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**Part 1            General**

**1.1                RELATED REQUIREMENTS**

- .1            Section 26 05 00 - Common Work Results for Electrical.

**1.2                REFERENCES**

- .1            CSA International.
  - .1            CSA C22.2 No. 46-M1988(R2006), Electric Air-Heaters.
  - .2            Underwriters Laboratories (UL).
    - .1            UL 1042-2009, Standard for Electric Baseboard Heating Equipment.

**1.3                ACTION AND INFORMATIONAL SUBMITTALS**

- .1            Submit in accordance with Section 01 33 00 - Submittal Procedures.
- .2            Product Data:
  - .1            Submit manufacturer's instructions, printed product literature and data sheets for convectors and include product characteristics, performance criteria, physical size, finish, and limitations.
- .3            Manufacturer's Instructions: provide to indicate special handling criteria, installation sequence, and cleaning procedures.

**1.4                CLOSEOUT SUBMITTALS**

- .1            Submit in accordance with Section 01 78 00 - Closeout Submittals.
- .2            Operation and Maintenance Data: submit operation and maintenance data for convectors for incorporation into manual.

**1.5                DELIVERY, STORAGE, AND HANDLING**

- .1            Deliver, store, and handle materials in accordance with manufacturer's written instructions.
- .2            Delivery and Acceptance Requirements: deliver materials to site in original factory packaging, labelled with manufacturer's name and address.
- .3            Storage and Handling Requirements:
  - .1            Store materials off ground, indoors, and in accordance with manufacturer's recommendations in clean, dry, and well-ventilated area.
  - .2            Store and protect convectors from nicks, scratches, and blemishes.
  - .3            Replace defective or damaged materials with new.
- .4            Packaging Waste Management: remove for reuse of packaging materials in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal.

## **1.6 ACCEPTABLE PRODUCTS AND MATERIALS**

- .1 Where a particular brand name is stipulated, see Instructions to Bidders for procedure for requesting approval of substitute materials and products.

## **Part 2 Products**

### **2.1 BASEBOARD CONVECTORS**

- .1 Heaters: to CSA C22.2 No. 46, wattage density as indicated with connection box both ends.
  - .1 Element through-type fitted with aluminum convector vanes and resistor wire enclosed in mineral insulation in copper sheath.
  - .2 Element: locked to cabinet and supported at additional points throughout length to allow for linear expansion with non-metallic supports.
  - .3 Cabinet: to CSA C22.2 No. 46, pre-drilled back for securing to wall. Integral air diffusion reflector with wireway at bottom and built-in clamps.
    - .1 Bottom inlet/top outlet.
    - .2 Bottom inlet/front outlet.
    - .3 Front inlet/front outlet.
    - .4 Sloping inlet/sloping front outlet.
    - .5 Panel: steel casing, metal thickness, bottom 1 mm, extruded aluminum grill, 2 mm thick.
    - .6 Finish: phosphatized with epoxy/polyester baked powder coated finish, colour as selected by Departmental Representative.
  - .4 Blank cabinet sections and corners complete with wireway in sections including splice plates, to match heater cabinets in respects for continuous baseboard effect as indicated.
  - .5 Acceptable Products:
    - .1 As indicated on drawing in the heating fixtures list.
    - .2 Replacement materials or products: approved by addendum according to Instructions to bidders.

### **2.2 CONTROLS**

- .1 Relays and temperature controller and power module to switch loads in excess of thermostat rating.

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**Part 3 Execution**

**3.1 EXAMINATION**

- .1 Verification of Conditions: verify that conditions of substrate previously installed under other Sections or Contracts are acceptable for convectors installation in accordance with manufacturer's written instructions.
  - .1 Visually inspect substrate in presence.
  - .2 Inform Departmental Representative of unacceptable conditions immediately upon discovery.
  - .3 Proceed with installation only after unacceptable conditions have been remedied.

**3.2 INSTALLATION**

- .1 Install baseboard convector heaters, blank sections, and controls.
- .2 When wireway is used, remove knock-outs and insert insulating bushing between units.
- .3 Install grounding wire to maintain ground integrity between heating, blank, and auxiliary sections.
- .4 Make power and control connections.

**3.3 FIELD QUALITY CONTROL**

- .1 Perform tests in accordance with Section 26 05 00 - Common Work Results for Electrical.
- .2 Ensure heaters and controls operate correctly.

**3.4 CLEANING**

- .1 Progress Cleaning: clean in accordance with Section 01 74 11 - Cleaning.
  - .1 Leave Work area clean at end of each day.
- .2 Final Cleaning: upon completion remove surplus materials, rubbish, tools and equipment in accordance with Section 01 74 11 - Cleaning.
- .3 Waste Management: separate waste materials for recycling in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal.
  - .1 Remove recycling containers and bins from site and dispose of materials at appropriate facility.

**3.5 PROTECTION**

- .1 Protect installed products and components from damage during construction.
- .2 Repair damage to adjacent materials caused by commercial convectors installation.

**END OF SECTION**