

PART 1 **GENERAL**

1.1 **RELATED SECTIONS**

- .1 Section 26 05 20 - Wire and Box Connectors - 0 - 1000 V.
- .2 Refer to drawings for wiring type required under different applications.

1.2 **REFERENCES**

- .1 Canadian Standards Association (CSA)
 - .1 CSA C22.2 No .0.3, Test Methods for Electrical Wires and Cables.
 - .2 CAN/CSA-C22.2 No. 131, Type TECK 90 Cable.

PART 2 **PRODUCTS**

2.1 **BUILDING WIRES**

- .1 Conductors: stranded for 10 AWG and larger. Minimum size: 12 AWG.
- .2 Copper and ACM alloy conductors: size as indicated, with 600 V insulation of cross-linked thermosetting polyethylene material rated RW90 XLPE and RWU90 XLPE as indicated. Provide RWU90 XLPE rated cable for underground wiring. Related to new service entrance feeders and site lighting circuits. RWU90 XLPE not required under interior floor slabs.
- .3 Copper conductors: size as indicated, with thermoplastic insulation type TWH rated at 600 V, typically used for insulated ground wires.
- .4 Type ACM conductors permitted for feeders above 60 amps.

2.2 **TECK Cable**

- .1 Cable: to CAN/CSA-C22.2 No. 131.
- .2 Conductors:
 - .1 Grounding conductor: copper.
 - .2 Circuit conductors: copper and ACM alloy, size as indicated.
- .3 Insulation:
 - .1 Cross-linked polyethylene XLPE, rating – 600 V.
- .4 Inner jacket: polyvinyl chloride material.
- .5 Armour: interlocking aluminum, compliant to applicable Building Code classification for this project.

- .6 Overall covering: thermoplastic polyvinyl chloride material.
- .7 Fastenings:
 - .1 One hole steel straps to secure surface cables 50 mm and smaller. Two hole steel straps for cables larger than 50 mm.
 - .2 Channel type supports for two or more cables at 1500 mm centers.
 - .3 Threaded rods: 6 mm dia. to support suspended channels.
- .8 Connectors:
 - .1 Watertight and/or type approved for TECK cable, as indicated.

PART 3 **EXECUTION**

3.1 **FIELD QUALITY CONTROL**

- .1 Perform tests in accordance with Section 26 05 00 - Common Work Results for Electrical.
- .2 Perform tests using method appropriate to site conditions and to approval of Departmental Representative and local authority having jurisdiction over installation.
- .3 Perform tests before energizing electrical system.

3.2 **GENERAL CABLE INSTALLATION**

- .1 Install cable in trenches in accordance with drawings.
- .2 Terminate cables in accordance with Section 26 05 20 - Wire and Box Connectors - (0-1000 V).
- .3 Cable Colour Coding: to Section 26 05 00 Common Work Results for Electrical.
- .4 Conductor length for parallel feeders to be identical.
- .5 Lace or clip groups of feeder cables at distribution centres, pull boxes, and termination points.
- .6 Wiring in walls: typically drop or loop vertically from above to better facilitate future renovations. Generally wiring from below and horizontal wiring in walls to be avoided unless indicated.
- .7 Branch circuit wiring for surge suppression receptacles and permanently wired computer and electronic equipment to be 2-wire circuits only, i.e. common neutrals not permitted.

3.3 **INSTALLATION OF BUILDING WIRES**

- .1 Install wiring as follows:

