

**Initial Study and Mitigated Negative Declaration
Sol Orchard Solar Project
El Centro, Imperial County, California**



Submitted to:
City of El Centro
Community Development Department
Planning and Zoning Division
1275 West Main Street
El Centro, CA 92243

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SECTION 1: BACKGROUND INFORMATION

1.1 - Project Title

Sol Orchard Solar Project

1.2 - Lead Agency Name and Address

City of El Centro
Community Development Department
Planning and Zoning Division
1275 West Main Street
El Centro, CA 92243

1.3 - Lead Agency Contact Person

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1.4 - Project Location

The proposed project is located in the City of El Centro and in unincorporated Imperial County (Exhibit 1 and Exhibit 2). The project site consists of four parcels totaling approximately 140 acres consisting of Imperial County Assessor's Parcel Numbers (APNs) 044-450-043, 044-450-024, 044-450-025, and 044-430-012. The project site is located in the City of El Centro south of West Villa Avenue, east of North 3rd Street, north of Euclid Avenue, and west of the Imperial Irrigation District (IID) El Centro Generating Station. The portion of the site located north of West Villa Avenue is located in Imperial County.

1.5 - Project Applicant's Name and Address

Sol Orchard Imperial 1, LLC.
2435 Marshall Road
Imperial, CA 92251
760.355.1831
Contact: Don Wilcoxon

1.6 - General Plan Designation and Zoning Designation

The El Centro General Plan Land Use Element designates their portion of the project site as General Industrial. The portion of the project site located in Imperial County is designated as Planned Industrial by the Imperial County General Plan Land Use Element.

The portion of the project site located in the City of El Centro is currently zoned Light Manufacturing (ML), while the portion of the site occurring in unincorporated Imperial County is zoned General Agriculture, Urban Overlay (A-2-U).

Pursuant to Division 4, Section 29-69, Manufacturing Zone Use Designation, of the El Centro Municipal Code, utility distribution sub-stations and utility yards are conditional uses that may be permitted in the Light Manufacturing (ML) zone with the approval of the City of El Centro's Planning Commission.

1.7 - Existing Land Uses

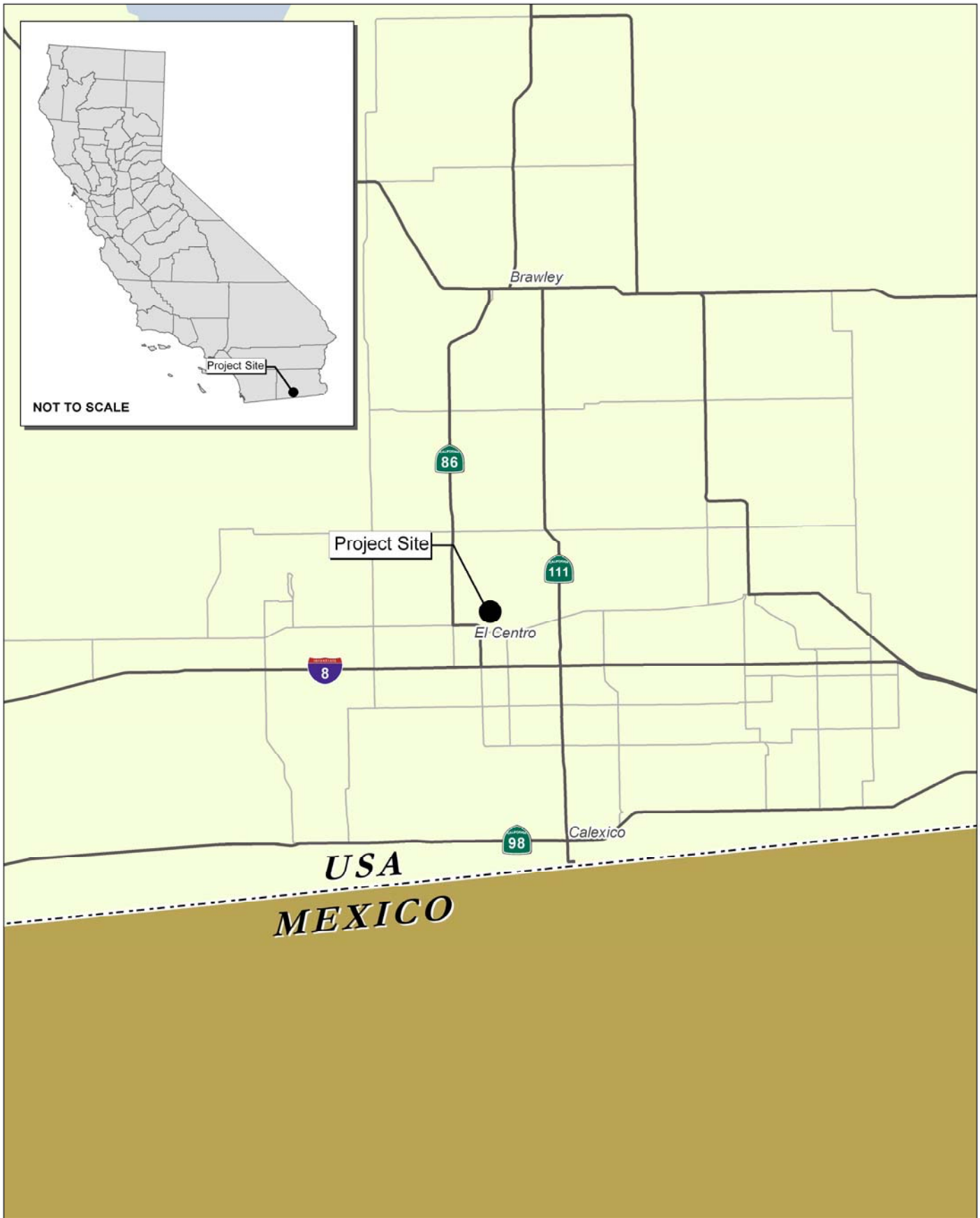
1.7.1 - Project Site Land Use

In its existing condition, the majority of the project site is undeveloped, although portions have been previously disturbed through weed abatement or similar activity (Exhibit 3). Existing uses such as a radio tower, Imperial Irrigation District (IID) canals, IID's First Street drain, City and County roadways, and power transmission corridors currently occur on the project site and would remain in place following development of the proposed project. The land is currently owned, and would continue to be owned, by the IID.

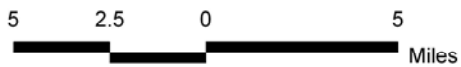
1.7.2 - Surrounding Land Uses

The surrounding project area consists of various land uses, including agricultural, commercial, industrial, public, and residential. Land uses immediately surrounding the project site include:

- **North:** Active agricultural operations.
- **West:** Single-family residences.
- **South:** Commercial chemical plant.
- **East:** IID El Centro Generating Station Power Plant; Abandoned fishery operations.



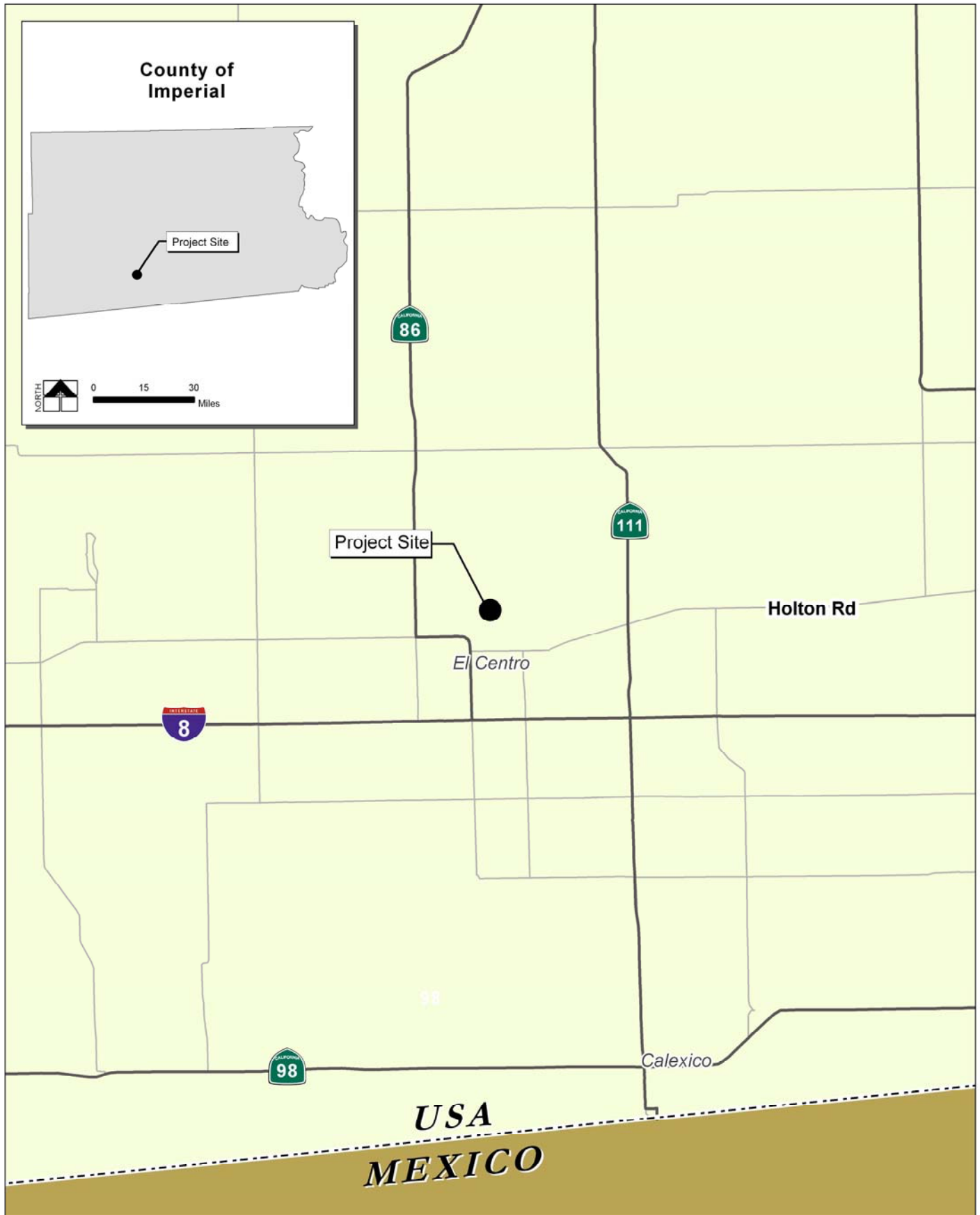
Source: Census 2000 Data, The CaSIL, MBA GIS 2012.



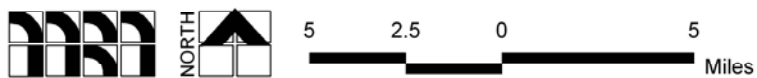
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Exhibit 1 State and Regional Location Map

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Source: Census 2000 Data, The CaSIL, MBA GIS 2012.



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Exhibit 2 County Location Map

CITY OF EL CENTRO • SOL ORCHARD SOLAR PROJECT
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Panorama view at the corner of Euclid and N 3rd St

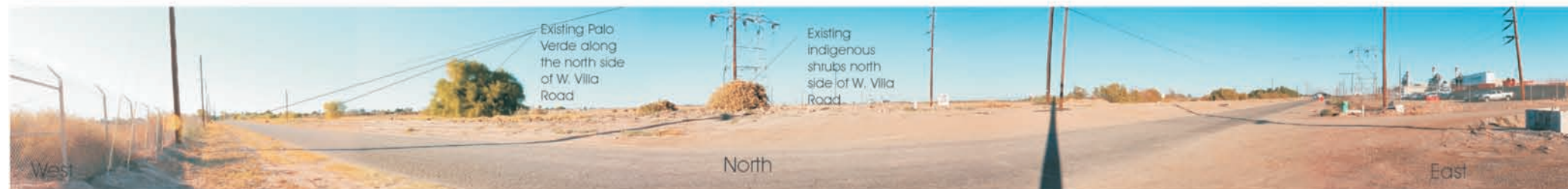


Panorama at W Villa Avenue looking southwest to the rear of homes along N 3rd Street



Panorama at the corner of San Diego and N 3rd Street

Observation:
Very little existing vegetation exists and there may be none within the properties right-of-way along streets. The vegetation that is growing are "volunteer" Palo Verde trees and indigenous shrubs such as: quail bush, salt bush, etc. These indigenous shrubs have very little appeal as a "landscape" or ornamental shrub. The Palo Verde tree is appealing as a landscape tree however, there are other hybrids available in the trade that have better growth habits. A drought tolerant plant palette will be developed that will be compatible with the El Centro climate.



Panorama W Villa Road at the canal



Panorama along W Villa Avenue



360 deg. Panorama of the northwestern portion of the project-north of W Villa Avenue



SITE MAP

Source: AEI-CASC Consulting.



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Exhibit 3 Existing Site Conditions

CITY OF EL CENTRO • SOL ORCHARD SOLAR PROJECT
INITIAL STUDY

1.8 - Description of the Project

1.8.1 - Project Purpose and Need

California's investor-owned utilities are required, under the State's Renewable Portfolio Standard (RPS), to provide 20-percent of electricity supplied from renewable sources as of 2010. Subsequently, Executive Order S-14-08 established RPS targets for all State utilities, requiring that "all retail sellers of electricity shall serve 33-percent of their load with renewable energy by 2020." The RPS has created a competitive market for contracts to sell renewable energy, with success determined based on "least cost, best fit" criteria. Renewable energy projects such as the Sol Orchard Solar Project would help the State meet its RPS goals.

The proposed project would allow for the installation and operation of a photovoltaic (PV) electrical generation facility and represents an opportunity to provide IID's customers within El Centro and the surrounding service area with a clean source of electrical power from a local and renewable source. The proposed project would deliver renewable energy to all IID customers via one of the cleanest, most efficient manner possible today by generating renewable power locally and feeding into the existing local electrical system. Power from the proposed project would replace a portion of energy currently supplied to the power grid by non-renewable sources located within and outside of the general El Centro area.

In the broad spectrum of renewable energy projects, the proposed project would fit into the category known as Wholesale Distributed Generation (WDG). WDG is currently the most cost-effective renewable energy market segment because it optimizes the use of appropriate and available sites to serve local load, while avoiding costs and delays associated with transmission line upgrades that are required for larger, central station projects located far from the load being served. Transmission of power over great distances also leads to significant energy losses to resistance and transformation, and such losses broadly degrade the efficiency and usefulness of larger, central station generators.

1.8.2 - Project Overview

Sol Orchard Imperial 1, LLC (Applicant) proposes the construction, operation, and maintenance of a PV solar energy facility to be located on IID owned lands currently in the City of El Centro and Imperial County. The proposed Sol Orchard Solar Project would have a production capacity of 20 Megawatts (MW) alternating current (AC). Power from the proposed project would be purchased by IID to serve IID customers. During typical daytime conditions, the proposed project would supply electricity equivalent to 7,500 households, equating to approximately 40- to 45-percent of the residential population within the City of El Centro. Under peak power consumption conditions, when the electricity needs of a household can double, the proposed project would supply an equivalent of 20- to 25-percent of the residential population within the City. The proposed project would serve the IID's service area only, and is not being developed with the intent of exporting power beyond IID's own system and customer base.

The proposed project would require approval of a General Plan Amendment, Zone Change, and Conditional Use Permit (CUP) from the City of El Centro’s Planning Commission and City Council to allow for the construction, operation, and maintenance of facilities for the generation of solar energy. Since the project site also includes lands currently within the jurisdiction of Imperial County but within the Sphere of Influence of the City, the Applicant would concurrently apply for annexation of the County lands into the City’s jurisdictional boundary through the Imperial County Local Agency Formation Commission (LAFCO).

The proposed project would be installed on portions of four parcels totaling 140 acres (Exhibit 4). However, development and CUP authority for the proposed project would be limited to approximately 118 acres of the four parcels, as other existing uses such as a radio tower, IID canals, IID’s First Street drain, City and County roadways, and power transmission corridors would remain in place. Table 1 summarizes the project components.

Also included in the proposed project is the undergrounding of the portion of Central Drain No. 5 and Laterals within the site boundary. See the discussion below under the heading, “Undergrounding Central Drain No. 5 and Laterals.”

Table 1: Project Summary

Component	Description
Total Facility	140 acres (118 developed acres)
Substation	15,299 square feet (sq ft)
Vehicle Access Points	Five access points located along West Villa Avenue and one access along North 3 rd Street.
Vehicle Access Security	Access points would be accessible through a Knox-Box or similar device for expedited emergency response access.
Vehicle Parking	A minimum of two paved parking spaces and one van accessible parking space would be provided adjacent to the substation.
Entry, Perimeter, and Internal Access Roads	20-foot wide all-weather access roads improved and maintained to City of El Centro standards.
Perimeter Security Fencing	8-foot chain-link fencing with three-strand barbed wire affixed atop. Fencing at certain locations would include beige colored slats.
Security Lighting	Downward facing, sensor controlled lighting located at the vehicle access points, substation, and inverters.
Solar Type	PV (Photovoltaic)
Panel Type	Either mono-crystalline or polycrystalline silicon
Total Panels	100,000 to 120,000
Panel Construction	Aluminum frame with anti-reflective glass

Table 1 (cont.): Project Summary

Component	Description
Electrical Output	20 MW
Imperial Irrigation District Grid Connection	Existing 92 kV line
Water Supply	Imperial Irrigation District (IID) and City of El Centro
Three Stormwater Basins	14.30 acres

1.8.3 - Project Objectives

The Applicant proposed construction and operation of the proposed project to meet the following specific objectives:

- Deploy a photovoltaic solar technology that has been proven and is readily available, efficient, and environmentally friendly.
- Generate electricity at a cost that is competitive on the renewable market.
- Generate electricity in immediate proximity to where it is being consumed, thereby reducing demand on existing transmission lines and the need for additional transmission lines.
- Provide a new source of renewable energy that assists the power purchaser and the State of California in achieving the Renewable Portfolio Standard (RPS).
- Deliver electricity to the grid as soon as possible. The Applicant has executed a long-term Power Purchase Agreement (PPA) with Imperial Irrigation District to purchase all electricity generated by the Project.
- Locate the Project on land in a rural setting where there is direct access to the existing electric system.
- Minimize potential impacts to the environment by:
 - Locating the Project on previously disturbed land to minimize potential impacts to threatened and endangered species and habitat.
 - Maximizing the use of existing infrastructure (e.g., electrical lines, roads, water source).
 - Reducing the emission of greenhouse gases from the generation of electricity.

1.8.4 - Solar Facility Design

The proposed Sol Orchard Solar Project and associated components are described in detail below.

Solar Panel Array

The proposed project would consist of 100,000 to 120,000 PV solar panels mounted onto either a collection of single-axis tracking (SAT) systems supported by machine-driven posts or a ballasted

foundation system could be provided wherein individual SAT system supports become pre-cast elements set atop of the existing soil. The solar panels would be composed of either mono-crystalline or polycrystalline silicon solar cells that convert sunlight directly into electricity. The ultimate number of PV solar panels will be determined during the final design stage and is dependent upon which storm water collection option is selected. Refer to the discussion below under Drainage.

Single-Axis Tracking (SAT) Systems

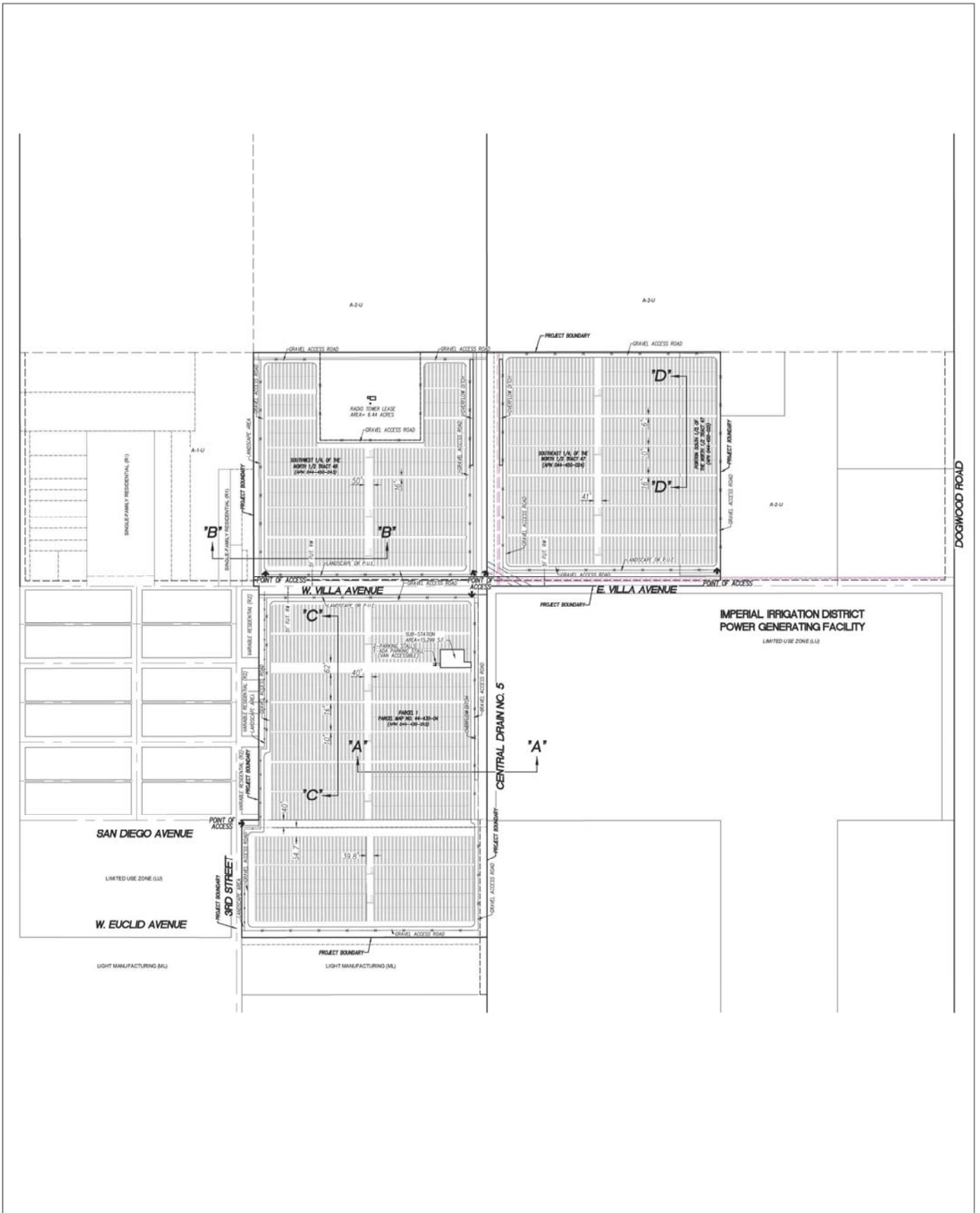
The SAT systems would consist of solar panels mounted onto a support structure that aligns the panels in rows that rotate to face east in the morning and west in the afternoon hours, tracking the sun along a north/south axis to maximize solar absorption. The solar panels would be rack-mounted at a width of three panels, measuring from 9 to 9.5 feet across each row regardless of whether the row is tilted to a maximum 45-degrees in the morning or evening hours or when laying level (horizontal) at midday. The upper edge of the highest panels would be from 8 to 8.5 feet from the ground surface when fully inclined to 45-degrees, while all panels would be from 4.5 to 5 feet above the ground surface when level. Minor undulations in terrain may raise these heights slightly where existing ground surface dips compared to the surroundings. The length of each row of panels would be 150 feet along the north/south axis.

Solar Panels

The proposed project would incorporate high-efficiency, commercially available Underwriters Laboratory (UL)-listed PV solar panels made from either mono-crystalline or polycrystalline silicon, anti-reflective glass, aluminum frame, and copper electrical wires with plastic sheathing. By design, the solar panels would absorb sunlight to maximize electrical output and use anti-reflective glass, resulting in less reflectance of standard residential and commercial glass applications. Due to the limited rotation angles, the solar panels would lack the ability to reflect the Sun upon any ground-based, offsite observer. These solar panels would be protected from impact by tempered glass, and would have factory applied ultraviolet (UV) and weather-resistant “quick connect” wire connectors.

Electricity Delivery

Energy generated by the solar panel arrays on the portion of the project site located north of West Villa Avenue would be delivered to the proposed onsite dedicated substation via an underground connection that would be constructed under West Villa Avenue using horizontal directional drilling methods. Energy generated by the proposed project would be delivered to the existing 92 kilovolt (kV) transmission line that runs parallel to IID’s First Street drain, south of West Villa Avenue, along the eastern boundary of the Project’s southern parcel. Connection would be made from the project site via a direct tap of the 92kV transmission line, with new conductors running a short distance overhead to a new pole located on the site, just outside the proposed dedicated substation.



Source: AEI-CASC Consulting.



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Exhibit 4 Site Plan

Onsite Dedicated Substation

The onsite dedicated substation would be located near the eastern boundary of the southern parcel approximately 400 feet south of West Villa Avenue (Exhibit 4). The substation would contain metering equipment, switchgear, a series of fuses and circuit breakers that serve as protective relays, and transformers that step-up the voltage to match the voltage of the transmission system at the Point of Interconnection (POI). The substation footprint would be 15,299 sq ft and one-story in height. During final design and construction of the substation, building materials and color schemes would be selected based on the ability to conform harmoniously to the materials and colors found on adjacent property.

Other Site Improvements

Site Access, Internal Circulation, and Parking

Two gated access points would be provided for each of the three project site areas. Access points would generally be provided from West Villa Avenue for the two northern project areas, and from West Villa Avenue and North 3rd Street for the southern project area (Exhibit 4).

All-weather 20-foot wide perimeter access roads would be included for fire access and internal circulation for operations circulations and maintained to City of El Centro standards.

Two paved parking spaces would be provided adjacent to the substation. Each parking space would be a minimum of 9 feet by 20 feet in size. Additionally, one van accessible parking space would be provided pursuant to the Americans with Disabilities Act (ADA) requirements. A minimum five-foot wide walkway would be maintained between the accessible parking stalls and substation. All parking areas would be maintained in accordance with Division 5, Section 29-134, Design and Improvement of Parking Areas, of the El Centro Zoning Ordinance.

Fencing, Site Security and Landscaping

The project site perimeter would be fenced by 8-foot chain-link fencing with three-strand barbed wire affixed atop. Fencing at these locations would include beige colored slats. Fencing with beige colored slats would also be installed along 200 feet of the southern project boundary from the corner of 3rd Street and Euclid Avenue. Additionally, concurrent with the undergrounding of the Central Drain No. 5 as described below, both sides of the new maintenance road that would be constructed atop the canal would be fenced with 8-foot chain-link fencing with three-strand barbed wire affixed atop. Beige colored slats would be installed for a 100-foot length on either side of West Villa Avenue and along the northern portion of the maintenance road to screen passing motorists on West Villa Avenue and more distant roadways from views of the proposed project within the project site.

A 10-foot wide landscaping strip would be used for screening purposes along the north and south sides of West Villa Avenue and along North 3rd Street (Exhibit 6a). Water for the irrigation system would come from a new connection to an existing City of El Centro water pipeline located east of San

Diego Avenue within the project site and would comply with Section 29-142 of the City of El Centro Municipal Code. The waterline for the landscape areas would have a backflow device.

Vegetation within the landscaping strips would consist of the following species:

- Italian Rosewood 24-inch box size
- Petite Pink Oleander 5-gallon size
- Purple Fountain Grass 5-gallon size
- New Gold Lantana 5 gallon size

Refuse Collection Area

A refuse collection area would be provided adjacent to the substation. The collection area shall be screened by a six-foot high decorative wall with split-face block that matches the color and texture of the façade of the adjacent substation. According to City of El Centro standards, a minimum six-inch thick concrete pad would be provided in front of the refuse enclosure.

Lighting

Security lighting would be provided at the onsite dedicated substation, the inverters, and the points of access. All lighting would comply with the provisions set forth by Section 29-149, Lighting Standards, of the El Centro Municipal Code, which establishes requirements regarding the avoidance of light spillage (a.k.a. light trespass) and the use of shielding. Lights would be shielded, downward facing, and sensor controlled to reduce offsite light scatter, and would remain on from dusk to dawn.

Drainage

Two drainage options have been developed for the proposed project that would satisfy the Imperial County development standard for zero discharge of 100-year onsite flows. The final drainage option will be selected during the final design stage and shall be improved in accordance with the City of El Centro's retention basin design standards. Any deviation from these standards would require City Council approval.

Option 1 proposes to grade the project site to a relatively level gradient and construct an earthen berm along the north and east periphery of each of the three portions of the site to contain the tributary onsite flows fully within the site while allowing all tributary offsite flows to pass through the site. This option would require minimal grading but would inundate from 75- to 80-percent of the project site with one-foot or less of water. The onsite access roads, substation, and essential equipment would be required to be elevated a minimum of 1.5 feet above the finish grade in order to protect them from offsite flooding. The solar panels would be elevated above the ground by 5.0 feet when panels are on a level plane (i.e., zero degree angle) and 1.5 feet when panels are tilted at a 45 degree angle from a level plane; therefore, the panels would not be subject to inundation. Refer to Exhibit A - Option 1 in the Conceptual Drainage Study (Appendix E).

Option 2 proposes to construct a retention basin at each of the three primary areas of the project site, thus allowing the onsite flows to be contained within a smaller and more confined area while keeping the solar panels, access roads, substation, and essential equipment out of the 100-year flood inundation. Option 2 would require the following preliminary retention basin volume based upon the onsite 100-year/24-hour flood volume:

- Basin “A” is located in the portion of the project site south of West Villa Avenue. This basin would allow 17.6 acre-feet (af) of storage, have a depth of 3.5 feet, and has a footprint of 5.9 acres.
- Basin “B” is located in the portion of the project site north of West Villa Avenue and west of Central Drain No. 5. This basin would allow 12.2 af of storage, have a depth of 3.5 feet, and has a footprint of 4.2 acres.
- Basin “C” is located in the portion of the project site north of West Villa Avenue and east of Central Drain No. 5. This basin would allow 12.2 af of storage, have a depth of 3.5 feet, and has a footprint of 4.2 acres.

