PROJECT DESCRIPTION

THIS STRUCTURE MOUNTED PHOTOVOLTAIC (PV) SYSTEM IS TO BE INSTALLED AT THE OFFICE BUILDING IN MORENO VALLEY, CALIFORNIA. THE ENERGY PRODUCED BY THE PV SYSTEM SHALL BE INTERCONNECTED WITH THE UTILITY GRID THROUGH THE EXISTING ON-SITE ELECTRICAL EQUIPMENT VIA A SUPPLY SIDE CONNECTION IN THE MAIN SERVICE PANEL. THIS PROJECT INCLUDES A 87 KW, 193.5 KWH BANK OF STORAGE BATTERIES.

SHEET INDEX

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E1.3 CONSTRUCTION DETAILS
E2.0 ELECTRICAL DIAGRAM
E2.1 SAFETY PLACARDS & ELECTRICAL CALCS
D1.0 EQUIPMENT DATA SHEETS

SCOPE OF WORK

(2044) PV MODULES (TOTAL: 43,869 SQ. FT.)
(11) 40.0 kW INVERTERS
(6) 33.0 kW INVERTERS
(3) 29 kW, 64.5 kWh AC BATTERY UNITS
(1) BATTERY ENCLOSURE
(1) SWITCHGEAR, 480 VAC, NEMA 3R
(1) AC COMBINER PANEL, 480 VAC, NEMA 3R
(1) AC DISCONNECT, 480 VAC, NEMA 1
(1) BESS METER, 480 VAC, NEMA 3R
(1) PV/BESS METER, 480 VAC, NEMA 3R

SITE SPECIFICATIONS

OCCUPANCY CATEGORY: II
DESIGN WIND SPEED: 110 MPH
EXPOSURE CATEGORY: C
GROUND SNOW LOAD: 0 PSF

GOVERNING CODES

2016 CA ELECTRICAL CODE: § 110, 240, 250, 690, 705
2016 CA BUILDING CODE: § 1507.17, 1510.7, 3111
2016 CA FIRE CODE: § 605.11
UNDERWRITERS LABORATORIES (UL) STANDARDS
OSHA 29 CFR 1910.269

CONSTRUCTION NOTES

1.) CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS PRIOR TO INITIATING CONSTRUCTION.
2.) CONTRACTOR SHALL REVIEW ALL MANUFACTURER INSTALLATION DOCUMENTS PRIOR TO INITIATING CONSTRUCTION.
3.) ALL EQUIPMENT SHALL BE LISTED BY U.L. (OR EQUAL) AND LISTED FOR ITS SPECIFIC APPLICATION.
4.) ALL EQUIPMENT SHALL BE RATED FOR THE ENVIRONMENT IN WHICH IT IS INSTALLED.
5.) ALL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
6.) ACCESS TO ELECTRICAL COMPONENTS OVER 150 VOLTS TO GROUND SHALL BE RESTRICTED TO QUALIFIED PERSONNEL.
7.) ALL CONDUCTORS SHALL BE COPPER, RATED FOR 1000 VOLTS AND 90°C WET ENVIRONMENT, UNLESS OTHERWISE NOTED.
8.) WHERE SIZES OF JUNCTION BOXES, RACEWAYS, AND CONDUITS ARE NOT SPECIFIED, CONTRACTOR SHALL SIZE THEM ACCORDING TO APPLICABLE CODES.
9.) PV MODULE FRAMES SHALL BE BONDED TO RACKING RAIL OR BARE COPPER G.E.C. PER THE MODULE MANUFACTURER'S LISTED INSTRUCTION SHEET.
10.) PV MODULE RACKING RAIL SHALL BE BONDED TO BARE COPPER G.E.C. VIA WEEB LUG, ILSCO GBL-4DBT LAY-IN LUG, OR EQUIVLENT LISTED LUG.
11.) GROUNDING ELECTRODE CONDUCTOR (G.E.C.) SHALL BE CONTINUOUS AND/OR IRREVERSIBLY SPLICED/WELDED.
12.) ALL JUNCTION BOXES, COMBINER BOXES, AND DISCONNECTS SHALL BE INSTALLED IN AN ACCESSIBLE LOCATION.
13.) ROOF ACCESS POINTS SHALL BE AT A STRONG POINT ON THE BUILDING AND NOT REQUIRE THE PLACEMENT OF LADDERS OVER EXTERIOR WALL OPENINGS.
14.) WORKING SPACE AROUND ELECTRICAL EQUIPMENT SHALL COMPLY WITH NEC 110.26

811 Know what's below. Call before you dig.

Project:
MORENO VALLEY, CA 92553

Project Details:
694.96 kWstc, 639.8 kW AC
AHJ: MORENO VALLEY, CITY OF

Engineering Approval:

REVISIONS

DESCRIPTION	DATE	REV
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Sheet Title:
COVER

Sheet Number:
T1.0

Sheet Size:
ARCH D - 36" x 24"

DESIGN & DRAFTING BY:
RICHARD DOBBINS
PV-102216-011268
SepiSolar POWER BY DESIGN

Reviewed & Approved by:
AD

CONTRACTOR NOTES:

1.) THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AND NOTIFY THE SYSTEM DESIGN ENGINEER OF ANY DISCREPANCIES BETWEEN EXISTING CONDITIONS AND DRAWINGS.
2.) THE CONTRACTOR SHALL SUPPLY AND INSTALL ALL WORK AS SHOWN IN THE CONSTRUCTION DOCUMENTS UNLESS OTHERWISE NOTED. ALL WORK SHALL BE PERFORMED IN AN ORDERLY, WORKMAN-LIKE AND SAFE MANNER BY WORKERS SKILLED AND EXPERIENCED IN THEIR TRADES.
3.) THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL INSPECTIONS TO BE WITNESSED BY THE AHJ AND/OR THE OWNER. THE CONTRACTOR SHALL WORK WITH THE OWNER'S INSPECTION AGENCY TO PLAN THE INSPECTIONS, AND NOTIFY ALL PARTIES INVOLVED SUFFICIENTLY IN ADVANCE TO ALLOW THE INSPECTIONS TO TAKE PLACE IN A TIMELY MANNER AND NOT DELAY THE PROGRESS OF THE WORK. THE OWNER AND SYSTEM DESIGN ENGINEER WILL NOT BE RESPONSIBLE FOR SCHEDULING, ARRANGING OR COORDINATING THE INSPECTIONS.
4.) THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING THE AREAS WHERE WORK IS TAKING PLACE, AS WELL AS ANY ADJOINING AREAS WHICH MAY BE AFFECTED BY THE WORK, TO PREVENT SUBJECTING THE OCCUPANTS, STRUCTURES, VEHICLES, EQUIPMENT, OR ANY OTHER PARTS OR CONTENTS OF THE SITE TO HAZARD OR DAMAGE.
5.) CONTRACTOR SHALL FURNISH ALL NECESSARY BOXES, OUTLETS, SUPPORTS, CONDUITS, FITTINGS, AND ACCESSORIES TO FULFILL APPLICABLE CODES, REGULATIONS, BUILDING STANDARDS, AND THE BEST PRACTICE OF THE TRADE FOR THE INSTALLATION OF ELECTRICAL WORK.
6.) THE CONTRACTOR SHALL, AT ALL TIMES DURING THE WORK, MAINTAIN ACCESSIBILITY FROM THE STREET TO ALL FIRE HYDRANTS, POWER OR LIGHT POLES, AND SIMILAR UTILITY AND PUBLIC SERVICE ITEMS WITHIN OR ADJACENT TO THE CONSTRUCTION SITE.
7.) WORK SHALL NOT RESTRICT CLEAR AND UNOBSTRUCTED ACCESS TO ANY WATER OR POWER DISTRIBUITION FACILITIES (POWER POLES, PULLBOXES, TRANSFORMERS, VAULTS, PUMPS, VALVES, METERS, APPURTENANCES, ETC.) OR TO THE LOCATION OF THE HOOKUP.
8.) THE OWNERS AND THE AHJ SHALL BE NOTIFIED IN WRITING IN ADVANCE OF ANY REQUIRED CONSTRUCTION OPERATION THAT WILL INVOLVE INTERRUPTION OF THE HEATING, WATER, FIRE PROTECTION SYSTEMS, TELEPHONE, GAS OR ELECTRICAL SERVICES TO THE OTHER BUILDINGS AND AREAS OF THE SITE. THE CONTRACTOR SHALL COORDINATE ANY REQUIRED SHUTDOWN OF THE UTILITIES WITH THE OWNERS, THE AHJ, AND THE UTILITY COMPANY.
9.) UPON REVIEW OF ELECTRICAL DRAWINGS, THE ELECTRICAL CONTRACTOR SHALL INFORM THE SYSTEM DESIGN ENGINEER OF ANY DISCREPANCIES OR REQUEST CLARIFICATION, IF NECESSARY, CONCERNING THE INTENT OF THE PLANS AND SPECIFICATIONS TO PROVIDE A COMPLETE ELECTRICAL INSTALLATION.
10.) THE CONTRACTOR SHALL COORDINATE HIS WORK WITH OTHER CONTRACTORS WHOSE WORK MIGHT AFFECT THIS INSTALLATION. CONTRACTORS SHALL ARRANGE ALL PARTS OF THIS WORK AND EQUIPMENT IN PROPER RELATION TO THE WORK AND EQUIPMENT OF OTHERS AND WITH BUILDING CONSTRUCTION AND ARCHITECTURAL FINISH SO THAT IT WILL HARMONIZE IN SERVICE AND APPEARANCE.
11.) THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH THE OWNER'S INSPECTION AGENCY TO ARRANGE FOR INSPECTIONS RELATED TO ALL SPECIAL INSPECTIONS IN A TIMELY MANNER, AND SHALL BE PRESENT AS REQUIRED AT THE INSPECTIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSURING THAT THE APPROPRIATE SUBCONTRACTORS ARE PRESENT DURING TESTS AND INSPECTIONS OF THE SYSTEMS FOR WHICH THE SUBCONTRACTORS ARE RESPONSIBLE.

