

**CI-0703****TAB 7: TECHNICAL DISCIPLINES**

Electrical

POWER DISTRIBUTION**SERVICE DUCT BANKS**

Service duct banks shall conform to OESC (Ontario Electrical Safety Code) latest edition inside property line, or rail corridor per AREMA, CSA Standard C22.3 No. 7 Underground Systems and OESC, coordinate with local Hydro and Bell for area having jurisdiction and for utility requirements.

Provide concrete encased duct banks in heavy vehicular areas and fire routes.

Minimum 30% spare conduits with pull-cords shall be provided in duct banks for future use, coordinate with Metrolinx.

WIRING METHODS**Raceways**

Raceways and branch circuitry shall be implemented to minimize failure of a complete system due to failure or malfunctioning of any single electrical component. Distribution minimizing conductors of different circuits sharing common raceways and pull-boxes, etc., shall be implemented. Raceways selected shall suitably resist mechanical damage and environmental deterioration effects. In particular, special attention shall be applied to corrosion inhibitors and protective coatings or treatments on surface mounted conduit in underground areas (e.g., tunnels, below grade electrical rooms, Bridges and parking structures etc.).

Conduits

Rigid galvanized steel conduit, or other GO Transit approved cabling methods shall be used for all exposed work in normally dry areas not likely to present corrosion problems. Rigid steel or rigid PVC conduit may be used embedded in slabs where high impact protection is required. Rigid non-metallic conduit shall be used below ground, either direct buried or concrete encased.

PVC or epoxy coated rigid galvanized steel conduit shall be used in corrosion problem areas. Conduit, having a minimum of 50mm shall be used in parking lots where deemed necessary; concrete encasement shall be provided for bus loops, road crossings, and railway Right-of-Ways.

In finished areas, all conduits shall be concealed.

Cable Trays

Where required, hot dip galvanized cable trays shall be ladder type; steel or aluminium or non-metallic as required for the application, complete with vertical barriers to separate systems or cables as required. Class shall be selected based on conductor weight plus 50% spare capacity as a minimum. Cable trays