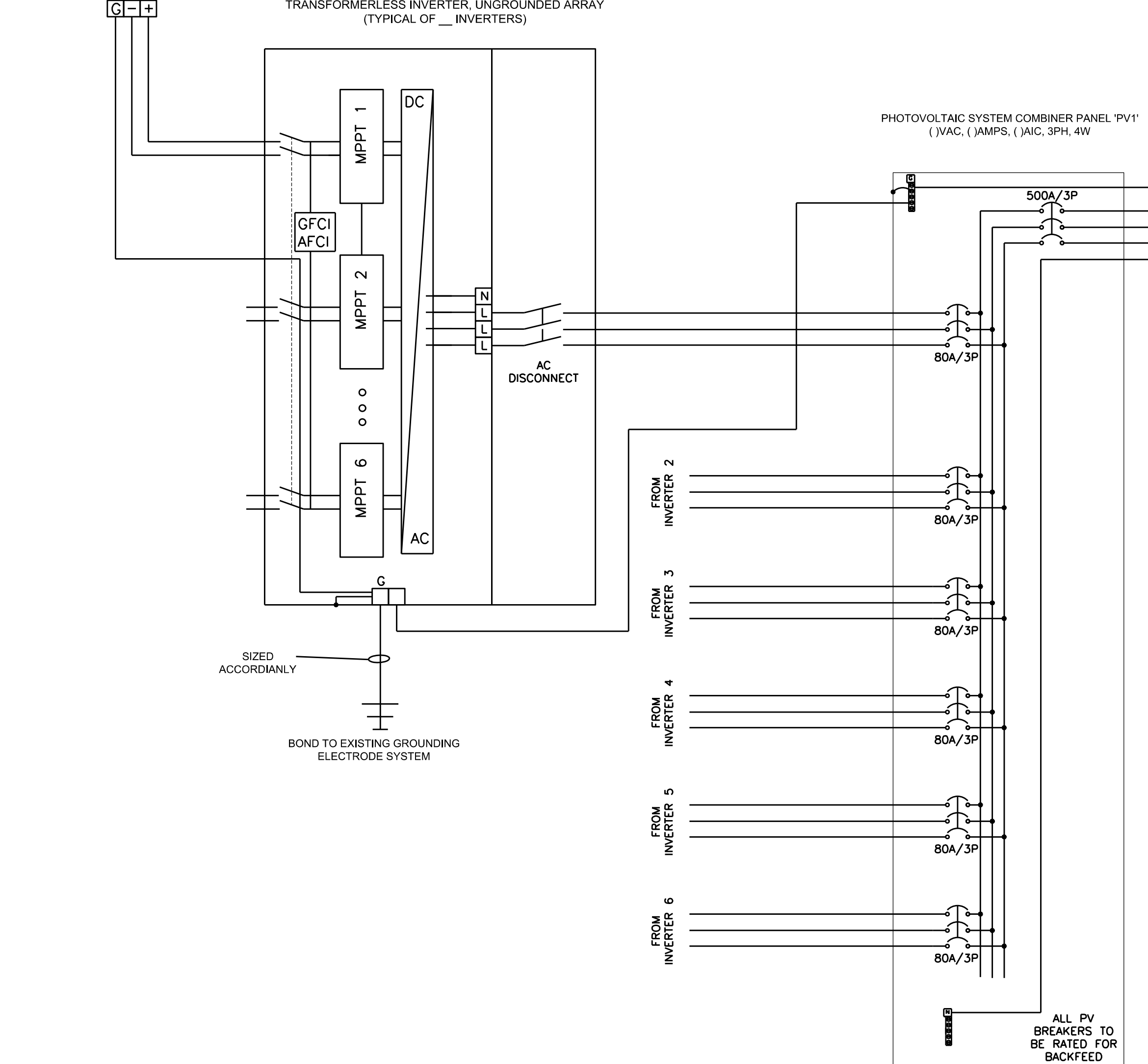


STANDARD THREE LINE DRAWING TO SHOW SRP REQUIREMENTS FOR A CLASS III PV SYSTEM OVER 1MW

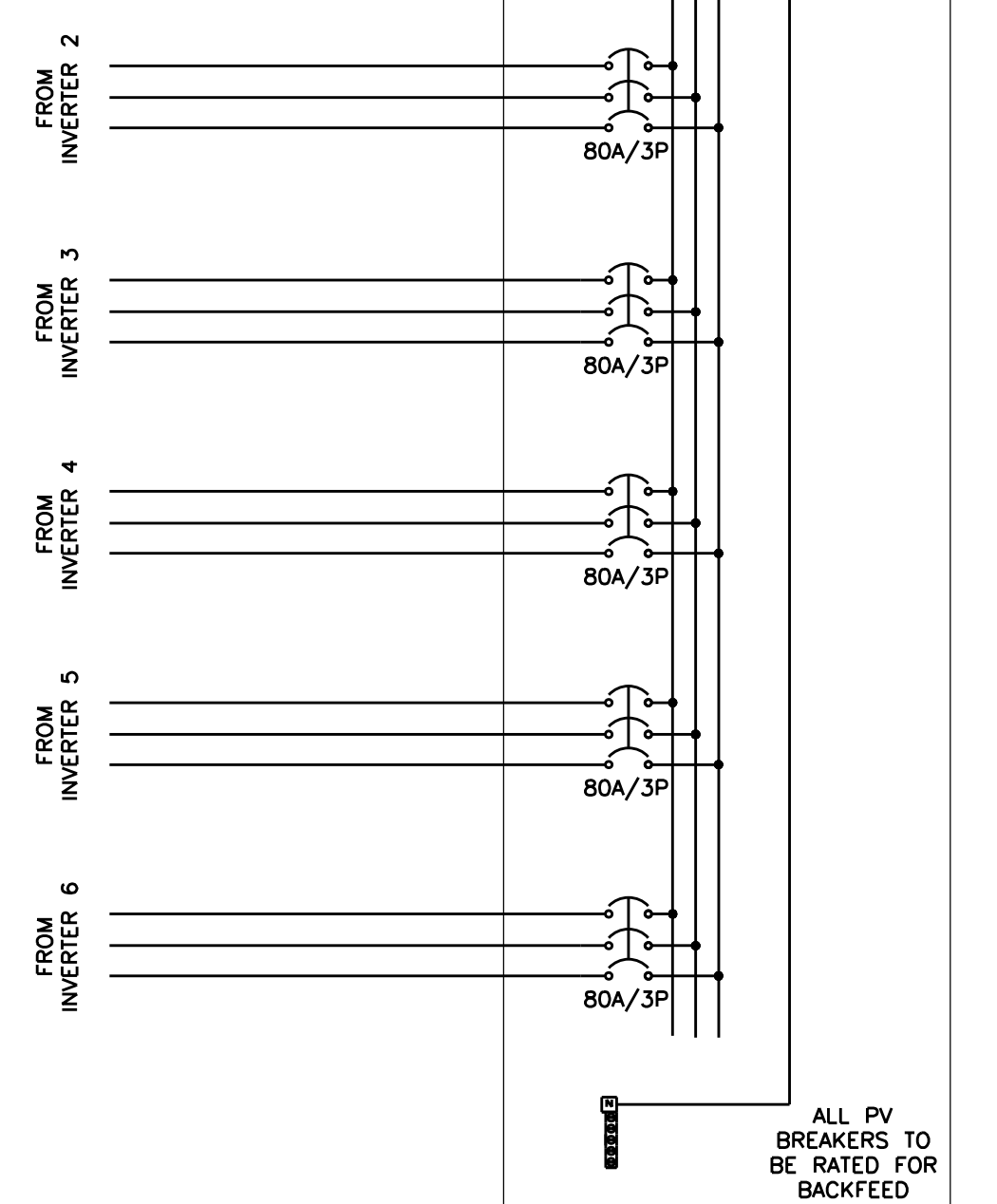
COMPLETE PV ARRAY
