

1.1 RELATED WORK

1. Basic Electrical Materials & Methods Section 16050
2. Fastenings and Supports Section 16126

1.2 LOCATION OF CONDUIT

1. Drawings do not show all conduits. Those shown are diagrammatic form only.
2. Electrical Subcontractor shall produce layout sketches of conduit runs through mechanical and electrical service areas in order to pre-avoid any conflict with other construction elements and to determine the most efficient route to run conduit.

1.3 CONDUITS

1. Rigid galvanized steel threaded conduit: size as indicated.
2. Electrical metallic tubing (EMT), with couplings: size as indicated.
3. Rigid PVC conduit: size as indicated.
4. Flexible metal conduit and liquid-tight flexible metal conduit: size as indicated.
5. FRE duct: size 2" (50mm) and above as indicated.

1.4 CONDUIT FASTENINGS

1. One hole steel straps to secure surface conduits 1 ¼" (35mm) and smaller. Two hole steel straps for conduits larger than 1 ¼" (35mm).
2. Beam clamps to secure conduits to exposed steel work.
3. 3/8" (10mm) diameter threaded rods to support suspended channels. One rod shall be non-ferrous.

1.5 CONDUIT FITTINGS

1. Fittings manufactured for use with conduit specified.
2. Manufacturer elbows where 90° bends are required for 2 ½" (63mm) and larger conduits.
3. Die cast set screw connectors and couplings. Insulated throat liners on connectors.
4. Raintight connector fittings complete with O-rings, for use on weatherproof or sprinklerproof enclosures. Raintight couplings shall be used for surface conduit installations exposed to moisture or sprinkler heads. Raintight connectors shall be used for all top entries to panels, contactors and motor control centres.

1.6 INSTALLATION

1. Install conduits to conserve headroom in exposed locations and cause minimum interference in spaces through which they pass.
2. Conceal conduits except in mechanical and electrical service rooms.
3. Use electrical metallic tubing (EMT) except where noted otherwise.
4. Wiring home runs to panels and main branch wiring runs in ceiling spaces shall be run in conduit. Wiring drops from conduit systems into boxes for wiring devices in steel stud partitions may be wired with AC-90. AC-90 drops to light fixtures shall not run horizontally more than 6' (1.83m) from conduit system junction boxes in ceiling space. AC-90 drops from conduit system in the ceiling space to feed outlets in steel stud partitions shall not run more than 6' (1.83m) horizontally from the ceiling outlet box to the point where the AC-90 drops vertically into the partition.
5. Use rigid PVC conduit for underground installations.
6. Use flexible metal conduit for connection to motors, transformers and equipment subject to movement or vibration. Provide a separate insulated grounding conductor within flexible conduit.
7. Use threaded rigid conduit and fittings in hazardous areas, concrete encased duct banks or where conduit is exposed to mechanical injury. Install conduit sealing fittings in hazardous areas and fill with compound. Field threads on rigid conduit shall be sufficient length to draw conduits up tight. Mechanically bend rigid steel conduit over ¾" (21mm) diameter.
8. Bend conduit cold. Replace conduit if kinked or flattened more than 1/10th of its original diameter.
9. Install polypropylene fish cord in empty conduits.
10. Where conduits become blocked, remove and replace blocked section.
11. Dry conduits out before installing wire.
12. The length of any conduit run shall not exceed 100' (33m) and no conduit run shall have more than two 90° bends (or equivalent) before a pullbox is installed. Pullboxes shall be installed in accessible ceiling spaces. Conduits shall be supported within 12" (300mm) of entering any junction box, pullbox, cabinet, or panelboard.
13. Conduit shall be sized as per Canadian Electrical Code or as shown on drawings. Note that the sizes of branch circuit conductors scheduled and/or specified on the drawings are minimum sizes and shall be increased as required to suit length of run and voltage drop in accordance with Canadian Electrical Code. Where conductor sizes are increased to suit voltage drop requirements, increase the conduit size to suit at no extra cost.

END OF SECTION