BLYTHE SOLAR POWER PROJECT

AMENDMENT
(09-AFC-6C)

Submitted to the:

California Energy Commission

Submitted by:

Palo Verde Solar I, LLC

June 2011

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June 14, 2011

Mary Dyas
Compliance Project Manager
Siting, Transmission and Environmental Protection Division
California Energy Commission
1516 Ninth Street, MS-2000
Sacramento, CA 95814-5512

Subject**: PALO VERDE SOLAR I, LLC'S PETITION FOR AMENDMENT**
BLYTHE SOLAR POWER PROJECT
DOCKET NO. (09-AFC-6C)

Dear Ms. Dyas,

On behalf of Palo Verde Solar I, LLC (PVSI), Galati & Blek LLP hereby submits 1 (one) original and 12 (twelve) copies of PVSI, LLC's Petition for Amendment for the Blythe Solar Power Project (BSPP) (09-AFC-6C).

I certify under penalty of perjury that the foregoing is true, correct, and complete to the best of my knowledge. I also certify that I am authorized to submit PVSI, LLC's Petition for Amendment for the BSPP on behalf of PVSI.

Sincerely,

Scott A. Galati
Counsel to Palo Verde Solar I, LLC

SECTION 1

Introduction

1.1 Background

On August 24, 2009, Palo Verde Solar I, LLC (PVSI), a wholly-owned subsidiary of Solar Millennium LLC), submitted an Application for Certification (AFC) to the California Energy Commission (CEC or Commission), for the Blythe Solar Power Project (BSPP or Project). The Commission certified the Project in its Final Decision dated September 15, 2010, Docket Number 09-AFC-6 (Decision or License).

The BSPP is licensed as a nominally rated 1000-megawatt (MW) solar generating facility utilizing solar parabolic trough technology. The BSPP is located in the California inland desert, approximately eight miles west of the City of Blythe and two miles north of the Interstate-10 freeway on land managed by the Bureau of Land Management (BLM) in Riverside County, California. The Project has received its Right-Of-Way Grant (ROW) and Notice to Proceed to construction (NTP) for Phase 1A from the BLM and a NTP from the CEC for Phase 1A. Phase 1A of the BSPP is currently under construction.

In accordance with Title 20 CCR Section 1769, PVSI hereby files this Petition For Amendment the BSPP Final Decision (Petition) to reflect modifications to the design of the facility and to modify the location of its transmission line to reflect the new proposed location of the Colorado River Substation. This Petition discusses the proposed modifications and demonstrates consistency with the applicable laws, ordinances, regulations and standards (LORS). Additionally, the Petition demonstrates that the proposed modifications are based upon new information that does not change or undermine the assumptions, rationale, findings, or other bases of the Final Decision. Section 1 of the Petition includes an overview of each modification including a description of why the modification is necessary and why it could not have been included in the Final Decision. Section 2 provides a detailed description of each proposed modification. Section 3 provides the analysis demonstrating that the proposed modifications would comply with all applicable LORS and will not result in significant environmental impacts including any changes to Conditions of Certification necessary to accommodate the proposed modifications. Lastly, Section 4 contains the required analysis of potential effects on surrounding Property Owners.

1.2 Summary of Modifications

The following is an outline of the modifications to the Project Description proposed by this Petition.

A complete description of each is contained in Section 2.0.

1. Revised General Arrangement for the Shared Facilities Area
    a. Relocation of the switchyard to the northwest corner of the Shared Facilities Area
        i. Eliminates four transmission line poles within the site boundaries
    b. Addition of Electric Fire Water Pump and 200,000 gallon Water Storage Tank
    c. Relocation of the Fuel Depot and Maintenance Building to the south east of the Shared Facilities Area
    d. Relocation of the Concrete Batch Plant
    e. Modification of Assembly Hall increasing height from 36 to 46 feet
    f. Relocation of Construction Trailers and Parking
2. Modification of Generation Tie-Line route.
    a. Accommodates proposed relocation of the Colorado River Substation
    b. Accommodates the Desert Southwest Transmission Project
3. Relocation of existing SCE 12 kV distribution transmission poles to allow improvement of a portion of Black Rock Road
4. Replacement of the Steam Turbine Generator (STG) manufactured by Toshiba Model Number TCDF-33.5 with a STG manufactured by Siemens, Model Number SST-5000
5. Revised General Arrangement of the Power Block
    a. Minor relocations and redesign to accommodate Siemens STG
    b. Minor relocations as a result of Final Design
6. Revisions to Air Quality Conditions of Certification to make consistent with Mojave Desert Air Quality Management District (MDAQMD) conditions contained in the Authority To Construct (ATC)

1.3 Purpose, Need and Benefits of Modifications

All of the proposed modifications are the result of changes discovered to be necessary as part of the final design of the BSPP or as a result of changed circumstances since the Final Decision.

1.3.1 Revised General Arrangement for Shared Facilities Area

All of the modifications to the General Arrangement of the Shared Facilities Area are the result of design modifications that were not available until the BSPP was undergoing final design with its EPC Contractor. During final design of the Shared Facilities Area it was determined that a separate fire protection water storage tank and electric fire water pump were necessary to provide adequate fire protection and therefore these items were added.

Also during the final design, it was discovered that it be more efficient if some of the maintenance and workshop activities which were originally planned to occur within each

power block were consolidated in the Shared Facilities Area. Therefore, the size of the Control/Maintenance Building where these activities were originally planned at each power block has been reduced. Additionally, rearrangement of the Shared Facilities Area resulted in relocating the switchyard within the Shared Facilities Area which eliminated the need for four on-site transmission line poles and provides for more even distribution between Units 1 and 2. Also, the height of the Assembly Building needed to be increased to accommodate the size of manufacturing equipment necessary to assemble the trough mechanisms. All of these changes were not known at the time of the Final Decision because they were discovered during the Final Design Phase of the BSPP.

1.3.2 Modified Generation Tie-Line Route

The need to modify the BSPP Generation Tie-Line Route is solely caused by the recent indication from the California Public Utilities Commission (CPUC) that the original location of the Colorado River Substation (CRSS) would not be approved. On April 29, 2011 the CPUC Staff released its Final Supplemental Environmental Impact Report (FSEIR) in which it recommended that the originally proposed location of the CRSS should not be approved. Instead the FSEIR identifies two alternatives that are environmentally superior to the original CRSS; Avoidance Alternative 1 and the Avoidance Alternative 2 (also called the Southern Alternative). The CPUC has not yet formally acted, but it is likely that it will approve one of these two alternatives. Therefore, PVSI has elected to re-route the terminus of its Generation Tie-Line to interconnect at either the Alternative location of the CRSS. This information was not known until the CPUC indicated it would not approve the original location of the CRSS some 6 months after the CEC approved the project and therefore could not have been incorporated into the Final Decision.

1.3.3 Relocation of Existing Transmission Poles Along Black Rock Road

During detailed design of the access road, discussions with the County and the SCE determined that there was not enough room in the existing County right-of-way to accommodate construction of the access road to the width requested by the County without relocating 18 existing wood poles of SCE's existing transmission line along the roadway within the approved estimated disturbance area. The need for this minor relocation was discovered during detailed design and was not known at the time of the Final Decision.

1.3.4 Siemens Steam Turbine Generator

During final design and procurement, it was discovered that it would be more cost-effective to replace the planned Toshiba Model Number TCDF-33.5 STG with Siemens Model Number SST-5000 STG. The cost savings and efficiency were not known at the time of the Final Decision because they were discovered once final design and procurement with the assistance of the EPC Contractor were undertaken after the Final Decision.

1.3.5 Revised General Arrangement of Power Block Area

The primary reason for revising the General Arrangement of the Power Block Area was to accommodate the switch to the Siemens STG. Similarly, this information was not available at the time of the CEC Final Decision because the benefits of switching to a Siemens STG were not discovered until the final design phase of the project. Other modifications not associated with the Siemens STG were discovered as part of the Final Design.

1.3.6 Revised Air Quality Conditions

Minor revisions are necessary to the Air Quality Conditions of Certification to reflect minor revisions made by the MDAQMD when it issued its ATC for the BSPP. We have included those minor modifications in Appendix A as requested by CEC Staff.

SECTION 2

Description of Project Amendment

2.1 Project Description Modifications

2.1.1 Revised General Arrangement for Shared Facilities Area

As discussed in Section 1 of this Petition, the facilities within the Shared Facilities Area have been rearranged to accommodate final design changes. All of the modifications will take place within the original location of the Shared Facilities Area as analyzed in the Staff Assessments and Final Decision. Since the Shared Facilities Area is within the project footprint (near the center) as described in the Final Decision, there will be no additional ground disturbance to accommodate the following modifications. The Plot Plan of the Shared Facilities Area is shown on **Figure 2-1**.

2.1.1.1 Switchyard Relocation

The switchyard for the BSPP has been relocated from its original central location to the northwest corner of the Shared Facilities Area. This relocation will result in elimination of four transmission poles.

2.1.1.2 Addition of Fire Water Storage Tank and Electric Fire Water Pump

To accommodate the needs of the Shared Facilities Area, it was determined that a 200,000 gallon fire water storage tank and associated electric fire water pump were necessary. The need was discovered during preparation of the Fire Risk Assessment for CEC and Chief Building Official compliance approval, which included coordination with Riverside County Fire Department. While the conceptual design of the fire protection system for the Shared Facilities was not explicitly described in the AFC, the original plan was for an extension of the fire water loop from Unit 1 to the Shared Facilities.

2.1.1.3 Relocation of Fuel Depot and Maintenance Building

The Fuel Depot and Maintenance Building has been relocated to the southeast within the Shared Facilities Area.

2.1.1.4 Relocation of Concrete Batch Plant

The Concrete Batch Plant has been located approximately 950 feet west and 227 feet north of its original location. This relocation reduces the amount of paved surface necessary to provide access to the Plant.

2.1.1.5 Increase Height of Assembly Hall

The Assembly Hall has height has increased from 36 feet to 46 feet.

2.1.1.6 Relocation of Construction Trailers and Parking

The Construction Trailers and associated Parking have been moved east of the original locations.

2.1.2 Modified Generation Tie-Line Route

As discussed above, the last half mile of the Generation Tie-Line Route had been modified to terminate at the new alternative locations of the CRSS. Since the CPUC has not formally approved either alternative, in order to accommodate the BSPP Project Schedule it is necessary for PVSI to request both route reconfigurations be approved by the CEC even though only one will be constructed. Both routes involve only the last one-half mile of the Generation Tie-Line with an increase of approximately 700 feet to the end of the Generation Tie-Line. However, since the BSPP switchyard has been relocated to the Shared Facilities Area, the total length of the new Generation Tie-Line will be approximately 2900 feet shorter than the length contained in the Final Decision.

The Right-Of-Way width for approximately 1-3/4 miles of the Generation Tie-Line has also been decreased by 25 feet and shifted north approximately 70 feet to accommodate the Desert Southwest Transmission Project.

Additionally the re-route requires construction of an additional overcrossing of the existing 230 kV Blythe I Transmission Line. The re-route and overcrossing add one additional tubular steel transmission pole. The new Generation Tie-Line Routes are shown on **Figure 2-2**.

2.1.3 Relocation of Existing Transmission Poles Along Black Rock Road

During final design of the access road it was discovered that expansion of a portion of Black Rock Road could not be accommodated without relocating some of the adjacent transmission poles supporting SCE's existing 12 kV Distribution Line that currently serves the CalTrans Weigh Station. Eighteen poles will be relocated approximately 10 to 15 feet. The work will be performed by SCE and will involve removing existing poles and either replacing them with new wood transmission poles or undergrounding. The new transmission poles may be 5 feet taller than existing and will be placed within an expansion of the existing County Right-Of-Way. **Figure 2-3** identifies the extent of the Black Rock Road transmission pole relocation.

2.1.4 Siemens Steam Turbine Generator

The Siemens STG Model Number SST-5000 will replace the originally planned STG which was a Toshiba Model Number TCDF-33.5. The Siemens STG will include a combined High Pressure/Intermediate Pressure casing and one double-flow low pressure casing with standardized modules. The Siemens STG employs a tandem

compound design with individual shafts which are rigidly coupled. The Siemens STG uses a double reheat system where as the Toshiba STG used single reheat. The Siemens STG's terminal voltage will be 18 kV as opposed to the 21 kV voltage of the Toshiba STG. A Preliminary One-Line Diagram is shown on **Figure 2-4**. The Siemens STG is air cooled while the Toshiba STG was cooled by hydrogen. There will be no change in electrical output related to this project modification.

To accommodate the Siemens STG two Benson Boilers have been added to replace four drum-type Solar Steam Generators. Additionally, the Siemens IP and LP heaters, De-aerator and Boiler Feed Water Pumps replace those that were associated with the Toshiba STG.

The expected heat rate of the Toshiba STG was 9820 Btu/kWh. The expected heat rate of the Siemens STG is 9595 Btu/kWh. However, the overall plant design with the new Siemens STG and associated power block equipment will result in the same generating capacity as the plant originally designed with the Toshiba STG.

