# APPENDIX U VISUAL RESOURCES TECHNICAL REPORT

(see PDF files on enclosed CD)

# VISUAL RESOURCES TECHNICAL REPORT

# FOR THE DESERT QUARTZITE SOLAR PROJECT RIVERSIDE COUNTY, CALIFORNIA

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#### LIST OF ACRONYMS

AF Acre feet

AFY Acre feet per year

ALUC Airport Land Use Commission BLM Bureau of Land Management

CDCA California Desert Conservation Area (CDCA) Plan area

CO Carbon Dioxide

CRSS Colorado River Substation
EIR Environmental Impact Report
EIS Environmental Impact Statement

FLPMA Federal Land Policy and Management Act

FO Field Office GHG Greenhouse Gas

LTVA Midland Long-Term Visitor Center

MW Megawatt

NEPA National Environmental Policy Act

PEIS Programmatic EIS
POD Plan of Development
ROD Record of Decision (ROD)

ROW Right-of-Way

RPS Renewable Portfolio Standard

SB Senate Bill

SCE Southern California Edison

SEZ Riverside East Solar Energy Zone

Solar PEIS Solar Energy Development in Six Southwestern States PEIS

SLRU Sensitivity Level Rating Units SQRU Scenic Quality Rating Units VRI Visual Resource Inventory VRM Visual Resource Management

# SECTION 1.0 PROPOSED ACTION AND ALTERNATIVES

#### 1.1 INTRODUCTION

Desert Quartzite, LLC (Applicant) proposes to develop and construct a 300-megawatt (MW) alternating current photovoltaic solar facility known as the Desert Quartzite Solar Project (Project). The overall Project includes the solar generation facility, an on-site substation, and the generation-tie (gen-tie) line. The proposed Project is located in eastern Riverside County near Blythe, California. The proposed solar facility and the approximately 3-mile-long, 230-kilovolt (kV) gen-tie line interconnection to the existing Southern California Edison (SCE) Colorado River Substation (CRSS) are located primarily on lands administered by the U.S. Department of the Interior, Bureau of Land Management (BLM) (BLM CACA# 04937; 5,115 acres). The Project site also includes 160 acres of private land (APN 879-110-001). The overall Project site encompasses approximately 5,275 acres. The proposed solar facility would be constructed within an approximately 3,714-acre fenced portion of the overall Project site. The gen-tie line study corridor encompasses approximately 445 acres of BLM lands within the overall Project site. A vicinity map of the proposed Project (i.e., including BLM and privately-owned lands) is presented on Figure 1-1 and the proposed preliminary site layout is presented on Figure 1-2.

Site access will be via Interstate 10 (I-10) at the State Route (SR)-78 exit to SR-78 (south)/ Neighbours Boulevard to 16<sup>th</sup> Avenue/Seeley Avenue (west). Project construction is anticipated to require from approximately 25 to 48 months to complete and is expected to start in late 2016. This analysis is based on an assumed approximately 25-month construction timeframe, which is considered to be worst case for impact assessment purposes. The construction workforce is estimated to result in an average 450 (round trip) vehicle trips per day (21 working days per month), with a maximum of 810 (round trip) vehicle trips per day during peak construction. The workforce is expected to commute to the site from within an average distance of 35 miles from the Project site and is expected to arrive at the Project site by 7 a.m. and to depart at 5 p.m. each day (i.e., avoid 7–9 a.m. peak traffic period but not the 4–6 p.m. peak period); it is common that a fairly large portion of the workforce voluntarily carpools regularly. In addition to commute trips by construction workers, approximately 14,400 truck deliveries of equipment, materials, and fuel for on-site construction equipment are estimated to be required over the course of the construction period. Construction of the proposed Project is expected to require a total of up to 10 to 15 oversize loads for transformers and motor graders. Equipment, material, and fuel deliveries are planned to occur during non-peak traffic hours. Construction phase-related truck deliveries are estimated to require one-way distances (within the boundaries of the Mojave Desert Air Quality Management District) as follows: equipment and material deliveries at 30.5 miles; aggregate and concrete at 13 miles; and fuel at 10 miles.

Construction activities will include site preparation and grading, solar array foundation installation (which may include post driving), equipment installation, on-site substation and operations and maintenance building construction, gen-tie poles and conductor installation along the gen-tie route, equipment testing, and site cleanup and restoration. Construction of the proposed Project will require removal of vegetation and disturbance during site preparation within the 3,714-acre fenced portion of the site as well as along the gen-tie corridor. The operational workforce is anticipated to be 5 employees.

It is currently estimated that the maximum water usage for an approximate 25-month construction timeframe is 1,400 acre feet (AF) or approximately 700 AF per year on average. During construction, water will be needed primarily for dust control and soil compaction, with small amounts used for sanitary and other purposes. During operations, the Project will use no water directly for electricity generation. The operational phase of the Project is expected to require up to 38 AF per year (AFY) of water. The Project plans to utilize groundwater from either existing local well(s) or via installation of on-site groundwater wells. The Applicant is also considering trucking water to the Project site for at least the initial months of construction if an on-site water supply well(s) is not yet installed and functional. It is possible that trucking water to the Project site could be required for the entire length of construction which would potentially require up to approximately 57,000 water deliveries (assuming 8,000-gallon capacity water trucks). All water deliveries to the Project site would be required by the Applicant to occur during non-peak traffic hours. It is assumed that water deliveries would originate from a water supply source within 10 miles of the Project site.

The purpose of this study is to provide scientific and technical data regarding the existing visual resources within the study area and the proposed Project's potential to change the area's visual resources. The Project information supporting this analysis is based primarily on the Applicant's revised Desert Quartzite Solar Project Plan of Development (POD) submitted to the BLM in May 2014, as amended. The POD will continue to be updated by the Applicant to provide current and accurate Project information. If warranted, Applicant measures are proposed or recommended in this study to address adverse changes to visual resources as a result of the Project. This study is submitted to the BLM and Riverside County to support their independent review and evaluation of the environmental impacts of the Project pursuant to applicable Federal, State, and local laws. The POD is part of the BLM Right-of-Way (ROW) grant application process which for this Project includes preparation of an Environmental Impact Statement (EIS) in accordance with the National Environmental Policy Act (NEPA). The proposed Project is also expected to require a Conditional Use Permit from Riverside County, which will require compliance with the California Environmental Quality Act (e.g., Environmental Impact Report [EIR]). Therefore, it is currently planned that a joint EIS/EIR will be prepared by the BLM and Riverside County.

#### 1.2 PROJECT BACKGROUND

The fundamental purpose of the Project is to construct, operate, and eventually decommission a clean, renewable source of solar electricity that helps meet California's growing demand for power and helps fulfill national and State renewable energy and greenhouse gas (GHG) goals. Solar energy provides a sustainable, renewable source of power that helps reduce fossil fuel dependence and GHG emissions. The proposed Project will help California meet its Renewable Portfolio Standard (RPS) goal, which is currently 50 percent of electrical power retail sales by 2030 under Senate Bill (SB) 350. The Project supports Secretary of the Interior Salazar's Orders 3283 and 3285, which make developing renewable energy a top national priority. The Project will also help the State achieve the 2006 Global Warming Solutions Act (Assembly Bill [AB] 32) GHG reduction targets, which require California's GHG emissions to be reduced to 1990 levels by 2020. The Project would furthermore support the County's energy policy goal to contribute to California's long-term renewable energy development and GHG reduction goals.

When fully operational, the 300 MW Project would deliver over 1.5 billion kilowatt-hours of clean, renewable energy annually. This is equivalent to the amount of energy needed to serve over 90,000 California homes each year. When compared to the carbon dioxide (CO<sub>2</sub>) emissions that would be emitted if the same amount of electricity was generated from fossil fuels, implementing the Project will avoid emissions of over 165,000 metric tons of CO<sub>2</sub> annually – the equivalent of taking almost 32,000 automobiles off the road. The electricity generated by the Project will be sold to one or more utilities or other retail customers.

#### 1.3 SUMMARY OF PROJECT CONSTRUCTION ACTIVITIES AND SCHEDULE

Construction of the proposed Project is planned to consist of nine primary activities. The currently estimated timeframes and maximum workforce numbers for an assumed 25-month construction schedule are as shown in Table 1-1.

#### 1.4 APPLICANT-COMMITTED ENVIRONMENTAL PROTECTION MEASURES

#### 1.4.1 Introduction

In order to minimize potential Project-related effects to visual resources, including those associated with lighting, color, and the profile of the proposed facilities, the Applicant has committed to implement environmental protection measures specific to visual resources. The following environmental protection measures are based on the visual resource measures presented in Appendix A of the POD submitted to the BLM in May of 2014. As applicable, the measures presented herein have been updated to meet the current Project design.

# TABLE 1-1 CONSTRUCTION OVERVIEW FOR ASSUMED 25-MONTH SCHEDULE

Activity #	Timeframe	Duration (Months)	Working Days	Max No. Workers <sup>1</sup>	Activity Description
1	Dec. 2016 – Jan. 2017	2	42	60	Move On (grading of laydown, construction trailers, and parking areas)
2	Jan. 2017 – June 2018	18	378	80	Grading – site preparation/clearing/ grading and balance of retention basins
3	Mar. 2017 – Aug. 2018	18	378	160	Construction – solar array structural components (posts, tilts, rails, trackers)
4	Apr. 2017 – Sept. 2018	18	378	80	Trenching – PCS excavation, PCS placement, underground cable trenching
5	May 2017 – Oct. 2018	18	378	310	Construction – solar module installation
6	Apr. 2018 - Sept. 2018	6	126	60	Construction – substation
7	Apr. 2018 - Sept. 2018	6	126	60	Construction – Gen-Tie
8	Apr. 2018 – Sept. 2018	6	126	60	Construction – Operations and Maintenance Building
9	July 2018 – Dec. 2018	6	126	60	Construction – testing, cleanup, and restoration

Peak workforce estimated at 810 workers due to overlapping of construction activities. Workforce numbers may vary.

#### 1.4.2 Lighting

Lights may periodically be used at nighttime in occupied portions of the Project site for security purposes. In order to limit the potential effects associated with night lighting, lighting on the Project site will be limited to areas required for operations or safety, will be directed on-site to avoid backscatter, and will be shielded from public view to the extent practical. Lighting that is not required to be on during nighttime hours will be controlled with sensors or switches operated such that lighting will be on only when needed.

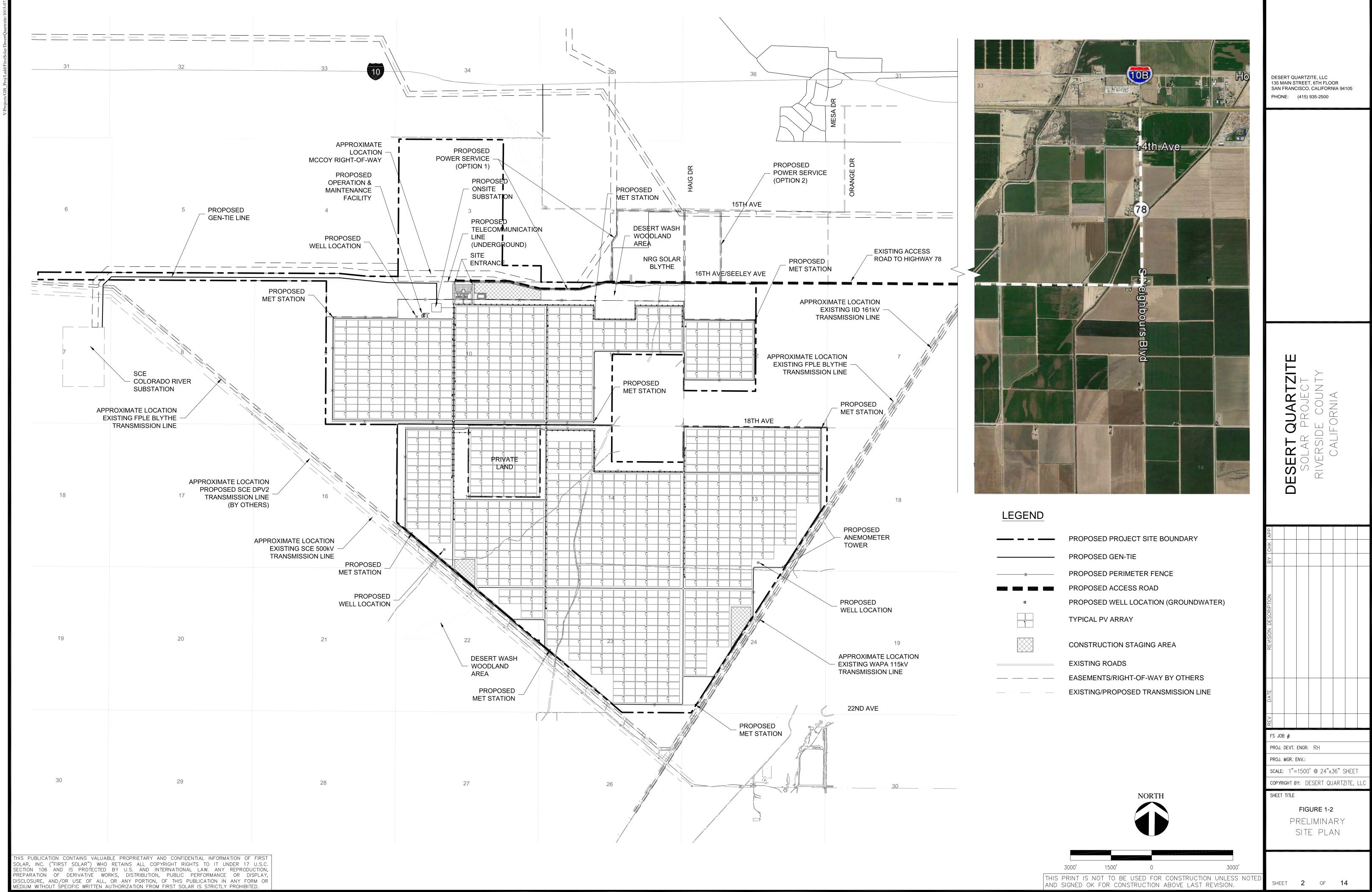
#### 1.4.3 Color and Reflection

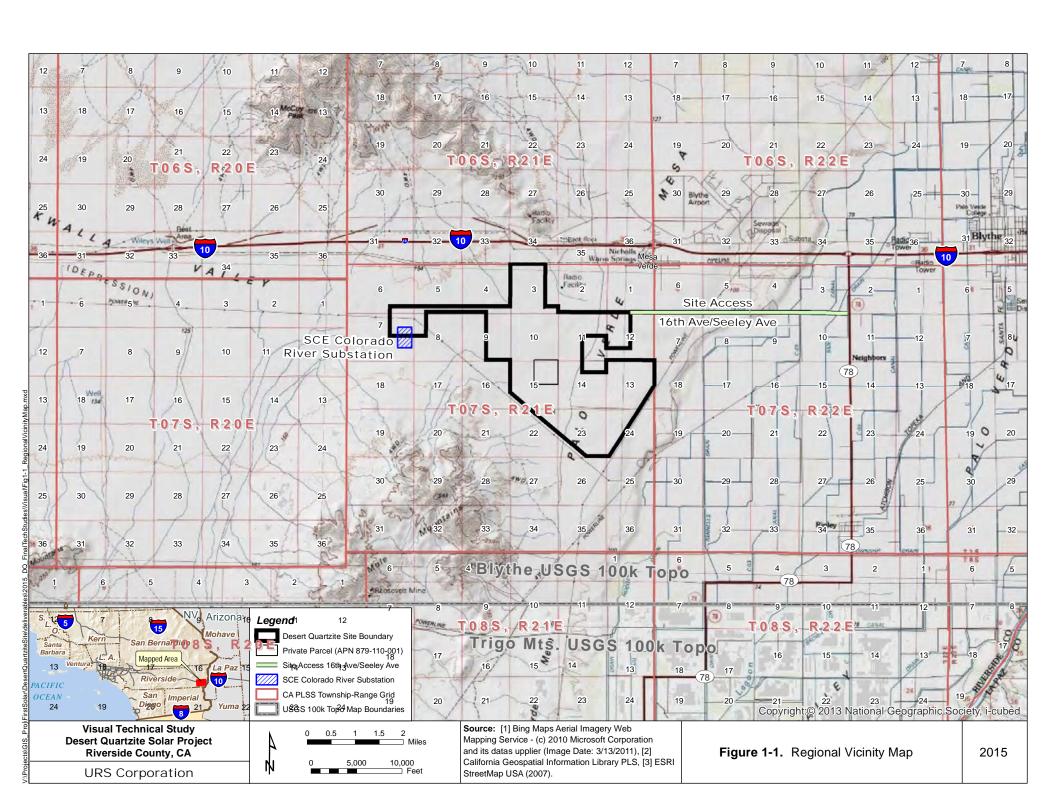
The Project will introduce new man-made facilities to the viewshed. In order to limit the potential visual effects associated with the introduction of facilities, the Project design will include the following: 1) an exterior color acceptable to the BLM will be used on Project

buildings, as appropriate, to blend more naturally with the existing setting; and 2) fencing will be constructed of non-reflective materials to reduce visual effects.

#### 1.4.4 Profile of Facilities

The Project's PV blocks will cover a substantial ground area with dark PV panels and ancillary facilities. In order to limit the potential visual effects associated with the introduction of the proposed facilities, the Project design will include the following: 1) the Project will use low profile PV panel structures that should not extend higher than approximately 13 feet above the ground surface; and 2) Project facilities will be set back more than 1 mile from I-10 and at least 4 miles from SR-78.





# SECTION 2.0 REGULATORY SETTING

#### 2.1 FEDERAL

#### 2.1.1 National Environmental Policy Act (42 USC 4371)

NEPA Section 101(b)(2) states that it is the "continuous responsibility" of the Federal government to "use all practicable means" to "assure for all Americans safe, healthful, productive, and esthetically and culturally pleasing surroundings." Section 1502.6 states that analyses should be prepared using "an interdisciplinary approach which will ensure the integrated use of natural and social science and environmental design arts" (Section 102(2)(A)).

#### 2.1.2 Federal Land Policy and Management Act

Section 102 (a)(8) of Federal Land Policy and Management Act (FLPMA) states that "the public lands be managed in a manner that will protect the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water resource, and archeological values..."

#### 2.1.3 Bureau of Land Management

#### 2.1.3.1 Land Use Planning Handbook

The handbook (BLM 2005) states that visual resource management classes shall be designated for all BLM land based on consideration of Visual Resource Inventory (VRI) data and management considerations for other land uses. Resource use and management activities shall be managed according to the visual resource management objectives established in the land use plan.

#### 2.1.3.2 <u>Visual Resource Management System</u>

Visual resources on BLM-administered lands are managed under the Visual Resource Management (VRM) System (BLM 1986). The system provides the framework by which to manage visual values by classifying all BLM-administered lands into one of four VRM classes. Visual values are established through the VRI process, which classifies scenery based on the assessment of three components: scenic quality, visual sensitivity, and distance zones. Each VRM class is defined by a specific management objective that describes the acceptable level of change to visual resources. Change in the resource is measured though implementation of the contrast rating procedure and by assessing change in visual resource inventory values. The BLM has completed the VRI for the Project site and surrounding areas located within the Palm Springs Field Office (FO) (BLM 2010). The BLM Palm Springs FO

has assigned a Class III Interim VRM Objective to the Desert Quartzite Solar Project footprint (Dalton 2015). The VRM Class III objective is defined as follows:

Partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate (BLM 1986).

#### 2.1.3.3 <u>California Desert Conservation Area Plan</u>

The Riverside East Solar Energy Zone (SEZ) is located within the California Desert Conservation Area (CDCA) Plan area. The CDCA Plan of 1980 (as amended) designates all BLM-administered public lands in the CDCA, except for a few small and scattered parcels, geographically into four multiple-use classes: Class C (Controlled Use), Class L (Limited Use), Class M (Moderate Use), and Class I (Intensive Use). The classifications were based on the sensitivity of resources and type of uses for each geographic area. Each multiple-use class describes a different type and level or degree of use that is permitted within that geographic area. Land use actions and resource management activities on public lands within a multiple-use class delineation must meet the guidelines for each class. Lands within the Moderate Use Class are managed in a controlled balance between higher intensity use and protection. A wide variety of uses, such as mining, livestock grazing, recreation, and energy and utility development are allowed. Any damage caused by permitted uses must be mitigated. The proposed Project is located on lands designated as Moderate Multiple Use.

