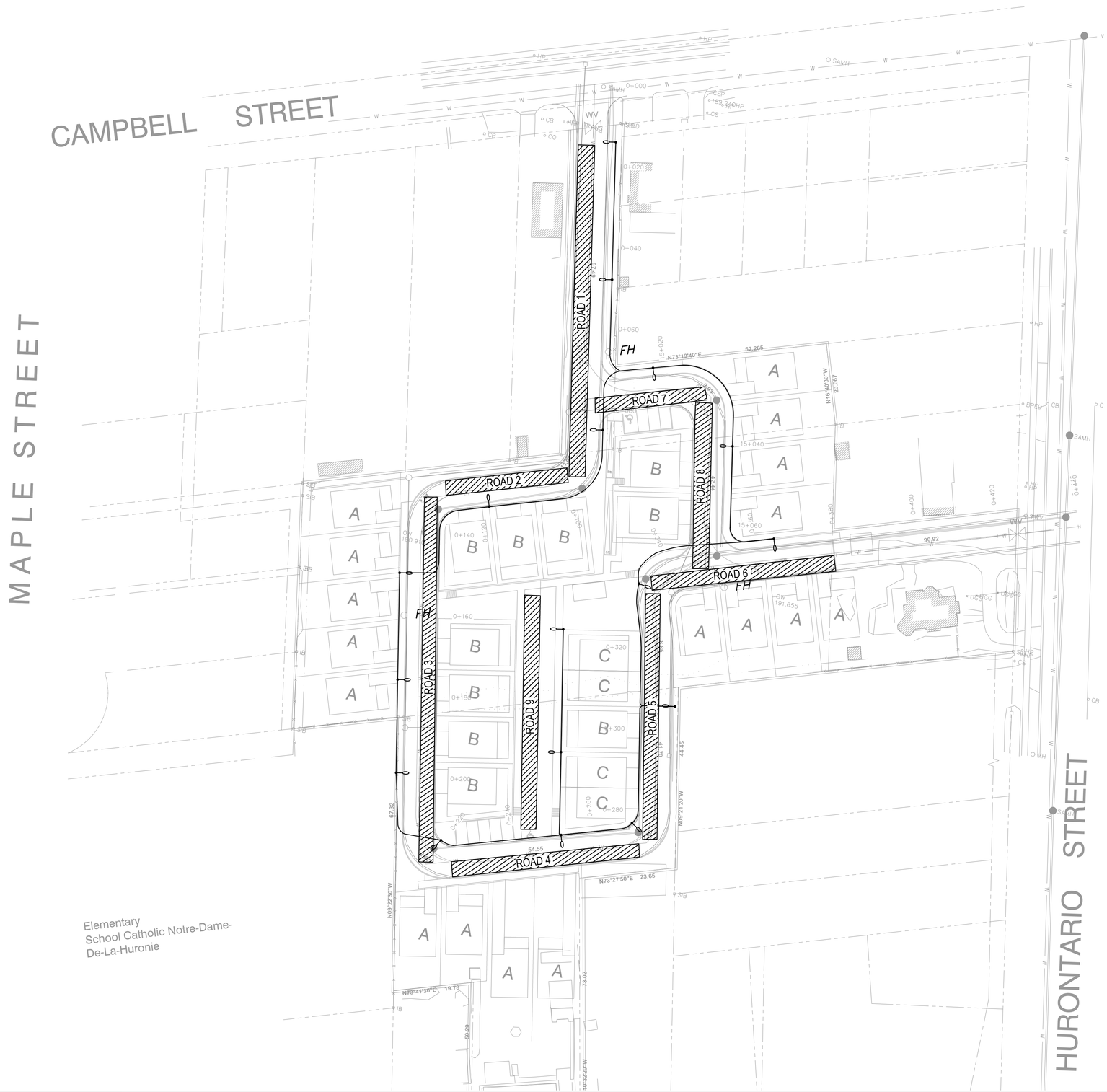

LEGEND

PROPOSED WORK

LED STREET LIGHT MOUNTED ON A 8.5m POLE - DIRECT BURIED (OPSD 2225.010) WITH 1.8m ALUMINUM TAPERED ELLIPTICAL DAVIT ARM (OPSD 2420.010) APPROVED MANUFACTURER FIXTURES:
CREE RSW SERIES SMALL, TYPE II MEDIUM, 27.9 WATTS
PHILIPS ROADSTAR SERIES, TYPE II MEDIUM, 27.0 WATTS
AMERICAN ELECTRIC ATB0 SERIES, TYPE III SHORT, 37 WATTS

53mm (2.0in) TYPE 2 DUCT/CONDUIT c/w 3#10+GND (OR AS SHOWN), CSA APPROVED FOR DIRECT BURIAL. CABLE SHALL BE COPPER.

