SOUTH DAKOTA SCIENCE AND TECHNOLOGY AUTHORITY

REQUEST FOR PROPOSALS
Yates Complex Electrical Rehab

RFP #2026-02

Project Date Milestones	***All times listed in Mountain Time***
Registration Deadline for Site Visit:	February 16, 2026, by 4:00 pm
Mandatory Site Visit:	February 19, 2026, 7:30 – 10:00 am
Questions Submitted:	February 26, 2026, by 4:00 pm
Questions & Answers Posted:	March 5, 2026, by 4:00 pm
Proposal Due Date:	March 26, 2026, by 4:00 pm

1. PURPOSE:

This Request for Proposal (RFP) is issued by the South Dakota Science and Technology Authority (SDSTA) for Construction Services to rehabilitate the electrical distribution system at the Yates Complex. An individual firm will be selected for a fixed-price contract based on the total quantities and unit costs listed on the project bid sheet, demonstrated competence, and qualifications for the required work. Documents included with this RFP include:

A. Draft Contract (2026-02)
B. Draft Construction General Conditions Agreement
C. Bid Security Form (to be submitted with proposal)
D. Payment and Performance Bond Form (informational – to be submitted with contract)
E. SDSTA Bid Sheet
F. SDSTA Design Documents
    a. SDSTA Drawings – Yates Complex Electrical Rehab – Stamped "Final Issued for Bid with Holds" Drawing Set
    b. SDSTA Specifications – Technical specifications describing the physical, functional, and performance characteristics of the rehabilitation.
    c. Site Access, Parking, Staging and Work Areas – Photos representing general parking areas, vehicle access routes, laydown yards, and work areas.
G. Contractor Pre-Qualification ESH Questionnaire
H. Exhibits
    a. SURF Arc Flash Label Requirements REV3

2. PROJECT BACKGROUND:

The South Dakota Science and Technology Authority (SDSTA) reopened the historic Homestake Mine to develop a world-class underground science research facility, the Sanford Underground Research Facility (SURF). A dependable power distribution system is crucial for operations at SURF's Yates Complex. As the research facility continues to push the boundaries of scientific exploration, the reliability and efficiency of its power distribution system have become increasingly important. The existing electrical distribution system, originally designed for the Homestake mining operation, has exceeded its service life and no longer meets current reliability, capacity, or safety standards required at SURF.

SURF receives power from the utility provider at 69,000 volts, which is stepped down to 12,470 volts (12kV) and distributed to various substations across the site. These substations further reduce the voltage for use in buildings and equipment. One of the 12kV circuits supplies the Yates Complex on the surface, which includes the Administration Building, Education & Outreach Building, Foundry Building, Surface Assembly Lab, Wastewater Treatment Plant (WWTP), Rounds Operation Center, Yates Shaft Hoist Building, Yates Headframe, and the LBNF conveyor to the Open Cut. From the Yates Complex, power is delivered underground via two feeder cables (YS01 and YS02) in the Yates Shaft. YS01 serves the 1700L and 4100L levels, and YS02 serves the 4850L Davis Campus.

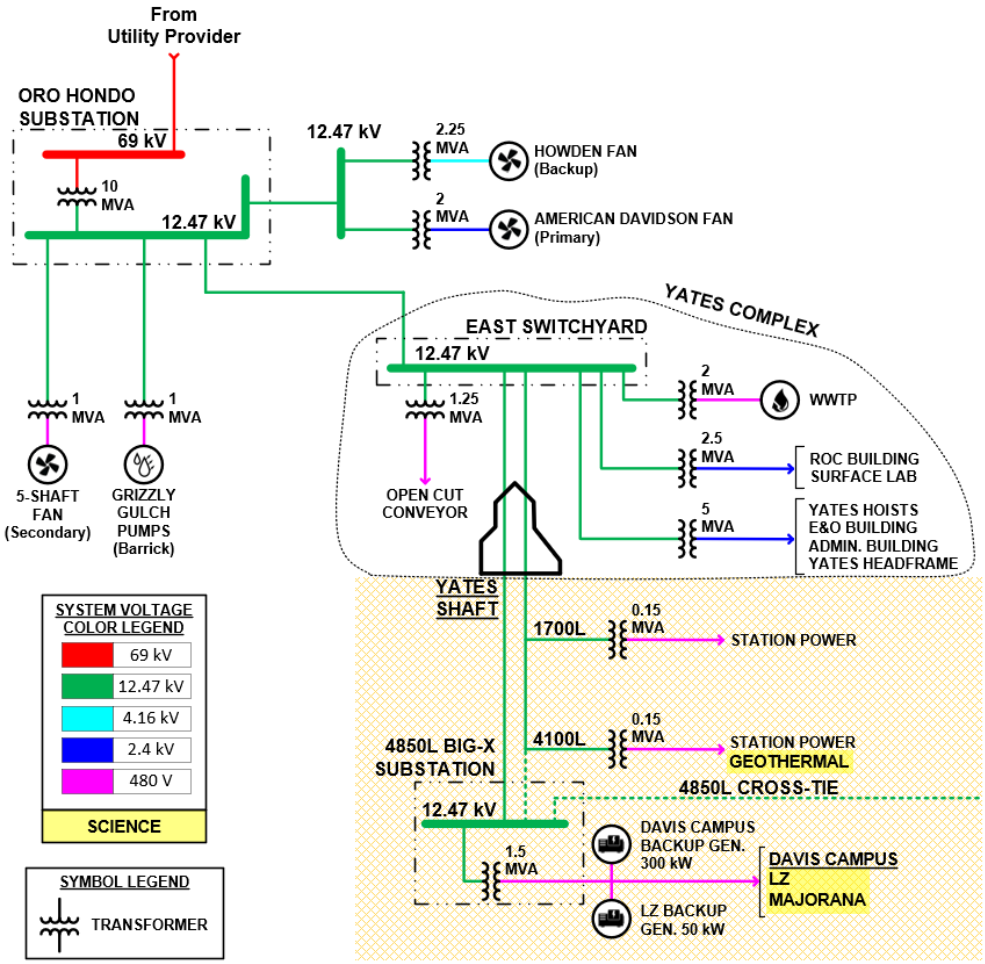

Figure 1: Simplified SURF Power Distribution One-Line, Oro Hondo Service

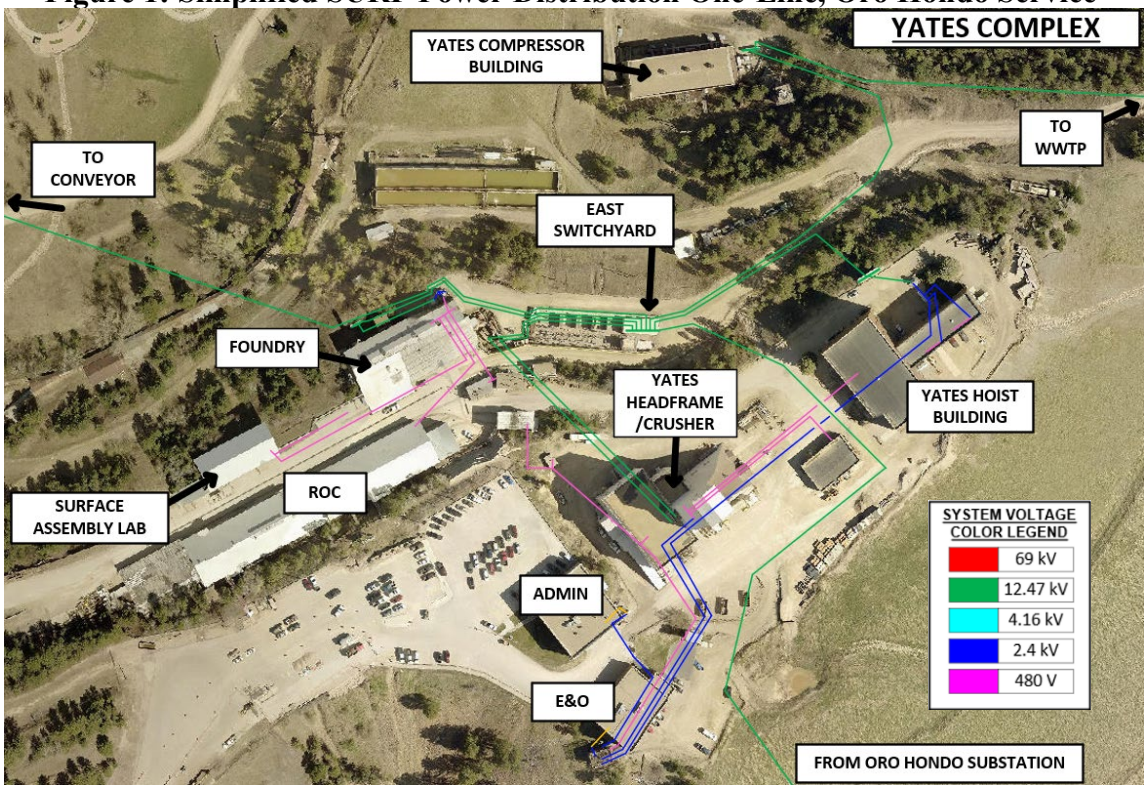

Figure 2: Aerial Photo of the Yates Complex Overlaid with Major Feeder Circuits

In 2025, the South Dakota Science and Technology Authority (SDSTA) engaged Stantec to develop plans and specifications for rehabilitating the Yates Complex electrical distribution system, with the primary goal of improving its functionality, reliability, and efficiency. The design focused on addressing critical deficiencies in the existing substations by consolidating outdated equipment, optimizing the system's layout, and realigning distribution to better support the facility's scientific operations. This design and subsequent construction also aimed to lay the groundwork for future rehabilitations and upgrades, including the Yates Hoists, Yates Shaft, and Wastewater Treatment Plant (WWTP). Due to funding priorities for these future projects, Stantec's design was divided into three phases, each of which would be executed under separate construction contracts. This RFP and associated contract cover the first phase (Phase I), referred to as the Yates Complex Electrical Rehabilitation Project, with an estimated construction cost between $4,000,000 and $6,000,000.

The remaining two phases, planned for execution after the Yates Hoists have been upgraded, will involve replacing the Foundry Substation and part of its feeder, decommissioning the East Switchyard and Yates Compressor Substation, and replacing the WWTP Substation and a portion of its feeder.