The CDCA outlines the following actions to manage for the alteration of the natural character of the landscape that could occur as part of the multiple-use activities described in the plan:

- (1) The appropriate levels of management, protection, and rehabilitation on all public lands in the CDCA will be identified, commensurate with visual resource management objectives in the multiple-use class guidelines.
- (2) Proposed activities will be evaluated to determine the extent of change created in any given landscape and to specify appropriate design or mitigation measures using the Bureau's contrast rating process.

The CDCA Plan stipulates that solar energy development and new electric transmission facilities are allowed on Class L, M, or I lands provided that NEPA requirements are met.

The Imperial Sand Dunes Recreation Area Management Plan (RAMP)/CDCA Plan Amendment established VRM classes for the Imperial Sand Dunes RAMP area within the CDCA. However, formal VRM classes were never established for most of the CDCA, including those that overlap the Project site.

A Section 368 federally designated, 2-mile (3-kilometer) wide energy corridor on BLM-administered lands overlaps the SEZ along I-10. There are also two north-south corridors

within the SEZ that were designated as part of the CDCA Plan. One corridor is located in the western portion of the SEZ and one in the eastern portion.

## 2.1.3.4 Approved Resource Management Plan/Record of Decision for the Solar PEIS

The Record of Decision (ROD) for the Programmatic EIS (PEIS) for Solar Energy Development in Six Southwestern States (Solar PEIS) provides for ongoing implementation of the BLM's Solar Energy Program. As part of the Solar Energy Program, the BLM identified locations, referred to as SEZs, within this planning area considered suitable for utility production of solar energy (BLM 2012). The ROD contains information on anticipated land management plan revisions, including those that would be required for the Palm Springs- South Coast planning area. Appendix C of the ROD contains Design Features that would be required for projects constructed within the SEZ.

The Project is considered a "First in-line pending" application. The BLM defines "pending" applications as any applications filed within proposed variance and/or exclusion areas before the publication of the Supplement to the Draft Solar Programmatic Environmental Impact Statement (PEIS) (October 28, 2011), and any applications filed within proposed solar energy zones (SEZs) before June 30, 2009. Pending applications will not be subject to any new program elements adopted by the Solar PEIS ROD (BLM 2012).

#### 2.1.4 Federal Aviation Administration

The Federal Aviation Administration (FAA) has established an interim policy for proposals by sponsors of federally obligated airports to construct solar energy systems on airport property (78 FR 63276). The interim policy also requires use of the Solar Glare Hazard Analysis Tool (SGHAT) for assessing glare-induced ocular impact. Solar energy systems that are located on a non-federally obligated airport or located off airport property are not subject to this policy; however, they are strongly encouraged to consider the requirements established in the interim policy when siting the project. The Project is not located on a federally obligated airport. However, Riverside County has requested that a glare analysis be performed for the Project. The interim policy provides the following standards for measuring ocular impact of a proposed solar energy system:

- 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" 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.

#### 2.2 STATE OF CALIFORNIA

#### 2.2.1 California Environmental Quality Act

In accordance with Appendix G of the California Environmental Quality Act Guidelines, a project would result in a significant impact on aesthetics and visual quality if the project would meet at least one of the following criteria:

- Have a substantial adverse effect on a scenic vista;
- Substantially damage scenic resources, including, but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway;
- Substantially degrade the existing visual character or quality of the site and its surroundings; and/or
- Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area or create substantial shadow on a sensitive use.

In addition, a project would have a significant impact if the project would introduce elements that would conflict with the visual character of a historic district, State- or federally-listed or eligible historic property, and/or substantially affect a feature or area identified as an important visual resource. By contrast, the project would be considered to result in a beneficial visual impact if the project would eliminate a dominant feature in the landscape that currently detracts from scenic qualities or blocks scenic vistas, or if the project would provide new scenic views that are not currently available.

#### 2.3 RIVERSIDE COUNTY

#### 2.3.1 Riverside County General Plan and Palo Verde Valley Area Plan

The Riverside County General Plan and Palo Verde Valley Area Plan contain policies to protect the scenic quality of views from designated and eligible scenic highways. Per the County of Riverside General Plan, I-10 is eligible for designation as a Riverside County Scenic Highway, and provides motorists with desert views across the mesa to the mountains. Policies applicable to the Project that pertain to the protection of visual resources are provided below (County of Riverside 2008). The County of Riverside considers scenic resources to include areas visible to the public that are generally considered visually attractive, including scenic corridors, natural landmarks, and prominent or unusual features. Scenic vistas are considered points that provide a view of the countryside and are accessible to the general public (County of Riverside 2008). Relevant policies include the following:

- PVVAP 10.1: "Protect the scenic highways in the Palo Verde Valley planning area from change that would diminish the aesthetic value of adjacent properties in accordance with the Scenic Corridors sections of the General Plan Land Use, Multipurpose Open Space, and Circulation Elements."
- C 19.1: "Preserve scenic routes that have exceptional or unique visual features in accordance with Caltrans' Scenic Highways Plan."
- **OS 21.1:** "Identify and conserve the skylines, view corridors, and outstanding scenic vistas within Riverside County."
- OS 22.4: "Impose conditions on development within scenic highway corridors requiring dedication of scenic easements consistent with the Scenic Highways Plan, when it is necessary to preserve unique or special visual features."

#### 2.3.2 Riverside County Airport Land Use Compatibility Plan

The Riverside County Airport Land Use Compatibility Plan (adopted 2004) identifies several countywide policies that apply to projects proposed within the Airport Land Use Compatibility Zones (Compatibility Zone E for portion of this Project) and relate to glare, which require review by the Airport Land Use Commission (ALUC). The Project has prepared a Glare Study analyzing Project effects which is included as part of an Application for Major Land Use Action Review submitted to the Riverside County ALUC.

# SECTION 3.0 METHODS

#### 3.1 ANALYSIS AREA

The study area for the visual resources assessment was defined by a 20-mile radius surrounding the Project site. This area was selected based on the assumption that: 1) visibility of the project would attenuate at this distance when observed from inferior or at-grade observer positions; and 2) visual contrast of the Project would be weak when viewed from higher elevations at this distance.

The study area was refined based on the results of viewshed analyses prepared for major Project components. Potential Project visibility is determined based on the relationship between topography, height of the proposed Project, and average eye height of the viewer. The results identify locations within the study area where the Project could potentially be seen, and locations where it is shielded by existing topography. The analysis is conservative, as it does not account for the potential screening of Project features by vegetation or structures. The resulting viewshed map illustrates the area where Project components could potentially be seen; however, it does not represent any measure of actual visibility.

Two viewshed models were prepared for the proposed Project, with each representing potential visibility of: 1) the anemometer, poles, and gen-tie (Figure 3-1); and 2) the solar arrays (Figure 3-2). The viewshed origin included the following worst-case assumptions:

- Solar Arrays: Panel height of 13 feet
- Anemometers: Maximum pole height of 30 feet
- 34.5 kV Collector Poles: Maximum pole height of 70 feet
- Gen-tie: Maximum pole height of 200 feet (note: conservative given maximum proposed gen-tie structure height is 135 feet)
- 10-meter digital elevation model

The viewshed models indicated potential visibility of the solar arrays across the Palo Verde Valley, with geographic extent limited by surrounding high elevation landforms of the McCoy, Palo Verde, and Chuckwalla Mountains. The viewshed of the anemometers, 34.5 kV collector poles, and gen-tie extended farther to the surrounding valleys due to the taller height of these components.

#### 3.2 BASELINE CONDITIONS ASSESSMENT

Baseline (existing) conditions were described at multiple scales, including the regional landscape setting, the analysis area (using VRI data prepared for the Palm Springs FO [BLM]

2010]), and at a localized scale using Key Observation Points (KOP). This approach evaluates baseline conditions at two spatial scales: Landscape-level scale, in which the regional landscape setting and scenic values are defined; and project-scale, in which the project site is assessed from KOPs (BLM 1986). The purpose of this framework is to understand potential impacts in a manner that is scalable, whereby KOPs are used to identify specific impact mechanisms that can be evaluated within in the larger scale context of the BLM Palm Springs Field Office (FO) planning area. The VRI data was obtained from the Visual Resource Inventory for the Palm Springs/South Coast FO (BLM 2010). Baseline conditions at KOPs were assessed in the field. Fieldwork was completed on February 25, 2015. The field team included representatives from BLM, First Solar, Truescape, and URS. Conditions during the site visit were clear and dry, with light wind.

#### 3.2.1 Visual Resource Inventory

As part of its land use planning process, the BLM maintains an inventory of visual values within the planning area. Visual values are established through the VRI process, which classifies visual resources into one of four VRI classes based on the assessment of three components: scenic quality, visual sensitivity, and distance zones. These VRI classes and their components provide baseline measurements of existing conditions within the planning area.

Scenic quality is defined as the visual appeal of a tract of land and is determined using a systematic process to classify lands into one of three scenic quality categories: A, B, or C (BLM 1986). Class A represents the highest scenic quality, and C represents the lowest scenic quality. The first step in the scenic quality assessment process entails dividing the landscape into Scenic Quality Rating Units (SQRU) based on conspicuous changes in physiography or land use. Scenic quality within each SQRU is then ranked based on the assessment of seven key factors: landform, vegetation, water, color, adjacent scenery, scarcity, and cultural modification. Each key factor is scored, and the value of each is added to derive an overall score for the unit.

Visual sensitivity is defined as a measure of public concern for scenic quality (BLM 1986). Visual sensitivity within the planning area is determined by the Sensitivity Level Analysis (SLA), and is completed in two steps: 1) Delineation of Sensitivity Level Rating Units (SLRU), and 2) Rating visual sensitivity within each SLRU. SLRUs represent a geographic area where public sensitivity to change of the visual resources is shared amongst constituents. The unit boundaries may be defined by a single factor driving the sensitivity consideration, or factors driving sensitivity may extend across numerous SLRUs. Units are thus derived, in part, by the consideration of factors analyzed in the SLA. For example, constituents of a residential area are assumed to share a high sensitivity to change in visual resources of views from their homes. In such an example, an SLRU defining the general viewshed of this community would be established based on knowledge and assumptions of shared sensitivity

of this area. Visual sensitivity ratings within each SLRU are estimated as high, medium, or low based on the categories and criteria described below:

- Type of Users. Visual sensitivity is expected to vary by type of user. For example, recreational sightseers may be highly sensitive to any changes in visual quality, whereas workers who pass through the area on a regular basis may not be as sensitive to change. This category is rated High where maintenance of visual quality is a major concern for most users, Moderate where maintenance of visual quality is a moderate concern for most users, and Low where maintenance of visual quality is a low concern for most users (BLM 1986).
- Amount of Use. Visual sensitivity is expected to vary by amount of use. For example, areas seen and used by large numbers of people are potentially more sensitive. Protection of visual values usually becomes more important as the number of viewers increase. This category is rated high for high levels of use, moderate for moderate levels of use, and low for low levels of use as defined below (BLM 1986):
  - **High.** Roads and highways (greater than 45,000 visits per year), rivers and trails (greater than 20,000 visits per year), and recreation sites (greater than 10,000 visitor days per year)
  - **Moderate.** Roads and highways (5,000–45,000 visits per year), rivers and trails (2,000–20,000 visits per year), and recreation sites (2,000–10,000 visitor days per year)
  - Low. Roads and highways (fewer than 5,000 visits per year), rivers and trails (less than 2,000 visits per year), and recreation sites (fewer than 2,000 visitor days per year)
- **Public Interest.** The visual quality of an area may be of concern to local, State, or National groups. Indicators of this concern are usually expressed in public meetings, letters, newspaper or magazine articles, newsletters, land-use plans, or public controversy created in response to proposed activities that is perceived to result in change to the landscape character. This category is rated High where maintenance of visual quality is a major public issue, Moderate where maintenance of visual quality is a moderate public issue, and Low where maintenance of visual quality is a minor public issue (BLM 1986).
- Adjacent Land Uses. The interrelationship with land uses in adjacent lands can affect the visual sensitivity of an area. For example, an area within the viewshed of a residential area may be very sensitive, whereas an area surrounded by commercially developed lands may not be visually sensitive. This category is rated High where maintenance of visual quality to sustain adjacent land use objectives is very important, Moderate where maintenance of visual quality to sustain adjacent land use objectives is moderately

important, and Low where maintenance of visual quality to sustain adjacent land use objectives is slightly important (BLM 1986).

- Special Areas. Management objectives for special areas such as Natural Areas, Wilderness Areas, or Wilderness Study Areas frequently require special consideration for the protection of the visual values. This designation does not necessarily indicate high scenic quality, but rather the potential for management objectives to be aimed at preservation of the natural landscape setting. This category is rated High where maintenance of visual quality to sustain Special Area management objectives is very important, Moderate where maintenance of visual quality to sustain Special Area management objectives is moderately important, and Low where maintenance of visual quality to sustain Special Area management objectives is slightly important (BLM 1986).
- Other Factors. Additional information, such as research or studies that includes indicators of visual sensitivity, should be included in the sensitivity level analysis when available.

Distance zones represent the distance from which the landscape is most commonly viewed and are established by buffering common travel routes and viewer locations at distances of 3 miles, 5 miles, and 15 miles. Because of the relationship between distance and viewer perception, distance zones can also be used to estimate visual thresholds, as a viewer's ability to detect attributes of form, line, color, and texture is expected to decrease with distance. Distance zones are defined as follows (BLM 1986):

- **Foreground-Middleground.** This is the area that can be seen from a particular location to a distance up to 5 miles. The outer boundary of this distance zone is described as the point where the texture and form of individual plants are no longer apparent in the landscape. In some areas, atmospheric conditions can reduce visibility and shorten the distance normally covered by each zone.
- **Background.** The background includes locations that can be seen between a distance of 5 and 15 miles. The background zone does not include areas in the background that are so far distant that the only thing discernible is the form or outline. In order to be included within this distance zone, vegetation should be visible at least as patterns of light and dark.
- **Seldom-seen Zone.** These are areas that are generally not visible within the foreground-middleground and background, or portions which are visible but beyond the background distance of 15 miles.

#### 3.2.2 Key Observation Points

Visual resources and viewer groups located within the analysis area were identified by desktop review of relevant planning documents and the VRI prepared for the BLM Palm

Springs FO (BLM 2010). Based on this review, a list of potential KOP locations was identified and provided to the BLM for feedback on their suitability for use in the visual impact assessment. A subset of 12 KOP locations as listed below was selected for field review:

- Bradshaw Trail
- California State Route 78
- Chuckwalla Desert Wildlife
   Management Area (DWMA)/Area of
   Critical Environmental Concern
   (ACEC)
- Colorado River
- Community of Ripley
- Interstate 10

- McCoy Mountains
- Mule Mountains ACEC
- Palen/McCoy Wilderness
- Town of Nicholls Warm Springs/Mesa Verde
- Midland Long Term Visitor Center (LTVA) (eliminated)
- Palo Verde College (eliminated)

Following field review, Midland Long-Term Visitor Center (LTVA) and Palo Verde College were eliminated due to lack of visibility of the Project site.

Through discussions with the BLM, the following additional 8 KOPs were not carried forward for analysis due to their low potential for Project visibility from their locations:

- Big Maria ACEC
- Blythe Airport
- Cibola National Wildlife Refuge
- City of Blythe
- County of Riverside Mayflower Park
- Ironwood State Prison
   (ISP)/Chuckwalla Valley State Prison
- Little Chuckwalla Mountains Wilderness
- Mule Mountains LTVA

Final KOPs were approved by the BLM. A description of KOPs (e.g., type of viewer, estimated amount of use, and distance zone, etc.) selected for the analysis, including those KOPs that were considered, but eliminated, are described in Appendix A. A map of the candidate KOP study area that was evaluated is also presented in Appendix A (Figure A-1). Final KOP locations are shown on Figure 3-1 through Figure 4-5.

#### 3.3 IMPACT ASSESSMENT

Impacts to visual resources were assessed using a combination of: 1) the Visual Contrast Rating Procedure (BLM 1986), and 2) the VRI analysis. The results of these analyses were collectively used to inform a conformance determination to the Interim VRM Class III

Objective assigned to the Project footprint. The Project has prepared a separate Glare Study analyzing Project effects which is included as part of an Application for Major Land Use Action Review submitted to the Riverside County ALUC (submitted September 25, 2015).

## 3.3.1 Contrast Rating

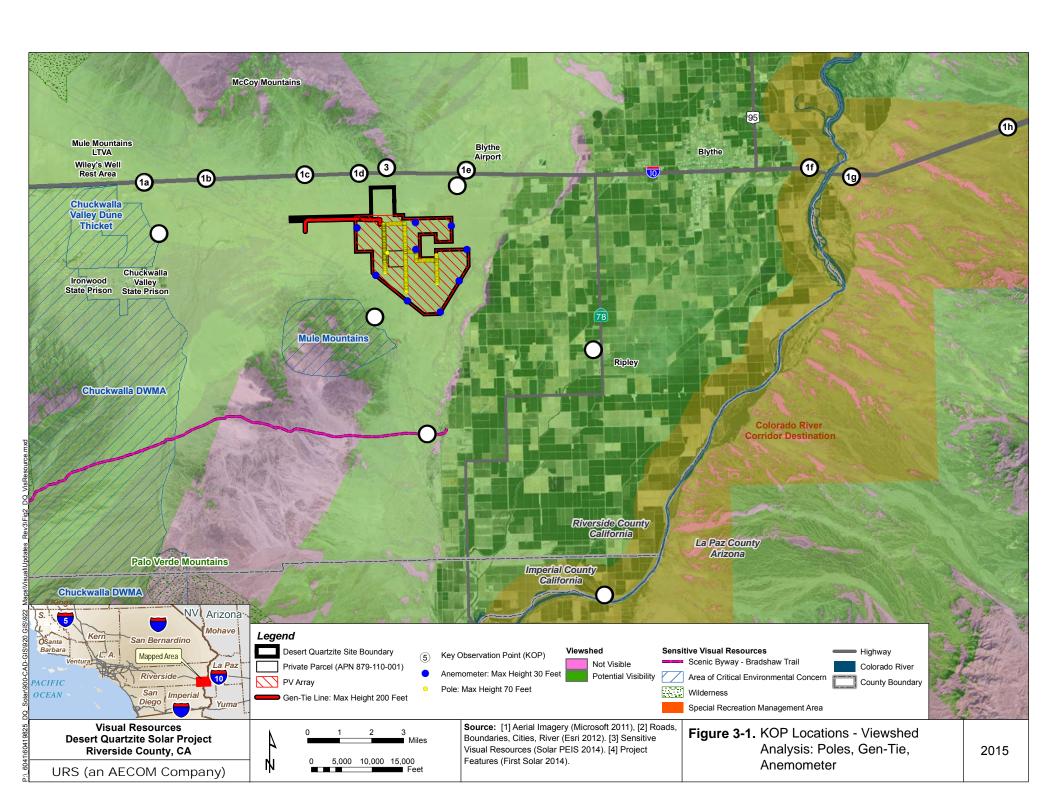
The Visual Contrast Rating Procedure assumes the extent to which a project results in adverse effects to visual resources is a function of the visual contrast between the project and the existing landscape (BLM 1986). This procedure was implemented at each KOP, and focused on identifying changes in form, line, color, and texture, considering the following environmental factors: distance, viewer geometry, duration of view, motion, atmospheric conditions, light conditions, scale, and spatial relationships (BLM 1986, 2013). Viewer exposure was assumed to be year-round; therefore, seasonality was not considered as a differentiating environmental factor in the analysis. Visual contrast was defined per BLM (1986), as follows:

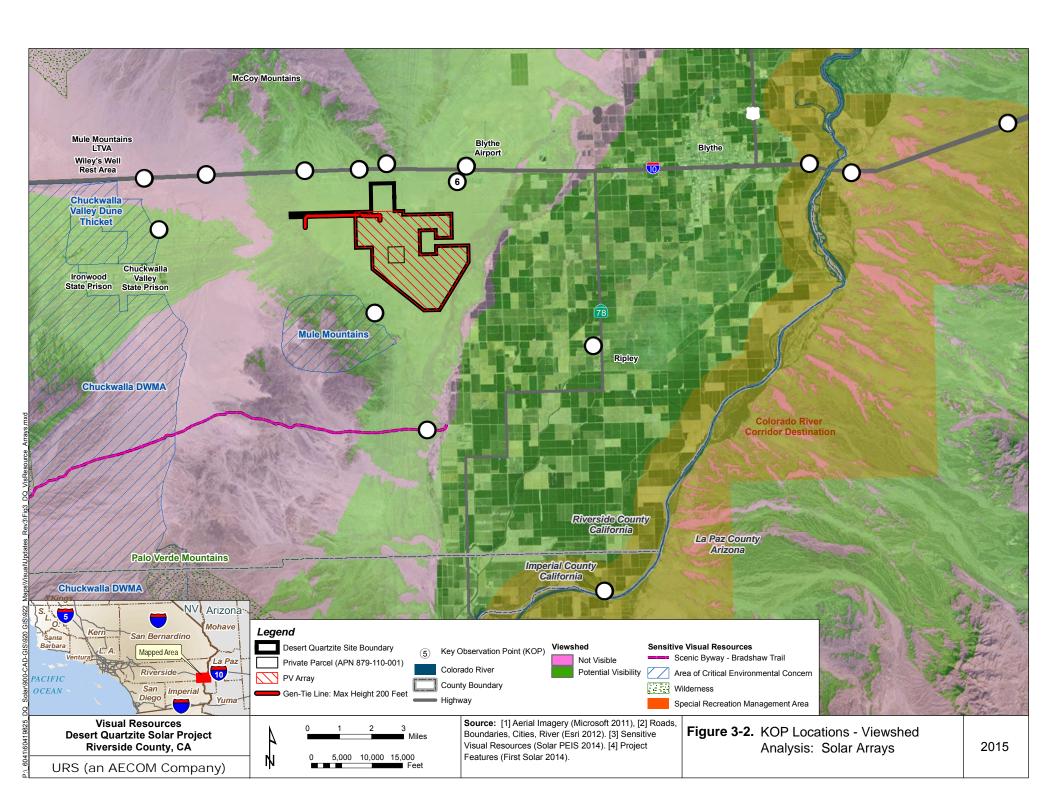
- **None.** The element contrast is not visible or perceived.
- Weak. The element contrast can be seen but does not attract attention.
- **Moderate.** The element contrast begins to attract attention and begins to dominate the characteristic landscape.
- **Strong.** The element contrast demands attention, would not be overlooked, and is dominant in the landscape.

