

telecommunications rooms, telecommunications terminal spa and any crossconnect facilities in the telecommunications cabling system infrastructure w the building. This system consists of servicing cables, main and intermediate cross connects, and mechanical terminations.

1.2 RELATED DOCUMENTS

- A. BICSTelecommunicationDistributionMethodsManual(TDMM),ThirteenthEdition.
- B. EIA/TIA568-C: Communications Industry Testing standards.
- C. Section260526: ^ ' CE } μ v and Bondingfor Communication^ Ç • š u • X _
- D.

- C. EMI: Electromagneticinterference.
- D. Entrance Telecommunications Room (ETR): space in which the joining of inter and/or In buildingtelecommunicationsbackbonefacilitiestakesplace. It is the TRwhere exterior cabling enters the building.
- E. IDC: Insulationdisplacementconnector.
- F. RCDD: RegisteredCommunicationDistributionDesigner.
- G. Telecommunications Room (TR): space for housing telecommunications equipment, c terminations, and crossconnect cabling. A spacethat joins the backboneand horizontal cabling for a building.
- H. ITS: Information Technology ServicesNI:
- I. UniversityNetworkandInfrastructure

1.4 ADMINISTRATIVE REQUIREMENTS

- A. COORDINATION WORK

SECTION 271300- COMMUNICATIONS BACKBONE CABLING

3.

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3.3 TERMINATIONS

A. ENTRANCE TELECOMMUNICATIONS ROOM

1. The Fiber Termination Cassettes will be arranged in the Housing such that the service fiber cable to the building will be positioned to the far left in the fiber housing.
2. Immediately following the building service cable, the interior riser backbone cables will be arranged in sequential order based on the room number of the building TRs.
3. Immediately following the interior riser backbone cables, the Horizontal fiber cables will be arranged in sequential order based on the room number of where they serve.
4. With the exception of the horizontal fiber cables, there shall only be one cable terminated in a cassette. Note: one cable may require multiple cassettes.

B. TELECOMMUNICATIONS ROOM

1. The interior riser backbone cable that services this TR from the ETR will be arranged such that the service fiber cable will be positioned to the far left in the fiber housing.
2. Note: No fiber shall be terminated in this fiber housing. All Horizontal fiber cabling shall be terminated in the ETR.

3.4 FIELD QUALITY CONTROL

1. Testing Agency: Engage a qualified testing agency to perform tests and inspections.
2. End-to-end cabling will be considered defective if it does not pass tests and inspections.
3. Where cabling is considered defective, that cabling is to be repaired or removed and replaced.

B. VISUAL INSPECTION:

1. Visually inspect the optical fiber jacket materials for NRTL certification markings to make sure that the cables are rated for the environment in which they are installed.
2. Inspect cabling terminations in communications equipment rooms for compliance with color-coding for pin assignments, and inspect cabling connections for compliance with TIA/EIA-568-C.
3. Visually inspect cable placement, cable termination, equipment and patch cords, and labeling of all components.

C. TESTING

1. Optical Fiber Cable Tests:

- 1) All single mode fiber cables shall be tested at both 1310 nm and 1550 nm after installation. Printed test results for each fiber strand are required. All tests are to be performed in accordance with ANSI/TIA/EIA-526-7, Method A.1, Two Reference Jumpers required. Fibers will be considered acceptable if the OTDR trace for that fiber shows an end to end loss of less than the following equation:

$$xx\text{dB} + yy(0.2)\text{dB} + zz(0.5)\text{dB}$$

(Where xx is the maximum advertised attenuation by the manufacturer of the cable for the length of the fiber installed, yy is the number of splices, and zz is the number of connector pairs).

- 2) In addition, no splice may show a loss of greater than 0.2 dB and no connector pairs may show a loss of greater than 0.5 dB.
- 3) The contractor shall test each fiber strand utilizing an OTDR and perform a bi-directional test at the wavelengths specified above.

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- 4) Overall, the OTDR test results shall be made up of the wavelength of the conducted test, the link length, attenuation, cable identification, and the locations of the near end, the far end and each splice point or points of discontinuity. Electronic copies (.pdf) or hard-copy results for each fiber

D. IDENTIFICATION STANDARDS

1. During construction all Backbone Cables (service and riser) shall be labeled/tagged as to the location of other end of that particular cable. The label shall be wrapped or flagged on the jacket of the cable at its first visible location as close to