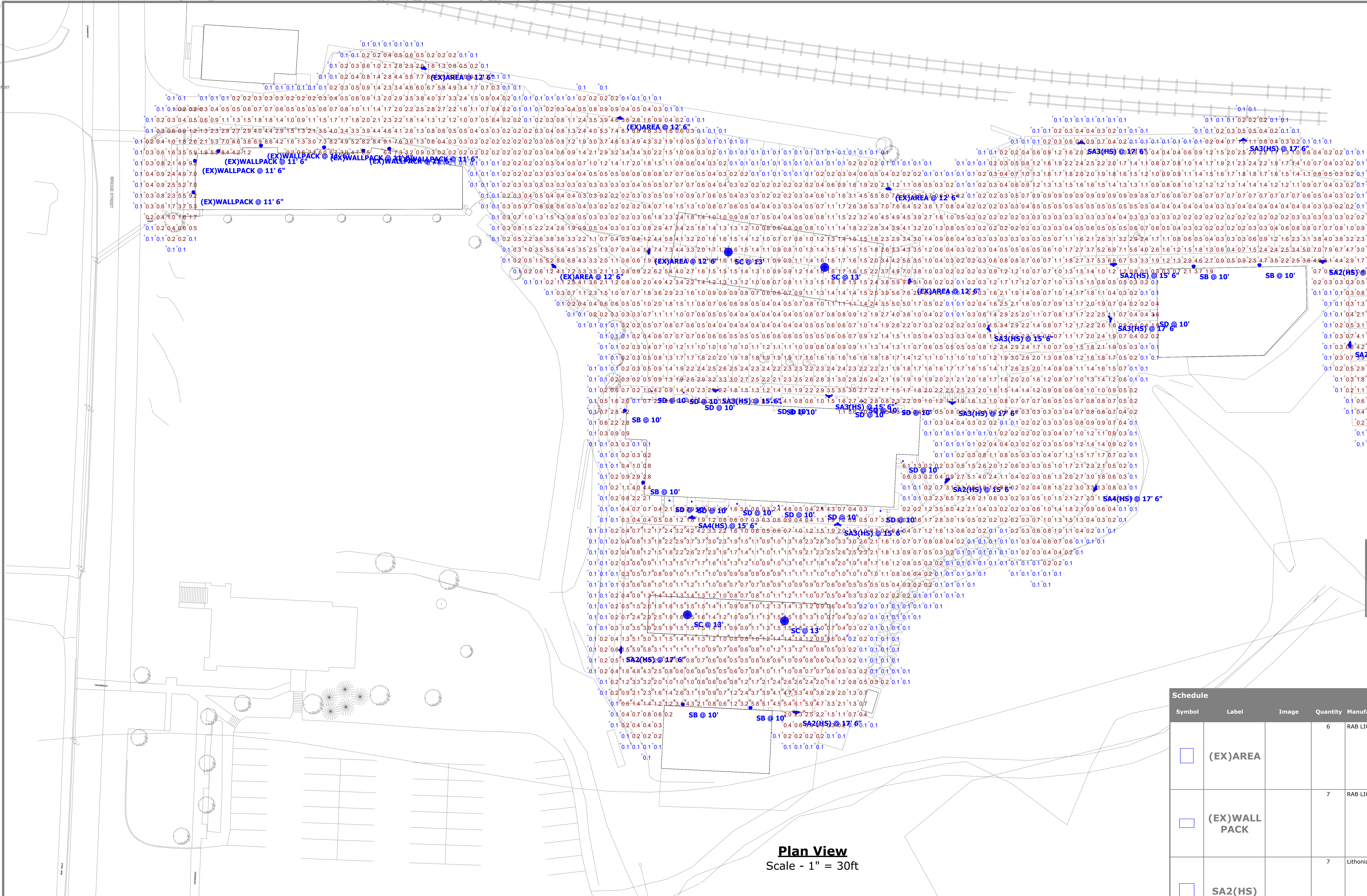


## Plan View

Scale - 1" = 30ft

Plan revision 06/08/2023 to reflect DRB review comments.

Item 45.e - Overall heights of pole luminaires are identified adjacent to each luminaire on the plan. Heights are also described in the plan notes, #7 and #8.

