

PART 1 GENERAL

1.1 RELATED SECTIONS

- .1 The City of Winnipeg Standard Construction Specifications Section CW1110 - General Instructions.

1.2 REFERENCES

- .1 Canadian Standards Association (CSA International)
 - .1 CSA-C22.2 No. 214-02, Communications Cables (Bi-National standard with UL 444).
- .2 Telecommunications Industry Association (TIA)/Electronic Industries Alliance (EIA)
 - .1 TIA/EIA-568-B.1-(2001), Commercial Building Telecommunications Cabling Standard, Part 1: General Requirements.
 - .2 TIA/EIA-568-B.2-(2001), Commercial Building Telecommunications Cabling Standard, Part 2: Balanced Twisted-Pair Cabling Components.
 - .3 TIA/EIA-606-A-(2002), Administration Standard for the Commercial Telecommunications Infrastructure.

1.3 DEFINITIONS

- .1 Refer to TIA/EIA-598-C, Annex A for definitions of terms: optical-fiber interconnect, distribution, and breakout cables.

1.4 SYSTEM DESCRIPTION

- .1 Structured telecommunications wiring system consist of unshielded-twisted-pair, terminations, connectors, cross-connection hardware and related equipment installed inside building for occupant's telecommunications systems, including voice (telephone), data, and image.
- .2 Installed in physical star configuration with separate horizontal sub-systems.
 - .1 Horizontal cables link equipment to PLC Panels (VFD to PLC Panel)
 - .2 Horizontal cables link PLC Panel to DCS Cabinet.

1.5 SUBMITTALS

- .1 Provide submittals in accordance with The City of Winnipeg Standard Construction Specifications Section CW1110 - General Instructions.
- .2 As-built Records and Drawings:
 - .1 Provide Microsoft Access database reflecting cable installation and cross-connections.
 - .2 Provide electronic drawings in AutoCAD 2000 format depicting all construction.
 - .3 Provide two (2) bound complete hard-copy sets of as-built records to the Contract Administrator.
 - .1 Provide and place one hard copy of as-built records for each telecommunications room in plan holder in each telecommunications room.

1.6 QUALITY ASSURANCE

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- .1 Health and Safety Requirements: do construction occupational health and safety.

1.7 DELIVERY, STORAGE AND HANDLING

- .1 Waste Management and Disposal: separate waste materials for reuse and recycling.

PART 2 PRODUCTS

2.1 FOUR-PAIR 100 Ω BALANCED TWISTED PAIR CABLE

- .1 Armoured Four-pair, 100 ohm balanced unshielded-twisted-pair (UTP) cable, flame test classification FT4 to: CSA-C22.2 No. 214, Category 5e (Cat 5) to: TIA/EIA-568-B.2.

2.2 TERMINATION AND CROSS-CONNECTION HARDWARE FOR UTP

- .1 Patch panel, Din rail mountable or wall mountable, 12 ports minimum:
 - .1 Each port equipped with factory installed "RJ-45" jacks, type T568A Category 5 to: TIA/EIA-568-B.2.
 - .2 Horizontal cable-management unit for every 12 ports.

2.3 UTP PATCH CORDS

- .1 1 metres long, with factory-installed male plug at one end to mate with "RJ-45" jack and with factory-installed male plug at other end to mate with "RJ-45" jack Category 6, 4 pairs to: TIA/EIA-568-B.2.

PART 3 EXECUTION

3.1 INSTALLATION OF TERMINATION AND CROSS-CONNECT HARDWARE

- .1 Install termination hardware in PLC panel as indicated and according to manufacturers' instructions. Identify and label as indicated to: TIA/EIA-606-A.
- .2 Install consolidation points, as indicated according to manufacturer's instructions. Identify and label as indicated to: TIA/EIA-606-A.

3.2 INSTALLATION OF HORIZONTAL DISTRIBUTION CABLES

- .1 Support horizontal cables at intervals not exceeding 1.5 metres.
- .2 Install horizontal cables from PLC Panel to individual field equipment.
 - .1 Provide supplementary support channels to support cables at intervals not exceeding 1.5 metres.
 - .2 Identify and label as indicated to: TIA/EIA-606-A.
- .3 Terminate horizontal cables in PLC Panel and at individual equipment location.
 - .1 Identify and label as indicated to: TIA/EIA-606-A.
- .4 Coil spare cables and store in ceiling space in zone.
- .5 Harness slack cable in cabinets, racks, and wall-mounted termination and cross-connection hardware.

3.3 IMPLEMENT CROSS-CONNECTIONS

- .1 Implement cross-connections using patch cords as specified.

3.4 FIELD QUALITY CONTROL

- .1 Test horizontal UTP cables as specified below and correct deficiencies provide record of results as electronic record on DVD.
 - .1 Perform tests for Permanent Link on installed cables, including spares:
 - .1 Category 6 using certified level III tester to: TIA/EIA-568-B.2.

END OF SECTION