Stantec completed its design to the "Final Issued for Bid" stage. It will be the selected construction contractor's responsibility to finalize the project requirements before construction. This finalization includes incorporating certified vendor data, shop drawings, and all required technical elements, such as interlocks, relay coordination, SKM modeling (including short-circuit

and arc-flash studies), and protective relay configuration. The SDSTA will provide the facility's electrical model and arc flash label template (**Attachment H**) in SKM Power*Tools format to support these studies. The Contractor must manage and certify these updates to ensure the final project deliverables meet all technical and safety standards. The certified shop drawings, coordination studies, and model updates must be submitted to SDSTA for formal review and approval prior to commencing construction. Updated as-built documentation and models must also be provided after commissioning is complete.

3. EXISTING CONDITIONS:

Work Area, General Access, Staging Area, & Sanitation:

Photos of the work areas are shown in **Attachment F**. The specific areas include:

- Yates Yard
- Yates Crusher/Headframe Building
- Utility tunnel connecting Yates Crusher/Headrame Building with Yates Hoist Building
- Yates Hoist Building
- E&O Building
- Administration Building

As part of this Request for Proposal (RFP), prospective contractors are advised that this project will require careful coordination of work areas, access routes, staging zones, and sanitation facilities. Contractors must plan for secure and organized staging areas, maintain clean and safe work zones, and provide appropriate sanitary accommodations for personnel. Access to the site must be managed in accordance with SDSTA safety and traffic control standards, including fencing, barricades, and designated parking. All temporary facilities and utilities must meet code requirements and be approved by the SDSTA. For detailed specifications and compliance requirements, refer to the SDSTA Division 01 Specification (**Attachment F**) included with this RFP.

Attachment F identifies the designated roadway access routes for both worker travel and large material deliveries to the Yates Complex. It also shows the locations of approved parking and staging areas.

Electrical System Downtime:

SDSTA relies on the Yates Complex portion of its power distribution system to support daily operations and scientific experiments. The Offeror is responsible for coordinating with SDSTA to schedule any necessary electrical disruptions. Minor outages, such as connecting a new low-voltage feed to a building, must be scheduled during a weekend to avoid impacting office staff. If a complete outage of the Yates Complex is required, it must be limited to one weekend, and the Offeror must plan work efficiently to minimize downtime. All outages must be incorporated into the project schedule, and any changes to scheduled outages require at least 2 weeks' advance notice to SDSTA.

Material/Equipment Access:

The following onsite equipment and personnel are available to assist in the removal and transport of materials between the transporting trucks, staging areas, and work areas.

- **Overhead Cranes:** The Yates Crusher room in the Yates Crusher/Headframe Building contains a 35-ton overhead electric bridge crane (Figure 3) that can be used to hoist materials and equipment within the room. Between the Yates Shaft and the wall that divides the Yates Crusher Room from the Yates Headframe is a 3-ton electric chain hoist (Figure 4). A trained SDSTA operator will be available to control these cranes and hoists.
- **Roll-up Doors:** The Yates Crusher room contains one roll-up door with opening dimensions of 22'H x 14'W. The Yates Headframe contains four roll-up doors with opening dimensions of 12'H x 10'W, 9'H x 10'W, 12’-7" H x 16’-8" W, and 12'H x 12’-2" W. There is one roll-up door between the Yates Crusher room and Yates Headframe with dimensions of 8'H x 12'W.

Figure 3: Yates Crusher Room Overhead Bridge Crane

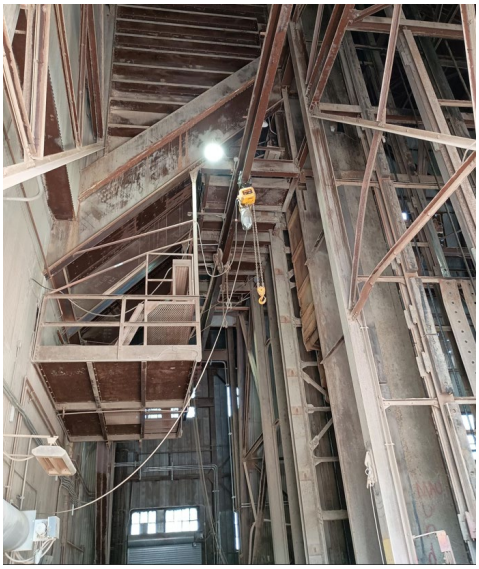

Figure 4: Yates Headframe Chain Hoist

4. SCOPE OF WORK:

This scope of work includes all services required to procure, construct, and commission new portions of the power distribution system at the Yates Complex. The primary objective of this project is to consolidate and replace the aging substations with a new, centralized 12.47kV substation located in the Yates Crusher Building. This rehabilitative objective will be accomplished by reconfiguring and replacing portions of the existing Yates Complex distribution system with new transformers, switchgear, feeder conductors, associated raceways, and by installing provisions for future facility rehabilitation projects. A high-level summary of the construction has been provided below. For additional details regarding the scope of work, refer to the SDSTA design documents (**Attachment F**).