The contrast rating was completed using visual simulations of the proposed Project prepared by Truescape based on photographs taken at the KOPs. Photographs were taken using a digital SLR 1:1, 21 megapixel camera, ensuring a high level of resolution and clarity for generating visual simulations. A collection of photographs were taken at each KOP such that multiple images could be overlaid to create a panoramic representing the primary human vertical and horizontal field of view. Simulations were prepared using a true-to-scale digital 3D model of the Project and spatial data indicating locations of Project features. Project design-related specifications used in the model were provided by the Applicant. Locations of KOPs as well as target objects used for accurate alignment of the 3D model to the photography were surveyed using professional grade survey instruments. A 3D model of the Project site area was generated using land contour data and the proposed solar facilities modelled in 3D were then imported and positioned accurately into the individual photo simulation views. Simulations were produced using Autodesk 3D Studio Max Design and Adobe Photoshop. The resulting photo simulation represents the appearance of the Project within the primary human field of view when viewed from a position located 19.7 inches back from the photo.

#### 3.3.2 Visual Resource Inventory Analysis

An analysis was conducted to identify potential change in VRI values of scenic quality and visual sensitivity for portions of BLM-administered lands within the Palm Springs FO planning area as a result of the Desert Quartzite Solar Project. This analysis identified the expected change in VRI values by comparing scenic quality and visual sensitivity classifications under the operational phase of the Project to original ratings provided in the BLM's VRI of the Palm Springs FO (BLM 2010). Because no additional major roads are required or proposed by the Project, it is assumed that there would be no change in visual distance zones, as primary viewer platforms would remain the same (I-10 and SR-78). The analysis was restricted to SQRUs and SLRUs that overlap with the Project site and/or its viewshed.





# SECTION 4.0 EXISTING BASELINE CONDITIONS

#### 4.1 EXISTING BASELINE VISUAL RESOURCES

The landscape setting of the analysis area is generally characterized by large expanses of desert and agricultural croplands. The Project site includes the broad, flat Chuckwalla Valley, Palo Verde Mesa and the rugged ranges of the Big Maria Mountains to the northeast, Mule Mountains to the south, the McCoy Mountains to the north, and the Palo Verde Valley to the east. These mountains are recognized as unique features by Riverside County and form a backdrop that provides scale, variety, interest, and enclosure to this broad landscape (Riverside County 2014). Vegetation is primarily composed of creosote scrub, which sparsely covers the landscape but also includes wheat, alfalfa, and citrus orchards. To the east, contiguous agricultural land extends north to south, appearing as a lush, flat valley floor. This area is patterned and colored by a constantly changing array of cultivated crops and contains the majority of development in the area. There is a stark visual contrast between the fertile, highly irrigated agricultural lands and the arid desert to the west and north. The Colorado River meanders to the east of the Project site and is considered a remarkable natural resource and recreational attraction by the County of Riverside (County of Riverside 2008).

Though the analysis area is characterized by large areas of undeveloped land, industrial, commercial, and residential development is present in adjacent areas, including:

- The Blythe Energy Center, a 520 MW combined-cycle power plant
- The Blythe Solar Project, a 21 MW PV solar facility and gen-tie located immediately to the north of the proposed Project site
- The SCE Colorado River Substation, located west of the proposed Project
- Multiple existing high voltage transmission lines adjacent to the northern, eastern, western, and southern boundaries of the Project site
- I-10, running in an east/west direction and located to the north of the proposed Project site
- The Blythe Municipal Airport, located north of the proposed Project
- Chuckwalla and Ironwood Prisons, located to the west of the proposed Project site
- The communities of Blythe, Ripley, and Nicholls Warm Springs/Mesa Verde, located generally to the east of the proposed Project

Results of the baseline conditions assessment are described below, including planning-level VRI values (scenic quality, visual sensitivity, and distance zones), and KOPs.

# 4.2 VISUAL RESOURCE INVENTORY VALUES: BLM PALM SPRINGS FIELD OFFICE

The Project site is located in an area designated as VRI Class II, indicating high scenic value (Figure 4-1). Results of the BLM's VRI for the Palm Springs FO planning area (BLM 2010) that are within or partially within the Project site and its viewshed are summarized below.

#### 4.2.1 Scenic Quality

The Project site overlaps the following SQRUs that were delineated in the Palm Springs FO planning area VRI: 021 (Chuckwalla Valley), 026 (McCoy Mountains), 036 (Blythe Valley), 037 (Palo Verde), 038 (Mule Mountains), and 039 (Little Chuckwalla Mountains) (Figure 4-2). Scenic quality for each unit is summarized in Table 4-1, below.

TABLE 4-1 SCENIC QUALITY RATING SUMMARY<sup>1</sup>

Scenic Quality Rating Unit	Rating <sup>2</sup>	Rationale
021	В	Dramatic mountains surrounding area; some cultural modification but overall natural-appearing.
026	С	Landscape lacks naturalness.
036	В	Adjacent scenery enhances flat landscape with some variation in vegetation and color.
037	С	Desert pavement adds color contrast to low, rolling landform with moderate views. Roads, power lines, and trash detract.
038	В	Interesting detail; landform features with subtle color variation and moderate views of adjacent units.
039	В	Some interesting landforms and color contrast with sparse vegetation and moderate views of adjacent scenery.

<sup>&</sup>lt;sup>1</sup> Source: BLM 2010.

#### 4.2.1.1 SQRU 021 – Chuckwalla Valley

SQRU 021 encompasses the Chuckwalla Valley, extending from the City of Blythe, California, northwest to Midland, and west to Desert Center. Scenic Quality was ranked as Class B (Table 4-2). This unit is characterized as a broad, enclosed landscape bordered by the rugged Mule, McCoy, Palen, Big Maria, and Chuckwalla Mountains. The valley bottom is characterized as vast, low, and gently rolling. Some variety in vegetation exists and is considered somewhat visually dominant. The area appears natural, despite some cultural modification (BLM 2010).

<sup>&</sup>lt;sup>2</sup> Refer to Section 3.2.1 for description of ratings.

TABLE 4-2 SCENIC QUALITY RATING: SQRU 021 CHUCKWALLA VALLEY<sup>1</sup>

Criteria	Rating	Rationale
Landform	1	Vast, low, gently rolling valley bottom
Vegetation	3	Some variety in vegetation; one or two major types
Water	0	None present
Color	2	Subtle variation
Adjacent scenery	4	Dramatic mountains surrounding area
Scarcity	2	Fairly distinctive but not unusual
Cultural modification	0	Some cultural modification but overall natural- appearing
Total score	12	
Scenic quality rating <sup>2</sup>	В	12–18 points

<sup>&</sup>lt;sup>1</sup> Source: BLM 2010.

## 4.2.1.2 **SQRU 026 – McCoy Mountains**

SQRU 026 is located in the McCoy Mountains, north of the Project site. The unit is characterized as a naturally appearing, rugged, and highly eroded mountain range. Vegetation is sparse, with little variety. Colors are generally monotone, with some contrast between the grey tones of the rock and brown tones of the soil. Adjacent scenery of neighboring Joshua Tree National Park, and the Palen, McCoy, and Big Maria Wilderness Areas, enhance scenic quality of this unit. Evidence of surface mining and milling exists and is considered discordant. Scenic quality was ranked as C (Table 4-3) (BLM 2010).

#### **4.2.1.3 SQRU 036** – **Blythe Valley**

SQRU 036 is located east of the Project site, surrounding the City of Blythe, California. The unit contains primarily private lands characterized by agricultural, industrial, and residential uses. Topography is flat to rolling, with little variety. Though evidence of cultural modification exists, it does not detract from the overall scenic quality and is considered consistent with the prevailing landscape character. Overall scenic quality was ranked as Class B (Table 4-4) (BLM 2010).

#### **4.2.1.4 SQRU 037 – Palo Verde**

SQRU 037 is located south of the Project site, encompassing an area generally south of the Mule Mountains and west of Blythe Valley. The unit is characterized by a series of washes, separated by low, rolling, and rocky landforms. Roads, powerlines, and trash are considered

<sup>&</sup>lt;sup>2</sup> Refer to Section 3.2.1 for description of ratings.

discordant and detract from overall scenic quality. Overall scenic quality was ranked as Class C (Table 4-5) (BLM 2010).

TABLE 4-3
SCENIC QUALITY RATING: SQRU 026 McCOY MOUNTAINS<sup>1</sup>

Criteria	Rating	Rationale
Landform	3	Rugged Mountains, deep canyons
Vegetation	1	Little variety; not noticeable
Water	0	None present
Color	2	Some contrast between soil and rock
Adjacent scenery	4	Dramatic adjacent National Park and Wilderness
Scarcity	2	Somewhat distinctive but not unusual
Cultural modification	-2	Landscape significantly modified by surface mining/milling
Total score	10	
Scenic quality rating <sup>2</sup>	С	11 points or less

<sup>&</sup>lt;sup>1</sup> Source: BLM 2010.

TABLE 4-4 SCENIC QUALITY RATING: SQRU 036 BLYTHE VALLEY<sup>1</sup>

Criteria	Rating	Rationale
Landform	1	Not much variety
Vegetation	3	Some variety
Water	1	Minor presence
Color	3	Some variation
Adjacent scenery	3.5	Enhances
Scarcity	1	Common in area
Cultural modification	0	Expected in this setting
Total score	12.5	
Scenic quality rating <sup>2</sup>	В	12–18 points

<sup>&</sup>lt;sup>1</sup> Source: BLM 2010.

# 4.2.1.5 **SQRU 038 – Mule Mountains**

SQRU 038 is located south of the Project site in the Mule Mountains. This unit is characterized by interesting detail in landform created by a linear series of rough, serrated formations that appear prominent against the surrounding valley. Some evidence of mining

<sup>&</sup>lt;sup>2</sup> Refer to Section 3.2.1 for description of ratings.

<sup>&</sup>lt;sup>2</sup> Refer to Section 3.2.1 for description of ratings.

exists; however, it is not dominant and does not detract from scenic quality. Overall scenic quality was ranked as Class B (Table 4-6) (BLM 2010).

TABLE 4-5 SCENIC QUALITY RATING: SQRU 037 PALO VERDE<sup>1</sup>

Criteria	Rating	Rationale
Landform	1.5	Low and rolling, washes
Vegetation	2	Not a lot of variety
Water	0.5	Washes
Color	3	Desert pavement contrast
Adjacent scenery	3.5	Moderate views of adjacent units
Scarcity	2	Similar
Cultural modification	-1.5	Roads, power lines, trash
Total score	11	
Scenic quality rating <sup>2</sup>	С	11 points or less

<sup>&</sup>lt;sup>1</sup> Source: BLM 2010.

TABLE 4-6 SCENIC QUALITY RATING: SQRU 038 MULE MOUNTAINS<sup>1</sup>

Rating	Rationale
3.5	Interesting detail feature
1	Sparse
0	Not present or noticeable
2.5	Subtle variation
3	Moderate views of adjacent units
2.5	Common
0	Not very noticeable
12.5	
В	12–18 points
	3.5 1 0 2.5 3 2.5 0

<sup>&</sup>lt;sup>1</sup> Source: BLM 2010.

# 4.2.1.6 SQRU 039 – Little Chuckwalla Mountains

SQRU 039 is located west of the Project site, adjacent to the Little Chuckwalla Mountains Wilderness Area. The unit transitions from the rough formations of the Little Chuckwalla Mountains toward the Chuckwalla Valley to the east. Overall, the area appears natural, with

<sup>&</sup>lt;sup>2</sup> Refer to Section 3.2.1 for description of ratings.

<sup>&</sup>lt;sup>2</sup> Refer to Section 3.2.1 for description of ratings.

no evidence of cultural modification. Vegetation is sparse. Overall scenic quality was ranked as Class B (Table 4-7) (BLM 2010).

TABLE 4-7
SCENIC QUALITY RATING: SQRU 039
LITTLE CHUCKWALLA MOUNTAINS<sup>1</sup>

Criteria	Rating	Rationale
Landform	3.5	Some interest
Vegetation	1	Sparse
Water	0	Not present or noticeable
Color	3.5	Interesting contrast
Adjacent scenery	3	Moderate views
Scarcity	2.5	Not scarce
Cultural modification	0	None present
Total score	13.5	
Scenic quality rating <sup>2</sup>	В	12–18 points

<sup>&</sup>lt;sup>1</sup> Source: BLM 2010.

#### 4.2.2 Visual Sensitivity

The Project site is located in SLRU 49, Bradshaw Trail Backcountry Byway. Adjacent SLRUs that overlap the Project viewshed include the McCoy Mountains (SLRU 26), Mule Mountains (SLRU 46), and Little Chuckwalla Mountains (SLRU 39) (Table 4-8) (Figure 4-3).

#### 4.2.2.1 SLRU 49 – Bradshaw Trail Backcountry Byway

The Project site is located in SLRU 49, Bradshaw Trail Backcountry Byway. This unit encompasses the eastern portion of the Chuckwalla Valley, extending from approximately the McCoy Mountains, south to the Palm Springs FO planning area boundary, and east to the Little Chuckwalla Mountains. Visual sensitivity was classified as high, primarily due to presence of the Byway, high OHV use, and importance of maintaining scenic quality to sustain land use objectives of neighboring Wilderness Areas, ACECs, and military ranges (Table 4-9) (BLM 2010).

#### 4.2.2.2 SLRU 26 – McCoy Mountains

SLRU 26 is located north of the Project site in the McCoy Mountains. Visual sensitivity of this unit was ranked as medium, as it is not considered a primary recreation destination

<sup>&</sup>lt;sup>2</sup> Refer to Section 3.2.1 for description of ratings.

(Table 4-10). Maintenance of scenic quality is of moderate importance as it is a visual backdrop for the I-10 corridor and is part of the CDCA (BLM 2010).

TABLE 4-8
VISUAL SENSITIVITY RATINGS – DESERT QUARTZITE PROJECT AREA<sup>1</sup>

Sensitivity Level Rating Unit	Overall Rating <sup>2</sup>	Rationale
Bradshaw Trail National Backcountry Byway	Н	Backcountry Byway with high OHV use.
McCoy Mountains	M	Part of the California Desert Conservation Area (CDCA) and an important visual backdrop along the I-10 corridor.
Mule Mountain	Н	Area of Critical Environmental Concern; part of CDCA.
Little Chuckwalla Mountains	М	Not a lot of use.

<sup>&</sup>lt;sup>1</sup> Source: BLM 2010.

TABLE 4-9 VISUAL SENSITIVITY: SLRU 49 BRADSHAW TRAIL<sup>1</sup>

Criteria	Rating <sup>2</sup>	Rationale	
Type of use	М	OHV, camping in the area, rural travelers	
Amount of use	Н	Indication of high OHV use, popular trail	
Public interest	Н	Backcountry Byway, historic trails	
Adjacent land use	Н	Military range, wilderness, various Areas of Critical Environmental Concern	
Special areas	Н	Part of California Desert Conservation Area	
Other factors	NP	National designation	
Overall rating	Н	Backcountry Byway with high OHV use.	

<sup>&</sup>lt;sup>1</sup> Source: BLM 2010.

#### 4.2.2.3 SLRU 46 – Mule Mountains

SLRU 46 is a small unit located south of the Project site in the Mule Mountains. Visual sensitivity was ranked as medium, largely due to low recreation use and limited access. The area is recognized for its proximity to the Mule Mountains Long Term Visitor Area, its designation as an ACEC, and its inclusion in the CDCA (Table 4-11) (BLM 2010).

#### **4.2.2.4** SLRU 39 – Little Chuckwalla Mountains

SLRU 39 is a small unit located southwest of the Project site in the Little Chuckwalla Mountains. Visual sensitivity is classified as medium (Table 4-12), largely because it is

<sup>&</sup>lt;sup>2</sup> Refer to Section 3.2.1 for description of ratings.

<sup>&</sup>lt;sup>2</sup> Refer to Section 3.2.1 for description of ratings.

located in the viewshed of I-10 and is part of the CDCA. Maintenance of scenic quality is also considered important to sustain neighboring Wilderness Areas and the Chuckwalla Valley. The area is characterized by limited access and low use (BLM 2010).

TABLE 4-10 VISUAL SENSITIVITY: SLRU 26 MCCOY MOUNTAINS<sup>1</sup>

Criteria	Rating <sup>2</sup>	Rationale	
Type of use	L	Mining, some recreation	
Amount of use	L	Not a significant recreational attraction	
Public interest	M	Part of CDCA	
Adjacent land use	M	Visual backdrop for Blythe and I-10 corridor	
Special areas	Н	Part of CDCA	
Other factors	NP	Not present	
Overall rating	М	Part of the CDCA and an important visual backdrop along the I-10 corridor	

<sup>&</sup>lt;sup>1</sup> Source: BLM 2010.

TABLE 4-11 VISUAL SENSITIVITY: SLRU 46 MULE MOUNTAINS<sup>1</sup>

Criteria	Rating <sup>2</sup>	Rationale
Type of use	L	Not very accessible
Amount of use	L	Low use
Public interest	M	Proximity to Long-term Visitor Area
Adjacent land use	M	Valley, Mule Mountains
Special areas	Н	ACEC; part of CDCA
Other factors	NP	Not present
Overall rating	М	Some concern

<sup>&</sup>lt;sup>1</sup> Source: BLM 2010.

#### 4.2.3 Distance Zones

The proposed Project is located in the foreground-middleground distance zone, indicating visibility of this area from locations within 3-5 miles from viewing platforms (Figure 4-4). Primary viewing platforms include I-10 and SR-78 (BLM 2010).

<sup>&</sup>lt;sup>2</sup> Refer to Section 3.2.1 for description of ratings.

<sup>&</sup>lt;sup>2</sup> Refer to Section 3.2.1 for description of ratings.

TABLE 4-12 VISUAL SENSITIVITY: SLRU 39 LITTLE CHUCKWALLA MOUNTAINS<sup>1</sup>

Criteria	Rating <sup>2</sup>	Rationale
Type of use	L	Possible 4x4
Amount of use	L	Not much access
Public interest	M	Seen from highway
Adjacent land use	M	Wilderness, valley
Special areas	Н	Part of CDCA
Other factors	NP	Not present
Overall rating	М	Not a lot of use

<sup>&</sup>lt;sup>1</sup> Source: BLM 2010.

