1.0 GENERAL

1.1 Related UBC Guidelines

.1 UBC Campus Plan (Phase 6), Part 3, Section 2.5.2 on page 30.  
UBC Vancouver Campus Plan: Part 3 Design Guidelines

.2 UBC Exterior Lighting Master Plan Part 4 Section 4.1.

1.2 Coordination Requirements

.1 UBC Energy & Water Services

.2 UBC Building Operations Electrical Technical Support

1.3 Description

.1 UBC requirements for Exterior Lighting, Street Lighting and Landscape Lighting.

2.0 MATERIAL AND DESIGN REQUIREMENTS

.1 For each project, exterior lighting must be provided for all roadways, plazas, walks, steps, etc., to a level sufficient to meet safety requirements of all users, but as a minimum to meet IESNA published standards where available. Where public use of the project at night is required, this lighting shall extend beyond the boundaries of the project site to include contiguous access and parking areas.

.2 Lighting design shall incorporate the principles of sustainability and its products and systems shall be energy conserving, long life, have a low cost of ownership and shall be easily and safely accessible for service and maintenance. If special equipment is required for lighting maintenance, then the consultant shall, prior to tender, prepare and submit a Lighting System Maintainability Plan to UBC for review and approval and it shall contain documentation describing the special equipment and a maintenance schedule and spare parts list. Street lighting shall not be dimmable. Light fixtures (where required) shall be mounted on concrete surfaces. Cast in place fixtures shall not be used.

.3 Exterior lighting is supplied with electrical energy from nearby buildings. For each project where existing exterior lighting will be impacted by planned new construction, the new project scope shall include all needed adjustments, removals or relocations to the existing systems to ensure continued operation of existing exterior lighting systems beyond the project boundaries, as well as new exterior lighting for the new project. The scope for remediation of existing lighting systems shall be as per the original design intent. All impacted existing systems shall require coordination with UBC Building Operations Electrical Technical Support. Building Operations Policies and Procedures shall be followed when investigating and/or modifying existing systems.

.4 Lighting equipment shall be vandal proof by use of proper design and sufficient mounting height. Specifically, post top units at low mounting height (below 5m) and bollards shall not be used.

.5 Building highlighting/floodlighting is discouraged.

.6 Landscape (garden-shrub-lawn) type lighting is not acceptable.
.7 Exterior lighting shall be arranged for full automatic operation and shall be controlled by the BMS system.

.8 Where feasible, floodlighting of high quality, low glare design installed on building areas inaccessible to the public can be used.

.9 In all cases, lamps of low energy input-high lumen output with appropriate color rendition shall be used.

.10 For lane and roadways, refer to UBC Campus & Community Planning design guidelines: https://planning.ubc.ca/sites/default/files/2019-12/PLANS_UBC_VCampusPlanPart32014.pdf.

.11 Poles shall be steel and be painted with one coat of primer and 2 coats of paint.

.12 Poles complete with luminaries shall be able to withstand 160 km/h winds.

.13 All conduit systems for street lighting shall be sized for designed conduit fill then increased by 1 trade size. Minimum conduit size shall be 37mm. All conduit and fittings shall be RPVC.

.14 All conductors for street lighting shall be minimum #8AWG RW90XLPE 1000V rated. Control and power conduits shall not share the same conduit system.

.15 Boxes used for street or landscape lighting shall be sized as per the CEC. All boxes shall be of concrete construction, come with galvanized steel covers labeled “ELEC” and incorporate a bonding lug.

.16 No electrical equipment such as transformers, ballasts, starters, drivers, etc. shall be installed in in-ground boxes or any below grade installations.

.17 Exterior lighting shall not be dimmable. DMX, DALI and other lighting control systems shall not be used without an approved variance from Building Operations, Electrical Technical Support.

***END OF SECTION***