



**DESIGN & CONSTRUCTION GROUP
THE GOVERNOR NELSON A. ROCKEFELLER
EMPIRE STATE PLAZA
ALBANY, NY 12242**

ADDENDUM NO. 1 TO PROJECT NO. 47474

**ELECTRICAL WORK
PROVIDE REPLACEMENT DATA CENTER
UNINTERRUPTIBLE POWER SUPPLIES
HUDSON VALLEY TRANSPORTATION MANAGEMENT CENTER
200 BRADHURST AVE
HAWTHORNE, NY**

September 6, 2023

NOTE: This Addendum forms a part of the Contract Documents. Insert it in the Project Manual. Acknowledge receipt of this Addendum in the space provided on the Bid Form.

SPECIFICATION GROUP

1. SECTION 262413 SWITCHBOARDS: Discard the Section bound in the Project Manual and substitute the accompanying Section (pages 262413 – 1 through 262413 – 5) noted “Revised 09/06/2023”.

END OF ADDENDUM

Brady M. Sherlock, P.E.
Deputy Director, Division of Design
Design & Construction

SECTION 262413
SWITCHBOARDS

PART 1 GENERAL

1.01 REFERENCES

- A. NEMA, and UL 891.

1.02 DEFINITIONS

- A. ITIC (Information Technology Industry Council) Curve: Describes how much or how little voltage IT equipment can sustain without damage and over what length of time.

1.03 SUBMITTALS

- A. Waiver of Submittals: The "Waiver of Certain Submittal Requirements" in Section 013300 does not apply to this Section.
- B. Submittals Package: Submit the shop drawings, product data, and quality control submittals specified below at the same time as a package.
- C. Shop Drawings; include the following for each switchboard:
 - 1. Front and plan view with overall dimensions.
 - 2. Details showing type of construction and available conduit space.
 - 3. Voltage rating, and continuous current rating of the through bus and distribution sections.
 - 4. Short-circuit current rating. Fully rated equipment rating is required.
 - 5. Enumeration of each circuit breaker including frame size, ATE, number of poles, and interrupting capacity.
 - a. Indicate circuit breakers are suitable for the switchboards' fully rated equipment rating. Series rated combinations will not be considered.
 - 6. Wiring and schematic diagrams.
 - 7. A statement for each switchboard indicating if it will, or will not, bear a UL label. If a section cannot bear a UL label, state the specific reasons why it is not qualified to bear the UL label.
 - 8. Cable terminal sizes.
- D. Product Data:
 - 1. Catalog sheets, specifications and installation instructions.
 - a. For devices equipped with ground fault protection, include information sheets describing system testing instructions and test form which comply with UL 891 requirements.
 - 2. Bill of materials.
 - 3. Name, address and telephone number of nearest fully equipped service organization.

- E. Quality Control Submittals:
 - 1. Company Field Advisor Data: Include:
 - a. Name, business address and telephone number of Company Field Advisor secured for the required services.
 - b. Certified statement from the Company listing the qualifications of the Company Field Advisor.
 - c. Services and each product for which authorization is given by the Company listed specifically for this project.

- F. Contract Closeout Submittals:
 - 1. System acceptance test report.
 - 2. Certificate: Affidavit, signed by the Company Field Advisor and notarized, certifying that the system meets the contract requirements and is operating properly.
 - 3. Operation and Maintenance Data: Deliver 2 copies, covering the installed products, to the Director's Representative.

1.04 QUALITY ASSURANCE

- A. Equipment Qualifications For Products Other Than Those Specified:
 - 1. At the time of submission provide written notice to the Director of the intent to propose an “or equal” for products other than those specified. Make the “or equal” submission in a timely manner to allow the Director sufficient time to review the proposed product, perform inspections and witness test demonstrations.
 - 2. If products other than those specified are proposed for use furnish the name, address, and telephone numbers of at least 5 comparable installations that can prove the proposed products have performed satisfactorily for 3 years. Certify in writing that the owners of the 5 comparable installations will allow inspection of their installation by the Director's Representative and the Company Field Advisor.
 - a. Make arrangements with the owners of 2 installations (selected by the Director) for inspection of the installations by the Director's Representative. Also obtain the services of the Company Field Advisor for the proposed products to be present. Notify the Director a minimum of 3 weeks prior to the availability of the installations for the inspection, and provide at least one alternative date for each inspection.
 - b. Only references from the actual owner or owner’s representative (e.g., Maintenance Supervisor, etc.) will be accepted. References from dealers, system installers or others, who are not the actual owners of the proposed products, are not acceptable.
 - 1) Verify the accuracy of all references submitted prior to submission and certify in writing that the accuracy of the information has been confirmed.
 - 3. The product manufacturer shall have test facilities available that can demonstrate that the proposed products meet the contract requirements.
 - a. Make arrangements with the test facility for the Director's Representative to witness test demonstrations. Also obtain the services of the Company Field Advisor for the proposed product to be present at the test facility. Notify the Director a minimum of