#### 4.3 KEY OBSERVATION POINTS

Fifteen KOPs were established to evaluate baseline conditions and potential impacts to visual resources. Eight of the KOPs represent different locations along a linear corridor (I-10) and are collectively considered a "linear KOP" (Figure 4-5). Table 4-13 below summarizes environmental factors that could influence Project visibility and visual contrast level. The following subsections describe existing landscape character and scenic quality attributes as viewed from each KOP, including discussions of relevant human and environmental factors that could affect potential visibility toward the Chuckwalla Valley and Palo Verde Mesa.

TABLE 4-13 KEY OBSERVATION POINTS<sup>1</sup>

КОР	Location	Distance From Project (Approximate Miles)	Viewer Geometry	Duration of View
KOP 1a-1h	Interstate 10	0.5-15	At grade	Temporary/intermittent
KOP 2	Chuckwalla DWMA	5.0	At grade	Sustained/intermittent
KOP 3	McCoy Mountains	0.5	Superior	Sustained/intermittent
KOP 4	Mule Mountains	1.0	Superior	Sustained/intermittent
KOP 5	Bradshaw Trail	4.0	At grade	Intermittent
KOP 6	Nicholls Warm Springs/ Mesa Verde	1.0	At grade	Sustained
KOP 7	Community of Ripley	6.0	At grade	Sustained
KOP 8	Colorado River	12.0	At grade	Sustained

<sup>&</sup>lt;sup>1</sup> KOP locations are shown on Figure 3-1 through Figure 4-5.

<sup>&</sup>lt;sup>2</sup> Refer to Section 3.2.1 for description of ratings.

#### **4.3.1** Key Observation Point 1: Interstate 10

I-10 is a major east-west four-lane interstate highway that runs from Arizona through California. It is located north of the Project site and traverses through the center of the Riverside East SEZ. Though the County has designated I-10 as an eligible County Scenic Highway, it is not designated as an eligible scenic highway by Caltrans' California Scenic Highways Program. Annual average daily traffic on I-10 north of the Project (Wiley's Well Road to Mesa Drive) is estimated at 20,200 (see http://www.interstate-guide.com/i-010\_aadt.html).

Eight points along the I-10 corridor were used to establish a linear KOP (designated KOPs 1a–1h). This linear KOP is representative of roadway travelers traveling east- and westbound along I-10. Viewer geometry relative to the Project is generally at grade (KOPs 1a-1f); however, superior viewer positions do exist as westbound travelers descend from the Domee Rock Mountains toward the City of Blythe, the Palo Verde Mesa and the Chuckwalla Valley (KOPs 1h and 1g). From I-10, the landscape appears large in scale and enclosed. The flat valley creates a broad horizontal line, interrupted only by the discrete and rugged landforms of the surrounding mountains. When traveling eastbound, the landscape appears natural. A 500 kV transmission line parallels I-10 from Palm Springs; despite the modification to the landscape from this feature, the landscape appears largely intact. When traveling westbound, the City of Blythe is dominant in the foreground-middle ground.

#### 4.3.2 Key Observation Point 2: Chuckwalla DWMA ACEC

The Chuckwalla DWMA is located in the eastern foothills of the Little Chuckwalla Mountains. The DWMA is bordered to the north by I-10 and the town of Desert Center and to the south by the Bradshaw Trail. The highest point is Black Butte, elevation 4,504 feet (1,373 meters). Much of the Little Chuckwalla Mountains are contained in the Chuckwalla Mountains Wilderness Area. Motorized travel is permitted on established roads.

The KOP was placed at the eastern edge of the DWMA, north of the Chuckwalla Valley State Prison. This KOP is representative of recreators using the lower elevation portions of the DWMA. Viewer geometry relative to the proposed Project site is at grade. From this KOP, the landscape appears broad and flat, characterized by a distinct horizontal line created by the valley floor. Views extend to the background distance zone, with some enclosure provided by the McCoy and Mule Mountains to the east.

The Mule Mountain Long Term Visitor Area (LTVA) is located south of KOP 2. Recreators may use this facility for seasonal long-term (September 15 to April 15) or short-term (14 days) visitation (*see* http://www.blm.gov/ca/st/en/fo/elcentro/recreation/ltvas.html).

#### **4.3.3** Key Observation Point 3: McCoy Mountains

The McCoy Mountains are located east of the Palen Mountains and south of the Little Maria Mountains. The mountain range measures approximately 18 miles and is oriented primarily north-south. McCoy Peak, located at the southern terminus of the range, reaches an elevation of 2,054 feet above sea level. The southern terminus of the range is located on the north side of I-10, approximately 10 miles east of the City of Blythe.

The KOP was established on the foothills of the McCoy Mountains with views directed south across the Palo Verde Valley. The viewer position is superior relative to the valley and is representative of views experienced by individuals engaged in dispersed recreation. The landscape is characterized by the broad, flat Palo Verde valley, which appears enclosed by the bold form and jagged silhouette of the Mule Mountains and Chuckwalla Mountains to the south. Color in the valley is primarily muted tan to grey-green tones. Views from this location include I-10, which passes directly south of the KOP. The steady movement of vehicles and trucks are dominant features in the immediate foreground. An existing solar facility is visible to the southeast. The smooth, dark grey solar panels and flat, geometric shape of the facility contrast the form, line, color, and texture of the existing landscape; however, the facility is not a dominant feature in the view. Numerous narrow, vertical electrical transmission poles are visible in the foreground/middleground. The poles appear orderly and evenly distributed across the valley. Though they are relatively small in scale compared to the surrounding valley, they appear as dominant elements of the landscape.

Recreational use within the McCoy Mountains is reported low (Hill 2015).

#### **4.3.4** Key Observation Point 4: Mule Mountains

The Mule Mountains are designated as an ACEC under the CDCA Plan, with the goal of managing prehistoric resources (BLM 1980). The ACEC measures 4,092 acres in size and is managed per dual Multiple Use Class designations: M (Moderate Use), and L (Limited Use).

The KOP was established on a narrow two-track located on BLM-administered lands and is representative of views experienced from the foothills of the Mule Mountains, including a BLM-administered interpretive area located nearby. The landscape is characterized by the broad, flat Palo Verde Valley. The valley appears large in scale, with enclosure provided by the bold forms and rugged silhouette of the McCoy Mountains to the north and the Big Maria Mountains to the northwest. The exposed gravelly loam soils of the valley are a dominant feature, appearing coarse due to the angular rocky substrate. Vegetation is composed of discrete oval-shaped shrubs that appear stippled across the landscape. An abandoned plantation exists to the east of this KOP, where remnant vegetation exists in distinct linear rows. Predominant color appears as muted grey to pink tones intermixed with the green tones of the vegetation. Large-stature lattice transmission towers cross the foreground-middleground of the view. The structures are apparent due to their distinctly vertical form

and line that contrast against the predominantly horizontal line of the valley. Traffic on I-10 to the north is visible due to the consistent motion of vehicles against the still landscape.

#### 4.3.5 Key Observation Point 5: Bradshaw Trail

Bradshaw Trail, also known as the "Gold Road to La Paz," is a 65-mile backcountry byway extending from approximately 35 miles southeast of Indio, California, to approximately 15 miles southwest of Blythe. The route traverses mostly public land between the Chuckwalla Mountains and the Chocolate Mountain Aerial Gunnery Range. The trail is characterized as a dirt road that is periodically graded by the Riverside County Transportation Department. Four wheel drive vehicles are recommended because of stretches of soft sand and dry wash.

The Bradshaw Trail connects to SR-78 approximately 12 miles south of the intersection with I-10. Portions of the Bradshaw Trail intersect the Project viewshed in the foreground/middleground and background distance zones. Multiple recreation-based viewing opportunities exist along the Bradshaw Trail.

#### 4.3.6 Key Observation Point 6: Town of Nicholls Warm Springs/Mesa Verde

The Town of Nicholls Warm Springs/Mesa Verde is a small, medium-density residential community located south of I-10, north of the existing NRG Blythe 21 Solar Power Plant near Blythe. KOP 6 is located at the corner of Cottonwood Drive and Blythe Way, on the western edge of town. Nicholls Warm Springs/Mesa Verde is considered the closest residential grouping to the Project. Housing and community buildings are primarily single-story. Views from the perimeter of town extend across the flat horizon of the Palo Verde Mesa and the Chuckwalla Valley to the south and west and the Palo Verde Valley to the southeast and east. Surrounding mountain ranges appear dominant and provide enclosure to the setting.

#### 4.3.7 Key Observation Point 7: Town of Ripley

The Town of Ripley is located in eastern Riverside County, along SR-78 between Palo Verde and Blythe. The town exists as a discrete population center, surrounded by agricultural lands. Per the 2010 census, the population was approximately 692 (http://censusviewer.com/city/CA/Ripley). SR-78 is a two-lane highway that runs generally east-west from Oceanside, California to Blythe. In the vicinity of the proposed Project, the highway runs north-south, terminating at the intersection with eastbound I-10, east of the Project site. The portion of SR-78 in Riverside County is not designated as a scenic route by Caltrans.

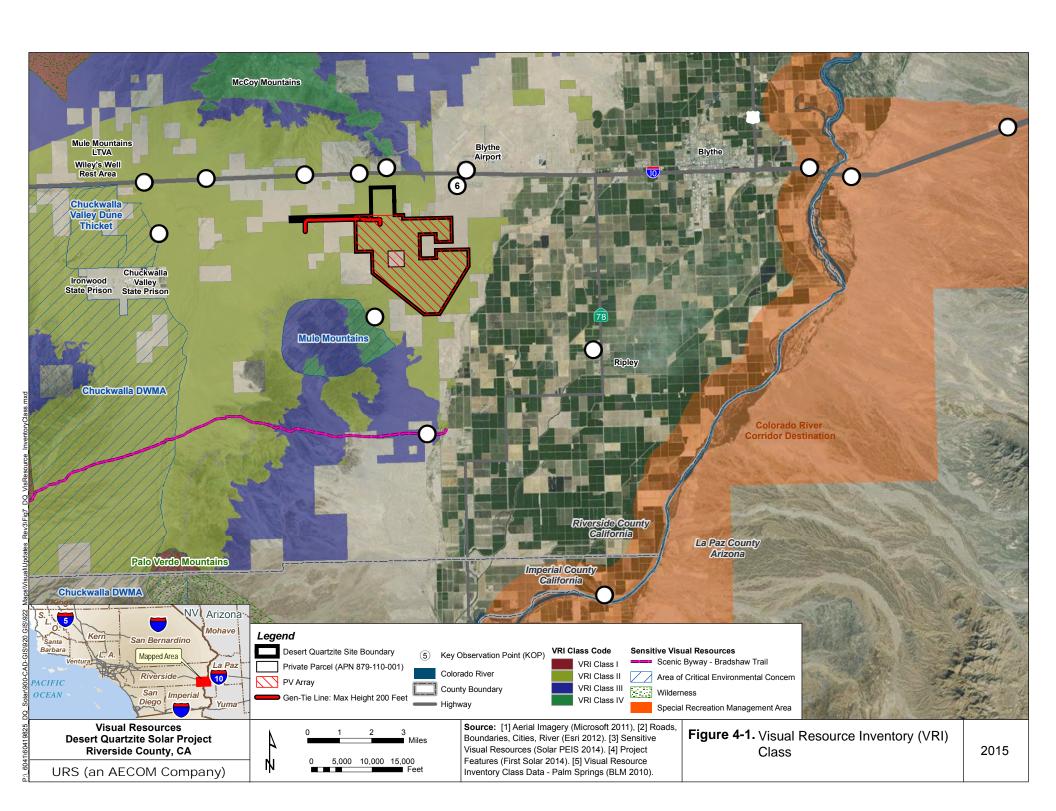
The KOP was placed on the western edge of the Town of Ripley, adjacent to the Community Center. Views are representative of the residential area located the closest to the proposed Project. The landscape from the Town of Ripley appears broad and flat, with enclosure provided in the foreground by shallow, rolling topography and in the background by isolated

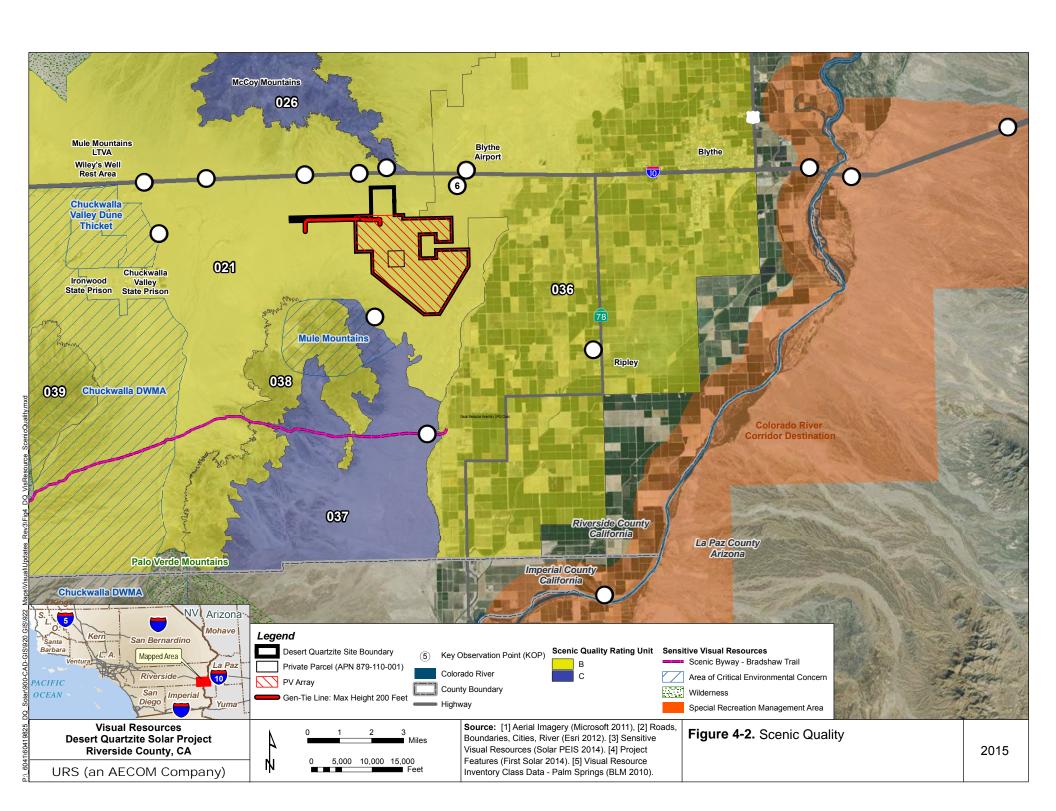
forms of the Chuckwalla Mountains to the west. Views are dominated by the tan-pink color of exposed ground. Patches of vegetation exist, appearing discrete and irregular. Dried branches appear sharp. Large-stature 500 kV transmission towers are visible in the foreground, appearing as dominant elements in the landscape due to their vertical structure against the horizontal lines of the valley.

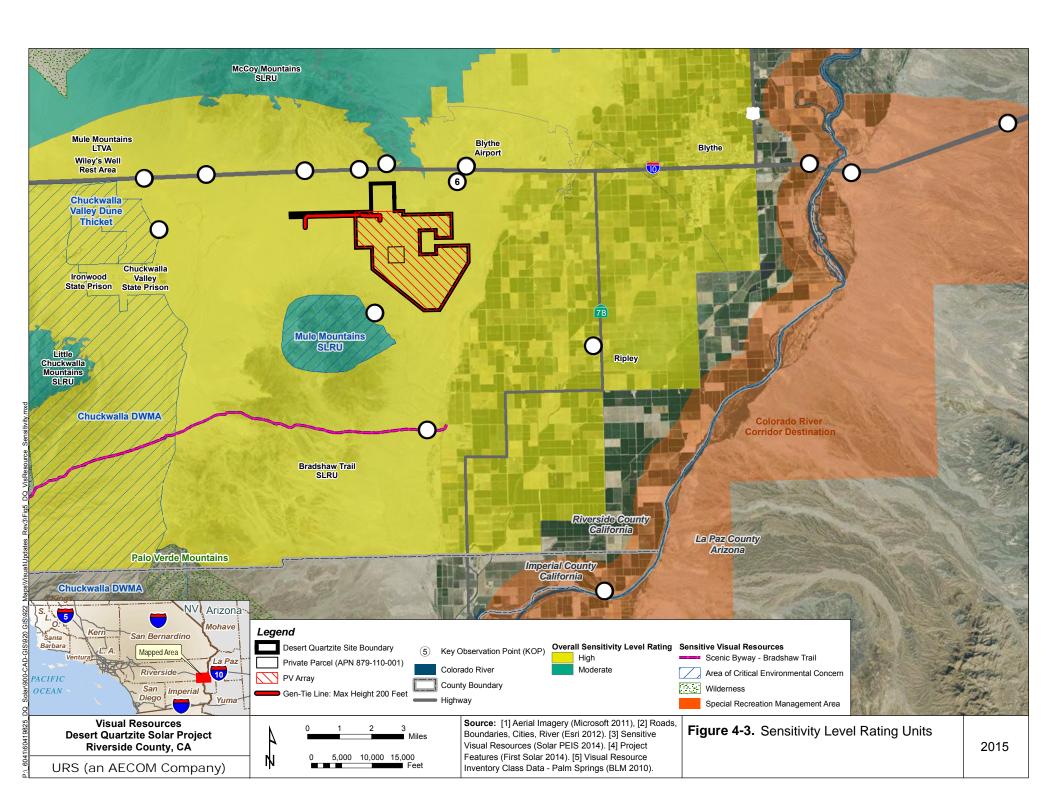
#### 4.3.8 Key Observation Point 8: Colorado River

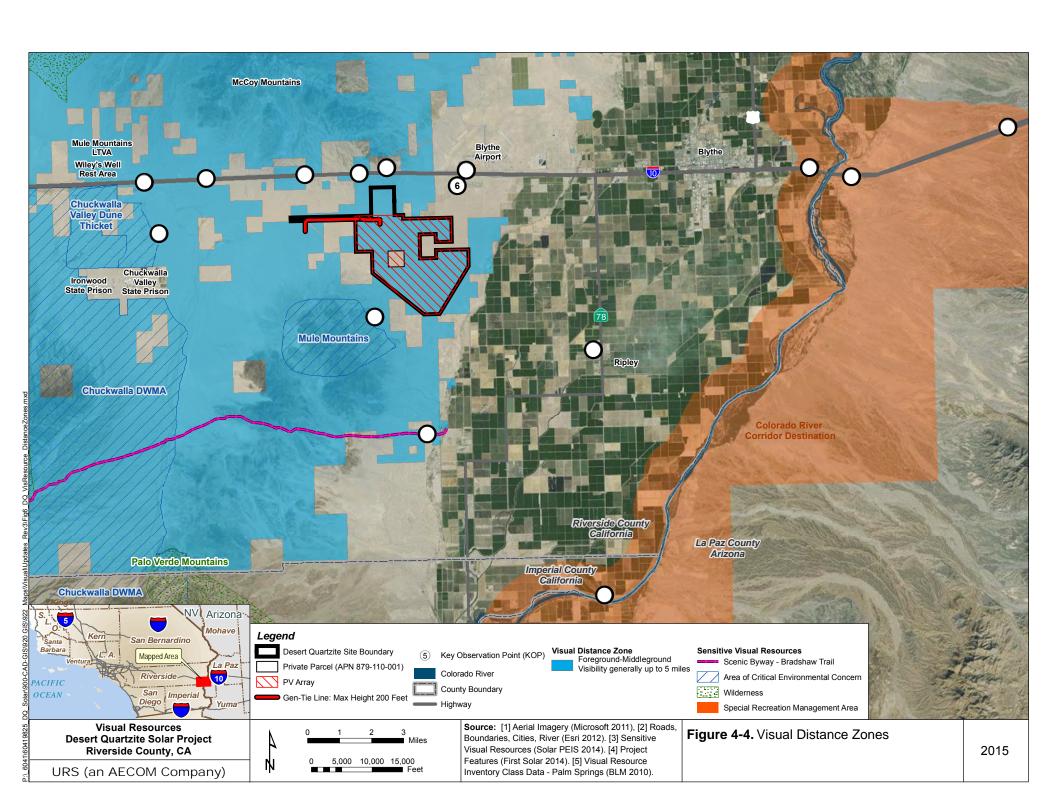
The Colorado River is a major water body in the southwestern U.S., the source of which is located in the Rocky Mountains of Colorado, and the mouth of which is located in the Gulf of California in Baja California, Mexico. The river crosses I-10 east of SR-78, which is east of the Project site, and is surrounded by agricultural land uses. It provides the border between California and Arizona.