2.1.5 Revised General Arrangement of Power Block Area

Figure 2-5 is the Revised General Arrangement of Power Block Area and depicts all of the modifications that were made as part of final design work and rearrangement of equipment to accommodate the switch to the Siemens STG. The modifications are described below.

2.1.5.1 Decrease in Size of Control/Maintenance Building

Since workshop, warehouse and administrative services have been consolidated into the buildings within the Shared Facilities Area, it was determined during the final design phase of the BSPP that size of the Control/Maintenance Building in power block for each unit could be decreased from approximately 12,000 square feet to approximately 4,500 square feet.

2.1.5.2 Modifications to Accommodate Siemens STG and Equipment

To accommodate the use of the Siemens STG the following components were simply rearranged within the Power Block Area:

- HTF Expansion Tanks,
- HTF Pumps,
- VFD Controls
- HTF Electrical Enclosure
- Electrical Equipment including the Isophase Bus Duct, Generator Circuit Breaker, Auxiliary Transformers and the Power Control Center
- Condensate Drains located in the LP heaters area

2.1.5.3 Additional Final Design Modifications

As part of the final design the Ullage/Regeneration system and the Nitrogen System were relocated near the southeast corner of the Expansion tanks.

SECTION 3

Environmental Analysis

3.1 Introduction

Pursuant to Section 1769(a)(1)(E) of the CEC Siting Regulations this section addresses the potential for significant environmental impacts resulting from the proposed Project modifications and discusses the need for additional mitigation measures beyond those contained in the Final Decision. Additionally, pursuant to Section 1769(a)(1)(F) of the Siting Regulations this Section discusses how the Project after modification will continue to comply with applicable LORS.

3.2 Air Quality

The modifications to the project include changes to the equipment types planned for the BSPP power block areas and rearrangement of the location and heights of some equipment within the power block areas and rearrangement of the Shared Facilities Area.

3.2.1 Shared Facilities Area, Generation Tie-Line Rerouting, and Relocation of Existing 12 kV SCE Distribution Line Along Black Rock Road

There are no air quality sources in the Shared Facilities Area or along the route of the Generation Tie-Line or along Black Rock Road. Additionally, the modifications proposed in these areas are too far away to have any effect on the emissions from the stationary sources which are only within the Power Block Area. Therefore, the proposed modifications in these areas do not conflict with any assumption, finding or conclusion of the Final Decision.

3.2.2 Power Block Area

The fence lines and power block footprints have remained unchanged. None of the changes alter the sources included in the construction modeling. While the source parameters for some of the auxiliary equipment located within the power blocks have changed, these changes are not expected to affect the conclusions presented in the Staff Assessment and Final Decision as a result of the previously submitted modeling of normal operations for the following reasons.

Per Air Quality Table 6 on Page 133 of the *Blythe Solar Power Project – Commission Decision* (CEC-800-2010-009-CMF, September, 2010), the modeled project impacts for both CO and SO_2 were less than 5% of the applicable standards before non-project sources and ambient background were considered, and as the emissions of these pollutants have not changed significantly, any increase in modeled impacts would be very small and would not alter the conclusions of CEC Staff.

In terms of the PM10 and PM2.5 impacts, modeled BSPP project impacts were 22.3 and 2.9 g/m^3, respectively. Maintenance vehicle traffic, emissions from which will not change as a result of the modifications to the power blocks, dominates these impacts, accounting for more than 95% of the modeled impacts of PM10 and more than 90% of the modeled PM2.5 impacts. Thus, the contribution of the sources at the power blocks to the total facility modeled impacts is very small in comparison to maintenance vehicle traffic, and any small change in modeled impacts from the ancillary equipment located at the power blocks would not affect the conclusion of the analysis and demonstration of compliance with applicable standards.

Lastly, modeled 1-hour NO_2 impacts, when non-project sources and ambient background are considered, equate to 85% of the 1-hour NO_2 CAAQS and 95% of the 1-hour NO_2 NAAQS. While the emergency generators located at each power block contribute a large amount of the BSPP impacts, the shifting of this equipment a few meters is not expected to change their modeled impacts enough to approach the standards because of the following considerations:

1. The dominating structure in terms of building downwash is still the air cooled condenser at each power block, and the height of that structure is not being changed. Additionally, the emergency generators will remain approximately in the same position relative to the ACC's. Therefore the effect of building downwash on the modeling will not significantly change.

2. The NO_2 emissions from the emergency generators will not change.

3. The closest power block source to any fence line is over 700 meters, and in most cases is well over 1000 meters. At that great a distance, minor changes in the location of these sources would have little or no effect on their modeled impacts.

4. Per the new US EPA Guidance Memo on the modeling of the 1-hour NO_2 NAAQS issued on March 1st, 2011, modeling of intermittent-use sources such as emergency engines is not compatible with the probabilistic nature of the new standard and therefore should no longer be required in such modeling demonstrations. *Additional Clarification Regarding the Application of Appendix W Modeling Guidance for the 1-hour NO2 National Ambient Air Quality Standard* (US EPA, March 2011).

As the above information indicates, the rearrangement and minor changes of equipment located in the power blocks at BSPP should not substantially change the modeled impacts, nor alter the conclusions reached by CEC in the Final Decision. Therefore, there are no recommended changes to the Conditions of Certification necessary to ensure BSPP air quality impacts are mitigated to less than significant levels or to ensure the BSPP will comply with all applicable LORS.

3.2.2 Conformance of Conditions of Certification with ATC

As part of its final review and issuance of the ATC, the MDAQMD made a change to Condition of Certification AQ-17 (e) to define a potential leak. Additionally, the District corrected a reference to reflect that there was an updated order applicable to the gasoline tank that the BSPP will have onsite during construction. The correct reference is EO VR-401-B. These modifications to conform the Conditions of Certification in the Final Decision to the ATC are included in Appendix A.

3.3 Biology

3.3.1 Introduction

None of the modifications proposed for the Shared Facility Area or the Power Block Area would result in new impacts to biological resources because all of the modifications will not result in a new disturbance. All of these modifications will be within the existing footprint which was fully analyzed in the Final Decision.

Additionally, replacement of the transmission poles along Black Rock Road will not result in new impacts to biological resources because all of the modifications will not result in a new disturbance. All of these modifications will be within the areas previously surveyed and within the area previously estimated to be disturbed by the expansion of this portion of Black Rock Road.

The re-rerouting of the Generation Tie-Line to accommodate the Desert Southwest Transmission Project and the new alternative locations for the CRSS would result in new disturbance. PVSI engaged AECOM to perform a biological assessment of these changes and the results are contained in Appendix B. The results of assessment indicate that for most species there is no change from the conclusions, findings or mitigation requirements contained in the Final Decision. For Desert Tortoise and Mojave Fringe Toed Lizard (MFTL) there are changes in amount of habitat that will be disturbed. For the DT, the estimated disturbance will be 1 acre less for interconnection to either CRSS alternative. Interconnection to the Avoidance Alternative 1 site will result in an additional 10 acres of MFTL habitat disturbance. Interconnection to the Southern Alternative site will result in 8 acres less disturbance of MFTL habitat. These minor differences do not change any underlying assumption, finding or conclusion of the Final Decision. Proposed modifications to Condition of Certification **BIO-12**, **BIO-20** and **BIO-28** to reflect these changes are contained in Appendix A.

3.4 Cultural Resources

None of the modifications proposed for the Shared Facility Area or the Power Block Area would result in new impacts to cultural resources because all of the modifications will not result in a new disturbance. All of these modifications will be within the existing footprint which was fully analyzed in the Final Decision.

Additionally, replacement of the transmission poles along Black Rock Road will not result in new impacts to cultural resources because all of the modifications will not result in a new disturbance. All of these modifications will be within the areas previously surveyed and within the area previously estimated to be disturbed by the expansion of this portion of Black Rock Road.

PVSI engaged AECOM cultural resources staff to review the re-routing of the Generation Tie-Line to determine if any areas had not been subjected to Class III survey and inventory. Upon comparing the alignment shift to all areas surveyed by AECOM to date, it was determined that no known cultural resources would be affected by the shift. However, the shift in alignment did reveal that a 4.2-acre area had not been surveyed. AECOM cultural resources staff surveyed the 4.2-acre area and a 50-foot buffer on April 28, 2011 and did not observe any cultural resources in the previously unsurveyed portion of the gen-tie alignment.

In addition, the Bureau of Land Management (BLM) provided maps showing areas surveyed by Southern California Edison (SCE) for the Colorado River Substation alternatives. When these maps were compared to maps showing AECOM's survey areas to date, it revealed that no additional survey was required. All areas surveyed by SCE's consultants that crossed the BSPP's realigned gen-tie corridor had been previously surveyed by AECOM. AECOM did not identify any cultural resources in the overlapping survey areas.

The results of this survey are currently being compiled in a Class III Second Addendum Report for the BLM. The report will also be submitted to CEC under confidential cover, once released by BLM. The report will include survey methodology and updated project maps showing the new gen-tie alignment.

However, based on the lack of known new cultural resources that could be impacted by the modifications, the modifications do not conflict with, nor alter the basis for any assumption, finding, conclusion or Condition of Certification contained in the Final Decision. Therefore, implementation of the Cultural Resources Conditions of Certification will ensure the Project as proposed will not result in significant adverse impacts. The Project as proposed is expected to continue to comply with all applicable LORS.

3.5 Geology & Paleontology

The Final Decision found that the Project would not have an adverse significant impact on the geology or paleontological resources. The proposed changes to the Project design do not alter the basis for this conclusion because any new potential disturbance would be within the same geologic units. Moreover, implementation of the Geology & Paleontology Resources Conditions of Certification will ensure the Project as proposed will not result in significant adverse impacts. The Project as proposed will continue to comply with all applicable LORS.

3.6 Hazardous Materials

The Final Decision found that the Project would not have an adverse significant impact in the area of Hazardous Materials. The project modifications do not propose any increase in the quantities of materials or new materials analyzed under the Hazardous Materials section of the Final Decision. The Project as proposed is expected to continue to comply with all applicable LORS.

3.7 Land Use

The only potential modification that is relevant to Land Use is that portion of the Generation Tie-Line re-routing to the CRSS Avoidance Alternative 1 because the route must cross a private parcel not previously identified in the Final Decision, Parcel Number 879080010. According to the Riverside County Land Information System[1], the Riverside County General Plan designates the private parcel as Open Space-Rural with a Zoning Designation of W-2-10. This designation is compatible with a transmission line. Therefore any modification to interconnect the BSPP to the CRSS Avoidance Alternative 1, if it is approved by the CPUC, would not conflict with any finding or conclusion of the Final Decision.

3.8 Noise

Although the modifications include different STGs and associated equipment, the difference in noise between the Toshiba and the Siemens equipment is expected to be small. However, even if the modifications result in slightly higher noise levels, the modifications are simply too far away from any sensitive receptor to alter any assumption, finding, conclusion or Condition of Certification contained in the Final Decision. The Project as modified will continue to comply with all applicable LORS.

3.9 Public Health

For the reasons described in Section 3.2 Air Quality the modifications do not propose any changes to emissions and therefore the Petition has no affect on the area of Public Health.

3.10 Socioeconomics

The proposed Project modifications will have no affect on the area of Socioeconomics and will not increase or diminish the construction workforce.

3.12 Worker Safety & Fire Protection

The modifications do not affect any assumption, finding, conclusion or Condition of Certification in the area of Worker Safety & Fire Protection. The additional of the 200,000 gallon Water Storage Tank and electric Fire Water Pump in the Shared

[1] http://www3.tlma.co.riverside.ca.us/pa/rclis/viewer.htm

Facilities Area is a direct result of modifications made during compliance with the existing Conditions of Certification.

3.12 Traffic & Transportation

The proposed Project modifications will have no affect on the area of Traffic & Transportation as none of the assumptions relating to workforce, delivery of equipment or vehicle trips will not change as a result of the modifications.

3.13 Visual Resources

The project modifications include some minor increases in height of existing structures but such increases would not be visible from any of the KOPs relied up on in the Final Decision. The Final Decision ultimately included a Finding of Override for significant visual impacts. The modifications do not conflict with or require alteration of any assumption, finding, conclusion or Condition of Certification contained in the Final Decision.

3.13 Waste Management

No changes are proposed for the types, quantities, or frequency of waste generation by the Project site during either construction or operation and therefore the modifications have no affect on the area of Waste Management.

3.14 Water Resources

The project modifications do not affect the area of Soil & Water Resources. The use of the Siemens STG will not modify the amount of water used during operations. The existing Conditions of Certification will continue to ensure that the Project will not result in significant impacts to water resources and that the Project will comply with all applicable LORS.

3.15 Transmission System Engineering

Replacement of the Toshiba STG with the Siemens STG does not result in an increase generation output. According to oral communications with SCE and the California Independent System Operator (CAISO) the minor change in the electrical parameters associated the voltage decrease will not have any negative impact on the transient stability studies and is not large enough to warrant any modification to the mitigation requirements to the system attributable to the BSPP interconnection. A letter from CAISO providing confirmation of that opinion will be submitted under separate cover. Therefore, the addition of the Siemens STG does alter any assumption, finding, conclusion, Condition of Certification contained in the Final Decision.

