

## **1. GENERAL**

### **1.1 Description**

- .1 Provide a complete system of cable trays as shown on the drawings.
- .2 Coordinate the location of the support channels so as not to interfere with other services.

### **1.2 Related Work**

- .1 Wire and connectors 1000V insulation and under: Section 16122
- .2 Fastenings and Supports: Section 16191

### **1.3 Shop Drawings and Product Data**

- .1 Submit shop drawings and product data in accordance with Section 16010 - Electrical General Requirements.
- .2 Indicate various types of cabletroughs with terminology used in Part 2.

## **2. PRODUCTS**

### **2.1 Cabletrough**

- .1 Cabletroughs and fittings: to EEMAC F5-1.
- .2 Ventilated type, Class C1 to CSA C22.2 No.126.
- .3 Galvanized steel tray 150, 300, 450 or 600 mm wide as required with depth of 75 mm.
- .4 Horizontal elbows, end plates, drop outs, vertical risers and drops, tees, wyes, expansion joints, reducers and other fittings where required. Radii on fittings: 600 mm minimum.
- .5 Barriers where different voltage systems or electrical systems are in the same cabletrough, or as indicated.
- .6 Cable trough metal galvanized covers for all cable troughs installed on floor of pump station to 1 m above floor.
- .7 Approved materials: Pilgrim, Enduro, Canstrut, Pursley, Newton Instrument Co., or approved equal.

### **2.2 Supports**

- .1 Provide hardened steel (HS) rod hangers, rod hanger clamps and accessories as required.
- .2 Provide U-channel support structures for cabletroughs supported from floor.

- .3 Approved materials: Same as cabletrough.

### **3. EXECUTION**

#### **3.1 Installation**

- .1 Install complete cabletrough system. Provide concrete curbs around openings passing through floors.
- .2 Support cabletrough on both sides at 1500mm, on centre, spacings.
- .3 Remove sharp burrs or projections to prevent damage to cables or injury to personnel.
- .4 Fire stop all penetrations of fire barriers.
- .5 Install bare ground cable in all new trough system and bond to trough as required by the Canadian Electrical code.

#### **3.2 Cables in Cabletrough**

- .1 Install cables individually.
- .2 Lay cables into cabletrough. Use rollers when necessary to pull cables.
- .3 Secure cables in cabletrough at 5 m centers, with nylon ties.
- .4 Identify cables every 30 m with nameplates in accordance with Section 16010 - Electrical General Requirements.
- .5 Mark power and communication runs in accordance with colour coding outlined in Section 16010 - Electrical General Requirements.

**END OF SECTION**

RACEWAY SCHEDULE					
RACEWAY NUMBER	RACEWAY SIZE	RACEWAY TYPE	CABLE NUMBERS	RACEWAY REFERENCE DRAWINGS	REMARKS
CONDUITS					
C-001	50mm	CONDUIT-RIGID GALVANIZED STEEL	CPP-11-004, CPP-11-005	E-04	Follow trays from CPP-11 to UVR 1100
C-002	50mm	CONDUIT-RIGID GALVANIZED STEEL	CPP-12-004, CPP12-005	E-04	Follow trays from CPP-12 to UVR 1200
C-003	50mm	CONDUIT-RIGID GALVANIZED STEEL	CPP-21-004, CPP-21-005	E-04	Follow trays from CPP-21 to UVR 2100
C-004	50mm	CONDUIT-RIGID GALVANIZED STEEL	CPP-22-004, CPP-22-005	E-04	Follow trays from CPP-22 to UVR 2200
C-005	50mm	CONDUIT-RIGID GALVANIZED STEEL	CPP-23-004, CPP-23-005	E-04	Follow trays from CPP-23 to UVR 2300
C-006	50mm	CONDUIT-RIGID GALVANIZED STEEL	CPP-24-004, CPP-24-005	E-04	Follow trays from CPP-24 to UVR 2400
C-007	25mm	CONDUIT-RIGID GALVANIZED STEEL	CPP-11-007	E-04	UV MASTER PLC TO CPP-11
C-008	25mm	CONDUIT-RIGID GALVANIZED STEEL	CPP-12-007	E-04	CPP-11 TO CPP-12
C-009	25mm	CONDUIT-RIGID GALVANIZED STEEL	CPP-21-007	E-04	CPP-12 TO CPP-21
C-010	25mm	CONDUIT-RIGID GALVANIZED STEEL	CPP-22-007	E-04	CPP-21 TO CPP-22
C-011	25mm	CONDUIT-RIGID GALVANIZED STEEL	CPP-23-007	E-04	CPP-22 TO CPP-23
C-012	25mm	CONDUIT-RIGID GALVANIZED STEEL	CPP-24-007	E-04	CPP 23 TO CPP24