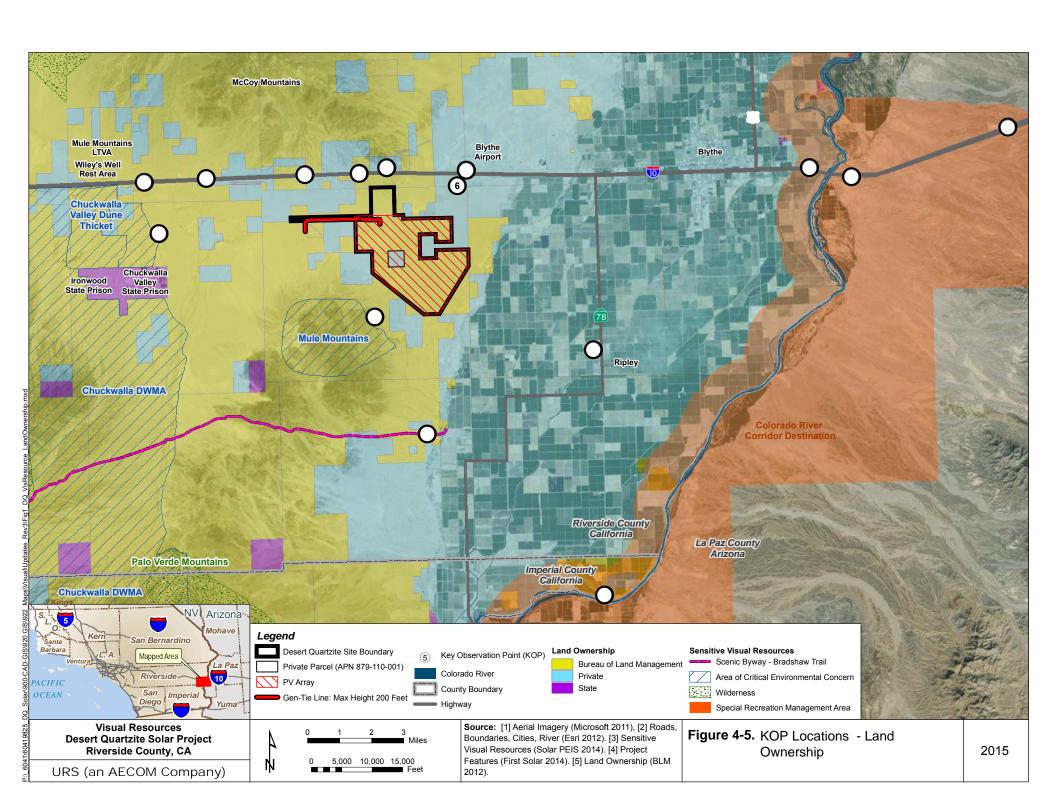
The Project is adjacent to the City of Blythe Sphere of Influence (Colorado River Corridor Plan 2007). The river may be considered a "boating trail" under the 1974 Recreational Trails Act and may be used by recreational canoers from Blythe to the Imperial Dam (see http://www.dbw.ca.gov/Pubs/BlythetoImperial/BlythetoImperial.pdf). Boaters can start from Mayflower County Park north of the I-10 bridge over the river or at the privately owned Riviera Blythe Marina south of the bridge, and travel south toward the Imperial Dam. Portions of the Project may be visible from the Colorado River.











## SECTION 5.0 IMPACT ASSESSMENT

#### 5.1 VISUAL CONTRAST RATING

Potential impacts to visual resources that may result from construction and/or operation of the proposed Project were assessed at 15 KOPs (8 of which are along I-10) established in the study area. The KOPs were established on public lands administered by the BLM, municipalities of Ripley and Nicholls Warm Springs/Mesa Verde, and within the Colorado River Corridor Destination Special Recreation Management Area (Figure 4-5). All KOPs were placed within the viewshed of Project components (Figures 3-1 and 3-2). The impact assessment was based on visual simulations prepared for a subset of the KOPs, including KOP 1c (I-10), KOP 2 (Chuckwalla DWMA), KOP 3 (McCoy Mountains), KOP 4 (Mule Mountains), and KOP 7 (Community of Nicholls Warm Springs/Mesa Verde) (see Appendix C). This subset was selected to represent various viewer positions and related visibility relative to the Project. No simulations were prepared for the construction phase. For KOPs where simulations were not prepared, assumptions were made regarding the level of visual contrast expected.

Visual contrast of the proposed Project was assessed from each KOP. Relevant environmental factors and results of the visual contrast rating and are described below and summarized in Table 5-1. Overall Project visibility was determined to be greatest at KOPs situated at close proximity and at an elevated vantage point relative to the Project. Because of the low stature of the solar panels, the gently sloping or rolling topography of the valley floor would block views of this feature from KOPs situated at grade. This impact assessment includes consideration of the Applicant-committed environmental protection measures for visual resources presented in Section 1.4.

#### **5.1.1** Key Observation Point 1: Interstate 10

Construction of the proposed Project would result in moderate visual contrast when viewed from I-10. Primary sources of contrast would result from the density and movement of construction vehicles, workers, and activities such as site preparation and grading, solar array installation, equipment installation, on-site substation and operations and maintenance building construction, and gen-tie tower and conductor installation. Such activity would contrast at a moderate level against the primarily natural setting of the Chuckwalla Valley and the Palo Verde Mesa. Contrast of graded areas would increase incrementally as construction progressed and could contrast with the flat and uniform appearance, smooth texture, and distinct tan color where desert pavement was removed. Overall visual contrast of cleared areas would be weak as views of the ground-plane would be largely shielded by vegetation for viewers situated at-grade relative to the Project (i.e., KOPs 1a–1e). Likewise,

TABLE 5-1 LANDSCAPE CHANGE AND VIEWER EXPOSURE

				Landscape Change			Viewer Exposure	
KOP Number	KOP Name	Approximate Distance (Miles)	Overall Visual Contrast	Source of Contrast	Scale Dominance	Viewer Geometry	Duration of View	
1	Interstate 10 (a-h)	0.5 to >15	Moderate	Form; color; texture	Apparent	Oblique/superior	Intermittent	
2	Chuckwalla DWMA	≥5	None-weak <sup>1</sup>	N/A	Not apparent	Variable	Intermittent	
3	McCoy Mountains	≥1	Strong	Form; color; texture	Dominant	Superior	Intermittent	
4	Mule Mountains	≥0.5	Strong	Form; color; texture	Dominant	Superior	Intermittent	
5	Bradshaw Trail	3		_	_		Intermittent	
6	Nicholls Warm Springs/Mesa Verde	0.25	NonModerate-strong	Form; line	Apparent	Vari <b>A</b> bl <del>gr</del> ade	Sustained	
7	Town of Ripley	3	Weak	Form; line	Not apparent	At grade	Sustained	
8	Colorado River	8	None	N/A	Not apparent	At grade/inferior	Intermittent	

Visual contrast may increase to a moderate-to-strong level depending on the vantage point within this resource.

for viewers situated at a higher elevation relative to the Project (KOPs 1f–1h), visual contrast of cleared areas would be perceived as none to weak.

Visual contrast of Project components is expected to increase as construction of solar arrays, substation, gen-tie, and auxiliary facilities progresses. Construction-related dust is not expected to contribute to visual contrast, as dust control measures are included in the Plan of Development.

Operation of the proposed Project would result in moderate visual contrast against the existing landscape. Contrast is expected to be reduced from that expected during the construction phase as additional contrasting elements resulting from construction vehicles and personnel would be eliminated. The primary sources of visual contrast would result from the dark grey color, smooth and reflective surface of the solar panels, and the large scale of the facility relative to the surrounding landscape. The narrow, vertical lines of the collector poles and gen-tie result in weak visual contrast against the existing landscape, largely due to their distance from this observation corridor and the presence of multiple other larger stature electrical transmission poles. The facility would be apparent, though largely subdominant to surrounding landscape features. The low stature and dominant horizontal line of the structure would result in an overall weak visual contrast against the existing landscape.

Viewer exposure to weak visual contrast of the proposed Project during the operational phase would be intermittent. It is estimated that the Project would be most visible from within an approximately 4-mile segment located due north of the proposed Project, as the elevation of the highway is higher than that of the Project site. Views of the Project would be experienced temporarily while traveling east- or west-bound on I-10, at speeds of approximately 70 miles per hour. The Project would be situated at an oblique angle relative to the viewer.

#### 5.1.2 Key Observation Point 2: Chuckwalla DWMA ACEC

Visual contrast of the proposed Project from the Chuckwalla DWMA during construction and operational phases would be none to weak. The low visibility of the Project from this location is primarily due to screening of construction-related actions and solar arrays by the low rolling topography of the Chuckwalla Valley. Visibility of taller structures, such as collector poles and the gen-tie, would also result in none to weak visual contrast, largely due to the location of these features relative to this observation point (approximately ≥4 miles) and the difficulty in discerning the narrow vertical line of these features at this distance. In addition, the presence of other existing transmission lines in and surrounding the Project site would reduce the contrast created by the proposed collector poles and gen-tie structures.

#### **5.1.3** Key Observation Point 3: McCoy Mountains

Construction and operation of the Project when viewed from KOP 3 would be strong. Similar to KOP 1 (I-10) as described above, visual contrast during the construction phase would

primarily result from the density and movement of construction vehicle, workers, and flat, uniform appearance, smooth texture, and distinct tan color of graded areas.

During operation of the Project, strong visual contrast would result from the broad, flat form and dark grey, reflective surface of the solar panels against the exiting muted tones of the landscape. From this elevated viewer platform, the scale of the solar panels would dominate the landscape. Other Project features, including collector poles and gen-tie, would be visible; however, these features would contrast at a weak level against the existing landscape, largely due to the presence of multiple other transmission structures with similar form, line, and axis within the study area.

Viewer exposure to visual contrast of the proposed Project during construction and operational phases would be intermittent to sustained, depending on the prevailing use of the area. The majority of use is expected within the southern-most portion of the mountain range along access roads leading to local utility stations.

#### **5.1.4** Key Observation Point 4: Mule Mountains

Construction and operation of the Project when viewed from KOP 4 would be strong. As described for I-10 and the McCoy Mountains, the primary sources of visual contrast during the construction phase would result from the density and movement of construction vehicles, workers, and the flat, uniform appearance, smooth texture, and distinct tan color of graded areas. Construction-related actions would appear dominant due to the close proximity (<1 mile) of viewers to the Project site.

During the operational phase, the primary source of visual contrast would result from the solar panels; specifically, the broad, flat form, dark grey, reflective surface and smooth texture of this feature against the existing muted tones of the landscape. The configuration of linear arrays would be apparent, appearing ordered and directional. Collector poles would be apparent, appearing as rows of straight, tall vertical lines that result in weak-moderate visual contrast against the existing landscape. Collectively, these features would dominate the landscape from this vantage point. The gen-tie, though visible, would contrast at a weak level when viewed from this location. The tall, narrow, vertical lines of the gen-tie poles are consistent with the cluttered appearance of existing transmission and distribution lines.

#### 5.1.5 Key Observation Point 5: Bradshaw Trail

Visibility of construction and operational phases of the Project from the Bradshaw Trail is expected to be minimal. Views of the Project site from the majority of the Bradshaw Trail would be screened by the Mule Mountains to the north. The low, rolling topography east of the Mule Mountains would preclude visibility of the solar arrays from the eastern-most terminus of the Bradshaw Trail. Collector poles and gen-tie may be detectable; however,

visual contrast is expected to be weak, largely due to distance and the presence of existing transmission and distribution lines.

#### 5.1.6 Key Observation Point 6: Town of Nicholls Warm Springs/Mesa Verde

Construction and operation of the Project when viewed from KOP 6 would be moderate. Visual contrast during the construction phase is primarily expected to result from the presence of construction vehicles and workers and the close proximity (<1 mile) of construction-related actions to viewers. Construction-related actions pertaining to installation of the collector poles and gen-tie could be apparent due to the vertical stature of these features. Because viewer geometry at this site is at-grade, cleared and graded areas are expected to be screened by low rolling topography and foreground vegetation, and therefore would not contribute to visual contrast.

Though characterized by a low profile consistent with the horizontal line of the landscape, solar panels would be apparent, largely due to the large scale of the facility and the smooth, flat silhouette against the surrounding coarser texture and muted colors of the landscape. Moderate-strong contrast could result from the scale of the Project and the large portion of the horizon occupied by the arrays. Collector poles would also be apparent; however, visual contrast is expected to be weak as a result of existing and planned transmission structures in the foreground. In addition, the existing NRG Blythe 21 solar facility is located between the proposed Project location and Nicholls Warm Springs/Mesa Verde.

#### **5.1.7** Key Observation Point 7: Town of Ripley

Visual contrast of the proposed Project when viewed from the Town of Ripley would be weak. Though no high elevation or prominent topography or vegetation exists between the Project site and the Town of Ripley, the low-stature solar array would be screened by the gently rolling topography of the valley and the Project would not be apparent. Collector poles could be visible; however, the narrow, vertical line and form of these structures is consistent with existing electrical transmission and distribution poles and therefore is expected to result in low visual contrast.

#### 5.1.8 Key Observation Point 8: Colorado River

No visual contrast is expected to result from viewpoints on the Colorado River, as the channel is situated below grade relative to the Palo Verde Mesa and Chuckwalla Valley bottom and the proposed solar array and gen-tie facilities.

#### 5.2 VISUAL RESOURCE INVENTORY ANALYSIS

The VRI analysis was implemented for SQRUs 021, 026, 036, 037, and 038, and for SLRU 49 (Bradshaw Trail National Backcountry Byway) (Tables 4-2 through 4-7). This assessment

summarizes impacts to scenic quality and visual sensitivity based on estimated changes to key factor rating scores documented in the BLM's VRI for the Palm Springs FO (BLM 2010). This assessment is to support the requirements of FLPMA and allow the BLM to document potential change in the distribution of scenic values across the planning area.

For scenic quality, the primary key factors that could reduce scenic quality ratings are "cultural modification" and "adjacent scenery." Potential visual contrast of the Project could appear discordant, thereby reducing the score for "cultural modification." Likewise, if the land use objectives associated with a particular SQRU were identified as being reliant on the scenic quality of SQRU 021 (where the Project site is located), the overall score for "Adjacent Scenery" could be reduced under operational conditions.

For visual sensitivity, the primary factor that is evaluated under the Projects operational scenario in the VRI analysis is "Adjacent Land Use," which measures the importance of maintaining visual quality to sustain adjacent land use objectives (Tables 4-8 through 4-12). The VRI analysis addresses long-term impacts to visual resources that may result from the Project under operational conditions.

#### **5.2.1** Scenic Quality

Potential impacts to scenic quality are described below and summarized in Table 5-2.

#### 5.2.1.1 Scenic Quality Rating Unit 021 – Chuckwalla Valley

The proposed Project is located in SQRU 021 (Chuckwalla Valley). The results of the contrast rating completed at the KOPs indicate that the proposed Project, under operational conditions, would dominate the landscape when viewed from superior viewer positions (i.e., Unit 026 [McCoy Mountains] and Unit 038 [Mule Mountains]). When viewed from these higher elevation vantage points, moderate-strong contrast of the Project could extend to background distance zones. Visibility of the Project is limited in areas situated at similar elevation due to the low profile of the solar arrays. The solar arrays, considered the dominant visual element of the proposed Project, would be discordant with existing naturally appearing character attributes of the Chuckwalla Valley, thereby potentially reducing the ranking of cultural modification in SQRU 21 from 0 (neutral) to -4. A reduction in value could reduce the overall scenic quality rating score from 12 to 8 and the overall scenic quality rating classification from B to C. The expected level of cultural modification within this portion of SQRU 021 is not expected to warrant splitting the SQRU in planning records, as transmission lines and other solar developments are present throughout the unit.

#### 5.2.1.2 Scenic Quality Rating Unit 026 – McCoy Mountains

The proposed Project is located south of SQRU 021 (McCoy Mountains). Based on the viewshed models prepared for all Project components, the proposed Project would not be

TABLE 5-2 SCENIC QUALITY RATING UNIT IMPACT SUMMARY

Scenic Quality Rating Unit (SQRU) <sup>1</sup>	SQRU Name <sup>1</sup>	Existing Rating <sup>2</sup>	Expected Post-project Rating	Rationale <sup>1</sup>
021	Chuckwalla Valley	В	С	Reduction in Cultural Modification from 0 to -4.
026	McCoy Mountains	С	С	Operation of the proposed Project is not expected to detract from existing values for "Adjacent Scenery."
036	Blythe Valley	В	С	A reduction of one point in the value for "Adjacent Scenery" to account for modification to the Chuckwalla Valley.
037	Palo Verde	С	С	Despite the reduction of 1 point for value for "Adjacent Scenery," no change in overall classification would occur.
038	Mule Mountains	В	С	A reduction of 1 point the value for "Adjacent Scenery" would decrease the overall scenic quality score from 12.5 to 11.5.
039	Little Chuckwalla Valley	В	В	"Adjacent Scenery" is dominated by the rugged topography of the Mule, McCoy and Little Chuckwalla Mountains; consequently, no change in the inventoried value for "Adjacent Scenery" is expected.

<sup>&</sup>lt;sup>1</sup> Source: BLM 2010.

visible from the majority of this SQRU. The dramatic landscape of adjacent National Park and Wilderness was recognized in the scenic quality assessment as a major contribution to overall visual quality, with a value of 4 assigned to "Adjacent Scenery." Operation of the proposed Project is not expected to detract from the quality of existing adjacent scenery in the adjacent National Park or Wilderness Area. Consequently, no change in scenic quality rating is expected to result in SQRU 026 as a result of the proposed Project.

#### 5.2.1.3 Scenic Quality Rating Unit 036 – Blythe Valley

The proposed Project is located west of SQRU 036 (Blythe Valley). Based on field reconnaissance, the proposed Project would not be visible from the majority of this SQRU due to shielding by topography, vegetation, and/or structures. "Adjacent Scenery" was recognized to "enhance" the overall scenic quality of the unit. A value of 3.5 was assigned to "Adjacent Scenery." Though specific elements of adjacent scenery (e.g., valley, mountains) are not specified, it is assumed that the collective landscape character of the broad Chuckwalla Valley and Palo Verde Mesa and the enclosure provided by the surrounding McCoy, Chuckwalla, and Mule Mountains collectively support this positive score. A

<sup>&</sup>lt;sup>2</sup> Refer to Section 3.2.1 for description of ratings.

conservative reduction of one point in the value for "Adjacent Scenery" could result from modification to the Chuckwalla Valley visible from the western edge of this SQRU. Should this reduction be applied, a reduction in the overall scenic quality rating score from 12.5 to 11.5 could result, thereby reducing the overall scenic quality rating classification from B to C.

#### 5.2.1.4 Scenic Quality Rating Unit 037 – Palo Verde

The proposed Project is located north of SQRU 037 (Palo Verde). "Adjacent Scenery" moderately enhances scenic quality of this unit, with a value of 3.5 assigned to this key factor. The proposed Project would be visible from the northern portion of this SQRU, where the Project could appear as a dominant element of "Adjacent Scenery." The proposed Project could appear discordant, thereby reducing the overall contribution of the portion of the adjacent scenery to the overall score. A conservative reduction of 1 point the value for "Adjacent Scenery" due to visual contrast of the proposed Project would decrease the overall scenic quality score from 11 to 10. Despite this reduction in score, no change in the existing scenic quality classification of "C" would result.

#### 5.2.1.5 <u>Scenic Quality Rating Unit 038 – Mule Mountains</u>

The proposed Project is located northeast of SQRU 038 (Mule Mountains). Similar to SQRU 037, "Adjacent Scenery" moderately enhances scenic quality of this unit, with a value of 3 assigned to this key factor. The proposed Project would be visible from the northern portion of this SQRU, where the Project could appear as a dominant element of "Adjacent Scenery." The proposed Project could appear discordant, thereby reducing the overall contribution of the portion of the adjacent scenery to the overall score. A conservative reduction of 1 point the value for "Adjacent Scenery" due to visual contrast of the proposed Project would decrease the overall scenic quality score from 12.5 to 11.5. This reduction in the scenic quality score would change the existing scenic quality classification of B to C.

