SUBSTATION REPLACEMENT PROJECT

SOLANO COMMUNITY COLLEGE DISTRICT

4000 SUISUN VALLEY ROAD, FAIRFIELD, CA 94534

PROJECT NO: SUBMITTAL

GENERAL NOTES

1. FIELD VERIFY ALL EXISTING CONDITIONS AND NOTIFY ARCHITECT OF ACTUAL FIELD CONDITIONS PRIOR TO THE COMMENCEMENT OF ANY WORK. THIS SHALL INCLUDE UTILITY LOCATIONS, LOCATIONS OF FIXTURES BASES AND ALL UTILITY RUNS AND PROPOSED IN-FIELD CONDITIONS FOR CONFORMANCE TO DOCUMENTS.

2. ELEVATIONS: ALL ELEVATIONS ARE TOP OF FINISH FLOOR U.D.N.

3. UNRESTRICTED ACCESS WITHIN SIDEWALKS AND ROADWAYS SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION. ALL EXISTING UTILITY LOCATIONS, LOCATIONS OF FIXTURES BASES AND ALL UTILITY RUNS SHALL HAVE ACCESS AND DOES NOT REQUIRE DSA STRUCTURAL AND FIRE LIFE SAFETY APPROVAL. THE WORK SHALL COMPLY WITH ALL MANIFESTATION REQUIREMENTS.

4. ALL WORK PERFORMED UNDER THESE DOCUMENTS SHALL BE IN ACCORDANCE WITH ALL APPLICABLE CODES AND REQUIREMENTS. ALL NEW WORK SHALL NOT DIMINISH ANY EXISTING CONDITIONS WITH RESPECT TO THEIR ADHERENCE TO APPLICABLE CODES AND REQUIREMENTS (TYP.). THE DISTRICT MAY ELECT TO HAVE INSPECTIONS AND SUPERVISION OF WORK BY A LICENSED INSPECTOR OF RECORD (JCR).

5. THESE DOCUMENTS ARE TO REFLECT THE CURRENTLY EFFECTIVE DESIGN, CONSTRUCTION, AND INSPECTION PROVISIONS OF THE CODE TITLE 24 AS ADOPTED BY THE CALIFORNIA BUILDING STANDARDS COMMISSION.

6. CONTRACTOR SHALL ENGAGE PRIVATE UTILITY LOCATOR TO VERIFY AND LOCATE ANY UTILITIES WITHIN AREA SCOPED FOR WORK PRIOR TO COMMENCEMENT OF DEMO WORK. CONTRACTOR SHALL NOTIFY ARCHITECT IMMEDIATELY FOR ANY POTENTIAL CONFLICT WITH PROPOSED WORK FOR FUTURE RELOCATION.

CODES & REGULATIONS (SEE ES101 FOR ADD. CODES)

INDEX

PROJECT DIRECTORY

COVER SHEET INDEX

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SOLANO COMMUNITY COLLEGE DISTRICT

4000 Suisun Valley Road

Fairfield, CA 94534
1.1 SCOPE

The existing 12kV underground distribution system consists of 15kV, 500kcmil copper cables rated at 465 amps and are installed in underground conduits. Due to cable failures in the past, all 12kV cables between all five (5) substations will be removed and replaced with new 12kV cables. The existing 12kV cables will be removed in accordance with the Contractor's approved plan. The new 12kV cables will be installed in the same underground conduits as the existing cables. All 12kV cables will be installed in underground conduits with new cable dampers.

The existing 12kV switching equipment in each substation will be removed and replaced with new switching equipment. The existing 12kV switching equipment will be removed in accordance with the Contractor's approved plan. The new 12kV switching equipment will be installed in the same locations as the existing equipment.

The existing 12kV feeders from each substation to the campus will be replaced with new feeders. The existing 12kV feeders will be removed in accordance with the Contractor's approved plan. The new 12kV feeders will be installed in the same locations as the existing feeders.

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1. Substation #1 & #2 to be demo and new substation by Eaton as replacement. See specification for guidelines on removal and replacement process.

