

## SECTION 260235 – ELECTRICAL TESTING

### PART 1 - GENERAL

#### 1.1 SCOPE OF WORK

- A. Provide testing of electrical wiring and systems as specified here.
- B. Provide the following tests:
  - 1. Feeder insulation resistance testing
  - 2. Ground system testing

#### 1.2 DOCUMENTATION

- A. All tests specified shall be completely documented indicating time of day, date, temperature and all pertinent test information.
- B. All required documentation of readings indicated above shall be submitted to the engineer prior to, and as one of the pre-requisites for final acceptance of the project.

### PART 2 - PRODUCTS (NOT USED)

### PART 3 - EXECUTION

#### 3.1 FEEDER INSULATION RESISTANCE TESTING

- A. All current carrying phase conductors and neutrals shall be tested as installed, and before connections are made, for insulation resistance and accidental grounds. This shall be done with a 500-volt megger. The procedures listed below shall be as follows:
  - 1. Minimum readings shall be one million (1,000,000) or more ohms for #6 wire and smaller, 250,000 ohms or more for #4 wire or larger, between conductors and between conductor and the grounding conductor.
  - 2. After all fixtures, devices and equipment are installed and all connections completed to each panel, the contractor shall disconnect the neutral feeder conductor from the neutral bar and take a megger reading between the neutral bar and the grounded enclosure. If this reading is less than 250,000 ohms, the contractor shall disconnect the branch circuit neutral wires from this neutral bar. He shall then test each one separately to the panel and until the low readings are found. The contractor shall correct troubles, reconnect and retest until at least 250,000 ohms from the neutral bar to the grounded panel can be achieved with only the neutral feeder disconnected.

3. At final inspection, the contractor shall furnish a megger and show the engineers and Owner representatives that the panels comply with the above requirements. He shall also furnish a hook-on type ammeter and a voltmeter and take current and voltage readings as directed by the representatives. Refer to Section 260519 for additional requirements.

### 3.2 GROUND SYSTEM TESTING

- A. Upon completion of installation of the electrical grounding and bonding systems, test the ground resistance with a ground resistance tester. Where tests show resistance-to-ground is over 25 ohms, take appropriate action to reduce the resistance to 25 ohms, or less, by driving additional ground rods. Then retest to demonstrate compliance. Submit test report to the Engineer and Owner.

END OF SECTION 260235