







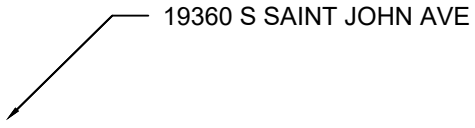
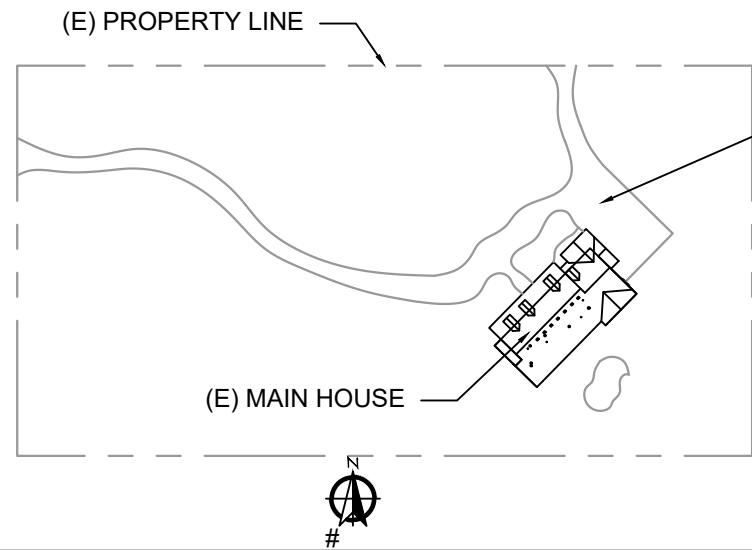


SHEET INDEX		
PV-01	TITLE SHEET	
PV-02	SITE PLAN	
PV-03	MOUNTING DETAIL	
PV-04	WIRING DIAGRAM	
PV-05	LABELING	
SYSTEM INFORMATION		
SYSTEM SIZE	# kW DC	# kW AC
PV MODULES	#	#
INVERTER	#	
BATTERY	#	# kWh
RACKING	#	
MOUNTING	#	
SCOPE OF WORK		
INSTALLATION CONSISTS OF (#) # PV MODULES, #, (#) # OPTIMIZERS AND RELATED ELECTRICAL METERING (IF USED) AND SAFETY EQUIPMENT. ALL COMPONENTS UL LISTED, WHERE APPLICABLE. ALL EQUIPMENT WILL BE INSTALLED AS REQUIRED BY APPLICABLE CODES AND LOCAL UTILITY COMPANY REQUIREMENTS. MAIN PANEL UPGRADE: NA MAIN PANEL DE-RATED: #		
EXISTING BUILDING INFORMATION		
STRUCTURE TYPE: RESIDENTIAL OCCUPIED BUILDING 2-STORY ROOF FRAMING: # ROOF TYPE: #		
APPLICABLE CODES		
2022 CALIFORNIA BUILDING CODE (CBC) 2022 CALIFORNIA RESIDENTIAL CODE (CRC) 2022 CALIFORNIA ELECTRICAL CODE (CEC) 2022 CALIFORNIA ENERGY STANDARDS 2022 CALIFORNIA FIRE CODE 2022 CALIFORNIA GREEN BUILDING STANDARDS CODE		
LEGEND		
 METER	 CHIMNEY	
 SWITCH	 AIR CONDITIONER	
 BREAKER	 INVERTER	
 FUSE	 GROUND	