Installation of new manhole, duct bank, and 12.47kV conductors between the existing utility pole and the Yates Headframe/Crusher Building

Power for the new 12.47kV Yates Crusher Substation will require a connection to an existing circuit from the Oro Hondo Substation. This circuit is currently routed to the East Switchyard 12.47kV switchgear via a duct bank consisting of a 2 x 2 configuration of 6 inch conduits that run from the Oro Hondo Utility Pole to a route along the south side of the Yates Complex, past the Yates Hoist Building, and then down to the East Switchyard 12.47kV switchgear. Changes to the Oro Hondo feeder will require the installation of a new manhole located adjacent to the existing Oro Hondo Utility Pole that will allow splices and a new duct bank with 2 x 4 conduit configuration to be installed between the Oro Hondo Utility Pole and a conduit riser at the south wall of the Yates Crusher Building, as shown in Figure 5. From this point, the cables will transition to cable tray and will be routed to the new switchgear in the Yates Crusher Building.

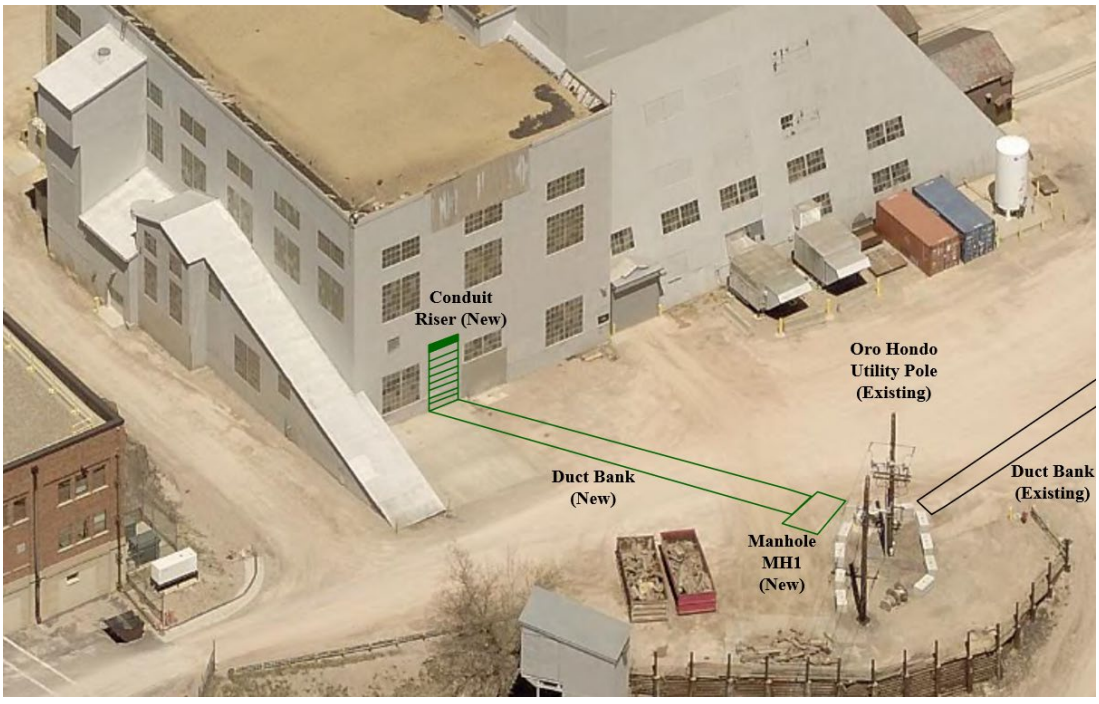

Figure 5: Yates Crusher Building Duct Bank and Conduit Riser

The installation of the new manhole, the new direct buried conduits between the Oro Hondo Utility Pole and the new manhole, and the new 2 x 4 duct bank between the new manhole and the Yates Crusher Building, can all be done without taking an outage or exposing workers to energized equipment. The new feeder between the Oro Hondo utility pole and the Yates Crusher Building Substation 12.47kV Switchgear can be pulled and prepped for a 2-day outage to terminate the cables and commission the new Yates Crusher Substation.

Installation of new cable tray at the Yates Crusher/Headframe Building

Cable tray and conduit will be installed in the Yates Crusher/Headframe Building as shown in the design (excerpt shown in Figure 6). This cable tray will contain the Yates Complex's main 12.47kV feeder from the Oro Hondo Substation, as well as additional cables being routed through the east wall of the Yates Crusher Building into the adjoining Yates Headframe Building. The cable tray will also contain other cables that route back out to the Oro Hondo Utility Pole Manhole (MH1) for distribution to additional Yates Complex loads using an existing duct bank and conductors between the utility pole and the East Switchyard.

