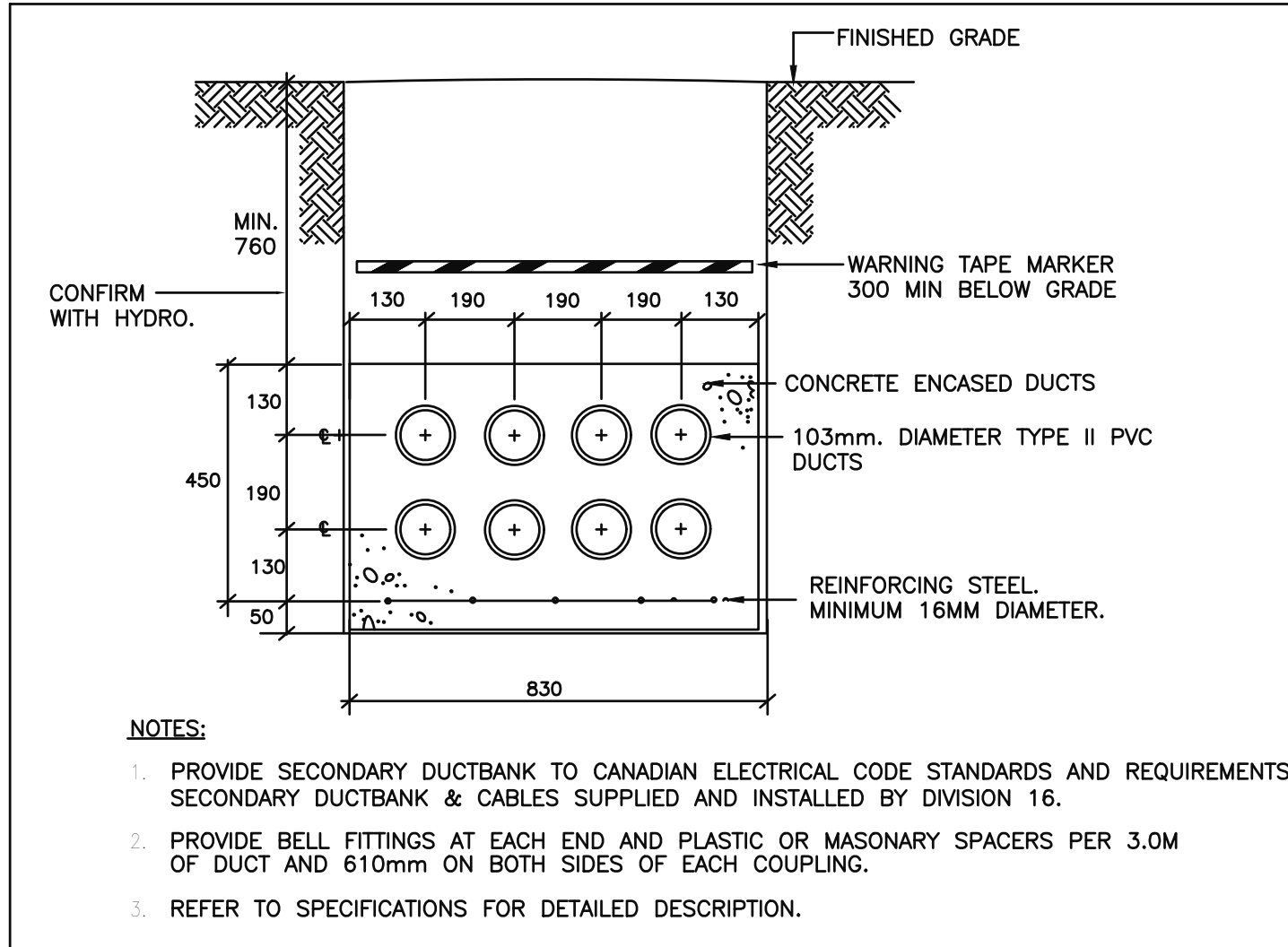
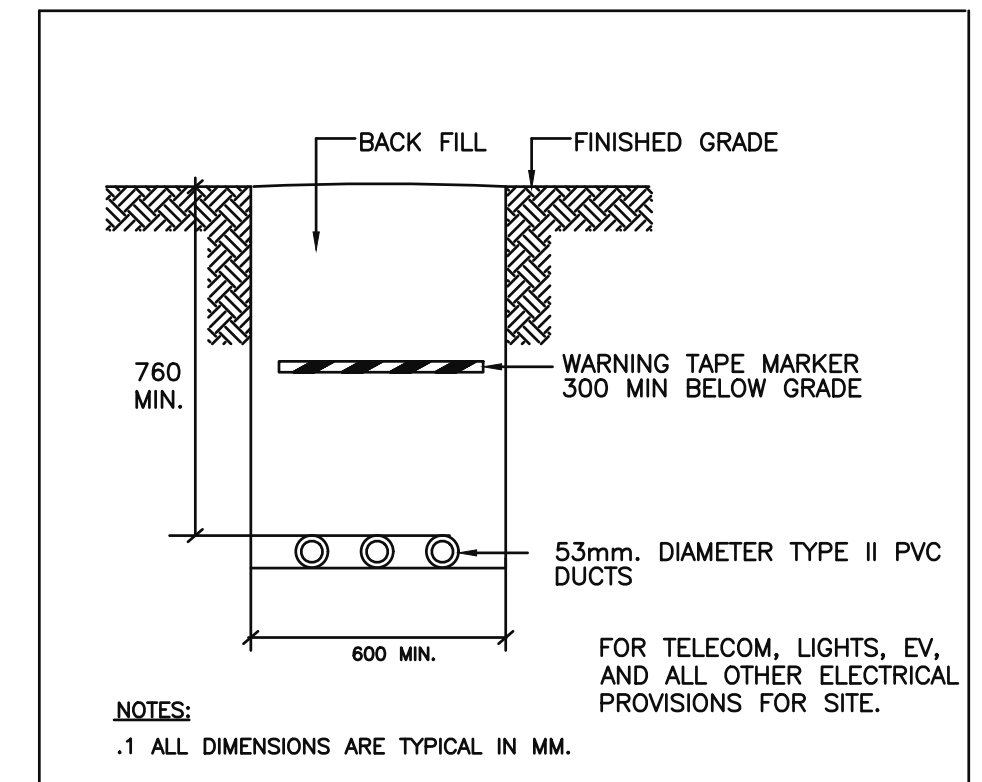