PHOTOVOLTAIC NOTES:

1.) ALL ASPECTS OF WORK RELATED TO THE SOLAR PHOTOVOLTAIC (PV) SYSTEM SHALL BE IN ACCORDANCE WITH ALL STATE AND LOCAL CODES, UTILITY REQUIREMENTS, AND THE NEC, ESPECIALLY ARTICLE 690.
2.) SOLAR PV MODULE FRAMES SHALL BE BONDED TO RACKING RAIL OR BARE COPPER E.G.C. PER THE MODULE MANUFACTURER'S LISTED INSTRUCTION SHEET.
3.) SOLAR PV SYSTEMS SHALL BE GROUNDED IN ACCORDANCE WITH NEC 690 PART V: GROUNDING.
4.) COMBINER BOXES, FUSING, WIRE SIZES, QUANTITIES AND CONDUIT SIZES BETWEEN SOLAR ARRAYS AND INVERTERS TO BE VERIFIED BY CONTRACTOR WITH SOLAR MODULE AND INVERTER MANUFACTURERS BEFORE INSTALLATION.
5.) ALL PV SOURCE CIRCUIT CONDUCTORS AND CONNECTORS SHALL BE SUPPORTED AND SECURED WITHOUT EXCESSIVE STRESS. NO WIRING SHALL BE PERMITTED TO TOUCH THE ROOF SURFACE.
6.) PV SOURCE CIRCUIT CONDUCTORS EXPOSED BETWEEN ARRAYS SHALL BE SECURED ON BOTH SIDES, AND BE PROTECTED FROM PHYSICAL DAMAGE AND ABRASION, INCLUDING FROM EDGES OF RACKING, CHANNEL EDGES, WIRE TRAYS, ETC.
7.) ANY CABLE TIES USED SHALL BE HEAT STABILIZED (-40C TO 105C), UV STABILIZED AND OUTDOOR RATED, SUITABLE AND DURABLE FOR THE ENVIRONMENT AND LIFE OF THE PV SYSTEM.
8.) WHERE EXPOSED TO SUNLIGHT, CONDUCTORS SHALL BE LISTED AND MARKED AS SUNLIGHT RESISTANT.
9.) ALL EQUIPMENT GROUND CONDUCTORS SMALLER THAN AWG #6 SHALL BE PROTECTED FROM PHYSICAL DAMAGE BY AN IDENTIFIED RACEWAY OR CABLE ARMOR UNLESS INSTALLED WITHIN THE HOLLOW SPACES OF THE FRAMING MEMBERS OF BUILDINGS OR STRUCTURES AND WHERE NOT SUBJECT TO PHYSICAL DAMAGE.

EQUIPMENT NOTES:

1.) ALL MATERIALS, SUPPLIES, AND EQUIPMENT SHALL BE LISTED, USED, AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND INSTRUCTIONS, AND APPLICABLE NATIONALLY RECOGNIZED TESTING LABORATORY (NRTL) REQUIREMENTS.
2.) ALL EQUIPMENT SHALL BE RATED FOR THE ENVIRONMENT IN WHICH IT IS INSTALLED.
3.) WORKING SPACE AROUND ELECTRIAL EQUPMENT SHALL COMPLY WITH NEC 110.26.
4.) THE APPROXIMATE LOCATIONS OF ALL JUNCTION BOXES, COMBINER BOXES, CONDUITS, ETC. SHALL BE DETERMINED FROM THE DRAWINGS, AND VERIFIED BY THE CONTRACTOR FOR INSTALLATION.
5.) ALL JUNCTION BOXES, COMBINER BOXES, AND DISCONNECTS SHALL BE INSTALLED IN AN ACCESSIBLE LOCATION.
6.) PROVIDE NEMA 3R RATED EQUIPMENT OR BETTER WHERE EXPOSED TO OUTDOORS.
7.) WHERE SIZES OF RACEWAYS OR BOXES ARE NOT INDICATED ON THE DRAWINGS, THE CONTRACTOR SHALL SIZE THESE ITEMS AS REQUIRED FOR THE INSTALLATION.
8.) ALL VERTICAL RUNS OF CONDUIT OR TUBING TERMINATING IN THE BOTTOM OF WALL BOXES OR CABINETS OR SIMILAR LOCATIONS, SHALL BE PROTECTED FROM THE ENTRANCE OF FOREIGN MATERIAL PRIOR TO THE INSTALLATION OF CONDUCTORS.
9.) METAL RACEWAYS, METAL ENCLOSURES OF ELECTRICAL DEVICES AND EQUIPMENT, MODULE FRAMES, AND OTHER EQUIPMENT SHALL BE COMPLETELY GROUNDED IN ACCORDANCE WITH THE NEC.
10.) PROPER HARDWARE FOR A COMPLETE GROUNDING AND BONDING SYSTEM SHALL BE INSTALLED BY THE CONTRACTOR, IF NECESSARY.
11.) GROUNDING RODS SHALL HAVE A RESISTANCE TO GROUND OF 25 OHMS OR LESS AND SHALL BE 5/8" x 8' MIN, COPPER-BONDED STEEL. ALL GROUND CLAMPS USED SHALL BE UL 467 LISTED.
12.) ALL PVC CONDUIT EXPOSED TO SUNLIGHT SHALL BE SCHEDULE 80 AND MARKED AS SUNLIGHT RESISTANT. ALL UNDERGROUND PVC CONDUIT SHALL BE SCHEDULE 40 OR 80.

ELECTRICAL NOTES:

1.) ELECTRICAL POWER MUST BE SHUT OFF PRIOR TO THE CONTRACTOR PERFORMING ANY WORK IN RACEWAYS WITH LIVE ELECTRICAL CIRCUITS OR ANY OTHER EQUIPMENT. WHEN SWITCHES OR CIRCUIT BREAKERS ARE OPENED FOR WORK ON ELECTRICAL EQUIPMENT OR WIRING, SIGNS OR TAGS SHOULD BE INSTALLED AT THE SWITCH OR BREAKER STATING THAT WORK IS BEING PERFORMED ON THEM. INCLUDE THE TIME, DATE, AND CONTRACTOR'S NAME ON THE SIGN OR TAG. IF DEVICE IS LOCKABLE, IT SHOULD BE PADLOCKED.
2.) THE ELECTRICAL WORK SHALL COMPLY WITH THE REQUIREMENTS OF THE AHJ, NATIONAL FIRE PROTECTION AGENCY (NFPA), NATIONAL ELECTRICAL CODE (NEC), AND OSHA.
3.) PHASING OF NEW CONDUCTORS TO MATCH EXISTING CONDUCTORS. IF INSTALLATING A NEW CIRCUIT, THEN CONTRACTOR SHALL FOLLOW THE PHASING SCHEMES PROVIDED IN THE ELECTRICAL DIAGRAM.
4.) ALL CONDUCTORS SHALL BE COPPER, RATED FOR 90°C WET ENVIRONMENT, AND 1000 VOLTS DC OR 600 VOLTS AC, UNLESS OTHERWISE NOTED.
5.) GROUNDING ELECTRODE CONDUCTOR (G.E.C.) SHALL BE CONTINUOUS AND/OR IRREVERSIBLY SPLICED/WELDED.
6.) FLEXIBLE, FINE-STRANDED CABLES SHALL BE TERMINATED ONLY WITH TERMINALS, LUGS, DEVICES, OR CONNECTORS THAT ARE IDENTIFIED AND LISTED FOR SUCH USE PER NEC 690.31(F).
7.) ALL WIRES SHALL BE IDENTIFIED BY CIRCUITS IN ALL CABINETS, BOXES, WIRING TROUGHS, AND OTHER ENCLOSURES, AND AT ALL TERMINAL POINTS, I.E., RECEPTACLES, MECHANICAL LUGS, COMPRESSION FITTINGS. THE CIRCUIT DESIGNATIONS SHALL BE AS SHOWN ON THE CONTRACT DRAWINGS OR AS DIRECTED BY THE SYSTEM DESIGN ENGINEER. LABELS OR TAGS SHALL BE APPLIED TO WIRES SO THAT THEY WILL BE READILY VISIBLE.
8.) FUSES FOR SWITCHES SHALL BE CURRENT-LIMITING TYPE WITH A MINIMUM INTERRUPTING CAPACITY OF 200,000 AMPERES RMS (UNLESS OTHERWISE NOTED) AND OF THE CONTINUOUS CURRENT RATINGS AS INDICATED ON THE DRAWINGS OR AS RECOMMENDED BY THE MANUFACTURER.

ELECTRICAL LEGEND

- = CIRCUIT CONDUCTORS
- = EQUIPMENT GROUNDING CONDUCTORS
- = TERMINAL BLOCK
- = FUSE
- = CIRCUIT BREAKER
- = THROW SWITCH (KNIFE-BLADE)
- = RECLOSING CIRCUIT BREAKER
- = RECLOSING DISCONNECT/RELAY
- = GROUNDING ELECTRODE SYSTEM
- = PV MODULE
- = INVERTER
- = MICROINVERTER
- = POWER OPTIMIZER
- = METER/MONITORING DEVICE
- = TRANSFORMER
- = GENERATOR
- = TRANSFER SWITCH
- = BATTERY
- = CURRENT TRANSFORMER (CT)

SITE/ARRAY PLAN LEGEND

- = CONDUIT ROUTES
- = CONDUIT ROUTES (UGND OR INDOORS)
- = PV MODULE
- = PV EQUIPMENT
- = RAFTER/TRUSS
- = STANDING SEAM
- = VENT
- = CHIMNEY
- = SKYLIGHT
- = HVAC UNIT
- = ROOF HATCH
- = PV ATTACHMENT FLASHING
- = RACKING RAIL
- = SETBACKS/PATHWAYS
- = SWINGING DOOR
- = TREE/BUSH

ELECTRICAL LEGEND - DC

- + = POSITIVE TERMINAL (PHASED RED)
- − = NEGATIVE TERMINAL (PHASED BLACK)
- G = GROUND TERMINAL (PHASED GREEN)

ELEC. LEGEND - 480 VAC

- L1 = LINE 1 TERMINAL (PHASED BROWN)
- L2 = LINE 2 TERMINAL (PHASED ORANGE)
- L3 = LINE 3 TERMINAL (PHASED YELLOW)
- N = NEUTRAL TERMINAL (PHASED WHITE)
- G = GROUND TERMINAL (PHASED GREEN)

Project:
MORENO VALLEY, CA 92553

Project Details:
694.96 kWstc, 639.8 kW AC
AHJ: MORENO VALLEY, CITY OF

Engineenng Approval:

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DESCRIPTION	DATE	REV
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SCE SLD & PLOT PLAN	4/23/2018	2
ORIGINAL	4/27/2018	A
CONDUIT, SPECS	5/1/2018	B

Sheet Title:
PROJECT NOTES

Sheet Number:
T1.1

Sheet Size:
ARCH D - 36" x 24"

DESIGN & DRAFTING BY:
RICHARD DOBBINS
PV-102216-011268
CERTIFIED PV Installation Professional
SepiSolar
POWER BY DESIGN

Reviewed & Approved by:
AD
CERTIFIED PV Installation Professional

NOTES:
1.) EXISTING TREES WILL BE REMOVED AS REQUIRED (SEE SHEET A3.0).
2.) STRUCTURAL DESIGN BY OTHERS

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SITE PLAN

Sheet Number:
A1.0

Sheet Size:
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DESIGN & DRAFTING BY:
NABCEP CERTIFIED PV Installation Professional
RICHARD DOBBINS
PV-102216-011268

SepiSolar
POWER BY DESIGN

Reviewed & Approved by:
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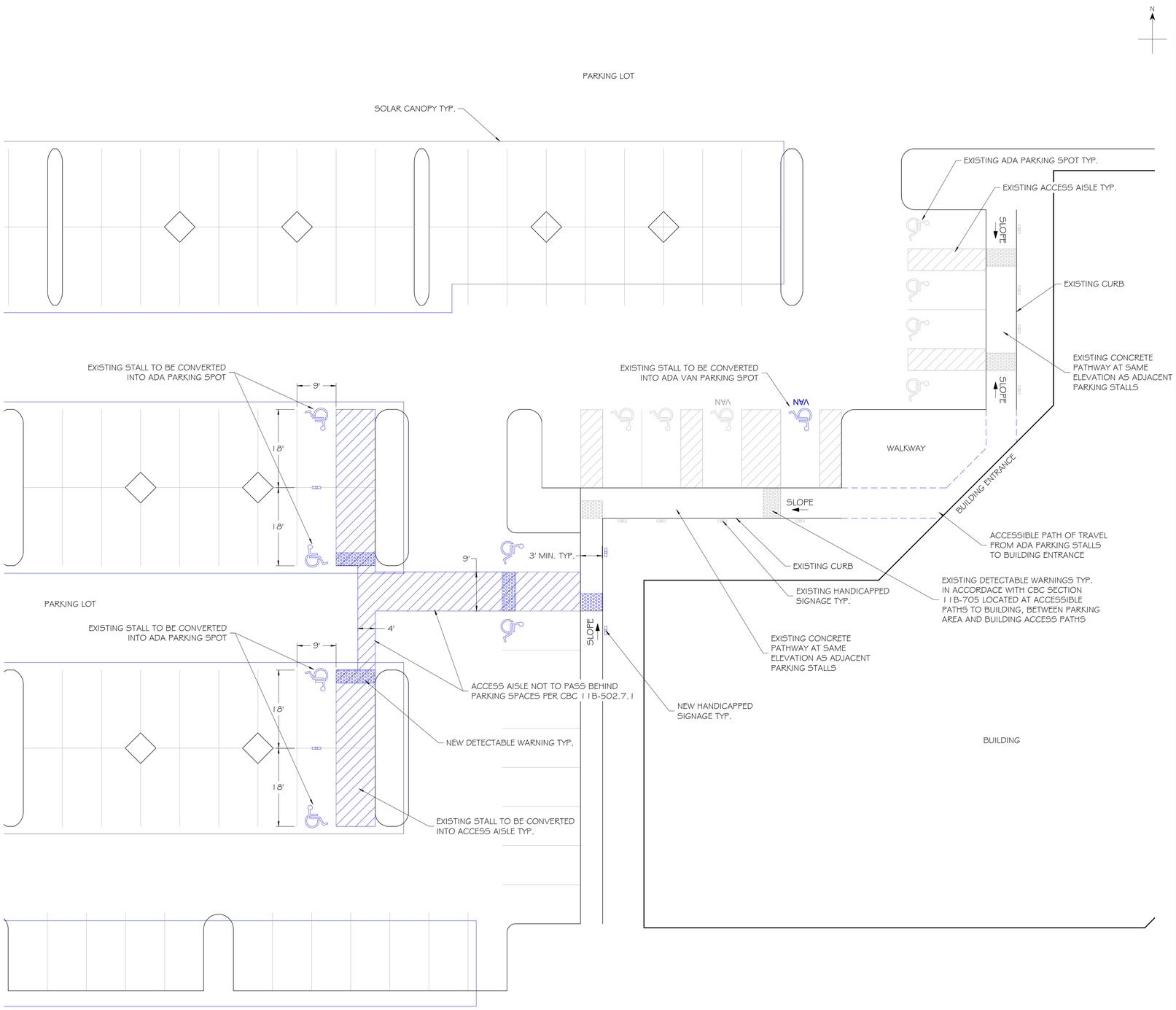
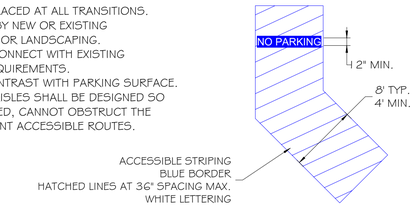
NABCEP CERTIFIED PV Installation Professional



SIGNAGE NOTE:
ALL PROPOSED SIGNING AND STRIPING SHALL COMPLY WITH THE CALIFORNIA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (CAMUTCD)

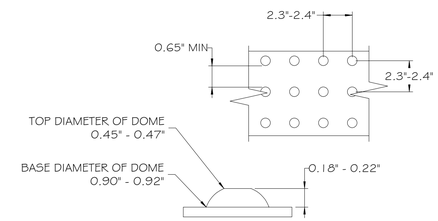
ADA STALL LAYOUT
SCALE: 1" = 12'
1

AISLE NOTES:
1. ADA ACCESS AISLE MUST CONNECT ADA PARKING STALLS TO BUILDING ENTRANCE.
2. DETECTABLE WARNINGS TO BE PLACED AT ALL TRANSITIONS.
3. AISLES SHALL NOT BE IMPEDED BY NEW OR EXISTING SUPPORT STRUCTURES, FEATURES, OR LANDSCAPING.
4. NEW ADA ACCESS AISLES MAY CONNECT WITH EXISTING ADA ACCESS AISLES PER THESE REQUIREMENTS.
5. FINAL PAINTED COLOR SHALL CONTRAST WITH PARKING SURFACE.
6. PARKING SPACES AND ACCESS AISLES SHALL BE DESIGNED SO THAT CARS AND VANS, WHEN PARKED, CANNOT OBSTRUCT THE REQUIRED CLEAR WIDTH OF ADJACENT ACCESSIBLE ROUTES.



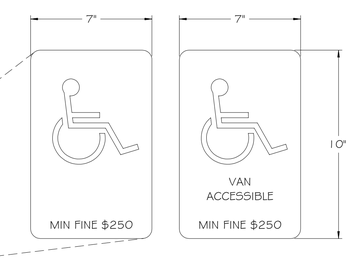
ADA ACCESS AISLE
SCALE: NTS
2

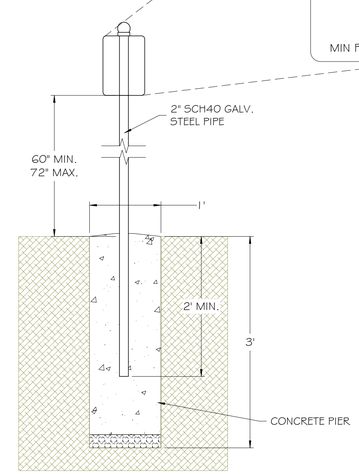
DETECTABLE WARNING NOTES:
1. DETECTABLE WARNINGS SHALL CONSIST OF A SURFACE OF TRUNCATED DOMES.
2. DETECTABLE WARNING SURFACES SHALL CONTRAST VISUALLY WITH ADJACENT SURFACES EITHER LIGHT-ON-DARK OR DARK-ON-LIGHT.
3. DETECTABLE WARNINGS ARE REQUIRED AT CURB RAMPS EXTENDING 36" MIN. IN THE DIRECTION OF TRAVEL.

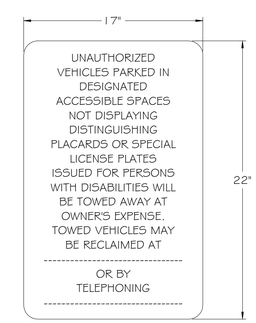


ADA SYMBOL
SCALE: NTS
3

SIGNAGE NOTES:
1. SIGN SHALL CONTAIN PROFILE VIEW OF A WHEELCHAIR WITH OCCUPANT IN WHITE ON DARK BLUE BACKGROUND.
2. SIGNS CENTERED AT INTERIOR END OF PARKING SPACE.
3. SIGN AREA 70 SQ. IN. MIN.
4. SIGN TO BE "REFLECTORIZED" AND PERMANENT.
5. MOUNT TO WALL AT 60" MIN. FROM BOTTOM OF SIGN ABOVE PARKING SPACE FINISH GRADE, GROUND OR SIDEWALK.
6. MOUNT SIGN ON POLE WHERE REQUIRED.
7. PARKING FACILITY ENTRY SIGN SHALL BE POSTED IN A CONSPICUOUS PLACE, AT EACH ENTRANCE TO OFF-STREET PARKING FACILITIES, OR IMMEDIATELY ADJACENT TO AND VISIBLE FROM EACH STALL OR SPACE.







