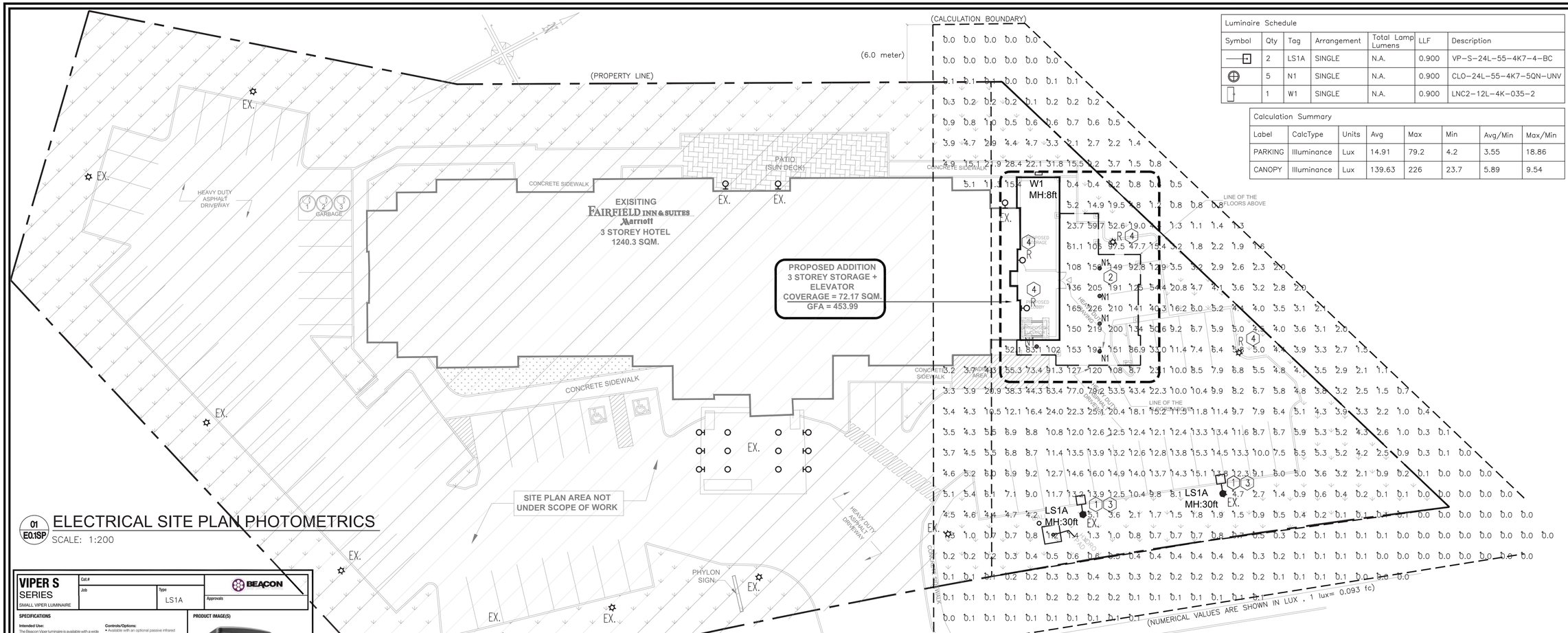


Luminaire Schedule						
Symbol	Qty	Tag	Arrangement	Total Lamp Lumens	LLF	Description
	2	LS1A	SINGLE	N.A.	0.900	VP-S-24L-55-4K7-4-BC
	5	N1	SINGLE	N.A.	0.900	CLO-24L-55-4K7-5QN-UNV
	1	W1	SINGLE	N.A.	0.900	LNC2-12L-4K-035-2

Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
PARKING	Illuminance	Lux	14.91	79.2	4.2	3.55	18.86
CANOPY	Illuminance	Lux	139.63	226	23.7	5.89	9.54

01 E0.1SP
ELECTRICAL SITE PLAN PHOTOMETRICS
SCALE: 1:200

VIPER S SERIES
SMALL VIPER LUMINAIRE

Cat.# | Job | Type: LS1A | Approvals: BEACON

SPECIFICATIONS

Intended Use:
The Beacon Viper luminaire is available with a wide choice of different LED Wattage configurations and optical distributions designed to replace HID lighting up to 400W MH or HPS.