- 3 weeks prior to the availability of the test facility, and provide at least one alternative date for the testing.
4. Provide written certification from the manufacturer that the proposed products are compatible for use with all other equipment proposed for use for this system and meet all contract requirements.
- B. Company Field Advisor: Secure the services of a Company Field Advisor for a minimum of 8 working hours for the following:
1. Render advice regarding switchboard installation, and final adjustment of the switchboard devices.
 2. Witness final system test and then certify with an affidavit that the switchboard is installed in accordance with the contract documents and is operating properly.
 3. Train facility personnel on the operation and maintenance of the switchboard devices (minimum of two 1 hour sessions).
 4. Explain available service programs to facility supervisory personnel for their consideration.
- C. Service Availability: A fully equipped service organization shall be available to service the completed Work.

1.05 DELIVERY, STORAGE AND HANDLING

- A. Protection: Provide supplemental heating devices, such as incandescent lamps or low wattage heaters within the enclosure or under a protective cover to control dampness. Maintain this protection from the time equipment is delivered to the site until it is energized.

PART 2 PRODUCTS

2.01 SWITCHBOARD

- A. The listing of specific manufacturers does not imply acceptance of their products that do not meet the specified ratings, features and functions. Manufacturers listed are not relieved from meeting these specifications in their entirety.
- B. Eaton Corp.'s Pow-R-Line C, Square D Co.'s QED-2, General Electric Co.'s Spectra Line, Siemens Sentron Series, having:
1. Ratings as indicated on drawings.
 2. Front accessibility.
 3. Fully rated copper bus bars.
 - a. Ampere rating of through bus not less than frame size of main device.
 4. Full length copper ground bus.
 5. Circuit Breakers:
 - a. Mounting: Group mounted, or individually mounted as necessary to accommodate the circuit breaker style and switchboard construction.
 - b. Style: 100%-rated, molded case, or power circuit breakers, as required to accommodate the circuit breaker components.

- c. Interrupting Capacity: Equal to, or greater than, the short circuit rating required for the switchboard.
- d. Key Interlock Kit: Externally mounted to prohibit circuit-breaker operation; key must be removable only when circuit breaker is in off position.

2.02 SURGE PROTECTIVE DEVICES

- A. General: Where indicated on the drawings, the switchboards shall be provided with factory installed directly to bus, internal modular Surge Protective Device (SPD) equipment having:
 - 1. ANSI/UL 1449 3rd Edition compliant – Listed Category C, Type 2 with protected modes for 3 phase, 3 wire configured system: L-G and L-L.
 - 2. Rating (ANSI / IEEE C62.41 location Category C): The minimum surge current capacity the device is capable of withstanding shall be 250 kA per phase, 125 kA per mode minimum.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install switchboards in accordance with NEMA Publication No. PB2.1 "Instructions for Proper Handling, Installation, Operation and Maintenance of Deadfront Distribution Switchboards".
 - 1. Set and program the switchboard devices in accordance with the approved coordinated selective scheme.
- B. Install foundation channels for anchoring and leveling of each switchboard.
- C. Identification:
 - 1. Install on the front of each circuit breaker, a phenolic nameplate indicating load served by circuit breaker.
 - 2. Stencil on front of each switchboard with white paint in 1/2 inch lettering "SB-1, etc." corresponding to switchboard designations on the drawings, and electrical parameters (phase, wire, voltage).
- D. Operating Instructions: Frame and mount printed basic operating instructions for switchboards, including control and key interlocking sequences and emergency procedures. Fabricate frame of finished wood or metal and cover instructions with clear acrylic plastic. Mount on front of switchboards.

3.02 FIELD QUALITY CONTROL

- A. Preliminary System Test:
 - 1. Preparation: Have the Company Field Advisor adjust the completed switchboard devices and then operate them long enough to assure that they are performing properly.
 - 2. Run a preliminary test for the purpose of:
 - a. Determining whether the switchboard is in a suitable condition to conduct an acceptance test.
 - b. Checking instruments and equipment.

- c. Training facility personnel.
- B. System Acceptance Test:
- 1. Preparation: Notify the Director's Representative at least 3 working days prior to the test so arrangements can be made prior to the test to have a Facility Representative witness the test.
 - 2. Make the following tests:
 - a. Test devices which have ground fault protection in accordance with the approved information sheets and test form.
 - b. Test programmable solid state trip devices in accordance with the manufacturer's recommendations.
 - 3. Supply all equipment necessary for system adjustment and testing.
 - 4. Submit written report of test results signed by the Company Field Advisor and the Director's Representative. Mount a copy of the final report in a plexiglass enclosed frame assembly in a conspicuous location on the switchboard.

END OF SECTION