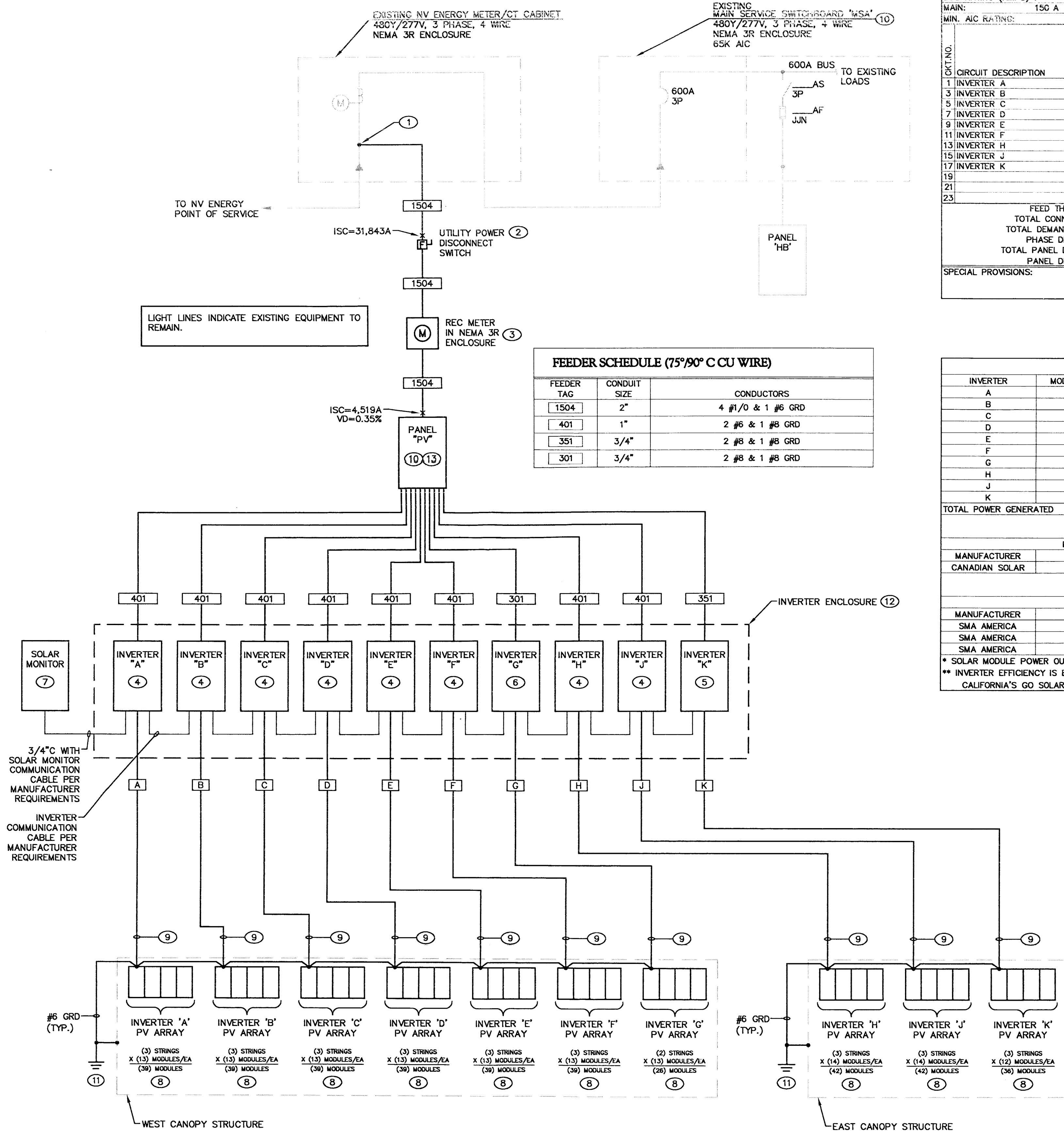




NOTES TO SINGLE LINE DIAGRAM

- PROVIDE CONNECTION TO SUPPLY SIDE OF SERVICE DISCONNECT PER NEC 690.6(A).
- DISCONNECT SWITCH SHALL BE 480V, 200A, 3P, NEMA 3R FUSIBLE DISCONNECT SWITCH, WITH 150A TYPE RK5 FUSES, AND SHALL COMPLY WITH NV ENERGY ELECTRIC SERVICE REQUIREMENTS (ESR). INSTALLATION AND LABELING SHALL COMPLY WITH NV ENERGY ESR #RE-3.
- REC METER, INSTALLATION AND LABELING SHALL COMPLY WITH NV ENERGY ESR #RE-3. LOCATE METER WITHIN 10 FEET OF EXISTING NV ENERGY METER AT EXISTING MAIN SERVICE SWITCHBOARD.
- INVERTER SHALL BE SUNNY BOY 8000US (8.0KW MAX AC, 277V, 1 PHASE UTILITY-INTERACTIVE OUTPUT) WITH INTEGRAL DC DISCONNECT SWITCH. INVERTER SHALL INCLUDE AUTOMATIC VOLTAGE SENSING AND REGULATION TO KEEP PHASE VOLTAGES BALANCED AT PANEL "PV" PER NEC 690.63(A).
- INVERTER SHALL BE SUNNY BOY 7000US (7.0KW MAX AC, 277V, 1 PHASE UTILITY-INTERACTIVE OUTPUT) WITH INTEGRAL DC DISCONNECT SWITCH. INVERTER SHALL INCLUDE AUTOMATIC VOLTAGE SENSING AND REGULATION TO KEEP PHASE VOLTAGES BALANCED AT PANEL "PV" PER NEC 690.63(A).
- INVERTER SHALL BE SUNNY BOY 6000US (6KW MAX AC, 277V, 1 PHASE UTILITY-INTERACTIVE OUTPUT) WITH INTEGRAL DC DISCONNECT SWITCH. INVERTER SHALL INCLUDE AUTOMATIC VOLTAGE SENSING AND REGULATION TO KEEP PHASE VOLTAGES BALANCED AT PANEL "PV" PER NEC 690.63(A).
- PROVIDE AND INSTALL SOLAR PV MONITORING SYSTEM (SUNNY WEBBOX) WITH CONNECTION OF COMMUNICATION CABLE TO INVERTERS AND COMMUNICATION CONNECTION TO INTERNET SERVICE. PROVIDE COMMUNICATION CABLING PER MANUFACTURER'S RECOMMENDATIONS.
