

PART 1 - GENERAL

- 1.1 REFERENCES .1 Canada Green Building Council (CaGBC)
.1 LEED Canada-NC-2009, LEED (Leadership in Energy and Environmental Design): Green Building Rating System Reference Package For New Construction and Major Renovations.
- 1.2 ACTION AND INFORMATIONAL SUBMITTALS .1 Submit in accordance with Section 01 33 00 - Submittal Procedures.
.2 Product Data:
.1 Submit manufacturer's instructions, printed product literature and data sheets for lighting control devices and include product characteristics, performance criteria, physical size, finish and limitations.
.3 Submit detailed description of each control system operation.
.4 Sustainable Design Submittals:
.1 LEED Canada Submittals: in accordance with Section 01 35 21 - LEED Requirements.
.2 Construction Waste Management:
.1 Submit project Waste Management Plan highlighting recycling and salvage requirements.
.2 Submit calculations on end-of-project recycling rates, salvage rates, and landfill rates demonstrating that 75% of construction wastes were recycled or salvaged.
- 1.3 DELIVERY, STORAGE AND HANDLING .1 Deliver, store and handle materials in accordance with Section 01 61 00 - Common Product Requirements and with manufacturer's written instructions.
.2 Develop Construction Waste Management Plan related to Work of this Section and in accordance with Section 01 35 21 - LEED Requirements.
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- 1.3 DELIVERY, STORAGE AND HANDLING
(Cont'd)
- .3 Packaging Waste Management: remove for reuse or return of pallets, crates, padding, banding, and packaging materials as specified in Construction Waste Management Plan in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal and Section 01 35 21 - LEED Requirements.

PART 2 - PRODUCTS

- 2.1 LIGHTING CONTROL DEVICES
- .1 Ceiling Occupancy Sensors - basic control: PIR line voltage, 120V, on/off control, 360° coverage, adjustable time delay and sensitivity, designed for LED lighting.
- .2 Ceiling Occupancy Sensors - washrooms: ultrasonic line voltage, 120 V, and low voltage as indicated, on/off control, 360° coverage, adjustable time delay and sensitivity, frequency 40 kHz. Design for LED lighting.
- .3 Wall Vacancy Sensors: line voltage, 120V, deco style with Snap-On plate, PIR sensor lens, manual on/off switch and side dimmer. 0-10V dimming: single or 3-way, trim high and low end, adjustable time delay and sensitivity, minimum 150 W LED rating. Vacancy model.
- .4 Ceiling vacancy sensors: line or low voltage as indicated. 360° coverage, designed for LED lighting.
- .5 Stairwells: integrated within the light fixtures. PIR sensor to dim to 50% when unoccupied. Lights to remain on continuously. Refer to drawing notes.
- .6 Corridors: LV wireless ceiling sensor with 120V power pack 0-10V dimming module, junction box mounted in ceiling space. Dim to 50% when unoccupied. Lights to remain on continuously. Refer to drawing notes.
- .7 Operations Room: LV wireless ceiling vacancy sensor with 120V power pack dimming module for dimming to 1%, junction box mounted in ceiling
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2.1 LIGHTING CONTROL.7
DEVICES
(Cont'd)

Operations Room:(Cont'd)
space. Wireless wall mounted dimmer switch for manual control. Console task lighting and dimming module, for dimming to 1%, junction box mounted in ceiling space. Wireless remote dimmer with on/off switch and slider dimmer. Suitable to attach to any surface. Refer to drawing notes.

- .8 Clean workshop: combination of occupancy sensor, vacancy sensor and individual dimming control. Refer to drawing notes.
- .9 Wall fixtures and pole lights controlled with single building mounted photocell with on-off-auto selector switch to turn lights on or off manually.

2.2 STANDARD OF
ACCEPTANCE

- .1 Lutron.
- .2 Sensor Switch.
- .3 Watt Stopper.

PART 3 - EXECUTION

3.1 INSTALLATION

- .1 Install controls in accordance with manufacturer's written instructions and to CSA C22.1.

3.2 FIELD QUALITY
CONTROL

- .1 Site Tests:
 - .1 Perform tests in accordance with Section 26 05 00 - Common Work Results for Electrical.
 - .2 Actuate control units in presence of Departmental Representative to demonstrate lighting circuits are controlled as designated.
 - .3 Manufacturer's Field Services:
 - .1 Obtain written report from manufacturer verifying compliance of Work, in handling, installing, applying, protecting and cleaning
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- 3.2 FIELD QUALITY CONTROL (Cont'd) .3 Manufacturer's Field Services: (Cont'd)
- .1 (Cont'd)
of product and submit Manufacturer's Field Reports as described in PART 1 - SUBMITTALS.
 - .2 Provide manufacturer's field services consisting of product use recommendations and periodic site visits for inspection of product installation in accordance with manufacturer's instructions.
- 3.3 CLEANING .1 Progress Cleaning: clean in accordance with Section 01 74 11 - Cleaning.
- .1 Leave Work area clean at end of each day.
 - .2 Waste Management: separate waste materials for reuse and recycling in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal and Section 01 35 21 - LEED Requirements.
 - .1 Remove recycling containers and bins from site and dispose of materials at appropriate facility.
- 3.4 PROTECTION .1 Protect installed products and components from damage during construction.
- .2 Repair damage to adjacent materials caused by lighting control devices installation.