ADA SIGNAGE
SCALE: NTS
4

Project:
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Sheet Title:
ADA LAYOUT

Sheet Number:
A2.0

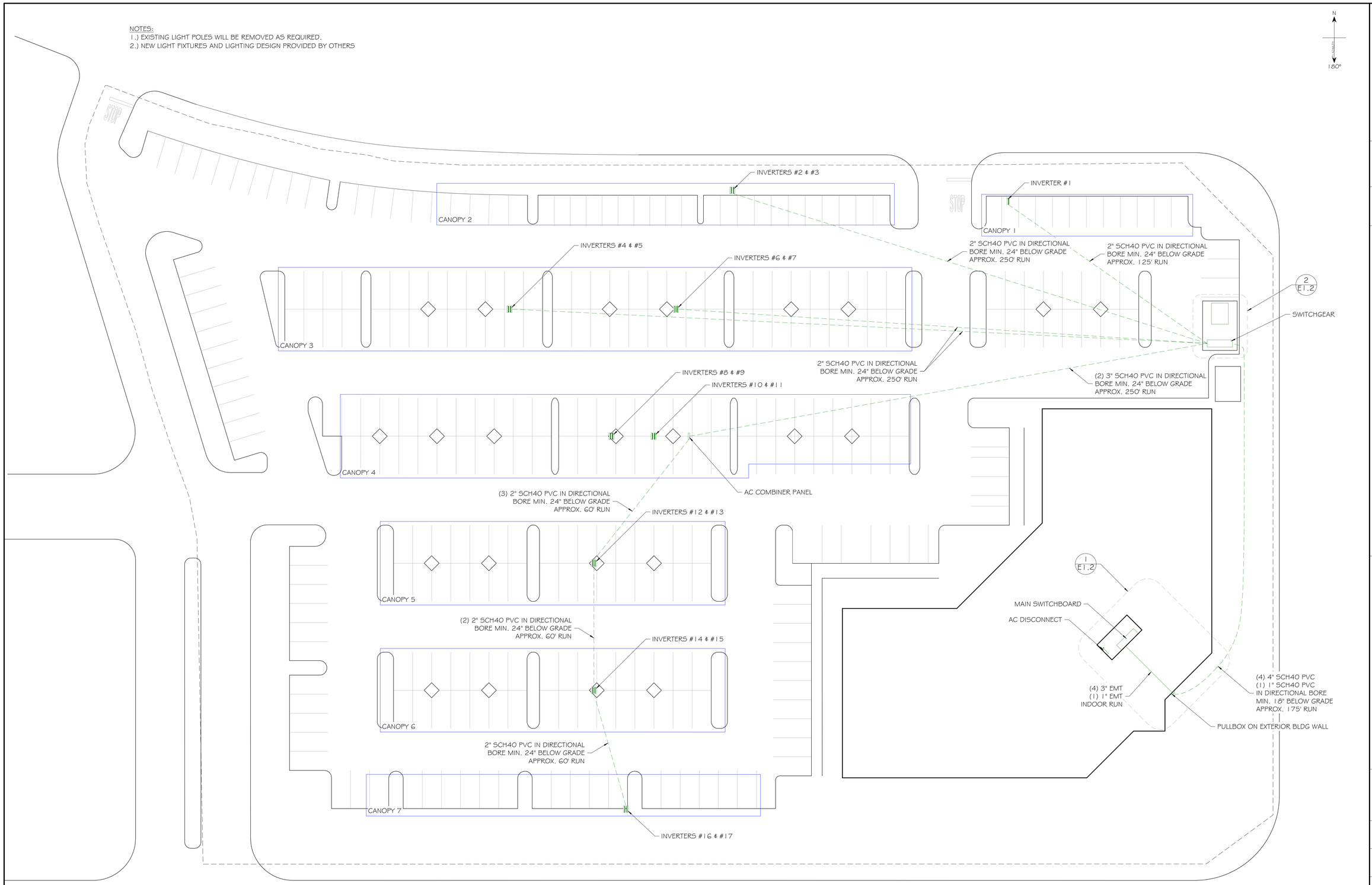
Sheet Size:
ARCH D - 36" x 24"

DESIGN & DRAFTING BY:
RICHARD DOBBINS
PV-102216-011268

SepiSolar
POWER BY DESIGN

Reviewed & Approved by:
AD

NOTES:
1.) EXISTING LIGHT POLES WILL BE REMOVED AS REQUIRED.
2.) NEW LIGHT FIXTURES AND LIGHTING DESIGN PROVIDED BY OTHERS



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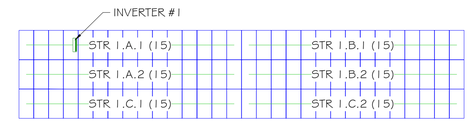

STRING LEGEND:

1.A.2 (15)

- STRING LENGTH
- STRING ID #
- MPPT (A, B, C, OR D)
- INVERTER ID #

SCALE: NTS

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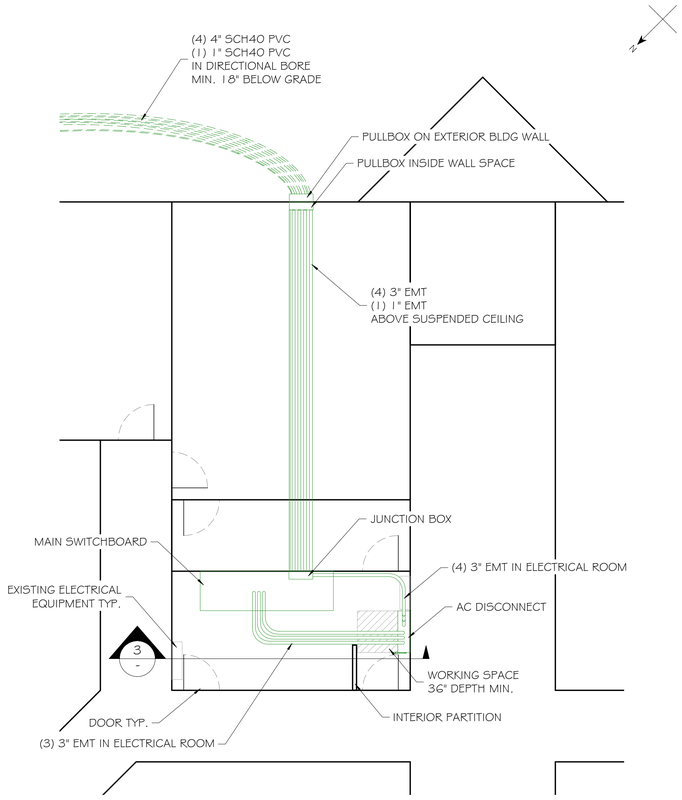
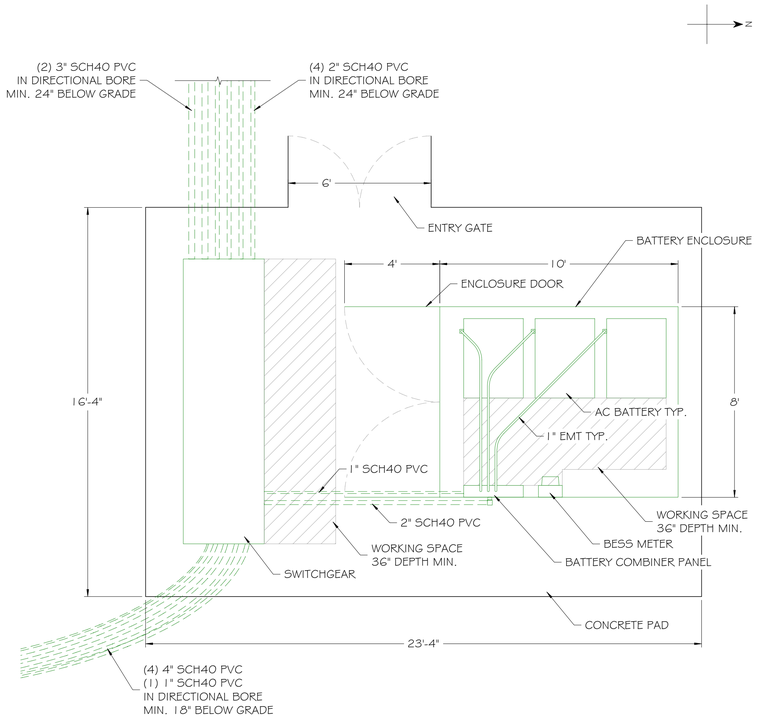
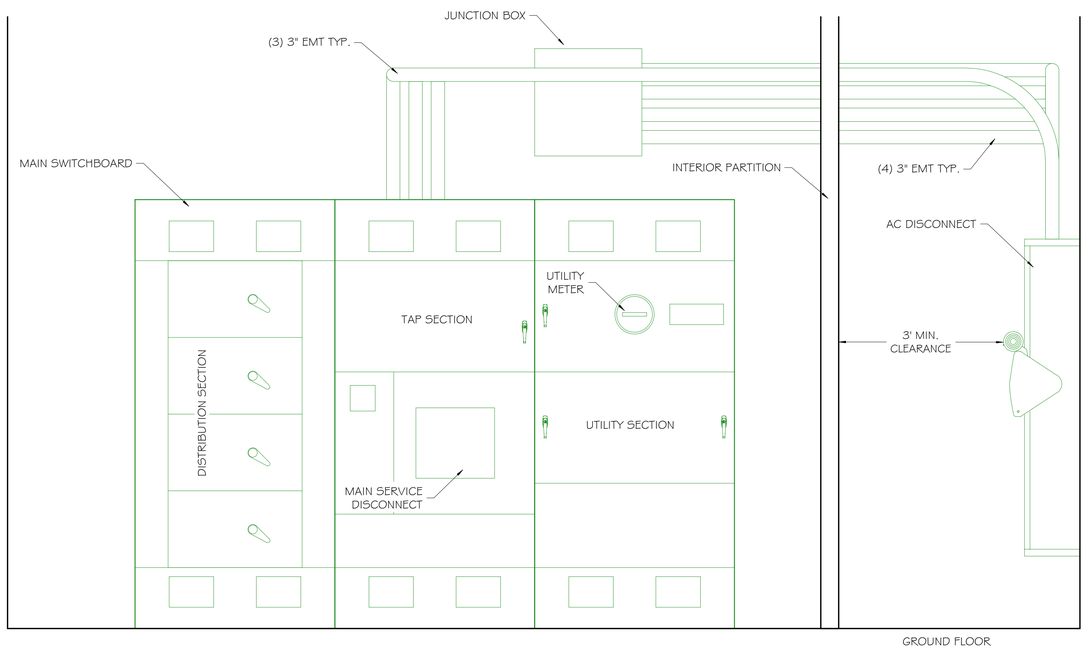


