

## **PART 1 - GENERAL**

### **1.1 RELATED REQUIREMENTS**

- .1 Section 26 05 28 - Grounding - Secondary.

### **1.2 REFERENCES**

- .1 CAN C22.1-2012 - Canadian Electrical Code.
  - .2 National Building Code of Canada 2010.
  - .3 National Fire Code of Canada 2010.
  - .4 TBITS 6.9 - Treasury Board Guidelines for Telecommunications Installation.
  - .5 TIA/EIA-568 Commercial Building Telecommunications Cabling Standard.
  - .6 TIA/EIA-569 Commercial Building Standard for Telecommunications Pathway and Spaces.
  - .7 TIA/EIA-570 Residential and Light Commercial Telecommunications Infrastructure Standard.
  - .8 TIA/EIA-606 Administration Standard for Commercial Telecommunications Infrastructure.
  - .9 TIA/EIA-607 Commercial Building Grounding (Earthing) and Bonding Requirements for Telecommunications.
  - .10 TIA/EIA-758 Customer Owned Outside Plant Telecommunications Cabling Standard.
  - .11 TIA/EIA-942 Telecommunication Infrastructure Standard for Data Centre.
  - .12 BICSI - Outside Plant Design Manual.
  - .13 BICSI - Telecommunication Distribution Methods Manual.
  - .14 BICSI - Information Transport System Installation.
  - .15 BICSI - Wireless Design Reference Manual.
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- .16 BICSI - Network Design Reference Manual.

NOTE: The above standards and codes apply to specifications and drawings.  
In the event of conflict, the most stringent and recent requirements SHALL apply.

### **1.3 SYSTEM DESCRIPTION**

- .1 Telecommunications grounding and bonding system consists of grounding busbars, bonding backbones, and other bonding conductors.
- .2 Provides ground reference for telecommunications systems within building.
- .3 Metallic pathways, cable shields, conductors, and hardware within telecommunications spaces are bonded to telecommunications grounding and bonding system.

### **1.4 QUALITY ASSURANCE**

- .1 Health and Safety Requirements: perform construction occupational health and safety in accordance with Section 01 35 29 - Health and Safety Requirements.

### **1.5 DELIVERY, STORAGE AND HANDLING**

- .1 Waste Management and Disposal:  
.1 Separate waste materials for reuse and recycling in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal.

## **PART 2 - PRODUCTS**

### **2.1 TELECOMMUNICATIONS MAIN GROUNDING BUSBAR (TMGB)**

- .1 Predrilled copper busbar, electrotin plated with holes sized for using a 2-hole compression connector to: ANSI J-STD-607-A. TMGB shall be mounted on insulated supports.
- .2 Dimensions 6 mm thick, 100 mm wide, length sized as necessary to accommodate MTR requirements plus 50% spare, to: ANSI J-STD-6 07-B.

### **2.2 BONDING CONDUCTOR FOR TELECOMMUNICATIONS**

- .1 6 AWG copper conductor, green insulated marked to: ANSI J-STD-607-B.
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### **2.3 WARNING LABELS**

- .1 Non-metallic warning labels in English and French to: ANSI J-STD-607-B.
- .2 Identify labels with wording "If this connector is loose or must be removed, please call the building telecommunications manager".

## **PART 3 - EXECUTION**

### **3.1 TELECOMMUNICATIONS MAIN GROUNDING BUSBAR (TMGB)**

- .1 Install TMGB in entrance room on insulated supports 50 mm high in room indicated, adjacent to the cable entrance conduits, 150 mm from the corner of the MTR and 150 mm AFF.
- .2 Install copper bonding conductor, sized as indicated on drawings from TMGB to building main ground bus.

### **3.2 BONDING CONDUCTORS GENERAL**

- .1 When placed in ferrous metallic conduit or EMT longer than 1 m, bond to each end of conduit or EMT using 6 AWG copper conductor.

### **3.3 BONDING CONDUCTOR FOR TELECOMMUNICATIONS**

- .1 Install bonding conductor for telecommunications from TMGB to service equipment.
- .2 Use approved 2 hole compression lugs 1 hole non-twisting lugs for connection to TMGB.

### **3.4 BONDING TO TMGB**

- .1 Mechanically bond metallic parts and raceways in telecommunications entrance room to TMGB using 6 AWG green insulated copper conductor.
  - .2 For cables within telecommunications entrance room having shield or metallic member, bond shield or metallic member to TMGB using 6 AWG green insulated copper conductor.
  - .3 Bond equipment racks or cabinets located in telecommunications entrance room to TMGB using 6 AWG green insulated copper conductor.
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- .4 All metallic parts shall be bonded together mechanically and attached to TMGB.

### **3.5 LABELLING**

- .1 Apply warning labels to telecommunications bonding and grounding conductors.
- .2 Apply additional administrative labels to: TIA/EIA-606.