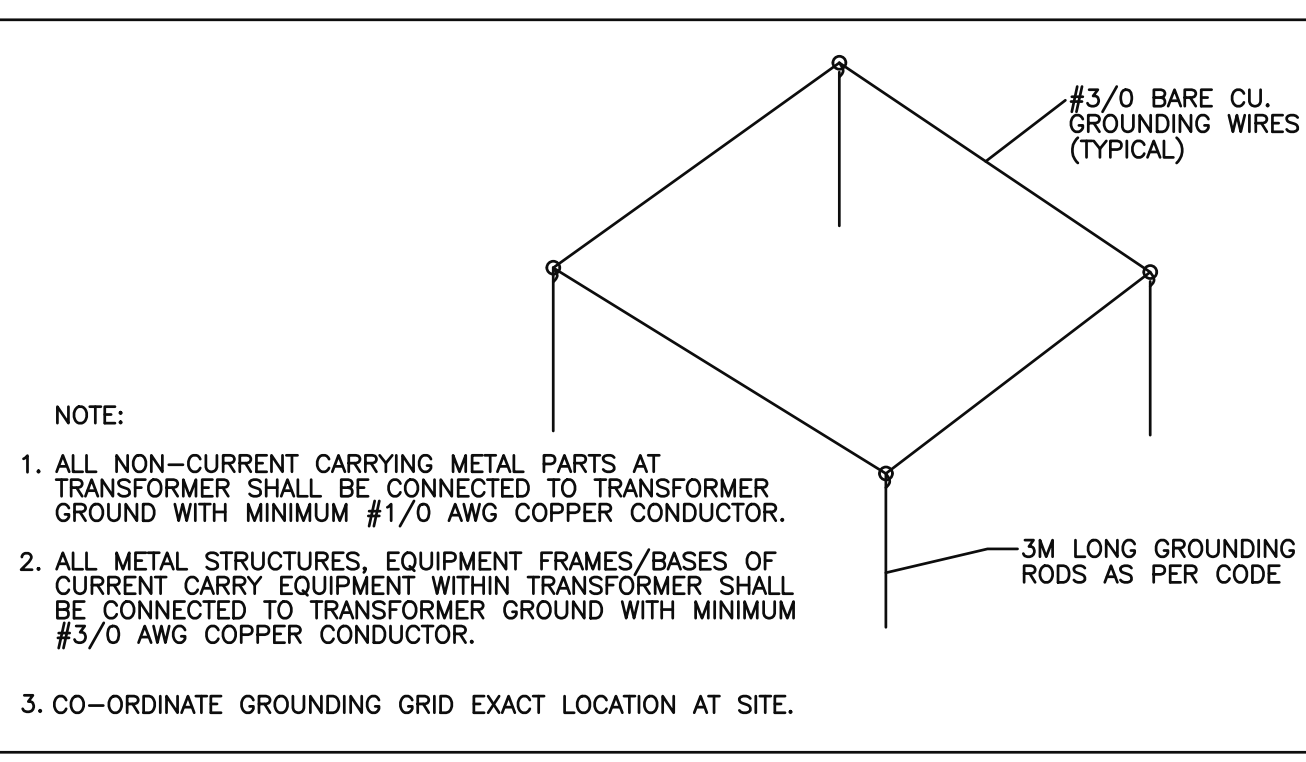
1 SITE PLAN - ELECTRICAL LAYOUT
E101 SCALE: 1:200