Based on the results of a preliminary geotechnical investigation summarized in the Conceptual Drainage Study, an infiltration rate of one-half inches per hour confirms that complete infiltration would occur within the maximum drawdown time of 72 hours. The offsite flows passing through the project site would continue to be collected at the downstream corner of each project area. A drainage inlet structure would be constructed to intercept these offsite flows at the corner collection point before discharging into Central Drain No. 5. Refer to Exhibit A - Option 2 in the Conceptual Drainage Study (Appendix E) for a location of the basins.

Undergrounding of Central Drain No. 5 and Laterals

According to the Open Space/Conservation Element of the El Centro General Plan, the majority of the canals, laterals, and drainages that crisscross the landscape of the City of El Centro are open and unprotected, creating a potential safety concern. As a result, the Open Space/Conservation Element includes the following requirement, which is reiterated in the Safety Element:

The canals and laterals are often open and unprotected. The City will require developers of land adjacent to these open drainage facilities to underground the facilities to protect public safety.

Based on these requirements, the City is requiring that Central Drain No. 5, the West Villa Avenue Storm Drain Swale, and the Dogwood Lateral on and adjacent to the project site would be undergrounded (Exhibit 5) as part of the proposed project.

Central Drain No. 5

Once undergrounded, Central Drain No. 5 would consist of a 3,203 linear foot, 5-foot by 7-foot precast concrete box culvert. The box culvert would be placed above a bed of 0.75-inch crushed rock and backfilled with soil. A stabilized maintenance road would be created to run the length of the undergrounded drain from north to south. The roadbed would be stabilized with an approved soil stabilizer per IID, City of El Centro, and/or Imperial County Air Pollution Control District (ICAPCD) requirements. Both sides of the maintenance road would be fenced with 8-foot chain-link fencing with three-strand barbed wire above. Beige colored slats would be installed for a 100-foot length on either side of West Villa Avenue and along the northern portion of the maintenance road to screen passing motorists on West Villa Avenue and more distant roadways from views of the proposed project within the project site.

During construction of this underground drainage, a temporary diversion ditch would be constructed to direct flows away from the construction area. Once the box culvert is installed, backfilled, and compacted, the temporary diversion ditch would be removed.

West Villa Avenue Storm Drain Swale

A 1,284 linear foot, 18-inch reinforced concrete pipeline would replace the existing West Villa Avenue earthen drainage swale. The pipeline would include inlet and junction structures to connect to the drainage system.

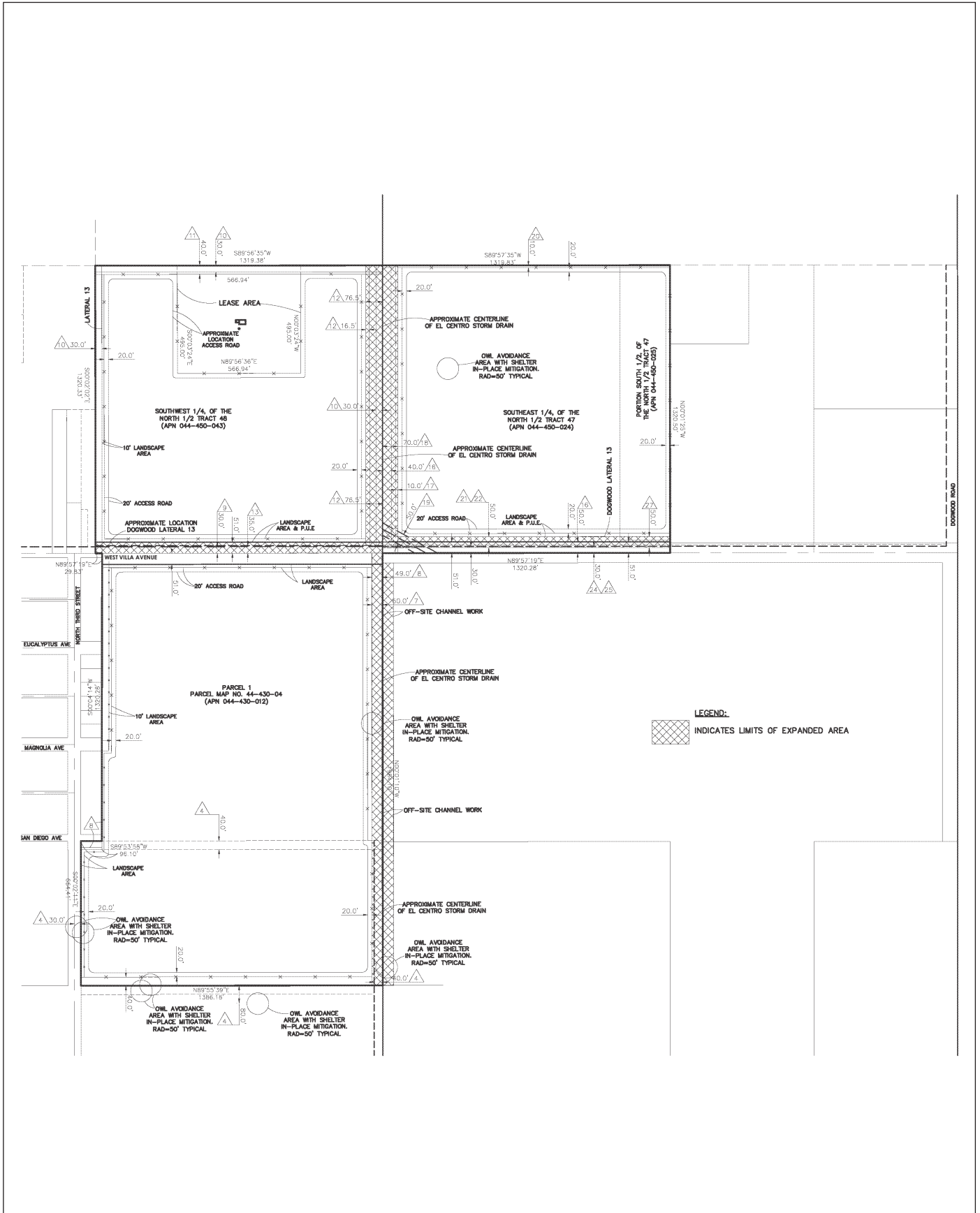
Dogwood Lateral

This 2,470 linear foot lateral would be covered with a concrete cap. The cap would be reinforced with rebar and 24-inch stirrups.

Upon undergrounding, operation and end use of the Central Drain No. 5, West Villa Avenue Storm Drain, and Dogwood Lateral would remain the same.

1.8.5 - Construction

Construction activities associated with the undergrounding of the adjacent drainages would take approximately 13-15 weeks and would occur prior to the construction of the proposed solar energy facility. Construction of the proposed solar array is anticipated to begin in early 2013 with all the solar facility being fully operational in late 2013. It is anticipated that construction of the proposed solar array portion of the project would occur over one phase and take approximately six consecutive months to complete.



Source: AEI CASC Engineering.



Michael Brandman Associates



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Exhibit 5 Central Drain and Laterals

Construction Schedule and Workforce and Hours

During the peak period of construction activities (one month out of the nine month construction schedule), a maximum of 125 workers would be required to construct the proposed project. Depending on the particular construction activities being performed at the time, construction crews would work either five to six days per week, eight hours per day. Construction activities are expected to occur between the hours of 6:00 a.m. and 7:00 p.m., Monday through Saturday. Construction activities would not occur during the nighttime, on federal holidays, or anytime on Sunday.

Construction Equipment

During construction of the proposed project, a variety of construction equipment and vehicles would be operating on the project site. Table 2 provides a list of the type of equipment and vehicles that would be required during the construction phase.

Table 2: Construction Equipment by Activity

Month	Activity	Equipment
Month 1	Excavation of the Diversion Ditch, Begin Construction of Box Drain, Delivery of 5'x7' Precast Concrete Box Culvert and Gravel	Excavators, Backhoe, Loader, Delivery Truck, Crane Truck.
Month 2	Backfill, Compact, and Finish Construction of Box Drain, Begin Construction of 18-inch Reinforced Concrete Pipeline, Import Soil, Backfill and Compact Diversion Ditch	Excavators, Backhoe, Loader, Delivery Truck
Month 3	Set Forms-Steel-Place Concrete Canal Cap, Complete and Demobilize	Excavators, Backhoe, Loader, Delivery Truck
Month 4	Site Mobilization, Trenching, Civil Work, Wire Installation	Trencher, Forklift, Heavy Duty Forklift, Small Utility Vehicles, Water Truck, Material Delivery Truck, Concrete Delivery Truck
Month 5	Civil Work, Wire Installation, Post Installation, Receipt of Racking Equipment	Pile Driver, Trencher, Forklift, Heavy Duty Forklift, Small Utility Vehicles, Water Truck, Material Delivery Truck, Concrete Delivery Truck
Month 6	Racking Installation, Receipt of Modules and Combiners	Forklift, Heavy Duty Forklift, Small Utility Vehicles, Water Truck, Material Delivery Truck, Concrete Delivery Truck
Month 7	Module and Combiner Install, Receipt of Inverter	Forklift, Heavy Duty Forklift, Small Utility Vehicles, Water Truck, Material Delivery Truck
Month 8	Module Wiring, Final Wire Termination	Forklift, Heavy Duty Forklift, Small Utility Vehicles, Water Truck, Material Delivery Truck
Month 9	Checkout/Troubleshooting/Testing, Final Inspection/Punch Lists, Commissioning	Forklift, Heavy Duty Forklift, Small Utility Vehicles, Water Truck, Material Delivery Truck
Source: Sol Orchard Imperial 1, LLC, 2012.		

Construction Traffic

Traffic generated by construction of the proposed project would primarily consist of the delivery of construction equipment, vehicles, and materials, as well as daily construction worker trips. A majority of the equipment (e.g., solar panels, inverters, tracker steel, transmission poles, substation circuit breakers, and substation steel) would be delivered to the project site in standard widths and lengths by vans or covered flatbed trailers. Substation equipment, inverter enclosures, and pile drivers may be delivered to the project site on wide-load trailers. These trailers would require pilot cars. The Applicant would facilitate delivery during off-peak traffic hours, and would comply with applicable permitting requirements in the event that these loads are oversized.

During the peak period of undergrounding activities, two trucks would arrive at the project site during each hour of construction to deliver imported soil, resulting in 32 truck trips per day (equivalent to 96 passenger vehicle trips). During the peak period of construction activities for the proposed solar energy facility, one delivery truck would arrive at the project site during each hour of construction, resulting in 16 one-way truck trips per day (equivalent to 48 passenger vehicle trips).

The majority of the construction worker labor force would be local to the Imperial Valley, with a small portion, primarily the management team, coming to/from the greater Los Angeles area. Materials delivered to the project site via truck would use the 1-8 (Kumeyaay Highway), exit Dogwood Road, proceed north on Dogwood Road, and turn left onto West Villa Avenue to access the site. Trucks exiting the project site would use the same route but in reverse.

Construction Materials and Waste

During construction of the proposed project, general construction materials (e.g., concrete, aggregate, metal, and fuel), the materials necessary to construct the solar arrays, and construction equipment and vehicles would be stored within a temporary dedicated storage and staging area. The storage and staging area would be located near the proposed dedicated substation and its periphery would be designated using signage and other markings to distinguish this area from the remainder of the project site and to prevent the spillage of construction materials, equipment, and vehicles outside of the boundary of this area. The storage and staging area would also serve as a temporary parking area for construction workers. Since the storage and staging area would remain as bare earth, this area would be routinely wetted by a water truck for dust control purposes, much like the balance of the project site.

Construction waste generated at the project site would be sorted to separate recyclable and non-recyclable materials. The sorted waste would be stored in dumpsters located in the storage and staging area and would be serviced by a licensed solid waste hauler. Non-hazardous construction debris would be disposed of in local landfills permitted to accept solid waste.

Hazardous Materials

Construction of the proposed project would include the use of some hazardous or potentially hazardous materials such as fuels, lubricants, and other similar petroleum-based materials used for construction equipment and vehicles requiring servicing or maintenance. Such materials would be stored in temporary aboveground storage tanks or sheds located on the project site. The fuels stored on the project site would be contained within a locked container within a fenced and secure temporary staging area. Trucks and construction vehicles would be serviced offsite. No extremely hazardous substances (i.e., those governed pursuant to Title 40, Part 335 of the Code of Federal Regulations) would be found on the project site. Material Safety Data Sheets (MSDS) for all applicable materials present on the project site would be readily available to onsite personnel.

Construction Grading

The project site is generally level and featureless. As such, minimal grading would be required to level the areas where the solar arrays, substation, and associated facilities would be located. Some light grubbing and minimal grading is expected to be required for targeted leveling and trenching, and fine grading would be required for the development of internal roads. Soil will be balanced onsite and no fill material would be either imported or exported.

Erosion and Sediment Control and Pollution Prevention During Construction

A Stormwater Pollution Prevention Plan (SWPPP) would be prepared for construction of the proposed project. The SWPPP would include a combination of measures to protect areas that are determined to be vulnerable to erosion. Additionally, measures would be proposed in the SWPPP to control dust and the tracking of mud onto the roads by construction equipment and vehicles.

Construction Water Usage and Wastewater Disposal

Dust Mitigation

A water truck will be used for dust mitigation throughout construction of the proposed project. Dust mitigation activities for the undergrounding of Central Drain No. 5 and Laterals would require up to 4,000 gallons for each of the three months of construction. Dust mitigation activities for the construction of the portion of the site developed with the solar array would require up to 160,000 gallons for each of the first two months of construction, and up to 8,000 gallons per month during the remaining 4 months. Total water requirements for dust mitigation activities would be approximately 364,000 gallons, or 1.18 af.

Wastewater Disposal

Temporary restroom facilities would be used during construction of the proposed project. These restroom facilities would be serviced on a routine basis. As such, construction of the proposed project would not require effluent disposal.

1.8.6 - Operation and Maintenance

Operation and Maintenance Overview

Maintenance of the proposed project would require regular but occasional visual inspections, equipment servicing, and minor repairs. Overall, minimal maintenance requirements are anticipated, as the SAT systems would operate independently with little human involvement required. Power electronics would be serviced annually or bi-annually depending on the equipment type. On intermittent occasions, the presence of several workers may be required if major repair or replacement of equipment is necessary. However, due to the nature of the proposed project, such maintenance activities are anticipated to be infrequent.

Vegetation and Site Management

Onsite vegetation would be managed by typical landscape maintenance techniques, including the application of herbicides and manual weeding. All open and un-landscaped portions of the project site would be maintained in good condition, with weeds, trash, and debris routinely removed from the site. Trees within the landscape strip would be maintained at a maximum of 10 feet above grade.

Security

The proposed project would be monitored remotely by Sol Orchard Imperial 1, LLC or an affiliated company. Once the solar panels are installed, the panels would operate during daylight hours, seven days per week, 365 days per year. Security would be maintained through an 8-foot chain-link fencing with three strands of barbed wire affixed atop that would be installed along the perimeter of the entire project site. A remotely monitored intrusion detection system would also be employed. Two gated access points would be provided for each of the three project areas (Exhibit 4). These access points would be locked and accessible through a Knox-Box or similar device, which would allow emergency response personnel and operations and maintenance workers rapid entrance to the project site.

Hazardous Materials

Operation and maintenance of the proposed project is not anticipated to require hazardous or potential hazardous materials. Transformers located at the proposed substation would use biodegradable oil-based esters or similar substances, which according to the U.S. Occupational Safety and Health Administration (OSHA), are not classified as a hazardous material. Disposal of this oil would occur in accordance with all applicable regulations. The solar arrays would produce no waste during operations of the proposed project.

Operations Water Usage and Wastewater Disposal

Panel Washing and Landscape Irrigation

The solar panels would be washed with softened and de-ionized water, typically twice per year, with water drawn from the new City of El Centro water pipeline located east of San Diego Avenue within the project site. Panel washing activities would require one gallon per panel per year. Taking into

account the proposed project's 100,000 to 120,000 solar panels, the panel washing activities would require up to 120,000 gallons of water per year, or up to 0.368 af per year (afy).

As discussed previously in Section 1.8.4, the project site would include landscape strips with water delivered via an irrigation system. Annual water demand for landscape irrigation would require up to 1.0 af per year.

Erosion Control

Water mixed with erosion and dust control additives would also be applied biannually. The erosion and dust control additive acts as a soil-binding agent and would be applied by maintenance personnel using small equipment. This work is similar to hydro-seeding without the inclusion of seed mix, and would be performed in combination with conventional weed control measures such as spraying, weed whipping, and mowing. Application of the soil-binding agent would require 3,300 gallons per acre for the first year, followed by 1,650 gallons per acre every two years afterwards. Based upon the proposed project's 118 acres of development, the application of the soil-binding agent would require 389,400 gallons of water for the first year (1.195 afy), and 194,700 gallons for every two years afterwards (0.299 afy).

Wastewater Disposal

The proposed project would not include any permanent habitable structures or restroom facilities. As such, the proposed project would not require effluent disposal. The ground surface below the solar panels would be pervious, allowing any residual water from panel washing and erosion control activities to be absorbed into the topsoil before percolating into the deeper subsurface soils.

1.9 - Required Permits and Approvals

The Initial Study (IS) prepared for the proposed Sol Orchard Solar Project would be used by the City of El Centro as the supporting documentation for the following required project permits and approvals:

- Application for Conditional Use Permits (a) and (b) (Case Number C.U.P. 12-04).
- Application for Change of Zone (Case Number C.O.Z. 12-01).
- Application for General Plan Amendment (Case Number G.P.A. 12-01).
- Site Plans, Engineering Plans, Building Plans, Grading Plans, and Landscaping Plans.
- California Department of Fish and Game Section 1600 Streambed Alteration Agreement permit.

In addition, approval of the annexation application would require approval from the Imperial County Local Agency Formation Commission.



Visual Simulation Photo Locations

Map Features

-  Project Boundary
-  Photo Points

Source: ECORP Consulting, Inc., 2012.



Michael Brandman Associates

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**Exhibit 6
Visual Simulations Index**

CITY OF EL CENTRO • SOL ORCHARD SOLAR PROJECT
INITIAL STUDY



Pre-project Condition



Post-project Condition

Source: ECORP Consulting, Inc., 2012.



Michael Brandman Associates

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Exhibit 6a Photo Point 1



Pre-project Condition



Post-project Condition

Source: ECORP Consulting, Inc., 2012.



Michael Brandman Associates

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Exhibit 6b
Photo Point 2

CITY OF EL CENTRO • SOL ORCHARD SOLAR PROJECT
INITIAL STUDY



Pre-project Condition



Post-project Condition

Source: ECORP Consulting, Inc., 2012.



Michael Brandman Associates

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Exhibit 6c
Photo Point 3

SECTION 2: ENVIRONMENTAL DETERMINATION

2.1 - Environmental Factors Potentially Affected

The following identifies those environmental factors potentially affected by implementation of the proposed project.

Environmental Factors Potentially Affected

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

<input type="checkbox"/> Aesthetics	<input type="checkbox"/> Agriculture and Forestry Resources	<input type="checkbox"/> Air Quality
<input type="checkbox"/> Biological Resources	<input type="checkbox"/> Cultural Resources	<input type="checkbox"/> Geology / Soils
<input type="checkbox"/> Greenhouse Gas Emissions	<input type="checkbox"/> Hazards / Hazardous Materials	<input type="checkbox"/> Hydrology / Water Quality
<input type="checkbox"/> Land Use / Planning	<input type="checkbox"/> Mineral Resources	<input type="checkbox"/> Noise
<input type="checkbox"/> Population / Housing	<input type="checkbox"/> Public Services	<input type="checkbox"/> Recreation
<input type="checkbox"/> Transportation / Traffic	<input type="checkbox"/> Utilities / Services Systems	<input type="checkbox"/> Mandatory Findings of Significance

2.2 - Environmental Determination

On the basis of this initial evaluation:

- I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measure based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signed: Norma M. Villicaña Date: 10/11/12
 Name: Norma M. Villicaña, AICP, Community Development Director Agency: City of El Centro Community Development Department, Planning and Zoning Division

SECTION 3: EVALUATION OF ENVIRONMENTAL IMPACTS

3.1 - Aesthetics

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

3.1.1 - Setting

Environmental Setting

The following is based on the site reconnaissance performed by Michael Brandman Associates in April 2012.

Visual Distance Zones

The following distance zones (foreground, middle ground, and background) are used to characterize the dominant visual character from each vantage point and describe views in terms that can be analyzed and compared. As discussed below, sensitivity of views modified from the natural environment are defined in order to establish thresholds for analysis of potential visual impacts resulting from the implementation of the proposed project.

Foreground Views

These views include elements that can be seen at a close distance and that dominate the entire view. Impacted views at this distance are generally considered potentially adverse when viewed by a sensitive viewer group such as surrounding residents, workers, pedestrians, or regular motorists.

Middle Ground Views

These views include elements that can be seen at a middle distance and that partially dominate the view. Impacted views at this distance are generally considered potentially adverse when viewed by a sensitive viewer group.

Background Views

These views include elements that are seen at a long distance and typically do not dominate the view but are part of the overall visual composition of the view. Impacted views at this distance are generally considered not to be an adverse impact when viewed by a sensitive viewer group.

The project site is generally level and featureless; it ranges between 47 and 50 feet below sea level. There are no significant natural topographic features within the project site. Central Drain No. 5 is located within the eastern perimeter of the project site south of West Villa Avenue and bisects the site north of this roadway. Single-family residences are located directly adjacent to the western portion of the project site. A residential subdivision is located west of North 3rd Street. The Swarhout Field Park is located at the northwest corner of North 3rd Street and West Euclid Avenue. These residential and park uses would be considered a sensitive viewer group.

3.1.2 - Environmental Impacts and Mitigation Measures

Would the project:

a) Have a substantial adverse effect on a scenic vista?**Short-Term Construction Impacts**

During construction of the proposed project, potentially visually degrading elements such as construction equipment, vehicles, portable office trailers, and other temporary elements would be located on the project site. These temporary elements would be removed from the project site upon completion of the construction phase. Therefore, due to the visually degrading elements being temporary, and because the project site does not contain any significant scenic resources (see “Long-Term Operation Impacts” below), short-term impacts associated with adversely affecting a scenic vista would be less than significant.

Long-Term Operations Impacts

The El Centro General Plan Land Use Element and Conservation/Open Space Element generally identify scenic resources in the City as limited to parks, dedicated open space, and agricultural uses. Active agricultural operations are located directly adjacent to the northern portion of the project site. However, due to the considerable distance between these agricultural uses and the nearest sensitive viewer group, and because of the lack of elevation changes, these agricultural operations are not a significant part of the viewshed of the residential uses located directly adjacent to the project site. As such, the proposed project would not impede views of this scenic vista. Therefore, long-term impacts associated with adversely affecting a scenic vista would be less than significant.

The Swarthout Field Park located west of the project site will have partial visual access of the project site depending on the viewer location within the park. The visual screening along North 3rd Street incorporated into the proposed project would block views from the park (Exhibit 6a). Therefore, long-term visual impacts from this park would be less than significant.

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic building within a state scenic highway?

According to the Imperial County General Plan Circulation and Scenic Highway Element, four roadway segments within the County have the potential to be State-Designated Scenic Highways, but are not currently officially designated. These roadways include portion of Interstate (I) 8, State Route (SR) 78, SR-111, and the Borrego-Salton Seaway. The project site is not within the viewshed of any of these roadway segments. Therefore, no impacts to State-Designated Scenic Highways would occur.

c) Substantially degrade the existing visual character or quality of the site and its surroundings?

Short-Term Construction Impacts

During construction of the proposed project, potentially visually degrading elements such as construction equipment, vehicles, portable office trailers, and other temporary elements would be located on the project site. These temporary elements would be removed from the project site upon completion of the construction phase. Therefore, due to the visually degrading elements being temporary, short-term impacts associated with degradation of the existing visual character or quality of the project site and its surroundings would be less than significant.

Operations Phase

In its existing condition, the project site is undeveloped (Exhibit 3). The project site is periodically maintained and cleared of refuse and other illegal dumped materials, although loose refuse is allowed to accumulate on the site. The project site is generally level and featureless, and as previously discussed in Impact Threshold 3.1.2 a), lacks any scenic vistas or other significant aesthetic quality.

The proposed project would modify the existing character of the project site by installing solar arrays and associated improvements on the site, including perimeter fencing, landscaping, and a substation building. The solar panels would be installed in a uniform manner that would provide a consistent appearance. Perimeter fencing would consist of 8-foot chain-link fencing with three-strand barbed wire affixed atop and would include beige colored slats. Perimeter landscaping strips comprised of oleander shrubs, trees, new gold lantana, gravel, rocks, or other City of El Centro approved landscaping would be provided. The combination of the fencing and the landscaping would conceal the solar facility from the neighboring sensitive viewer groups while aesthetically incorporating with the overall industrial character south and west of the project site (Exhibit 6, 6a, 6b, and 6c). Any

fencing and landscaping installed as part of the proposed project would comply with all applicable provisions contained within Chapter 29, Article III, Division 6, Water Efficient Landscaping, Screening, and Fencing Regulations. The provisions contained within apply to all zoning designations within the City and ensure that all fencing and landscaping in the City is consistent and uniform in appearance, which reduces that potential for visual conflict.

Design and construction of the substation would comply with all applicable provisions contained within Division 4, Section 29-71, Manufacturing Zone Design Standards, which would allow the building visually to conform to other structures within the Manufacturing Zone. Building materials and color schemes for the substation would be selected based on the ability to harmoniously conform to the materials and colors found on adjacent property.

Moreover, under California Government Code Section 65850.5(a), "It is the policy of the State to promote and encourage the use of solar energy systems and to limit obstacles to their use." The project is consistent with and furthers the purpose of Section 65850.5, which also provides that it is the "intent of the Legislature that local agencies not adopt ordinances that create unreasonable barriers to the installation of solar energy systems, including, but not limited to, design review for aesthetic purposes, and not unreasonably restrict the ability of homeowners and agricultural and business concerns to install solar energy systems."

Therefore, based on the preceding analysis, long-term impacts associated with degradation of the existing visual character or quality of the project site and its surroundings would be less than significant.

d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Short-Term Construction Impacts

During construction of the proposed project, light and glare may be produced from construction equipment, vehicles, portable office trailers, and other temporary elements on the project site. These temporary elements would be removed from the project site upon completion of the construction phase. The use of temporary lighting during the construction phase may be necessary in the early morning or during the winter, when the sun sets earlier. Due to the temporary nature of the construction phase, short-term impacts associated with light and glare would be less than significant.

Long-Term Operations Impacts

The proposed project would not create a new source of substantial light that would adversely affect day or nighttime views in the area. Low-level lighting would be installed throughout the project site for safety and security purposes, as well as operation and maintenance. As mandated by the provisions set forth by Section 29-149, Lighting Standards, of the El Centro Municipal Code, all lighting would incorporate shielding and would be designed to avoid light spillage (a.k.a. light

trespass) onto adjacent property. Lights would be shielded, downward facing, and sensor controlled to reduce offsite light scatter, and would remain on from dusk to dawn. Therefore, long-term impacts associated with light would be less than significant.

The proposed project would also not create a new source of substantial glare that would adversely affect day or nighttime views in the area. The solar panels would be black in color and absorptive rather than reflective. By design, the solar panels would absorb sunlight to maximize electrical output. The solar panels would use anti-reflective glass, resulting in less reflectance of standard residential and commercial glass. Due to the limited rotation angles, the solar panels would lack the ability to reflect the Sun upon any ground-based, offsite observer. In addition, the frame and other mounting components on which the solar panels would be affixed would be constructed of galvanized aluminum or a similar material, which would have a low reflective property. Of all the components that would be installed as part of the proposed project, none would be overly reflective or create a new source of substantial glare. Therefore, long-term impacts associated with glare would be less than significant.

3.1.3 - References

El Centro, City of. 2011 (Updated). Municipal Code. November (Updated).

El Centro, City of. 2004. Final General Plan. Land Use Element. February.

El Centro, City of. 2004. Final General Plan. Conservation/Open Space Element. February.

Imperial, County of. 2008. General Plan. Circulation and Scenic Highways Element. January 29.

3.2 - Agriculture and Forestry Resources

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
<p>Agriculture and Forestry Resources <i>In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:</i></p>				
<p>a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>d) Result in the loss of forest land or conversion of forest land to non-forest use?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.2.1 - Setting

Environmental Setting

Of the 2,942,080 acres that encompass Imperial County, 20-percent of the land is irrigated for agricultural purposes. Favorable climate, productive soils, and the availability of irrigation water have permitted Imperial County to become a leading producer of agricultural products. Irrigation agriculture in the County is extremely diverse and includes numerous types of vegetable crops including lettuce, carrots, onions, tomatoes, cauliflower, and broccoli; alfalfa, Sudan grass, and other animal feed; sugar beets; wheat and other grains; melons; cotton; and various citrus, fruits, and nuts. In 1990, Imperial County surpassed one billion dollars in gross income from all agricultural products

combined, and in 1988, 1989, and 1991, the gross income was a little under the one billion dollar figure. Vegetable and melon crops, as a category, have traditionally represented the highest gross value, followed by field crops, fruit and nut crops, seed crops and nursery products, and apiary products.

