

**CONCRETE ENCASED
DUCT BANKS AND MANHOLES**

1. GENERAL

1.1 Shop Drawings

- .1 Submit shop drawings for cable racks.

2. PRODUCTS

2.1 PVC Ducts

- .1 PVC ducts, type DB2, encased in reinforced concrete.

3. PVC DUCT FITTINGS

- .1 Rigid PVC opaque solvent welded type couplings, bell end fittings, plugs, caps, adaptors as required to make complete installation.
- .2 Expansion joints.
- .3 Rigid PVC 5° angle couplings.

3.2 Concrete Manholes

- .1 Refer to Structural Drawings and Specifications.
- .2 Pulling inserts and bolts for racks integrally cast in concrete: to ANSI/ACI-347.

3.3 Drainage

- .1 Floor drain fittings in each manhole consisting of floor drain, back water valve, trap and pipe connection to underground land drainage pipe.
- .2 Refer to Civil Drawings and Specifications for connections to land drainage system.

3.4 Grounding

- .1 Ground rods: to Section 16160 - Primary Grounding for cable rack grounding.

3.5 Cable Racks

- .1 Aluminum cable racks and supports.
- .2 12 x 100 mm preset inserts for rack mounting.

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3.6 Cable Pulling Equipment

- .1 Pulling iron made of galvanized steel rods, size and shape as indicated.
- .2 6 mm stranded polypropylene pull rope, tensile strength 5 kN, continuous throughout each duct run with 3 m spare rope at each end.

3.7 Markers

- .1 Concrete type cable markers: 100 x 600 x 100 mm, with words; “cable”, “joint” or “conduit” impressed in top surface, with arrows to indicate change in direction of duct runs.

4. EXECUTION

4.1 Installation General

- .1 Install underground duct banks and manholes including formwork.
- .2 Open trench completely between manholes to be connected before ducts are laid and ensure that no obstructions will necessitate change in grade of ducts.
- .3 Install ducts at elevations and with slope as indicated and minimum slope of 1 to 400. Tolerance of +/-1 mm over 1000 mm.
- .4 Install base spacers at maximum intervals of 1.5 m levelled to grades indicated for bottom layer of ducts.

END OF SECTION