SECTION 16711 - 27 05 26 GROUNDING AND BONDING FOR COMMUNICATIONS SYSTEMS

PART 1 - GENERAL

1.01 SUMMARY
A. Section Includes:
   1. Grounding of communications components
   2. Fastening hardware

1.02 RELATED DOCUMENTS
A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.
B. Specifications throughout all Divisions of the Project Manual are directly applicable to this Section, and this Section is directly applicable to them.
C. Section 27 05 28.33 – Conduits and Boxes for Communications Systems
D. Section 27 05 28.39 – Surface Raceways for Communications Systems
E. Section 27 11 00 – Communications Equipment Room Fittings

1.03 REFERENCE STANDARDS
A. National Electrical Code (NEC)

1.04 SCOPE OF WORK
A. Review T-drawing numbers for placement and specific installation notes.

1.05 SUBMITTALS
A. All specifications for the grounding and bonding hardware used for the project must be given to the Owner’s designated staff at least two weeks prior to the installation of the components. All components will be approved for use in the project. All manufacturers’ specifications shall be included in the O&M manuals.
B. Written confirmation by either drawings or document which outlines the construction of the grounding system for the project.
C. A single sample of each grounding and bonding component must be given to the Owner’s designated staff at least two weeks prior to installation. The owner shall retain all submittals and they shall not be used in the project.

PART 2 - PRODUCTS

2.01 GENERAL
A. All materials shall meet or exceed all applicable referenced standards, federal, state and local requirements, and conform to codes and ordinances of authorities having jurisdiction.
B. All grounding and bonding hardware shall be stainless steel and meet or exceed the National Electrical Code (NEC\textsuperscript{\textcopyright}) as well as local codes which specify additional grounding and/or bonding requirements.

**PART 3 - EXECUTION**

3.01 GENERAL

A. Communication bonding and grounding shall be in accordance with the National Electrical Code (NEC\textsuperscript{\textcopyright}) and NFPA.

B. Metallic panels and raceways shall be bonded to an equipment grounding conductor and these are all bonded to the grounded electrical service.

C. A communications ground is required and may be typically found in one of the following:
   1. Communications Entrance Facility
   2. Equipment Room
   3. Communications Equipment Room

D. The grounding system shall not rely on plumbing systems.

E. Bonding conductors shall be routed with a minimum number of bends. The bends placed in the conductor shall be sweeping.

F. Make all bonding connections with listed bolts, crimp pressure connectors, clamps or lugs.

G. Multiple buss bars placed in a building shall be directly bonded with minimally a 6AWG copper conductor.

3.02 HANDHOLES

A. The locate wires shall be bonded to a $\frac{1}{2}$" x 5' copper bonded pointed ground rod driven 4' into undisturbed earth at each new handhold site. The locate wire shall be wire bonded to the ground rod (inside of the handhold) with a bronze ground rod clamp suitable for direct burial.

END OF SECTION 16711 - 27 05 26