

## PART 1 - GENERAL

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| <u>1.1 REFERENCES</u>                    | .1 | Canadian Standards Association (CSA)  |
|  | .1 | CAN/CSA C22.2 No. 18.2, Nonmetallic Outlet Boxes.   |
|  | .2 | CSA C22.2 No. 211.2-06, Rigid PVC (Unplasticized) Conduit.  |
| <u>1.2 LOCATION OF CONDUIT</u>           | .1 | Location to be as shown on drawings or as directed by Departmental Representative.  |
| <u>1.3 WASTE MANAGEMENT AND DISPOSAL</u> | .1 | Separate and recycle waste materials 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.   |
|  | .4 | Collect and separate plastic, paper packaging and corrugated cardboard in accordance with Waste Management Plan.                  |
| <u>1.4 APPROVALS, CODES AND PERMITS</u>  | .1 | All work shall be done in accordance with the latest edition of the Canadian Electrical Code C22.1.                               |
|  | .2 | Contractor shall present drawings to Electrical Inspection Authority for approval and obtain a permit before starting work.       |
|  | .3 | Notify the Departmental Representative of any changes required before proceeding.   |

## PART 2 - PRODUCTS

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| <u>2.1 CONDUITS</u>                           | .1 | Rigid PVC conduit complete with fittings: to CSA C22.2 No. 211.2.  |
| <u>2.2 CONDUIT FASTENINGS</u>                 | .1 | One hole epoxy coated galvanized steel straps to secure surface conduits 41 mm and smaller. Two hole epoxy coated steel straps for conduits larger than 41 mm. |
| <u>2.3 CONDUIT FITTINGS</u>                   | .1 | Fittings: manufactured for use with conduit specified. Coating: same as conduit.   |
|   | .2 | Factory "ells" where 90° bends are required for 25 mm and larger conduits.   |
|   | .3 | Short radius bends: Coordinate conduit installation with actual space available for bend. Use short radius bend as required.                                   |
| <u>2.4 EXPANSION FITTINGS FOR PVC CONDUIT</u> | .1 | Weatherproof expansion fittings suitable for 100 mm linear expansion.  |
|   | .2 | Watertight expansion fittings suitable for linear expansion and 19 mm deflection in all directions.  |
|   | .3 | Weatherproof expansion fittings for linear expansion at entry to panel.  |
| <u>2.5 FISH CORD</u>                          | .1 | 6 mm polypropylene.  |
| <u>2.6 POLES</u>                              | .1 | Wood preservation: to CAN/CSA080 Series.   |

- .2 Poles
  - .1 to CAN/CSA-O15, wood species, Class 2, 12.2 meter poles, CCA or ACA pressure treated to 080-M1983. Installation as detailed on civil drawings. Minimum circumference at top is 635 mm. Minimum circumference at 1.8 m from butt is 978 mm.
- .3 Protective Posts: Steel pipes for protective Posts to be 100mm diameter epoxy coated galvanized steel pipe. Welding materials to CSA W48.1-M1980 and galvanizing to CGSB1-GP-40M. Steel plates to CSA G40.21-M92 Grade 300W galvanized and bolts to ASTM A307-76G.

### PART 3 - EXECUTION

#### 3.1 CONDUITS IN CAST-IN-PLACE CONCRETE

- .1 Use only rigid PVC conduit in wharf construction.
- .2 Locate to suit reinforcing steel. Install in centre one-third of concrete slab in location as shown.
- .3 Install sleeves where conduits pass through structural timbers.
- .4 Protect conduits from damage where they stub out of concrete.
- .5 Encase conduits completely in concrete with minimum 25 mm concrete cover.
- .6 Organize conduits in slab to minimize cross-overs.
- .7 Use PVC conduit for all conduit above wharf deck and cap. In all cases protect exposed PVC conduit with galvanized steel

pipe guards.

- .8 Ensure system is intact and clear after concrete is placed. Remove and replace blocked conduit sections. Do not use liquids to clean out conduits.
- .9 Install fish cord in empty conduits.
- .10 Dry conduits out before installing wire.
- .11 Install PVC watertight expansion fittings on all PVC conduits passing through concrete deck expansion joints.

### 3.2 POLE INSTALLATION

- .1 Install poles in cribwork as detailed on the drawings.
- .2 Install poles as shown on the drawings or as otherwise directed by the Departmental Representative.
- .3 Fabricate and install protective posts as detailed and in locations indicated on the drawings. Concrete for pipe to be in accordance with Section 03 30 00.
- .4 Paint steel post using two (2) coats of best quality oil base exterior marine paint as specified. Ensure first coat of paint is dry Before second is applied.