoring/Reporting Action:*** One or more CSLC-approved archaeological monitor(s) present during ground-disturbing activities, and prepare daily monitoring forms
***Effectiveness Criteria:*** Reduce adverse impacts to Cultural Resources
***Responsible Party:*** Applicant
***Timing:*** Prior to and during construction

**MM CUL-1e: Unanticipated Discoveries.** If construction personnel unearth Tribal cultural resources, or precontact or historic-period archaeological resources during Project implementation, all Project activities within 100 feet will halt until the CRS or an approved archaeological monitor determines the significance of the discovery. Precontact archaeological materials/Tribal cultural resources might include lithic scatters, ceramic scatters, quarries, habitation sites, temporary camps/rock rings, ceremonial sites, and trails. Historic period materials may include structural remnants (such as cement foundations), historic era objects (such as bottles and cans), and sites (such as refuse deposits or scatters).

After stopping Project activities, the approved archaeologist will determine impacts, significance, and mitigation in consultation with local Native American representatives. If the resource is a Tribal Cultural Resource, substantial adverse changes to this resource shall be avoided or minimized following the measures identified in Public Resources Code section 21084.3, subdivision (b), if feasible, unless other equally or more effective measures are mutually agreed on by CSLC, the archaeologist, and the interested local Native American representative(s).

A treatment plan, if needed to address a find, shall be developed cooperatively by the archaeologist and, for Tribal cultural resources, the interested local Native American representative(s). The plan will be submitted to the appropriate tribal representatives and CSLC staff for review, input, and concurrence prior to its implementation.

Protection in place of Tribal cultural resources shall be prioritized, if feasible; if the archaeologist or Tribal representative determines that damaging effects on the cultural Tribal cultural resource can be avoided in place, then work in the area may resume

provided the area of the find is clearly marked for no disturbance. If avoidance in place of tribal cultural resources is infeasible, the treatment plan shall include measures that place priority on Tribal self-determination over collection and curation, including the option to repatriate (rebury) materials nearby at a location of their choosing, and to transfer possession/ownership to the culturally affiliated Tribe.

Title to all archaeological sites, historical or cultural resources, and Tribal cultural resources on State-owned school lands is vested in the state and under CSLC jurisdiction. The final disposition of archaeological, historical, and Tribal cultural resources recovered on state lands under CSLC jurisdiction must be approved by the CSLC.

***Location:*** SSGP, SGTL, and SCF
***Monitoring/Reporting Action:*** CRS and Tribal Monitor to evaluate any unknown archaeological resource exposed during construction activities
***Effectiveness Criteria:*** Reduce adverse impacts to Cultural Resources
***Responsible Party:*** Applicant
***Timing:*** Prior to and during construction

**MM CUL-1f: Monitoring Report.** Within 6 months of completing construction, a Cultural Resources Monitoring Report shall be submitted to the CSLC. The report shall include 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.

***Location:*** SSGP, SGTL, and SCF
***Monitoring/Reporting Action:*** Prepare a Cultural Resources Monitoring Report for CSLC after construction is completed
***Effectiveness Criteria:*** Reduce adverse impacts to Cultural Resources
***Responsible Party:*** Applicant
***Timing:*** After construction

**MM CUL-1g: Avoidance of Environmentally Sensitive Area.** SCE shall protect site 3380 13, plus a 200-foot buffer, by installing exclusion fencing or other visible markings and labeling the site as an Environmentally Sensitive Area. The Applicant shall ensure that this site is not affected by any construction activity.

***Location:*** SCF
***Monitoring/Reporting Action:*** Install exclusion fencing for ESAs
***Effectiveness Criteria:*** Reduce adverse impacts to Cultural Resources
***Responsible Party:*** Applicant
***Timing:*** During construction

**Impact CUL-3: The Project could disturb human remains, including those interred outside of formal cemeteries**

**MM CUL-3: Treatment of Human Remains.** In accordance with state law (Health & Saf. Code, § 7050.5; Pub. Resources Code, § 5097.98), if human remains are found, all ground disturbing activities shall halt within 165 feet (50 meters) of the discovery and an Environmentally Sensitive Area (ESA) physical demarcation/barrier constructed. The on-site lead/foreman/CRS shall then immediately (within 24 hours) notify the County Coroner and the CSLC. No further excavation or disturbance within the ESA or any nearby area reasonably suspected to overlie potential remains shall occur until the County Coroner has determined whether the remains are subject to his or her authority. The County Coroner must make this determination within 2 working days of notification of the discovery (pursuant to Health & Saf. Code, § 7050.5, subd. (b)). If the County Coroner determines that the remains do not require an assessment of cause of death and that the remains are, or are believed to be Native American, the Coroner must notify the Native American Heritage Commission (NAHC) by telephone within 24 hours, which must in turn immediately notify those persons it believes to be the Most Likely Descendant (MLD) of the deceased Native American. The MLD shall be allowed to (1) inspect the site of the discovery and (2) make determinations as to how the human remains and funerary objects shall be treated and disposed of with appropriate dignity. The MLD, CSLC, and other landowner if applicable, agree to discuss in good faith what constitutes “appropriate dignity” as that term is used in the applicable statutes. The MLD shall complete their inspection and make recommendations within forty-eight (48) hours of the site visit, as required by California Public Resources Code section 5097.98.

Reburial of human remains and/or funerary objects (those artifacts associated with any human remains or funerary rites) shall be accomplished in compliance with California Public Resources Code section 5097.98, subdivisions (a) and (b). The MLD, in consultation with the landowner, shall make the final discretionary determination regarding the appropriate disposition and treatment of human remains and funerary objects. All parties are aware that the MLD may wish to rebury the human remains and associated funerary objects on or near the site of their discovery, in an area that shall not be subject to future subsurface disturbances. On-site reburial in a mutually agreed on location shall be accommodated as much as feasible.

It is understood by all Parties that revealing the location of a site of any reburial of Native American human remains or cultural artifacts would endanger the remains or artifacts to vandalism and looting. Maintaining the confidentiality of such information helps respect and preserve reburials and artifacts. Accordingly, public agencies should withhold from public disclosure information related to such reburials or artifacts, pursuant to the specific exemption set forth in California Government Code section 6254, subdivision (r).

***Location:*** SSGP, SGTL, and SCF
***Monitoring/Reporting Action:*** Compliance with state law if human remains are found
***Effectiveness Criteria:*** Reduce adverse impacts to Cultural Resources
***Responsible Party:*** Applicant
***Timing:*** During construction

**CULTURAL RESOURCES – TRIBAL**

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| **Impact TCR-1:** | **Change the Significance of a Tribal Cultural Resource, as defined in Public Resources Code section 21074, that is either eligible for or listed in the California Register of Historical Resources (CRHR) or in a local register or is determined by the lead agency to be significant.** |

**MM TCR-1a: Tribal Monitoring**. Due to the heightened cultural sensitivity of the proposed project area, Tribal monitors representing the San Manuel Band of Mission Indians shall be present for all ground-disturbing activities that occur within the proposed project area (which includes, but is not limited to, tree/shrub removal and planting, clearing/grubbing, grading, excavation, trenching, compaction, fence/gate removal and installation, drainage and irrigation removal and installation, hardscape installation [benches, signage, boulders, walls, seat walls, fountains, etc.], and archaeological work). A sufficient number of Tribal monitors shall be present each work day to ensure that simultaneously occurring ground disturbing activities receive thorough levels of monitoring coverage.

***Location:*** SSGP, SGTL, and SCF
***Monitoring/Reporting Action:*** Presence of tribal monitors present on site for all ground-disturbing activities.
***Effectiveness Criteria:*** Reduce adverse impacts to Tribal Cultural Resources
***Responsible Party:*** Applicant
***Timing:*** During ground disturbing activities

**MM TCR-1b: Treatment of Cultural Resources.** If a pre-contact cultural resource is discovered during archaeological testing or during construction, the discovery shall be properly recorded and then reburied *in situ.* The Cultural Resources Management Plan (defined in MM CUL-1b) shall include a research design developed by the Cultural Resources Specialist (CRS) that shall include a plan to evaluate the resource for significance under CEQA criteria. Representatives from the San Manuel Band of Mission Indians Cultural Resources Department (SMBMI), the CRS, and the CSLC shall confer regarding the research design, as well as any testing efforts needed to delineate the resource boundary.

Following the completion of evaluation efforts, all parties shall confer regarding the archaeological significance of the resource, its potential as a Tribal Cultural Resource (TCR), avoidance (or other appropriate treatment) of the discovered resource

If avoidance of any significant resource and/or TCR is not feasible and the removal of the resource is necessary to mitigate impacts, then a data recovery plan will be developed by the CRS in coordination with the SMBMI and CSLC. The data recovery plan will include a research design and a comprehensive discussion of sampling strategies, resource processing, analysis, and reporting protocols/obligations. Removal of any cultural resource(s) shall be conducted with the presence of a Tribal monitor representing the Tribe, unless otherwise decided by SMBMI. The data recovery plan must be reviewed and approved by the applicant, CSLC, and SMBMI prior to implementation, and all removed materials will be temporarily curated on-site.

It is the preference of SMBMI that removed cultural material be reburied as close to the original find location as possible. However, should reburial within/near the original find location during project implementation not be feasible, then a reburial location for future reburial shall be decided upon by SMBMI, the landowner, and the Lead Agency, and all finds shall be reburied within this location. Additionally, in this case, reburial shall not occur until all ground-disturbing activities associated with the project have been completed, all monitoring has ceased, all cataloguing and basic recordation of cultural resources have been completed, and a final monitoring report has been issued to Lead Agency, California Historical Resources Information System (CHRIS), and SMBMI. All reburials are subject to a reburial agreement that shall be developed between the landowner and SMBMI outlining the determined reburial process/location, and shall include measures and provisions to protect the reburial area from any future impacts (vis a vis project plans, conservation/preservation easements, etc.).

Should it occur that avoidance, preservation in place, and on-site reburial are not an option for treatment, the landowner shall relinquish all ownership and rights to this material and confer with SMBMI to identify an American Association of Museums (AAM)-accredited facility within the County that can accession the materials into their permanent collections and provide for the proper care of these objects in accordance with the 1993 CA Curation Guidelines. A curation agreement with an appropriate qualified repository shall be developed between the landowner and museum that legally and physically transfers the collections and associated records to the facility. This agreement shall stipulate the payment of fees necessary for permanent curation of the collections and associated records and the obligation of the Project developer/applicant to pay for those fees.

All draft records/reports containing the significance and treatment findings and data recovery results shall be prepared by the archaeologist and submitted to the Lead Agency and SMBMI for their review and comment. After approval from all parties, the final reports and site/isolate records are to be submitted to the local CHRIS Information Center, the Lead Agency, and SMBMI.

