SECTION 26 0526

GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS

PART 1 - GENERAL

1.1 SUMMARY
A. Includes But Not Limited To:
   1. Furnish and install grounding for electrical installation as described in Contract Documents except
      as excluded below.

B. Related Sections:
   1. Section 26 0501: Common Electrical Requirements.

1.2 QUALITY ASSURANCE
A. Pre-Installation Conference: Participate in pre-installation conference specified in Section 03 3111.

PART 2 - PRODUCTS

2.1 COMPONENTS
A. Size materials as shown on Drawings and in accordance with applicable codes.

B. Grounding And Bonding Jumper Conductors: Bare copper or with green insulation.

C. Make grounding conductor connections to ground rods and water pipes using approved bolted clamps
   listed for such use.

D. Service Grounding Connections And Cable Splices:
   1. Make by exothermic process.
   2. Type One Acceptable Products:
      c. Equal as approved by Architect before bidding. See Section 01 6000.

PART 3 - EXECUTION

3.1 INSTALLATION
A. Interface With Other Work: Coordinate with Section 03 3111 in installing grounding conductor and
   placing concrete. Do not allow placement of concrete before Architect's inspection of grounding
   conductor installation.

B. Grounding conductors and bonding jumper conductors shall be continuous from terminal to terminal
   without splice. Provide grounding for following.
   1. Electrical service, its equipment and enclosures.
   2. Conduits and other conductor enclosures.
   3. Neutral or identified conductor of interior wiring system.
   4. Main panelboard, power and lighting panelboards.
5. Non-current-carrying metal parts of fixed equipment such as motors, starter and controller cabinets, instrument cases, and lighting fixtures.

C. Grounding connection to main water supply shall be accessible for inspection and made within 6 inches 150 mm of point of entrance of water line to building. Provide bonding jumpers across water meter and valves to assure electrical continuity.

D. Provide concrete-encased electrode system by embedding 20 feet 6 000 mm minimum of No. 2/0 bare copper conductor in concrete footing, 2 inches 50 mm minimum below concrete surface. Extend No. 2/0 copper conductor to main panel as shown on Drawings.

E. Ground identified common conductor of electrical system at secondary side of main transformer supplying building. Ground identified grounded (neutral) conductor of electrical system on supply side of main service disconnect.

F. Pull grounding conductors in non-metallic raceways, in flexible steel conduit exceeding 72 inches 1 800 mm in length, and in flexible conduit connecting to mechanical equipment.

G. Provide grounding bushings on all feeder conduit entrances into panelboards and equipment enclosures.

H. Bond conduit grounding bushings to enclosures with minimum #10 AWG conductor.

I. Connect equipment grounds to building system ground.
   1. Use same size equipment grounding conductors as phase conductors up through #10 AWG.
   2. Use NEC Table 250-95 for others unless noted otherwise in Drawings.

J. Run separate insulated grounding cable from each equipment cabinet to electrical panel. Do not use intermediate connections or splices. Affix directly to cabinet.

K. On motors, connect ground conductors to conduit with approved grounding bushing and to metal frame with bolted solderless lug.

L. Do not bond neutral conductor of emergency generator set to set frame at generator location.

M. Ground cabinet of transformers to conduit and ground wires, if installed. Bond transformer secondary neutral conductor to cabinet.

3.2 FIELD QUALITY CONTROL

A. Inspections: Notify Architect for inspection two days minimum before placing concrete over grounding conductor.

END OF SECTION