#### 5.2.1.6 Scenic Quality Rating Unit 039 – Little Chuckwalla Mountains

The proposed Project is located east of SQRU 039 (Little Chuckwalla Mountains). "Adjacent Scenery" moderately enhances scenic quality of this unit, with a value of 3 assigned to this key factor. Based on the viewshed models, the proposed Project could be visible from the northeastern edge of this SQRU. However, "Adjacent Scenery" is expected to be dominated by the rugged topography of the Mule, McCoy and Little Chuckwalla Mountains. Consequently, no change in the inventoried value for "Adjacent Scenery" is expected and no change in the scenic quality classification of B is expected to result from operation of the proposed Project.

#### 5.2.2 Visual Sensitivity

Operation of the proposed Project could alter visual sensitivity within SLRU 49 (Bradshaw Trail National Backcountry Byway SLRU). As shown on Figure 4-3, this SLRU extends from the Imperial County/Riverside County border to approximately 10 miles north of the Bradshaw Trail, including the Chuckwalla Valley, Palo Verde Mesa and Palo Verde Valley.

The sensitivity level analysis for this unit indicated a high score for "Adjacent Land Use," because of the importance of maintaining scenic quality for adjacent land use, including a military range, Wilderness Areas, and ACECs. Operation of the proposed Project could reduce this value to a "Medium" or "Low," as the areas overall contribution to scenic quality would be diminished. It is likely that, for planning purposes, the SLRU would be split such that portions of the unit located to the south retained a ranking of "High" for this key factor. Visual sensitivity for portions of this SLRU located in the Chuckwalla Valley south of I-10 could be reduced from "high" to "medium."

#### 5.3 IMPACT ASSESSMENT SUMMARY AND FINDINGS

An overall impact determination is provided below. This determination summarizes the expected impact in terms of its magnitude/intensity, direction, geographic extent, and context. Criteria used in this assessment are described in Table 5-3.

The rating scales provided below provide a guideline to place the effects of the Project in an appropriate context and to reach summary conclusions about the level of impact, taking into account the impact factors of intensity, duration, extent, and context.

Impacts may be beneficial or adverse. Impacts are generally assumed to be adverse, unless specifically noted as beneficial:

- Major. Impacts would be high intensity, resulting from strong visual contrast, scale
  dominance, prolonged viewer duration, and within the foreground-middleground distance
  zone. Long-term or permanent impacts would be regional or extended in geographic
  extent. Impacts would affect areas defined as having outstanding or high visual values
  (important or unique).
- Moderate. Impacts would be medium-high intensity, resulting from moderate to strong visual contrast, prolonged or intermittent viewer duration, and within the foreground-middleground or background distance zone; however viewer exposure to high intensity impacts would be intermittent and experience from background distance zone. Project related visual contrast would be co-dominant with existing features. Temporary or long-term impacts would be local or regional in geographic extent. Impacts would affect areas defined as having high visual value (common or important).

TABLE 5-3 IMPACT CRITERIA FOR VISUAL RESOURCES

Magnitude or Intensity	Low. Project components result in low to no visual contrast against the existing landscape, viewer duration is prolonged or transient, and experienced from foreground-middleground or background distance zones. Project-related impacts are subordinate.	Medium. Project components result in moderate to strong visual contrast against the existing landscape, viewer duration is prolonged or transient, and views are experienced from foreground-middleground or background distance zones.  Project-related impacts are codominant.	High. Project components result in strong visual contrast against the existing landscape, viewer duration is prolonged, and views are experienced from foreground-middleground distance zones. Project-related impacts are dominant.
Duration	Temporary. Changes to landscape character would last less than 3 years or for the duration of Project construction.	Long-term. Changes to landscape character would extend for the life of the Project.	Permanent. Changes to landscape character would last longer than the estimated life of the Project.
Geographic Extent (Viewshed limiting factors)	Local. The geographic extent of the affected area would not extend beyond the foreground-middleground distance zone (3–5 miles); key factor used to rank scenic quality in affected SQRU(s) could be changed; however, no change to VRI values for affected SQRUs would result.	Regional. The geographic extent of the affected area would extend to the background distance zone (15 miles) and/or VRI scores for affected SQRU(s) would be altered.	Extended. The geographic extent of the affected area would extend beyond the background distance zone (15 miles) and VRI scores for affected SQRU(s) would be altered.
Context	Common. The affected area is ranked as VRI Class IV (low visual value). The affected area is not recognized for its scenic value.	Important. The affected area is ranked as VRI Class II (high visual value) or III (moderate visual value). The affected area may be recognized for its scenic quality, though scenic resources are not protected by existing legislation.	Unique. The affected area is ranked as VRI Class I. The affected area is managed by legislation aimed at the protection of visual resources.

• Minor. Impacts would be of low intensity, resulting from weak visual contrast, prolonged or intermittent viewer duration, and within the foreground-middleground or background distance zone. Project related visual contrast would be subordinate to existing features. Temporary or long-term impacts would be local geographic extent. Impacts would affect areas defined as having low to high visual value (common).

• **No effect.** No effect would occur if the facilities would be isolated, screened by prevailing vegetation or topography, not noticed in the view, most often seen from background distance zones, or where no visually sensitive resources would be affected.

Detailed impact findings are provided in Sections 5.1 and 5.2. In summary, moderate to strong visual contrast was identified at four of the eight KOPs analyzed: Interstate 10, McCoy Mountains, Mule Mountains, and the Town of Nicholls Warm Springs/Mesa Verde. The visual contrast expected at these locations is due to their higher elevation relative to the Project site and/or close proximity. This conclusion is consistent with the expected visual contrast levels described in the Final Solar PEIS, which analyzed potential impacts of several solar facilities (BLM 2012). Based on this expected level of contrast and scale dominance, scenic quality of three of the affected SQRUs could be reduced. Likewise, it is expected that visual sensitivity of the Bradshaw Trail Backcountry Byway SLRU would be reduced from "medium" to "low." Collectively these changes could reduce the overall VRI score for the Project site and surrounding lands from a Class II to Class III or IV.

Based on these findings, impacts to visual resources from the proposed Project are expected to be of **medium-high intensity**, **long-term**, **regional**, **and affecting important resources**. Impacts would be experienced from locations in the foreground-middleground, where viewer duration is prolonged. However, because most locations analyzed represent viewer experience of recreators or roadway travelers, predominant viewer exposure is expected to be transient. The duration of impacts is considered long-term, extending for the life of the Project. The geographic extent of impacts is considered regional, as the distribution of VRI values would be altered within the BLM Palm Springs FO planning area (i.e., shift of Class II to Class III or IV). Affected resources are considered important, as lands occupied by the Project site were ranked as VRI Class II (high visual value). Overall, the Project is expected to result in **moderate impacts to visual resources**. Impacts to visual resources would not be perceived from several sensitive viewer locations within the Project's viewshed, including the Chuckwalla DWMA, Bradshaw Trail, Town of Ripley, and the Colorado River.

#### 5.4 PLAN CONFORMANCE DETERMINATION

This section discusses conformance of the proposed Project with existing federal, state and local land management objectives based on the results of the visual resource impact analysis.

#### 5.4.1 Federal

#### **5.4.1.1** Visual Resource Management System

Potential impacts to visual resources that may result from construction and operation of the proposed Project would be consistent with that permitted under the Class III Interim VRM Objective assigned to the Project footprint. Projects sited in VRM Class III management areas should "Partially retain the existing character of the landscape. The level of change to

the characteristic landscape should be moderate (BLM 1986)". The Project would begin to attract attention and begin to dominate the characteristic landscape; however the overall change to the existing character of the landscape would be moderate (see Section 5.1 for discussion of visual contrast and Section 5.3 for discussion of change to existing landscape character). Changes in landscape character would be perceived from locations situated at higher elevations relative to the Project, where moderate-strong element contrast in form and texture would be apparent. Overall visual contrast in line and color is expected to be weak.

#### 5.4.1.2 <u>California Desert Conservation Area Plan</u>

As discussed in Section 2.0, the proposed Project is located in an area designated as Moderate Multiple Use (BLM 1980). The CDCA outlines the following actions to manage for the alteration of the natural character of the landscape that could occur as part of the multiple-use activities described in the plan:

- (1) The appropriate levels of management, protection, and rehabilitation on all public lands in the CDCA will be identified, commensurate with visual resource management objectives in the multiple-use class guidelines.
- (2) Proposed activities will be evaluated to determine the extent of change created in any given landscape and to specify appropriate design or mitigation measures using the Bureau's contrast rating process.

The CDCA Plan stipulates that solar energy development and new electric transmission facilities are allowed on Class L, M, or I lands provided that NEPA requirements are met. The proposed Project conforms to the land management objectives defined in the CDCA.

#### **5.4.1.3** Federal Aviation Administration

The Federal Aviation Administration (FAA) has established an interim policy for proposals by sponsors of federally obligated airports to construct solar energy systems on airport property (78 FR 63276). The interim policy also requires use of the Solar Glare Hazard Analysis Tool (SGHAT) for assessing glare-induced ocular impact. Solar energy systems that are located on a non-federally obligated airport or located off airport property are not subject to this policy; however, they are strongly encouraged to consider the requirements established in the interim policy when siting the project.

The Project is in conformance with this land use objective and required findings. The Project has prepared a Glare Study analyzing project effects which is included as part of an Application for Major Land Use Action Review submitted to the Riverside County ALUC (URS 2015).

#### **5.4.2** State of California

#### 5.4.2.1 California Environmental Quality Act

In accordance with Appendix G of the California Environmental Quality Act Guidelines, a project would result in a significant impact on aesthetics and visual quality if the project would meet at least one of the following criteria:

- Have a substantial adverse effect on a scenic vista;
- Substantially damage scenic resources, including, but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway;
- Substantially degrade the existing visual character or quality of the site and its surroundings; and/or
- Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area or create substantial shadow on a sensitive use.

The results of this study indicate that the proposed Project could result in potentially adverse effects to scenic vistas, scenic resources, and degradation of visual character or quality of the site.

#### **5.4.3** Riverside County

#### 5.4.3.1 Riverside County General Plan and Palo Verde Valley Area Plan

The Riverside County General Plan and Palo Verde Valley Area Plan contain the following policies:

- PVVAP 10.1: "Protect the scenic highways in the Palo Verde Valley planning area from change that would diminish the aesthetic value of adjacent properties in accordance with the Scenic Corridors sections of the General Plan Land Use, Multipurpose Open Space, and Circulation Elements."
- C 19.1: "Preserve scenic routes that have exceptional or unique visual features in accordance with Caltrans' Scenic Highways Plan."
- OS 21.1: "Identify and conserve the skylines, view corridors, and outstanding scenic vistas within Riverside County."
- OS 22.1: "Design developments within designated scenic highway corridors to balance the objectives of maintaining scenic resources with accommodating compatible land uses."

 OS 22.4: "Impose conditions on development within scenic highway corridors requiring dedication of scenic easements consistent with the Scenic Highways Plan, when it is necessary to preserve unique or special visual features."

The proposed Project is in conformance with these policies/land use objectives. Operation of the Project would not result in adverse impacts to scenic resources as observed from I-10.

#### 5.4.3.2 The Riverside County Airport Land Use Compatibility Plan

The Riverside County Airport Land Use Compatibility Plan (adopted 2004) identifies several countywide policies that apply to projects proposed within the Airport Land Use Compatibility Zones (Compatibility Zone E for portion of this Project) and relate to glare, potential electrical interference, and placement of structures in the vicinity of Blythe Airport, which require review by the Airport Land Use Commission (ALUC).

The Project has prepared a Glare Study analyzing project effects which is included as part of an Application for Major Land Use Action Review submitted to the Riverside County ALUC. The proposed Project is in conformance with this land use objective.

### SECTION 6.0 REFERENCES

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# SECTION 7.0 LIST OF PREPARERS

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Emily Whiteman, Environmental Planner, URS

# APPENDIX A RECORD OF SELECTED AND ELIMINATED KEY OBSERVATION POINTS

This appendix presents a tabular summary of the selected and eliminated key observation points as well as Figure A-1 (Candidate KOP Study Area).

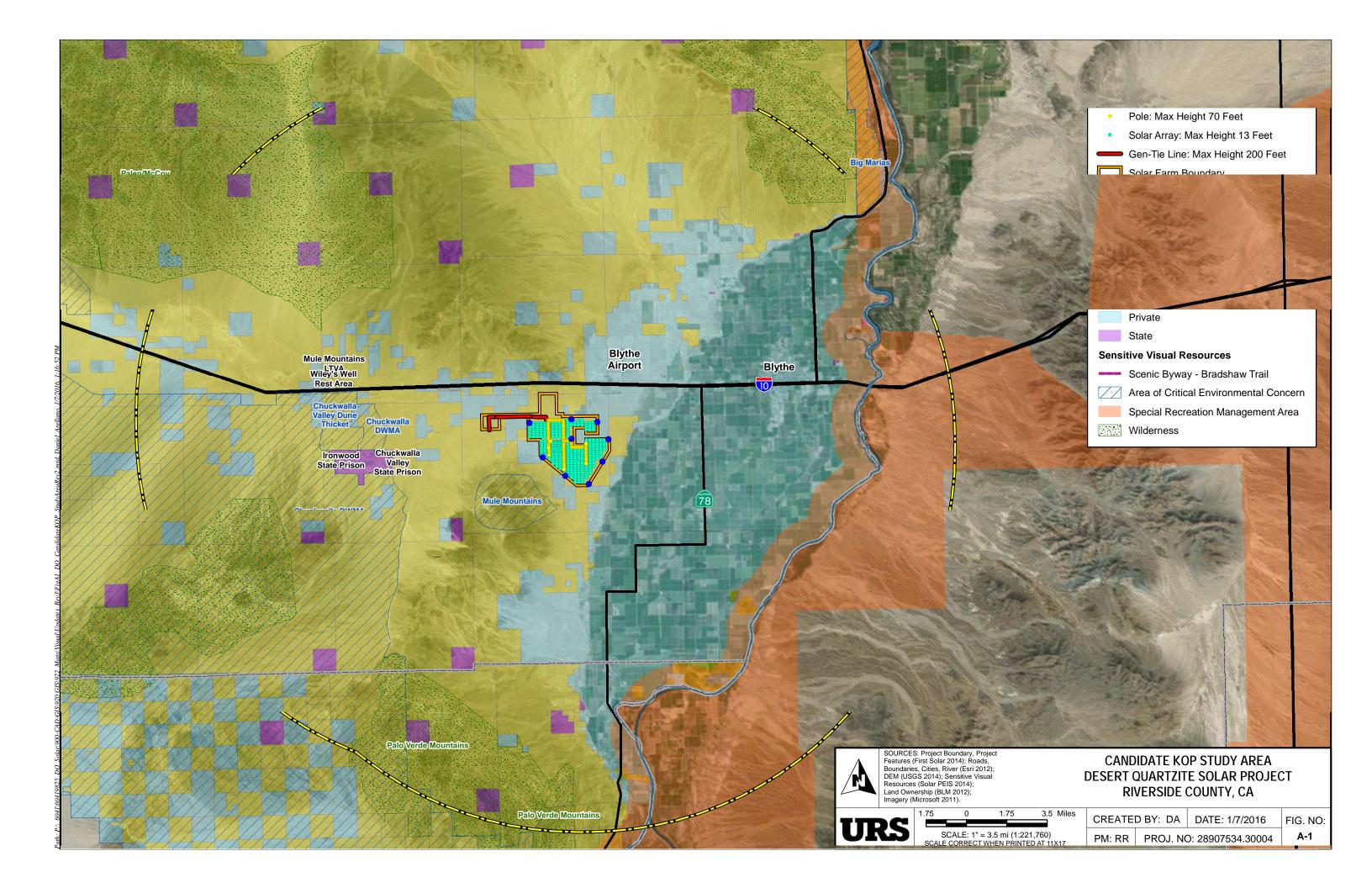


		Table A-1. Record of Selected and Eliminated R	(ey Observation I	Points (KOP)	
Candidate KOP	Selected / Eliminated	Description	Uses	Visual Analysis Factors	Project Component / Analysis Goal
Bradshaw Trail	Selected	Bradshaw Trail is a Back Country Byway. Bradshaw Trail, also known as the Gold Road to La Paz, is a 65-mile back country byway that begins 35 miles southeast of Indio, CA and ends 15 miles southwest of Blythe. The first road through Riverside County was blazed by William Bradshaw in 1862, as an overland stage route beginning in San Bernardino, California, and ending in La Paz (now Ehrenberg), Arizona. The trail was used extensively between 1862 and 1877 to transport miners and other passengers to the gold fields at La Paz. The trail is now a graded dirt road that traverses mostly public land between the Chuckwalla Mountains and the Chocolate Mountain Aerial Gunnery Range. The trail is periodically graded by the Riverside County Transportation Department, but 4WD vehicles are recommended before of stretches of soft sand and dry wash.	Recreation	Foreground / middleground / background views; temporary/transient; viewer position variable	Assess change in landscape character along Bradshaw trail, including potential foreground views of PV Arrays, background views of transmission towers, and areas where based on the viewshed model Project is not expected to be visible.
California State Route 78 (SR-78)	Selected	SR-78 is an east-west two lane California state highway that runs from Oceanside to Blythe, but generally runs north-south in the vicinity of the Project. SR-78 terminates at its intersection with eastbound I-10, east of the Project site within the viewshed of the Riverside SEZ. The portion of SR-78 in Riverside County is not designated as a scenic route by Caltrans.	Transportation; Residential	Middleground views; temporary /transient; viewer position at grade	Assess potential changes in landscape character at nearby residences and roadway travelers with potential views of arrays as and taller Project infrastructure (transmission towers, anemometer, and 34.5 kV poles).
Chuckwalla DWMA ACEC / Chuckwalla Valley Dune Thicket ACEC	Selected	The range spans approximately 40 miles (64 km), running in a generally northwest-to-southeast direction. It is bordered to the north by Interstate 10 and the town of Desert Center and to the south by the Bradshaw Trail and the Chocolate Mountains Aerial Gunnery Range. The highest point is Black Butte, elevation 4,504 feet (1,373 m). The Chuckwalla Range is divided from the Little Chuckwalla Range by Graham Pass. The Orocopia Mountains are to the west and Joshua Tree National Park to the northwest. Most of the mountains were designated by the Bureau of Land Management as the Chuckwalla Mountains Wilderness Area in 1994. Motorized travel is allowed only on "cherry-stemmed" established roads.	Public Lands Recreation	Background / middleground views; temporary/transient; viewer position at grade	Assess potential changes in landscape character with potential views of arrays as well as taller Project infrastructure (transmission towers, anemometer, and 34.5 kV poles).
Colorado River	Selected	The Colorado River is a major water body in the southwestern U.S., the source of which is located in the Rocky Mountains of Colorado, and the mouth of which is located in the Gulf of California in Baja California, Mexico. It is the primary source of water supply for all of southern California. It is not designated as a Wild & Scenic River by the National Wild and Scenic Rivers System, but is used for recreational activities. The river crosses I-10 east of SR-78, which is east of the Project site, and is surrounded by agricultural land uses. It provides the border between California and Arizona.	Recreational Water Supply	Background / middleground views; temporary/transient; viewer position at grade / inferior	Assess potential changes to landscape character of the river corridor.

	Table A-1. Record of Selected and Eliminated Key Observation Points (KOP)						
Candidate KOP	Selected / Eliminated	Description	Uses	Visual Analysis Factors	Project Component / Analysis Goal		
Community of Ripley	Selected	Ripley is a census-designated place community in east Riverside County. It is located along State Route 78 between Palo Verde and Blythe. The area is mostly agricultural lands irrigated by Colorado River water. The elevation is 249 feet (76 m). The population was 692 at the 2010 census.	Residential	Middleground views; long- term viewers; viewer position at grade	Assess potential changes in landscape and community character with potential views of arrays as well as taller Project infrastructure (transmission towers, anemometer, and 34.5 kV poles).		
Interstate 10 (I-10) Corridor	Selected	I-10 is a major east-west four lane interstate highway that runs from Arizona through California. I-10 is eligible for the State Scenic Highway System, but is not designated as a scenic highway by Caltrans. It is located north of the Project site, and traverses through the center of the Riverside SEZ.	Transportation	Foreground / middleground / background views; temporary/transient; viewer position at grade	Assess potential change in character along I-10; including potential foreground views of PV Arrays, background views of transmission towers, and areas where Project is not expected to be visible.		
McCoy Mountains	Selected	The range lies in a northwest-southeasterly direction east of the Palen Mountains and south of the Little Maria Mountains. The mountain range is approximately 18 miles long and is located just north of Interstate 10, and about seven miles northeast of Chuckwalla Valley State Prison. The mountains reach an elevation of 2,054 feet above sea level at McCoy Peak, at the southern end of the range. Downtown Blythe, California is about 10 miles to the east.	Public LandsRecreation	Foreground/Middleground views; temporary/transient; superior viewer position	Assess potential change in landscape character that may result from development of the proposed Project.		
Mule Mountains ACEC	Selected	Under the California Desert Conservation Area (CDCA) Plan, the Mule Mountains are designated as an Area of Critical Environmental Concern (ACEC) by the BLM. The Mule Mountains ACEC is 4,092 acres in size and bears dual Multiple Use Class designations, M (Moderate Use) and L (Limited Use). The Mule Mountains ACEC was established to manage prehistoric resources (BLM, 1980).	Public Lands Recreation	Foreground / middleground; stationary; temporary/transient; viewer position at grade	Assess potential change in landscape character that may result from development of the proposed Project.		

	Table A-1. Record of Selected and Eliminated Key Observation Points (KOP)							
Candidate KOP	Selected / Eliminated	Description	Uses	Visual Analysis Factors	Project Component / Analysis Goal			
Palen/McCoy Wilderness	Selected	Within the Palen-McCoy Wilderness are the Granite, McCoy, Palen, Little Maria and Arica Mountains, which are five distinct mountain ranges separated by broad sloping bajadas. Because this large area incorporates so many major geological features, the diversity of vegetation and landforms is exceptional. The desert wash woodland found here provides food and cover for burro deer, coyote, bobcat, gray fox and mountain lion. Desert pavement, bajadas, interior valleys, canyons, dense ironwood forests, canyons and rugged peaks form a constantly changing landscape pattern.	Public Lands Recreation	Background views; temporary/transient; superior viewer position	Assess potential change in landscape character from that may result from development of the proposed Project.			
Midland Long Term Visitor Area (LTVA)	Selected/ Eliminated following field visit	The BLM's Long Term Visitor Area (LTVA) program was established in 1983 to meet the long-term camping needs of winter visitors and to provide special management and control measures for the protection of natural and cultural resources. Each year, thousands of visitors come to the deserts of Southern California to enjoy the natural opportunities found there. Many of these visitors choose to make the Midland LVTA their home from the months of September through April. The LTVA is conveniently located approximately 8 miles north of the town of Blythe and to the several different types of recreational opportunities within the area including hiking, rock hounding, hunting, camping, OHV driving, wildlife watching, etc.	Public Lands Recreation	Background views; transient and long-term viewers; superior viewer position	Assess potential change in landscape character that may result from development of the proposed Project.			
Nicholls Warm Springs / Palo Verde	Selected	Nicholls Warm Springs is a small, medium density residential community located south of the I-10, north of the NRG Blythe Solar Power Plant near Blythe.	Residential	Middleground views; transient and long-term viewers; viewer position at grade	Assess potential change in landscape character that may result from development of the proposed Project.			
Palo Verde College	Selected / Eliminated following field visit	Palo Verde College is located on a mesa overlooking the City of Blythe and the Palo Verde Valley.	Academic	Middleground View; prolonged; familiar; superior viewer position	Assess potential change in landscape character that may result from development of the proposed Project.			

Table A-1. Record of Selected and Eliminated Key Observation Points (KOP)						
Candidate KOP	Selected / Eliminated	Description	Uses	Visual Analysis Factors	Project Component / Analysis Goal	
Big Maria ACEC	Eliminated	The Big Marias ACEC contains the single greatest concentration of geoglyphs in North America. The density of intaglio features in this ACEC is extremely rare and presents unique management challenges for cultural resource protection and opportunities for scientific research. The ground figures within the ACEC are known to be of tremendous importance to several Native American tribes.	Public Lands Recreation	N/A	N/A	
Blythe Airport	Eliminated	Blythe Airport is a County of Riverside publicly-owned general aviation facility located six miles west of Blythe. It has two asphalt runways and is situated at approximately 400 feet in elevation. The Blythe Airport accommodated 69 aircrafts per day on average for a 12-month period ending February 2014.	Commercial - Air Transportation	N/A	N/A	
Cibola National Wildlife Refuge	Eliminated	Cibola NWR is located in the floodplain of the lower Colorado River and surrounded by a fringe of desert ridges and washes. The refuge encompasses both the historic Colorado River channel as well as a channelized portion constructed in the late 1960's. Along with these main water bodies, several important backwaters are home to many wildlife species that reside in this portion of the Sonoran Desert. Cibola National Wildlife Refuge is located south east of the Project site, in Arizona.		N/A	N/A	
City of Blythe	Eliminated	The City of Blythe is a General Law city, which was incorporated in 1916. It is located in the Palo Verde Valley of Riverside County approximately 225 miles east of Los Angeles, CA and 150 miles west of Phoenix, Arizona. The City of Blythe encompasses an area of approximately 26 square miles and is situated 265 feet above mean sea level (City of Blythe 2006-2014). The I-10 corridor runs directly through the city.	Residential Agriculture	N/A	N/A	
County of Riverside Mayflower Park	Eliminated	Mayflower Park is a 24-acre park situated alongside the Colorado River 6 miles north of Blythe, just north of 6th Avenue and Colorado River Road. It consists of grassy campsites for tents and RVs, covered picnic ramadas on the river, showers, a launch ramp and a small lagoon. Recreational activities at the park include boating/fishing, picnics, and swimming in the lagoon.	Public Facilities Recreation	N/A	N/A	
Ironwood State Prison (ISP) / Chuckwalla Valley State Prison	Eliminated	ISP jointly occupies with CVSP 1,720 acres of State-owned property, of which ISP encompasses 640 acres. The prison complex occupies approximately 350 acres with the remaining acreage used for erosion control, drainage ditches, and catch basins.	Federal Facility	N/A	N/A	

		Table A-1. Record of Selected and Eliminated R	Key Observation P	Points (KOP)	
Candidate KOP	Selected / Eliminated	Description	Uses	Visual Analysis Factors	Project Component / Analysis Goal
Little Chuckwalla Mountains Wilderness	Eliminated	Rugged mountains surrounded by a large, gently sloping bajada laced with a network of washes describe the terrain and landforms found within the Little Chuckwalla Mountains Wilderness. To the north, a bajada gently rises to 400 feet, while the rugged mountains crest at 2,100 feet. Habitat for bighorn sheep and desert tortoise can be found in portions of this region, and the southern bajada has been identified as crucial desert tortoise habitat. Several sensitive plant species grow here, including the California snakeweed, Alverson's foxtail cactus and the barrel cactus.	Public LandsRecreation	N/A	N/A
Mule Mountains LTVA	Eliminated	The Mule Mountains Long Term Visitor Area consists of the Wiley's Well and Coon Hollow camp sites located approximately 17 miles west of Blythe, and the surrounding desert area where dispersed camping is allowed. The Long Term Visitor Area is managed by BLM. The area consists of 29 trailer sites with tables, BBQ stands and campsite rings, vault toilets, and ranger patrols. There is no electricity or water at the campgrounds. Long term camping trailers and motor homes are allowed. There is easy 4WD access to nearby rock-hounding sites such as the Hauser Geode Beds and Opal Hill Fire Agate Mine. The historic Bradshaw Trail National Scenic Byway passes between the two campgrounds and provides access to numerous trails, gem and mineral collection sites and historic stage route and mining areas.	Public Facilities Recreation	N/A	N/A
Palo Verde Mountains Wilderness	Eliminated	Distinguishing this wilderness are twin buttes known as the Flat Tops, which stand out as a landmark against a range of jagged peaks. Palo Verde Peak is the high point of the range rising to 1,800 feet. Dry washes cut across the mountain slopes, supporting such vegetation as palo verde, mesquite and ironwood. Clapp Spring and its palm oasis are unique to this area, offering the only permanent water source to such wildlife species as desert bighorn sheep, desert tortoise and wild burros. Rather than hide among canyon walls as most springs in the desert, Clapp Spring lies in an open landscape. Saguaro cactus dot the southeastern part of the wilderness, a rare plant species in California.	Public Lands Recreation	N/A	N/A
Riviera RV Resort	Eliminated	Riviera RV Resort is a privately-owned park and marina on the Colorado River near I-10 in Blythe. It consists of a convenience store and recreational room, laundry facility, public restroom sand showers, a pool and spa, and tent and RV camping sites.  Recreational activities include hiking, boating, skiing, fishing and off-road adventures.	Recreation	N/A	N/A
Wiley Well District Geode Beds	Eliminated	The Wiley Well District is located in the Colorado Desert, south of I-10 between Desert Center and Blythe. Best known for its many geode beds and a variety of other rocks and minerals, the Wiley Well District has been popular with rock hounds since the 1940s. In January 2000, the California Federation of Mineralogical Societies and the BLM signed a MOU that designated the Wiley Well District as a Rockhound Educational and Recreational Area. The MOU establishes and preserves over 36 square miles of the area for rockhounding.	Recreation	N/A	N/A

Table A-1. Record of Selected and Eliminated Key Observation Points (KOP)						
Candidate KOP	Selected / Eliminated	Description	Uses	Visual Analysis Factors	Project Component / Analysis Goal	
Wiley's Well Rest Area	Eliminated	Wiley's Well is a public rest area along the I-10 corridor 15 miles west of Blythe. The facility is maintained by the California Department of Transportation.	Public Facilities	N/A	N/A	

# APPENDIX B KEY OBSERVATIONS POINTS – BASELINE PHOTOGRAPHS



View directed east from Interstate 10 eastbound at KOP 1-a (Corner of Christopher Columbus Transcontinental Highway & Wiley's Well Road). Viewer location is approximately 6 miles west of the western edge of the proposed

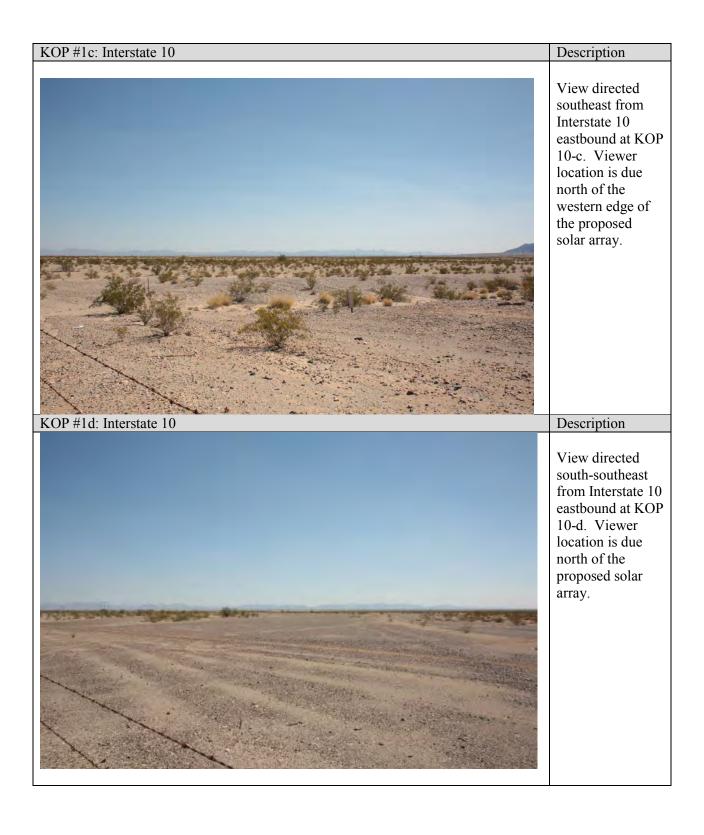
solar array.

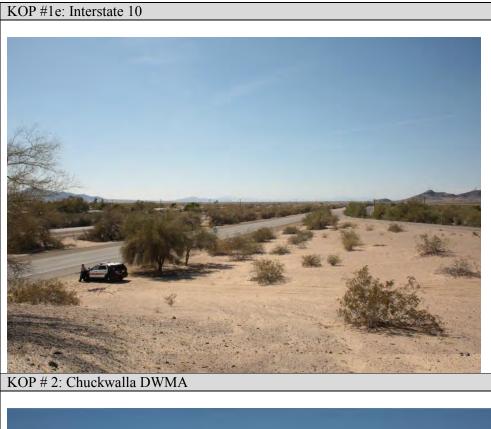
Description

KOP #1b: Interstate 10 Description



View directed east from Interstate 10 eastbound at KOP 1-b. Viewer location is approximately 3.5 miles west of the western edge of the proposed solar array.





View directed west from Interstate 10 westbound at KOP 1-e. Viewer location is approximately due north of the eastern edge of the proposed

Description

Description

solar array.

View directed eastward from the Chuckwalla DWMA at KOP 2. Viewer location approximately 2 miles from the western edge of the proposed solar array.



Description

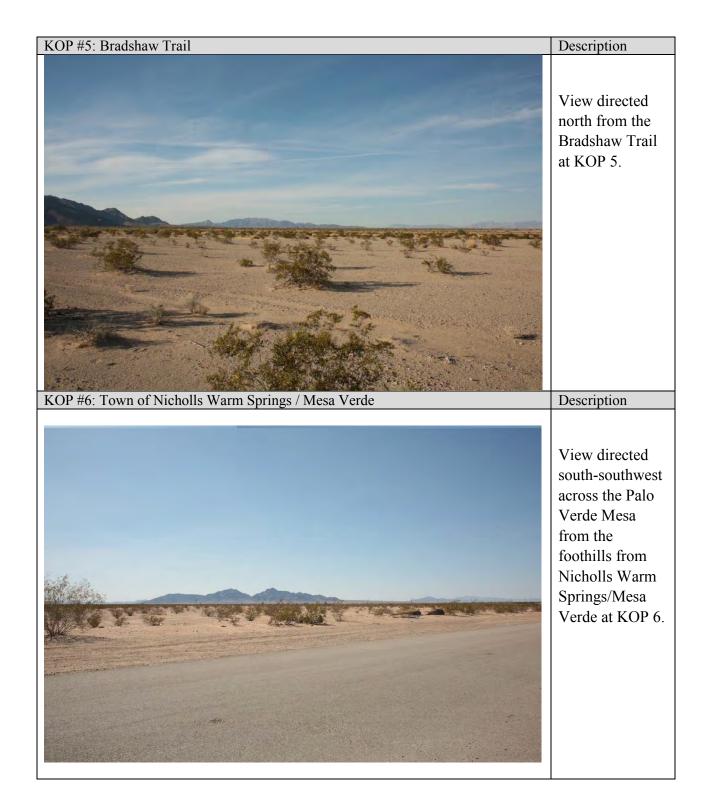
View directed south-southeast across the Palo Verde Mesa, Chuckwalla Valley and Palo Verde Valley from the McCoy Mountains at KOP 3.

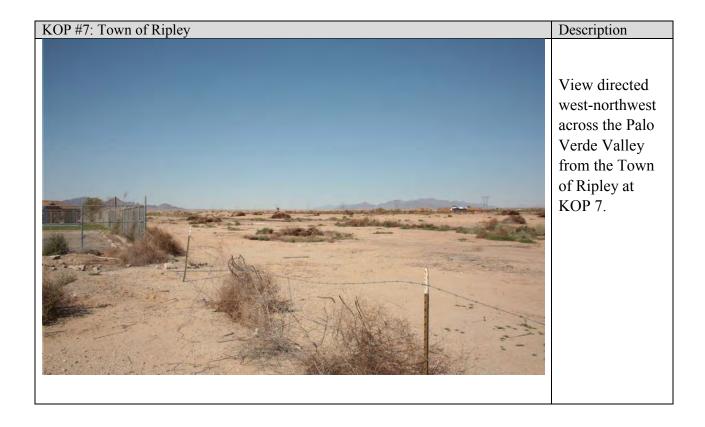
KOP #4: Mule Mountains

Description



View directed north across the Palo Verde Mesa and Chuckwalla Valley from the foothills of the Mule Mountains at KOP 4.





## APPENDIX C KEY OBSERVATIONS POINTS – VISUAL SIMULATIONS



Single Frame Photosimulations - Existing & Proposed

# Viewpoint Locations

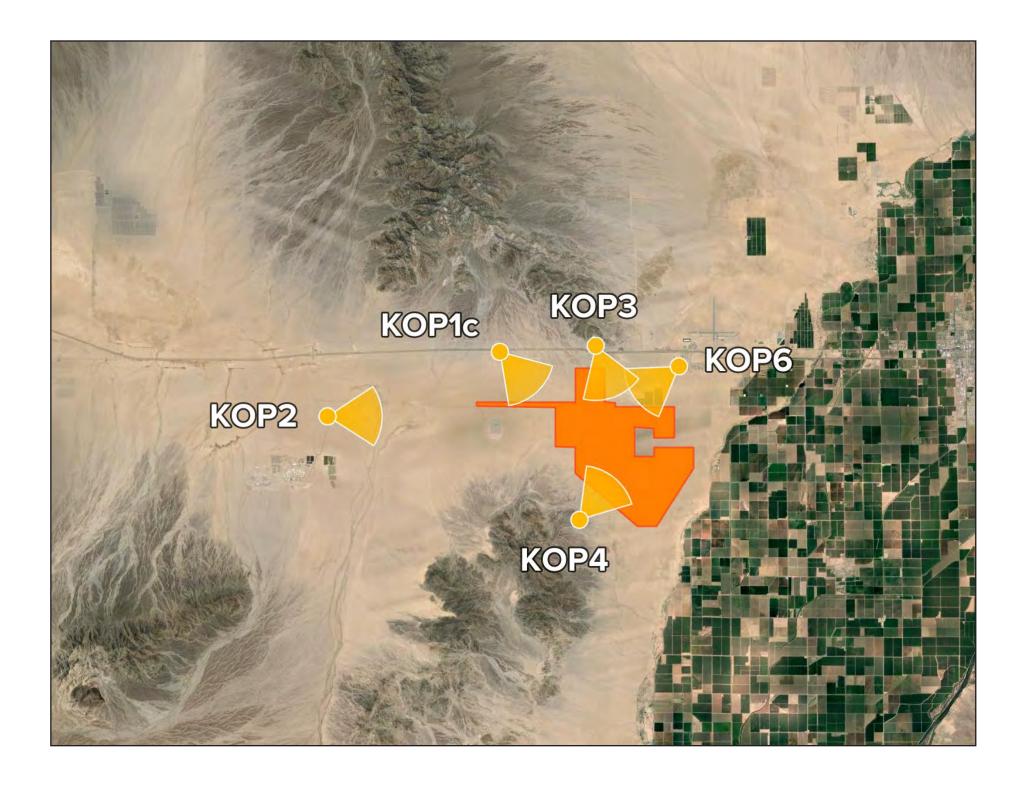
KOP2 Chuckwalla DWMA

**KOP3** *McCoy Mountains* 

**KOP4** *Mule Mountains* 

**KOP1c** Interstate 10

KOP6 Nicholls Warm Springs







Desert Quartzite Solar Project

KOP2

Chuckwalla DWMA

O Viewpoint Location



Easting Position (UTM Zon	e 11):	695432.
Northing Position (UTM Zo	one 11):	3718027.
Elevation of Photopoint P	Position (NAD83):	424.
Height of Camera Above	Ground (ft):	5.4
Date of Photography:	26 February 201	15 at 01:40 PM
Orientation of View:		1
Horizontal Field of View:		65
Vertical Field of View:		46

NOTES

Viewpoint locations have been precision surveyed by

The Holt Group, Inc. Blythe, California 92225

No part of this photo simulation shall be altered any way.

visual assessments should be made from the re size TrueView™ only.

