

MEPNN Supplier Scouting Opportunity Synopsis

Section 1: General Information

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| Scouting Number | 2025-145 |
| Item to be Scouted | Low-Volt Busways |
| Days to be scouted | 15 |
| Response Due By | 05/16/2025 |
| Description | The following items are needed to complete the low voltage bus duct - Bus Plugs - Bus Plug Breakers |

Section 2: Technical Information

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| Type of supplier being sought | Vermont Manufacturer |
| Reason | BABA |
| Describe the manufacturing processes (elaborate to provide as much detail as possible) | Electrical assembly |
| Provide dimensions / size / tolerances / performance specifications for the item | <ul style="list-style-type: none">o Bus Plugso Bus Plug Breakerso 3p 100a Breakerso QBHW3100H Breakers <p>Please see attached document for additional information.</p> |
| List required materials needed to make the product, including materials of product components | Includes but is not limited to copper, steel, thermoset plastics, epoxy resins, bimetallic strips, and electromagnetic coils |
| Are there applicable certification requirements? | No |
| Are there applicable regulations? | No |
| Are there any other standards, requirements, etc.? | Yes |
| Details | <ul style="list-style-type: none">-International Electrotechnical Commission (IEC) 60529-National Electrical Contractors Association (NECA) 1-National Electrical Contractors Association (NECA) 408-National Electrical Manufacturers Association (NEMA) BU 1.1-National Fire Protection Association (NFPA) 70-Underwriter's Laboratories (UL) 489UL 489 |
| Additional Technical Comments | |

Section 4: Business Information

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|-------------------------------------|---|
| Estimated potential business volume | <p>Bus Plugs - as many as available Bus Plug Breakers - as many as available 3p 100a Breakers - as many as available QBHW3100H Breakers - as many as available</p> <p>This request is only for this project but the trade partner is working on additional BABAA projects</p> |
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| Estimated target price / unit cost information (if unavailable explain) | \$6000 total (depends on the availability of items sought) |
| When is it needed by? | May 2025 |
| Describe packaging requirements | Best available. Delivered undamaged. Specifics discussed in negotiation. |
| Where will this item be shipped? | South Burlington, VT |

Additional Comments

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| Is there other information you would like to include? | <p>Agency Providing funds: Commerce, U.S. Department of / National Institute of Standards and Technology (NIST)</p> <p>For questions related to BABA Compliance: Robert Slocum robert.slocum@nist.gov</p> |
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SECTION 26 2513
LOW-VOLTAGE BUSWAYS

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|------------------|-----------|
| Job # | 10424 |
| Cost # | |
| Construction Set | |
| Received | 11/7/2024 |
| DEW CONSTRUCTION | |

PART 1 GENERAL

1.01 ALL WORK UNDER THIS SECTION SHALL BE BID UNDER ELECTRICAL ALTERNATE E-02.

1.02 SECTION INCLUDES

- A. Plug-in busway.
- B. Plug-in units for plug-in busway.

1.03 RELATED REQUIREMENTS

- A. Section 26 0526 - Grounding and Bonding for Electrical Systems.
- B. Section 26 0529 - Hangers and Supports for Electrical Systems.
- C. Section 26 0573 - Power System Studies: Additional criteria for the selection and adjustment of equipment and associated protective devices specified in this section.

1.04 REFERENCE STANDARDS

- A. IEC 60529 - Degrees of Protection Provided by Enclosures (IP Code).
- B. NECA 1 - Standard for Good Workmanship in Electrical Construction.
- C. NECA 408 - Standard for Installing and Maintaining Busways.
- D. NEMA BU 1.1 - General Instructions for Handling, Installation, Operation, and Maintenance of Busway Rated 600 Volts or Less.
- E. NFPA 70 - National Electrical Code.
- F. UL 489 - Molded-Case Circuit Breakers, Molded-Case Switches and Circuit Breaker Enclosures.
- G. UL 857 - Busways.

1.05 ADMINISTRATIVE REQUIREMENTS

- A. Coordination:
 - 1. Coordinate the arrangement of busway with structural members, ductwork, piping, equipment and other potential conflicts installed under other sections or by others. Coordinate the work with other trades to avoid installation of obstructions within busway required clearances.
 - 2. Coordinate arrangement of busway with the dimensions and clearance requirements of the actual equipment to be installed.
 - 3. Coordinate the work with placement of supports, anchors, etc. required for mounting.
 - 4. Verify with manufacturer that conductor terminations are suitable for use with the conductors to be installed.
 - 5. Where busway extends through roof, coordinate the work with other trades to provide roof penetrations that preserve the integrity of the roofing system and do not void the roof warranty.
 - 6. Notify Engineer of any conflicts with or deviations Contract Documents. Obtain direction before proceeding with work.
- B. Preinstallation Meeting: Convene one week prior to performing field measurements for busway fabrication drawings; require attendance of all affected installers. Review proposed routing, sequence of installation, and protection requirements for installed busway.
- C. Sequencing:
 - 1. Perform field measurements prior to busway fabrication. Where necessary, perform field measurement for custom lengths after installation of adjacent sections.