- PV MODULES SHALL BE CANADIAN SOLAR CS6P-235P RACK MOUNTED MODULES (PMAX=235W, ISC=8.46A, VOC=36.9V). PROVIDE CUSTOM RACKING SYSTEM FOR MODULE SUPPORT AS REQUIRED. COORDINATE INSTALLATION REQUIREMENTS WITH CANOPY STRUCTURE MANUFACTURER. PROVIDE #6 AWG EQUIPMENT GROUNDING CONDUCTOR FOR BONDING OF EACH ROW OF PV MODULE FRAMES PER NEC 690.45. INDIVIDUAL PV MODULE FRAMES IN CONTINUOUS ROWS SHALL BE FASTENED TOGETHER WITH MECHANICAL EQUIPMENT BONDING JUMPERS (UL 467 COMPLIANT).
- PHOTOVOLTAIC MODULES, ASSOCIATED EQUIPMENT AND INSTALLATION SHALL COMPLY WITH NEC ARTICLE 690. PROVIDE ALL DC SYSTEM WIRING FROM PV MODULES AND COMBINER BOXES TO DC DISCONNECT SWITCH AND INVERTER AS REQUIRED. COORDINATE REQUIREMENTS WITH MANUFACTURER. PROVIDE EQUIPMENT GROUNDING AT PARKING CANOPY PER 690.43 AS REQUIRED.
- PROVIDE PLAQUE AT MAIN SERVICE MSA, AND PANEL PV INDICATING LOCATION OF ALL OTHER POWER SOURCES (MSA AND PANEL PV) PER NEC 705.10
- PROVIDE GROUNDING ELECTRODE FOR CARPORT CANOPY STRUCTURE PER NEC 250.32(A). GROUNDING ELECTRODE SHALL CONSIST OF 20' OF #4 SOLID BARE COPPER INSTALLED PER NEC 250.52(A)(3). ELECTRODE SHALL BE INSTALLED IN CARPORT FOUNDATION NEAREST COMBINER BOX (WHERE OCCURS) OR NEAREST INVERTER WHERE NO COMBINER BOX IS REQUIRED. PROVIDE BOND TO FEEDER EQUIPMENT GROUND FROM PANEL PV.
- INVERTERS ARE NEMA 3R RATED. INSTALLATION INSIDE ENCLOSURE SHALL BE SUITABLE FOR WET LOCATION SO THAT ENCLOSURE SHALL NOT BE REQUIRED TO BE NEMA 3R RATED.
- PANELBOARD TO BE SERIES RATED WITH RK5 FUSING OVERCURRENT PROTECTION IN MAIN DISCONNECT SWITCH. DISCONNECT SWITCH SHALL BE LABELED PER NEC 110.22 AND PANELBOARD SHALL BE LABELED PER NEC 240.86.

