

## PART 1 - GENERAL

- |  |    |   |
|--|----|---|
| <u>1.1 REFERENCES</u>                    | .1 | Canadian Standards Association (CSA International)  |
|  | .1 | CAN/CSA C22.2 No. 18-98(R2003), Outlet Boxes, Conduit Boxes, Fittings and Associated Hardware, A National Standard of Canada.                 |
|  | .2 | CSA C22.2 No. 45-M1981(R2003), Rigid Metal Conduit.   |
|  | .3 | CSA C22.2 No. 56-04, Flexible Metal Conduit and Liquid-Tight Flexible Metal Conduit.  |
|  | .4 | CSA C22.2 No. 83-M1985(R2003), Electrical Metallic Tubing.  |
|  | .5 | CSA C22.2 No. 211.2-M1984(R2003), Rigid PVC (Unplasticized) Conduit.  |
| <u>1.2 WASTE MANAGEMENT AND DISPOSAL</u> | .1 | Separate waste materials for reuse and recycling in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal. |
|  | .2 | Place materials defined as hazardous or toxic waste in designated containers.   |
|  | .3 | Ensure emptied containers are sealed and stored safely for disposal away from children.   |

## PART 2 - PRODUCTS

- |                     |    |   |
|---------------------|----|---|
| <u>2.1 CONDUITS</u> | .1 | Rigid metal conduit: to CSA C22.2 No. 45, galvanized steel threaded.      |
|                     | .2 | Electrical metallic tubing (EMT): to CSA C22.2 No. 83, with couplings.    |
|                     | .3 | Rigid pvc conduit: to CSA C22.2 No. 211.2.                                |
|                     | .4 | Flexible metal conduit: to CSA C22.2 No. 56, liquid-tight flexible metal. |

- 2.2 CONDUIT FASTENINGS
- .1 One hole steel straps to secure surface conduits 53 mm and smaller.
    - .1 Two hole steel straps for conduits larger than 53 mm.
  - .2 Beam clamps to secure conduits to exposed steel work.
  - .3 Channel type supports for two or more conduits at 1.5 m on centre.
  - .4 Threaded rods, 6 mm diameter, to support suspended channels.
- 2.3 CONDUIT FITTINGS
- .1 Fittings: to CAN/CSA C22.2 No. 18, manufactured for use with conduit specified. Coating: same as conduit.
  - .2 Ensure factory "ells" where 90 degrees bends for 27 mm and larger conduits.
  - .3 Set-screw steel connectors and couplings for EMT.
- 2.4 FISH CORD
- .1 Polypropylene.

PART 3 - EXECUTION

- 3.1 MANUFACTURER'S INSTRUCTIONS
- .1 Compliance: comply with manufacturer's written recommendations or specifications, including product technical bulletins, handling, storage and installation instructions, and datasheets.
- 3.2 INSTALLATION
- .1 Install conduits to conserve headroom in exposed locations and cause minimum interference in spaces through which they pass.
-

MCTS CENTRE	CONDUITS, CONDUIT	Section 26 05 34
PORT AUX BASQUES, NL	FASTENINGS AND CONDUIT	Page 3
R.082780.004	FITTINGS	2017-06-28

- 3.2 INSTALLATION (Cont'd)
- .2 Conceal conduits except in mechanical and electrical service rooms, areas with exposed ceilings, or otherwise as noted.
  - .3 Use rigid galvanized steel threaded conduit where exposed to mechanical injury and as noted.
  - .4 Use electrical metallic tubing (EMT) except in cast concrete and not subject to mechanical injury.
  - .5 Use rigid pvc conduit underground.
  - .6 Use flexible metal conduit for connection to motors in dry areas.
  - .7 Use liquid tight flexible metal conduit for connection to motors or vibrating equipment in damp, wet or corrosive locations.
  - .8 Minimum conduit size for lighting and power circuits: 21 mm.
  - .9 Install EMT conduit from branch circuit panel to junction box in sub-floor immediately below operations room.
    - .1 Run flexible conduit from junction box to receptacle outlet boxes in sub-floor.
  - .10 Bend conduit cold:
    - .1 Replace conduit if kinked or flattened more than 1/10th of its original diameter.
  - .11 Mechanically bend steel conduit over 21 mm diameter.
  - .12 Field threads on rigid conduit must be of sufficient length to draw conduits up tight.
  - .13 Install fish cord in empty conduits.
  - .14 Run 2 27 mm spare conduits up to ceiling space and from each flush panel.
    - .1 Terminate these conduits in 152 x 152 x 102 mm junction boxes in ceiling space.
  - .15 Remove and replace blocked conduit sections.
    - .1 Do not use liquids to clean out conduits.

MCTS CENTRE	CONDUITS, CONDUIT	Section 26 05 34
PORT AUX BASQUES, NL	FASTENINGS AND CONDUIT	Page 4
R.082780.004	FITTINGS	2017-06-28

3.2 INSTALLATION .16 Dry conduits out before installing wire.  
(Cont'd)

3.3 SURFACE  
CONDUITS

- .1 Run parallel or perpendicular to building lines.
- .2 Run conduits in flanged portion of structural steel.
- .3 Group conduits wherever possible on suspended or surface channels.
- .4 Do not pass conduits through structural members except as indicated.
- .5 Do not locate conduits less than 75 mm parallel to hot water lines with minimum of 25 mm at crossovers.

3.4 CONCEALED  
CONDUITS

- .1 Run parallel or perpendicular to building lines.
- .2 Do not install conduits in terrazzo or concrete toppings.

3.5 CONDUITS IN  
CAST-IN-PLACE  
CONCRETE

- .1 Locate to suit reinforcing steel.
  - .1 Install in centre one third of slab.
- .2 Protect conduits from damage where they stub out of concrete.
- .3 Install sleeves where conduits pass through slab or wall.
- .4 Provide oversized sleeve for conduits passing through waterproof membrane, before membrane is installed.
  - .1 Use cold mastic between sleeve and conduit.
- .5 Conduits in slabs: minimum slab thickness 4 times conduit diameter.

MCTS CENTRE	CONDUITS, CONDUIT	Section 26 05 34
PORT AUX BASQUES, NL	FASTENINGS AND CONDUIT	Page 5
R.082780.004	FITTINGS	2017-06-28

- |  |   |
|--|---|
| <u>3.5 CONDUITS IN<br/>CAST-IN-PLACE<br/>CONCRETE<br/>(Cont'd)</u> | .6    Encase conduits completely in concrete with<br>minimum 25 mm concrete cover.<br><br>.7    Organize conduits in slab to minimize<br>cross-overs.   |
| <u>3.6 CONDUITS IN<br/>CAST-IN-PLACE SLABS<br/>ON GRADE</u>        | .1    Run conduits 27 mm and larger below slab and<br>encase in 75 mm concrete envelope.<br>.1    Provide 50 mm of sand over concrete<br>envelope below floor slab.   |
| <u>3.7 CONDUITS<br/>UNDERGROUND</u>                                | .1    Slope conduits to provide drainage.   |
| <u>3.8 CLEANING</u>  | .1    Proceed in accordance with Section 01 74 11 -<br>Cleaning.<br><br>.2    On completion and verification of performance<br>of installation, remove surplus materials,<br>excess materials, rubbish, tools and<br>equipment. |