

SECTION 270553 – IDENTIFICATION FOR COMMUNICATIONS SYSTEMS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Documentation practices and requirements of cables, termination hardware, patching and cross-connection facilities, conduits, other cable pathways, Telecommunications Rooms, and other telecommunications spaces.

1.2 RELATED DOCUMENTS

- A. Drawings and General Provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.3 SUMMARY

- A. This Section specifies the requirements for the Identification for Communications Systems.
- B. Work covered by this Section shall consist of furnishing labor, equipment and materials necessary for the labeling of the telecommunications infrastructure as described on the Drawings and/or required by these specifications.

1.4 QUALITY ASSURANCE

- A. Identification and administration work specified herein shall comply with the latest applicable requirements of:
 - 1. ANSI/TIA/EIA - 606-A Administration Standards.
 - 2. ANSI/TIA/EIA - 569 Pathway and Spaces
 - 3. ANSI/TIA/EIA - 568-B Telecommunications Cabling Standard.
 - 4. BICSI Telecommunications Distribution Methods Manual.
 - 5. UL 969.

1.5 TELECOMMUNICATIONS ADMINISTRATION

- A. Administration of the telecommunications infrastructure includes documentation of cables, termination hardware, patching and cross-connection facilities, conduits, other cable pathways, Telecommunications Rooms, and other telecommunications spaces.
- B. Coordinate with the Owner's Personnel for Labeling Standards and Conventions.
- D. Telecommunications Infrastructure Records must be maintained in a computer spreadsheet, or in a computer database. Paper records are encouraged, but are optional. A cable record is prepared for each backbone cable. The record will show the cable name, and must describe the origin point and destination point of the cable. The cable record will record what services and/or connections are assigned to each cable pair or strand. An equipment record is prepared for services distributed from a certain piece of equipment, such as a router, or a system such as the telephone system PBX.

- E. Installer shall maintain accurate, up-to-date Installation or Construction Drawings. At a minimum, the Installation Drawings shall show pathway locations and routing, configuration of telecommunications spaces including backboard and equipment rack configurations, and wiring details including identifier assignments.
- F. Installer shall provide a complete and accurate set of as-built drawings. The as-built drawings shall record the identifiers for major infrastructure components including; the pathways, spaces, and wiring portions of the infrastructure which may each may have separate drawings if warranted by the complexity of the installation, or the scale of the drawings.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Panduit
- B. Brady Corporation
- C. Deal
- D. Brother P-Touch

2.2 LABELS

- A. Shall meet the legibility, defacement, exposure and adhesion requirements of UL 969.
- B. Shall be preprinted or computer printed type. Hand written labels are not acceptable.
- C. Where insert type labels are used provide clear plastic cover over label.
- D. Outside plant labels shall be totally waterproof even when submerged.
- E. Equipment Room Copper, Fiber, and Coax Backbone Cable Labels
 - 1. Panduit Part#LS7-75NL-1 or Brady#WML-1231-292
- F. Equipment Room Copper, Fiber, and Coax Horizontal Cable Labels
 - 1. Panduit Part#LS7-75NL-1 or Brady#WML-317-292
- G. Work Area Copper, Fiber, and Coax Riser Cable Labels
 - 1. Panduit Part#LS7-75NL-1 or Brady #WML-317-292
- H. Patch Panel Labels
 - 1. Panduit Part #LS7-38-1 or Brady #CL-111-619

PART 3 EXECUTION

3.1 IDENTIFICATION & LABELING

- A. The size, color, and contrast of all labels should be selected to ensure that the identifiers are

easily read. Labels should be visible during the installation of and normal maintenance of the infrastructure.

- B. Labels should be resistant to the environmental conditions at the point of installation (such as moisture, heat, or ultraviolet light), and should have a design life equal to or greater than that of the labeled component.
- C. All labels shall be printed or generated by a mechanical device.

3.2 TELECOMMUNICATION IDENTIFIERS

- A. Outside Plant cabling shall be clearly marked using permanent means. Outside plant shall use the following system of numbering and labeling:

- 1. Fiber Optic:

- a. Identify: far-end building name, building number, fiber-type and strand-count
- b. Label at entrance and exit points of tunnel system and at conduit entry points between 12 inches and 36 inches from the conduit or at closet point that is clearly visible, and long cable length in tunnel at 200 foot intervals.
- c. Label at termination panels at both ends.

- 2. Copper:

- a. Identify: far-end building name, building number and strand-count
- b. Label at entrance and exit points of tunnel system and at conduit entry points between 12 inches and 36 inches from the conduit or at closet point that is clearly visible, and long cable length in tunnel at 200 foot intervals.

- B. Riser cabling shall be clearly marked using permanent means. Riser cabling shall use the following system of numbering and labeling:

- 1. Fiber Optic:

- a. Identify: far-end EF / ER / TR, fiber-type and strand-count .
- b. When small facilities are fed from a primary location and treated as an ER, riser shall be labeled similar to Outside Plant Fiber Optic.

- 2. Copper:

- a. Identify: far-end EF / ER / TR and pair-count
- b. Termination points shall be labeled as to actual pair at every fifth (5th) pair-point.

3.3 LABELING PROCEDURES

- A. To be consistent with ANSI/TIA/EIA standards and industry practices, it is important that both labeling and color coding be applied to all telecommunications infrastructure components. Labeling with the unique identifier will identify a particular component. Proper color coding will quickly identify how that component is used in the overall telecommunications infrastructure of the facility.

B. Visibility and durability

1. The size, color, and contrast of all labels should be selected to ensure that the identifiers are easily read. Labels should be visible during the installation of and normal maintenance of the infrastructure.
2. Labels should be resistant to the environmental conditions at the point of installation (such as moisture, heat, or ultraviolet light), and should have a design life equal to or greater than that of the labeled component.
3. Labels are generally of either the adhesive or insert type. All labels must be legible, resistant to defacement, and maintain adhesion to the application surface.
4. Outside plant labels shall be totally waterproof, even when submerged.
5. Labels applied directly to a cable shall have a clear vinyl wrapping applied over the label and around the cable to permanently affix the label.
6. Other types of labels, such as tie-on labels, may be used. However, the label must be appropriate for the environment in which it is used, and must be used in the manner intended by the manufacturer.

C. Mechanical generation

1. All labels shall be printed or generated by a mechanical device.

END OF SECTION 270553