SECTION 26 05 26 - GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS

PART 1 - GENERAL

1.1 DESCRIPTION

A. Provide ground system as specified herein, as shown on the Drawings, and as required by NEC and other rules and regulations pertaining to grounding.

1.2 SUBMITTAL AND RECORD DOCUMENTATION

A. None required.

PART 2 - PRODUCTS

2.1 GROUND CONDUCTORS

A. Equipment or grounding conductors shall be soft drawn copper, stranded per ASTM B8 and, if insulated, shall have green insulation.

2.2 GROUNDING BUSHINGS/WEDGES

A. Sufficient ampacity with grounding conductor set screw connection.

2.3 CONNECTOR

A. Cast, set screw or bolted type.

2.4 GROUND RODS

A. Copper-clad steel, not less than 3/4" in diameter, 8' long, driven full length into the earth.

PART 3 - EXECUTION

3.1 INSTALLATION

A. All grounding conductors shall be sized in accordance with Article 250, Tables 250.66 and 250.122 of the NEC.

B. Except where specifically indicated otherwise, all exposed non-current-carrying metallic parts of electrical equipment, metallic raceway systems, and neutral conductor of the wiring system shall be grounded.

C. The ground connection shall be made at the main service equipment and shall be extended to the point of entrance of the metallic water service. Connection to the water pipe shall be made by a suitable ground clamp. If flanged pipes are encountered, connection shall be made with the lug bolted to the street side of the flange connection.

D. Where the metallic water service is used, it shall be grounded as described by Article 250.52 of the NEC.

E. Generally, all supplemental grounding electrodes shall be ground rods.

F. All ground wire connections below finished grade, cast in concrete, or bonding solid wire shall be exothermically welded.

G. Where there is no metallic water service to the building, ground connections shall be made to driven ground rods on the exterior of the building.

H. The maximum resistance measured in accordance with IEEE Standard 142 of a driven ground shall not exceed 25 ohms under normally dry conditions. If this resistance cannot be obtained with a single rod, additional rods shall be installed not less than 6' on centers, or if sectional-type rods are used, additional sections may be coupled and driven with the first rod. If the resultant resistance exceeds 25 ohms measured not less than 48 hours after rainfall, the Engineer shall be notified immediately.

I. Grounding conductor connectors shall be made up tight and located for future servicing and to ensure low impedance.

J. The Contractor shall submit in writing to the Owner upon completion of the project the measured ground resistance of each ground rod, indicating the location of the rod and the resistance and the soil conditions at the time the measurements were made.

K. Where new circuits are to be served by existing panels with no ground bus, provide supplemental copper ground bus in panel.

END OF SECTION 26 05 26