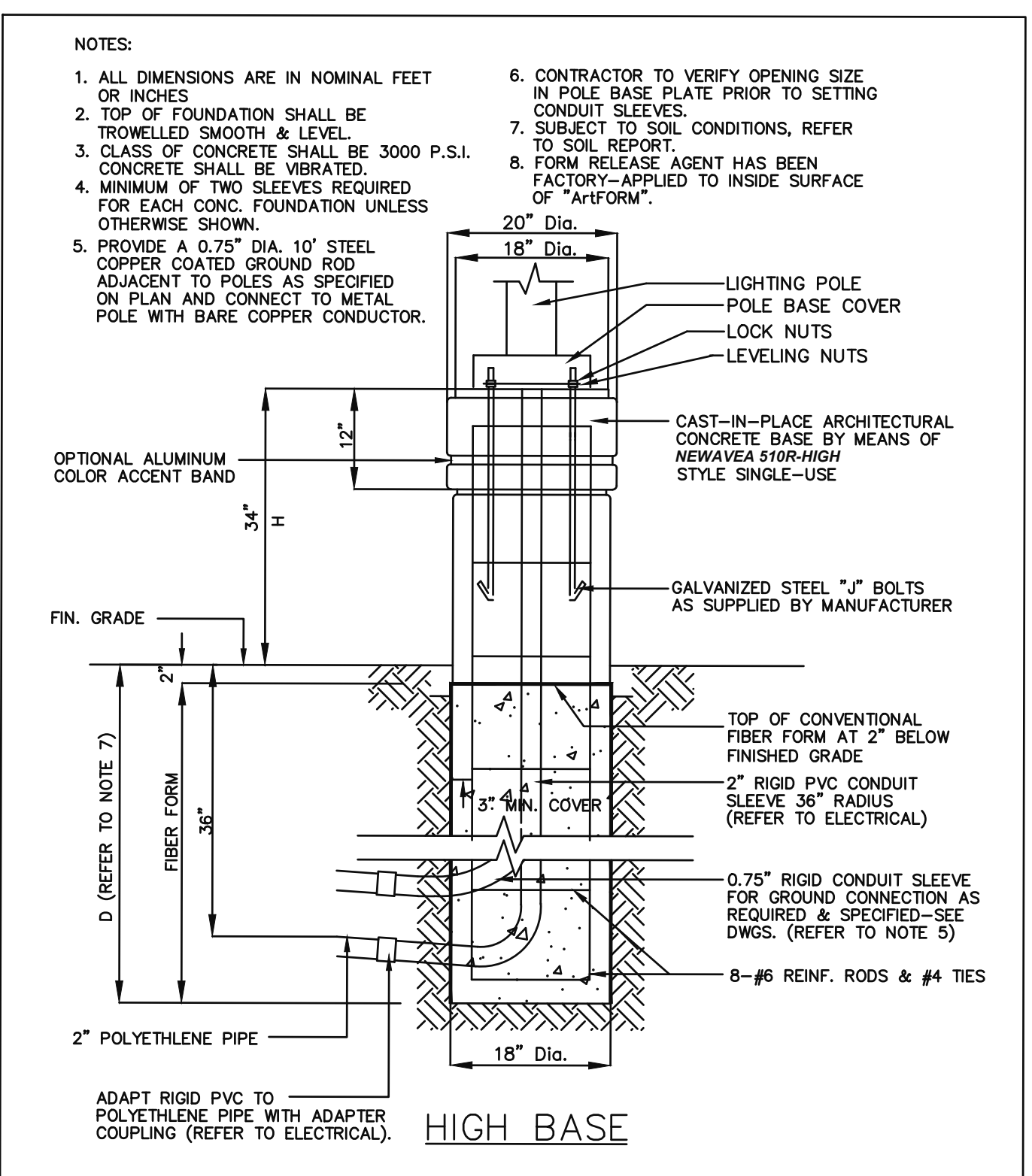
2 PRIMARY/SECONDARY DUCTBANK DETAIL
E101 N.T.S.