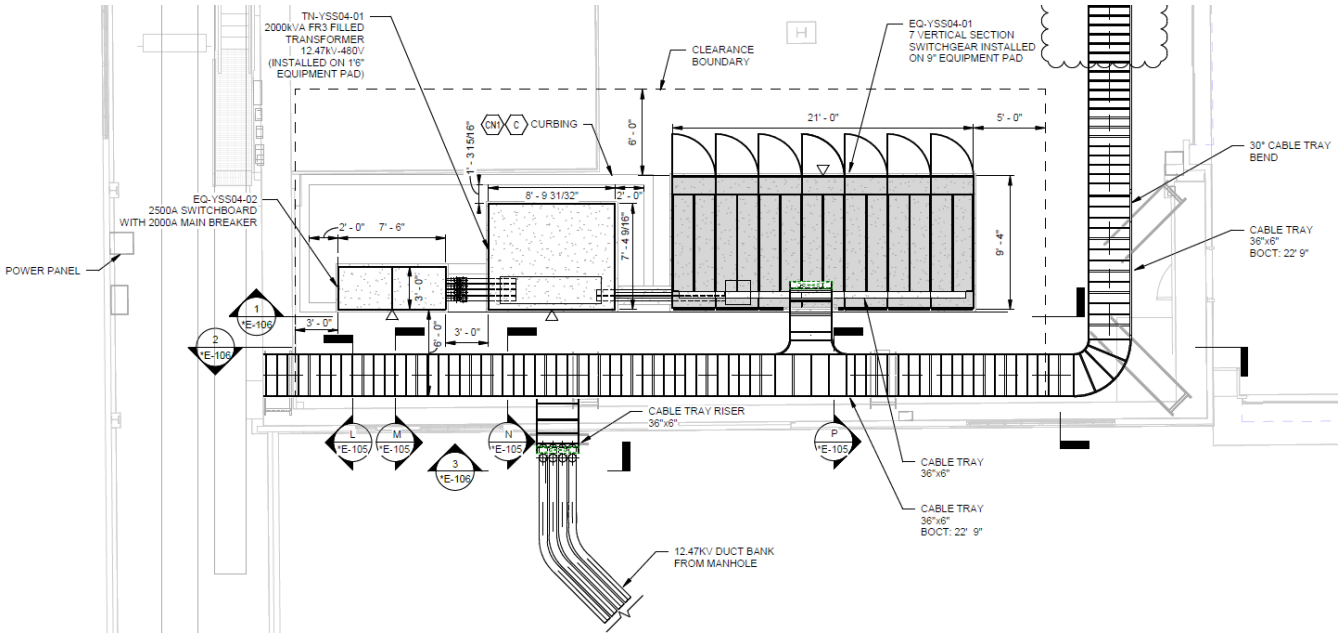

Figure 6: Yates Crusher Building Substation Plan

Installation of new 12.47kV 1200A switchgear in the Yates Crusher Building

The new 12.47kV switchgear will be installed on a concrete pad that will also serve as a protective curb for two conduits that will be routed between the switchgear and a new 2MVA oil-filled transformer mounted on a concrete pad adjacent to the switchgear lineup.

Installation of a new 2MVA 12.47kV to 480V transformer in the Yates Crusher Building

A new 2MVA, 12.47kV – 480V transformer (TN-YSS04-01) will be installed on a concrete equipment pad between the Yates Crusher Switchgear (EQ-YSS04-01) and the 480V Switchboard (EQ-YSS04-02). The transformer will only directly feed the 480V Switchboard (EQ-YSS04-02).

Installation of new 480V 2500A switchboard in the Yates Crusher Building
A new 2500A, 480V switchboard (EQ-YSS04-02) will be installed on a concrete equipment pad next to the 2MVA transformer (TN-YSS04-01). This switchboard will feed new transformers at the Admin Building and E&O Building. It will also feed the existing 480V panelboards in the Yates Headframe/Crusher Building, which are currently fed from the E&O Substation. The Offeror will be responsible for installing the circuits that connect to these existing panelboards.

Installation of new 12.47kV cables from Yates Crusher Switchgear to new Manhole MH1
The cables for the 12.47 kV circuits would leave the Yates Crusher Switchgear and would be routed via a cable tray along the South wall of the Yates Crusher Building until reaching a point where they transition outside the building to the south. Once the cables are outside, they will run down a conduit riser (see Figures 5 and 6) until reaching the new duct bank, then over to the new Manhole MH1 next to the existing Oro Hondo Utility Pole.

Power to the Foundry Building, Conveyor Building, WWTP, and Yates Hoist Building will continue to be supplied by the East Switchyard 12.47kV switchgear until Phase II. Two new cables will be installed in the new 2 x 4 conduit duct bank extending from the Crusher Building Substation 12.47kV switchgear (EQ-YSS04-01) to the new Manhole MH1, located adjacent to the Oro Hondo Utility Pole. Inside the Manhole MH1, the existing East Switchyard switchgear feeder cables are to be cut and spliced with the new cables during the weekend outage.

With the installation of the new Yates Crusher Building 12.47kV switchgear (EQ-YSS04-01), the feeder from the Oro Hondo Utility Pole will be redirected to supply power to this new switchgear instead of the East Switchyard. However, to minimize the scope of work during Phase I, the East Switchyard switchgear will remain energized (excluding the weekend outage) and in service until Phase II. During this interim period, power to the East Switchyard will be rerouted through the new Yates Crusher Building switchgear, effectively re-powering the East Switchyard and its loads via the new configuration.

Installation of new 12.47kV cables from Yates Crusher Switchgear to Yates Hoist Building Basement via cable tray and tunnel
The routing of the new feeder cables to the Yates Hoist Building includes the use of the new cable tray and the existing utility compartment in the Yates Shaft and utility tunnel as follows:

- The cables for the 12.47kV circuits would leave the Yates Crusher Switchgear and be routed via the new cable tray, which shares space with the Oro Hondo Utility Pole circuits along the South wall of the Yates Crusher Building.

