# MARIO SOTO - 6.800kW DC, 7.600kW AC

## VICINITY MAP


## AERIAL MAP

## SHEET CATALOG

| SHEET | REVISION | DESCRIPTION |
|---|---|---|
| CS-01 | G | COVER SHEET |
| CS-02 | G | GENERAL NOTES |
| E-01 | G | SITE PLAN |
| S-01 | G | MOUNTING DETAILS |
| S-02 | G | STRUCTURAL DETAILS |
| E-02 | G | SINGLE LINE DIAGRAM |
| E-03 | G | ELECTRICAL CALCULATIONS |
| PL-01 | G | PLACARDS |
| SS | G | SPEC SHEET(S) |

## ROOF AREA CALCULATION

| | |
|---|---|
| TOTAL ARRAY AREA | = 350.59 sq.ft |
| TOTAL ROOF AREA | = 1033 sq.ft |
| % ARRAY AREA IN ROOF | = 33.94 % |

## DESIGN CRITERIA

BASIC WIND SPEED = 130 MPH @ 3-SEC GUST
GROUND SNOW LOAD = 40 PSF
RISK CATEGORY- II
PROJECT WINDSPEED DETERMINED USING THE ASCE 7 STANDARD UNLESS DIRECTED OTHERWISE BY LOCAL JURISDICTION AMENDMENTS

## SCOPE OF WORK

**SYSTEM SIZE:**
6800W DC, 7600W AC

**MODULES:**
(16)CANADIAN SOLAR HIKU CS3N-425MS (425W)

**INVERTER:**
(1)SOLAREDGE TECHNOLOGIES SE7600H-US (240V)

**OPTIMIZER:**
(16)SOLAREDGE P505 POWER OPTIMIZER

## ENGINEERING SCOPE OF WORK

1. ILLUMINE INDUSTRIES INC. HAS ONLY PROVIDED DRAFTING SERVICES FOR THE PERMIT DRAWINGS. NO ACTUAL ENGINEERING WORK, ENGINEERING REVIEW OR ENGINEERING APPROVAL HAS BEEN CONDUCTED BY ILLUMINE INDUSTRIES INC UNLESS NOTED OTHERWISE.
2. WHEN A PROFESSIONAL ENGINEER APPROVES AND SEALS THE DESIGN FOR COMPONENTS OF THEIR RESPECTIVE DISCIPLINE (STRUCTURAL/ELECTRICAL) SHOWN ON THESE PERMIT DRAWINGS, THE PROFESSIONAL ENGINEER
   a. TAKES FULL DIRECT CONTROL OF THE ENGINEERED DESIGN
   b. IS GIVEN ACCESS TO PERSONALLY SUPERVISE AND RECTIFY ANY ASPECT OF THE ENGINEERED DESIGN
   c. HAS FULLY ACCEPTED RESPONSIBILITY FOR THE ENGINEERED DESIGN

## GENERAL NOTES

1. MODULES ARE LISTED UNDER UL 61730 AND CONFORM TO THE STANDARDS.
2. INVERTERS ARE LISTED UNDER UL 1741 AND CONFORM TO THE STANDARDS.
3. DRAWINGS ARE DIAGRAMMATIC, INDICATING GENERAL ARRANGEMENT OF THE PV SYSTEM AND THE ACTUAL SITE CONDITION MIGHT VARY.
4. WORKING CLEARANCES AROUND THE NEW PV ELECTRICAL EQUIPMENT WILL BE MAINTAINED IN ACCORDANCE WITH NEC 110.26.
5. ALL GROUND WIRING CONNECTED TO THE MAIN SERVICE GROUNDING IN MAIN SERVICE PANEL/ SERVICE EQUIPMENT.
6. ALL CONDUCTORS SHALL BE 600V, 90°C STANDARD COPPER UNLESS OTHERWISE NOTED.
7. WHEN REQUIRED, A LADDER SHALL BE IN PLACE FOR INSPECTION IN COMPLIANCE WITH OSHA REGULATIONS.
8. THE SYSTEM WILL NOT BE INTERCONNECTED BY THE CONTRACTOR UNTIL APPROVAL FROM THE LOCAL JURISDICTION AND/OR THE UTILITY.
9. ROOF ACCESS POINT SHALL BE LOCATED IN AREAS THAT DO NOT REQUIRE THE PLACEMENT OF GROUND LADDERS OVER OPENINGS SUCH AS WINDOWS OR DOORS, AND LOCATED AT STRONG POINTS OF BUILDING CONSTRUCTION WHERE THE ACCESS POINT DOES NOT CONFLICT WITH OVERHEAD OBSTRUCTIONS SUCH AS TREES, WIRES OR SIGNS.
10. PV ARRAY COMBINER/JUNCTION BOX PROVIDES TRANSITION FROM ARRAY WIRING TO CONDUIT WIRING