 (MAKE AND MODEL OF PV MODULES)
 TOTAL POWER: _____ DC WATTS

PV STRING #1
 _____WATT PHOTOVOLTAIC SOURCE CIRCUIT
 TYPICAL OF _____ STRINGS
 SEE PV ARRAY DRAWING FOR
 WIRING DETAIL

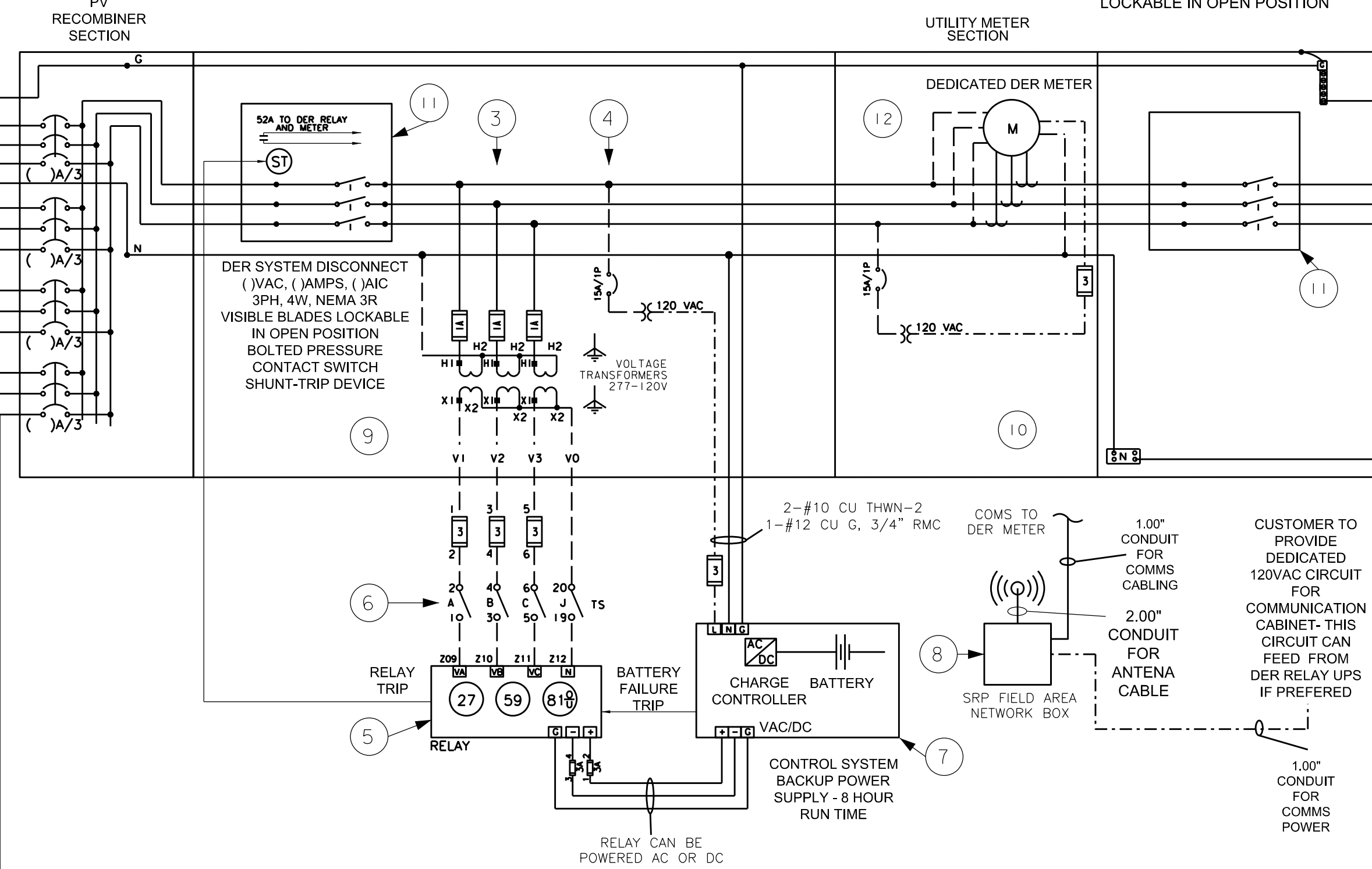
GRID INTERTIE INVERTER 1 (#1/12)
 UL 1741 LISTED
 150 TO 1000 VDC TO 480 VAC 3Ø, 4W
 TRANSFORMERLESS INVERTER, UNGROUNDED ARRAY
 (TYPICAL OF _____ INVERTERS)