***Location:*** SSGP, SGTL, and SCF
***Monitoring/Reporting Action:*** Evaluate any resource found under CEQA guidelines, and if reburial is not possible, then a data recovery plan will be developed by the CRS in coordination with the SMBMI and CSLC.
***Effectiveness Criteria:*** Reduce impacts to Tribal Cultural Resources
***Responsible Party:*** Applicant
***Timing:*** During and after construction

## GEOLOGY AND SOILS

**Impact GEO-5: Construction and operation of the Project could trigger or accelerate soil erosion**

**MM GEO-5: Prepare Desert Pavement Assessment.** The Applicant shall complete a site-specific desert pavement assessment, prepared by a qualified geologist or other qualified specialist. The assessment shall identify and map desert pavement within and adjacent to project construction impact areas. Based on the mapping, the plan shall include options for avoidance, minimized disturbance of, and/or protection of desert pavement, to the extent feasible. These design changes shall be incorporated into the Project design. The desert pavement assessment and any modifications to the Project design based on the assessment shall be submitted to the CSLC for review and approval at least 60 days prior to start of construction.

***Location:*** SSGP and SGTL
***Monitoring/Reporting Action:*** Prepare a desert pavement assessment by a qualified geologist/specialist to be reviewed by CSLC
***Effectiveness Criteria:*** Reduce impacts due to disturbance of desert pavement
***Responsible Party:*** Applicant
***Timing:*** Prior to construction

**Impact GEO-7: Unsuitable soils result in damage to project structures**

**MM GEO-7: Assess Unsuitable Soils.** The project-specific geotechnical investigation(s) shall include evaluation of expansive and corrosive soils underlying Project components and if necessary, develop recommendations to protect project structures from expansive or corrosive soil conditions. If expansive soils are identified, geotechnical recommendations to mitigate potential problems from expansive soils could include over-excavation and replacement with non-expansive fill, ground treatment processes, or redirection of surface water and drainage away from components underlain by expansive soils. If corrosive soils are identified, geotechnical design recommendations for the protection of steel reinforcement, concrete, and buried metal structural components could include use of corrosion resistant materials and coatings, increased thickness of project components exposed to corrosive soils, or use of passive or active cathodic protection systems. The

geotechnical recommendations shall be incorporated in the final project design to reduce impacts related to expansive or corrosive soils. The geotechnical investigation report and project plans with any modifications made based on geotechnical recommendations should be submitted to CSLC for review 60 days prior to the start of construction.

***Location:*** SSGP, SGTL, and SCF
***Monitoring/Reporting Action:*** Prepare and submit to CSLC a geotechnical investigation, and incorporate findings into project plans
***Effectiveness Criteria:*** Avoid project components being damaged by unsuitable soils
***Responsible Party:*** Applicant
***Timing:*** Prior to construction

## HAZARDS AND HAZARDOUS MATERIALS

**Impact HAZ-1: Spill or release of hazardous materials occurs during construction, operation, or maintenance of the project**

**MM HAZ-1: Hazardous Materials Training and Management Plan.** Prior to approval of final construction plans, a Project-specific Hazardous Materials Training and Management Plan shall be prepared for the construction phase of the Project to ensure that accidental spills, leaks or mishandling of hazardous materials does not result in contamination of soil or water. The plan is subject to CSLC approval, and shall include the following information related to hazardous materials, as applicable:

- Hazardous Material Storage and Disposal Procedures. A list of the hazardous materials that will be present onsite during construction, including information regarding their storage, use, and transportation requirements. A description of the waste management and disposal procedures for any hazardous materials that will be used or generated during construction. Hazardous materials shall not be stored near drainages or waterways.
- Training. The plan shall also include procedures for training and communication to minimize the potential exposure of the public and site workers to potential hazardous materials during all phases of construction. This would include training on hazardous material protocols and best management practices (BMPs). All project personnel shall be provided with project-specific training to ensure that all hazardous materials and wastes associated with the project are handled in a safe and environmentally sound manner and disposed of according to applicable rules and regulations.
- Emergency Release Response Procedures. The Plan shall include emergency response procedures in the event of a release of hazardous materials. The Plan must prescribe hazardous materials handling procedures for reducing the potential for a spill during construction and would include an emergency response program to ensure quick and safe cleanup of accidental spills. A list of spill response materials and the locations of such materials at the Project site during construction shall be

included. All construction personnel, including environmental monitors, would be made aware of state and federal emergency response reporting guidelines for accidental spills.

- Fueling and Maintenance of Construction Equipment. Written procedures for fueling and maintenance of construction equipment shall be included in the Plan. Refueling and maintenance procedures may require vehicles and equipment to be refueled on site or by tanker trucks. Procedures will require the use of drop cloths made of plastic, drip pans and trays to be placed under refilling areas to ensure that chemicals do not come into contact with the ground. Equipment would be inspected daily for potential leakage or failures. Fueling shall not take place within 200 feet of drainages or waterways with flowing water or within 75 feet of drainages or waterways that are dry.

The Hazardous Material Training and Management Plan shall be submitted to the CSLC 60 days prior to the start of construction for review, comment, and approval.

***Location:*** SSGP, SGTL, and SCF
***Monitoring/Reporting Action:*** Prepare Hazardous Materials Training and Management Plan, subject to CSLC approval
***Effectiveness Criteria:*** Reduce impacts related to waste disposal
***Responsible Party:*** Applicant
***Timing:*** Prior to and during construction

**Impact HAZ-2: Encountering unexploded ordnance or military munitions and explosives of concern (UXO or MEC)**

**MM HAZ-2: Unexploded Ordnance (UXO) Identification, Training and Reporting Plan.** A project-specific UXO Identification, Training and Reporting Plan shall be prepared and implemented to properly train all site workers in the recognition, avoidance and reporting of military waste, munitions debris, and ordnance, and provide guidelines for identification and removal of UXO or munition and explosives of concern (MEC) by trained experts. The Plan shall contain, at a minimum, the following:

- Identification of areas of ground disturbance where UXO, MEC, or munitions debris may be encountered that may require additional ordnance surveys prior to construction. Identification of these areas and additional surveys shall be conducted by an UXO or another approved expert.
- A description of the training program and materials, and the qualifications of the training program preparer and training personnel
- Notification and avoidance requirements when potential UXO, MEC, or munitions debris are noted by site workers
- Identification of available trained experts that will respond to notification of discovery of any UXO, MEC, or munitions debris (unexploded or not)

- Work plan to recover and remove discovered ordnance or munitions debris, and complete additional field screening, possibly including geophysical surveys to investigate adjacent areas for surface, near surface or buried ordnance in all proposed land disturbance areas

The UXO Identification, Training and Reporting Plan shall be submitted to the CSLC 60 days prior to the start of construction for review, comment, and approval.

***Location:*** SSGP and SGTL
***Monitoring/Reporting Action:*** Prepare and implement UXO Identification, Training and Reporting Plan, submitted to the CSLC for review and approval
***Effectiveness Criteria:*** Avoid and remove UXOs to reduce impacts
***Responsible Party:*** Applicant
***Timing:*** Prior to and during construction

**Impact HAZ-3: Unknown environmental contamination could be encountered during construction**

**MM HAZ-3a: Aerially Deposited Lead Testing Program.** Prior to Project construction an Aerially Deposited Lead (ADL) soil testing program will be prepared and conducted to determine the presence and extent of ADL contaminated soils along and adjacent to Lucerne Valley Cutoff and SR-247 in areas where Project related ground disturbance would occur. If ADL contaminated soil is identified the Applicant shall coordinate with the Department of Toxic Substance Control (DTSC) to determine appropriate handling, treatment, and disposal of any ADL contaminated soil.

The ADL Testing Program shall be submitted to the CSLC and Hazardous Materials Division of the San Bernardino County Fire Department 60 days prior to the start of construction for review, comment, and approval.

***Location:*** SSGP, SGTL, and SCF
***Monitoring/Reporting Action:*** Prepare and conduct an ADL soil testing program, and coordinate with the DTSC if contaminated soil is found, and submit to the CSLC and Hazardous Materials Division of the San Bernardino County Fire Department for review and approval
***Effectiveness Criteria:*** Reduce impacts related to encountering ADL contaminated soil
***Responsible Party:*** Applicant
***Timing:*** Prior to construction

**MM HAZ-3b: Soil and Groundwater Management Plan.** The Contractor shall prepare a Soil and Groundwater Management Plan that outlines how Proposed Project construction crews would identify, handle, and dispose of previously unidentified potentially contaminated soil and groundwater. Due to the potential for unknown contamination, the plan shall include the following requirements:

- Identify the anticipated field screening methods and appropriate regulatory limits to be applied to determine proper handling and disposal of excavated soil spoils
- Any suspect soil already excavated shall be segregated, and work will stop in the subject area until sampling and testing is done to determine appropriate treatment and disposal
- Although dewatering during construction is unlikely, any water produced by dewatering shall be tested prior to disposal, which would be in accordance with all applicable regulations
- Include requirements for documenting and reporting incidents of encountered contaminants, such as documenting locations of occurrence, sampling results, and reporting actions taken to dispose of contaminated materials. The Contractor shall immediately notify the Hazardous Materials Division of the San Bernardino County Fire Department and the CSLC in the event of encountering contaminated soil or groundwater. A weekly report listing encounters with contaminated soils and describing actions taken shall be submitted to the CSLC and the County Fire Department.

The Soil and Groundwater Management Plan shall be submitted to the CSLC and Hazardous Materials Diversion of the San Bernardino County Fire Department 60 days prior to the start of construction for review, comment, and approval.

***Location:*** SSGP, SGTL, and SCF
***Monitoring/Reporting Action:*** Prepare a Soil and Groundwater Management Plan, subject to review and approval by CSLC and Hazardous Materials Division of the San Bernardino County Fire Department
***Effectiveness Criteria:*** Reduce impacts related to potential unknown contamination
***Responsible Party:*** Applicant
***Timing:*** Prior to construction

**Impact HAZ-5: Gen-tie line could cause interference with radio, television, communications, or electronic equipment**

**MM HAZ-5a: Limit the Conductor Surface Gradient.** As part of the design and construction process for the Stagecoach Gen-tie Line, the Applicant shall limit the conductor surface gradient in accordance with the Institute of Electrical and Electronic Engineers Radio Noise Design Guide.

***Location:*** SGTL
***Monitoring/Reporting Action:*** Comply with design limits on construction surface gradient
***Effectiveness Criteria:*** Reduce impacts due to corona discharges and addressing loose connections

***Responsible Party:*** Applicant
***Timing:*** Prior to construction

**MM HAZ-5b: Document and Resolve Electronic Interference Complaints.** After energizing the Stagecoach Gen-tie Line, the Applicant shall respond to, document, and resolve radio, television, and electronic equipment interference complaints received. These records shall be made available to the CSLC for review upon request. All unresolved disputes shall be referred by the Applicant to the CSLC for resolution.

