1.0 GENERAL

1.1 Related UBC Guidelines

.1 Divisions 20 to 28

1.2 Coordination Requirements

.1 UBC Building Operations Electrical Technical Support

1.3 Description

.1 UBC Requirements for Wire and Cables (0-1000 V).

2.0 MATERIALS AND DESIGN REQUIREMENTS

.1 Wires shall be copper throughout with R90 XLPE 90°C insulation. Minimum wire size shall be #12 AWG except for control wire. Wires #12 AWG and larger shall be stranded. **#14AWG conductors shall be an acceptable minimum size if no part of the conductor is installed outside of the Student Housing and Hospitality Services residential suite it services.**

.2 Color shall be impregnated in the insulation for wire #8 and smaller, and clearly identified with colored vinyl tape at both ends and at all splices for large wire.

.3 Control wiring shall be clearly identified if AC or DC.

.4 Color coding for motor control wiring shall reflect accepted industry standards, but be sized no smaller than #18.

.5 Wiring installed in underground ducts installed outside of building footprint (i.e. Building Services, Distribution or Lighting) shall be copper, RWU rated, XLPE.

.6 Electrical wiring shall be installed in Rigid PVC, Rigid Metal, or EMT conduit. Use metallic surface raceway equal to wire mold in finished areas for renovation projects. Where deviation from this rule is necessary, a variance shall be obtained in writing from UBC Building Operations Electrical Technical Support before proceeding with the work. The variance shall apply only to the particular installation for which it is given.

.7 An additional conduit matching the largest utilized size, shall be provided for all building power feeds, power sub-feeds, and all electrical systems requiring inter-building connections.

.8 High Voltage conductors run within buildings shall be installed in rigid steel conduit unless encased in no less than 50mm of concrete and clearly marked with embedded brass plate indicating danger, voltage and burial depth.

.9 Armoured cable may only be used for the following:

.1 Drops to individual luminaires and shall have a maximum length of 1.5m (5'). Daisy-chaining of luminaires is not allowed.

.2 Final connection to motors, transformers or vibrating equipment to a maximum length of 3m. Cable shall be run neatly, not secured to heat emitting mechanical systems and secured using mechanical fasteners not cable ties.
.3 Within Student Housing & Hospitality Services residential suites for power and lighting circuits only. No part of the installed Armored Cable shall exit the individual suite. Armored cable shall not be permitted to be used for any other system within residential suites.

***END OF SECTION***