THE STATE of ALASKA
GOVERNOR MIKE DUNLEAVY

Department of Corrections
DIVISION OF ADMINISTRATIVE SERVICES

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Issue Date: December 8, 2023

ATTN: Vendors

RE:	**Project Name:**	SCCC Transformer and Pad Replacement Project
	Project Number:	230004026-1
	Project Location:	Seward, Alaska
	RFP Deadline:	December 20, 2023 @ 2:00 p.m. local time.

Addendum # Five (5)

This addendum forms a part of the contract documents and modifies the original drawings and/or specifications for the subject work. In case of conflicts between this addendum and previously issued documents, this addendum shall take precedence.

The following are questions from interested parties and the department ‘s response:

1. Given Seward's climate and the need to test the grounding prior to energization of the transformers as well as interconnection of the individual ground rings will the project wave 260525 3.7 3 C 3 a?. Considering the feasibility of timing the weather and maintaining generation on until the weather meets the current specifications, the boiler plate specification doesn't appear to be in the projects best interest.

   RESPONSE: Section 3.7.C.3.a can be disregarded. Ground system tests do not need to be performed on dry days.

2. NETA ATS Ch 7.3.3 provides many options for Partial Discharge testing. Please be more specific on which method and offline/online the project requires.

   RESPONSE: Perform offline VLF partial discharge tests on cables.

3. What is the point of measuring the secondary voltage on each transformer other than at the time of energization prior to applying load? This is the time when the transformer taps can be adjusted. The City of Seward's Spring Creek substation which feeds this facility has a LTC which will maintain the voltage to a specific voltage level at the substation. If there are any imbalances on the secondary, this is due to the facility load imbalance, nothing to do with the SOW under this contract.

   RESPONSE: The purpose is to verify the secondary voltage of the transformers and adjust the transformer taps. The Contractor is not responsible for facility load balancing.

4. Please provide referenced 26 05 33 referenced within the table of contents.

   RESPONSE: Section 26 05 33 is not included in the design. Remove 26 05 33 from

table of contents.

5. Please provide specification(s) for the service entrance equipment that needs to be provided under this contract.

   RESPONSE: See attached specification section 262816 for enclosed switches and circuit breakers.

6. Mineral Oil (addendum drawing) or FR3?

   RESPONSE: FR3.

7. Is the large transformer a VFI unit?

   RESPONSE: Yes.

8. Bushings on the large transformer are showing 600A on the addendum drawing, however, everything else is 200A Loadbreak.

   RESPONSE: Note that the transformer cutsheets are for reference only and are preliminary information provided as a basis of design. Dead break or load break connections are acceptable.

9. Bushings on the 300kVA addendum drawing are calling out 35kV HV bushing w/15kV Insert?

   RESPONSE: Utilize 15kV bushings. The transformer cutsheets are for reference only and are preliminary information provided as a basis of design. Contractor shall work with their preferred vendor/manufacturer to develop final equipment submittals.

10. Is there a spec for the Padmounted Switch? I only see that they called out a PME-9.

    RESPONSE: Padmount switch basis of design is an S&C PME-9 to match the existing installation. Contractor shall provide an equal or similar product.

11. 1500kVA (addendum drawing) or 2000kVA?

    RESPONSE: If this question is in regard to transformer T-23, it is a 2000kVA Transformer.

12. Cooper has about 3-4 year lead time. I am looking for alternative transformers to keep the schedule posted.

    RESPONSE: Understood that there are long lead times associated with pad mount transformers. Please note that the transformer cutsheets provided are for reference only and were used as a basis of design. Contractor shall work with their preferred vendor/manufacturer to develop final equipment submittals.

13. Vendor has two ways that they can do the concrete: precast and then supply them or to pour in place. Which would you prefer?

    RESPONSE: Either method is allowable.

14. Our rebar fabricators would need access to the rebar details to manufacture the reinforcing scope of work. Are we able to provide just that information to them, making sure that no other details are passed on?

    RESPONSE: Sharing the design information with vendors/manufacturers is acceptable as long as they are not to be duplicated in anyway or posted on any media platform without the direct approval of the Alaska Department of Corrections. Violators may be prosecuted.

This addendum is considered part of the Request for Proposal (RFP) and is to be acknowledge on your bid proposal.

Please contact me if you have any questions.

Sincerely,

Michael Lim

Michael Lim
Procurement Specialist V

cc: John Gard, Facilities Manager I, DOC
William Merchant, Facilities Manager II, DOC
Clif Reagle Facilities Manager II, DOC

End of Addendum #5, Total pages with attachment is 9

SECTION 262816 - ENCLOSED SWITCHES AND CIRCUIT BREAKERS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Fusible switches.
2. Molded-case circuit breakers (MCCBs).
3. Enclosures.