***Location:*** SGTL
***Monitoring/Reporting Action:*** Document and resolve complaints related to electronic interference, and provide records to the CSLC upon request
***Effectiveness Criteria:*** Reduce impacts related to electronic interference
***Responsible Party:*** Applicant
***Timing:*** Prior to, and during construction and operation

**MM HAZ-5c: Implement Grounding Measures.** As part of the final siting and construction process for the Stagecoach Gen-tie Line, the Applicant shall identify objects (such as metal fences, metal buildings, and metal pipelines) within and near the right-of-way that have the potential for induced voltages and shall implement electrical grounding of metallic objects in accordance with the industry standards (e.g., IEEE 1048-2016 – IEEE Guide for Protective Grounding of Power Lines) (IEEE 2016). The identification of objects shall document the threshold electric field strength and metallic object size at which grounding becomes necessary.

***Location:*** SGTL
***Monitoring/Reporting Action:*** Identify objects within and near the right-of-way (ROW) that have the potential for induced voltages
***Effectiveness Criteria:*** Reduce impacts related to induced voltage
***Responsible Party:*** Applicant
***Timing:*** Prior to construction

**Issue HAZ-6: Electric and Magnetic Fields would be increased with presence of the Stagecoach Gen-tie Line**

Best Management Practice

**Best Management Practice EMF-1, Low-Cost EMF Reduction:** The Applicant shall implement the provisions of California Public Utilities Commission (CPUC) Decision 06-01-042 (CPUC 2006), focusing on reduction of magnetic field where the gen-tie line is closest to existing residences. In these areas, the tower height could be increased, or the conductor phases modified, with the goal being a magnetic field reduction of at least 15 percent in areas where residences are located adjacent to the ROW. The cost of these

practices would be capped at 4 percent of total gen-tie cost, unless the CSLC determines that a higher expenditure is appropriate.

## HYDROLOGY AND WATER QUALITY

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| **Impact HWQ-2:** | **The Proposed Project would substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level** |

Cumulative Impact Mitigation:

**MM HWQ-2: Prepare & Implement Groundwater Monitoring and Reporting Plan.** Prior to issuance of an operational well construction permit, a Groundwater Monitoring and Reporting Plan shall be prepared by an Agency-approved California professional geologist or certified hydrogeologist and submitted to the CSLC and MWA for review and approval. The purpose of the Plan is to detect a potential decline in groundwater levels in the Project area because Project water use during operation may contribute to this decline. The Plan shall define a methodology for monitoring groundwater levels. The purpose of monitoring is to establish pre-operation groundwater level, and to monitor changes in groundwater level and groundwater quality during the Project life.

The Plan shall define installation of a discharge meter on the Project well and recording of production on at least a monthly basis. Monitoring of the Project well shall be performed prior to its regular operation for a sufficient time to allow for collection of baseline groundwater level and water quality. Water level monitoring shall be performed and documented monthly for at least one year and quarterly thereafter. Monitoring shall be conducted consistent with California Statewide Groundwater Elevation Monitoring (CASGEM) Program procedures (CDWR 2010). Available information on groundwater levels for all wells within one mile of the State lease boundary shall be obtained at least annually from MWA and from California Department of Water Resources (CDWR) and U.S. Geological Survey (USGS) websites.

The Plan shall include identification of all water supply wells within one mile of the State lease boundary. It shall also include coordination with MWA for provision of monitoring data including development of a schedule for submittal of annual monitoring data reports by the Applicant to MWA. During the first 5 years of project operation, annual water level monitoring data reports shall be submitted to MWA for review and approval. At a minimum, these annual reports shall include:

- Quarterly usage, quarterly range, and quarterly average of water usage
- Total water used on a quarterly and annual basis in acre-feet
- Summary of all water level data

- Identification of trends that indicate potential for off-site wells within one mile of the Project well to experience deterioration of water level

Based on the results of annual trend analyses during the first 5 years of Project operation, the Applicant and MWA shall determine if a water level decline (drawdown) of 5 feet or more below the baseline (pre-operation) level has occurred. If water level decline of 5 feet or more is found, and the MWA determines that Project groundwater use is attributable for all or part of this decline, the Applicant shall immediately reduce groundwater pumping to levels approved by the MWA until water levels stabilize or recover. Alternatively, the Applicant may reach out to other well owners within one mile of the Lease boundary to provide compensation to well owners commensurate with the Project's contribution to local water level decline, as determined in conjunction with the MWA. Compensation may include reimbursement of increased energy costs, deepening the well (if appropriate/ feasible) or pump setting, or development of a new well.

After the first 5 years of project operation, the Applicant and MWA shall jointly evaluate the effectiveness of the Groundwater Monitoring and Reporting Plan and recommend to the Commission whether it is appropriate that monitoring frequencies or procedures be revised or eliminated.

***Location:*** SSGP, SGTL, and SCF
***Monitoring/Reporting Action:*** Prepare a Groundwater Monitoring and Reporting Plan, subject to CSLC and MWA for review and approval
***Effectiveness Criteria:*** Reduce impacts related to groundwater availability and prevent a decline in groundwater levels
***Responsible Party:*** Applicant
***Timing:*** Prior to construction

**Impact HWQ-3: The Proposed Project would substantially alter existing drainage patterns by altering the course of a waterway or through the addition of impervious surfaces, allowing substantial erosion, siltation, increased surface runoff on- or off-site, or affecting flood flows**

**MM HWQ-3: Drainage Plan Development.** At least 60 days before site mobilization, the Applicant shall submit a Drainage Plan for review and approval to the CSLC and the County of San Bernardino. The Drainage Plan shall address management of stormwater flow during Project construction and operation, and shall contain the following components:

- An assessment of runoff discharges, floodplains, and flood depths entering and passing through the property under conditions both with and without the Project
- Measures to avoid erosion damage that may result from concentration of flows, including consideration of providing dedicated entryways for incoming flood flows, collection and conveyance channels, and/or fence design that does not obstruct flows

- Consideration of potential flood, erosion, and siltation that could occur on or adjacent to the Project site, by identifying off-site flow concentration points, discharges, and flood depths and widths, and ensuring that flow patterns entering and exiting the site are not altered in a manner that would induce erosion and siltation
- Demonstration that during and after Project construction, existing drainage patterns will not be disturbed, and runoff will not be increased to the extent that either adjacent properties or Project components (substation, O&M building, or battery energy storage system [BESS]) would be adversely affected by erosion or flooding

***Location:*** SSGP and SCF
***Monitoring/Reporting Action:*** Prepare a Drainage Plan, subject to CSLC and County of San Bernardino for review and approval
***Effectiveness Criteria:*** Reduce impacts due to drainage or runoff
***Responsible Party:*** Applicant
***Timing:*** Prior to construction

## NOISE AND VIBRATION

**Impact NOI-1: Construction and operation noise levels in excess of applicable community noise standards**

**MM NOI-1a: Construction Restrictions.** Construction Restrictions. Heavy equipment operation relating to any Project features shall be restricted to the hours between 7:00 a.m. and 7:00 p.m. on Monday through Saturday, and not allowed on Sundays or federal holidays, unless a special approval has been granted by the County of San Bernardino.

***Location:*** SSGP, SGTL, and SCF
***Monitoring/Reporting Action:*** Comply with heavy equipment restrictions
***Effectiveness Criteria:*** Reduce impacts due to construction noise
***Responsible Party:*** Applicant
***Timing:*** During construction, O&M, and operation

**MM NOI-1b: Public Notification Process.** At least 15 days prior to the start of ground disturbance, the Project owner shall notify all residents within 1 mile of the Project site and the linear facilities, by mail or by other effective means, of the commencement of Project construction. Notification materials shall identify a mechanism for residents to register complaints with the appropriate jurisdiction if construction noise levels are overly intrusive or construction occurs outside the permitted hours. Recommendations to assist noise-sensitive land uses in reducing interior noise levels (e.g., closing windows and doors) shall be included in the notification. At the same time, the Project owner shall establish a telephone number for use by the public to report any undesirable noise conditions associated with the construction and operation of the Project. If the telephone is not staffed 24 hours a day, the Project owner shall include an automatic answering feature, with date

and time stamp recording, to answer calls when the phone is unattended. This telephone number shall be posted at the Project site during construction where it is visible to passersby. This telephone number shall be maintained until the Project has been commercially operational for at least one year.

***Location:*** SSGP, SGTL, and SCF
***Monitoring/Reporting Action:*** Notify residents near the project of commencement of construction with directions about how to register a complaint
***Effectiveness Criteria:*** Reduce impacts due to construction noise
***Responsible Party:*** Applicant
***Timing:*** Prior to construction

**MM NOI-1c: Noise Complaint Process.** Throughout construction and operation of the Project, the Project owner shall document, investigate, evaluate, and attempt to resolve all Project-related noise complaints. The Project owner or authorized agent shall be responsible for responding to any complaints about construction activities. The disturbance coordinator shall receive all public complaints about construction disturbances and be responsible for determining the cause of the complaint and implementation of feasible measures to be taken to alleviate the problem.

***Location:*** SSGP, SGTL, and SCF
***Monitoring/Reporting Action:*** Document, investigate, evaluate and attempt to resolve noise-related complaints
***Effectiveness Criteria:*** Reduce impacts due to construction noise
***Responsible Party:*** Applicant
***Timing:*** During construction and O&M

**MM NOI-1d: Operational Noise Performance Standard.** The Project design and implementation shall include appropriate noise control features adequate to ensure that the operation of the Project will not cause the noise levels due to plant operation alone to exceed 45 dBA Leq measured at a property boundary of any inhabited dwelling [County Development Code Chapter 83.01.080(c)]. All step-up transformers and power inverters, and air handling units associated with the energy storage system shall be located, enclosed, or shielded, if necessary, to meet this standard. No new pure-tone components shall be caused by the power inverters or transformers associated with the Project. No single piece of equipment shall be allowed to stand out as a source of noise that draws legitimate complaints. To achieve this standard, the final Project design in site plans shall avoid placing stationary sources of noise within 1,000 feet of residential property boundaries. If the final design of the Project includes any stationary source of noise, including the battery energy storage system, heating, ventilation and air conditioners, inverters, or transformers within 1,000 feet of a residential property boundary, then a final noise study shall be submitted to the satisfaction of the appropriate jurisdiction demonstrating that noise will not exceed 45 dBA Leq at nearby property boundaries of any inhabited dwelling.

