

PART 1      GENERAL

1.1    RELATED SECTIONS

- .1    Division 01.
- .2    Section 26 05 01 - Common Work  
Results - Electrical.

1.2    REFERENCES

- .1    Canadian Standards Association,  
(CSA)
- .2    Insulated Cable Engineers  
Association, Inc. (ICEA)

PART 2      PRODUCTS

2.1    MARKERS

- .1    Warning tape run entire length of  
trench 200 mm below surface.

PART 3      EXECUTION

3.1    CABLE INSTALLATION  
IN DUCTS

- .1    Install cables as indicated in  
ducts.
  - .1    Do not pull spliced cables  
inside ducts.
- .2    Install multiple cables in duct  
simultaneously.
- .3    Use CSA approved lubricants of type  
compatible with cable jacket to  
reduce pulling tension.
- .4    To facilitate matching of colour  
coded multiconductor control cables  
reel off in same direction during  
installation.
- .5    Before pulling cable into ducts and  
until cables are properly  
terminated, seal ends of lead  
covered cables with wiping solder;  
seal ends of non-leaded cables with  
moisture seal tape.

- .6 After installation of cables, seal duct ends with duct sealing compound.

### 3.2 MARKERS

- .1 Install 200 mm below surface. See drawings for details.

### 3.3 FIELD QUALITY CONTROL

- .1 Perform tests in accordance with Section 26 05 01 - Common Work Results - Electrical and Division 01.
- .2 Perform tests using qualified personnel. Provide necessary instruments and equipment.
- .3 Check phase rotation and identify each phase conductor of each feeder.
- .4 Check each feeder for continuity, short circuits and grounds. Ensure resistance to ground of circuits is not less than 50 megohms.
- .5 Pre-acceptance tests.
  - .1 After installing cable but before splicing and terminating, perform insulation resistance test with 1000 V megger on each phase conductor.
  - .2 Check insulation resistance after each splice and/or termination to ensure that cable system is ready for acceptance testing.
- .6 Acceptance Tests
  - .1 Ensure that terminations and accessory equipment are disconnected.
  - .2 Ground shields, ground wires, metallic armour and conductors not under test.
  - .3 High Potential (Hipot) Testing.

Wharf Reconstruction (Phase II)  
Grand Bank, NL

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- .1 Conduct hipot testing at 100% of original factory test voltage in accordance with manufacturer's recommendations.
- .4 Leakage Current Testing.
  - .1 Raise voltage in steps from zero to maximum values as specified by manufacturer for type of cable being tested.
  - .2 Hold maximum voltage for specified time period by manufacturer.
  - .3 Record leakage current at each step.
- .7 Provide Owner's Representative with list of test results showing location at which each test was made, circuit tested and result of each test. Include results in Commissioning Manual.
- .8 Remove and replace entire length of cable if cable fails to meet any of test criteria.

END OF SECTION