3 DIRECT BURIED CONDUIT DETAIL
E101 N.T.S.



4 TRANSFORMER GROUNDING DETAIL
E101 N.T.S.



5 LIGHTING STANDARD BASE DETAIL
E101 N.T.S.

- DRAWING NOTES:**
- ◇ RUN MINIMUM #8 AWG WIRING AND TYPE II PVC CONDUITS FOR ALL EXTERIOR LIGHTING POLE, BOLLARDS, WALL PACKS, AND FLAG POLE LIGHTING TO ENSURE NO VOLTAGE DROP EXCEEDS 2.5%.
 - ◇ SUN COUNTRY HIGHWAY MODEL EV40. 40A-2P, LEVEL II EV CHARGER FROM SUNCOUNTRY
 - ◇ DETAILS ON THIS DRAWINGS ARE FOR INFORMATIONAL PURPOSES ONLY. ALL TRANSFORMER INSTALLATIONS, DUCTING, AND PERTAINING DEVICES TO BE INSTALLED AS PER HYDRO STANDARDS AND DETAILS. CONTRACTOR TO COORDINATE CLOSELY WITH HYDRO REPRESENTATIVE THROUGHOUT ALL INSTALLATIONS
 - ◇ RESERVED
 - ◇ PROVIDE 4 (FOUR) PROTECTIVE BOLLARDS FOR TRANSFORMER (TYPICAL FOR ALL).
 - ◇ PADMOUNT TRANSFORMER BY HYDRO. SEE HYDRO REQUIREMENTS AND DETAILS.
 - ◇ FOUNDATION, PAD, BOLLARDS AND GROUNDING BY ELECTRICAL CONTRACTOR PER HYDRO STANDARDS. SEE HYDRO REQUIREMENTS AND DETAILS.
 - ◇ RESERVED
 - ◇ RESERVED
 - ◇ ALL PRIMARY DUCTBANK INSTALLATION TO BE AS PER HYDRO STANDARDS. CABLES SUPPLIED BY HYDRO. INSTALLED BY CONTRACTOR. CONTRACTOR TO BE IN CONSTANT COORDINATION WITH HYDRO REPRESENTATIVE THROUGHOUT ALL INSTALLATIONS. 4 DUCT ARRANGEMENT PER HYDRO STANDARDS IS TO BE INSTALLED.