POWER FEED FROM COLLUS POWERSTREAM TRANSFORMER TO BREAKER PEDESTAL, ALL TO COLLUS POWERSTREAM APPROVAL. (3-#3/0+#6GND, 53C)

LIGHTING CALCULATION GRID AREA

STREET LIGHTING POWER PEDESTAL (ES-1) c/w POWER BREAKER + METER. PEDESTAL SHALL BE MODEL SLM422 FROM PSI SOLUTION INC. THE PEDESTAL SHALL BE COMPLETE WITH METER. THE METER SHALL FACE THE PROPERTY SIDE.

PAD & METER MOUNTED SINGLE PHASE 240/120 VOLT SECONDARY TRANSFORMER c/w CONCRETE BASE. TRANSFORMER AND METER BY COLLUS POWERSTREAM. BASE TO BE SUPPLIED BY CONTRACTOR.

CENTERLINE OF TRENCH TO BE LOCATED 3.75M FROM PROPERTY LINE AS PER TYPICAL SECTION ON PAGE C1-7.

STREET LIGHTING POWER PEDESTAL

THE STREET LIGHTING POWER BREAKER SHALL BE ENCLOSED IN AN EEMAC TYPE 4 ENCLOSURE AND MOUNTED ON A 150X150MMX3.0M GALVANIZED STEEL POST (OESC TABLE 102) WHERE SHOWN ON THE DRAWINGS AT A MOUNTING HEIGHT OF APPROXIMATELY 1.5M ABOVE GRADE AND BURIAL DEPTH OF 1.5M.

THE CIRCUIT BREAKER ENCLOSURE SHALL BE TYPE 316, STAINLESS STEEL, SIZE 12" X 10" X 5" DEEP (305 X 254 X 127MM), COMPLETE WITH CONTINUOUS STAINLESS STEEL HINGED COVER SECURED WITH STAINLESS STEEL CLAMPS AND TAMPERPROOF SCREWS, HASP FOR PAD-LOCKING, MOUNTING LUGS AND REMOVABLE INNER PANEL, HAMMOND PART NO. 1414 N4 PHSS K OR APPROVED EQUIVALENT.

THE CIRCUIT BREAKER SHALL BE 15 AMPERE, 240 VOLT, 2 POLE 18 KA I.C., THERMAL MAGNETIC, FPE CAT. NO. CE2015 E4 OR APPROVED EQUIVALENT. THE CIRCUIT BREAKER SHALL BE MOUNTED SECURELY ON THE INNER PANEL OF THE ABOVE ENCLOSURE.

THE ENCLOSURE SHALL BE MOUNTED SECURELY ON THE POST, WHERE SHOWN ON THE DRAWING BOLTED TO POST WITH GALVANIZED (2-1/2"Ø X REQUIRED LENGTH BOLTS). INSTALL A 50MM RIGID PVC CONDUIT FROM THE BOTTOM OF THE ENCLOSURE TO 900MM BELOW GRADE FOR THE INCOMING STREET LIGHTING CABLE FROM THE TRANSFORMER TO THE LINE SIDE OF THE BREAKER AND INSTALL 2 - 53MM CONDUITS FROM THE BOTTOM OF THE ENCLOSURE TO 900MM BELOW GRADE FOR THE CONDUCTORS FROM THE BREAKER TO THE STREET LIGHTING POLE BASE HAND HOLES AS SHOWN ON THE DRAWING. ENSURE THAT ALL DOOR CLAMPS ARE SECURED AND THE ENCLOSURE IS PADLOCKED AFTER ENERGIZATION.

THE STREET LIGHTING CONDUIT SHALL BE LOCATED WHERE SHOWN AND AS SHOWN ON THE COLLUS POWERSTREAM DRAWINGS AND TO THE APPROVAL OF COLLUS POWERSTREAM. IN THE JOINT USE UTILITY TRENCHES.

