

1.0 **GENERAL**

1.1 **Coordination Requirements**

- .1 UBC Facilities Electrical (Vancouver)
- .2 UBC Energy & Water Services (Vancouver)

1.2 **Description**

- .1 The University owns and operates the power system consisting of 60 KV and 12 KV overhead and underground lines. Two 60 KV lines feed two substations: one located in the South Campus, and one in the Main Campus. The Main Substation supplies a 12 KV indoor and outdoor switching station.
- .2 The 12 KV systems are distributed underground in a combined duct and manhole system which serves throughout Main and South campuses. The 12 KV systems are nominally rated at 12,480 volts, 3 phase Wye System, low resistance grounded. The design limits are Basic Impulse Level 95 KV and Design Fault 300 MVA Symmetrical.
- .3 The power distribution is a Dual Radial System with 500 KCM 15 KV single conductor cable for 12 KV System. For a General Distribution diagram of the 12 KV feeders, refer to Standard Drawing No. E1-1.

2.0 **MATERIAL AND DESIGN REQUIREMENTS**

- .1 All new buildings, UBC Renew projects and any major additions to existing buildings shall be supplied from the 12 KV systems. 12KV main feeds shall NOT be fed as an interconnection from other buildings ("daisy-chaining"). Interconnection might compromise the research in both buildings, should a problem occur.
- .2 Any major renovation adding electrical loads to an existing building that exceeds 300kW must discuss with UBC Energy & Water Services prior to design submission to ensure available system capacity. There are no exceptions.
- .3 Any request for variance, such as where small buildings are concerned, must be reviewed with Building Operations Electrical Technical Support.
- .4 Refer to Standard Drawing No. E1-1 attached as Appendix "A" in regard to the supply feeders into each building.
- .5 Note that a ground of equivalent size (in general a 4/0) shall be installed to each building switch room. This ground conductor shall tie into the existing ground system and also be connected to an accessible ground bus on which all equipment and service grounds are to be terminated. Provisions shall be made for at least two spare connecting points for additional grounding, other than for the Telephone Company, fire alarm, etc.

END OF SECTION