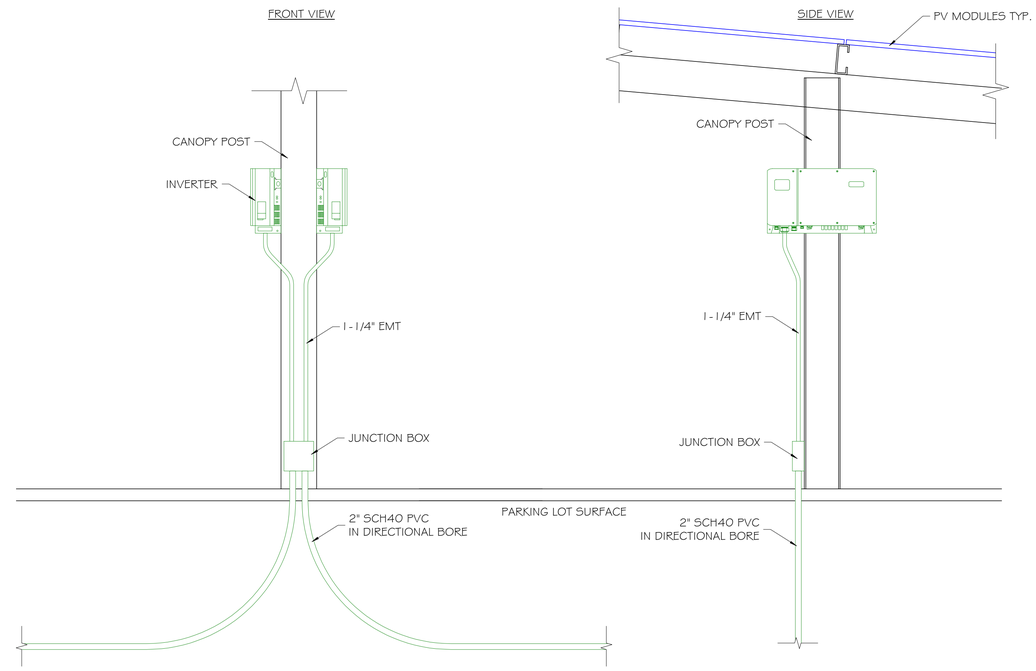
ELECTRICAL ROOM LAYOUT
SCALE: 1" = 6'
1
3 ft | 6 ft | 12 ft



EQUIPMENT PAD LAYOUT
SCALE: 1" = 3'
2
1.5 ft | 3 ft | 6 ft



ELECTRICAL ROOM ELEVATION
SCALE: 1" = 16"
3
8 in | 16 in | 32 in



INVERTER ELEVATION
SCALE: 1" = 2'
4
1 ft | 2 ft | 4 ft

Project:
MORENO VALLEY, CA 92553

Project Details:
694.96 kWstc, 639.8 kW AC
AHJ: MORENO VALLEY, CITY OF

Engineering Approval:

REVISIONS

DESCRIPTION	DATE	REV
SCE SLD	4/9/2018	1
SCE SLD & PLOT PLAN	4/23/2018	2
ORIGINAL	4/27/2018	A
CONDUIT, SPECS	5/1/2018	B

Sheet Title:
ELECTRICAL ELEVATIONS

Sheet Number:
E1.2

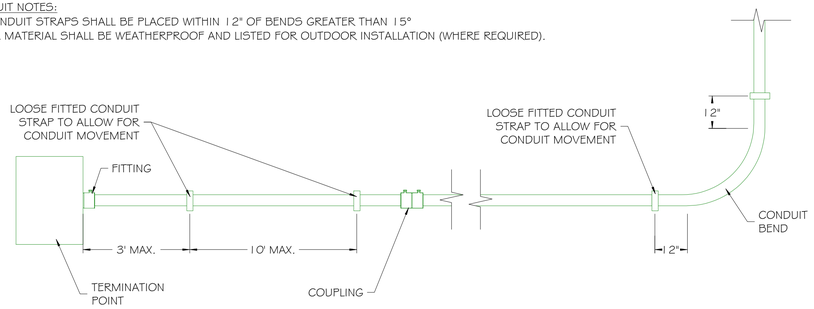
Sheet Size:
ARCH D - 36" x 24"

DESIGN & DRAFTING BY:
RICHARD DOBBINS
PV-102216-011268

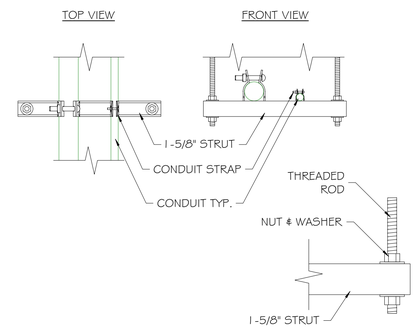
SepiSolar
POWER BY DESIGN

Reviewed & Approved by:
AD

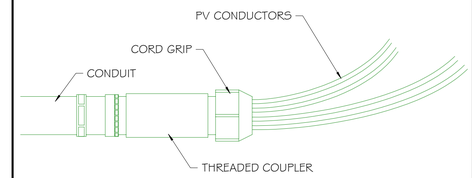
CONDUIT NOTES:
1.) CONDUIT STRAPS SHALL BE PLACED WITHIN 12" OF BENDS GREATER THAN 15°
2.) ALL MATERIAL SHALL BE WEATHERPROOF AND LISTED FOR OUTDOOR INSTALLATION (WHERE REQUIRED).



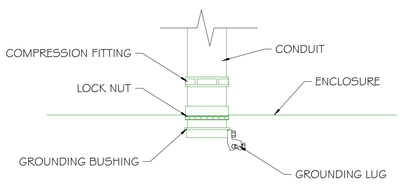
CONDUIT WALL MOUNT
SCALE: NTS
2



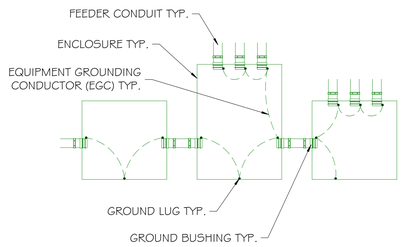
CONDUIT CEILING MOUNT
SCALE: NTS
2



CONDUIT CORD CONNECTOR
SCALE: NTS
3



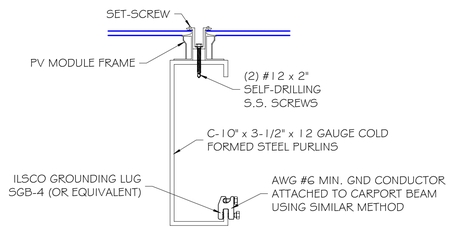
CONDUIT GROUNDING
SCALE: NTS
4

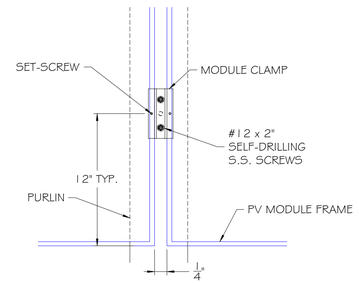


EQUIPMENT GROUNDING
SCALE: NTS
5

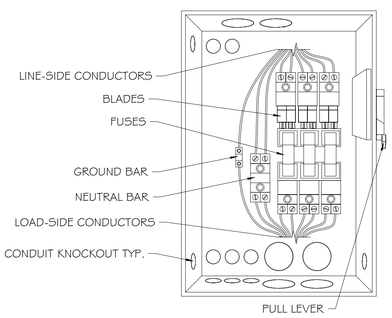
NOTES:
RACKING TORQUE SCHEDULE:
#12 x 2" SCREWS: 30-36 in-lbs
3/32" HEX SET SCREWS: 20 in-lbs

SET SCREWS ELECTRONICALLY BOND THE MODULE FRAME TO CARPORT SUPPORT PURLINS





MODULE GROUNDING
SCALE: NTS
6



AC DISCONNECT
SCALE: NTS
7

Project:
MORENO VALLEY, CA 92553

Project Details:
694.96 kWstc, 639.8 kW AC
AHJ: MORENO VALLEY, CITY OF

Engineenng Approval:

REVISIONS

DESCRIPTION	DATE	REV
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ORIGINAL	4/27/2018	A
CONDUIT, SPECS	5/11/2018	B

Sheet Title:
CONSTRUCTION DETAILS

Sheet Number:
E1.3

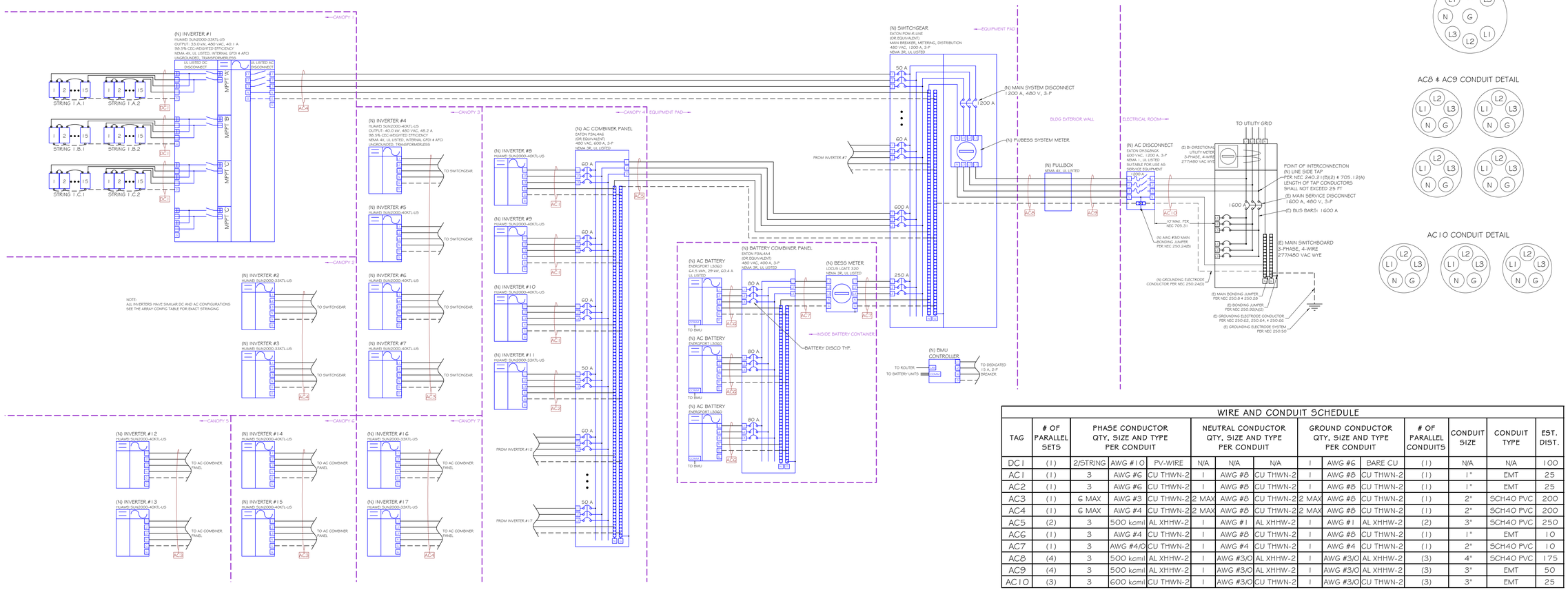
Sheet Size:
ARCH D - 36" x 24"

