APPENDIX B

Visual Resources Report
for the JVR Energy Park Project

Visual Resources Report
for the
JVR Energy Park Project

Lead Agency:

County of San Diego
Planning and Development Services
5510 Overland Avenue, Suite 310
San Diego, California 92123
Contact: Susan Harris

Project Proponent:

BayWa Renewable Energy
17901 Von Karman Avenue Suite 1050
Irvine, California
Contact: Patrick Brown

Prepared by:

DUDEK
605 Third Street
Encinitas, California 92024
Contact: Josh Saunders, AICP, County Approved Consultant for Visual Resources

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ACRONYMS AND ABBREVIATIONS

Acronym/Abbreviation	Definition
AC	alternating current
AMSL	above mean sea level
BLM	Bureau of Land Management
Caltrans	California Department of Transportation
CEQA	California Environmental Quality Act
County	County of San Diego
DC	direct current
FAA	Federal Aviation Administration
I	Interstate
kV	kilovolt
MW	megawatt
Proposed Project	JVR Energy Park Project
PV	photovoltaic
RMZ	Resource Management Zone
SDG&E	San Diego Gas & Electric
SP	State Park
SR	State Route

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EXECUTIVE SUMMARY

As proposed, the proposed JVR Energy Park Project (Proposed Project) would cover approximately 643 acres within the 1,356-acre Project site (see Figure 1, Project Location). The JVR Energy Park is a solar energy generation and storage facility that would produce a rated capacity of up to 90 megawatts (MW) of alternating current (AC) generating capacity. Proposed Project components would include approximately 300,000 photovoltaic (PV) modules, an on-site collector substation, a switchyard, a 220-foot-long 65-foot-high overhead slack span transmission line, and a 1,860 foot overhead transmission line (gen-tie) on up to five steel transmission poles. The JVR Energy Park would also include a battery energy storage system of up to 90 MW, and five meteorological weather stations. The battery storage system would be located throughout the solar facility with up to three containers at each location for a total of 75 containers on site. Chain-link fencing with tan slat inserts would be installed on the perimeter of the solar facility. Landscaping would also be installed along portions of the facility perimeter. Primary access to the solar facility would be provided via an improved access driveway from Old Highway 80, with additional access off Carrizo Gorge Road. Construction of the JVR Energy Park would occur over a 13-month period.

The existing visual character and quality of the Project site and surrounding Jacumba Valley area is characterized as predominantly rural and includes undeveloped land, public open space lands, rural residential uses and limited commercial development in the community of Jacumba Hot Springs. In addition, regional electrical transmission lines transect the Project site. The primary visual elements of the Proposed Project include photovoltaic (PV) modules, battery storage containers, a substation and switchyard, and perimeter components including chain-link fencing.

Once constructed, the texture and straight lines of the solar facility would contrast with existing textures and fluid lines in the surrounding desert landscape. Solar panel rows across the development footprint would display smooth and dark-colored rectangular forms and regular horizontal lines. A total of 75 rectangular shipping containers would be located at 25 locations within the solar facility. The on-site substation and switchyard would introduce complex, angular lines to the Project site. Tall and lightly colored steel poles for transmission lines would introduce additional vertical lines that would contrast with the low form of mounded vegetation and the largely horizontal composition of the valley floor. PV modules would be the dominant Proposed Project component and a point of focus for receptors. However, other Proposed Project components (e.g., substation and switchyard, inverters, battery energy storage system, and overhead lines) would contribute forms, lines, and colors that would contrast with the tan soils, gold and green vegetation present in the existing landscape. The location, size, and design of the Proposed Project would result in the substantial adverse change of one or more features that contribute to the valued visual character of the area, namely, the open, unencumbered characteristics currently displayed by the Project site (**Impact AE-1**). With implementation of mitigation measures **M-AE-1** (non-reflective inverters), **M-AE-2** (nonreflective energy storage

containers), **M-AE-3** (nonreflective transmission line), **M-AE-4** (residential properties setback), **M-AE-5** (landscaping), and **M-AE-6** (fence slats), impacts would be reduced but not to a less than significant level. Since no additional feasible mitigation measures have been identified that would further reduce anticipated effects resulting from the solar facility, the visual environment would be adversely affected and the Proposed Project would contrast with the existing visual character and/or quality with the community or localized area (i.e., Threshold 1). Thus, **Impact AE-1** would remain **significant and unavoidable**.

No designated landmarks (i.e., a visual feature or element designated or identified in an adopted land use plan as an important visual or scenic resource) or identified visual resources such as unique topographical features, designated historic resources, or prominent rock outcroppings or ridgelines occur within the development footprint of the solar facility. While a portion of conical Round Mountain is located within the Project site, no Proposed Project components or disturbance would occur on Round Mountain. However, the implementation of the Proposed Project would result in a substantial change to the existing openness and undeveloped character of the Project site (**Impact AE-2**). With implementation of mitigation measures **M-AE-1** (non-reflective inverters), **M-AE-2** (nonreflective energy storage containers), and **M-AE-3** (nonreflective transmission line), impacts would be reduced but not to a less than significant level. Since no additional feasible mitigation measures have been identified to further reduce the effects of the solar facility, a substantial change to the existing open and undeveloped characteristics of the site would occur (i.e., Threshold 2). Thus, **Impact AE-2** would remain **significant and unavoidable.**

Several locations (i.e., Key Views) were assessed for potential visual change as a result of Proposed Project implementation. In addition, locations were assessed for visual impacts to valued focal or panoramic views, including designated scenic highways, other public roadways, and recreation areas in the Proposed Project viewshed. For example, Key Views were established on I-8 and Old Highway 80, both of which are included on the County of San Diego Scenic Highway System. Key Views were also established on Carrizo Gorge Road, Jacumba Community Park, residential lands in Jacumba Hot Springs, Anza-Borrego Desert State Park (SP) lands, and public lands managed by the Bureau of Land Management (BLM). Proposed Project components would be clearly visible from I-8 and implementation of the Proposed Project would result in moderately strong color contrasts and moderate line contrasts. Also, from I-8, the installation of approximately 300,000 PV modules across the Project site would substantially interrupt the long views available to the south (**Impact AE-3**). From Old Highway 80, the existing openness displayed by the Project site would be fundamentally altered by the installation of the solar facility that would occur to the north and south of the highway (**Impact AE-4**). In addition, the Proposed Project would substantially interrupt available scenic views from Jacumba Community Park **(Impact AE-5)**, Anza Borrego Desert SP lands to the immediate west of the Project site **(Impact AE-6)**, western portion of Round Mountain (BLM) (**Impact AE-7**), and elevated vantage points in the BLM-managed Airport Mesa Recreation

Management Zone (RMZ) (**Impact AE-8**) and Table Mountain RMZ (**Impact AE-9**).(RMZs). With implementation of mitigation measures **M-AE-1** (non-reflective inverters), **M-AE-2** (nonreflective energy storage containers), **M-AE-3** (nonreflective transmission line), **M-AE-4** (residential properties setback), **M-AE-5** (landscaping), **M-AE-6** (fence slats), impacts would be reduced but not to a less than significant level. Thus, impacts to focal or panoramic vistas (i.e., Threshold 3), **Impacts AE-3 through AE-9**, would remain **significant and unavoidable**.

Because the Project site has not been designated as containing "significant" scenic value by the County or other agency and proposed development would not inhibit the establishment and maintenance of the County scenic highway system, the Proposed Project would comply with applicable visual resources related goals, policies and requirements of the applicable County Subregional Plan (i.e., the Mountain Empire Subregional Plan). Therefore, impacts concerning conflicts concerning compatibility with applicable goals or policies of an applicable County Subregional Plan (i.e., Threshold 4) would be **less than significant**.

All light fixtures installed at components of the Proposed Project would conform to the San Diego County Light Pollution Code. Temporary lighting that may be used during construction or during as-needed nighttime maintenance would not adversely affect nighttime views use of such lighting would conform to the Light Pollution Code lighting requirements. Lighting would be installed primarily for security and safety. Motion detected lighting would be installed at Proposed Project driveways and at the switchyard. All lighting would be shielded and directed downward to minimize uplighting and light trespass onto surrounding properties. Regarding glare, proposed solar panels would be uniformly dark in color, non-reflective, and designed to be highly absorptive of all light that strikes their glass surfaces. Therefore, lighting impacts (i.e. Threshold 5) of the Proposed Project would be **less than significant**.

According to the Glare Study prepared for the Proposed Project (see Appendix A), any potential glare generated by the PV modules would to be redirected above and away from analyzed residential and motorist locations throughout the day and year, including pedestrian walkways and adjacent residential properties used for outdoor activities. No highly reflective building materials would be used on other Proposed Project components; however, the inverters, battery energy storage system containers, and overhead slack span transmission line would be constructed of steel and/or metallic materials and could generate daytime glare capable of being received on public roads (**Impact AE-9**). With implementation of mitigation measures **M-AE-1** (non-reflective inverters), **M-AE-2** (nonreflective energy storage containers), **M-AE-3** (nonreflective transmission line), potential glare impacts from these Proposed Project components would be reduced to **less than significant** l. Therefore, glare impacts (i.e., Threshold 5) of the Proposed Project would be **less than significant with mitigation**.

Implementation of projects considered in the cumulative scenario would result in an increasingly modified landscape, diminished day and night views, and reduced visual quality. For example, 60 wind turbines, a gen-tie transmission line, and other components are proposed by the Campo Wind and Boulder Brush Facilities project. In addition, the Torrey Wind project proposes 30 wind turbines and supporting components. These projects, in conjunction with the Proposed Project and the existing East County Substation and Jacumba Solar projects, would dominate views in the Project area and result in prominent visual change within the largely undeveloped landscape. Therefore, the Proposed Project would result in a **cumulatively considerable impact** (**Impact AE-CU-1**). Implementation of mitigation measures **M-AE-1** (non-reflective inverters), **M-AE-2** (nonreflective energy storage containers), **M-AE-3** (nonreflective transmission line) would reduce impacts, however, **Impact AE-CU-1** would remain **significant and unavoidable**.

In regard to cumulative impacts to panoramic views, combined with the existing East County Substation, and Jacumba Solar projects, the Proposed Project **would contribute to a cumulatively considerable impact (Impact AE CU-2)** to the panoramic vista available from elevated vantage points in the Airport Mesa and Table Mountain RMZs. With implementation of mitigation measures **M-AE-1** (non-reflective inverters), **M-AE-2** (nonreflective energy storage containers), **M-AE-3** (nonreflective transmission line) , impacts would be reduced but not to a less than significant level. Thus, **Impact AE-CU-2** would remain **significant and unavoidable**.

1 INTRODUCTION

1.1 Purpose of the Visual Resources Report

The purpose of this visual resources report is to assess the visual impacts of the proposed JVR Energy Park Project (Proposed Project) and determine the significance of the impacts under the California Environmental Quality Act (CEQA). In addition, this visual resources report proposes measures to avoid, minimize, or mitigate adverse visual impacts associated with the introduction of a 90-megawatt (MW) solar energy generation and storage facility on existing views and the surrounding visual environment.

1.2 Key Issues

Adverse effects typically associated with development include the loss of natural vegetation, removal of natural features with aesthetic value, modification of terrain (e.g., alteration of topography through grading), and/or the introduction of contrasting elements within the existing landscape setting. The loss or degradation of significant visual features or views and the introduction of Proposed Project features that would significantly contrast with the visual character of an area or with the existing elements of form, line, color, or texture can be considered significant adverse visual effects. The effects and elements of the Proposed Project that could potentially result in significant visual quality impacts include the following:

- Introduction of a 643-acre solar facility including over 300,000 photovoltaic (PV) modules on vacant land.
- Installation of vertical features including the on-site collector substation, 75 battery energy storage containers (each container is approximately 55 feet long, 19 feet wide, and 10 feet high); a 150,000-square-foot switchyard that would include circuit breakers, overhead electrical bus work, switches and controls, and a control enclosure; a 138-kilovolt (kV), 220-foot-long overhead slack span transmission line supported by 65-foot-high poles; and two 138 kV, 550-foot-long each, 70- to 115-foot-high overhead transmission lines (gen-tie) that would loop the switchyard into an existing transmission line that traverses the Project site.
- Visibility of proposed solar facility from Interstate (I) 8, Old Highway 80, Jacumba Community Park, the community of Jacumba Hot Springs, and local recreation areas including Bureau of Land Management (BLM) and Anza-Borrego Desert State Park (SP) lands.
- Proximity of the solar facility to residences in Jacumba Hot Springs.
- Contrasts in theme, color, site coverage, horizontal scale, and general character between Proposed Project components and the natural and undeveloped elements in the surrounding area.

1.3 Principal Viewpoints to be Covered

Principal viewpoints to be covered in this analysis consist of off-site public locations from which views of the Project site are available. More specifically, principal viewpoints used to assess the potential visual changes associated with the Proposed Project were established at the following locations:

- Eastbound I-8 off-ramps at Carrizo Gorge Road
- Northbound Carrizo Gorge Road
- Eastbound Old Highway 80
- Westbound Old Highway 80
- Jacumba Community Park
- Residential property west of the site in Jacumba Hot Springs
- State Park lands
- Airport Mesa (federal Recreation Management Zone [RMZ] managed by BLM)
- Mesa located south of Table Mountain (within Table Mountain RMZ managed by BLM)

2 PROJECT DESCRIPTION

The Project site totals approximately 1,356 acres in southeastern San Diego County, within the San Diego County's Mountain Empire Subregional Plan area (see Figure 1, Project Location). The Proposed Project would be located to the south of I-8, immediately east of the community of Jacumba, and immediately north of the U.S./Mexico international border. The Project site is located entirely on private land and consists of 24 parcels. The Project site includes right-of-way easements for Old Highway 80, San Diego Gas & Electric (SDG&E) easements, and an easement for the San Diego and Arizona Eastern Railway. The proposed solar facility would cover approximately 643 acres within the 1,356-acre Project site (see Figure 2A, Project Components). Primary access to the Project site would be provided via an improved access road from Old Highway 80, with additional access off Carrizo Gorge Road.

The Proposed Project is a solar energy facility that would produce a rated capacity of up to 90 MW of alternating current (AC) generating capacity.

The Proposed Project would include the following primary components:

- Approximately 300,000 photovoltaic modules mounted on single-axis solar trackers. The PV module arrays would be a single-axis tracker system that would be oriented along a north-to-south axis. The PV modules would be mounted on support structures that are typically mounted on metal pipe pile or I-beam foundations 6 to 10 inches in diameter driven to approximate depths of 10 to 15 feet deep depending upon required embedment depth. At their highest point, the PV module would be approximately 12 feet above the ground surface depending upon elevation of racking above 100-year flood elevations.
- The PV modules would be electrically connected to adjacent modules to form module "strings" using wiring attached to the support structures. PV module strings would be electrically connected to each other via underground wiring at a depth of 3 to 4 feet deep and 1 to 3 feet wide. String wiring would terminate at PV module array combiner boxes, which are lockable electrical boxes mounted on or near an array's support structure.
- A total of 25 inverter/transformer platforms would convert the power generated by the PV modules into a compatible form for use with the transmission network. Two inverters and one transformer would be installed on a metal platform, referred to as a skid. Each metal skid would be approximately 8 feet wide and 20 feet long. The skids would be mounted above the 100-year flood elevations on a set of piles driven into the ground and covered by an earth or gravel mount. All of this electrical rated equipment would be within a 10-foot-long, 10-foot-high, and 20-foot-long area.

- Approximately 5,000 feet of 34.5-kilovolt (kV) underground AC collection system and 50 feet of overhead AC feeders, approximately 30 feet tall linking the inverters to the on-site collector substation.
- An on-site collector substation located on an approximately 27,360-square-foot (152 feet by 180 feet) crushed rock atop gravel overlay. Consisting of transformers, circuit breakers, bus work, telemetering equipment and a control enclosure that would be approximately 34 feet long by 15.5 feet wide with a height of 15 feet, the collector substation also includes a 138 kV dead-end structure (A-frame or H-frame design) that would have a maximum height of 65 feet. Motion detector lighting would also be provided next to the entrance door to the control house and mounted at the entrance gates to allow for safe entry.
- A 140,00 square-foot, 138 kV switchyard adjacent to the on-site collector substation (see Figure 2A) that would be utilized to transfer power from the on-site collector substation to the existing SDG&E 138 kV transmission line that traverses the Project site. Within the larger switchyard footprint would be an 8-foot-tall, 445-foot by 300-foot security fence surrounded by a 5-foot shoulder for grounding protection. In addition to switching gear, a single-story control enclosure would be located at the switchyard. The tallest structures in the switchyard would be the 138 kV line and the dead-end structures (approximately 65-foot-high and constructed of tubular steel). Motion detector lighting would be placed near major electrical equipment in the switchyard and would be mounted near the entry gate to safely illuminate the switchyard entry. The lights would normally be turned off and would only be used if motion is detected for security and safety reasons.
- A 138 kV, 220-foot-long 65-foot-high overhead slack span transmission line would connect the Proposed Project's substation to the switchyard.
- An overhead transmission line tie-in that would require six spans of wire, totaling approximately 1,860 feet, and up to five steel transmission poles. The poles would range from 70 to 115 feet above ground. One of the poles would have six davit arms, while the other four poles would have no davit arms. Each pole would have a pole top to accommodate a fiber optic ground wire for lightning protection and critical communication.
- A battery energy storage system, up to 90 MW, comprised of battery storage containers located adjacent to the inverter/transformer platforms previously described (up to 3 steel containers per each of the 25 inverter/transformer platforms for a total of 75 containers on site). The containers would measure approximately 55 feet long, 19 feet wide, and 10 feet high.
- Approximately 5 meteorological weather station. Each weather station would occupy an area of approximately 10 feet by 7 feet and would be installed on level ground. The mounting equipment would be made up of steel, and the maximum height of the station would be 10 feet. The station would be installed on a 5-foot by 5-foot square pad.

- Six 10,000-gallon water tanks with fire department connections would be installed. One tank would be provided at each entrance to the solar facility and one water tank would be provided near the substation. The tanks would be labeled "Fire Water: 10,000 gallons" and use reflective paint.
- Chain-link fencing (approximately 7 feet high) would be installed along the entire solar facility boundary.
- The Proposed Project proposes five access driveways to the solar facility. The access driveways would be off Old Highway 80 and Carrizo Gorge Road. The access driveways would be approximately 24 feet wide, exceed for the access route from Carrizo Gorge Road to the switchyard which would be a 30-foot-wide, 1,500-foot-long paved asphalt road. Motion detector lights would also be installed at all entrances to the facility and lighting would be shielded and directed downward to minimize any effects to the surrounding area.
- Landscaping and tan slat inserts, as required for visual screening (see mitigation measures).

2.1 Project Construction

The construction of the solar facility would consist of several activities, which are described below. Construction of the Proposed Project will include the following activities:

- Site Mobilization
- Demolition of Dairy and Ranch Structures
- Site Preparation (including access driveways and staging areas), Grading and Stormwater Protections
- Perimeter Fence Installation
- Landscaping Installation
- Substation, Switchyard and Meteorological Weather Stations
- Pile Driving
- Tracker and PV Module Installation
- Direct Current Electrical
- Underground Medium Alternating Current Voltage Electrical
- Inverter/Transformer Installation
- Battery Energy Storage System Installation
- Commissioning

Several activities would occur simultaneously during construction. The total construction duration of the solar facility would be approximately 13 months.

It is conservatively estimated that during the peak construction of the Proposed Project, up to 500 workers would be scattered across the entire Project site and would arrive and depart between 6 a.m. and 7 p.m. It is also anticipated that 30 heavy construction and/or delivery vehicles would travel to/from the Project site daily during construction.

Implementation of the Proposed Project would result in a temporary increase in traffic on Carrizo Gorge Road and Old Highway 80. No road closures are anticipated during Proposed Project construction. A County of San Diego (County)-required Traffic Control Plan to provide safe and efficient traffic flow in the area and on the Project site would be prepared prior to construction. The Traffic Control Plan would be prepared in consultation with the County of San Diego and would contain Proposed-Project-specific measures for noticing, signage, policy guidelines, and the limitation of lane closures to off-peak hours (although it is noted that no requirement for lane closures has been identified).

2.2 Surrounding Lands

Surrounding lands include the community of Jacumba Hot Springs, primarily rural and/or undeveloped private lands, and local, state, and federal public lands (see Figure 3A, Surrounding Lands and Public Lands Ownership in Vicinity). Recreational lands/facilities in the surrounding area comprise potential public vantage points to the Project site. The discussion below pertains to surrounding land uses and visual features that mark the general area. In addition, public lands in the vicinity are discussed and Figure 3A is referenced as needed to clarify the location on these lands in the context of the Project site.

The surrounding Jacumba area, which includes the community of Jacumba Hot Springs, consists of a predominantly rural landscape featuring large-lot ranches and single-family homes with a mixture of small-scale agriculture, recreational facilities/areas, and undeveloped lands. The community of Jacumba Hot Springs borders the Project site to the west and consists of denser development compared to the rest of the area. Jacumba Hot Springs largely consists of single-story rural residential development on relatively small lots. Old Highway 80 functions as the community's main street and also traverses the Project site. Single-family residences, limited commercial businesses, and the Jacumba branch of the San Diego County Library and the Jacumba Community Park are located along Old Highway 80. As shown in Figure 3A, Jacumba Community Park is adjacent to the southwestern boundary of the Project site. Two additional County recreational facilities, In-Ko-Pah Park and Mountain Springs Park, are located in the area to the northeast of the Project site but are visually screened from view of residents in Jacumba Hot Springs and Old Highway 80 motorists by intervening terrain. Lastly, the Jacumba Airport is adjacent to the Project site to the southeast. Accessed off Old Highway 80, the airport is unattended, unlighted and is used mainly on the weekends for glider flights (County of San Diego 2020).

Several utility developments exist within the Project site and further to the east. The Project site is traversed by two 500 kV transmission lines (Sunrise Powerlink and Southwest Powerlink) that are supported by tall, approximately 170-foot-tall lattice steel towers or slightly shorter tubular steel poles. A 138 kV SDG&E transmission line supported by approximately 150-foot-high poles also traverses the central portion the of the Project site. Specifically, a steel cable riser and angled pole supporting the SDG&E 138 kV transmission line are located approximately 450 feet west of Carrizo Gorge Road near the Sunrise Powerlink and Southwest Powerlink crossing of Carrizo Gorge Road. Further to east, the existing Jacumba Solar facility is located approximately 1.75 miles east from the Project site's eastern boundary. The solar facility consists of over 80,000 PV modules, an on-site substation, an overhead transmission line (gen-tie), and an approximately 10 MW battery energy storage system. Lastly, a regional 138 kV electrical substation (i.e., SDG&E's East County Substation) is located approximately 1.9 miles east of the Project site.

Federal public lands managed by the BLM are also located in the surrounding area. In addition to a J-shape tract of land that encompasses the western slope of Round Mountain and discontiguous lands along the Carrizo Gorge (located north of I-8 and between tracts of State Parks lands; see Figure 3A), nearby BLM-managed lands are within the Boulevard/Jacumba Destination Special Recreation Management Area within which the BLM delineates RMZs. The RMZs located nearest to the Project site, the Airport Mesa RMZ and Table Mountain RMZ, are shown in Figure 3A. The Airport Mesa RMZ is managed by BLM for its rural recreational qualities and provides opportunities for hiking (BLM 2008). The RMZ abuts the U.S./Mexico international border on the south and a portion of the landform boundary with the border is unfenced. Public lands managed by BLM to the north of the Airport Mesa RMZ and I-8 comprise the Table Mountain RMZ. According to the Eastern San Diego Resource Management Plan and Record of Decision, the Table Mountain RMZ is managed for its "historical, cultural and natural qualities" and also provides a variety of "primitive, natural, and unconfined recreational opportunities" (BLM 2008).

In addition to RMZs, BLM public lands in the area include federally designated wilderness. The Jacumba Wilderness is located approximately 3 miles to the east of the Project site and includes rugged ridgelines and narrow valleys. The Jacumba Wilderness provides opportunities for hiking and camping. Certain uses including motorized vehicles and other forms of mechanical transport are prohibited within the federally designated wilderness (BLM 2019a, 2019b).

The Carrizo Gorge Wilderness is located north of I-8 and approximately 1.7 miles northeast of the northernmost boundary of the Project site (see Figure 3A). Located west of Carrizo Gorge and the Carrizo Canyon Wilderness which encompasses State Park lands, the Carrizo Gorge Wilderness is managed by the BLM and includes moderate and steep terrain of the In-Ko-Pah Mountains. The wilderness provides opportunities for solitude and non-motorized recreation including camping, hiking, wildlife viewing, and photography (BLM 2020).

Portions of Anza-Borrego Desert SP, as shown in Figure 3A, are in the Project area. Anza-Borrego Desert SP is the largest state park in California and includes 500 miles of dirt roads, twelve wilderness areas, washes, canyons, a variety of plants and wildlife, and numerous hiking trails (California State Parks 2020). Anza-Borrego Desert SP lands (including the Carrizo Canyon Wilderness) are generally located north of I-8 but also include non-connected tracts to the south of the interstate (California State Parks 2016). The State Parks lands to the south of the interstate do not include wilderness. While not shown in Figure 3A, State Park lands in the vicinity include the mesa to the immediate west of the Project site (i.e., north of Old Highway 80 and the Jacumba Hot Springs community). These lands were recently transferred from the Anza Borrego Foundation to the Department of Parks and Recreation and for the purposes of this analysis, are State Park lands that support passive recreation. In addition to undeveloped mountain terrain and access roads, the area is crossed by the same transmission infrastructure crossing the Project site. Gates to the area currently exist on nearby roads including Railroad Street and Desert Rose Ranch Road.

The southern boundary of the Project site parallels is the U.S/Mexico border. A 50-foot-wide setback from the border, referred to as the Public Reserve, provides an open view corridor for and facilitates movement of U.S. Customs and Border Patrol Protection (CBP) staff in the area. The border fence is approximately 1,700 feet from the eastbound travel lane of Old Highway 80. The rust-colored border fence creates a dark horizontal line across the landscape. Within the Project area, the metal fence consists of a series of tall, vertical slats that permit visibility to the south and support wider, rectangular "panels" that comprises the top of the fence. CBP maintains a strong presence in the area including patrols on local roads, the Public Reserve, and atop Airport Mesa.

2.3 Regulatory Framework

Federal

Bureau of Land Management Eastern San Diego County Resource Management Plan and Record of Decision

The Eastern San Diego County Resource Management Plan and Record of Decision guide the development and management of the Eastern San Diego County Planning Area, an area spanning an eastern escarpment of southern California's Peninsular Ranges and including more than 100,000 acres of public land administered by the BLM (BLM 2008). The Resource Management Plan also addresses conflicts among various recreational users accessing BLM lands, provides direction for future site-specific development including renewable energy projects, and provides for plan monitoring to determine the effectiveness of BLM land management strategies (BLM 2008). Further, the Resource Management Plan stresses that future policy decisions and land management strategies shall be compatible with the multiple use mission of the BLM that entails the management of recreational use and responsible development on public lands while also maintaining environmental quality (BLM 2008).

State

California Scenic Highway System

Created by the California State Legislature in 1963, the California Scenic Highway Program includes highways designated by the California Department of Transportation (Caltrans) as scenic. There are five officially designated scenic highways in San Diego County and the nearest (State Route [SR] 78 from the west to east boundary of Anza-Borrego Desert State Park) is located over 30 miles from the Project site. However, I-8 is an eligible state scenic highway from SR-67 to the eastern San Diego County border (Caltrans 2017). At its closest location, I-8 is located approximately 220 feet north of the northern Proposed Project boundary (see Figure 2A).

California State Historic Routes

Old Highway 80 is a designated California State Historic Route. In 2006, the state legislature granted this designation in recognition of the highway's "outstanding natural, cultural, historic, and scenic qualities". Despite this description, the designation does not influence the development of public and private properties adjacent to Old Highway 80 (Assembly Concurrent Resolution 123; State of California Legislature 2006).

Anza-Borrego Desert State Park Plan

While the Project site is located entirely on private lands under the land use jurisdiction of the County, the proposed development would be visible from lands within the Anza-Borrego Desert SP. The overall long-range purpose and vision for the park is established in the Anza Borrego Desert State Park General Plan that was approved by the California State Parks and Recreation Commission in February 2005 (California State Parks 2005). Since then, the Parks and Recreation Commission approved a Cultural Preserve Management Plan in November 2012 but no updates to the 2005 General Plan have been made. Because the General Plan is only applicable to State Park lands, the goals and guidelines of the Anza-Borrego Desert SP General Plan are not applicable to the Proposed Project.

Local

San Diego County General Plan

The San Diego County General Plan, through elements established to address the various issues accompanying planning and development, provides guidance for the protection of visual resources. Select policies within the Land Use, Mobility, and Conservation and Open Space Elements of the General Plan (County of San Diego 2011a) address the protection of existing visual character and quality of areas, and contain general direction regarding the minimization of adverse impacts to visual resources. Policies from the remaining elements of the San Diego County General Plan are not considered applicable since they do not concern the protection of visual resources.

The following goals and policies of the Land Use (LU), Mobility (M), and Conservation and Open Space (COS) Elements concern the preservation of visual and scenic resources (County of San Diego 2011a). While pertinent to protection of visual quality and quality, the County's visual resource guidelines (County of San Diego 2007) do not specifically require a consistency evaluation between General Plan goals and policies and developments proposed in the County. Still, the goals and policies below apply to visual resources, and therefore, are included below for informational purposes (County of San Diego 2011a):

- **Goal LU-2: Maintenance of the County's Rural Character.** Conservation and enhancement of the unincorporated County's varied communities, rural setting, and character.
    - **Policy LU-2.8:** Mitigation of Development Impacts. Require measures that minimize significant impacts to surrounding areas from uses or operations that cause excessive noise, vibrations, dust, odor, aesthetic impairment and/or are detrimental to human health and safety.
    - **Policy LU-2.9:** Maintaining Rural Character. Consider level of service criteria, in accordance with Policy M-2.1, to determine whether adding lanes to a Mobility Element road would adversely impact the rural character of a community or cause significant environmental impacts. In those instances, consider other options to mitigate LOS [level of service] where appropriate.
- **Goal LU-6: Development – Environmental Balance.** A built environment in balance with the natural environment, scarce resources, natural hazards, and the unique local character of individual communities.
    - **Policy LU-6.6: Integration of Natural Features into Project Design.** Require incorporation of natural features (including mature oaks, indigenous trees, and rock formations) into proposed development and require avoidance of sensitive environmental resources.
    - **Policy LU-6.9: Development Conformance with Topography.** Require development to conform to the natural topography to limit grading; incorporate and not significantly alter the dominant physical characteristics of a site; and to utilize natural drainage and topography in conveying stormwater to the maximum extent practicable.
    - **Policy LU-10.2: Development – Environmental Resource Relationship.** Require development in Semi-Rural and Rural areas to respect and conserve the unique natural features and rural character, and avoid sensitive or intact environmental resources and hazard areas.

- **Policy LU-11.2: Compatibility with Community Character.** Require that commercial, office, and industrial development be located, scaled, and designed to be compatible with the unique character of the community.
- **Policy LU-12.4: Planning for Compatibility.** Plan and site infrastructure for public utilities and public facilities in a manner compatible with community character, minimize visual and environmental impacts, and whenever feasible, locate any facilities and supporting infrastructure outside preserve areas. Require context sensitive Mobility Element road design that is compatible with community character and minimizes visual and environmental impacts; for Mobility Element roads identified in Table M-4, an LOS D or better may not be achieved.
- **Policy M-4.5: Context Sensitive Road Design.** Design and construct roads that are compatible with the local terrain and the uses, scale and pattern of the surrounding development. Provide wildlife crossings in road design and construction where it would minimize impacts in wildlife corridors.
- **Policy COS-11.1: Protection of Scenic Resources.** Require the protection of scenic highways, corridors, regionally significant scenic vistas, and natural features, including prominent ridgelines, dominant landforms, reservoirs, and scenic landscapes.
- **Policy COS-11.2: Scenic Resource Connections**. Promote the connection of regionally significant natural features, designated historic landmarks, and points of regional historic, visual, and cultural interest via designated scenic corridors, such as scenic highways and regional trails.
- **Policy COS-11.3: Development Siting and Design.** Require development within visually sensitive areas to minimize visual impacts and to preserve unique or special visual features, particularly in rural areas, through the following:
  - Creative site planning;
  - Integration of natural features into the project;
  - Appropriate scale, materials, and design to complement the surrounding natural landscape;
  - Minimal disturbance of topography;
  - Clustering of development so as to preserve a balance of open space vistas, natural features, and community character; and
  - Creation of contiguous open space networks.
- **Policy COS-11.7: Underground Utilities.** Require new development to place utilities underground and encourage "undergrounding" in existing development to maintain

viewsheds, reduce hazards associated with hanging lines and utility poles, and to keep pace with current and future technologies.

- **Policy COS-12.1: Hillside and Ridgeline Development Density.** Protect undeveloped ridgelines and steep hillsides by maintaining semi-rural or rural designations on these areas.
- **Policy COS-12.2: Development Location on Ridges.** Require development to preserve the physical features by being located down and away from ridgelines so that structures are not silhouetted against the sky.
- **Policy COS-13.1: Restrict Light and Glare.** Restrict outdoor light and glare from development projects in Semi-Rural and Rural Lands and designated rural communities to retain the quality of night skies by minimizing light pollution.
- **Policy COS-13.2: Palomar and Mount Laguna.** Minimize, to the maximum extent feasible, the impact of development on the dark skies surrounding Palomar and Mount Laguna observatories to maintain dark skies which are vital to these two world-class observatories by restricting exterior light sources within the impact areas of the observatories.

In addition to goals and policies, the General Plan Conservation and Open Space Element establishes a County Scenic Highway System that is composed of scenic corridors that includes County roads, state routes, and interstate freeways. Within the Project area, I-8 and Old Highway 80 are included within the County Scenic Highway System (County of San Diego 2011a).

Mountain Empire Subregional Plan

The Project site is located within the Mountain Empire Subregion of the County of San Diego. The Mountain Empire Subregional Plan (County of San Diego 2011b) contains policies applicable to visual resources and thus are applicable to the Proposed Project. The following goals, policies, and recommendations established in the Subregional Plan are relevant to the Proposed Project (County of San Diego 2011b):

- **Land Use – General Goal (Policy and Recommendation 1):** The landforms of the Subregion are an important environmental resource that should be respected in new development. Hillside grading shall be minimized and designed to blend in with the existing natural contours.
- **Conservation – Environmental Resources (Policy and Recommendation 4):** The dark night sky is a significant resource for the Subregion and appropriate steps shall be taken to preserve it.

- **Conservation – Environmental Resources (Policy and Recommendation 6):** Development shall not adversely affect the habitat of sensitive plant and wildlife species or those areas of significant scenic value.
- **Scenic Highways Goal:** Establish a network of scenic highway corridors within which scenic, historical and recreational resources are protected and enhanced.

Jacumba Subregional Group Area

While a community plan has not been prepared for Jacumba Hot Springs, the community has developed a Vision Statement that includes "beautiful scenery" as a community "want" (County of San Diego 2011c). In regards to new development, the Vision Statement includes the following:

> The community supports new development that is compatible with, and preserves the natural and historical environment, including water resources, and protects existing neighborhoods, manages growth to reinforce the rural small town character of the area, which includes agriculture, open space, and trails as important elements of the community.

The Vision Statement does not include a list of goals or policies.

San Diego County Zoning Ordinance - Section 6322 Outdoor Lighting and Section 6324 Lighting Permitted in Required Yards

These sections of the County Zoning Ordinance establish regulations to control excessive or unnecessary outdoor light emissions which produce unwanted illumination of adjacent premises within the unincorporated area of the County. In addition to the prohibition of certain lighting sources including searchlights, lighting for advertisements and lighting for recreational facilities (see Section 6322), requirements for yard lighting are established in Section 6324.

San Diego County Zoning Ordinance - Section 6954 Solar Energy Systems

Section 6954 of the County's Zoning Ordinance regulates Solar Energy Systems. Section 6954 (b) (2) specifies that a photovoltaic solar energy system for off-site uses with a project area greater than 10 acres is considered a Major Impact Service and Utility within all zones and requires a Major Use Permit. In addition, Section 6954(b)(3) specifically relates to visual resources and requires that the following measures be implemented to minimize the visual impacts of a project:

- Removal of existing vegetation shall be minimized.
- Internal roads shall be graded for minimal size and disruption.

- Any accessory buildings shall be painted or otherwise visually treated to blend with the surroundings.
- A structure shall be non-reflective in all areas possible to blend with the surroundings.

San Diego Light Pollution Code

The Light Pollution Code was developed by the County of San Diego Department of Planning & Development Services and Department of Public Works in cooperation with lighting engineers, astronomers, and land use planners from SDG&E, Palomar and Mount Laguna Observatories, and local planning and sponsor groups to address and minimize the impact of new sources of light pollution on nighttime views.

For purposes of lighting requirements, the Light Pollution Code separates the unincorporated portion of San Diego County into two zones: Zone A and Zone B. Zone A includes all unincorporated lands located within a 15-mile radius of the Palomar or the Mount Laguna Observatories, and Zone B includes all areas not included in Zone A. Section 59.105 includes general lighting requirements applicable to all unincorporated lands in San Diego County, and Section 59.106 includes shielding requirements per fixture by lighting type (i.e., outdoor lighting used for outdoor sales, eating areas, or advertisements [Class I]; security lighting [Class II]; and decorative lighting [Class III]) and according to location (Zone A or B). Because the Mount Laguna Observatory is located greater than 15 miles from the Proposed Project boundary, the Proposed Project is in Zone B (San Diego County Code of Regulatory Ordinances, Title 5, Chapter 2, Light Pollution).

3 VISUAL ENVIRONMENT OF THE PROJECT

3.1 Project Setting

3.1.1 Project Site

The Project site is located within unincorporated San Diego County in the Jacumba Valley area. Composed of 24 privately owned parcels covering 1,356 acres, the Project site is located south of I-8 and north of the U.S./Mexico international border. Landforms on the Project site include the conical form of Round Mountain (the eastern slopes are within Project site boundary), east-facing slopes to the west of the San Diego and Arizona Eastern Railway, and the valley floor that includes a dense to moderately vegetated floodplain. The site also features low, mounded hills in the northern portion and a wide, pronounced hill in the eastern portion. The central and southern portions encompass flatter portions of the site that were previously used for farming.

According to the Biological Resources Technical Report for the Jacumba Valley Solar Energy Project (Dudek 2020), 11 vegetation communities and/or land covers occur on the Project site, including nine sensitive communities. Native vegetation communities within the boundaries of the Project site include Sonoran mixed woody scrub, Sonoran mixed woody and succulent scrub, mesquite bosque, and desert saltbush scrub. Two non-sensitive land covers, disturbed habitat and urban/developed also occur on the Project site.

While most of the northern area of Project site is dotted with low to moderately tall woody shrubs including creosote bush, clusters of relatively tall, spreading shrubs and occasionally, trees, also occur on site. These areas of southern riparian forest are located outside of the development footprint of the solar facility. Pockets of semi-desert chaparral mark the westernmost and easternmost extents of the Project site. As viewed from I-8 and Carrizo Gorge Road, these higher elevation areas are marked by low to moderately high chamise shrubs featuring light to dark green foliage with seasonal clusters of small, white flowers, and upright and woody bigberry manzanita. The solar facility is primarily proposed on areas which were previously used for agriculture; however, due to inactivity of previous agricultural activities, vegetation has recolonized areas located north and south of Old Highway 80.

Photographs of the Project site and surrounding area were taken during site visits conducted in fall and winter 2018, and winter and spring 2019. The photographs illustrate the existing visual character and quality of the Project site and surrounding area as experienced during site visits. The locations from which the photographs were taken are depicted in Figure 3B, Existing Conditions Photographs Key Map. The photographs of the Project site are presented in Figures 4 and 5, Existing Conditions: Project Site. Photographs depicting the surrounding area are presented in Figures 6, 7, and 8, Existing Conditions: Surrounding Area.

In the northwestern portion of the Project site, a vegetated creek corridor tapers from north to south and supports low shrubs and moderately tall and spreading trees. Vegetation is relatively dense along the corridor that wraps around the north and east slopes of Round Mountain and abuts a segment of Carrizo Gorge Road. The corridor and adjacent San Diego and Arizona Eastern Railway (not currently operational) are aligned adjacent to steep to moderately sloped, rocky terrain speckled with low desert shrubs to the west. The eastern slopes of Round Mountain are located within the Project site.

While the central and southern portions of the Project site have historically been used for farming and dairy operations, the Project site has been fallow since 2014. Buildings and other structures associated with a prior dairy, creamery and ranch are located north of Old Highway 80 within the southern portion of the Project site. These buildings and structures were constructed over 45 years ago and are in various states of disrepair. Figure 5 includes views of the buildings and structures (see Photographs E and F). In addition to a collection of dilapidated wood frame, rusted metal siding, and broken concrete masonry unit structures, several vertical tanks/silos, a metal storage container, and concrete foundations are scattered in the immediate area. Weathered wooden corrals and fencing, discarded and rusted farming machinery and equipment, empty concrete troughs, and a weathered barn and livestock house provide additional evidence of prior uses. A narrow spur road extends east of the area and provides access to three vertical water tanks constructed east and upslope of the abandoned structures. Lands to the south and north of Old Highway 80 are situated at a lower elevation than the structures that are constructed atop a low hill. The lower lying lands are disturbed and are traversed (or bordered) by dirt access roads or occasionally, by east-west and north-south irrigation ditches.

The central portion of the Project site is crossed by existing utility development. For example, two 500 kV transmission lines (Sunrise Powerlink and Southwest Powerlink) supported by over 150-foot-tall lattice steel structures and traverse the Project site in an east-west alignment. In addition, a 138 kV transmission line that supported by vertical tubular steel poles steel structures parallels the 500 kV transmission lines across a portion of the Project site. Specifically, the transmission line transitions from underground to overhead on the Project site as evidence by the steel cable riser pole located to the west of Carrizo Gorge Road and near the Sunrise Powerlink and Southwest Powerlink crossings. Figure 5 includes photographs of the existing transmission lines (see Photographs G and H).

In the north central area of the Project site, a hill has been visibly altered by excavation associated with production of construction aggregate materials. The top of the hill has been graded and leveled and mounded piles of soil have been spread nearby to the northwest. The hill is accessed via a narrow gravel road that extends to the northeast to Carrizo Gorge Road. A portion of the Carrizo Gorge Road right-of-way near the gravel road has been graded and leveled. At the time of the site visits, the area supported a construction materials storage/laydown yard featuring blue, rectangular

dumpsters, and short and tall stacks of plastic bulk bins and lids. Lastly, the laydown area extended to the west of Carrizo Gorge Road and stack materials were covered with black tarps/screens and setback from the road.

3.1.2 Surrounding Area

I-8 is located to the north of the Project site, with hilly to mountainous terrain further to the north. The Project site extends to the U.S./Mexico international border to the south. A prominent hill, desert wash and primarily undeveloped lands are located immediately adjacent to the Project site. Hilly to rugged terrain is located to the east beyond the Jacumba Airport. Further to the east, the existing 20 MW Jacumba solar development is located 1.75 miles to the east of the Project site boundary and a regional 138 kV electrical substation (i.e., SDG&E's East County Substation) is located 1.9 miles away. North of Old Highway 80 and Jacumba Hot Springs, the western Project site boundary abuts undeveloped hilly and mountainous terrain including Round Mountain and a mesa. As previously stated, the eastern slopes of Round Mountain are located within the Project site. The unincorporated community of Jacumba Hot Springs is located adjacent to the southwestern portion of the Project site.

North

The segment of Carrizo Gorge Road bordering (and occasionally traversing) the Project site is an approximately 30-foot-wide dirt road that extends to the northwest, passes under I-8, and provides access to a private resort (De Anza Springs). The dirt road is the sole access road to the De Anza Springs development. Although the resort is located approximately 0.50 miles north of the northwestern corner of the Project site, the proposed solar facility would not be visible due to intervening terrain. The northeastern corner of the Project site abuts two gas stations that include small convenience stores (see Photograph I in Figure 6, Existing Conditions: Surrounding Area).

Terrain to the immediate north of Carrizo Gorge Road gradually climbs toward the separated travel lanes of I-8. In the Project area, I-8 consists of four total travel lanes (two in each direction) with paved shoulders and an approximately 80-foot-wide median covered with boulders of varying size, areas of exposed and rocky, brown/tan colored soils and shrubs of low to moderate height. Sections of medians are mounded or swale-like and are occasionally crossed by short turnouts for law enforcement. To the north of I-8, the terrain is rocky and covered with low scattered shrubs that display olive to dark green to greyish tones. Prominent mountain terrain to the north of the Project site and I-8 includes Gray Mountain (3,780 feet above mean sea level [AMSL]) and Table Mountain (4,089 feet AMSL) (see Figure 3A for location), both which occur on public land managed by the BLM and within the Table Mountain RMZ. Table Mountain is located approximately two miles to the northeast of the Project site. Photograph J in Figure 6 illustrates

the existing view north from Carrizo Gorge Road toward I-8 (obscured by terrain and vegetation) and boulder covered mountains including Gray Mountain (lower peak to the northwest).

East

To the east, the landscape is largely undeveloped and features scrubby vegetation and boulders, traversed by several dirt roads. Photograph K in Figure 6 provides a representative northwestward view from Old Highway 80 across the local desert landscape and toward the Project site (located approximately 0.5 miles away). The Sunrise Powerlink and Southwest Powerlink transmission lines, which feature regularly spaced lattice steel towers, extend to the east and beyond the Project site in the photograph. In addition, scattered rural residential development is located east of the Project site (generally near the Old Highway 80 and Carrizo Gorge Road intersection) and the Jacumba Airport is located south of Old Highway 80 and adjacent to the southeastern portion of the Project site. The East County Substation and Jacumba Solar facility are located over 1.7 miles away and beyond the Airport Mesa landform. The existing facilities are not visible from Jacumba Hot Springs due to intervening terrain and have limited visibility from Old Highway 80 due to setbacks.

Limited rural residential development occurs to the east of the Project site and along Old Highway 80. An approximately 2-acre fenced property located at the base of a prominent hill partially within the Project site and with direct access to Old Highway 80 includes several lightly colored, wood and stucco mobile and permanent residential buildings. The windows of several of the single-story buildings have been boarded yet signs of activity on site during the fall 2018 site visit suggests that one or more of the buildings is occupied. An electrical distribution and telephone line parallel Old Highway 80 and provide service to the property. Three additional rural residential properties are located near the base of the hill's east-facing slope and near the intersection of Old Highway 80 and Carrizo Creek Road. Photograph L in Figure 6 provides a westward view from Old Highway 80 at Carrizo Gorge Road toward rural residential development.

The Jacumba Airport is located south of Old Highway 80, south and east of the Project site. Unattended and unlighted, the airport is used mainly as an operation area for gliders and receives most of the use on the weekends (County of San Diego 2019). The County of San Diego owns the 2,562-foot-long asphalt runway (AirNav 2019), dirt helipad, two small single-story tan metal storage structures and surrounding airport property. The property is protected by a gated driveway (permission to access the property is required) with direct access off Old Highway 80. A cleared dirt area to the north of the runway is used for facility parking. According to the County of San Diego, approximately 1,162 "operations" occurred at the airport in 2018 (County of San Diego 2019). The parking area and runway are visible from Old Highway 80 (see Photograph M in Figure 7).

The tall and broad form of Airport Mesa rises from the otherwise low desert terrain to the east of the Project site and Jacumba Airport. See Photograph M in Figure 7. The majority of the steep sloped

Airport Mesa landform, and undeveloped desert lands to the north are managed by the BLM as the Airport Mesa RMZ. Airport Mesa abuts the U.S./Mexico international border fence on the south and a graded road to the summit provides an elevated vantage point from which CBP staff scan the border-adjacent landscape. The road is regularly patrolled by federal law enforcement and is within the portion of the mesa managed by the BLM. While primary recreation activities in the Airport Mesa RMZ are identified as target shooting, hiking and hunting in the Eastern San Diego Planning Area RMP (BLM 2008), a prohibition of target shooting on Airport Mesa was subsequently enacted by the BLM in 2009. Official use is not recorded; however, BLM estimates that the area experiences low annual use (i.e., less than 200 visitors per year) (Williams, pers. comm. 2020).

The existing Jacumba Solar and East County Substation and facility are located approximately 1.75 and 1.9 miles to the east, respectively, of the Project site. Due to variations in terrain and the presence of a tall, broad hill, these facilities are not visible from the Project site and are obscured from view of motorists on Old Highway 80. Photograph N in Figure 7 provides a representative view of the substation from Old Highway 80. Relatively clear, albeit short-duration views to the facilities are available from eastbound I-8. The electrical substation encompasses a large area (approximately 58 acres) and includes two separately fenced and graveled yards that support a variety of equipment including air-insulated electrical buses, steel support structures including vertical buses and bays, transformers, disconnect switches, and communication gear (CPUC and BLM 2011). As a regional hub for electrical conveyance, numerous tall lattice steel towers and tubular steel poles are installed to the north, east, south and west of the substation yards.

The Jacumba Solar facility consists of approximately 81,000 PV panels on approximately 2,200 fixed-title racks (approximately 12 feet tall) across 108 acres (County of San Diego 2016). A collector substation is also located on the fenced site that is surrounded by the characteristic vegetation and terrain of the local desert landscape. In addition to the low profile of solar panels, the presence of Airport Mesa, a tall and broad hill to the west, the U.S./Mexico international border fence to the south, and the Jacumba Mountains to the east limits viewing opportunities from Old Highway 80 and the surrounding area.

South

The U.S./Mexico international border fence is located directly south of the Project site. In the Project area, the border fence is a straight, 15-foot-tall, tan and brown slatted steel structure that traverses the desert landscape from east to west. While nearly continuous, unconstructed gaps in the fence occur at particularly steep terrain including the west and east slopes of Airport Mesa and at the west-facing slope of the Jacumba Mountains (see Figure 7, Photograph M that partially depicts Airport Mesa). To the south of the border within Mexico, a wide valley is bordered by the rugged and rocky Sierra de Juarez Mountains to the east and hilly terrain to the southwest. Within Mexico, scattered rural residential development and the village of Jacume are located in the vicinity.

West

To the south of Round Mountain and west of the Project site, the local terrain gradually rises to create a moderately sloped mesa landform. The mesa encompasses lands recently acquired by the State of California Department of Parks and Recreation and added to Anza-Borrego Desert SP. Existing utility development that traverses the Project site continues west across the rising east-facing slopes and the relatively flat mesa. The slopes and mesa are also traversed by access roads used by utilities to maintain the transmission lines. Photograph O of Figure 7 provides a representative northwestward view from Old Highway 80 across the Project site and toward the mesa landform and Round Mountain. Existing steel lattice towers are faint but visible atop the mesa. The pyramidal landform visible in Photograph O, Jacumba Peak, is managed by State Parks, included within Anza-Borrego Desert SP, and is approximately 0.75 miles west of the Project site.

The unincorporated community of Jacumba Hot Springs is located south of the mesa landform and west of the Project site. The community is bisected by Old Highway 80, which functions as the sole commercial corridor and access road in the community. The area predominantly consists of single-story residences on fenced lots dotted with mature trees. Photograph P in Figure 7 depicts an eastward view from Old Highway 80 near the community library. As illustrated in the photograph, residences and mature trees line the highway corridor through the eastern extent of the community. Permanent homes within Jacumba Hot Springs typically display a rectangular floor plan, angular roof, and white, tan, or greyish painted wood or stucco exteriors. Chain-link, wood picket, and continuous wood board fences mark residential properties. While most properties support one single-family residential structure, an approximate 2.4-acre lot located immediately west of the Project site and north of Old Highway 80 is developed as the Wagon Wheel Trailer Park. Based on aerial imagery, the tree dotted trailer park is home to approximately 20 rectangular and single-story mobile homes. In addition to local residences located north of Old Highway 80 (approximately 150 residences are located north of the highway), approximately 20 single-family residences are scattered on the hilly terrain to the south of the highway and west of Jacumba Community Park. Photograph Q in Figure 8, Existing Conditions: Surrounding Area, provides a view across Old Highway 80 at Jacumba Street toward hillside and hilltop rural residences.

In addition to residential land uses, the community of Jacumba Hot Springs includes limited commercial development, a post office, and County library branch. These uses, and Jacumba Elementary School, are located off Old Highway 80. A tan with blue trim building houses a local restaurant and the adjacent tan colored stucco single-story structure with a blocky false front is the community's lone market (see Photograph R in Figure 8). Vacant one and two-story structures are scattered to the north of Old Highway 80. The vacant structures display a rustic aesthetic characterized by wood and tan painted stucco exteriors, small overhangs and high fronted facades (see Figure 8, Photograph S). The small and rectangular post office building fronts Railroad Street and is located north of vacant car wash business housed in a blocky white and teal trim structure.

The Jacumba Branch library and adjacent Jacumba Community Park are located south of Old Highway 80. The library property is planted with several mature pine and deciduous trees. In addition to the rectangular, single-story library building that feature a pink-red exterior with dark green trim, a dirt parking lot and playground are featured on the property. The community park is located to the south of the library and consists of a single basketball court, and a dirt baseball/softball field. Photograph T in Figure 8 shows the park's basketball court and more distant baseball/softball field. The park property is bordered by the Project site on the east and south.

Scenic Vistas

The following discussion describes opportunities for scenic views in the area surrounding the Project site. While there are no formally designated scenic vistas or lookouts in the Jacumba area, the presence of hill and mountain terrain, public and designated scenic roads, parks and public lands near the Project site provides opportunities for long and broad views of the local landscape. The discussion is organized by jurisdiction for clarity.

Local/County

There are no designated County public scenic vistas or lookouts in the local area. In addition, the community of Jacumba Hot Springs has not adopted a Community Trails and Pathways Plan and no segments of trails within the Boulevard Community Trails and Pathways Plan offer views to the Jacumba Valley area and Project site (County of San Diego 2009a). Since Jacumba Hot Springs has not adopted a Community Trails and Pathways Plan, the nearest trail (i.e., the San Diego and Arizona Eastern Railway Trail) effectively ends at the Boulevard/Jacumba Community Plan boundary. At the boundary, the San Diego and Arizona Eastern Railway Trail is located within a rocky, mountainous landscape and intervening terrain blocks the Jacumba Valley area from view.

Jacumba Community Park is bordered on the east and south by the Project site and provides opportunities for open views that stretch across the undeveloped Project site and Jacumba Airport to Airport Mesa (located approximately 1.9 miles away). While containing limitations that prohibit opportunities for particularly long views (such as those available from an elevated vantage point or mountain peak), the open, undeveloped character of the desert landscape including mountain terrain are considered valued visual resources. Therefore, for purposes of this analysis, existing westerly views from Jacumba Community Park are considered scenic vistas.

The east and south-facing slopes of Round Mountain are located within the Project site. While there are no trailheads or developed trails on the east- and south-slopes of the landform, long and uninterrupted views toward the Project site are available from Round Mountain.

State

Anza-Borrego Desert SP lands are located to the west and northwest of the Project site. In addition to the non-connected tracts to the west of Round Mountain and south of I-8 (see Figure 3A), State Park lands are located to the immediate west of the Project site. Views from eastern extent of the broad portion of this mesa landform are broad and long, extending east to the Jacumba Mountains and south into Mexico. Uninterrupted views to the central and southern portion of the Project site, and Jacumba Hot Springs, are also available. Eastwardly views from higher elevation State Park lands located to the west of Round Mountain are at times long and broad. For example, from the elevated ridgeline located approximately 1.75 northwest of Round Mountain, views to the southeast may extend to the southern portion of the Project site; however, the presence of intervening landforms (the aforementioned mesa and Round Mountain) generally interrupt views to the Jacumba Valley area. While there is no specific discussion of establishing recreation facilities on State Park lands located west of the Project site and south of I-8 in the Anza-Borrego Desert SP General Plan, the SP lands located south of the I-8 as shown in Figure 3A are designated as Proposed Backcountry Zones (see General Plan Figure 6.6, Management Zones Preferred Alternative) (California State Parks 2005).

In addition to State Park lands to the south of I-8, the Jacumba Mountains Wilderness is located to the north of the interstate (see Figure 3A). As these State Park lands encompass rocky, mountainous terrain, elevated vantage points including summits and south- and east-facing slopes may provide opportunities for long views that extend to the Project site. The volume of viewers in the Jacumba Mountain Wilderness is assumed to be low as the area is managed as a wilderness area and supports no developed facilities. The nearest developed State Park facilities (e.g., designated trails, roads, and campgrounds) are located 13 miles from the Project site.

Currently, it is assumed that the Anza Borrego Desert SP lands above receive relatively little public use due to their remote nature, management as Backcountry or Wilderness areas, and lack of developed facilities.

Federal

Federal public lands located closest to the Project site include the summit, west- and south-facing slopes of Round Mountain. While the northern portion of the Project site is visible from the summit, from the western slopes the proposed solar facility would be blocked from view by intervening terrain. Views to the Project site from the south-facing slopes of Round Mountain are available and are similar to those discussed above for the portion of Round Mountain located on County lands.

In addition to Round Mountain, public lands managed by the BLM are located to the north and east of the Project site. Table Mountain is located approximately two miles to the northeast of the

Project site on BLM lands within the Table Mountain RMZ. Located north of I-8, the RMZ is accessible to the public via a system of unmaintained unpaved roads that extend north from Old Highway 80 and Carrizo Creek Road. While actual usage is not recorded, the BLM estimates that the Table Mountain RMZ receives low use throughout the year (i.e., less than 20 visitors per year) (Williams, pers. comm. 2020). The primary access road to the RMZ passes under I-8 at the Mica Gem Undercrossing (i.e., approximately 1.75 miles east of the Project site) and eventually branches, offering several route across BLM and County lands. While there are no developed trails to the summit of Table Mountain, a less prominent mesa landform (also on BLM-managed land) to the south is accessible via an unimproved unpaved road that branches off from the main access approximately 0.45 miles north of I-8. The mesa (3,770 feet AMSL) provides long and broad south- and southwestward views that encompasses the Jacumba Valley and the Project site. The landform is somewhat remote and no informational signage noting access is provided on nearby roads. Table Mountain receives occasional use by the Jacumba Hikers and Walkers group. For example, "Table Mountain Hike" was listed on the group's April to June 2019 schedule of planned hikes. As such, the mesa is assumed to receive some local recreational use.

Airport Mesa is located to the east of the Project site and is managed by the BLM as part of the Airport Mesa RMZ for its rural recreational qualities. The single access road to the summit is managed by CBP and is regularly used by agents when conducting patrols in the area. No developed staging or parking areas for hikers or other trail users are provided near Airport Mesa previously allowable target shooting was prohibited by the BLM in 2009. Airport Mesa is estimated to receive less than 200 visitors per year (Williams, pers. comm. 2020); however, the westward view from the summit is long and expansive. Both the Jacumba Valley and the Project site are visible in westward views from the summit of Airport Mesa.

Lastly, BLM-managed lands in Imperial County are located approximately 3 miles east of the Project site and encompass the southern extent of the Jacumba Mountain range. Lands to the immediate east of the southeastern corner of San Diego County are managed by the BLM for multiple use. The boundary of the BLM-managed Jacumba Wilderness is approximately 1 mile from the County line. The areas are accessible from unpaved roads located south of I-8 and Old Highway 80 near the In-Ko Pah Park Road exit (approximately 3 miles east of the Project site). The condition of the roads declines as they ascend higher into the mountains and several areas are severely eroded. Westward views from most unpaved roads (including those on non-wilderness BLM lands) in the mountain landscape are generally blocked by higher elevation terrain to the west. Clear westward views are occasionally offered to visitors atop prominent terrain accessible by off-trail/road hiking. According to the BLM, the southern extent of the Jacumba Mountains and adjacent wilderness are estimated to receive low public use (i.e., approximately 1,500 visitors per year) (Williams, pers. comm. 2020).

Scenic Highways

There are no official state designated highways in the surrounding area of the Project site. The closest officially designated State Scenic Highway is SR-78, which is located approximately 35.5 miles north of the Project site (Caltrans 2017). The majority of I-8 that extends through the County of San Diego is an eligible state scenic highway and a component of the County Scenic Highway System (Caltrans 2017; County of San Diego 2011a). Old Highway 80, which transects the southern portion of the Project site, is also included in the County Scenic Highway System (County of San Diego 2011a).

Views to the Project site are intermittently available from I-8 for approximately 1.2 miles. East of Round Mountain, the Project site is visible to eastbound motorists but partially obstructed by vegetation within the Carrizo Creek corridor to the southeast. The brief, partially obstructed views to the Project site are available for seconds and are abruptly blocked by an intervening hill to the south of I-8. Near the Carrizo Gorge Road off-ramp, motorists pass the intervening hill and views to the south briefly open to reveal the Project site and a prominent hill to the east of the Project site. The presence of mounded, rocky and vegetated median terrain regularly blocks the Jacumba Valley and Project site from view of westbound motorists. However, uninterrupted views to the Project site are available to westbound motorists for approximately 0.40 miles, roughly from the Carrizo Gorge off-ramp to the intervening hill to the south of I-8 as described above.

Regarding public roads, views toward the Jacumba Valley area and nearby hills and mountains are available from Old Highway 80 and Carrizo Gorge Road. The Project site parallels Old Highway 80 to the north and south from approximately Laguna Street to the Jacumba Airport/glider port driveway (0.95 miles). From westbound Old Highway 80 near Airport Mesa, a prominent hill blocks most of the Project site from view. However, views to portions of the northern and southern Project site are occasionally available and visibility of the southern Project site increases on the approach to the Jacumba Airport. As the highway descends and approaches Jacumba Hot Springs from the west, hilly terrain, residential structures and mature trees along the corridor block views to the Project site. Within the community of Jacumba Hot Springs, mature trees planted parallel to the highway screen the Project site from view of eastbound motorists.

3.2 Project Viewshed

According the County of San Diego, the visual environment can be vast; therefore, for purposes of analyzing impacts, boundaries must be placed on it (County of San Diego 2007). The area within those boundaries is commonly referred to as the viewshed. A viewshed is comprised of all the surface areas visible from an observer's viewpoint.

A viewshed analysis of the proposed solar facility is presented as Figure 9, Topographic Viewshed of Proposed Project. The figure illustrates the approximate viewshed of the Proposed Project based on topography and the height of the tallest solar facility component (70- to 115-foot-high support poles for the 138 kV overhead slack span transmission line) and represents a worst-case assessment of the potential extent of available views to the Proposed Project from the surrounding area. Potential screening effects due to vegetation and/or structures at specific locations or viewpoints are not considered or reflected in Figure 9.

The Proposed Project viewshed is primarily defined by the presence of hilly and mountainous terrain to the west, north, and east of the Project site. Views to the Project site are available from prominent terrain in the area including Round Mountain, State Park lands to the west and northwest, Table Mountain to the northeast, Airport Mesa and the Jacumba Mountains. These areas are public lands managed by the BLM for dispersed recreation, designated wilderness (Jacumba Wilderness) and conservation (Table Mountain Area of Critical Environmental Concern).

Views to the Project site are also available from the Jacumba Hot Springs area. For example, based on the viewshed, views to the Project site are available to local residents near the western and southwestern boundary of the Project site and a limited number of homes constructed along Boundary Creek near the paved extent of Railroad Street. Further, the viewshed encompasses properties adjacent to the southwest corner of the Project site (including Jacumba Community Park) and homes on elevated, east-facing slopes near South Railroad Street.

The viewshed also extends to segments of I-8, Old Highway 80, and several local roads in the immediate surrounding area. While the segment of I-8 in the viewshed is located at a greater elevation than the Project site and the local terrain tends to fall to the south from the interstate, the presence of mounded embankments (road cuts) and median and interstate-adjacent shrubs occasionally screens or obscures the Project site from view of passing motorists.

Lastly, the U.S./Mexico international border fence is taller than the proposed solar modules to be installed, however, components including 138 kV gen-tie line poles and equipment at the proposed collector substation would be taller than the border fence. As such, views to proposed components would extend south into Mexico and more specifically, to the small community of Jacume and to the slopes of the Sierra de Juarez Mountains.

3.3 Landscape Character Units

A landscape character unit (LCU) is a portion of the regional landscape that exhibits a distinct visual character. Terrain, vegetation, and existing land use contribute to the distinctness of visual character. Slopes, watershed ridges, and other physical elements can serve to distinguish one unit from another. The lines and elements that define LCUs may be abrupt and obvious (a mountainous

ridgeline for example) but may also be less obvious and transitional in nature (the broad sweep of a valley or a transitional uplands area featuring irregular clumps of granite boulders which slowly gradate to distinct boulder-strewn mountain foothills). A landscape unit will often correspond to a place or district that is commonly known among local viewers.

For purposes of this study, four LCUs were identified in the Project area: Jacumba Valley LCU, Desert Alluvial Fan LCU, Desert Mesa and Mountains LCU, and Jacumba Mountains LCU. The approximate LCU boundaries are depicted in Figure 10, Landscape Character Units. LCUs in the Project area were first identified in the Visual Resources Report for the Energia Sierra Juarez U.S. Transmission, LLC Generation Tie Line Project (ICF Jones & Stokes 2010) and in the Visual Resources Report for the Jacumba Solar Energy Project (Dudek 2015). These LCUs were reviewed and were modified for inclusion in this visual resource report for the JVR Energy Park Project. While the characteristics of the LCUs were verified as the prevailing features of units within the viewshed, the LCUs names and boundaries were modified to be more indicative of similar topographical and vegetative characteristics in the Project area.

Jacumba Valley LCU

The Jacumba Valley LCU encompasses generally flat terrain in the Project area. This LCU encompasses the Jacumba Valley, most of the Project site, the community of Jacumba Hot Springs, and the Boundary Creek corridor. This LCU is defined in the north by the narrow, winding form and relatively dense vegetative character of Boundary Creek that crosses beneath I-8. The creek widens to the south and the LCU expands to encompass the previously farmed and flat central portion of the Project site. Existing high-voltage transmission lines including the 500 kV Southwest Powerlink and Sunrise Powerlink transect this LCU. The LCU extends south of Old Highway 80, encompassing the flat terrain of the southern portion of the Project site, the Jacumba Airport and nearby lands to the east. While development is notably greater (the predominant land use is residential) and mature ornamental trees dot streets and private property, the flat topographic characteristic of the Jacumba community are generally similar to that of the central Jacumba Valley. Therefore, these areas have been combined and encompasses the Jacumba Valley LCU.

Desert Alluvial Fan LCU

The Desert Alluvial Fan LCU is situated east of the Jacumba Valley LCU and south of the Desert Mesa and Mountains LCU. Located south of I-8, elevations of the LCU range from approximately 3,100 feet to 3,200 feet. Based on aerial photography, there is visual continuity of this LCU with similar vegetation and terrain that occurs south into Mexico to the base of the Jacumba Mountains/Sierra de Juarez Mountains (south of the international border, is the Jacumba Mountains are referred to as the Sierra de Juarez Mountains). The Desert Alluvial Fan LCU is defined by a patchwork of light to dark green and occasional gray mixed woody scrub shrubs

regularly interrupted by lightly colored exposed tan soils and, intermittently, by the tan-reddish colors of boulder outcrops. Low, sandy washes are also present in the LCU and are distinguishable by their lack of vegetation, smooth sinuous form and lightly colored sandy soils.

Existing development in this LCU includes I-8, Old Highway 80, ESJ gen-tie, the Southwest Powerlink and the Sunrise Powerlink 500 kV transmission lines, the East County Substation, Jacumba Solar facility, and numerous dirt roads. Old Highway 80 and I-8 introduce straight, disparate lines to the landscape and the paved asphalt surfaces contrast with the tans and green hues of the surrounding desert landscape. At a distance and from elevated vantage points, large steel lattice structures of the ESJ gen-tie, Southwest Powerlink, and the Sunrise Powerlink are backscreened by mountainous desert terrain and as a result tend to blend into the colors of background terrain. However, when viewed from a low viewing angle, the large scale of the geometric structures becomes apparent and the tall forms and complex lines become prominent features in the landscape. Similarly, the tan color of East County Substation yard slopes and repetitive tall, bold forms of transmission line steel support structures disrupt the intactness and unity of the LCU. To a lesser extent, the dark form of solar panels, straight line of panel rows, and tan soils associated with access roads disrupt existing intactness and unity however, the contrasts associated with these Jacumba Solar facility elements have a relatively narrow viewshed.

Jacumba Mountains LCU

Located north of the Project site, the Jacumba Mountains comprise the eastern flank of California's coastal peninsular ranges. The mountain range is relatively wide and characterized by a series of almost parallel rocky ridgelines and intervening valleys that descend from west to east toward to the Colorado Desert. In the United States, this LCU primarily consists of public lands managed by the BLM as wilderness and lands included within Anza Borrego Desert State Park. In the vicinity of the Project site, the elevation of the Jacumba Mountains range from approximately 3,500 feet at the western foothills to 4,300 feet at the summit of prominent peaks located east of the Project site. Prominent peaks to the north of the Project site and I-8 include Gray Mountain (approximately 3,780 feet AMSL).

The LCU rises abruptly from the adjacent Desert Alluvial Fan and Desert Mesa and Mountains LCU. Rocky foothills appear lighter in color than more prominent peaks and elevated terrain. The grayish, slopes of the Jacumba Mountains support boulder outcrops and sporadic clumps of low, dark green to gray shrubs. The rocky, rugged ridgeline of the mountains is silhouetted against the desert sky creates a vivid scene and comprises an element of interest to passing motorists and locals. This LCU is primarily undeveloped; however, several access roads traverse foothills and intervening valley areas and extends to rural residential development. North of the Project site and I-8 and in the northeastern extent of the area included in Figure 10, development is limited and

primarily consists of scattered residences and dirt roads that to be screened from view of I-8, Carrizo Gorge Road, and Old Highway 80.

Desert Mesa and Mountains LCU

The Desert Mesa and Mountains LCU is located to the west, and east of the Project site. Prominent mountains within this LCU include Round Mountain and Table Mountain and notable mesas include Airport Mesa, and the elevated landform southwest of Table Mountain. These land features share common topographic forms, soil color, and spatial relationships with the surrounding landscape. In regard to Round Mountain and Airport Mesa, these features are isolated from adjacent mountainous terrain and are typified by a lower profile and broad flat mesa top with gently sloping sides that gradually spread out and downward into the adjacent Desert Alluvial Fan and Jacumba Valley LCUs.

4 EXISTING VISUAL QUALITY AND VIEWER RESPONSE

4.1 Visual Quality

A discussion of the visual quality as it pertains to the vividness, intactness, and unity associated with each identified LCU identified in the Project area is presented below. Vividness, intactness, and unity are discussed below and evaluated according to a scale of low, moderately low, moderate, moderately high, and high.

Jacumba Valley LCU

Vividness

The Jacumba Valley LCU generally displays a relatively low and flat form with occasionally hilly terrain. This LCU includes the previously farmed valley floor, the Boundary Creek corridor, and the community of Jacumba Hot Springs. The combination of the densely vegetated creek corridor and the wide and low valley floor creates a unique visual pattern that includes contrasting forms and colors. In a similar manner, the undeveloped valley viewed in the context of ornamental trees and concentrated low-profile residences in Jacumba produces a visual pattern that is generally uncommon in the Mountain Empire subregion. The presence of Boundary Creek within this LCU enhances the potential for enhanced vividness however, seasonal flows are typically screened from view of receptors in the area and as such, the color and movement of this feature have an overall weak contribution to LCU vividness.

The vividness of the Jacumba Valley LCU is assessed as moderate.

Intactness

Visible development in the LCU consists the community of Jacumba Hot Springs. This includes residential, commercial and civic development along Old Highway 80. The Jacumba Airport is also located within this LCU. Within the Project site, building and structures associated with prior ranching and dairy operations still exist though are in disrepair. The residential and commercial development, ranch structures, and the Jacumba Airport appear appropriately scaled and consistent with the predominantly rural character of the area and LCU. In addition to development within Jacumba Hot Springs, transmission lines supported by tall steel lattice towers and poles transect this LCU. These transmission lines tower over other visible development and rise from the generally flat terrain of the area. Two gas stations are also located off of the I-8 ramps. In addition, sand extraction activities have created visible color and lines contrasts that are evident by the exposure of lightly colored soils and manufactured slopes on low, hilly landforms that are visible from Carrizo Gorge Road and the gas station parking lots. The international border fence is also located along the southern boundary of this LCU within the United States.

The intactness of the Jacumba Valley LCU is assessed as moderate.

Unity

While visible and apparent, residential, commercial, and civic development is subordinate to natural features within this LCU. Residential, commercial, and civic development is generally located within Jacumba Hot Springs to the west of the Project site. There is also scattered residential development along Old Highway 80. Residential and commercial development is generally low profile and displays character consistent with that of the surrounding rural environment. The international border fence is typically viewed from a distance which tends to reduce scale impacts and effects on unity. From certain vantage points including Carrizo Gorge Road and Old Highway 80, high-voltage transmission lines are silhouetted against the sky and draw attention from lower, natural elements in the LCU. The ranch and dairy complex structures are lightly colored and a cylindrical silo towers over smaller residential and agricultural structures. As the structures are visible from Old Highway 80 and limited screening opportunities are provided, the abandoned ranch property lowers visual unity of the LCU. Sand extraction operations have also produced cuts and altered forms that affect unity.

The unity of the Jacumba Valley LCU is assessed as moderate.

Desert Alluvial Fan LCU

Vividness

The Desert Alluvial Fan LCU displays a generally low, flat and spreading form. In addition, the Desert Alluvial Fan LCU supports a patchwork of coarsely textured, light to dark green and occasional, gray, mixed woody scrub vegetation regularly interrupted by lightly colored exposed tan dry washes and intermittently, by tan-reddish and gray colored boulder outcrops. Vegetative coverage in the LCU tends to be denser than in the mountainous LCUs in the area but colors and textures are generally uniformly drab and coarse. The sinuous form and line of several low, sandy washes are also included in this LCU but are partially obscured when viewed from a normal viewing elevation and acute angle. The LCU includes the contrasting forms, lines and colors displayed by 500 kV transmission lines and steel lattice structures as well as the East County Substation and Jacumba Solar facilities. As a result, the overall memorability of the LCU is weakened.

The vividness of the Desert Alluvial Fan LCU is assessed as moderately low.

Intactness

While large portions of this LCU are intact and display uniformity in form, color and texture, the presence of numerous access roads, regional energy infrastructure, the Jacumba solar

development, East County Substation, and the international border fence reduces overall intactness. The continuity of coarsely textured, light to dark green and occasional, gray, mixed woody scrub shrubs and lightly colored exposed tan soils is interrupted by the effects of past and current development. More specifically, natural visual patterns of vegetation and the predominately horizontal lines of the terrain are interrupted by straight lines displayed by numerous dirt access roads, the dark, curving line of the newly constructed paved East County Substation access road off Old Highway 80, the tan colored slopes of substation yards and numerous vertical tall, metallic forms of substation support structures. In addition, tan access roads, and dark, low profile solar panels on the Jacumba Solar site and the international border fence interrupt the integrity of the visual pattern.

The intactness of the Desert Alluvial Fan LCU is assessed as moderately low.

Unity

Limited rural residential development, I-8, Old Highway 80, transmission lines, the substation, solar facility, and the international border fence have altered the composition of the visual landscape and diminish the overall unity of the LCU. Rural residential development is visually subordinate to natural features and the straight horizontal line and dark color of artificial linear elements (i.e., transportation corridors at the ground plane) are not typically considered to be contrasting elements in the landscape. As viewers tend to experience landscapes from transportation corridors, the line and color of roads, highways and interstates are viewed differently than landscape modifications occurring outside of the transportation corridor and within the visible landscape. The lightly colored and sloped yards of the East County Substation and the concentration of numerous metallic support structures at the substation diminish the integrity of the predominant visual pattern of desert vegetation and terrain. Solar panels and access roads of the Jacumba Solar development (located in the eastern extent of the LCU) have a similar effect on the predominant visual pattern. Several large steel lattice structures dot the LCU and while the backdrop of these features is mountainous terrain when viewed from elevated vantage points, from Old Highway 80 the tall, metallic forms are prominent. Lastly, colored marker balls strung between steel lattice structures detract from views of mountainous terrain and the surrounding desert landscape.

The unity of the Desert Alluvial Fan LCU is assessed as moderately low.

Jacumba Mountains LCU

Vividness

As viewed from surrounding LCUs, transportation corridors and rural residences in the Jacumba area, the rocky ridgelines of the Jacumba Mountains are visually prominent and create a bold, dark line that defines the eastern horizon. Due to their large and prominent pyramidal and broad arching

forms, the Jacumba Mountains are silhouetted against the desert sky and the resulting visual pattern is notable. The elevated mountainous terrain and ridgelines create an element of interest to passing motorists and local residents. With the exception of skylined wind turbines and tall, geometric steel lattice structures located southeast of the Project site in Mexico, cultural modifications in the LCU are limited in number, are unobtrusive, and do not substantially degrade the memorability of views of the characteristic steep and rocky mountainous terrain.

The vividness of the Jacumba Mountains LCU is assessed as moderately high.

Intactness

Several narrow dirt roads/trails traverse the west-facing slopes of the Jacumba Mountain and a small communications facility is located atop Nopal Peak. Although light-colored lines created by access roads and the grayish and thin vertical forms of communication towers located east and northeast of the Project site are visually subordinate to the broad, pyramidal, and slightly arching forms of mountainous terrain, wind turbines are prominently displayed on terrain to the southeast and a winding access road has created visible contrast in color, line, and texture with surrounding terrain.

The intactness of the Jacumba Mountains LCU is assessed as moderately high.

Unity

Within Mexico, wind turbines atop ridgelines and steel lattice structures and a wide access road on west-facing slopes create noticeable contrast and attract attention. In addition, the terrain displays a rugged form and natural-appearing character that is interrupted by white, skylined wind turbines and the winding, light-colored line of an access road climbing south-facing slopes. North of the international border, visible development in the LCU primarily consists of several narrow dirt roads/trails and these features are not visually prominent. The steep slopes and broad, yet at times jagged, ridgelines create a seemingly undisturbed backdrop to the local surroundings and attract the attention of viewers in the areas. The LCU displays a relatively harmonious visual pattern of steep terrain populated by shrubs and rock outcroppings.

The unity of the Jacumba Mountains LCU is assessed as moderate.

Desert Mesa and Mountains LCU

Vividness

Jade Peak is backscreened by prominent mountainous terrain to the east and is lower in elevation than both the Table Mountain and Airport Mesa landforms in the Proposed Project viewshed. In addition to Round Mountain, the conical form and lines of Jade Peak are unique and are visually distinct from the pyramidal and mesa landforms in the surrounding area. The existing land cover of light to dark green scrub shrubs interrupted by exposed soils is relatively commonplace in the

viewshed; however, the reddish-tinged soils of the LCU tend to stand out when viewed against the backdrop of the tan to grayish colors displayed by the Jacumba Mountains LCU. The simple, conical form and reddish hues of Round Mountain and Jade Peak create element of moderate interest in the Proposed Project viewshed. As opposed to the typically boulder covered terrain of the Jacumba Mountains LCU, the terrain of the Desert Mesa and Mountains LCU typically appears smooth and with pockets of rocky terrain.

The wide spreading base and series of relatively flat mesa tops associated with the Airport Mesa and Table Mountain rise from the surrounding Desert Alluvial Fan LCU east of the Project site. The mesa landforms are somewhat unique in the Project area and when viewed in the context of the surrounding desert environment, the trapezoidal forms with gradual rising, diagonal lines create a distinct visual pattern. Table Mountain includes pockets of lightly colored soils and boulders that contrast with the otherwise uniformly drab color of the landform and sparse vegetation that dot the south-facing slopes. From a distance, these features appear sparsely vegetated and smoothly textured.

The vividness of the Desert Mesa and Mountains LCU is assessed as moderate.

Intactness

An existing access road traversing the west- and south-facing slope of Jade Peak is obscured from the view of passing Old Highway 80 motorists by intervening terrain and vegetation. The access road is visible to eastbound I-8 motorists and while the horizontal, lightly colored line contrasts with the gradually sloping line and dark green and tan-reddish color of vegetation and terrain, the contrast is experienced briefly and does not substantially affect the overall intactness of LCU.

While the trapezoidal form and seemingly smooth façade of Airport Mesa is unique and visually striking, the mesa landform is nearly bisected by the rust colored slats and panels of the international border fence. A constructed feature that encroaches on the visual pattern of the LCU, the dark colored fence climbs a portion of the west- and east-facing slopes of the mesa landform and is visible from Old Highway 80, I-8, and surrounding undeveloped lands. In addition to the fence, the line and color contrasts created by the paved CBP access road climbing the east-facing slope of the landform is apparent to westbound Old Highway 80; however, from other locations in the viewshed, the access road is obscured, and visual effects are concealed.

From low and normal viewing angles (such as from I-8 and Old Highway 80), Table Mountain appears untouched and displays a slight diagonal line created by variations in east-west elevations. While variations in colors and textures are visible and are associated with the geologic properties of the landforms, these contrasts are difficult to detect by passing motorists. Views of gradually rising terrain and steep mesa slopes are visible along the I-8 corridor; however, dirt access roads

climbing the northeast-facing slope are concealed by terrain and the network of roads/trails atop the mesa landform is revealed only after a review of aerial photography. The landform is primarily experienced from I-8 and Old Highway 80 and from these locations, Table Mountain and the lesser mesa to the south appear to be free of encroaching elements.

The intactness of the Desert Mesa and Mountains LCU is assessed as moderately high.

Unity

The Desert Mesa and Mountains LCU is a primarily natural appearing landscape with limited occurrences of encroaching elements. Several existing unpaved access roads have varying degrees of visibility and several roads are screened from the view of passing I-8 and highway motorists. Transmission infrastructure is generally absent from the Desert Mesa and Mountains LCU. Therefore, natural elements such as terrain and vegetation create the observable visual pattern of the LCU. Because modifications are generally concealed, the introduction of access roads has not substantially affected the visual unity of the natural landscape elements.

While mesa tops display a variable line and form, slight variations in elevation are visible when viewed from Old Highway 80 and I-8 and as such, the straight horizontal line of the border fence that climbs up the side of the Airport Mesa portion of the LCU contrasts with the smooth, flowing horizon line of the mesa landform. While large portions of the Desert Mesa and Mountains LCU appear untouched and display a rugged, almost mountainous character, the international border fence is a disparate landscape element that diminishes the visual quality and unity of the Desert Mesa and Mountains LCU.

The unity of the Desert Mesa and Mountains LCU is assessed as moderately high.

4.2 Viewer Response

Viewer response is based on several factors including viewer sensitivity, viewer groups, viewer exposure, and viewer awareness. Each of these factors influences how a viewer might respond to a change or changes in the environment and to changes involving development of a site from a natural, undeveloped state. Each factor contributing to viewer response is discussed below.

4.2.1 Viewer Sensitivity

The Project site is located within the central southern portion of the Jacumba Subregional group area of the Mountain Empire Subregion (County of San Diego 2017). While the community of Jacumba does not have a stand-alone community or subregional plan, the community sponsor group has adopted a vision statement. The visual statement states “the community supports new development that is compatible with and preserves the natural and historical environment” (County

of San Diego 2011c). Furthermore, the vision statement stresses a need to manage future growth in order "to reinforce the rural small-town character of the area."

Based on the vision statement and comments received on the Draft EIR Notice of Preparation, concerns of the community and responding agencies include Proposed-Project-related light, glint and glare and effects to motorists and residents of Jacumba and impacts to dark skies due to Proposed Project lighting. In addition, the community and agencies expressed concern regarding impacts to existing views and visual character of the area, size, and scale of the Proposed Project, and proximity of the Proposed Project to residential land uses in Jacumba Hot Springs.

The Proposed Project would be visible to motorists on I-8, Old Highway 80, Carrizo Gorge Road and additional local roads in the surrounding area. Residences located adjacent to the western boundary of the Project site and homes atop east-facing slopes west of south of Old Highway 80 and west of Heber Street would have clear, uninterrupted views to the Proposed Project. While residences located west of Campo Street would be provided partially to fully screened views to the Project site (intervening homes and ornamental trees would obstruct views), all Jacumba residents would be aware of the Proposed Project and may view the Proposed Project daily as they travel east on Old Highway 80 to access I-8 via Carrizo Gorge Road.

Users of local, state and federal recreational areas would also have views of the proposed solar facility. These recreational areas include Jacumba Community Park, State Park lands including lands to the immediate west of the Project site as well as the southern portion of Anza Borrego Desert SP, and BLM lands including Round Mountain, Airport Mesa and Table Mountain.

In addition, regional and state have established programs and policies aimed at the protection of scenic views and resources. For example, in the Project area, I-8 is an eligible state scenic highway included in the State Scenic Highway System and both I-8 and Old Highway 80 are included in the County of San Diego's Scenic Highway System (County of San Diego 2011b). Also at the regional level, policies of the County of San Diego General Plan Conservation and Open Space Element and the Mountain Empire Subregional Plan support the protection of existing scenic resources, visual character and scenic corridors (County of San Diego 2001a, 2011b).

While the existing visual setting in the vicinity includes several high-voltage electrical lines, East County Substation, and the Jacumba Solar development, a high level of visual sensitivity is assumed for the various viewer types in the Jacumba planning area.

4.2.2 Viewer Groups, Exposure and Awareness

The exposure and awareness of the three primary viewer groups provided views to the Project site (motorists, resident, and recreationists) is described below by viewer group.

Motorists

Mobile views of the Jacumba Valley area including the Project site are available to motorists on I-8, Old Highway 80, and Carrizo Gorge Road. Views from I-8 are relatively brief and occasionally impeded by intervening terrain and median boulders and vegetation and Old Highway 80 parallels the Project site for approximately 1 mile. Carrizo Gorge Road parallels the northeastern portion of the Project site and the dirt segment west of the Jacumba Shell gas station borders the northern portion of the site. Visibility to the Project site from Carrizo Gorge Road is typically limited by the presence of rising terrain and vegetation north of the road and by development and vegetation to the south of the road.

Given the scenic designation of these roads and high to moderate usage of I-8 (approximate average daily traffic of 16,000 vehicles) (Caltrans 2019) and Old Highway 80 (approximate average daily traffic of 500 vehicles) (SANDAG 2019), motorists on these roads are assumed to have high viewer awareness for changes occurring in the visual environment. While view exposure of the Project site from Carrizo Gorge Road is relatively brief and occasionally screened, motorists on Carrizo Gorge Road are considered to have high awareness to changes in the landscape.

Residents

In 2010, the total population of the community of Jacumba Hot Springs was 561 persons (Census Viewer 2019). Jacumba Hot Springs residents would be highly aware of changes in the landscape. Further, residents typically have high concern regarding potential effects to the quality of existing views available from their homes.

Residential land uses border the western boundary of the Project site. While uninterrupted views to the Project site are available to the closest properties, views to more distant residences such as those residences west of Campo Street are blocked by intervening residential development and private yard landscaping. To the south of Old Highway 80, a single residence is bordered by the Project site on three sides. Further, approximately 25 residential structures are constructed on low hills located south of Old Highway 80 and west of Jacumba Community Park and views to the Project site are likely available from these residences. Lastly, three to five homes are located off Old Highway 80, north and northeast of the Jacumba Airport. Views to the Project site from homes located north of Old Highway 80 and immediately west of Carrizo Gorge Road are blocked by intervening terrain. Clear and uninterrupted views to the southern Project site (i.e., south of Old Highway 80) are available from the homes to the north of the Jacumba Airport.

Recreational Users

Recreational opportunities in the Project area are described in Section 3.1.2, Surrounding Area, above. Except for Jacumba Community Park, each of the identified recreational areas primarily

supports passive trail-based recreation such as hiking, nature viewing, and photography. Because trail users typically move through the landscape at a walking rate of speed, opportunities for longer duration views are available. However, given the relatively remote location of the Project area and lack of formal trailheads and staging areas for trails, and based on the estimated annual use of nearby BLM-managed lands, the daily volume of trail users near the Project site is assumed to be relatively low. Despite low usage and temporary view exposure, viewer awareness for trail users is assessed as moderately high.

Jacumba Community Park includes a basketball court with bleachers and a baseball/softball diamond. The park and adjacent County library branch share a driveway off Old Highway 80 that is marked by modest signage and a large (approximately 15 to 20 feet tall), rust-colored metal sculpture of a semi-coiled rattlesnake. While the park is assumed to receive relatively low regular use throughout the year, the Jacumba Community Services District occasionally holds seasonal festivals for the community at Jacumba Community Park (a fall festival was held in October 2019) (East County Magazine 2020). Eastward views from the park across the Project site and to Airport Mesa are open and unimpeded by intervening elements. Due to the open and primarily undeveloped nature of existing eastward views, viewer awareness for park users is assessed as high.

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5 VISUAL IMPACT ASSESSMENT

5.1 Guidelines for Determining Significance

The County of San Diego Guidelines for Determining Significance and Report Format and Content Requirement for Visual Resources (County of San Diego 2007) and Dark Skies and Glare (County of San Diego 2009b) were reviewed to determine the applicable significance thresholds for the Proposed Project. According to the County of San Diego Guidelines for Determining Significance, a project will generally be considered to have a significant effect if it proposes any of the following, absent specific evidence to the contrary:

- The project would introduce features that would detract from or contrast with the existing visual character and/or quality of a neighborhood, community, or localized area by conflicting with important visual elements or the quality of the area (such as theme, style, setbacks, density, size, massing, coverage, scale, color, architecture, building materials, etc.) or by being inconsistent with applicable design guidelines.
- The project would result in the removal or substantial adverse change of one or more features that contribute to the valued visual character or image of the neighborhood, community, or localized area, including but not limited to landmarks (designated), historic resources, trees, and rock outcroppings.
- The project would substantially obstruct, interrupt, or detract from a valued focal and/or panoramic vista from:
    - A public road.
    - A trail within an adopted County or State trail system.
    - A scenic vista or highway.
    - A recreational area.
- The project would not comply with applicable goals, policies, or requirements of an applicable County Community Plan, Subregional Plan, or Historic District's Zoning.
- The project will install highly reflective building materials, including but not limited to reflective glass and high-gloss surface color, that will create daytime glare and be visible from roadways, pedestrian walkways, or areas frequently used for outdoor activities on adjacent properties.

5.1.1 Key Views

5.1.1.1 Methodology

Locations in the Proposed Project viewshed from which views of the Proposed Project would be available were identified on a satellite and aerial photography program (i.e., Google Earth) prior to the initial site visit conducted in fall 2018. Site visits were conducted in fall 2018, winter 2018, and winter and spring 2019. Winds were mild, and local conditions were generally sunny and clear except for the site visit conducted in February 2019, during which local conditions were mostly cloudy. Digital photographs of the Project site and surrounding area were taken with a location-services-enabled iPhone 6s to document the characteristics of the Project site and surrounding area. Photographs were also taken to capture views from public vantage points to the Project site and for baseline images for Proposed Project visual simulations. Photographs of existing settings were taken from multiple locations on the Project site, public roads in the surrounding area, Jacumba Community Park, an undeveloped residential lot to the west of the Project site, State Park lands to the west of the Project site, the mesa below Table Mountain and Airport Mesa.

