

**Part 1 General****1.1 RELATED SECTIONS**

- .1 Section 26 05 00 - Common Work Results for Electrical.
- .2 Section 26 05 21 - Wire and Cables (0 - 1000 V).
- .3 Section 26 05 32 - Outlet Boxes, Conduit Boxes and Fittings.

**1.2 REFERENCES**

- .1 Canadian Standards Association (CSA)
  - .1 CAN/CSA C22.2 No.18-98 (R2003), Outlet Boxes, Conduit Boxes and Fittings.
  - .2 CSA C22.2 No. 45-M1981(R2003), Rigid Metal Conduit.
  - .3 CSA C22.2 No. 56-13, Flexible Metal Conduit and Liquid-Tight Flexible Metal Conduit.
  - .4 CSA C22.2 No. 83-M1985 (R2013), Electrical Metallic Tubing.
  - .5 CSA C22.2 No. 211.2-06 (R2011), Rigid PVC (Unplasticized) Conduit.

**1.3 SUBMITTALS**

- .1 Provide submittals in accordance with Section 01 00 10 – General Instructions.

**1.4 WASTE MANAGEMENT AND DISPOSAL**

- .1 Separate and recycle waste materials in accordance with Section 01 00 10 – General Instructions.
- .2 Remove from site and dispose of all packaging materials at appropriate recycling facilities.
- .3 Collect and separate for disposal all 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 as approved by Departmental Representative.
- .5 Fold up metal banding, flatten and place in designated area for recycling.

**Part 2 Products****2.1 CONDUITS**

- .1 Electrical metallic tubing with couplings to CSA C22.2 No. 83.
- .2 Flexible and liquid-tight flexible metal conduit: to CSA C22.2 No.56.
- .3 Epoxy coated conduit: to CSA C22.2 No. 45, with zinc coating and corrosion resistant epoxy finish inside and outside.
- .4 Rigid PVC conduit: to CSA 22.2 No. 211.2.

**2.2 CONDUIT FASTENINGS**

- .1 One-hole galvanized steel straps to secure surface conduits 50 mm and smaller. Two-hole galvanized steel straps for conduits larger than 50 mm.
- .2 Beam clamps to secure conduits to exposed steel work.
- .3 Channel type supports for two (2) or more conduits at 1500 mm OC.
- .4 12 mm diameter galvanized threaded rods to support suspended channels.

**2.3 CONDUIT FITTINGS**

- .1 Fittings for raceways: to CSA C22.2 No. 18.
- .2 Fitting manufactured for use with conduit specified.
- .3 Factory “ells” where 90° bends are required for 25 mm and larger conduits.
- .4 All couplings and connectors at the sprinkler-proof equipment shall be steel-compression type (binding collar). For all other applications, steel set screw-type couplings and connections shall be used. Set screw and cast types will not be acceptable.

**Part 3 Execution****3.1 INSTALLATION**

- .1 Install conduits to conserve headroom in exposed locations and cause minimum interference in space through which they pass.
- .2 Conceal conduits except in mechanical and electrical service rooms.
- .3 In finished areas, run wiring concealed, except as otherwise specified or indicated on the drawings. Run exposed conduit neatly, parallel to building lines and maintain maximum headroom.
- .4 Use EMT conduit for all feeders and branch wiring within the building.
- .5 Use rigid PVC conduit underground.
- .6 Use epoxy coated rigid steel conduit as indicated on drawings.
- .7 Use 600 mm liquid-tight flexible metal conduit for primary and secondary connection to dry-type transformers.
- .8 Bend conduit cold. Replace conduit if kinked or flattened more than 1/10th of its original diameter.
- .9 Mechanically bend steel conduit over 20 mm diameter.
- .10 Install polypropylene fish cord in all empty conduits.
- .11 Where conduits become blocked, remove and replace blocked section.
- .12 Dry conduits out before installing wire.
- .13 Provide expansion fittings at all building and shield expansion joints.

**3.2 SURFACE CONDUITS**

- .1 Line up all exposed raceways, parallel and at right angles to the building walls. Set plumb and level equipment accurately and align hanger rods. Function and appearance shall be to the Departmental Representative's satisfaction.
- .2 Locate conduits behind infrared or gas-fired heaters with 1500 mm clearance.
- .3 Run conduits in flanged portion of structural steel.
- .4 Group conduits wherever possible on recessed channels. Surface or suspended channels may be used if unavoidable.
- .5 Do not pass conduits through structural members except as indicated and only with the Departmental Representative's permission for each case.

**3.3 EXPANSION FITTINGS**

- .1 Conduit expansion fittings shall be provided on all conduits crossing structural expansion joints.
- .2 Install expansion fittings perpendicular to expansion joint.

**3.4 CLEANING**

- .1 On completion and verification of performance of installation, remove surplus material, excess materials, rubbish, tools and equipment.

**END OF SECTION**