2. Existing gear to remain. No work outside of scope.

3. Reuse all existing feeders. Contractor shall include splicing as part of base bid. All feeders shall match existing feeder sizes.

General Notes:

1. Before any work can begin coordinate with PG&E and SCCD for shutdown. Following all requirements for tagging and lock-out PG&E power pole.

2. Refer to specifications for new equipment to be used in replacement of existing substations.

3. No additional electrical load has been added to the system.
1. CONTRACTOR SHALL REVIEW THE OWNER'S CONDITIONS FOR HAZARDOUS MATERIALS (SEE 007313 AND 007756) AS WELL AS THE SOLANO COMMUNITY COLLEGE 12kv/480v FACILITIES INVESTIGATION REPORT (DATED AUGUST, 2009) PREPARED AND DISTRIBUTED BY THE COORDINATING OFFICE TO ASSIST IN THEIR ASSESSMENT OF THE EXISTING EQUIPMENT AND PROJECT SITE FOR HAZARDOUS MATERIALS. IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE ALL WORK FOR THIS PROJECT, INCLUDING DEMOLITION, ABATEMENT AND DISPOSAL OF HAZARDOUS MATERIALS. EQUIPMENT AS INDIcATED IN THE REPORT ALONG WITH THE CONTRACTOR'S REASONABLE ASSESSMENT. NO WORK SHALL COMMENCE UNTIL THE PROJECT SITE HAS BEEN PROPERLY ABATED FOR HAZARDOUS MATERIALS AND THE CONTRACTOR HAS CONFORMED TO ALL REQUIREMENTS OUTLINED IN THE DOCUMENTS AND WITH ALL AGENCIES HAVING JURISDICTION FOR SUCH MATERIALS AND THEIR ABATEMENT. THE COORDINATION OF THIS WORK SHALL BE DONE SUCH THAT THE UTILITY INTERRUPTION SHALL BE MINIMIZED AS MUCH AS FEASIBLE.
NOTES:

GROUND WALL 3" X 12' GROUND ROD: CADWELD GROUND ROD TO 4/0 CU BARE (TYP)

SUBSTATION #2 GROUND CEMENT TO FENCE POST. CADWELD TO 4/0 GROUND SYSTEM (TYP)

GROUND WALL 3" X 12' GROUND ROD: CADWELD GROUND ROD TO 4/0 CU BARE (TYP)

CONCRETE COVER WITH 3" STEEL ROD. CADWELD SINGLE CONNECTION.

FINISHED GRADE (TYP)

CONCRETE PAD 6" THICK (TYP)

ANCHOR DETAIL FOR REFERENCE ONLY. REFER TO MANUFACTURES ENGINEERED SPECIFICATIONS FOR EACH SECTION

GENERAL NOTES:

SHOES ON NEW FENCING TO OSHA STANDARDS

CONCRETE PAD 6" THICK (TYP)

FINISH GRADE (TYP)

SUBSTATION #1 NEW TOP VIEW

SCALE: 3/8"=1'-0"

SUBSTATION #1 NEW FRONT VIEW

SCALE: 3/8"=1'-0"

SUBSTATION #1 NEW SIDE VIEW

SCALE: 3/8"=1'-0"

SUBSTATION #1 NEW END VIEW

SCALE: 3/8"=1'-0"

ANCHOR DETAIL TYPICAL

FENCE

GROUND GRID

PAD

CONDUIT

GROUND WELLS DETAILS AT CORNERS (TYP)