***Location:*** SSGP and SCF
***Monitoring/Reporting Action:*** Design project to include appropriate noise control
***Effectiveness Criteria:*** Reduce impacts due to construction noise
***Responsible Party:*** Applicant
***Timing:*** Prior to construction

## PALEONTOLOGICAL RESOURCES

**Impact PAL-1: The Proposed Project could destroy a unique paleontological resource or site**

**MM PAL-1a: Paleontological Worker Environmental Awareness Program.** A County of San Bernardino qualified professional paleontologist shall be retained by the project prior to beginning construction. They shall have an advanced degree (Masters or higher) in geology, paleontology, biology or related disciplines (exclusive of archaeology). Additionally, they shall have at least 5 years professional experience with paleontological (not including cultural) resources, including the collection, identification and curation of the resources (County of San Bernardino Development Code § 82.20.040).

The qualified professional paleontologist shall prepare a Paleontological Worker Environmental Awareness Program (WEAP training shall be provided for all staff who will be onsite during excavations. The WEAP shall show what local Pleistocene fossils look like in general, where they may appear in the project, and how to proceed should material suspected to be a fossil is encountered. If COVID-19 protocols are in place, a digital presentation which workers may view on their phones is recommended.

***Location:*** SSGP, SGTL, and SCF
***Monitoring/Reporting Action:*** Choose a County of San Bernardino qualified Paleontologist who will Prepare a WEAP and provide training for all staff who will be on site during excavations
***Effectiveness Criteria:*** Reduce impacts to paleontological resources
***Responsible Party:*** Applicant and/or contractor
***Timing:*** Prior to construction

**MM PAL-1b: Unanticipated Fossil Discovery.** Should fossils be encountered, construction work within 25 feet of the find(s) shall be halted and directed away from the discovery until the qualified professional paleontologist (defined in MM PAL-1a) can be contacted and come to the site to assess the significance of the resource. Where warranted, fossils will be excavated or otherwise recovered. Field data forms shall be used to record pertinent geologic data, stratigraphic sections shall be measured, and appropriate sediment samples will be collected and submitted for analysis from each fossil locality. Recovered fossils shall be prepared to the point of curation, identified by qualified experts, listed in a database to facilitate analysis, and deposited in a County of San Bernardino designated

paleontological curation facility. Reporting shall be to CEQA standards (County of San Bernardino Development Code § 82.20.030).

***Location:*** SSGP, SGTL, and SCF
***Monitoring/Reporting Action:*** Comply with guidelines if an unanticipated fossil is discovered
***Effectiveness Criteria:*** Reduce impacts to paleontological resources
***Responsible Party:*** Applicant and/or contractor
***Timing:*** During construction

## TRAFFIC AND TRANSPORTATION

**Impact TRA-1: Project traffic volumes, or temporary road or travel lane closures, would substantially affect the circulation system**

**MM TRA-1: Construction Traffic Control Plan.** Prior to the start of construction, the Applicant shall submit a Construction Traffic Control Plan (CTCP) for review and approval by the CSLC, Caltrans, and San Bernardino County. The CTCP shall address all roads that would be directly affected by the construction activities or would require permits and approvals. The CTCP shall include consideration of the specific contents defined below, as applicable to each component of the Proposed Project. The components defined herein may be modified based on agency consultation and on the final construction schedule and staffing levels.

Stagecoach Solar Generation Plant:

- Employ a licensed Traffic Engineer to study the need for temporary intersection improvements at the intersections of SR 18/SR 247 and SR 247/Lucerne Valley Cutoff Road during project construction to improve safety and traffic flow, especially for vehicles turning left from northbound SR 247 onto Lucerne Valley Cutoff Road, but also considering vehicles turning right from southbound SR 247. The study shall be completed at least 90 days before the start of construction and shall be consistent with all Caltrans methodologies for determining roadway safety. The study shall be completed in coordination with Caltrans. Improvements studied shall include, but not be limited to:
    - Temporary four-way stop light at SR 18/SR 247 sequenced to facilitate efficient turning movements consistent with project worker commute shifts
    - Temporary three-way stop light at SR 247/Lucerne Valley Cutoff Road sequenced to facilitate turning movements consistent with project worker commute shifts
- Employ a licensed Traffic Engineer to study the need for and design of a paved transition zone and paved apron on Lucerne Valley Cutoff Road where it connects with SR 247. The purpose of this is to ensure safe vehicle ingress/egress at this

intersection, and to allow for adequate speed and acceleration when transitioning to/from SR 247. The assessment shall be done consistent with all Caltrans and San Bernardino County Department of Public Works (or other) methodologies for determining roadway safety and include coordination with, and approval by, Caltrans and San Bernardino County. This assessment shall be completed by the Applicant at least 90 days before the start of construction and shall be reviewed and approved by Caltrans and the County at least 30 days before construction.

- The Applicant shall implement all recommendations made by Caltrans and San Bernardino County as a result of the two studies identified above
- The Applicant shall install signage along Lucerne Valley Cutoff Road at appropriate intervals notifying drivers of the presence of construction traffic on those roadways
- If Lucerne Valley Cutoff Road is not paved, place steel shaker plates west of the entrance to SR 247 to reduce the potential for gravel, dirt, and debris to be deposited on SR 247
- The Applicant shall consult with the California Highway Patrol (CHP) to evaluate the potential safety benefit resulting from increased CHP patrol of SR 18 between I 15 and SR 247 and on SR 247 between SR 18 and Lucerne Valley Cutoff Road during at least the 12-month period of most intense construction activity. The consultation shall consider the potential cost and value of the Applicant paying for additional patrols and shall be documented in a letter to the CSLC, Caltrans, and the County. If determined by the CHP, Caltrans, and County to be beneficial, the precise number and timing of additional patrols shall be defined in consideration of the potential safety impacts presented by construction traffic.

For the Stagecoach Gen-tie Line, the CTCP shall include:

- The locations of all road or traffic lane segments that would be temporarily closed or disrupted due to construction activities
- The locations where guard poles, netting, or similar means to protect transportation facilities for any construction, conductor, or communication line installation work, may require an overhead crossing of a local street or highway
- Provisions for ensuring that detours enable safe movement of pedestrians and bicycles through all public roadways and/or sidewalk facilities temporarily closed or disrupted
- Applicable to All Components (Stagecoach Solar Generation Plant, Stagecoach Gen-tie Line, and SCE Calcite Facilities) – the Applicant shall:
- Provide written notification to all property owners and tenants at properties affected by access restrictions to inform them about the timing and duration of obstructions and to arrange for alternative access if necessary. Initial notification defining the start of construction and the anticipated length of construction shall be included in the

public notices defined in MM NOI-1b (Public Notification Process). Additional notices shall be provided if conditions or schedules change, at least one week prior to any change or road closures.

- Stagger shifts for construction workers to spread associated traffic over longer times in the morning and evening to improve traffic flow and safety challenges resulting from all workers having the same starting and ending times
- Restrict non-worker construction trips, to the maximum extent feasible, to outside the hours of 7:00 9:00 a.m. and 4:00 6:00 p.m. to increase safety and traffic flow through Apple Valley and Lucerne Valley during peak construction commuter hours.
- Coordinate with the Cities of Victorville, Apple Valley, and Barstow to identify locations for park-and-ride carpooling lots within their communities and establish project-supported buses or vanpools from these locations. The purpose of this measure is to increase safety and maintain traffic flow by decreasing the number of trips on rural roadway segments that have low baseline traffic volumes.
- Use flaggers, warning signs, lights, barricades, delineators, cones, arrow boards, etc., at key locations according to standard guidelines outlined in the Manual on Uniform Traffic Control Devices (FHWA 2021), the Standard Specifications for Public Works Construction (SFPUC 2021), and/or the California Manual on Uniform Traffic Control (Caltrans 2021) to ensure safe site ingress/egress and use of public roadways
- Implement a public outreach campaign (signage, direct mail, website, recorded telephone update line, newspaper notices, etc.) to notify the public of construction traffic routes and construction duration
- Install signage placed along the east and west shoulders of SR 247 at Sunset Road, Sunrise Road, and Rabbit Springs Road in the vicinity of Lucerne Valley Elementary School and Lucerne Valley Middle/High School notifying drivers of the school entrance and school traffic. Develop other provisions to ensure safe crossings of SR 247 by students at Lucerne Valley Elementary School and Lucerne Valley Middle/High School during peak Project commute hours and months.
- Submit to the CSLC, Caltrans, the CHP, and San Bernardino County a description of required oversize vehicles anticipated, permits from Caltrans, and means to follow all safety requirements such as flaggers, flashing lights, and/or the use of continuous traffic breaks operated by the CHP on state highways (if necessary)
- Develop plans to coordinate in advance with emergency service providers to avoid restricting the movements of emergency vehicles. Notify police departments and fire departments that serve the affected area in advance of the proposed locations, nature, timing, and duration of any roadway disruptions, areas of likely congestion, and access restrictions that could impact their effectiveness. At locations where roads will be blocked or constrained, provisions shall be ready at all times to accommodate emergency vehicles, such as immediately stopping work for emergency vehicle

passage, providing short detours, and developing alternate routes in conjunction with the public agencies.

- Develop and implement a method for maintaining close coordination with San Bernardino County and other federal and local agencies responsible for approving major projects that may include significant traffic volumes on shared segments of regional and local roadways where the majority of Project-related trips would occur. This coordination would allow Lead Agencies to consider staggering project construction timeframes to minimize the potential for multiple simultaneous construction projects affecting shared portions of the circulation system.

***Location:*** SSGP, SGTL, and SCF
***Monitoring/Reporting Action:*** Prepare a Construction Traffic Control Plan for review and approval by the CSLC, Caltrans, and San Bernardino County
***Effectiveness Criteria:*** Reduce impacts to traffic and transportation and reduce potential safety impacts
***Responsible Party:*** Applicant and/or contractor
***Timing:*** Prior to construction

**Impact TRA-3: Project activities or features would substantially increase roadway hazards from roadway damage or incompatible uses**

**MM TRA-3a: Repair Roadways Damaged by Construction Activities.** If roadways, sidewalks, medians, curbs, shoulders, or other such features are damaged by the Project's construction activities, as determined by the affected public agency, such damage shall be repaired and streets restored to their pre-project condition by the Project applicant. Prior to construction, the Project applicant shall confer with agencies having jurisdiction over the roads anticipated to be directly affected by delivery vehicles and equipment. At least 30 days prior to construction, the Project applicant shall photograph or video record the affected portions of Lucerne Valley Cutoff Road, SR 247 between SR 18 and Lucerne Valley Cutoff Road, and a 2,000-foot segment of SR 18 west of SR 247 and shall provide the CSLC, Caltrans, and San Bernardino County with a copy of these images and videos.

At least 15 days prior to construction, the Project applicant shall provide a letter or email to the CSLC confirming that the mitigation measure has been executed. This communication shall identify persons or agencies contacted, contact information, and the date of contact, and shall summarize discussions and/or agreements reached.

