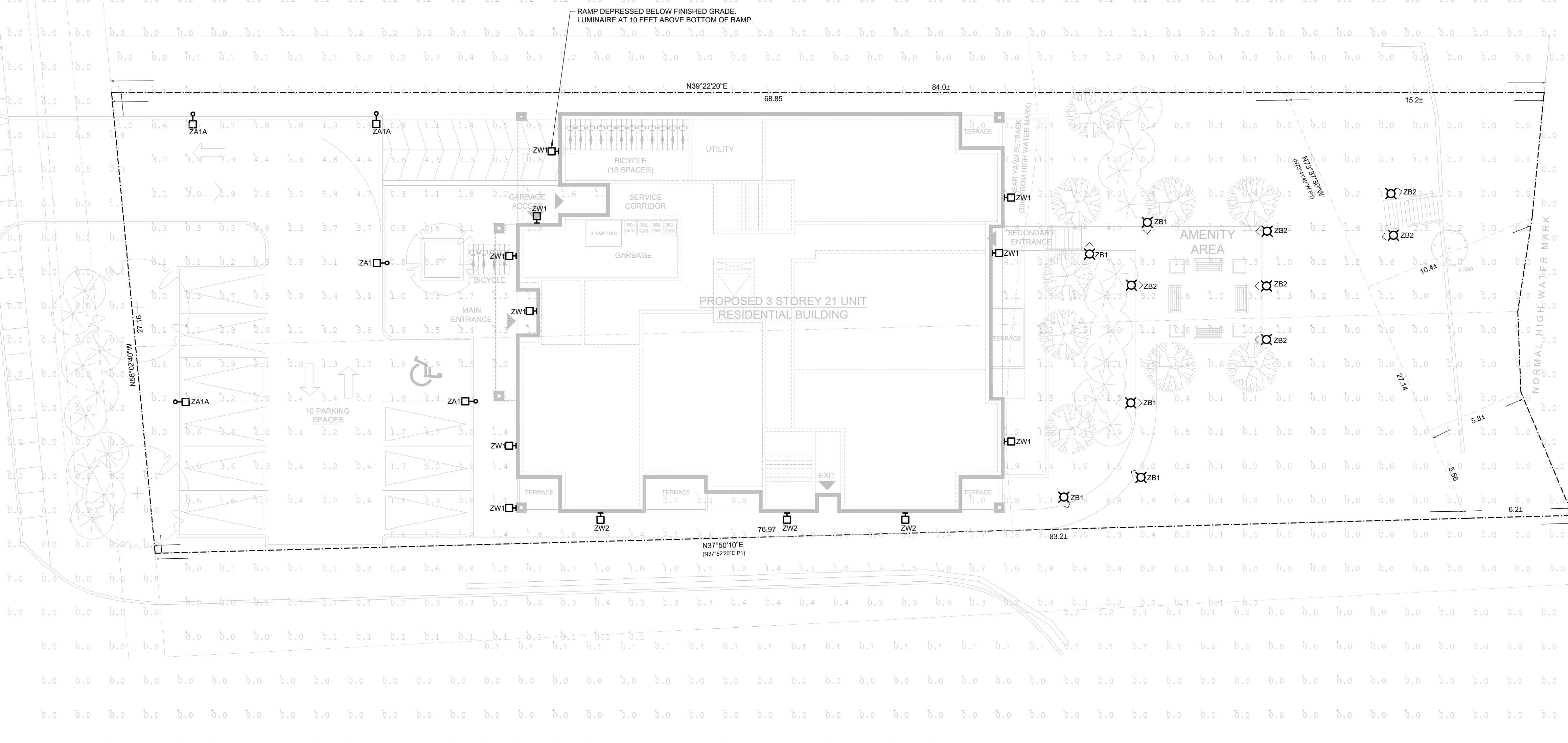


MANOTICK MAIN STREET

RIDEAU RIVER



**LEGEND**

- ARM MOUNTED AREA LIGHT ON POLE
- BOLLARD LUMINAIRE. ARROW DENOTES PRIMARY LUMEN ORIENTATION.
- WALL PACK
- AFG ABOVE FINISHED GRADE

**GENERAL SHEET NOTES**

- PHOTOMETRIC DATA POINTS ARE PROVIDED IN FOOTCANDLES (fc). ANALYSIS PERFORMED BY OMNILUMEN TECHNICAL PRODUCTS IN AGI32 SOFTWARE WITH 0.9 LIGHT LOSS FACTOR (LLF). CALCULATION GRID SPACING 3.0 m x 3.0 m (10 FOOT X 10 FOOT) GRID AT GROUND LEVEL.
- EXTERIOR LIGHTING MANUFACTURER TO SUBMIT PHOTOMETRIC ANALYSIS PLAN OF PROPOSED LUMINAIRE SHOWING DELIVERED LIGHT LEVELS (MEASURED IN FOOTCANDLES), AND DEMONSTRATING MUNICIPALY COMPLIANT LIGHT TRESPASS.
- UNDERGROUND LIGHTING CONDUCTORS MINIMUM #6 AWG.