3.16 Transmission Line Safety and Nuisance

The modifications to the Generation Tie-Line route have no affect on the area of Transmission Line Safety and Nuisance.

SECTION 4

Potential Effects on Property Owners

The CEC Siting Regulations Section 1769(a)(1)(I), requires the project owners address any potential effects the proposed amendment may have on nearby property owners, the public, and parties to the proceeding.

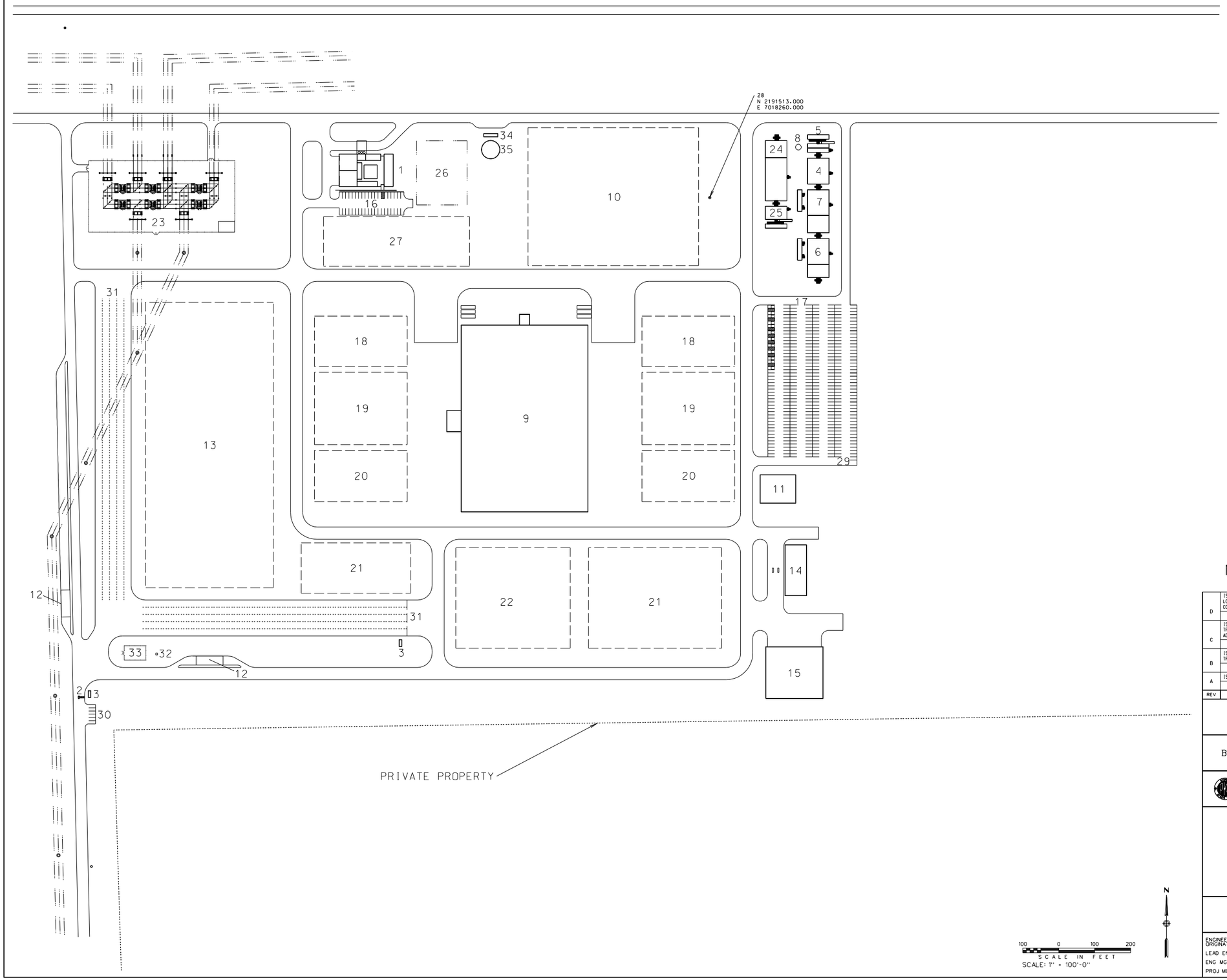
As demonstrated in Section 3, the proposed Project modifications will not result in impacts different than analyzed in the Final Decision. Since the issuance of the Final Decision, no new property owners have moved within 1,000 feet of the Project site. However, the Generation Tie-Line route that would accommodate the Avoidance 1 Alternative location for the CRSS would involve the need for easements across one private parcel that was not included as part of the Final Decision. The parcel number that would be affected by this Generation Tie-Line route is

APN	Name	Mail Street	Mail City	Mail Zip	Acre
879080010	OLIVIA CHEN	5232 VIA RINCON	NEWBURY PARK CA	91320	160

While this route would involve this private parcel, as demonstrated in Section 3 of this Petition, with the incorporation of the Conditions of Certification as amended, environmental impacts would not be significant and the BSPP comply with all applicable LORS. Therefore the proposed modifications will not result in new or different effects to new or existing property owners.

FIGURE 2-1

Plot Plan of the Shared Facilities Area



DRAWING LEGEND

1. MAIN ADMINISTRATION BUILDING
2. MAIN ACCESS GATE
3. GUARD BOOTH
4. OWNER TRAILERS
5. CBO TRAILERS
6. INFRASTRUCTURE TRAILERS
7. ADMINISTRATION TRAILERS
8. POTABLE WATER SYSTEM
9. ASSEMBLY HALL / LAYDOWN AREA
10. BATCH PLANT
11. COVERED HTF PIPE FABRICATION AREA
12. VEHICLE WASH AREA
13. LAYDOWN YARD
14. FUEL DEPOT
15. MAINTENANCE BUILDING
16. 38 VEHICLE PARKING
17. 350 VEHICLE PARKING
18. COUNTERWEIGHT LAYDOWN
19. MIRROR LAYDOWN
20. CANTILEVER ARM LAYDOWN
21. TRUCK UNLOADING ZONE
22. TORQUE TUBE LAYDOWN
23. SWITCHYARD
24. SOLAR FIELD TRAILERS
25. SAFETY INDOCTRINATION TRAILERS
26. LEACH FIELD AREA
27. ADMINISTRATION BUILDING LAYDOWN YARD
28. CONSTRUCTION WELL
29. VISITOR PARKING
30. GUARD PARKING
31. SOLAR FIELD DELIVERY GATE
32. TELEPHONE INTERFACE
33. GAS YARD
34. FIRE PUMP ENCLOSURE
35. FIRE WATER TANK

– PRELIMINARY –
NOT FOR CONSTRUCTION

REV	DESIGN BY	DRAWN BY	CHECKED BY	DATE
D	ISSUED FOR REVIEW. REVISED SWITCH YARD. ADMIN BUILDING. GAS YARD. TELEPHONE INTERFACE LOCATIONS. REVISED TRANSMISSION LINE CORRIDOR. ADDED UNIT 3 AND 4 TRANSMISSION LINE CORRIDOR. ADDED FIRE PUMP AND STORAGE TANK. REVISED LINE TYPE FOR LAYDOWN AREAS.			
	A. FILIP	A. FILIP	A. HEITZ	04-28-11
C	ISSUED FOR REVIEW. UPDATED ASSEMBLY HALL FACILITIES. ROADS. REVISED CONSTRUCTION TRAILER AREA. PARKING AREAS. SWITCHARD. CONSTRUCTION WELL AND MAIN GATE LOCATION. ADDED GAS YARD AND TELEPHONE INTERFACE.			
	A. FILIP	A. FILIP	A. HEITZ	04-14-11
B	ISSUED FOR REVIEW. UPDATED ASSEMBLY HALL FACILITIES. ROADS. ADDED CONSTRUCTION TRAILER AREA. PARKING AREAS. VEHICLE WASH AREAS. MAIN GATE. GUARD SHACK			
	A. FILIP	A. FILIP	C. EDWARDS	10-14-10
A	ISSUED FOR REVIEW			
	A. FILIP	A. FILIP	C. EDWARDS	08-25-10

SOLAR MILLENNIUM LLC

BSPP - BLYTHE SOLAR POWER PROJECT

Kiewit

Kiewit Power
9401 Renner Boulevard
Lenexa, Kansas 66219

I HERBY ATTEST THAT THIS DESIGN CONFIRMS TO ALL ENGINEERING DESIGN REQUIREMENTS SET FORTH IN THE BSPP ENERGY COMMISSION'S DECISION AND IS IN COMPLIANCE WITH ALL APPLICABLE LORS.

PLOT PLAN
SHARED SERVICES AREA

ENGINEER/DESIGN ORIGINATOR	A. FILIP
LEAD ENG	R. TEETER
ENG MGR	S. LORENZ
PROJ MGR	S. LORENZ

DRAWING NUMBER

2008-045-PP-004

$$DATE$$ $$TIME$$ $$USERNAME$$ $$FILENAME$$

FIGURE 2-2

Generation Tie-Line Re-Route

Blythe Solar Power Project

CEC Amendment Details

Solar Millennium LLC
1111 Broadway, 5th Floor
Oakland, CA 94607
510-463-6518

OLD CRS

OLD Sothern Generation-Tie ROW Alignment

New CRS

New Sothern Generation-Tie ROW Alignment

N

Drafted: 05/27/2011
Sheet: 1 of 1

Blythe Solar Power Project ROW modification due to 230kV Generation-Tie Realignment for CRS Relocation, Desert Southwest, and Blythe Energy II Proposed 500kV lines.

1 ROW REDUCED FROM 120 ft to 95 ft AND SHIFTED 70 ft NORTH A DISTANCE OF APPROXIMATELY 1.75 mi.

2 ROW SHIFTED 15 ft NORTH A DISTANCE OF APPROXIMATELY 1.0 mi. NO CHANGE TO ROW WIDTH.

3 ROW REDUCED FROM 120 ft to 95ft A DISTANCE OF APPROXIMATELY 0.25 mi.

OLD CRS

1

2

No Change

3

New CRS

D:\GIS\Data\Project_Site\Blythe\Support\Development\CRSS_Location\CEC_Amendment_Details_06102011\Mxd\CEC_Amendment_Details_06102011.mxd