At the end of major construction, the Project applicant shall coordinate with each affected jurisdiction to confirm what repairs are required. Any damage is to be repaired to the pre-construction condition within 60 days from the end of construction, or on a schedule mutually agreed to by the Project applicant and the affected jurisdiction. The Project applicant shall provide the CSLC written and visual (photo or video) documentation when the coordination has been completed and when the repairs have been completed.

***Location:*** SSGP
***Monitoring/Reporting Action:*** Repair roadways damaged by construction activities
***Effectiveness Criteria:*** Reduce impacts to traffic and transportation and reduce potential safety impacts
***Responsible Party:*** Applicant and/or contractor
***Timing:*** Prior to and after construction

**MM TRA-3b: Gen-tie Access Road Design Approval.** Prior to construction of the Stagecoach Gen-tie Line, the Applicant shall provide designs and gain approval by the San Bernardino County Department of Public Works for all new permanent access roads that would be accessible to the public.

***Location:*** SGTL
***Monitoring/Reporting Action:*** Provide designs for approval by the San Bernardino County Department of Public Works
***Effectiveness Criteria:*** Reduce impacts to traffic and transportation and reduce potential safety impacts
***Responsible Party:*** Applicant and/or contractor
***Timing:*** Prior to construction

**WILDFIRE**

| | |
|---|---|
| **Impact WIL-1:** | **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 increased wildfire risk.** |

**MM WIL-1: Expand Fire Management and Prevention Plan.** The Applicant (for the Stagecoach Facilities) and SCE (for SCE Calcite Facilities) shall expand their respective FMPPs to include additional standards for review and approval by the SBCFD, CSLC, and CPUC (for SCE Calcite Facilities) prior to initiation of construction. The draft Plan shall be provided to each listed agency at least 60 days before the start of any construction activities. The final Plan shall be approved by the CSLC, the CPUC, and SBCFD at least 30 days prior to the initiation of construction activities. The Applicant and SCE shall fully implement the Plan during construction, operation, and decommissioning activities.

The expanded Fire Management and Prevention Plan (FMPP) shall include, but not be limited to, the following elements:

- Safety and design elements and standards, including, but not limited to, signage near the entrance of the BESS stating that the enclosure contains energized battery systems, electrical circuits, and type of batteries; continuous monitoring of the temperature and temperature control systems within the BESS enclosure; use of certified battery cells; and regular inspections of fire suppression equipment.

Combustible materials shall not be stored inside or within 10 feet of the BESS enclosures.

- Coordination with the local water supplier to ensure a sufficient on-site water supply
- Design shall ensure appropriate water pressure, equipment, and facilities for firefighting
- A fire suppression system shall be required, and fire suppression equipment shall be available to workers during construction, operation, and decommissioning
- An adequate number of Knox Boxes (or equivalent key boxes for emergency access) shall be available at main secured access areas to allow for rapid access for first responders
- Procedures for minimizing potential ignition, including, but not limited to, vegetation clearing, parking requirements/restrictions, idling restrictions, smoking restrictions, proper use of gas-powered equipment, and hot work restrictions
- Daily monitoring of weather conditions and implementing work restrictions during Red Flag Warnings and High to Extreme Fire Danger days
- All internal combustion engines used at the Project site shall be equipped with spark arrestors that are maintained in good working order
- Once initial two-track roads have been cut and initial fencing completed, light trucks and cars shall be used only on roads where the roadway is cleared of vegetation. Mufflers on all cars and light trucks shall be maintained in good working order.
- Fire rules shall be posted on the project bulletin board at the contractor's field office and areas visible to employees
- Equipment parking areas and small stationary engine sites shall be cleared of all flammable materials
- Fire suppression equipment requirements when spark-generating work is being implemented
- Smoking shall be prohibited in all vegetated areas and within 50 feet of combustible materials storage and shall be limited to paved areas or areas cleared of all vegetation
- Each Project construction site (including gen-tie construction locations) and the proposed solar generation plant site shall be equipped with fire extinguishers and fire-fighting equipment sufficient to extinguish small fires
- The Applicant shall coordinate with the SBCFD to create a training component for emergency first responders to prepare for specialized emergency incidents (such as a fire at the BESS) that may occur at the Project site

- All construction workers, plant personnel, and maintenance workers visiting the facilities and/or transmission lines to perform maintenance activities shall receive training on fire prevention procedures; the proper use of fire-fighting equipment; the proper handling, storage, and disposal of flammable materials; initial attack firefighting; and fire reporting. Each worker shall carry at all times a laminated card listing pertinent telephone numbers for reporting fires and defining immediate steps to take if a fire starts. Information on contact cards shall be updated and redistributed to all crewmembers as needed, and outdated cards destroyed, prior to the initiation of construction activities on the day the information change goes into effect. Training records shall be maintained and be available for review by the SBCFD.
- Vegetation near all solar panel arrays, ancillary equipment, and access roads shall be controlled through periodic cutting or spraying of weeds, in accordance with the requirements of MM BIO 1d (Integrated Weed Management Plan)
- The SBCFD shall be consulted during plan preparation and fire safety measures recommended by these agencies included in the plan
- The plan shall list fire prevention procedures and specific emergency response and evacuation measures that would be required to be followed during emergency situations
- All on-site employees shall participate in annual fire prevention and response training exercises with the SBCFD
- The plan shall list all applicable wildland fire management plans and policies established by state and local agencies and demonstrate how the Project will comply with these requirements
- The Applicant shall designate an emergency services coordinator from among the full-time, on-site employees who shall perform routine patrols of the site during the most active period of the fire season (defined as June 1 to October 31), equipped with a portable fire extinguisher and communications equipment. The Applicant shall notify the SBCFD of the name and contact information of the current emergency services coordinator in the event of any change.
- Remote monitoring of all major electrical equipment (transformers and inverters) will screen for unusual operating conditions. Higher than nominal temperatures, for example, can be compared with other operational factors to indicate the potential for overheating, which under certain conditions could precipitate a fire. Units could then be shut down or generation curtailed remotely until corrective actions are taken.
- Fires igniting onsite shall be immediately reported to the SBCFD.
- The Applicant shall develop a project-specific O&M guide, incorporating the relevant CAL FIRE principles from the 2021 California Power Line Fire Prevention Field Guide (CAL FIRE 2021), specifically to govern the O&M procedures to be implemented for the Stagecoach Gen-tie Line

- The engineering, procurement, and construction contract(s) for the Project shall clearly state the requirements of this mitigation measure. The Plan shall include methods for verification that all protocols and requirements are being followed.

***Location:*** SSGP, SGTL, and SCF
***Monitoring/Reporting Action:*** The Applicant and SCE both to Expand Fire Management and Prevention Plan to include additional standards. This is subject to review by SBCFD, CSLC, and CPUC
***Effectiveness Criteria:*** Reduce fire hazards and improve safety
***Responsible Party:*** Applicant and/or contractor
***Timing:*** Prior to construction

**SCE Applicant Proposed Measures**

SCE has developed the following Applicant Proposed Measures (APMs) that it proposes to apply to construction of the SCE Calcite Facilities. The first four measures include similar protective requirements as those in the mitigation measures developed for the Stagecoach Solar Generation Plant and that are recommended for the SCE Calcite Facilities (see Section 4.3.4.3, *Biological Resources, Impacts of the SCE Calcite Facilities*). Because certain components of the Stagecoach Facilities' mitigation measures are more protective than the APMs, the mitigation measures identified in Section 4.3, *Biological Resources*, supersede the APMs presented by SCE.

With respect to APM BIO-MAM1 (Mohave Ground Squirrel), as discussed in Section 4.3, *Biological Resources,* under Impact BIO-3 for the solar generation plant, this species is not known to be present in the Proposed Project area or vicinity. None were observed during 2017 surveys of the SCE Calcite Facilities area, known occurrences from trapping are 20 miles away, the Proposed Project area is over 8 miles from the MGS geographic range, and MGS occurrences are lacking in the vicinity since 1955. Therefore, this EIR does not present mitigation for Mohave ground squirrel, but it does not prevent SCE from implementing this measure independently.

BIO-GEN-1: Pre-construction Biological Clearance Surveys and Monitoring

Pre-construction clearance surveys will be performed by a qualified biologist (i.e., a biologist with the requisite education and experience to address specific resources) to avoid or minimize impacts on special status plants and wildlife species, habitat, nesting birds, and other sensitive biological resources in areas with the potential for resources to be present. Sensitive resources identified during the clearance survey will be either:

- Flagged for avoidance;
- Moved to outside impact areas;
- Avoided by implementing procedures to avoid impacts to individuals while impacting habitat (e.g., burrows, dens, etc.); or
- Documented based on permit authorizations

Specific details on the pre-construction survey requirements may be found within measures for each individual species below (i.e., in BIO-HERP-1 for desert tortoise and BIO-MAM-1 for Mohave ground squirrel).

Where special-status species (e.g., reptiles, birds, mammals, and bat roosts) or unique resources (defined by regulations and local conservation plans) are known to occur, and there is a potential for significant impacts, qualified biologists will monitor construction activities to ensure that impacts to special-status species, sensitive vegetation types, wildlife habitat, and unique resources are avoided and minimized.

***Location:*** SCF
***Monitoring/Reporting Action:*** SCE to ensure appropriate construction monitoring.
***Effectiveness Criteria:*** Minimize impacts to special status plants and wildlife
***Responsible Party:*** SCE and/or contractor
***Timing:*** Prior to construction

ENV-GEN-1 WEAP: Worker's Environmental Awareness Training Program

All workers on the project site shall be required to attend a Worker's Environmental Awareness Training Program (WEAP). Training shall inform all construction personnel of the resource protection and avoidance measures as well as procedures to be followed upon the discovery of environmental resources. The WEAP training will include, at a minimum, the following topics so crews will understand their obligations:

- Environmentally sensitive area (ESA) boundaries
- Housekeeping (trash and equipment cleaning)
- Safety
- Work stoppage and environmental monitor authority
- Communication protocol
- Consequences of non-compliance

***Location:*** SCF
***Monitoring/Reporting Action:*** SCE to implement WEAP training
***Effectiveness Criteria:*** Develop awareness of onsite resources
***Responsible Party:*** SCE and/or contractor
***Timing:*** Prior to and during construction

BIO-AVI-1: Avian-Safe Design

All transmission, substation, and distribution facilities for the project will be designed to be avian-safe, following the intent of Suggested Practices for Avian Protection on Power Lines: The State of the Art in 2006 (APLIC 2006). All transmission facilities will be evaluated for potential collision risk and, where determined to be high risk, lines will be marked with collision reduction devices in accordance with Reducing Avian Collisions with Power Lines: The State of the Art in 2012 (APLIC 2012).