Nine key views were selected from which to evaluate effects to existing views and visual change resulting from implementation of the Proposed Project. The locations of selected key views are shown in Figure 11, Key Views. The key views are representative of views to the Project site available from public roads, residential areas, and recreational areas in the vicinity of the Project site. Further and consistent with County requirements, the key view locations were selected because these would clearly display the visual effects of the Proposed Project.

Except for Key View 6, key views were not identified on private property. Neither CEQA nor County Guidelines for Determining Significance and Report Format and Content Requirements specifically require analysis of views from private properties. However, the selected key views are representative of the viewing angles and distances available to viewer groups in the Jacumba area, including residents.

5.1.1.2 Visual Simulations

Photographs of the Project site taken from the key views were used to create 3D simulations of the Proposed Project. True-scale 3D models were rendered onto the photographs that were taken during the fall and winter 2018, and winter 2019 site visits from the key view locations.

Visual simulations were created to illustrate the anticipated visual change and characteristics associated with the development of the Proposed Project. Using available topography maps or digital elevation maps, a 3D surface was created for the existing terrain and then imported into 3D Studio Max. This 3D surface was used to camera-match the background photos to the terrain model. 3D models were created for all proposed facilities that are visible from the selected key

views. These 3D models were then merged into the 3D scene at their finished grade elevations. Lighting was added to the scene to match the time of day the photos were taken and to cast realistic shadows. Each view was rendered to a high-resolution image. The final product depicts a photorealistic before-and-after simulation. Upon completion of the visual simulations, the existing setting photographs were compared to the Proposed Project conditions to outline the potential impacts of the Proposed Project and determine the significance of anticipated visual change. Existing setting photographs and visual simulations from the identified Key Views are provided in Figures 12 through 20.

5.1.1.3 Visual Assessment

Visual character is qualitatively defined by four primary components: form, line, color, and texture. Projects that create a high level of contrast with the existing visual character of a project setting are more likely to generate adverse visual impacts due to visual incompatibility. Conversely, projects that create a low level of contrast with the existing visual character are less likely to generate adverse visual impacts due to inherent visual compatibility. Proposed Project modifications were evaluated on this basis for impact analysis purposes.

The visual analysis in this section evaluates the Proposed Project against thresholds from the County of San Diego's Guidelines for Determining Significance and Report Format and Content Requirements – Visual Resources (County of San Diego 2007).

5.2 Key View Visual Assessment

5.2.1 Key View 1 – Existing Conditions

Orientation

Key View 1 is located on the Carrizo Gorge Road off-ramp of eastbound I-8 and is representative of views available to eastbound interstate motorists. For safety reasons, the Key View was located on the off-ramp and not the interstate travel lanes. Key View 1 is oriented to the south and approximates the quality of the existing elevated view toward the Project site (and Jacumba area) available to eastbound motorists. Key View 1 is elevated in comparison to the Project site that is located as close as 250 feet to the south of Key View 1.

Existing Visual Character and Quality

An existing photograph illustrating the character of the landscape and quality of the existing view is included in Figure 12, Key View 1 – Eastbound I-8. The view at Key View 1 looks from the eastbound interstate travel lane to generally flat terrain that is punctuated by two low-mounded hills in the foreground and taller, more distant hills to the south and southwest. The dark greyish

silhouette of distant mountains in Mexico create a rugged southern horizon line. Visible vegetation includes low shrubs adjacent to I-8 and low and tan to dark green colored shrubs that stipple the hills and low-lying terrain of the valley landscape. The dark foliage of isolated and clustered trees is faint but visible to the south and southwest and these features occur along Old Highway 80 (located approximately 1.5 miles south of Key View 1) and in the unincorporated community of Jacumba Hot Springs (located approximately 1.75 miles southwest of Key View 1. In addition, tall lattice steel towers and tubular steel poles are detectable in the view. These electrical transmission lines traverse the Project site along an east-west alignment and interrupt views of the otherwise open valley landscape toward Jacumba. Lastly, the U.S./Mexico international border fence displays a dark yet low line in the landscape that is visible in the distance.

While distant mountains enhance the vividness of the landscape as viewed from Key View 1, the juxtaposition of valley and mountain features is common along I-8 throughout southeastern San Diego County. The intactness of the view is impacted by vertical poles and towers, horizontal transmission lines (conductor), and the lightly colored surface of dirt roads that attract the attention of passing motorists.

Changes to Visual Character and Quality

A visual simulation of the Proposed Project as experienced from Key View 1 is presented in Figure 12, Key View 1 – Eastbound I-8. As illustrated on the figure, proposed solar panels on the Project site would be visible and would be concentrated on generally flat terrain to the south and southwest of Key View 1. The proposed solar panels in this area would be experienced by passing interstate motorists as smooth and dark gray features across the site. In contrast to the existing seasonally drab green shrubs and grasses and tan soils that cover the site and adjacent hills, the proposed solar panels would display a consistent dark tone that would create noticeable color contrast. As opposed to more distant features, the orientation and layout of solar panels in closer proximity to Key View 1 would create a series of dark grey line and rectangular forms in the landscape. Color contrast associated with these components would be heightened when viewed against the light tan displayed by cleared lands within the Proposed Project fence line. This pattern of light and dark color and line would attract the attention of passing motorists. Motorists traveling on eastbound I-8 near Key View 1 would briefly experience the sharp geometric lines and smooth texture of proposed solar panels. Assuming vehicle speeds of 70 miles per hour, views to solar panels provided to eastbound interstate motorists would be available for approximately 25 seconds.

Although less noticeable than solar panels and ground disturbance associated with grading and removal of vegetation within the Proposed Project fence line, additional Proposed Project components would be visible from the elevated vantage point offered at Key View 1. For example, tall and long steel battery storage containers (10 feet high by 55 feet long) and inverter skids would be distributed throughout the site and those closest to Key View 1 would be approximately 0.25

miles away. The lighter colors associated with battery storage containers and inverter/transformer pads and the darker solar panels would create color contrast that, while noticeable, would be secondary to the visual effects of solar panels in the landscape. In addition, the proposed switchyard and adjacent collector substation would be visible to the south and situated near the base of a wide, low hill. From Key View 1, the greyish color and straight lines displayed by racks, bays, transformers, circuit breakers, and support structures (including the 65-foot-high 138 kV dead end structure at the collector substation and 70- to 115-foot-high support poles for the two switchyard loop-in gen-ties to the existing East County Substation 138 kV transmission line) would be detectable but muted by distance. While visual effects associated with substation and switchyard would be somewhat dulled by distance (i.e., located over 0.65 miles away at Key View 1), vegetation removal and the wide distribution of solar panels would have a pronounced adverse effect on the Jacumba Valley landscape.

At Key View 1, the Proposed Project would result in moderately strong color contrasts and moderately strong line contrasts. The introduction of numerous solar panels across the Project site would interrupt existing views across the valley landscape to Jacumba Hot Springs and alter the undeveloped, open field character of the site. The vividness and intactness of the landscape would be reduced due to increased color and texture contrast and the introduction of solar panels and other Proposed Project components that would further reduce existing unity in the landscape.

5.2.2 Key View 2 – Existing Conditions

Orientation

Key View 2 is located on northbound Carrizo Gorge Road, approximately 0.5 miles northwest of the Carrizo Gorge Road/Old Highway 80 intersection and 0.6 miles southeast of the existing Chevron Jacumba station. Key View 2 is located 0.1 miles south and 0.2 miles east of the Project site boundaries and is situated at an approximate elevation of 2,840 feet AMSL. The view is to the northwest along Carrizo Gorge Road and toward existing electrical transmission lines and gas station development.

Existing Visual Character and Quality

As shown in Figure 13, Key View 2 – Northbound Carrizo Gorge Road, the local terrain gradually rises to the north toward the elevated I-8 corridor and a series of tan and rocky pyramidal peaks. Lower hills and distant, dark mountains are included in the scene to the northwest. The terrain is covered with shrubs of varying heights that are intermixed with unvegetated strips of tan soils. Shrubby vegetation in the foreground is rough yet more distant shrubs on hills and mountains are stipple and somewhat smooth. Tall lattice steel towers and tubular steel poles cross the landscape from east to west in the

foreground. The upper portions of these elements are silhouetted against the desert sky. Gas station signage and buildings are seemingly small, thin and indistinct from this key view.

The landscape is enhanced by the inclusion of mountainous terrain in the foreground and middle ground. Tall, greyish and metallic poles and lattice towers that stand out in the desert landscape reduce intactness and unity.

Changes to Visual Character and Quality

At Key View 2, the introduction of solar panels to the Project site would be apparent and experienced as a collection of low, dark rectangular lines in the landscape (see Figure 13, Key View 2 – Northbound Carrizo Gorge Road). The hard line displayed by dark solar panels would stand out when viewed alongside the characteristic tan and green-grey tones displayed by the local terrain and vegetation. Despite the distance between Key View 2 and the Project site (the Project site is approximately 0.1 miles to the north and 0.2 miles to the west of Key View 2), proposed solar panels would attract the attention of motorists. In addition, taller elements of the switchyard and loop-in may be visible above a low berm to the northwest of Key View 1. While existing lattice steel towers and tubular steel poles are present in the views, these elements are either partially transparent (lattice steel) or are not central to the scene (tubular steel poles). In contrast, the alignment of Carrizo Gorge Road would draw motorist's attention to the northwest to proposed solar panels. As depicted in Figure 13, proposed solar panels would create a noticeable break in the characteristic color and lines displayed by existing vegetation and terrain in the landscape.

Reduced vividness, intactness and unity would occur due to the introduction of rectangular, dark features to the Key View 2 landscape.

5.2.3 Key View 3 – Existing Conditions

Orientation

Located on eastbound Old Highway 80, Key View 3 is situated approximately 430 feet to the east of Campo Road, 0.75 miles west of the Jacumba Airport, and 0.4 miles north of the U.S./Mexico international border fence. Key View 3 is oriented to the southeast, providing views of the southern portion of the Project site as well as the mountains to the southeast and the international border fence.

Existing Visual Character and Quality

Figure 14, Key View 3 – Eastbound Old Highway 80, illustrates the character of the landscape and quality of the existing view available to motorists. As viewed from Key View 3, an electrical distribution line supported by thin wood poles parallels the highway and is present in the foreground. Thin and dark conductor lines strung between poles is silhouetted against the sky. The

visible landscape in the foreground is comprised of generally flat terrain covered with low, seasonally green grasses and scattered shrubs. The U.S./Mexico international border fence creates a dark and low horizontal line that extends west to east across the landscape and climbs a mountain slope. Rugged and dark mountains create a straight horizon line that stretches across the extent of the view. While faint, several three-blade wind turbines in Mexico are visible atop the dark, rugged ridgeline to the southeast and are silhouetted against the cloudy sky.

The vividness of the Key View 3 landscape is enhanced by the presence of mountains. Wind turbines to the southeast in Mexico are barely detectable due to distance and cloudy conditions. The landscape displays a consistent pattern of flat terrain covered with shrubs and grasses as well as a regular line created by distant mountains. The subtle line displayed by the U.S./Mexico international border fence breaks the consistent pattern created by valley and mountain terrain. Nonetheless, the U.S./Mexico international border fence is not visually prominent, and the landscape is fairly intact and unified.

Changes to Visual Character and Quality

As illustrated in Figure 14, proposed solar panels and slatted perimeter fencing would be visible between gaps in the proposed 15-foot-wide row of landscaping that would be planted parallel to Old Highway 80. Landscaping and slatted fencing are proposed to be installed at specified locations to reduce overall visibility of Proposed Project components and screen solar panels from view of motorists, residents, and park users. From Key View 3, the installation of proposed landscaping would partially screen proposed solar panels and perimeter fencing from view and help break up the horizontal footprint of the Proposed Project. However, Figure 14 depicts proposed landscaping at maturity (i.e., 10 years of growth) as opposed to at installation. Landscaping at installation would be substantially thinner and shorter than at maturity and would be noticeably less successful at screening the perimeter fencing and proposed solar panels from view.

While partially screened from view by proposed landscaping, proposed solar panels would create a moderately strong color contrast when compared to the existing greens and browns displayed by vegetation and terrain. In addition, the visible edge of solar panels would create moderate line contrast due to the introduction of a low and regular collection of dark lines to the landscape. The tan-slatted fence would create a straight, rectangular form that would follow the solar facility perimeter and create form, line and color contrast. Further, the regular pattern introduced by proposed landscaping would create a substantial contrast with the typical low form and scattered distribution of existing vegetation in the view. Proposed landscaping would help to screen new solar panels and fencing (and the exposed soils across the site) from view of motorists; however, regularly spaced landscaping that intentionally parallels the highway does not currently occur along Old Highway 80.

As experienced from Key View 3, implementation of the Proposed Project would result in moderately strong color and line contrasts relative to existing natural features in the landscape.

5.2.4 Key View 4 – Existing Conditions

Orientation

Key View 4 is in the eastern portion of Jacumba Community Park, approximately 480 feet south of Old Highway 80 and 110 feet west of the southern portion of the Project site. Key View 4 offers an eastward view toward undeveloped lands including the southern portion of the Project site. Rugged and dark mountains to the east are also visible from Key View 4 and while faint due to cloudy conditions, the distinct y-shape massing of several wind turbine rotors and towers is detectable atop mountainous terrain in Mexico.

Existing Visual Character and Quality

Figure 15, Key View 4 – Jacumba Community Park, depicts an eastward view that illustrates the character of the landscape as experienced from the easternmost portion of the park. The foreground is dominated by generally flat terrain and shrubs that are clustered at a low chain-link fence. Except for several distant trees with dark green to brown/grey crowns, existing vegetation in the view is consistently low. Several white, low-profile structures are detectable to the east and the tall scale of cylindrical tanks on the Project site north of Old Highway 80 are noticeable. Beyond the Project site, light brown hills and taller (and darker) mountains create an irregular east horizon line.

While mountainous terrain enhances the vividness of the visible landscape, the intactness of the view is slightly impacted by features including the distribution line pole and transformers, lightly colored ranch and residential buildings, and faint, silhouetted wind turbines. More so than the fence itself, the adjacent patrol road cuts a lightly colored line that attracts the eye in the available eastward view at Key View 4.

Changes to Visual Character and Quality

As demonstrated in the Key View 4 visual simulation, solar panels and interior Proposed Project components would be partially screened by landscaping and tan-slatted perimeter fencing (see Figure 15). Slatted fencing and landscaping would help screen proposed solar panels and cleared ground within the Project site from view. Despite the installation of slats and new landscaping, the dark, rectangular form and horizontal line of proposed solar panels would be visible above the fence and between gaps in proposed landscape trees (see Figure 15). The visible portions of proposed solar panels including metallic edges and rectangular cells on panel surfaces would create strong color and line contrast. Specifically, the proposed panels would create a straight and elevated, horizontal line across the site that would contrast with the low line of existing site

topography and undulating lines of distant hills in the landscape. Further, solar panels and proposed fencing would contrast and obscure vegetation that currently covers the Project site. While they would be partially screened by slatted fencing and landscaping, proposed panels would substantially alter the existing open characteristics of the landscape as viewed from Key View 4. As shown in Figure 15, existing views across the Project site are open and unimpeded, stretching from Jacumba Community Park to Airport Mesa. With implementation of the Proposed Project, much of the landscape between viewers at Key View 4 and Airport Mesa would be occupied by elements of the Proposed Project.

As such, the Proposed Project would reduce the vividness and intactness of the landscape by introducing strong color and line contrasts.

5.2.5 Key View 5 – Existing Conditions

Orientation

Key View 5 is located on westbound Old Highway 80, approximately 0.90 miles west of Carrizo Gorge Road and 0.90 miles east of Heber Street (i.e., central Jacumba Hot Springs). Key View 5 is located at an approximate elevation of 2,800 feet and is oriented to the northwest toward the northern portion of the Project site.

Existing Visual Character and Quality

As depicted in Figure 16, Key View 5 – Westbound Old Highway 80, Key View 5 looks across the Project site that consists of flat terrain covered with low grasses and shrubs. The flat terrain and distribution of low shrubs is generally consistent across this terrain; however, this visual pattern also features a broken line of trees with seasonally reddish foliage that is located approximately 0.35 miles away (on the Project site). On the Project site and further to the west, the flat valley terrain transitions to moderate and steeply sloping terrain that is densely speckled with low shrubs. Tall and geometric steel lattice towers and less visible steel tubular poles climb the hilly terrain east of the Project site. A dirt access road parallels the transmission lines and cuts a visible line into the terrain. Lastly, the conical form of Round Mountain and a dark and distant mountain terrain are visible to the northwest.

The vividness of the landscape as experienced as Key View 5 is moderately strong. The landscape is relatively indistinct, however, the inclusion of conical and pyramidal peaks to the otherwise flat landscape creates an interesting pattern. Vertical infrastructure including silhouetted steel lattice towers and tubular steel poles reduce the intactness of the visible landscape. Visible forms and lines created by transmission infrastructure on nearby hills reduce landscape unity to a moderate level.

Changes to Visual Character and Quality

A visual simulation of the Proposed Project as viewed from Key View 5 is depicted in Figure 16. From this vantage point, regular rows of solar panels would be distributed across the visible landscape and would be focal elements in the view. The installation of landscaping and tan slatted fencing parallel to Old Highway 80 is proposed and would partially screen proposed solar panels from view. See Figure 16 visual simulation that depicts proposed landscaping at maturity. At installation, proposed landscape trees and shrubs would be noticeably shorter than that depicted in Figure 16 and would be notably less successful at screening solar panels and slatted fencing from view of motorists. While they would display a 12-foot-high vertical profile, the installation and operation of proposed solar panels on the Project site would create noticeable color and line contrast. For example, the rectangular form and dark color displayed by proposed solar panels would contrast with the flat form and colors that currently characterize the terrain and vegetation of the Project site. In addition, tan slats would create a horizontal band that would parallel the highway frontage and create a less diverse palette of colors in the available view.

Driving parallel to the Project site perimeter fencing and numerous rows of solar panels, as well as proposed landscaping that would be planted to partially screen solar panels and interior Proposed Project components from view, would create a repetitive viewing experience for motorists. Existing views across the Project site are open and unencumbered by regular and continuous vertical structures. In contrast, the introduction of solar panels and site perimeter elements would substantially impede upon existing views across the site and reduce the quality of the view. The repetition of features and associated forms and lines would detract from the existing view and create a monotonous viewing experience. Overall contrast at Key View 5 would be strong.

5.2.6 Key View 6 – Existing Conditions

Orientation

Key View 6 is located on an undeveloped, residential lot off Brawley Avenue, just beyond the Campo Street/Brawley Avenue intersection, and near the western boundary of the Project site. The key view is located approximately 0.20 miles north of Old Highway 80 and is representative of eastward views from Jacumba Hot Springs residences north of Old Highway 80 and adjacent to the Project site. Key View 6 is located approximately 80 feet from the Proposed Project boundary.

Existing Visual Character and Quality

An existing view from Key View 6 is presented in Figure 17, Key View 6 – Undeveloped Brawley Avenue Property. As viewed from Key View 6, the Project site displays a flat form punctuated by dense, low and grasses and low mounded shrubs. The seasonally red tinged foliage of trees is noticeable and presents a broken, reddish line across the site. A collection of white buildings and

two cylindrical tanks within the Project site are visible to the east at the base of a tall hill. Rocky terrain is visible in the distance to the northeast and the greyish and jagged Jacumba Mountains are prominent in the view to the east. Lastly, closer and darker mountain terrain creates a slightly horizontal horizon line to the east and southeast that is topped by the distinct silhouetted y-shaped form of several (i.e., eight) wind turbines located in Mexico.

The existing view across the Project site is open and unencumbered. The inclusion of valley and mountain terrain creates an interesting visual pattern that increases vividness. The interesting visual pattern is also supported by the presence of lightly colored grasses and shrubs in the foreground and dark mountain terrain in the distance. Intactness and unity are moderately strong with weak contrast created by distant and silhouetted wind turbines and the international border fence. Both features create dark lines in the landscape.

Changes to Visual Character and Quality

A visual simulation of the Proposed Project as viewed from Key View 6 is depicted in Figure 17. From Key View 6 and other residential properties adjacent the western boundary of the Project site, the installation of solar panels would be visually prominent. Even with the setbacks, and installation of landscaping and fencing, the straight horizontal line of dark panel edges would be visible and would introduce repeating dark and rectangular forms to the landscape. Resulting contrasts would be strong. In addition to solar panels, landscaping and slatted fencing would substantially shorten the length of eastward views across the Project site that are currently open and unencumbered. The shortened views and reduced visual quality would reduce landscape intactness and unity.

5.2.7 Key View 7 – Existing Conditions

Orientation

Key View 7 is located on a primarily undeveloped mesa that, along with neighboring properties, was acquired by ABF and transferred to State Parks for inclusion in Anza-Borrego Desert SP. The key view is located 0.20 miles west of the Proposed Project boundary, approximately 0.75 miles north of Old Highway 80 and 0.75 miles southwest of Round Mountain. The location is accessible via occasionally maintained dirt access roads off Old Highway 80 that are used to maintain transmission lines and by CBP personnel to access Jacumba Peak (3,365 feet AMSL). The peak is located approximately 0.90 miles southwest of Key View 7. Situated on a mesa-top access road, Key View 7 is oriented to the southeast toward the Project site, international border fence and mountain terrain in Mexico (see Figure 18, Key View 7 – State Park Lands).

Existing Visual Character and Quality

Key View 7 looks southeast across descending hilly terrain and toward the flat terrain of the Project site. Vegetation on the Project site consists of grasses and shrubs that display seasonal colors and perpendicular lines of trees. Several access roads crossing the Project site are evident. A collection of white/lightly colored structures on the Project site is visible in the distance to the north. Old Highway 80 is indistinct and creates a faint east-west horizontal line. Lightly colored residences amongst clusters of tall trees mark the community of Jacumba Hot Springs to the south. Other visible features include the hard lines and greyish surface of the Jacumba Airport, the dark horizontal line of the international border fence, rugged mountains and distant silhouetted wind turbines in Mexico. From Key View 7, the Project site is primarily characterized by an undeveloped character and flat form.

Despite the inclusion of transmission structure in the foreground and silhouetted wind turbines, the elevated vantage point and available long and broad view create a vivid scene. Intactness and unity are affected by the presence of energy development, however, the openness and vastness of the landscape is dominant. Because tall and vertical development occur at the extents of the view (i.e., immediate foreground and atop distant mountains), intactness and unity are moderately high.

Changes to Visual Character and Quality

From Key View 7, contrasts associated with development of the Proposed Project would be visually prominent and strong (see Figure 18). The exposure of tan soils and creation of hard line along the Proposed Project perimeter would create strong color and line contrast. The installation of repeating rows of dark, rectangular solar panels would create form and color contrast across the visible extent of the Project site. The visual pattern of proposed solar panels would occasionally be broken by the installation of battery storage containers and inverter/transformer pads. Battery storage containers (approximately 55 feet long by 10 feet high by 19 feet wide) and electrical equipment installed on inverter/transformer pads would be viewed as lightly colored, rectangular forms within a wide field of taller and greyish solar panels. Inverter equipment and battery containers would be visible due to the elevated vantage point offered at Key View 7. At Key View 7, the Proposed Project would produce a repetitive, orderly quality that is not currently present on the open and undeveloped Project site.

Contrasts in color, form, line and texture would be strong as viewed from Key View 7 and the current openness displayed by the Project site would be fundamentally altered. While the view would remain long and broad due to its elevated vantage point, development of the Project site would strongly interrupt the existing character of the landscape and substantially reduce existing intactness. The Proposed Project would display flat forms, however, the existing visual pattern displayed by low on-site vegetation would be removed and altered, thus reducing vividness. From the elevated vantage point at Key View 7, the Proposed Project would display a large horizontal scale and footprint that would dominate the landscape.

5.2.8 Key View 8 – Existing Conditions

Orientation

Key View 8 is located near the paved CBP road that provides federal agents access to the top of Airport Mesa. The portion of the mesa top located in the U.S. is wide and slopes from east to west toward the Jacumba Valley. Key View 8 is located 1.5 miles east of the western Proposed Project boundary, 0.15 miles north of the international border fence and 0.55 miles south of Old Highway 80. Situated at an elevation of approximately 3,570 feet AMSL, Key View 8 is oriented to the west-northwest toward the Project site. In addition, the view includes Old Highway 80, the community of Jacumba Hot Springs, Carrizo Gorge Road, I-8, and Round Mountain. Both the hill and valley terrain and mountains of the Mountain Empire subregion are evident in the view from Key View 8.

Existing Visual Character and Quality

As experienced from Key View 8 the landscape displays a rural, primarily undeveloped character typified by tracts of undeveloped properties and generally unaltered hills and mountains (see Figure 19, Key View 8 – Airport Mesa). In the foreground, the descending west-facing slopes of the Airport Mesa landform are covered with grasses, scattered small rocks, and low, clumped shrubs. The lower hills to the west display a similar speckled look attributed to low grasses and shrubs. Old Highway 80 creates a greyish, straight line that runs west through the community of Jacumba Hot Springs. The community is marked by a concentration of dark green vegetation (i.e., ornamental trees) north of the highway. The international border fence creates a hard and distinct, dark horizontal line that runs east to west. Residential development in Jacumba and elsewhere in the viewshed is obscured by distance and the expansive nature of the view. From Key View 8, the Project site is distinct. The flat and open terrain in the Jacumba Valley is located to the north and south of Old Highway 80 and is generally situated between hilly terrain and the community of Jacumba. In addition to Old Highway 80, the Project site is traversed by dirt roads and electrical transmission lines that, from Key View 8, are difficult to detect. As opposed to the speckled appearance or tan colored soils of nearby undeveloped lands, the Project site is covered with low and grasses and shrubs.

Changes to Visual Character and Quality

A visual simulation of the Proposed Project as viewed from Key View 8 is depicted in Figure 19. This viewpoint is located on BLM-managed land. The Proposed Project would result in strong visual contrast from existing conditions. The installation of repeating rows of dark, rectangular solar panels would create strong line and color contrast across the visible extent of the Project site. The visual pattern of the proposed solar panels would be emphasized by hard, tan-colored lines created by the spaces between rows of solar panels. Old Highway 80 transects the Project site, and

the long, rectangular rows of solar panels would create parallel horizontal lines across the valley floor. Interruptions in the regular rows of solar panels created by battery containers and inverter/transformer pads would be detectable but due to distance, these components would not be overly discernable at Key View 8. From the elevated vantage point of Airport Mesa, Proposed Project components would display a repetitive, orderly quality that is not currently present on the open and undeveloped Project site. Seasonal color changes associated with on-site grasses, shrubs, and trees would no longer occur as vegetation within the Proposed Project fence line would be cleared and replaced by dark solar panels.

Color and line contrasts would be strong as viewed from Key View 8 and the current character of the Project site would be adversely altered by proposed development. While the view would remain long and broad, and surrounding hills and mountains would remain unaltered, development of the Project site would interrupt the existing view and strongly reduce existing intactness. The proposed solar facility would display flat forms; however, the existing visual pattern of flat, undeveloped valley terrain and mountains would be visibly altered by dark rectangular forms separated by the thin, tan lines of internal access roads. As a result, vividness would be reduced. Maximum exposure to the Project site from the elevated vantage point at Key View 8 would result in a broad horizontal scale and footprint that would occupy a sizeable portion of the valley landscape.

5.2.9 Key View 9 – Existing Conditions

Orientation

Key View 9 is located on BLM-managed lands located north of I-8 and south of Table Mountain. In addition to use by local hikers, the mesa landform on which Key View 9 is located is used by CBP for patrols and placement of mobile communications equipment. The elevated vantage point provides a high-angle and uninterrupted views to the international border fence and primarily undeveloped landscape of the Jacumba Valley area. The mesa landform is accessible via a BLM access road that extends north from Carrizo Creek Road and I-8 and onto County and eventually BLM-managed lands. The dirt road is at times rocky and rough and tends to be used by higher profile vehicles. The mesa top is accessible via vehicle or foot. The view from Key View 9 is oriented to the southwest, across the vegetated and boulder-strewn terrain near Gray Mountain, and toward the flat vegetated form of Jacumba Valley (see Figure 20, Key View 9 – Mesa South of Table Mountain). While residences are indistinct as viewed from Key View 9, a concentrated cluster of dark green ornamental trees marks the community of Jacumba Hot Springs.

Existing Visual Character and Quality

From Key View 9, the landscape displays a rural, primarily undeveloped character typified by tracts of undeveloped properties and generally unaltered hills and mountains. From the mesa south

of Table Mountain, the boulder-covered terrain near Round Mountain is in the foreground and contributes additional rugged qualities to the view (see Figure 20). Beyond these features, the Jacumba Valley appears low and open and visible contrasts associated with existing structures on the Project site are diminished by distance. As viewed from Key View 9, the Project site is distinct in this existing setting photograph due to the flat terrain that, unlike adjacent areas covered with gold grasses and small green shrubs, is generally covered by smooth, gold and green grasses. The flat, greyish form of the Jacumba Airport is visible to the north of the thin, dark line displayed by the international border fence. The view extends beyond the international border fence and south into Mexico where the landscape includes a similar valley and mountain terrain as in the U.S.

Changes to Visual Character and Quality

A visual simulation of the Proposed Project as viewed from Key View 9 is depicted in Figure 20. From the elevated vantage point of Key View 9, the Proposed Project would result in strong visual contrast. The installation of dark, rectangular solar panels would create line and color contrast across the valley floor such that the Proposed Project would become a focal point in the view. Due to the viewing distance, the solar panels would be perceived as a large and flat, dark area regularly broken by lightly colored and thin lines. Individual Proposed Project components, such as battery containers and electrical equipment installed on inverter/transformer pads, are not visible due viewing distance from Key View 9. As experienced from Key View 9, the Proposed Project components would result in a large, dark greyish/black flat area not currently present on the open and undeveloped Project site. Seasonal color changes associated with on-site grasses, shrubs, and trees would no longer occur and would be replaced by the dark solar panels.

Contrasts in color and line would be strong as viewed from Key View 9. The seasonal golden and green colored grasses and shrubs across the rural landscape of the Project site would be replaced by dark solar development. While the panoramic view from Key View 9 would remain long and broad, and surrounding hills and mountains would remain unaltered, development of the Project site would substantially degrade the existing character of the landscape and reduce visual quality. Maximum exposure to the Project site from the elevated vantage point at Key View 9 would result in a large horizontal scale and footprint that would tend to dominate the expansive view.

5.3 Assessment of Visual Character and Visual Quality

5.3.1 Assessment of Visual Character

Existing Condition

The approximately 643-acre proposed solar facility would be located on approximately 1,356 acres of primarily vacant lands that are crossed by Old Highway 80 and located south of I-8. The Project site is located immediately east of the community of Jacumba Hot Springs and immediately north of the

U.S./Mexico border. Within the Proposed Project viewshed, residential and commercial development is concentrated in Jacumba Hot Springs with single-family homes primarily located north of Old Highway 80 and scattered homes located south of Old Highway 80, to the west of the Project site.

The Project site and surrounding area are also crossed by regional electrical transmission lines. Specifically, two 500 kV transmission lines (Sunrise Powerlink and Southwest Powerlink) supported by lattice steel towers (approximately 170 feet tall) traverse the Project site in an east-west alignment. A 138 kV high-voltage transmission line supported by vertical tubular steel poles also transects a portion of the Project site. From certain vantage points including Carrizo Gorge Road and Old Highway 80, high-voltage transmission lines are silhouetted against the sky and draw attention from lower, natural elements in the surrounding area.

The Project site is located within a rural valley bordered by I-8 and Gray Mountain to the north, a prominent hill and rising desert alluvial fan terrain to the east, the community of Jacumba Hot Springs and mountainous terrain (i.e., Round Mountain) to the west. The international border fence is located immediately south of the Project site, however, the valley terrain continues south into Mexico. The Project site itself is crossed by several informal dirt access roads and is covered by typically low grasses whose visual pattern is occasionally broken by spreading shrubs and isolated trees. Viewers in the Project area consist of residents, motorists and recreational users. Residences in the community of Jacumba with east facing views would have regular, uninterrupted views to the Project site when not screened by intervening development or vegetation. Motorists traveling on Old Highway 80, I-8, Carrizo Gorge Road and additional local roads in the surrounding area may experience daily views of the Project site. Recreational areas in the vicinity include Jacumba Community Park, immediately adjacent to the southern Project site, State Park lands to the west and northwest, and BLM managed lands which include a portion of Round Mountain and lands located to the east and north of the Project site. Round Mountain, Table Mountain, Airport Mesa, and Jacumba Mountains within BLM managed lands, and the southern portion of Anza Borrego Desert SP would be provided views to the Project site. As stated above, the community of Jacumba Hot Springs is immediately adjacent and has direct views into the Project site.

During Construction

Construction of the Proposed Project would consist of the following activities: installation of perimeter fencing; site preparation and clearing/grading; development site access roads; collection system trenching; and installation of the solar panel system, battery storage containers, inverter/transformer pads, substation, switchyard, and electrical transmission facilities. The open character of the Project site would be screened by tan slatted chain-link fencing and views across the site would be noticeably shortened. Once the perimeter fence is installed, activities within the interior of the site including site preparation and grading and the installation of solar panels and ancillary facilities would commence.

During site preparation and grading, construction vehicles and equipment would be mobilized on the Project site and the characteristic grass and shrub visual pattern would be replaced with a broad cleared area displaying a consistent flat form and tan soil character. While the contrast in form, line, color and texture between the cleared site and surrounding desert landscape would be apparent from elevated viewing locations including I-8 and nearby mesas and mountains used by recreationists, perimeter fencing and newly installed landscape screens would generally screen these effects from Old Highway 80 and the majority of Jacumba residents. Site preparation and grading (and all phases of construction) would introduce movement to the site. Due to the concentration of vehicles and equipment, the movement of vehicles across the denuded site would be more apparent to receptors than the occasional CBP vehicles across the site under existing conditions. Grading activities may also produce localized, but visible, fugitive dust that would typically be lessened by routine dust suppression best management practices (BMPs) such as the application of water and covering of soil stockpiles. The development of staging areas and site access roads and trenching activities would similarly create visual disturbance to the characteristic visual pattern of the landscape through the removal of vegetation and disturbance of soils.

Once site preparation is complete and staging areas and site access roads are in place, activities including solar system installation would begin. During these stages, the Project site would again transform and start to display the characteristics of a solar generation and storage facility. For example, solar panels would be brought to the site, assembled and installed in rows that would extend across the site and would be separated by internal access roads. As stated in Section 2, Project Description, approximately 300,000 PV modules would be installed throughout the 643-acre development footprint. During installation, stockpiled materials, the angular lines of the racking systems and the horizontal and straight lines of dark solar panels would be introduced to the site. Other facilities and features overhead lines, an on-site collector substation and switchyard with multiple vertical and horizontal metallic component, and inverters would also be installed. The form, line and color of these components would contrast with that of surrounding shrubs, soils and hill and mountainous terrain. The installation of an overhead slack line supported by 65-foot-high poles and 70- to 115-foot-high poles that would support dual 138 kV gen-ties would introduce new vertical and horizontal lines to the landscape. Construction of the on-site battery energy storage system and the installation of up to 75 containers across the site (up to 3 containers each at the 25 inverter skids that would be installed) would introduce large rectangular forms that would be visible above solar modules and inverter/transformer pads.

End of Construction

The smooth texture and straight lines of the solar field edges would contrast with the texture of surrounding vegetation. Solar panel racks and rows across the site would display smooth dark-colored rectangular forms and regular horizontal lines. The on-site substation would introduce a series of complex, angular lines to the site. The battery energy storage facility would entail the

installation of box shipping containers at 25 locations within the solar facility. Tall and lightly colored steel poles would rise from the ground and introduce additional vertical lines that would contrast with the low form of mounded vegetation and the largely horizontal composition of the Project site. The approximately 300,000 solar modules on the site would be the dominant Proposed Project component and a point of focus. However, other Proposed Project facilities (i.e., substation and switchyard, battery energy storage system, overhead lines) would contribute forms, lines, and colors that would contrast with the grasses and shrubs present in the existing landscape.

Maturity

At maturity (i.e., 10 years post-installation), landscaping installed at specified locations on the outside of the perimeter fencing is anticipated to be relatively dense and tall. Landscape locations, shown in Figure 2A, include along Old Highway 80, adjacent to residential areas in Jacumba Hot Springs, along segments of the Proposed Project boundary adjacent to Carrizo Gorge Road. Clear views to the slatted perimeter fence and the top edges of solar panels above the 6-foot-high fence would be replaced with partially screened views. Regularly placed trees would broaden with time and foliage would partially screen fencing and solar panels from view. However, gaps between trees would occur and proposed solar panels and perimeter fencing would remain constant in views.

5.3.2 Assessment of Visual Quality

Existing Condition

Most of the Project site displays a relatively low and flat form with occasionally hilly terrain. Further, the combination of the densely vegetated creek corridor in the northwestern extents of the site and the wide and low valley floor that comprises the majority of the site creates a unique visual pattern of contrasting forms and colors that enhances landscape vividness. However, buildings and structures associated with prior dairy and farming operations in the eastern portion of the site (i.e., north of Old Highway 80) are in disrepair. High-voltage transmission lines supported by tall steel lattice towers and poles traverse the northern portion of site. The utility infrastructure, unmaintained ranch buildings, and visible lines associated with sand extraction activities detract from landscape intactness and unity.

During Construction

During site preparation, the currently open character of the Project site would be visually screened from view of Jacumba residents and Old Highway 80 motorists by tan slatted perimeter fencing and landscaping that would be installed along specified sections of the perimeter of the proposed solar facility. Except from elevated vantage points, the visual pattern of low and tall landforms experienced in views across the site would be substantially interrupted. As the fencing and landscape screens would be installed during construction, the quality of views across the Project

site for residents, motorists and recreational users would be substantially reduced. Subsequent activities including site preparation, grading, installation of solar panels and other Proposed Project components would be visible above perimeter fencing. The removal of vegetation, grading and equipment and vehicle traffic across denuded portions of the site would generate dust that would further degrade visual quality. Once installed, new vertical features on the Project site including collection and gen-tie lines and steel containers associated with the battery energy storage system would contribute contrasting forms and line to views. In addition, the upper edges of solar panels on the perimeter of the Project site would be visible from foreground (and ground level) vantage points including Old Highway 80, Carrizo Gorge Road, Jacumba Community Park, and residential properties in Jacumba Hot Springs. Like existing steel towers and poles, these components and features would detract from the existing visual pattern of the Jacumba landscape and result in reduced visual quality. Further, where Proposed Project components would occupy a large portion of the view (as shown in the visual simulations for at Key View 1 [Figure 12], Key View 6 [Figure 17], and Key View 7 [Figure 18]), landscape vividness and intactness would be significantly reduced. From other locations including Key View 2 (Figure 13), Key View 4 (Figure 15), and Key View 9 (Figure 8), screening of the dominant visual features in the landscape (i.e., mountainous terrain) by Proposed Project elements would be minimal but effects to existing unity, and the open quality of existing views, would be pronounced. Existing visual quality would be notably reduced.

End of Construction

The solar facility would create strong visual contrast in form, line, color, and texture that would reduce the visual quality of the landscape. Within the middle ground viewing distance, the horizontal line and form of PV modules and support racks would strongly contrast with the low form of on-site grasses and shrubs and the rugged line of mesa and mountain terrain. Existing open and uninterrupted views across the Project site would routinely be shortened by the Proposed Project. From elevated vantage points (as shown in visual simulations for Key View 7 [Figure 18], Key View 8 [Figure 19], and Key View 9 [Figure 20]), the broad and long views of the primarily natural visual landscape would be interrupted by regular rows of solar panels, battery energy storage containers, and inverter/transformer platforms. A visible grid of tan lines across the site would heighten the contrast created by light and dark colors displayed by interior access roads and solar panels. In addition, the proposed substation and switchyard would be visible from these vantage points; however, the solar panels would be the dominant features on the Project site. For example, as viewed from atop Airport Mesa (i.e., Key View 8 [Figure 19]), the substation and switchyard would be located approximately 1.3 miles away and partially obscured by an intervening hill located west of Carrizo Gorge Road. While visible, the substation and switchyard would generally be experienced as greyish but indistinct forms in the landscape. The vividness, intactness and unity of the landscape would be substantially diminished by the introduction of new

vertical lines and light and dark colors that would detract from views of the existing visual pattern created by desert scrub vegetation and grasses, pockets of arid, sandy colored soils, and rugged, visually prominent mountains.

Maturity

Visual quality anticipated at maturity would be similar to visual quality at the end of construction.

5.3.3 Assessment of Viewer Response

The viewer response to change is the sum of viewer exposure, viewing duration, and viewer sensitivity to changes in the visual environment. Viewer exposure is the degree to which viewers are exposed to a view or visual resources (e.g., number of viewers, length of time, and/or frequency of views). Viewer sensitivity can be affected by the viewer's perception of a project's compatibility with existing features in a landscape; sensitivity and expectations are based on the preferences, standards, ideas, opinions, and bias of different viewers. The viewer groups present within the Proposed Project viewshed, as well as their sensitivity and exposure to the existing visual environment, are discussed in Section 4.2, Viewer Response, and summarized below. The anticipated viewer response to the Proposed Project compared to existing conditions is assessed below by development stage.

Existing Condition

As described in Section 4.2, the Project site is visible to motorists, residents and recreational users. Motorists on I-8, Old Highway 80, Carrizo Gorge Road and additional local roads in the surrounding area have both direct, uninterrupted views to the Project site as well as intermittent or screened views. While view exposure for motorists varies by road and at times is affected by intervening elements (primarily terrain), motorists are considered to have high awareness to changes in the landscape. I-8 is a regional freeway and Carrizo Gorge Road and Old Highway 80 are the primary (and most direct) routes from the freeway to Jacumba Hot Springs. In addition, I-8 and Old Highway 80 are in the County of San Diego's Scenic Highway System. Residences located immediately west of the Project site and homes atop east-facing slopes have clear, uninterrupted views to the Project site, while more distant and non-elevated residential properties are provided partial to fully screened views to the Project site. From these residences, intervening homes and ornamental trees would obstruct views to construction activities occurring on the Project site. Residents are considered highly sensitive to changes in the quality of existing views available from their homes. Where visible, view exposure to construction activities would occur over a long duration and would be static in nature. Users of Jacumba Community Park, State Parks lands including the mesa to the west of the Project site, and BLM-managed lands would also be provided

views of the Project site and construction activities. While view exposure would not be long, viewer awareness of visual change associated with construction would be moderately high.

During Construction

During the construction phase of the Proposed Project, the installation of site perimeter fencing and construction equipment and vehicles would be visible from public roads, residences in Jacumba, and Jacumba Community Park. From more elevated vantage points from Anza Borrego Desert State Park lands, Airport Mesa and the mesa south of Table Mountain, , construction activities within the Project site would be visible. In addition to construction equipment and vehicles, these activities would include site preparation and clearing/grading, development of staging areas and site access roads, and installation of Proposed Project components. While Proposed Project construction would entail the introduction of contrasting elements to the site, most local residents in Jacumba, local road motorists, and visitors to Jacumba Community Park would not be exposed to views of all Proposed Project components and the overall change in the viewshed. The installation of perimeter fencing would screen views and as such, the visual experience of residents and local road motorists would be primarily defined by perimeter Proposed Project elements.

From Old Highway 80, Jacumba Community Park, and the residential area located immediately west of the Project site, the proposed changes during construction would be in the foreground for motorists, park visitors, and residents that currently experience open views across the fairly intact and unified landscape. Jacumba residents and motorists (and their occupants) on Old Highway 80, included on the County Scenic Highway System, have high sensitivity. Given the number of viewers, duration, and proximity, viewer response from Old Highway 80 would be high. Based on similar factors, viewer response would be moderately high for Carrizo Gorge Road motorists and high for I-8 and Old Highway motorists. Sensitivity of Jacumba Community Park, State Park lands, and BLM-managed land users is moderately high sensitivity. While, each of these areas is assumed to receive relatively low regular use and users are in the area for a temporary duration (i.e., during recreation) (which suggests low exposure), expectations amongst recreationists in the area for open desert landscapes is assumed high.

Partial views of the Project site are available from BLM-managed Airport Mesa and the mesa south of Table Mountain. While regular use is assumed to be low, expectations and preferences for open landscapes in the Jacumba area for hikers and other recreationists is assumed to be high. In addition to these locations, views of the Project site are available from Round Mountain (eastern slopes and summit within the Project site boundary; western lands managed by the BLM) and mountainous terrain to the north of I-8. While viewer volume is low due to the remote location and limited access, users of these areas would have high sensitivity to changes during construction and high expectations for views of an open and primarily undeveloped desert landscape. From

elevated vantage points to the north of the Project site, exposed soils, grading and site preparation equipment and activities, and installation of Proposed Project components would be visible. Viewers would experience strong contrasts between active areas of construction and unaltered lands outside of the development footprint.

End of Construction

At the end of construction, local road motorists on Old Highway 80 and Carrizo Gorge Road, Jacumba residents, and visitors to Jacumba Community Park would experience views to the Project site. that would consist of landscape screens, perimeter fencing, and the top edges of solar panels located along the perimeter of the Project site. These views are reflected in the visual simulations show in Key View 3 (Figure 14), Key View 4 (Figure 15), and Key View 5 (Figure16).