DESIGN & DRAFTING BY:
NABCEP CERTIFIED Photovoltaic Installation Professional
RICHARD DOBBINS
PV-102216-011268

SepiSolar
POWER BY DESIGN

Reviewed & Approved by:
AD
NABCEP CERTIFIED PV Installation Professional

480V | ---- = EQUIP. GROUNDING CONDUCTOR | —— = CIRCUIT CONDUCTOR | = FUSE | = CIRCUIT BREAKER | (N) = NEW EQUIP. | (E) = EXISTING EQUIP. | L1 = LINE 1 (BROWN) | L2 = LINE 2 (ORANGE) | L3 = LINE 3 (YELLOW) | N = NEUTRAL (WHITE) | G = GROUND (GREEN) | = POSITIVE (RED) | = NEGATIVE (BLACK)



WIRE AND CONDUIT SCHEDULE

TAG	# OF PARALLEL SETS	PHASE CONDUCTOR QTY, SIZE AND TYPE PER CONDUIT			NEUTRAL CONDUCTOR QTY, SIZE AND TYPE PER CONDUIT			GROUND CONDUCTOR QTY, SIZE AND TYPE PER CONDUIT			# OF PARALLEL CONDUITS	CONDUIT SIZE	CONDUIT TYPE	EST. DIST.
DC1	(1)	2/STRING	AWG #10	PV-WIRE	N/A	N/A	N/A	1	AWG #6	BARE CU	(1)	N/A	N/A	100
AC1	(1)	3	AWG #6	CU THWN-2	1	AWG #8	CU THWN-2	1	AWG #8	CU THWN-2	(1)	1"	EMT	25
AC2	(1)	3	AWG #6	CU THWN-2	1	AWG #8	CU THWN-2	1	AWG #8	CU THWN-2	(1)	1"	EMT	25
AC3	(1)	6 MAX	AWG #3	CU THWN-2	2 MAX	AWG #8	CU THWN-2	2 MAX	AWG #8	CU THWN-2	(1)	2"	SCH40 PVC	200
AC4	(1)	6 MAX	AWG #4	CU THWN-2	2 MAX	AWG #8	CU THWN-2	2 MAX	AWG #8	CU THWN-2	(1)	2"	SCH40 PVC	200
AC5	(2)	3	500 kcmil	AL XHHW-2	1	AWG #1	AL XHHW-2	1	AWG #1	AL XHHW-2	(2)	3"	SCH40 PVC	250
AC6	(1)	3	AWG #4	CU THWN-2	1	AWG #8	CU THWN-2	1	AWG #8	CU THWN-2	(1)	1"	EMT	10
AC7	(1)	3	AWG #4/0	CU THWN-2	1	AWG #4	CU THWN-2	1	AWG #4	CU THWN-2	(1)	2"	SCH40 PVC	10
AC8	(4)	3	500 kcmil	AL XHHW-2	1	AWG #3/0	AL XHHW-2	1	AWG #3/0	AL XHHW-2	(3)	4"	SCH40 PVC	175
AC9	(4)	3	500 kcmil	AL XHHW-2	1	AWG #3/0	AL XHHW-2	1	AWG #3/0	AL XHHW-2	(3)	3"	EMT	50
AC10	(3)	3	600 kcmil	CU THWN-2	1	AWG #3/0	CU THWN-2	1	AWG #3/0	CU THWN-2	(3)	3"	EMT	25

PV Inverter Type A Specifications

Model Number:	HUAWEI SUN2000-40KTL-US		
Power Rating (kW AC):	40.00		
Nominal AC Voltage (V):	480	(3/N/PE)	
Max Output Current (A):	48.2		
CEC Weighted Efficiency:	98.5%		
Maximum DC Voltage (V):	1000	Max Current MPPT A:	22.0
DC Start Voltage (V):	250	Max Current MPPT B:	22.0
Max. MPPT Voltage (V):	850	Max Current MPPT C:	22.0
Min. MPPT Voltage (V):	530	Max Current MPPT D:	22.0
MPPT Quantity:	4		
Inverter Quantity:	11		

PV Inverter Type B Specifications

Model Number:	HUAWEI SUN2000-33KTL-US		
Power Rating (kW AC):	33.30		
Nominal AC Voltage (V):	480	(3/N/PE)	
Max Output Current (A):	40.1		
CEC Weighted Efficiency:	98.5%		
Maximum DC Voltage (V):	1000	Max Current MPPT A:	22.0
DC Start Voltage (V):	250	Max Current MPPT B:	22.0
Max. MPPT Voltage (V):	850	Max Current MPPT C:	22.0
Min. MPPT Voltage (V):	460	Max Current MPPT D:	22.0
MPPT Quantity:	4		
Inverter Quantity:	6		

Battery Inverter Specifications

Model Number:	EnergPort L3060		
Power Rating (W AC):	29000	Max Utility Input Current (A):	60.4
Nominal Voltage (VAC):	480	Backup Output Current (A):	N/A
Battery Capacity (kWh):	64.5	Max Surge Current (A):	N/A
Nominal Voltage (VDC):	358.4	CEC Efficiency:	97.0%
Weight (lbs):	1500	Inverter Quantity:	3

PV Module Specifications

Model Number:	HANSOL HS340TD-AN3		
Weight (lbs):	49.6		
Dimensions (in):	78.5 x 39.4 x 1.6		
Power @ STC (W):	340		
Voc (VDC):	46.6		
Vmp (VDC):	38.0	Voc Temp Coeff (%/°C):	-0.31
Isc (A):	9.54	Max Voltage (VDC):	1,500
Imp (A):	8.95	Module Quantity:	2,044

PV AC System Summary

NOMINAL SYSTEM VOLTAGE:	480	Volts AC
MAX CURRENT PER 690.8(A):	771	Amps
MAX CURRENT PER 690.8(B):	964	Amps

BESS AC System Summary

NOMINAL SYSTEM VOLTAGE:	480	Volts AC
MAX CURRENT PER 690.8(A):	181	Amps
MAX CURRENT PER 690.8(B):	227	Amps

Total AC System Summary

NOMINAL SYSTEM VOLTAGE:	480	Volts AC
MAX CURRENT PER 690.8(A):	952	Amps
MAX CURRENT PER 690.8(B):	1190	Amps

PV System Maximum Voltage Calculation per NEC 690.7(A)

Local Record Low Temp: -2 °C Data Source: MARCH AFB/RIVERSIDE

Voc Temp Coefficient	x	25°C - Record Low Temp.	+ 1 =	Voc Correction Factor
0.31%/°C	x	27°C	+ 1 =	1.084

Voc Correction Factor	x	Voc	x	Max # of Modules in Series	=	Temperature Corrected Open Circuit Voltage
1.084	x	46.6	x	19	=	959.5 Volts DC

Array Configuration

System: 694.96 kWstc, 639.8 kW AC

Total PV Module Qty: 2044

	Inverter I.D. #	Inv #1	Inv #2	Inv #3	Inv #4	Inv #5	Inv #6	Inv #7	Inv #8	Inv #9	Inv #10	Inv #11	Inv #12	Inv #13	Inv #14	Inv #15	Inv #16	Inv #17
	Inverter AC Power (kW):	33.30	33.30	33.30	40.00	40.00	40.00	40.00	40.00	40.00	40.00	33.30	40.00	40.00	40.00	40.00	33.30	33.30
	PV Power (kWstc):	30.60	35.36	30.94	46.24	46.24	45.56	45.56	41.14	40.80	40.80	34.68	50.32	49.64	50.32	49.64	28.56	28.56
	Inverter DC:AC Ratio	0.92	1.06	0.93	1.16	1.16	1.14	1.14	1.03	1.02	1.02	1.04	1.26	1.24	1.26	1.24	0.86	0.86
	Module Total Qty:	90	104	91	136	136	134	134	121	120	120	102	148	146	148	146	84	84
MPPT "A"	String Qty:	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	String Length:	18	18	18	18	18	18	18	18	18	18	18	19	19	19	19	18	18
	Max Open Circuit Voltage:	758	909	909	909	909	909	909	909	909	909	909	960	960	960	960	909	909
	Min Open Circuit Voltage:	610	732	732	732	732	732	732	732	732	732	732	773	773	773	773	732	732
	Max Operating Voltage:	549	659	659	659	659	659	659	659	659	659	659	695	695	695	695	659	659
	Min Operating Voltage:	498	597	597	597	597	597	597	597	597	597	597	630	630	630	630	597	597
	Max Short Circuit Current:	23.9	23.9	23.9	23.9	23.9	23.9	23.9	23.9	23.9	23.9	23.9	23.9	23.9	23.9	23.9	23.9	23.9
	Operating Current:	17.9	17.9	17.9	17.9	17.9	17.9	17.9	17.9	17.9	17.9	17.9	17.9	17.9	17.9	17.9	17.9	17.9
MPPT "B"	String Qty:	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	String Length:	15	18	18	18	18	18	17	17	17	17	17	19	18	19	18	16	16
	Max Open Circuit Voltage:	758	909	909	909	909	859	859	859	859	859	859	960	909	960	909	808	808
	Min Open Circuit Voltage:	610	732	732	732	732	692	692	692	692	692	692	773	732	773	732	651	651
	Max Operating Voltage:	549	659	659	659	659	622	622	622	622	622	622	695	659	695	659	585	585
	Min Operating Voltage:	498	597	597	597	597	564	564	564	564	564	564	630	597	630	597	531	531
	Max Short Circuit Current:	23.9	23.9	23.9	23.9	23.9	23.9	23.9	23.9	23.9	23.9	23.9	23.9	23.9	23.9	23.9	23.9	23.9
	Operating Current:	17.9	17.9	17.9	17.9	17.9	17.9	17.9	17.9	17.9	17.9	17.9	17.9	17.9	17.9	17.9	17.9	17.9
MPPT "C"	String Qty:	2	2	1	2	2	2	2	2	2	2	2	2	2	2	2	1	1
	String Length:	15	16	19	16	16	16	16	16	16	16	16	18	18	18	18	16	16
	Max Open Circuit Voltage:	758	808	960	808	808	808	808	808	808	808	808	909	909	909	909	808	808
	Min Open Circuit Voltage:	610	651	773	651	651	651	651	651	651	651	651	732	732	732	732	651	651
	Max Operating Voltage:	549	585	695	585	585	585	585	585	585	585	585	659	659	659	659	585	585
	Min Operating Voltage:	498	531	630	531	531	531	531	531	531	531	531	597	597	597	597	531	531
	Max Short Circuit Current:	23.9	23.9	11.9	23.9	23.9	23.9	23.9	23.9	23.9	23.9	23.9	23.9	23.9	23.9	23.9	11.9	11.9
	Operating Current:	17.9	17.9	9.0	17.9	17.9	17.9	17.9	17.9	17.9	17.9	17.9	17.9	17.9	17.9	17.9	9.0	9.0
MPPT "D"	String Qty:				2	2	2	2	1	1	1		2	2	2	2		
	String Length:				16	16	16	16	19	18	18		18	18	18	18		
	Max Open Circuit Voltage:				808	808	808	808	960	909	909		909	909	909	909		
	Min Open Circuit Voltage:				651	651	651	651	773	732	732		732	732	732	732		
	Max Operating Voltage:				585	585	585	585	695	659	659		659	659	659	659		
	Min Operating Voltage:				531	531	531	531	630	597	597		597	597	597	597		
	Max Short Circuit Current:				23.9	23.9	23.9	23.9	11.9	11.9	11.9		23.9	23.9	23.9	23.9		
	Operating Current:				17.9	17.9	17.9	17.9	9.0	9.0	9.0		17.9	17.9	17.9	17.9		