No.	Date:	Issue/Revision
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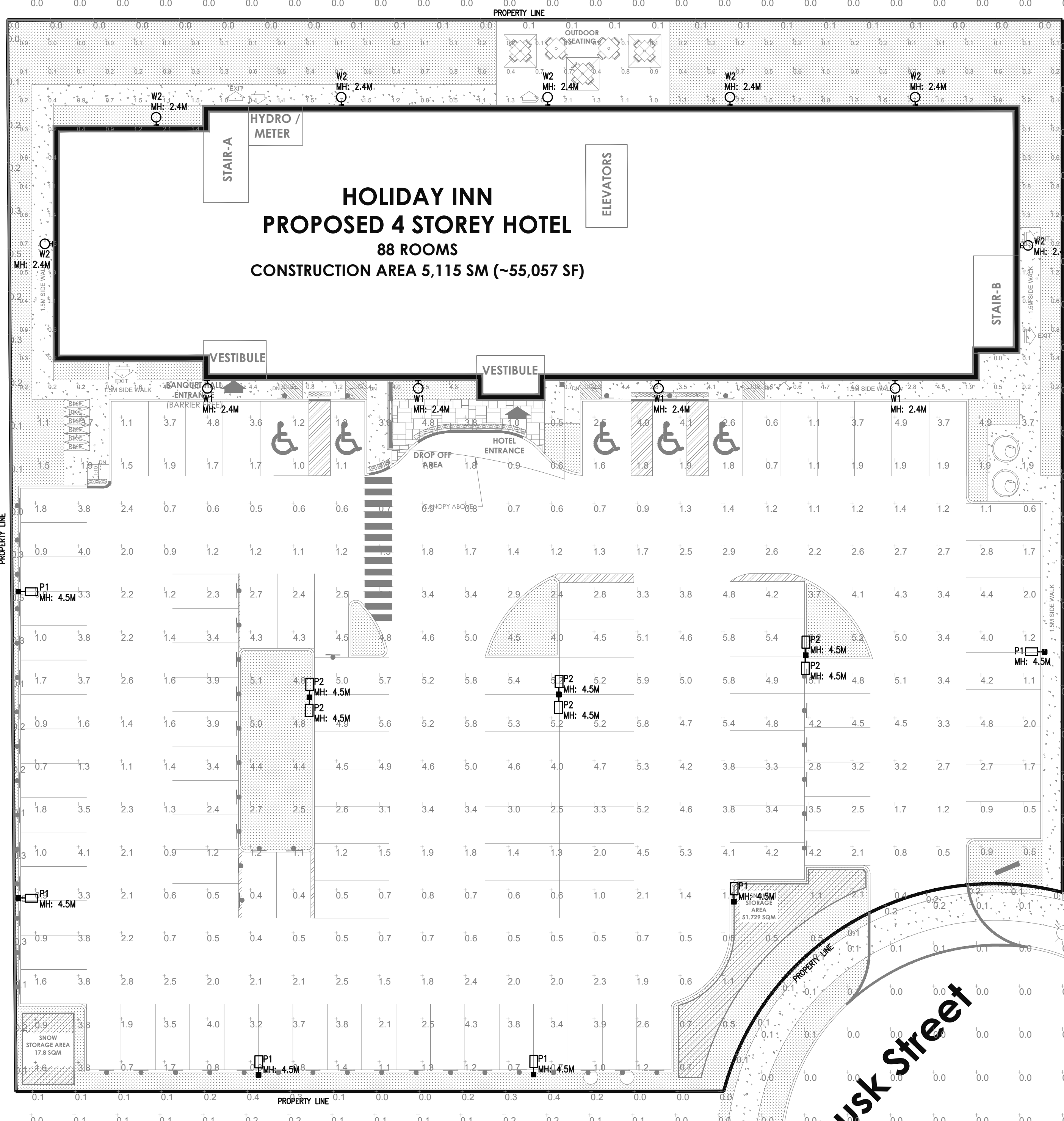
Project:
HOLIDAY INN OTTAWA
140 LUSK ST., OTTAWA, ON

Sheet Title:
SITE PLAN - ELECTRICAL LAYOUT

Design By: N.P.	Drawn By: N.P.	Approved By: G.S.
Scale: AS SHOWN	Date:	Project No.: 138-22

Drawing No.:
E101 of:
ELECTRICAL

O'Keefe Ct



**HOLIDAY INN
PROPOSED 4 STOREY HOTEL**
88 ROOMS
CONSTRUCTION AREA 5,115 SM (~55,057 SF)

1 SITE PLAN - PHOTOMETRICS
E102 SCALE: 1:200

Symbol	Qty	Label	Arrangement	Description	LLF	BUG Rating	Luminaire Lumens	Luminaire Watts
W2	7	W2	Single	LNC-5LU-3K-2	0.850	B0-U0-G1	884	12.9
P2	3	P2	Back-Back	VP-1-160L-75-4K7-4W	0.850	B2-U0-G2	10267	72.1
W1	4	W1	Single	RWL-1-48L-25-3K7-4W-U	0.850	B1-U0-G1	3538	28
P1	6	P1	Single	VP-1-160L-75-3K7-4W-BC	0.850	B0-U0-G1	5215	72.1

Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
BLDG PERIMETER	Illuminance	Fc	0.95	4.5	0.0	N.A.	N.A.
PARKING	Illuminance	Fc	2.58	5.9	0.4	6.45	14.75
PROPERTY LINE	Illuminance	Fc	0.15	0.6	0.0	N.A.	N.A.
SPILL LIGHT	Illuminance	Fc	0.00	0.2	0.0	N.A.	N.A.