As viewed from I-8 and elevated vantage points including Anza-Borrego Desert State Park, Airport Mesa, Table Mountain and the nearby mesa to the south, and Round Mountain (see visual simulations for Key View 7 [Figure 18], Key View 8 [Figure 19], Key View; Key View 9 [Figure 20], Proposed Project components including solar panels, battery energy storage containers, the substation and switchyard, electrical lines, and access roads would be visible.

Maturity

At maturity, the landscaping would be more prominent where installed; however, viewer response would generally be similar to visual quality at end of construction. Please refer to discussion above.

5.4 Determination of Significance

The criteria used to assess the significance of visual impacts from the Proposed Project are derived from the County of San Diego's Guidelines for Determining Significance and Report Format and Content Requirements – Visual Resources (County of San Diego 2007).

1. Would the project introduce features that would detract from or contrast with the existing visual character and/or quality of a neighborhood, community, or localized area by conflicting with important visual elements or the quality of the area (such as theme, style, setbacks, density, size, massing, coverage, scale, color, architecture, building materials, etc.) or by being inconsistent with applicable design guidelines?
2. Would the project result in the removal or substantial adverse change of one or more features that contribute to the valued visual character or image of the neighborhood, community, or localized area, including but not limited to landmarks (designated), historic resources, trees, and rock outcroppings?

3. Would the project substantially obstruct, interrupt, or detract from a valued focal and/or panoramic vista from:
    - a public road,
    - a trail within an adopted County or State trail system,
    - a scenic vista or highway; or
    - a recreational area?
4. Would the project not comply with applicable goals, policies or requirements of an applicable County Community Plan, Subregional Plan, or Historic District's Zoning?

In addition, the County of San Diego's Guidelines for Determining Significance and Report Format and Content Requirements – Dark Skies and Glare (County of San Diego 2009b) was used to assess the significance of visual impacts resulting from the Proposed Project.

1. Would the project install outdoor light fixtures that do not conform to the lamp type and shielding requirements described in Section 59.105 (Requirements for Lamp Source and Shielding) and are not otherwise exempted pursuant Section 59.108 or Section 59.109 of the San Diego County Light Pollution Code?
2. Would the project operate Class I or Class III outdoor lighting between 11:00 p.m. and sunrise that is not otherwise exempted pursuant Section 59.108 or Section 59.109 of the San Diego County Light Pollution Code?
3. Would the project generate light trespass that exceeds 0.2-foot-candles measured five feet onto the adjacent property?
4. Would the project install highly reflective building materials, including but not limited to reflective glass and high-gloss surface color that will create daytime glare and be visible from roadways, pedestrian walkways or areas frequently used for outdoor activities on adjacent properties?
5. Would the project not conform to applicable Federal, State or local statute or regulation related to dark skies or glare, including but not limited to the San Diego County Light Pollution Code?

The County's Guidelines for Determining Significance are generally intended to address the questions posed in Appendix G of the CEQA Guidelines. In 2018, the CEQA Guidelines were updated and several of the questions listed in Appendix G were revised, deleted, or modified. The County's Guidelines for Determining Significance have yet to be updated to address these amendments. Accordingly, this EIR analyzes the impacts from the Proposed Project using the County's Guidelines for Determining Significance and the questions posed in Appendix G. Where

the questions in Appendix G have not been revised, only the County's Guidelines for Determining Significance are identified and analyzed. Where the questions in Appendix G have been significantly altered or additional questions have been posed, the Proposed Project's impacts are analyzed as against the questions in Appendix G and, to the extent they remain consistent with Appendix G, the County's Guidelines for Determining Significance.

5.4.1 Assessment

This assessment includes an analysis of the entire Proposed Project and a specific analysis for the switchyard under each threshold. This analysis is organized as such because after construction, the switchyard would be owned and operated by SDG&E.

5.4.1.1 Threshold 1 – Assessment

Would the project introduce features that would detract from or contrast with the existing visual character and/or quality of a neighborhood, community, or localized area by conflicting with important visual elements or the quality of the area (such as theme, style, setbacks, density, size, massing, coverage, scale, color, architecture, building materials) or by being inconsistent with applicable design guidelines?

Proposed Project

According to the Mountain Empire Subregional Plan, the Jacumba Subregional Group Area is unique both in natural and created settings, which includes hot springs and a desert environment (County of San Diego 2011b). Although the existing character of the Project site and surrounding area is largely defined by undeveloped desert landscape including flat valley terrain, rugged and rocky mountains, rolling hills, and scrub vegetation, the surrounding area also includes the community of Jacumba Hot Springs, I-8, Old Highway 80 and local roads, high-voltage transmission lines, and commercial development at I-8. More specifically, high-voltage transmission lines traverse the Project site from east to west and are a constant presence in existing views from I-8, Carrizo Gorge, and Old Highway 80. Residential development and limited commercial development is located to the immediate west of the Project site within Jacumba Hot Springs. A few single-family homes are also scattered to the east along Old Highway 80. Two gas stations are located adjacent to the Project site and I-8.

Of the visual elements included in Threshold 1, theme, style, size, massing, scale, color building materials, and setbacks are particularly relevant to the solar facility and substation. Density, coverage, and architecture are not particularly applicable to the Project site and the primary visual impacts associated with the Proposed Project. In addition, the Mountain Empire Subregional Plan does not include design guidelines, and therefore, consistency with design guidelines is not included below.

Theme and Style

Construction and operation of the solar energy generation and storage facility and associated access roads would occur on approximately 643 acres within the 1,356-acre Project site. The solar facility components would include 300,000 PV modules mounted on support structures (single-axis solar trackers). The solar panels would be approximately 12 feet high each as measured from the upper panel edge to the adjacent ground level. Other components would include an underground collection line system, 25 inverter/transformer pads, an on-site collector substation, two 138 kV overhead gen-tie lines, and a 90 MW battery energy storage system. As proposed, 75 steel containers (approximately 55 feet long by 10 feet high by 19 feet wide) would be installed next to the inverter/transformer platforms at 25 locations within the solar facility.

The theme and style of the visual character of the Project area, including the Project site, is defined by a largely undeveloped desert landscape marked by sandy to rocky hills, low-lying rugged shrubs, and rugged mountains. Landforms on the Project site range from mountain terrain and east-facing slopes, vegetated floodplains, low, rolling hills in the northern portion, and a wide hill in the eastern portion. In addition, the traditional pattern of development in the surrounding area is characterized by single-family residences within community of Jacumba Hot Springs and slightly larger lots and scattered structures on the periphery of the community. High-voltage transmission lines traverse the Project site and adjacent properties to the east and west.

The solar facility and substation would not replicate the traditional theme and style of the Jacumba area characterized by single-family residences, ranches, and natural topography and terrain. The introduction of the solar facility adjacent to a small rural town would result in a noticeable change in the visual character of the community. The anticipated visual effects associated with Proposed Project construction is discussed in Section 5.4.1, Assessment. In addition, the anticipated effects of the Proposed Project are shown in visual simulations from Key Views 1 through 9, as depicted in Figures 12 through 19. Although existing high voltage transmission lines and distant wind development in Mexico is currently visible, the solar facility and substation would contrast strongly with the existing theme and style of the landscape and predominant development (i.e., residential) in the Jacumba area. In addition, development of the Project site as proposed would result in a permanent and prominent change in the visual theme and style of the community. Impacts to theme and style would be adverse.

Size, Scale, and Massing

The proposed solar panels would feature a maximum panel edge height of approximately 12 feet above ground surface. Although the height of the panels would be less than the typical height of single-family residences in the Jacumba community, additional Proposed Project components including the collector substation, 138 kV overhead slack span transmission line and 138 kV loop-

in gen-ties would exceed the vertical scale of nearby residential development. For example, tall components associated with the collector substation, including a 138 kV dead-end structure and switching gear, and support poles for the slack span transmission line would be 65 feet high (approximately). These components would be distant but visible from I-8 near the Carrizo Gorge Road exit. In addition, 70- to 115-foot-high (approximately) steel poles would be installed to support the proposed 138 kV loop in gen-ties and would be visible to motorists on Carrizo Gorge Road. For a brief duration, these elements would also be visible to I-8 motorists. Although the taller components of the Proposed Project would have limited visibility from residences in Jacumba Hot Springs (the proposed facilities and lines would be located more than 1 mile northeast of Laguna Street and nearby residences), the size and scale of taller Proposed Project components would be dissimilar to that of Jacumba area residential development and predominantly low vegetation across the Project site.

Although existing transmission line infrastructure displays comparable vertical size, scale, and massing as taller Proposed Project components, the wide distribution of solar panels across the Project site would strongly contrast with the size and scale of existing nearby development. More specifically, repeating rows and racks of proposed solar panels would be distributed across a large, 643-acre area that previously supported dairy farming and ranching uses. The broad distribution of proposed solar panels would be particularly noticeable from I-8 (see Key View 1 [Figure 12]), elevated vantage points on State Park lands to the immediate west of the Project site (see Key View 7 [Figure 18]), Airport Mesa (see Key View 8 [Figure 19]), and from the mesa south of Table Mountain (see Key View 9 [Figure 20]).

As viewed from Old Highway 80, the upper portion of the solar panels would be visible above the slatted fencing which would be installed to screen the solar facility (see Key View 3 [Figure 14] and Key View 5 [Figure16]). These key views also show the landscaping that would be installed as screening along the Project site frontage of Old Highway 80. Landscaping and slatted fencing would also be installed along the western Project site boundary that adjoins Jacumba Community Park and residential properties (see Key View 4 [Figure 15] and Key View 6 [Figure 17]).

On its western boundary, a portion of the Project site is located adjacent to small lot residential properties featuring modest, single-family residences and mobile homes. With the exception of scattered residences south of Old Highway 80 and east of the Project site, the majority of development in Jacumba Hot Springs is concentrated on a less than 100-acre area located north of Old Highway 80, east of Railroad Street, and west of Laguna Street. The existing Jacumba Solar facility is located to the east; however, this facility is blocked from view of the community and has limited visibility from Old Highway 80. As such, the horizontal scale and massing of the Proposed Project would conflict with the established scale and massing of existing development in the Jacumba Hot Springs community.

Color and Building Materials

Earth tone colors are prevalent on the Project site and consist of green to greyish grasses, dark green to grey shrubs, and light tans displayed by access roads, hills, drainages, and patches of exposed soils. The abandoned ranch structures are typically white or metallic grey. Vegetation on nearby rural residential properties tends to display a similar earth tone palette, but, these areas may include larger expanses of lightly colored tones due to vegetation clearance near structures. Colors displayed by existing on-site elements including terrain and vegetation, are illustrated in the photographs of existing conditions from Key Views 1 through 9 (see Figures 12 through 20).

Proposed solar panels would be uniformly dark in color. As demonstrated in the visual simulations prepared for the Proposed Project, the dark color of solar panels would be visible to varying degrees from public vantage points in the surrounding areas (see Key Views 1 through 9 [Figures 12 through 20]). Other proposed components on the Project site would include the on-site substation, underground collection system, dual gen-tie lines supported by 70- to 115-foot-high poles, an overhead slack line supported by 65-foot-high poles, inverters, and a battery energy storage system composed of 75 steel containers (55 feet long by 10 feet high by 19 feet wide each). In general, these facilities would be metallic grey in color and would be constructed of steel.

Although dark grasses and shrubs are seasonally present throughout the Project site, the introduction of up to 300,000 uniformly dark solar panels would create strong color contrast with the general earth tones displayed by vegetation on the Project site and in the surrounding area. Further, the wide distribution of dark tones of proposed solar panels would conflict with the typically white or off-white color of residential and commercial buildings in Jacumba Hot Springs, and with abandoned structures on the Project site. Also, unlike the on-site substation that would be distant from public viewing locations, inverters and battery energy storage system containers would be scattered between rows of solar panels, including along the perimeter of solar development. If these components are painted with light colors, they would contrast with dark solar panels. Due to the wide distribution of dark solar panels across the site and the colors expressed by prominent perimeter screening elements, Proposed Project components would conflict with the dominant colors displayed by terrain and vegetation in the landscape and by existing residential and commercial development in Jacumba Hot Springs.

Setbacks

Due to the proximity of rural residences and public roads and the visual prominence of Proposed Project components, substantial contrasts with existing visual character would occur. Along the western Proposed Project boundary, solar panels are proposed near occupied rural residences.

At the closest location (i.e., near the driveway to be constructed off Carrizo Gorge Road to provide access to panels located west of the road), proposed solar panels would be setback approximately

60 feet from the Carrizo Gorge Road ROW. At this location, solar panels would be located beyond a perimeter fence and a 24-foot-wide site perimeter access road. East of the road, the nearest solar panels within an isolated T-shaped tract of the Proposed Project would be similarly setback approximately 67 feet from the Carrizo Gorge Road ROW.

As shown in Figures 2A and 2B, the Project site parallels Old Highway 80 to the south and north generally from Carrizo Gorge Road west to the community of Jacumba Hot Springs. Solar panel setbacks from the highway ROW would vary, ranging from a shorter distance of approximately 45 feet from the southerly ROW on the south to a longer distance of approximately 85 feet from the northerly ROW.

The western Project site boundary parallels residential property lines for approximately 0.25 miles, north of Old Highway 80. The nearest solar panels would be setback approximately 75 feet from the closest residential property line.

Lastly, the western Project site boundary parallels Jacumba Community Park for approximately 0.18 miles, south of Old Highway 80. The setback of the solar panels from the park property line would vary, ranging from approximately 48 feet to 65 feet.

Threshold 1 – Assessment Summary

As detailed above, the height of the proposed panels (up to12 feet high) would be consistent with the scale of the typical residential development in the adjacent community of Jacumba. In addition, the proposed scale of prominent collector substation components (including the 138 kV dead end structure that is approximately 65 feet high), and switchyard loop-in gen-tie poles (approximately 80 feet high each) would be consistent with or shorter than existing electrical transmission poles and towers in the landscape. However, the wide distribution of repeating rows of solar panels on the approximately 643-acre site would create noticeable horizontal scale and massing contrasts with adjacent areas of residential development. In addition, installation of thousands of uniformly dark solar panels in an area that consists mostly of earth tones, modest and lightly colored residential structures, and undeveloped lands would strongly contrast with the established theme and style of the Jacumba area. While not visually prominent in comparison to solar panels, inverters, battery energy and gen-tie lines may also create noticeable color contrasts when viewed against the background of thousands of uniformly dark solar panels. Thus, the color of proposed solar panels would not be consistent with the predominant colors displayed by features in the existing landscape and internal color contrasts would further degrade the existing visual environment. Although the existing Jacumba Solar development is located further to the east of the Project site, this facility is located outside of the rural village boundary and is fully screened by intervening terrain from viewers in Jacumba Hot Springs. Unlike the Proposed Project, the Jacumba Solar facility also has limited visibility from Old Highway 80. Therefore, the

characteristics of the Proposed Project would detract from or contrast with the undeveloped, desert landscape and small town character of Jacumba and impacts would be **potentially significant (Impact AE-1).**

Switchyard

The switchyard would be constructed on undeveloped desert lands in the northeastern portion of the Project site. The proposed switchyard would be sited adjacent to the proposed substation and would be bordered by undeveloped, previously disturbed lands to the east, north, and west. A visually prominent hill is located south of the switchyard site. The nearest developed uses consist of two gas stations off Carrizo Gorge Road that are approximately 1 mile to the north. Scattered rural residences are located within 1 mile of the switchyard site but views to the site from these areas are blocked by a hill. Residences in Jacumba Hot Springs are located more than 1.5 miles to the southwest and due to distance, the switchyard would not be particularly visible.

The switchyard would not represent the traditional development theme and style of the Jacumba area. Although views of the switchyard and gen-tie lines from I-8 and Carrizo Gorge Road would be brief and visual contrasts would be muted by distance (see Key View 1 [Figure 12]), both the nature of the development and the scale and massing of the approximately 140,000-square-foot facility would create moderately strong contrasts in the landscape. Although the existing are adjacent to the proposed switchyard, these existing transmission lines and the proposed switchyard would not replicate the traditional predominant theme and style of the Jacumba area.

Regarding color, the proposed switchyard and loop-in components would generally display a consistent metallic grey color and would be constructed of steel or similar metal. Switchyard and gen-tie line components would display colors consistent with those displayed by electrical and substation infrastructure in the immediate area. Still, metallic tones would contrast with the drab tones of vegetation and tans of desert terrain, and the concentration of these metallic components would be dissimilar to the linear distribution of nearby transmission lines.

In addition, the height of prominent switchyard components and loop in structure would not be consistent with the scale of the typical residential and nearby gas station development in the Jacumba area. The proposed scale of prominent switchyard components (bus work, switches and controls) and switchyard loop-in poles (approximately 75 to 110 feet high) would be consistent with or shorter than existing electrical transmission poles and towers in the immediate area. Despite these consistencies with existing electrical infrastructure, the character of the proposed switchyard would detract from the character of the larger Jacumba area and would conflict with the established theme and style of the area that is predominantly associated with an undeveloped desert landscape, including flat valley terrain, rugged and rocky mountains, rolling hills, and scrub vegetation. Therefore, impacts would be **potentially significant (Impact AE-1)**.

5.4.1.2 Threshold 2 – Assessment

Would the project result in the removal or substantial adverse change of one or more features that contribute to the valued visual character or image of the neighborhood, community, or localized area, including but not limited to landmarks (designated), historic resources, trees, and rock outcroppings?

Proposed Project

There are no designated landmarks or historic resources present on the Project site. Further, the proposed impact area generally consists of flat terrain that was previously disturbed by agricultural operations. Prominent rock outcroppings are not present within the proposed development footprint. Trees are present on the Project site and are grouped in orderly east west and north/south lines near the center of the Project site. Although these features are visible from Old Highway 80, they are proportionately minor features within the context of the 643-acre Project site. Although specific landmarks, historic resources, and rock outcroppings are not present on the Project site and trees are limited, the Project site does feature an undeveloped desert environment, with open views of the Jacumba Valley and surrounding mountainous areas.

The existing scenery of the Jacumba area would be substantially altered and affected during construction. Construction activities and the installation of fencing around the perimeter of the development footprint would result in the removal of 643 acres of currently vacant and primarily undeveloped lands from the local area. The construction phase of the Proposed Project would last approximately 13 months and a workforce of up to 500 employees per day may be required during peak activities.

The physical effects of construction activities would alter the existing open character of the Project site. Roads and other previous disturbances have created visible lines and gaps across the Project site but, proposed grading and vegetation removal would create precise and geometric forms and lines. These new forms and lines would be noticeable and would contrast with adjacent areas of undisturbed vegetation. Following the clearance of vegetation and grading of the site, underground trenching work and installation of the proposed solar panels would occur. During this period, the Project site would begin to display an orderly appearance. While order created by repeating rows of support racks and panels and straight roads would be somewhat compatible with the grid-like pattern of residential development in Jacumba, the Project site would contrast with the dynamic, open appearance of the existing site and of undeveloped terrain and native vegetation in the surrounding area.

Similarly, clearing, grading, and construction of the on-site collector substation would introduce straight and rectangular building pads and geometric vertical forms where none currently occurs

on site. Available views to these facilities would generally be limited to motorists on I-8 and Carrizo Gorge Road. One 220-foot-long 138 kV overhead slack span transmission line (supported by poles approximately 65 feet high) is proposed and would connect the collector substation to the switchyard. The proposed overhead slack span transmission line would be located more than 0.50 miles away but visible to eastbound and westbound I-8 motorists over distances of approximately 0.25 miles and 0.21 miles, respectively. From Carrizo Gorge Road, the proposed slack span transmission line would be more than 0.25 miles away but would be visible to southbound Carrizo Gorge Road motorists over an approximate distance of 0.52 miles. At 65 feet tall, proposed slack span transmission line poles would be substantially shorter than steel poles and towers of the existing 500 kV Southwest Powerlink, 500 kV Sunrise Powerlink, and 138 kV East County Substation transmission line (approximately 150 feet tall). These transmission lines traverse the Project site immediately north of the proposed switchyard.

Proposed solar panels would be visually prominent and experienced as the dominant features of the Proposed Project. Landscaping and slatted fencing would partially screen solar panels from view of motorists along Old Highway 80, Jacumba Community Park users, and nearby residents (see Key Views 3, 4, 5, and 6 [Figures 14 through 17]); however, the Proposed Project would substantially alter the currently open and unimpeded character of views across the Project site from these areas.

The existing undeveloped character of the Project site would also be altered by construction of less prominent Proposed Project components. The inverter/transformer platforms and battery energy storage containers would generally be screened from public view. Grading and trenching associated with the underground electrical collection system would result in similar lines as the proposed internal access road (lines would be installed beneath roads). Inverter/transformer platforms and up to three storage containers (55 feet long by 10 feet high by 19 feet wide) would be installed at 25 locations distributed throughout the proposed solar facility (total of 75 battery storage containers). Despite the height of the storage containers, these components would generally be set back from the perimeter of the solar facility and visually screened by solar panels located closer to viewers. For example, the nearest storage containers would be located approximately 410 feet from Carrizo Gorge Road and rows of solar panels, a 24-foot-wide access road, and perimeter fencing would be installed between the storage containers and motorists. Storage containers would be located approximately 750 feet from Old Highway 80.

As proposed, the Proposed Project would result in a substantial adverse visual change to the existing small-town character of the area and open characteristics of the site. Although agricultural operations on the Project site have not be active for years, the site is primarily undeveloped and displays open and unimpeded characteristics. Installation of the solar facility would substantially change existing visual quality and result in the adverse alteration of the open and unencumbered qualities of the Project site. As experienced from I-8, the proposed solar facility would

substantially interrupt existing open and unencumbered views across the Project site (see Key View 1 [Figure 12]).

Visual simulations prepared from Key View 3 (Figure 14), Key View 4 (Figure 15), and Key View 5 (Figure 16) show the visibility of the Proposed Project along Old Highway 80 and from Jacumba Community Park. The visual simulation from Key View 6 (Figure 17) shows the visibility of the Proposed Project from adjacent residential properties in Jacumba Hot Springs. Under existing conditions, clear and open views across the Project site are available from Old Highway 80, the community park and adjacent residential properties. With implementation of the Proposed Project, the currently unimpeded views available would be substantially altered and shortened. As such, views of the Proposed Project by Old Highway 80 motorists, Jacumba Community Park users, and Jacumba Hot Springs residential properties adjacent to the Project site, the Proposed Project would be substantially altered and the length of available views would be shortened.

The introduction of visually prominent Proposed Project components, including 300,000 PV modules, would substantially change the quality of existing views across the site. Further, the proposed solar facility development would conflict with the small-town character of the Jacumba area and the existing open and unencumbered visual characteristics of the Project site that are important elements. As such, the Proposed Project's impacts would be **potentially significant (Impact AE-2).**

Switchyard

The proposed switchyard site encompasses undeveloped yet previously disturbed lands located approximately 0.60 miles south of I-8 and 0.25 miles west of Carrizo Gorge Road. On-site terrain gradually slopes from east to west; however, the site is generally flat and is covered with tan colored soils and scrubby shrubs. The site is also crossed by several dirt access roads. The site does not contain landmarks, trees, or prominent rock outcroppings. While development of the switchyard would alter the existing character of the previously disturbed site, it is situated near the base of a prominent hill and visually screened from most public vantage points in the area including Old Highway 80 and the Jacumba residential area. In addition, the proposed switchyard would not shorten available views across the Jacumba Valley. Still, the construction and operation of an approximately 140,000 square foot switchyard surrounded by security fencing and housing a 138 kV insulated electrical bus, steel support structures and foundations, and a concentration of additional electrical equipment would adversely alter the valued open and unencumbered characteristics of the Jacumba area. Therefore, impacts would be **potentially significant (Impact AE-2)**.

5.4.1.3 Threshold 3 – Assessment

Would the project substantially obstruct, interrupt, or detract from a valued focal and/or panoramic vista from:

- **a public road,**
- **a trail within an adopted County or State trail system,**
- **a scenic vista or highway; or**
- **a recreational area?**

Also, pursuant to Appendix G of the CEQA Guidelines:

In non-urbanized area, would the project substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point).

Proposed Project

Public Roads

Interstate 8

As discussed in Section 3.1.2, Surrounding Area, views of the Project site are intermittently available from I-8 for approximately 1.2 miles. From eastbound I-8, the duration of available views to the Project site is brief, lasting less than 30 seconds as the interstate passes a low hill that blocks southward views and approaches the Carrizo Gorge Road off-ramp. The duration of available views to the Project site available to westbound I-8 motorists is longer but views are non-continuous and are routinely interrupted by intervening median elements including road cut terrain, boulders, and vegetation.

While the southward views offered to I-8 eastbound and westbound motorists near the Project site are occasionally broad and stretch to mountainous terrain in Mexico, existing elements detectable in south-oriented views include the 500 kV Southwest Powerlink, 500 kV Sunrise Powerlink, and the 138 kV transmission line. As shown in the existing conditions photograph from Key View 1 (Figure 12), these existing facilities traverse the Project site and are visible from the interstate. In addition to transmission facilities, southward views offered to eastbound motorists near the Project site includes scattered development (i.e., gas station development and signage) and remnants of a quarried hill in the foreground (see Key View 1: Figure 12).

Despite the brief and intermittent nature of the views from I-8 and the present disturbance of views by existing electrical transmission infrastructure, the installation of the Proposed Project, including the introduction of up to 300,000 PV modules across the Project site, would interrupt existing southward views across the Jacumba Valley landscape and alter the mostly undeveloped and open character of the Project site (see Key View 1 [Figure 12]). Further, the visual effects of vegetation removal and the introduction of dark solar panels across approximately 643 acres of mostly undeveloped, flat terrain would be stark and would attract attention. As previously stated, I-8 is an eligible state scenic highway (and included on the County Scenic Highway System), which implies a heightened sensitivity to modifications along the corridor. As demonstrated in the visual simulation from Key View 1 (Figure 12), development of the Project site as a solar facility would substantially detract from the available long view from I-8. As such, impacts to views from I-8 would be **potentially significant (Impact AE-3)**.

Old Highway 80

Old Highway 80 transects the Project site from approximately Laguna Street to the Jacumba Airport driveway (0.95 miles). Along this segment of the highway, existing southward and northward views offered to motorists (and occupants) are unimpeded except for regularly spaced wooden poles that support local electrical distribution lines. More specifically, southward views extend across the flat, grass and scattered shrub covered terrain to the international border fence and a rugged ridgeline in Mexico (see Key View 3 [Figure 14]). Northward views spread across the Project site and extend to local hills traversed by electrical transmission lines (and associated access roads) and mountain terrain including Round Mountain and Mount Tule (see Key View 5 existing conditions [Figure 16]).

From eastbound Old Highway 80, views to the Project site are available over approximately 0.95 miles, which is the approximate length that the highway parallels the Project site boundary. From westbound Old Highway 80, view duration to the Project site is longer. In addition to the segment paralleling the Project site, views to portions of the northern and/or southern Project site are available starting approximately 0.8 miles east of Carrizo Gorge Road. From this segment of westbound Old Highway 80, views to the Project site are partially screened by vegetation adjacent to the highway and by the large hill situated west of Carrizo Gorge Road/Old Highway 80 intersection and east of the Project site (see Figure 2A). In total, the Project site is visible to westbound motorists on Old Highway 80 for a discontinuous 2.25 miles. According to the San Diego Association of Governments, average daily traffic on Old Highway 80 near the Project site is approximately 500 vehicles (SANDAG 2019). Lastly, Old Highway 80 is included on the County's Scenic Highway System.

As shown in Key View 3 (Figure 14), southeasterly views from eastbound Old Highway 80 are drawn to the rugged ridgeline of mountain terrain beyond the international border fence. Except

for the border fence that is constant in the Old Highway 80 landscape, existing views across the Project site are open and unencumbered. The Proposed Project would include installation of solar panels and other solar facility components, and perimeter fencing to the south of Old Highway 80 for a distance of approximately 0.83 miles. At shown in the visual simulation from Key View 3 (Figure 14), the solar panel setbacks from the highway ROW would vary, ranging from a low of approximately 45 feet from the southerly ROW on the south to a high of approximately 85 feet from the northerly ROW.

As shown from Key View 3 (Figure 14), the Proposed Project would alter the existing quality of views from eastbound Old Highway 80 across the Project site. While the dark, rugged ridgelines of distant topography would remain visible, the continuity of views to these prominent landscape elements would be severed by Proposed Project components introduced to the foreground of Old Highway 80. For example, currently open views to the south and southeast would be replaced with routinely broken and intermittently blocked views. While not depicted in Figure 14, northerly views from eastbound Old Highway 80 across the Project site and toward I-8 and prominent topography including Gray Mountain (located approximately 2.1 miles away) would similarly be altered by the implementation of the Proposed Project.

For westbound motorists (and occupants), views in the foreground would be interrupted by Proposed Project components as shown in the visual simulation from Key View 5 (Figure 16). Existing views are occasionally long, stretching to Mount Tule (approximately 6.5 miles away). Solar panels would be setback between approximately 59 feet to 85 feet from the highway ROW adjacent to the westbound travel lane. North of the highway, the Proposed Project components would parallel the westbound travel lane for approximately 0.80 miles.

Due to their interesting form and vertical prominence, landforms including Round Mountain, Mount Tule and Gray Mountain are focal features in northward views along the Proposed Project frontage of Old Highway 80. Both Mount Tule and Round Mountain are visible from the westbound travel lane of Old Highway 80. Although views of Round Mountain and other higher terrain would be visible above the tops of the solar panels and the fencing that would be installed along the perimeter of the solar facility, implementation of the Proposed Project and specifically, the introduction of thousands of solar panels, would substantially alter the existing character of the view across the Project site.

As described above, solar panels would parallel Old Highway 80 and would substantially alter the existing quality of views available to highway motorists and passengers. Numerous racks of solar panels would be aligned perpendicular to Old Highway 80 and while solar panels would be setback at least 75 feet from the paved extents of the highway, their wide distribution across relatively flat and open desert terrain would reduce existing visual quality and create strong contrast with existing conditions,. Therefore, due to the wide distribution of solar panels across the site and related

alteration of existing visual quality as experienced from eastbound and westbound Old Highway 80, including occasionally obscured views to mountainous terrain in the area, the Proposed Project would substantially obstruct, interrupt, or detract from a valued focal and/or panoramic vista. Impacts would be **potentially significant (Impact AE-4).**

Carrizo Gorge Road

In 2015, daily traffic volumes on Carrizo Gorge Road between Old Highway 80 and I-8 was approximately 300 vehicles (SANDAG 2019). Because the Project site abuts Carrizo Gorge Road, views to the Project site are available to motorists (and occupants). Carrizo Gorge Road is a two-lane, light collector, paved and dirt road that generally provides local access between Old Highway 80 and I-8. A segment of Carrizo Gorge Road also extends to the northwest from the Carrizo Gorge Road/I-8 on-ramps intersection near the existing gas stations. From this location, the road is maintained by the County generally to the I-8 crossing. North of I-8, Carrizo Gorge Road becomes a privately maintained road and provides access to the private De Anza Springs Resort located to the north of I-8. Carrizo Gorge Road parallels the Project site for approximately 1.8 miles; however, development areas do not encompass the entirety of the Project site (see Figure 2B). As such, views to areas proposed solar facility development are available over a discontinuous, approximately 1.25-mile segment of the road.

A representative view to the Project site from Carrizo Gorge Road was established at Key View 2 (see Figure 13). Key View 2 is located on a segment of Carrizo Gorge Road that does not parallel the Project site and is located approximately 0.4 miles south of the nearest area proposed for solar development. From Key View 2 (Figure 13), solar panels of the Proposed Project would be located approximately 0.4 miles away and the hard line displayed by dark solar panels would stand out when experienced alongside the local terrain and vegetation. The Key View 2 landscape contains scenic features (i.e., tan and boulder covered Gray Mountain north of I-8 and darker Mount Tule to the northwest); however, the low angle of the view, presence of a prominent hill to the west (not visible in Figure 13), and visible mountains limits the panoramic qualities of the view. The solar panels would display a rectangular and relatively low-profile form and while the dark color of these elements would create noticeable visual contrast, the quality of existing views to Gray Mountain and Mount Tule would be weakly affected at Key View 2. In addition, Proposed Project components would not block views or substantially interrupt views to prominent topographical features.

Where the solar facility would parallel Carrizo Gorge Road, existing views of the Project site would be altered by Proposed Project components. . However, motorists would experience these immediate foreground views over a distance of approximately 600 feet. Despite the proximity of Proposed Project components to the road (proposed solar panels would be setback approximately 75 feet from the paved extents of Carrizo Gorge Road), Gray Mountain and Mount Tule would remain visible. In addition, Carrizo Gorge Road is not included on the County Scenic Highway

System and is not designated scenic by the state. Focal views to scenic features from Carrizo Gorge Road would not be substantially blocked, interrupted, or otherwise degraded by implementation of the Proposed Project. Therefore, due to the short distance over which solar development areas would parallel Carrizo Gorge Road, brief duration of views to solar development within the foreground, the low number of daily vehicles on Carrizo Gorge Road, and lack of scenic designation, impacts to focal or panoramic vistas would be **less than significant**.

Trails

As discussed in Section 3.1.2, Surrounding Area, there are no segments of an adopted County or state trail system in the Jacumba area. Further, no segments of trails within the Boulevard Community Trails and Pathways Plan offer views to the Project site and Jacumba Valley area and the community of Jacumba does not have a Community Trails and Pathways Plan. Since views to the Proposed Project would not be available to users of an adopted County or state trail system, **no impacts** to a valued focal and/or panoramic vista from a trail within an adopted County or state trail system would occur.

Scenic Highways

There are no official state designated highways in the viewshed of the Proposed Project. One eligible state scenic highway, I-8 (also included in the County Scenic Highway System), is located in the Project area (Caltrans 2017). In addition, Old Highway 80, a two-lane road included in the County Scenic Highway System, transects the Project site (County of San Diego 2011a).

Impacts to focal and panoramic vistas from I-8 and Old Highway 80, both included in the County Scenic Highway System, are described under the Public Roads heading, above.

Recreational Areas

Recreation areas within the Proposed Project viewshed include local, state, and federal lands. Specifically these include Jacumba Community Park, which is located immediately adjacent to the southern portion of the Project site. State lands include Anza Borrego Desert State Park which is located to the west and northwest of the Project site. Federal lands include BLM managed lands encompassing the summit of Round Mountain (and its west- and south-facing slopes), Airport Mesa RMZ, Table Mountain RMZ, and the Jacumba Mountain Wilderness. Both the Airport Mesa RMZ and Jacumba Mountain Wilderness are located to the east of the Project site and the Table Mountain RMZ is located to the northeast.

Local/County Recreational Areas

Jacumba Community Park

Jacumba Community Park is located south of Old Highway 80 and immediately west of the southern portion of the Project site. As shown in the existing conditions photograph from Key View 4 (Figure 15), the existing eastward view from the park looks across the undeveloped and open views of the southern portion of the Project site; With implementation of the Proposed Project, solar panels would be installed south of Old Highway 80 and east of the community park. Solar panels would be setback approximately 40 feet from the eastern boundary of the park property and while active recreational facilities (i.e., basketball court and baseball/diamond) are located in the center and southwestern corner of the park property, solar panels would be visible from locations throughout Jacumba Community Park. Specifically, the dark, rectangular form and horizontal line of proposed solar panels would be visible and would stretch over the Project site and toward the Jacumba Airport and Airport Mesa, as shown in the visual simulation from Key View 4 (Figure 15). Implementation of the Project would substantially alter the existing open character of the Proposed Project and the unimpeded quality and intactness of the existing view. Therefore, impacts to focal or panoramic vistas from Jacumba Community Park would be **potentially significant (Impact AE-5)**.

State Recreational Areas

Anza-Borrego Desert State Park

While most of the State Park land in the surrounding area is located to the north of I-8, discontinuous tracts of State Parks land included within the current boundary of State Park northwest of the Project site. In addition, lands recently acquired by the state for inclusion in State Park are located to the west of the Proposed Project from generally the base of Round Mountain south to the San Diego and Arizona Eastern Railway alignment. As shown in Figure 9, north of I-8, the Proposed Project viewshed extends to sections of the Jacumba Mountain Wilderness Area within the State Park. No designated trails, points of interest, or campgrounds are currently located on the State Parks lands nearest to the Project site. As such, these remote areas are assumed to currently receive very little public recreation use. In regards to the State Park lands located to the immediate west of the Project site, proposed solar panels would be in relatively close proximity (i.e., within 0.30 miles) and the lack of intervening topography creates opportunities for clear and unimpeded views to the central and south potions of the Project site. In addition, most State Parks lands would be located over 1 mile from solar panels on the Project site and due to intervening mountainous terrain, the partially blocked views to the Project site would not substantially obstruct or interrupt a valued focal or panoramic.

Key View 7 Figure 18 shows existing views from the mesa within Anza-Borrego Desert SP lands to the immediate west of the Project site. From the eastern edge of these lands, the central and southern portions the Project site are visible and display an open, undeveloped character. With implementation of the Proposed Project, contrasts would be visually prominent and strong as shown in the visual simulation from Key View 7 (Figure 18). The installation of repeating rows of dark, rectangular solar panels would create form and color contrast across the visible extent of the Project site. Further, the Proposed Project and installation of thousands of solar panels would produce a repetitive, orderly quality that is not currently present on the open and undeveloped Project site. Although the State Park lands to the west are located 200 feet or greater in elevation than the Project site and Proposed Project components would not substantially block or shorten the available long view, the Proposed Project would display a large horizontal scale and footprint that would cover a wide area of visible valley floor as shown from Key View 7 (Figure 18). In addition, solar panels and other visible Proposed Project components would substantially interrupt and detract from existing views. As such, impacts to panoramic vistas available from State Park lands west of the Project site would be **potentially significant (Impact AE-6)**.

Federal Recreational Areas

Round Mountain

The western portion of Round Mountain is located on BLM-managed lands. Round Mountain is assumed to receive sporadic use by individual hikers or small, informal hiking groups.

Due to its elevated vantage points and the general lack of intervening topography, the entirety of the solar facility would be visible from the summit of Round Mountain. Ground disturbance and activities during construction would be apparent and once constructed, the distribution of hundreds of thousands of solar panels and the grid-like layout of access roads and panels would be clear and prominent across the flat valley floor. As previously stated, views from the summit and southern slope of Round Mountain are long and broad, stretching to the Jacumba Mountains to the east and the southerly extension of this range into Mexico.

The proximity of the Project site and visibility of the entire development footprint would substantially interrupt the long view available from Round Mountain. The solar facility would be a focal point in the landscape and would detract from the available expansive view to the southeast and south. As such, impacts would be **potentially significant (Impact AE-7)**.

Airport Mesa RMZ

As previously described in Section 3.1.2, Airport Mesa is managed by BLM for its rural recreational qualities however; the lone access road to the summit is managed by U.S. Customs and Border Protection. In addition, the access road and summit are regularly used by U.S. Customs

and Border Protection agents to conduct patrols of the area. No staging or parking areas for hikers or other trail-based recreationists are provided near the Airport Mesa landform and no visible trails were identified on the east-, north-, or west-facing slopes. Therefore, limited recreational use of Airport Mesa occurs. However, as Airport Mesa provides opportunities for long views and has not formally been closed by the BLM for recreational use, effects to existing views from Airport Mesa are considered in this report.

As shown in the existing conditions photograph from Key View 8 (Figure 19), Airport Mesa offers a westward views toward the Jacumba Valley and community of Jacumba Hot Springs. As shown in Figure 19, the existing westward view is long and includes mesas and several hills and valleys to the west of Jacumba and the generally horizontal horizon of the Tecate Divide. With implementation of the Proposed Project, contrasts in color and line would be strong as viewed from Key View 8 and the current character of the Project site would be fundamentally altered by development. While the view would remain long and broad, and surrounding hills and mountains would remain unaltered, development of the solar facility would interrupt and detract from the available view. The proposed solar facility would display flat forms somewhat consistent with the flat valley floor, however; the existing visual pattern of flat, undeveloped valley terrain and mountains would be visibly altered by dark rectangular forms separated by the thin, tan lines displayed by access roads. With maximum exposure to the Proposed Project components from the elevated vantage point at Key View 8, the large horizontal scale and footprint of the Proposed Project would be visible and would substantially interrupt and detract from the available long view. As such, impacts to a focal or panoramic vista from Airport Mesa would be **potentially significant (Impact AE-8)**.

Table Mountain RMZ

As depicted in Figure 9, the viewshed of the Proposed Project would extend to portions of Table Mountain and the more accessible mesa to the south. Both areas are located on BLM-administered lands and are accessible via narrow trails. Also, both receive limited use from the local Jacumba Hikers and Walkers group and sporadic use from individual hikers and small hiking groups.

Key View 9 was established on the mesa located south of Table Mountain and offers a southwestward view toward the Jacumba Valley. In addition to the mesa, Key View 9 is representative of the available view from the summit of Table Mountain. As shown in the existing conditions photograph taken from Key View 9 (Figure 20), the Project site is visible from the mesa south of Table Mountain. Views of the Proposed Project components would be available to the assumed limited number of annual hikers accessing the elevated vantage point. The nearest solar panels on the Project site would be located over 1.5 miles away from viewers at Key View 9 and except for locations in the north and south, the majority of proposed solar panels installed across the Project site would be visible. From the mesa, the Proposed Project would primarily be viewed as a flat and geometric expanse of dark color on the valley floor.

While the details of proposed solar panels and the grid-like layout of the Proposed Project would be indistinct or difficult to detect, and Proposed Project components would not block visually prominent terrain from view, the concentration of dark color and geometric form of the developed Project site would interrupt the available open, unencumbered view to the southwest and would detract from the panoramic vista Therefore, impacts would be **potentially significant (Impact AE-9)**.

Jacumba Wilderness

Accessible trails offering westward views to the Jacumba Valley and Project site are located over 3 miles to the east. Apart from peaks and west-facing slopes, the occurrence of available westward views to the Project site is irregular and motorists must typically perform some overland scrambling to access these views. Given these factors and the remote location of the Jacumba Wilderness and its associated network of roads (BLM 2019b), the number of users of the Jacumba Wilderness as a recreational resource is very low.

Where long westward views are available, the southern portion of the Project site is entirely blocked from view by Airport Mesa. This elevated landform is situated between the Jacumba Wilderness and the Project site and is a limiting factor in views. In addition, a portion of the Project site is blocked from view by the prominent hill located west of the Old Highway 80/Carrizo Gorge Road intersection. As viewed from the Jacumba Wilderness, the details of components on the Project site (primarily solar panels) would indistinct yet color contrast would be detectable. Still, this contrast would appear low in the landscape and would be generally viewed as a thin, horizontal feature. Visible yet distant Proposed Project components would not result in view blockage and due to distance and the partially blocked view to the Project site, detectable contrast would neither substantially interrupt nor detract from the available view. Therefore, as viewed from the BLM-administered Jacumba Wilderness, impacts to focal or panoramic vistas would be **less than significant**.

Switchyard

Public Roads

Interstate 8

The proposed switchyard site is located approximately 0.6 miles from the eastbound I-8 and once constructed; the facility would be visible to interstate motorists. As with the other elements of the Proposed Project, views to the switchyard site offered to eastbound I-8 motorists would be brief, lasting approximately 8 seconds as the interstate passes a low hill that blocks southward views and approaches the Carrizo Gorge Road off-ramp. Duration view exposure to westbound I-8 motorists would be longer and the proposed switchyard would be in the foreground for approximately 13 seconds. A visual simulation of the Proposed Project as experienced from I-8 near the Carrizo Gorge Road exit is included in Figure 12. Although less noticeable than proposed solar panels and

ground disturbance within the Proposed Project fence line, ancillary Proposed Project components including the switchyard would be visible from the elevated vantage point of Key View 1. As shown in Figure 12, vertical racks and bays, and several 70- to 115-foot-high support poles of the short gen-tie lines, would be distant but detectable in southerly views from the interstate near Carrizo Gorge Road. In addition to distance, the presence of a hill to the immediate south of the switchyard would reduce the visual prominence of the switchyard as viewed from the interstate. Similarly, the presence of the hill and comparatively low-vertical profile of switchyard components would avoid the potential for the facility to be silhouetted against the sky. From I-8, the visual effects of the switchyard would be visually subordinate to those of other components of the Proposed Project. Due to the distance between viewers and components and the location of the facility in the landscape as viewed from I-8, the proposed switchyard would result in a **less than significant impact** to a focal or panoramic vista from I-8.

Old Highway 80

The switchyard site is located approximately 0.7 miles from Old Highway 80. From westbound Old Highway 80, views to the switchyard site are generally blocked from view by terrain, including the mounded hill located west of Carrizo Gorge Road and north of the highway. As westbound highway motorists approach Carrizo Gorge Road, views toward the site narrow and view blockage associated with the hill increases. At Carrizo Gorge Road, northwestward views offered to westbound Old Highway 80 motorists are limited to a foreground distance due to the rising terrain of the hill.

East of Laguna Street, northeasterly views across the Project site available to eastbound Old Highway 80 motorists are generally unimpeded. Specifically, motorists are offered views that generally stretch to the switchyard site. However, upon implementation of the Proposed Project, most equipment installed at or associated with the proposed switchyard would be screened from view by the slatted perimeter fencing and landscape screens. Motorists would be offered partially obstructed views to 70- to 115-foot-high support poles; however, these new poles would be located over 1 mile away and viewed in combination with visually prominent poles and towers of the existing Southwest Powerlink and Sunrise Powerlink transmission lines. Due to the prominence of other Proposed Project components, distance, and the presence of existing visually prominent transmission line towers and poles, the proposed switchyard would not substantially obstruct, interrupt or detract from existing views from Old Highway 80. As such, impacts would be **less than significant**.