**CALCULATION SUMMARY**

| LABEL                | CALC TYPE   | UNITS | AVG  | MAX  | MIN | AVG/MIN | MAX/MIN |
|----------------------|-------------|-------|------|------|-----|---------|---------|
| BARRIER FREE PARKING | ILLUMINANCE | FC    | 3.55 | 5.1  | 1.5 | 2.37    | 3.40    |
| BOLLARD STAIRS       | ILLUMINANCE | FC    | 6.71 | 13.8 | 1.9 | 6.71    | 13.80   |
| GARBAGE ACCESS       | ILLUMINANCE | FC    | 2.70 | 3.2  | 1.9 | 1.42    | 1.68    |
| MAIN ENTRANCE        | ILLUMINANCE | FC    | 2.43 | 4.1  | 1.4 | 1.74    | 2.93    |
| OVERALL SITE         | ILLUMINANCE | FC    | 1.11 | 15.3 | 0.0 | N.A.    | N.A.    |
| PARKING              | ILLUMINANCE | FC    | 1.87 | 3.1  | 0.8 | 2.34    | 3.88    |
| RAMP                 | ILLUMINANCE | FC    | 2.17 | 4.0  | 0.7 | 3.10    | 5.71    |
| SECONDARY ENTRANCE   | ILLUMINANCE | FC    | 7.92 | 14.0 | 2.4 | 3.30    | 5.83    |
| SPILL OF LIGHT       | ILLUMINANCE | FC    | 0.03 | 2.3  | 0.0 | N.A.    | N.A.    |

