

PART 1 - GENERAL

1.1 NOT USED

- .1 Not applicable.

PART 2 - PRODUCT

2.1 SUPPORT CHANNELS

- .1 U shape, size 41 mm x 41 mm, 27 mm thick, surface mounted, suspended or set in poured concrete walls and ceilings unless otherwise indicated.
- .2 Standard rolled structural steel shapes and plates or prefabricated structural systems.
- .3 Unless otherwise indicated, use hot dipped galvanized steel (after fabrication).
- .4 Use stainless steel or aluminum outside and in wet areas. Zinc plating will not be accepted for exterior installations.

2.2 CABLE TIES

- .1 Nylon flame retardant, low smoke cable tie, size as required.
- .2 Nylon flame retardant, low smoke cable tie mounting bracket. Mechanical fastening type only; adhesive mounts not acceptable.

2.3 CONDUIT "P" CLAMPS

- .1 Use galvanized clamps in all areas except for outside the building. Use stainless steel outside the building.
- .2 Secure all conduits with P-clamps.

PART 3 - EXECUTION

3.1 INSTALLATION

- .1 Secure equipment to solid masonry, tile and plaster surfaces with mechanical anchors or nylon shields.
- .2 Secure equipment to poured concrete with expandable inserts.
- .3 Secure equipment to hollow masonry walls with stainless steel toggle bolts.
- .4 Support equipment, conduit or cables using clips, spring loaded bolts, cable clamps designed as accessories to basic channel members.
- .5 Fasten exposed conduit or cables to building construction or support system using straps.
 - .1 One-hole straps to secure surface conduits and cables 50 mm and smaller.
 - .2 Two-hole straps for conduits and cables larger than 50 mm.
 - .3 Conduit straps shall match conduits in material and finish.
- .6 Suspended support systems for horizontal runs:
 - .1 Support individual conduit runs with minimum 12 mm dia. continuously threaded rods and spring clips.
 - .2 Support two (2) or more conduits on channels supported by minimum 12 mm dia threaded rod hangers where direct fastening to building construction is impractical.
 - .3 Continuously threaded rods shall be zinc plated or stainless steel to match supporting hardware.
 - .4 Modify existing support systems throughout the interstitial space to accommodate new conduit runs. Provide any necessary mounting channel and threaded rod to make the necessary modifications.
- .7 For surface mounting of two (2) or more conduits, use support channels spaced in accordance with the Canadian Electrical Code (maximum 1.5m spacing).
- .8 Provide metal brackets, frames, hangers, clamps and related types of support structures where indicated or as required to support conduit and cable runs.
- .9 Provide adequate support for conduits and cables dropped vertically to equipment where there is no wall support.

- .10 Do not use wire lashing or perforated strap to support or secure conduits or cables.
- .11 Provide pipe hangers on all conduits the run up through interstitial floor slab for vertical support. Grout all conduits into place using non-shrink epoxy grout.
- .12 Provide fastenings and supports as required for each type of equipment, cables and conduits, and in accordance with manufacturer's installation recommendations.
- .13 Provide hot dipped galvanized or stainless steel beam clamps to secure conduits and cable tray to exposed steel work.
- .14 Various suspended types of junction, pull and/or outlet boxes as well as conduits, are to be supported with minimum size 12 mm threaded rod, nuts and flat washers. Secure threaded rods to boxes with one (1) flat washer and nut installed on both sides of box.
 - .1 One (1) rod required for all type boxes sized 150 mm x 150 mm and smaller.
 - .2 Two (2) rods required for boxes sized 200 mm x 200 mm and larger, up to and including those sized 300 mm x 300 mm.
 - .3 Minimum of four (4) rods required for all boxes sized larger than 300 mm x 300 mm.
 - .4 Cut-off all excess rod within 12 mm of channel bottom.
- .15 In addition to C.E.C. minimum conduit spacing requirements, all suspended conduit runs containing horizontal or vertical elbows are to have one additional support rod installed not greater than 300 mm and mid-point of "all" 90° bends. Maximum spacings between conduit support channels shall be as dictated by smallest size conduit(s) being supported and/or secured to same.
- .16 Where galvanized steel supports are exposed to moisture, touch-up all field cut surfaces with galvanizing paint.

END OF SECTION