PARTIAL ELECTRICAL SINGLE LINE DIAGRAM

SCALE: NONE

PANELBOARD										(NEW PANELBOARD)																																							
PV NEMA 3R																																																	
VOLTS: 480Y/277V, 3 PH, 4W SURFACE MOUNT																																																	
BUS RATING (AMPS): 150 BOLT ON CIRCUIT BREAKERS																																																	
MAIN: 150A MOE COPPER BUS										LOCATION																																							
MIN. AIC RATING: 14K										INVERTER CABINET																																							
CIRCUIT NO.		CIRCUIT DESCRIPTION		BKR. SIZE		LOADS (VA)						LOAD TYPE		BKR. SIZE		LOADS (VA)						LOAD TYPE		CIRCUIT DESCRIPTION		CIRCUIT NO.																							
						LOADS (VA)										LOADS (VA)																																	
						A		B		C								A		B		C																											
1		INVERTER A		40		1		C		8000		8000						A		B		C								2																			
2		INVERTER B		40		1		C		8000		8000						A		B		C								3																			
5		INVERTER C		40		1		C		8000		8000						A		B		C								6																			
7		INVERTER D		40		1		C		8000		8000						A		B		C								8																			
9		INVERTER E		40		1		C		8000		8000						A		B		C								10																			
11		INVERTER F		40		1		C		8000		8000						A		B		C								12																			
13		INVERTER H		40		1		C		8000		8000						A		B		C								14																			
15		INVERTER J		40		1		C		8000		8000						A		B		C								16																			
17		INVERTER K		35		1		C		7000		7000						A		B		C								18																			
19																		A		B		C								20																			
21																		A		B		C								22																			
23																		A		B		C								24																			
FEED THROUGH LOAD										8.33% PERCENT BALANCE										LOAD ABBREVIATIONS AND DEMAND FACTORS:																													
TOTAL CONN. LOAD (VA)										24000										24000										29000										L=CONTINUOUS LOAD=125%, K=KITCHEN EQUIP.=100%									
TOTAL DEMAND LOAD (VA)										30000										30000										36250										M=LIGHTING LOAD=125%, LM=LARGEST MOTOR=125%,									
PHASE DEMAND AMPS										108										108										131										N=MOTOR LOAD=100%, N=NON-CONTINUOUS LOAD=100%									
TOTAL PANEL DEMAND (VA)										96250										96250																				P=PANEL LOAD=100%, R=RECEPTACLE LOAD=100%									
PANEL DEMAND AMPS										131										131																													
SPECIAL PROVISIONS:																																																	