

1.0 **GENERAL**

1.1 **Related UBC Guidelines**

- .1 Section 26 05 06 Standard Drawings

1.2 **Coordination Requirements**

- .1 UBC Facilities Electrical (Vancouver)
- .2 UBC Energy and Water Services (Vancouver)
- .3 UBC Facility Management (Okanagan)

2.0 **MATERIAL AND DESIGN REQUIREMENTS**

2.1 **Labeling Requirements**

- .1 Feeder labels to be installed around feeders at cable heads, stress cones, manholes, pull pits, etc. Refer to Standard Drawing E4-1.
- .2 Feeders revised from existing circuit arrangements shall be relabeled at all 'downstream' locations such as manholes, pull pits and building switchgear.
- .3 Engraved lamacoid nameplates with the name of the load shall be installed on breakers or switches at the switchgear cubicles and elsewhere where called for on the drawings.
- .4 Nameplates shall be securely fastened and screwed or riveted.
- .5 Exterior cubicle nameplate dimensions shall be engraved brass 4" x 1 ½" black lettering.

2.2 **Labeling General**

- .1 Labelling is required for any electrical equipment rated at 20kW and above.
- .2 Junction Boxes
 - .1 Junction boxes in visible areas shall be labeled with machine printed material. The label(s) shall consist of Panel #, Cct #(s), FA zone #, etc.
- .3 Disconnects
 - .1 Disconnects (Non Fused/Fused/Breaker) shall have a firmly affixed lamacoid label indicating the following (as applicable):
 - 1. Downstream device tag #
 - 2. Disconnect maximum rating
 - 3. Fuse/Breaker rating
 - .2 If a VFD is upstream of the disconnect an additional label must be placed stating the following: Disconnect shall not be operated until motor has been verified to be disengaged at the VFD.
- .4 Labels Outside
 - .1 Labels located outside shall be of the engraved lamacoids type and be affixed with UV or corrosion resistant ties.

- .5 Equipment and Devices
 - .1 All equipment and devices shall be labeled with their tag # first and if this is not available the circuit #, IP address or Zone shall be labeled with machine printed material. Examples of the equipment and devices that shall be labeled:
 - 1. Receptacles
 - 2. Light switches
 - 3. Motors / Pumps
 - 4. AHU's
 - 5. Heaters
 - 6. Equipment specific to the area
 - 7. Fire Alarm System field devices
 - 8. Unit Equipment

2.3 Distribution Equipment and Panel Board Identification

- .1 Panel Boards, Load Centers and Transformers shall be labeled and identified in accordance with Standard Drawing E 10-2 in all new buildings, UBC Renew projects and in any major additions to existing buildings.
- .2 Secondary distribution equipment, such as Panel Boards, Load Centers and MCCs shall have conspicuously attached a permanent 2" X 4" Hazard Warning Label to meet OSHA and NFPA standards that clearly identifies:
 - .1 Incident Energy
 - .2 Arc Flash protection boundary
 - .3 Hazard Category
 - .1 Secondary distribution equipment that is identified as Hazard Category two or higher, the above label shall be 3.5" X 5"
- .3 The following outline the color requirements for lamicoids at distribution equipment:
 - .1 Utility Power:
 - 1. Black with White Letters
 - .2 Generator Power:
 - 1. Single generator with 1 transfer switch (Life Safety and Standby / Life Safety only loads):
 - 1. ATS (Red with White) → Main EM distribution (Red with White) → Downstream distributions (Red with White)
 - 2. Single generator with 1 transfer switch (Standby only loads):
 - 1. ATS (Yellow with Black) → Main EM distribution (Yellow with Black) → Downstream distributions (Yellow with Black)
 - 3. Generator(s) with 2 or more transfer switches:
 - 1. Generator Main Distribution (Red with White)
 - 2. ATS and downstream distributions for Life Safety (Red with White)
 - 3. ATS and downstream distributions for Standby (Yellow with Black)
 - 4. ATS and downstream distributions for Data Center/IT Equipment/UPS/IT Exclusive loads (Blue with white)
 - .3 UPS/Inverter power:
 - 1. UPS and Downstream Distributions (Blue with white).

2.4 Secondary Distribution Raceways and Cables Identification

- .1 Raceways and cables for interior LOW VOLTAGE systems shall be identified in accordance with Drawing E10-1.

2.5 Concealed Equipment Identification

- .1 BLUE colored dots shall be utilized for identification of concealed electrical equipment where removable panels/tiles exist. This includes but is not limited to:
 - .1 Suspended T-Bar ceiling
 - .2 Wall or Ceiling.

- .2 Equipment Type:
 - .1 Lighting Controllers
 - .2 Electrical boxes

- .3 Dot requirements:
 - .1 Provide self-adhesive color coded dots 13 mm in diameter.

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