***Location:*** SCF
***Monitoring/Reporting Action:*** SCE to implement avian-safe design
***Effectiveness Criteria:*** Minimize impacts to birds and bats
***Responsible Party:*** SCE and/or contractor
***Timing:*** Prior to final design

BIO-HERP-1: Desert Tortoise

**Pre-construction surveys/Construction monitoring.** Prior to initial ground-disturbing activities, an approved biologist with experience monitoring and handling desert tortoise (*Gopherus agassizii)* will conduct a pre-activity survey in all work areas within potential desert tortoise habitat, plus an approximate 100-foot buffer. All desert tortoise burrows within the pre-activity survey area (including desert tortoise pallets) will be prominently flagged at that time so that they may be avoided during work activities.

An approved biologist will be onsite to monitor vegetation removal and grading until desert tortoise fencing is installed around the perimeter of the site and as needed thereafter. For work areas located outside of desert tortoise fencing, an approved biologist will be onsite to monitor vegetation removal and grading and provide regular inspections of all other construction activities within desert tortoise habitat. The approved biologist will have the authority to halt all non-emergency actions (as soon as safely possible) that may result in harm to desert tortoise, and will assist in the overall implementation of APMs for the tortoise.

In the event a desert tortoise is encountered in the work area, all work will cease and the approved biologist will be contacted. Work will not commence until the animal has voluntarily moved to a safe distance away from the work area. No tortoise will be handled except under authorization from the USFWS and CDFW. Encounters with desert tortoise will be documented and provided to the appropriate wildlife resource agencies. In the event a dead or injured desert tortoise is observed, the approved biologist will be responsible for notifying SCE's Herpetologist and reporting the incident to the wildlife resource agencies.

**Coordinate with agencies.** If desert tortoise is observed in the project area, and avoidance is not possible through project design, SCE would obtain the necessary permits or authorizations in consultation with USFWS, CDFW, and/or land management agencies.

**Avoid and minimize impacts.** All project activities located within areas identified as desert tortoise habitat shall implement the following avoidance and minimization measures:

- Under Vehicle Checks. Desert tortoises commonly seek shade during the hottest times of the day. Employees working within the geographic range of this species will be required to check under their equipment or vehicles before they are moved. If desert tortoises are encountered, the vehicle will not be moved until the tortoise has voluntarily moved away from the equipment or vehicle.
- Disposal of Trash. Trash and food items will be contained in closed containers and removed daily to reduce attractiveness to opportunistic predators, such as common ravens (*Corvus corax*), coyotes (*Canis latrans*), and feral dogs (*Canis lupus familiaris*).

- Pets Prohibited. Employees will not bring pets or other animals to the Proposed Project area, unless the animal is ADA compliant.
- Vehicle Travel. During construction-related activities, motor vehicles will be limited to maintained roads, designated routes, and areas identified as being permanently or temporarily affected by construction within the Project footprint. Motor vehicle speeds along Project routes and access roads within habitat for desert tortoise will not exceed 20 miles per hour.
- Trapped Animal Prevention. All auger holes, trenches, pits, or other steep-sided excavations that may pose a hazard to desert tortoise will be either constructed with escape ramps (earthen or wooden) or securely covered when unattended to prevent entrapping animals. At the start and end of each workday, and just before backfilling, all excavations will be inspected for trapped animals. If found, trapped animals will be removed by the qualified biologist and relocated to outside the Project footprint, as required in all applicable permits or habitat conservation plans.

***Location:*** SCF
***Monitoring/Reporting Action:*** SCE to implement protective measures for desert tortoise
***Effectiveness Criteria:*** Tortoise are not injured or killed
***Responsible Party:*** SCE and/or contractor
***Timing:*** Prior to and during construction

BIO-MAM-1: Mohave Ground Squirrel

**Pre-construction survey/Construction monitoring.** Prior to initial ground-disturbing activities, a qualified Mohave Ground Squirrel (MGS; *Xerospermophilus mohavensis*) biologist would conduct pre-construction surveys within identified MGS habitat areas. The preconstruction surveys would identify MGS individuals or burrows for avoidance. The qualified biologist would demarcate (e.g., flagging, signage, fencing, construction maps, etc.) avoidance areas as needed to prevent impacts. Qualified biological monitors would monitor all construction activities in occupied habitat and areas adjacent to occupied habitat. The qualified biologist would have the authority to stop all activities with the potential to impact MGS. Work would not resume in that area until appropriate corrective measures have been implemented.

**Coordinate with agencies.** If MGS habitat is determined or presumed to be occupied within or adjacent to impact areas (including access routes), or if presence is assumed (no trapping due to poor conditions or time constraints), SCE would consult with CDFW to determine whether the protective measures identified below are sufficient or if additional measures may be needed and obtain an incidental take permit (ITP), if needed.

**Avoid and minimize impacts.** All project activities located within areas identified as suitable MGS habitat would implement the following avoidance and minimization measures:

- Burrow avoidance. A qualified biologist would demarcate (e.g., flagging, signage, fencing, construction maps, etc.) a 50-foot buffer avoidance area around all potential MGS burrows as needed to prevent impacts.
- Trash disposal. Trash and food items would be contained in closed containers and removed daily to reduce attracting predators.
- Pets Prohibited. Employees would not bring pets or other animals to the Proposed Project area, unless the animal is ADA compliant.
- Vehicle Travel. During construction-related activities, motor vehicles would be limited to maintained roads, designated routes, and areas identified as being permanently or temporarily affected by construction within the Project footprint. Motor vehicle speeds along Project routes and access roads within habitat for MGS would not exceed 20 miles per hour.
- Trapped animal prevention. All auger holes, trenches, pits, or other steep-sided excavations that may pose a hazard to MGS would be either constructed with escape ramps (earthen or wooden) or securely covered when unattended to prevent entrapping animals. At the start and end of each workday, and just before backfilling, all excavations would be inspected for trapped animals. Any MGS found would be allowed to escape unimpeded. If a MGS is trapped and does not leave on its own, a qualified biologist would move the animal according to agency authorizations; if there is no agency authorization, the MGS would not be moved (unless in imminent danger) until the CDFW has been contacted and further guidance has been received.
- Cover Materials. All pipes or other construction materials or supplies would be covered or capped in storage or laydown areas at the end of each workday to prevent entrapping animals. No pipes or tubing of sizes or inside diameters ranging from 3 to 10 inches would be left open either temporarily or permanently. All pipes or other construction materials would be inspected for wildlife prior to moving or installing. MGS would be allowed to leave on their own accord or would be removed by a qualified biologist according to an ITP, if obtained, or other authorization requirements.

***Location:*** SCF
***Monitoring/Reporting Action***: SCE to implement protective measures for Mohave ground squirrel
***Effectiveness Criteria:*** Mojave ground squirrel are not injured or killed
***Responsible Party:*** SCE and/or contractor
***Timing:*** Prior to and during construction

# 8.0 ENVIRONMENTAL JUSTICE

## 8.1 ENVIRONMENTAL JUSTICE CONSIDERATIONS

Environmental justice is defined by California law as "the fair treatment and meaningful involvement of people of all races, cultures, incomes, and national origins, with respect to the development, adoption, implementation, and enforcement of environmental laws, regulations, and policies" (Gov. Code, § 65040.12, subd. (e)). The CSLC adopted an Environmental Justice Policy in December 2018 (Item 75, December 2018) to ensure that environmental justice is an essential consideration in the CSLC's processes, decisions, and programs (CSLC 2021a). Through its policy, the CSLC reaffirms its commitment to an informed and open process in which all people are treated equitably and with dignity, and in which its decisions are tempered by environmental justice considerations. Among other goals, the policy commits the CSLC to, "Strive to minimize additional burdens on and increase benefits to marginalized and disadvantaged communities resulting from a proposed project or lease" (CSLC 2021a).

In keeping with its commitment to environmental sustainability and access to all, California was one of the first states to codify the concept of environmental justice in its statutes. Beyond the fair treatment principles described in statute, the CSLC believes that it is critical to include individuals who are disproportionately affected by a Proposed Project's effects in the decision-making process. The goal is that, through equal access to the decision-making process, everyone has equal protection from environmental and health hazards and can live, learn, play, and work in a healthy environment.

In 2016, Senate Bill (SB) 1000 (Leyva, Chapter 587, Statutes of 2016) was enacted to require local governments with disadvantaged communities, as defined in statute, to incorporate environmental justice into their general plans when two or more general plan elements (sections) are updated. The Governor's Office of Planning and Research (the lead state agency on planning issues) worked with state agencies, local governments, and many partners to update the General Plan Guidelines in 2020 to include guidance for communities on environmental justice (OPR 2020).

### 8.1.1 Scoping Comments Related to Environmental Justice

Several scoping comments noted that an analysis of environmental justice would be important for this project. Specific comments are as follows:

- The Lucerne Valley area is a disadvantaged community that would experience economic injuries due to the Proposed Project (Scenic 247 Committee)
- Lucerne Valley was not defined as an "EJ Community" by the County, but has a "Severely Disadvantaged Community" status, with "very low income of rural residents adjacent to the project site and transmission corridor" (Lucerne Valley Economic Development Association)

- Consideration of environmental justice concerns should take into account that the Community would not reap any benefits from the Proposed Project while suffering all of the impacts of the project (noise, dust, equipment). The CSLC should not fund the State Teacher's Retirement Fund on the backs of the State's rural communities. In addition, the County's economy is heavily dependent on tourism, and the proliferation of energy generation facilities would have both long-term and short-term effects on that industry due to the visual blight of these projects. This would affect the economic welfare of the County's residents. (Coalition of Community Groups and Individuals)
- Environmental justice concerns should consider all social, economic, and physical impacts that would be imposed on the surrounding community, including whether pollution from the project would have a significant burden on nearby communities already bearing other pollution burdens (Coalition of Community Groups and Individuals)
- A letter to the CSLC dated April 30, 2020, states that the Lucerne Valley is a low-income (economically disadvantaged) community already affected by environmental pollution. Residents include an older, health-compromised population. The Project would cause Lucerne Valley residents to suffer disproportionate environmental and social impacts, while providing it with no benefits. Health concerns include effects of dust and potential exposure to Valley Fever. The Project would ruin the local economy which is oriented towards tourism, and it would deplete groundwater resources. (Coalition of Community Groups and Individuals)

### 8.1.2 Geographic Extent of Potential Environmental Justice Impacts

For environmental justice concerns, a 5-mile radius surrounding the entire Proposed Project was used. This area encompasses the Stagecoach Solar Generation Plant, the Stagecoach Gen-tie Line, and Southern California Edison (SCE) Calcite Facilities. This 5-mile radius was selected because most short- and long-term direct and indirect impacts associated with the Proposed Project are reasonably expected to occur within this area. An analysis of this radius includes only one U.S. Census Tract: 121.04 (refer to Figure 8-1).