1.06 SUBMITTALS

- A. Product Data: Provide manufacturer's standard catalog pages and data sheets for busway system components and accessories. Include dimensions, weight, materials, fabrication details,

finishes, and service condition requirements. Indicate voltage and current ratings, short circuit current ratings, configurations, and installed features and accessories.

1. Clearly indicate whether proposed short circuit current ratings are fully rated or, where acceptable, series rated systems.
- B. Shop Drawings: Include dimensioned plan views and sections indicating proposed busway routing, required clearances, and locations and details of supports, fittings, building element penetrations, and equipment connections.
- C. Manufacturer's Installation Instructions: Indicate application conditions and limitations of use stipulated by product testing agency. Include instructions for storage, handling, protection, examination, preparation, and installation of product.

1.07 QUALITY ASSURANCE

- A. Comply with requirements of NFPA 70.
- B. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years documented experience.
- C. Product Listing Organization Qualifications: An organization recognized by OSHA as a Nationally Recognized Testing Laboratory (NRTL) and acceptable to authorities having jurisdiction.

1.08 DELIVERY, STORAGE, AND HANDLING

- A. Receive, inspect, handle, and store busway in accordance with manufacturer's instructions, NECA 408, and NEMA BU 1.1.
- B. Store products indoors in a clean, dry space having a uniform temperature to prevent condensation (including outdoor busway, which is not weatherproof until completely and properly installed). Maintain factory wrapping or provide an additional heavy canvas or heavy plastic cover to protect units from dirt, water, construction debris, and traffic.
- C. Handle products carefully to avoid damage to internal components, enclosure, and finish.

1.09 FIELD CONDITIONS

- A. Maintain field conditions within required service conditions during and after installation.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Busway System:
 1. ABB: www.electrification.us.abb.com/.
 2. Eaton Corporation: www.eaton.com/.
 3. Schneider Electric: www.se.com/.
 4. Starline Power: www.starlinepower.com/

2.02 BUSWAY SYSTEM

- A. Provide new busway system consisting of all required components, fittings, devices, supports, accessories, etc. as necessary for a complete operating system.
- B. Provide products listed, classified, and labeled as suitable for the purpose intended.
- C. Description: Prefabricated sectionalized enclosed bus assemblies and associated fittings and devices; listed and labeled as complying with UL 857.
- D. Busway General Requirements:
 1. Busway Type: Totally enclosed, non-ventilated; suitable for installation in any mounting orientation the busway is designed for (e.g horizontal flatwise, horizontal edgewise, vertical) without derating.
 2. Temperature Rise: Not exceeding 55 degrees C, when operating at continuous rated current in an ambient temperature of 104 degrees F.
 3. Busbars and stabs to be suitably plated at all electrical contact points.
 4. Busbar Insulation: NEMA Class B, rated 266 degrees F.

5. Housing: Steel or aluminum, with manufacturer's standard finish unless otherwise indicated.
6. Single-Bolt Type Joints:
 - a. Use torque-indicating bolts with visual indication that proper torque has been applied.
 - b. Bolts to be at ground potential to allow adjustment without requiring de-energizing of busway.
 - c. Designed such that tightening of joints only requires access to one side of busway.
 - d. Allows for length adjustment of plus/minus 0.125 inch.
- E. Service Conditions:
 1. Provide busway system and associated components suitable for operation under the following service conditions without derating:
 - a. Altitude: Less than 6,600 feet.
 - b. Ambient Temperature:
 - 1) Busway Lengths and Fittings: Between -22 degrees F and 104 degrees F.
 - 2) Circuit Breaker Plug-In Units: Between 32 degrees F and 104 degrees F.
 2. Provide busway system and associated components suitable for operation at indicated ratings under the service conditions at the installed location.
- F. Short Circuit Current Rating:
 1. Provide busway system and associated components with listed short circuit current rating not less than the available fault current at the installed location as determined by short circuit study performed in accordance with Section 26 0573.

2.03 PLUG-IN BUSWAY

- A. General Requirements:
 1. Provide cover at each unused plug-in opening.
 2. Provide means for mechanical support and alignment of plug-in units.
 3. IEC 60529 Protection Rating: Standard (not splash resistant), with rating of IP 40.
- B. Plug-In Busway:
 1. Voltage: As indicated on the drawings.
 2. Ampere Rating: As indicated on the drawings.
 3. Configuration: 3 phase, 4-wire (100 percent capacity neutral), with 50 percent capacity integral housing ground.
 4. Busbar Material: Copper.
 5. Plug-In Opening Spacing: 24 inches (610 mm) nominal between openings (openings on two sides).