Calculation Summary						
Label	Avg	Max	Min	Avg/Min	Max/Min	LVRatio
Road_1_Illuminance	4.59	9.7	1.9	2.42	5.11	N.A.
Road_1_Luminance	0.24	0.4	0.1	2.40	4.00	0.21
Road_2_Illuminance	4.78	8.6	2.4	1.99	3.58	N.A.
Road_2_Luminance	0.24	0.4	0.1	2.40	4.00	0.04
Road_3_Illuminance	5.81	10.0	2.8	2.08	3.57	N.A.
Road_3_Luminance	0.28	0.5	0.1	2.80	5.00	0.29
Road_4_Illuminance	5.10	8.9	1.5	3.40	5.93	N.A.
Road_4_Luminance	0.24	0.4	0.2	1.20	2.00	0.04
Road_5_Illuminance	5.43	9.6	1.5	3.62	6.40	N.A.
Road_5_Luminance	0.23	0.4	0.1	2.30	4.00	0.04
Road_6_Illuminance	4.86	7.9	2.3	2.11	3.43	N.A.
Road_6_Luminance	0.20	0.3	0.1	2.00	3.00	0.15
Road_7_Illuminance	5.72	7.9	3.7	1.55	2.14	N.A.
Road_7_Luminance	0.23	0.3	0.2	1.15	1.50	-
Road_8_Illuminance	4.43	7.7	1.9	2.33	4.05	N.A.
Road_8_Luminance	0.18	0.4	0.1	1.80	4.00	-
Road_9_Illuminance	4.46	7.4	2.2	2.03	3.36	N.A.
Road_9_Luminance	0.19	0.3	0.1	1.90	3.00	0.11
Illuminance Overall	5.06	10.0	1.5	3.37	6.67	N.A.
Luminance Overall	0.23	0.5	0.1	2.30	5.00	N.A.

NOTES

GENERAL NOTES

A) ILLUMINATION: CALCULATIONS AS PER RP-8-00 USING LED LUMINARES. THE FOLLOWING CRITERIA WAS USED BASED ON THE CLASSIFICATION OF THE ROADWAY AS LOCAL WITH LOW PEDESTRIAN VOLUME:
AVERAGE MAINTAINED ILLUMINANCE = 4 LUX;
AVERAGE /MINIMUM RATIO = 6:1 OR BETTER

B) ONLY ILLUMINATION CALCULATIONS WERE CONSIDERED FOR THE DESIGN OF THE ROADWAY LIGHTING. LUMINANCE CALCULATIONS ARE SHOWN FOR REFERENCE ONLY, AS THE STRAIGHT ROAD SEGMENTS ARE TO SHORT TO PRODUCE ACCURATE RESULTS. FOR REFERENCE, THE LUMINANCE CRITERIA HAD THEY BEEN CONSIDERED WOULD BE BASED ON RP-8-14 AND THE CLASSIFICATION OF THE ROADWAY AS LOCAL WITH LOW PEDESTRIAN VOLUME:
AVERAGE MAINTAINED LUMINANCE = 0.3 CD/M2;
AVERAGE /MINIMUM RATIO = 6:1 OR BETTER;
MAXIMUM /MINIMUM RATIO = 10:1;
VEILING LUMINANCE RATIO = 0.4 OR BETTER

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wsp.com

CONSULTANT - SUB-CONSULTANT:

SEAL:

CLIENT:

CLIENT REF. #:

PROJECT:

KEY PLAN:

DISCLAIMER: COPYRIGHT:
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THIS DRAWING IS NOT TO BE SCALED.

CAUTION :
THE POSITION OF POLE LINES, CONDUITS, WATERMAINS, SEWERS AND OTHER UNDERGROUND AND OVERGROUND UTILITIES AND STRUCTURES IS NOT NECESSARILY SHOWN ON THE CONTRACT DRAWINGS, AND, WHERE SHOWN, THE ACCURACY OF THE POSITION OF SUCH UTILITIES AND STRUCTURES IS NOT GUARANTEED. BEFORE STARTING WORK, THE CONTRACTOR SHALL INFORM HIMSELF OF THE EXACT LOCATION OF ALL SUCH UTILITIES AND STRUCTURES, AND SHALL ASSUME ALL LIABILITY FOR DAMAGE TO THEM.

ISSUED FOR - REVISION:

IS.	RV.	DATE	DESCRIPTION
	1	APR. 2018	FOR REVIEW

PROJECT NO.: DATE:

ORIGINAL SCALE:

DESIGNED BY:

DRAWN BY:

CHECKED BY:

IF THIS BAR IS NOT 25mm LONG, ADJUST YOUR PLOTTING SCALE.

25mm

DISCIPLINE:

TITLE:

SHEET NUMBER:

SHEET #: OF

ISSUE: RV. #

DATE OF: