

SECTION 27 15 13
COMMUNICATIONS HORIZONTAL COPPER CABLE

Part 1 General

1.1 Summary

1.1.1 This section shall govern the products and installation of category copper horizontal cable

1.2 Related Documents

1.2.1 The latest versions of the following codes, standards, and guidelines shall be followed. Bring to CCS' immediate attention where construction documents or conditions differ from requirements in codes, standards, guidelines and specifications.

1.2.2 The following standards:

1. ANSI/TIA-568-C.0, Generic Telecommunications Cabling for Customer Premises
2. ANSI/TIA-568-C.2, Balanced Twisted-Pair Telecommunications Cabling and Components Standards
3. ANSI/TIA-568-C.4, Broadband Coaxial Cabling and Components Standard
4. TIA-569-C, Commercial Building Standard for Telecommunications Pathways and Spaces

1.2.3 The following guidelines:

1. BICSI, Telecommunications Distribution Methods Manual (TDMM)
2. BICSI, Information Transport Systems Installation Methods Manual (ITSIMM)

1.2.4 The following project specifications:

1. 27 05 26 Grounding and Bonding for Communications
2. 27 05 53 Identification for Communications Systems
3. 27 11 19 Communications Terminations Blocks and Patch Panels
4. 27 15 43 Communications Faceplates and Modular Jacks

1.3 Submittals

1.3.1 The following submittals are due at the Pre-Construction Phase, in accordance with submittal requirements in Section 27 05 00:

1. Product Information

a) Provide manufacturer's product information cutsheet or specifications sheet with the specific product number identified or filled out.

2. Shop Drawings

a) Provide scaled drawings indicating routing of copper horizontal cabling.

Part 2 Product

2.1 General Requirements

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- 2.1.1 The Telecom sub-contractor shall utilize Panduit or Hubbell as the manufacturer for horizontal cable.
- 2.1.2 Category 6A product shall be used for new construction.
- 2.2 CATEGORY 6/ CATEGORY 6A
 - 2.2.1 Cable shall be balanced four-pair, unshielded, within an overall jacket.
 - 2.2.2 Cable performance shall meet the performance as detailed in ANSI/TIA-568-C.2.
 - 2.2.3 Cable shall be rated for the environment (indoor/outdoor) for which it is installed.
 - 2.2.4 Plenum-rated cable shall be blue with white or black lettering. The lettering (marking) shall indicate the following:
 - 1. Manufacturer name
 - 2. Pair count
 - 3. American Wire Gauge (AWG)
 - 4. Listing
 - 5. Performance rating
 - 6. Sequential length markings, in one foot increments
 - 2.2.5 Manufacturer shall be:
 - 1. Panduit (for Panduit warranty)
 - PUP6004BU-W (CAT 6 enhanced 4 pair plenum cable)
 - PUP6AM04BU-UG (CAT 6A 4 pair plenum cable)
 - 2. Hubbell (for Hubbell warranty)
 - C6RPB (NEXTSPEED®Category 6,
4-Pair, UTP Cable, Plenum)
 - C6ASPB (NEXTSPEED®Ascent Category 10GbE Cable)

Note: Another colour may be substituted for blue depending on architectural requirements.

Part 3 Execution

- 3.1 General
 - 3.1.1 Support all horizontal cabling continuously in conduit or cable tray, or every 5' with jhooks.
 - 3.1.2 Maintain the following clearances from electrical and heat sources as per the following table

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Item	Minimum Separation Distances		
	(<2kVA)	(2-5kVA)	(>5kVA)
Unshielded power lines or electrical equipment in proximity to open or non-metallic pathway.	127 mm (5"(in))	305 mm (12"(in))	610 mm (24"(in))
Unshielded power lines or electrical equipment in proximity to a grounded metal conduit pathway.	64 mm (2.5"(in))	152 mm (6"(in))	305 mm (12"(in))
Power lines enclosed in a grounded metal conduit (or equivalent shielding) in proximity to a grounded metal conduit pathway.	---	76 mm (3"(in))	152 mm (6"(in))
Motors	1.2 m (4'-0")		
Transformers	1.2 m (4'-0")		
Conduit and cables used for electrical distribution less than 1kV	0.3 m (1'-0")		
Conduit and cables used for electrical distribution greater than 1kV	1.0 m (3'-0")		
Fluorescent Luminaires	300 mm (12")		
Pipes (gas, oil, water, etc.)	120 mm (5")		
HVAC (equipment, ducts, etc.)	150 mm (6")		
Coax (CATV/CCTV)	Separate conduits or metallic divider in cable tray (do not run Cat6A and coax in same pathways)		

- 3.1.3 Coordinate with all other trades prior to installation.
- 3.1.4 Lubrication shall not be used on cable.
1. Exception is allowed for wet-rated cables.
- 3.1.5 No portion of cabling is to be painted for any length. Any cables that are painted are to be replaced at no cost to the owner/project.
- 3.1.6 All copper horizontal cabling shall be tested in accordance with section 27 08 20 Copper Testing.
- 3.1.7 For outside-plant cables to be installed as part of the contract documents that are not also rated for indoor/plenum use, provide a transition point and enclosure in an accessible ceiling location and transition to indoor/plenum cable.
1. Indicate this location on the Record Drawings.

End of Section 27 15 13