

## VOICE & DATA CABLING SPECIAL NOTES

- Contractor will use conduit, raceway and boxes. Ground wire shall be placed within cable runway to avoid sharp bends and areas where the cable may be damaged in the course of reconfiguring termination equipment, ongoing maintenance, or traffic within the space. Cable runway or ladder rack sections shall be bonded together utilizing a copper bonding jumper securely attached to each section utilizing a star washer or other similar device to insure electrical continuity exists between the metal surfaces.
- All voice and data cables should be plenum rated.
- All installed horizontal cable and components, comprising the cabling link/channel, shall meet or exceed the requirements of the TIA 568-B.1 and –B.2 and the ISO/IEC IS 11801 Category 6 standards for:
  - Wiremap
  - Length
  - Attenuation
  - Return loss
  - Resistance
  - NEXT and PSNEXT
  - ACR and PSACR
  - ELFEXT and PSELFEXT
- Maximum cable lengths will not exceed standards for Cat6 installations based on Siemen’s warranty. Requires lengths not to exceed 295’.
- Data cables will have a blue jacket.
- Testing and testing documentation shall be provided to certify that the permanent links (patch panel to wall drop) meet Cat6 specifications.
- All RJ45 modular terminations for data locations will be blue.
- All voice wiring and hardware will be (Cat3) or better cables with a (white) jacket.
- The installed riser cable shall meet or exceed the requirements of the TIA 568-B.1 and –B.2 and the ISO/IEC IS 11801 Category 3 standards for:
  - a. Wiremap
  - b. Length
  - c. Attenuation
  - d. Return loss
  - e. Resistance
  - f. NEXT
- All modular terminations for voice cables will be white and will be terminated for (2) line operation, and Contractor shall perform final testing on the voice cable system to demonstrate the acceptability of the project as installed. As a minimum, the Contractor shall perform and furnish documentation of each of the following tests:
  - Continuity, Shorts/Crosses, Grounds, Opens, Split Pairs
  - Pair Map
  - Length
  - Resistance and Attenuation
  - NEXT

## **VOICE & DATA CABLING SPECIAL NOTES**

- Data terminations in the IT Room will be wall mounted, on Contractor supplied backboard, and terminated in RJ45 modular connectors on Cat6 compliant hardware Cable management panels should be used when terminating cables Horizontal cables shall be terminated sequentially and visibly labeled. All terminations shall be performed in accordance with TIA/EIA 568-B. All cables shall be labeled at both ends on permanent labels. Labels shall be machine-printed (not handwritten) and individual number strips are unacceptable. All cable labeling shall include unique numeric designation, origin, destination, and cable type.
- Voice terminations in the IT Room will be wall mounted, on Contractor supplied backboard, and terminated on 66-type hardware termination blocks that are mounted on plywood backboards shall be mounted on standoff brackets
- Voice and Data cables will be installed 2-voice and 2-data at the locations specified per Sheet E3.1 Special Systems Floor Plan – New Work. Each data cable shall be terminated on modular 8-position/8-conductor (RJ45) Category 6 connector wired per the T568B pin sequence and mounted within a modular faceplate configured as shown on the drawings. Each voice cable shall be terminated on modular 6-position/6-conductor (RJ11) connector wired per the USOC pin configuration and mounted within a modular faceplate. Connectors shall utilize 110-style IDC termination.
- Outlet faceplates shall be labeled per the submitted and accepted labeling scheme. Minimally, the labeling scheme shall identify the serving IDF room number enclosure, patch panel, and patch panel port or voice block and station. Outlet labeling shall be machine prepared, permanently secured, and indelible.

## **FIRESTOP AND WEATHER SEALING**

- All penetrations through fire-rated walls, enclosures, or bulkheads, and all conduits, sleeves, and/or cores provided by the electrical contractor for use by the telecommunications cabling system(s) shall be fire/weather sealed through the application of a U.L. accepted system, as applicable, by the
  - Contractor, whether utilized or left vacant for spare. Penetrated members shall retain the original fire rating after construction is complete by the application of a U.L. accepted fire stop system. All fire stop procedures shall be in conformance with ASTM E814
- Any external floors or walls penetrated shall be fire and weather sealed per applicable codes and standards.

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- **FIRESTOP MATERIALS**

- Fire stopping shall be a material, or combination of materials, utilized to retain the integrity of time-rated construction by maintaining an effective barrier against the spread of flame, smoke, and gases.
- Fire stopping materials shall be asbestos free and capable of maintaining an effective barrier against flame, smoke, and gases in accordance with requirements of ASTM E 814 and UL 1479. Only listed fire stopping material acceptable to the City of San Antonio Fire Marshall shall be used.
- The rating of these fire stops shall in no case be less than the rating of the time-rated floor or wall assembly in which the

- **J-HOOKS**

- J-hooks shall be installed in uniform, coordinated pathways, aligned with the building grid, and at an elevation that provides maximum separation from other above-ceiling systems. Contractor shall provide a dedicated support system for J-hooks, and may not be attached to any support for the ceiling, other system conduit or duct, or any other building structure except walls, deck, or joists.
- J-hooks shall be placed where indicated in the project drawings, or where cable tray or other means of cable support is not provided. J-hooks shall include assemblies to create dedicated support for Category 6, and other telecommunications cabling. Cable installation shall not exceed Manufacturer's recommend cabling capacities for individual clips, and one hundred percent (100%) expansion capacity shall be provided at all "multiple hook" installation locations.
- Attach appropriate J-hook fastener(s) for wall, stud, beam, or flange mounting to the supporting structure. Space fasteners to fall at maximum every five foot (5') of cable length. Should cabling sag more than 12" between supports, add additional fasteners and J-hooks to accommodate the cable.