CONSTRUCTION NOTES	
A LADDER SHALL BE IN PLACE FOR INSPECTION IN COMPLIANCE WITH CALIFORNIA OSHA REQUIREMENTS.	
THE PV MODULES ARE CONSIDERED NON-COMBUSTIBLE AND THIS SYSTEM IS A UTILITY GRID INTERACTIVE SYSTEM.	
A GROUNDING ELECTRODE SYSTEM IN ACCORDANCE WITH CEC 690.47, 250.50 THROUGH 60, AND 250.66 SHALL BE PROVIDED. PER CEC, GROUNDING ELECTRODE SYSTEM OF EXISTING BUILDING MAY BE USED AND BONDED TO AT THE SERVICE ENTRANCE. IF EXISTING SYSTEM IS INACCESSIBLE, OR INADEQUATE, OR IS ONLY METALLIC WATER PIPING, A SUPPLEMENTAL GROUNDING ELECTRODE WILL BE USED AT THE INVERTER LOCATION CONSISTING OF A UL LISTED 8 FT GROUND ROD WITH ACORN CLAMP. GROUNDING ELECTRODE CONDUCTORS SHALL BE NO LESS THAN #6 AWG AND NO GREATER THAN #6 AWG COPPER AND BONDED TO THE EXISTING GROUNDING ELECTRODE TO PROVIDE OR A COMPLETE GROUND.	
EACH MODULE WILL BE GROUNDED USING THE SUPPLIED GROUNDING POINTS IDENTIFIED BY THE MANUFACTURER. EXPOSED NON-CURRENT CARRYING METAL PARTS OF MODULE FRAMES, EQUIPMENT, AND CONDUCTOR ENCLOSURES SHALL BE GROUNDED IN ACCORDANCE WITH CEC 250.134 OR 250.136(A) REGARDLESS OF VOLTAGE.	
PROPER ACCESS AND WORKING CLEARANCE AROUND EXISTING AND PROPOSED ELECTRICAL EQUIPMENT WILL BE PROVIDED PER CEC 110.26.	
ALL SIGNAGE WILL BE INSTALLED AS REQUIRED BY THE CEC.	
HEIGHT OF INTEGRATED AC/DC DISCONNECT SHALL NOT EXCEED 6' 7" PER CEC 240.24.	
THE GROUNDING ELECTRODE CONDUCTOR SHALL BE PROTECTED FROM PHYSICAL DAMAGE BETWEEN THE GROUNDING ELECTRODE AND THE PANEL (OR INVERTER) IF SMALLER THAN #6 AWG COPPER WIRE	
ALL EXTERIOR CONDUIT SHALL BE PAINTED TO MATCH ADJACENT SURFACES.	
THE PV CONNECTION IN THE PANEL BOARD SHALL BE POSITIONED AT THE OPPOSITE (LOAD) END FROM THE INPUT FEEDER LOCATION OR MAIN CIRCUIT LOCATION PER CEC 705.12 (B)(2)(3)(B).	
SITE CONDITIONS SHALL PREVAIL IF NO SCALE IS GIVEN. DRAWINGS ARE NOT NECESSARILY TO SCALE. ALL DIMENSIONS SHALL BE VERIFIED BY SUBCONTRACTOR UPON COMMENCEMENT OF CONSTRUCTION.	
PER THE CA RESIDENTIAL CODE (CRC) § R314 & R315, 10 YEAR BATTERY CARBON MONOXIDE AND SMOKE ALARMS SHALL BE INSTALLED IN EACH SLEEPING AREA AND HALLWAYS LEADING TO SLEEPING AREAS.	
AGREEMENT	
THE LICENSE GRANTED BY THE DESIGN ENGINEER PERMITS THE OWNER, BUILDER OR ARCHITECT, CONTRACTOR, OR SUBCONTRACTORS TO REPRODUCE APPLICABLE PORTIONS OF THE INSTRUMENTS OF SERVICE (THE PV DRAWINGS) EXCLUSIVELY AND SOLELY FOR THE USE IN PERFORMING SERVICES OR CONSTRUCTION FOR THIS PROJECT WHICH IS SPECIFIC TO A PARCEL.	
THE OWNER, BUILDER, SUB, TO THE EXTENT PERMITTED BY LAW, AGREES TO INDEMNIFY AND HOLD HARMLESS THE DESIGN ENGINEER RELATED TO CLAIMS ARISING ANY THIRD PARTY ENTITY FROM THE USE OF THE INSTRUMENTS OF SERVICE, AND SHALL NOT ASSIGN OR DELEGATE, SUB-LICENSE OR TRANSFER THIS LICENSE GRANTED HERE-IN TO ANOTHER ENTITY OR PROJECT DEVIATING FROM THE PARCEL SPECIFIC PROJECT PERMIT WITHOUT WRITTEN AGREEMENT AND TERMS FOR ADDITIONAL COMPENSATION FOR THE REPLICATION OF DESIGN WORK. ' ANY ADDITIONAL DESIGN CHANGE TO THIS DOCUMENT WILL BE SUBJECT TO CHARGES.	
VICINITY MAP	
	

DESIGNED BY: DIYSOLAR PLANNING LIC # PREPARED FOR: #		
PROJECT INFORMATION		
PROJECT TYPE: #		
NAME:	#	
PH:	#	
ADDRESS:	#	
CITY:	#	
STATE, ZIP:	XX XXXXX	
AHJ:	NEVER COUNTY	
APN:	#	
FINANCE TYPE:	MONOPOLY MONEY	
DRAWN BY:	#	
SIGNATURE:		
DATE:	8/21/23	
REVISIONS		
DESCRIPTION	DATE	REV
AHJ SIGNATURE AND DATE		
SHEET TITLE		
TITLE SHEET		
SHEET NUMBER		
PV-01		



2022 CRC: R324.6.2: FOR PHOTOVOLTAIC ARRAYS OCCUPYING NOT MORE THAN 33 PERCENT OF THE PLAN VIEW TOTAL ROOF AREA, NOT LESS THAN 18-INCH (457 MM) CLEAR SET BACK IS REQUIRED ON BOTH SIDES OF A HORIZONTAL RIDGE. FOR PHOTOVOLTAIC ARRAYS OCCUPYING MORE THAN 33 PERCENT OF THE PLAN VIEW TOTAL ROOF AREA, NOT LESS THAN 36-INCH (914 MM) CLEAR SET BACK IS REQUIRED ON BOTH SIDES OF A HORIZONTAL RIDGE.

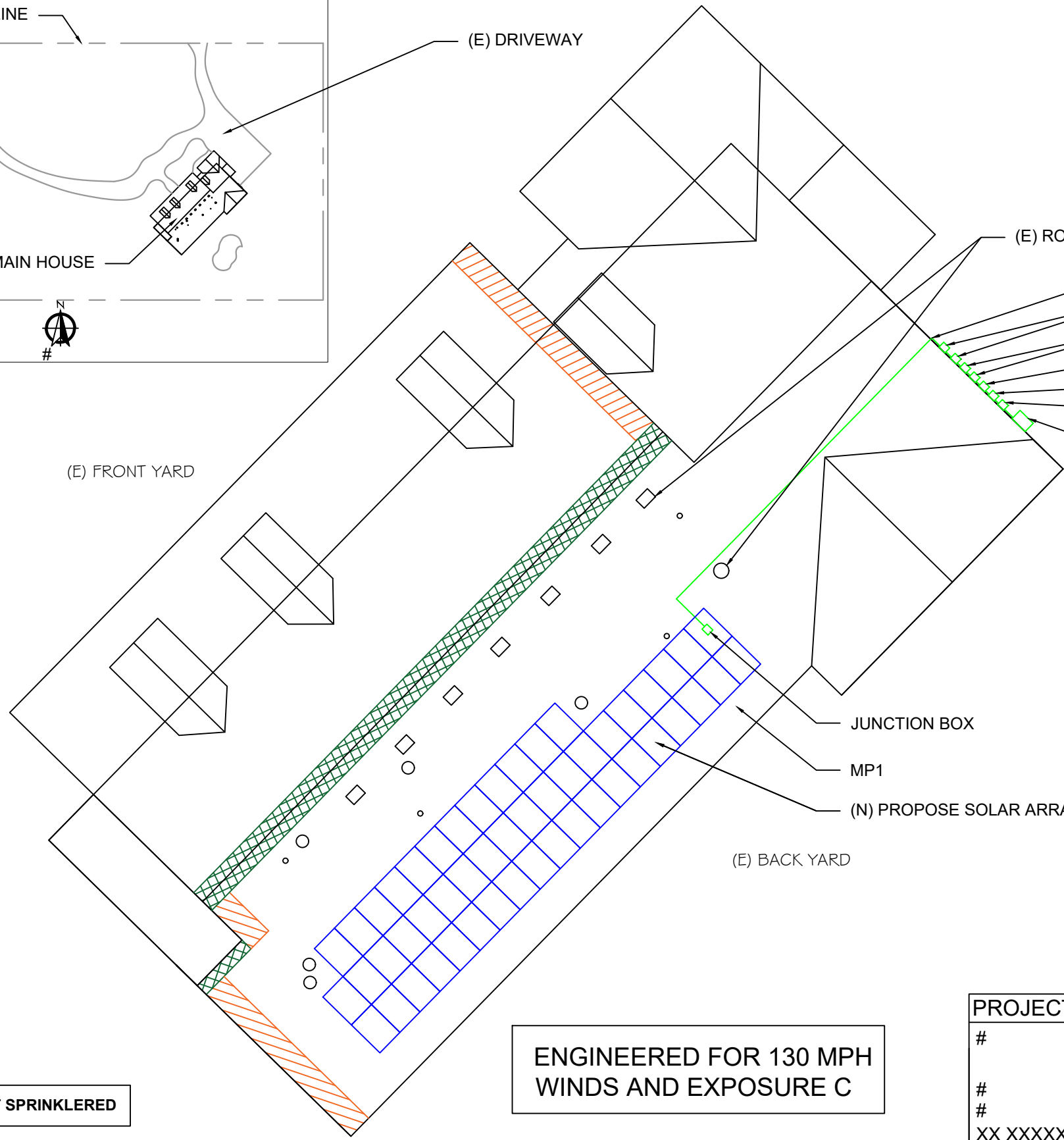
#

COORDINATES:

37, -120

AZIMUTH AND SLOPE

MOUNTING PLANE	MP1
TILT (degrees)	#
MODULE COUNT	#
AZIMUTH	#



R324.6 (EXCEPTION 1): DETACHED NON HABITABLE STRUCTURES ARE NOT SUBJECT TO FIRE SETBACKS

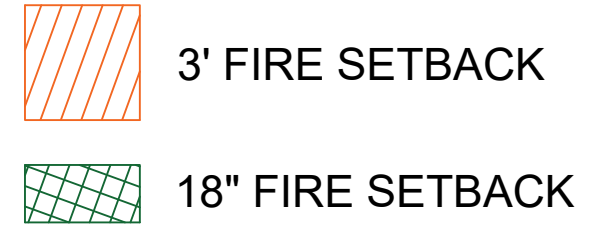
R324.6 (EXCEPTION 3): THESE REQUIREMENTS SHALL NOT APPLY TO ROOFS WITH SLOPES OF 2:12 OR LESS

TOTAL ROOF AREA:
sqft

AREA OF ARRAYS:
/ 144 (PANEL DIMENSIONS) = ##### sqft (PER PANEL)
sqft/panel X # panels = ##### sqft (TOTAL PANEL AREA)

PERCENTAGE OF TOTAL ROOF AREA:
(##### sqft / #sqft)(100)= ##### %

THE PANELS USE #####% OF THE TOTAL ROOF AREA



SCALE: #

LICENSE C-46 #

DRAWN BY:

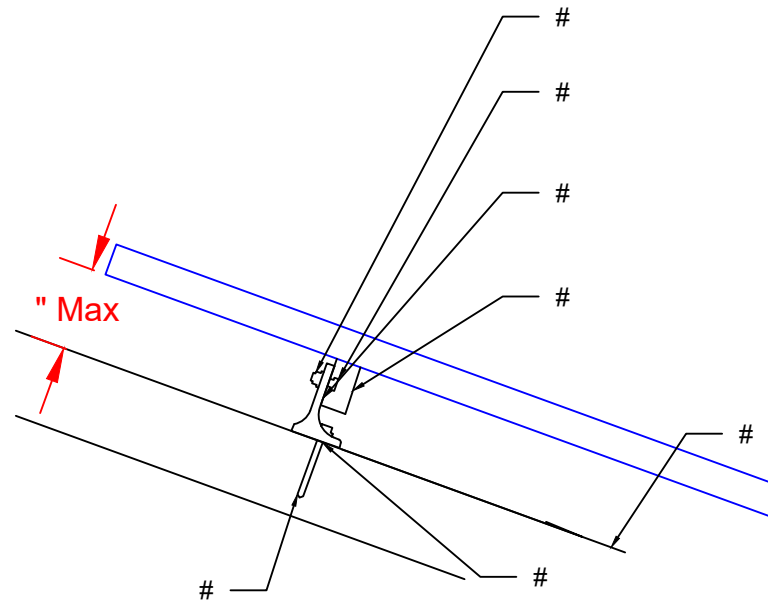
STRUCTURE IS NOT SPRINKLERED

ENGINEERED FOR 130 MPH WINDS AND EXPOSURE C

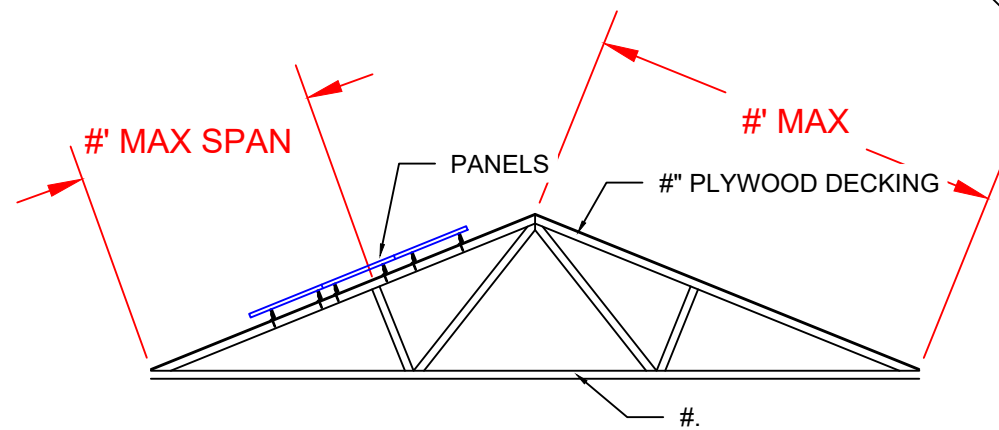
PROJECT TYPE: #

#	REVISIONS			SHEET NAME
	DESCRIPTION	DATE	REV	
#				SITE PLAN
#				SHEET NUMBER
XX XXXXX				PV-02
AHJ: NEVER COUNTY				

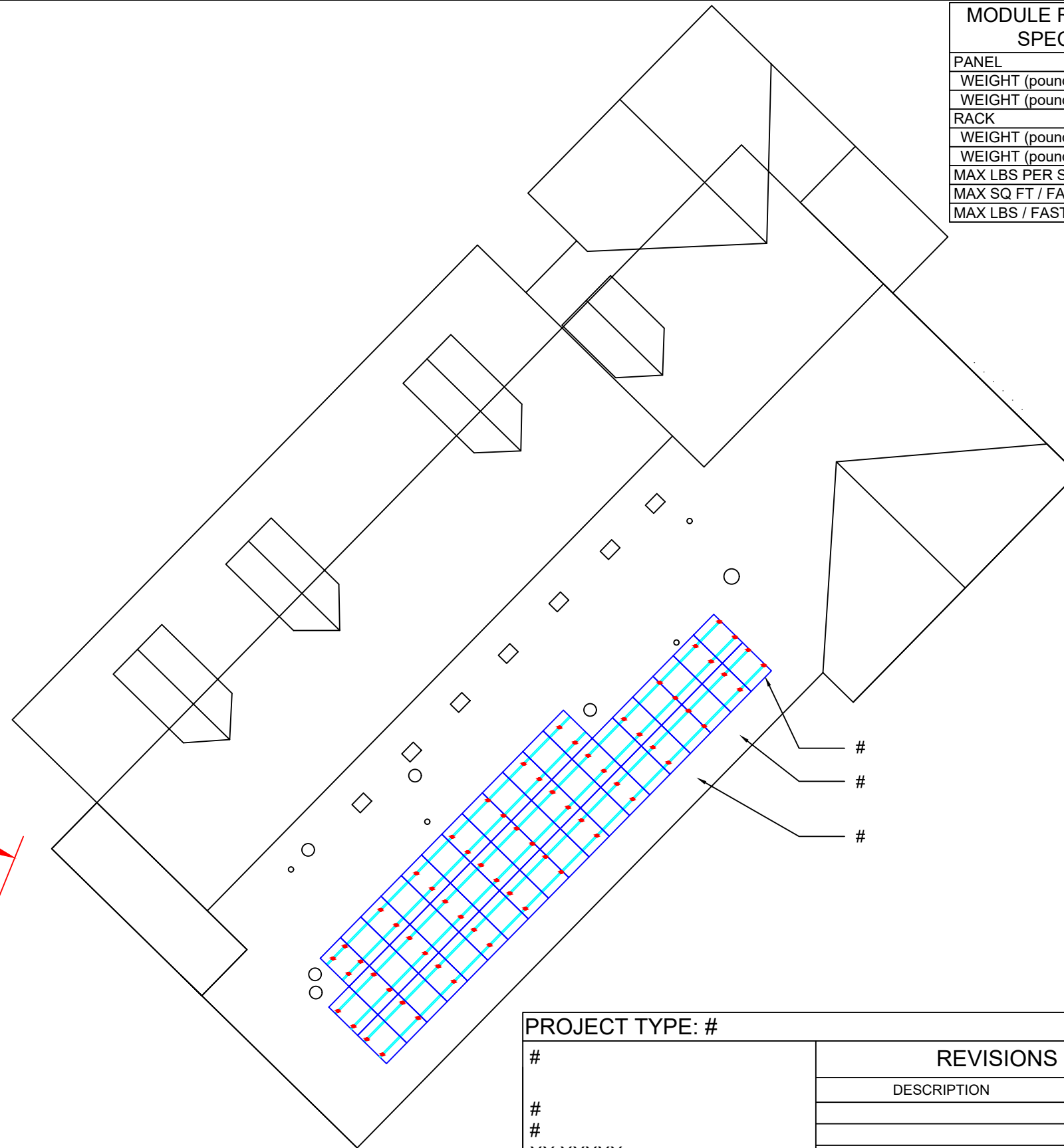
MODULE RACKING WEIGHT SPECIFICATIONS	
PANEL	
WEIGHT (pounds)	#
WEIGHT (pounds) ## / ##### SQ FT	####
RACK	
WEIGHT (pounds / lin. ft.)	#
WEIGHT (pounds) / SQ FT	# LBS
MAX LBS PER SQ FT	# LBS
MAX SQ FT / FASTENER	# sq ft
MAX LBS / FASTENER	# LBS