Livestock production, or animal husbandry, represents the second major form of agricultural production in Imperial County. Livestock production focuses on the production of beef cattle, sheep, wool, dairy products, swine, and, more recently, fish and other aquatic products. Horses are also used for work and pleasure. Imperial County offers many advantages to livestock producers. Locally grown crops provide a variety of feed ingredients for beef cattle, dairy cattle, sheep, and other animals, and adequate supplies of clean, fresh water are available from various water delivery systems. Although hot in the summer, the climate is dry and mild in winter, making feeding conditions ideal for cattle and sheep.

Applicable Regulations, Plans, and Standards

State of California

Important Farmland Mapping and Monitoring Program

The conservation of agricultural lands in California is monitored through the Department of Conservation, Division of Land Resource Protection's Farmland Mapping and Monitoring Program (FMMP). For the FMMP, U.S. Department of Agriculture (USDA) soils surveys and existing land use observations recorded during even-numbered years are used to determine the nature and quality of farmland in 10-acre minimum units across the State. FMMP mapping categories for the most important Statewide farmland include Prime Farmland, Farmland of Statewide Importance, and Unique Farmland. These three categories combined are referred to as Farmland. The remaining two classifications include Farmland of Local Importance and Grazing Land.

Williamson Act and Farmland Security Zone

In 1965, the California Legislature adopted the California Land Conservation Act of 1965 (commonly referred to as the Williamson Act), which enabled local governments to provide property tax relief to agricultural land owners who voluntarily agreed to devote their land to long-term agricultural use (10-year Williamson Act Contract).

The Williamson Act enables local governments to enter into rolling, 10-year contracts with private landowners for the purpose of restricting specific parcels of land to agricultural or compatible uses. In return, restricted parcels are assessed for property tax purposes at a rate consistent with their actual, farming, and open space uses, as opposed to potential market value.

County Plans, Regulations, and Consultation

Neither the El Centro General Plan nor the Zoning Ordinance identifies any agricultural land use designations. The portion of the project site located north of West Villa Avenue in Imperial County

is designated as Planned Industrial by the Imperial County General Plan Land Use Element zoned General Agriculture, Urban Overlay (A-2-U).

3.2.2 - Environmental Impacts and Mitigation Measures

Would the project:

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

According to the Imperial County Important Farmland 2010 Map published by the California Department of Conservation: Division of Land Resource Protection, the portion of the project site located north of West Villa Avenue is designated Farmland of Local Importance and the portion of the site south of West Villa Avenue is designated Other Lands (California Department of Conservation, 2012). Therefore, no impacts associated with conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) would occur.

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?

Agricultural Use Zoning

The portion of the site located south of West Villa Avenue is located within El Centro and does not contain agricultural zoning. The portion of the project site located north of West Villa Avenue in unincorporated Imperial County is currently zoned General Agriculture with an Urban Overlay (A-2-U). Although zoned for Agriculture, no agricultural operations currently occur on the project site and the land is presently undeveloped. In addition, the General Plan Land Use Map of the El Centro Service Area Plan designates this portion of the site as Planned Industrial (Imperial Local Agency Formation Commission [LAFCO], 2005). This is consistent with El Centro Zoning Map No. 1 that identifies this portion of the site as Urban Area.

As part of the proposed project, the Applicant would apply for annexation of the County lands into the City of El Centro's jurisdictional boundary through the Imperial County LAFCO. Once annexed into El Centro, this portion of the project site would initially be zoned Single Family Residential (R1), and subsequently rezoned Light Manufacturing (ML). Implementation of the proposed project would not include any on- or offsite improvements that would affect the active agricultural operations located north of the project site. These existing agricultural operations would be able to continue unaffected following implementation of the proposed project. Therefore, impacts associated with underlying agricultural use zoning would be less than significant upon completion of the annexation and rezoning.

Williamson Act Contract

According to the most recent Williamson Act Agricultural Preserves Map published by the California Department of Conservation: Division of Land Resource Protection, the project site is not located on

or adjacent to any land currently under Williamson Act Contract. Therefore, no impacts associated with Williamson Act Contract would occur.

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

No forestland, timberland, or timberland zoned Timberland Production is located in the general project area. Neither the City of El Centro nor Imperial County contains such lands. Therefore, no impacts associated with forestland, timberland, or timberland zoned Timberland Production would occur.

d) Result in the loss of forestland or conversion of forestland to non-forest use?

As previously discussed under Impact Threshold 3.2.2 c), no forestland is located in the general project area. Neither the City of El Centro nor Imperial County contains such lands. Therefore, no impacts associated with loss or conversion of forestland would occur.

e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forestland to non-forest use?

As previously discussed under Impact Threshold 3.2.2 a), no impacts to Farmland would occur. As part of the proposed project, the Applicant would apply for annexation of the County lands into the City of El Centro's jurisdictional boundary through the Imperial County LAFCO, and once annexed, this portion of the project site would be zoned Light Manufacturing (ML). Neither the El Centro General Plan nor the Zoning Ordinance identifies agricultural land use designations. Implementation of the proposed project would not include any on- or offsite improvements that have the potential to affect the active agricultural operations located north of the project site. These existing agricultural operation would be able to continue unaffected following implementation of the proposed project. Therefore, no impacts associated with changes in the existing environment that could result in the conversion would occur.

3.2.3 - References

California Department of Conservation: Division of Land Resource Protection. 2012. Imperial County Important Farmland 2010 Map. September.

California Department of Conservation: Division of Land Resource Protection. 2006. Williamson Act Agricultural Preserves Map. October.

Imperial, County of. 1996. General Plan. Agricultural Element. November 19.

Imperial Local Agency Formation Commission. 2005. El Centro Service Area Plan. November.

3.3 - Air Quality

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Air Quality				
<i>Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:</i>				
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions, which exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The following is summarized in part from the Air Quality and Greenhouse Gas Report prepared for the proposed project on September 13, 2012 by Michael Brandman Associates. The Air Quality and Greenhouse Gas Report is included as Appendix A.

3.3.1 - Setting

Environmental Setting

The project site is located within the Salton Sea Air Basin (SSAB or Basin). The SSAB consists of the southeast portion of Riverside County and all of Imperial County. The Imperial County portion of the SSAB extends over 4,597 square miles, and is bordered by the country of Mexico to the south, Riverside County to the north, San Diego County on the west, and the State of Arizona to the east. Specifically, the SSAB is a north/south facing trough consisting of a generally level valley surrounded by the Peninsular Range to the west; the Chocolate, Orocopia, and Cargo Muchaco Mountains to the east; and the Banning Pass to the north. The majority of the SSAB trough is below sea level and is generally an arid desert region.

Local Climate

Imperial County is characterized as a semi-arid desert with the lowest point being 275 feet below mean sea level (msl) and the highest point being 4,284 feet above msl. Most of the Imperial Valley,

including the project site, is below sea level. The County has an arid climate with warm, dry summers and mild winters. Typically, temperatures of 100 degrees occur more than 100 days each year with freezing temperatures averaging less than 10 days per year. The average annual air temperature is 72 degrees, the average “frost-free” season is about 300 days, and the average rainfall is about 2.8 inches.

Because of the climatic characteristics of Imperial County, two types of temperature inversions exist, subsidence and radiation, which contribute to local air quality degradation. Subsidence inversions occur during the warmer months, as descending air associated with the Pacific high-pressure cell comes into contact with cool marine air. The boundary between the two layers of air represents a temperature inversion that traps pollutants below. Radiation inversion typically develops on winter nights, when air near the ground cools by radiation, and air aloft remains warm. A shallow inversion layer that can trap pollutants is formed between the two layers. The prevailing winds in the project area (for a 24-hour period) move predominately from west to east and southwest to northeast, with an average wind speed of 3.86 meters per second (m/s). During windy periods, the inversion layers weaken or disappear due to movement in the atmosphere.

Local Ambient Air Quality

Existing levels of ambient air quality and historical trends and projections of air quality in the project area are best documented from measurements made near the project site. The ICAPCD has air quality monitoring stations in Niland, Brawley, Westmorland, El Centro, and a station in Calexico and the California Air Resources Board (ARB) has two other stations in Calexico. The monitoring stations measure the levels for the various air pollutants that are used to define ambient air quality.

The monitoring station in El Centro (El Centro-150 9th Street) is located on 0.9 mile southwest of the project site and is the station that best reflects conditions at the project site. Published monitoring data from 2009 through 2011, the most recent 3-year period available, for the nearest air monitoring sites can be found in the Air Quality and Greenhouse Gas Report (Appendix A).

3.3.2 - Environmental Impacts and Mitigation Measures

Where available, the significance criteria established by the Imperial County Air Pollution Control District (ICAPCD) may be relied upon to make the following determinations. Would the project:

a) Conflict with or obstruct implementation of the applicable air quality plan?

The Basin is designated nonattainment of State and federal health-based air quality standards for ozone and PM_{2.5}. In addition, the Basin is designated nonattainment of state PM₁₀. To meet Federal Clean Air Act (CAA) requirements, the SJVAPCD has multiple air quality attainment plan (AQAP) documents, including:

- 8-Hour Ozone Modified Air Quality Management Plan
- 2009 Imperial County State Implementation Plan for Particulate Matter Less Than 10 Microns in Aerodynamic Diameter (2009 PM₁₀ SIP)

The project would comply with all applicable rules and regulations. Additionally, as subsequently discussed in Impact Thresholds b) through e), project emissions would not exceed the ICAPCD's significance thresholds. Moreover, the proposed project would offset NO_x emissions from power plants, thereby reducing the NO_x emissions in the Basin. NO_x is an ozone precursor pollutant. As such, the proposed project would assist the ICAPCD in attaining ozone standards. Therefore, impacts associated with conflicting with or obstructing implementation of the applicable air quality plan would be less than significant.

b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?

There are two pollutants of concern for this impact: CO and localized PM₁₀. PM_{2.5} is not assessed in this impact, as the main source of localized PM impacts would be generated by fugitive dust, which consists mainly of the coarse fraction of PM and because the ICAPCD does not have a PM_{2.5} threshold. The proposed project would not result in localized CO hotspots or PM₁₀ impacts, as discussed below. Therefore, the proposed project would not violate an air quality standard or contribute to a violation of an air quality standard in the project area.

Operation

The ICAPCD indicates that to have a less than significant impact on air quality from operation, the project should implement all feasible mitigation measures as contained in Section 7.2 of its CEQA Handbook. However, the measures in Section 7.2 of the ICAPCD's CEQA Handbook apply to residential, commercial, and industrial projects, all of which would contain buildings that use energy and generate daily trips (a source of vehicle miles traveled in the County). The standard mitigation measures are not applicable to the proposed project, as it would not be a typical residential, commercial, or industrial project. For example, mitigation measures in the ICAPCD's CEQA Handbook are aimed at energy efficiency and decreasing vehicle miles traveled. The project would generate energy from a renewable source, and would not generate additional vehicle miles traveled above that necessary to maintain and operate the solar energy facility. As provided in Table 3, the proposed project would emit less than the ICAPCD's thresholds of significance. Therefore, impacts associated with the operations phase of the proposed project would be less than significant.

Table 3: Operational Emissions (2013)

Source	Emissions (Annual Average lbs/day)				
	ROG	NO _x	PM ₁₀	SO _x	CO
Fugitive Dust*	—	—	6.82	—	—
Offsite Employee Commute Trips	0.03	0.11	0.01	0.00	0.82
Offsite Truck Deliveries	0.05	0.92	0.04	0.00	0.26
Onsite Employee Trips	0.00	0.00	0.00	0.00	0.03
Onsite Trucks	0.00	0.00	0.00	0.00	0.00
Onsite Panel Cleaning	0.18	1.39	0.06	0.00	0.04
Total	0.26	2.43	6.93	0.00	1.15
ICAPCD Threshold	55	55	150	150	550
Significant?	No	No	No	No	No
Notes: Totals based on non-rounded emissions estimates. * Fugitive Dust includes offsite employee commute trips, truck deliveries, onsite employee and truck trips and panel cleaning. Source: MBA, 2012 (Appendix A).					

CO Hotspot

Localized high levels of CO are associated with traffic congestion and idling or slow-moving vehicles. Because increased CO concentrations are usually associated with roadways that are congested and with heavy traffic volume, and because the proposed project would add an estimated maximum of 12 total daily trips at any one time during the operations phase, it can be determined with a fair degree of certainty that the project's effect on any given intersection would not cause a potential CO Hotspot. In addition, the proposed project would generate less CO than the ICAPCD's threshold of significance, as shown in Table 3 and would not exceed State or federal CO standards. Therefore, impacts associated with CO Hotspots are less than significant.

Construction

Regarding construction emissions for both the solar energy facility and the undergrounding of the adjacent drainages, the ICAPCD indicates that the approach of the CEQA analyses for construction particulate matter impacts should be qualitative as opposed to quantitative. While a Lead Agency may elect to quantify construction emissions, the ICAPCD recommends the implementation of effective and comprehensive mitigation measures as listed in its CEQA Handbook. In any case, regardless of the size of the particular project, the standard mitigation measures for construction equipment and fugitive PM₁₀ must be implemented at all construction sites. The implementation of discretionary mitigation measures apply to the proposed project, as the measures apply to construction sites which are 5 acres or more for non-residential developments or 10 acres or more in size for residential developments. The proposed project must also comply with ICAPCD Regulation

VII regarding preventing fugitive dust. With implementation of Mitigation Measures AIR-1a through AIR-1j, the proposed project would not violate any air quality standard or contribute substantially to an existing or projected air quality violation. Therefore, impacts associated with construction of the proposed project would be less than significant with incorporation of mitigation.

- MM AIR-1** The project shall comply with the following measures (a through j) during construction. Written documentation of compliance with this measure shall be provided to the City of El Centro Building Official for review and approval prior to the issuance of a building permit or grading permit, whichever shall occur first.
- a) All disturbed areas, including bulk material storage, which is not being actively utilized, shall be effectively stabilized and visible emissions shall be limited to no greater than 20 percent opacity for dust emissions by using water, chemical stabilizers, dust suppressants, tarps or other suitable material such as vegetative ground cover.
 - b) All on site and off site unpaved roads will be effectively stabilized and visible emissions shall be limited to no greater than 20% opacity for dust emissions by paving, chemical stabilizers, dust suppressants and/or watering.
 - c) All unpaved traffic areas one (1) acre or more with 75 or more average vehicle trips per day will be effectively stabilized and visible emission shall be limited to no greater than 20% opacity for dust emissions by paving, chemical stabilizers, dust suppressants and/or watering.
 - d) The transport of bulk materials shall be completely covered unless six inches of freeboard space from the top of the container is maintained with no spillage and loss of bulk material. In addition, the cargo compartment of all haul trucks is to be cleaned and/or washed at delivery site after removal of bulk material.
 - e) All track-out or carryout will be cleaned at the end of each workday or immediately when mud or dirt extends a cumulative distance of 50 linear feet or more onto a paved road within an urban area.
 - f) Movement of bulk material handling or transfer shall be stabilized prior to handling or at points of transfer with application of sufficient water, chemical stabilizers or by sheltering or enclosing the operation and transfer line.
 - g) Use of alternative fueled or catalyst equipped diesel construction equipment, including all off-road and portable diesel powered equipment.
 - h) Minimize idling time either by shutting equipment off when not in use or reducing the time of idling to 5 minutes as a maximum.
 - i) Limit, to the extent feasible, the hours of operation of heavy-duty equipment and/or the amount of equipment in use

- j) Replace fossil-fueled equipment with electrically driven equivalents (provided they are not run via a portable generator set).

c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions, which exceed quantitative thresholds for ozone precursors)?

The following tiered approach is used to assess cumulative air quality impacts. Each of the criteria must be less than significant in order to have a less than significant cumulative impact.

Regional Analysis

If an area is in nonattainment for a criteria pollutant, then the background concentration of that pollutant has historically been over the ambient air quality standard. It follows that if a project exceeds the regional threshold for that nonattainment pollutant, then it would result in a cumulatively considerable net increase of that pollutant and result in a significant cumulative impact.

Imperial County is in nonattainment for PM₁₀, PM_{2.5}, and ozone. Therefore, if the proposed project exceeds the regional thresholds for PM₁₀, then it contributes to a cumulatively considerable impact for PM₁₀. Additionally, if the proposed project exceeds the regional threshold for NO_x or ROG, then it follows that the project would contribute to a cumulatively considerable impact for ozone. The ICAPCD has not adopted thresholds of significance for PM_{2.5}. Therefore, it is assumed that if a project exceeds the regional threshold for PM₁₀, then the project would similarly cause a cumulatively considerable impact for PM_{2.5}.

During operation, the proposed project would not exceed the regional significance thresholds for ROG, NO_x, PM₁₀, or PM_{2.5}. During construction, the proposed project would implement all standard construction mitigation measures to reduce emissions. Therefore, according to this criterion, it is anticipated that the proposed project would not contribute to a cumulative air quality impact.

Plan Approach

The geographic scope for cumulative air quality impacts would be include the Imperial County portion of the Salton Sea Air Basin, as this would be the area where the air pollutants generated by sources within the basin circulate and are often trapped. The ICAPCD is required to prepare and maintain attainment plans and a State Implementation Plan to document the strategies and measures to be undertaken to reach attainment of ambient air quality standards. While the ICAPCD does not have direct authority over land use decisions, it is recognized that changes in land use and circulation planning are necessary to maintain clean air. As a result, the ICAPCD evaluates the entire basin when it develops the attainment plan. As discussed in Impact Threshold a), the proposed project would be consistent with the current attainment plan. Therefore, according to this criterion, it is anticipated that the proposed project would not contribute to a cumulative air quality impact.

According to the preceding tiered analysis, emissions would not exceed the regional operational significance thresholds and the proposed project would be consistent with the current attainment plan. Therefore, the proposed project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or State ambient air quality standard.

d) Expose sensitive receptors to substantial pollutant concentrations?

Those who are most sensitive to air pollution include children, the elderly, and persons with preexisting respiratory or cardiovascular illness. Thus, sensitive receptors refer to these segments of the population most susceptible to poor air quality. Land uses where sensitive individuals are most likely to spend time include schools and schoolyards, parks and playgrounds, daycare centers, nursing homes, hospitals, and residential communities.

Table 4 provides the results of the construction health risk and hazard assessment for construction of both the solar energy facility and the undergrounding of the adjacent drainages, along with the ICAPCD’s community health risk and hazard significance thresholds. As provided in Table 4, the construction emissions would not exceed the ICAPCD’s community health risk and hazard significance thresholds for cancer risk and chronic non-cancer hazard. Therefore, impacts associated with exposure of sensitive receptors to substantial pollutant concentrations would be less than significant.

Table 4: Results of the Construction Health Risk Assessment

Metric	Dispersion Model Estimate ¹	District’s Significance Threshold	Exceeds Threshold?
Unmitigated			
Cancer Risk (unmitigated) ²	0.6 in one million	10 in one million	No
Chronic Non-Cancer Hazard Index from DPM ³	0.08	1.0	No
Notes: ¹ Computed at the nearest sensitive receptor located approximately 10 meters west of the project boundary. ² Assumes an exposure frequency of 180 days, exposure duration of 0.6 years, and an age sensitivity factor of 1. ³ Assumes a chronic DPM reference exposure level of 5 µg/m ³ . Source: MBA, 2012 (Appendix A).			

e) Create objectionable odors affecting a substantial number of people?

The proposed project would not be a gathering place of people or sensitive receptors. Further criteria for evaluation of odor impacts are found in the ICAPCD’s CEQA Air Quality Handbook. That criteria screens out projects as having odor impacts if the project is within one mile of a wastewater treatment plant, sanitary landfill, composting station, feedlot, asphalt batching plant, painting/coating operations (including auto body shops), or rendering plant. The proposed project would not generate a substantial quantity of adverse or noxious odors. Therefore, no impacts associated with creation of objectionable odors would occur.

3.3.3 - References

Michael Brandman Associates. 2012. Air Quality and Greenhouse Gas Analysis Report.
September 13.

3.4 - Biological Resources

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Biological Resources <i>Would the project:</i>				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The following is summarized in part from the Biological Resources Evaluation Technical Report prepared for the proposed project during August 2012 by Barrett's Biological Surveys. The Biological Resources Evaluation Technical Report is included as Appendix B.

3.4.1 - Setting

Top Soils and Topography

In Imperial County, elevations range from 230 below sea level to 350 feet above sea level. Soils were generally formed from stratified alluvial materials and vary greatly in texture and thickness of layers. The primary irrigated areas in the County occur on a lakebed floor. This lakebed area is nearly level, sloping north to the Salton Sea from 0.1 to 0.3-percent.

The project site is at 47 to 50 feet below sea level. The main soil series found in the project area are Holtville silty clay and Imperial-Glenbar silty clay loams.

Vegetation

Although Imperial County is located within the Colorado Desert, approximately 500,000 acres of the County have been converted to agricultural use.

Agriculture

Farming activity has historically occurred on the project site, although the site is not currently under cultivation.

Ruderal Vegetation

The sparse amount of vegetation that is found on the project site consists of ruderal species. No vegetation communities currently occur on the project site.

Salt cedar, considered a ruderal or invasive species, as well as other weeds, ruderal, and invasive, non-native vegetation species were observed on the project site.

Wildlife

Wildlife species observed on the project site were those typically found in agricultural and desert areas. For a complete listing of invertebrates, amphibians, reptiles, birds, and mammals that were either observed or would be expected to be found within the project area, refer to the Biological Resources Evaluation Technical Report (Appendix B).

Sensitive Biological Resources

Special Status Plant Species

Federal Listed Species

No federally listed plant species were observed or would be expected to be found within the project area. The previous agricultural usage of the project site does not promote a habitat favorable to federal plant species.

State Listed Species

No State listed plant species were observed or would be expected to be found within the project area. The previous agricultural usage of the project site does not promote a habitat favorable to State plant species.

Special Status Wildlife Species*Federal Listed Species*

No federally listed species were observed on the project site. The project site lacks favorable habitat that would support species such as southwestern willow flycatcher (*Empidonax trailii extimus*), Yuma clapper rail (*Rallus longirostris yumanensis*), least Bell's vireo (*Vireo bellii pusillus*), or desert pupfish (*Cyprinidon macularis*).

State Listed Species

The greater sandhill crane (*Grus canadensis tabida*), which is State listed as threatened, was evaluated based on known occurrences in Imperial County and the availability of suitable habitat in the project area. In addition to its listing by the State, the greater sandhill crane is also included on the Migratory Bird Treaty Act list of sensitive birds. The Colorado River Valley population of greater sandhill crane is estimated between 1,400 to 2,100 individuals and is considered stable. The population breeds in northeastern Nevada and southwestern Idaho, migrates through Nevada, and winters along the lower Colorado River in the Imperial Valley.

A Bermuda grass field is located adjacent to the northern portion of the project site on an offsite location. Additionally, other surrounding agricultural fields could potentially rotate to either alfalfa or Bermuda. Although the greater sandhill crane is not expected to occur on the project site, it could potentially be found in adjacent alfalfa or Bermuda grass fields.

*State Species of Special Concern and Fully Protected Species***Burrowing Owl (*Athene cunicularia*)**

The project site was surveyed via a pedestrian survey for habitat and sign (e.g., burrows, pellets, feathers, scat, litter, and animal dung) of burrowing owls. Survey information is provided in the Biological Resources Evaluation Technical Report (Appendix B).

The majority of the burrowing owl population in Southern California resides in the Imperial Valley. The Valley's array of irrigation canals and drains are commonly used as nesting sites. Burrowing owl is a California Department of Fish and Game (CDFG) Species of Special Concern and is included on the Migratory Bird Treaty Act list of sensitive birds. This survey was done using guidance from the 1995 CDFG Staff Report, which addresses survey and mitigation guidelines for the burrowing owl and communications with CDFG wildlife biologists.

Several burrowing owl and active burrows were observed on the project site. The Biological Resources Evaluation Technical Report (Appendix B) provides the location of observations, active burrows, and other biological observations on and adjacent to the project site. Two occupied and one active burrow, along with three adult burrowing owls, occur on the project site. In addition, three occupied and three active burrows, as well as three adult burrowing owls currently occur within a 250-foot offsite buffer zone around the project site boundary.

In its current condition, although the burrows found on the project site may be used for nesting, the project site does not support active burrowing owl foraging habitat. The lack of water and the sparse vegetation found on project site does not support an active invertebrate prey base sufficient to support burrowing owl. Although crickets were heard within offsite drains during the survey, none were heard on the project site. The three owls that are using the project site for nesting are assumed to be foraging offsite in the adjacent agricultural fields. A residential area located west of the project site could be a source of rodents, although no bones were found within burrowing owl pellets.

Burrowing owls are known to use an area with a 1.25-mile radius from their nest for foraging. This represents 3,142 acres that can be used as foraging habitat. As such, any burrowing owl currently residing on the project site could be expected to forage in the agricultural fields, canals, and drains north and east of the site.

Loggerhead Shrike (*Lanius ludovicianus*)

Loggerhead shrike is a CDFG species of special concern and is year-round resident of Imperial County. Loggerhead shrike are generally associated with open areas such as agricultural fields, which are used for foraging, and thickets, which are used for nesting. One loggerhead shrike was observed in brush surrounding the project site.

3.4.2 - Environmental Impacts and Mitigation Measures

Would the project:

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

Burrowing owl and burrows were observed on the site and within a 250-foot buffer zone of proposed construction activities.

CDFG Staff Report on Burrowing Owl lists impacts to burrowing owl as:

- Disturbance within 250 feet (September through January non nesting season) or within 160 feet (February through August nesting season) of active burrows
- Destruction of active burrows
- Destruction/degradation of forage within 300 feet of active burrows Long-Term Operations Impacts

According to criteria set forth by CDFG, the construction of the proposed project, as well as the undergrounding of the adjacent canal and laterals, could potentially impact burrowing owl. Mitigation Measures BIO-1a through BIO-1d are required to reduce impacts associated with burrowing owl to less than significant.

MM BIO-1a A pre-construction survey shall be performed by a qualified biologist within 30 days of the start of construction of the proposed project. The biologist shall prepare a report detailing the findings of the survey and present the report to the Lead Agency for review and approval within five business days following the survey. Any new recommendations contained in the report shall be subsequently incorporated into the proposed project.

MM BIO-1b All onsite construction personnel shall be given worker training by a qualified biologist regarding burrowing owl, which shall include the following:

- Description of owl
- Biology
- CDFD and USFWS Regulations
- Wallet card with a photograph of a typical burrowing owl picture and guidelines for protecting burrowing owl

MM BIO-1c During the non-nesting season (September through January), a distance of 250 feet shall be maintained between active burrows and construction activities. A qualified biologist may also employ the technique of sheltering in place (e.g., using hay bales to shelter the burrow from construction activities). If this technique is employed, the sheltered area shall be monitored weekly by the biologist.

MM BIO-1d In the event that occupied and/or active burrows are found that must be removed, the following shall be warranted:

- After consultation with CDFG's appropriate regional office, artificial burrows placed 50 feet apart shall be installed using the guidelines found in the Imperial Irrigation District Artificial Burrow Installation Manual or other applicable manuals.
- After consultation with CDFG, burrowing owl shall be excluded by installation of one-way doors installed at the opening of burrows. One-way doors shall be left in place for 48 hours if burrows are occupied. Any burrow indicating occupancy shall be thoroughly evaluated prior to excavation. Excavation shall be done using hand tools and refilled to prevent reoccupation. After burrow is collapsed, contractor shall immediately disk the area to prevent reoccupation.

- Documentation shall be made (e.g., photographs, notes) and a report shall be prepared and sent to CDFG within five business days.
- In the event that suitable foraging habitat is found on the project site, CDFG's mitigation guidelines for burrowing owl shall be implemented, which require a minimum of 6.5 acres of foraging habitat per pair or unpaired resident bird to be provided and protected to offset the loss of foraging and burrow habitat on the site.

In addition to burrowing owl, loggerhead shrike was also observed in brush surrounding the project site. Construction of the proposed project, as well as the undergrounding of the adjacent canal and laterals, could potentially impact loggerhead shrike, as well as any other migratory, non-migratory, and sensitive species with the potential to occur in the project region such as mountain plover (*Charadrius montanus*), long billed curlew (*Numenius americanus*), and short billed dowitcher (*Limnodromus griseus*). Due to lack of habitat and/or nesting opportunity, the potential for migratory, non-migratory, and sensitive avian species to nest on the project site is low. However, if construction begins between February 1 and September 1, there is potential for nest failure. If construction occurs within the general nesting season, Mitigation Measures BIO-2a and Mitigation Measure BIO-2b are required to reduce impacts associated with nesting birds to less than significant.

MM BIO-2a If construction of the proposed project occurs between February 1 through September 1, the general nesting season, the Applicant shall retain the service of a qualified biologist to conduct a pre-construction nesting survey on the project site for nesting birds 30 days prior to construction activity. In the event that the biologist determines that nesting birds occur on the project site, Mitigation Measure BIO-2b would be required.

MM BIO-2b In the event that nesting birds protected under the Migratory Bird Treaty Act (MBTA); candidate, sensitive, or special status species; or any other species of note are determined to occur on the project site, no construction activity shall occur around the nest(s) until the nest(s) is no longer active. If construction activity must occur within 300 feet of an active nest or 500 feet of an active raptor nest, a biological monitor shall be present onsite to ensure that no direct take of the active nest occurs as a result. Construction activity may continue at the discretion of the biological monitor.

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

The distribution of riparian plant species and communities is largely driven by hydrological and soil variables. Riparian plant communities typically occur in a relatively distinct zone along streamside

elevational and soil textural gradients. The only riparian habitat that could potentially occur on or adjacent to the project site is found within the IID drainages. These canals and laterals are right-of-ways maintained by IID and are covered by the draft Water Conservation and Transfer Project Habitat Conservation Plan.

These IID canals and laterals are part of an agricultural system, and therefore, by definition, are not classified as wetlands, although typical wetland/riparian plant species are found within the drainages.