TAG	CIRCUIT ORIGIN	CIRCUIT DESTINATION	CONDUCTOR SPECIFICATIONS: MATERIAL	CONN. TEMP. RATING	TRADE SIZE	AMPACITY PER 310.15(B)(16) & 310.15(B)(17)	REQUIRED CONDUCTOR AMPACITY: MAX CURRENT 690.8(A)(1)	x Isc (Amps)	x # OF COMBINED STRINGS	= MAX CURRENT PER 690.8(A)(1)	x 125% PER 690.8(B)(1)	= MAX CURRENT PER 690.8(B)(1)	AMPACITY CHECK #1: MAX CURRENT PER 690.8(B)(1)	< CONDUCTOR AMPACITY	CONDUCTOR TEMPERATURE DERATING: CIRCUIT ENVIRONMENT	LOCAL 2% AVG. HIGH TEMP (°C)	HEIGHT ABOVE ROOF (in)	TEMP. ADDER PER 310.15(B)(3)(c)	OPERATING TEMP (°C)	AMPACITY CORRECTION 310.15(B)(2)(a)	CONDUIT FILL DERATING: # OF UNGROUNDED CONDUCTORS	AMPACITY CORRECTION 310.15(B)(3)(a)	CORRECTED AMPACITY CALCULATION: 90°C CONDUCTOR AMPACITY	x TEMP DERATE	x CONDUIT FILL DERATE	= DERATED CONDUCTOR AMPACITY	AMPACITY CHECK #2: MAX CURRENT PER 690.8(B)(2)	< DERATED CORRECTED AMPACITY	VOLTAGE DROP: EST. ONE-WAY DISTANCE	VOLTAGE DROP
DC1	PV STRING	INVERTER	COPPER	90°C	AWG #10	55 Amps	1.25	x 9.54	x 1	= 11.9 Amps	x 1.25	= 14.9 Amps	14.9 Amps	< 55.0 Amps	ROOFTOP, FREE AIR	37	-	N/A	37	0.91	N/A	1.00	55	x 0.91	x 1.00	= 50.1 Amps	11.9 Amps	< 50.1 Amps	100 ft	0.40%

TAG	CIRCUIT ORIGIN	CIRCUIT DESTINATION	CONDUCTOR SPECIFICATIONS: MATERIAL	TERMINAL TEMP. RATING	TRADE SIZE	NUMBER OF PARALLEL CONDUCTORS	AMPACITY PER 310.15(B)(16) & 310.15(B)(17)	REQUIRED CONDUCTOR AMPACITY: INVERTER OUTPUT CURRENT	x # OF INVERTERS	= MAX CURRENT PER 690.8(A)(3)	x 125% PER 690.8(B)(1)	= MAX CURRENT PER 690.8(B)(1)	AMPACITY CHECK #1: MAX CURRENT PER 690.8(B)(1)	< CONDUCTOR AMPACITY	CONDUCTOR TEMPERATURE DERATING: CIRCUIT ENVIRONMENT	LOCAL 2% AVG. HIGH TEMP (°C)	EXPECTED OPERATING TEMP (°C)	AMPACITY CORRECTION 310.15(B)(2)(a)	CONDUIT FILL DERATING: # OF UNGROUNDED CONDUCTORS	AMPACITY CORRECTION 310.15(B)(3)(a)	CORRECTED AMPACITY CALCULATION: 90°C CONDUCTOR AMPACITY	x TEMP DERATE	x CONDUIT FILL DERATE	= DERATED CORRECTED AMPACITY	AMPACITY CHECK #2: MAX CURRENT PER 690.8(B)(2)	< DERATED CONDUCTOR AMPACITY	VOLTAGE DROP: EST. ONE-WAY DISTANCE	VOLTAGE DROP
AC1	INVERTER TYPE A	AC COMBINER PANEL	COPPER	75°C	AWG #6	1	65 Amps	48.2	x 1	= 48.2 Amps	x 1.25	= 60.3 Amps	60.3 Amps	< 65 Amps	OUTDOORS, SHADED (+10°C)	37	47	0.82	3	1.00	75	x 0.82	x 1.00	= 61.5 Amps	48.2 Amps	< 61.5 Amps	25 ft	0.21%
AC2	INVERTER TYPE B	AC COMBINER PANEL	COPPER	75°C	AWG #6	1	65 Amps	40.1	x 1	= 40.1 Amps	x 1.25	= 50.1 Amps	50.1 Amps	< 65 Amps	OUTDOORS, SHADED (+10°C)	37	47	0.82	3	1.00	75	x 0.82	x 1.00	= 61.5 Amps	40.1 Amps	< 61.5 Amps	25 ft	0.18%
AC3	INVERTER TYPE A	ACCP/SWITCHGEAR	COPPER	75°C	AWG #3	1	100 Amps	48.2	x 1	= 48.2 Amps	x 1.25	= 60.3 Amps	60.3 Amps	< 100 Amps	UNDERGROUND (+0°C)	37	37	0.91	12	0.50	115	x 0.91	x 0.50	= 52.4 Amps	48.2 Amps	< 52.4 Amps	200 ft	0.85%
AC4	INVERTER TYPE B	ACCP/SWITCHGEAR	COPPER	75°C	AWG #4	1	85 Amps	40.1	x 1	= 40.1 Amps	x 1.25	= 50.1 Amps	50.1 Amps	< 85 Amps	UNDERGROUND (+0°C)	37	37	0.91	12	0.50	95	x 0.91	x 0.50	= 43.3 Amps	40.1 Amps	< 43.3 Amps	200 ft	0.89%
AC5	AC COMBINER PANEL	SWITCHGEAR	ALUM	75°C	500 kcmil	2	620 Amps	(48.2 x 7) + (40.1 x 3)		= 457.7 Amps	x 1.25	= 572.1 Amps	572.1 Amps	< 620 Amps	UNDERGROUND (+0°C)	37	37	0.91	3	1.00	700	x 0.91	x 1.00	= 637 Amps	457.7 Amps	< 637.0 Amps	250 ft	0.88%
AC6	BATTERY INVERTER	BATTERY COMBINER	COPPER	75°C	AWG #4	1	85 Amps	60.4	x 1	= 60.4 Amps	x 1.25	= 75.5 Amps	75.5 Amps	< 85 Amps	DIRECT SUNLIGHT (+15°C)	37	52	0.76	3	1.00	95	x 0.76	x 1.00	= 72.2 Amps	60.4 Amps	< 72.2 Amps	10 ft	0.07%
AC7	BATTERY COMBINER	SWITCHGEAR	COPPER	75°C	AWG #4/0	1	230 Amps	60.4	x 3	= 181.2 Amps	x 1.25	= 226.5 Amps	226.5 Amps	< 230 Amps	UNDERGROUND (+0°C)	37	37	0.91	3	1.00	260	x 0.91	x 1.00	= 236.6 Amps	181.2 Amps	< 236.6 Amps	10 ft	0.04%
AC8	SWITCHGEAR	PULLBOX	ALUM	75°C	500 kcmil	4	1240 Amps	(48.2x11)+(40.1x6)+(60.4x3)		= 952.0 Amps	x 1.25	= 1190.0 Amps	1190.0 Amps	< 1240 Amps	UNDERGROUND (+0°C)	37	37	0.91	3	1.00	1400	x 0.91	x 1.00	= 1274 Amps	952.0 Amps	< 1274.0 Amps	175 ft	0.64%
AC9	PULLBOX	AC DISCONNECT	ALUM	75°C	500 kcmil	4	1240 Amps	(48.2x11)+(40.1x6)+(60.4x3)		= 952.0 Amps	x 1.25	= 1190.0 Amps	1190.0 Amps	< 1240 Amps	INDOORS (+0°C)	37	37	0.91	3	1.00	1400	x 0.91	x 1.00	= 1274 Amps	952.0 Amps	< 1274.0 Amps	50 ft	0.18%
AC10	AC DISCONNECT	LINE SIDE CONN.	COPPER	75°C	600 kcmil	3	1260 Amps	(48.2x11)+(40.1x6)+(60.4x3)		= 952.0 Amps	x 1.25	= 1190.0 Amps	1190.0 Amps	< 1260 Amps	INDOORS (+0°C)	37	37	0.91	3	1.00	1425	x 0.91	x 1.00	= 1297 Amps	952.0 Amps	< 1296.8 Amps	25 ft	0.06%

