

SECTION 260526 - GROUNDING AND BONDING FOR ELECTRICAL SYSTEM

PART 1 - GENERAL

- 1.1 Related Documents: Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division - 1 Specification sections, apply to the work of this section.
- 1.2 Grounding shall be installed in accordance with the National Electrical Code and shall include ground and equipment grounds for all electrically operated equipment.
- 1.3 Grounding conductors shall be run with all lighting and power circuits 120V and above, and be bonded to all equipment or devices. Grounding conductors shall be run in all flexible metal conduits, including liquidtight conduit. Grounding conductors shall be installed elsewhere as shown.
- 1.4 The grounding system shall be bonded together and effectively ground all exposed, non-energized metal surfaces containing energized parts, devices or conductors, all metallic electrical raceways and the neutrals and cases of all transformers.

PART 2 - PRODUCTS

- 2.1 Equipment grounding conductors in raceways shall be insulated copper sized as shown on the Drawings.

PART 3 - EXECUTION

3.1 BUILDING SYSTEMS GROUNDING

- A. The main service ground clamp shall be attached to the cold water main at an accessible point and before its size is reduced immediately after it enters the building. Clamp shall be accessible after construction is complete. Grounding conductor shall be without splice into the service enclosure where it shall be connected to main service neutral. Grounding type insulated bonding bushings and jumpers shall be provided where conduits terminate in service entrance equipment, transformers, and where concentric, eccentric or over-sized knockouts are encountered. The jumpers shall be sized per NEC Table 250-66 for services, and transformers, and per Table 250-122 for branch circuits.
- B. In addition to the clamp on the water main, a supplemental electrode shall be provided. This supplemental electrode shall consist of one of the following:

1. Three 10 foot minimum copper clad ground rods, 3/4" in diameter, driven to a depth so top of rod is below finished grade. Grounding conductor shall be continuous and sized as shown on plans. The grounding conductor conduit shall be fastened to service enclosure with double locknuts and bonding bushing.
- C. In addition, the metal frame of the building shall be bonded to the grounding electrode system using a conductor sized the same as the main grounding conductor on the drawings.
- D. Bonding shall be done with approved insulated bonding bushings and compression type lugs.
- E. Grounding conductor shall be Type TW or THHN/THWN run in heavy wall conduit, and of size shown on drawings or required by NEC.
- F. A grounding conductor shall be installed and solidly connected to all electrical equipment such as dry type transformer neutrals, motor control center ground buses, housings, switchgear, panelboards, switchboard, wireways, motor frames, controllers, generators, transfer switches, conduits, etc., in accordance with code requirements and as shown on the drawings. Connections to the equipment may be bolted or screwed using corrosion resisting bolts, nuts and screws as required for a solid and permanent connection.
- G. Bonding jumpers shall be installed. Bare grounding conductors, where passing through steel sleeves, shall be bonded to the steel at entrance and exit.

END OF SECTION 260526