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## APPLICABLE CODES

- ELECTRIC CODE:NEC 2020
- FIRE CODE:IFC 2015
- BUILDING CODE:IBC 2015
- RESIDENTIAL CODE:IRC 2015

## CUSTOMER INFORMATION

NAME: MARIO SOTO
ADDRESS: 1611 WOOD AVE, COLORADO SPRINGS, CO 80907

38.857034, -104.825354
APN: 6406313010
UTILITY: COLORADO SPRINGS
AHJ: CO-CITY OF COLORADO SPRINGS

## CONTRACTOR INFORMATION

Sun Power Energy, LLC.

## DRAWING INFORMATION

PRN NUMBER: SUP-73664 REV: G
DRAFTED BY: R.KARTHICK
QC'ED BY: S.PRAKASH
SCALE: AS NOTED
PAPER SIZE: 17"X11"

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**COVER SHEET**
DATE: 05/23/2023 SHEET: CS-01

**INSTALLATION NOTES:**

1. STRUCTURAL ROOF MEMBER LOCATIONS ARE ESTIMATED AND SHOULD BE LOCATED AND VERIFIED BY THE CONTRACTOR WHEN LAG BOLT PENETRATION OR MECHANICAL ATTACHMENT TO THE STRUCTURE IS REQUIRED.
2. ROOFTOP PENETRATIONS FOR SOLAR RACKING WILL BE COMPLETED AND SEALED WITH APPROVED SEALANT PER CODE BY A LICENSED CONTRACTOR.
3. LAGS MUST HAVE A MINIMUM 2.5" THREAD EMBEDMENT INTO THE STRUCTURAL MEMBER.
4. ALL PV RACKING ATTACHMENTS SHALL BE STAGGERED BY ROW BETWEEN THE ROOF FRAMING MEMBERS AS NECESSARY.
5. ROOF MOUNTED STANDARD RAIL REQUIRES ONE THERMAL EXPANSION GAP FOR EVERY RUN OF RAIL GREATER THAN 40'.
6. ALL CONDUCTORS AND CONDUITS ON THE ROOF SHALL BE MINIMUM 7/8" ABOVE THE ROOF SURFACE (INCLUDING CABLES UNDERNEATH MODULES AND RACKING).
7. THE PV INSTALLATION SHALL NOT OBSTRUCT ANY PLUMBING, MECHANICAL OR BUILDING ROOF VENTS.
8. ALL SOLAR PANEL ARRAY COMPONENTS SHALL BE INSTALLED PER THE MANUFACTURER'S APPROVED INSTALLATION SPECIFICATIONS.
9. THE EXISTING BUILDINGS STRUCTURE SHALL BE VERIFIED AS PROPERLY CONSTRUCTED AND MAINTAINED IN GOOD CONDITION. NO ALLOWANCE HAS BEEN MADE IN THESE DRAWINGS FOR ANY EXISTING DEFICIENCY IN DESIGN, MATERIAL, CONSTRUCTION, OR LACK OF MAINTENANCE FOR THE EXISTING STRUCTURE OR PROPOSED EQUIPMENT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFYING EXISTING CONDITIONS, PROPER FIT, AND CLEARANCES IN THE FIELD.
10. WATERPROOFING AROUND THE ROOF PENETRATIONS IS THE RESPONSIBILITY OF OTHERS.
11. MISCELLANEOUS ITEMS NOT EXPLICITLY LISTED OR IDENTIFIED IN THESE DRAWINGS HAVE NOT BEEN DESIGNED. IT IS RECOMMENDED THAT MATERIAL OF SUITABLE SIZE STRENGTH TO BE OBTAINED FROM A REPUTABLE MANUFACTURER FOR MISCELLANEOUS ITEMS.
12. IF PROJECT IS STAMPED AND SEALED BY AN ILLUMINE-I STRUCTURAL ENGINEER, SEE ASSOCIATED ILLUMINE-I STRUCTURAL REPORT FOR FULL COMPREHENSIVE SCOPE OF STRUCTURAL ENGINEERING INVESTIGATION AND APPROVAL.
13. IF ANY CONDITION THROUGHOUT THE ASSOCIATED REPORT OR PERMIT DRAWINGS IS NOT ALSO REPRESENTED ON-SITE, CONTRACTOR SHALL NOTIFY THE ENGINEER OF RECORD OF ANY DISCREPANCIES AND RECEIVE WRITTEN APPROVAL FROM THE ENGINEER OF RECORD BEFORE PROCEEDING WITH INSTALLATION.
14. CONTRACTOR TO PROVIDE MINIMUM 1/4" GAP BETWEEN ALL SOLAR PANELS.