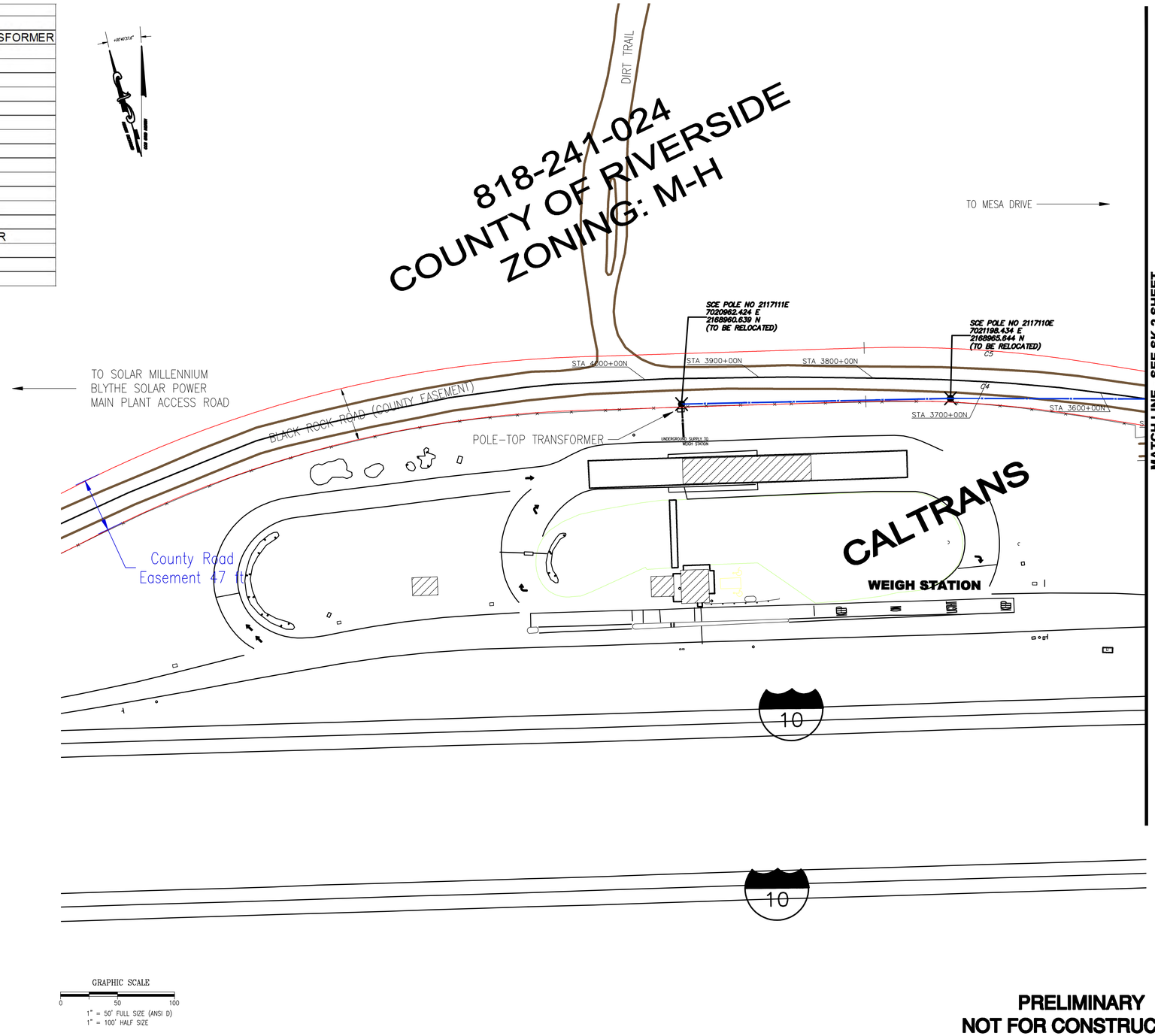
FIGURE 2-3

Black Rock Road Transmission Pole Relocation

BLACK ROCK ROAD POLE TABLE					
INDEX	POLE NUMBER	X = EAST	Y = NORTH	Ahead Span (ft)	NOTES
1	2117111E	7020962.424 E	2168960.639 N	235	RELOCATE POLE & TRANSFORMER
2	2171110E	7021198.434 E	2168965.644 N	285	RELOCATE POLE
3	2117109E	7021484.504 E	2168964.881 N	296	RELOCATE POLE
4	2117108E	7021777.394 E	2168917.462 N	301	RELOCATE POLE
5	2117107E	7022073.675 E	2168869.465 N	274	RELOCATE POLE
6	2117106E	7022345.884 E	2168845.118 N	300	RELOCATE POLE
7	2117105E	7022645.128 E	2168854.562 N	310	RELOCATE POLE
8	2117104E	7022954.329 E	2168870.500 N	205	RELOCATE POLE
9	1758859E	7023160.069 E	2168870.888 N	225	RELOCATE POLE
10	1758858E	7023382.528 E	2168878.355 N	180	RELOCATE POLE
11	1758857E	7023558.844 E	2168883.802 N	180	RELOCATE POLE
12	1758856E	7023737.681 E	2168890.474 N	180	RELOCATE POLE
13	1758855E	7023916.263 E	2168895.117 N	180	RELOCATE POLE
14	1758854E	7024094.225 E	2168900.533 N	180	RELOCATE POLE
15	1758862E	7024285.302 E	2168557.616 N	350	EXISTING POLE TO METER
16	2295236E	7024273.895 E	2168907.309 N	323	RELOCATE POLE
17	4627225E	7024583.292 E	2169000.423 N	300	EXISTING POLE
18	4627226E	7024865.960 E	2169097.383 N	-	EXISTING POLE

NOTES:

1. SOLAR MILLENNIUM TO IMPROVE BLACK ROCK ROAD WEST FROM MESA DRIVE TO MAIN PLANT ACCESS ROAD A DISTANCE OF APPROXIMATELY 1 MILE. REFER TO PRELIMINARY CIVIL DESIGN DRAWING 2008-045-CD- 200 FOR TYPICAL SECTION
2. EXISTING 12KV DISTRIBUTION LINE BETWEEN POLE 2117111E AND 2295236E TO BE RELOCATED BY SOUTHERN CALIFORNIA EDISON TO CONFORM WITH MINIMUM RIVERSIDE COUNTY REQUIREMENTS AND ENABLE SOLAR MILLENNIUM CONSTRUCTION ACTIVITY
3. FINAL RELOCATED POLE LOCATIONS TO BE PROVIDED BY SCE IN ACCORDANCE WITH RIVERSIDE COUNTY STANDARDS AND SPECIFICATIONS FOR ROAD IMPROVEMENT WORKS INCLUDING ORDINANCE 461
4. COORDINATES TO NAD 83 STATE PLANE VI COORDINATE SYSTEM, U.S. SURVEY FOOT
5. SOLAR MILLENNIUM HAS COMPLETED ENVIRONMENTAL STUDIES ALONG LENGTH OF BLACK ROCK ROAD REQUIRING UPGRADE



LEGEND

REMOVE POWER POLE
EXISTING POWER POLE
EDGE OF CONC.
EDGE OF ASPH.
EDGE OF DIRT
AWNING
BUILDING
POWER POLE
STREET LIGHT
STREET LIGHT
STOP LIGHT
MISCELLANEOUS
ROAD STRIPING
EXISTING OVERHEAD 12kV
EXISTING UG SUPPLY
COUNTY ROW
FENCE
WALL
WATER LINE
FIRE HYDRANT

GRAPHIC SCALE
0 50 100
1" = 50' FULL SIZE (ANSI D)
1" = 100' HALF SIZE

PRELIMINARY
NOT FOR CONSTRUCTION

Rev	Description	By	App'd	Date
0	ISSUED FOR REVIEW	GO		11/15/10

ENERGY

AECOM Technology Corporation
2101 Webster St., Suite 1000
Oakland, CA 94612
T 510.622.6600 F 510.835.3464

AECOM
www.aecom.com

Designed By DG
Drawn By GO
Checked By DG
Date 12/17/10

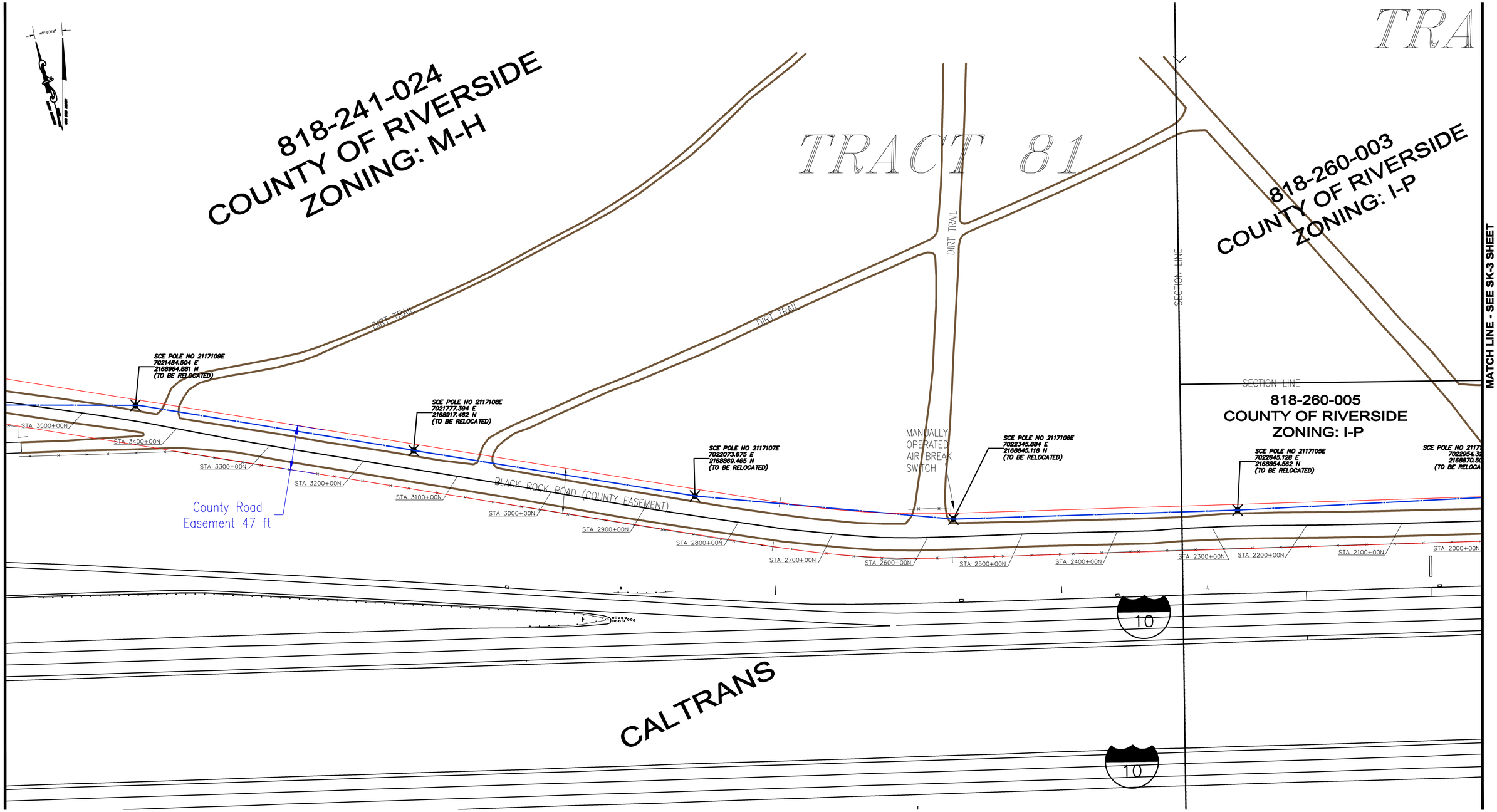
Solar Millennium LLC

BLYTHE SOLAR POWER PROJECT

Sheet Title
BLACK ROCK ROAD
12kV DISTRIBUTION LINE
(RELOCATION)

Project Number 60150317
Sheet Number SK1 of 4

Original inside border size 19" x 32" (483mm x 813mm)
Copyright © 2010 by AECOM All rights reserved Gerard02 Dec 20, 2010 - 10:12am C:\Documents and Settings\gerard02\Desktop\backup\BLACK ROCK RD\BLACK ROCK ROAD 12kV RELOCATION.dwg



GRAPHIC SCALE
0 50 100
1" = 50' FULL SIZE (ANSI D)
1" = 100' HALF SIZE

SEE SHEET SK1 FOR LEGEND AND NOTES

PRELIMINARY
NOT FOR CONSTRUCTION

Rev	Description	By	App'd	Date
0	ISSUED FOR REVIEW	GO		11/15/10

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Designed By
DG
Drawn By
GO
Checked By
DG
Date
12/17/10

Solar Millennium LLC

BLYTHE SOLAR POWER PROJECT

Sheet Title
BLACK ROCK ROAD 12kV DISTRIBUTION LINE (RELOCATION)

Project Number
60150317

Sheet Number
SK2 of 4

Original inside border size 19" x 32" (483mm x 813mm)
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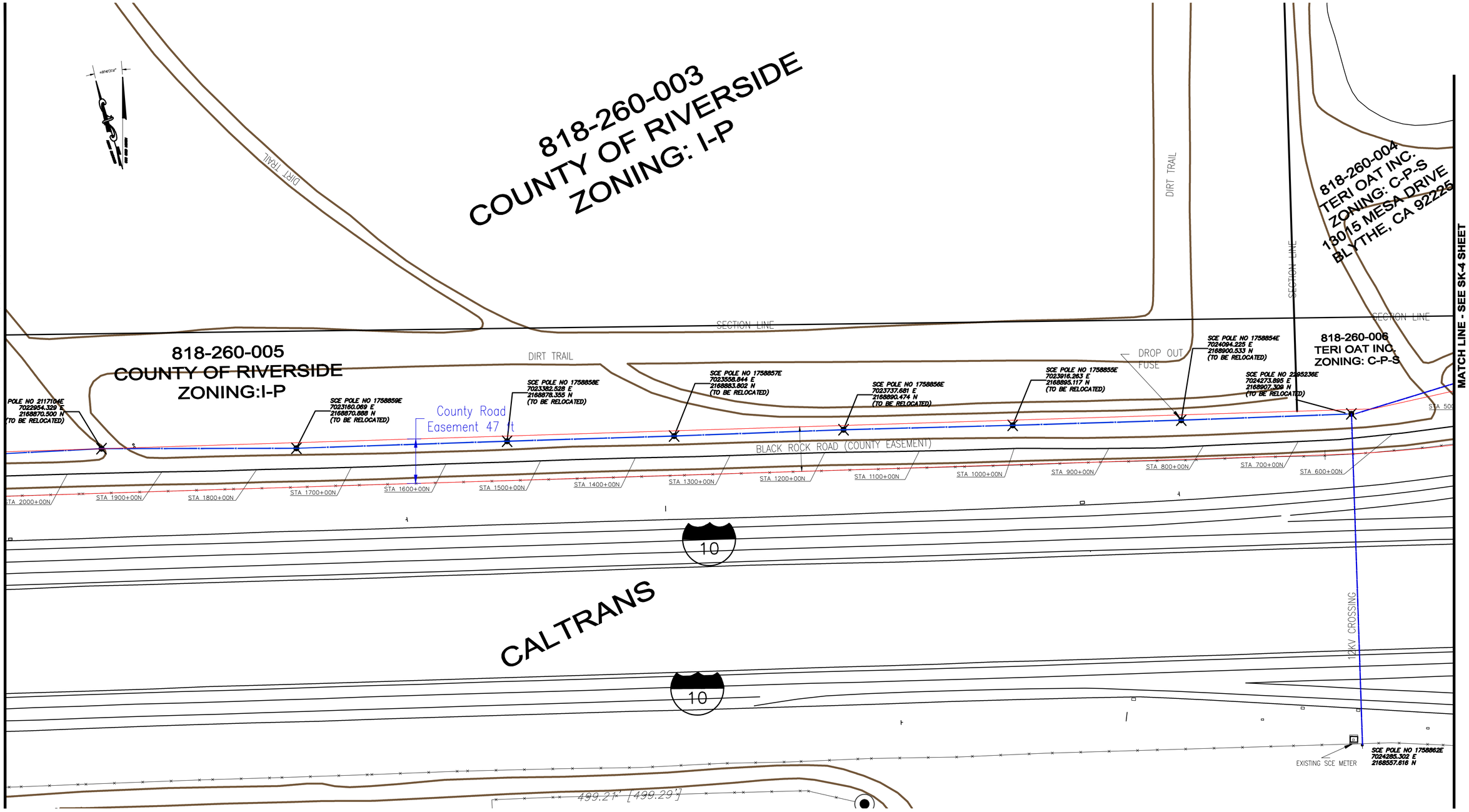