Carrizo Gorge Road

Northbound motorists on Carrizo Gorge Road would have limited view exposure to the proposed switchyard. Due to intervening terrain generally located west of the Old Highway 80/Carrizo Gorge Road intersection, views to the proposed switchyard would not be available to northbound Carrizo Gorge Road motorists. From southbound Carrizo Gorge Road, construction and operation

of the proposed switchyard would be partially blocked intervening desert shrubs and occasional trees and would be somewhat obscured by proposed perimeter fencing. Where visible, the switchyard would be experienced in concert with existing towers and poles of regional electrical lines and would be revealed to motorists after passing proposed solar panels that would be in the foreground of Carrizo Gorge Road. While the switchyard would be more visually distinct from Carrizo Gorge Road as compared to from I-8, the facility would remain visually subordinate to the proposed PV modules. In addition, existing views across the Project site from southbound Carrizo Gorge Road that would include the switchyard are not particularly panoramic due to the presence of prominent hills. Further, as viewed from Carrizo Gorge Road, the proposed switchyard would not block a focal feature from view and would not substantially interrupt or detract from a view to a prominent focal feature. As such, the proposed switchyard would not obstruct or substantially interrupt or detract from a valued focal vista from Carrizo Gorge Road and impacts would be **less than significant**.

County or State Trail System

As discussed in Section 2.2, Surrounding Lands, there are no segments of an adopted County or state trail system in the Jacumba area and no segments of trails within the Boulevard Community Trails and Pathways Plan that offer views to the switchyard site. In addition, the community of Jacumba does not have a Community Trails and Pathways Plan. Since views to the switchyard site would not be available to users of an adopted County or state trail system, **no impacts** to a valued focal and/or panoramic vista from a trail within an adopted County or state trail system would occur.

Recreation Areas

Local/County Recreational Areas

Jacumba Community Park

Except for the 70- to 115-foot-high gen-tie poles, the proposed switchyard would be blocked from view of Jacumba Community Park users. Proposed gen-tie poles may be visible from the park; however, poles would be located over 1.25 miles away and would appear relatively low in the landscape. In addition, the proposed poles would be viewed in context of existing 150-foot-tall steel lattice towers and tubular steel poles that support the Southwest Powerlink and Sunrise Powerlink (both 500 kV transmission lines), and the existing 138 kV transmission line. Due to distance and because switchyard components would generally be blocked from view and would not substantially interrupt or detract from the available views, impacts to focal or panoramic vistas from the Jacumba Community Park would be **less than significant**.

State Recreation Areas

Anza-Borrego Desert State Park

The proposed switchyard and associated support poles would be visible from nearby State recreational areas including State Parks lands adjacent to Project site that are within the Anza-Borrego Desert SP. State recreational areas and their proximity to the Proposed Project boundary (the switchyard and gen-tie poles are located within the Proposed Project boundary) are depicted in Figure 9. As stated above for the JVR Energy Park Project, no trails, points of interest, or campground are located on Anza-Borrego Desert SP lands nearest to the switchyard site and as such, nearby Anza-Borrego Desert SP lands are assumed to receive relatively low use by the public.

The proposed switchyard and support poles would be visible from prominent locations in the southern area of Anza-Borrego Desert SP such as mountainous terrain to the east of Goat Canyon. In addition, the switchyard and gen-tie poles would be visible from elevated vantage points on State Park lands to the immediate west of the Project site and State Parks lands located to the north of I-8. However, the proposed switchyard (approximately 3.2 acres) and gen-tie poles would be located over 3 miles away from Anza-Borrego Desert SP locations within the Proposed Project viewshed. Due to distance, the footprint and apparent scale of the switchyard would be substantially reduced when viewed from Anza-Borrego Desert SP lands and the proposed switchyard and features would not be visually prominent or substantially detract from existing views. In addition, the proposed switchyard and gen-tie poles would be located on lower elevation lands and as viewed from elevated vantage points located approximately 3 miles in the Anza-Borrego Desert SP, the new facilities would not result in view blockage or substantial view interruption. Therefore, construction and operation of the proposed switchyard and associated gen-tie poles would not substantially obstruct, interrupt or detract from an existing focal or panoramic vista available from the Anza-Borrego Desert SP that are assumed to receive limited annual usage. Impacts would be **less than significant**.

Federal Recreation Areas

Round Mountain

As viewed from the summit and south-facing slopes of Round Mountain, the proposed switchyard and gen-tie poles (70 to 115 feet high) would be located approximately 1.15 miles away within the Proposed Project boundary. While visible to the limited number of annual hikers on Round Mountain, these elements would be located approximately 560 feet lower in elevation and near the base of a prominent hill. Due to distance and the difference in elevation, the proposed switchyard and gen-tie poles would not result in view blockage from Round Mountain. While the graded and leveled surface of the approximately 3.2-acre switchyard footprint and metallic, horizontal and

vertical components within its fenced boundary would contrast with nearby hills covered with low desert shrubs, the switchyard site has been previously disturbed. In addition, the proposed switchyard would occupy a small portion of the available view from the summit of Round Mountain. As such, development of the previously disturbed site to a switchyard facility would not substantially detract from the views available from Round Mountain. Several 70- to 115-foot-tall poles for the two, 550-foot-long 138 kV gen-ties would be introduced to the landscape; however, as these poles would be viewed alongside existing poles and towers traversing the area, and would be viewed against a backdrop of hilly terrain and brown-grey colored vegetation, they would not substantially interrupt or detract from the available view. Therefore, impacts to focal or panoramic vistas from Round Mountain associated with the proposed switchyard would be **less than significant**.

Airport Mesa RMZ

While partially visible, the proposed switchyard would not be prominent or particularly distinct in northwestward or northward views from Airport Mesa. Where visible and not blocked by intervening terrain, the thin, grey lines of switchyard components and the gravel surface of the site would create color and line contrast. However, the assumed limited annual number of viewers at Airport Mesa would be focused on the wide distribution, color and lines create of hundreds of thousands of solar panels (and horizontal access roads) across the 643-acre development footprint (see Figure 19). In addition, visible components of the proposed switchyard would be low in the landscape and would not block a particularly scenic feature from view. Lastly, the approximately 3.2-acre switchyard would occupy a small portion of the visible landscape as viewed from Airport Mesa and would not substantially affect the panoramic and expansive qualities of the view. Therefore, impacts to focal or panoramic vistas would be **less than significant**.

Table Mountain RMZ

While visible within the Proposed Project boundary, the proposed switchyard would be located approximately 4 miles away and 1,000 feet lower in elevation than the mesa located south of Table Mountain. When viewed from the elevated vantage point accessed annually by a limited number of hikers, proposed grading and surfacing of the switchyard would create detectable color and line contrast. Further, the installation of hardware and equipment would introduce metallic grey color to a previously disturbed site displaying tan and gold tones. From 4 miles away, proposed gen-tie poles would be perceived as thin lines in the landscape and would not be visually prominent. From the mesa, neither the proposed switchyard nor 70- to 115-foot-high gen-tie poles would result in view obstruction. Significant scenic features would not be blocked or obscured. The visible contrast would not create substantial interruption in the available long and expansive views as hikers would not typically fixate on the relatively small 3-acre switchyard area. Similarly, the proposed switchyard and gen-tie poles (and associated color and line contrast) would not

substantially reduce the existing quality of the southwestward view from the mesa. Impacts to focal or panoramic vistas from the mesa south of Table Mountain (and from Table Mountain) would be **less than significant**.

Jacumba Wilderness

Relative to the Table Mountain RMZ, the proposed switchyard would be located a greater distance from potential viewers within the Jacumba Wilderness. As previously stated and similar to other recreational areas in the Jacumba area, the Jacumba Wilderness is assumed to receive a limited annual number of visitors including hikers that may seek out opportunities for scenic vistas. Both the proposed switchyard and gen-tie poles would be visible from elevated peaks and east-facing slopes in the Jacumba Wilderness. However, due to distance and the small apparent scale of proposed switchyard and gen-tie poles within the expansive westward view, neither the switchyard nor the gen-tie poles would substantially interrupt or diminish the quality of the existing views. Lastly, relative to peaks and slopes in the Jacumba Wilderness, the switchyard and gen-tie poles would be situated low in the landscape and would not obstruct or block scenic features from view. Therefore, impacts to focal or panoramic vistas from the Jacumba Wilderness due to the proposed switchyard would be **less than significant**.

5.4.1.4 Threshold 4 – Assessment

Would the project not comply with applicable goals, policies or requirements of an applicable County Community Plan, Subregional Plan, or Historic District's Zoning?

Proposed Project

As detailed in Table 1, Mountain Empire Subregional Plan Consistency Analysis – JVR Energy Park, the solar facility, including the substation, would comply with the relevant aesthetics goals and policies of the Mountain Empire Subregional Plan. Therefore, impacts concerning conflicts with goals and policies of the applicable County subregional plan would be **less than significant**.

Since Jacumba Hot Springs does not have an adopted community plan and the Jacumba Vision Statement and Background does not contain goals or policies, only the applicable subregional plan (i.e., Mountain Empire Subregional Plan) is assessed below in Table 1. Lastly, the Project site is not located in a Historic District.

Table 1
Mountain Empire Subregional Plan Consistency Analysis – JVR Energy Park

Policy and Recommendation	Proposed Project Consistency with Policy
Land Use – General Goal (Policy and Recommendation 1) The landforms of the Subregion are an important environmental resource that should be respected in new	Consistent. The solar facility (i.e., all components of the JVR Energy Park Project) would be consistent with this policy. The general topography within the development footprint consists of flat land and gently rolling hills. Grading will be necessary for the

Table 1
Mountain Empire Subregional Plan Consistency Analysis – JVR Energy Park

Policy and Recommendation	Proposed Project Consistency with Policy
development. Hillside grading shall be minimized and designed to blend in with the existing natural contours.	construction of access and service roads and the installation of solar arrays; trenching for the underground electrical DC and AC collection system, including the telecommunication lines; and construction of the Proposed Project substation. Major Grading Permits would be required and would be obtained once grading quantities are finalized. Grading is expected to be balanced on site, with approximately 75,000 cubic yards of cut redistributed across the site. Hillside grading would be minimized and designed to conform to the existing contours to the extent feasible.
Conservation – Environmental Resources (Policy and Recommendation 4) The dark night sky is a significant resource for the Subregion and appropriate steps shall be taken to preserve it.	Consistent. The solar facility would be consistent with this policy and. would comply with the County's Light Pollution Code during construction and operations. More specifically, during construction, portable night lighting used during construction would be fully compliant with the lamp type and shielding requirements for Class II lighting as established by Section 51.204 of the County Light Pollution Code and would be fully shielded and directed downward to minimize opportunities for unnecessary sky glow and light trespass. During operations, all lighting for the solar facility would be shielded, directed downward, and would comply with the County of San Diego Light Pollution Code (LPC), also known as the Dark Sky Ordinance, Section 59.101 et seq. Lastly, the Proposed Project would comply with the San Diego County Zoning Ordinance, Performance Standards Sections 6320, 6322, and 6324, which guide performance standards for glare, and control excessive, or unnecessary outdoor light emissions.
Conservation – Environmental Resources (Policy and Recommendation 5) Development shall not adversely affect the habitat of sensitive plant and wildlife species or those areas of significant scenic value.	Consistent. As discussed in Section 2.3, Biological Resources, of the EIR, the solar facility would result in impacts to sensitive plant and wildlife species. However, through mitigation, potentially significant impacts would be reduced to less than significant. While implementation of the Proposed Project was determined to result in significant and unmitigable impacts to focal or panoramic vistas from several locations including I-8 and Old Highway 80, the Proposed Project would not conflict with this policy. Neither the Project site nor the surrounding area has been designated by local, state, or federal agencies or organizations as containing or being of "significant" scenic value. Still, the areas identified for solar development encompass flatter terrain and unique or particularly vivid terrain including ridgelines and slopes would not be disturbed by Proposed Project development. With implementation of landscaping and slatted fencing, solar panels and other equipment would be screened from public view of motorists on Old Highway 80, users of Jacumba Community Park, and residents in Jacumba Hot Springs to the extent

Table 1
Mountain Empire Subregional Plan Consistency Analysis – JVR Energy Park

Policy and Recommendation	Proposed Project Consistency with Policy
	practicable. From elevated vantage points, taller Proposed Project components associated with the collector substation, switchyard and gen-tie line would be visible but would be added to a viewshed that currently includes tall steel lattice towers and tubular steel poles of the Southwest Powerlink and Sunrise Powerlink. Lastly, the Proposed Project is proposed in the Jacumba area landscape that has been previously altered by the existing transmission lines Since the Project area has not been designated or described by agencies as containing "significant" scenic value, and in consideration of the factors described above, the Proposed Project would not conflict with this policy.
Scenic Highways Goal. Establish a network of scenic highway corridors within which scenic, historical and recreational resources are protected and enhanced.	Consistent. Within the Mountain Empire Subregional Plan Area, Interstate 8 from State Route 79 east to the Imperial County Line and Old Highway 80, from the Central Mountain Subregion to Interstate 8 are designated scenic corridors. The solar facility would be visible from portions of I-8 and Old Highway 80. Despite their inclusion in the County's scenic highway system, there are no current local regulations governing development of lands along I-8 or Old Highway 80. For example, existing energy infrastructure including the East County Substation, Jacumba Solar Project, transmission lines, and the East County Substation 138 kV line is currently visible from I-8 and Old Highway 80. Near the Project site, both I-8 and Old Highway 80 were identified as providing opportunities for long and/or broad scenic views. However, the duration of available views from I-8 to the Project site is brief (30 seconds or less) and the viewshed currently encompasses gas station development and electrical infrastructure in addition to natural terrain and native desert vegetation. Further, from Old Highway 80, the installation of landscaping and slatted fencing would partially screen solar panels and interior Proposed Project components from view of passing motorists, which would substantially reduce the visibility of solar panels and ancillary facilities from Old Highway 80. Lastly, implementation and operation of the JVR Energy Park Project would not prevent the County from continuing to establish and designate scenic highways and would not inhibit the County from establishing regulations and/or development standards geared toward the protection and enhancement of scenic highways. Due to the inclusion of existing energy infrastructure in the I-8 and Old Highway 80 viewsheds, the brief duration of views to the Project site from I-8, screening of solar panels from view of Old

Table 1
Mountain Empire Subregional Plan Consistency Analysis – JVR Energy Park

Policy and Recommendation	Proposed Project Consistency with Policy
	Highway 80 motorists and because the Proposed Project does not inhibit the County from establishing regulations and/or development standards geared toward the protection and enhancement of scenic highways, the JVR Energy Park Project would not be inconsistent with the Scenic Highways Goal of the Mountain Empire Subregional Plan.

Switchyard

The proposed switchyard would be consistent with relevant goals and policies of the Mountain Empire Subregional Plan as described in Table 1. As with the Proposed Project, the switchyard site and loop in alignments are not located in a Historic District.

5.4.1.5 Light and Glare

Would the project install outdoor light fixtures that do not conform to the lamp type and shielding requirements described in Section 59.105 (Requirements for Lamp Source and Shielding) and are not otherwise exempted pursuant Section 59.108 or Section 59.109 of the San Diego County Light Pollution Code?

Would the project operate Class I or Class III outdoor lighting between 11:00 p.m. and sunrise that is not otherwise exempted pursuant Section 59.108 or Section 59.109 of the San Diego County Light Pollution Code?

Would the project generate light trespass that exceeds 0.2-foot-candles measured five feet onto the adjacent property?

Would the project install highly reflective building materials, including but not limited to reflective glass and high-gloss surface color that will create daytime glare and be visible from roadways, pedestrian walkways or areas frequently used for outdoor activities on adjacent properties?

Would the project not conform to applicable Federal, State or local statute or regulation related to dark skies or glare, including but not limited to the San Diego County Light Pollution Code?

Proposed Project

Lighting

Construction

Construction of the Proposed Project is anticipated to last approximately 13 months. Construction activities would generally occur during the County's allowable hours and days of operation but may involve extended hours, as needed, to complete certain construction activities and/or during emergencies or as approved by the County. For most of the year, nighttime construction lighting would not be required. However, during emergencies, tasks requiring extended hours and during late fall and winter months, the lack of adequate natural light may dictate that portable lighting sources be used at specific construction sites.

When required, portable construction night lighting would temporarily illuminate and be focused on active areas of construction. All temporary construction lighting would be compliant with the County's Light Pollution Code. Specifically, portable night lighting used during construction would be fully compliant with the lamp type and shielding requirements for Class II lighting as established by Section 51.204 of the County Light Pollution Code. Lighting would be fully shielded and directed downward to minimize opportunities for unnecessary sky glow and light trespass. Due to the anticipated limited frequency of night construction lighting use and through compliance with the lamp type and shielding requirements of the County Light Pollution Code, short-term construction lighting impacts to nighttime views would **be less than significant**.

Operation

Would the project install outdoor light fixtures that do not conform to the lamp type and shielding requirements described in Section 59.105 (Requirements for Lamp Source and Shielding) and are not otherwise exempted pursuant Section 59.108 or Section 59.109 of the San Diego County Light Pollution Code?

As the JVR Energy Park Project is subject to compliance with applicable ordinances and regulations of the County, all outdoor light fixture would conform to the lamp type and shielding requirements of the San Diego County Light Pollution Code. Motion censored lights would be installed at all site access driveway entrances and would only be used if motion is detected. No other lighting is proposed within the solar facility. The motion censored lights would have bulbs that do not exceed 100 watts, and all lights would be shielded and directed downward to minimize

potential effects to nighttime views and dark skies in the surrounding area. These efforts would also minimize the potential for light trespass onto adjacent off-site properties. Except for lights installed off Old Highway 80 at the site entrance that would be on after 5:00 p.m., lighting would be used on an as-needed basis and would normally be turned off unless nighttime access to the site is required. Entrance lights would be shielded and would conform to the Light Pollution Code's lamp type requirements. Since maintenance activities are not anticipated to be completed during the evening hours, lights within the interior of the substation site would normally be turned off. Maintenance crews would carry lights when performing maintenance work after 5:00 p.m. As such, the JVR Energy Park Project would conform to the lamp type and shielding requirements of the San Diego County Light Pollution Code and impacts would be **less than significant**.

Would the project operate Class I or Class III outdoor lighting between 11:00 p.m. and sunrise that is not otherwise exempted pursuant Section 59.108 or Section 59.109 of the San Diego County Light Pollution Code?

No Class I or Class III outdoor lighting is proposed to be installed on the JVR Energy Park site. As a solar energy park facility, outdoor lighting for an outdoor sale or eating area, vehicle fueling area, assembly or repair area, billboard or other sign, recreational facility or other similar application (i.e., Class I lighting) would not be required. In addition, outdoor lighting used for decorative effects such as architectural illumination, flag and monument lighting and landscape lighting (i.e., Class III lighting) is not proposed to be installed on the site. As such, Class I or Class III lighting would not be installed and the operators of the Proposed Project would not be inconsistent with Section 59.108 or Section 59.109 of the San Diego County Light Pollution Code. **No impacts** would occur.

Would the project generate light trespass that exceeds 0.2 foot-candles measured five feet onto the adjacent property?

Under existing conditions, no sources of nighttime lighting operate on the Proposed Project site. Upon implementation of the Proposed Project, operational nighttime lighting sources would be introduced to the site and more specifically, lighting would be provided at the site entrance gates/driveways off Carrizo Gorge Road and Old Highway 80 and within the Project site interior at the on-site substation. The nearest entrance gates off Carrizo Gorge Road would be located approximately 1,000 feet southeast of I-8. There are no occupied residential properties near the proposed entrance gates and the area is exposed to nighttime lighting associated with nearby gas station development. Gates would be setback approximately 200 feet or greater from non-Proposed-Project controlled property to the north and east of Carrizo Gorge Road and this property is currently developed as a parking lot and features overhead lighting around the perimeter of the lot. The driveways and entrance gates constructed off Old Highway 80 would be located near an assumed occupied rural residential property that is not included in the Proposed Project boundary.

The driveway entrance to the substation would have motion censored lights that would only be used if motion is detected. No other lighting is proposed within the substation. The motion censored lighting would have bulbs that do not exceed 100 watts, and all lights would be shielded and directed downward and would comply with the County of San Diego Light Pollution Code, also known as the Dark Sky Ordinance, Section 51.201 et seq. With these measures, all measurable lighting would be retained at the access driveway and would not trespass onto non-Proposed-Project related properties and occupied properties in the surrounding area. Therefore, light trespass impacts would be **less than significant**.

Would the project install highly reflective building materials, including but not limited to reflective glass and high-gloss surface color that will create daytime glare and be visible from roadways, pedestrian walkways or areas frequently used for outdoor activities on adjacent properties?

Although the Proposed Project does not propose to install traditional highly reflective building materials such as glass windows or metallic siding, the Proposed Project entails the introduction of glass-surfaced solar panels on single-axis racks across an approximate 643-acre fenced site. The proposed solar panels would be uniformly dark in color, non-reflective, and designed to be highly absorptive of all light that strikes their glass surfaces. In addition, Proposed Project components, including the on-site substation, inverters, batter energy storage system containers, and the overhead slack span transmission line, would be constructed of steel and/or other metallic materials and, depending on daily atmospheric conditions, may be sources of daytime glare. The Project site is visible from I-8, Carrizo Gorge Road, and Old Highway 80 and the Proposed Project boundary abuts residential properties in Jacumba and the Jacumba Airport. To determine the potential for proposed solar panels to generate distraction glare that could be received by viewers within 1 mile of the Project site on local roads (specifically I-8, Old Highway 80, and Carrizo Gorge Road), at residential properties in Jacumba, or the Jacumba Airport runway approaches (i.e., east and west), Power Engineers Inc. prepared a Glare Study. The Glare Study is included as Appendix A to this report.

The glare study utilized the Solar Glare Hazard Analysis Tool licensed by GlareGauge and meets Federal Aviation Administration (FAA) requirements for airport operations. In addition to runway approaches, residential and I-8, Old Highway 80, and Carrizo Gorge Road motorist analysis points within 1 mile of the Project site were identified and assessed by Power Engineers Inc. Details of solar technologies to be constructed at the Project site including tracking axis orientation (180 degrees due south), maximum tracking angle (55 degrees), wake angle (5 degrees), stow angle (5 degrees), mount height, and application of anti-reflective coated smooth surface glass was provided by BayWa Renewable Energy. The anti-reflective coating is a treatment to solar panel glass designed to reduce reflected light and increase panel efficiencies. Proposed solar operations

were analyzed from the perspective and viewpoint of motorists, residence and pilots. The location of single points analyzed in the Glare Study are depicted in Figure 5 of Appendix A.

For all arrays, the 55-degree array tracker rotational limits combined with the 5-degree wake/stow angle would cause any potential glare to be redirected above and away from analyzed sensitive viewers (i.e., residential locations and motorists on I-8, Old Highway 80, and Carrizo Gorge Road) throughout the day and year. Specifically, no annual glare was calculated to be received at the 14 discrete plotted locations on Carrizo Gorge Road and Old Highway 80 or at the 20 discrete plotted locations on I-8 near the Project site. Regarding analyzed receptor locations, proposed tracker rotational limits, and the presence of slatted fencing and landscaping would result in any potential glare being angled above these locations. To clarify, Power Engineers Inc. determined that local area motorists or residents would receive no glare during Proposed Project operations. As such, the daytime views of these receptors, and outdoor activities on adjacent properties, would not be substantially affected by Proposed-Project-generated glare. Impacts would be **less than significant**.

After review of the GlareGauge analysis, Power Engineers Inc. determined potential glare visible from the proposed solar operations is limited to the Runway 7 approach (i.e., west approach) during the afternoon hours of the winter months lasting for less than 1 hour per day. Potential glare reported has a hazard level of "green" (low potential for temporary after-image) and is acceptable by the FAA. During the morning hours, the modified wake angle of arrays south of Old Highway 80 would redirect any potential glare up and out of the view of pilots landing on the Runway 7 approach. Given that the exposure of pilots to Proposed-Project-generated glare would be limited throughout the year and would be within the range deemed acceptable by the FAA, the Proposed Project and more specifically, Proposed-Project-generated glare, would not substantially affect the daytime views of pilots on the Jacumba Airport Runway 7 approach. Therefore, glare impacts associated with solar panels would be **less than significant**.

As previously stated, in addition to solar panels, the Proposed Project includes other components/facilities that may produce daytime glare due to use of metallic materials. Regarding the on-site substation, the facility would not be visible from pedestrian walkways or areas on adjacent properties used for outdoor activities. The substation would be visible from I-8 but would be distant from motorists. Due to distance, the on-site substation would tend to blend into background terrain in the views of I-8 motorists. Brief views to the on-site substation would be available from Carrizo Gorge Road; however, potential glare received by motorists would be minor, located in the periphery of views, and would not be expected to create nuisance or distraction that would result in unsafe driving conditions. Components including inverters, battery energy storage system containers, and overhead slack span transmission line, would be visible from public roads, including I-8 and Carrizo Gorge Road. In absence of non-reflective or reduce reflectivity design measures, these components may create daytime glare that could be visible from roadways. As such, impacts would be **potentially significant (Impact AE-10)**.

Would the project not conform to applicable Federal, State or local statute or regulation related to dark skies or glare, including but not limited to the San Diego County Light Pollution Code?

Please refer to the construction lighting discussion above. Operational lighting would be shielded and directed downward to minimize potential effects to nighttime views and dark skies in the surrounding area. These efforts would also minimize the potential for light trespass onto adjacent off-site properties. Lighting would be used on an as-needed basis and would typically be turned off unless nighttime access to the site is required. In addition, since maintenance activities are not anticipated to be completed during the evening hours, lights within the interior of the substation site would normally be turned off. If nighttime maintenance is required, maintenance crews would carry lights when performing maintenance work after 5:00 p.m. Further, all lighting sources installed at the solar facility would have bulbs that do not exceed 100 watts and would comply with the County of San Diego Light Pollution Code, also known as the Dark Sky Ordinance, Section 59.101 et seq, regarding lamp type and shielding requirements. Lastly, the Proposed Project would be designed in accordance with the San Diego County Zoning Ordinance, Performance Standards Sections 6322 and 6324 that guide performance standards for control of excessive or unnecessary outdoor light emissions. Due to the limited installation and use of nighttime lighting on site during operations, through compliance with County Light Pollution Code requirements and zoning ordinance standards regarding lighting and based on the glare analysis presented above, lighting installed at the JVR Energy Park would conform to applicable federal, state, or local statutes or regulations related to dark skies and glare. Impacts would be **less than significant**.

Switchyard

Would the project install outdoor light fixtures that do not conform to the lamp type and shielding requirements described in Section 59.105 (Requirements for Lamp Source and Shielding) and are not otherwise exempted pursuant Section 59.108 or Section 59.109 of the San Diego County Light Pollution Code?

At the switchyard, lighting would be installed primarily for security and safety. Lighting would be placed near major electrical equipment in the switchyard and would be mounted near the entry gate to safely illuminate the switchyard entry. Yard lights would normally be turned off and would only be used during nighttime for security and safety reasons. An entry light to the switchyard facility would be installed and would be left on during nighttime hours to allow the entry to be illuminated if nighttime emergency repair or maintenance are needed. All lighting at the switchyard would be shielded and directed downward to minimize the uplighting and light trespass onto surrounding properties. Further, except for the entry light, lights would typically be off when not in use. All lighting sources would have bulbs that do not exceed 100 watts, would comply with the County of San Diego Light Pollution Code and would be designed in accordance with the San

Diego County Zoning Ordinance, Performance Standards Sections 6322 and 6324. Through compliance with County Light Pollution Code requirements and zoning ordinance standards regarding lighting, lighting installed at the switchyard would conform to applicable federal, state, or local statutes or regulations related to dark skies and glare. Therefore, impacts would be **less than significant**.

Would the project operate Class I or Class III outdoor lighting between 11:00 p.m. and sunrise that is not otherwise exempted pursuant Section 59.108 or Section 59.109 of the San Diego County Light Pollution Code?

No Class I or Class III outdoor lighting is assumed to be installed at the switchyard. As a switchyard facility, outdoor lighting for an outdoor sale or eating area, vehicle fueling area, assembly or repair area, billboard or other sign, recreational facility or other similar application (i.e., Class I lighting) would not be required. Further, decorative outdoor lighting (i.e., Class III lighting) is unlikely to be installed be installed on the switchyard site. Lastly, Class I or Class III lighting would not be installed at the switchyard. Therefore, n**o impacts** would occur.

Would the project generate light trespass that exceeds 0.2-foot-candles measured five feet onto the adjacent property?

Operational lighting at the switchyard would be shielded and directed downward to minimize potential effects concerning light trespass onto adjacent properties. The proposed switchyard is located over approximately 500 feet from the Proposed Project boundary and adjacent undeveloped property. Through the inclusion of shielded and downward casting lighting, and due to distance between the facility and occupied properties outside of the Proposed Project boundary, impacts associated with light trespass generated by entry gate lighting are anticipated to be **less than significant**.

Would the project install highly reflective building materials, including but not limited to reflective glass and high-gloss surface color that will create daytime glare and be visible from roadways, pedestrian walkways or areas frequently used for outdoor activities on adjacent properties?

Highly reflective building materials such as glass windows or metallic siding, would not be installed at the switchyard. However, the proposed switchyard would include metallic equipment and components constructed of steel and other similar materials. The proposed switchyard would have limited visibility from pedestrian walkways and immediately adjacent properties that are utilized for outdoor activities. The switchyard would be visible from I-8 and Carrizo Gorge Road. However, metallic components and equipment installed at the switchyard are not particularly reflective and would not be expected to create nuisance or distraction glare that would result in

unsafe driving conditions on either I-8 or Carrizo Gorge Road. The materials under consideration for support poles are already used by electrical infrastructure in the existing landscape, and rust-colored steel or galvanized tubular steel are not typically considered to be highly reflective. Therefore, glare impacts would be **less than significant**.

Would the project not conform to applicable Federal, State or local statute or regulation related to dark skies or glare, including but not limited to the San Diego County Light Pollution Code?

Please refer to the lighting and glare related discussions for the switchyard, above. Lighting controls including the use of shielded fixtures and downward casting of lighting would be implemented to minimize opportunities for impacts to dark skies or impacts concerning the creation of new glare conditions. Based on the analysis presented above, impacts related to dark skies and glare would be **less than significant**.

5.5 Summary of Project Impacts and Significance and Conclusions

Threshold 1

Would the project introduce features that would detract from or contrast with the existing visual character and/or quality of a neighborhood, community, or localized area by conflicting with important visual elements or the quality of the area (such as theme, style, setbacks, density, size, massing, coverage, scale, color, architecture, building materials, etc.) or by being inconsistent with applicable design guidelines?

The proposed theme and style of Proposed Project development (i.e., solar energy development) would not be consistent with the undeveloped, desert landscape and small-town character of Jacumba. The height of the proposed panels (approximately 12 feet high) would be consistent with the height of typical single-story residential development in the Jacumba area. Components within the collector substation including a 65-foot-high, 138 kV dead-end structure (steel A or H-frame design), and switchyard including 70- to 115-foot-tall loop-in support poles would be consistent with the scale of the existing electrical transmission development in the local landscape. However, the wide distribution of repeating rows of solar panels on the disturbed approximately 643-acre site would create noticeable horizontal scale and massing contrasts with adjacent areas of residential development. In addition, the proposed solar panels would install thousands of uniformly dark solar panels (and potentially light colored inverters, battery energy storage system containers, and reflective transmission line conductor) to an area that consists mostly of earth tones, modest and lightly colored residential structures, and undeveloped lands. Thus, the color of proposed solar panels not be consistent with the predominant colors displayed by features in the

existing landscape. Solar panel contrasts would be further heightened by lightly colored inverters and battery energy storage system containers, and reflective transmission line conductor.

Although existing solar development is located within 2 miles of the Project site, this facility is located outside of the rural village boundary and is fully screened from viewers in Jacumba. Unlike the Proposed Project, the existing solar facility has limited visibility from Old Highway 80. Therefore, the characteristics of the Proposed Project would conflict with the established character of the Jacumba Hot Springs community (**Impact AE-1**).

With implementation of mitigation measures **M-AE-1** (non-reflective inverters), **M-AE-2** (nonreflective energy storage containers), **M-AE-3** (nonreflective transmission line), **M-AE-4** (residential properties setback), **M-AE-5** (landscaping), **M-AE-6** (fence slats), impacts would be reduced but not to a less than significant level. . Since feasible mitigation measures have not been identified that would further reduce anticipated theme, style, size, scale, massing, and color contrasts resulting from construction and operation of solar panels, **Impact AE-1** would be **significant and unavoidable**.

Switchyard

The proposed switchyard would not represent the traditional development theme and style of the Jacumba area. While views to the of the switchyard and gen-ties from I-8 and Carrizo Gorge Road would be brief and visual contrasts would be muted by distance, both the nature of the development and the scale and massing of the approximately 140,000-square-foot facility would create moderately strong contrasts in the landscape. Although there are existing transmission lines in the vicinity of the proposed switchyard, like these uses, the proposed switchyard would not replicate the predominant theme and style of the Jacumba area. The character of the proposed switchyard would detract from the established character of the larger Jacumba area and would conflict with the established theme and style of the area that is predominantly associated with an undeveloped desert landscape including flat valley terrain, rugged and rocky mountains, rolling hills, and scrub vegetation. Overhead transmission lines between the switchyard and a nearby existing transmission line would be non-specular which would reduce opportunities for received glare in the surrounding area. However, as no feasible mitigation has been identified to reduce anticipated theme and style contrasts, impacts would be **significant and unavoidable**.

Threshold 2

Would the project result in the removal or substantial adverse change of one or more features that contribute to the valued visual character or image of the neighborhood,

community, or localized area, including but not limited to landmarks (designated), historic resources, trees, and rock outcroppings?

Implementation of the Proposed Project would result in the removal of vegetation throughout the development footprint. The introduction of visually prominent Proposed Project components including solar panels would substantially change the quality of existing views across the site. Further, the proposed solar facility development would conflict with the small-town character of Jacumba Hot Springs and open, unencumbered characteristics of the Project site (**Impact AE-2**), that according to the community's vision statement, includes agricultural uses and open space as important elements. Even with implementation of mitigation measures **M-AE-4** (residential properties setback), **M-AE-5** (landscaping), **M-AE-6** (fence slats), impacts would be reduced but not to a less than significant level. . As no further feasible measures have been identified to reduce anticipated visual change and effects to existing visual character, **Impact AE-2** would be **significant and unavoidable**.

Switchyard

The proposed switchyard site encompasses undeveloped yet previously disturbed lands located approximately 0.60 miles south of I-8 and 0.25 miles west of Carrizo Gorge Road. On-site terrain gradually slops from east to west; however, the site is generally flat and is covered with tan colored soils and scrubby shrubs. The site is also crossed by several dirt access roads. The site does not contain landmarks, trees, or prominent rock outcroppings. While development of the switchyard and gen-tie would alter existing character of the previously developed site, it is situated near the base of a prominent hill and visually screened from most public vantage points in the area including Old Highway 80 and the Jacumba residential area. In addition, the proposed switchyard would not shorten available views across the Jacumba Valley. Still, the construction and operation of an approximately 140,000-square-foot switchyard surrounded by security fencing and housing a 138 kV insulated electrical bus, steel support structures and foundations, and a concentration of additional electrical equipment would adversely alter the valued open and unencumbered characteristics of the Jacumba area. However, as no feasible mitigation has been identified to reduce anticipated effects to the open and unencumbered characteristics of the area, impacts would be **significant and unavoidable**.

Threshold 3

Would the project substantially obstruct, interrupt, or detract from a valued focal and/or panoramic vista from:

- **a public road,**
- **a trail within an adopted County or State trail system,**

- **a scenic vista or highway; or**
- **a recreational area?**

The Proposed Project would create visible contrast that would result in reduced visual quality from viewing locations in the surrounding area. In addition to notably reduced visual quality associated with the introduction of solar panels (and other Proposed Project components) as viewed from I-8, implementation of the Proposed Project would substantially obstruct a focal vista, Old Highway 80. Further, the distribution of 300,000 PV modules across the development footprint and alteration of the open, primarily undeveloped character of the Project site to a solar facility displaying repeating visual elements, would create strong visual contrast. Following implementation of the Proposed Project, reduced intactness and unity (i.e., reduced visual quality) is anticipated in scenic views available from local recreation areas (e.g., Jacumba Community Park), State Park lands located to the immediate west of the Project site, and federal recreational areas including Round Mountain and elevated vantage points in the Airport Mesa and Table Mountain RMZs. While nearby State Park lands and federal recreational areas including Round Mountain and the Airport Mesa and Table Mountain RMZs experience relatively low annual recreation use by the public (BLM 2020), the visual change associated with the Proposed Project as experienced from these locations would be pronounced. In addition, the proximity of these recreational lands would heighten perceived form, line, and color contrast and the Proposed Project would occupy a significant portion of the visible landscape in available views.

Due to the wide distribution of solar panels and other Project components within the 643-acre solar facility, the Proposed Project would substantially reduce the quality of existing views toward the Project site from I-8 (**Impact AE-3**), Old Highway 80 (**Impact AE-4**), Jacumba Community Park (**Impact AE-5**), Anza-Borrego Desert State Park (**Impact AE-6**), Round Mountain (**Impact AE-7**), Airport Mesa (**Impact AE-8**), and Table Mountain and the nearby mesa to the south (**Impact AE-9**). With implementation of mitigation measures **M-AE-1** (non-reflective inverters), **M-AE-2** (nonreflective energy storage containers), **M-AE-3** (nonreflective transmission line), **M-AE-4** (residential properties setback), **M-AE-5** (landscaping), **M-AE-6** (fence slats), impacts would be reduced but not to a less than significant level. Because additional feasible mitigation measures that would preserve the existing quality of views or substantially lessen anticipated view interruption have not been identified, **Impacts AE-2 thru AE-9** would remain **significant and unavoidable**.

Switchyard

The switchyard and associated gen-tie to the existing transmission line would be visible from public roads including County-designated scenic corridors, Jacumba Community Park and State Recreational areas (i.e., Anza-Borrego Desert SP lands located to the west, northwest of the switchyard site). In addition, the switchyard site may be visible from Federal recreational areas including Round Mountain,

elevated vantage points in the Airport Mesa and Table Mountain RMZs, and Jacumba Wilderness. Although remote, views to the switchyard site may also be available from elevated vantage points in the Carrizo Gorge Wilderness (managed by the BLM and located approximately 4 miles northwest of the switchyard site). However, the approximately 3-acre switchyard and gen-tie would be relatively distant from the elevated vantage points provided at these locations and the new facilities and features would not be visually prominent. The new switchyard facilities would also not result in view blockage from scenic corridors or local, state or federal recreational areas. Lastly, because the proposed switchyard and gen-tie would occupy a small area within the visible landscape, the switchyard and associated gen-tie line poles would not substantially obstruct, interrupt or detract from an existing focal or panoramic vista available at on a scenic corridors or at a nearby recreation area. Impacts would be **less than significant**.

Threshold 4

Would the project not comply with applicable goals, policies or requirements of an applicable County Community Plan, Subregional Plan, or Historic District's Zoning?

As shown in Table 1, the Proposed Project would comply with identified aesthetic and visual policies and goals of the Mountain Empire Subregional Plan. A specific community plan for Jacumba has not been prepared and the Proposed Project boundary does not overlie a Historic District.

Therefore, the Proposed Project would have **less than significant** impacts related to compliance with applicable goals, policies or requirements of an applicable County Community Plan, Subregional Plan, or Historic District's zoning.

Switchyard

The switchyard would be consistent with the visual resource related policies of the Mountain Empire Subregional Plan. As such, impacts would be **less than significant**.

Threshold 5

Would the project install outdoor light fixtures that do not conform to the lamp type and shielding requirements described in Section 59.105 (Requirements for Lamp Source and Shielding) and are not otherwise exempted pursuant Section 59.108 or Section 59.109 of the San Diego County Light Pollution Code?

Would the project operate Class I or Class III outdoor lighting between 11:00 p.m. and sunrise that is not otherwise exempted pursuant Section 59.108 or Section 59.109 of the San Diego County Light Pollution Code?

Would the project generate light trespass that exceeds 0.2-foot-candles measured five feet onto the adjacent property?

Would the project install highly reflective building materials, including but not limited to reflective glass and high-gloss surface color that will create daytime glare and be visible from roadways, pedestrian walkways or areas frequently used for outdoor activities on adjacent properties?

Would the project not conform to applicable Federal, State or local statute or regulation related to dark skies or glare, including but not limited to the San Diego County Light Pollution Code?

Use of nighttime lighting during construction would be irregular (construction would primarily occur during daylight hours) and operational lighting sources would be limited to motion detected lighting at site entrance gates and at the on-site substation. Construction lighting and permanent operational lighting used and installed at the Project site (i.e., at entrance gates and the on-site collector substation) is required to and would be fully compliant with the County's Light Pollution Code and the San Diego County Zoning Ordinance. Therefore, through compliance with existing County regulations and the installation of shielded and downward directed outdoor lighting fixtures, construction and operational effects to day and nighttime views in the area would be less than significant. Further, the Proposed Project would be compliant with applicable sections of the County Light Pollution Code related to lamp type and shielding requirements and operation of Class I of Class II lighting. In addition, operational lighting is not anticipated to exceed the County's light trespass threshold of 0.2 foot-candles measured 5 feet onto the adjacent property.

While the Proposed Project does not propose to install traditional highly reflective building materials, the proposed solar panels would be uniformly dark in color, non-reflective, and designed to be highly absorptive of all light that strikes their glass surfaces. In addition, Proposed Project components, including the on-site substation, inverters, batter energy storage system containers, and the overhead slack span transmission line, would be constructed of steel and/or other metallic materials and depending on daily atmospheric conditions, may be sources of daytime glare.

According to the Glare Study prepared for the Proposed Project (see Appendix A), the 55-degree array tracker rotational limits combined with the 5-degree wake/stow angle of proposed solar panels would cause any potential glare to be redirected above and away from analyzed residential and motorists locations throughout the day and year. Potential glare visible from the proposed solar operations would be limited to the Jacumba Airport Runway 7 approach (i.e., west approach) during the afternoon hours of the winter months lasting for less than 1 hour per day. During the morning hours, the modified wake angle of arrays south of Old Highway 80 would redirect any potential glare up and out of the view of pilots landing on the Runway 7 approach. The exposure

of pilot's Proposed-Project-generated glare on the westbound approach to the Jacumba Airport Runway 7 to would be limited throughout the year and would be within the range deemed acceptable by the FAA (i.e., "green" hazard level). As such, the Proposed Project and more specifically, Proposed-Project-generated glare, would not substantially affect the daytime views of pilots on the Jacumba Airport Runway 7 approach. Therefore, Proposed-Project-generated glare impacts from solar panels would be **less than significant**.

As previously stated, in addition to solar panels, the Proposed Project includes other components/facilities that may produce daytime glare due to use of metallic materials. Regarding the on-site substation, the facility would not be visible from pedestrian walkways or areas on adjacent properties used for outdoor activities. The substation would be visible from I-8 (see Key View 1; Figure 2.1-9) but would be distant from motorist. Due to distance, the on-site substation would tend to blend into background terrain in the views of I-8 motorists. Brief views to the on-site substation would be available from Carrizo Gorge Road; however, potential glare received by motorists would be minor, located in the periphery of views, and would not be expected to create nuisance or distraction that would result in unsafe driving conditions. Components including inverters, battery energy storage system containers, and overhead slack span transmission line would be visible from public roads, including I-8 and Carrizo Gorge Road. In absence of non-reflective or reduce reflectivity design measures, these components may create daytime glare that could be visible from roadways (**Impact AE-10**). As such, impacts are considered potentially significant. However, with implementation of mitigation measures **M-AE-1** (nonreflective inverters), **M-AE-2** (nonreflective energy storage containers), and **M-AE-3** (nonreflective transmission line), potential glare associated with inverters, battery energy storage system containers, and the overhead slack span transmission line would be reduced to a **less than significant** level.

Switchyard

Switchyard motion detected lighting would be mounted near the entry gate to safely illuminate the switchyard entry. All lighting at the switchyard would be shielded and directed downward to minimize the uplighting and light trespass onto surrounding properties. Lighting installed at the switchyard would be shielded of would be of the minimum intensity necessary to ensure a safe working environment during emergency activities. Therefore, impacts related to lighting and glare would be **less than significant**.

6 CUMULATIVE EFFECTS

Methodology

For most projects, the cumulative study boundary for visual resources encompasses the Proposed Project viewshed. The character elements of cumulative development occurring within the Proposed Project viewshed contribute to the overall visual character of the viewshed and would affect, either negatively or positively, the quality of existing views of the landscape. However, when scenic roads are included in the Proposed Project viewshed, an expanded cumulative study area is warranted. Both the Proposed Project and development occurring or planned within the viewshed of a designated scenic road could combine to permanently alter the visual character of the landscape and diminish the quality of existing views of valued scenic resources. For purposes of this analysis, the "List of Projects" method is used in the cumulative impacts discussion below.

Cumulative Projects

Cumulative projects considered in this analysis are those in the study area that would produce similar visual effects as the Proposed Project. Therefore, for purposes of this analysis, electric substation, solar energy, wind energy, transmission line, and energy storage projects within the cumulative study area are considered and they would include highly visible and distinct elements (e.g., wind turbines) or would create similar form, line, color, and texture contrasts as the proposed solar facility. The location of cumulative projects is depicted in Figure 21, Cumulative Projects.

The following projects are considered in the cumulative impact analysis provided below.

Tule Wind Project (Operational; Phase II Approved)

Phase I of the Tule Wind project consists of 57 wind turbines, an underground electrical collection system linking the wind turbines to the collector substation, a 5-acre collector substation site and adjacent 5-acre operations and maintenance facility site, and MET towers. The Tule Wind project is located in the McCain Valley area of Boulevard, approximately 8 miles to the northwest of the Project site. The Tule Wind project delivers power through a project substation via a 138 kV gen-tie line running south to an interconnection with the existing SDG&E Rebuilt Boulevard Substation.

In October 2016, Avangrid Renewables received approval from the California State Lands Commission to construct Phase II of the Tule Wind project. Phase II would consist of an additional 24 wind turbines constructed in the area that would generate approximate 69 MW. The wind turbines of Phase II would be located atop a ridgeline west of Phase I on both state lands and tribal lands of the Ewiiaapaayp Band of Kumeyaay Indians. Seven wind turbines would be sited on lands managed by the California State Lands Commission and 17 would be constructed on tribal lands. Construction of Phase II is likely to take 6 months to 1 year, and would employ between 100 and 200 works per day during the peak construction period.

Kumeyaay Wind Project (Operational)

The existing Kumeyaay Wind project consists of a 25-wind-turbine energy generation facility on tribal lands of the Campo Band of Diegueño Mission Indians Reservation. Wind turbines are installed atop the Tecate Divide, approximately 9.85 miles northwest of the Project site.

Jacumba Solar Energy Project (Operational)

The existing 20 MW, 108-acre solar facility is located 2 miles east of the Project site. The Jacumba Solar facility consists of approximately 81,108 PV modules fitted on 2,253 fixed-tilt rack panels.

East County Substation Project (Operational)

The existing East County Substation consists of an interconnection hub for renewable generation along SDG&E's existing Southwest Powerlink 500 kV transmission line. The substation offers interconnection capability at three voltage levels (500 kV, 230 kV, and 138 kV). This project also includes a 138 kV transmission line between the East County Substation and the rebuilt Boulevard substation to the west. The transmission line is above ground between the Boulevard substation and in the vicinity of the Project site. A segment of the above ground transmission line is located within the Project site. To the east of the Project site, the transmission line follows existing roadways from the vicinity of the Project site east to the East County Substation. The East County Substation is located approximately 2 miles east of the Project site.

Energia Sierra Juarez U.S. Transmission Line (Operational)

As approved by the County Board of Supervisors in August 2012, the U.S. portion of the project includes a 0.65-mile-long, dual-circuit 230 kV transmission line from the U.S./Mexico border north to the East County Substation. The power lines are capable of delivering up to 1,250 MW of power generated at the ESJ wind project located in the town of La Rumorosa in Mexico to the East County Substation.

Rugged Solar Project (proposed modification to approved Major Use Permit in progress)

The proposed modification of the previously approved Rugged Solar project would include construction and operation of a 74 MW solar energy system on an approximately in the McCain Valley. In addition to solar panels and inverter and transformer units, the Rugged Solar project would include an on-site collector substation, a 138 kV overhead and underground transmission line, and an approximately 20 MW battery energy storage system. The proposed Rugged Solar project would be located approximately 4.5 miles northwest of the Project site.

Torrey Wind Project (currently in planning stages)

The proposed Torrey Wind project consists of an approximately 126 MW wind energy facility. The project would include approximately 30 new wind turbines (rated up to 4.2 MW each), an underground electrical collection system, a high-voltage substation, a 500 kV switchyard, an operations and maintenance facility and associated parking areas, a temporary staging area, a batch plant, meteorological towers, various access roads and off-site improvements. The Torrey Wind project site is located approximately 7.6 miles northwest of the Project site.

Campo Wind Project and Boulder Brush Facilities (currently in planning stages)

The Campo Wind Project proposes a 250 MW wind energy generation facility consisting of 60 wind turbines on approximately 2,200 acres within the Campo Band of Diegueño Mission Indians Reservation. In addition to wind turbines, the Campo Wind Project includes a collector substation, operations and maintenance facility, On-Reservation gen-tie, access roads, and temporary areas including a laydown yard and concrete batch plant on the Reservation. The Boulder Brush Facilities include the construction of a gen-tie line, high-voltage substation, and switchyard on approximately 200 acres of private land under the County's jurisdiction. The Campo Wind Project and Boulder Brush Facilities site is located approximately 7.6 miles northwest of the Project site.

Boulevard Solar (currently in planning stages)

A modification to a Major Use Permit is currently proposed for a 60 MW solar energy system on an approximately 420-acre site located north of I-8 and east and west of McCain Valley Road on private land under the County's jurisdictional. The Boulevard Solar project site is located approximately 9 miles west of the Project site.

Boulevard Energy Storage (currently in planning stages)

The Boulevard Energy Storage project includes a 100 MW energy storage facility (two-acre development footprint). The Boulevard Energy Storage project site is located approximately 4.75 miles northwest of the Project site.

Cameron Solar (currently in planning stages)

The Cameron Solar project includes a 1.7 MW solar energy storage system consisting of approximately 19 acres on a 164.7-acre parcel. The Cameron Solar project site is located approximately 18 miles west of the Project site.

Cumulative Impact Analysis

Visual Character and Quality and Valued Visual Character

The Proposed Project would not be consistent with the undeveloped, desert landscape and small-town character of Jacumba. Cumulative projects in the area include existing and proposed electric substations, solar energy facilities, wind energy facilities and transmission projects located within the Proposed Project viewshed and the greater surrounding area. This composite viewshed was determined to be an appropriate cumulative boundary based on the type and geographic extent of the Proposed Project's visual impacts, further described below. In addition, the composite viewshed would encompass projects resulting in similar visually prominent impacts as the Proposed Project that would have the potential to change the character of the landscape as viewed from the I-8 corridor and other local roads traversing the Jacumba area including Old Highway 80 and Carrizo Gorge Road.

In addition to existing utility development in the area, including the Tule Wind project, Kumeyaay Wind project, Jacumba Solar, the East County Substation, Energia Sierra Juarez transmission line, implementation of the Proposed Project and other foreseeable projects considered in the cumulative scenario would result in an increasingly modified landscape, diminished day and night views, and reduced visual quality. Contrasts in structure and facility scale, size, massing, color, and materials associated with cumulative projects and less intensely developed (and undeveloped) lands would be visible to a relatively large volume of viewers within the cumulative study area, including motorists on federal and state highways, local roads including County-designated scenic corridors, users of County and State designated trails, users of recreational lands, and rural and tribal communities. As further described under the "Focal or Panoramic Vista" discussion below, the effects of identified cumulative projects from a given vantage point would ultimately be dependent on the vertical scale of components, proximity of observers to projects, and the presence (or lack) of intervening elements (terrain, structures, vegetation) to screen or obstruct specific components from view.

However, the sheer number of completed and proposed wind and solar energy generation developments, electrical substations, and electrical transmission lines in the Boulevard and Jacumba areas and, specifically, within the I-8 viewshed, would entail viewshed-scale visual change that would be impossible to overlook. Further, the introduction of numerous prominent and bold structures and facilities would moderately to strongly contrast with the valued visual character of the local communities in the cumulative study area.

Existing development in the cumulative study area primarily has a rural residential and ranching/grazing character. However, the area is also marked by interstate and local road development, regional electrical infrastructure and substations, and utility-scale solar and wind energy development.

Regional electrical infrastructure and solar and wind development, including the Tule Wind Project and Kumeyaay Wind Projects, and the Jacumba Solar Project, occur along the I-8 corridor. Power lines including the East County Substation 138kV transmission line, and the 500 kV Southwest Powerlink and Sunrise Powerlink lines traverse the Jacumba and McCain Valley landscapes. These existing transmission lines also crosses the Project site. In addition to the proposed JVR Energy Park, elements of cumulative projects in the planning stage including Rugged Solar, Torrey Wind, and Campo Wind, would be visible from the I-8 corridor. As with the JVR Energy Park, solar and wind projects with visually prominent components and/or large footprints of development would typically result in the removal or substantial adverse change of one of more features that contribute to valued visual character. For example, the Campo Wind and Torrey Wind Projects would result in diminished openness in the landscape and the removal of oak vegetation, elements that are identified in the Boulevard community plan as contributing to the valued visual character of the community. The JVR Energy Park would result in the removal of vegetation throughout the site and would degrade the open, unencumbered characteristics of the Project site.

Except for developed sites supporting wind, electrical transmission, solar energy, or substation facilities, landscapes throughout the cumulative study area generally have moderate to high scenic integrity. In these areas, rural residential, commercial, and public service development and other modifications display relatively unobtrusive characteristics and design features, and a consistency in scale, form, and theme. As a result, these traditional types of existing development are well-integrated into the landscape and tend not to command the attention of receptors in the area.

Implementation of projects considered in the cumulative scenario would result in an increasingly modified landscape, diminished day and night views, and reduced visual quality. For example, development of 30 wind turbines on approximately 2,226 acres proposed by the Torrey Wind Project and 2,400 acres of wind development proposed under Campo Wind. These projects, in conjunction with the Proposed Project and others in the area, would dominate views in the Project area and result in prominent visual change within the largely undeveloped landscape. Therefore, the Proposed Project would result in a **cumulatively considerable impact** (**Impact AE-CU-1**) on the valued visual character or image of neighborhoods, communities, or localized areas. With implementation of mitigation measures **M-AE-1** (non-reflective inverters), **M-AE-2** (nonreflective energy storage containers), **M-AE-3** (nonreflective transmission line), impacts would be reduced but not to a less than significant level. Thus, **Impact AE-CU-1** would remain **significant and unavoidable**.

Focal or Panoramic Vistas

Views to the Project site are available from I-8 Old Highway 80, Carrizo Gorge Road, nearby recreation areas including Jacumba Community Park, Anza-Borrego Desert SP, and federal recreational areas including Round Mountain, Airport Mesa, and Table Mountain RMZs, the

Jacumba Wilderness. While proximity to the Project site from these locations and the clarity of Proposed Project components varies, each of the identified recreation areas are located in the Proposed Project viewshed (see Figure 9). The existing Jacumba Solar facility, the Energia Sierra Juarez Transmission line, and the East County Substation are located east of the Project site and visible from similar public roads and scenic corridors, and recreational areas; therefore, cumulative projects outside of the Proposed Project viewshed would also be experienced by similar receptors. For example, the Proposed Project would be visible from I-8 and cumulative wind and solar projects including the existing Kumeyaay wind energy facility, and the proposed Campo Wind Project and Boulder Brush Facilities, Torrey Wind, and Rugged Solar projects would also be visible from I-8 and would cumulatively affect the quality of the interstate viewshed. However, since the JVR Energy Park would not result in a significant impact to focal or panoramic vistas from I-8, the Proposed Project would not combine with existing and proposed wind and solar development in the study area to create a cumulative impact on interstate vistas.

Similarly, from Airport Mesa and the mesa south of Table Mountain, existing wind turbines of the Kumeyaay Wind Project atop the Tecate Divide and Tule Wind Project are faint but visible and proposed wind turbines of the Campo and Torrey Wind Projects would likely be detectable in future views. However, due to distance and the thin, faint lines displayed by tall wind turbines, a cumulative impact to the existing panoramic views from Airport Mesa and the mesa south of Table Mountain would not occur. Views would not be obstructed by components of the Proposed Project or by distant yet visible elements of cumulative projects. However, as viewed from the mesa south of Table Mountain, projects including the East County Substation, Jacumba Solar, and the Proposed Project alter the existing character and quality of the visible landscape. While components of these projects have and would not result in substantial view blockage, the large footprints of the development and contrasting forms, lines and colors particularly noticeable in the local desert environment and tend to interrupt the panoramic view from the mesa south of Table Mountain. Therefore, combined with the existing East County Substation, and Jacumba Solar projects, the Proposed Project **would result in a cumulatively considerable impact (Impact AE CU-2)** to the panoramic vista available from elevated vantage points in the Airport Mesa and Table Mountain RMZs. With implementation of mitigation measures **M-AE-1** (non-reflective inverters), **M-AE-2** (nonreflective energy storage containers), **M-AE-3** (nonreflective transmission line) , impacts would be reduced but not to a less than significant level. Thus, **Impact AE-CU-2** would remain **significant and unavoidable**.

Community and Subregional Plan Conflicts

As identified in Section 5.4.1.4, Threshold 4 – Assessment, the Proposed Project would be consistent with the Mountain Empire Subregional Plan. Similarly, related projects considered in the cumulative scenario and located on County of San Diego lands would be required to demonstrate compliance with the applicable policies and regulations of the Mountain Empire

Subregional Plan and/or additional plans including the Boulevard Community Plan, Campo/Lake Morena Community Plan, and Potrero Community Plan. Public lands projects (i.e., Tule Wind Project) and projects proposed on tribal lands (i.e., Campo Wind Project) would be required to demonstrate compliance with the relevant plans and policies of lead agencies. For all projects considered in the cumulative analysis, project-specific analysis would be required to ensure that projects considered in the cumulative scenario are compatible with applicable plans and policies. Because the Proposed Project would comply with the goals, policies, or requirements of the Mountain Empire Subregional Plan and similar development has occurred and is proposed in the subregional plan area, the Proposed Project **would not result in a cumulatively considerable impact** associated with plan conflicts.

Light and Glare

Similar to the Proposed Project, identified cumulative projects would be evaluated on a project-by-project basis to determine the severity of lighting and glare impacts. Outdoor lighting at the Project site would only contain motion detector lights that would be installed at all site access driveway entrances and would only be used if motion is detected. No other lighting would be included in the Proposed Project. The motion censored lights would be shielded and directed downward, per the requirements of the County's Light Pollution Code and the San Diego County Zoning Ordinance. Furthermore, all outdoor lighting installed at the Proposed Project would conform to the B lamp type and shielding requirements of the Light Pollution Code. Conformance with the San Diego Light Pollution Code Zone B lamp type and shielding requirements would minimize the potential for light trespass onto adjacent properties and excess illumination of the nighttime sky. All other proposed cumulative solar facilities are anticipated to have similar operational lighting scenarios as the Proposed Project. In addition, all the proposed cumulative projects located on private lands under County of San Diego land use jurisdiction would be required to conform to the applicable lighting and shielding requirements of the San Diego Light Pollution Code. Through conformance with existing County regulations, the Proposed Project would not contribute to a potential cumulative lighting effect associated with facility lighting. Since the Proposed Project would not install FAA obstruction lighting which is required of vertical elements taller than 200 feet above ground plane, operation of the Proposed Project would not generate comparable blinking lighting within the Proposed Project boundary. As such, the Proposed Project would not combine with the existing and proposed wind energy projects in the cumulative scenario to create a cumulative nighttime lighting impact.

As previously discussed, the Project site is visible from I-8, Carrizo Gorge Road, and Old Highway 80 and the Project site abuts residential properties and the Jacumba Community Park in Jacumba Hot Springs and the Jacumba Airport. Adjacent properties including Anza-Borrego Desert SP and BLM-managed Round Mountain are also used (albeit infrequently) for outdoor recreation. The Glare Study prepared for the Proposed Project determined that proposed tracker rotational limits,

and the presence of slatted fencing and landscaping along the property frontage of Old Highway 80 and the eastern Proposed Project boundary would result in any potential glare being angled above these locations and away from potential viewers. While local area motorists on Old Highway 80, Carrizo Gorge Road, and I-8, and residents of Jacumba, would receive no glare during Proposed Project operations, the conclusions of the Glare Study suggest that Proposed Project glare may be angled such that glare is received at the summit or slopes of Round Mountain and at adjacent State Park lands to the west of the Project site. However, as detailed in Section 3.1.2, Surrounding Area, Round Mountain and the adjacent State Park lands receive limited use from local hiking groups. As such, potential glare received at Round Mountain and adjacent State Park lands would **not result in a cumulatively considerable impact**.

As discussed in Section 5.4.1.5, Light and Glare, potential glare visible from the proposed solar operations is limited to the Runway 7 approach (i.e., west approach) during the afternoon hours of the winter months lasting for less than 1 hour per day. Given that the exposure of pilots to Proposed-Project-generated glare would be limited throughout the year and would be within the range deemed acceptable by the FAA, the Proposed Project and more specifically, Proposed-Project-generated glare, would not substantially affect the daytime views of pilots on the Jacumba Airport Runway 7 approach. It is anticipated that all related projects would also be required to analyze and mitigate potential impacts to glare. As such, glare from Proposed Project components would not combine with the anticipated glare effects associated with the other solar projects to create a cumulative glare impact to daytime views in the area. Therefore, the Proposed Project **would not result in a cumulatively considerable impact** associated with light and glare.

7 MITIGATION MEASURES

The following mitigation measures shall be required would be implemented to reduce anticipated visual contrast associated with Proposed Project components:

M-AE-1 Inverter enclosures shall be a non-reflective color. If the enclosures are not manufactured as non-reflective, the enclosures shall be painted a non-reflective color.

M-AE-2 Energy storage containers shall be a non-reflective color. If the containers are not manufactured as non-reflective, the containers shall be painted a non-reflective color.

M-AE-3 All new transmission line conductors shall be non-reflective in design to reduce conductor visibility and visual contrast.

M-AE-4 A minimum set-back of 75 feet from residential property lines to solar panels shall be provided along the western Project boundary. This setback shall be provided where the western Project boundary parallels residential property lines in Jacumba Hot Springs. Setbacks shall be provided pursuant to Section 4800, Setback Regulations, of the County's Zoning Ordinance and shown on Project Plot Plans.

M-AE-5 Landscaping shall be installed to provide visual screening of the solar facility. The proposed rows of landscaping will be approximately 15 feet wide and will include drought tolerant trees (approximately 18 feet tall 10 years after planting) with native and/or drought tolerant shrubs and ground covers incorporated in between the fence line and the existing road and utility easements. As identified on the Project Conceptual Landscape Plan, landscaping shall be installed and shall run parallel to segments of the Project perimeter fence in the following specified sections: along the north and south sides of Old Highway 80 for entire length of the solar facility; along the east side of Carrizo Gorge Road; and along the southwestern portion of the solar facility adjacent to the community of Jacumba Hot Springs. The applicant shall prepare the Landscape Plans using the Landscape Documentation Package and pay all applicable review fees. Prior to approval of any plan, issuance of any permit, and prior to use of the premises in reliance of this permit, the Landscape Documentation Package shall be prepared and approved. Prior to any occupancy, final grading release, or use of the premises in reliance of this permit, the landscaping shall be installed. The applicant shall submit to the [PDS LA, PCC], a Landscape Certificate of Completion from the project California licensed Landscape Architect, Architect, or Civil Engineer, that all landscaping has been installed as shown on the approved Landscape Documentation Package. The applicant shall prepare the Landscape Certificate of Completion using the

Landscape Certificate of Completion Checklist. Prior to project construction, the project applicant shall submit a conceptual landscape plan detailing the planting materials and sizes and location of landscaping shall be prepared and provided to the County for review and approval. Landscaping shall be planted and maintained accordingly to ensure continued screening of proposed solar panels by the Applicant and/or Project operator over the operational life of the Project.

M-AE-6 As identified on the Project Plot Plans, tan-colored slats shall be installed along specific segments of the Project perimeter fence in the following specified sections: along the north and south sides of Old Highway 80 for entire length of solar facility; along the east side of Carrizo Gorge Road; and along the southwestern portion of the solar facilities adjacent to the community of Jacumba Hot Springs. Slats shall be maintained accordingly over the operational life of the Project. Slats shall be replaced as needed to ensure a unified and orderly appearance and to provide continued screening of Project components.

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9 REPORT PREPARERS

Josh Saunders, AICP, County Approved Consultant for Visual Resources
Iulia Roman, Environmental Planner
Curtis Battle, Geographic Information Systems (GIS)
Paul Caliguiri, Visual Simulations
Candice Disney Magnus, Project Manager

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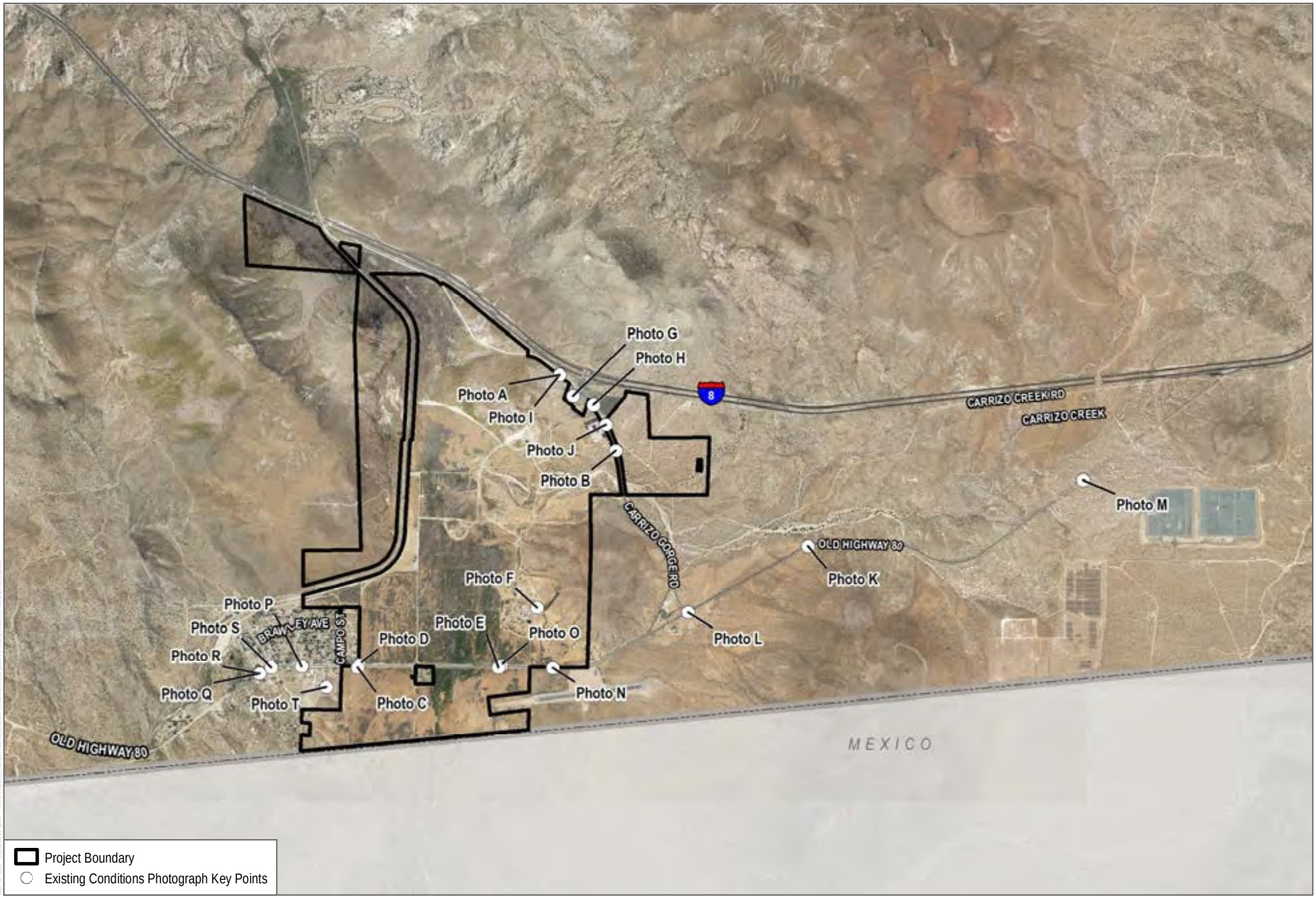

SOURCE: SANGIS 2017, 2019

DUDEK

0 1,500 3,000 Feet

FIGURE 2.1-1

Existing Conditions Photographs Key Map

JVR Energy Park Project EIR

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Photograph A
View south from Carrizo Gorge Road (dirt) across Project Site

Photograph B
View east from Carrizo Gorge Road to northeastern portion of Project Site

Photograph C
View southeast from Old Highway 80 across southern portion of Project Site

Photograph D
View northeast from Laguna Street to western boundary of Project Site

SOURCE: Dudek 2018

DUDEK

FIGURE 2.1-2
Existing Conditions: Project Site
JVR Energy Park Project EIR

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Photograph E
View north from Old Highway 80 towards ranch property and structures

Photograph F
View east from Project Site towards abandoned ranch structures and residences

Photograph G
View southwest from Jacumba Chevron towards fencing and transmission infrastructure on Project Site

Photograph H
View south from Carrizo Gorge Road to transmission line crossing near Project Site

SOURCE: Dudek 2018

DUDEK

FIGURE 2.1-3
Existing Conditions: Project Site
JVR Energy Park Project EIR

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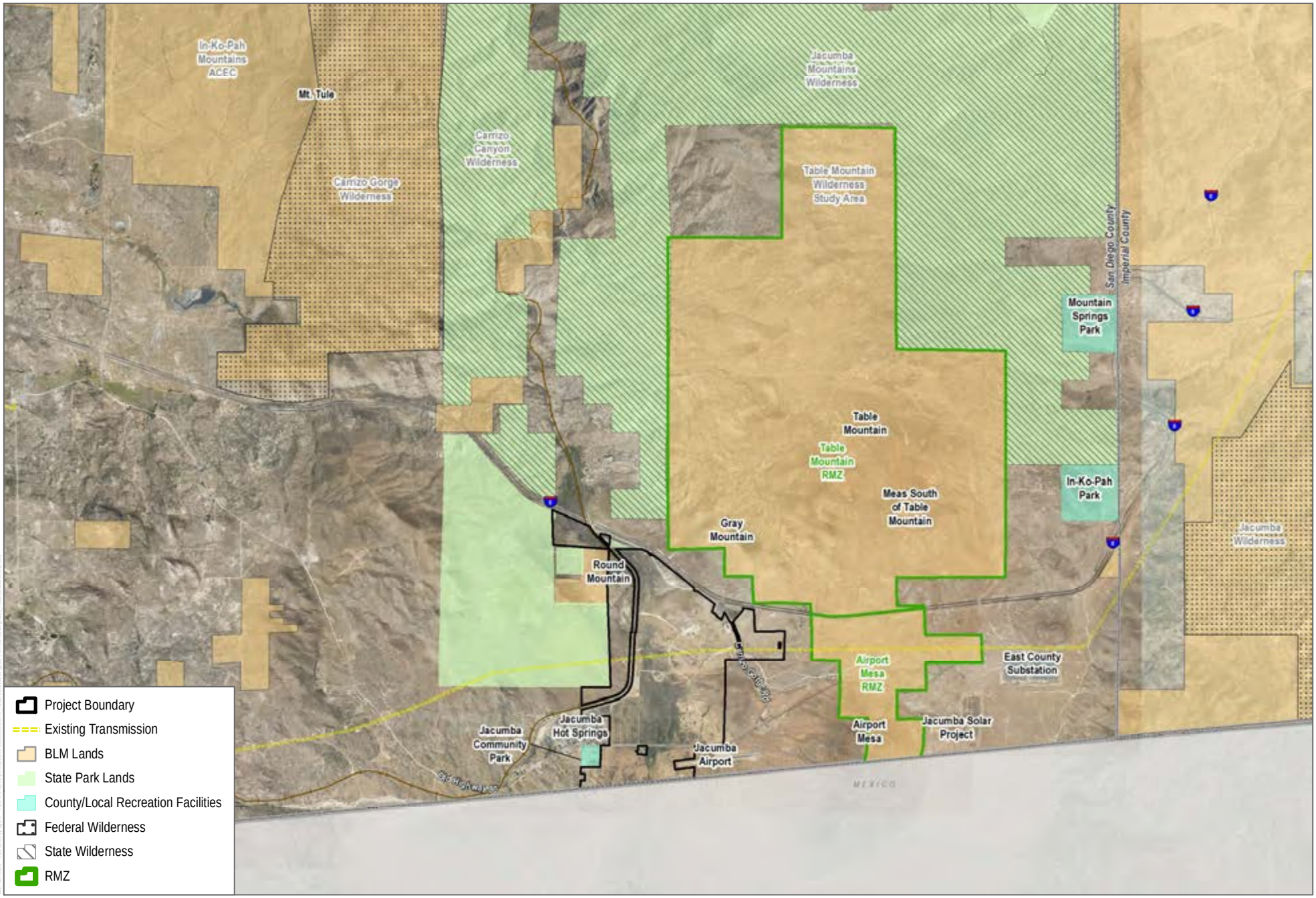

SOURCE: SANGIS 2017, 2020

DUDEK

0 1 2 Miles

FIGURE 2.1-4A

Surrounding Lands and Public Lands Ownership in Vicinity

JVR Energy Park Project EIR

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Photograph I
View east from Carrizo Gorge Road (dirt) towards gas station development

Photograph J
View north from Carrizo Gorge Road (paved) towards parking lot, I-8 and rocky mountain terrain

Photograph K
View northwest from Old Highway 80 towards Project Site (approx. 0.5 mile away)

Photograph L
View west from Old Highway 80 at Carrizo Gorge Road towards rural residential development

SOURCE: Dudek 2018

DUDEK

FIGURE 2.1-4
Existing Conditions: Surrounding Area
JVR Energy Park Project EIR

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Photograph M
View southeast from Old Highway 80 towards Jacumba Airport, Airport Mesa, and international border fence

Photograph N
View southeast from Old Highway 80 towards East County Substation

Photograph O
View northwest from Old Highway 80 across Project Site and towards Round Mountain and mesa landform to the west

Photograph P
View east from Old Highway 80 towards residential development north of the highway

SOURCE: Dudek 2015, 2018, 2019

FIGURE 2.1-5
Existing Conditions: Surrounding Area
JVR Energy Park Project EIR

DUDEK

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Photograph Q
View south from Old Highway 80 at Jacumba Street towards residential development

Photograph R
View southeast from Old Highway 80 towards active commercial development

Photograph S
View northeast from Old Highway 80 towards vacant commercial structures

Photograph T
View of recreational facilities offered at Jacumba Community Park

SOURCE: Dudek 2018

FIGURE 2.1-6
Existing Conditions: Surrounding Area
JVR Energy Park Project EIR

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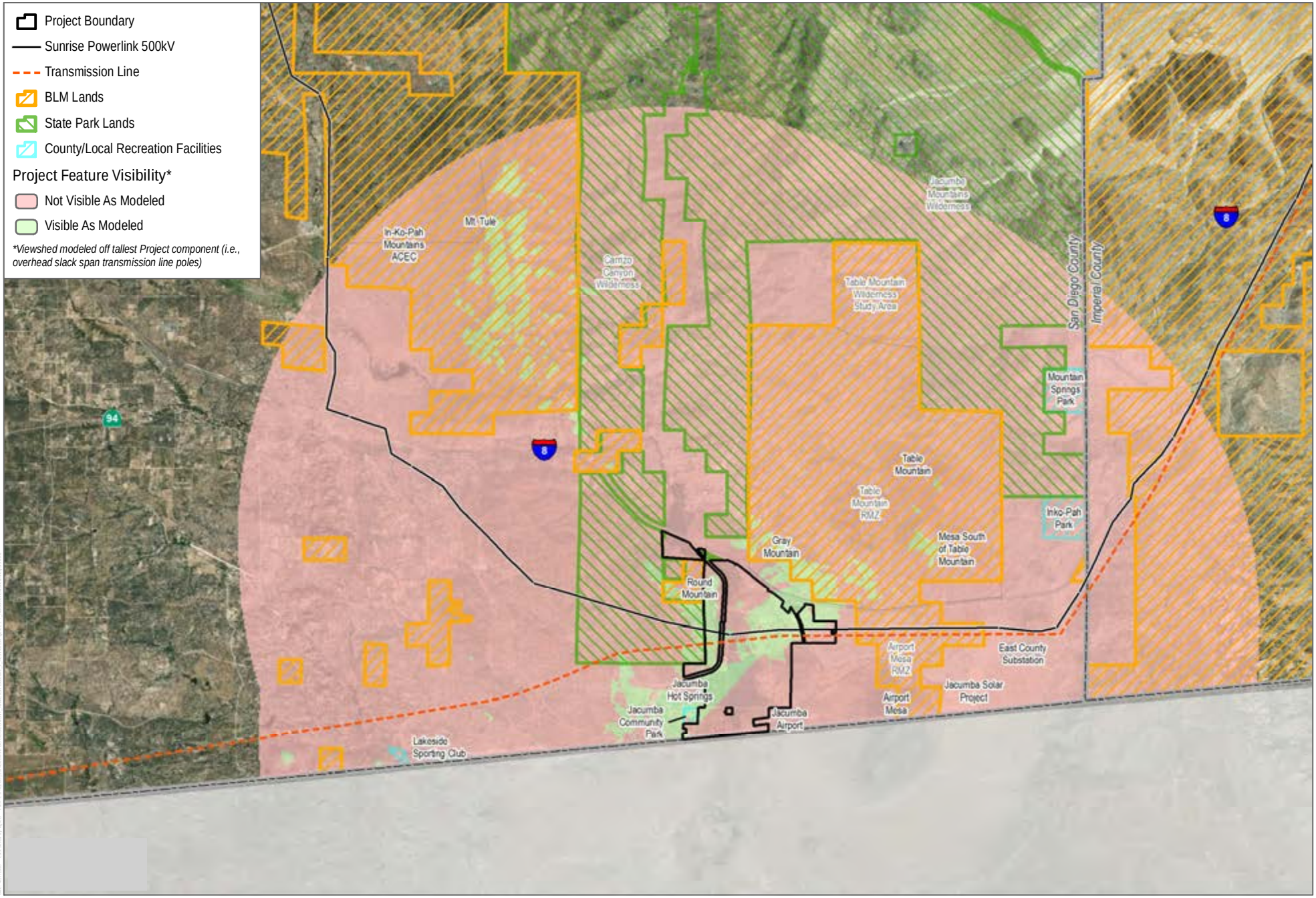

SOURCE: BLM 2019; SANGIS 2017, 2020

DUDEK

0 1 2 Miles

FIGURE 2.1-7

Topographic Viewshed of Proposed Project

JVR Energy Park Project EIR

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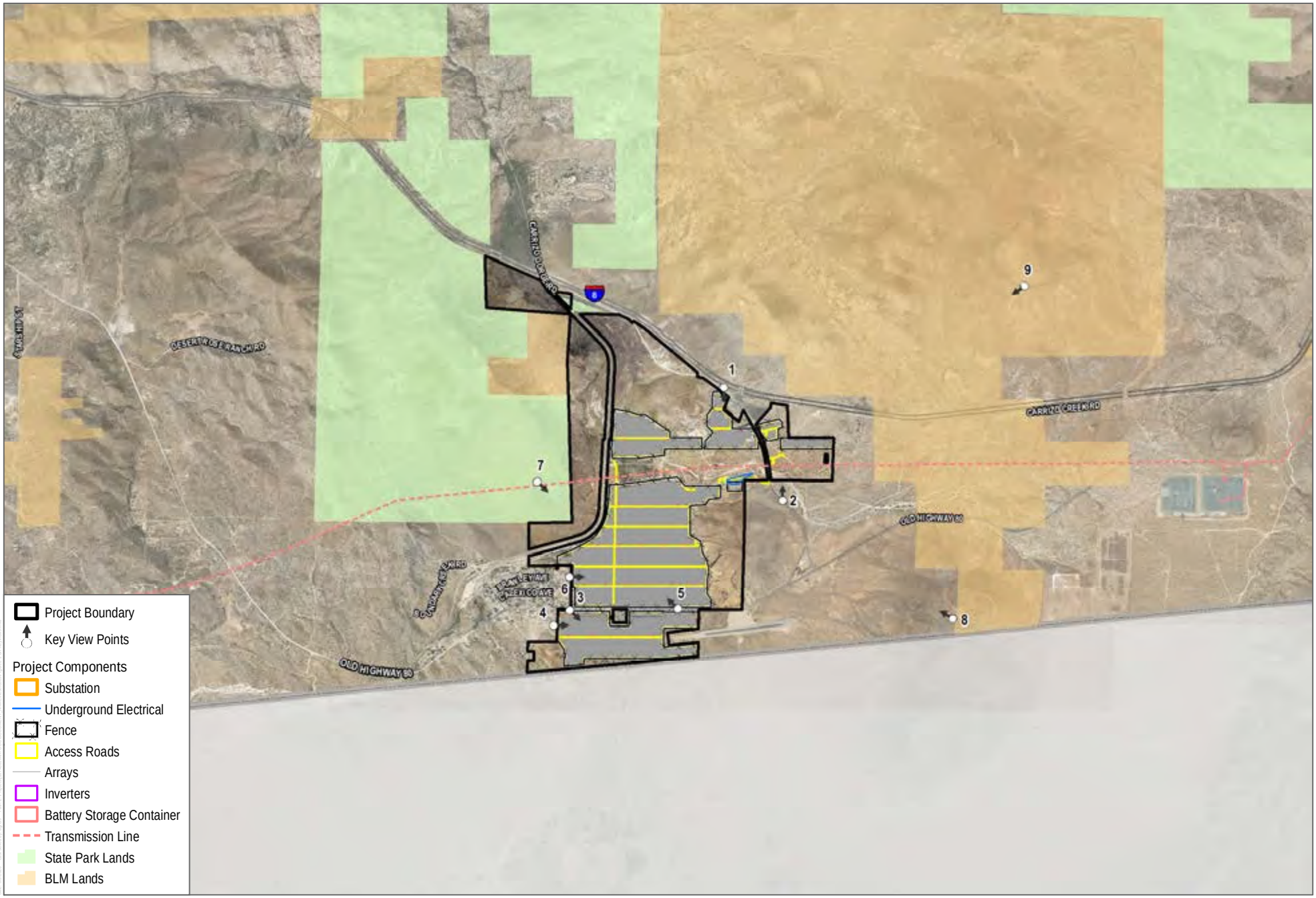

SOURCE: BLM 2019; SANGIS 2017, 2019

DUDEK

0 0.5 1 Miles

FIGURE 2.1-8A

Key Views

JVR Energy Park Project EIR

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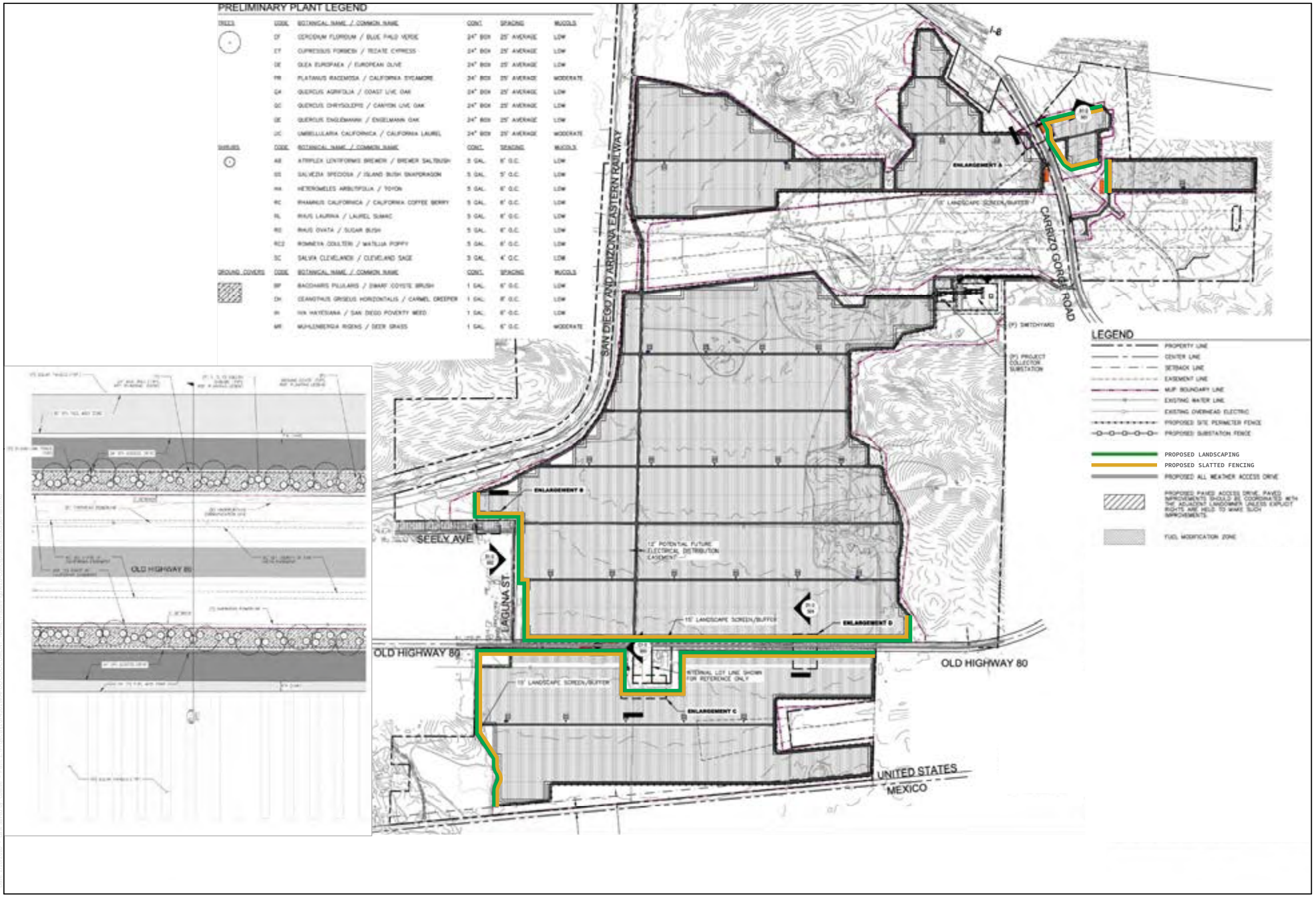

SOURCE: BayWa r.e. 2019

DUDEK

0 500 1,000 Feet

FIGURE 2.1-8B

Conceptual Landscape Plan

JVR Energy Park Project EIR

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Existing View South from Eastbound I-8 at Carrizo Gorge Road Offramp

Visual Simulation of the Project

SOURCE: Dudek 2019

FIGURE 2.1-9
Key View 1 - Eastbound I-8
JVR Energy Park Project EIR

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Existing View North from Carrizo Gorge Road (approx. 0.5 mile North of Old Highway 80)

Visual Simulation of the Project

SOURCE: Dudek 2019

DUDEK

FIGURE 2.1-10

Key View 2 - Northbound Carrizo Gorge Road

JVR Energy Park Project EIR

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Existing View Southeast from Old Highway 80 at Laguna Street

Visual Simulation of the Project

SOURCE: Dudek 2019

FIGURE 2.1-11

Key View 3 - Eastbound Old Highway 80

JVR Energy Park Project EIR

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Existing View East from Jacumba Valley Park

Visual Simulation of the Project

SOURCE: Dudek 2019

FIGURE 2.1-12

Key View 4 - Jacumba Community Park

JVR Energy Park Project EIR

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Existing View Northwest from Old Highway 80

Visual Simulation of the Project

SOURCE: Dudek 2019

DUDEK

FIGURE 2.1-13

Key View 5 - Westbound Old Highway 80

JVR Energy Park Project EIR

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Existing View East from Undeveloped Brawley Avenue Property

Visual Simulation of the Project

SOURCE: Dudek 2019

FIGURE 2.1-14

Key View 6 - Undeveloped Brawley Avenue Property

JVR Energy Park Project EIR

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Existing View Southeast from State Park Lands Adjacent to Project Site

Visual Simulation of the Project

SOURCE: Dudek 2019

DUDEK

FIGURE 2.1-15

Key View 7 - State Park Lands

JVR Energy Park Project EIR

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Existing View West from Airport Mesa

Visual Simulation of the Project

SOURCE: Dudek 2019

DUDEK

FIGURE 2.1-16

Key View 8 - Airport Mesa

JVR Energy Park Project EIR

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Existing View Southwest from mesa landform south of Table Mountain

Visual Simulation of the Project

SOURCE: Dudek 2019

FIGURE 2.1-17

Key View 9 - Mesa South of Table Mountain

JVR Energy Park Project EIR

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APPENDIX A

JVR Energy Project Glare Study

JACUMBA VALLEY RANCH SOLAR PROJECT
GLARE STUDY

March 7, 2018 | Prepared by POWER Engineers for Bayway r.e.

PROJECT CONTACT:

Jason Pfaff
Visualization Services Department Manager
(509) 780-0053
jason.pfaff@powereng.com

POWER ENGINEERS

Jacumba Valley Ranch Solar Project Glare Study

PREPARED FOR: *BAYWA R.E.*

PREPARED BY: *POWER ENGINEERS, INC.*

EXECUTIVE SUMMARY

POWER Engineers, Inc. has prepared a glare study for Baywa r.e's Jacumba Valley Ranch Solar Project. This study utilized the Solar Glare Hazard Analysis Tool licensed by GlareGauge and meets Federal Aviation Administration requirements for analyzing glare for airport operations. Proposed solar operations were analyzed from pilot, residential, and motorist viewpoints.

After review of the analysis, POWER determined potential glare is limited to the Jacumba Airport Runway 7 approach during the afternoon hours of the winter months lasting for less than one hour per day. Potential glare reported has a hazard level of "green" (low potential for temporary after-image) and is acceptable by the FAA. No glare was reported for motorists or residences due to the rotational limits and wake/stow procedures of solar operations (see Section 4.0)

Based on these findings, it is POWER's professional opinion that the proposed JVR Solar Project will not impact airport operations at the Jacumba Airport or nearby residences and motorists. For a detailed reporting of the GlareGauge analysis results, see Appendix A.