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| CUSTOMER INFORMATION | CONTRACTOR INFORMATION |
|---|---|
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**DRAWING INFORMATION**

PRN NUMBER: SUP-73664 REV: G
DRAFTED BY: R.KARTHICK
QC'ED BY: S.PRAKASH
SCALE: AS NOTED
PAPER SIZE: 17"X11"

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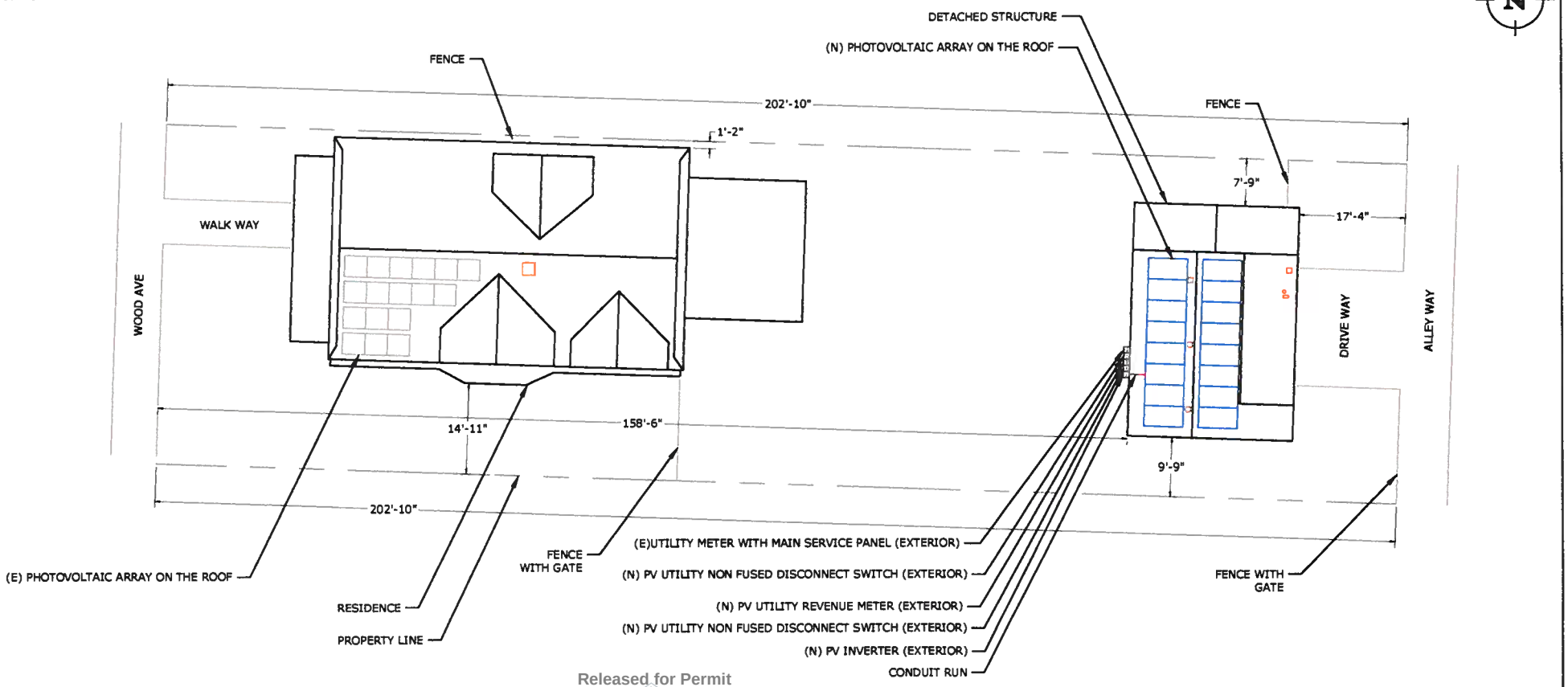
**GENERAL NOTES**
DATE: 05/23/2023 SHEET: CS-02

# MARIO SOTO - 6.800kW DC, 7.600kW AC

NOTE: PV SYSTEM TO BE INSTALLED ON
DETACHED NON-HABITABLE STRUCTURE.

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ELECTRICAL

SCALE:1/16" = 1'-0"

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**SITE PLAN**
DATE: 05/23/2023 SHEET: E-01