- The new cable tray and cables then route north along the east wall inside the Yates Crusher Building and continue along the sheet-metal wall separating the Yates Crusher Building from the Yates Headframe Building.

- At the north edge of the Yates Crusher Mezzanine, the cable tray turns east and passes through the west wall of the Yates Headframe Building.

- Once inside the Yates Headframe Building, the cable tray is supported using new T-pole

supports or existing shaft and building column steel, as it is routed to a point near the Yates Shaft where the cables exit the cable tray and transition vertically down the Yates Shaft utility compartment (see Figure 7) to the basement. The anchoring and routing of the cables within the Yates Shaft utility compartment will be performed by SDSTA shaft crews.

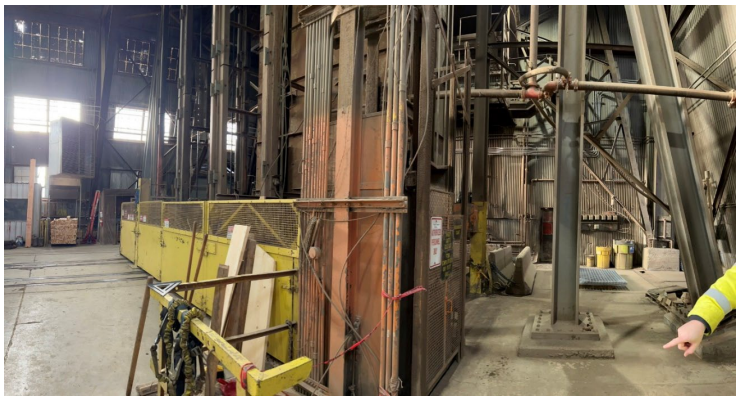

Figure 7: Yates Shaft Utility Compartment

- Once the cables reach the basement next to the tunnel area, they exit the Yates Utility Shaft and are fastened to the wall using cable straps or existing cable support, then continue through the access hallway to the tunnel that runs between the Yates Headframe Building and the Yates Hoist Building.

- The cables then follow the tunnel to the Yates Hoist Building and are secured using existing cable supports. The cable shall be routed to the basement of the Motor-Generator (M-G) room, leaving approximately 250 ft of additional cable at the end point. This extra length shall remain coiled in place until installation during the Yates Hoist Upgrade project and kept in a manner that prevents damage, with the ends in the Yates Hoist Building wrapped in tape to protect against moisture and contaminants.

- The Yates Hoist feeder cables shall be electrically tested and left terminated at the Yates Crusher Switchgear end.

A conceptual model of the proposed cable tray system for both the Yates Crusher Building and the Yates Headframe Building is shown in Figure 8.

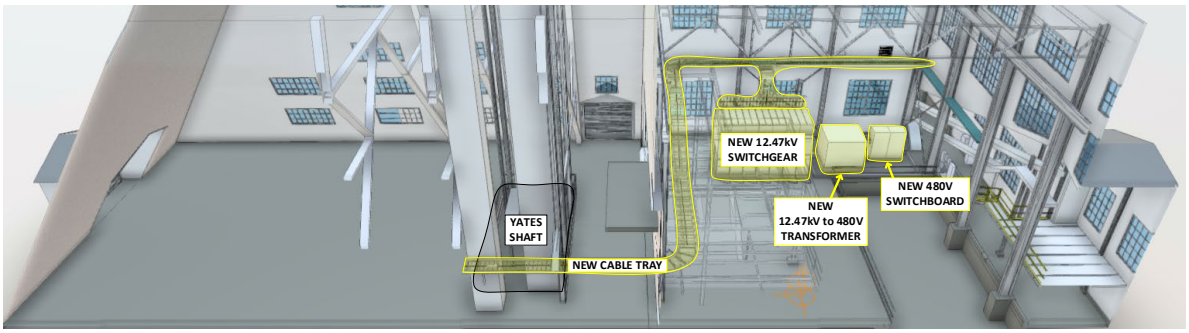

Figure 8: Conceptual Cable Tray and Substation Layout

Provide space for existing 12.47kV YS01 and YS02 feeder cables in or next to new cable tray
During a future rehabilitation project (Phase II) involving the decommissioning of the East Switchyard, existing YS01 and YS02 shaft feeder cables (250 MCM Hi-Tensile Verlok) will be rerouted up the Yates Shaft from the Tramway level and will be connected to the Yates Crusher Switchgear by SDSTA staff. These cables will be cut in the Tramway level at a point that provides adequate length to pull them back so they can be refed, without splices, to the Yates Crusher Switchgear. The YS01 and YS02 feeders are currently being fed from the East Switchyard Switchgear.

Installation of New Trench with Buried Conduits and 480V Conductors between the Crusher Building and the Administration Building
Direct buried conduits will be installed between the Yates Crusher Building and a new Admin Building transformer (TN-YSS12-02), as shown in Drawing No. 24768-E-103 (excerpt in Figure 9), consisting of two PVC conduits. Conduits routed above ground on sleepers or T-Poles will be rigid galvanized steel (RGS).