GRAPHIC SCALE
0 50 100
1" = 50' FULL SIZE (ANSI D)
1" = 100' HALF SIZE

SEE SHEET SK1 FOR LEGEND AND NOTES

PRELIMINARY
NOT FOR CONSTRUCTION

Rev	Description	By	App'd	Date
0	ISSUED FOR REVIEW	GO		11/15/10

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Drawn By
GO
Checked By
DG
Date
12/17/10

Solar Millennium LLC

BLYTHE SOLAR POWER PROJECT

Sheet Title
BLACK ROCK ROAD
12kV DISTRIBUTION LINE
(RELOCATION)

Project Number
60150317

Sheet Number
SK3 of 4

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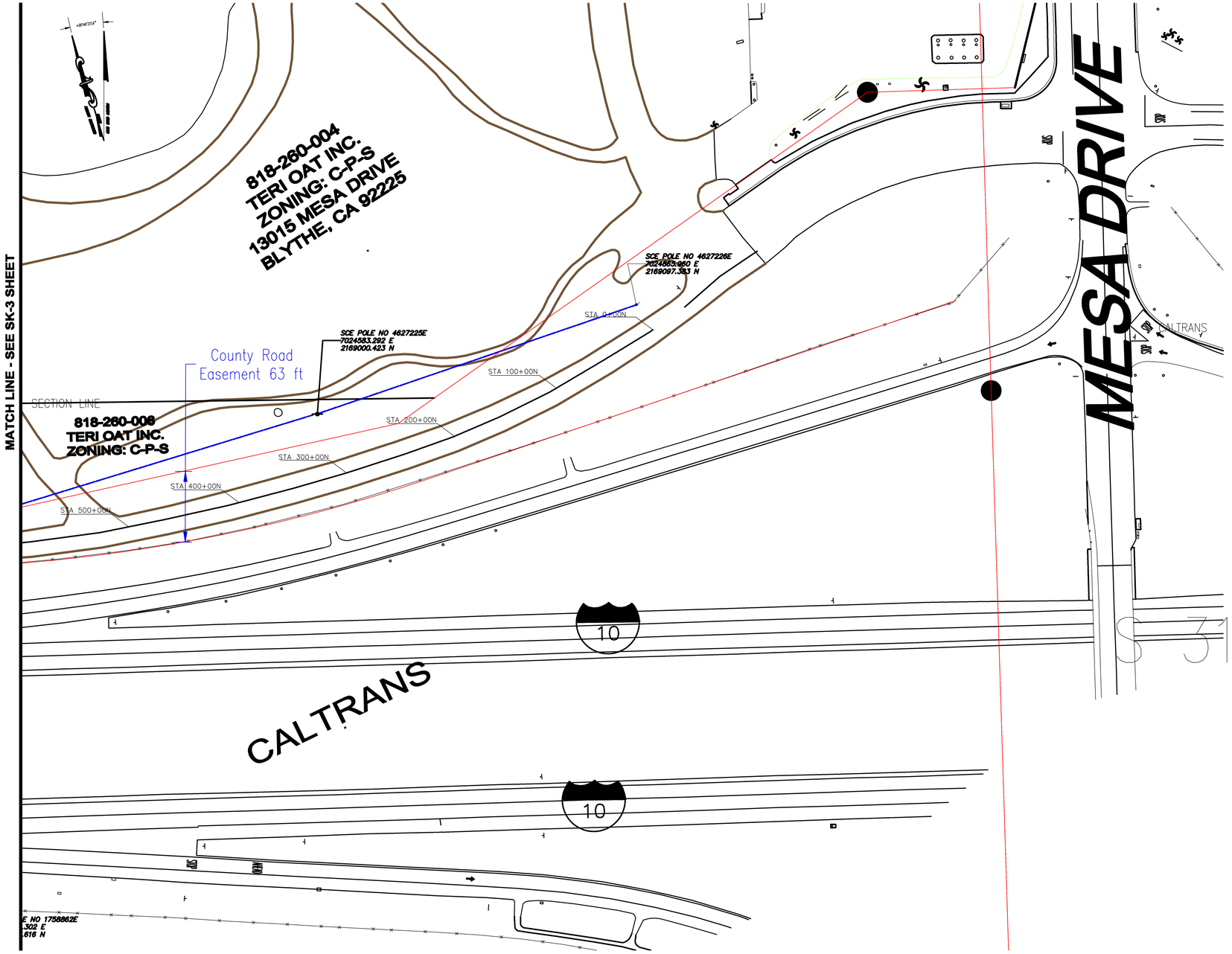

E 1/4 COR SEC
FD 2" BRASS DI.
0.2' PER RS 10
MAP NOS 204-
N 2169021.167
E 7025180.583
ELEV 406.373'

GRAPHIC SCALE
0 50 100
1" = 50' FULL SIZE (ANSI D)
1" = 100' HALF SIZE

SEE SHEET SK1 FOR LEGEND AND NOTES

PRELIMINARY
NOT FOR CONSTRUCTION

Rev	Description	By	App'd	Date
0	ISSUED FOR REVIEW	GO		11/15/10

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Drawn By
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Checked By
DG
Date
12/17/10

Solar Millennium LLC

BLYTHE SOLAR POWER PROJECT

Sheet Title
BLACK ROCK ROAD
12kV DISTRIBUTION LINE
(RELOCATION)

Project Number
60150317

Sheet Number
SK4 of 4

Original inside border size 19" x 32" (483mm x 813mm)
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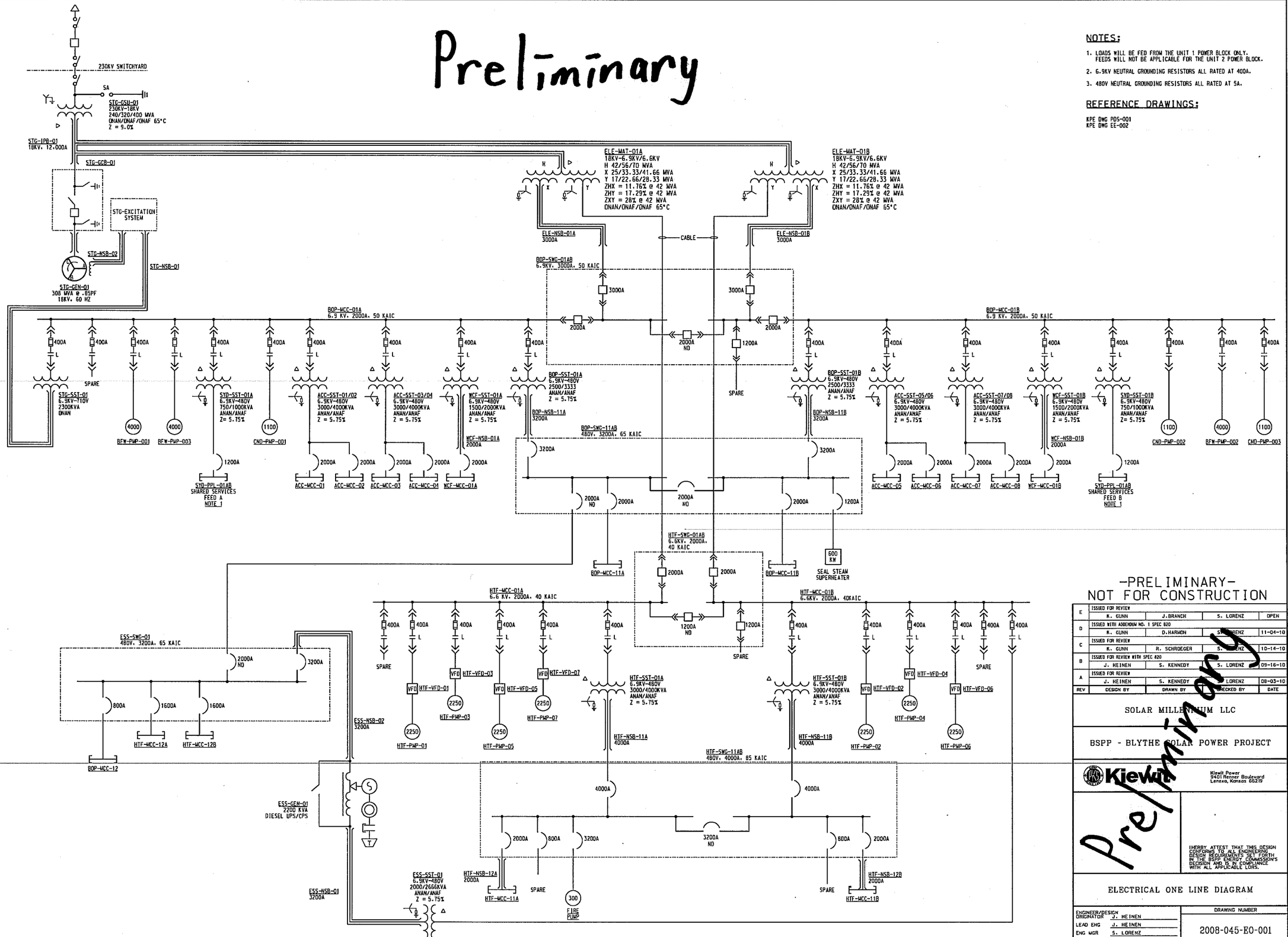
FIGURE 2-4

Preliminary One-Line Diagram

Preliminary



NOTES:

1. LOADS WILL BE FED FROM THE UNIT 1 POWER BLOCK ONLY. FEEDS WILL NOT BE APPLICABLE FOR THE UNIT 2 POWER BLOCK.
2. 6.9KV NEUTRAL GROUNDING RESISTORS ALL RATED AT 400A.
3. 480V NEUTRAL GROUNDING RESISTORS ALL RATED AT 5A.

REFERENCE DRAWINGS:

KPE DWG PDS-001
KPE DWG EE-002

-PRELIMINARY-
NOT FOR CONSTRUCTION

REV	DESIGN BY	DRAWN BY	CHECKED BY	DATE
E	ISSUED FOR REVIEW			
	K. GUNN	J.BRANCH	S. LORENZ	OPEN
D	ISSUED WITH ADDENDUM NO. 1 SPEC 820			
	K. GUNN	D.HARMON	S. LORENZ	11-04-10
C	ISSUED FOR REVIEW			
	K. GUNN	R. SCHROEGER	S. LORENZ	10-14-10
B	ISSUED FOR REVIEW WITH SPEC 820			
	J. HEINEN	S. KENNEDY	S. LORENZ	09-16-10
A	ISSUED FOR REVIEW			
	J. HEINEN	S. KENNEDY	S. LORENZ	08-03-10

SOLAR MILLENNIUM LLC

BSPP - BLYTHE SOLAR POWER PROJECT

Kiewit

Kiewit Power
9401 Renner Boulevard
Lenexa, Kansas 66219

Preliminary

I HEREBY ATTEST THAT THIS DESIGN CONFORMS TO ALL ENGINEERING DESIGN REQUIREMENTS SET FORTH IN THE BSPP ENERGY COMMISSION'S DECISION AND IS IN COMPLIANCE WITH ALL APPLICABLE LORS.