**MUNICIPAL LIGHTING ORDINANCE**

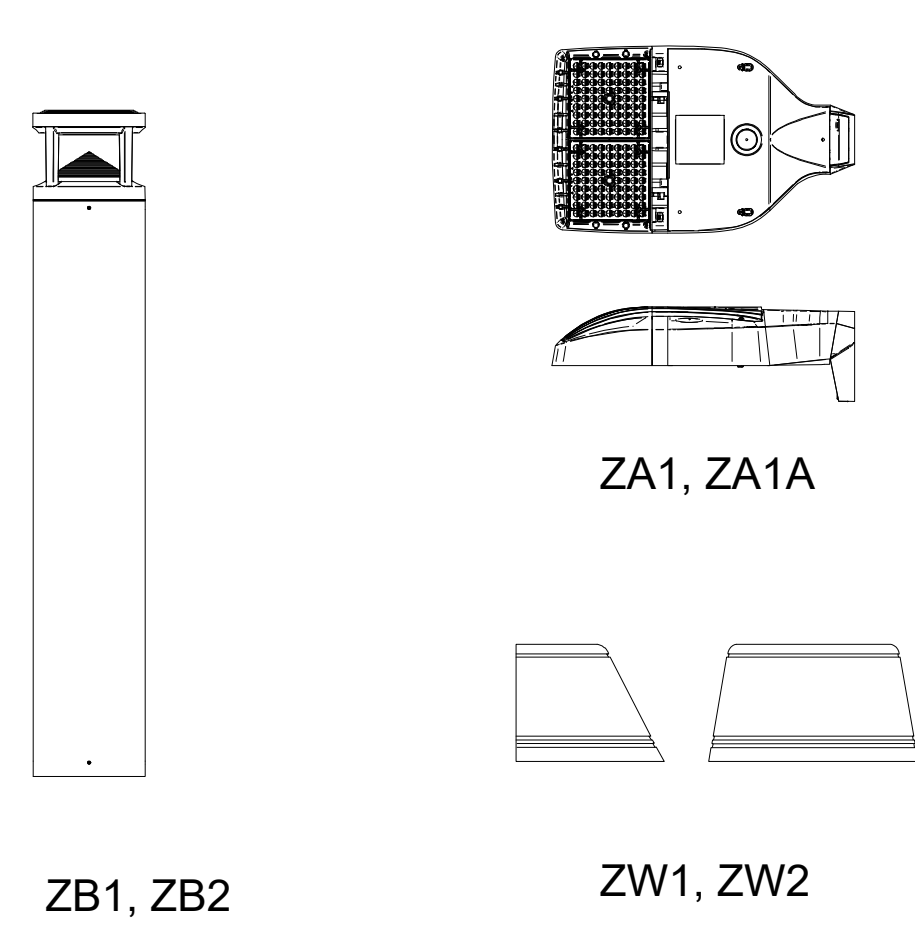
- CITY OF OTTAWA PROPERTY STANDARDS BY-LAW NO. 2013-416 PART II - RESIDENTIAL PROPERTY STANDARDS SECTION 6 - YARDS
  - IN RESPECT TO MULTIPLE DWELLINGS AND NON-RESIDENTIAL PROPERTIES, EVERY AREA OF A YARD WHICH IS USED FOR VEHICULAR TRAFFIC OR PARKING INCLUDING A LOADING AREA SHALL BE:
    - KEPT FREE FROM DIRT AND REFUSE;
    - ADEQUATELY LIGHTED; AND
    - MAINTAINED IN GOOD REPAIR.
  - LIGHTS USED TO ILLUMINATE ANY AREA USED FOR VEHICULAR AND PEDESTRIAN TRAFFIC, OR PARKING SHALL BE ARRANGED, INSTALLED OR DESIGNED SO AS TO DEFLECT AWAY FROM ADJUTING RESIDENTIAL PROPERTIES.
- CITY OF OTTAWA OFFICIAL PLAN, VOLUME 1, SECTION 5 - IMPLEMENTATION 5.2 - IMPLEMENTATION MECHANISMS, BY AUTHORITY UNDER THE PLANNING ACT AIR QUALITY
  - [...] SUBMISSIONS MAY NEED TO INCLUDE INDICATION OF ANY OR ALL OF THE FOLLOWING:
    - LOCATION, SITE, COLOUR, AND TYPE OF ALL BUILDING EXTERIOR SIGNAGE AND LIGHTING;
- BEST PRACTICES (NOT CITED BY CITY OF OTTAWA BY-LAW)
  - IES RP-8-18, CHAPTER 17 PARKING AREAS AND DRIVES MINIMUM 0.5 FC.
  - DARK SKY FRIENDLY LUMINAIRE - CCT OF MAX 3000 K CCT - MINIMIZE UPLIGHT
- CITY OF OTTAWA BIRD SAFE DESIGN GUIDELINES GUIDELINE 6: DESIGN EXTERIOR LIGHTING TO MINIMIZE LIGHT TRESPASS AT NIGHT. THE FOLLOWING RECOMMENDATIONS APPLY TO BOTH PERMANENT AND TEMPORARY OR EVENT-BASED EXTERIOR LIGHTING.
  - AVOID UP-LIGHTING.
  - SPECIFY DARK SKY COMPLIANT, FULL-CUTOFF EXTERIOR FIXTURES TO REDUCE LIGHT TRESPASS.
  - USE MOTION DETECTORS AND OTHER AUTOMATIC LIGHTING CONTROLS TO REDUCE OR EXTINGUISH NON-ESSENTIAL LIGHTING BETWEEN 11 PM AND 6 AM.
  - USE MINIMUM WATTAGE FIXTURES TO ACHIEVE APPROPRIATE LIGHTING LEVELS (NOTE: MINIMUM REQUIRED LIGHTING LEVELS ARE ESTABLISHED IN THE ONTARIO BUILDING CODE).
  - MINIMIZE AMOUNT AND VISUAL IMPACT OF PERIMETER LIGHTING.
  - AVOID USE OF FLOODLIGHTING.