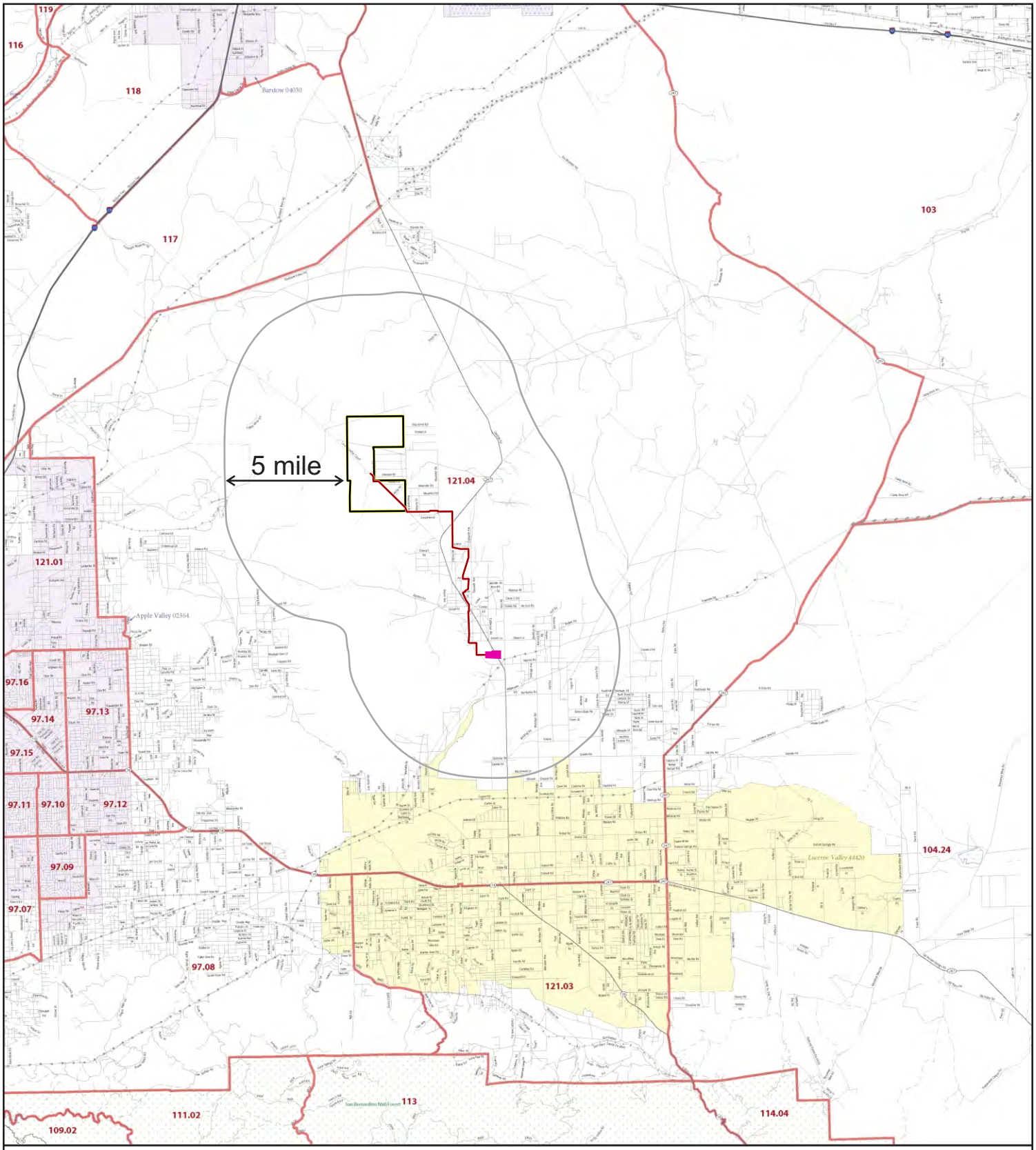



**Figure 8-1**
**U.S. Census Tracts in the Project Area**

Source: 2010 Census, San Bernardino County

### 8.1.3 U.S. Census Bureau Statistics

Table 8-1 presents income, employment, and race data of the regional and 5-mile radius area of the Proposed Project, based on the most recently available information from the U.S. Census.

As shown, Census Tract 121.04 does not contain a disproportionate minority population. Greater than 50 percent of the tract population identified their race as white (not Hispanic or Latino).

**Table 8-1. U.S. Census 2019[1] Environmental Justice Statistics for California, San Bernardino County, and Census Tract 121.04**

| | | California | San Bernardino County | Census Tract 121.04 |
|---|---|---|---|---|
| **Income and Population** | | | | |
| Total population | | 39,283,497 | 2,149,031 | 5,280 |
| Median Household Income | | $75,235 | $63,362 | $62,609 |
| Low-Income Population[2] (Percent of Total) | | 13.4 | 16.0 | 27.0 |
| **Race (percentage of total population)** | | | | |
| Hispanic or Latino | | 39.0 | 53.3 | 29.4 |
| Not Hispanic or Latino | White | 37.2 | 28.5 | 62.3 |
| | Black | 5.5 | 7.9 | 6.7 |
| | American Indian | 0.4 | 0.4 | 0.4 |
| | Asian | 14.3 | 7.0 | 0.0 |
| | Other/mix | 6.7 | 5.4 | 0.2 |
| **Employment by Industry (percentage)** | | | | |
| Agriculture, forestry, fishing and hunting, mining | | 2.2 | 0.7 | 1.5 |
| Construction | | 6.3 | 7.5 | 8.2 |
| Manufacturing | | 9.1 | 8.5 | 8.4 |
| Wholesale trade | | 2.8 | 3.3 | 0.6 |
| Retail trade | | 10.5 | 12.8 | 6.9 |
| Transportation and warehousing, and utilities | | 5.3 | 10.1 | 12.1 |
| Information | | 2.9 | 1.2 | 0.5 |
| Finance and insurance, and real estate and rental and leasing | | 6.0 | 4.6 | 3.3 |

**Table 8-1. U.S. Census 2019[1] Environmental Justice Statistics for California, San Bernardino County, and Census Tract 121.04**

| | California | San Bernardino County | Census Tract 121.04 |
|---|---|---|---|
| Professional, scientific, and management, and administrative and waste management services | 13.7 | 9.6 | 11.7 |
| Educational services and health care and social assistance | 21.0 | 21.9 | 22.2 |
| Arts, entertainment, and recreation, and accommodation and food services | 10.4 | 9.3 | 11.1 |
| Other services, except public administration | 5.2 | 5.1 | 4.5 |
| Public administration | 4.4 | 5.3 | 8.9 |

Source: U.S. Census 2021b.

Notes:

[1] As of September 1, 2021, the detailed data presented in this table remains unavailable from the 2020 U.S. Census. Therefore, 2019 data remain the most currently available. Because U.S. Census 2014-2019 American Community Survey (ACS) estimates come from a sample population, a certain level of variability is associated with the estimates. ACS estimate data were utilized for providing current data and are considered to represent the best available data for representing the demographic makeup of the affected local communities affected by the Proposed Project. U.S. Census 5-year ACS data are regularly used by Lead Agencies for decisions under CEQA. Because they are based on a sample of population, a certain level of variability is associated with the estimates. Supporting documentation on ACS data accuracy and statistical testing can be found on the ACS website in the Data and Documentation section available here: https://www.census.gov/programs-surveys/acs.

[2] Represents the population identified as “Income in the past 12 months below poverty level.”

### 8.1.4 Population and Economic Characteristics

From a regional standpoint, Census Tract 121.04 has an equivalent median household income level ($62,609) to San Bernardino County ($63,362), which are both below the State of California median household income ($75,235). San Bernardino County and Tract 121.04 residents are supported primarily by employment in educational and health care services, as well as transportation/warehousing. With respect to populations living below the established poverty level, Census Tract 121.04 (27 percent) is substantially greater than San Bernardino County (16 percent) and the State of California (13.4 percent).

### 8.1.5 California Office of Environmental Health Hazard Assessment (OEHHA) CalEnviroScreen Results

CalEnviroScreen is a screening tool that evaluates the burden of pollution from multiple sources in communities while accounting for potential vulnerability to the adverse effects of pollution. CalEnviroScreen ranks Census Tracts in California based on potential exposures to pollutants, adverse environmental conditions, socioeconomic factors, and prevalence of

certain health conditions. The CalEnviroScreen model uses the following formula to calculate an overall score for a particular census tract:

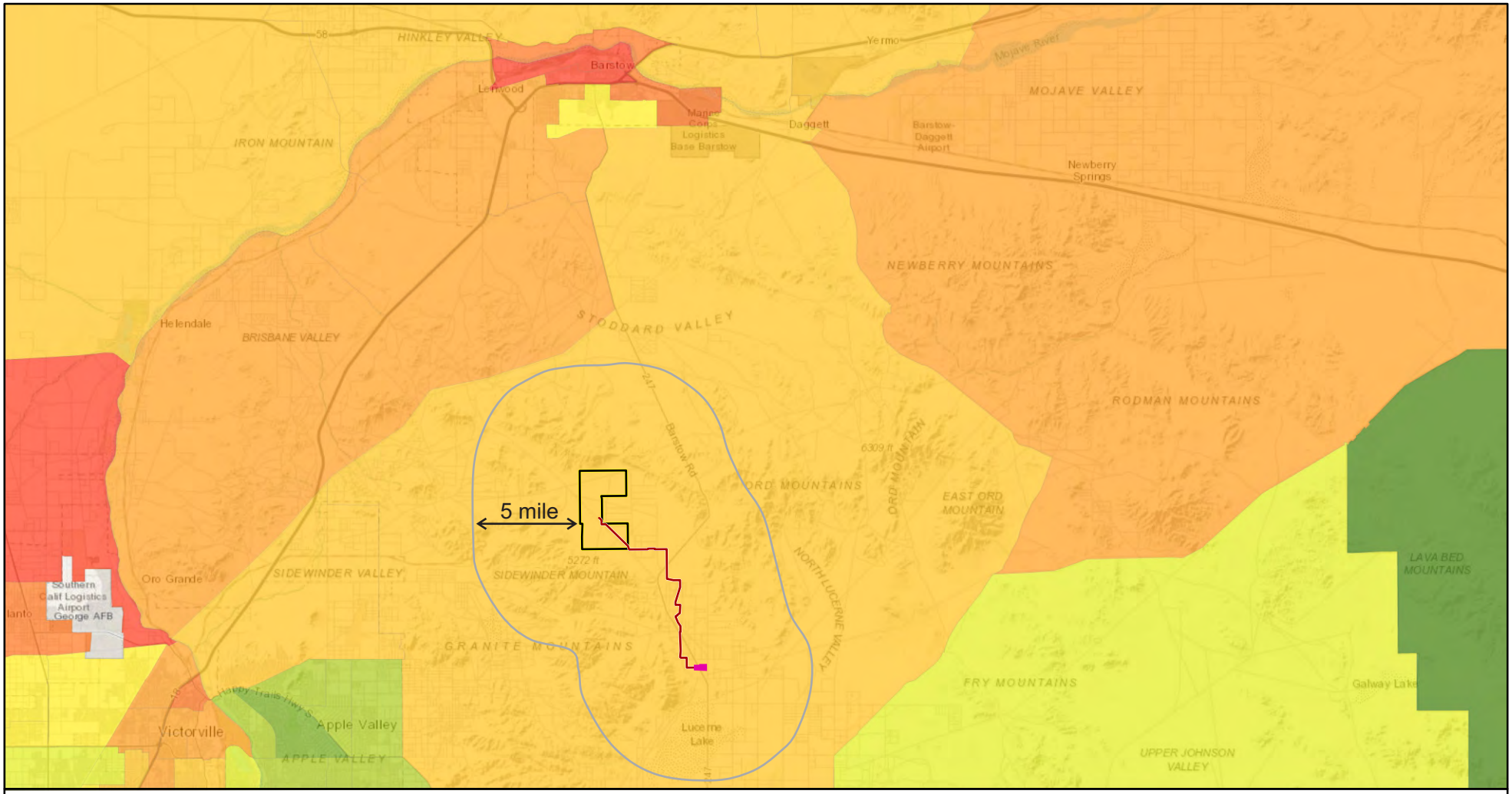
[Pollution Burden] x [Population Characteristics] = CalEnviroScreen Score

Pollution Burden and Population Characteristics each has a maximum score of 10; therefore, the maximum CalEnviroScreen Score is 100 (10 x 10 = 100).