Construction:
- Manufactured with die cast aluminum.
- Coated with a polyester finish that meets ASTM B117 corrosion test requirements and ASTM D522 cracking and loss of adhesion test requirements.
- External hardware is corrosion resistant.
- One piece optical cartridge system consisting of an LED engine, LED lamps, optics, gasket and stainless steel band.
- Cartridge is held together with internal brass standoffs soldered to the board so that it can be field replaced as a one piece optical system.
- Two-piece silicone and micro-cellular polyurethane foam gasket ensures a weather-proof seal around each individual LED.

Electrical:
- 100V through 277V, 50 Hz to 60 Hz (UNV), or 347V or 480V input.
- Power factor is ≥.90 at full load.
- Dimming drivers are standard, but must contact factory to request wiring leads for purpose of external dimming controls.
- Component-to-component wiring within the luminaire may carry no more than 80% of rated load and is certified by UL for use at 600VAC at 90°C or higher.
- Surge protection is provided by UL for use at 6[illegible] VAC, 13A or higher. 10A rating applies to primary (AC) side only.
- Fixture electrical compartment shall contain all LED driver components and shall be provided with a push-button terminal block for AC power connections.
- The housing is designed for an optional twist lock photo control receptacle.
- Ambient operating temperature -40°C to 40°C
- Surge protection - 20kA.
- Optional 7-pin ANSI C136.41-2013 twist-lock photo control receptacle available. Compatible with Beacon BT136-141 external wireless control devices.
- Lifeshield™ Circuit - protects luminaire from excessive temperature. The device shall activate at a specific, factory-preset temperature, and progressively reduce power over a finite temperature range. Operation shall be smooth and undetectable to the eye. Thermal circuit is designed to "fail on", allowing the luminaire to revert to full power in the event of an interruption of its power supply or faulty wiring connection to the drivers. The device shall be able to co-exist with other 0-10V control devices (occupancy sensors, external dimmers, etc.).

Controls/Options:
- Available with an optional passive infrared (PIR) motion sensor capable of detecting motion 360° around the luminaire. When no motion is detected for the specified time, the Motion Response system reduces the wattage to factory preset level, reducing the light level accordingly. When motion is detected by the PIR sensor, the luminaire returns to full wattage and full light output. Please contact Beacon Products if project requirements vary from standard configuration.
- Available with Emergen for optional set wattage, 90 minute battery backup, steady, or timed dimming based on time of night (see www.beaconproducts.com/products/emergen).
- In addition, Viper can be specified with **SiteSync™** wireless control system for reduction in energy and maintenance cost while optimizing light quality 24/7. See ordering information or visit www.hubbelllighting.com/sitesync for more details.

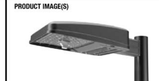
Installation:
- Mounting options for horizontal arm, vertical tenon or traditional arm mounting available. Mounting hardware included.

Finish:
- IFS polyester powder-coat electro-statically applied and thermo-cured.
- IFS finish consists of a five stage pretreatment regimen with a polymer primer sealer and top coated with a thermosetsuper TGIC polyester powder coat finish.
- The finish meets the AAMA 605.2 performance specification which includes passing a 3000 hour salt spray test for corrosion resistance and resists chalking or loss of adhesion per ASTM D522 and resists surface impacts of up to 160 inch-pounds.

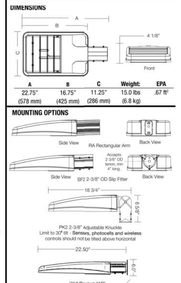
Listings:
- DesignLights Consortium (DLC) qualified, consult DLC website for more details: http://www.designlights.org/QPL
- Certified to UL 1598 and CSA C22.2 No.250.0 IDA approved
- This product is approved by the Florida Fish and Wildlife Conservation Commission. Separate spec available at: http://www.beaconproducts.com/products/aeromat

Warranty:
Five year limited warranty for more information visit: www.hubbelllighting.com/resources/warranty

PRODUCT IMAGE(S)



DIMENSIONS



CERTIFICATIONS/LISTINGS

ORDERING INFORMATION ORDERING EXAMPLE: VPS/36NB-80/SK/T4/UNV/PEC/SWP/BLC/RA/BBT

VPS

SERIES	ENGINE-WATTS	LED COLOR*	VOLTAGE	ELECTRICAL OPTIONS	HOUSE SIDE SHIELD OPTIONS	FINISH
VPS viper-small	24NB-55 50W LED array 36NB-70* 70W LED array 36NB-80 80W LED array 48NB-110 110W LED array 60NB-136 130W LED array	3K 3000K 4K 4000K 5K 5000K	UNV 120-277V 347V 347V 480V 480V	7PIN** 7-PIN Receptacle only 7PR-TL 7-PIN Receptacle with Factory Cap 7PR-SC 7-PIN Receptacle w/ Shorting Cap PEC photocell, button 2PIN* dual power feed	BLC backlight control	BBT basic black textured BMT black matte textured WHT white textured MBT metallic bronze textured BZT bronze textured DBT dark bronze textured GYS gray smooth DPS dark platinum smooth GNT green textured MST metallic silver textured MTT metallic titanium textured ORI old world iron RAL

OPTICS
T1 Type I
T2 Type II
T3 Type III
T4 Type IV
TSR type V, rectangular
TSQM type V, square medium
TSW type V, round wide
FR front row auto optic

BIRD DETERRENT
BSP bird spike

MOUNTING OPTIONS
RA rectangular arm for round or square pole mount. RPA included.
SF2 2 3/8" OD slip-fitter
PK2 2 3/8" adjustable knuckle
wall bracket (use with SF2 or PK2), SF2 standard

CONTROL OPTIONS
GEN-XX* Emergen
SWP1,5 SiteSync Wireless Pre-Commission w/ Motion Detection
SWP4,5 SiteSync Wireless Pre-Commission w/ Motion Detection
MDD1,5 Motion Dimming Detector

HOUSE SIDE SHIELD ACCESSORIES
HSS/VP-S/90-FB/XXX 90° shield front or back
HSS/VP-S/90-LR/XXX 90° shield left or right

CEILEO SERIES
CEILING/GARAGE

Cat.# | Job | Type: N1 | Approvals: BEACON

SPECIFICATIONS

Intended Use:
Ceileo is a commercial grade LED outdoor and indoor ceiling downlight that utilizes high powered LEDs with precise and efficient optical control and on board wattage and lumen choices. Ceileo is designed to replace up to 250W metal halide HID lamps with 55 watts and reduce maintenance by delivering over 200,000 hours of projected life.

Construction:
- Cast aluminum external housing and recessed driver housing
- Cast aluminum housing provides direct heat exchange between the LED light engine and the cool outdoor air

LED/Optics:
- Optical one piece cartridge system consisting of an LED engine, LED lamps, optics, gasket and stainless steel band.
- Die cut foam silicone gasket ensures a weather-proof seal around each individual LED
- Ceileo uses a 24-LED engine that can be field adjusted to four wattages (55, 45, 30,15 watts) and four lumen outputs by a four position rotary dial on the PCB. The product shall also maintain the 70%, 75%, and 80% CRI and offer dimming level to approximately 10%, 50%, 75% and 100% of current. Dimming switch shall be accessible by removing a sealing screw from the lens. Following removal of screw, switch may be rotated with a small screwdriver. A metal insert shall be provided in lens to accept the access screw.
- Ceileo comes standard with 0-10 OV dimming capability, with flicker-free dimming to 10%.
- Independent institute thermal testing shall confirm solder point temperatures not to exceed 55°C and driver case temperatures not to exceed 60°C at 55-watts input power.
- At 30-watts input power solder point and driver temperature shall not exceed 40-C and driver case temperatures not to exceed 50°C.

Electrical:
- 100V through 277V, 50 Hz to 60 Hz (UNV).
- Power factor is ≥.90 at full load.
- Dimming drivers are standard. Must contact factory to request wiring leads for purpose of external dimming controls.
- Component-to-component wiring within the luminaire may carry no more than 80% of rated load and is certified by UL for use at 600VAC at 90°C or higher.
- Surge protection - 20kA.
- Luminaires are equipped with an LED driver that accepts 100V through 277V, 50 Hz to 60 Hz (UNV).

Options:
- Available in 6" Round and Square versions.
- Kits to co-exist with other 0-10V current-sinking control devices (occupancy sensors, external dimmers, etc.).
- Driver and wiring compartments comprise min. 20 gauge corrosion protected steel platform utilizing a J-box with snap-on cover for easy access.
- LED cast housing is designed to easily be removed for access and replacement.

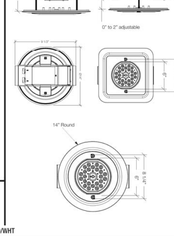
Finish:
- IFS polyester powder-coat electrostatically applied and thermocured.
- IFS finish consists of a five stage iron phosphate chemical pretreatment regimen with a polymer primer sealer, oven dry off, and top coated with a thermoset super TGIC polyester powder coat finish.
- The finish meets the AAMA 2604 performance specification which includes passing a 3000 hour salt spray test for corrosion resistance and resists cracking or loss of adhesion per ASTM D522 and resists surface impacts of up to 160 inch-pounds.

Listings:
The luminaire shall be NRTL certified to UL 1598 and 8750 standards for use in wet locations.

Warranty:
Five year limited warranty for more information visit: http://www.hubbelllighting.com/resources/warranty

PRODUCT IMAGE(S)

DIMENSIONS



CERTIFICATIONS/LISTINGS

UL 1598

ORDERING INFORMATION ORDERING EXAMPLE: CLO/24L-55/SK7/SW/UNV/RD/WHT

CLO | 24L-55

SERIES	ENGINE-WATTS	LED COLOR	OPTICS	VOLTAGE	STYLE OPTIONS	COLOR
CLO Ceileo	24L-55 50 Watts - LED array	3K7 3000K 4K7 4000K 5K7 5000K	SXS wide lighter SR type V, rectangular SQM type V, square medium SQN type V, square narrow SW type V, round wide DXS vertical feed DF Diffused lens	UNV 120-277V	RD Round SQ Square	BL Black Textured DB Dark Bronze Textured GYS Light Gray Smooth PS Platinum Silver Smooth WH White Textured CC Custom Color

LNC2 SERIES

Cat.# | Job | Type: W1 | Approvals: HUBBELL Outdoor Lighting

SPECIFICATIONS

The tri-mast sided LNC2 is designed for perimeter illumination for safety, security and identification. No uplight and minimal trespass offer neighbor friendly lighting at typical mounting heights of 8-15'. Units have protective polyester finish for long lasting appearance. Ideal for schools, factories, hospitals, warehouses and retail applications. Energy efficient LEDs provide up to 85% energy savings when compared to traditional light sources with little to no maintenance.

Construction:
Rugged die-cast aluminum housing protects components and provides an architectural appearance. Casting thermally conducts LED heat to optimize performance and long life. Powder paint finish provides durability in outdoor environments.

Electrical:
- 120V-277V universal voltage 50/60Hz 0-10V dimming drivers
- 347V and 480V dimmable driver option in 12L, 070 configuration
- Minimum operating temperature is -40°C/-40°F (excludes 12L-055 and P1S configurations)
- Drivers have greater than .90 power factor and less than 20% Total Harmonic Distortion
- Driver RoHS and IP66
- 10kA surge protector

LEDs:CCT:
- 3000K CCT nominal , 4000K CCT nominal, 5000K CCT nominal (70 CRI)
- 9, 12 and 18 LED configurations available see pages 2 and 3 for electrical and photometric details

Optical:
Zero uplight distributions using individual acrylic LED optics provide IES type I, II and V distributions. Optional (DS) acrylic diffuser available for reduced glare. Prismatic refractor lens provides ~10% uplight for increased vertical FC and forward-light projection ideal for security lighting.