When the portion of Central Drain No. 5 located on the project site is undergrounded, 1.33 acres of riparian habitat would be removed. Although this would constitute a permanent removal, the habitat currently found within Central Drain No. 5 is not considered a reliable, stable habitat, as the drain is routinely dredged during maintenance activities by the IID. Since the removal of 1.33 acres of riparian habitat could result in a potentially significant impact, the proposed project would be responsible to replace 1.33 acres of habitat through the implementation of Mitigation Measure BIO-3. With incorporation of Mitigation Measure BIO-3, impacts associated with riparian habitat to less than significant.

MM BIO-3 Referencing typical mitigation ratios used by CDFG, during the permitting process the Applicant shall replace a minimum of 1.33 acres within the City of El Centro for disturbing CDFG riparian habitat. The compensation shall be at a 1:1 ratio and consist of lands of at least the same quality as the converted land on the project site.

In addition to Mitigation Measure BIO-3, a Section 1600 Streambed Alteration Agreement permit would also be required for impacts to CDFG resources. Upon undergrounding of Central Drain No. 5, no residual riparian habitat would be expected as a result of runoff or rainfall, as rainfall in the project region is typically sporadic and generally less than 3 inches per year.

Both the West Villa Avenue Storm Drain and the Dogwood Lateral do not support riparian habitat and would not require mitigation or a Section 1600 Streambed Alteration Agreement permit.

c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

The drainages on and adjacent to the project site, including Central Drain No. 5, West Villa Avenue Storm Drain, and the Dogwood Lateral are right-of-ways maintained by the IID and are covered by the draft Water Conservation and Transfer Project Habitat Conservation Plan. Through the use of typical construction best management practices (BMPs), and because of the ability to control water flow into Central Drain No. 5, no discharge into waters of the United States would occur during the undergrounding of the IID laterals and canals. As such, Clean Water Act (CWA) 404 permit would not be required from the U.S. Army Corp of Engineers (USACE).

Additionally, onsite flows, which would be a result of rare rain events would be contained on the project site and not discharged offsite. Thus, CWA 401 permit would also not be required from the Regional Water Quality Control Board (RWQCB). Moreover, no flows would be redirected as a result of undergrounding of the IID lateral and canals. Therefore, impacts associated with adversely effecting federally protected wetlands would be less than significant.

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

The ability for wildlife to freely move about an area and not become isolated promotes dispersal of a species to exchange genetic characteristics, forage for food and water, and escape predation. The general project area is characterized as an agricultural vegetative community. When Central Drain No.5 is undergrounded, a linear area of 3,200 feet would be removed from the approximately 1,456 miles of drainages maintained by the IID that can be used for wildlife movement. Following undergrounding, the area above the drain would include landscaping and would be closed to public traffic but continue to allow movement of wildlife species. Additionally, the project site was determined to occur outside of an established migratory route for any species. Moreover, since no current wildlife nursery sites were found within the project site during biological surveys, implementation of the proposed project would not impede the use of native wildlife nursery sites. Therefore, impacts associated with wildlife corridors, the movement of wildlife, and wildlife nursery sites would be less than significant.

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

Local-level authority over the project site is set forth in the provisions of the El Centro General Plan and include the entire project site upon annexation. The General Plan's Open Space and Conservation Elements generally addresses the conservation and preservation of natural habitats, ecosystems, and plant and animal habitats. However, the Open Space and Conservation Element does not include specific provisions for any habitats, including the previously disturbed, former agricultural habitat currently found on the project site. In addition, the City of El Centro does not currently have a tree preservation ordinance. Moreover, no significant mature trees are located on the project site, and no tree would require removal or relocation as a result of the proposed project. Therefore, no impacts associated with local policies or ordinances would occur.

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

Although the Imperial Valley is within the California Desert Conservation Area, the project site is not located within or immediately adjacent to an Area of Critical Environmental Concern (ACEC). Therefore, impacts associated with conflicting with any adopted conservation plan would be less than significant. The undergrounding of Central Drain No. 5 and Laterals will not affect the draft Water

Conservation and Transfer Project Habitat Conservation Plan and IID's ability to maintain the function of their drainage system.

3.4.3 - References

Barrett's Biological Surveys. 2012. Biological Resources Evaluation Technical Report. August.

El Centro, City of. 2011. Municipal Code. November (Updated).

El Centro, City of. 2004. Final General Plan. Conservation/Open Space Element. February.

3.5 - Cultural Resources

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Cultural Resources <i>Would the project:</i>				
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The following is summarized in part from the Class I Records Search Letter Report prepared for the proposed project on July 6, 2012 and a Cultural Resources Inventory Report prepared for the proposed project during July 2012, both by ECORP Consulting, Inc. The Class I Records Search Letter Report and the Cultural Resources Inventory Report are included as Appendix C.

3.5.1 - Setting

Prehistoric

Approximately 7,000 prehistoric archaeological sites have been recorded in Imperial County. A variety of site types have been encountered, including settlements, trails, rock art, geoglyphs, fish traps, and resource procurement and manufacturing locations. The current distribution and availability of such resources are a consequence of several environmental and historic factors. Environmental factors include the periodic flooding of ancient Lake Cahuilla and the existence of the New River and Alamo River, all of which encouraged prehistoric settlement and resource use in the vicinity of their shorelines and riverbanks. At the other extreme, an environmental feature that discourages the likelihood of finding prehistoric cultural resources is the Algodones Sand Dunes. From a historical standpoint, the intensive use of Imperial Valley for irrigation agriculture since the beginning of the 20th Century has impacted any resources that may have existed on land that is now either farmland or under the Salton Sea.

Historic

In 1906, W. F. Holt and C.A. Barker purchased the land on which the City of El Centro was eventually built. The City was incorporated on April 16, 1908. Early growth was rapid, with the

City's residential population reaching 1,610 people by 1910 and 5,646 by 1920. One reason for this rapid early growth was the City's successful battle with the City of Imperial to become the County seat. By the mid-1940s, the City had become the second largest city in the Imperial Valley, with a population of about 11,000 people.

During this time, the City of El Centro had become the principal wholesale center of the region and the location of the IID administrative offices. Due to its strategic location near rail lines and SR-80 and SR-99, the City in the 1940s was becoming the shipping center for vegetables in the southern portion of the Imperial Valley. The principle industry of the City in the 1940s revolved around agriculture – fruit and vegetable packing and shipping, ice plants, a flax fiber plant, a box factory, and concrete pipe and brickyards. By the 1970s, agriculture was still an important part of the City's economic life. Imperial County had become one of the most agriculturally productive areas in the State, with numerous growing and shipping operations still operating in the City.

Class I Records Search

Information Center Search

An archaeological records search was conducted at the South Coastal Information Center (SCIC) at San Diego State University in San Diego on January 2, 2012. The SCIC is part of the California Historical Resources Information System and is the official repository for all cultural resources site records and reports for Imperial County. The SCIC records search identified previous surveys that have been conducted, as well as cultural resources that have been previously recorded, within a 0.50-mile radius of the study area.

The Class I records search indicated that 50-percent, or 61 acres, of the 123-acre study area had been previously surveyed for cultural resources, with three of the seven surveys being less than 10 years old. Surveys are considered valid for a period of no more than 10 years. Approximately 40-percent, or 49 acres, of the study area had been surveyed in the last 10 years. The current surveys included two linear and block surveys in the northern portion of the study area and a block radio tower survey, also within the northern portion of the study area. As of the Class I record search, the southern portion of the study area had not been surveyed within the last 10 years. Because of this, an intensive systematic pedestrian survey of the project area was conducted to ensure that the entirety of the project site had been surveyed. Refer to the "Field Survey" section on page 66 of this IS/MND for a more thorough discussion of this field survey.

In addition, historic maps of the area were reviewed to identify any historic-period structures or features within the study area. The Historic Property Data File was also reviewed to identify any properties that have been listed on or determined eligible for listing on the National Register of Historic Places (NRHP), California Register of Historical Resources (CRHR), California Points of Historical Interest, California Landmarks, and National Historic Landmarks within 0.50 mile of the study area.

Previous Surveys

The results of the records search indicated that between 1989 and 2007, 12 cultural resources investigations were conducted within the records search radius. Of these studies, seven overlapped, crossed, or took place within the boundaries of the study area.

Known Sites

The records search results show that four cultural resources have been previously recorded within the records search radius. These consist of two historic-period railroad segments, one historic-period railroad station, and one historic-period transmission line. Of these four resources, none cross or occur within the study area. Table 5 provides expanded detail on these recorded cultural resources.

Historic-Period Addresses

In addition to the previously recorded sites, the records search results identified two historic-period addresses within the records search radius. These addresses are 519 Broadway and 710 West Main Street, both in the City of El Centro. 710 West Main Street is the former location of the Hotel Barbara Worth, which has been nominated for inclusion as a California Point of Historical Interest. Neither of these two historic-period addresses are located within the study area. Table 5 provides expanded detail on these historic resources.

Historic Map Review

The review of historic maps included examination of the Blackburn Map of Imperial County, California (1936, 1955, 1964). This map shows multiple roads traversing the record search radius, including Villa Avenue that runs through the study area. This map also shows the Southern Pacific Niland to Calexico railroad located east of the study area. The U.S. Geological Survey 7.5-minute El Centro quadrangle map from 1957 shows both of these features, at least four structures adjacent to the western boundary of the study area, and four reservoir tanks located southeast of the study area. In addition, a portion of the Central Drain No. 5 runs north to south through both the northern and southern sections of the study area. The 1957 map also shows at least 11 structures adjacent to the western border of the study area and 6 reservoir tanks, with associated oil tanks, located southeast of the study area. Three of these reservoir tanks are adjacent to the eastern border of the study area. A transmission line runs parallel to Central Drain No. 5 through the northern portion of the study area and turns east adjacent to the southern boundary of the northern study area. The portion of this transmission line that crosses the study area is not a previously recorded cultural resource. However, this line becomes a known site (P13-009016) after it crosses the Dogwood Levee to the east. Multiple additional structures and roads are located west of the study area but within the record search boundary. The north-south trending Dogwood Levee is located to the east of the study area and what appears to be a railroad switching-yard is located just south of the project study area.

Table 5: Previously Recorded Cultural Resources Near the Project Area

Designation	Location	Description	Age or Period
CA-IMP-8166H P13-008682	~0.25 mile west of the study area	Southern Pacific Railroad, Niland to Calexico Line	Historic
CA-IMP-8489 P13-009302	~0.4 mile west of the study area	San Diego and Arizona Eastern Railroad	Historic
P13-009302	~0.3 mile east of the study area	Transmission Line running between Dogwood Road and SR-111	Historic
P13-008322	~0.35 mile southwest of the study area	Railroad Station	Historic
P13-008579	~0.5 mile southeast of the study area	Hotel Barbara Worth	Historic
P13-008048	~0.5 mile southwest of the study area	Confucius Church and Community Center	Historic

Source: Phase I Records Search, 2012 (Appendix C).

Field Survey

Since the Class I record search indicated that approximately 60 percent of the project area had not been surveyed within the last 10 years, a field survey was conducted by ECORP archaeologists on July 16, 2012 and consisted of an intensive systematic pedestrian survey of the project area for evidence of cultural resources. All accessible areas within the project area were walked using 15-meter intervals between transects. Notes were taken on the environmental setting and disturbances within the project area. Newly identified sites were photographed, described, given a temporary number (starting at Sol-1), and recorded using a Trimble GPS unit. Newly identified isolated resources were photographed, described, given an artifact number (starting at Sol-3-I), and recorded using a Trimble GPS unit. Updated Department of Parks and Recreation (DPR) records were prepared for all resources.

Field Survey Results

Fifteen cultural resources were identified within the project area as a result of the field survey. These include 2 historic-period sites (Sol-1 and Sol-2), 10 isolated resources (Sol-3-I, Sol-4-I, Sol-5-I, Sol-6-I, Sol-7-I, Sol-8-I, Sol-9-I, Sol-10-I, Sol-13-I, and Sol-14-I), 2 historic-period elements of the built environment (Sol-11 [Villa Avenue] and Sol-12 [Central Drain No. 5]), and the extension of one previously recorded resource (P13-009016). No prehistoric resources were identified within the project area. Approximately 90 percent of the surveyed project area has been tilled and graded, mixing modern debris and trash with historic-period artifacts. Modern dumping is also present throughout the southern portion of the project area and appears to be associated with both the railroad yard to the south and the houses along the western border of the project area. In addition, modern looking water/irrigation features were noted within the project area. These include two

irrigation/hydrant type features, one of which has an attached pipe that may be used to flood the graded fields.

Newly Recorded Resources

Sol-1

Sol-1 consists of a group of foundation pads that appear on the 1957 USGS quadrangle map. The USGS 1957 map shows a grouping of nine structures north of Villa Avenue that are labeled as a labor camp. The site appears to represent the remains of housing provided by a farmer for migrant workers that dates to the 1940s or 1950s. This site does not appear on the USGS quadrangle map from 1940. Thus, it is likely that the site was built between 1940 and 1957.

In its existing conditions, a portion of the site is covered by a makeshift shanty house and yard that are nestled against a grove of large trees. The portion of the site that is visible consists of three foundation pads (Features 1 to 3) and four outlying wooden posts. A north-south trending unpaved road is located just east of the site. The site is littered with modern trash and debris. No historic-period artifacts were found. There is a grove of large trees to the west of the recorded portion of the site that, due to the proximity of the shanty house and homeless camp, was not explored for safety reasons.

Sol-2

Sol-2 consists of an enclosed rectangular arraignment of steel rails that are embedded in the ground. The steel rails are heavily rusted and show signs of age. There are no accompanying tracks or structures in the immediate vicinity. The outside edge of the rails is surrounded by embedded, poured concrete that is about six inches thick. To the south of this feature is a fallen metal electrical pole with ceramic insulators attached. The function of this site is unknown. The site is located north of a railway yard, 680 feet north of the Southern Pacific Railway line. At some time, the railway yard may have extended north to this point.

Elements of the Built Environment

Sol-11 (Villa Avenue)

West Villa Avenue is an east-west trending road that bisects the northern portion of the project area. This road appears on historic-period maps. West Villa Avenue is a paved street that runs between the Southern Pacific Railroad Tracks 0.40 miles west of the project area to Central Drain No. 5 in the middle of the project area. After it crosses Central Drain No. 5, West Villa Avenue becomes East Villa Avenue and runs east through agricultural fields for an additional two miles before terminating at Cannon Road. A narrow drainage channel/irrigation channel runs along the northern border of the road.

Sol-12 (Central Drain)

A north-west trending portion of Central Drain No. 5 runs through the middle of the northern portion of the project area and along the eastern border of the southern portion of the project area. This feature is depicted on the 1957 quadrangle map and is historic in age. The portion of Central Drain

No. 5 that runs through the project is 1.40 mile long and runs between Cross Road and Dogwood Road. The canal itself is a dirt-lined ditch, approximately 30 feet wide with compacted unpaved access roads on either side of it. At the time of the survey, the canal contained water with multiple plants and debris within it. The Central Drain No. 5 is present on the 1957 USGS Quadrangle map. However, this site does not appear on the USGS quadrangle map from 1940. Thus, it is likely that the site was built between 1940 and 1957.

Isolated finds

A total of 10 historic-period isolated finds were identified within the southern portion of the project area. All 10 isolated finds are broken fragments of historic-period glass. Nine of these are sun-colored amethyst (SCA) glass. Based on the thickness and design elements of these fragments it is likely that at least three (Sol-3-I, Sol-4-I, and Sol-6-I) of these isolated finds are from the same glass vessel. The entire southern section of the project area has been heavily disturbed and graded. None of the artifacts in this portion of the project area are complete or *in situ*. Thus, it is possible that the isolates noted here may represent as few as three glass items that have been broken and spread over a large area during tilling or grading.

Previously Recorded Resources

P13-009016 (Transmission line).

This transmission line provides power for an Imperial Irrigation District steam plant. The portion of the IID transmission line, associated with P13-009016, which crosses the project area, was surveyed by Peak and Associates in 1989. At that time, Peak and Associates did not identify this segment of the transmission line as a cultural resource. In 1998, when Dolan and Toenjes surveyed Central Drain No. 5, they identified the segment east of the project area as a site (P13-009016). They recorded this site east of the project area, but did not record this transmission line west of Dogwood Levee. The portion of this line that crosses the project area appears on the 1957 USGS Quadrangle map. Therefore, this section should also be considered a cultural resource. Two towers of this line are located within the project area. However, this site does not appear on the USGS quadrangle map from 1940. Thus, it is likely that the site was built between 1940 and 1957.

Paleontological Resources

Paleontological Record Search

A paleontological resources records search was conducted by the Department of Paleontological Resources at the San Diego Natural History Museum on January 2, 2011. The results of the record search indicate that the study area overlies Holocene-age lacustrine deposits that are known to contain paleontological resources. In addition, one fossil locality was identified within 1 mile of the study area.

3.5.2 - Environmental Impacts and Mitigation Measures

Would the project:

a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?

A recent site survey conducted by ECORP Consulting, Inc. on July 16, 2012 determined that a total of 15 historical resources occur in the project area. These historical resources consist of two newly recorded historic-period resources, two elements of the built environment, 10 historic-period isolated finds, and an extension of one previously recorded historic-period resource (refer to the Section 3.5.1, Setting, for a thorough discussion regarding each of these resources). As such, implementation of the proposed project could potentially directly or indirectly impact these historical resources. Although the significance of the historical resources is not known at this time, Mitigation Measure CUL-1 would be required to reduce potential impacts associated with historical resources to less than significant.

MM CUL-1 Prior to the issuance of a building permit or grading permit, whichever shall occur first, the Applicant shall retain the services of a City and County qualified archaeologist. Based upon the findings of previous surveys, the archaeologist shall record and exhaust the research potential of each previously identified historical resource found on the site including Sol-1, Sol-2, Sol-3-I, Sol-4-I, Sol-5-I, Sol-6-I, Sol-7-I, Sol-8-I, Sol-9-I, Sol-10-I, Sol-11, Sol-12, Sol-13-I, Sol-14-I, and P13-009016 and prepare a letter report. If the archaeologist determines that one or more of the previously identified resources are not considered significant resources, then only those resources are not required to be recorded, further researched, or included in the letter report. The letter report shall be submitted to the South Coastal Information Center (SCIC) at San Diego State University.

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

According to the Class I Records Search Letter Report (Appendix C), the project site has low sensitivity for prehistoric archaeological sites. However, grading and other ground-disturbing activities during construction of the proposed project have the potential to unearth, damage, or destroy unknown archeological resources located on the site. To reduce impacts to potentially buried unknown archaeological resources, Mitigation Measure CUL-2 would be required. With incorporation of Mitigation Measure CUL-2, impacts associated with archeological resources would be less than significant.

MM CUL-2 In the event that unknown buried cultural resources are discovered during construction of the proposed project, all construction activities in the immediate vicinity of the find shall cease until a City and County qualified archaeologist can be

summoned to determine whether the unearthed resource requires further study. The archeologist shall make recommendations to the Lead Agency regarding specific measures that shall be implemented to protect the discovered resource, including but not limited to excavation of the finds and evaluation of the find in accordance with §15064.5 of the State CEQA Guidelines. Potentially significant cultural resources consist of, but are not limited to stone, bone, fossils, wood, or shell artifacts or features, including hearths, structural remains, or historic dumpsites. Any previously unknown resources discovered during construction activities on the project site shall be documented on appropriate California Department of Parks and Recreation (DPR) forms and further evaluated for significance in terms of CEQA criteria.

No further construction activities shall occur in the immediate vicinity of the find until the Lead Agency approves the measures to protect these unearthed resources. Any archaeological artifact recovered shall be donated to a qualified scientific institution approved by the Lead Agency where the resource would be afforded long-term preservation to allow future scientific study.

c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Per the results of the paleontological resources records search that was conducted by the Department of Paleontological Resources at the San Diego Natural History Museum (Appendix C), given the known moderate paleontological sensitivity of the Holocene-age lacustrine deposits from Lake Cahuilla in Imperial County and the proven fossil occurrences in the immediate project area, any proposed excavation activities that extend deep enough to encounter previously undisturbed deposits of the Lake Cahuilla beds have a substantial potential to cause impacts to paleontological resources preserved in these deposits. As a result, Mitigation Measure CUL-2 would be required. With incorporation of Mitigation Measure CUL-2, impacts associated with archeological resources would be less than significant.

d) Disturb any human remains, including those interred outside of formal cemeteries?

Ground-disturbing activities during construction of the proposed project such as grading have the potential to unearth, damage, or destroy unknown archeological resources located on the site. In the event of accidental discovery or recognition of any human remains, California State Health and Safety Code Section 7050.5 dictates that no further disturbance shall occur until the Imperial County Coroner has made the necessary findings as to origin and disposition pursuant to CEQA Guidelines and Public Resources Code Section 5097.98. If human remains are found on the project site, mandatory compliance with the provisions contained within the California State Health and Safety Code and the Public Resources Code would reduce impacts to human remains to less than significant

levels. Therefore, impacts associated with discovery of human remains would be less than significant.

3.5.3 - References

ECORP Consulting, Inc. 2012. Phase I Records Search Letter Report. July 6.

ECORP Consulting, Inc. 2012. Cultural Resources Inventory Report. July.

El Centro, City of. ND. City of El Centro Website: About Our City. Website:
<http://www.cityofelcentro.org/index.asp?m=1&page=32>. Accessed May 2012.

Imperial County. ND. General Plan. Conservation and Open Space Element.

3.6 - Geology and Soils

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Geology and Soils <i>Would the project:</i>				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.6.1 - Setting

Setting

The Imperial Valley is one of the most tectonically active regions in the United States. Branches of the San Andreas Fault form the eastern boundary of the Valley (Salton Trough), while the western perimeter of the Valley is defined by the San Jacinto-Coyote Creek and the Elsinore-Laguna Salada Faults. More small to moderate earthquakes have occurred in the region than along any other section of the San Andreas Fault System. During the 20th Century, the region experienced eleven

earthquakes of magnitude 6.0 or greater on the Richter Scale, with the strongest being a magnitude 7.1 temblor on the Imperial Fault in 1940. More recently, on Easter 2010 a magnitude 7.2 struck northern Baja California. The deep, sediment-filled geologic structure of the Valley makes the region particularly susceptible to severe earthquake damage. Since the Imperial Valley is subject to frequent seismic events, there are concerns related to ground shaking, liquefaction, and landslides.

Existing Faults

There are no known faults or seismic zones intersecting the City of El Centro. The geologic strain pattern in the Imperial Valley region is clearly defined, with the primary strain features consisting of northwest-trending high-angle faults developed along the San Andreas, San Jacinto, and Elsinore Zones. Movements along these faults are predominantly right lateral, with relative southeastward displacements of the northeast blocks, and vertical movements are local or only apparent. Within the last 35 years, the City has experienced damage from the movements of major faults in the San Jacinto Fault Zone.

In relation to the City of El Centro, the Imperial Fault is located five miles east. It is a historically active fault associated with an earthquake of major proportions in 1940 and again in 1966, both of which have well documented reports indicating surface faulting. The May 18, 1940 Imperial Valley Earthquake exposed the exact line (i.e., trace) of the Imperial Fault, which is the only known section of the San Andreas system near the U.S./Mexico border.

Within a few miles north of the City of El Centro, there are several faults which have been active historically; some of these are associated with the recorded 1951 Superstition Hills fault, a well documented quake, showing surface faulting.

Epicenters

There are two historically active earthquake epicenters located within a four-mile radius of the City of El Centro. One had an estimated magnitude of 6.3 on the Richter Scale in 1915, while the other epicenter has had 26 earthquakes since 1915 with a magnitude equal to or less than 7.1 on the Richter Scale. Within a 20-mile radius of the City, there are approximately 45 epicenters, all with historic earthquake magnitudes ranging between 4.0 and 5.9 on the Richter Scale. Several of these epicenters have had many recorded earthquakes.

Soils

According to California Department of Conservation, California Geological Survey, the Imperial Valley is located within the Colorado Desert Geomorphic Province. This Geomorphic Province is characterized by a low-lying barren desert basin, about 245 feet below sea level and partially dominated by the Salton Sea. The province is a depressed block between active branches of alluvium-covered San Andreas Fault and the Mojave Desert. It is characterized by the ancient beach lines and silt deposits of extinct Lake Cahuilla.

According to the U.S. Department of Agriculture (USDA), the project site is underlain by nearly level, moderately well drained and well-drained silty clay, silty clay loam, and clay loam lacustrine (lakebed) deposits. Although lacustrine deposits are suitable for agriculture, they present engineering and construction challenges. These soils typically need conditioning to support structural footings and foundations.

3.6.2 - Environmental Impacts and Mitigation Measures

Would the project:

- a) **Expose people or structures to potential substantial adverse effects, including the risk of loss, injury or death involving:**
 - i) **Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.**

The Alquist-Priolo Earthquake Fault Zoning Act established standards to regulate development near active faults in order to mitigate the hazard of surface rupture. The intent of the Alquist-Priolo Act is to ensure public safety by prohibiting the siting of most structures for human occupancy across traces of active faults that constitute a potential hazard to structures from surface faulting or fault creep. Alquist-Priolo Earthquake Fault Zones are regulatory zones around active faults.

The project site is not located within an Alquist-Priolo Earthquake Fault Zone. Faults in an Alquist-Priolo Earthquake Fault Zone are typically known active faults (i.e., a fault that has experienced rupturing within the last 11,000 years). The nearest Alquist-Priolo Earthquake Fault Zone is located 3.85 miles northwest of the project site and approximately one mile west of the City of Imperial's western boundary. This Alquist-Priolo Zone is associated with the active Superstition Hills/Weiner Fault. Although this fault could result in seismic events, the project site is not located within an Alquist-Priolo Earthquake Fault Zone, and as such, not subject to the provisions of the Alquist-Priolo Act. Therefore, impacts associated with known earthquake fault rupture would be less than significant.

ii) **Strong seismic ground shaking?**

As previously discussed, the Imperial Valley is one of the most tectonically active regions in the United States. Additionally, two historically active earthquake epicenters are located within a four-mile radius of the City of El Centro. Due to the proximity of these earthquake epicenters and the seismically active nature of the project area, the proposed project would be susceptible to strong seismic ground shaking in the event of a moderate seismic event.

The City of El Centro has adopted the most recent Uniform Building Code, Uniform Mechanical Code, Uniform Fire Code, and the National Electric Code, which contain structural requirements for existing and new buildings. These Codes were designed to ensure structural integrity during seismic events, and prevent injury, loss of life, and substantial property damage. To protect public safety, all new development in the City is subject to these Codes. Therefore, with the mandatory compliance with the provisions contained with these Codes, impacts associated with strong seismic ground shaking would be less than significant.

iii) Seismic-related ground failure, including liquefaction?

Severe ground shaking can cause loose, saturated, subsurface materials to liquefy. Soil liquefaction occurs when increased water pressure results in the loss of friction between grains in sandy deposits, causing them to lose strength and temporarily behave like a thick fluid. Earthquakes are the cause of most documented cases of liquefaction. According to the Safety Element of the El Centro General Plan, due to its geographic location in a seismically active region, the City is subject to geotechnical hazards such as liquefaction. The potential for liquefaction is greater in areas of artificial fill and natural river courses.

The Safety Element Plan, however, indicates that the risk of liquefaction can be reduced through appropriate land use planning, development engineering, and building construction practices. As such, the proposed project would comply with the most recent Uniform Building Code, Uniform Mechanical Code, Uniform Fire Code, and the National Electric Code, which contain structural requirements for existing and new buildings designed to ensure structural integrity during seismic events, and prevent injury, loss of life, and substantial property damage. Therefore, with the mandatory compliance with the provisions contained with these Codes, impacts associated with liquefaction would be less than significant.

iv) Landslides?

The Safety Element of the El Centro General Plan determined that due to the City of El Centro's relatively level terrain, landslides are not considered a major hazard in the City. The project site is generally level and featureless. As such, the proposed project would not be susceptible to landslides.

The Safety Element, however, indicates that bluff failure and mudslides may occur along slopes and embankments of rivers and canals. Although a portion of Central Drain No. 5 crosses the project site, neither the solar arrays nor the substation would be placed immediately adjacent to the drain. Moreover, the portion of Central Drain No. 5 located on the project site would be undergrounded thereby eliminating any potential for slope failure. Proposed internal access roads would be constructed along the perimeter of each of the individual project areas. These roads would be constructed according to City and Imperial County standards, which include structural requirements to ensure structural integrity. Therefore, with the mandatory compliance with the structural standards

set forth by both the City and County, impacts associated with landslides or bluff failure would be less than significant.

b) Result in substantial soil erosion or the loss of topsoil?

Short-Term Construction Impacts

Grading, excavation, and similar earthmoving activities could temporarily increase water and wind erosion and sedimentation. To prevent erosion impacts, the Applicant would apply for a National Pollutant Discharge Elimination System (NPDES) Permit and subsequently prepare a Stormwater Pollution Prevention Plan (SWPPP) that would address erosion. Under the NPDES, the Applicant would apply for a Construction Activities Storm Water General Permit (Order 2009-0009-DWQ) through the Colorado River Water Quality Control Board (WQCB). The General Permit would pertain to stormwater discharges associated with any construction activity, including clearing, grading, and excavation, that results in the disturbance of at least one acre of total land area. Since construction of the proposed project would disturb more than one acre, a NPDES permit and a SWPPP would be required. The SWPPP prepared for the proposed project would detail erosion and sediment control measures, including a series of best management practices (BMPs) designed to control erosion physically from the disturbed areas on the project site. BMPs would include the following, or similar, efforts: fiber rolls, street sweeping, sandbag barriers, straw bale barriers, and storm drain inlet protection. Therefore, with the mandatory compliance with the SWPPP, short-term impacts associated with erosion and sedimentation would be less than significant.

