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**PART 1 GENERAL**

**1.1 RELATED SECTIONS**

- .1 Section 01 33 00 - Submittal Procedures.
- .2 Section 01 74 21 – Construction/Demolition Waste Management and Disposal.
- .3 Section 01 78 00 - Closeout Submittals.
- .4 Section 23 09 33 – Electric and Electronic Control System for HVAC
- .5 Section 26 05 00 – Common Work Results - Electrical

**1.2 REFERENCES**

- .1 Canadian Standards Association (CSA International)
  - .1 CSA C22.2 No.46, Electric Air-Heaters.
- .2 Underwriters' Laboratories (UL) Inc.
  - .1 UL 1042, Electric Baseboard Heating Equipment.

**1.3 PRODUCT DATA**

- .1 Submit product data in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Submit product data sheets for baseboard convectors, include:
  - .1 Product characteristics.
  - .2 Performance criteria.
  - .3 Mounting methods.
  - .4 Physical size.
  - .5 kW rating, voltage, phase.
  - .6 Cabinet material thicknesses.
  - .7 Limitations.
  - .8 Colour and finish.
- .3 Manufacturer's Instructions: Provide to indicate special handling criteria, installation sequence and cleaning procedures.

**1.4 CLOSEOUT SUBMITTALS**

- .1 Submit operation and maintenance data for baseboard convectors in accordance with Section 01 78 00 - Closeout Submittals.

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**1.5 WASTE MANAGEMENT AND DISPOSAL**

- .1 Separate and recycle waste materials in accordance with Section 01 74 21 – Construction/Demolition Waste Management And Disposal, and with Waste Reduction Workplan.
- .2 Remove from site and dispose of packaging materials at appropriate recycling facilities.
- .3 Collect and separate for disposal paper, plastic, polystyrene, corrugated cardboard, packaging material in appropriate on-site bins for recycling in accordance with Waste Management Plan.
- .4 Divert unused metal and wiring materials from landfill to metal recycling facility approved by Department Representative.
- .5 Collect, package and store existing convector units for either reuse or recycling and return to recycler in accordance with Waste Management Plan.

**PART 2 PRODUCTS**

**2.1 MANUFACTURERS**

- .1 Acceptable Product:
  - .1 Ouellet
  - .2 Dimplex
  - .3 Chromalox
  - .4 Stelpro.

**2.2 BASEBOARD CONVECTORS**

- .1 Heaters: to CSA C22.2 No.46 standard 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 aluminum 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/front outlet.
  - .2 Front inlet/front outlet.
  - .3 Bottom inlet/sloping top outlet.
  - .4 Panel: steel, metal thickness, bottom 1 mm, front 1.6 mm thick.
  - .5 Finish: phosphatized and finished with 2 coats baked enamel, beige colour.

- .4 Blank cabinet sections and outside, inside corners complete with wireway in sections including splice plates, to match heater cabinets in respect for continuous baseboard effect as indicated.

## **2.3 CONTROLS**

- .1 Wall mounted thermostats: type line, low voltage or electronic, and solid state relays Energy Star certified, to Section 23 09 33 - Electric and Electronic Control System for HVAC or Section 25 30 02 – EMCS: Field Control Devices as indicated.
- .2 Integral thermostats 1 or 2 pole to control load as indicated.
- .3 Relays and transformers to switch loads in excess of thermostat rating.
- .4 Double pole, double throw switch and receptacle terminal box assembly for combination heater and air conditioner power supply.

## **PART 3 EXECUTION**

### **3.1 INSTALLATION**

- .1 Install baseboard convactor 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 Install thermostats in locations indicated.
- .5 Make power and control connections.

### **3.2 COMMISSIONING**

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

**END OF SECTION**