ROOF ATTACHMENT DETAIL
Scale: #



ROOF FRAMING DETAIL
Scale: #



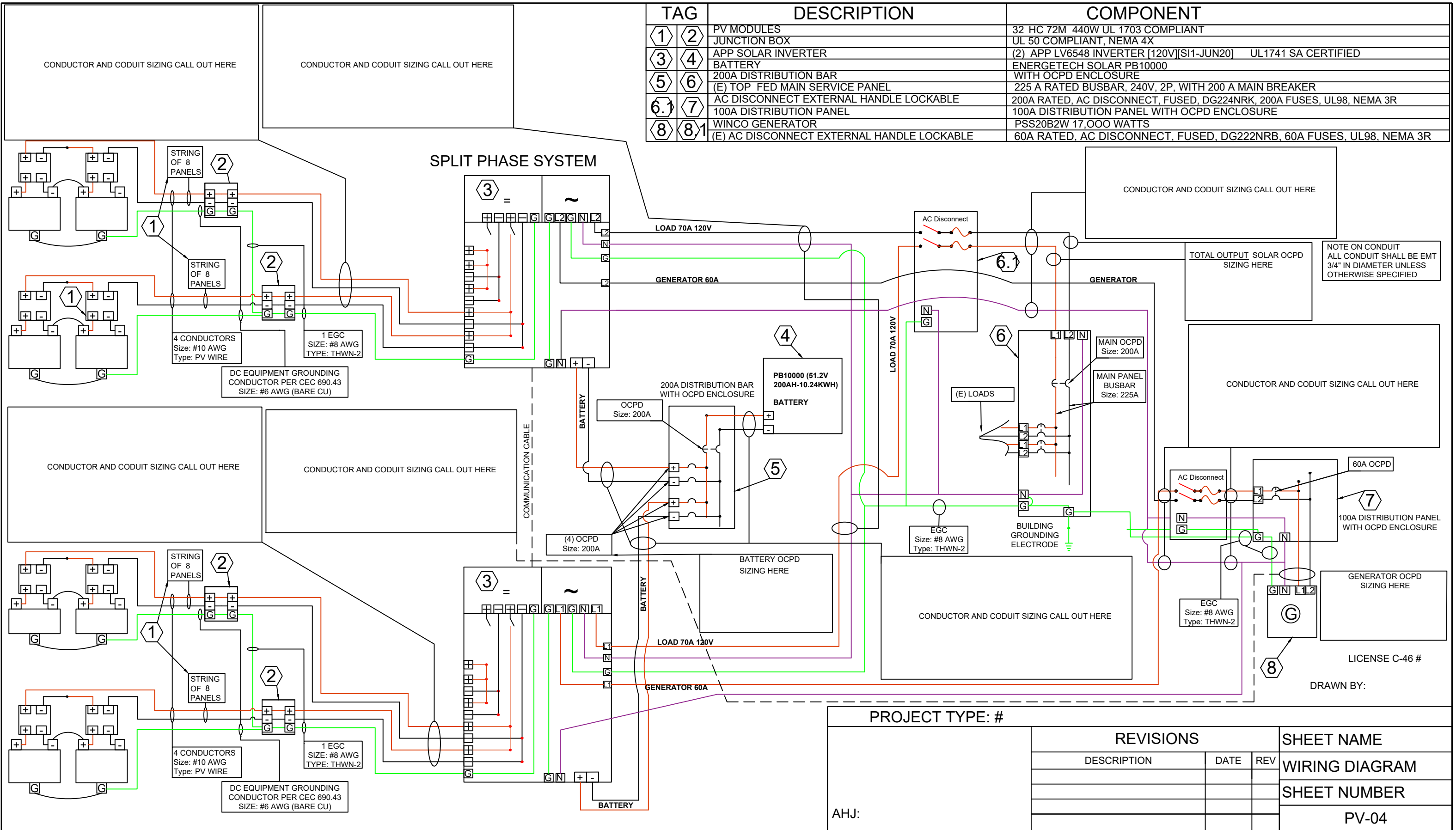
Scale: #

LICENSE C-46 #

DRAWN BY:

PROJECT TYPE: #				
# # # XX XXXXX AHJ: NEVER COUNTY	REVISIONS			SHEET NAME
	DESCRIPTION	DATE	REV	MOUNTING DETAIL
				SHEET NUMBER
				PV-03

TAG		DESCRIPTION	COMPONENT
①	②	PV MODULES	32 HC 72M 440W UL 1703 COMPLIANT
		JUNCTION BOX	UL 50 COMPLIANT, NEMA 4X
③	④	APP SOLAR INVERTER	(2) APP LV6548 INVERTER [120V][SI1-JUN20] UL1741 SA CERTIFIED
		BATTERY	ENERGETECH SOLAR PB10000
⑤	⑥	200A DISTRIBUTION BAR	WITH OCPD ENCLOSURE
		(E) TOP FED MAIN SERVICE PANEL	225 A RATED BUSBAR, 240V, 2P, WITH 200 A MAIN BREAKER
⑥	⑦	AC DISCONNECT EXTERNAL HANDLE LOCKABLE	200A RATED, AC DISCONNECT, FUSED, DG224NRK, 200A FUSES, UL98, NEMA 3R
		100A DISTRIBUTION PANEL	100A DISTRIBUTION PANEL WITH OCPD ENCLOSURE
⑧	⑧	WINCO GENERATOR	PSS20B2W 17,000 WATTS
		(E) AC DISCONNECT EXTERNAL HANDLE LOCKABLE	60A RATED, AC DISCONNECT, FUSED, DG222NRB, 60A FUSES, UL98, NEMA 3R



NOTE ON CONDUIT
ALL CONDUIT SHALL BE EMT
3/4" IN DIAMETER UNLESS
OTHERWISE SPECIFIED

GENERATOR OCPD
SIZING HERE

LICENSE C-46 #

DRAWN BY:

AHJ:	PROJECT TYPE: #			REVISIONS		SHEET NAME
				DESCRIPTION	DATE	REV
						SHEET NUMBER
						PV-04

SOLAR PV SYSTEM EQUIPPED WITH RAPID SHUTDOWN

TURN RAPID SHUTDOWN SWITCH TO THE "OFF" POSITION TO SHUTDOWN PV SYSTEM AND REDUCE SHOCK HAZARD IN ARRAY

LABEL 1
AT RAPID SHUTDOWN SYSTEM
[CEC 690.56(C)(1)(A)]

WARNING
ELECTRIC SHOCK HAZARD
TERMINALS ON BOTH LINE AND LOAD SIDES MAY BE ENERGIZED IN THE OPEN POSITION

LABEL 2
AT EACH AC DISCONNECTING MEANS
[CEC 690.13(B)]

PHOTOVOLTAIC AC DISCONNECT

RATED AC OUTPUT CURRENT: 52.08A
NOMINAL OPERATING AC VOLTAGE: 240V

LABEL 3
AT EACH AC DISCONNECTING MEANS
[CEC 690.13(B) AND 690.54]

WARNING
TRI POWER SOURCES
SECOND SOURCE IS PHOTOVOLTAIC SYSTEM

LABEL 4
AT LOAD CENTER & MAIN SERVICE PANEL
[CEC 705.12(B)(3)]

LABELING NOTES
1. LABELING REQUIREMENTS BASED ON THE CALIFORNIA ELECTRICAL CODE, INTERNATIONAL FIRE CODE 605.11, OSHA STANDARD 1910.145, CCR TITLE 8 §3340, ANSI Z535.4-2011
2. MATERIAL BASED ON THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION.
3. LABELS TO BE OF SUFFICIENT DURABILITY TO WITHSTAND THE ENVIRONMENT INVOLVED.
4. LABELS TO BE A MINIMUM LETTER HEIGHT OF 3/8" AND PERMANENTLY AFFIXED.
5. ALERTING WORDS TO BE COLOR CODED. "DANGER" WILL HAVE RED BACKGROUND; "WARNING" WILL HAVE ORANGE BACKGROUND; "CAUTION" WILL HAVE YELLOW BACKGROUND.[ANSI Z535.4-2011]