1.2 DEFINITIONS

A. GFEP: Ground-fault circuit-interrupter for equipment protection.

B. GFLS: Ground-fault circuit-interrupter for life safety.

C. SPDT: Single pole, double throw.

1.3 ACTION SUBMITTALS

A. Product Data:

1. For each type of enclosed switch, circuit breaker, accessory, and component indicated. Include nameplate ratings, dimensioned elevations, sections, weights, and manufacturers' technical data on features, performance, electrical characteristics, ratings, accessories, and finishes.
2. Enclosure types and details for types other than UL 50E, Type 1.
3. Current and voltage ratings.
4. Short-circuit current ratings (interrupting and withstand, as appropriate).
5. Detail features, characteristics, ratings, and factory settings of individual overcurrent protective devices, accessories, and auxiliary components.

B. Shop Drawings: For enclosed switches and circuit breakers.

1. Include plans, elevations, sections, details, and attachments to other work.
2. Include wiring diagrams for power, signal, and control wiring.

C. Field Quality-Control Submittals:

1. Field quality-control reports.

1.4 INFORMATIONAL SUBMITTALS

A. Sample warranties.

1.5 CLOSEOUT SUBMITTALS

A. Warranty documentation.

1.6 MAINTENANCE MATERIAL SUBMITTALS

A. Spare Parts: Furnish to Owner spare parts, for repairing enclosed switches and circuit breakers, that are packaged with protective covering for storage on-site and identified with labels describing contents. Include the following:

1. Fuses: Equal to 10 percent of quantity installed for each size and type, but no fewer than three of each size and type.
2. Fuse Pullers: Two for each size and type.

PART 2 - PRODUCTS

2.1 GENERAL REQUIREMENTS

A. Source Limitations: Obtain products from single manufacturer.

B. Electrical Components, Devices, and Accessories: Listed and labeled in accordance with NFPA 70, by qualified electrical testing laboratory recognized by authorities having jurisdiction, and marked for intended location and application.

2.2 FUSIBLE SWITCHES

A. Type HD, Heavy Duty:

1. Single throw.
2. Three pole.
3. Voltage Rating As Indicated.
4. UL 98 and NEMA KS 1, horsepower rated, with clips or bolt pads to accommodate fuses.
5. Lockable handle with capability to accept three padlocks, and interlocked with cover in closed position.

B. Accessories:

1. Equipment Ground Kit: Internally mounted and labeled for copper and aluminum ground conductors.
2. Neutral Kit: Internally mounted; insulated, capable of being grounded and bonded; labeled for copper and aluminum neutral conductors.
3. Service-Rated Switches: Labeled for use as service equipment.
4. Lugs: Mechanical type, suitable for number, size, and conductor material.

2.3 MOLDED-CASE CIRCUIT BREAKERS

A. Circuit breakers must be constructed using glass-reinforced insulating material. Current carrying components must be completely isolated from handle and accessory mounting area.

B. Circuit breakers must have toggle operating mechanism with common tripping of all poles, which provides quick-make, quick-break contact action. Circuit-breaker handle must be over center, be trip free, and reside in tripped position between on and off to provide local trip indication. Circuit-breaker escutcheon must be clearly marked on and off in addition to providing international I/O markings. Equip circuit breaker with push-to-trip button, located on face of circuit breaker to mechanically operate circuit-breaker tripping mechanism for maintenance and testing purposes.

C. Maximum ampere rating and UL, IEC, or other certification standards with applicable voltage systems and corresponding interrupting ratings must be clearly marked on face of circuit breaker.

D. MCCBs must be equipped with device for locking in isolated position.

E. Lugs must be suitable for 75 deg C rated wire.

F. Standard: Comply with UL 489 with required interrupting capacity for available fault currents.

G. Thermal-Magnetic Circuit Breakers: Inverse time-current thermal element for low-level overloads and instantaneous magnetic trip element for short circuits. Adjustable magnetic trip setting for circuit-breaker frame sizes 250 A and larger.

H. Features and Accessories:

1. Standard frame sizes, trip ratings, and number of poles.
2. Lugs: Mechanical type, suitable for number, size, trip ratings, and conductor material.

2.4 ENCLOSURES

A. Enclosed Switches and Circuit Breakers: UL 489, NEMA KS 1, UL 50E, and UL 50, to comply with environmental conditions at installed location.

B. Conduit Entry: UL 50E Types 4, 4X, and 12 enclosures may not contain knockouts.

C. Operating Mechanism: Circuit-breaker operating handle must be externally operable with operating mechanism being integral part of box, not cover. Cover interlock mechanism must have externally operated override. Override may not permanently disable interlock mechanism, which must return to locked position once override is released. Tool used to override cover interlock mechanism must not be required to enter enclosure in order to override interlock.