**LUMINAIRE SCHEDULE**

|      |  |
|------|--|
| ZA1  | ARM MOUNTED AREA LIGHT, TYPE 4W DISTRIBUTION<br>BASIS OF DESIGN: HUBBELL AIRO MICRO STRIKE<br>ASL1-80L-25-3K7-4W-U<br>1996 LUMENS, 25.5 WATTS, 3000 K CCT, MIN 70 CRI, 120 VOLT<br>MOUNTING 10 FEET AFG (7 FOOT POLE ON 3 FOOT ARTFORMS KELLAMY 610R BASE)<br>B0-U0-G0                       |
| ZA1A | ARM MOUNTED AREA LIGHT, TYPE 4W DISTRIBUTION, BACKLIGHT CONTROL<br>BASIS OF DESIGN: HUBBELL AIRO MICRO STRIKE<br>ASL1-80L-25-3K7-4W-U-BC<br>1996 LUMENS, 25.5 WATTS, 3000 K CCT, MIN 70 CRI, 120 VOLT<br>MOUNTING 10 FEET AFG (7 FOOT POLE ON 3 FOOT ARTFORMS KELLAMY 610R BASE)<br>B0-U0-G0 |
| ZB1  | BOLLARD LUMINAIRE, TYPE 3 DISTRIBUTION<br>BASIS OF DESIGN: HUBBELL KIM PATR SERIES<br>PATR-NU3-12L-010-3K7, 42 INCH HIGH BOLLARD<br>809 LUMENS, 14 WATTS, 3000 K CCT, MIN 70 CRI, B0-U0-G0   |
| ZB2  | BOLLARD LUMINAIRE, TYPE 4 DISTRIBUTION<br>BASIS OF DESIGN: HUBBELL KIM PATR SERIES<br>PATR-NU3-12L-010-3K7, 42 INCH HIGH BOLLARD<br>977 LUMENS, 14 WATTS, 3000 K CCT, MIN 70 CRI, B0-U0-G0   |
| ZW1  | WALL MOUNT LUMINAIRE, TYPE 4 DISTRIBUTION<br>BASIS OF DESIGN: HUBBELL GEOPAK SERIES 1, SIZE 1<br>TRP1-12L15-3K7-4<br>MOUNTING HEIGHT 10 FEET AFG<br>1471 LUMENS, 13.9 WATTS, 3000 K CCT, MIN 70 CRI, 120 VOLT, B1-U0-G1  |
| ZW2  | WALL MOUNT LUMINAIRE, TYPE 2 DISTRIBUTION<br>BASIS OF DESIGN: HUBBELL GEOPAK SERIES 1, SIZE 1<br>TRP1-12L15-3K7-2<br>MOUNTING HEIGHT 10 FEET AFG<br>1497 LUMENS, 13.9 WATTS, 3000 K CCT, MIN 70 CRI, 120 VOLT, B1-U1-G1  |

**NOTES:**

- WHERE AN INCOMPLETE MODEL CAT NO. IS LISTED, MANUFACTURERS/SUPPLIERS MUST CONFIRM THE PROPOSED FIXTURE WITH THE CONSULTANT A MINIMUM OF ONE WEEK PRIOR TO TENDER CLOSE.
- WHERE NOTED ABOVE THAT FIXTURES ARE TO HAVE FINISH TO SUIT ARCHITECT THE FINISH WILL BE SELECTED FROM MANUFACTURER'S OPTIONAL COLOUR CHART (i.e. RAL COLOURS OR EQUAL). PROVIDE THIS COLOUR CHART WITH SHOP DRAWING SUBMITTAL.
- SUBMIT SHOP DRAWINGS FOR CONSULTANT'S REVIEW PRIOR TO PLACING ANY ORDER.
- SEQUENCE OF OPERATION  
EACH LUMINAIRE SHALL BE CONTROLLED BY A PHOTOCELL OR TIME CLOCK DEVICE THAT AUTOMATICALLY TURNS OFF THE LIGHTING WHEN SUFFICIENT DAYLIGHT IS AVAILABLE. (ASHRAE 90.1-2013 9.4.1.4.a.)



**REVISIONS**

| No. | DATE        | DESCRIPTION                      | CH'D |
|-----|-------------|----------------------------------|------|
| 2   | 2021-OCT-14 | RE-ISSUED FOR SITE PLAN APPROVAL | CB   |
| 1   | 2021-AUG-17 | ISSUED FOR SITE PLAN APPROVAL    | CB   |

THE SPECIFICATIONS ARE TO BE CONSIDERED AS AN INTEGRAL PART OF THESE DRAWINGS AND NEITHER THE DRAWINGS NOR THE SPECIFICATIONS SHALL BE USED ALONE. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS. DO NOT SCALE.

PROJECT NORTH

**QUASAR CONSULTING GROUP**

1025-130 SLATER ST., OTTAWA, ON K1P 6E2  
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NCR-21-RE-009@QUASARCG.COM

CLIENT

**12213559**  
Canada Inc

996B ST AUGUSTIN ROAD, EMBRUN, ON K0A 1W0

PROJECT

**SITE PLAN APPROVAL**  
5497 MANOTICK MAIN STREET  
OTTAWA, ON

TITLE

CHECKED: CB PROJECT No. NCR-21-RE-009  
SCALE: 1:150 DRAWING No. EL-101