TYPES P1 & P2

BEACON
VIBER Area/Site
VIBER LUMINAIRE

FEATURES

- Low profile LED area/site luminaire with a variety of ES distributions for lighting applications such as auto dealership, retail, commercial, and campus parking lots
- Featuring two different optical technologies, Strike and Micro Strike Optics, which provide the best distribution patterns for retrofit or new construction
- Rated for high vibration applications including bridges and overpasses. All sizes are rated for ISO
- Control options including photo control, occupancy sensing, NX Distributed Intelligence™, wISCAPE and 7-pin with networked controls
- New customizable luminaire output feature allows for the wattage and lumen output to be customized in the factory to meet whatever specification requirements may exist
- Field interchangeable mounting provides additional flexibility after the fixture has shipped

CONTROL TECHNOLOGY
NX DISTRIBUTED INTELLIGENCE™ wISCAPE

SPECIFICATIONS

CONSTRUCTION

- Die-cast housing with hidden vertical heat fins are optimal for heat dissipation while keeping a clean smooth outer surface
- Corrosion resistant, die-cast aluminum housing with 1000 hour powder coat paint finish
- External hardware is corrosion resistant

ELECTRICAL

- Universal 120-277VAC or 347-480VAC input voltage, 50/60 Hz
- Ambient operating temperature: -40°C to 40°C
- Drivers have greater than 90% power factor and less than 20% THD
- LED drivers have output power over-voltage, over-current protection and short circuit protection with auto recovery
- Field replaceable surge protection device provides 20kA protection meeting ANSI/IEEE C82.41.2 Category C High and Surge Location Category C3. Automatically takes Optics so both solutions can be combined on the same application. Catalog logic found on page 2

OPTICS

- Micro Strike Optics (660, 320, 480, or 720 LED counts) maintains uniformity in applications and come standard with micro-power LEDs which evenly illuminate the entire luminous surface area to provide a low glare appearance. Catalog logic found on page 2
- Strike Optics (36, 72, 108, or 162 LED counts) provide best in class distributions and maximum pole spacing in new applications with high powered LEDs
- Field replaceable surge protection device to meet the appearance of the construction site
- Optics so both solutions can be combined on the same application. Catalog logic found on page 2

INSTALLATION (CONTINUED)

- Knuckle arm fixture option available for 3-3/8" OD lumen
- For products with EDI less than 10mm to a pole greater than 20k, a vibration damper is recommended

CONTROLS (CONTINUED)

- 7-pin ANSI C136-41-2013 photocontrol (reciprocable option available for wet lock, photocontrols or wireless control modules (control accessories sold separately))
- 7-pin ANSI C136-41-2013 photocontrol (reciprocable option available for wet lock, photocontrols or wireless control modules (control accessories sold separately))
- 7-pin ANSI C136-41-2013 photocontrol (reciprocable option available for wet lock, photocontrols or wireless control modules (control accessories sold separately))

KEY DATA

Lumen Range	5,000-80,000
Wattage Range	36-600
Efficacy Range (LPW)	92-155
Weight lbs. (kg)	13.7-30.9 (6.2-15.9)

MICROSTRIKE STRIKE

FEATURES

- Low profile LED area/site luminaire with a variety of ES distributions for lighting applications such as auto dealership, retail, commercial, and campus parking lots
- Featuring two different optical technologies, Strike and Micro Strike Optics, which provide the best distribution patterns for retrofit or new construction
- Rated for high vibration applications including bridges and overpasses. All sizes are rated for ISO
- Control options including photo control, occupancy sensing, NX Distributed Intelligence™, wISCAPE and 7-pin with networked controls
- New customizable luminaire output feature allows for the wattage and lumen output to be customized in the factory to meet whatever specification requirements may exist
- Field interchangeable mounting provides additional flexibility after the fixture has shipped

