SECTION 16711 - 27 05 28.29 HANGERS AND SUPPORTS FOR COMMUNICATIONS SYSTEMS

PART 1 - GENERAL

1.01 SUMMARY

A. This section includes Labor, materials and equipment necessary to complete the installation required for the items specified under this Section, including but not limited to:

1. Conduit and equipment supports.
2. Fastening hardware for communications infrastructure.

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 Backboxes for Communications Systems.

1.03 REFERENCE STANDARDS

A. National Electrical Code (NEC)

1.04 SUBMITTALS

A. Submit shop drawings to the Owner detailing proposed method of anchoring or supporting all items to the structural building systems.

B. The subcontractor shall submit to the owner at least one device of each type to the owner. The Owner shall retain all submittals and they not be used in the project.

C. Installation Instructions: Submit manufacturer’s printed installation instructions.

D. All specifications must be given to the Owner’s designated staff at least two weeks prior to the installation of the components.

1.05 PERFORMANCE REQUIREMENTS

A. Be tested for the surrounding construction and support requirements.

B. Meet or exceed the devices intended loading requirements.

C. Shall be engineered to be reusable without damage or reduction in load rating.

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.
2.02 MATERIALS
   A. Support Channel and related support devices shall be galvanized or painted.
   B. All support hardware shall be corrosion resistant.

PART 3 - EXECUTION

3.01 REQUIREMENTS
   A. Coordinate the location and support devices with the ceiling support system and mechanical ducts and pipes.
   B. Support systems shall be adequate for weight of equipment and conduit, including wiring, which they carry.
   C. Fasten hanger rods, conduit clamps, and outlet and junction boxes to building structure using precast inserts, expansion anchors, or beam clamps. Lateral components shall be utilized to obtain three axis support and rigidity. Wire supports are not allowed.
   D. Use toggle bolts or hollow wall fasteners in hollow masonry, plaster, or gypsum board partitions and walls; expansion anchors or preset inserts in solid masonry walls; self-drilling anchors or expansion anchors into concrete; and sheet metal screws into sheet metal studs.
   E. Do not fasten supports to piping, ductwork, mechanical equipment, conduit, or suspended ceiling system.
   F. Do not use powder actuated anchors unless specifically approved by the Owner.
   G. Do not drill structural steel members.
   H. Fabricate supports from structural steel or steel channel, rigidly welded or bolted to present a neat appearance. Use hexagon head bolts with spring lock washers under all nuts.
   I. Install free standing electrical equipment on concrete pads.
   J. Install surface mounted cabinets and panelboards with minimum of four anchors.
   K. Bridge studs top and bottom with channels to support flush mounted cabinets and panelboards in stud walls.
   L. Each hanger removed for new installation work shall be replaced with a new hanger at approximately the same location as the hanger which was removed.

3.02 EXAMINATION
   A. Before beginning installation, verify that supporting structure is acceptable for installation in accordance with manufacturer’s installation instructions and technical information.
   B. Surfaces shall be free of dirt, grease, oil, scale, laitance, rust, release agents, water repellants, and any other substances that may inhibit optimum adhesion.
   C. Do not proceed until unsatisfactory conditions have been corrected.

END OF SECTION 16711 - 27 05 28.29