D. Enclosures designated as UL 50E Type 4, 4X stainless steel, 12, or 12K must have dual cover interlock mechanism to prevent unintentional opening of enclosure cover when circuit breaker is ON and to prevent turning circuit breaker ON when enclosure cover is open.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine elements and surfaces to receive enclosed switches and circuit breakers for compliance with installation tolerances and other conditions affecting performance of the Work.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

1. Commencement of work will indicate Installer's acceptance of areas and conditions as satisfactory.

3.2 SELECTION OF ENCLOSURES

A. Indoor, Dry and Clean Locations: UL 50E, Type 1.

B. Outdoor Locations: UL 50E, Type 3R.

3.3 INSTALLATION

A. Comply with manufacturer's published instructions.

B. Special Techniques:

1. Coordinate layout and installation of switches, circuit breakers, and components with equipment served and adjacent surfaces. Maintain required workspace clearances and required clearances for equipment access doors and panels.
2. Install fuses in fusible devices.

3.4 FIELD QUALITY CONTROL

A. Tests and Inspections for Switches:

1. Visual and Mechanical Inspection:

a. Inspect physical and mechanical condition.
b. Inspect anchorage, alignment, grounding, and clearances.
c. Verify that unit is clean.
d. Verify blade alignment, blade penetration, travel stops, and mechanical operation.
e. Verify that fuse sizes and types match the Specifications and Drawings.
f. Verify that each fuse has adequate mechanical support and contact integrity.
g. Inspect bolted electrical connections for high resistance using one of the following methods:

1) Use low-resistance ohmmeter.

a) Compare bolted connection resistance values to values of similar connections. Investigate values that deviate from those of similar bolted connections by more than 50 percent of lowest value.

2) Verify tightness of accessible bolted electrical connections by calibrated torque-wrench method in accordance with manufacturer's published data or NETA ATS Table 100.12.

a) Bolt-torque levels must be in accordance with manufacturer's published data. In absence of manufacturer's published data, use NETA ATS Table 100.12.

h. Verify lubrication of moving current-carrying parts and moving and sliding surfaces.

2. Electrical Tests:

a. Perform resistance measurements through bolted connections with low-resistance ohmmeter. Compare bolted connection resistance values to values of similar connections. Investigate values that deviate from adjacent poles or similar switches by more than 50 percent of lowest value.
b. Measure contact resistance across each switchblade fuseholder. Drop values may not exceed high level of manufacturer's published data. If manufacturer's published data are not available, investigate values that deviate from adjacent poles or similar switches by more than 50 percent of lowest value.

B. Tests and Inspections for Molded-Case Circuit Breakers:

1. Visual and Mechanical Inspection:

a. Verify that equipment nameplate data are as described in the Specifications and shown on Drawings.
b. Inspect physical and mechanical condition.
c. Inspect anchorage, alignment, grounding, and clearances.
d. Verify that unit is clean.
e. Operate circuit breaker to ensure smooth operation.
f. Inspect bolted electrical connections for high resistance using one of the following methods:

1) Use low-resistance ohmmeter.

a) Compare bolted connection resistance values to values of similar connections. Investigate values that deviate from those of similar bolted connections by more than 50 percent of lowest value.

2) Verify tightness of accessible bolted electrical connections by calibrated torque-wrench method in accordance with manufacturer's published data or NETA ATS Table 100.12.

a) Bolt-torque levels must be in accordance with manufacturer's published data. In absence of manufacturer's published data, use NETA ATS Table 100.12.

2. Electrical Tests:

    a. Perform resistance measurements through bolted connections with low-resistance ohmmeter. Compare bolted connection resistance values to values of similar connections. Investigate values that deviate from adjacent poles or similar switches by more than 50 percent of lowest value.
    b. Perform contact/pole resistance test. Drop values may not exceed high level of manufacturer's published data. If manufacturer's published data are not available, investigate values that deviate from adjacent poles or similar switches by more than 50 percent of lowest value.

C. Nonconforming Work:

1. Enclosed switches and circuit breakers will be considered defective if they do not pass tests and inspections.
2. Remove and replace defective units and retest.

D. Collect, assemble, and submit test and inspection reports.

1. Test procedures used.
2. Include identification of each enclosed switch and circuit breaker tested and describe test results.
3. List deficiencies detected, remedial action taken, and observations after remedial action.

3.5 ADJUSTING

A. Adjust moving parts and operable components to function smoothly, and lubricate as recommended by manufacturer.

3.6 PROTECTION

A. After installation, protect enclosed switches and circuit breakers from construction activities. Remove and replace items that are contaminated, defaced, damaged, or otherwise caused to be unfit for use prior to acceptance by Owner.

END OF SECTION 262816