Item 47.i - All luminaires are full cut-off as defined by IESNA.

-Claus Bartenstein, P.E.

### Statistics

| Description | Symbol | Avg | Max | Min | Max/Min | Avg/Min |
|---|---|---|---|---|---|---|
| Typical Parking Area Average With New Luminaires | ✳ | 1.6 fc | 6.1 fc | 0.2 fc | 30.5:1 | 8.0:1 |
| Site Overall With Existing & New Luminaires | + | 1.2 fc | 9.4 fc | 0.1 fc | 94.0:1 | 12.0:1 |

### Note

1. ALL "ZERO" CALCULATION POINTS HAVE BEEN REMOVED TO ELIMINATE DIVIDE BY ZERO ERRORS FOR RATIOS IN THE STATISTICS MATRIX. CALCULATION RESULTS ARE TO TENTHS; LOWEST LEVELS INDICATED ARE 0.1 FOOT-CANDLES

2. CALCULATIONS BASED ON IES FILES FOR THE SPECIFIC BASIS OF DESIGN PRODUCTS. EXISTING LUMINAIRES, INDECATED BY (EX) PREFIX ARE ESTIMATED BASED ON BEST AVAILABLE INFORMATION.

3. EXISTING LUMINARES MOUNTING HEIGHT IS ESTIMATED BASED ON BEST AVAILABLE INFORMATION

4. POINT BY POINT CALCULATION IS 6' ON CENTER CALCULATION POINTS AT GRADE (0' AFF).

5. CALCULATION IS PREPARED UTILIZING VISUAL LIGHTING 2020 PROGRAM, RELEASE 2.11.0062.

6. CONTROLS FOR ALL EXTERIOR LIGHTING WILL BE THROUGH A LIGHTING CONTROLLER WITH BOTH TIME AND PHOTOCELL INPUT.

7. SELECT POLE LUMINAIRES SHALL BE 15'-6" ABOVE FINISHED GRADE TO BOTTOM OF LUMINOUS DOWN LIGHT SURFACE WHERE INDICATED; THIS TO INCLUDE 15' POLE AND 6" CONCRETE BASE ABOVE GRADE ON THE LAWNED AREAS NOT SUSCEPTIBLE TO VEHICLE CONTACT.

8. SELECT POLE LUMINAIRES SHALL BE 17'-6" ABOVE FINISHED GRADE TO BOTTOM OF LUMINOUS DOWN LIGHT SURFACE WHERE INDICATED; THIS TO INCLUDE 15' POLE AND 30" CONCRETE BASE ABOVE GRADE ON THE PARKING OR DRIVE AREAS WHERE SUSCEPTIBLE TO VEHICLE CONTACT.

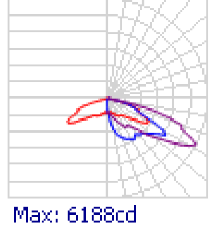
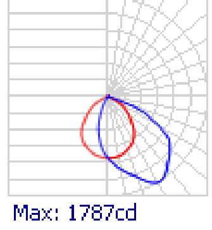
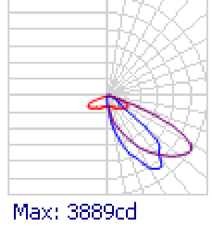
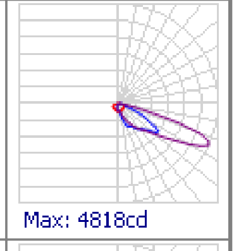
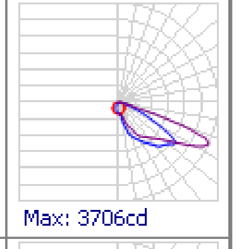
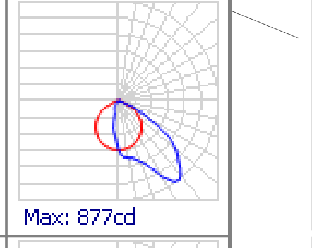
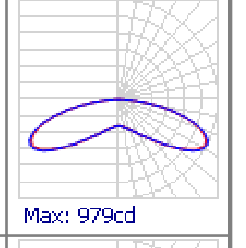
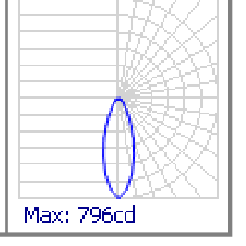
9. BUILDING MOUNTED WALL PACK LUMINAIRES SHALL BE LOCATED ~10' ABOVE FINISHED GRADE TO BOTTOM OF LUMINOUS DOWN LIGHT SURFACE.

