
Part 1 General

1.1 RELATED SECTIONS

- .1 Section 26 05 22 Connectors and Terminations.
- .2 Section 26 05 44 Installation of Cables in Trenches and in Ducts.
- .3 Section 26 12 19 Pad Mounted Distribution Transformers.
- .4 Section 26 99 99 – Commissioning.

1.2 REFERENCES

- .1 Canadian Standards Association (CSA International)
 - .1 CAN/CSA-C68.3 M92.
- .2 National Electrical Manufacturers' Association (NEMA)/Insulated Cable Engineers Association (ICEA)
 - .1 NEMA WC7-1992/ICEA S-66-524, Cross-linked Polyethylene Wire and Cable for Transmission and Distribution.
- .3 Newfoundland Power installation details Appendices.

1.3 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Provide submittals in accordance with Section 26 05 01 Common Work Results - Electrical.
- .2 Provide product data in accordance with Section 01 33 00 - Submittal Procedures.
 - .1 Provide manufacturer's printed product literature, specifications, data sheet and include product characteristics, performance criteria, physical size, finish and limitations.
- .3 Quality assurance submittals: submit following in accordance with Section 01 45 00 – Testing and Quality Control.
 - .1 Manufacturer's Instructions: submit manufacturer's installation instructions and special handling criteria, installation sequence, and cleaning procedures.
- .4 **Underground primary power cable to be terminated in Newfoundland Power existing terminal pole. The electrical contractor is responsible to submit reviewed underground primary power cable shop drawing to Newfoundland Power for their approval.**

1.4 DELIVERY, STORAGE AND HANDLING

- .1 Deliver, store and handle materials in accordance with manufacturer's written instructions.
- .2 Waste Management and Disposal:
 - .1 Separate waste materials for in accordance with Section 01 74 21 – Construction Demolition Waste Management.

Part 2 Products

2.1 CONCENTRIC NEUTRAL UNDERGROUND POWER CABLES 15kV

- .1 Concentric neutral power 15 kV cable to:
 - .1 CAN/CSA C68.5.
 - .2 Tree Retardant Cross-link Polyethylene Insulated to UECC-1.
- .2 Conductor: Single copper conductor, size as indicated.
- .3 Conductor Shield: Extruded semi-conducting XLPE.
- .4 Conductor Insulation: TR-XLPE rated 15kV (minimum) for 133% voltage level.
- .5 Insulation Shield: Extruded semi-conducting XLPE.
- .6 Copper neutral wires applied helically over insulation shield equivalent to 33% (minimum full capacity).
- .7 Separator tape over neutral wires.
- .8 Extruded PVC jacket rated minus 40°C.

2.2 LOADBREAK ELBOW CONNECTORS

- .1 Loadbreak elbow connectors 200A, 15 kV, 95 kV BIL, to IEEE 386, consisting of:
 - .1 Arc-followers.
 - .2 Tin-plated copper loadbreak probe.
 - .3 Moulded EDPM compound elbow housing.
 - .4 Conductor contact, copper crimp type.
 - .5 Stainless steel reinforced pulling-eye.
 - .6 Capacitive test point made of corrosion resistant plastic.
 - .7 Grounding tabs moulded into semi-conductive shield for the attachment of a ground wire to maintain deadfront safety.
 - .8 High-quality peroxide-cured EPDM rubber creates a smooth surface around the “current interchange” to evenly distribute electrical stress within the insulation.
 - .9 Outer jacket shield: High-quality peroxide-cured EPDM rubber provides protective dead-front shield that meets requirements of IEEE Std 592™ standard.
 - .10 CSA coppertops.
 - .11 Optional jacket seal.
 - .12 CSA approved.
- .2 Loadbreak elbow shall be capable to terminate existing cable as shown on the drawing.
- .3 Confirm existing padmount switch rating on site before ordering loadbreak elbow connector.
- .4 Provide cable sealing kit to seal cable of entry to loadbreak elbow.

Part 3 Execution

3.1 INSTALLATION

- .1 Install power cable in trenches as indicated and in accordance with manufacturer's instructions.
- .2 Provide continuous cable length without any splice.
- .3 Provide supports and accessories for installation of high voltage power cable.
- .4 Install terminations and connectors in accordance with manufacturer's written recommendations.
- .5 Install stress cones and terminations in accordance with manufacturer's instructions.
- .6 Use CSA approved lubricants to reduce pulling tension.
- .7 Install grounding in accordance with local inspection authority having jurisdiction.
- .8 Provide cable identification tags and identify each phase conductor of power cable.
- .9 Seal duct end with duct sealing compound.
- .10 Utility representative having jurisdiction shall inspect and confirm the installation of underground primary power cable before backfilling.**

3.2 FIELD QUALITY CONTROL

- .1 Perform tests in accordance with Section 26 05 01 - Common Work Results - Electrical.
- .2 Use of qualified tradespersons for installation, termination and testing of high voltage power cables.
- .3 Engage an independent testing agent to test high voltage power cable. Submit test result and inspection certificate.
- .4 Install loadbreak elbow in existing padmount switch as indicated.

END OF SECTION