Division 27 Communication Cabling

27.02a Interbuilding Copper Cable

Materials
- Core Construction
  - Conductors: solid, annealed copper, 24 AWG unless noted on design documents.
  - Insulation: Dual insulated with inner layer of foamed natural polyolefin covered by an outer layer of solid color polyolefin, color coded to industry standards.
  - Twisted Pairs: Insulated conductors twisted into pairs with varying lay lengths to minimize crosstalk. Standard capacitance of 83 to 87 Nano farads per mile and a staggered twist design.
  - Core Assembly: cables of 25 pairs and less formed by assembling pairs together in a single group. Cables of more than 25 pairs formed by twisted pairs arranged in groups with each group having a color coded unit binder.
  - Filling Compound: core assembly completely filled with an 80 degree Celsius rated ETPR compound, filling the interstices between the pairs and under the core tape.
  - Core Wrap: non-hygroscopic dielectric tape applied longitudinally with an overlap.
- Quad Shield
  - Inner shield: corrugated, copolymer coated, 8 mil aluminum tape applied longitudinally without an overlap. The sheath interfaces are flooded with an adhesive water blocking compound.
  - Outer shield: corrugated, copolymer coated, 6 mil steel tape applied directly over the aluminum and overlays. The shield interfaces are flooded with an adhesive compound to provide a moisture barrier.
  - Jacket: black, linear low density polyethylene.
- Cable sizes defined in design documents.
- Applications
  - Use for placement in underground conduit or utility tunnel.
- Manufacturers: Superior Essex, Commscope, General Cable

27.02b Copper Station Cable

Materials
- Plenum rated, CMP/MPP
- Four pair, 23 AWG, UTP, as specified in TIA/EIA-568-B.2-1, Addendum 1: transmission performance specifications for 4-Pair 100 Ohm Category 6 Cabling.
- Four pair, 24 AWG, UTP, Category 5e cabling for all voice cabling
• Application
  o Use for voice and data network applications to interconnect services from workstation to the wiring closet in a plenum or non-plenum rated space.
• Colors
  o Blue is the University’s standard color for the data network station cables
  o White is the University’s standard color for the voice network station cables
• Manufacturers: Superior Essex, Commscope, General Cable.

27.02c
Coaxial Station Cable
• RG - 6 cable, plenum-rated with two bonded foil aluminum shields having 100% coverage each
• Constructed with two aluminum braid shields with 60% minimum coverage each
• Foamed teflon dielectric with a .04 inch copper clad steel center conductor
• Impedance 75 ohms
• Support frequencies between 5-1000 MHz
• Nominal attenuation not to exceed 5.85 dB per 100 feet at 700 MHz
Manufacturer: Commscope, General Cable, Belden