ELECTRICAL ONE LINE DIAGRAM

ENGINEER/DESIGN	
ORIGINATOR	J. HEINEN
LEAD ENG	J. HEINEN
ENG MGR	S. LORENZ
PROJ MGR	J. DEDRICKSON

DRAWING NUMBER

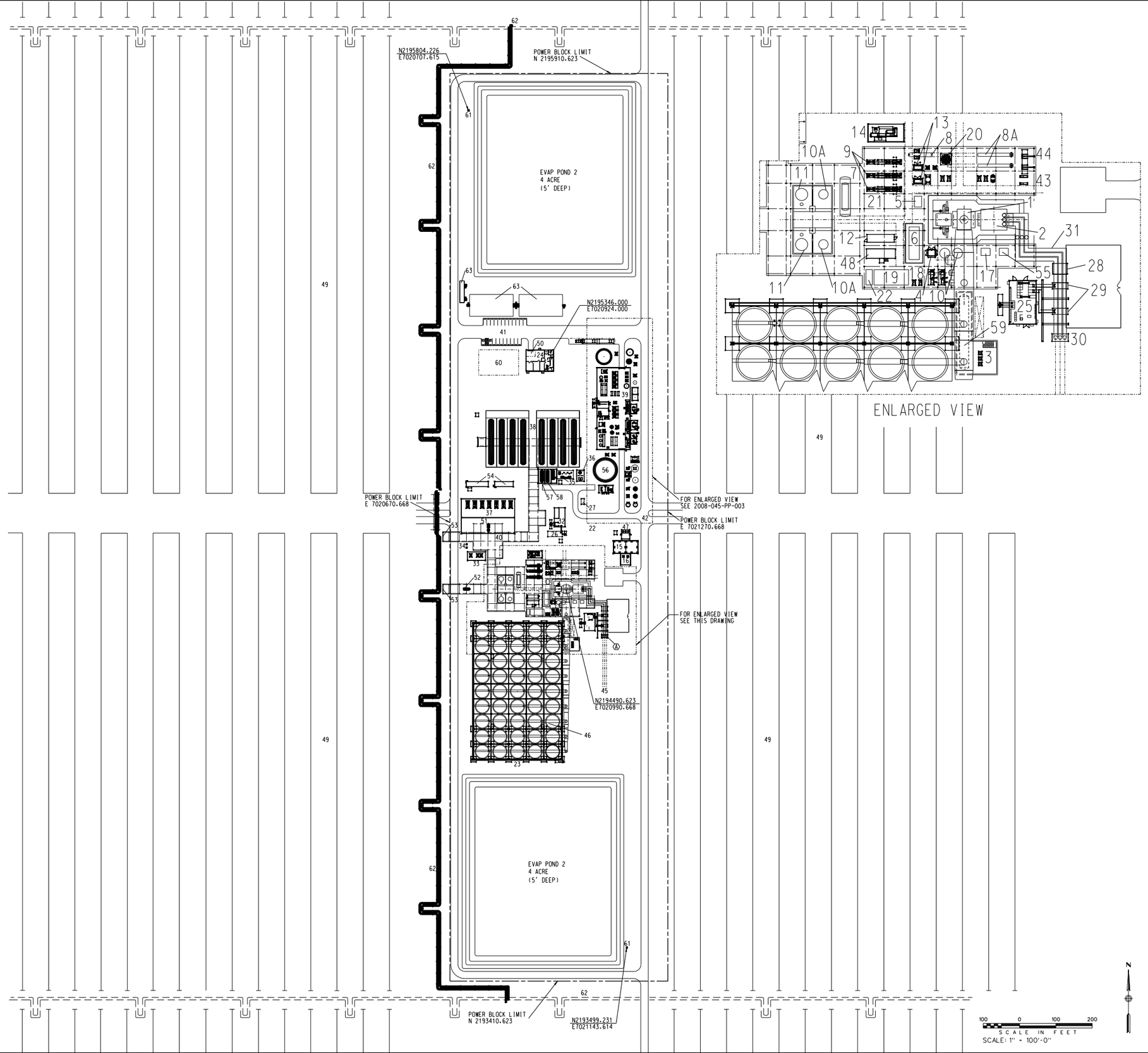
2008-045-E0-001

Preliminary

$$DATE$$ $$TIME$$ $$USERNAME$$ $$FILENAME$$

FIGURE 2-5

Revised General Arrangement of Power Block Area



DRAWING LEGEND

1. STEAM TURBINE
2. GENERATOR
3. CONDENSATE PUMPS
4. HYDRAULIC SKID
5. GLAND STEAM CONDENSER
6. LUBE OIL SKID
7. DEAERATOR
8. HP FEEDWATER HEATERS
8A. LP FEEDWATER HEATERS
9. FEEDWATER PUMPS
10. LP REHEATERS
10A. IP REHEATERS
11. BENSON BOILER
12. SAMPLE PANEL & LAB BUILDING
13. AIR COMPRESSORS
14. AUXILIARY BOILER
15. COOLING TOWER
16. CIRCULATING WATER PUMPS
17. CLEAN DRAINS TANK
18. CONDENSATE POLISHER PUMPS
19. CONDENSATE POLISHERS
20. CONDENSATE DRAINS TANK
21. GENERATION AREA PIPE RACK
22. CHEM FEED AREA
23. AIR COOLED CONDENSER (ACC)
24. CONTROL BUILDING
25. POWER CONTROL CENTER
26. EMERGENCY DIESEL GENERATOR
27. OIL/WATER SEPARATOR
28. GENERATOR CIRCUIT BREAKER
29. AUXILIARY TRANSFORMERS
30. GENERATION STEP UP TRANSFORMER
31. ISO PHASE BUS DUCT
32. HTF ELECTRICAL ROOM
33. FREEZE PROTECTION PUMPS
34. HTF HEATERS
35. HTF REGENERATION AND VESSELS
36. NITROGEN SYSTEM
37. HTF MAIN PUMPS
38. EXPANSION VESSELS
39. WATER TREATMENT AREA
40. PIPE RACK
41. PARKING AREA
42. ACCESS ROADS
43. CLOSED CYCLE COOLING WATER PUMPS
44. CLOSED COOLING WATER HEAT EXCHANGERS
45. 230 KV TRANSMISSION LINES
46. ACC MCCS
47. COOLING TOWER CHEM FEED BUILDING
48. CYCLE CHEMICAL FEED
49. SOLAR FIELD
50. MAINTENANCE AREA
51. COLD MIXING VESSEL
52. HOT MIXING VESSEL
53. HTF PIPING CONNECTION TO SOLAR FIELD
54. HTF MAIN PUMP VFD
55. CO2 STORAGE
56. FIRE & SERVICE WATER TANK
57. RECLAIM STORAGE TANK
58. RECLAIM COLLECTING TANK
59. ACC DRAINS TANK
60. SEPTIC DRAIN FIELD
61. WATER WELL
62. HTF PIPING
63. CONSTRUCTION TRAILERS

INTERCONNECT LIST

Ⓐ HV ELECTRICAL - HIGH SIDE TERMINALS OF GSU

- PRELIMINARY -
NOT FOR CONSTRUCTION

REV	DESIGN BY	DRAWN BY	CHECKED BY	DATE
E	ISSUED FOR REVIEW. REVISED LAYOUT FOR SIEMENS TURBINE AND BENSON BOILER. ADDED ENLARGED VIEW.			
	C. EDWARDS	C. EDWARDS	A. FILIP	05-17-11
D	ISSUED FOR REVIEW. REVISED COOLING TOWER BASIN. PIPE RACK. ACCESS ROADS. DEMIN TRAILER LOCATION. VFD BUILDINGS. HYDROGEN TRAILER PARKING AREA. ADDED HTF STEAM HEATERS. CONSTRUCTION TRAILER AREA			
	A. FILIP	A. FILIP	C. EDWARDS	10-14-10
C	ISSUED FOR REVIEW. REVISED ORIENTATION. PIPE RACK. STEAM TURBINE FOUNDATION. FEEDWATER HEATER ARRANGEMENT. ADDED HTF PUMP VFD BUILDING. BOILER FEED PUMP. PIPE TRANCH ADDED REFERENCE TO PP-003			
	A. FILIP	A. FILIP	C. EDWARDS	08-25-10
B	DELETED WEATHER STATION. ADDED BLOWDOWN SUMP. SEPTIC DRAIN FIELD. WATER WELLS. MOISTURE SEPARATOR. UPDATED EQUIPMENT LOCATIONS AND PIPE RACK OUTLINE REVISED AND RELOCATED CONTROL BUILDING. REVISED SETTLING POND DEPTH. ADDED POWER BLOCK LIMITS			
	A. FILIP	A. FILIP	C. EDWARDS	07-14-10
A	PRELIMINARY			
	A. FILIP	C. EDWARDS	S. LORENZ	6-24-10

SOLAR MILLENNIUM LLC

BSPP - BLYTHE SOLAR POWER PROJECT

Kiewit

Kiewit Power
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Lenexa, Kansas 66219

I HERBY ATTEST THAT THIS DESIGN CONFIRMS TO ALL ENGINEERING DESIGN REQUIREMENTS SET FORTH IN THE BSPP ENERGY COMMISSION'S DECISION AND IS IN COMPLIANCE WITH ALL APPLICABLE LORS.

PLOT PLAN
UNIT 1

ENGINEER/DESIGN ORIGINATOR	A. FILIP
LEAD ENG	R.TEETER
ENG MGR	S. LORENZ
PROJ MGR	S. LORENZ

DRAWING NUMBER

2008-045-PP-002

APPENDIX A

PROPOSED MODIFICATIONS TO CONDITIONS OF CERTIFICATION

INTRODUCTION

The following modifications to the approved Conditions of Certification are proposed as described in Section 3 of the Petition For Amendment. Additions are shown in ***bold italic*** and deletions are shown in ~~strikethrough~~.

AIR QUALITY

AQ-17 The project owner shall establish an inspection and maintenance program to determine, repair, and log leaks in HTF piping network and expansion tanks. Inspection and maintenance program and documentation shall be available to District staff upon request.

a. All pumps, compressors and pressure relief devices (pressure relief valves or rupture disks) shall be electronically, audio, or visually inspected once every operating day.

b. All accessible valves, fittings, pressure relief devices (PRDs), hatches, pumps, compressors, etc. shall be inspected quarterly using a leak detection device such as a Foxboro OVA 108 calibrated for methane.

c. Inspection frequency for accessible components, except pumps, compressors and pressure relief valves, may be changed from quarterly to annual when two percent or less of the components within a component type are found to leak during an inspection for five consecutive quarters.

d. Inspection frequency for accessible components, except pumps, compressors and pressure relief valves, shall be increased to quarterly when more than two percent of the components within a component type are found to leak during any inspection or report.

e. If ~~any evidence of a potential~~ ***a*** leak ***greater than 100 ppm above background*** is found***,*** the ***leaking component*** ~~indication of the potential leak~~ shall be ***repaired, replaced or removed*** ~~eliminated~~ within 7 calendar days of detection….

AQ-56 The project owner shall maintain a log of all inspections, repairs, and maintenance on equipment subject to Rule 461. Such logs or records shall be maintained at the facility for at least two (2) years and available to the District upon request. Records of Maintenance, Tests, Inspections, and Test Failures shall be maintained and available to District personnel upon request; record form shall be similar to the Maintenance Record form indicated in EO VR-401-~~A~~***B***, Figure 2N….

AQ-58 Pursuant to EO VR-401-~~A~~***B***, vapor vent pipes are to be equipped with Husky 5885 pressure relief valves or as otherwise allowed by EO….

AQ-59 The project owner shall perform the following tests within 60 days of construction completion and annually thereafter in accord with the following test procedures:

a. Determination of Static Pressure Performance of Vapor Recovery Systems at Gasoline Dispensing Facilities with Aboveground Storage Tanks shall be conducted per EO VR-401-~~A~~***B*** Exhibit 4

b. Phase I Adapters, Emergency Vents, Spill Container Drain Valve, Dedicated gauging port with drop tube and tank components, all connections, and fittings shall NOT have any detectable leaks; test methods shall be per EO VR-401-~~A~~***B*** Table 2-1, and….

c. Liquid Removal Test (if applicable) per TP-201.6, and

Summary of Test Data shall be documented on a Form similar to EO VR-401 ~~A~~***B*** Form 1

AQ-60 Pursuant to California Health and Safety Code sections 39600, 39601 and 41954, this aboveground tank shall be installed and maintained in accordance with Executive Order (EO) VR-401-~~A~~***B*** for EVR Phase I, and Standing Loss requirements….

AQ-61 Pursuant to EO VR-401-~~A~~***B***; Maintenance and repair of system components, including removal and installation of such components in the course of any required tests, shall be performed by OPW Certified Technicians….

AQ-62 Pursuant to EO VR-401-~~A~~***B***, Maintenance Intervals for OPW; Tank Gauge Components; Dust Caps Emergency Vents; Phase I Product and Vapor Adapters, and Spill Container Drain Valve, shall be conducted by an OPW trained technician annually….

AQ-64 The project owner shall; install, maintain, and operate EVR Phase I in compliance with CARB Executive Order VR-401-~~A~~***B***, and Phase II vapor recovery in accordance with G-70-116-F. In the event of conflict between these permit conditions and/or the referenced EO's the more stringent requirements shall govern….

BIOLOGICAL RESOURCES

BIO-12 To fully mitigate for habitat loss and potential take of desert tortoise, the Project owner shall provide compensatory mitigation at a 1:1 ratio for impacts to 6,95~~8~~***7*** acres, adjusted to reflect the final Project footprint. For purposes of this condition, the Project footprint means all lands disturbed in the construction and operation of the Blythe Project, including all linears, as well as undeveloped areas inside the Project's boundaries that will no longer provide viable long-term habitat for the desert tortoise….