PHOTOVOLTAIC SYSTEM COMBINER PANEL 'PV1'
 (VAC, ()Amps, ()AIC, 3PH, 4W)



PHOTOVOLTAIC SYSTEM RE-COMBINER AND SERVICE PANEL
 (VAC, ()Amps, ()AIC, 3PH, 4W, NEMA 3R



RELAY NOTES:

- RELAY ENFORCES IEEE 1547-2018 CATEGORY III AT THE POINT OF COMMON COUPLING.
- IN THE CASE OF AN ANSI ELEMENT EVENT, THE RELAY WILL SHUNT TRIP THE DER DISCONNECT SWITCH AND PROVIDE A SOFTWARE B6 LOCKOUT.
- THE RELAY WILL TRIP THE SYSTEM GENERATION IN THE EVENT OF CATEGORY III ABNORMAL CONDITIONS FROM IEEE-1547-2018 AND/OR BATTERY TROUBLE.
- LOCKOUT CAN ONLY BE CLEARED MANUALLY AFTER RESTORATION OF GRID TO ANSI THRESHOLDS.
- PROTECTION SYSTEM TO BE TESTED EVERY 5 YEARS BY AN APPROVED TESTING AGENCY.
- VERIFY UPS AND BATTERY VOLTAGE ARE SAME AS RELAY POWER AND CONTROL VOLTAGE AND VERIFY ALARM CONTACT VOLTAGE FROM UPS IS APPROPRIATE FOR RELAY INPUT.
- LABE SENSING POTENTIAL CUTOUPS AS WELL AS 52A STATUS AND TRIP CUTOUPS WITH PLACARDS MOUNTED ABOVE CUTOUPS.
- SENSING POTENTIAL TEST SWITCH SHALL BE SEPERATE FROM INPUT AND OUTPUT CUTOUPS.
- ALL WIRES ASSOCIATED WITH RELAY SYSTEM SHALL BE LABELLED AND LANDED ON TERMINAL BOARDS TO FACILITATE WIRING SYSTEM CORRECTLY. WIRE NUTS SHALL NOT BE USED IN THIS SCHEME.

UTILITY AC DISCONNECT
 (VAC, ()Amps, ()AIC
 3PH, 4W, NEMA 3R
 VISIBLE BLADES
 LOCKABLE IN OPEN POSITION

OVERCURRENT PROTECTION DEVICE
 (VAC, ()Amps, ()AIC
 3PH, 4W, NEMA 3R
 VISIBLE BLADES
 LOCKABLE IN OPEN POSITION

IDENTIFY WIRE TYPE
 # CONDUCTORS PHASES AND NEUTRAL
 DISTANCE FROM SES TO DER BOARD

EXISTING ELECTRICAL SERVICE ENTRANCE
 AND DISTRIBUTION SECTION
 (VAC, ()Amps, ()AIC

KEYED NOTES:

- CT RATED BI-DIRECTIONAL UTILITY METER TO BE INSTALLED BY UTILITY COMPANY.
- SUPPLY-SIDE CONNECTION IS INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. SUPPLY-SIDE TAP ENTERS THROUGH BACK OR BOTTOM OF SES TO AVOID UTILITY SECTIONS. DOCUMENTATION IS INCLUDED WITH THE SRP INTERCONNECTION APPLICATION.
- PROTECTION RELAY POTENTIALS TO BE UPSTREAM OF DISCONNECT SWITCH SO THAT RELAY POTENTIALS ARE ENERGIZED WHEN DISCONNECT IS OPENED AND GRID POWER IS PRESENT.
- PROTECTION RELAY POWER TO BE UPSTREAM OF DISCONNECT SWITCH SO THAT RELAY POWER IS ENERGIZED WHEN DISCONNECT IS OPENED AND GRID POWER IS PRESENT.
- SUPPLEMENTAL DER DEVICE (SEL-751 SHOWN FOR EXAMPLE).
- DER RELAY SENSING POTENTIALS SHALL BE LANDED ON FT-1 STYLE TEST SWITCH AND SHALL NOT SHARE SWITCH WITH 52A AND SHUNT TRIP CUTOUP. 52A AND SHUNT TRIP WIRES SHALL BE LANDED ON SEPERATE CUTOUP PER RELAY SCHEMATIC. TEST SWITCH AND CUTOUP SWITCH SHALL HAVE UNIQUE PLACARDS IDENTIFYING FUNCTIONALITY OF SWITCH. EACH SWITCH BLADE SHALL BE IDENTIFIED WITH FUNCTIONALITY OF BLADE AND LABELLED CORRECTLY BEFORE PTO WILL BE ISSUED.
- DER SWITCHBOARD CPT, GFR CPT AND RELAY UPS POWER SUPPLIES SHALL NOT PARALLEL IF SUPPLIES ARE SOURCED FROM SEPERATE TRANSFORMERS.
- CONTACT SRP TELECOM DEPARTMENT FOR CONSTRUCTION SPECIFICATION AND SAMPLE DRAWING OF THE FAN CABINET BOX. CABINET SHALL BE WITHIN TEN FEET OF THE DEDICATED DER METER SOCKET.
- DER SWITCHBOARD AND RELAY COMPARTMENT WIRING SHALL BE LABELLED AT EACH END OF WIRE.
- VISIBLE OPEN (DER SYSTEM DISCONNECT AND UTILITY AC DISCONNECT) REQUIRED ON BOTH SIDES OF DER METER IF DER SYSTEM IS OVER 240V OR SPLIT BUS.
- EITHER THE DER SYSTEM DISCONNECT SWITCH OR THE UTILITY AC DISCONNECT SWITCH MAY BE USED FOR SHUNT TRIP REQUIREMENTS.
- DEDICATED DER METER SOCKET SHALL BE FOUR-WIRE WYE-STYLE 13 JAW CT RATED SOCKET

NOTES:

- WITHIN EACH INDIVIDUAL POWERCLERK APPLICATION, A SITE PLAN, ONE LINE, THREE LINE, AND LABEL SHEET SPECIFIC FOR EACH PROJECT WILL NEED TO BE UPLOADED INTO POWERCLERK FOR ENGINEERING REVIEW. IN ADDITION FOR SYSTEMS OVER 1MW A UNIQUE PROTECTION SCHEMATIC WILL BE REQUIRED FOR EACH PROJECT SUBMITTED IN POWER CLERK.
- SYSTEMS INSTALLED IN AREAS WHERE THE AHJ DOES NOT PROVIDE A CITY CLEARANCE, DESIGN DRAWINGS MUST BE STAMPED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF ARIZONA, AND THE CUSTOMER MUST PROVIDE A SIGNED CERTIFICATE-IN-LIEU OF CLEARANCE FOLLOWING COMPLETION OF ALL WORK.

REV. NO.	001	PROJECT NO.	04/2021	DATE	MCA	MCA	PM	PM
DSGN ENGR		DFTR		DESIGN CHECK		ISSUE APPRVD		



XXX KW DC/ XXXKW AC PV
 THREE LINE DIAGRAM
 ADDRESS LINE 1
 ADDRESS LINE 2

THIS SAMPLE DRAWING IS FOR ILLUSTRATION PURPOSES ONLY AND IS NOT TO BE USED FOR DESIGN OR CONSTRUCTION. THIS DRAWING AND ITS SUITABILITY FOR END USE IS NOT IMPLIED. THE INTENT IS ONLY TO ILLUSTRATE TYPICAL MINIMUM INFORMATION REQUIRED AT THE TIME OF APPLICATION TO SRP. ADDITIONAL INFORMATION MAY BE REQUIRED

SCALE: NONE	0L	E8	30x42	CLASS III 1MW
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