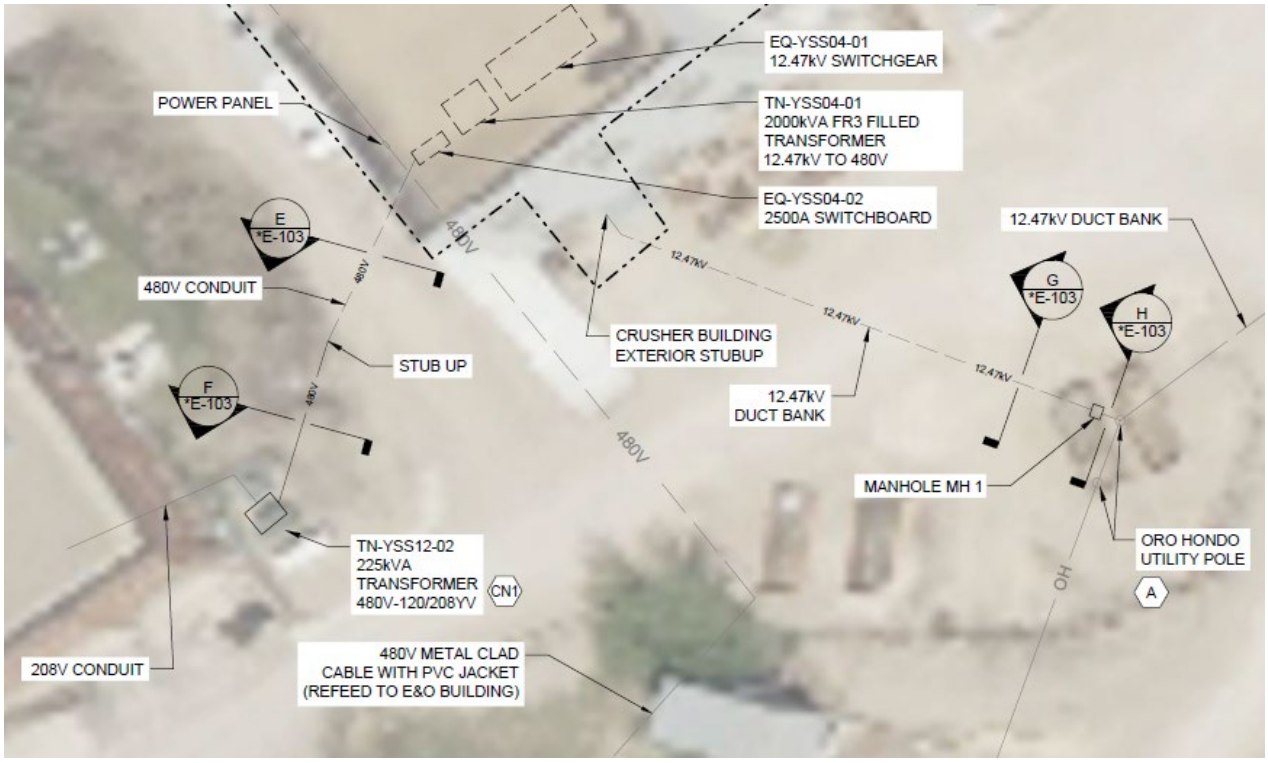

Figure 9: Admin Building Conduit Plan

Installation of new 225 kVA 480 V to 208 V transformer at Admin Building
The Admin Building is currently fed by a 2.4kV feeder originating at the E&O Substation. This feeder supplies power to a 225kVA, 2.4kV–208Y/120V transformer for the Admin Building's lighting, HVAC, and building auxiliaries. The Offeror will partially demolish the E&O Substation that provides the 2.4kV power as part of this project. Subsequently, the existing 2.4kV–208Y/120V transformer and associated 2.4kV disconnect switch at the Admin Building will be replaced with a new 225kVA, 480V – 208Y/120V dry-type transformer (TN-YSS12-02) that will

be fed from the new Yates Crusher Building 480V switchboard.

Installation of New 480V to 208V Transformer at the E&O Building
An existing feed from the E&O building to the Yates Crusher Building will be re-purposed to feed a new 225kVA 480-208Y/120V dry-type transformer (TN-YSS13-03) located outside the E&O Building. The new transformer will be installed on a new concrete pad. The Offeror will demolish the existing transformers at the E&O Substation as part of this project.

Figure 10: E&O Building Transformer Location

Installation of New 208V Panelboard at the E&O Building
New 208V circuit conductors and raceway will be installed from the new transformer (TN-YSS13-03) to a new Panelboard that will be installed with breakers at the E&O Building. SDSTA electrical staff will procure and install the conductors and raceway from the load side of this new panelboard to existing panelboards scattered throughout the E&O Building.

5. TECHNICAL EVALUATION CRITERIA:

A best value selection process will be used to award this contract. The selection criteria are listed below. Selection will be made based on tradeoffs between price and non-price evaluation criteria.

a. The offeror's total project package including proposed project team and other technical requirements defined in this document.
b. Specialized experience and technical competence in:
    - Heavy electrical construction including, but not limited to:
        - Switchgear
        - Transformers
        - Cable Trays
        - Duct Banks
        - Electrical Commissioning
        - Arc Flash Studies
c. Construction safety practices, procedures, and safety record relating to the scope of work.

d. Qualified professional personnel in the following key areas:
    - Project management
    - Project supervision
    - Industrial electrical construction
    - Heavy equipment operation

e. Past performance on SDSTA, US Department of Energy, State of South Dakota, or other contracts with respect to cost control, quality of work, and compliance with performance schedules.

