

## 1.0 **GENERAL**

### 1.1 **DOCUMENTS**

- .1 This section of the Specification forms part of the Contract Documents and is to be read, interpreted, and coordinated with all other parts.

### 1.2 **SUMMARY**

- .1 Section Includes:

- 1.0 GENERAL
- 1.1 DOCUMENTS
- 1.2 SUMMARY
- 1.3 OVERVIEW
- 2.0 CATEGORY 3 VOICE INTRA BACKBONE CABLES
- 2.1 CATEGORY 6A DATA INTRA BACKBONE CABLES
- 2.2 DATA FIBRE INTRA BACKBONE CABLES
- 2.3 FIBRE OPTIC CABLES

### 1.3 **OVERVIEW**

- .1 The backbone configuration shall be a two-level hierarchical star structure with separate dedicated cables from the Main Communication Room to each Local Communication Room.
- .2 In a Main Communication Room (MCR), Intra Backbone cables shall be bundled separately from Entrance and Horizontal cables.
- .3 In a Local Communication Room (LCR), Horizontal cables shall be bundled separately from Intra Backbone cables.
- .4 Where it is specifically noted that a Backbone cable is not terminated in a Communication Room, a minimum of 5 meters slack shall be left. The starting point of measurement shall be defined at time of installation by the Information Technology Representative.

## 2.0 **CATEGORY 3 VOICE INTRA BACKBONE CABLES**

- .1 Voice backbone cabling consisting of multiples of 25 pair Category 3 unshielded twisted-pair shall be installed by the Contractor, from the Main Communication Room (MCR) to each zone LCR as directed by the Information Technology Representative.
- .2 Multi-pair cable bundles entering GigaBIX mounts and the hinging of GigaBIX connectors shall be on the jumper side of the mount.
- .3 Backbone Category 3, 25-pair UTP cables from the same communication room must be grouped together and terminated sequentially on the GigaBIX connectors; group the cables from each communications room together. Once the first riser is terminated and numbered, every other riser in its group continues the number sequence. (Refer to Standard Drawing ITSTD-32 & 64.)
- .4 Wall space for the lightning protectors shall be provided to the left of the GigaBIX mounts. (Refer to Standard Drawing ITSTD-06)

**2.1 CATEGORY 6A DATA INTRA BACKBONE CABLES**

- .1 Data backbone cabling consisting of Cat6A cables is not to be used unless specifically requested by UBC IT.

**2.2 DATA FIBRE INTRA BACKBONE CABLES**

- .1 Data backbone cabling consisting of a minimum of 24 strand – OS2, 8.3/125 single-mode optical fibre cable shall be installed from the MCR to each LCR. (Refer to Standard Drawing ITSTD – 32 & 63)

**2.3 FIBRE OPTIC CABLES**

- .1 All fibre optic cable system work completed by the Contractor must be approved by the UBC Information Technology Representative.
- .2 The following basic requirements must be met to gain system acceptance:
  - .1 Receive, check, unload, handle, store and adequately protect equipment and materials to be installed as part of the Contract. Store in areas as directed by the Information Technology Representative or General Contractor. Installation includes setting in place, fastening to walls, floors, ceilings, or other structures where required, interconnecting wiring of system components where specified, equipment alignment and adjustment and other related work whether or not expressly defined herein.
  - .2 Install materials and equipment in accordance with applicable standards, codes, requirements and recommendations of national, provincial and local authorities having jurisdiction and with manufacturers' printed instructions.
  - .3 Adhere to manufacturers' published specifications for dressing spliced fibre pigtails in fibre panel, pulling tension, minimum bend radii and sidewall pressure when installing cables.
  - .4 No manual fusion splicing shall be performed.
  - .5 Fibre cable preparation, pigtail routing, and forming within the splice or distribution panel shall be as per manufacturer printed instructions.
  - .6 When splicing all 900um fibre strands transitioning from cable sheath to splice tray and splice tray to bulkheads must be bundled inside protective tubing.
  - .7 Acceptable SM terminations are:
    - Preferred solution - Corning CCH Cassette with Pigtails – SC connector
    - Corning Unicam pre-polished stub – SC connector (for service/ repair only)
    - Pigtail with Corning glass – SC connector

**END OF SECTION 27 13 00**