

SECTION 16450 - GROUNDING

GENERAL

1.1 SECTION INCLUDES

- A. Service ground system.
- B. Feeder and branch circuit wiring grounding.
- C. Electrical equipment and raceway grounding and bonding.
- D. Telecommunications system grounding.

1.2 RELATED SECTIONS

- A. Section 16123 - Wiring.

1.3 REFERENCES

- A. NFPA 70 - National Electrical Code.

1.4 REGULATORY REQUIREMENTS

- A. Conform to requirements of NFPA 70.
- B. Conform to requirements of the *Central Maine Power Company*.

1.5 SERVICE GROUND SYSTEM DESCRIPTION

- A. The service ground shall include ground conductors and electrodes at service terminal poles and at service transformers. A secondary service ground conductor and ground electrode shall also be provided at each service entrance.

1.6 FEEDER AND BRANCH CIRCUIT GROUNDING DESCRIPTION

- A. All feeders and branch circuits shall include a separate insulated (green) grounding conductor.

1.7 TELECOMMUNICATIONS SYSTEM GROUNDING DESCRIPTION

- A. The telephone service termination board shall include a separate ground conductor connected to the main service ground system.

PRODUCTS

2.1 MATERIALS

- A. Feeder and Branch Circuit Ground Conductors: Insulated conductors per Section 16123.
- B. Service Ground Conductor: Bare copper stranded wire, sized as indicated on the Drawings.
- C. Ground Electrodes: 5/8" diameter by 8 feet long, copper clad steel rod.

EXECUTION

3.1 INSTALLATION

- A. Terminate each ground conductor end on a grounding lug, bus, or bushing.
- B. Connect the service ground to service ground electrodes as well as to the water service entrance pipe (attach ground ahead of water meter).
- C. Provide a sufficient number of service ground electrodes to provide a resistance from the system neutral connection to a convenient ground reference point not exceeding 10 ohms.
- D. Install all ground system components in conformance with Article 250 of NFPA 70.

3.2 FIELD QUALITY CONTROL

- A. Inspect grounding and bonding system conductors and connections for tightness and proper installation.
- B. Measure ground resistance from system neutral connection at service entrance to confirm that resistance does not exceed 10 ohms.

\*\*\*END OF SECTION\*\*\*