Part 1 General

1.1   Summary

1.1.1   This section shall govern the products and installation of identification and labeling of all required parts, pieces and accessories of the communications cabling system, which shall include, but is not limited to, cabling, faceplates, patch panels, bix-blocks, conduit, innerduct, junction and pullboxes, firestop locations, and the communications grounding system.

1.1.2   Contractor shall also supply a cable manifest (spreadsheet) prior to construction for all backbone and horizontal cabling links, which shall identify the cable type, the starting and ending points of each cable, include pair/strand count, and indicate the label content on both ends (at the faceplate or telecommunications room termination). An updated cable manifest shall be delivered with substantial completion.

1.2   Related Documents

1.2.1   The latest versions of the following codes, standards, and guidelines shall be followed. Bring to the immediate attention of CCS if construction documents or conditions differ from requirements in codes, standards, guidelines and specifications.

1.2.2   The following codes, as required by law:

Ontario Electrical Safety Code (OESC)

Ontario Building Code (OBC)

1.2.3   The following standards:

TIA/EIA-606-B – Administration Standard for Commercial Telecommunications Infrastructure

1.2.4   The following best practices:

BICSI, Telecommunications Distribution Methods Manual (TDMM)

BICSI, Information Transport Systems Installation Methods Manual (ITSIMM)

1.3   Quality Assurance

1.3.1   All labels shall be machine-printed, crisp, clear, non-smearing and extremely legible. Labels shall be durable for the life of the system (the 15+ year system warranty); labels which can be easily removed shall not be utilized.

1.4   Coordination with CCS

1.4.1   Prior to submission of pre-construction submittals, coordinate with CCS Representative for an owner-provided labeling scheme to be followed for each building.

1.4.2   CCS will provide both copper and fiber backbone cable identifiers.

1.4.3   Refer to the subsequent sections for additional instructions. Failure to coordinate with CCS on labeling and identification schemes in a timely manner, and/or failure to follow the requirements of this section may result in the project's Substantial Completion not being met.

1.5   Submittals

1.5.1   The following submittals are due at the Pre-Construction Phase, in accordance with submittal requirements in Section 27 05 00 Communications:

1. Product Information Submittals

a) Provide manufacturer's product information cutsheet or specifications sheet with the specific product number identified or filled out.

b) For planned labeling for all outlets/horizontal cables and backbone cabling:

1) Provide a complete list, in Microsoft Excel format, of the planned identification labels for all outlets/horizontal cables and backbone cables.

2) Await approval or corrections by CCS for labeling scheme prior to printing/applying labels.

2. Shop Drawings

a) Planned labeling for outlets:

1) Provide scaled drawings of the floor plans showing all outlets with the proposed identification label for each outlet.

b) Communication Rooms and Backbone Cabling:

1) Provide a riser diagram that indicates each Communications Room by both room number and two letter ITS designation. Also indicate the ITS-provided backbone cable identifiers on this riser diagram.

c) Planned labeling for racks and patch panels:

1) Provide enlarged scaled drawings of each communication room indicating Rack Row and Number.

2) Refer to the Execution section for additional information, including Rack Row/Number and Patch Panel labeling.

1.5.2   The following submittals are due prior to Substantial Completion, in accordance with the submittal requirements in Section 27 05 00 Communications:

1. Record Drawings

a) Updated shop drawings (now identified as Record Drawings) with any additions or changes as required during the course of construction.

2. Cable Manifest

a) Provide cable manifest (spreadsheet) identifying source, destination, pair/strand count, and labeling scheme used for each horizontal and backbone cable. b) This file shall be readable with Microsoft Excel (2007 Version) with formatting intact.

c) Submit this file on USB Flash Drive or CD/DVD-R specific for Div. 27 Record Drawings. Refer to Section 27 05 00 for additional information.

Part 2 Product

2.1   Cable, Faceplate, Patch Panel and Active Equipment Labelling

    2.1.1   All products shall meet UL 969 standards and be rated for indoor or outdoor use as applicable to the installation.

    2.1.2   Cable labels shall be self laminating, vinyl with white printing area and sized to allow label to wrap around 2.5 times minimum. Labels also shall be sized to suit the labelling requirement maintaining a minimum 10pt. font size.

    2.1.3   Faceplate and Patch Panel labels shall be adhesive style made of polyester with a white printing area and sized to suit the designated label location. Labels shall be printed with a minimum 10pt. font size.

    2.1.4   Active equipment labels shall be adhesive style made of polyester with a white printing area and sized to suit the designated label location. Labels shall be printed with a minimum ¼″ high font.

    2.1.5   Patch Panel labels shall be adhesive style made of polyester with a white printing area and sized to suit the designated label location. Labels shall be printed with a minimum ¼″ high font.