6. SUBMISSION REQUIREMENTS:

Submission Requirement: General

To be eligible for contract award, a firm must be registered as a business entity with the South Dakota Secretary of State.

Proposals should be provided in digital format as a pdf file with standard letter size format. Note that there is a 50-page limit for proposals. Proposals must contain the following:

- Description of the working relationship between each of the overall team members, including a personnel specific organization chart. Note that the named subcontractors and outside associates or consultants must be used for project execution, and any change must be approved in advance by the SDSTA.
- Primary points of contact for the proposed team.
- Description of the approach to cost and schedule control. What tools are used and how is information to be communicated to the project team and SDSTA.
- Any exceptions to the draft contract, terms and conditions, or other RFP materials.

Submission Requirement: Similar Projects

Describe at least two similar projects that the Contractor/Subcontractor has installed and commissioned within the past ten years. Example projects should be at least $500K in value and include similar scopes of work. Examples should note the customer, location, and date of the project.

Submission Requirement: Safety

Provide a description of the safety programs of contractors and subcontractors who would be performing work at SURF under this contract. Demonstrate the firm's understanding and awareness of all ESH issues that will be present on this project.

- Include safety records for the past five years (incident/injury records, OSHA 300 logs, and EMR data) of contractors and subcontractors who would be performing work at SURF under this contract.

Submission Requirement: Quality Control

Provide a description of the QC programs of contractors and subcontractors who would be performing work under this contract. QC manuals will not count toward the 50-page limit.

Submission Requirement: Qualifications

Provide resumes for key personnel proposed for this project. Include project manager, project superintendent, project safety officer. Resumes should include qualifications, certifications, and experience in the specific role proposed with relevant projects.

Submission Requirement: Schedule

Proposed schedule/work plan. Offerors shall provide the basic schedule, outlined below, and specific number of calendar days required for project completion after Notice to Proceed (NTP) on the bid sheet:

- Finalize Design and Receive Approvals on Material/Equipment Submittals
- Lead Time for Fabrication of Materials/Equipment
- Mobilization
- Construction
- Commissioning
- Demobilization
- Project Complete (total days)

The total project duration shall be within 700 days of the Notice to Proceed (NTP). Note that liquidated damages of $200/day will be applied for additional schedule days after the approved contract completion date. Refer to section 10of the draft contract for additional details.

Submission Requirement: Price

Provide a project pricing breakdown using the bid sheet (Attachment E). The offeror's fixed price shall constitute full payment for the work, materials, services, quality control testing, other items required, and include all applicable federal, state use, sales, and local taxes, duties, permits, bonding, and all the Subcontractor's other obligations related to such work.

Submission Requirement: Mandatory Site Visit

All bidders are required to attend an onsite pre-bid conference and site visit on **February 19, 2026**, from **7:30 a.m. to 10:00 a.m.** at the **Sanford Underground Research Facility (SURF)**.

Pre-registration is required. All individuals planning to attend must submit their names via email to **David Raad** at draad@sanfordlab.org no later than **4:00 p.m. on February 16, 2026**. Confirmation, instructions and directions will be provided upon registration. **Unregistered individuals will not be permitted to enter the facility or participate in the site visit.** Failure to comply with registration requirements may result in disqualification from the bidding process.

SURF is a secure facility with Site Protocols that must be followed. All visitors must present a valid photo identification upon arrival that meets federal security standards. Each contractor may send up to **two representatives**. Any changes to designated attendees must be confirmed in advance with David. Changes are not allowed on the same day as the visit.

Subcontractors are welcome to attend the site visit. They may participate **in addition to** the contractor’s two representatives, provided they are pre-registered and approved in advance.

Subcontractor attendance does not count against the contractor's representative limit.
Only those companies represented at the pre-bid conference will be eligible to submit proposals.

7. DELIVERABLES:

Refer to SDSTA Division 01 and other technical specifications for deliverables required after contract award but before the start of work and during project execution. While not a complete list, key deliverables include:

- Safety Plan
- Quality Control Plan
- Environmental Protection Plan
- Construction Schedule
- Schedule of Prices
- Submittal Register
- Shop Drawings
- Contractor Daily Reports
- Test Reports
- As Built Drawings
- O&M Manuals and Warranties
- Electrical load flow, coordination, and arc-flash study reports.
- Equipment labels per applicable codes and standards.
- Critical spare parts list that includes itemized pricing, availability, and estimated delivery times.
- Training records for all owner training.
- Copies of training materials developed and used for owner training.

8. PROPOSALS DUE:

Offerors should submit an electronic copy (pdf format) of the proposal no later than 4:00 p.m. on March 26, 2026, to draad@sanfordlab.org. Late submissions will not be accepted.

Questions are due by 4:00 pm on February 26,2026.

Questions & Answers will be emailed to all prospective offerors and posted to the sanfordlab.org website no later than 4:00 pm on March 5, 2026.

Proposals shall be valid for **60 days**. The proposal period may be extended at the discretion of SDSTA based on the quantity and/or complexity of questions. Any notices of extension of time to respond will be distributed to all prospective offerors by SDSTA.

All communications regarding this procurement between RFP release and award shall be directed by email to draad@sanfordlab.org. Communications with other SDSTA staff regarding this procurement in advance of the award are not allowed.