2.04 PLUG-IN UNITS FOR PLUG-IN BUSWAY

- A. Description: Plug-in units suitable for use with installed busway; types, ratings, configurations, and features as indicated on the drawings.
- B. General Requirements:
 1. Designed to make positive ground connection prior to phase/neutral connections when installed.
 2. Where splash resistant busway is specified, provide splash resistant plug-in units with minimum IEC 60529 rating of IP 54 unless otherwise indicated.
- C. Circuit Breaker Plug-In Units:
 1. Provide safety interlock to prevent opening the cover with the unit in the ON position with capability of overriding interlock for testing purposes.
 2. Provide 20 foot drop cord and NEMA configuration receptacles where indicated.
 3. Provide mechanical interlock for plug-in units up to 250 A to prevent installation or removal with the unit in the ON position.
 4. Conductor Terminations: Suitable for use with the conductors to be installed.
 5. Provide insulated 100 percent capacity solid neutral assembly where a neutral connection is required, with a suitable lug for terminating each neutral conductor.

6. Provide solidly bonded equipment ground bus with suitable lug for terminating equipment grounding conductor.
7. Provide thermal magnetic circuit breakers unless otherwise indicated.
8. Molded Case Circuit Breakers:
 - a. Description: Quick-make, quick-break, over center toggle, trip-free, trip-indicating circuit breakers listed and labeled as complying with UL 489.
 - b. Interrupting Capacity:
 - 1) Provide circuit breakers with interrupting capacity as required to provide the short circuit current rating indicated.
 - 2) Fully Rated Systems: Provide circuit breakers with interrupting capacity not less than the short circuit current rating indicated.
 - c. Conductor Terminations:
 - 1) Provide mechanical lugs unless otherwise indicated.
 - 2) Lug Material: Aluminum, suitable for terminating aluminum or copper conductors.
 - d. Thermal Magnetic Circuit Breakers: For each pole, furnish thermal inverse time tripping element for overload protection and magnetic instantaneous tripping element for short circuit protection.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that field measurements are as indicated.
- B. Verify that the ratings of busway system components are consistent with the indicated requirements.
- C. Verify that mounting surfaces are ready to receive busway and associated supports.
- D. Verify that conditions are satisfactory for installation prior to starting work.

3.02 PREPARATION

- A. Perform insulation resistance testing on individual current-carrying busway system components prior to installation in accordance with NECA 408 and NEMA BU 1.1.

3.03 INSTALLATION

- A. Install products in accordance with manufacturer's instructions.
- B. Install busway in accordance with NECA 1 (general workmanship), NECA 408, and NEMA BU 1.1.
- C. Unless otherwise indicated, arrange busway to be parallel or perpendicular to building lines.
- D. Arrange busway to provide required clearances and maintenance access.
- E. Install busway plumb and level, with sections aligned and with horizontal runs at the proper elevation.
- F. Unless otherwise indicated, orient horizontal plug-in busway with plug-in openings on sides (edgewise orientation).
- G. Maintain proper phase sequence throughout busway system, accounting for phase transitions where applicable.
- H. Provide suitable expansion fittings where busway is subject to movement, including but not limited to:
 1. Where busway crosses structural joints intended for expansion.
 2. Long straight busway runs in accordance with manufacturer's instructions.
- I. Provide end closures at unconnected ends of busway runs.
- J. Busway Support:
 1. Use manufacturer's recommended hangers and supports, located at intervals complying with NFPA 70 and manufacturer's requirements. Provide required support and attachment in accordance with Section 26 0529, where not furnished by busway manufacturer.

2. Provide independent support from building structure. Do not provide support from piping, ductwork, or other systems.
 3. Provide sway bracing as indicated or as required to keep busway runs straight and prevent rotation and movement, accounting for unbalanced weight distribution of plug-in units where applicable.
- K. Penetrations:
1. Provide suitable flanges where busway penetrates building elements. Use weatherproof flanges for exterior wall or roof penetrations. Seal roof penetrations as indicated or as required to preserve integrity of roofing system and maintain roof warranty.
- L. Plug-In Units:
1. Install plug-in units on plug-in busway in accordance with manufacturer's instructions. Provide independent supports where recommended by manufacturer.
 2. Unless otherwise indicated, final connections from plug-in units to loads to be provided by Contractor.
- M. Provide grounding and bonding in accordance with Section 26 0526.
1. Where integral housing ground is utilized, verify joint covers and other components required for continuity are properly installed.

3.04 FIELD QUALITY CONTROL

- A. Electrically isolate busway system before energizing and perform insulation resistance testing in accordance with NECA 408 and NEMA BU 1.1.
- B. Correct deficiencies and replace damaged or defective busway system components.

3.05 ADJUSTING

- A. Adjust tightness of mechanical and electrical connections to manufacturer's recommended torque settings.
- B. Adjust supports as required to minimize strain on busway and associated components.

3.06 CLEANING

- A. Clean dirt and debris from busway enclosure and components in accordance with manufacturer's instructions. Do not use compressed air or a blower in order to prevent debris infiltration.
- B. Clean exposed surfaces to remove dirt, paint, or other foreign material and restore to match original factory finish.

3.07 PROTECTION

- A. Protect busway system from subsequent construction operations.

END OF SECTION 26 2513