> Photo Simulation Created Using TrueView<sup>™</sup> Technology (Patent No.: US 8,184,906 B2)

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DATE

4 September 201





Desert Quartzite Solar Project

KOP2

Chuckwalla DWMA

Viewpoint Location

Project Are



Easting Position (UTM Zon	e 11):	695432.7
Northing Position (UTM Z	one 11):	3718027.8
Elevation of Photopoint P	Position (NAD83):	424.5
Height of Camera Above	Ground (ft):	5.4
Date of Photography:	26 February 201	15 at 01:40 PN
Orientation of View:		
Horizontal Field of View:		65
Vertical Field of View:		46

NOTES

Viewpoint locations have been precision surveyed by

The Holt Group, Inc. Blythe, California 92225

No part of this photo simulation shall be altered any way.

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KOP2 - Chuckwalla DWMA, Looking East - Proposed View





Desert Quartzite Solar Project

КОР3

McCoy Mountains

O Viewpoint Location Project Area



Easting Position (UTM Zone	e 11):	706864.0
Northing Position (UTM Zo	ne 11):	3721347.7
Elevation of Photopoint P	osition (NAD83):	544.6
Height of Camera Above	Ground (ft):	5.4
Date of Photography:	26 February 201	5 at 03:12 PN
Orientation of View:		5
Horizontal Field of View:		65
Vertical Field of View:		46

NOTES

Viewpoint locations have been precision surveyed by

The Holt Group, Inc. Blythe, California 92225

lo part of this photo simulation shall be altered any way.

Visual assessments should be made from the ful size TrueView™ only.

> Photo Simulation Created Using TrueView™ Technology (Patent No.: US 8,184,906 B2)

> > Provided b

**Truescape** 

www.truescape.com

DATE

4 September 2015



McCoy Mountains



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3721347.	one 11):	orthing Position (UTM Zo	N
544.	Position (NAD83):	evation of Photopoint P	EI
5.	Ground (ft):	eight of Camera Above	H
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**KOP3** - McCoy Mountains, Looking South - *Proposed View* 



Mule Mountains



 Easting Position (UTM Zone 11):
 706270

 Northing Position (UTM Zone 11):
 3713836

 Elevation of Photopoint Position (WADB3):
 435

 Height of Camera Above Ground (tr):
 5

 Date of Photography:
 26 February 2015 at 12:000 Prientation of View:

 Horizontal Field of View:
 6

 Vertical Field of View:
 4

**KOP4** - Mule Mountains, Looking Northeast - Existing View



Mule Mountains



 Easting Position (UTM Zone 11):
 706270.

 Northing Position (uTM Zone 11):
 3713836.

 Elevation of Photopoint Position (NADBS):
 435.

 Height of Camera Above Ground (tr):
 5.

 Date of Photography:
 26 February 2015 at 12:00 Pl

 Orientation of View:
 65

 Vertical Field of View:
 65

**KOP4** - Mule Mountains, Looking Northeast - *Proposed View* 



KOP1c
Interstate 10



Easting Position (UTM Zone	11):	702753.8
Northing Position (UTM Zone	11):	3721002.0
Elevation of Photopoint Pos	sition (NAD83):	539.5
Height of Camera Above Gr	round (ft):	5.4
Date of Photography:	27 February 2015	at 01:12 PN
Orientation of View:		SE
Horizontal Field of View:		65
Vertical Field of View:		46

**KOP1c** - Interstate 10, Looking Southeast - *Existing View* 

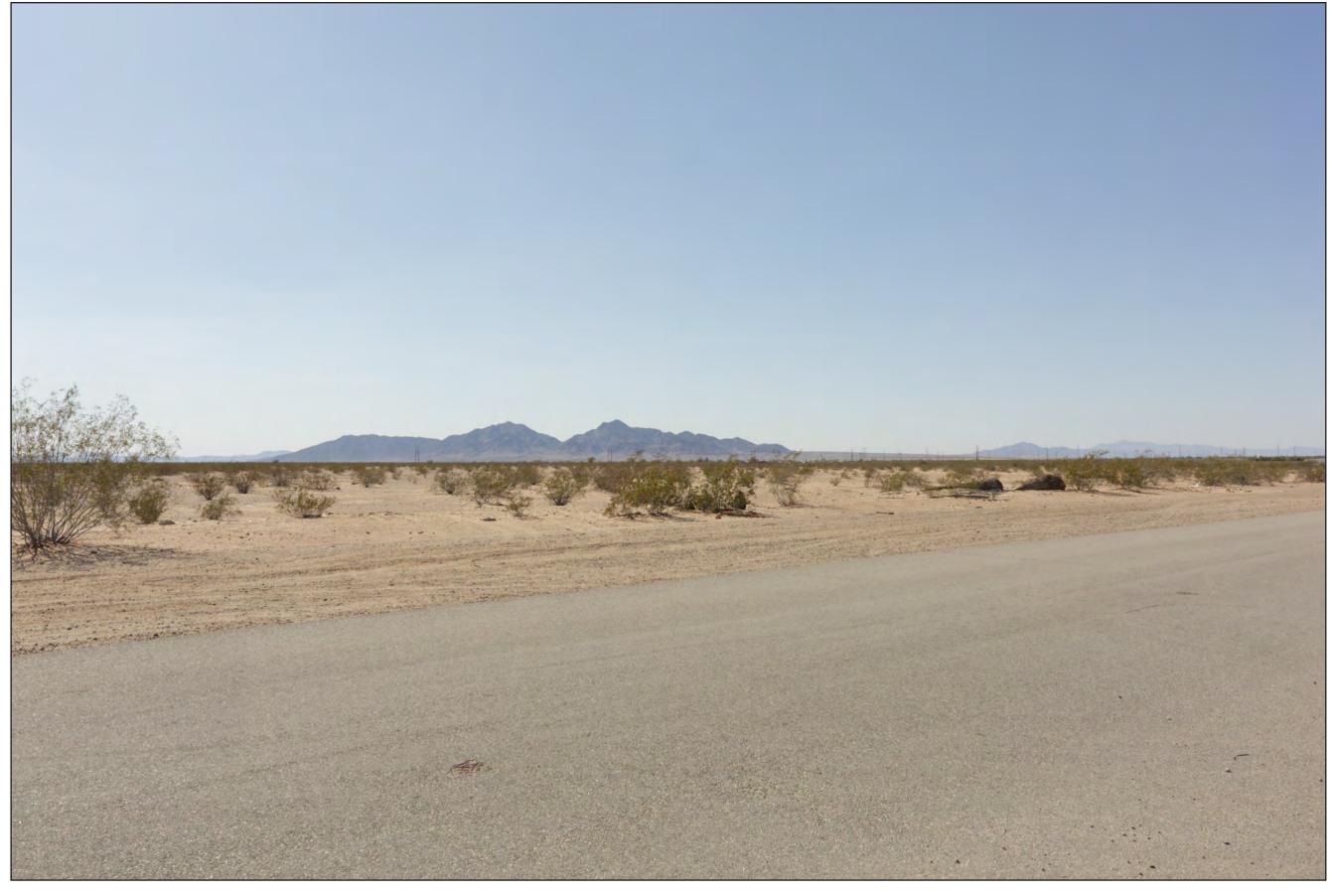


KOP1c
Interstate 10



Easting Position (UTM Zone	11):	702753.8
Northing Position (UTM Zone	11):	3721002.0
Elevation of Photopoint Pos	sition (NAD83):	539.5
Height of Camera Above Gr	round (ft):	5.4
Date of Photography:	27 February 2015	at 01:12 PM
Orientation of View:		SE
Horizontal Field of View:		65°
Vertical Field of View:		46°

KOP1c - Interstate 10, Looking Southeast - Proposed View



Nicholls Warm Springs



Easting Position (UTM Zone 11): 71040
Northing Position (UTM Zone 11): 372044
Elevation of Photopoint Position (NADB3): 39
Height of Camera Above Ground (II):
Date of Photography: 27 February 2015 at 12:33
Orientation of View:
Vertical Field of View:

KOP6 - Nicholls Warm Springs, Looking Southwest - Existing View



Nicholls Warm Springs



 Easting Position (UTM Zone 11):
 710409.

 Northing Position (UTM Zone 11):
 3720442.

 Elevation of Photopoint Position (NADS3):
 397.

 Height of Camera Above Ground (tt):
 5.

 Date of Photography:
 27 February 2015 at 12:33 PI

 Orientation of View:
 \$U

 Horizontal Field of View:
 65

 Vertical Field of View:
 46

**KOP6** - Nicholls Warm Springs, Looking Southwest - *Proposed View* 



### **MEMORANDUM**

URS Corporation 130 Robin Hill Road, Suite 100 Santa Barbara, CA 93117 Phone: 1-805-692-0600

Fax: 1-805-964-0259

To: Louis DeRosa, First Solar

**From:** Kara Friedman

Senior Environmental Analyst

**Date:** April 30, 2019

Subject: Draft Addendum to the Desert Quartzite Solar Project Visual Resources

**Technical Report to Consider Visual Impacts of Gen-Tie Realignment** 

**Attachments:** Figure 1 - Desert Quartzite Project Site – Visual Addendum

#### **BACKGROUND**

URS prepared a Visual Resources Technical Report for the Desert Quartzite Solar Project (Project) in Riverside County, California in January 2016 to provide scientific and technical data regarding the existing visual resources within the study area and the proposed Project's potential to change the area's visual resources. The document was completed in accordance with the Bureau of Land Management (BLM) Land Use Planning Handbook and Visual Resource Management System and to satisfy the requirements of the National Environmental Protection Act (NEPA) and California Environmental Quality Act (CEQA).

The Project would construct a 450-megawatt (MW) alternating current photovoltaic solar facility. The overall Project includes the solar generation facility, an on-site substation, and generation-tie (gen-tie) line near Blythe in eastern Riverside County. The Project Site encompasses approximately 5,275 acres. The proposed solar facility and the approximately 3-mile-long, 230-kilovolt (kV) gen-tie line interconnection to the existing Southern California Edison (SCE) Colorado River Substation are located primarily on lands administered by the BLM (5,115 acres). The Project Site also includes 160 acres of private land. A 25-month construction schedule was assumed for the Project.

A total of eight Key Observation Points (KOPs) were selected for analysis and assessed using a combination of: 1) the Visual Contrast Rating Procedure (BLM 1986), and 2) the Visual Resource Inventory (VRI) analysis. The Project Site is located in an area designated as VRI Class II, indicating high scenic value and overlaps the following Scenic Quality Rating Units (SQRUs) that were delineated in the Palm Springs Field Office planning area VRI: 021 (Chuckwalla Valley), 026 (McCoy Mountains), 036 (Blythe Valley), 037 (Palo Verde), 038 (Mule Mountains), and 039 (Little Chuckwalla Mountains).

The Visual Resources Technical Report determined the following:

Moderate to strong visual contrast is present at four of the eight KOPs analyzed: Interstate

10 (I-10), McCoy Mountains, Mule Mountains, and the community of Nicholls Warm Springs/Mesa Verde. The visual contrast expected at these locations is due to their higher elevation relative to the Project Site and/or proximity.

- Based on the expected level of contrast and scale dominance, scenic quality of three of the affected SQRUs could be reduced.
- The visual sensitivity of the Bradshaw Trail Backcountry Byway Sensitivity Level Rating Unit (SLRU) would be reduced from "medium" to "low."
- Collectively the aesthetic changes could reduce the overall VRI score for the Project Site and surrounding lands from a Class II to Class III or IV.
- Impacts to visual resources from the Project are expected to be of medium-high intensity, long-term, regional, and affecting important resources.
- Overall, the Project is expected to result in moderate impacts to visual resources.

#### PROPOSED GEN-TIE REALIGNMENT

Subsequent to the completion of the Visual Resources Technical Report, a refined route for a portion of the gen-tie line connecting the onsite Project substation to the point of interconnection (POI) with SCE facilities was been proposed under Alternative 2 of the Project's Environmental Impact Statement/Environmental Impact Report. This realignment was made to reduce overall environmental impacts and avoid potential conflicts with other proposed projects along the northern boundary of the Project Site. The proposed realignment, shown in Figure 1, would be modified along the eastern portion of the original alignment, beginning about halfway between the POI and onsite substation. The new alignment would be adjusted slightly to the south, ranging from approximately 1,000 to 2,000 feet south of the original alignment. The new gen-tie alignment would utilize the same type of pole structures with a maximum pole height of 135 feet as originally proposed. With the proposed realignment, the overall gen-tie route would total approximately 3.94 miles in length, which is 0.24 miles less than the original alignment. The proposed relocation would move the gen-tie alignment slightly south and closer to the Project Site. The gen-tie line would continue to be situated between the existing Blythe Mesa 230 KV transmission line and the proposed Project Site.

#### **ANALYSIS**

This analysis considers the potential visual change of this proposed realignment as compared to the previous alignment and how any visual change might modify or affect the conclusions drawn in the Visual Resources Technical Report. Other Project features such as the solar panel field or collector poles are not considered in this analysis as they have not been modified and any visual impacts attributed to those features would remain as described in the Visual Resources Technical Report.

#### <u> KOP 1</u>

KOP 1 represents various locations along the I-10 corridor north of the Project Site. As described in the Visual Resources Technical Report, the narrow, vertical lines of the gen-tie poles result in weak visual contrast against the existing landscape, largely due to their distance from the I-10 corridor, the intermittent and temporary views of motorists, and the presence of multiple other larger stature electrical transmission poles intervening between the KOP and the gen-tie line. As shown on Figure

1, the proposed relocation would move a portion of the gen-tie alignment farther south, resulting in a greater viewing distance from KOP 1. Also, the new alignment would be shorter than previously proposed, which would minimize the amount of visible infrastructure as compared to the original alignment. The additional distance from I-10 (approximately 1,000 to 2,000 feet) and less infrastructure would further minimize the visual presence of the gen-tie line within the existing landscape and help to weaken the visual contrast. Thus, the realignment would not increase or change the resulting visual contrast conclusions as identified in the Visual Resources Technical Report.

#### KOP 2

KOP 2 is located at the eastern edge of the Chuckwalla Desert Wildlife Management Area and is more than 5 miles west of the proposed realigned gen-tie line. As described in the Visual Resources Technical Report, visibility of taller structures, such as the gen-tie infrastructure, would result in none to weak visual contrast, largely due to the distant location of these features relative to this KOP and the difficulty in discerning the narrow vertical line of these features at this distance. As shown in Figure 1, the viewing distance from KOP 2 to the proposed realignment would not change. In addition, the presence of other existing transmission lines in and surrounding the Project Site would reduce the contrast created by the gen-tie structures. The reduced amount of infrastructure required for the proposed alignment as compared to the original alignment would also further minimize the visual presence of the gen-tie line within the existing landscape and weaken the visual contrast. Thus, the realignment would not increase or change the resulting visual contrast conclusions as identified in the Visual Resources Technical Report.

#### KOP 3

KOP 3 is located in the foothills of the McCoy Mountains and is approximately 1.5 miles north of the proposed gen-tie realignment. As described in the Visual Resources Technical Report, tall and thin Project features such as the gen-tie line would be visible from this KOP. However, such features would contrast at a weak level against the existing landscape, largely due to the presence of multiple other transmission structures with similar form, line, and axis in the same general area. As shown on Figure 1, the proposed relocation would move a portion of the gen-tie alignment farther south, resulting in a greater viewing distance from KOP 3. Also, the new alignment would be shorter than previously proposed, which would minimize the amount of visible infrastructure as compared to the original alignment. The additional distance from KOP 3 (approximately 1,000 - 2,000 feet) and less infrastructure would further minimize the visual presence of the gen-tie line within the existing landscape and help to weaken the visual contrast. Thus, the realignment would not increase or change the resulting visual contrast conclusions as identified in the Visual Resources Technical Report.

#### KOP 4

KOP 4 is in the foothills of the Mule Mountains, approximately 3 miles south of the proposed gen-tie realignment. As described in the Visual Resources Technical Report, the gen-tie infrastructure, though visible, would contrast at a weak level when viewed from this location. The tall, narrow, vertical lines of the gen-tie poles would be consistent with the cluttered appearance of existing transmission and distribution lines. As shown on Figure 1, the proposed realignment would move the gen-tie infrastructure slightly closer to KOP 4; however, at approximately 3 miles, the change of 1,000 to 2,000 feet would not make a noticeable difference in the visual presence of the gen-tie line within the viewshed and amongst the existing transmission infrastructure. Additionally, the reduced amount of infrastructure required for the proposed alignment as compared to the original alignment would also further minimize the visual presence of the gen-tie line within the existing landscape. Thus, the realignment would not increase or change the resulting visual contrast conclusions as identified in the Visual Resources Technical Report.

#### KOP 5

KOP 5 is located approximately 6 miles south on the Bradshaw Trail with minimal views of the Project Site due to the intervening Mule Mountains. As described in the Visual Resources Technical Report, the gen-tie infrastructure may be detectable; however, visual contrast is expected to be weak, largely due to distance and the presence of existing transmission and distribution lines. As shown on Figure 1, the proposed realignment would move the gen-tie infrastructure slightly closer to KOP 5; however, at approximately 6 miles, the change of 1,000 to 2,000 feet would not make a noticeable difference in the visual presence of the gen-tie line within the viewshed and amongst the existing transmission infrastructure. Thus, the realignment would not increase or change the resulting visual contrast conclusions as identified in the Visual Resources Technical Report.

#### KOP 6

KOP 6 is located approximately 2.5 miles from the proposed gen-tie realignment on the western edge of the Nicholls Warm Springs/Mesa Verde community, which is considered the closest residential grouping to the Project. As described in the Visual Resources Technical Report, transmission poles would be apparent; however, visual contrast is expected to be weak because of existing and planned transmission structures in the foreground of this KOP. In addition, the existing NRG Blythe 21 solar facility is located between the proposed Project location and Nicholls Warm Springs/Mesa Verde. As shown on Figure 1, the proposed relocation would move a portion of the gen-tie alignment farther south, resulting in a slightly greater distance from KOP 6. Also, the new alignment would be shorter than previously proposed, which would minimize the amount of visible infrastructure as compared to the original alignment. Thus, the realignment would not increase or change the resulting visual contrast conclusions as identified in the Visual Resources Technical Report.

#### KOP 7

KOP 7 is located approximately 7 miles southeast of the proposed gen-tie realignment on the western edge of the town of Ripley, adjacent to the Community Center with views representative of the residential area. Across the gently rolling topography between KOP 7 and the relocated gen-tie alignment, the poles could be visible in the distance. As described in the Visual Resources Technical Report, the narrow, vertical line and form of these structures is consistent with existing electrical transmission and distribution poles and the substantial distance from KOP 7 reduces their prominence in the viewscape. Thus, the realignment would not increase or change the resulting visual contrast conclusions as identified in the Visual Resources Technical Report.

#### KOP8

KOP 8 is located over 12 miles southeast of the proposed gen-tie realignment along the Colorado River, which is used for recreational canoeing. As described in the Visual Resources Technical Report, no visual contrast is expected to result from viewpoints on the Colorado River, as the channel is situated below grade relative to the Palo Verde Mesa and Chuckwalla Valley bottom and the Project Site and gen-tie facilities. The slight relocation of the gen-tie alignment within the substantial distance from KOP 8 would not change the conclusions regarding the resulting visual contrast as identified in the Visual Resources Technical Report.

#### Construction

The relocated gen-tie line would be installed in the same manner as the previously analyzed alignment. The relocation of the gen-tie alignment nearer to the Project Site would not cause a noticeable effect on the construction activities, workforce, or schedule. Views of construction activities associated with the relocated portion of the gen-tie line would not be noticeably different than as described in the Visual Resources Technical Report and would not change the conclusions drawn in the report regarding construction.

#### **CONCLUSIONS**

The proposed gen-tie line adjustment would result in visually inconsequential modifications to the Project from all KOPs. As described in the analysis, realignment of the gen-tie line would move a portion of the line closer to the Project Site and maintain the alignment between the site and other existing transmission infrastructure. The proposed realignment would not place the gen-tie infrastructure substantially closer to viewers; rather, it would relocate slightly farther from a high volume of viewers traveling on I-10. Compared to the original analysis, the realignment would use identical components but require less infrastructure (0.24 miles less in length); therefore, resulting in reduced visible elements. Thus, based on these factors and the analysis presented for each KOP, the proposed gen-tie line adjustment would not result in increased or worsened visual impacts than identified in the Visual Resources Technical Report for the Project. Because the gen-tie realignment would not modify the overall contrast and scale dominance of the Project, the conclusions drawn in the Visual Resources Technical Report regarding the scenic quality of three of the affected SQRUs, the visual sensitivity of the SLRUs, and VRI score would not change.