RACEWAY SCHEDULE					
RACEWAY NUMBER	RACEWAY SIZE	RACEWAY TYPE	CABLE NUMBERS	RACEWAY REFERENCE DRAWINGS	REMARKS
<b>CABLE TRAY</b>					
T-001	600mm	CABLE TRAY-GALVANIZED STEEL CSA C1-75mm DEEP	P-0001, P-0002	E-04	
T-002	600mm	CABLE TRAY-GALVANIZED STEEL CSA C1-75mm DEEP	P-0003, P-0004, P-0005, P-0006	E-04	
T-003	600mm	CABLE TRAY-GALVANIZED STEEL CSA C1-75mm DEEP	CPP-11-001, CPP-11-002, CPP-11-003, CPP-11-006, CPP-11-008 CPP-12-001, CPP-12-002, CPP-12-003, CPP-12-006, CPP-12-008	E-03	
T-004	600mm	CABLE TRAY-GALVANIZED STEEL CSA C1-75mm DEEP	CPP-11-001, CPP-11-002, CPP-11-003, CPP-11-006, CPP-11-008 CPP-12-001, CPP-12-002, CPP-12-003, CPP-12-006, CPP-12-008 SIV-2-001, FIT-2-001, FCV-2-002, FCV-2-003, FCV-1-001, FCV-1-002, FCV-1-003 SIV-1-001, FIT-1-001, DHV-2-001	E-03	C/W COVER
T-004A	150mm	CABLE TRAY-GALVANIZED STEEL CSA C1-75mm DEEP	SIV-2-001	E-03	C/W COVER
T-004B	150mm	CABLE TRAY-GALVANIZED STEEL CSA C1-75mm DEEP	FIT-2-001, CPP-12-006	E-03	C/W COVER
T-004C	300mm	CABLE TRAY-GALVANIZED STEEL CSA C1-75mm DEEP	FCV-1-001, FCV-1-002, FCV-1-003, FCV-2-001, FCV-2-002 FCV-2-003, IHV-1-001, DHV-2-001	E-03	C/W COVER
T-004D	300mm	CABLE TRAY-GALVANIZED STEEL CSA C1-75mm DEEP	FCV-1-001, FCV-1-002, FCV-1-003, FCV-2-001, FCV-2-002 FCV-2-003, IHV-1-001, DHV-2-001	E-03	C/W COVER
T-005	600mm	CABLE TRAY-GALVANIZED STEEL CSA C1-75mm DEEP	CPP-11-001, CPP-11-002, CPP-11-003, CPP-11-006, CPP-11-008	E-03	C/W COVER
T-006	600mm	CABLE TRAY-GALVANIZED STEEL CSA C1-75mm DEEP	TC-1-001, TC-1-002	E-03	
T-006A	600mm	CABLE TRAY-GALVANIZED STEEL CSA C1-75mm DEEP	TC-3-001, TC-3-002, TC-2-001, TC-2-002, UVT-2-002		
T-006B	300mm	CABLE TRAY-GALVANIZED STEEL CSA C1-75mm DEEP	TC-3-001, TC-3-002, UVT-2-001		
T-007	600mm	CABLE TRAY-GALVANIZED STEEL CSA C1-75mm DEEP	TC-1-001, TC-1-002, TC-2-001, TC-2-002 TC-3-001, TC-3-002	E-03	
T-008	600mm	CABLE TRAY-GALVANIZED STEEL CSA C1-75mm DEEP	CPP-21-001, CPP-21-002, CPP-21-003, CPP-21-006, CPP-21-008 CPP-22-001, CPP-22-002, CPP-22-003, CPP-22-006, CPP-22-008	E-03	
T-009	600mm	CABLE TRAY-GALVANIZED STEEL CSA C1-75mm DEEP	CPP-21-001, CPP-21-002, CPP-21-003, CPP-21-006, CPP-21-008 CPP-22-001, CPP-22-002, CPP-22-003, CPP-22-006, CPP-22-008	E-03	
T-009A	600mm	CABLE TRAY-GALVANIZED STEEL CSA C1-75mm DEEP	CPP-21-001, CPP-21-002, CPP-21-003, CPP-21-006, CPP-21-008 CPP-22-001, CPP-22-002, CPP-22-003, CPP-22-006, CPP-22-008 IHV-3-001, IHV-4-001	E-03	C/W COVER
T-009B	600mm	CABLE TRAY-GALVANIZED STEEL CSA C1-75mm DEEP	CPP-22-001, CPP-22-002, CPP-22-003, CPP-22-006, CPP-22-008 IHV-3-001, IHV-4-001, SIV-3-110, IHV-2-001, DHV-3-001, FCV-3-001, FCV-3-002, FCV-3-003, FIT-3-001 IHV-2-001	E-03	C/W COVER
T-009C	300mm	CABLE TRAY-GALVANIZED STEEL CSA C1-75mm DEEP	TC-2-001, TC-2-002	E-03	C/W COVER
T-010	460mm	CABLE TRAY-GALVANIZED STEEL CSA C1-75mm DEEP	IHV-2-001, FCV-3-001, FCV-3-002, FCV-3-003, FIT-3-001 CPP-21-001, CPP-21-002, CPP-21-003, CPP-21-006, CPP-21-008 SIV-3-001,	E-03	C/W COVER
T-010A	150mm	CABLE TRAY-GALVANIZED STEEL CSA C1-75mm DEEP	IHV-2-001	E-03	C/W COVER