10. LIGHTING UNDER SOLAR CANOPIES SHALL BE MOUNTED ~13' ABOVE FINISHED GRADE TO BOTTOM OF LUMINOUS DOWN LIGHT SURFACE.

11. LUMINAIRES RECESSED INTO THE BUILDING ENTRANCE CANOPY ARE APPROXIMATELY 10' ABOVE FINISHED GRADE TO BOTTOM OF LUMINOUS DOWN LIGHT SURFACE.

12. EXISTING STREET LIGHTING CONTRIBUTION IS NOT INCLUDED IN THESE CALCULATIONS.

### Schedule

| Symbol | Label | Image | Quantity | Manufacturer | Catalog Number | Description | Number Lamps | Lumens Per Lamp | Light Loss Factor | Wattage | Plot |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ☐ | (EX)AREA | | 6 | RAB LIGHTING INC. | ALED3T78 - RWLED3T78 - RWLED3T78SF - WPLED3T78 (TYPE III) | CAST FINNED METAL HOUSING, 6 CIRCUIT BOARDS EACH WITH 1 LED, MOLDED PLASTIC REFLECTOR WITH SPECULAR FINISH AND 1 APERTURE PER LED, CLEAR FLAT GLASS LENS IN CAST WHITE PAINTED METAL LENS FRAME. | 6 | 1544 | 0.7 | 76.8 | <br>Max: 6188cd |
| ▭ | (EX)WALL PACK | | 7 | RAB LIGHTING INC. | [WP, A]LED18Y | | 1 | 2783 | 0.9 | 21.3 | <br>Max: 1787cd |
| ☐ | SA2(HS) | | 7 | Lithonia Lighting | RSX1 LED P1 30K R2 HS | RSX LED Area Luminaire Size 1 P1 Lumen Package 3000K CCT Type R2 Distribution with HS shield | 1 | 4901 | 0.9 | 51.34 | <br>Max: 3889cd |
| ☐ | SA3(HS) | | 8 | Lithonia Lighting | RSX1 LED P1 30K R3 HS | RSX LED Area Luminaire Size 1 P1 Lumen Package 3000K CCT Type R3 Distribution with HS shield | 1 | 4533 | 0.9 | 51.34 | <br>Max: 4818cd |
| ☐ | SA4(HS) | | 2 | Lithonia Lighting | RSX1 LED P1 30K R4 HS | RSX LED Area Luminaire Size 1 P1 Lumen Package 3000K CCT Type R4 Distribution with HS shield | 1 | 4300 | 0.9 | 51.34 | <br>Max: 3706cd |
| ▭ | SB | | 6 | Lithonia Lighting | WDGE1 LED P1 30K 80CRI VW | WDGE1 LED WITH P1 - PERFORMANCE PACKAGE, 3000K, 80CRI, VISUAL COMFORT WIDE OPTIC | 1 | 1163 | 0.9 | 10.0002 | <br>Max: 877cd |
| ○ | SC | | 4 | Lithonia Lighting | VCPG LED P1 30K T5W MVOLT | VCPG LED WITH P1 - PERFORMANCE PACKAGE, 3000K, T5W OPTIC TYPE | 1 | 3592 | 0.9 | 26.57 | <br>Max: 979cd |
| ○ | SD | | 16 | Juno Lighting | IC1LED G4 06LM 30K 90CRI 120 FRPC + 12 WWH | 4" IC LED HOUSING | 1 | 474 | 0.9 | 8.6 | <br>Max: 796cd |

Engineering Services of Vermont LLC
Mechanical-Electrical Consulting Engineers

# GRISTMILL BUILDERS - JOLINA COURT MASTER PLAN, RICHMOND, VERMONT
# SITE LIGHTING CALCULATIONS

**Designer**
ESVT
**Date**
03/29/2023
**Scale**
Not to Scale
**Drawing No.**
**EL1**
**Summary**