According to California Office of Environmental Health Hazard Assessment (OEHHA 2019) California Communities Environmental Health Screening Tool (CalEnviroScreen) data (CalEnviroScreen 2020), the entire Proposed Project area has a score in the 65th to 70th percentile, meaning that 35 to 30 percent of all census tracts in California have greater population vulnerability and/or environmental burdens (see Figure 8-2). Typically, Census Tracts (and population within) that score in the 75th to 100th percent on CalEnviroScreen are considered disadvantaged communities[42] within a statewide context. Therefore, the Proposed Project area (Census Tract 121.04) is not considered disadvantaged compared to Statewide CalEnviroScreen scores.

More detailed CalEnviroScreen data for the Proposed Project area indicate the existing pollution burden for the Proposed Project area is in the 42nd percentile, with ozone levels, cleanup sites, asthma, and drinking water as factors with the greatest environmental concerns (CalEnviroScreen 2020). This area, with an assigned CalEnviroScreen population of 5,110, has a population characteristics (vulnerability) score in the 77th percentile, which represents health factors and socioeconomic community components that could result in increased pollution vulnerability. This score is derived in part from higher unemployment and poverty scores within the area, as well as scores for high public health concerns such as asthma and cardiovascular emergencies (i.e., heart attacks).

[42] The term “disadvantaged community” is commonly associated with minority and low-income populations in several California laws (e.g., Safe Drinking Water Act, Affordable Housing and Sustainable Communities Program [Pub. Resources Code, div. 44, part 1, § 75200]). Additionally, the California Legislature passed SB 535 (De León, Chapter 830, Statutes of 2012), regarding the Greenhouse Gas Reduction Fund, which requires the California Environmental Protection Agency (CalEPA) to implement a more comprehensive approach to identifying disadvantaged communities within the State through the use of public health and environmental hazard criteria in addition to socioeconomic data. Through this refined approach, the State definition of disadvantaged communities was expanded to include areas that are disproportionately impacted by environmental pollution and negative public health effects.




Source: CalEnviroScreen 3.0, (June 2018 Update)

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CalEnviroScreen 3.0 Results (June 2018 Update)

| | | |
|---|---|---|
| 11 - 20% | 41 - 50% | 71 - 80% |
| 21 - 30% | 51 - 60% | 81 - 90% |
| 31 - 40% | 61 - 70% | 91 - 100% (Highest Scores) |

0 3 6 Miles

**Figure 8-2**
**CalEnviroScreen Results**

### 8.1.6 Impacts and Mitigation Measures

#### 8.1.6.1 Construction Impacts

The Proposed Project would have temporary environmental health effects during construction from air emissions and traffic. Construction-related dust also increases the risk of exposure to Valley Fever spores (see discussion in Section 4.9, *Hazards and Hazardous Materials*). These impacts are defined as significant and unavoidable, but they would occur only during the 18-month construction timeframe. As defined in Table 8-2, impact severity would be reduced with implementation of a number of mitigation measures (MMs).

**Table 8-2. Construction Impacts and Mitigation Measures Related to Environmental Justice**

| Impact | Mitigation Measure(s) |
|---|---|
| **Section 4.2, *Air Quality*** | |
| **Impact AQ-1:** Air pollutant emissions from construction (Significant and Unavoidable) | **MM AQ-1a:** Fugitive Dust Control<br>**MM AQ-1b:** Control On-Site Off-Road Equipment Emissions |
| **Impact AQ-3:** Exposure of sensitive receptors to substantial pollutant concentrations (Significant and Unavoidable) | **MM AQ-1a:** Fugitive Dust Control<br>**MM AQ-1b:** Control On-Site Off-Road Equipment Emissions |
| **Section 4.9, *Hazards and Hazardous Materials*** | |
| **Impact HAZ-4:** Valley Fever spores could be mobilized (Less than Significant with Mitigation) | **MM AQ-1a:** Fugitive Dust Control |
| **Section 4.17, *Traffic and Transportation*** | |
| **Impact TRA-1:** Project traffic volumes, or temporary road or travel lane closures, would substantially affect the circulation system (Significant and Unavoidable) | **MM TRA-1:** Construction Traffic Control Plan |
| **Impact TRA-4:** Project activities requiring temporary road or travel lane closures would affect emergency vehicle response (Significant and Unavoidable) | **MM TRA-1:** Construction Traffic Control Plan |

The Proposed Project would generate direct and indirect employment opportunities during construction. Beneficial economic and tax base impacts would occur from local expenditures of construction worker wages, as well as from procurement of goods and services required for project construction. This is considered a local economic benefit of the Proposed Project in an area that contains a high percentage of population living in poverty.

#### 8.1.6.2 Operational Impacts

Once operational, the Proposed Project would not create any long-term environmental or health effects related to air emissions or traffic. There would be direct economic benefits to the owners of the approximately 50 private land parcels crossed by the Stagecoach Gen-tie Line, all of whom have agreements with the Applicant including payment for use or purchase of their land.

The potential for the Proposed Project to contribute to a decline in groundwater levels is addressed in Section 4.10.5, *Hydrology and Water Quality*, *Cumulative Impacts*. MM HWQ-2 (Prepare and Implement Groundwater Monitoring and Reporting Plan) would be required to reduce the contribution of the Proposed Project to a potential cumulative decline in basin groundwater levels.

The Proposed Project would generate direct employment opportunities during operation. Additionally, beneficial economic and tax base impacts would occur from expenditures of operation worker wages. This is considered a local economic benefit of the Proposed Project in an area that contains a high percentage of population living in poverty.

### 8.1.7 Conclusion

The Proposed Project site is located in a census tract with a moderate CalEnviroScreen environmental burden score, but the Proposed Project area (Census Tract 121.04) is not considered disadvantaged compared to Statewide CalEnviroScreen scores.

Overall, the Proposed Project is considered to have a low long-term contribution to pollution. Thus, the Proposed Project is not anticipated to create new burdens or add to existing pollution burdens felt by a vulnerable community. There are no anticipated factors that would put any of the nearby populations at risk from adverse health effects related to increased levels of pollution resulting from the Proposed Project.

Furthermore, the Proposed Project would not introduce disproportionate impacts to minority persons; the population is over 62 percent white according to Census data (Table 8-1). Within the Proposed Project area, approximately 27 percent of people have income in the past 12 months that was below poverty level. However, the Proposed Project is expected to introduce construction jobs and direct/indirect economic benefits to the area through worker and developer purchases of goods and services.

# 9.0 REPORT PREPARATION SOURCES AND REFERENCES

## 9.1 CALIFORNIA STATE LANDS COMMISSION STAFF

Sarah Mongano, Senior Environmental Scientist, Division of Environmental Planning and Management (DEPM)
Nicole Dobroski, Chief, DEPM
Eric Gillies, Assistant Chief, DEPM
Jennifer Mattox, Science Policy Advisor and Tribal Liaison
Randy Collins, Public Land Management Specialist
Patrick Huber, Staff Attorney
Yessica Ramirez, Environmental Justice Liaison

## 9.2 PROFESSIONAL CONSULTANT TEAM

**Aspen Environmental Group**

Susan Lee, EIR Principal, Alternatives
Hedy Koczwara, EIR Project Manager
Brewster Birdsall, PE, Air Quality, Greenhouse Gas Emissions, Energy, Noise
Lauren DeOliveira, PhD, RPA, Cultural Resources, Cultural Resources – Tribal
Fritts Golden, Land Use and Planning and Public Access, Utilities and Service Systems
Philip Lowe, PE, Hydrology
Aurie Patterson, PG, Geology and Soils, Hazards, Hydrology
Stephanie Tang, Public Services, Wildfire
Grace Weeks, Recreation, Public Participation
Scott Debauche, CEP, Transportation and Traffic, Environmental Justice, Hydrology
Erin Woods, Biological Resources
Scott White, Biological Resources
Sandra Alarcón-Lopez, Public Participation
Michael Macko, Cultural Resources Surveys
Justin Wood, Biological Resources Surveys

**Michael Clayton & Associates**

Michael Clayton, Aesthetics/Light and Glare

**Granite Financial Services (Geology and Hazards)**

James Thurber, PG, CEG, CHG, Geology and Hazardous Materials
Jennifer Knipper, Geology and Hazardous Materials

**Cogstone (Paleontological Resources)**
Eric Scott
Logan Freeberg
Kim Scott

**ECORP (Biological Resources Surveys)**
Don Mitchell, Manager
Adam Schroeder
Alexandra Dorough
Carley Lancaster
Caroline Garcia
Greg Hampton
Jonathan Renard
Josh Corona-Bennett
Kent Hughes
Kristen Wasz
Lauren Simpson
Marc Guidry
Max Murray
Michael Tuma
Taylor Dee
Wendy Turner

**Granite Financial Services (Biological Resources Surveys)**
Corey Mitchell
Dave Silverman
Kelly Herbison
Rachel Woodard

**Todd Groundwater**
Iris Priestaf (Water Supply Assessment)
Maureen Reilly (Water Supply Assessment)

**Applied Earthworks (Cultural Resources Surveys)**
Kurt McLean, Field Supervisor
Matthew Tennyson, Senior Archaeologist
Evan Mills, Archaeologist
William Borkan, Archaeologist

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