RACEWAY SCHEDULE					
RACEWAY NUMBER	RACEWAY SIZE	RACEWAY TYPE	CABLE NUMBERS	RACEWAY REFERENCE DRAWINGS	REMARKS
T-011	460mm	CABLE TRAY-GALVANIZED STEEL CSA C1-75mm DEEP	CPP-22-001, CPP-22-002, CPP-22-003, CPP-22-006, CPP-22-008 DHV-4-001, FCV-4-001, FCV-4-002, FCV-4-003, FIT-4-001, SIV-4-001	E-03	C/W COVER
T-011A	150mm	CABLE TRAY-GALVANIZED STEEL CSA C1-75mm DEEP	FIT-4-001, CPP-22-006	E-03	C/W COVER
T-011B	300mm	CABLE TRAY-GALVANIZED STEEL CSA C1-75mm DEEP	CPP-22-001, CPP-22-002, CPP-22-003, CPP-22-006, CPP-22-008	E-03	C/W COVER
T-011C	150mm	CABLE TRAY-GALVANIZED STEEL CSA C1-75mm DEEP	FCV-4-001, FCV-4-002, FCV-4-003	E-03	C/W COVER
T-011C	150mm	CABLE TRAY-GALVANIZED STEEL CSA C1-75mm DEEP	SIV-4-001	E-03	C/W COVER
T-012	600mm	CABLE TRAY-GALVANIZED STEEL CSA C1-75mm DEEP	CPP-23-001, CPP-23-002, CPP-23-003, CPP-23-006, CPP-23-008 CPP-24-001, CPP-24-002, CPP-24-003, CPP-24-006, CPP-24-008 FCV-5-001, FCV-5-002, FCV-5-003, IHV-5-001, FIT-5-001 SIV-5-001	E-03	
T-013	460mm	CABLE TRAY-GALVANIZED STEEL CSA C1-75mm DEEP	CPP-23-001, CPP-23-002, CPP-23-003, CPP-23-006, CPP-23-008 FCV-5-001, FCV-5-002, FCV-5-003, IHV-5-001, FIT-5-001 SIV-5-001	E-03	C/W COVER
T-013A	150mm	CABLE TRAY-GALVANIZED STEEL CSA C1-75mm DEEP	IHV-5-001	E-03	C/W COVER
T-014	460mm	CABLE TRAY-GALVANIZED STEEL CSA C1-75mm DEEP	CPP-24-001, CPP-24-002, CPP-24-003, CPP-24-006, CPP-24-008 DHV-5-001, FCV-6-001, FCV-6-002, FCV-6-003, SIV-6-001, FIT-6-002	E-03	C/W COVER
T-014A	150mm	CABLE TRAY-GALVANIZED STEEL CSA C1-75mm DEEP	FCV-6-001, FCV-6-002, FCV-6-003	E-03	C/W COVER
T-014B	300mm	CABLE TRAY-GALVANIZED STEEL CSA C1-75mm DEEP	CPP-24-001, CPP-24-002, CPP-24-003, CPP-24-006, CPP-24-008	E-03	C/W COVER
T-014C	150mm	CABLE TRAY-GALVANIZED STEEL CSA C1-75mm DEEP	FIT-6-001, CPP-24-006	E-03	C/W COVER
T-014D	150mm	CABLE TRAY-GALVANIZED STEEL CSA C1-75mm DEEP	SIV-6-001	E-03	C/W COVER
T-015	600mm	CABLE TRAY-GALVANIZED STEEL CSA C1-75mm DEEP	P-0015	E-04	
T-016	600mm	CABLE TRAY-GALVANIZED STEEL CSA C1-75mm DEEP	P-0016	E-04	