

SECTION 271513 - COMMUNICATIONS COPPER HORIZONTAL CABLING

PART 1 - GENERAL

1.1 GENERAL REQUIREMENTS

- A. Applicable requirements of Division 27 - Communications shall be considered a part of this section and shall have the same force as if printed herein in full.
- B. This document describes the products and execution requirements relating to Communications Copper Horizontal Cabling.
- C. Product specifications, general design considerations, and installation guidelines are provided in this document. The successful vendor shall meet or exceed all requirements described in this document and on the drawings.

1.2 SUBMITTALS

- A. Provide product data from the manufacturer's specifications.

1.3 WORK INCLUDED

- A. The work included under this specification consists of furnishing all labor, equipment, materials, and supplies and performing all operations necessary to complete the installation. The Contractor will provide and install all the required material whether specifically addressed in the Specification or not.

PART 2 - PRODUCTS

2.1 APPROVED PRODUCTS

- A. Approved CATEGORY 6/6A Horizontal Copper Cable Manufacturer(s)
 - 1. ANALOG VOICE = WHITE - COMMScope UN874049704/10
 - 2. DATA = BLUE - COMMScope UN874043004/10
 - 3. WAPS = BLUE CAT-6A - COMMScope UN874035104/10
 - 4. CAMERAS = PINK - COMMScope UN874033904/10
 - 5. ACCESS CONTROL = YELLOW - COMMScope UN874029504/10
 - 6. TELEMETRY = ORANGE - COMMScope UN874027604/10
 - 7. NURSE CALL = GREEN - COMMScope UN874046304/10
 - 8. HUGS = PURPLE- COMMScope UN874026304/10

2.2 CATEGORY 6A HORIZONTAL COPPER CABLE

- A. 100 OHM Category 6A Balanced Twisted Pair Cable
 - 1. The horizontal balanced twisted pair cable shall exceed the Category 6A transmission characteristics per issue of ANSI/TIA-568-C.2.

2. Cable jacket shall be CMP/CMR rated, according to the space it occupies.
3. Jacket color shall be coordinated with owner prior to ordering.

2.3 CATEGORY 6 HORIZONTAL COPPER CABLE

- A. 100 OHM Category 6 Balanced Twisted Pair Cable
 1. The horizontal balanced twisted pair cable shall exceed the Category 6 transmission characteristics per issue of ANSI/TIA-568-C.2.
 2. Cable jacket shall be CMP/CMR rated, according to the space it occupies.
Jacket color shall be coordinated with owner prior to ordering.

PART 3 - EXECUTION

3.1 HORIZONTAL CABLES

- A. Cable shall be installed in accordance with the manufacturer's recommendations and best industry practices.
- B. A plastic or nylon pull cord with a minimum test rating of 90 Kg (200 lb.) shall be co-installed with all cables installed in any conduit.
- C. Cable raceways shall not be filled greater than the ANSI/TIA-569-B maximum fill for the particular raceway type.
- D. Cables shall be installed in continuous lengths from origin to destination (no splices) except for transition points, or consolidation points.
- E. Where transition points or consolidation points are allowed, they shall be located in accessible locations and housed in an enclosure intended and suitable for the purpose.
- F. The cable's minimum bend radius and maximum pulling tension shall not be exceeded. Refer to the manufacturer's requirements.
- G. If a J-hook or trapeze system is used to support cable bundles all horizontal cables shall be supported at a maximum of 48 to 60 inch (1.2 to 1.5 meter) intervals. At no point shall cable(s) rest on acoustic ceiling grids or panels.
- H. Horizontal distribution cables shall be bundled in groups of no more than 24 cables. Cable bundle quantities in excess of 24 cables may cause deformation of the bottom cables within the bundle and degrade cable performance.
- I. Cable shall be installed above fire-sprinkler systems and shall not be attached to the system or any ancillary equipment or hardware. The cable system and support hardware shall be installed so that it does not obscure any valves, fire alarm conduit, boxes, or other control devices.
- J. Cables shall not be attached to ceiling grid or lighting fixture wires. Where support for horizontal cable is required, the Contractor shall install appropriate carriers to support the cabling.
- K. Any cable damaged or exceeding recommended installation parameters during installation shall be replaced by the Contractor before final acceptance at no cost to the Owner.

- L. Cables shall be dressed and terminated in accordance with the recommendations made in the ANSI/TIA-568-C.2 document, manufacturer's recommendations and best industry practices.
- M. Leave a minimum of 12" of slack for twisted pair cables at the outlet. Cables shall be coiled in the in-wall box, surface-mount box or modular furniture raceway if adequate space is present to house the cable coil without exceeding the manufacturers bend radius. Excess slack shall be loosely coiled and stored in the ceiling above each drop location when there is not enough space present in the outlet box to store slack cable.
- N. Cables shall be neatly bundled and dressed to their respective termination device. Each terminating device shall be fed by an individual bundle separated and dressed back to the point of cable entrance into the rack or frame.
- O. Each cable shall be clearly labeled on the cable jacket behind the termination device at a location that can be viewed without removing the bundle support ties. Cables labeled within the bundle, where the label is obscured from view shall not be acceptable.

3.2 IDENTIFICATION

- A. Refer to Section 27 05 53 - Identification for Communications Systems for labeling details.
- B. Refer to Section 27 08 00 - Commissioning of Communications for Testing Requirements.

END OF SECTION