BIO-20 To mitigate for habitat loss and direct impacts to Mojave fringe-toed lizards the Project owner shall provide compensatory mitigation at a 3:1ratio, which may include compensation lands purchased in fee or in easement in whole or in part, for impacts to stabilized or partially stabilized desert dune habitat (~~58~~***50*** acres or the acreage of sand dune/partially stabilized sand dune habitat impacted by the final Project footprint ***if the Project interconnects to CRSSAlternative 2 (Southern Alternative); or 69 acres if the Project interconnects to CRSS Avoidance Alternative 1***)….

BIO-28 The Project Owner shall provide compensatory mitigation for the total Project Disturbance Area and may provide such mitigation in three phases, Phase 1a, Phase 1b, and Phase 2, as described in Palo Verde Solar 1, LLC's Proposed Phased Construction and Mitigation (Galati & Blek [tn:57593]. Palo Verde Solar 1, LLC's Proposed Phased Construction and Mitigation: Blythe Solar Power Project Docket No. (09-AFC-6), dated July 15, 2010.). "Project Disturbance Area" encompasses all areas to be temporarily and permanently disturbed by the Project.

Project construction will occur in three phases that generally follow development of the solar units, with the exception of the first phase of the Project, Phase 1a, which will consist of two types of construction areas: (1) linear facilities, including the access road and communication lines and (2) non-linear facilities to include a staging/laydown area and a portion of the Unit 1 solar block area.

Phase 1b shall consist of the remainder of Unit 1 and Unit 2, and Phase 2 shall consist of the remainder of the Project (Units 3 and 4). These phases will generally include installation of fencing, clearing, grubbing and grading, and development of common facilities first, followed by the remaining power block units. All construction activities for the non-linear features during these subsequent phases will occur within desert tortoise exclusionary fenced areas that have been cleared in accordance with USFWS protocols.

The disturbance area for each project Phase and resource type is provided in the tables below. This table shall be refined prior to the start of each construction phase with the disturbance area adjusted to reflect the final

Project footprint for each phase. Prior to initiating each phase of construction the Project owner shall submit the actual construction schedule, a figure depicting the locations of proposed construction and amount of acres to be disturbed. Mitigation acres are calculated based on the compensation requirements for each resource type as described in the above Conditions of Certification – **BIO-12** (Desert Tortoise), **BIO-20** (Mojave Fringe-toed Lizard), **BIO-18** (Western Burrowing Owl), and **BIO-22** (State Waters). Compensatory mitigation for each phase shall be implemented according to the timing required by each condition.

For Interconnection to CRSS Avoidance Alternative 1

Phase	**Desert Tortoise**		**MFTL**		**WBO**	
	Impact (acres)	**Mitigation (acres)**	**Impact (acres)**	**Mitigation (acres)**	**Impact (individuals/pairs)**	**Mitigation (acres)**
Phase 1a	769	769	0	0	0	0
Phase 1b	2,995~~4~~***4***	2,995~~4~~***4***	~~58~~***69***	~~174~~***207***	1	19.5
Phase 2	3,193	3,193	0	0	1	19.5
Total	6,958~~7~~***7***	6,958~~7~~***7***	~~58~~***69***	~~174~~***207***	2	39

Phase	**State Waters – Direct**		**State Waters – Indirect**	
	Impact (acres)	**Mitigation (acres)**	**Impact (acres)**	**Mitigation (acres)**
Phase 1a	67	130	0	0
Phase 1b	231	409	36	51
Phase 2	294	665	146	189
Total	593	1,205	133	179

For Interconnection to CRSS Alternative 2 (Southern Alternative)

Phase	*Desert Tortoise*		*MFTL*		*WBO*	
	Impact (acres)	*Mitigation (acres)*	*Impact (acres)*	*Mitigation (acres)*	*Impact (individuals/pairs)*	*Mitigation (acres)*
Phase 1a	*769*	*769*	*0*	*0*	*0*	*0*
Phase 1b	*2,994*	*2,994*	*50*	*151*	*1*	*19.5*
Phase 2	*3,193*	*3,193*	*0*	*0*	*1*	*19.5*
Total	*6,957*	*6,957*	*50*	*151*	*2*	*39*

Phase	*State Waters – Direct*		*State Waters – Indirect*	
	Impact (acres)	*Mitigation (acres)*	*Impact (acres)*	*Mitigation (acres)*
Phase 1a	*67*	*130*	*0*	*0*
Phase 1b	*231*	*409*	*36*	*51*
Phase 2	*294*	*665*	*146*	*189*
Total	*593*	*1,205*	*133*	*179*

APPENDIX B

BIOLOGICAL RESOURCES SUMMARY

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Oakland, CA 94612

510.622.6600 tel
510.834.4304 fax

Memorandum

Date:	June 3, 2011
To:	Elizabeth Ingram, Solar Millennium
From:	Angie Harbin-Ireland, AECOM
Subject:	BSPP Gen-Tie Alignment Revisions: Biological Resources Summary

Distribution:	Alice Harron, Solar Millennium Scott Galati, Galati and Blek Mark Luttrell, AECOM Jennifer Guigliano, AECOM

Introduction and Methods

AECOM biologists reviewed proposed revisions to the Blythe Solar Power Project Gen-Tie alignment that are necessary to accommodate the Colorado River Substation (CRS) alternatives (Alternative 1 and Alternative 2). Two alternative Gen-Tie alignments are proposed which vary slightly from the alignment considered and approved by the CEC in September 2010. The majority of the alignment shift is accommodated by the overall Biological Resources Survey Area (BRSA) assessed during the certification process (Figure 1). Biological investigations conducted by Southern California Edison (SCE) for the two CRS alternatives encompass portions of the resulting Gen-Tie alignment alternatives that were not included in the original BRSA. SCE's biological survey study area is also shown on Figure 1. Their biologists recently conducted the following biological surveys within overlapping portions of the two Gen-Tie alignment alternatives:

- Jurisdictional waters determination (Mar 21 - Mar 24)
- Desert tortoise protocol surveys (Apr 4 - Apr 8)
- Special-status wildlife surveys (Apr 4 - Apr 8)
- Special-status plant surveys (Apr 6 - Apr 11)

Comparisons with AECOM's 2009/2010 BRSA and survey buffers as well as recent SCE CRS biological study area boundaries were made to determine data gaps requiring additional survey efforts (Figure 1). The following additional surveys were conducted by AECOM biologists for identified data gaps within the two Gen-Tie alignment alternatives on May 3-4, 2011 to obtain 100% coverage for all biological resources:

Alternative 1 – 16.2 Acres

- Desert Tortoise Full Coverage Protocol Surveys

- Burrowing Owl Burrow Mapping and Focused Survey plus a 500 foot buffer
- Mojave Fringe Toed Lizard Habitat Assessment
- Couch's Spadefoot Toad Habitat Assessment
- State Waters Delineation

Alternative 2 – 1.5 Acres

- Desert Tortoise Full Coverage Protocol Surveys
- Mojave Fringe Toed Lizard Habitat Assessment
- Couch's Spadefoot Toad Habitat Assessment

Corridor – 4.2 Acres

- Desert Tortoise Full Coverage Protocol Surveys
- Mojave Fringe Toed Lizard Habitat Assessment
- Couch's Spadefoot Toad Habitat Assessment

These survey areas are depicted on Figures 1 and 2. An additional botanical survey of these areas to confirm conditions was conducted on April 11, 2011 according to CDFG, CNPS, and USFWS protocols. As shown on Figure 1, vegetation mapping and botanical surveys conducted in 2009/2010, which were completed at a 100% coverage level, encompassed both alternative Gen-Tie alignments given the size of the buffer zones. Given that average rainfall was greater over this period than in 2011, the previous botanical survey results can be considered most reliable.

Surveys were conducted according to USFWS protocols for desert tortoise and CDFG protocols for burrowing owl and included CDFG and CEC buffer survey requirements. For most areas, the buffer surveys conducted as part of the original biological surveys in 2009/2010 were adequate to encompass the Gen-Tie alternatives. The study areas were evaluated for evidence of ponding or areas that could provide potential breeding habitat for Couch's spadefoot toad.

Results

Vegetation communities present within the Gen-Tie alternatives are shown on Figure 2. Habitats within the recently surveyed/revised portions of the Gen-Tie alignment consist of stabilized and partially stabilized desert dunes within Alternative 1 and Alternative 2, with the inclusion of a small portion of Sonoran creosote bush scrub just north of CRS Alternative 2.

The areas surveyed by AECOM on May 3-4, 2011 are characterized as stabilized and partially stabilized sand dune habitats. They provide habitat for Mojave fringe toed lizards which were observed during the surveys. No desert tortoise or burrowing owls were found and no suitable burrows or potential habitat for either species is present within these areas. Suitable habitat for Couch's spadefoot toad and state waters were also absent given the sandy nature of the area. There are no opportunities for water movement or ponding in the survey area.

AECOM reviewed March and April survey data and draft memos provided by SCE for their study area. No state waters or potential Couch's spadefoot toad habitat was documented. Mohave fringe-toed lizards

were found within dune habitats and a DT burrow was documented within creosote bush scrub habitat just north of the substation Alternative 2 (SCE Figure 2). No burrowing owls or active burrows were found.

No new sensitive botanical resources were observed by AECOM or SCE biologists although the conditions this spring resulted in poor germination and flowering of resident plants. It is assumed that those spring blooming sensitive plant populations previously detected and analyzed for the BSPP in this area (Harwood's milkvetch, Harwood's wollystar, and ribbed cryptantha) are still present and minimization measures outlined in COC BIO-19 will be carried out for either Gen-Tie alignment alterative.

Conclusions

Overall biological resource impacts as identified in CEC COC BIO-28 for the BSPP are updated below for the two Gen-tie alternatives based on this evaluation. Acreage changes from the original impact analysis are highlighted in bold and only apply to desert tortoise and Mojave fringe toed lizard habitat as the other resources are not present within the revised portions of the Gen-Tie alternatives.

Alternative 1

Phase	**Desert Tortoise**		**MFTL**		**WBO**	
	Impact (acres)	**Mitigation (acres)**	**Impact (acres)**	**Mitigation (acres)**	**Impact (individuals/ pairs)**	**Mitigation (acres)**
Phase 1a	769	769	0	0	0	0
Phase 1b	**2,994**	**2,994**	**68.7**	**206.1**	1	19.5
Phase 2	3,193	3,193	0	0	1	19.5
Total	**6,957**	**6,957**	**68.7**	**206.1**	2	39

Phase	**State Waters – Direct**		**State Waters – Indirect**		**Big Horned Sheep**	
	Impact (acres)	**Mitigation (acres)**	**Impact (acres)**	**Mitigation (acres)**	**Impact (acres)**	**Mitigation (acres)**
Phase 1a	67	130	0	0	27	27
Phase 1b	231	409	36	51	488	488
Phase 2	294	665	146	189	414	414
Total	592	1,204	182	240	929	929

Alternative 2

Phase	**Desert Tortoise**		**MFTL**		**WBO**	
	Impact (acres)	**Mitigation (acres)**	**Impact (acres)**	**Mitigation (acres)**	**Impact (individuals/ pairs)**	**Mitigation (acres)**
Phase 1a	769	769	0	0	0	0

Phase 1b	**2,994**	**2,994**	**50.3**	**150.9**	1	19.5
Phase 2	3,193	3,193	0	0	1	19.5
Total	**6,957**	**6,957**	**50.3**	**150.9**	2	39

Phase	**State Waters – Direct**		**State Waters – Indirect**		**Big Horned Sheep**	
	Impact (acres)	**Mitigation (acres)**	**Impact (acres)**	**Mitigation (acres)**	**Impact (acres)**	**Mitigation (acres)**
Phase 1a	67	130	0	0	27	27
Phase 1b	231	409	36	51	488	488
Phase 2	294	665	146	189	414	414
Total	592	1,204	182	240	929	929

