

1.0 **GENERAL**

1.1 **Related UBC Guidelines**

- .1 Divisions 26 and 28
- .2 Division 27 Section 27 05 26 Grounding and Bonding for Communications Systems

1.2 **Coordination Requirements**

- .1 UBC Energy & Water Services (Vancouver)
- .2 UBC Information Technology
- .3 UBC Facilities Electrical (Vancouver)
- .4 UBC Facility Management (Okanagan)

1.3 **Description**

- .1 UBC requirements for Electrical Grounding.

2.0 **MATERIALS DESIGN REQUIREMENTS**

2.1 **Grounding**

- .1 *General*
 - .1 Grounding conductors shall be installed as required by the latest edition of the Canadian Electrical Code. In all cases the material shall be copper.
 - .2 From the neutral ground position of each transformer, a grounding conductor shall be extended to the UBC system ground bus.
 - .3 Ground wires for ground electrodes in 600V systems or lower may be sized as per Canadian Electrical Code, latest edition. Ground wires to ground electrodes for high voltage systems shall be #4/0 copper. All ground wire shall be tested for continuity. Record each continuity test and include in ground system report.
 - .4 In all buildings with 600V distribution a system ground bus shall be installed in each Electrical Room housing a Distribution Centre rated 400A or larger or a transformer 15kVA or larger.
 - .5 Insulated ground wires shall be utilized for all applications.
 - .6 Unit substation and pad-mounted transformers servicing buildings shall have a ground grid.
- .2 **Ground Rods**
 - .1 Ground rods shall be 3/4" x 10' copper clad ground rods.
- .3 **Ground Fittings**
 - .1 Ground connections shall be made with compression fittings that are CSA approved for grounding.
 - .2 Ground grid connections for buried ground grid splices shall be CSA approved compression connected.
 - .3 All ground connections shall be labeled. The label shall contain at minimum the type of equipment grounded, location of the equipment and equipment name as identified on the single line diagram.

2.2 *Bonding*

- .1 *General*
 - .1 *An additional bonding conductor is required for equipment when a raceway is installed as per the following:*
 - .1 *EMT in exterior, non-conditioned and uncovered locations.*
 - .2 *EMT is installed in slab for part or all of the run.*
- .2 Telecommunications Bonding
 - .1 Please refer to 1.1.2 Section 27 05 26 Grounding and Bonding for Communications Systems for specialized telecommunications bonding requirements.
- .3 Fire Alarm Bonding
 - .1 Please refer to Section 28 31 00 Fire Detection and Alarm for specialized Fire Alarm systems bonding/grounding.

*****END OF SECTION*****