GENERAL NOTES:

THIS IS A 2.99 KW-AC, 3.43 KW-DC SOLAR ELECTRIC SYSTEM USING (14) YINGLI GREEN ENERGY 245p-29b 245W-STC PHOTOVOLTAIC MODULES.

THIS IS A ROOF-MOUNTED SYSTEM (252.7 SQFT), ADDING 2.7 lbs/sqft. FINISHED ROOF SURFACE IS COMPOSITION SHINGLE (1-LAYER)

Total module (42.1 lbs each), inverter (3.5 lbs. each) and rail (.561 lbs/ft) weight: 679.17 lbs
Number of attachments: 28 At least 2 per module
Weight/attachment point: 24.25 lbs < 40 lbs OK
Area: 252.7 sqft
Distributed area: 2.7 lbs/sqft < 3.5 lbs/sqft OK

DESIGN COMPLYING WITH THE 2011 NEC, 2009 IBC AND ALL LOCAL ORDINANCES AND POLICIES.

THE HOUSE IS 1.5 STORY(IES) TALL. THE RAFTERS ARE 2 X 4 AND 24 INCHES ON CENTER.

THIS SYSTEM WILL NOT BE INTERCONNECTED UNTIL APPROVAL FROM THE LOCAL JURISDICTION AND THE UTILITY IS OBTAINED.

THIS SYSTEM IS GRID-INTERTED VIA UL-LISTED POWER CONDITIONING MICROINVERTERS, (14) Enphase Energy M215-60-2LL-S2 (240v). THIS SYSTEM HAS NO UPS, NO BATTERIES.

THE SOLAR PHOTOVOLTAIC INSTALLATION SHALL NOT OBRSTUCT ANY PLUMBING, MECHANICAL OR BUILDING ROOF VENTS.

IF THE EXISTING MAIN SERVICE PANEL DOES NOT HAVE VERIFIABLE GROUNDING ELECTRODE, IT IS THE CONTRACTOR'S RESPONSIBILITY TO INSTALL A SUPPLEMENTAL GROUNDING ELECTRODE.

EACH MODULE WILL BE GROUNDED USING THE SUPPLIED CONNECTIONS POINTS IDENTIFIED ON THE MODULE AND THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
1. THIS IS A 2.3 kW SOLAR ELECTRIC SYSTEM USING (8) SUNPOWER SPR-327NE-WHT-D (327W STC) PHOTOVOLTAIC MODULES.

2. THIS SYSTEM IS GRID-INTERTIED VIA A UL-LISTED POWER CONDITIONING INVERTER PV POWERED PV2500 (240 VAC).

3. THIS SYSTEM HAS NO UPS, NO BATTERIES.

4. THIS IS A ROOF-MOUNTED SYSTEM, ADDING 2.68 LB/sqFT. ROOF IS (1) LAYER COMPOSITION SHINGLE (ROOF SLOPE IS 0.12)

5. ROOF JOISTS ARE 2X8' ENGINEERED TRUSSES AT 32' O.C. SPACING.

6. LAG SCREWS ARE 5/16' x 3.5' AT 72' O.C. MAX, W/2.5' INTO FRAMING.

7. BUILDING IS (2) STORIES.
(2) source circuits of (4) series connected Sunpower SPR-327NE-WHT-D 327W photovoltaic modules

For Each Module:
Voc = 69.9 VDC
Vmp = 54.7 VDC
Isc = 6.46 A
Imp = 5.88 A

Iac = 6.46 A
Voc = 260 V (STC)
(2) 1/C #10 AWG USE-2
(1) 1/C #10 AWG Bare Cu Gnd
in free air

Junction Box

100 A, 2 pole, main service breaker

20 A, 2 pole, backfed solar breaker (Markey)

240V electric service from utility

Iac = 11 A
(3) #10 THWN-2
(1) #8 Gnd
in 1/2" EMT conduit

DC

(1) PV Powered PVP2500 2.5 kW inverter
with integrated DC and AC disconnects

AC

NOTES:
1. THE PV SOURCE CIRCUIT IS NEGATIVELY GROUNDED.
2. WIRE AND SIZES ARE AS INDICATED OR LARGER.
3. ALL EQUIPMENT IS BONDED BY MECHANICAL MEANS OR BY A GROUNDING CONDUCTOR.
4. CIRCUIT CALCULATIONS PROVIDED ON SEPARATE SHEET.
5. EQUIPMENT LABELS PROVIDED ON SEPARATE SHEET.
NOTES: Complies with CEC2013, CEC2013 and NEC2014

1. THIS IS A 1.6 kW-AC SOLAR ELECTRIC SYSTEM USING (8) RENESOLA XJ230M-24/Bb 230W-STC PHOTOVOLTAIC MODULES.

2. THIS SYSTEM IS GRID-INTERTIED VIA UL-LISTED POWER CONDITIONING MICROINVERTERS, (8) ENPHASE ENERGY M210-66-2LL-S2-1G 215W-STC. THIS SYSTEM HAS NO UPS, NO BATTERIES.

3. THIS IS A ROOF-MOUNTED SYSTEM 150.0 SQFT, ADDING 2.5 lbs/sqft. FINISHED ROOF SURFACE IS COMPOSITION SHINGLE (1-LAYER). Less than 50% of roof space.

   Total module (44.1 lbs each), Microinverter (3.4 lbs each) and Rails (0.52 lbs/ft) weight:
   Number of attachments: 12
   Weight/attachment point: 31.7 lbs < 40 lbs >> OK
   Area: 150.0 sqft
   Distributed area: 2.5 lbs/sqft < 4.0 lbs/sqft >> OK.

4. STANDARD WOOD ROOF CONSTRUCTION with 2x4 Rafters AT 24" OC TO FORM 1:12 ROOF. BUILDING IS (1) STORIES.

5. LAG SCREWS ARE 5/16"x 3-1/2" STAINLESS STEEL AT 72" OC MAX WITH MIN 3" INTO FRAMING.

6. ROOF PENETRATIONS ARE SEALED WITH GEDCEL 2300 AND ALUMINUM SOLAR FLASHINGS.

7. MECHANICAL AND PLUMBING VENTS WILL NOT BE COVERED THROUGH THE ROOF WITH THE MODULES.