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ACRONYMS AND ABBREVIATIONS

AR	anti-reflective
ATC	Air Traffic Control
FAA	Federal Aviation Administration
JVR	Jacumba Valley Ranch
KOP(s)	Key Observation Point(s)
MW	megawatts
POWER	POWER Engineers, Inc.
Project	Jacumba Valley Ranch Solar Project
PV	photovoltaic
SGHAT	Solar Glare Hazard Analysis Tool

1.0 INTRODUCTION

The Federal Aviation Administration (FAA) has expressed concern for glare resulting from photovoltaic (PV) systems potentially causing distractions to pilots or air traffic control tower personnel. For this reason, the FAA has asked solar developers to perform a glare analysis to evaluate and document potential occurrences of glare. POWER Engineers, Inc. (POWER) has performed this study for Baywa r.e.'s Jacumba Valley Ranch (JVR) Solar Farm Project (Project). The Project is located in the community of Jacumba, California, in southeastern San Diego County (see Figure 1).

The proposed Project will utilize single-axis tracking photovoltaic solar technology and produce up to 100 megawatts (MW) of energy (see Figure 2). This Glare Study was commissioned by DUDEK on behalf of Baywa r.e. and prepared for Jacumba Airport officials, the FAA, and San Diego County. Specifically, this study does the following:

- Identifies any sensitive viewers within one mile of the Project including residential, motorist, and pilot viewers (see Section 3.1).
- Characterizes typical glare behavior experienced from the solar project throughout the day and year (see Section 3.2).
- Evaluates when and where glare may be visible to sensitive viewers (see Section 4.0).

2.0 DEFINITIONS AND DESCRIPTIONS

The following definitions and descriptions are important for understanding the methodology and results of the study:

Anti-reflective Coating – Anti-reflective Coating, also known as AR coating, is a treatment to solar panel glass designed to reduce reflected light and increase panel efficiencies. AR Coating methods may vary by manufacturer. This study assumes both form and function are in original working conditions through the life of the project.

Final Approach – The angle of descent maintained by pilots during landing procedures. The FAA defines this as two miles total distance from 50 feet above the landing threshold using a standard three degree angle of decent. During these procedures, the aircraft is directly in line with the runway.

Glare – A continuous source of brightness, relative to diffuse or surface scattered lighting. For purposes of this study, glare is caused by the sun reflecting off solar panels (see Figure 3).

GlareGauge – The GlareGauge, by Forge Solar, uses Solar Glare Hazard Analysis Tool (SGHAT) technology, developed by Sandia National Laboratories. This web-based tool predicts the potential for solar glare and ocular impacts from an array of PV panels. The GlareGauge is compatible with FAA glare guidelines for analysis of any solar energy installation proposed at a federally obligated airport.

Key Observation Points (KOPs) – KOPs refer to locations with sensitivity to potential glare. For this study, KOPs included residences, roadways and pilots on final approach within one mile of the Project (see Section 3.1).

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POWER ENGINEERS

JVR Solar Project Glare Study

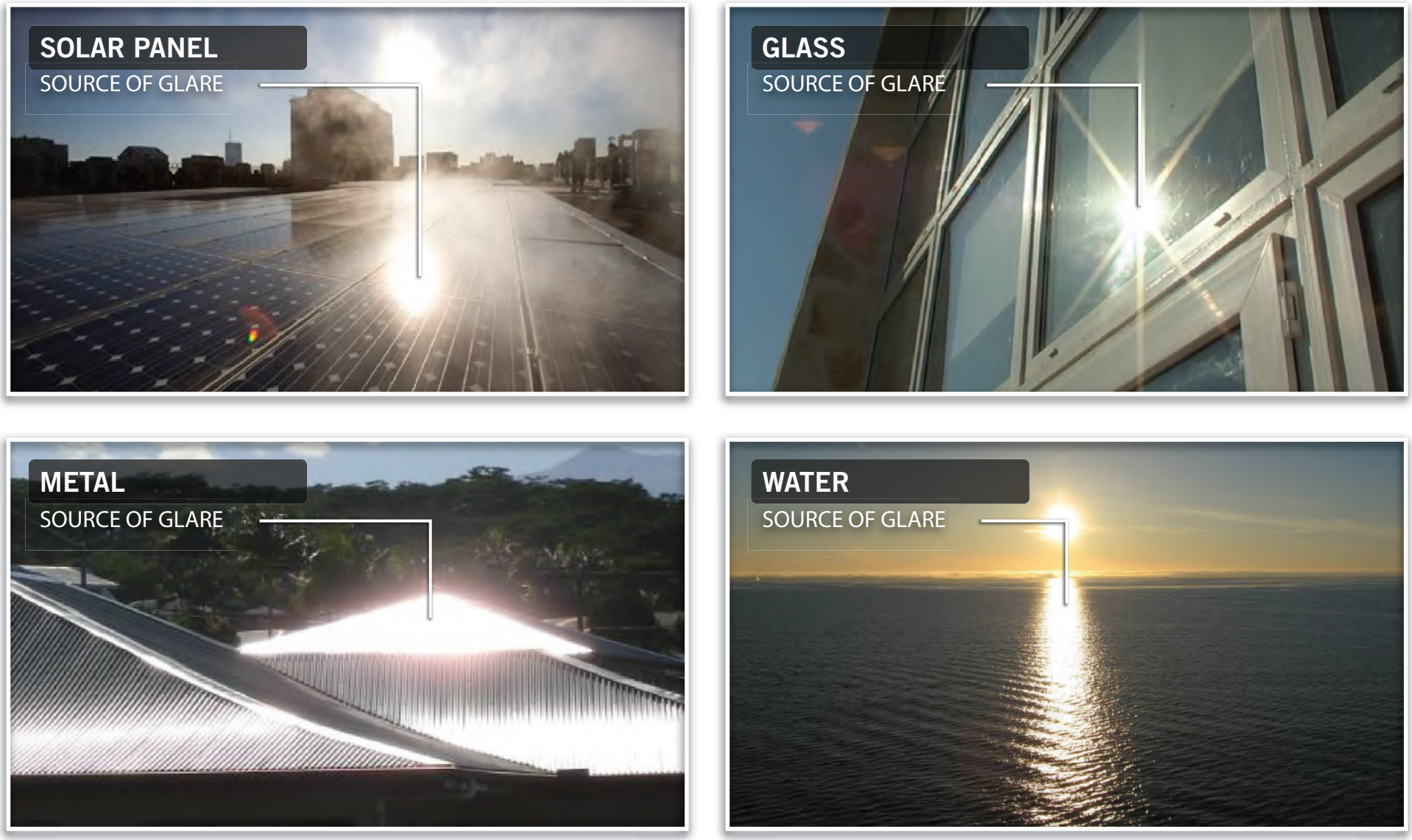
Figure 1 - Project Location Map

Prepared By,

POWER ENGINEERS

JVR Solar Project Glare Study

Figure 2 - Site Map


SOLAR PANEL
SOURCE OF GLARE
GLASS
SOURCE OF GLARE
METAL
SOURCE OF GLARE
WATER
SOURCE OF GLARE

Photovoltaic Panel – Photovoltaic panels, also known as PV panels, are designed to absorb solar energy and retain as much of the solar spectrum as possible in order to produce electricity.

Single-Axis Solar Tracker – Single-axis solar trackers are designed to maximize the efficiency of a PV panel operation. PV panels mounted to a single-axis tracker rotate around a fixed axis; allowing PV panels to track the sun's east/west position throughout the day (see Figure 4).

3.0 METHODOLOGY

This study was commissioned by DUDEK on behalf of Baywa r.e. to determine if glare will be visible to sensitive viewers. The analysis considered the changing positions of the sun throughout the day and year, and its influence on a single-axis tracking PV array.

Identify Potential Glare Issues – This study focused on potential issues where glare may be visible from nearby residences, roadways, or pilots on final approach to the Jacumba Airport. POWER prepared the study based on these locations (see Section 3.1).

Characterize Glare Behavior – POWER utilized the GlareGauge to determine when and where solar glare may occur throughout the year (see https://share.sandia.gov/phlux/). Technical specifications of proposed solar equipment were provided by Baywa r.e. and include PV operating procedures, type, panel coating/texture, angle, orientation, and placement (see Section 3.2).

Evaluate – Once glare was characterized, visual analysts documented the occurrence and hazard level of potential glare (see Section 4.0).

3.1 Identify Potential Glare Issues

The FAA has expressed concern for glare resulting from PV systems potentially causing distractions to pilots. For this reason, the FAA has asked solar developers to perform a glare hazard analysis to evaluate and document potential occurrences of glare. Proposed solar operations were studied for two landing approaches for one runway located at the Jacumba Airport (see Appendix A – Glare Results). No air traffic control tower is present at Jacumba Airport.

Each landing approach associated with Jacumba Airport is described below:

- **Jacumba Runway 7 Landing Approach:**
    - Threshold Distance from Project: 400 feet
    - Heading: East
    - Runway Elevation: 2,808 feet
    - Final Approach Slope: 3.0 degrees

- **Jacumba Runway 25 Landing Approach:**
    - Threshold Distance from Project: 1,600 feet
    - Heading: West
    - Runway Elevation: 2,828 feet
    - Final Approach Slope: 3.0 degrees

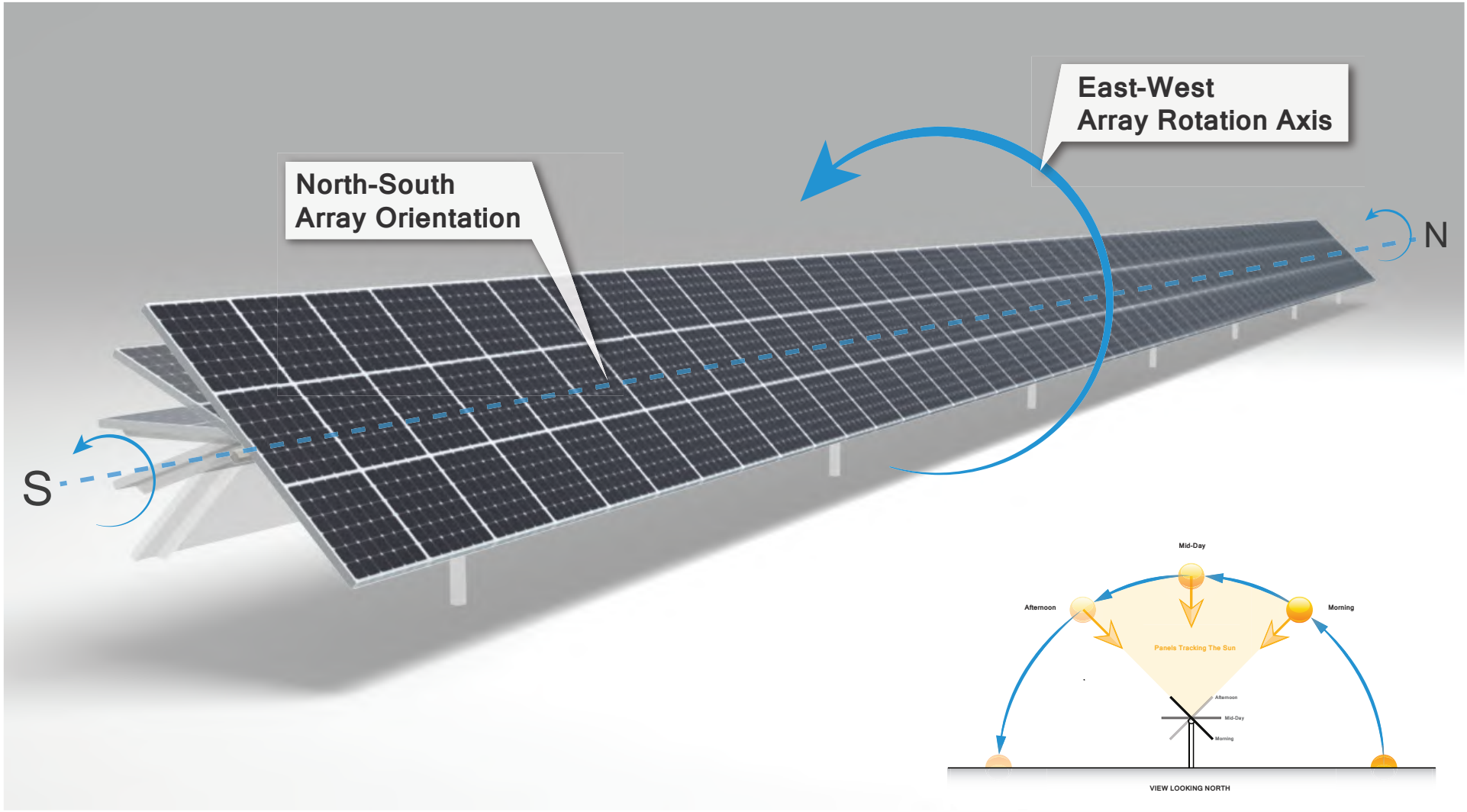


Figure 4 - Single Axis Solar Tracker

In addition to airport operations, the proposed solar operations were analyzed to evaluate and document any occurrences of glare that would potentially cause distractions to ground based viewers including nearby residences and motorists. Google Earth aerial imagery was used to identify major structures and roadways within one mile of the Project. A representative sample was then selected for analysis based on line of site, proximity, and elevation relative the Project. Proposed solar operations were then studied from KOPs located at 40 selected structures and three major roadways adjacent the site (see Figure 5). Each KOP is described below:

- **Surrounding Structures:**
  - Distance from Project: 0-1.0 mile
  - Viewer Height: 10 feet

- **Old Highway 80:**
  - Location relative Project: South
  - Viewer Height: 8 feet
  - Direction of Travel: East/West

- **Interstate 8:**
  - Location relative Project: North
  - Viewer Height: 8 feet
  - Direction of Travel: Northwest/Southeast

- **Carrizo Gorge Road:**
  - Location relative Project: East
  - Viewer Height: 8 feet
  - Direction of Travel: North/South

3.2 Characterize Glare Behavior

POWER utilized the GlareGauge to determine when and where solar glare may occur throughout the year (see https://share.sandia.gov/phlux/). Technical specifications of this study are described below:

Approach Slope – The typical landing approach, as defined by the FAA, is approximately three degrees. When on approach, the aircraft is directly in line with the runway.

Runway Information – Information derived from the website (www.airnav.com) was used to verify the details of each runway.

Single-Axis Tracking Photovoltaic Solar Panels – Details of solar technologies were provided by Baywa r.e. are described below:

- Tracking: Single-axis with back-tracking to reduce shading
- Tracking Axis Orientation: 180 due south
- Maximum Tracking Angle: ± 55 Degrees
- Wake Angle: 5 degrees
- Modified Wake Angle: 20 degree
- Stow Angle: 5 degrees
- Coating/Texture: Anti-Reflective Coated Smooth Surface Glass
- Average Mount Height: 3.0 feet above grade

Prepared By,

POWER ENGINEERS

JVR Solar Project Glare Study

Figure 5 - Key Observation Points

A single-axis solar tracker has four primary positions: wake, tracking, backtracking, and stow positions. These are characterized by the following descriptions (see Figure 6):

- Wake – The stationary position of a solar array prior to sunrise. A solar array in wake position rests in a position of 5 degrees from parallel to the ground facing east.
- Tracking – The process by which solar arrays rotate around a fixed axis to maintain a 90 degree relationship to the angle of inbound sunlight.
- Back tracking – The process by which solar arrays rotate away from 90 degrees relative to the sun to eliminate shading of the adjacent arrays. This occurs when an array reaches its maximum tracking angle.
- Stow – The stationary position of a solar array that is not in tracking or back tracking procedures. A solar array in stow position rests in a position of 5 degrees from parallel to the ground facing west and will occur during non-daylight hours.

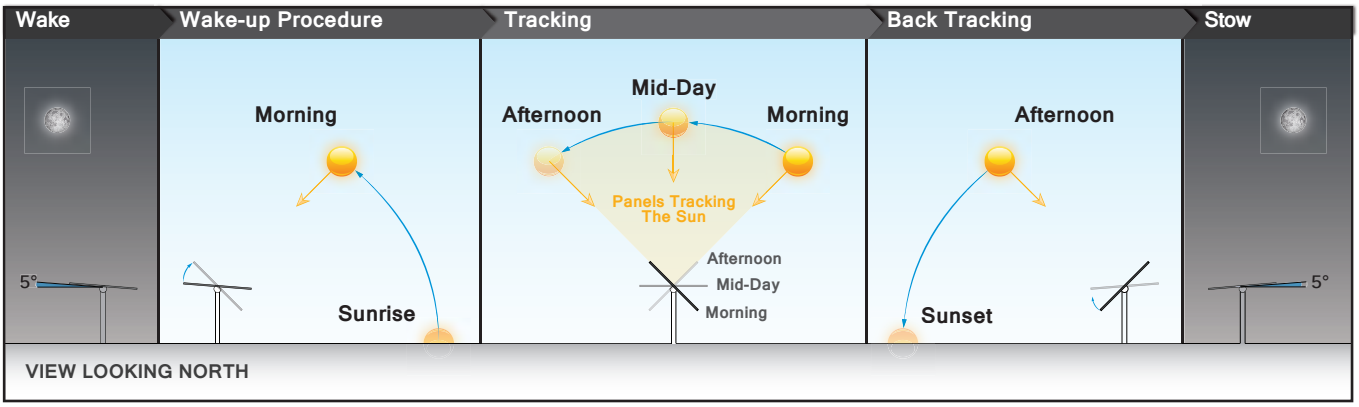
The general behavior of a single-axis solar tracker used for our study purposes is as such:

- All panels will be positioned at a 5 degree east facing angle prior to sunrise.
- Once the sun rises in the east, the solar arrays will enter the wake cycle and slowly rotate into a +55 degree east facing angle, with the sun perpendicular to the panel face. This ends the wake cycle and begins the tracking cycle.
- When the inbound sunlight is perpendicular (90 degrees) to the face of the solar panels, the arrays will begin to track the sun throughout the day until the panel reaches its westerly 55 degree rotational limits.
- When the solar arrays reach a 55 degree west facing angle, they will stop tracking the sun, start the back-tracking cycle and rotate to a 5 degree west facing stow angle.
- Solar arrays will remain in 5 degree west facing angle until after the sun has set.

In some cases, modified panel behavior may reduce the impact of potential glare. Modified behaviors used for our study purposes are as such:

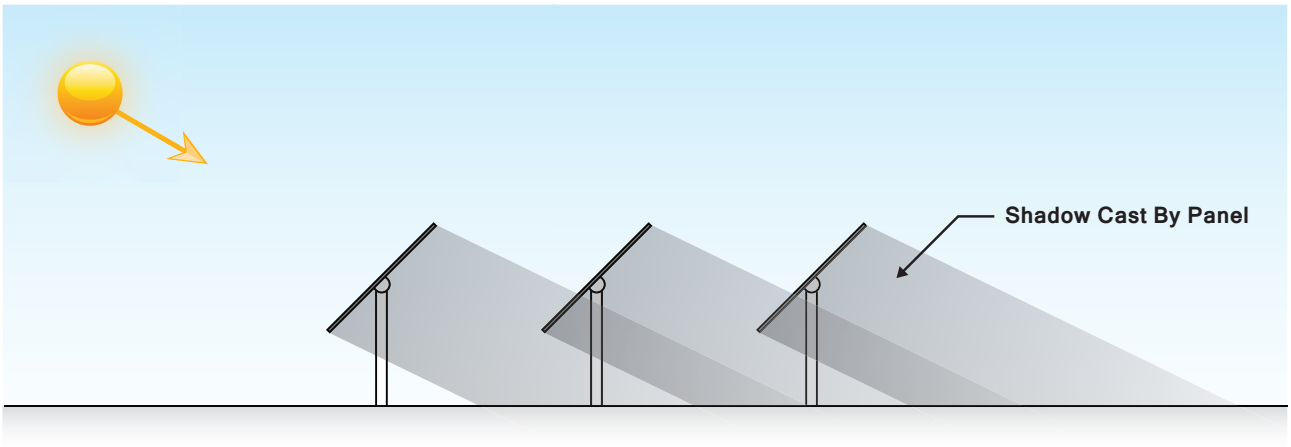
- All arrays south of Old Highway 80 will utilize a minimum 20 degree east facing wake angle. Operation of any angle less than 20 degrees east facing will require additional analysis.

Single Axis Tracker Behavior

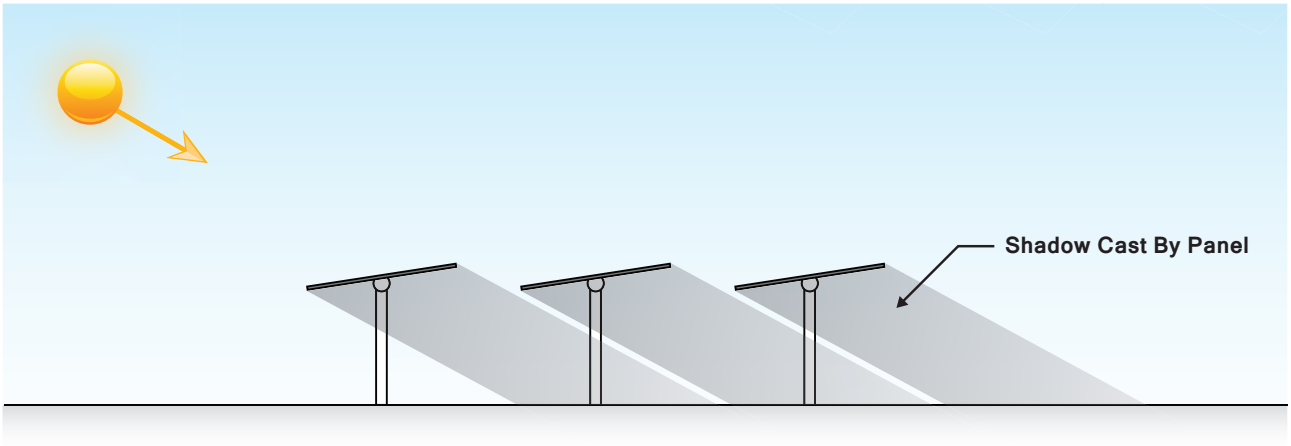


Back Tracking Procedures

Panels *without* Back Tracking



Panels *with* Back Tracking



3.3 Glare Evaluation – GlareGauge Analysis

To identify the occurrence of glare, POWER utilized the GlareGauge licensed by ForgeSolar. The GlareGauge uses SGHAT technology and is a web based glare assessment tool allowing input of viewer position, solar facility location, solar technology, and elevation data. The GlareGauge provides a quantified assessment of when and where glare may occur throughout the year from a solar installation, as well as identifying the potential effects on the human eye when glare does occur. Glare was analyzed at one minute intervals throughout the entire year to determine when and where glare may be visible to pilots, residences, and motorists. The GlareGauge meets FAA glare analysis requirements (for more information, see Appendix B – 78 FR 63276). The final approach was analyzed for each runway at Jacumba Airport. Single point analysis was performed at each selected structure and at quarter mile intervals for each major roadway. Structures and roadways were analyzed in four individual analyses due to the quantity of single points analyzed. Refer to Section 4.0 and Appendix A for glare results.

4.0 RESULTS

After review of the GlareGauge analysis, POWER determined potential glare visible from the proposed solar operations is limited to the Runway 7 approach during the afternoon hours of the winter months lasting for less than one hour per day. Potential glare reported has a hazard level of "green" (low potential for temporary after-image) and is acceptable by the FAA. During the morning hours, the modified wake angle of arrays south of Old Highway 80 redirects any potential glare up and out of the view of pilots landing on the Runway 7 approach with no glare anticipated for motorists or residences.

For all arrays north of Old Highway 80, the 55 degree array rotational limits combined with the 5 degree wake/stow angle cause any potential glare to be redirected above and away from analyzed sensitive viewers throughout the day and year with no glare recorded for airport operations, motorists, or residences. Based on these findings, it is POWER's professional opinion that the proposed JVR Solar Project will not impact airport operations at the Jacumba Airport or nearby residences and motorists. For detailed reporting of the GlareGauge analysis results, see Appendix A.

5.0 SOURCES

Federal Aviation Administration (FAA). 2010. *Technical Guidance for Evaluating Selected Solar Technologies on Airports*. November 2010. Full report can be downloaded at: http://www.faa.gov/airports/environmental/policy_guidance/media/airport_solar_guide.pdf.

AirNav Web Application. 2018. https://www.airnav.com/airport/L78. Accessed 2018.

ForgeSolar GlareGauge Web Application. 2018. https://www.forgesolar.com/tools/glaregauge. Accessed 2018.

Files provided by Baywa r.e.:
20180213_Base Layout Rev 05.dwg
163279-APN BDNY-25P.dwg
163279-TP-25P.dwg
Site Location 1.jpg
BayWa-2015.ctb
2017-11-14_JVR Solar Project Description.pdf
163279-PreApp-01-CONCEPT PLOT PLAN.pdf
Jacumba Solar Bounds.kmz

APPENDIX A GLARE RESULTS

FORGESOLAR GLARE ANALYSIS

Project: **JVR Solar**
Jacumba

Site configuration: **PV Final**
Analysis conducted by Andy Stephens (andy.stephens@powereng.com) at 18:29 on 05 Mar, 2018.

U.S. FAA 2013 Policy Adherence

The following table summarizes the policy adherence of the glare analysis based on the 2013 U.S. Federal Aviation Administration Interim Policy 78 FR 63276. This policy requires the following criteria be met for solar energy systems on airport property:

- No "yellow" glare (potential for after-image) for any flight path from threshold to 2 miles
- No glare of any kind for Air Traffic Control Tower(s) ("ATCT") at cab height.
- Default analysis and observer characteristics (see list below)

ForgeSolar does not represent or speak officially for the FAA and cannot approve or deny projects. Results are informational only.

COMPONENT	STATUS	DESCRIPTION
Analysis parameters	PASS	Analysis time interval and eye characteristics used are acceptable
Flight path(s)	PASS	Flight path receptor(s) do not receive yellow glare
ATCT(s)	N/A	No ATCT receptors designated

Default glare analysis and observer eye characteristics are as follows:

- Analysis time interval: 1 minute
- Ocular transmission coefficient: 0.5
- Pupil diameter: 0.002 meters
- Eye focal length: 0.017 meters
- Sun subtended angle: 9.3 milliradians

FAA Policy 78 FR 63276 can be read at https://www.federalregister.gov/d/2013-24729

SITE CONFIGURATION

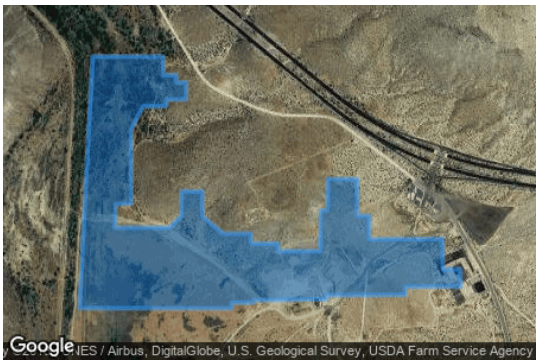
Analysis Parameters

DNI: peaks at 1,000.0 W/m^2
Time interval: 1 min
Ocular transmission coefficient: 0.5
Pupil diameter: 0.002 m
Eye focal length: 0.017 m
Sun subtended angle: 9.3 mrad
Site Config ID: 15957.2425

Name: PV array Mid
Axis tracking: Single-axis rotation
Tracking axis orientation: 180.0°
Tracking axis tilt: 0.0°
Tracking axis panel offset: 0.0°
Max tracking angle: 55.0°
Resting angle: 5.0°
Rated power: -
Panel material: Smooth glass with AR coating
Reflectivity: Vary with sun
Slope error: correlate with material

Vertex	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
1	32.621551	-116.187028	2802.78	3.00	2805.78
2	32.622109	-116.187014	2801.82	3.00	2804.82
3	32.622108	-116.186675	2800.79	3.00	2803.79
4	32.622649	-116.186668	2811.44	3.00	2814.44
5	32.622671	-116.185188	2793.24	3.00	2796.24
6	32.622941	-116.185199	2800.38	3.00	2803.38
7	32.622968	-116.183540	2791.19	3.00	2794.19
8	32.622404	-116.183545	2793.47	3.00	2796.47
9	32.622405	-116.182235	2787.18	3.00	2790.18
10	32.622972	-116.182228	2786.97	3.00	2789.97
11	32.622976	-116.181871	2785.70	3.00	2788.70
12	32.623321	-116.181874	2792.90	3.00	2795.90
13	32.623331	-116.180988	2784.71	3.00	2787.71
14	32.623894	-116.180979	2781.52	3.00	2784.52
15	32.623887	-116.180621	2783.28	3.00	2786.28
16	32.624159	-116.180605	2786.13	3.00	2789.13
17	32.624164	-116.180057	2781.51	3.00	2784.51
18	32.624776	-116.180033	2784.17	3.00	2787.17
19	32.625833	-116.179501	2777.57	3.00	2780.57
20	32.627802	-116.179350	2769.24	3.00	2772.24
21	32.627818	-116.177857	2769.20	3.00	2772.20
22	32.628366	-116.177863	2767.74	3.00	2770.74
23	32.628401	-116.174930	2767.21	3.00	2770.21
24	32.628618	-116.174915	2767.17	3.00	2770.17
25	32.628630	-116.171628	2787.04	3.00	2790.04
26	32.627734	-116.171622	2795.17	3.00	2798.17
27	32.627745	-116.169546	2787.33	3.00	2790.33
28	32.627912	-116.169548	2789.84	3.00	2792.84
29	32.628500	-116.167738	2798.81	3.00	2801.81
30	32.627715	-116.167752	2795.17	3.00	2798.17
31	32.626926	-116.170128	2784.64	3.00	2787.64
32	32.626918	-116.170937	2781.75	3.00	2784.75
33	32.624166	-116.170939	2778.27	3.00	2781.27
34	32.624165	-116.171127	2778.33	3.00	2781.33
35	32.623220	-116.171129	2788.84	3.00	2791.84
36	32.623222	-116.170236	2800.58	3.00	2803.58
37	32.622969	-116.170236	2810.16	3.00	2813.16
38	32.622965	-116.169941	2817.07	3.00	2820.07
39	32.622423	-116.169941	2818.70	3.00	2821.70
40	32.622423	-116.169683	2824.15	3.00	2827.15
41	32.621542	-116.169662	2819.58	3.00	2822.58
42	32.621533	-116.169066	2836.76	3.00	2839.76
43	32.621148	-116.169066	2830.50	3.00	2833.50
44	32.621139	-116.167756	2846.83	3.00	2849.83
45	32.620335	-116.167755	2823.17	3.00	2826.17
46	32.620335	-116.167109	2838.53	3.00	2841.53
47	32.619685	-116.167105	2826.22	3.00	2829.22
48	32.619685	-116.166089	2841.01	3.00	2844.01
49	32.618221	-116.166067	2808.16	3.00	2811.16
50	32.618238	-116.170050	2794.73	3.00	2797.74
51	32.618802	-116.170053	2793.96	3.00	2796.96
52	32.619018	-116.170048	2793.90	3.00	2796.90
53	32.619607	-116.170037	2795.56	3.00	2798.56
54	32.620414	-116.170042	2805.00	3.00	2808.00
55	32.621235	-116.170050	2815.61	3.00	2818.61
56	32.621551	-116.170053	2812.08	3.00	2815.08
57	32.621560	-116.171185	2801.66	3.00	2804.66

Name: PV array North
Axis tracking: Single-axis rotation
Tracking axis orientation: 180.0°
Tracking axis tilt: 0.0°
Tracking axis panel offset: 0.0°
Max tracking angle: 55.0°
Resting angle: 5.0°
Rated power: -
Panel material: Smooth glass with AR coating
Reflectivity: Vary with sun
Slope error: correlate with material



Vertex	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
1	32.631863	-116.178882	2752.98	3.00	2755.98
2	32.635184	-116.178687	2745.68	3.00	2748.68
3	32.639532	-116.178407	2737.05	3.00	2740.05
4	32.639527	-116.175860	2737.90	3.00	2740.90
5	32.638965	-116.175841	2744.78	3.00	2747.78
6	32.638964	-116.175387	2757.18	3.00	2760.18
7	32.638733	-116.175374	2764.03	3.00	2767.03
8	32.638746	-116.175023	2768.14	3.00	2771.14
9	32.638221	-116.175030	2778.30	3.00	2781.30
10	32.638215	-116.175745	2742.60	3.00	2745.60
11	32.638018	-116.175742	2741.94	3.00	2744.94
12	32.638004	-116.176583	2740.39	3.00	2743.39
13	32.637290	-116.177017	2741.30	3.00	2744.30
14	32.635048	-116.177010	2747.80	3.00	2750.80
15	32.635031	-116.177572	2747.32	3.00	2750.32
16	32.634317	-116.177594	2749.53	3.00	2752.53
17	32.634314	-116.175633	2753.47	3.00	2756.47
18	32.634685	-116.175198	2763.94	3.00	2766.94
19	32.635426	-116.175197	2809.87	3.00	2812.87
20	32.635421	-116.174446	2786.80	3.00	2789.80
21	32.634665	-116.174438	2764.32	3.00	2767.32
22	32.634134	-116.173684	2818.27	3.00	2821.27
23	32.634135	-116.172677	2864.05	3.00	2867.05
24	32.633833	-116.172667	2817.85	3.00	2820.85
25	32.633831	-116.171699	2796.75	3.00	2799.75
26	32.633600	-116.171688	2768.10	3.00	2771.10
27	32.633600	-116.170175	2781.61	3.00	2784.61
28	32.634845	-116.170157	2807.78	3.00	2810.78
29	32.634845	-116.169913	2802.97	3.00	2805.97
30	32.635798	-116.169902	2831.62	3.00	2834.62
31	32.635794	-116.168840	2808.24	3.00	2811.24
32	32.634680	-116.168837	2793.24	3.00	2796.24
33	32.634676	-116.168400	2795.32	3.00	2798.32
34	32.633964	-116.168409	2787.03	3.00	2790.03
35	32.633975	-116.165753	2820.37	3.00	2823.37
36	32.633049	-116.165734	2814.54	3.00	2817.54
37	32.633054	-116.165114	2823.66	3.00	2826.66
38	32.632521	-116.165095	2817.19	3.00	2820.19
39	32.632511	-116.167103	2791.84	3.00	2794.84
40	32.632268	-116.167101	2790.88	3.00	2793.88
41	32.632253	-116.169951	2785.82	3.00	2788.82
42	32.632133	-116.169949	2783.63	3.00	2786.63
43	32.632102	-116.172601	2769.23	3.00	2772.23
44	32.632035	-116.172599	2769.52	3.00	2772.52
45	32.632026	-116.173375	2766.32	3.00	2769.32
46	32.631854	-116.173381	2766.67	3.00	2769.67

Name: PV array South 1
Axis tracking: Single-axis rotation
Tracking axis orientation: 180.0°
Tracking axis tilt: 0.0°
Tracking axis panel offset: 0.0°
Max tracking angle: 55.0°
Resting angle: 20.0°
Rated power: -
Panel material: Smooth glass with AR coating
Reflectivity: Vary with sun
Slope error: correlate with material

Vertex	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
1	32.613935	-116.186890	2811.06	3.00	2814.06
2	32.613928	-116.178943	2806.56	3.00	2809.56
3	32.613456	-116.178943	2807.88	3.00	2810.88
4	32.613449	-116.179745	2807.76	3.00	2810.76
5	32.613207	-116.179750	2808.67	3.00	2811.67
6	32.613214	-116.186930	2821.96	3.00	2824.96

Name: PV array South 2
Axis tracking: Single-axis rotation
Tracking axis orientation: 180.0°
Tracking axis tilt: 0.0°
Tracking axis panel offset: 0.0°
Max tracking angle: 55.0°
Resting angle: 20.0°
Rated power: -
Panel material: Smooth glass with AR coating
Reflectivity: Vary with sun
Slope error: correlate with material

PV google static map

Vertex	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
1	32.615758	-116.178801	2802.08	3.00	2805.08
2	32.615746	-116.174155	2798.35	3.00	2801.35
3	32.615414	-116.174160	2802.76	3.00	2805.76
4	32.615396	-116.174021	2802.59	3.00	2805.59
5	32.613887	-116.174032	2809.21	3.00	2812.21
6	32.613896	-116.173914	2809.42	3.00	2812.42
7	32.613751	-116.173924	2809.81	3.00	2812.81
8	32.613724	-116.178838	2807.40	3.00	2810.40

Name: PV array South 3
Axis tracking: Single-axis rotation
Tracking axis orientation: 180.0°
Tracking axis tilt: 0.0°
Tracking axis panel offset: 0.0°
Max tracking angle: 55.0°
Resting angle: 10.0°
Rated power: -
Panel material: Smooth glass with AR coating
Reflectivity: Vary with sun
Slope error: correlate with material

Vertex	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
1	32.617095	-116.177229	2799.28	3.00	2802.28
2	32.617104	-116.170244	2799.94	3.00	2802.94
3	32.616390	-116.170223	2802.15	3.00	2805.15
4	32.616408	-116.171650	2799.62	3.00	2802.62
5	32.615749	-116.171661	2802.92	3.00	2805.92
6	32.615746	-116.174144	2801.54	3.00	2804.54
7	32.615760	-116.178795	2802.24	3.00	2805.24
8	32.616244	-116.178780	2802.79	0.00	2802.79
9	32.616247	-116.177230	2800.98	3.00	2803.98

Name: PV array South 4
Axis tracking: Single-axis rotation
Tracking axis orientation: 180.0°
Tracking axis tilt: 0.0°
Tracking axis panel offset: 0.0°
Max tracking angle: 55.0°
Resting angle: 15.0°
Rated power: -
Panel material: Smooth glass with AR coating
Reflectivity: Vary with sun
Slope error: correlate with material

Vertex	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
1	32.614516	-116.174030	2807.08	3.00	2810.08
2	32.614516	-116.173060	2809.35	3.00	2812.35
3	32.614742	-116.170865	2808.76	3.00	2811.76
4	32.614168	-116.170871	2810.82	3.00	2813.82
5	32.613874	-116.173092	2812.61	3.00	2815.61
6	32.613874	-116.174020	2809.27	3.00	2812.27

Name: PV array South Addition North
Axis tracking: Single-axis rotation
Tracking axis orientation: 180.0°
Tracking axis tilt: 0.0°
Tracking axis panel offset: 0.0°
Max tracking angle: 55.0°
Resting angle: 10.0°
Rated power: -
Panel material: Smooth glass with AR coating
Reflectivity: Vary with sun
Slope error: correlate with material

PV google static map

Vertex	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
1	32.617469	-116.184309	2801.31	3.00	2804.31
2	32.617478	-116.179137	2797.51	3.00	2800.51
3	32.615716	-116.179114	2801.73	3.00	2804.73
4	32.615707	-116.184341	2803.16	3.00	2806.17

Name: PV array South Addition South
Axis tracking: Single-axis rotation
Tracking axis orientation: 180.0°
Tracking axis tilt: 0.0°
Tracking axis panel offset: 0.0°
Max tracking angle: 55.0°
Resting angle: 20.0°
Rated power: -
Panel material: Smooth glass with AR coating
Reflectivity: Vary with sun
Slope error: correlate with material

PV google static map

Vertex	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
1	32.615699	-116.184336	2801.38	3.00	2804.38
2	32.615713	-116.179111	2797.50	3.00	2800.50
3	32.613978	-116.179116	2805.98	3.00	2808.98
4	32.613964	-116.184384	2806.64	3.00	2809.64

Flight Path Receptor(s)

Name: FP 25
Description:
Threshold height: 50 ft
Direction: °
Glide slope: 3.0°
Pilot view restricted? Yes
Vertical view: 30.0°
Azimuthal view: 90.0°

Point	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
Threshold	32.616331	-116.161444	2825.19	50.00	2875.20
Two-mile	32.619985	-116.127354	3139.67	288.98	3428.65

Name: FP 7
Description:
Threshold height: 50 ft
Direction: °
Glide slope: 3.0°
Pilot view restricted? Yes
Vertical view: 30.0°
Azimuthal view: 90.0°

Point	Latitude (°)	Longitude (°)	Ground elevation (ft)	Height above ground (ft)	Total elevation (ft)
Threshold	32.615458	-116.169663	2805.48	50.00	2855.48
Two-mile	32.612089	-116.203795	2916.45	492.49	3408.94

Discrete Observation Receptors

Name	ID	Latitude (°)	Longitude (°)	Elevation (ft)	Height (ft)
OP 1	1	32.617665	-116.183279	2799.38	8.00
OP 2	2	32.625382	-116.149033	2964.32	8.00
OP 3	3	32.634426	-116.165219	2832.78	8.00
OP 4	4	32.636256	-116.164618	2879.04	8.00

GLARE ANALYSIS RESULTS

Summary of Glare

PV Array Name	Tilt (°)	Orient (°)	"Green" Glare min	"Yellow" Glare min	Energy kWh
PV array Mid	SA tracking	SA tracking	0	0	-
PV array North	SA tracking	SA tracking	0	0	-
PV array South 1	SA tracking	SA tracking	2,337	0	-
PV array South 2	SA tracking	SA tracking	4,853	0	-
PV array South 3	SA tracking	SA tracking	0	0	-
PV array South 4	SA tracking	SA tracking	4,513	0	-
PV array South Addition North	SA tracking	SA tracking	0	0	-
PV array South Addition South	SA tracking	SA tracking	0	0	-

Total annual glare received by each receptor

Receptor	Annual Green Glare (min)	Annual Yellow Glare (min)
FP 25	0	0
FP 7	11703	0
1	0	0
2	0	0
3	0	0
4	0	0

Results for: PV array Mid

Receptor	Green Glare (min)	Yellow Glare (min)
FP 25	0	0
FP 7	0	0
OP 1	0	0

Receptor	Green Glare (min)	Yellow Glare (min)
OP 2	0	0
OP 3	0	0
OP 4	0	0

Flight Path: FP 25

0 minutes of yellow glare
0 minutes of green glare

Flight Path: FP 7

0 minutes of yellow glare
0 minutes of green glare

Point Receptor: OP 1

0 minutes of yellow glare
0 minutes of green glare

Point Receptor: OP 2

0 minutes of yellow glare
0 minutes of green glare

Point Receptor: OP 3

0 minutes of yellow glare
0 minutes of green glare

Point Receptor: OP 4

0 minutes of yellow glare
0 minutes of green glare

Results for: PV array North

Receptor	Green Glare (min)	Yellow Glare (min)
FP 25	0	0
FP 7	0	0
OP 1	0	0
OP 2	0	0
OP 3	0	0
OP 4	0	0

Flight Path: FP 25

0 minutes of yellow glare
0 minutes of green glare

Flight Path: FP 7

0 minutes of yellow glare
0 minutes of green glare

Point Receptor: OP 1

0 minutes of yellow glare
0 minutes of green glare

Point Receptor: OP 2

0 minutes of yellow glare
0 minutes of green glare

Point Receptor: OP 3

0 minutes of yellow glare
0 minutes of green glare

Point Receptor: OP 4

0 minutes of yellow glare
0 minutes of green glare

Results for: PV array South 1

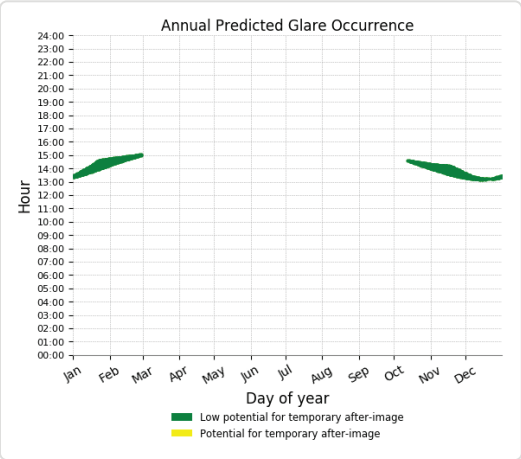
Receptor	Green Glare (min)	Yellow Glare (min)
FP 25	0	0
FP 7	2337	0
OP 1	0	0
OP 2	0	0
OP 3	0	0
OP 4	0	0

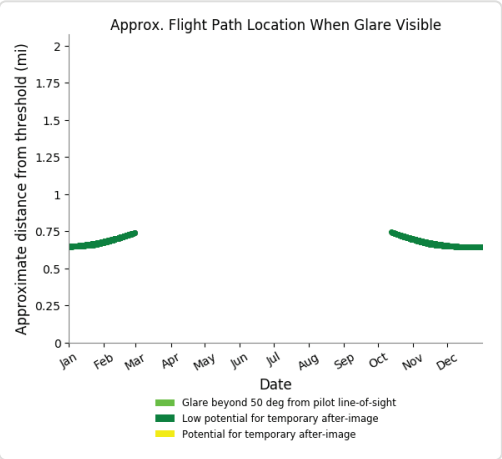
Flight Path: FP 25

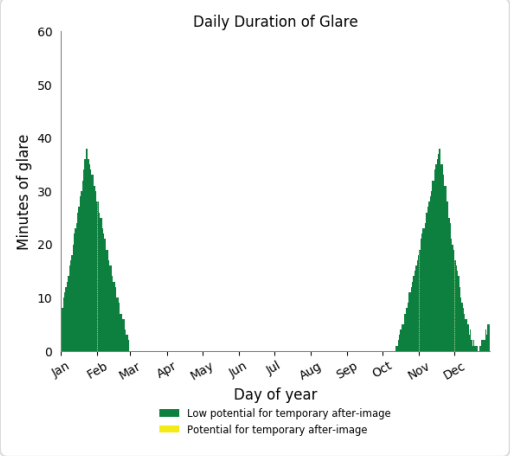
0 minutes of yellow glare
0 minutes of green glare