CONTROL TECHNOLOGY
NX DISTRIBUTED INTELLIGENCE™ wISCAPE

SPECIFICATIONS

CONSTRUCTION

- Die-cast housing with hidden vertical heat fins are optimal for heat dissipation while keeping a clean smooth outer surface
- Corrosion resistant, die-cast aluminum housing with 1000 hour powder coat paint finish
- External hardware is corrosion resistant

ELECTRICAL

- Universal 120-277VAC or 347-480VAC input voltage, 50/60 Hz
- Ambient operating temperature: -40°C to 40°C
- Drivers have greater than 90% power factor and less than 20% THD
- LED drivers have output power over-voltage, over-current protection and short circuit protection with auto recovery
- Field replaceable surge protection device provides 20kA protection meeting ANSI/IEEE C82.41.2 Category C High and Surge Location Category C3. Automatically takes Optics so both solutions can be combined on the same application. Catalog logic found on page 2

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TYPE W1

TYPE W2

HUBBELL Outdoor Lighting

RATIO Wall
RWL1RW2 LED WALLPACK

FEATURES

- Low profile LED wall luminaire with a variety of ES distributions for lighting applications such as retail, commercial and industrial building mounting
- Featuring Micro Strike Optics which maximizes target zone illumination with minimal losses at the house-side, reducing light trespass issues
- Visual comfort standard
- Control options including photo control, occupancy sensing, NX Distributed Intelligence™, wISCAPE and 7-pin with networked controls
- Battery Backup options available for emergency code compliance
- Quick-mount adapter allows easy installation/maintenance
- 347V and 480V versions for industrial applications and Canexa
- Stock versions available in 3500m and 5500m configurations at 4000K

ELECTRICAL

- 120-277V, 50/60 Hz Type II and Type IV lenses provide wide lateral spread
- 0-10V dimming 120-277V only
- LNC-L - 5 LEDs, 12.9w, 11 amp max, 980 lumens, Type II or IV
- LNC-L - 5 LEDs, 16.0w, 14 amp max, 1441 lumens, Type II or IV
- LNC-L - 5 LEDs, 20w, 18 amp max, 1806 lumens, Type II or IV
- 3000K, 4000K, 4000K - 70 CRI, and 5000K - 87 CRI, CCT optional
- Minimum operating temperature is -40°C/-40°F
- Drivers have greater than 90% power factor and less than 20% Total Harmonic Distortion

CONTROLS (CONTINUED)

- Quick-mount adapter provides easy installation/maintenance
- Quick-mount adapter provides easy installation/maintenance
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KEY DATA

Lumen Range	1300-8,300
Wattage Range	10-55
Efficacy Range (LPW)	119-148
Fixture Projected Life (Hours)	170-600
Weight lbs. (kg)	6.5/16.5 (2.9/7.5)

HUBBELL Outdoor Lighting

LNC SERIES

SPECIFICATIONS

Intended Use

Low profile LED LNC is designed for emergency-illuminance for safety, security and identify. Ideal mounting height is up to 12 feet with 40ft fixture spacing (without acrylic diffuser) and 30ft spacing with acrylic diffuser installed. Precontrol option is available to provide dusk-to-dawn control for additional energy savings.

Construction:

Decorative die-cast aluminum housing and door. Design products internal components and provides excellent thermal management for long life - 60,000 hour minimum LED life at UL8 rating per IESNA TM-21-11. Powder paint finishes provide lasting appearance in outdoor environments.

ES Progress Award Winner - 2012

Optics/Electrical:

Drivers are 120-277V, 50/60 Hz Type II and Type IV lenses provide wide lateral spread. 0-10V dimming 120-277V only

- LNC-L - 5 LEDs, 12.9w, 11 amp max, 980 lumens, Type II or IV
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CONTROLS (CONTINUED)

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CONTROLS (CONTINUED)

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Project:
HOLIDAY INN OTTAWA

140 LUSK ST., OTTAWA, ON

Sheet Title:
SITE PLAN - PHOTOMETRICS

Design By: N.P. Drawn By: N.P. Approved By: G.S.

Scale: AS SHOWN Date: Project No.: 138-22

Drawing No.: **E102** OF:
ELECTRICAL