Long-Term Operations Impacts

According to the Seismic and Public Safety Element of the Imperial County General Plan, the project site is located in the portion of the County that is generally level and experiences low levels of natural erosion. Since the project site is generally level and featureless, minimal grading would be required to level the areas where the proposed physical improvements would be located, which would help maintain the natural topography and contours currently found on the site. By preserving these natural, undisturbed portions of the project site, the proposed project would not continuously encourage erosion. Therefore, long-term impacts associated with erosion would be less than significant.

c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?

Onsite or Offsite Landsliding

As previously discussed in Impact Threshold 3.6.2 a iv), the project site is generally level and would not be susceptible to landslides. Proposed internal access roads would be constructed along the perimeter of each of the individual project areas. These roads would be constructed according to City and Imperial County standards, which include structural requirements to ensure structural integrity.

Therefore, with the mandatory compliance with the structural standards set forth by both the City and County, impacts associated with landslides or bluff failure would be less than significant.

Lateral Spreading

Lateral spreading of the ground surface usually occurs within liquefiable beds during seismic events. Lateral spreading generally requires an abrupt change in slope (e.g., a nearby steep hillside, a deeply eroded stream bank), but can occasionally occur on gentle slopes or relatively featureless topography. Other factors such as distance from the seismic event, magnitude of the seismic event, and thickness and depth of liquefiable layers also affect the degree of lateral spreading.

Due to its geographic location in a seismically active region, the City of El Centro is subject to geotechnical hazards such as liquefaction, which could result in lateral spreading. However, the risk of lateral spreading can be reduced through appropriate land use planning, development engineering, and building construction practices. As such, the proposed project would comply with the most recent Uniform Building Code, Uniform Mechanical Code, Uniform Fire Code, and the National Electric Code, which contain structural requirements for existing and new buildings designed to ensure structural integrity during seismic events, and prevent injury, loss of life, and substantial property damage.

Liquefaction

As previously discussed in Impact Threshold 3.6.2 a iii), the City of El Centro is subject to geotechnical hazards such as liquefaction. However, the risk of liquefaction can be reduced through appropriate land use planning, development engineering, and building construction practices. As such, the proposed project would comply with the most recent Uniform Building Code, Uniform Mechanical Code, Uniform Fire Code, and the National Electric Code, which contain structural requirements for existing and new buildings designed to ensure structural integrity during seismic events, and prevent injury, loss of life, and substantial property damage. Construction of the proposed project in accordance with the typical building construction practices that comply with the Uniform Building Code would result in less than significant impacts associated with unstable soils. Therefore, with the mandatory compliance with the provisions contained with these Codes, impacts associated with liquefaction would be less than significant.

Collapse

Neither natural nor manmade subsurface features that are known to encourage collapse, including mines, aggregate extraction operations, or karst topography, are known to underlay or occur adjacent to the project site. Therefore, impacts associated with collapse would be less than significant.

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?

Soil expansiveness, or shrink-swell potential, usually occurs within soils containing a high percentage of expansive clay minerals. These soils, when subjected to an increase in water content, are prone to

expansion. Expansive soils are usually measured with an index test such as the expansive index potential. In order for a soil to be a candidate for testing, the soil must have high clay content and the clay must have a high shrink-swell potential and a high plasticity index.

According to the USDA, the project site is underlain by nearly level, moderately well drained and well-drained silty clay, silty clay loam, and clay loam lacustrine deposits. Although lacustrine deposits are suitable for agriculture, they present engineering and construction challenges and could be susceptible to expansion. Construction of the proposed project in accordance with the typical building construction practices that comply with the Uniform Building Code would result in less than significant impacts associated with expansive soils.

e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

The proposed project would not include permanent or long-term temporary restroom facility structures, including septic tanks or similar alternative wastewater disposal systems. Therefore, no impacts associated with septic tanks or similar alternative wastewater disposal systems would occur.

3.6.3 - References

- California Department of Conservation: California Geological Survey. 1990. Alquist-Priolo Earthquake Fault Zones Map: El Centro Quadrangle. January 1. Website: <http://gmw.consrv.ca.gov/shmp/download/ap/pdf/ELCNTRO.PDF>. Accessed May 2012.
- California Department of Conservation: California Geological Survey. 2002. Note 36: California Geomorphic Provinces. December. Website: http://www.conservation.ca.gov/cgs/information/publications/cgs_notes/note_36/Documents/note_36.pdf. Accessed May 2012.
- El Centro, City of. 2004. Final General Plan. Safety Element. February.
- Imperial County. ND. General Plan. Seismic and Public Safety Element.
- U.S. Department of Agriculture. 1979. General Soil Map: Imperial County, California.

3.7 - Greenhouse Gas Emissions

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Greenhouse Gas Emissions <i>Would the project:</i>				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The following is summarized in part from the Air Quality and Greenhouse Gas Report prepared for the proposed project on September 13, 2012 by Michael Brandman Associates. The Air Quality and Greenhouse Gas Report is included as Appendix A.

3.7.1 - Setting

Environmental Setting

Gases that trap heat in the atmosphere are known as greenhouse gases. The effect is analogous to the way a greenhouse retains heat. Common greenhouse gases include water vapor, carbon dioxide, methane, nitrous oxides, chlorofluorocarbons, hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride, ozone, and aerosols. The accumulation of greenhouse gases in the atmosphere is believed to result in climate change.

Regulatory Setting

The California State Legislature enacted AB 32, the California Global Warming Solutions Act of 2006. AB 32 requires that greenhouse gases emitted in California be reduced to 1990 levels by the year 2020. "Greenhouse gases" as defined under AB 32 include carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride.

3.7.2 - Environmental Impacts and Mitigation Measures

Would the project:

- a) **Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?**

Construction

The Imperial County Air Pollution Control District (ICAPCD) does not provide guidance regarding assessment of the significance of greenhouse gases under CEQA. As such, there is no guidance regarding the significance of construction emissions. As provided in Table 6, the proposed project

would result in minor emissions of greenhouse gases during construction of the project. However, these minor emissions are deemed necessary, as operations of the proposed project would ultimately result in overall reductions in greenhouse gases. Therefore, impacts associated with emissions during the construction phase of the proposed project would be less than significant.

Table 6: Construction Greenhouse Gas Emissions (2012-2013)

Source	Metric Tons CO ₂ Emissions
2012	
Construction of Storm Drain	112
2013	
Construction of Storm Drain	6
Onsite Construction Equipment	159
Offsite Truck Deliveries	32
Offsite Employee Trips	119
Onsite Employee Trips	1
Maximum Annual	317
Notes: Emissions converted from tons per year to metric tons of carbon dioxide equivalent (MTCO ₂ e) per year by using the formula: (tons of gas) multiplied by (global warming potential) multiplied by (0.9072 metric tons). Source: MBA, 2012 (Appendix A).	

Operation

Generally, Air District’s with adopted guidance for addressing greenhouse gas emission impacts for new projects under CEQA have a tiered approach to analysis; a review of other Air District’s guidance (i.e., South Coast Air Quality Management District) shows that a project would be considered to have a less than significant individual and cumulative impact on climate change if the project were to do at least one of the following:

- Qualify for an exemption from the requirements of CEQA.
- Comply with an approved greenhouse gas emission reduction plan or greenhouse gas mitigation program, which avoids or substantially reduces greenhouse gas emissions within the geographic area in which the project is located. Such plans or programs must be specified in law or approved by the lead agency with jurisdiction over the affected resource and supported by a CEQA-compliant environmental review document adopted by the lead agency,
- Quantify project greenhouse gas emissions and reduce those emissions by at least 29-percent compared with business as usual.

“Business-as-usual” is defined in ARB’s AB 32 Scoping Plan as emissions occurring in 2020 if the average baseline emissions during the 2002 to 2004 period grew to 2020 levels without additional control. Therefore, 2002 to 2004 emissions factors, on a unit of activity basis, multiplied by the activity expected to occur in 2020, is an appropriate representation of 2020 business-as-usual. The reductions can be based on any combination of reduction measures, including greenhouse gas reductions achieved as a result of changes in building and appliance standards occurring since the 2002 to 2004 baseline period.

As provided in Table 7, the proposed project would emit negligible emissions of greenhouse gases during operation of the project. However, the proposed project would result in a net decrease in greenhouse gases during operations of the proposed project when compared with the existing uses found in the project region. Therefore, impacts associated with emissions during the operation phase of the proposed project would be less than significant.

Table 7: Operational Greenhouse Gas Emissions (2020)

Source	Emissions (MTCO ₂ e per year)
Employee commute trips and onsite travel	123.95
Truck deliveries	133.41
Onsite panel cleaning	41.55
Subtotal Operational	298.91
Reduction from offsetting fossil fueled power generation with solar production	- 16,621
Total with fossil fuel reductions	- 16,322
Source: MBA, 2012 (Appendix A).	

b) Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?

The California Air Resources Board approved a Climate Change Scoping Plan in December 2008. The Scoping Plan outlines the State’s strategy to achieve the 2020 greenhouse gas emissions limit. One of the strategies in the Scoping Plan is the Renewable Portfolio Standard (RPS).

California’s investor-owned utilities are required, under the State’s RPS, to provide 20-percent of electricity supplied from renewable sources as of 2010. Subsequently, Executive Order S-14-08 established RPS targets for all State utilities, requiring that “all retail sellers of electricity shall serve 33-percent of their load with renewable energy by 2020.” The RPS has created a competitive market for contracts to sell renewable energy, with success determined based on “least cost, best fit” criteria. Renewable energy projects such as the Sol Orchard Solar Project would help the State meet its RPS goals.

The proposed project would allow for the installation and operation of a photovoltaic (PV) electrical generation facility and represents an opportunity to provide IID's customers within El Centro and the surrounding service area with a clean source of electrical power from a local and renewable source. The proposed project would deliver renewable energy to all IID customers via one of the cleanest, most efficient manner possible today: by generating renewable power locally and feeding into the existing local electrical system. Power from the proposed project would replace a portion of energy currently supplied to the power grid by non-renewable sources located within and outside of the general El Centro area.

In the broad spectrum of renewable energy projects, the proposed project would fit into the category known as Wholesale Distributed Generation (WDG). WDG is currently the most cost-effective renewable energy market segment because it optimizes the use of appropriate and available sites to serve local load, while avoiding costs and delays associated with transmission upgrades that are required for larger, central station projects located far from the load being served. Transmission of power over great distances also leads to significant losses to resistance and transformation, and such losses broadly degrade the efficiency and usefulness of larger, central station generators.

The project would increase the renewable energy mix, and as such, would be consistent with the Scoping Plan. Therefore, no impacts associated with conflicting with any applicable greenhouse gas emissions reduction plan, policy or regulation would occur.

3.7.3 - References

Michael Brandman Associates. 2012. Air Quality and Greenhouse Gas Analysis Report. July 26.

3.8 - Hazards and Hazardous Material

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Hazards and Hazardous Materials				
<i>Would the project:</i>				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

3.8.1 - Setting

Historical Use

Based on historical records such as aerial photographs and topographic maps, the project site has been used intermittently for agricultural purposes from at least 1953. Between the years 1953 to sometime

before 1978, the southern parcel (APN 044-430-012), was used for flax mill and processing. Structures are apparent at the northeastern portion of the site (APN 044-450-025) in the historical aerial photographs until 2002.

Regulatory Database Search

A review of known electronic database listings for possible hazardous waste generating establishments in the vicinity of the project site, as well as adjacent sites with known environmental concerns, was conducted. Facilities were identified by county, State, or federal agencies that generate, store, or dispose of hazardous materials. The information was obtained from EDR, an environmental information database retrieval service. A copy of the EDR report is provided as part of the Phase I Environmental Site Assessment (ESA) prepared for the proposed project by Southern California Soil & Testing, Inc. on February 24, 2012 and included as Appendix D. The project site was not listed on any of the databases reviewed as having recognized environmental concerns (REC). A list of databases that were reviewed in the preparation of the Phase I ESA are presented below. A thorough description of each database reviewed is included in the EDR report (Appendix D)

- Databases Searched to 1 mile from the project site:
 - NPL, Proposed NPL, Delisted NPL, FEDERAL FACILITY, CORRACTS, RESPONSE, ENVIROSTOR, HIST CAL-SITES, Toxic Pits, DOD, FUDS, CONSENT, ROD, CA BOND EXP. PLAN, Notify 65, INDIAN RESERV, and HWP.
 - Within the 1-mile search radius, three properties were listed in the ENVIROSTOR database, two properties in the Notify 65 database, and three properties in the EDR PROPERTY RECORDS. One property, Handlers Inc., is located within 1/8 mile of the subject property.
 - Handlers Inc. (605 North 3d Street): This facility is listed on the LUST databases. The reported violations of unauthorized releases of gasoline by this facility were report by the regulatory agencies overseeing the facility. Based on the status of "Completed - Case Close," on August 24, 1992, the historical releases at this facility are unlikely to have created a REC at the project site.
- Databases Searched to 1/2 mile from the project site:
 - CERCLIS, CERC-NFRAP, RCRA-TSDF, Federal ICIEC, SWFILE, LUST, SLIC, SAN DIEGO CO. SAM (SAM), INDIAN LUST, VCP, INDIAN VCP, US BROWNFIELDS, DEBRIS REGION 9, 001, WMUDSISWAT, SWRCY, HAULERS, LUCIS, DEED, CORTESE, HIST CORTESE, SCR DRYCLEANERS, COAL ASH EPA, ENVIROSTOR, and PROC.
 - Within the 0.5-mile search radius, two properties were listed in the ENVIROSTOR database. Of these, none were interpreted to be located within 1/8 mile of the project site.
 - Based on a review of files provided by EDR and files maintained by GeoTracker and the Imperial County Department of Environmental Health, as well as the distance and direction of these ENVIROSTOR-listed facilities from the project site, the reported releases from these facilities are unlikely to have created a REC at the site.

- Databases Searched to 1/4 mile from the project site:
 - RCRA-LQG, RCRA-SQG, RCRA-CESSQG, UST, AST, INDIAN UST, FEMA UST, SCH, CA FID UST, HIST UST, SWEEPS UST, MINES, DRYCLEANERS, WIP, HWT, MWMP, EDR Historical Auto Stations, and EDR Historical Cleaners.
 - Within the 0.25-mile search radius, one property was listed on the LUST database, and is located within 1/8 mile of the project site.
 - Handlers Inc. (605 North 3d Street): This facility is listed on the LUST databases. The reported violations of unauthorized releases of gasoline by this facility were report by the regulatory agencies overseeing the facility. Based on the status of "Completed - Case Close," on August 24, 1992, the historical releases at this facility are unlikely to have created a REC at the project site.
- Orphan Sites
 - The properties listed on the Orphan Summary did not appear to be adjacent to the project site or contain REC that are likely to adversely affect the site.

Hazardous Materials

Hazardous materials are classified as those that include solids, liquids, or gaseous materials that, because of their quantity, concentration, or physical, chemical, or infectious characteristics, could pose a threat to human health or the environment. Hazardous materials are not directly used during PV solar panel and solar array installation and operations, but may be used during the manufacture of materials. These materials must be handled and used in accordance with all applicable federal, State, and local regulations.

Crystalline and Amorphous Silicon (c-Si)

Crystalline and amorphous silicon (c-Si) is a semiconductor used in solar cells to convert solar energy into electricity. Silicon-based solar PV cell production involves many of the same materials and hazards as those used in the microelectronics industry, with the highest toxicity levels found in production and disposal. Although c-Si material poses no significant hazard during the construction phase of the proposed project, careful consideration should be made for the disposal or reuse of solar PV cells in accordance with all applicable federal, State, and local regulations.

Airports

The project site is located 1.85 miles southeast of the Imperial County Airport and 6.2 miles east of the Naval Air Station El Centro. Although the project site appears on the Imperial County Airport Commission's Airport Land Use Compatibility Plan's Compatibility Maps and Noise Impact Area Maps for both the Imperial County Airport and the Naval Air Station El Centro, the site falls outside of any compatibility or hazard zones or CNEL noise contour zones.

Additionally, the project site is located 1.1 miles northwest of the Douthitt Airstrip. This private facility includes two dirt runways and serves as the base for 23 single-engine and ultra-light aircraft.

Emergency Evacuation Routes

None of the roads adjacent to the project site, including West Villa Avenue or North 3rd Street, are designated by any City of El Centro or Imperial County emergency evacuation, management, or similar plan as emergency evacuation routes.

Fire Hazards

The California Department of Forestry and Fire Protection designates the project site and the City of El Centro as being located outside of any Moderate, High, or Very High Fire Hazard Severity Zones.

Regulatory Setting

California Department of Industrial Relations, Occupational Safety and Health Regulations (Cal/OSHA)

Worker safety on construction projects is the responsibility of the California Department of Industrial Relations, Occupational Safety and Health Regulations (Cal/OSHA, California Code of Regulations, Title 8). Cal/OSHA establishes requirements for safe working conditions and safety-related reporting in the State, and for electrical safety (Electrical Safety Orders).

National Fire Protection Association (NFPA) 780, National Electrical Code (NEC)

With respect to electrical hazards, a thorough knowledge of the NEC is required to install any electrical power system, including PV systems. The NEC covers the installation of electrical conductors, equipment, and raceways; signaling and communications conductors and equipment and optical fiber cables for public and private premises. The activities of the project may require special permission for the Imperial County authority having jurisdiction for the enforcement of this Code. Article 690 of the NEC specifically covers installation and operational requirements for solar PV systems.

Photovoltaic Product Disposal and End-of-life Regulation

Regulation of solar PV products' end-of-life disposal is based on the federal Resource Conservation and Recovery Act (RCRA) and on the California Hazardous Waste Control Law (HWCL). If solar panels are determined to be hazardous waste by the regulatory authority (Imperial County), the requirements of RCRA and HWCL would regulate their handling, recycling, reuse, storage, treatment, and disposal. Decommissioned or defective solar panels are currently considered hazardous waste by regulators if they do not meet the U.S. Environmental Protection Agency (EPA) Toxicity Characteristic Leaching Procedure standards (this determination varies depending on the technology used). Silicon-based panels typically last 20 to 25 years, and proactive recycling can eliminate health and environmental risks of water stream and water contamination for municipalities.

3.8.2 - Environmental Impacts and Mitigation Measures

Would the project:

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

Short-Term Construction Impacts

During construction of the proposed project, typical materials of concern that would be used on the project site would include gasoline and diesel fuel, motor oil, hydraulic fluids, lubricants and similar petroleum-based products, paints, solvents, adhesives, and cleaning solutions. The Applicant and its construction contractors would follow best management practices (BMPs), which includes the use of hazardous, potentially hazardous, and non-hazardous materials according to manufacturer instructions and directions, the proper containment and disposal of hazardous wastes at a permitted facility, and a structured construction worker-training program. These BMPs would be designed to minimize the potential for accidental release of hazardous, potentially hazardous, or non-hazardous materials. All hazardous materials and wastes would be handled, transported, used, and disposed of according to all applicable federal, State, and local regulations. These regulations are codified in Title 8, 22, and 26 of the California Code of Regulations, and their enabling legislation contained in Chapter 6.95 of the California Health and Safety Code. Therefore, with mandatory compliance with applicable federal, State, and local regulations pertaining to the transport, use, and disposal of hazardous waste, short-term impacts associated with the routine transport, use, and disposal of hazardous materials would be less than significant.

Long-Term Operations Impacts

During the operations phase of the proposed project, transformers housed in the onsite dedicated substation would contain oil for cooling. The structural design of the substation would provide containment and/or diversionary structures for equipment to prevent the discharge of oil. As part of routine maintenance activities, used transformer oil from the substation would be pumped into a sealed container and stored in a secure location while waiting to be disposed of by an permitted agent.

Leaks or spills could potentially occur in the event that transformers at the substation were damaged from a seismic event, fire, or other unforeseen incident. However, leaks would be contained within the walls of the substation. Project design, including minimal grading on and around the substation, would incorporate BMPs to help contain spills. The Applicant would also ensure that measures are taken to address emergency spills or accidents by coordinating with all appropriate federal, State, and local agencies. Transformers located at the proposed substation would use biodegradable oil-based esters or similar substances, which according to the U.S. Occupational Safety and Health Administration (OSHA), are not classified as a hazardous material. Therefore, long-term impacts associated with the routine transport, use, and disposal of hazardous materials would be less than significant.

b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

For a thorough discussion regarding the handling of hazardous materials, potential hazardous materials, and non-hazardous materials, refer to the Impact Threshold 3.8.2 a). With mandatory compliance with all applicable federal, State, and local regulations related to the transportation, use, and disposal of hazardous and non-hazardous waste, the potential for reasonably foreseeable upset or accident conditions involving the release of hazardous materials would be low. Therefore, impacts associated with the release of hazardous materials would be less than significant.

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

The nearest schools to the project site are Kennedy Middle School (900 North Sixth Street), which is located one-half mile west of the site, and Washington Elementary (223 East First Street), which is located 0.4 mile east of the site. Additionally, due to the nature of the proposed project, the project would not emit hazardous emissions (as discussed in Appendix A, Air Quality Study) or handle hazardous materials, substances, or waste. Therefore, no impacts associated with hazardous emissions and materials within one-quarter mile of a school would occur.

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

As previously discussed under the Regulatory Database Search heading in Section, 3.8.1, Setting, a review of all known federal, State, and local regulatory databases concluded that the project site is not located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. Therefore, no impact associated with hazardous material sites would occur.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project site?

The project site is located 1.85 miles southeast of the Imperial County Airport and 6.2 miles east of the Naval Air Station El Centro. Although the project site appears on the Imperial County Airport Commission's Airport Land Use Compatibility Plan's Compatibility Maps for both the Imperial County Airport and the Naval Air Station El Centro, the site falls outside of any compatibility, hazards, or similar zones.

Height standards for quantifying obstructions to air navigation are established by the Federal Aviation Administration (FAA) and are defined in Federal Aviation Regulation (FAR) Part 77, Objects

Affecting Navigable Airspace. In order to make the determination whether a project constitutes a hazard to air navigation, FAR Part 77 requires that notice be given to the FAA if any kind of construction or alteration is (1) more than 200 feet in height above the ground level at its site or (2) of a greater height than an imaginary surface extending outward and upward at a slope of 100 to 1 for a horizontal distance of 20,000 feet from all edges of the runway surface if the runway is more than 3,200 feet in length. The proposed project involves development of a solar energy facility, with the tallest onsite structure measuring approximately one-story in height, well below any overhead air traffic. The proposed project would not include any improvements that would exceed the height standards established by the FAA. No part of the proposed project would interfere with air traffic and subsequently pose a threat to people residing or working in the project area. Therefore, no impacts associated with safety hazards related to public airport would occur.

f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project site?

The project site is located 1.1 miles northwest of the Douthitt Airstrip. This private facility includes two dirt runways and serves as the base for 23 single-engine and ultra-light aircraft. Due to the nature of the airstrip, aircraft operations at this location would be intermittent. Aircraft traffic originating from this facility and subsequently flying over the project site would be irregular and would occur at a height that would not pose a substantial safety hazard to people residing or working on and adjacent to the project site. The proposed project involves development of a solar energy facility, with the tallest onsite structure measuring approximately one-story in height, well below any overhead air traffic. The proposed project would not include any improvements that would exceed the height standards established by the FAA. No part of the proposed project would interfere with air traffic and subsequently pose a threat to people residing or working in the project area. Therefore, no impacts associated with safety hazards related to private airstrips would occur.

g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

None of the roads adjacent to the project site, including West Villa Avenue or North 3rd Street, are designated by any City of El Centro or Imperial County emergency evacuation, management, or similar plan as emergency evacuation routes. Additionally, the proposed project would not include any physical improvements that would extend to adjacent roads that could potentially serve as emergency evacuation routes. Therefore, no impacts associated with the impairment or interference with an adopted emergency response or evacuation plan would occur.

h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

The California Department of Forestry and Fire Protection designates the project site and the City of El Centro as being located outside of any Moderate, High, or Very High Fire Hazard Severity Zones. Due to the overall lack of substantial vegetation on or adjacent to the project site, the threat posed by wildland fires would be low. However, when compared with the existing conditions found on the project site, the proposed project could increase the potential for brush fires. Fire hazards associated with wildland-urban interfaces are typically closely related to unmanaged vegetation on and adjacent to developed properties. To prevent the uncontrolled overgrowth of weeds and other vegetation on the project site, routine maintenance of the proposed project would include typical weed abatement activities, including the application of herbicides and manual weeding.

Perimeter and internal access roads would be compacted and free of any vegetation or other flammable materials. These all-weather access roads would be maintained to provide not only operations and maintenance access, but to serve the secondary purpose as a fire buffer. These interior roads would also facilitate circulation for emergency vehicles on the project site.

Development of the proposed project would be comply with all applicable federal, State, and local regulations regarding fire hazards, including those set forth by the City of El Centro. The Applicant would be required to submit project designs and plans to the El Centro Fire Department (ECFD) for review and approval prior to the commencement of construction. Additionally, the Applicant would be required to provide training for ECFD fire suppression personnel, so that the ECFD would be capable of safely interrupting electrical power infrastructure for fire and emergency response incidents. Therefore, impacts associated with wildland fires would be less than significant.

3.8.3 - References

California Department of Forest and Fire Protection. 2007. Fire Hazard Severity Zones in SRA Map: Imperial County. November 6.

Southern California Soil & Testing, Inc. 2012. Phase I Environmental Site Assessment. February 24.

3.9 - Hydrology and Water Quality

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Hydrology and Water Quality				
<i>Would the project:</i>				
a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially alter the existing drainage pattern of area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
j) Inundation by seiche, tsunami, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The following is summarized in part from the Conceptual Drainage Study prepared for the proposed project on July 12, 2012 by AEI CASC Consulting. The Conceptual Drainage Study is included as Appendix E.

3.9.1 - Setting

Although the project site is not currently under cultivation, the balance of the project area consists of agricultural and residential uses are located adjacent to the site. In its existing condition, the project site and adjacent property contain natural cover consisting of ruderal and agricultural vegetation with sporadic barren native earth. Based on the USGS Topographic Map, the project site generally drains from south to north at a gradient of approximately 0.11-percent. The southern portion of project site located south of West Villa Avenue drains north towards the road. The northwesterly portion of the project site appears to flow north and east towards the Central Drain No. 5, while the northeasterly portion of the site drains towards the Central Drain No. 5 in a north and slightly west direction.

3.9.2 - Environmental Impacts and Mitigation Measures

Would the project:

a) Violate any water quality standards or waste discharge requirements?

Short-Term Construction Impacts

Construction of the proposed project, which would include grading and other ground disturbing activities, could result in soil erosion. The Applicant would apply for a National Pollutant Discharge Elimination System (NPDES) Permit and subsequently prepare a Stormwater Pollution Prevention Plan (SWPPP) that would address erosion. The SWPPP prepared for the proposed project would detail erosion and sediment control measures, including a series of best management practices (BMPs) designed to control erosion physically from the disturbed areas on the project site. BMPs would include the following, or similar, efforts: fiber rolls, street sweeping, sandbag barriers, straw bale barriers, and storm drain inlet protection. Mandatory compliance with the provisions contained within the SWPPP would reduce the potential for either onsite or offsite erosion. Additionally, the Applicant and its construction contractors would follow BMPs, which would be designed to minimize the potential for accidental release of hazardous, potentially hazardous, or non-hazardous materials into the surrounding environment, including the groundwater basin or nearby water body. Therefore, short-term impacts associated with violation of water quality standards and waste discharge requirements would be less than significant.

Long-Term Operations Impacts

According to the Conceptual Drainage Study (Appendix E), two options have been developed that would satisfy the Imperial County standard for zero discharge of onsite flows from 100-year storm events.

Option 1 proposes to grade the project site to a relatively level gradient and construct an earthen berm along the north and east periphery of each of the three portions of the site to contain the tributary onsite flows fully within the site while allowing all tributary offsite flows to pass through the site. This option would require minimal grading but would inundate from 75- to 80-percent of the project site with approximately one-foot or less of water. The onsite access roads, substation, and essential equipment would be required to be elevated a minimum of 1.5 feet above the finish grade in order to protect them from offsite flooding. The solar panels would be elevated above the ground by 5.0 feet when panels are on a level plane (i.e., zero degree angle) and 1.5 feet when panels are tilted at a 45-degree angle from a level plane; therefore, the panels would not be subject to inundation.

Option 2 proposes to construct a retention basin at each of the three primary areas of the project site, thus allowing the tributary onsite flows to be contained within a smaller and more confined area near the downstream corner of each primary area while keeping the solar panels, access roads, substation, and essential equipment out of the 100-year flood inundation. Option 2 would require the following preliminary retention basin volume based upon the onsite 100-year/24-hour flood volume:

- Basin “A” is located in the portion of the project site south of West Villa Avenue. This basin would allow 17.6 af of storage, have a depth of 3.5 feet, and has a footprint of 5.9 acres.
- Basin “B” is located in the portion of the project site north of West Villa Avenue and west of Central Drain No. 5. This basin would allow 12.2 af of storage, have a depth of 3.5 feet, and has a footprint of 4.2 acres.
- Basin “C” is located in the portion of the project site north of West Villa Avenue and east of Central Drain No. 5. This basin would allow 12.2 af of storage, have a depth of 3.5 feet, and has a footprint of 4.2 acres.

Based on the results of a preliminary geotechnical investigation summarized in the Conceptual Drainage Study, an infiltration rate of one-half inches per hour confirms that complete infiltration would occur within the maximum drawdown time of 72 hours. The offsite flows passing through the project site would continue to be collected at the downstream corner of each project area. A drainage inlet structure would be constructed to intercept these offsite flows at the corner collection point before discharging into the proposed undergrounded Central Drain No. 5.

Under either Option 1 or Option 2, tributary onsite flows would be contained within the boundary of the project site. The final drainage option will be selected during the final design stage and shall be improved in accordance with the City of El Centro’s retention basin design standards. Any deviation from these standards would require City Council approval. Onsite flows would be allowed to infiltrate into the subsurface soils and eventually percolate into the groundwater basin below. No wastewater would be required to be discharged. Therefore, long-term impacts associated with violation of water quality standards and waste discharge requirements would be less than significant.

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

Groundwater Supplies

As discussed in Impact Threshold 3.17.2 d), water requirements for both construction and operations of the proposed project would represent a modest percentage of the City of El Centro's projected water surplus, and a nominal percentage of the City's projected water supplies (Table 15). The City depends solely on the Colorado River for surface water inflows, supplied by the IID. The IID imports the raw Colorado River water and distributes it to the City and for agricultural purposes. As such, water used on the project site would not be directly derived from groundwater supplies. Therefore, impacts associated with groundwater supplies would be less than significant.

Groundwater Recharge

A small percentage of the project site, including the solar arrays, access roads, substation, and perimeter fencing would be impervious. The balance of the project site would consist of either barren native earth or landscaping, both of which are pervious surfaces. These pervious surfaces would promote groundwater recharge by promoting tributary onsite flows to percolate into subsurface soils and eventually into the groundwater basin below. Therefore, impacts associated with groundwater recharge would be less than significant.

- c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?**

Based upon the results of the Conceptual Drainage Study (Appendix E) prepared for the proposed project, implementation of either Option 1 or Option 2 would provide the project site with flood protection from a 100-year flood event without adversely affecting the existing drainage conditions downstream of the project site and essentially preserving the existing drainage pattern. Therefore, impacts associated with the altering of the existing drainage pattern of the project site in a manner that would result in substantial erosion would be less than significant.

The undergrounding of Central Drain No. 5 and Laterals would provide for the continued operation of these facilities. Because these facilities are currently below the surrounding grade and would remain so when undergrounded, no erosion on the portion of the site improved with the solar array would occur.

d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?

As previously discussed in Impact Threshold 3.9.2 c), based upon the results of the Conceptual Drainage Study (Appendix E) prepared for the proposed project, implementation of either Option 1 or Option 2 would provide the project site with flood protection from a 100-year flood event without adversely affecting the existing drainage conditions downstream of the project site. Therefore, impacts associated with the altering of the existing drainage pattern of the project site in a manner that would result in flooding would be less than significant.

e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

Under proposed project conditions, tributary onsite flows would be contained within the boundary of the project site. Over a maximum drawdown time of 72 hours, onsite flows would be allowed to infiltrate into subsurface soils and eventually percolate into the groundwater basin below. No surface runoff would be discharged from the project site. As such, the proposed project would not require stormwater drainage facilities. Therefore, impacts associated with the creation or contribution of runoff water would be less than significant.

f) Otherwise substantially degrade water quality?

As previously discussed in Impact Threshold a), construction of the proposed project would include grading and other ground disturbing activities that could result in soil erosion. The Applicant would apply for a National Pollutant Discharge Elimination System (NPDES) Permit and subsequent prepare a Stormwater Pollution Prevention Plan (SWPPP) that would address erosion. The SWPPP prepared for the proposed project would detail erosion and sediment control measures, including a series of best management practices (BMPs) designed to control erosion physically from the disturbed areas on the project site. Additionally, the Applicant and its construction contractors would follow BMPs, which would be designed to minimize the potential for accidental release of hazardous, potentially hazardous, or non-hazardous materials into the surrounding environment, including the groundwater basin or nearby water body. Therefore, impacts associated with water quality degradation would be less than significant.

g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?

The existing Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) was used to determine whether the project site is located within the limits of the 100-year floodplain. Review of the existing FEMA FIRM, panel 06025C1725C, indicates that the project site is located in a Flood Designation Zone X, which is defined as being subject to a 0.2-percent chance of annual

flood (i.e., 500-year flood). Being located within Zone X also means that the project site would be subject to a 1-percent chance of flooding (i.e., 100-year flood) with an average flooding depth of less than one foot. Additionally, the proposed project does not include any permanent or temporary housing. Therefore, impacts associated with placing housing within a 100-year flood hazard area would be less than significant.

h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?

As previously discussed in Impact Threshold 3.9.2 g), the project site is located in a Flood Designation Zone X, which is defined as being subject to a 0.2-percent chance of annual flood (i.e., 500-year flood). Being located within Zone X also means that the project site would be subject to a 1-percent chance of flooding (i.e., 100-year flood) with an average flooding depth of less than one foot. Additionally, only a modest percentage of the 140-acre project site would include structures such as the substation and associated refuse collection area, and any structure placed on the site would not substantially impede or redirect flood flows, given the overall quantity of open space surrounding these structures. The solar panels would be mounted above the ground at a height that would not significantly impede or redirect flood flows. Therefore, impacts associated with placing structures within a 100-year flood hazard area would be less than significant.

i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?

The project site is not located in a designated Dam Inundation Area. No dams or levees occur in the general upstream vicinity of the project site. Therefore, no impacts associated with failure of a dam or levee would occur.

j) Inundation by seiche, tsunami, or mudflow?

Due to its location and topography, people working and structures located on the project site would not be exposed to safety hazards related to seiche, tsunami, or mudflow. Seiche is typically associated with a large water body. The nearest large water body to the project site, the Salton Sea, is located over 20 miles northwest of the project site. Considering this relatively expansive distance, the potential for seiche affecting the project site is remote. The Pacific Ocean is nearly 115 miles west of the project site. As such, the probability of a tsunami impacting the project site would not occur because of the distance from the Pacific Ocean and intervening mountains. Additionally, given the project area's relatively level, consistent topography, it is improbable that mudflow could affect the project site. Therefore, no impacts associated with seiche, tsunami, or mudflow would occur.

3.9.3 - References

AEI CASC Consulting. 2012. Conceptual Drainage Study. July 12.

3.10 - Land Use and Planning

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

3.10.1 - Setting

The proposed project is located in the City of El Centro and in unincorporated Imperial County. The project site consists of four parcels totaling 140 acres. Assessor's Parcel Numbers (APNs) 044-450-043, 044-450-024, 044-450-025, and APN 044-430-.

Since the project site also includes lands currently within the jurisdiction of Imperial County but within the Sphere of Influence of the City, the Applicant would concurrently apply for annexation of the County lands into the City's jurisdictional boundary through the Imperial County Local Agency Formation Commission (LAFCO).

The El Centro General Plan Land Use Element designates their portion of the project site as General Industrial. The portion of the project site located in Imperial County is designated as Planned Industrial by the Imperial County General Plan Land Use Element.

The portion of the project site located in the City of El Centro is currently zoned Light Manufacturing (ML), while the portion of the site occurring in unincorporated Imperial County is zoned General Agriculture, Urban Overlay (A-2-U).

In its existing condition, the project site is undeveloped, although portions have been previously disturbed through weed abatement or similar activity. The land is currently owned, and would continue to be owned, by the IID.

The surrounding project area consists of various land uses, including agricultural, commercial, industrial, public, and residential. Land uses immediately surrounding the project site include:

- **North:** Active agricultural operations.
- **West:** Single-family residences.
- **South:** Commercial chemical plant.
- **East:** IID El Centro Generating Station Power Plant; Abandoned fishery operations.

3.10.2 - Environmental Impacts and Mitigation Measures

Would the project:

a) Physically divide an established community?

The project site is surrounded by various land uses, including agricultural, commercial, industrial, public, and residential. Only the western portion of the project site is bound by an existing residential community. The proposed project would not include any physical improvements that would extend to adjacent land uses and potentially divide an established community. Therefore, no impacts associated with the physical division of an established community would occur.

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

The El Centro General Plan Land Use Element designates their portion of the project site as General Industrial. The portion of the project site located in Imperial County is designated as Planned Industrial by the Imperial County General Plan Land Use Element. Additionally, The portion of the project site located in the City of El Centro is currently zoned Light Manufacturing (ML), while the portion of the site occurring in unincorporated Imperial County is zoned General Agriculture, Urban Overlay (A-2-U).

As part of the proposed project, the Applicant is applying for annexation of the County lands into the City of El Centro's jurisdictional boundary through the Imperial County LAFCO. Once annexed, the land use designation of the annexed portion of the project site would be changed from Planned Industrial to General Industrial via a General Plan Amendment. Moreover, following annexation, this portion of the project site would initially be rezoned to Single Family Residential (R1), and subsequently rezoned to Light Manufacturing (ML), via a Zone Change.

El Centro Municipal Code

Pursuant to Division 4, Section 29-69, Manufacturing Zone Use Designation, of the El Centro Municipal Code, utility distribution sub-stations and utility yards are conditional uses that may be permitted in the Light Manufacturing (ML) zone with the approval of the City of El Centro's Planning Commission.

Division 4, Section 29-70, Manufacturing Zone Development Standards, and Section 29-71, Manufacturing Zone Design Standards, of the El Centro Municipal Code establish minimum property development and design standards that are applicable to all construction in Manufacturing Zones, including the proposed project. Standards include specific provisions regarding building setbacks and heights; parking and loading; vehicle access; landscaping; screening, fencing, and walls; outdoor storage; signage; and lighting. In addition to these development and design standards specific to Manufacturing Zones, Chapter 29, Article III, Property Development Standards, of the Municipal Code establishes standards applicable to all construction within the City.

The purpose of these mandatory development and design standards is to ensure a high level of quality and overall consistency between various land uses while also providing a certain degree of flexibility. Prior to construction of the proposed project, the City of El Centro Community Development Department, Planning and Zoning Division would review site plans and construction drawings for consistency with the Chapter 29, Zoning, of the El Centro Municipal Code prior to approving and permitting the commencement of construction of the solar energy facility. The proposed project must comply with all applicable provisions of the Municipal Code before proceeding with construction of the facility. Therefore, the proposed project would not conflict with the El Centro Municipal Code.

El Centro General Plan

According to the Land Use Element of the El Centro General Plan, land designated General Industrial and zoned Light Manufacturing (ML):

Provides for the development of industrial uses that include the fabrication, manufacturing, assembly or processing of materials that are in refined form and which do not, in their transformation, create smoke, gas, odor, dust, noise, vibration of earth, soot or lighting to a degree that is offensive when measured at the property line of subject property. Most operations within this designation are conducted within enclosed buildings.

Although not a fabrication, manufacturing, assembly, or processing operation in the traditional sense, the proposed project would generate solar energy for the IID's customers within El Centro and the surrounding service area while not serving as a significant source of smoke, gas, odor, dust, noise, vibration of earth, soot or lighting to a degree that is offensive when measured at the property line of neighboring sensitive land uses.

In general, the Land Use Element includes goals whose purpose is to ensure compatibility between existing, planned, and future land uses. Goals contained in the Land Use Element that are applicable to the proposed project include:

- **Land Use Goal 1.** Provide planning and strategies for physical land use to create a healthy and aesthetically pleasing environment that balances the social and economic needs of the community.

- **Land Use Goal 2.** Control and direct growth so that new development is compatible with existing development and occurs in appropriate locations when adequate public services and facilities are available.
- **Land Use Goal 3.** Improve the visual appearance of the community by targeting areas in need for rehabilitation and beautification.

As previously mentioned, the proposed project would be required to comply with all applicable development and design standards pertaining to construction within Manufacturing Zones and the City as a whole. Compliance with these development and design standards would ensure that the proposed project would create an aesthetically pleasing visual environment while transforming an underutilized, undeveloped land use into a solar energy facility that would provide IID's customers within El Centro and the surrounding service area with a clean source of electrical power. Therefore, the proposed project would not conflict with the Land Use Element of the El Centro General Plan.

In addition to the Land Use Element, the Conservation and Open Space Element of the El Centro General Plan include a specific goal aimed at promoting the conservation of energy in order to sustain existing and future economic and population growth.

- **Conservation and Open Space Goal 9.** Use all energy resources in an efficient, conserving manner, taking into account local climatic factors, to reduce the consumption of valuable fossil resources such as oil and natural gas.

As a solar energy facility, the proposed project would harness the naturally occurring and abundant sunshine in the City of El Centro and use its energy in a clean, efficient, conserving manner, which would ultimately reduce the consumption of valuable, nonrenewable fossil fuel resources.

According to the Open Space/Conservation Element of the El Centro General Plan, the majority of the canals, laterals, and drainages that crisscross the landscape of the City of El Centro are often open and unprotected, creating a potential safety concern. As a result, the Open Space/Conservation Element includes the following requirement, which is reiterated in the Safety Element:

The canals and laterals are often open and unprotected. The City will require developers of land adjacent to these open drainage facilities to underground the facilities to protect public safety.

Based on these requirements, the Central Drain No. 5, the West Villa Avenue Storm Drain, and the Dogwood Lateral on and adjacent to the project site would be undergrounded (Exhibit 5) as part of the proposed project.

Based on the previous analysis, the proposed project would not conflict with the Conservation and Open Space Element of the El Centro General Plan nor City's Municipal Code. Therefore, impacts associated with applicable land use plans, policies, or regulations would be less than significant.

c) Conflict with any applicable habitat conservation plan or natural communities conservation plan?

As previously discussed in Section 3.4, Biological Resources, although the Imperial Valley is within the California Desert Conservation Area, the project site is not located within or immediately adjacent to an Area of Critical Environmental Concern (ACEC). The undergrounding of Central Drain No. 5 and Laterals will not affect the draft Water Conservation and Transfer Project Habitat Conservation Plan and IID's ability to maintain the function of their drainage system. Therefore, impacts associated with conflicting with any applicable conservation plan would be less than significant.

3.10.3 - References

El Centro, City of. 2011. Municipal Code. November 15 (Updated).

El Centro, City of. 2004. Final General Plan. Conservation and Open Space Element. February.

El Centro, City of. 2004. Final General Plan. Land Use Element. February.

3.11 - Mineral Resources

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Mineral Resources				
<i>Would the project:</i>				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.11.1 - Setting

A variety of minerals are found throughout Imperial County. Gold, gypsum, sand, gravel, lime, clay, and stone have the highest economic value and are currently extracted in Imperial County. Industrial materials are also readily available, including kyanite, mineral fillers (clay, limestone, sericite, mica, and tuff), salt, potash, calcium chloride, manganese, and sand. The managed use of the valuable mineral deposits is important for regional economic stability.

The geographic extent of mineral resources is a function of geologic factors. As a result, mining operations are restricted to the relatively few locations where mineral deposits are suitable for extraction. The Mineral Resources Map in the Conservation and Open Space Element of the Imperial County General Plan provides the locations of the mining and mineral extraction areas within the County. According to the Mineral Resources Map, no mining or extraction operations are located in the general project area.

Regulatory Setting

Under the California State Surface Mining and Reclamation Act of 1975 (SMARA), mineral resources are identified and organized into Mineral Resource Zones (MRZs) by the State Geologists in order to classify land according to its level of significance as a resource. MRZs are used to help identify and protect mineral resources within the State from urban expansion or other irreversible land uses that may preclude mineral extraction.

According to the California Department of Conservation, Division of Mines and Geology, no SMARA classification occurs in Imperial County.

3.11.2 - Environmental Impacts and Mitigation Measures

Would the project:

- a) **Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?**

The project site is not located on or adjacent to a known mineral resource. Neither the project site nor the immediate project area is designated by the State Geologists as an MRZ. As such, the proposed project would not affect any known mineral resource. Therefore, no impacts associated with a known mineral resource would occur.

- b) **Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?**

As previously discussed in Impact Threshold 3.11.2 b), the project site is not located on or adjacent to a known mineral resource or an economically viable extraction operation. Neither the project site nor the immediate project area is designated by the State Geologists as an MRZ. Therefore, no impacts associated with a locally-important mineral recovery site would occur.

3.11.3 - References

California Department of Conservation: Division of Mines and Geology. 2001. Classification Project: Publications of the SMARA Mineral Land Classification Project Dealing with the Mineral Resources in California. May 14.

Imperial County. ND. General Plan. Conservation and Open Space Element.

3.12 - Noise

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Noise				
<i>Would the project result in:</i>				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project site to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project site to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

3.12.1 - Setting

Transportation-Related Noise

Noise generated by transportation activity is the central component of the City of El Centro’s noise environment. Transportation noise is primarily concentrated along the transportation corridors that traverse the community such as I-8 (Kumeyaay Highway) and SR-80, major arterial and collector roads, the Union Pacific and San Diego & Arizona railroads, and aircraft flight patterns. A small portion of the northern part of the City falls within the 55 CNEL noise contour of the Imperial County Airport Noise Impact Area. A private airstrip located in the eastern portion of the City also generates aircraft noise that affects surrounding land uses.

Non-Transportation Related Noise

Sensitive receptors in the City of El Centro are also susceptible to excessive noise generated by non-transportation sources such as commercial and industrial centers, agricultural operations, restaurants, and public meeting places.

Sensitive Receptors

In general, noise-sensitive land uses are defined as locations where people reside or where the presence of unwanted sound could adversely affect the designated use of the land. Typically, noise-sensitive land uses include homes, hospitals, places of worship, libraries, and schools, as well as nature and wildlife preserves and parks and the Swarthout Field Park located west of the site across North 3rd Street.

The nearest noise-sensitive land use to the project site are single-family residences located directly adjacent to the western portion of the site.

Regulatory Setting

California Noise Insulation Standards (Title 24)

The California Commission of Housing and Community Development adopted noise insulation standards in 1974. In 1988, the State Building Standards Commission approved revisions to the standards (Title 24, Part 2, California Code of Regulations). As revised, the Title 24 establishes an interior noise standard of 45 dB(A) for residential space (CNEL or L_{dn}). Acoustical studies must be prepared for residential structures to be located within noise contours of 60 dB(A) or greater (CNEL or L_{dn}) from freeways, major streets, thoroughfares, rail lines, rapid transit lines, or industrial noise sources. The studies must demonstrate that the building is designed to reduce interior noise to 45 dB(A) or lower (CNEL or L_{dn}).

City of El Centro Noise Ordinance

The City of El Centro's Noise Ordinance (Chapter 17.1 of the El Centro Municipal Code) provides controls for excessive and annoying noise from a variety of sources. Maximum hourly average sound levels (measured in decibels) have been established for each land use designation, with levels varying by the time of day. Table 8 provides the Exterior noise standards set forth by the City's Noise Ordinance.

Table 8: El Centro Exterior Noise Level Limits

Zone	Time of Day	One Hour Average Noise Level (dB [L _{eq}])
Single-Family Residential	7:00 a.m. to 10:00 p.m.	50
	10:00 p.m. to 7:00 a.m.	45
Multi-Family Residential	7:00 a.m. to 10:00 p.m.	55
	10:00 p.m. to 7:00 a.m.	50
Commercial, Civic, and Limited Use	7:00 a.m. to 10:00 p.m.	60
	10:00 p.m. to 7:00 a.m.	55
Manufacturing	7:00 a.m. to 10:00 p.m.	75
	10:00 p.m. to 7:00 a.m.	70
Source: El Centro Municipal Code, 2011.		

In addition to establishing exterior noise standards, the El Centro Noise Ordinance addresses noise levels associated with construction activities.

Chapter 17.1, Section 17.1-8, Construction Equipment

Except for emergency work, it shall be unlawful for any person to operate construction equipment at any construction site, except as outlined in subsections (a) and (b) below:

- (a) It shall be unlawful for any person to operate construction equipment at any construction site on Sundays, and days appointed by the president, governor, or the city council for a public holiday. Notwithstanding the above, a person may operate construction equipment on the above specified days between the hours of 10 a.m. and 5 p.m. in compliance with the requirements of subsection (b) of this section at his residence or for the purpose of constructing a residence for himself, provided such operation of construction equipment is not carried on for profit or livelihood. In addition, it shall be unlawful for any person to operate construction equipment at any construction site on Mondays through Saturdays except between the hours of 6 a.m. and 7 p.m.
- (b) No such equipment, or combination of equipment regardless of age or date of acquisition, shall be operated so as to cause noise at a level in excess of seventy-five (75) decibels for more than eight (8) hours during any twenty-four (24) hour period when measured at or within the property lines of any property which is developed and used either in part or in whole for residential purposes.

In the event that lower noise limit standards are established for construction equipment pursuant to state or federal law, said lower limits shall be used as a basis for revising and amending the noise level limits specified in subsection (b) above. (Ord. No. 88-20, § 1)

Noise Standards and Land Use Compatibility Guidelines

The City of El Centro uses land use compatibility standards when planning and making development decisions in order to ensure that noise producers do not adversely affect sensitive receptors. The standards (Table 8) represent the maximum acceptable noise levels and are used to determine noise impacts.

These noise standards serve as the basis for preparation of the Land Use Compatibility Guidelines. If the noise level of a project falls within Zone A or Zone B, the project is considered compatible with the noise environment. Zone A indicates that no mitigation would be required, while Zone B indicates that minor mitigation may be needed to meet the City of El Centro's and Title 24 noise standards.

If the noise level falls within Zone C, substantial mitigation is likely required to meet City noise standards. Substantial mitigation may involve construction of noise barriers and substantial building sound insulation. Projects in Zone C can be successfully mitigated; however, projects within Zone C must demonstrate that the noise standards could be met prior to issuance of a building permit.

If noise levels fall outside of Zones A, B and C, projects are considered clearly incompatible with the noise environment and should not be approved.

El Centro General Plan Noise Element

In general, the Noise Element identifies sources of noise in the community and ways to reduce the impacts of these noise sources on the community. Contained in the Noise Element are goals, policies, and programs to achieve and maintain noise levels compatible with various land uses. Additionally, the Noise Element identifies those land uses sensitive to noise and assures that noise-generating land uses are located so as to minimize impact to those sensitive areas. Goals and policies contained in the Noise Element that are applicable to the proposed project include:

Noise Goal 1 Minimize the effects of noise through proper land use planning.

Policy 1.1

Use noise/land use compatibility standards as a guide for future planning and development decisions.

Policy 1.2

Provide noise control measures and sound attenuating construction in areas of new construction or rehabilitation.

Policy 1.3

Promote alternative sound attenuation measures, such as berms, embankments, landscaping, setbacks, and architectural design where appropriate, rather than wall barriers.

Noise Goal 3 Minimize non-transportation related noise impacts to preserve the City's overall environment.

Policy 3.1

Reduce the impacts of noise producing land uses and activities on noise sensitive land uses.

Policy 3.2

Incorporate sound-reduction design in new construction or rehabilitation projects impacted by non-transportation related noise.

Policy 3.3

Require mitigation measures to ensure that noise resulting from public and private construction projects is reduced to an acceptable level.

3.12.2 - Environmental Impacts and Mitigation Measures

Would the project result in:

a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

All applicable noise standards established by the City of El Centro and contained in their General Plan and Noise Ordinance have been previously outlined in the Regulatory Setting section above.

Construction of the proposed project is expected to occur between the hours of 6:00 a.m. and 7:00 p.m., primarily Monday through Friday, and Saturdays. Nighttime construction activities would not occur. Chapter 17.1, Section 17.1-8, Construction Equipment, of the El Centro Noise Ordinance (Chapter 17.1 of the El Centro Municipal Code) states in part:

It shall be unlawful for any person to operate construction equipment at any construction site on Mondays through Saturdays except between the hours of 6 a.m. and 7 p.m. ... No such equipment ... shall be operated so as to cause noise at a level in excess of seventy-five (75) decibels for more than eight (8) hours during any twenty-four (24) hour period when measured at or within the property lines of any property which is developed and used either in part or in whole for residential purposes.

The proposed project would comply with the time restrictions on construction activities as stated in the El Centro Noise Ordinance. In addition, as addressed in Impact Thresholds 12 c), long-term noise impacts associated with the operations phase of the proposed project would be less than significant. Furthermore, to ensure that construction noise is minimized, and to be consistent with El Centro General Plan, which recommends the incorporation of mitigation to reduce noise impacts, Mitigation Measures NOI-1 and NOI-2 would be required. With implementation of Mitigation Measures NOI-1

and NOI-2, impacts associated with the exposure of persons to or generation of noise levels in excess of established standards would be less than significant.

MM NOI-1 All construction equipment shall use available noise suppression devices and properly maintained mufflers. All internal combustion engines used in the project area shall be equipped with the type of muffler recommended by the vehicle manufacturer. In addition, all equipment shall be maintained in good mechanical condition to minimize noise created by faulty or poorly maintained engine, drive train, and other components.

MM NOI-2 During construction, stationary construction equipment shall be placed such that emitted noise is directed away from sensitive noise receptors and as far as possible from the boundary of sensitive receptors.

b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

Section 29-156, Commercial and Industrial Standards, of the El Centro Municipal Code establishes provisions regarding groundborne vibration, stating:

Every use shall be so operated that the ground vibration inherently and recurrently generated does not cause a displacement of the earth greater than three thousandths (0.003) of one (1) inch as measured at any point along the property line of the use.

The human response to vibration greatly depends on whether the source is continuous or transient. Continuous sources of vibration include certain construction activities, while transient sources include large vehicle movements. Generally, thresholds of perception and agitation are higher for continuous sources.

Table 9 illustrates the human response to both continuous and transient sources of groundborne vibration.

Table 9: Human Response to Groundborne Vibration

Peak Particle Velocity (inches/second)		Human Response
Continuous	Transient	
0.40	2.00	Severe
0.10	0.90	Strongly perceptible
0.04	0.25	Distinctly perceptible
0.01	0.04	Barely perceptible

Source: California Department of Transportation, 2004.

Typically, developed areas are continuously affected by vibration velocity of 50 VdB or lower. The human threshold of perception is around 65 VdB, so these continuous vibrations generally go unnoticed. Offsite sources perceptible vibrations are usually attributed to construction equipment and vehicles, steel-wheeled trains, and traffic on rough roads (Table 10). Acceptable vibration levels vary depending on the specific land use. For example, acceptable vibration levels for a commercial/office environment would be 84 VdB, while levels for a residential use would be 78 VdB.

Table 10: Vibration Levels Generated by Construction Equipment

Equipment	Peak Particle Velocity (inches/second) at 25 feet	Approximate Vibration Level (L _v) at 25 feet
Pile driver (impact)	1.518 (upper range)	112
	0.644 (typical range)	104
Pile driver (sonic)	0.734 (upper range)	105
	0.170 (typical range)	93
Clam shovel drop (slurry wall)	0.202	94
Hydromill (slurry wall)	0.008 (in soil)	66
	0.017 (in rock)	75
Vibratory Roller	0.210	94
Hoe Ram	0.089	87
Large bulldozer	0.089	87
Caisson drill	0.089	87
Loaded trucks	0.076	86
Jackhammer	0.035	79
Small bulldozer	0.003	58
Source: Transit Noise and Vibration Impact Assessment, Federal Transit Administration, May 2006.		

While long-term operations of the proposed project would not generate excessive groundborne vibration or groundborne noise levels, short-term construction activities could potentially introduce groundborne vibration to the project site and the surrounding area. The installation of the solar panels mounting structures would require the operation of a vibratory pile driver, which are known to generate substantial vibration levels. The primary source of vibration during construction of the proposed project would be from a vibratory (sonic) pile driver, which generates 0.170 inch per second PPV at 25 feet in the typical range with an approximate vibration level of 104 VdB, also in the typical range. The vibration from the vibratory pile driver would be intermittent and not a source of continual vibration.

The nearest sensitive receptors to the project site are single-family residences located directly adjacent to the western portion of the site. The vibratory pile driver would be used to install the solar panels mounting structures on the solar array footprints, whose western boundary is approximately 60

feet from the eastern (rear) property lines of these single-family residences. The eastern boundary of the solar array footprint would be approximately 2,530 feet from the receptors. The majority of vibratory pile driving activities would occur away from these residences and towards the center of the project site, at an average distance of 1,295 feet from the sensitive receptors.

Operation of the vibratory pile driver at a distance of 375 feet or greater would not exceed the City of El Centro's vibration standard of 0.003 inches per second PPV. However, without the incorporation of Mitigation Measures, the vibratory pile driver would be capable of generating vibration impacts at the adjacent single-family residences that could exceed the City's standards. Therefore, with the implementation of Mitigation Measure NOI-3, impacts associated with vibration would be less than significant.

MM NOI-3 During installation of the solar array mounting structures occurring within 375 feet of the adjacent single-family residences, the Applicant shall comply with the City of El Centro's vibration standard of 0.003 inches per second PPV by employing an alternative method of setting the mounting structures in the ground such as employment of an auger drill or similar device capable of producing less vibration. The alternative method shall be subject to City of El Centro approval.

c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

In general, operations of the proposed project would not contribute towards a substantial permanent increase in ambient noise levels in the surrounding area. The primary source of noise attributed to the operations phase of the proposed project would be the transformers that will be housed within the proposed substation. When operating at full power, transformers would typically generate noise levels ranging from 45 dBA to 55 dBA at the source (Ecology and Environment, Inc. 2010). The proposed substation would be located approximately 1,100 feet east of the nearest sensitive receptors. Over this distance, noise levels produced by the transformers would be reduced below the City of El Centro's Noise Ordinance, which establishes a 50 dB (L_{eq}) standard for Single-Family Residential Zones between 7:00 a.m. and 10:00 p.m. Noise that comply with the City's Noise Ordinance is not considered to be substantial.

Due to the proposed project's reliance on the sun, the project would operate only during daytime hours when the solar panels are generating power and background ambient noise is typically greater. As such, the proposed project would not operate during nighttime hours and would not have the potential to exceed the City's Noise Ordinance for the hours between 10:00 p.m. and 7:00 a.m.

Maintenance of the proposed project would require regular but occasional visual inspections, equipment servicing, and minor repairs. Overall, minimal maintenance requirements are anticipated, and due to the nature of the proposed project, such maintenance activities would be infrequent. Thus, maintenance of the proposed project, including operations and maintenance vehicle trips, is

anticipated to generate only intermittent increase in ambient noise. Therefore, impacts associated with a substantial permanent increase in ambient noise levels would be less than significant.

d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

Construction of the proposed project would include the use of equipment and the performing of activities that could temporarily increase ambient noise levels in the surrounding area. Although temporary, this increase in ambient noise levels could potentially affect the single-family residences located directly adjacent to the western portion of the project site, which are the nearest sensitive receptors to the site.