Lumen Maintenance:
L96 at 60,000hrs (Projected per IESNA TM-21-11), see table on page 2 for all values

Installation:
Quick-mount adapter provides easy installation to wall or to recessed junction boxes (4" square junction box). Designed for direct j-box mount. Optional 1/2" conduit hubs available (standard for sensor, SiteSync and battery versions).

Options/Controls:
- Universal button photocontrol
- Occupancy sensor options available for complete on/off and dimming control
- SiteSync pre-commissioned wireless controls (with or without sensor)
- Integral Battery Backup provides emergency lighting for the required 90 minute path of egress
- Dual Driver and Dual Power Feed option for 1B, 070 versions

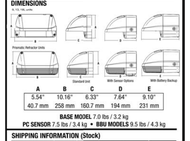
Listings:
- Listed to UL1598 and CSAC22.2#250.0-24 for wet locations
- DesignLights Consortium® (DLC) qualified. Please refer to the DLC website for specific product qualifications at www.designlights.org

Warranty:
Five year limited warranty (for more information visit: https://www.hubbelllighting/pim/warranty

PRODUCT IMAGE(S)

*Shown with CS acrylic diffuser

DIMENSIONS



BASE MODEL 7.0 lbs / 3.2 kg
PC SENSOR 7.5 lbs / 3.4 kg • BBU MODELS 9.5 lbs / 4.3 kg

SHIPPING INFORMATION (Stock)

Catalog Number	IL/Ft/Apr CFB	Carton Dimensions			Carton Qty per Pallet	Carton Qty per Truck Load
		Length (Inch [cm])	Width (Inch [cm])	Height (Inch [cm])		
LNC2-12L0	14.3 (6.5)	14.5 (37)	11.4 (29)	6.4 (21.5)	2	
LNC2-18L0	14.8 (6.7)	14.9 (38)	11.4 (29)	6.4 (21.5)	2	

CERTIFICATIONS/LISTINGS

ORDERING INFORMATION ORDERING EXAMPLE: LNC2-12L-4K-070-3-1-DB-PGU-EH-CS

LNC2 - - - - - - - - - - -

SERIES	LED SELECTION	CCT/CRI	DRIVE CURRENT	VOLTAGE	MOUNTING	CONTROL OPTIONS	OPTIONS
LNC2 Small LitePak LNC2	9L 9 LEDs 12L 12 LEDs 18L 18 LEDs	3K 3000K, 70 CRI 4K 4000K, 70 CRI 5K 5000K, 70 CRI AM Amber (530nm only)	070 700mA 035 350mA (12L & 18L only) RES DISTRIBUTION 2* IES Type II 3* IES Type III 4* IES Type IV FT Forward Throw (Prismatic Refractor only)	U 120V-277V 1 120V 2 208V 3 240V 4 277V 5* 480V P* 347V	Leave Blank for down position NV* Inverted FINISH DB Dark Bronze Textured BL Black Textured GYS Gray Smooth PS Platinum Silver Smooth WH White Textured CC Custom Color	SCP** Occupancy Sensor Programmable (Dim) PCU Universal Button Photocontrol SWP** SiteSync Pre-commission w/ OCC Sensor SWPM SiteSync Pre-commission w/ OCC Sensor SPECIFY SCP HEIGHT SF Up to 8ft mount height 20F Up to 20ft mount height	EMT Battery Backup Unit with Heater (-30°C) E* Battery Backup Unit (0°C) F* Fuse & Fuse-holder (not available with Battery Backup) CS Comfort Shield (N/A with Prismatic Refractor) 20M Dual Driver (18L - 700mA only) 2PF Dual Power Feed (18L - 700mA only) CM Surface Conduit Hubs