ANCHOR DETAIL TYPICAL

* ANCHOR DETAIL FOR REFERENCE ONLY. REFER TO MANUFACTURES ENGINEERED SPECIFICATIONS FOR EACH SECTION

REPLACE PRE-EXISTING CAUTION SIGNS ON NEW FENCING TO OSHA STANDARDS

REPLACE PRE-EXISTING CAUTION SIGNS ON NEW FENCING TO OSHA STANDARDS

TEST RESULTS SHOW WE ARE WELL WITHIN GROUND RESISTANCE REQUIREMENTS. FOR A SINGLE GROUND ROD, A READING OF 25OHMS OR LESS IS REQUIRED. NO UPDATES WILL BE NEEDED TO GROUNDING SYSTEM WHEN NEW SUBSTATION IS INSTALLED. CONTACT CALIFORNIA SWITCH GEAR & SOLAR, INC. AT 707.688.3643 FOR QUESTIONS.
1. Contractor shall review the Owner's Conditions for Hazardous Materials (see Section 00 73 13, 00 77 56, and SCCD Facilities Investigation Report dated August, 2009) as well as the Solano Community College 12kv/480v Facilities Investigation Report to assist in their assessment of the existing equipment and project site for hazardous materials. It shall be the sole responsibility of the Contractor to coordinate all work for this project, including demolition, abatement and removal of hazardous materials. Equipment, as indicated in the reports along with the Contractor's subsequent assessment, no work shall commence until the project site has been properly abated for hazardous materials based on the requirements and procedures outlined in the documents and not all hazardous having existed for site materials and their effect. The utility shall not be interrupted for any period of time that the utility interruption shall be minimized as much as possible.

2. Remove and properly dispose of equipment as shown, see Section 02 41 19 selective demolition for additional requirements. Coordinate work with hazardous materials abatement to ensure safe working environment.

3. Existing concrete pad to remain, protect as necessary.

Existing vaults to remain, protect as necessary.

OCCUPIED FEEDER IN CONDUIT
RESERVED STUB UP CONDUITS

EXISTING VAULT
EXISTING VAULT

SUBSTATION #2 EXISTING PLAN

EXISTING ELEVATION 480v DISTRIBUTION

FINISH GRADE (TYP)
1. REUSE EXIST LIGHT RELAY PANELS. FIELD VERIFY MOUNTING HEIGHT (TYP)
2. EXISTING FENCE TO REMAIN OUTSIDE OF SCOPE
3. EXISTING VAULTS TO REMAIN OUTSIDE OF SCOPE
4. EXISTING POLE LIGHT TO REMAIN OUTSIDE OF SCOPE
5. EXISTING ENCLOSURE DOOR TO REMAIN
6. 96" CLEARANCE PER PG&E GREEN BOOK SECTION 5.4.4, PAGE 5-11, TABLE 5-2
7. WORKING SPACE DIMENSIONS
8. SUBSTATION #2 RESULTS
   TEST POINT 1 RESISTANCE ___ ohms(READING NOT OBTAINABLE)
   TEST POINT 2 RESISTANCE 1.10ohms
   TEST RESULTS SHOW WE ARE STILL WITHIN GROUND RESISTANCE REQUIREMENTS.
   FOR A SINGLE GROUND ROD, A READING OF 25ohms or LESS IS REQUIRED. NO
   UPDATES WILL BE NEEDED TO GROUNDING SYSTEM WHEN NEW SUBSTATION IS
   INSTALLED. TEST POINT ONE READING WAS UNOBTAINABLE  "CONDUCTOR PASSES
   THROUGH BOTTOM OF CABINET AND CANNOT BE DETERMINED IF IT IS IN FREE OR
   PASSES ONTO A GROUND ROD CONTACT CALIFORNIA SWITCH GEAR & SOLAR, INC. AT
   707.688.3643 WITH QUESTIONS

ANCHOR DETAIL FOR REFERENCE ONLY. REFER TO MANUFACTURER'S ENGINEERED SPECIFICATIONS FOR EACH
SECTION

GENERAL NOTES:
- REFER TO SPECIFICATION SHEET FOR SUBSTATION LIGHTING
- REFER TO SPECIFICATION SHEET FOR SUBSTATION ENCLOSURE DOOR

* PANELED MOUNTING DETAILS
- PANEL & STRUT MOUNTING PENETRATIONS TO THE SUBSTATION WOULD BE WEATHER-PROOF RATED SILICON SEALED

SUBSTATION #2 PROPOSED PLAN

SUBSTATION #2 PROPOSED ELEVATION