

SECTION 27 05 43 – EXTERIOR COMMUNICATION PATHWAYS

PART 1 - GENERAL

1.1 DESCRIPTION

- A. Exterior communications pathways may either be underground or overhead which will dictate the type of cabling and support structures required.
- B. All pole attachments, securing hardware and necessary devices are to be part of the contractors bid whether specified or not for a complete and safe install.

1.2 QUALITY ASSURANCE

- A. All equipment shall be UL listed. All installations shall comply with the NEC.
- B. Additional requirements listed in Section 27 01 00.
- C. Refer to architectural and electrical documents additional requirements.
- D. Standards as set by the BICSI Customer-Owned Outside Plant manual shall be followed as well.

1.3 SUBMITTALS AND PRODUCT DATA

- A. Include shop drawings and cut sheets depicting splice cases, vaults, hand holes, and support items in addition to the requirements in other parts of this Specification.
- B. The drawing submitted need to show the amount of space, mounting design, and any other requirements needed for the system submitted.

PART 2 PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

- A. Allied Tube & Conduit, Western Tube & Conduit, Triangle, Bridgeport, AFC, Carlon, Western Plastics, Alfex, or approved substitute. Wiremold, Walker, or approved substitute.

2.2 CONDUITS

- A. Galvanized Rigid Conduit (GRC) shall be hot-dip zinc, galvanized inside and out, mild steel pipe manufactured in accordance with UL-6 and ANSI C80.1. All threads shall be galvanized after cutting.
- B. Electrical Metallic Tubing (EMT) shall be steel only and shall comply with UL-797 and ANSI C80.3. Exterior shall be hot-dip zinc galvanized and interior protected by a corrosion-resistant lubricating coating.

- C. Intermediate Metallic Conduit (IMC) shall comply with UL-1242 and ANSI C80.6. Exterior shall be hot-dip zinc galvanized and interior protected by a corrosion-resistant lubricating coating.
- D. Rigid non-metallic conduit (PVC) polyvinyl chloride shall be schedule 40 unless otherwise noted, and shall comply with UL-651 and NEMA TC 2.
- E. Surface raceway shall utilize snap-in cover and fittings as recommended by the manufacturer and shall comply with UL 5 standard. Material and size shall be as indicated on the Drawings.
- F. Flexible metal conduit shall be steel and comply with UL 1 and ANSI standards. Liquid-tight flexible metal conduit shall comply with UL 360 and ANSI standards.

PART 3 INSTALLATION

2.1 APPLICATION

- A. Areas of use:

Underground	PVC
Within poured Concrete (except slab-on grade) or CMU	GRC, IMC, PVC
Dry concealed locations	GRC, IMC, EMT
Wet or Dry exposed locations, subject to damage	GRC, IMC
Dry exposed locations, not subject to damage	GRC, IMC, EMT
Hazardous Class I or II	GRC, IMC

- B. Underground conduit shall be minimum 3/4" trade size. PVC shall not be used inside building. Unless otherwise approved, all conduits shall be installed under reinforcing steel.
- C. For the purposes of this section, poured concrete slabs on grade and under-the-building slabs are not classified as dry locations.
- D. Flexible metal conduit will be permitted only where flexibility is necessary. Flexible metal conduit shall be used for connection to all equipment subject to movement or vibration. Liquid-tight flexible metal conduit shall be used when moisture may be present and for exposed motor and equipment connections.
- E. Surface raceway may be used only where specifically called for on the Drawings or in the Specifications.
- F. Aluminum conduit is not permitted.

END OF SECTION