    2.1.6   Approved manufacturers:

        1. Dymo, Rhino, 5200 or 6000

        2. Panduit, LS8E or LS9

        3. Or approved equivalent

2.2   IDC Mounts

    2.2.1   IDC mounts shall be labelled using designation strips and labels specifically manufactured for the IDC mount being installed. Labels shall be colour coded as follows:

Orange	Incoming Circuits (Demarcation Point)
Green	Client Connection to Incoming Circuits (Client side of Demarcation Point)
White	Equipment Connections
Purple	First Level Backbone Cabling
Gray	Second Level Backbone Cabling
Blue	Horizontal Cabling
Brown	Interbuilding Backbone
Yellow	Auxiliary Circuits, Alarms, Maintenance, Security, and other Misc. Circuits
Red	Key Telephone Systems

2.3   Racks and Cabinets

    2.3.1   Racks and Cabinets shall be labelled using lamacoid plates.

    2.3.2   Lamacoid plates shall be black background with white letters.

    2.3.3   Lamacoid plate letters shall be 1″ high.

    2.3.4   Lamacoid plates shall be no more than 2″ high.

    2.3.5   Length of lamacoid plates shall be as required to accommodate number of characters.

Part 3 Execution

3.1 General

    3.1.1 Install labels in such a way as to be physically and visually accessible.

    3.1.2 Remove any temporary labels and ensure no permanent labels are damaged during construction.

    3.1.3 Replace all damaged or missing permanent labels prior to substantial completion.

3.2 Cable Labelling

    3.2.1 All cabling runs shall be labelled in four (4) locations including at each end of the cable, on the corresponding faceplate and patch panel or IDC mount.

3.3 Patch Cord Labelling

    3.3.1 Each patch cord shall be labelled with one label at each end.

3.4 Rack and Cabinet Labelling

    3.4.1 Each rack and cabinet shall be labelled with one label on the front (top) and one label on the back (top).

3.5 Active Equipment Labelling

    3.5.1 Each piece of active equipment, such as switches, routers, local ups, etc. shall be labelled with one label on the front and one label on the back.

3.6 Cabling System

    3.6.1 The Communications Contractor will be responsible to confirm labelling schemes with the Communications Consultant prior to preparation and installation of any labelling.

    3.6.2

    Horizontal Copper Cabling Labelling Scheme:

    xxx-yyy-zz   where: xxx = Originating TR
                                         yyy = Room Location
                                         zz = Cable Designation

    Horizontal CATV Cabling Labelling Scheme:

    xxx-yyy-zz   where: xxx = Originating TR
                                           yyy = Room Location
                                         zz = Cable Designation

    Security Cabling Labelling Scheme:

    xxx-yyy-zz   where: xxx = Originating TR
                                           yyy = Room Location
                                         zz = Cable Designation

    Copper Patch Cord Labelling Scheme:

Computing and Communications Services (CCS)
Toronto Metropolitan University
350 Victoria Street, Toronto

LL UU-XXX   where: LL = Length
                                      UU = Unit of measure Feet (ft) or Meters (m)
                                      XXX = Patch Cord number

Server Room Copper Cabling Labelling Scheme

TCABNN-XX   where: T = D (data) or V (voice)
                                        NN = Cabinet Number
                                        XX = Cable / Outlet number

Server Room Optical Fibre Cabling Labelling Scheme

TCABNN-XX   where: T = M (Multimode) or S (Singlemode)
                                        NN = Cabinet number
                                        XX = Strand number

Voice Interfloor Backbone Cabling Labelling Scheme:

IF-XXX-YYY-01-ZZ   where: XXX = Room (Origin)
                                        YYY = Room (Destination)
                                        01 = Cable number
                                        ZZ = Pair designation

Voice Interconnect Cabling Labelling Scheme:

IC-XX-YY-ZZ   where: XX = Rack number
                                        YY = Cable number
                                        ZZ = pair designation

Optical Fibre Cabling Labelling Scheme:

XXX-YYY-SS-ZZ   where: XXX = Room (Origin)
                                        YYY = Room (Destination)
                                        SS = Number of Strands
                                        ZZ = Strand designation

Optical Fibre Patch Cords Labelling Scheme:

LL UU-XXX   where: LL = Length
                                      UU = Unit of measure Feet (ft) or Meters (m)
                                      XXX = Patch Cord number

Copper Patch Panel Labelling Scheme:

A   where: A = alphabetical character starting with 'A'

Optical Fibre Patch Panel Labelling Scheme:

A   where: A = alphabetical character starting with 'A'

Rack and Cabinet Labelling Scheme:

RXX   where: R = Row (alphabetical character starting with 'A')
                                     XX = Rack or Cabinet number

Active Equipment Labelling Scheme:

tbd   where: tbd

3.7   Pathways

3.7.1   Conduit

1. Label exterior of conduit as COMMUNICATIONS (unless otherwise noted on the drawings) with text readable from a standing position on the finished floor.

a) For wall stub-up locations, label overhead only.

b) For strictly overhead conduits, label both ends.

c) For long runs of conduits that stub directly up or into Communications Room, label the end of the conduit in the Communications Room with the destination room number or location.

1) Examples: FLOOR BOX ROOM 2.302, EMERGENCY CALL

BOX NW CORNER OF BUILDING, ELEVATOR EQUIPMENT ROOM 1.402.

2. Sleeves which pass through a single wall or floor need not be labeled.

3.7.2   Junction boxes and pull boxes

1. Label exterior of junction boxes and pull boxes as COMMUNICATIONS with text readable from a standing position on the finished floor.

a) Preferred method is to paint ITS on the lid in blue paint.

3.7.3   Firestop locations

1. All communications firestop locations are to be labeled on both sides of wall or floor. Refer to firestopping specification section for additional information.

3.7.4   Grounding

3.7.5   Label TMGB as FLOOR# - ROOM# - TMGB.

3.7.6   Label TGBs as FLOOR# - ROOM# - TGB.

3.7.7   Label grounding conductors within 12″ of both ends with Warning Marker and Identification Label.

1. Identification label is to include the source and destination of the grounding

conductor.

End of Section 27 05 53