In order to analyze impacts to these and any other sensitive receptors adjacent to the project site, modeling for construction noise was performed using the U.S. Department of Transportation Federal Highway Administration’s (FHWA) Roadway Construction Noise Model (RCNM). The RCNM is the FHWA national model used for the prediction of construction-related noise and to determine compliance with noise limits for a variety of types of construction projects of varying complexity. The RCNM includes an extensive compilation of built-in reference noise levels for dozens of types of construction-related equipment based on manufacturer and actual monitored sources. Results from the RCNM modeling are provided in Table 11.

Table 11: Construction Equipment Noise Levels

Equipment	Noise Level (L _{max} dBA) at Source	Noise Level (L _{eq} dBA) at 60 feet ¹	Noise Level (L _{eq} dBA) at 1,295 feet ²
Backhoe	77.6	72.0	45.3
Concrete Truck	81.4	72.8	46.1
Excavator	80.7	75.1	48.5
Flat Bed/Delivery Truck	74.3	68.7	42.0
Front End Loader/Bobcat	79.1	73.5	46.9
Man Lift/Forklift	74.7	66.1	39.4
Pickup Truck/Small Utility Vehicle	75.0	69.4	42.8
Trencher	80.4	75.8	49.1
Vibratory Pile Driver	100.8	92.2	65.6
Total ³		92.6	65.9

Notes:
¹ Distance between the western boundary of the solar array footprint and the eastern (rear) property lines of the nearest sensitive receptors.
² Average distance between the construction activities and the nearest sensitive receptors.
³ “Total” noise level is automatically provided by the RCNM and represents an theoretical scenario where all construction equipment is operated in unison. Since not all of the equipment would be needed all of the time, it is highly unlikely that the “Total” noise level scenario would occur.
 Source: Roadway Construction Noise Model, Federal Highway Administration, 2004 (Refer to Appendix F for RCNM modeling printouts).

According to the results of the RCNM modeling, construction occurring along the western periphery of the solar array footprint, which would be as close as 60 feet to the nearest sensitive receptors, could exceed the City of El Centro's Noise Ordinance. As such, temporary installation of a sound shield along the western boundary of the project site would be required, per Mitigation Measures NOI-4. With incorporation of NOI-4, impacts associated with a substantial temporary increase in ambient noise levels would be less than significant.

MM NOI-4 During construction of the proposed project, the Applicant shall comply with the City of El Centro's Noise Ordinance for Single-Family Residential Zones by buffering the construction noise by temporarily installing a sound shield along the western boundary of the project site between the nearest residences and the construction activities. Sound shields shall consist of wood noise barriers and/or acoustical blankets. The sound shields shall be installed in a manner that shall break the line of sight from the nearest residences and the construction activities. The sound shields shall incorporate industry standard sound absorbing materials to control noise build-up and reflections at the project site and shall include sufficient noise reduction properties to reduce noise levels at the eastern property lines of the residences to 50 dBA (L_{eq}) or less.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project site to excessive noise levels?

The project site is located 1.85 miles southeast of the Imperial County Airport and 6.2 miles east of the Naval Air Station El Centro. Although the project site appears on the Imperial County Airport Commission's Airport Land Use Compatibility Plan's Noise Impact Area Maps for both the Imperial County Airport and the Naval Air Station El Centro, the site falls outside of any CNEL noise contour zones. As such, there are no restrictions placed on the project site as a result of airport noise. Therefore, no impacts associated with public airport noise would occur.

f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project site to excessive noise levels?

The project site is located 1.1 miles northwest of the Douthitt Airstrip. This private facility includes two dirt runways and serves as the base for 23 single-engine and ultra-light aircraft. Due to the nature of the airstrip, aircraft operations at this location would be intermittent. Aircraft traffic originating from this facility and subsequently flying over the project site would be irregular and would occur at a height that would not create substantial noise. Therefore, impacts associated with private airstrip noise would be less than significant.

3.12.3 - References

AirNav, LLC. 2012. Private Airport Search: El Centro, California. Website:
<http://www.airnav.com/airport/23CN>. Accessed May 2012.

California Department of Transportation. 2004. Transportation- and Construction-Induced Vibration Guidance Manual. June.

Ecology and Environment, Inc. 2010. CEQA Initial Study/Mitigated Negative Declaration for the Avenal Photovoltaic Solar Farm. June.

El Centro, City of. 2011. Municipal Code. November 15 (Updated).

El Centro, City of. 2004. Final General Plan. Noise Element. February.

Federal Highway Administration. 2006. Transit Noise and Vibration Impact Assessment. May.

Federal Highway Administration. 2006. Roadway Construction Noise Model, Version 1.1.

Imperial County Airport Commission. 1996. Airport Land Use Plan. June.

3.13 - Population and Housing

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

3.13.1 - Setting

Population

According to the U.S. Census Bureau, the City of El Centro's 2010 population stood at 42,598. This represents a 12.6-percent increase from 2000, when the City's population was 37,835.

Housing

Per the U.S. Census Bureau's 2006-2010 American Community Survey, the City of El Centro contains 14,644 housing units. 13,395 of these units are occupied, representing an 8.5-percent vacancy rate.

Employment

As of March 2012, the City of El Centro's labor force stood at 22,300 people, with the unemployment rate at 24.8 percent, representing 5,500 people. Statewide, the most recent figures (March 2012) suggest that unemployment in California is at 11 percent.

3.13.2 - Environmental Impacts and Mitigation Measures

Would the project:

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

Construction of the proposed project would be short-term and temporary. During the peak period of construction activities (one month out of the nine month construction schedule), a maximum of 125

workers would be required to construct the proposed project. The majority of the construction worker labor force would be local to the Imperial Valley, with a small portion, primarily the management team, coming to/from the greater Los Angeles area. According to the California Employment Development Department, the most recently available figures for the City of El Centro suggest that 5,500 people, or 24.8-percent of the local labor pool, are unemployed. As such, there would be a more than sufficient supply of construction workers available from the local labor force. The relocating of construction workers from outside of the project area would not be necessary. Therefore, no impacts associated with population growth would occur.

b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

In its existing condition, the project site does not contain any permanent or temporary housing. The project site currently consists of undeveloped land. Development of the proposed solar energy facility and associated physical improvements would occur solely on the project site and would not extend to adjacent land uses. Therefore, no potential impacts associated with displacement of housing would occur.

c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

As previously discussed in Impact Threshold 3.13.2 b), no permanent or temporary housing is located on the project site. As such, no people currently reside on the project site. Therefore, no impacts associated with the displacement of people would occur.

3.13.3 - References

California Employment Development Department. 2012. March 2012 Employment and Unemployment News Release. April 20. Website: http://www.edd.ca.gov/About_EDD/pdf/urate201204.pdf. Accessed May 2012.

California Employment Development Department. 2012. Labor Force and Unemployment Rate for Cities and Census Designated Places: El Centro, CA. <http://www.labormarketinfo.edd.ca.gov/?pageid=133>. Accessed May 2012.

El Centro, City of. 2009. Final General Plan. Housing Element of the General Plan 2008-2014. June (Updated).

U.S. Census Bureau. 2012. State and County QuickFacts: El Centro, California. January 31. Website: <http://quickfacts.census.gov/qfd/states/06/0621782.html>. Accessed May 2012.

U.S. Census Bureau. ND. American FactFinder: El Centro, California. Website:

<http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=bkmk>.

Accessed May 2012.

3.14 - Public Services

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Public Services				
<i>Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:</i>				
a) Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

3.14.1 - Setting

The following Existing Setting discussion describes Public Services at the project site and in the general project area, including fire protection, police protection, schools, parks, and other public facilities. The Environmental Setting and Impact Analysis associated with park and recreational facilities are discussed in Section 3.15, Recreation.

Fire Protection

The El Centro Fire Department (ECFD) provides fire protection and emergency response services to the City of El Centro. The ECFD operates from Station No. 1 (775 State Street), which serves as the Department’s headquarters and houses a fire engine, a pumper, and a rescue vehicle. The Department also maintains another fire station, Station No. 2 (900 South Dogwood Road), which serves as its prevention bureau and houses a fire engine, a pumper, and a ladder truck. A proposed facility, Station No. 3 (1910 N. Waterman Avenue), is currently under construction and due to open late June 2012.

The ECFD employs 33 fire suppression personnel and three administrative support staff. Additionally, one chief and four battalion chiefs oversee the Department. Services provided by the ECFD include fire suppression; advanced life support; basic life support; fire prevention, consulting, and investigative services; community disaster preparedness, hazardous materials response, and mitigation; confined space rescue services; and water rescue.

The ECFD responds to approximately 38,000 emergency calls annually. The standard response time for the Department is from 7 to 10 minutes for an emergency call, and 10 to 15 minutes for a non-emergency call.

Police Protection Service

The El Centro Police Department (ECPD) provides police protection services to the City of El Centro. The ECPD operates from the Department's headquarters located at 150 North 11th Street. The Department employs 52 officers, including a Chief of Police, one Captain, three Lieutenants, six Sergeants, and 36 Police Officers. The ECPD also includes 26 civilian employees that are assigned to records, communication, evidence, animal control, crime prevention, community service, crime analysis, information technology, and parking enforcement.

The ECPD's service ratio goal is 1.75 police officers per 1,000 population. The Department's response time to calls for service is prioritized based on urgency and need. Average response time for routine calls is 5 to 10 minutes, while for emergency calls is three to five minutes. Approximately 4,000 calls are made monthly to the ECPD.

Schools

Four school districts provide educational services to the City of El Centro. Collectively, the El Centro Elementary School District and the Central Union High School District serve Kindergarten through High School students residing within the City limits. McCabe Union Elementary School District and the Meadows Union Elementary School District serve Kindergarten through Intermediate School students residing outside the City limits, but within the City's Planning Area. For the current 2011-2012 School Year, the El Centro Elementary School District serves 5,985 children; the Central Union High School District serves 4,056 students; the McCabe Union Elementary School District serves 1,237 students; and the Meadows Union Elementary School District serves 478 students.

Other Public Facilities

Libraries

The El Centro Public Library System currently operates the Community Center Library Branch (375 South First Street) and will operate a new library branch proposed at 1140 North Imperial Avenue. This new branch will function as the new Main Branch for the City and is due to open September 2012. The old Main Branch Library was decommissioned in April 2010 due to damage incurred as a result of the Easter earthquake in April 2010. The new library has more than 13,500 sq ft of space and will house more than 111,000 books, magazines, and audiovisual materials.

Civic Center and Cultural Facilities

The City of El Centro's Civic Center, centered on and around Main Street, has a City Hall, County Government Complex, County Court House, IID Headquarters, and a Police Station. Additionally, the City supports a number of cultural facilities located throughout the City, including an archaeological museum, a Community Center, a variety of informal theatre and recreation groups, and a number of community groups.

Hospitals

The El Centro Regional Medical Center is an acute-care medical center, serving the health care needs of the Imperial Valley. The Medical Center has 165 beds, trauma center, rooftop heliport, the Imperial Valley Wound Healing Center, and the Oncology and Hematology Center.

3.14.2 - Environmental Impacts and Mitigation Measures

a) Fire protection?

The project site is located 0.85 mile northeast of ECFD's Station No. 1 and 1.10 miles northwest of Station No. 2. Based on these distances, ECFD would be capable of responding to the project site within 3 minutes via local surface streets. The standard response time for the Department is from 7 to 10 minutes for an emergency call, and 10 to 15 minutes for a non-emergency call. As such, ECFD fire protection and emergency response personnel operating from the existing Department facilities would be able to respond to the project site within its standard response time.

Additionally, the proposed project would not include residential uses and no people would reside upon the project site. Maintenance of the proposed project would require regular but occasional visual inspections, equipment servicing, and minor repairs and would not require personnel to work full-time on the project site. The lack of residents or full-time personnel would reduce the number of emergency response calls to the project site.

The proposed project would incorporate the latest industry standards when constructing the proposed solar energy facility. The design and construction of the proposed project, and the materials used to build the associated improvements, would comply with the 2010 California Fire Code, the most recent version of the Fire Code. Incorporation of the latest industry standards and the California Fire Code would also reduce the number of fire emergency call to the project site.

Therefore, due to the close proximity of the project site to the existing ECFD facilities and the anticipation that the proposed project will not generate more than a nominal amount of emergency calls to the project site, impacts associated with fire protection and emergency response facilities would be less than significant.

b) Police protection?

The project site is located approximately 1 mile northeast of the ECPD's headquarters. Based on these distances, ECFD would be capable of responding to the project site within 3 minutes via local surface streets. Although the Department's response time to calls for service is prioritized based on urgency and need, average response time for routine calls is 5 to 10 minutes, while for emergency calls is three to five minutes. As such, ECPD police protection personnel operating from the existing Department facility would be able to respond to the project site within its average response time.

Additionally, the ECPD's service ratio goal is 1.75 police officers per 1,000 population. As discussed previously in Section 3.13, Population and Housing, the proposed project would not induce substantial population growth in the area. Thus, the proposed project would not affect the Department's service ratio goal.

The proposed project and associated improvements would be fenced and securely locked to prevent unauthorized entry. The proposed project would be monitored remotely by Sol Orchard Imperial 1, LLC or an affiliated company. Security would be maintained through an 8-foot chain-link fence with three strands of barbed wire affixed atop that would be installed along the perimeter of the entire project site. A remotely monitored intrusion detection system would also likely be employed. Two gated access points would be provided for each of the three project areas. These access points would be locked and accessible through a Knox-Box or similar device, which would allow emergency response personnel and operations and maintenance workers rapid entrance to the project site. Such security measures would reduce the number of emergency calls to the project site.

Therefore, due to the close proximity of the project site to the existing ECPD facility and the anticipation that the proposed project will not generate more than a nominal amount of emergency calls to the project site, impacts associated with police protection facilities would be less than significant.

c) Schools?

The majority of the construction worker labor force required for construction of the proposed project would be local to the Imperial Valley. According to the California Employment Development Department, the most recently available figures for the City of El Centro suggest that 5,500 people, or 24.8-percent of the local labor pool, are unemployed. As such, there would be a more than sufficient supply of construction workers available from the local labor force. The relocating of construction workers from outside of the project area would not be necessary.

During operation of the proposed project, minimal maintenance requirements are anticipated, as the proposed project would operate independently with little human involvement required. On intermittent occasions, the presence of several workers may be required if major repair or replacement of equipment is necessary. However, due to the nature of the proposed project, such maintenance activities are anticipated to be infrequent and no full-time personnel would be required.

Therefore, because the proposed project would not create the need for new personnel and their families to move into the project area, no impacts associated with school facilities would occur.

d) Parks?

The affect of the proposed project on park facilities is described in further detail in Section 3.15, Recreation.

Neither construction nor operation of the proposed project would induce substantial population growth in the area. As such, the proposed project would not increase the patronage of park facilities in the City of El Centro. Therefore, no impacts associated with park facilities would occur.

e) Other public facilities?

Neither construction nor operation of the proposed project would induce substantial population growth in the area. As such, the proposed project would not increase the patronage of public facilities, including libraries, community centers, and hospitals in the City of El Centro. Therefore, no impacts associated with public facilities would occur.

3.14.3 - References

California Department of Education. 2012. Enrollment by Grade for 2011-12: Imperial County. May 9. Website: <http://dq.cde.ca.gov/dataquest/Enrollment/GradeEnr.aspx?cYear=2011-12&cChoice=CoEnrGrd2&cLevel=County&ctopic=Enrollment&cType=ALL&cGender=B&myTimeFrame=S&TheCounty=13,IMPERIAL>. Accessed May 2012.

El Centro, City of. 2004. Final General Plan. Public Facilities Element. February.

El Centro, City of. 2004. Final General Plan. Safety Element. February.

El Centro Regional Medical Center. ND. About Us Webpage. Website: <http://www.ecrhc.org/about-us/>. Accessed May 2012.

3.15 - Recreation

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Recreation				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.15.1 - Setting

The City of El Centro Parks and Recreation Department provides a range of recreational facilities in the City of El Centro. There are currently 13 parks located throughout the City, which are used structured and unstructured activities and special events. Additionally, several retention basins found within the City offer a more limited breadth of recreational uses. The Swarthout Field Park is located west of the project site.

Other recreational facilities include a Community Center, the Conrad Harrison Youth Center, and City Plunge. The Community Center offers a variety of summer recreation programs, senior programs, day camps, and classes. The Conrad Harrison Youth Center offers sports programs for both youth and adults. The City Plunge Aquatics Program offers public swim hours, swim lessons, lifeguarding, and other classes.

The City of El Centro has established a goal to provide parks within one-half mile of all residential areas in the City. The City continues to work with developers to ensure that developed and usable recreational facilities are provided as allowed under the Quimby Act. Additionally, new developments are required to provide for recreational facilities to the extent allowed by law.

3.15.2 - Environmental Impacts and Mitigation Measures

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

As previously addressed in Section 3.13, Population and Housing, the majority of the construction worker labor force required for construction of the proposed project would be local to the Imperial Valley. Based on the latest unemployment figures, there would be a more than sufficient supply of

construction workers available from the local labor force. The relocating of construction workers from outside of the project area would not be necessary.

During operation of the proposed project, minimal maintenance requirements are anticipated, as the proposed project would operate independently with little human involvement required. On intermittent occasions, the presence of several workers may be required if major repair or replacement of equipment is necessary. However, due to the nature of the proposed project, such maintenance activities are anticipated to be infrequent and no full-time personnel would be required.

Since the proposed project would not induce substantial population growth in the area, the project would not increase the patronage of recreational facilities in the City of El Centro, which would accelerate the physical deterioration of such facilities. Therefore, no impacts associated with the physical deterioration of recreational facilities would occur.

b) Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?

The proposed project would include construction and operations of a solar energy facility and would not include recreational facilities. Additionally, the proposed project would not induce substantial population growth in the area. As such, the proposed project would not increase the patronage of recreational facilities in the City of El Centro, which would lead to the requirement for new or expanded facilities to serve the expanded population. Therefore, no impacts associated with the inclusion, construction of new, or the expansion of existing recreational facilities would occur.

3.15.3 - References

El Centro, City of. 2004. Final General Plan. Public Facilities Element. February.

3.16 - Transportation / Traffic

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

3.16.1 - Setting

A diverse circulation system consisting of roadways, public transit, rail and air service, and pedestrian and bicycle trails serves the City of El Centro. The east-west traversing I-8 (Kumeyaay Highway) serves as the City's primary regional thoroughfare, although SR-86 and SR-80 also serve as transit corridors through the City. Imperial County Transit provides public bus service along SR-86, State Street, and a loop to the El Centro Regional Medical Center. In addition to vehicular roadways, the San Diego & Arizona railroads approach the City from the east and west and merge into the Union Pacific Railroad, which extends north and south through the central portion of the City. Additionally,

the City's network of bicycle paths offers an alternative to more conventional modes of transportation.

Traffic Impact Study

The following is summarized in part from the Traffic Impact Study prepared for the proposed project during May 2012, the Nexus Analysis Memorandum prepared on May 8, and the Traffic Memorandum prepared on August 7, 2012, all by Fehr & Peers. The Traffic Impact Study, Nexus Analysis Memorandum, and Traffic Memorandum are included as Appendix G.

Project Study Area

The project study area was determined based upon the project location, assumed distribution of project trips, and direction provided by the City of El Centro.

The following four (4) roadway segments were identified for study:

1. Villa Avenue, west of Dogwood Road
2. Dogwood Road between Villa Avenue and Main Street
3. Dogwood Road between Main Street and Ross Road
4. Dogwood Road between Ross Road and I-8 (Kumeyaay Highway)

The following four (4) key intersections were identified for study:

1. Villa Avenue / 3rd Street
2. Villa Avenue / Dogwood Road (County Highway S31)
3. Main Street (County Highway S80) / Dogwood Road (County Highway S31)
4. Ross Road / Dogwood Road (County Highway S31)

Project Trip Generation

Construction Traffic

Based upon information provided by the Applicant, during the peak period of construction activities (one month out of the nine month construction schedule) one delivery truck would arrive at the project site during each hour of construction, resulting in 16 truck trips per day (equivalent to 48 passenger vehicle trips). It is also anticipated that during the peak period a maximum of 125 workers would be required to construct the proposed project. As a worst-case scenario, it was assumed that all workers would drive solo vehicles to the project site and would arrive during the AM peak hour and depart during the PM peak hour. The assumed project construction trip generation would result in a total of 298 daily vehicle trips with 128 trips occurring during the AM peak-hour and 3 occurring during the PM peak-hour.

Construction activities associated with the undergrounding of Central Drain No. 5 and the adjacent laterals would occur prior to the construction of the proposed solar energy facility. It is anticipated that during the peak of undergrounding construction activities (approximately 24 days of the 13-15 week undergrounding construction period), 32 delivery trucks would arrive at the project site during each day of construction, resulting in 64 truck trips per day (equivalent to 192 passenger vehicle trips). It is also estimated that during the peak period of undergrounding activities a maximum of 17 construction workers would be required.

The majority of the construction worker labor force would be local to the Imperial Valley, with a small portion, primarily the management team, coming to/from the greater Los Angeles area. Materials delivered to the project site via truck would use the 1-8, exit Dogwood Road, proceed north on Dogwood Road, and turn left onto West Villa Avenue to access the site. Trucks exiting the project site would use the same route but in reverse.

Operations Traffic

Solar energy facilities are not identified in the Institute of Transportation Engineers (ITE) Trip Generation Handbook. As such, an analysis of project site activities, including employment, deliveries, and future operational activities was conducted to derive the proposed project's anticipated day-to-day trip generation.

The proposed project would not require any onsite staff or deliveries on a daily basis. Security for the project site would be handled at an offsite location and would be monitored via closed circuit cameras. However, workers would occasionally be required to access the project site to maintain and wash the solar arrays, as well as to perform landscaping activities around the site. As a worst-case scenario, it was assumed that all operations and maintenance activities would be performed on the same day, all workers would drive separate vehicles to and from the project site, and workers would arrive during the AM peak hour and depart during the PM peak hour. On occasion, there may be school bus tours of the proposed project. However, these tours would be infrequent and would not occur during the peak hour, and therefore were not included in day-to-day analysis. The assumed project operations trip generation would result in a total of 12 daily vehicle trips with 6 trips occurring during the AM peak-hour and 6 occurring during the PM peak-hour.

Summary of Traffic Operation

Construction Traffic

Table 12 provides the intersection Level of Service (LOS) and average vehicle delay results for both Existing and With Construction Traffic conditions.

Table 12: Peak Hour Intersection Level of Service Results With and Without Construction Traffic Conditions

#	Intersection	PM				AM				Change			
		Without Traffic Construction		With Construction Traffic		Without Traffic Construction		With Construction Traffic		AM		PM	
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	S?	Delay	S?
1	Villa Avenue / 3 rd Street (TWSC)	8.9	A	8.9	A	9.3	A	9.3	A	0.0	N	0.0	N
2	Villa Avenue / Dogwood Road (TWSC)	17.1	C	27.1	D	18.5	C	25.5	D	10.0	Y	7.0	Y
3	Main Street / Dogwood Road (Signal)	34.7	C	40.5	D	38.7	D	40.2	D	5.8	Y	1.5	N
4	Ross Road (Signal) / Dogwood	21.1	C	21.6	C	29.3	C	29.7	C	0.5	N	0.4	N

Source: Fehr & Peers, May 2012.

Operations Traffic

Table 13 provides the roadway segment LOS results for each of the analyzed scenarios.

Table 13: Summary of Roadway Segment Level of Service Results

#	Roadway	Segment	Existing	Existing + Project	Future Year	Future Year + Project
1	Villa Avenue	3rd Street and Dogwood Road	A	A	F	F
2	Dogwood Road	Villa Avenue and Main Street	A	A	F	F
3	Dogwood Road	Main Street and Ross Road	C	C	F	F
4	Dogwood Road	Ross Road and I-8	D	D	F	F

Notes:
Bold letters indicate facilities operating at LOS D or worse.
 Source: Fehr & Peers, March 2012.

Table 14 shows the intersection LOS results for each of the analyzed scenarios.

Table 14: Summary of Intersection Peak Hour Level of Service Results

#	Intersection	Existing		Existing + Project		Future Year		Future Year + Project	
		AM	PM	AM	PM	AM	PM	AM	PM
1	Villa Avenue / 3 rd Street (TWSC)	A	A	A	A	F	F	F	F
2	Villa Avenue / Dogwood Road (TWSC)	C	C	C	C	F	F	F	F
3	Main Street / Dogwood Road (Signal)	C	D	C	D	F	F	F	F
4	Ross Road / Dogwood Road (Signal)	C	C	C	C	F	F	F	F

Notes:
 TWSC: Two-Way Stop Controlled Intersection
Bold letters indicate facilities operating at LOS D or worse.
 Source: Source: Fehr & Peers, March 2012.

3.16.2 - Environmental Impacts and Mitigation Measures

Would the project:

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

The City of El Centro considers LOS C or better during the AM and PM peak hours to be the upper threshold for determining the significance of intersection LOS service under existing conditions and LOS D or better under cumulative conditions.

Short-Term Construction Impacts

Traffic generated during construction of the proposed project would be projected to create a significant direct impact at the following two study intersections during the AM peak hour:

- Villa Avenue / Dogwood Road
- Main Street / Dogwood Road

Construction impacts are due to construction workers accessing or exiting the project site during the AM and PM peak hours, and are anticipated to occur only during the peak period of construction activities. These impacts are anticipated to occur over a one month time period, and no permanent mitigation measures are recommended. However, to address short-term impacts, Mitigation Measure TRANS-1 is recommended, which includes preparation of a Construction Traffic Management Plan.

MM TRANS-1 Prior to the issuance of a building permit or grading permit, whichever shall occur first, the Applicant shall coordinate with the City of El Centro to prepare a Construction Traffic Management Plan. The Management Plan shall include strategies for implementation that are aimed at reducing the number of trips accessing the project site during the AM peak hour. These strategies shall include:

- Implementation of a ride-sharing program to encourage carpooling amongst workers.
- Adjusting work schedules so workers do not access the project site during the peak hours.
- Reduce the number of workers required onsite by extending the construction schedule.
- Provide offsite parking for workers with shuttle services to transport them onsite.

With incorporation of Mitigation Measures TRANS-1, short-term impacts associated with LOS would be less than significant.

Long-Term Operations Impacts

Based upon the significance criteria provided and presented in Section 2.4 of the Traffic Impact Report (Appendix G), the proposed project generation of traffic under both existing and future conditions would not have significant traffic impacts on either roadway segments or signalized intersections within the project study area. Therefore, long-term impacts associated with LOS would be less than significant.

b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?

The Imperial County 2007 Transportation Plan identifies roadways that are located in the City of El Centro and fall under its congestion management strategies. Of the roadways identified by the Traffic Impact Report (Appendix G) as occurring in the project study area, only one, Dogwood Road, is also identified in the Transportation Plan. As previously discussed in Impact Threshold 3.16.2 a), the intersections of Villa Avenue and Dogwood Road and Main Street and Dogwood Road would be temporarily impacted during construction of the proposed project. However, with incorporation of Mitigation Measure TRANS-1, short-term impacts associated with circulation system performance would be less than significant. Therefore, with implementation of Mitigation Measures TRANS-1, impacts associated with an applicable congestion management program would be less than significant.

c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

The project site is located 1.85 miles southeast of the Imperial County Airport and 6.2 miles east of the Naval Air Station El Centro. Although the project site appears on the Imperial County Airport Commission's Airport Land Use Compatibility Plan's Compatibility Maps for both the Imperial County Airport and the Naval Air Station El Centro, the site falls outside of any compatibility, hazard, or similar zones.

Height standards for quantifying obstructions to air navigation are established by the Federal Aviation Administration (FAA) and are defined in Federal Aviation Regulation (FAR) Part 77, Objects Affecting Navigable Airspace. In order to make the determination whether a project constitutes a hazard to air navigation, FAR Part 77 requires that notice be given to the FAA if any kind of construction or alteration is (1) more than 200 feet in height above the ground level at its site or (2) of a greater height than an imaginary surface extending outward and upward at a slope of 100 to 1 for a horizontal distance of 20,000 feet from all edges of the runway surface if the runway is more than 3,200 feet in length. The proposed project involves development of a solar energy facility, with the tallest onsite structure measuring approximately one-story in height, well below any overhead air traffic. The proposed project would not include any improvements that would exceed the height

standards established by the FAA. Therefore, no impacts associated with the altering of air traffic patterns would occur.

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

The proposed project would not include any physical improvements that would extend to adjacent roads. Aside from the internal access roads that would be located on the project site, the proposed project would not involve the construction or altering of any roads outside of the project's boundary. Therefore, no impacts associated with increasing roadway hazards would occur.

e) Result in inadequate emergency access?

Two gated access points would be provided for each of the three project site areas. Access points would generally be provided from West Villa Avenue for the two northern project areas, and from West Villa Avenue and North 3rd Street for the southern project area. These access points would be locked and accessible through a Knox-Box or similar device, which would allow emergency response personnel rapid entrance to the project site.

Additionally, the proposed project would include all-weather perimeter access roads for fire department access and operations circulation, which would provide adequate emergency access along the entire periphery of the project site and between the solar arrays. Therefore, no impacts to emergency access would occur.

f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

The proposed project represents a land use that would require limited use of local public services and/or infrastructure, including alternative transportation, during both the construction and the operations phased of the project. The proposed project would not include any physical improvements that would conflict with any adopted policies, plans, or programs regarding public transit and bicycle and pedestrian facilities, nor would any of the project's planned improvements decrease the performance or safety of such facilities. Therefore, no impacts associated with alternative transportation would occur.

3.16.3 - References

El Centro, City of. 2004. Final General Plan. Circulation Element. February.