CAUTION
PHOTOVOLTAIC SYSTEM
CIRCUIT IS BACKFED

LABEL 5
AT MAIN SERVICE PANEL, PULL BOXES
[NEC 705.12(B)(3)]

WARNING: PHOTOVOLTAIC POWER SOURCE

LABEL 6
AT EXPOSED RACEWAYS, CABLE TRAYS, AND OTHER WIRING METHODS; SPACED AT MAXIMUM 10FT SECTION OR WHERE SEPARATED BY ENCLOSURES, WALLS, PARTITIONS, CEILINGS, OR FLOORS. [CEC 690.31(G)(3)]

WARNING
POWER SOURCE OUTPUT
CONNECTION - DO NOT RELOCATE
THIS OVERCURRENT DEVICE

LABEL 7
AT POINT OF INTERCONNECTION
OVERCURRENT DEVICE
[CEC 705.12(B)(2)(3)(B)]

RAPID SHUTDOWN SWITCH FOR SOLAR PV SYSTEM

LABEL 8
AT RAPID SHUTDOWN SWITCH
[CEC 690.56(C)(3)]

DIRECTORY
A PERMANENT PLAQUE OR DIRECTORY PROVIDING THE LOCATION OF ALL ELECTRIC POWER SOURCE DISCONNECTING MEANS SHALL BE PROVIDED AT EACH SERVICE EQUIPMENT LOCATION AND PV SYSTEM DISCONNECTING MEANS IN ACCORDANCE WITH CEC 705.10. PV SYSTEM EQUIPMENT AND

SOLAR PV SYSTEM EQUIPPED WITH RAPID SHUTDOWN

TURN RAPID SHUTDOWN SWITCH TO THE "OFF" POSITION, TO SHUTDOWN CONDUCTORS OUTSIDE THE ARRAY. CONDUCTORS WITHIN ARRAY REMAIN ENERGIZED IN SUNLIGHT

AT RAPID SHUTDOWN SYSTEM
[CEC 690.56(C)(1)(B)]

LABELING

LETTERING TO BE AT LEAST 3/8" WHITE ON RED BACKGROUND; REFLECTIVE, UV RESISTANT STICKERS. [CEC 690.31(G)(4)]

SOLAR ONLY LOAD CENTER DO NOT ADD LOADS

APPLY TO:
SOLAR LOAD CENTER

NO BRANCH CIRCUIT LOADS LARGER THAN 30A TO BE INSTALLED IN THIS SUB PANEL

APPLY TO:
BACKUP SUB PANEL

ENERGY STORAGE SYSTEM DISCONNECT

NOMINAL VOLTAGE: 240 VAC
MAX AVAILABLE ISC: 32 AAC
ISC CLEAR TIME: 67 MS
DATE:

REQ'D BY CEC 706.7(D)
APPLY TO:
BATTERY

WARNING DC PHOTOVOLTAIC POWER SOURCE
RATED MPP VOLTAGE = # VDC
MAX SYSTEM VOLTAGE = # VDC
RATED MPP CURRENT = # AMPS
SHORT CIRCUIT CURRENT = # AMPS

CAUTION
MAIN BREAKER HAS BEEN DERATED FOR SOLAR SYSTEM
REPLACEMENT MUST BE SAME RATING/SIZE

SOLAR ONLY LOAD CENTER DO NOT ADD LOADS

APPLY TO:
COMBINER BOX

"CAUTION"
MULTIPE SOURCES OF POWER

LABEL 8
A PERMANENT PLAQUE OR DIRECTORY SHALL BE INSTALLED AT EACH SERVICE EQUIPMENT LOCATION, OR AT AN APPROVED READILY VISIBLE LOCATION. THE PLAQUE OR DIRECTORY SHALL DENOTE THE LOCATION OF EACH POWER SOURCE DISCONNECTING MEANS FOR THE BUILDING OR STRUCTURE AND BE GROUPED WITH OTHER PLAQUES OR DIRECTORIES FOR OTHER ON-SITE SOURCES. [CEC 705.10]

LICENSE C-46 #

DRAWN BY:

PROJECT TYPE: #				
#	REVISIONS			SHEET NAME
	DESCRIPTION	DATE	REV	LABELING
#				SHEET NUMBER
#				PV-05
XX XXXXX				
AHJ: NEVER COUNTY				

CAUTION

POWER TO THIS BUILDING IS
ALSO SUPPLIED FROM THE
FOLLOWING SOURCE(S) WITH
DISCONNECTS LOCATED AS
SHOWN.