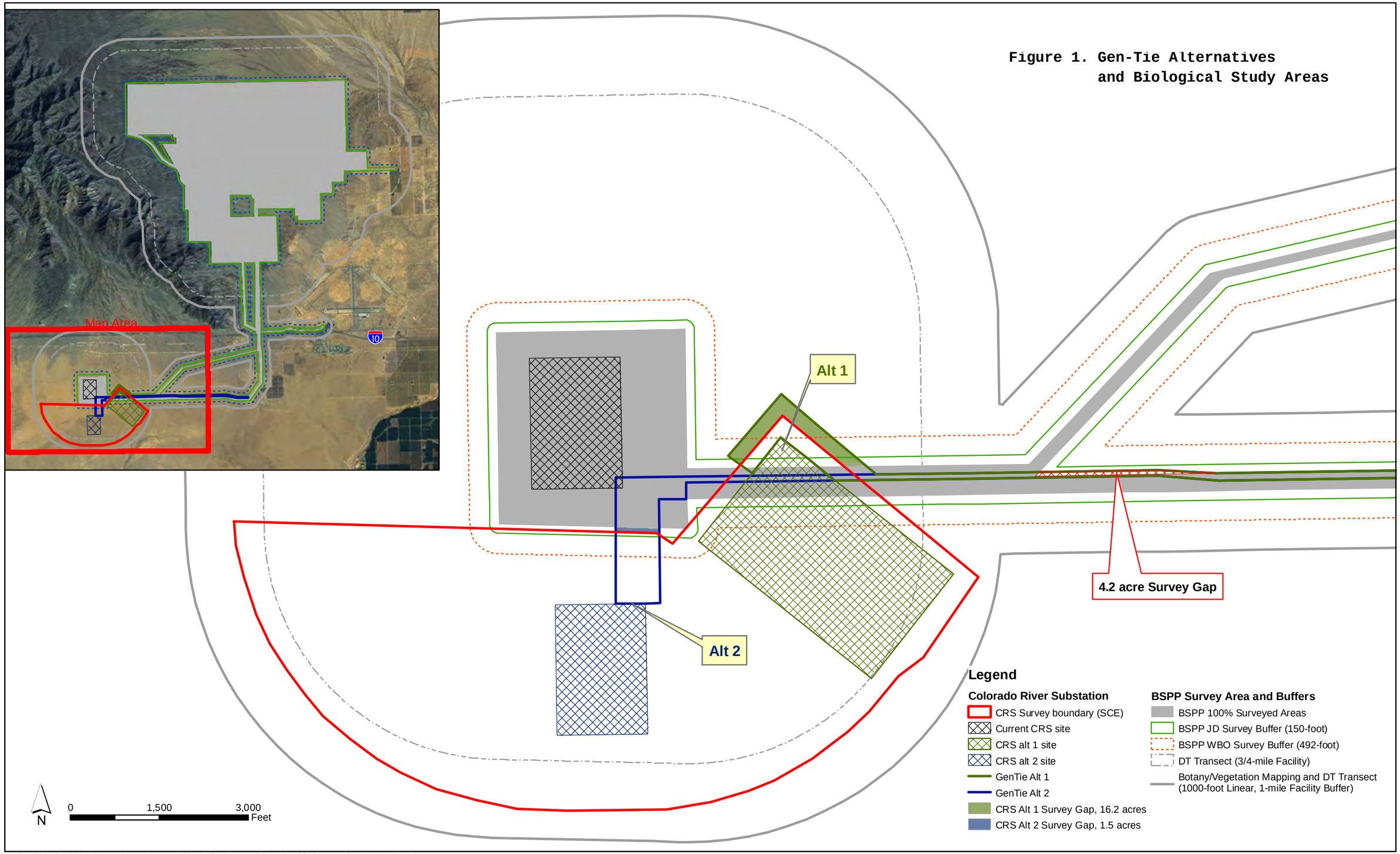

Figure 1. Gen-Tie Alternatives and Biological Study Areas

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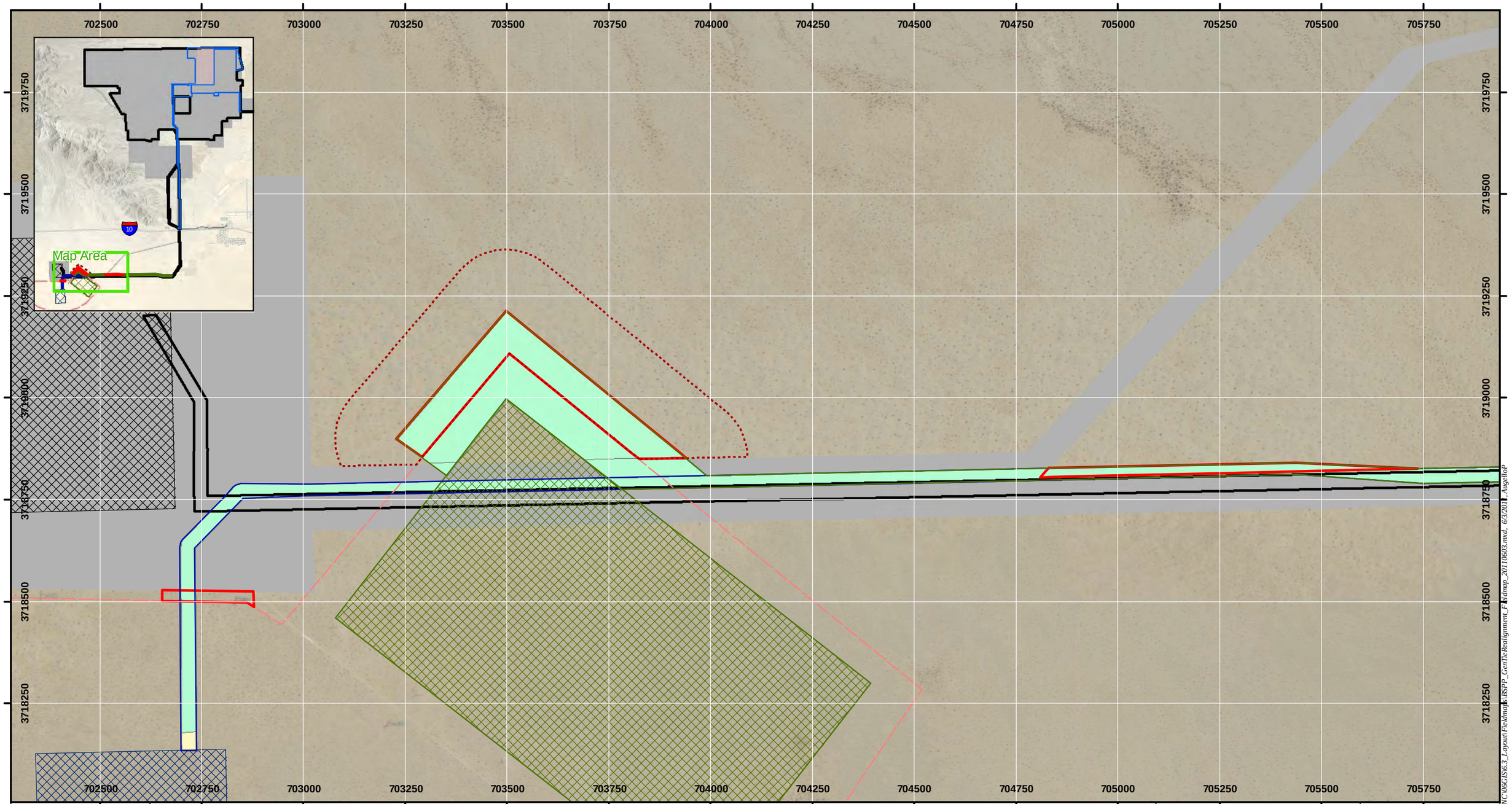


Map Location

Legend

- Survey Areas
- WBO Survey Buffer
- Disturbance Area
- GenTie Alt 1
- GenTie Alt 2
- Phase 1a
- BSPP 100% Surveyed Areas

Colorado River Substation

- SCE Survey boundary
- Current CRS site
- CRS alternative site 1
- CRS alternative site 2

Vegetation communities

- Sonoran Creosote Scrub Brush
- Stabilized and Partially Stabilized Desert Dunes

0 750 1,500 Feet

1:9,000 1 inch = 750 feet

N

Blythe Solar Power Project

Figure 2
GenTie Alternatives
Vegetation

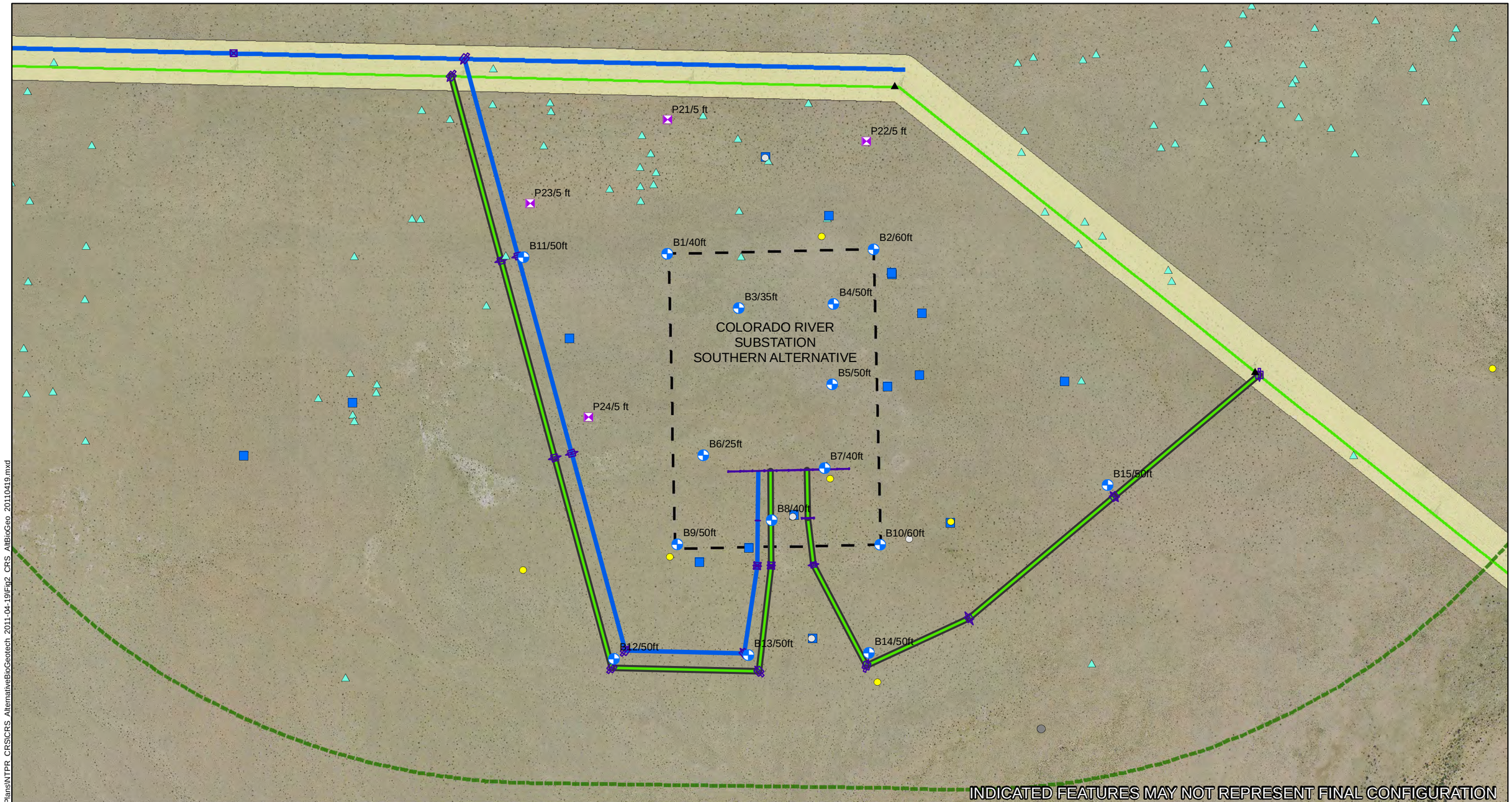
Source: NAIP 2009; RiversideCounty 2010; AECOM 2010
Coordinate Grid System: UTM Z11 N, NAD 83, meters

Solar Millennium LLC

AECOM

Date: June 2011

Path: P:\201111\280150.01_BSPP_COMPLNC\06GIS\6.3_Layout\Fieldmap\BSPP_GenTieRealignment_Fieldmap_20110603.mxd, 6/3/2011, AngelloP



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SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL™ Company

San Bernardino County
Riverside County
San Diego County
Imperial County

1 inch = 700 feet

0 700
Feet

Source: Southern California Edison / California Resources Agency Legacy Project 2005 / USDA Forest Service / ESRI

Imagery Source: 2007, 2008, 2009 1ft resolution flown aerial imagery, Eagle Aerial Imaging. Project features shown represent best available data as of March 24, 2011. Project features may change. Biology data received April 19, 2011.

Devers-Palo Verde No.2 Transmission Line Project	2011

Southern California Edison (SCE) has no reason to believe that there are any inaccuracies or defects with information incorporated in this work and make no representations of any kind, including, but not limited to, the warranties of merchantability or fitness for a particular use, nor are any such warranties to be implied, with respect to the information or data, furnished herein. No part of this map may be reproduced or transmitted in any form or by any means electronic or mechanical, including photo copying and recording system, except as expressly permitted in writing by SCE.

LEGEND

- Proposed Substation
- Existing Substation

Proposed 500 kV Route

- Colorado River to Devers (CR-D)
- Devers to Valley (DV2)
- DPV1 Proposed Route
- DPV1 Existing Route
- DPV No 1 & 2 Right-of-Way
- Proposed Project BRSA
- Borehole
- Pit

Special Status Wildlife Observations

- Raven
- Mohave Fringe-toed Lizard
- Desert Kit Fox
- Tortoise Burrow
- Unoccupied Burrow With Sign
- Unoccupied Burrow No Sign

Figure 2

2011 SURVEY DATA AND PROPOSED GEOTECHNICAL BORE AND PIT LOCATIONS

DRAFT FOR REVIEW