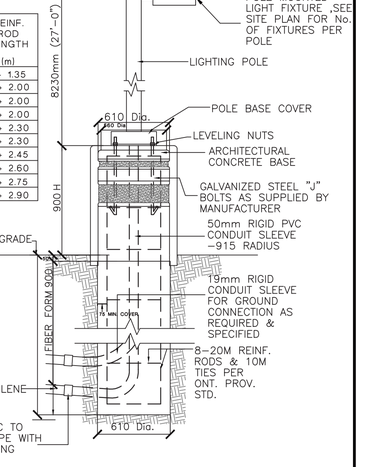
1. IES distributions only available with 9L, 12L, and 18L versions
2. Must specify voltage (120V-277V) when ordering with Forward Throw or prismatic refractor options
3. Must specify voltage (120 or 277 only) for 1 & 5 only
4. Must order minimum of one remote control to program dimming settings. 0-10V fully adjustable dimming
5. Not available with Battery Backup (EMT, E*, F*) or Amber (AM) lighting (3000K or 5K only)
6. PCU option not available included in control
7. 18L - 700mA versions only. Not available with 20M or 2PF options. Must specify group and zone information at time of order
8. Must specify 20F option when ordering Surface Conduit and mounting height
9. 12L - 700mA version only

GENERAL NOTES:
LIGHTING TO BE PROVIDED IN ACCORDANCE WITH STANDARD GUIDELINES & CODES WITH RESPECT TO PUBLIC SAFETY. SITE LIGHTING IS TO LIGHT THE GROUND DIRECTLY TO AVOID LIGHT POLLUTION.

ABBREVIATIONS
LS – LIGHT STANDARD
MH – MOUNTING HEIGHT (FEET)
EX – EXISTING LIGHT STANDARD
R – EXISTING LIGHT TO BE REMOVED

KEY NOTES:
1. NEW EXTERIOR LIGHT HEAD ON EXISTING 27' POLE WITH 3' CONCRETE BASE.(TYPICAL)
2. (N1)NEW SOFFIT LIGHTS (SURFACE OR RECESSED, PER ARCHITECT'S SELECTION).
3. LIGHT STANDARD INCLUDES BACK LIGHT CONTROL TO AVOID LIGHT SPILLAGE.
4. EXISTING LIGHT TO BE REMOVED.

POLE LENGTH (m)	BASE BURIAL DEPTH D (m)	REINF. ROD LENGTH (m)
3.0	1.50	H + 1.35
5.6	2.15	H + 2.00
7.0	2.15	H + 2.00
7.5	2.15	H + 2.00
8.7	2.45	H + 2.30
9.0	2.45	H + 2.30
10.5	2.60	H + 2.45
12.0	2.75	H + 2.60
13.6	2.90	H + 2.75
15.1	3.05	H + 2.90



NOTES:
* MINIMUM OF TWO SLEEVES REQUIRED FOR EACH CONC. FOUNDATION UNLESS OTHERWISE SHOWN.
* CONTRACTOR TO VERIFY OPENING SIZE IN POLE BASE PLATE PRIOR TO SETTING CONDUIT SLEEVES.

www.ArtFORMSConcreteBases.com

TYPICAL LIGHT POLE LIGHTING BASE DETAIL
N.T.S.

ISSUES and REVISIONS

ISSUE	DATE	DESCRIPTION
A	AUG. 19, 2019	ISSUED FOR SPA

DRAWINGS ARE NOT TO BE SCALED. USE ONLY DRAWINGS MARKED "ISSUED FOR CONSTRUCTION". CONTRACTOR TO CHECK AND VERIFY ALL DIMENSIONS AND CONDITIONS ON SITE AND REPORT ANY DISCREPANCIES TO THE CONSULTANT BEFORE PROCEEDING WITH THE WORK. THIS DRAWING IS THE COPYRIGHT PROPERTY OF THE CONSULTANT AND MUST BE RETURNED UPON REQUEST.

NORTH
PROJECT NORTH
TRUE NORTH

SEAL
LICENSED PROFESSIONAL ENGINEER
F. AHMED
100052751
AUG.19,2019
PROVINCE OF ONTARIO

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DESIGNED	DRAWN	APPROVED
F.A	K.S.	F.A.

SCALE: 1:200
DATE: JULY 2019

PROJ.
PROPOSED ADDITION TO FAIRFIELD INN & SUITES (MARRIOTT)
261 ESSA ROAD, BARRIE , ON.

DWG.
ELECTRICAL SITE PLAN PHOTOMETRIC DATA

CAD FILE: 19-031E0.1SP
PROJ No.: 19-031
DWG No.: **E0.1SP A**