Flight Path: FP 7

0 minutes of yellow glare
2337 minutes of green glare







Point Receptor: OP 1

0 minutes of yellow glare
0 minutes of green glare

Point Receptor: OP 2

0 minutes of yellow glare
0 minutes of green glare

Point Receptor: OP 3

0 minutes of yellow glare
0 minutes of green glare

Point Receptor: OP 4

0 minutes of yellow glare
0 minutes of green glare

Results for: PV array South 2

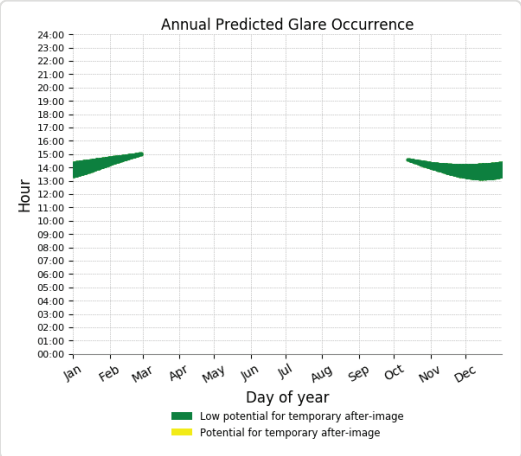
Receptor	Green Glare (min)	Yellow Glare (min)
FP 25	0	0
FP 7	4853	0
OP 1	0	0
OP 2	0	0
OP 3	0	0
OP 4	0	0

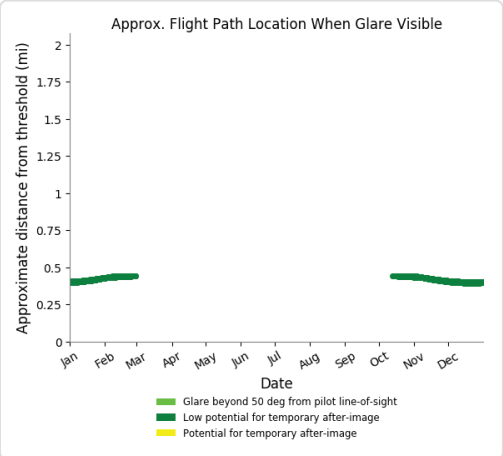
Flight Path: FP 25

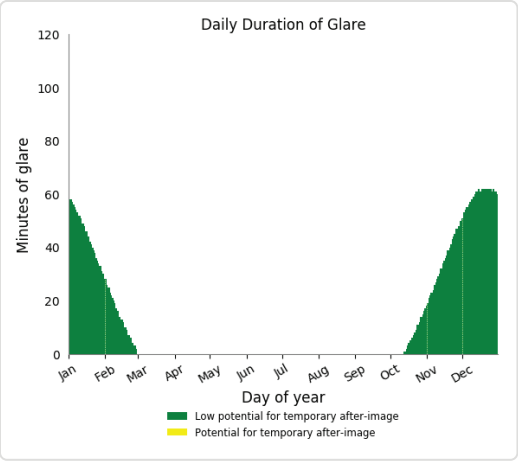
0 minutes of yellow glare
0 minutes of green glare

Flight Path: FP 7

0 minutes of yellow glare
4853 minutes of green glare







Point Receptor: OP 1

0 minutes of yellow glare
0 minutes of green glare

Point Receptor: OP 2

0 minutes of yellow glare
0 minutes of green glare

Point Receptor: OP 3

0 minutes of yellow glare
0 minutes of green glare

Point Receptor: OP 4

0 minutes of yellow glare
0 minutes of green glare

Results for: PV array South 3

Receptor	Green Glare (min)	Yellow Glare (min)
FP 25	0	0
FP 7	0	0
OP 1	0	0
OP 2	0	0
OP 3	0	0
OP 4	0	0

Flight Path: FP 25

0 minutes of yellow glare
0 minutes of green glare

Flight Path: FP 7

0 minutes of yellow glare
0 minutes of green glare

Point Receptor: OP 1

0 minutes of yellow glare
0 minutes of green glare

Point Receptor: OP 2

0 minutes of yellow glare
0 minutes of green glare

Point Receptor: OP 3

0 minutes of yellow glare
0 minutes of green glare

Point Receptor: OP 4

0 minutes of yellow glare
0 minutes of green glare

Results for: PV array South 4

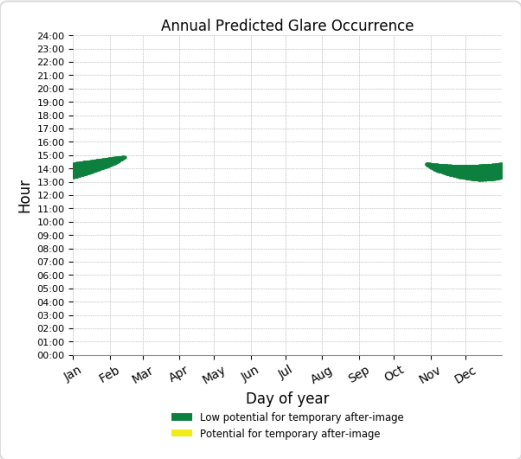
Receptor	Green Glare (min)	Yellow Glare (min)
FP 25	0	0
FP 7	4513	0
OP 1	0	0
OP 2	0	0
OP 3	0	0
OP 4	0	0

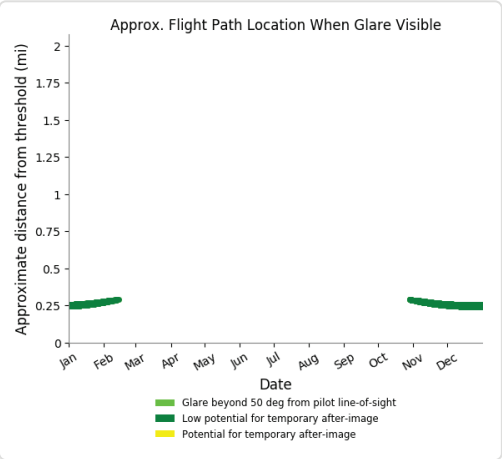
Flight Path: FP 25

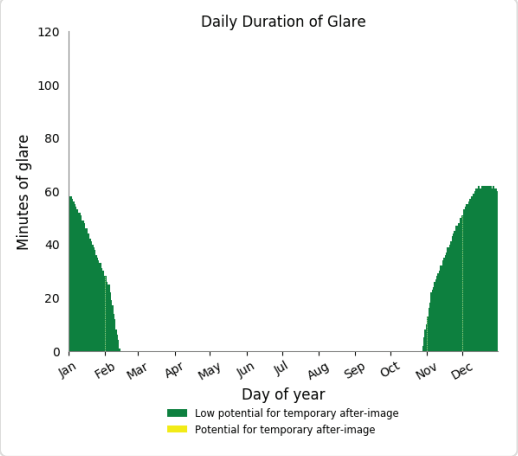
0 minutes of yellow glare
0 minutes of green glare

Flight Path: FP 7

0 minutes of yellow glare
4513 minutes of green glare







Point Receptor: OP 1

0 minutes of yellow glare
0 minutes of green glare

Point Receptor: OP 2

0 minutes of yellow glare
0 minutes of green glare

Point Receptor: OP 3

0 minutes of yellow glare
0 minutes of green glare

Point Receptor: OP 4

0 minutes of yellow glare
0 minutes of green glare

Results for: PV array South Addition North

Receptor	Green Glare (min)	Yellow Glare (min)
FP 25	0	0
FP 7	0	0
OP 1	0	0
OP 2	0	0
OP 3	0	0
OP 4	0	0

Flight Path: FP 25

0 minutes of yellow glare
0 minutes of green glare

Flight Path: FP 7

0 minutes of yellow glare
0 minutes of green glare

Point Receptor: OP 1

0 minutes of yellow glare
0 minutes of green glare

Point Receptor: OP 2

0 minutes of yellow glare
0 minutes of green glare

Point Receptor: OP 3

0 minutes of yellow glare
0 minutes of green glare

Point Receptor: OP 4

0 minutes of yellow glare
0 minutes of green glare

Results for: PV array South Addition South

Receptor	Green Glare (min)	Yellow Glare (min)
FP 25	0	0
FP 7	0	0
OP 1	0	0
OP 2	0	0
OP 3	0	0
OP 4	0	0

Flight Path: FP 25

0 minutes of yellow glare
0 minutes of green glare

Flight Path: FP 7

0 minutes of yellow glare
0 minutes of green glare

Point Receptor: OP 1

0 minutes of yellow glare
0 minutes of green glare

Point Receptor: OP 2

0 minutes of yellow glare
0 minutes of green glare

Point Receptor: OP 3

0 minutes of yellow glare
0 minutes of green glare

Point Receptor: OP 4

0 minutes of yellow glare
0 minutes of green glare

Assumptions

FORGESOLAR GLARE ANALYSIS

Project: **JVR Solar**
Jacumba

Site configuration: **Carrizo Gorge Rd**
Analysis conducted by Andy Stephens (andy.stephens@powereng.com) at 21:40 on 01 Mar, 2018.

U.S. FAA 2013 Policy Adherence

The following table summarizes the policy adherence of the glare analysis based on the 2013 U.S. Federal Aviation Administration Interim Policy 78 FR 63276. This policy requires the following criteria be met for solar energy systems on airport property:

- No "yellow" glare (potential for after-image) for any flight path from threshold to 2 miles
- No glare of any kind for Air Traffic Control Tower(s) ("ATCT") at cab height.
- Default analysis and observer characteristics (see list below)

ForgeSolar does not represent or speak officially for the FAA and cannot approve or deny projects. Results are informational only.

COMPONENT	STATUS	DESCRIPTION
Analysis parameters	PASS	Analysis time interval and eye characteristics used are acceptable
Flight path(s)	N/A	No flight paths analyzed
ATCT(s)	N/A	No ATCT receptors designated

Default glare analysis and observer eye characteristics are as follows:

- Analysis time interval: 1 minute
- Ocular transmission coefficient: 0.5
- Pupil diameter: 0.002 meters
- Eye focal length: 0.017 meters
- Sun subtended angle: 9.3 milliradians

FAA Policy 78 FR 63276 can be read at https://www.federalregister.gov/d/2013-24729

Discrete Observation Receptors

Name	ID	Latitude (°)	Longitude (°)	Elevation (ft)	Height (ft)
OP 1	1	32.636234	-116.165950	2846.95	8.00
OP 2	2	32.635466	-116.166283	2840.41	8.00
OP 3	3	32.634834	-116.165521	2835.00	8.00
OP 4	4	32.634174	-116.165070	2832.23	8.00
OP 5	5	32.633533	-116.164598	2832.05	8.00
OP 6	6	32.632946	-116.164233	2833.37	8.00
OP 7	7	32.632232	-116.163890	2832.68	8.00
OP 8	8	32.631464	-116.163547	2828.76	8.00
OP 9	9	32.630768	-116.163332	2824.52	8.00
OP 10	10	32.629955	-116.163203	2820.08	8.00
OP 11	11	32.629151	-116.163096	2818.86	8.00
OP 12	12	32.628103	-116.162796	2828.87	8.00
OP 13	13	32.627217	-116.162131	2842.08	8.00
OP 14	14	32.626332	-116.160843	2855.12	8.00
OP 15	15	32.625482	-116.159792	2862.16	8.00
OP 16	16	32.624599	-116.159360	2861.31	8.00
OP 17	17	32.623469	-116.159242	2860.02	8.00
OP 18	18	32.622258	-116.159102	2858.74	8.00
OP 19	19	32.621083	-116.158341	2856.70	8.00

GLARE ANALYSIS RESULTS

Summary of Glare

PV Array Name	Tilt (°)	Orient (°)	"Green" Glare min	"Yellow" Glare min	Energy kWh
PV array Mid	SA tracking	SA tracking	0	0	-
PV array North	SA tracking	SA tracking	0	0	-
PV array South 1	SA tracking	SA tracking	0	0	-
PV array South 2	SA tracking	SA tracking	0	0	-
PV array South 3	SA tracking	SA tracking	0	0	-
PV array South 4	SA tracking	SA tracking	0	0	-
PV array South Addition North	SA tracking	SA tracking	0	0	-
PV array South Addition South	SA tracking	SA tracking	0	0	-

Total annual glare received by each receptor

Receptor	Annual Green Glare (min)	Annual Yellow Glare (min)
1	0	0
2	0	0
3	0	0
4	0	0
5	0	0
6	0	0
7	0	0
8	0	0
9	0	0
10	0	0
11	0	0
12	0	0
13	0	0
14	0	0

FORGESOLAR GLARE ANALYSIS

Project: **JVR Solar**
Jacumba

Site configuration: **JVR Hwy 80**
Analysis conducted by Andy Stephens (andy.stephens@powereng.com) at 21:08 on 01 Mar, 2018.

U.S. FAA 2013 Policy Adherence

The following table summarizes the policy adherence of the glare analysis based on the 2013 U.S. Federal Aviation Administration Interim Policy 78 FR 63276. This policy requires the following criteria be met for solar energy systems on airport property:

- No "yellow" glare (potential for after-image) for any flight path from threshold to 2 miles
- No glare of any kind for Air Traffic Control Tower(s) ("ATCT") at cab height.
- Default analysis and observer characteristics (see list below)

ForgeSolar does not represent or speak officially for the FAA and cannot approve or deny projects. Results are informational only.

COMPONENT	STATUS	DESCRIPTION
Analysis parameters	PASS	Analysis time interval and eye characteristics used are acceptable
Flight path(s)	N/A	No flight paths analyzed
ATCT(s)	N/A	No ATCT receptors designated

Default glare analysis and observer eye characteristics are as follows:

- Analysis time interval: 1 minute
- Ocular transmission coefficient: 0.5
- Pupil diameter: 0.002 meters
- Eye focal length: 0.017 meters
- Sun subtended angle: 9.3 milliradians

FAA Policy 78 FR 63276 can be read at https://www.federalregister.gov/d/2013-24729

Discrete Observation Receptors

Name	ID	Latitude (°)	Longitude (°)	Elevation (ft)	Height (ft)
OP 1	1	32.613488	-116.196683	2865.70	8.00
OP 2	2	32.614735	-116.194816	2860.28	8.00
OP 3	3	32.615901	-116.192831	2848.83	8.00
OP 4	4	32.616859	-116.190986	2829.44	8.00
OP 5	5	32.617690	-116.188851	2819.72	8.00
OP 6	6	32.617699	-116.186834	2809.95	8.00
OP 7	7	32.617699	-116.184956	2802.90	8.00
OP 8	8	32.617690	-116.182961	2798.93	8.00
OP 9	9	32.617645	-116.180643	2798.17	8.00
OP 10	10	32.617654	-116.178283	2797.38	8.00
OP 11	11	32.617636	-116.175708	2795.24	8.00
OP 12	12	32.617618	-116.172961	2796.87	8.00
OP 13	13	32.617609	-116.170183	2798.44	8.00
OP 14	14	32.617600	-116.167382	2801.01	8.00
OP 15	15	32.618115	-116.164454	2813.48	8.00
OP 16	16	32.619498	-116.161525	2828.35	8.00
OP 17	17	32.621070	-116.158370	2856.41	8.00
OP 18	18	32.622353	-116.155581	2880.02	8.00
OP 19	19	32.623708	-116.152716	2916.12	8.00
OP 20	20	32.624919	-116.150109	2954.56	8.00
OP 21	21	32.625616	-116.147489	2963.70	8.00

GLARE ANALYSIS RESULTS

Summary of Glare

PV Array Name	Tilt (°)	Orient (°)	"Green" Glare min	"Yellow" Glare min	Energy kWh
PV array Mid	SA tracking	SA tracking	0	0	-
PV array North	SA tracking	SA tracking	0	0	-
PV array South 1	SA tracking	SA tracking	0	0	-
PV array South 2	SA tracking	SA tracking	0	0	-
PV array South 3	SA tracking	SA tracking	0	0	-
PV array South 4	SA tracking	SA tracking	0	0	-
PV array South Addition North	SA tracking	SA tracking	0	0	-
PV array South Addition South	SA tracking	SA tracking	0	0	-

Total annual glare received by each receptor

Receptor	Annual Green Glare (min)	Annual Yellow Glare (min)
1	0	0
2	0	0
3	0	0
4	0	0
5	0	0
6	0	0
7	0	0
8	0	0
9	0	0
10	0	0
11	0	0
12	0	0
13	0	0
14	0	0

FORGESOLAR GLARE ANALYSIS

Project: **JVR Solar**
Jacumba

Site configuration: **JVR I-8**
Analysis conducted by Andy Stephens (andy.stephens@powereng.com) at 20:50 on 01 Mar, 2018.

U.S. FAA 2013 Policy Adherence

The following table summarizes the policy adherence of the glare analysis based on the 2013 U.S. Federal Aviation Administration Interim Policy 78 FR 63276. This policy requires the following criteria be met for solar energy systems on airport property:

- No "yellow" glare (potential for after-image) for any flight path from threshold to 2 miles
- No glare of any kind for Air Traffic Control Tower(s) ("ATCT") at cab height.
- Default analysis and observer characteristics (see list below)

ForgeSolar does not represent or speak officially for the FAA and cannot approve or deny projects. Results are informational only.

COMPONENT	STATUS	DESCRIPTION
Analysis parameters	PASS	Analysis time interval and eye characteristics used are acceptable
Flight path(s)	N/A	No flight paths analyzed
ATCT(s)	N/A	No ATCT receptors designated

Default glare analysis and observer eye characteristics are as follows:

- Analysis time interval: 1 minute
- Ocular transmission coefficient: 0.5
- Pupil diameter: 0.002 meters
- Eye focal length: 0.017 meters
- Sun subtended angle: 9.3 milliradians

FAA Policy 78 FR 63276 can be read at https://www.federalregister.gov/d/2013-24729

Discrete Observation Receptors

Name	ID	Latitude (°)	Longitude (°)	Elevation (ft)	Height (ft)
OP 1	1	32.648052	-116.191120	2716.24	8.00
OP 2	2	32.646711	-116.187532	2737.95	8.00
OP 3	3	32.645121	-116.183176	2755.47	8.00
OP 4	4	32.643613	-116.179152	2760.31	8.00
OP 5	5	32.641661	-116.174947	2781.65	8.00
OP 6	6	32.639357	-116.171696	2809.32	8.00
OP 7	7	32.637596	-116.169121	2833.09	8.00
OP 8	8	32.636222	-116.165935	2846.54	8.00
OP 9	9	32.635572	-116.162394	2899.36	8.00
OP 10	10	32.635147	-116.158961	2931.75	8.00
OP 11	11	32.634641	-116.155067	2968.00	8.00
OP 12	12	32.634171	-116.151301	3002.92	8.00
OP 13	13	32.633936	-116.147428	3039.48	8.00
OP 14	14	32.634297	-116.143848	3070.93	8.00
OP 15	15	32.000000	-116.194638	3398.35	8.00

GLARE ANALYSIS RESULTS

Summary of Glare

PV Array Name	Tilt (°)	Orient (°)	"Green" Glare min	"Yellow" Glare min	Energy kWh
PV array Mid	SA tracking	SA tracking	0	0	-
PV array North	SA tracking	SA tracking	0	0	-
PV array South 1	SA tracking	SA tracking	0	0	-
PV array South 2	SA tracking	SA tracking	0	0	-
PV array South 3	SA tracking	SA tracking	0	0	-
PV array South 4	SA tracking	SA tracking	0	0	-
PV array South Addition North	SA tracking	SA tracking	0	0	-
PV array South Addition South	SA tracking	SA tracking	0	0	-

Total annual glare received by each receptor

FORGESOLAR GLARE ANALYSIS

Project: **JVR Solar**
Jacumba

Site configuration: **Residential**
Analysis conducted by Andy Stephens (andy.stephens@powereng.com) at 16:13 on 02 Mar, 2018.

U.S. FAA 2013 Policy Adherence

The following table summarizes the policy adherence of the glare analysis based on the 2013 U.S. Federal Aviation Administration Interim Policy 78 FR 63276. This policy requires the following criteria be met for solar energy systems on airport property:

- No "yellow" glare (potential for after-image) for any flight path from threshold to 2 miles
- No glare of any kind for Air Traffic Control Tower(s) ("ATCT") at cab height.
- Default analysis and observer characteristics (see list below)

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COMPONENT	STATUS	DESCRIPTION
Analysis parameters	PASS	Analysis time interval and eye characteristics used are acceptable
Flight path(s)	N/A	No flight paths analyzed
ATCT(s)	N/A	No ATCT receptors designated

Default glare analysis and observer eye characteristics are as follows:

- Analysis time interval: 1 minute
- Ocular transmission coefficient: 0.5
- Pupil diameter: 0.002 meters
- Eye focal length: 0.017 meters
- Sun subtended angle: 9.3 milliradians

FAA Policy 78 FR 63276 can be read at https://www.federalregister.gov/d/2013-24729

Discrete Observation Receptors

Name	ID	Latitude (°)	Longitude (°)	Elevation (ft)	Height (ft)
OP 1	1	32.621682	-116.192209	2845.42	10.00
OP 2	2	32.621092	-116.189717	2814.75	10.00
OP 3	3	32.621087	-116.188553	2807.83	10.00
OP 4	4	32.621273	-116.187121	2804.33	10.00
OP 5	5	32.621318	-116.185206	2797.11	10.00
OP 6	6	32.621246	-116.184583	2795.02	10.00
OP 7	7	32.621313	-116.183172	2791.52	10.00
OP 8	8	32.620654	-116.184283	2795.06	10.00
OP 9	9	32.620243	-116.184015	2794.76	10.00
OP 10	10	32.619592	-116.183666	2794.08	10.00
OP 11	11	32.618948	-116.183151	2794.49	10.00
OP 12	12	32.618365	-116.183274	2796.07	10.00
OP 13	13	32.617891	-116.183206	2796.78	10.00
OP 14	14	32.617268	-116.185180	2805.85	10.00
OP 15	15	32.617295	-116.187101	2811.74	10.00
OP 16	16	32.616091	-116.185606	2807.98	10.00
OP 17	17	32.616321	-116.186274	2810.14	10.00
OP 18	18	32.613919	-116.187247	2818.97	10.00
OP 19	19	32.613808	-116.187896	2842.17	10.00
OP 20	20	32.613232	-116.187757	2849.26	10.00
OP 21	21	32.612342	-116.187974	2859.57	10.00
OP 22	22	32.617246	-116.178648	2798.76	10.00
OP 23	23	32.617331	-116.177895	2797.82	10.00
OP 24	24	32.617221	-116.165173	2808.34	10.00
OP 25	25	32.617996	-116.165546	2809.43	10.00
OP 26	26	32.618482	-116.165063	2820.01	10.00
OP 27	27	32.620935	-116.160178	2837.94	10.00
OP 28	28	32.619932	-116.159078	2851.55	10.00
OP 29	29	32.635272	-116.166820	2842.03	10.00
OP 30	30	32.634902	-116.166147	2840.62	10.00
OP 31	31	32.614217	-116.189708	2886.51	10.00
OP 32	32	32.613872	-116.188521	2874.03	8.00
OP 33	33	32.613036	-116.188226	2863.25	8.00
OP 34	34	32.613965	-116.190211	2870.59	8.00
OP 35	35	32.617914	-116.184726	2802.32	8.00
OP 36	36	32.617810	-116.183508	2798.26	8.00

GLARE ANALYSIS RESULTS

Summary of Glare

PV Array Name	Tilt (°)	Orient (°)	"Green" Glare min	"Yellow" Glare min	Energy kWh
PV array South 2	SA tracking	SA tracking	0	0	-
PV array South 3	SA tracking	SA tracking	0	0	-
PV array South 4	SA tracking	SA tracking	0	0	-
PV array South Addition North	SA tracking	SA tracking	0	0	-
PV array South Addition South	SA tracking	SA tracking	0	0	-

Total annual glare received by each receptor

Receptor	Annual Green Glare (min)	Annual Yellow Glare (min)
1	0	0
2	0	0
3	0	0
4	0	0
5	0	0
6	0	0
7	0	0
8	0	0
9	0	0
10	0	0
11	0	0
12	0	0
13	0	0
14	0	0
15	0	0
16	0	0
17	0	0
18	0	0
19	0	0
20	0	0

"Green" glare is glare with low potential to cause an after-image (flash blindness) when observed prior to a typical blink response time.
"Yellow" glare is glare with potential to cause an after-image (flash blindness) when observed prior to a typical blink response time.
Times associated with glare are denoted in Standard time. For Daylight Savings, add one hour.
Glare analyses do not account for physical obstructions between reflectors and receptors. This includes buildings, tree cover and geographic obstructions.
The glare hazard determination relies on several approximations including observer eye characteristics, angle of view, and typical blink response time. Actual values may differ.
Hazard zone boundaries shown in the Glare Hazard plot are an approximation and visual aid based on aggregated research data. Actual ocular impact outcomes encompass a continuous, not discrete, spectrum.

APPENDIX B 78 FR 63276

Research and Innovative Technology Administration

Aylward, Anne D.; Brecht-Clark, Jan M.; Farley, Audrey L.; Hu, Patricia S.; Ishihara, David S.; Johns, Robert C.; Lang, Steven R.; Partridge, Ellen L.; Schmitt, Rolf R.; Womack, Kevin C.

Saint Lawrence Seaway Development Corporation

Middlebrook, Craig H.; Pisani, Salvatore L.

[FR Doc. 2013–24813 Filed 10–22–13; 8:45 am]

BILLING CODE 4910–9X–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

Interim Policy, FAA Review of Solar Energy System Projects on Federally Obligated Airports

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of interim policy; opportunity to comment.

SUMMARY: This notice establishes interim FAA policy for proposals by sponsors of federally obligated airports to construct solar energy systems on airport property. FAA is adopting an interim policy because it is in the public interest to enhance safety by clarifying and adding standards for measuring ocular impact of proposed solar energy systems which are effective upon publication. FAA will consider comments and make appropriate modifications before issuing a final policy. The policy applies to any proposed on-airport solar energy system that has not received from the FAA either an unconditional airport layout plan approval or a ''no objection'' finding on a Notice of Proposed Construction or Alteration Form 7460–1.

DATES: The effective date of this interim policy is October 23, 2013.

Comments must be received by November 22, 2013.

ADDRESSES: You can get an electronic copy of the interim policy and the comment form on the FAA Airports Web site at *http://www.faa.gov/airports/environmental/.*

You can submit comments using the Comments Matrix, using any of the following methods:

Electronic Submittal to the FAA: Go to *http://www.faa.gov/airports/environmental/* and follow the instructions for sending your comments electronically.

Mail: FAA Office of Airports, Office of Airport Planning and Programming, Routing Symbol APP–400, 800 Independence Avenue SW., Room 615, Washington, DC 20591. Please send two copies.

Fax: 1–202–267–5302.

Hand Delivery: To FAA Office of Airports, Office of Airport Planning and Programming, Routing Symbol APP–400, 800 Independence Avenue SW., Room 615, Washington, DC 20591; between 9 a.m. and 4 p.m., Monday through Friday, except Federal holidays. Please provide two copies.

For more information on the notice and comment process, see the **SUPPLEMENTARY INFORMATION** section of this document.

Privacy: We will post all comments we receive, without change, to *http://www.faa.gov/airports/environmental/*, including any personal information you provide.

Comments Received: To read comments received, go to *http://www.faa.gov/airports/environmental/* at any time.

FOR FURTHER INFORMATION CONTACT: Ralph Thompson, Manager, Airport Planning and Environmental Division, APP–400, Federal Aviation Administration, 800 Independence Ave. SW., Washington, DC 20591, telephone (202) 267–3263; facsimile (202) 267–5257; email: *ralph.thompson@faa.gov.*

SUPPLEMENTARY INFORMATION: The FAA invites interested persons to join in this notice and comment process by filing written comments, data, or views. The most helpful comments reference a specific portion of the proposal, explain the reason for any recommended change, and include supporting data.

Availability of Documents

You can get an electronic copy of this interim policy by visiting the FAA's Airports Web page at *http://www.faa.gov/airports/environmental/.*

Authority for the Policy

This notice is published under the authority described in Subtitle VII, part B, chapter 471, section 47122 of title 49 United States Code.

Background

There is growing interest in installing solar photovoltaic (PV) and solar hot water (SHW) systems on airports. While solar PV or SHW systems (henceforth referred to as solar energy systems) are designed to absorb solar energy to maximize electrical energy production or the heating of water, in certain situations the glass surfaces of the solar energy systems can reflect sunlight and produce glint (a momentary flash of bright light) and glare (a continuous source of bright light). In conjunction with the United States Department of Energy (DOE), the FAA has determined that glint and glare from solar energy systems could result in an ocular impact to pilots and/or air traffic control (ATC) facilities and compromise the safety of the air transportation system. While the FAA supports solar energy systems on airports, the FAA seeks to ensure safety by eliminating the potential for ocular impact to pilots and/or air traffic control facilities due to glare from such projects.

The FAA established a cross-organizational working group in 2012, to establish a standard for measuring glint and glare, and clear thresholds for when glint and glare would impact aviation safety. The standards that this working group developed are set forth in this notice.

A sponsor of a federally-obligated airport must request FAA review and approval to depict certain proposed solar installations (e.g., ground-based installations and collocated installations that increase the footprint of the collocated building or structure) on its airport layout plan (ALP), before construction begins.[1] A sponsor of a federally-obligated airport must notify the FAA of its intent to construct any solar installation [2] by filing FAA Form 7460–1, ''Notice of Proposed Construction or Alteration'' under 14 CFR Part 77 for a Non-Rulemaking case (NRA) [3] [4]. This includes the intent to permit airport tenants, including Federal agencies, to build such

[1] FAA Technical Guidance for Evaluating Selected Solar Technologies on Airports, Section 2.3.5, states that ''solar installations of any size, located on an airport, that are not collocated on an existing structure (i.e., roof of an existing building) and require a new footprint, need to be shown on the Airport Layout Plan (ALP). Collocated solar installations need to be shown on the ALP only if these installations substantially change the footprint of the collocated building or structure. *Available at: http://www.faa.gov/airports/environmental/policy_guidance/media/airport_solar_guide_print.pdf.* Title 49 of the United States Code (USC), sec. 47107(a), requires, in part, a current ALP approved by the FAA prior to the approval of an airport development project. See Grant Assurance No. 29, AC No. 150/5070–6B, and FAA Order No. 5100.38.

[2] Any solar installation means any ground-based solar energy installation and those solar energy installations collocated with a building or structure (i.e., rooftop installations).

[3] FAA Technical Guidance for Evaluating Selected Solar Technologies on Airports Section 3.1 reads in part ''All solar projects at airports must submit to FAA a Notice of Proposed Construction Form 7460 . . .''. This section further states ''Even if the project will be roof mounted . . . the sponsor must still submit a case'' [i.e., file a Form 7460–1].

[4] The requirements of this policy are not mandatory for a proposed solar installation that is not on an airport and for which a form 7460–1 is filed under part 77 and is studied under the Obstruction Evaluation Program. However, the FAA urges proponents of off-airport solar-installations to voluntarily implement the provisions in this policy.

installations. The sponsor's obligation to obtain FAA review and approval to depict certain proposed solar energy installation projects at an airport is found in 49 U.S.C. 47107(a)(16) and Sponsor Grant Assurance 29, ''Airport Layout Plan.'' Under these latter provisions, the sponsor may not make or permit any changes or alterations in the airport or any of its facilities which are not in conformity with the ALP as approved by the FAA and which might, in the opinion of the FAA, adversely affect the safety, utility or efficiency of the airport.

Airport sponsors and project proponents must comply with the policies and procedures in this notice to demonstrate to the FAA that a proposed solar energy system will not result in an ocular impact that compromises the safety of the air transportation system. This process enables the FAA to approve amendment of the ALP to depict certain solar energy projects or issue a ''no objection'' finding to a filed 7460–1 form. The FAA expects to continue to update these policies and procedures as part of an iterative process as new information and technologies become available.

Solar energy systems located on an airport that is not federally-obligated or located outside the property of a federally-obligated airport are not subject to this policy. Proponents of solar energy systems located off-airport property or on non-federally-obligated airports are strongly encouraged to consider the requirements of this policy when siting such systems.

This interim policy clarifies and adds standards for measurement of glint or glare presented in the 2010 Technical Guidance document. Later this year the FAA plans to publish an update to the ''Technical Guidance for Evaluating Selected Solar Technologies on Airports,'' (hereinafter referred to as ''Technical Guidance'') dated November 2010. This update to the technical guidance will include the standards for measuring glint and glare outlined in this notice. It will also provide enhanced criteria to ensure the proper siting of a solar energy installation to eliminate the potential for harmful glare to pilots or air traffic control facilities.

In advance of the planned update, as part of this Notice, we are clarifying one aspect of the Technical Guidance relating to airport sponsor and FAA responsibilities for evaluating the potential for solar energy systems installed on airports to either block, reflect, or disrupt radar signals, NAVAIDS, and other equipment required for safe aviation operations. Section 3.1 of the Technical Guidance, entitled ''Airspace Review,'' correctly states that this role is exclusively the responsibility of FAA Technical Operations (Tech Ops). However subsection 3.1.3, ''System Interference,'' states: ''[s]tudies conducted during project siting should identify the location of radar transmission and receiving facilities and other NAVAIDS, and determine locations that would not be suitable for structures based on their potential to either block, reflect, or disrupt radar signals.''

Reading the two sections together, what is meant is that the airport sponsor, in siting a proposed solar energy system, is responsible for limiting the potential for inference with communication, navigation, and surveillance (CNS) facilities. The sponsor should do so by ensuring that solar energy systems remain clear of the critical areas surrounding CNS facilities. FAA Advisory Circular (AC) 5300–13, ''Airport Design,'' Chapter 6, defines the critical areas for common CNS facilities located on an airport. Sponsors may need to coordinate with FAA Technical Operations concerning CNS facilities not in AC 5300–13. As stated in Section 3.1, the FAA is responsible for evaluating if there are any impacts to CNS facilities. The FAA will conduct this review after the Form 7460–1 is filed for the construction of a new solar energy system installation on an airport. In summary, airport sponsors do not need to conduct studies on their own to determine impacts to CNS facilities when siting a solar energy system on airport. Section 3.1.3 will be revised accordingly in the next version of the Technical Guidance.

Interim Policy Statement

The following sets forth the standards for measuring ocular impact, the required analysis tool, and the obligations of the Airport Sponsor when a solar energy system is proposed for development on a federally-obligated airport.

The FAA is adopting an interim policy because it is in the public interest to enhance safety by clarifying and adding standards for measuring ocular impact of proposed solar energy systems. FAA will consider comments and make appropriate modifications before issuing a final policy in a future **Federal Register** Notice. The policy applies to any proposed solar energy system that has not received unconditional airport layout plan approval (ALP) or a ''no objection'' from the FAA on a filed 7460–1, Notice of Proposed Construction or Alteration.

Standard for Measuring Ocular Impact

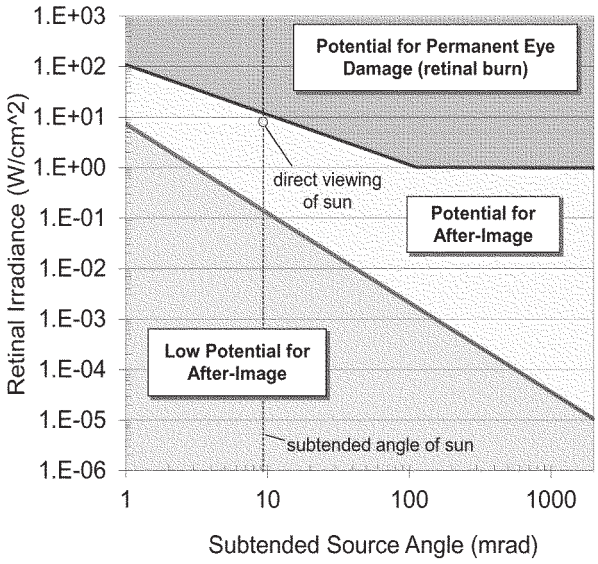
FAA adopts the *Solar Glare Hazard Analysis Plot* shown in Figure 1 below as the standard for measuring the ocular impact of any proposed solar energy system on a federally-obligated airport. To obtain FAA approval to revise an airport layout plan to depict a solar installation and/or a ''no objection'' to a Notice of Proposed Construction Form 7460–1, the airport sponsor will be required to demonstrate that the proposed solar energy system meets the following standards:

1. No potential for glint or glare in the existing or planned Airport Traffic Control Tower (ATCT) cab, and

2. No potential for glare or ''low potential for after-image'' (shown in green in Figure 1) along the final approach path for any existing landing threshold or future landing thresholds (including any planned interim phases of the landing thresholds) as shown on the current FAA-approved Airport Layout Plan (ALP). The final approach path is defined as two (2) miles from fifty (50) feet above the landing threshold using a standard three (3) degree glidepath.

Ocular impact must be analyzed over the entire calendar year in one (1) minute intervals from when the sun rises above the horizon until the sun sets below the horizon.

Figure 1



Solar Glare Ocular Hazard Plot: The potential ocular hazard from solar glare is a function of retinal irradiance and the subtended angle (size/distance) of the glare source. It should be noted that the ratio of spectrally weighted solar illuminance to solar irradiance at the earth's surface yields a conversion factor of ~100 lumens/W. Plot adapted from Ho et al., 2011.

Chart References: Ho, C.K., C.M. Ghanbari, and R.B. Diver, 2011, Methodology to Assess Potential Glint and Glare Hazards from Concentrating Solar Power Plants: Analytical Models and Experimental Validation, J. Solar Energy Engineering, August 2011, Vol. 133, 031021-1 – 031021-9.

Tool To Assess Ocular Impact

In cooperation with the DOE, the FAA is making available free-of-charge the *Solar Glare Hazard Analysis Tool* (SGHAT). The SGHAT was designed to determine whether a proposed solar energy project would result in the potential for ocular impact as depicted on the *Solar Glare Hazard Analysis Plot* shown above.

The SGHAT employs an interactive Google map where the user can quickly locate a site, draw an outline of the proposed solar energy system, and specify observer locations (Airport Traffic Control Tower cab) and final approach paths. Latitude, longitude, and elevation are automatically recorded through the Google interface, providing necessary information for sun position and vector calculations. Additional information regarding the orientation and tilt of the solar energy panels, reflectance, environment, and ocular factors are entered by the user.

If glare is found, the tool calculates the retinal irradiance and subtended source angle (size/distance) of the glare source to predict potential ocular hazards ranging from temporary after-image to retinal burn. The results are presented in a simple, easy-to-interpret plot that specifies when glare will occur throughout the year, with color codes indicating the potential ocular hazard. The tool can also predict relative energy production while evaluating alternative designs, layouts, and locations to identify configurations that maximize energy production while mitigating the impacts of glare.

Users must first register for the use of the tool at this web address: *www.sandia.gov/glare.*

Required Use of the SGHAT

As of the date of publication of this interim policy, the FAA requires the use of the SGHAT to demonstrate compliance with the standards for measuring ocular impact stated above for any proposed solar energy system located on a federally-obligated airport. The SGHAT is a validated tool specifically designed to measure glare according to the *Solar Glare Hazard Analysis Plot.* All sponsors of federally-obligated airports who propose to install or to permit others to install solar energy systems on the airport must attach the SGHAT report, outlining solar panel glare and ocular impact, for each point of measurement to the Notice of Proposed Construction Form 7460–1. The FAA will consider the use of alternative tools or methods on a case-by-case basis. However, the FAA must approve the use of an alternative tool or method prior to an airport sponsor seeking approval for any proposed on-airport solar energy system. The alternative tool or method must evaluate ocular impact in accordance with the *Solar Glare Hazard Analysis Plot.*

Please contact the Office of Airport Planning and Programming, Airport Planning and Environmental Division, APP–400, for more information on the validation process for alternative tools or methods.

Airport sponsor obligations have been discussed above under Background. We caution airport sponsors that under preexisting airport grant compliance policy, failure to seek FAA review of a solar installation prior to construction could trigger possible compliance action under 14 CFR Part 16, ''Rules of Practice for Federally-Assisted Airport Enforcement Proceedings.'' Moreover, if a solar installation creates glare that interferes with aviation safety, the FAA could require the airport to pay for the elimination of solar glare by removing or relocating the solar facility.

Issued in Washington, DC, on September 27, 2013.

Benito De Leon,

Director, Office of Airport Planning and Programming.

[FR Doc. 2013–24729 Filed 10–22–13; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

Third Meeting: RTCA Tactical Operations Committee (TOC)

AGENCY: Federal Aviation Administration (FAA), U.S. Department of Transportation (DOT)

ACTION: Third Meeting Notice of RTCA Tactical Operations Committee.

SUMMARY: The FAA is issuing this notice to advise the public of the third meeting of the RTCA Tactical Operations Committee.

DATES: The meeting will be held November 7, 2013 from 9 a.m.–3 p.m.

ADDRESSES: The meeting will be held at RTCA Headquarters, 1150 18th Street NW., Suite 910, Washington, DC 20036.

FOR FURTHER INFORMATION CONTACT: The RTCA Secretariat, 1150 18th Street NW., Suite 910, Washington, DC 20036, or by telephone at (202) 833–9339, fax at (202) 833–9434, or Web site *http://www.rtca.org.* Andy Cebula, NAC Secretary can also be contacted at *acebula@rtca.org* or 202–330–0652.

SUPPLEMENTARY INFORMATION: Pursuant to section 10(a)(2) of the Federal Advisory Committee Act (Pub. L. No. 92–463, 5 U.S.C., App.), notice is hereby given for a meeting of the Tactical Operations Committee (TOC). The agenda will include the following:

November 19, 2013

- Opening of Meeting/Introduction of TOC Members
- Official Statement of Designated Federal Official
- Approval of July 23, 2013 Meeting Summary
- FAA Report
- Notice to Airmen (NOTAM) Activity Prioritization
- Regional Task Groups (RTGs)
- Reports on current activities underway by Regional Task Groups: Eastern, Central, Western
- VHF Omni-directional Range (VOR) Minimum Operating Network
- New Tasking: Obstacle Clearance
- Anticipated Issues for TOC consideration and action at the next meeting
- Other Business
- Adjourn

Attendance is open to the interested public but limited to space availability. With the approval of the chairman, members of the public may present oral statements at the meeting. Persons wishing to present statements or obtain information should contact the person listed in the **FOR FURTHER INFORMATION CONTACT** section. Members of the public may present a written statement to the committee at any time.

Issued in Washington, DC, on October 18, 2013.

Edith V. Parish,

Senior Advisor, Mission Support Services, Air Traffic Organization, Federal Aviation Administration.

[FR Doc. 2013–24968 Filed 10–22–13; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

Public Notice for Waiver of Aeronautical Land-Use Assurance

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of intent of waiver with respect to land; French Lick Airport; French Lick, Indiana.

SUMMARY: The FAA is considering a proposal to change a portion of airport land from aeronautical use to non-aeronautical use and to authorize the sale of airport property located at French Lick Airport, French Lick, Indiana. The aforementioned land is not needed for aeronautical use. The proposal consists of 18.606 acres located in the southern section of airport property which is not being used by the airport presently. The land is to be sold to Commissioners of Orange County for the construction of County Road CR 300 South/Airport Road to facilitate access to the airport.

DATES: Comments must be received on or before November 22, 2013.

ADDRESSES: Documents are available for review by appointment at the FAA Airports District Office, Azra Hussain, Program Manager, 2300 E. Devon Avenue, Des Plaines, Illinois 60018 Telephone: (847) 294–8252/Fax: (847) 294–7046 and Zachary D. Brown, French Lick Municipal Airport, 9764 West County Road 375 South, French Lick, Indiana, 47933.

Written comments on the Sponsor's request must be delivered or mailed to: Azra Hussain, Program Manager, Federal Aviation Administration, Airports District Office, 2300 E. Devon Avenue, Des Plaines, Illinois (847) 294–7046.

FOR FURTHER INFORMATION CONTACT: Azra Hussain, Program Manager, Federal Aviation Administration, Airports District Office, 2300 E. Devon Avenue, Des Plaines, Illinois 60018. Telephone Number: (847) 294–8252/FAX Number: (847) 294–7046.

SUPPLEMENTARY INFORMATION: In accordance with section 47107(h) of Title 49, United States Code, this notice is required to be published in the **Federal Register** 30 days before modifying the land-use assurance that requires the property to be used for an aeronautical purpose.

The subject land consists of two parcels. Parcel 1 (approx. 16.667 acres) was acquired through the Federal Aid to Airport Program dated July 28, 1963 and Parcel 2 (approx. 1.939 acres) was acquired by the sponsor as part of a larger parcel (approx. 9.97 acres) for the nominal sum of One Dollar and zero cents ($1.00) on April 19, 2010. The Commissioners of Orange County intend to purchase the property for a nominal sum of One Dollar and zero cents ($1.00) for the construction of County Road CR 300 South/Airport Road. Construction of the road will facilitate access to the airport. The aforementioned land is not needed for aeronautical use, as shown on the Airport Layout Plan. There are no impacts to the airport by allowing the airport to dispose of the property.

This notice announces that the FAA is considering the release of the subject airport property at French Lick Airport, French Lick, Indiana, subject to easements and covenants running with the land. Approval does not constitute a commitment by the FAA to financially assist in the disposal of the subject airport property nor a determination that all measures covered by the program are eligible for grant-in-aid funding from the FAA. The disposition of proceeds from the sale of the airport property will be in accordance with FAA's Policy and Procedures Concerning the Use of Airport Revenue, published in the **Federal Register** on February 16, 1999 (64 FR 7696).

Issued in Des Plaines, Illinois on September 30, 2013.

James Keefer,

Manager, Chicago Airports District Office, FAA, Great Lakes Region.

[FR Doc. 2013–24738 Filed 10–22–13; 8:45 am]

BILLING CODE 4910–13–P