PART 1 - GENERAL

1. DESCRIPTION:
   This section specifies requirements for telecommunications cabling cable tray and raceway equipment.

1.2 SUMMARY
   Section Includes:
   A. Cable Tray.
   B. Fiber Optic Cable Raceway.
   C. Ladder Rack.

1.3 REFERENCES
   A. VA Infrastructure Standard for Telecommunications Spaces.

1.4 RELATED WORK:
   A. Grounding and bonding: Section 27 05 26, GROUNDING AND BONDING FOR COMMUNICATIONS SYSTEMS.

1.5 SUBMITTALS:
   A. Submit in accordance with Section 27 05 00, COMMON WORK RESULTS FOR COMMUNICATIONS SYSTEMS.

PART 2 - PRODUCTS

2.1 CABLE TRAY.
   A. Design. Wire basket with tray insert. Maximum 2” x 4” wire mesh construction. Constructed of round, smooth wire with continuous top side to minimize cable sheath damage.

   B. Finish. Coated to prevent rust.

   C. Size. Cable tray shall be sized to hold the maximum expected cable load at not more than 40% fill and not more than 6” maximum cable depth.

   D. Accessories. Provide and install the following components and accessories as necessary to achieve the design:

      1. Overhead mounting equipment (thread-rod, unistrut, nuts, washers, etc.) suitable for the supporting structural elements.
2. Tray section splicing hardware.
3. Tray insert.
4. Cable waterfalls.
5. Ground strap kits.

2.2 FIBER OPTIC CABLE RACEWAY.
A. Design. Raceway system shall be a modular system of channels, fittings, and brackets, able to be assembled with couplers. Fittings for cable spillout shall maintain a minimum 2” bend radius.
B. Materials. Raceway shall be constructed of rigid PVC and ABS plastics.
C. Size. Raceway shall be nominally sized 4”x4”.
D. Accessories. Provide and install the following components and accessories as necessary to achieve the design:
   1. Overhead mounting equipment (thread-rod, unistrut, nuts, washers, etc.) suitable for the supporting structural elements.
   2. /\ Hinged /\ channel covers.
   3. Raceway section couplers.
   4. Channel corners and intersections.
   5. Spillway fittings.

2.3 LADDER RACK.
A. Design. Ladder rack system shall be a modular system of ladder, turns, splices, supports, and accessories able to be assembled with couplers.
B. Finish. Coated to prevent rust.
C. Materials. Ladder rack shall be manufactured from /\ tubular /\ steel /\ and extruded aluminum /\ . Stringers will be 3/8” by 1-1/2” /\ tubular /\ steel. Cross members will be /\ 1” x 1/2” /\ /\ T-shaped /\ . Steel elements shall have a minimum 0.065” wall thickness.
D. Size. Ladder rack shall be nominally sized 12” width.
E. Accessories. Provide and install the following components and accessories as necessary to achieve the design:
   1. Overhead mounting equipment (thread-rod, unistrut, nuts, washers, etc.) suitable for the supporting structural elements.
   2. Ladder rack section couplers (splices).
   3. Ladder rack radius bends.
4. Ground strap kits.

PART 3 - EXECUTION

3.1 IMPLEMENTATION:

A. Cable tray shall be used in horizontal applications. Ladder rack is used in vertical applications.

B. Cable tray and ladder rack sections shall be bonded together with bonding conductors and the system bonded to the bonding busbar in the space.

C. Support horizontal cable tray not less than every 5’ (shorter spans if recommended by the equipment manufacturer).

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