Fehr & Peers. 2012. Traffic Memorandum. August 7.

Fehr & Peers. 2012. Nexus Analysis Memorandum. May 8.

Fehr & Peers. 2012. Traffic Impact Study. May.

Imperial Valley Association of Governments. 2008. Imperial County 2007 Transportation Plan.
May.

3.17 - Utilities and Service Systems

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Utilities and Service Systems				
<i>Would the project:</i>				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.17.1 - Setting

Water and Wastewater Treatment

Water Facilities

The City of El Centro provides water treatment and distribution services to both the City and some unincorporated areas of Imperial County. The City owns and operates the La Brucherie water treatment plant that provides clarification, filtration, and disinfection of water from the Colorado River. Untreated water is delivered to the plant via IID's All American Canal and Date Canal. Treated water is then pumped from storage tanks to users via a grid of distribution pipelines and water mains.

According to the City of El Centro’s Water Master Plan Update as referenced in the Public Facilities Element of the City’s General Plan, the existing water storage and treatment facilities have adequate capacity to meet the demands of the existing service area as well as several years of future development. The Water Master Plan Update estimated that the treated water storage facilities would reach capacity when the City’s population grows to 42,600, while the existing distribution system would reach capacity when the population grows to 49,700. As previously discussed in Section 3.13, Population and Housing, City’s 2010 population stood at 42,598.

Wastewater Facilities

The City of El Centro provides wastewater collection, treatment, and disposal services to both the City and some unincorporated areas of Imperial County. The City owns and operates a wastewater treatment plant with a capacity of eight million gallons per day (mgd) that provides secondary level treatment of wastewater generated within the service area. Treated water is discharged to the Alamo River. The City also owns and operates a wastewater collection and transmission system comprising collector sewers, trunk sewers, lift stations, and force mains.

Water Supply and Demand

The City of El Centro depends solely on the Colorado River for surface water inflows, supplied by the IID. The IID imports the raw Colorado River water and distributes it to the City and for agricultural purposes. Water from agricultural drains, as well as the New and Alamo Rivers, are high in total dissolved solids and other contaminants and are unsuitable for potable water use.

Table 15 provides the existing and future water supply and demand for normal year conditions in the City of El Centro, per the City’s 2010 Urban Water Management Plan.

Table 15: Projected Water Supply and Demand (AFY)

	Fiscal Year Ending				
	2010	2015	2020	2025	2030
Total Supply	8,029	11,198	12,374	13,540	14,705
Total Demand	8,029	11,339	12,515	13,681	14,846
Projected Surplus	0	141	141	141	141

Source: City of El Centro 2010 Urban Water Management Plan, March 2011.

Solid Waste Facilities

The City of El Centro contracts with CR&R Waste & Recycling Services (CR&R) to perform trash collection services in the City. Once collected, solid waste is transported to one of nine landfills located in Imperial County that are administered and operated by the Imperial County Department of Public Works, Solid Waste and Recycling Division. The nearest active landfill to the project site would be the Imperial Landfill, which is located 3.7 miles northeast of the site in unincorporated

Imperial County. The 337-acre Imperial Landfill has a disposal area of 162 acres. The landfill has a maximum permitted capacity of 1,700 tons per day, a maximum permitted capacity of 19,514,700 cubic yards, and a remaining capacity of 15,485,200 cubic yards. The landfill operates as a Class III facility and is permitted to accept municipal waste, construction and demolition debris, and green and wood waste.

3.17.2 - Environmental Impacts and Mitigation Measures

Would the project:

a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

The proposed project would not include permanent, traditional restroom facilities that would connect with a municipal sewer system and subsequently require effluent treatment. During construction of the proposed project, construction workers would use temporary, portable restroom facilities. During the operations phase of the proposed project, no full-time personnel would be on the project site, and as such, no permanent or temporary restroom facilities are proposed. The ground surface below the solar panels would be pervious, allowing any residual water from panel washing and erosion control activities to be absorbed into the topsoil before percolating into the deeper subsurface soils.

Therefore, no impacts associated with the exceedance of wastewater treatment requirements would occur.

b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

During construction of the proposed project, water would be transported to the project site via water trucks and used for dust suppression. As previously discussed in Impact Threshold 3.17.2 a), the proposed project would not produce effluent that would subsequently require treatment at a wastewater facility. As such, the proposed project would not warrant construction of new or expansion of existing wastewater facilities. Therefore, no impacts associated with water or wastewater treatment facilities would occur.

c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Under proposed project conditions, tributary onsite flows would be contained within the boundary of the project site. Over a maximum drawdown time of 72 hours, onsite flows would be allowed to infiltrate into subsurface soils and eventually percolate into the groundwater basin below. No surface runoff would be discharged from the project site. As such, the construction of new or the expansion of existing stormwater drainage facilities would not be required. Refer to the discussion under

3.9.2 a). Therefore, impacts associated with new or expanded stormwater drainage facilities would be less than significant.

d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?

Short-Term Construction Impacts

During construction of the proposed project, water would be required for dust suppression. A nominal quantity of water may also be required to moisture-condition onsite soils prior to compaction for the access roads and the solar array and substation foundations. A water truck will be used for dust mitigation throughout construction of the proposed project. Dust mitigation activities for the undergrounding of Central Drain No. 5 and Laterals would require approximately 4,000 gallons for each of the three months of construction. Dust mitigation activities for the construction of the portion of the site developed with the solar array would require approximately 160,000 gallons for each of the first two months of construction, and approximately 8,000 gallons per month during the remaining 4 months. Total water requirements for dust mitigation activities would be approximately 364,000 gallons, or 1.18 af. The water would represent a modest percentage of the City's projected water surplus, and a nominal percentage of the City's project water supplies (Table 15). The proposed project's water requirements during the construction phase would be satisfied by existing water entitlements and resources. Therefore, short-term impacts associated with water supplies would be less than significant.

Long-Term Operations Impacts

During the operations phase of the proposed project, the solar panels would be washed with softened and de-ionized water, typically twice per year. Panel washing activities would require one gallon per panel per year. Taking into account the proposed project's 100,000 to 120,000 solar panels, the panel washing activities would require up to 120,000 gallons of water per year, or up to 0.368 af per year (afy). The project site would include landscape strips with water delivered via an irrigation system. Annual water demand for landscape irrigation would require approximately 1.0 af per year.

Additionally, water mixed with erosion and dust control additives would also be applied biannually. Application of the soil-binding agent would require 3,300 gallons per acre for the first year, followed by 1,650 gallons per acre every two years afterwards. Based upon the proposed project's 118 acres of development, the application of the soil-binding agent would require 389,400 gallons of water for the first year (1.195 afy), and 194,700 gallons for every two years afterwards (0.299 afy). Collectively, panel washing activities and erosion and dust control activities would require 1.563 afy for the first year and 0.667 afy for all subsequent years. Again, much like during construction of the proposed project, these operations phase water requirements would represent a modest percentage of the City's projected water surplus, and a nominal percentage of the City's project water supplies (Table 15). The proposed project's water requirements during the operations phase would be satisfied by existing

water entitlements and resources. Therefore, long-term impacts associated with water supplies would be less than significant.

e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

As previously discussed in Impact Threshold 3.17.2 a), the proposed project would not produce effluent that would subsequently require treatment at a wastewater facility. As such, the proposed project would not affect the treatment capacity of the wastewater treatment provider that serves the project area. Therefore, no impacts associated with wastewater treatment capacity would occur.

f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?

The California Department of Resources Recycling and Recovery (CalRecycle [formerly the Integrated Waste Management Board]) provides solid waste generation estimates for various land uses. The waste generation source chosen for the proposed project is the "transportation/communication/utilities" category, chosen because it was the higher of the two rates that included utilities as a waste generation source and most closely matches the land use of the proposed project. This category generates an estimated 0.0108 ton/square foot/year (CalRecycle 2011). Generation rates for construction activities are not available. For purposes of this evaluation, the same solid waste generation rates will be used for the construction phase, although lesser quantity of solid waste is anticipated to be generated during the construction phase.

Based upon this generation rate and the proposed project's 15,299 sq ft of buildings and associated structural improvements, the project would produce 165.23 tons of solid waste per year during the operations phase or approximately one ton per day.

Once collected, solid waste is transported to one of nine landfills located in Imperial County that are administered and operated by the Imperial County Department of Public Works, Solid Waste and Recycling Division. The nearest active landfill to the project site would be the Imperial Landfill, which is located 3.7 miles northeast of the site in unincorporated Imperial County. The 337-acre Imperial Landfill has a disposal area of 162 acres. The landfill has a maximum permitted capacity of 1,700 tons per day, a maximum permitted capacity of 19,514,700 cubic yards, and a remaining capacity of 15,485,200 cubic yards. The landfill operates as a Class III facility and is permitted to accept municipal waste, construction and demolition debris, and green and wood waste.

The solid waste generated by either the construction or the operations phases of the proposed project based on CalRecycle's published generation rates represents a high estimate and actual solid waste generation rates would be lower. This would represent a very small percentage (less than one percent) of the Imperial Landfill's maximum daily permitted tonnage, and a nominal percentage of

the facility's remaining capacity. Therefore, impacts associated with the solid waste generation and the permitted capacity of the landfill serving the proposed project would be less than significant.

g) Comply with federal, state, and local statutes and regulations related to solid waste?

All solid waste generated by the proposed project would be handled, transported, and disposed of according to all applicable federal, State, and local regulation pertaining to municipal waste disposal. The collection of municipal solid waste, non-hazardous construction and demolition debris, and green and wood waste from the project site and the transportation of the waste to the Imperial Landfill or similarly active and permitted Imperial County Department of Public Works, Solid Waste and Recycling Division facility would be conducted by CR&R, a licensed and permitted agent. Although not anticipated, any hazardous or potential hazardous materials found on the project site during construction of the proposed project would be collected, transported, and disposed of by a permitted agent specializing in hazardous materials disposal. All handling of such materials would comply with the California Hazardous Waste Control Law, (California Health and Safety Code, Division 20, Chapter 6.5) and the Hazardous Waste Control Regulations (California Code of Regulations, Title 22, Division 4.5). Therefore, no potential impacts associated with solid waste statutes and regulations would occur.

3.17.3 - References

California Department of Resources Recycling and Recovery (CalRecycle). 2012. Active Landfill Profiles: Imperial Landfill. <http://www.calrecycle.ca.gov/SWFacilities/Directory/13-AA-0019/Detail/>. Accessed May 2012.

CalRecycle. 2010. Statewide Waste Characterization Study: Results and Final Report, December 1999 results accessed on 5/24/2010:
<http://www.calrecycle.ca.gov/wastechar/wastegenrates/Industrial.htm>

El Centro, City of. 2011. 2010 Urban Water Management Plan. March.

El Centro, City of. 2004. Final General Plan. Public Facilities Element. February.

3.18 - Mandatory Findings of Significance

Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Mandatory Findings of Significance				
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Does the project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Does the project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3.18.1 - Environmental Impacts and Mitigation Measures

a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?

As previously discussed in Section 3.4, Biological Resources, the project site was surveyed via a pedestrian survey for habitat and sign (e.g., burrows, pellets, feathers, scat, litter, and animal dung) of burrowing owls, which is currently a CDFG Species of Special Concern, a Federal Species of Concern, and is included on the Migratory Bird Treaty Act list of sensitive birds. In its existing condition, the project site does not support active burrowing owl foraging habitat. However, several burrowing owl and active burrows were observed on the project site and on adjacent property. According to criteria set forth by CDFG, the construction of the proposed project could potentially impact burrowing owl. Mitigation Measures BIO-1 through BIO-4 are required to reduce impacts associated with burrowing owl to less than significant.

Additionally, as addressed prior in Section 3.5, Cultural Resources, the project site has low sensitivity for prehistoric archaeological resources, but moderate sensitivity for paleontological resources given the composition of soils underlying the site. Since only 40-percent of the project site has been surveyed for cultural resources in the last 10 years, and because ground-disturbing activities during construction of the proposed project have the potential to unearth, damage, or destroy unknown resources located on the project site, Mitigation Measures CUL-1 and CUL-2 would be required. With incorporation of Mitigation Measures CUL-1 and CUL-2, impacts associated with cultural resources would be less than significant.

b) Does the project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?

Cumulative impacts refer to the combined impacts of the proposed project with the impacts of other past, present, and reasonably foreseeable future projects. The City of El Centro has identified the following related projects that could potentially contribute to cumulative impacts. Table 16 provides basic information regarding these related projects. The geographic scope for the related projects is the Imperial Valley. For the purpose of this discussion, related projects consist of planned projects located in close proximity to the project site and solar projects located in the region.

Table 16: Related Projects

Project Name	Project Description	Project Location	Status
City of El Centro			
Town Center Village	Construction of a 240 dwelling unit apartment project	2100 North 10 th Street Approx. 0.87 mile west-southwest of the project site.	Planned
Assembly Hall Church and Recreation Area	Conversion of an existing 5,700 square foot retail building to a church complex	728 North 12 th Street Approx. 1.00 mile west of the project site.	Planned
Ballington Academy Charter School	Construction of a charter school within an existing commercial building	1525 West Main Street Approx. 1.35 miles southwest of the project site.	Approved
CR&R Transfer Station	Construction of a medium Transfer Station (<100 tons/day)	360 West Commercial Avenue Approx. 0.23 mile southwest of the project site.	Planned
Gevorgian-AMG	General Plan Amendment and Zone Change from Commercial to High-Medium Residential	Southeast corner of Waterman and Crookshank Approx. 1.80 miles northwest of project site..	Planned

Table 16 (cont.): Related Projects

Project Name	Project Description	Project Location	Status
City of El Centro (cont.)			
City of El Centro Southern Pump Station	Zone Change from Light Manufacturing to Limited Use	Along Danenberg and Farnsworth Drive Approx. 2.50 miles southwest of project site.	Planned
Olive Garden Restaurant	Restaurant	504 E. Danenberg Drive Approx. 2.50 miles southeast of the project site.	Planned
Lotus Ranch Subdivision	Residential subdivision consisting of 635 single-family homes	South of I-8 and west of La Brucherie Road Approx. 2.85 miles southwest of the project site.	Planned
County of Imperial			
Chocolate Mountain	49.90 MW solar facility 320 ac.	Near community of Niland Approx. 35 miles north of the project site.	Approved
Wister Solar Plant	20 MW solar facility 148 ac.	Near community of Niland Approx. 35 miles north of the project site.	On Hold
IV Solar	23 MW solar facility 123 ac.	Near community of Niland Approx. 30 miles north of the project site.	Completed
Imperial Valley Solar 2	30 MW solar facility 150 ac.	Near community of Niland Approx. 32 miles north of the project site.	Planned and In Process
Energy Source Solar I	80 MW solar facility 480 ac.	Near community of Niland Approx. 28 miles north of the project site.	Pending Appeal
Energy Source Solar II	80 MW solar facility 480 ac.	Near community of Niland Approx. 28 miles north of the project site.	Pending Appeal
Salton Sea Solar Farm I	49.90 MW solar facility 320 ac.	Near City of Calipatria Approx. 25 miles north of the project site.	On hold
Salton Sea Solar Farm II	100 MW solar facility 640 ac.	Near City of Calipatria Approx. 25 miles north of the project site.	On hold
Calipatria Solar Farm I	50 MW solar facility 609 ac.	Near City of Calipatria Approx. 25 miles north of the project site.	Approved

Table 16 (cont.): Related Projects

Project Name	Project Description	Project Location	Status
County of Imperial (cont.)			
Calipatria Solar Farm II	50 MW solar facility 561 ac.	Near City of Calipatria Approx. 25 miles north of the project site.	Planned and In Process
Midway Solar Farm I	50 MW solar facility 319 ac.	Near City of Calipatria Approx. 20 miles north of the project site.	Approved
Midway Solar Farm II	155 MW solar facility 803 ac.	Near City of Calipatria Approx. 20 miles north of the project site.	Approved
Arkansas	50 MW solar facility 481 ac.	Near City of Calipatria Approx. 24 miles north of the project site.	Approved
Alhambra	50 MW solar facility 482 ac.	Near City of Calipatria Approx. 20 miles north of the project site.	Approved
Sonora	50 MW solar facility 488 ac.	Near City of Calipatria Approx. 25 miles north of the project site.	Approved
Mount Signal Solar	200 MW solar facility 1,431 ac.	West of City of Calexico Approx. 9 miles south of the project site.	Approved
Calexico Solar Farm I-A	100 MW solar facility 400 ac.	West of City of Calexico Approx. 9 miles south of the project site.	Approved
Calexico Solar Farm I-B	100 MW solar facility 591 ac.	West of City of Calexico Approx. 10 miles south of the project site.	Approved
Calexico Solar Farm II-A	100 MW solar facility 911 ac.	West of City of Calexico Approx. 9 miles south of the project site.	Approved
Calexico Solar Farm II-B	100 MW solar facility 534 ac.	West of City of Calexico Approx. 8 miles south of the project site.	Approved
Imperial Solar South	200 MW solar facility 903 ac.	West of City of Calexico Approx. 11 miles southwest of the project site.	Under Construction
Imperial Solar West	200 MW solar facility 1,138 ac.	South of community of Seeley Approx. 15 miles west of the project site.	Approved
Centinela Solar	175 MW solar facility 2,067 ac.	West of City of Calexico Approx. 10 miles southwest of the project site.	Approved

Table 16 (cont.): Related Projects

Project Name	Project Description	Project Location	Status
County of Imperial (cont.)			
Campo Verde	140 MW solar facility 2,266 ac.	West of City of Calexico Approx. 10 miles southwest of the project site.	Planned
Silver Leaf Solar	160 MW solar facility 1,096 ac.	South of community of Seeley Approx. 12 miles southwest of the project site.	Planned and In Process
Heber Solar Energy Facility	14 MW solar facility 80 ac.	Near of community of Heber Approx. 6 miles south of the project site.	Approved
SDG&E	14 MW solar facility substation 100 ac.	Approx. 13 miles southwest of the project site.	Planned and In Process with Bureau of Land Management
Source: City of El Centro, Community Development Department, Planning and Zoning Division, September 2012 and Imperial County Planning and Development Services, September 2012.			

Aesthetics - The project level analysis concluded that impacts to Aesthetics from the proposed project were less than significant and do not require mitigation. Each of the related cumulative projects is being designed in accordance with either the City of El Centro General Plan and zoning code or Imperial County General Plan and zoning code. In the areas where the related cumulative solar projects are located, urban visual characteristics would be introduced into an areas historically characterized by rural, agricultural vistas; however, these changes are not characterized as degradation. Moreover, the related cumulative solar projects are generally grouped into two areas of identified by Imperial County as “Southend Projects” and “Northend Projects” and geographically separated, which would preclude all of the related cumulative solar projects from being viewed simultaneously. The proposed project is not located near any of the cumulative solar projects; the nearest is located approximately 6 miles from the project site. The intervening development and vegetation would prevent the proposed project from being viewed simultaneously with any of the related solar projects. The nearest non-solar related project, the proposed CR&R Transfer Station, is located approximately 0.23 mile southwest of the project site. The CR&R Transfer Station site may have a limited view of the project site but would be limited with intervening development. Moreover, the Transfer Station site and the proposed project site are both located in an area characterized by industrial development. Thus, the proposed project plus related cumulative projects would result in less than significant cumulative impacts to Aesthetics. Therefore, the proposed project’s contribution to cumulative Aesthetics impacts would be less than cumulatively considerable.

Agricultural and Forestry Resources - The project level analysis concluded that no impacts to Agricultural and Forestry Resources would occur. Thus, the proposed project plus related cumulative

projects would result in less than significant cumulative impacts to Agricultural and Forestry Resources. Therefore, the proposed project's contribution to cumulative Agricultural and Forestry Resources impacts would be less than cumulatively considerable.

Air Quality - The tons per year thresholds as identified in Impact Threshold 3.1.2 b) above are project specific. Cumulative project emissions are addressed through compliance with the air quality attainment plans. The project level analysis concluded that impacts to Air Quality would be less than significant by including the proposed project's mitigation (Mitigation Measure AIR-1). The related cumulative projects would generate air quality emissions that could have air quality impacts likely resulting in a cumulative significant effect. In conformance with the requirement to analyze cumulative air quality impacts under Impact Threshold Section 3.3 c), each of the related cumulative projects would recommend mitigation measures or performance standards incorporated into their project resulting in less than cumulative significant impacts. Implementation of recommended Mitigation Measure AIR-1 for the proposed project would result in less than significant impacts for the proposed project. The project's emissions are compared with the ICAPCD's significance thresholds, which are recommended to determine the significance of potential cumulative impacts. The project would be reducing emissions NO_x (an ozone precursor) during operation from reducing the use of fossil fuel power plants. Therefore, the project's incremental contribution to that impact is not cumulatively considerable.

Biological Resources - The project level analysis concluded that impacts to Biological Resources would be potentially significant with the implementation of the proposed project. Moreover, the combination of the proposed project and the related cumulative projects could result in significant cumulative impacts to Biological Resources. To reduce its contribution to potential cumulative Biological Resources impacts, the proposed project would incorporate Mitigation Measures BIO-1 through BIO-3 into project implementation. With incorporation of the recommended mitigation measures, the proposed project's contribution to cumulative Biological Resources impacts would be less than cumulatively considerable.

Cultural Resources - The project level analysis concluded that impacts to Cultural Resources would be potentially significant with the implementation of the proposed project. Moreover, the combination of the proposed project and the related cumulative projects could result in significant cumulative impacts to Cultural Resources. To reduce its contribution to potential cumulative Cultural Resources impacts, the proposed project would incorporate Mitigation Measures CUL-1 and CUL-2 into project implementation. Moreover, each of the related projects would incorporate, as necessary, site-specific mitigation measures related to this topical environmental issue. With incorporation of the recommended mitigation measures, the proposed project's contribution to cumulative Cultural Resources impacts would be less than cumulatively considerable.

Geology and Soils - The project-level analysis concluded that impacts to Geology and Soils would be potentially significant with the implementation of the proposed project. Moreover, the combination

of the proposed project and the related cumulative projects could result in significant cumulative impacts to Geology and Soils. To reduce its contribution to potential cumulative Geology and Soils impacts, the proposed project would comply with the mandatory obligations of the Uniform Building Code. Similarly, each of the related projects would have site-specific conditions and be required to comply with the mandatory obligations of the Uniform Building Code. With compliance with the Uniform Building Code, the proposed project's contribution to cumulative Geology and Soils impacts would be less than cumulatively considerable.

Greenhouse Gas Emissions - The project level analysis concluded impacts to Greenhouse Gas emissions were less than significant and do not require mitigation. The nature of greenhouse gases is cumulative, as the accumulation of greenhouse gases from sources around the world contributes to climate change, which, by definition, would include the related cumulative projects. There is no guidance from the ICAPCD regarding the significance of construction or decommission related emissions. AB 32 requires that greenhouse gases be reduced by the year 2020. Construction emissions would occur prior to the year 2020; therefore, the emissions would not impede implementation of AB 32. The emissions would be more than offset by the reduction in overall greenhouse gases from the project. Therefore, construction emissions are less than significant and therefore not cumulatively considerable. The project would reduce emissions of greenhouse gases during operation as compared to uses presently occurring in the region. The project would reduce existing baseline emissions by substantially more than 29 percent using a tiered approach. Therefore, the project's emissions have less than significant cumulative impacts and therefore are not cumulatively considerable.

Hazards and Hazardous Materials - The project level analysis concluded that Hazards and Hazardous Materials impacts were less than significant and do not require mitigation. Potential Hazards and Hazardous Materials impacts are generally considered specific to individual sites. Because potential Hazards and Hazardous Materials impacts are site-specific, each of the related cumulative projects would either conclude that no or less than significant impacts would occur, or would include their own mitigation specific to the unique physical characteristics of the individual site and project. Thus, the proposed project plus related cumulative projects would result in less than significant cumulative impacts to Hazards and Hazardous Materials. Therefore, the proposed project's contribution to cumulative Hazards and Hazardous Materials impacts would be less than cumulatively considerable.

Hydrology and Water Quality - The project level analysis concluded that impacts to Hydrology and Water Quality were less than significant and do not require mitigation. Because potential impacts to Hydrology and Water Quality are site-specific, each of the related cumulative projects would either conclude that no or less than significant impacts would occur, or would include their own mitigation specific to the unique drainage and water quality characteristics of the individual site and project. Additionally, all related cumulative projects would be required to comply with the provisions contained with their individualized NPDES construction permit, including the preparation of a

SWPPP. Thus, the proposed project plus related cumulative projects would result in less than significant cumulative impacts to Hydrology and Water Quality. Therefore, the proposed project's contribution to cumulative Hydrology and Water Quality impacts would be less than cumulatively considerable.

Land Use and Planning - The proposed project level analysis concluded that impacts to Land Use and Planning were less than significant and do not require mitigation. Each of the related projects either would be consistent with the respective general plan and zoning or made so with an amendment to the general plan, change in zoning classification, or both depending on the site-specific conditions. Additionally, the related cumulative projects are situated in a manner that a potential land use conflict at one project site would be unlikely to affect another site due to the distances from the proposed project. Thus, the proposed project plus related cumulative projects would result in less than significant cumulative impacts to Land Use and Planning. Therefore, the proposed project's contribution to cumulative Land Use and Planning impacts would be less than cumulatively considerable.

Mineral Resources - The project level analysis concluded that no impacts to Mineral Resources would occur. Thus, the proposed project plus related cumulative projects would result in less than significant cumulative impacts to Mineral Resources. Therefore, the proposed project's contribution to cumulative Mineral Resources impacts would be less than cumulatively considerable.

Noise - The project level analysis concluded that impacts to Noise would be potentially significant with the implementation of the proposed project. Moreover, the combination of the proposed project and the related cumulative projects could result in significant cumulative impacts to Noise for those projects located in close proximity to the proposed project. To reduce its contribution to potential cumulative Noise impacts, the proposed project would incorporate Mitigation Measures NOI-1 through NOI-4 into project implementation. With incorporation of the recommended mitigation measures, the proposed project's contribution to cumulative Noise impacts would be less than cumulatively considerable.

Population and Housing - The project level analysis concluded that no impacts to Population and Housing would occur. Because of the current higher than average unemployment rate, staggered construction schedules, and relatively nominal quantity of employees needed to operate each of the related cumulative projects, the region would not experience a substantial increase in population due to prospective construction personnel and employees relocated from outside of the area. Each of the related cumulative projects would obtain labor from a similar and often overlapping labor pool that would supply construction personnel and employees. Thus, the proposed project plus related cumulative projects would result in less than significant cumulative impacts to Population and Housing. Therefore, the proposed project's contribution to cumulative Population and Housing impacts would be less than cumulatively considerable.

Public Services - The project level analysis concluded that impacts to Public Services were less than significant and do not require mitigation. Each of the related cumulative projects would exhibit similar low demand for these public services. For the related solar projects, security services to the related cumulative projects would be provided through remote and onsite security monitoring services that would reduce the demand for both police protection services and fire protection services. In addition, these types of facilities would employ workers from the existing labor pool and would not result in an increased demand for school services, parks, or other facilities such as hospitals, libraries, and community centers. Thus, the proposed project plus related cumulative projects would result in less than significant cumulative impacts to Public Services. Therefore, the proposed project's contribution to cumulative Public Services impacts would be less than cumulatively considerable.

Recreation - The project level analysis concluded no impacts to Recreation would occur. The related solar cumulative projects would result in less than significant impacts because none of the solar projects include recreational components in their respective projects and each would exhibit no demand for the use of recreational facilities resulting in less than significant cumulative impacts. Should the Lotus Ranch subdivision project include a recreational component with this proposed project, it would be evaluated along with the entire project and not as a separate project. Thus, the proposed project plus related cumulative projects would result in less than significant cumulative impacts to Recreation. Therefore, the proposed project's contribution to cumulative Recreation impacts would be less than cumulatively considerable.

Transportation and Traffic - The project level analysis concluded that impacts to Transportation and Traffic would be potentially significant with the implementation of the proposed project during the short-term construction phase. Impacts were determined to be less than significant during the long-term operations phase. Of the related solar cumulative projects, none are located in close proximity to the project site with the closest located approximately six miles from the project site. Of the non-solar cumulative projects, the closest project is located one-quarter mile to the southwest of the project site and is still in the planning stage. Because of the multiple roadways that would be used by, the staggered construction schedules of the related cumulative projects, and the nominal amount of ADT that would be generated during the operations phases of these facilities, only incremental impacts to the overall effectiveness of the local and regional circulation system are anticipated and overall less than significant cumulative impacts would occur. To reduce its contribution to potential cumulative Transportation and Traffic impacts during the construction phase, the proposed project would incorporate Mitigation Measure TRANS-1 into project implementation. Thus, the proposed project plus related cumulative projects would result in less than significant cumulative impacts to Transportation and Traffic. Therefore, the proposed project's contribution to cumulative Transportation and Traffic impacts would be less than cumulatively considerable.

Utilities and Service Systems - The project level analysis concluded that impacts to Utilities and Service Systems were less than significant and do not require mitigation. Because the related solar cumulative projects would demand less water due to the reduced agriculture operations if they were

occurring on the site, not require regional trunk wastewater treatment facilities or storm drain systems, and not exceed landfill capacity, less than significant cumulative impacts would occur. Thus, the proposed project plus related cumulative projects would result in less than significant cumulative impacts to Utilities and Service Systems. Therefore, the proposed project's contribution to cumulative Utilities and Service Systems impacts would be less than cumulatively considerable.

Therefore, the proposed project's contribution to cumulative impacts associated with the above impact topical environmental areas would be less than cumulatively considerable.

c) Does the project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly?

As discussed throughout Section 3, Evaluation of Environmental Impacts, of this IS, with the incorporation of Mitigation Measures, all environmental impacts associated with construction and/or operation of the proposed project would be less than significant, and therefore would not have a substantial adverse effect, either directly or indirectly, on human beings.