Project:
MORENO VALLEY, CA 92553

Project Details:
694.96 kWstc, 639.8 kW AC
AHJ: MORENO VALLEY, CITY OF

Engineering Approval:

REVISIONS

DESCRIPTION	DATE	REV
SCE SLD	4/9/2018	1
SCE SLD & PLOT PLAN	4/23/2018	2
ORIGINAL	4/27/2018	A
CONDUIT, SPECS	5/1/2018	B

Sheet Title:
ELECTRICAL DIAGRAM

Sheet Number:
E2.0

Sheet Size:
ARCH D - 36" x 24"

DESIGN & DRAFTING BY:
RICHARD DOBBINS
PV-102216-011268
SepiSolar
POWER BY DESIGN

Reviewed & Approved by:
AD

Incident Energy at Inverter (Note: calcs are for DC energy only)

Available power	P	=	50.32	kW stc		
Working distance	D	=	18	in	=	45.720 cm
Exposure time	T_{exp}	=	2	sec		

I_E = P x 0.286 J/cm^2 = 3.434 cal/cm^2

Incident Energy if disconnect switch is closed 3.434 **cal/cm^2**

Required minimum PPE rating Category 1

⚠ WARNING

ARC FLASH HAZARD
3.434 CAL/CM²
PPE REQUIRED: CAT 1
REFER TO NFPA 70E

REQ'D BY: NFPA 70 E
APPLY TO:
INVERTERS
1

ARC FLASH HAZARD PPE CATEGORIES

CATEGORY	REQUIRED PERSONAL PROTECTIVE EQUIPMENT	INCIDENT ENERGY
1	SAFETY GLASSES, HARD HAT, FR SHIRT AND PANTS (OR FR COVERALLS), LEATHER PROTECTIVE GLOVES, AND LEATHER SHOES	0-4
2	SAFETY GLASSES OR GOGGLES, HEARING PROTECTION, HARD HAT, COTTON UNDERWEAR, FR SHIRT AND PANTS (OR FR COVERALLS), ARC RATED FACE SHIELD (OR ARC FLASH HOOD), LEATHER GLOVES, AND LEATHER SHOES	4-8
3	SAFETY GLASSES OR GOGGLES, HEARING PROTECTION, HARD HAT, COTTON UNDERWEAR, FR SHIRT AND PANTS, FR COVERALLS (IN ADDITION TO FR SHIRT AND PANTS), ARC FLASH HOOD, LEATHER GLOVES, AND LEATHER SHOES	8-25
4	SAFETY GLASSES OR GOGGLES, HEARING PROTECTION, HARD HAT, COTTON UNDERWEAR, FR SHIRT AND PANTS, FR COVERALLS (IN ADDITION TO FR SHIRT AND PANTS), FULL FLASH SUIT WITH HOOD, LEATHER GLOVES, AND LEATHER SHOES	25-40

ANY ELECTRICAL EQUIPMENT WITH AN INCIDENT ENERGY OF GREATER THAN 40 CAL/CM ^ 2 MUST BE DE-ENERGIZED BEFORE MAINTENANCE IS PERFORMED

FOR ADDITIONAL INFORMATION ON ARC FLASH PPE AND RATING REQUIREMENTS, PLEASE REFERENCE THE STANDARD FOR ELECTRICAL SAFETY IN THE WORKPLACE (NFPA 70E)

SIGNAGE REQUIREMENTS
1.) RED BACKGROUND
2.) WHITE LETTERING
3.) MIN. 3/8" LETTER HEIGHT
4.) ALL CAPITAL LETTERS
5.) ARIAL OR SIMILAR FONT
6.) WEATHER RESISTANT MATERIAL, PER UL 969

WARNING
ELECTRIC SHOCK HAZARD.
DO NOT TOUCH
TERMINALS. TERMINALS ON
BOTH THE LINE AND LOAD
SIDES MAY BE ENERGIZED
IN THE OPEN POSITION.

REQ'D BY: NEC 690.17
APPLY TO:
DISCONNECTS
COMBINER BOXES
1

WARNING: PHOTOVOLTAIC
POWER SOURCE

REQ'D BY: NEC 690.31(E)(3)
APPLY TO:
EXPOSED RACEWAYS, CABLE TRAYS
COVERS OR ENCLOSURES OF JUNCTION BOXES
CONDUIT BODY W/ AVAILABLE CONDUIT OPENING
2

THIS ELECTRIC SERVICE IS
ALSO SERVED BY A
PHOTOVOLTAIC SYSTEM

REQ'D BY: NEC 705.12(D)(4)
APPLY TO:
MAIN SERVICE PANEL
3

WARNING
INVERTER OUTPUT
CONNECTION. DO NOT
RELOCATE THIS
OVERCURRENT DEVICE

REQ'D BY: NEC 705.12(D)(7)
APPLY TO:
PV SYSTEM BREAKER
4

SOLAR AC DISCONNECT

REQ'D BY: NEC 690.14(C)(2)
APPLY TO:
PV SYSTEM AC DISCONNECTS
5

SOLAR DC DISCONNECT

REQ'D BY: NEC 690.13(B)
APPLY TO:
PV SYSTEM DC DISCONNECTS
6

WARNING
IF A GROUND FAULT IS
INDICATED, THE NORMALLY
GROUNDED CONDUCTORS
MAY BE ENERGIZED AND
UNGROUNDED.

REQ'D BY: NEC 690.5(C)
APPLY TO:
INVERTER
7

PHOTOVOLTAIC SYSTEM
AC DISCONNECT
OPERATING CURRENT: 1190 A
OPERATING VOLTAGE: 480 V

REQ'D BY: NEC 690.54
APPLY TO:
PV SYSTEM DISCONNECT
8

WARNING
ELECTRIC SHOCK HAZARD.
THE DC CONDUCTORS OF
THE PV SYSTEM ARE
UNGROUNDED AND MAY BE
ENERGIZED.

REQ'D BY: NEC 690.35(F)
APPLY TO:
JUNCTION BOXES, COMBINER BOXES
DC DISCONNECTS, INVERTERS
9

GRID TIED PHOTOVOLTAIC
POWER SOURCE
OPERATING CURRENT: 53.7 A
OPERATING VOLTAGE: 549 V
MAX SYSTEM VOLTAGE: 758 V
MAX SYSTEM CURRENT: 71.7 A
MAX INVERTER OUTPUT:
33.3 kW, 40.1 A, 480 VAC

REQ'D BY: NEC 690.54
APPLY TO:
INVERTER #1
10

GRID TIED PHOTOVOLTAIC
POWER SOURCE
OPERATING CURRENT: 53.7 A
OPERATING VOLTAGE: 659 V
MAX SYSTEM VOLTAGE: 909 V
MAX SYSTEM CURRENT: 71.7 A
MAX INVERTER OUTPUT:
33.3 kW, 40.1 A, 480 VAC

REQ'D BY: NEC 690.54
APPLY TO:
INVERTERS #2, #11, #16, #17
11

GRID TIED PHOTOVOLTAIC
POWER SOURCE
OPERATING CURRENT: 44.8 A
OPERATING VOLTAGE: 695 V
MAX SYSTEM VOLTAGE: 960 V
MAX SYSTEM CURRENT: 59.7 A
MAX INVERTER OUTPUT:
33.3 kW, 40.1 A, 480 VAC

REQ'D BY: NEC 690.54
APPLY TO:
INVERTER #3
12

GRID TIED PHOTOVOLTAIC
POWER SOURCE
OPERATING CURRENT: 71.6 A
OPERATING VOLTAGE: 659 V
MAX SYSTEM VOLTAGE: 909 V
MAX SYSTEM CURRENT: 95.6 A
MAX INVERTER OUTPUT:
40.0 kW, 48.2 A, 480 VAC

REQ'D BY: NEC 690.54
APPLY TO:
INVERTERS #4 - #7, #9, #10
13

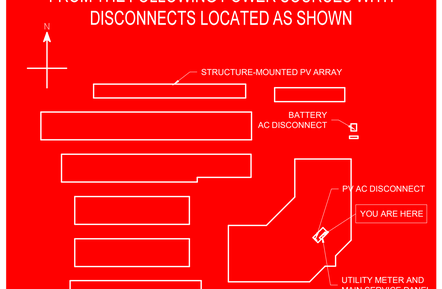
GRID TIED PHOTOVOLTAIC
POWER SOURCE
OPERATING CURRENT: 71.6 A
OPERATING VOLTAGE: 695 V
MAX SYSTEM VOLTAGE: 960 V
MAX SYSTEM CURRENT: 95.6 A
MAX INVERTER OUTPUT:
40.0 kW, 48.2 A, 480 VAC

REQ'D BY: NEC 690.54
APPLY TO:
INVERTERS #8, #12 - #15
14

REQ'D BY: NEC 690.56
APPLY TO:
UTILITY METER
15

CAUTION

POWER FROM THIS BUILDING IS ALSO SUPPLIED
FROM THE FOLLOWING POWER SOURCES WITH
DISCONNECTS LOCATED AS SHOWN



SERVICE BY QUALIFIED PERSONNEL ONLY

Project:
MORENO VALLEY, CA 92553

Project Details:
694.96 kWstc, 639.8 kW AC
AHJ: MORENO VALLEY, CITY OF

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Sheet Title:
SAFETY PLACARDS & ELECTRICAL CALCS

Sheet Number:
E2.1

Sheet Size:
ARCH D - 36" x 24"

DESIGN & DRAFTING BY:
RICHARD DOBBINS
PV-10221-011268

SepiSolar
POWER BY DESIGN

Reviewed & Approved by:
AD

:Hansol

Mono 72 cells (320~360Watt)

Those who dream of a better future can help lead to a more meaningful and enriched world.
As a leading solar module manufacturer in Korea, we never stop to achieve competitiveness through differentiation, implement the maximum value, and commit to sustainable development with customers.

Key Features

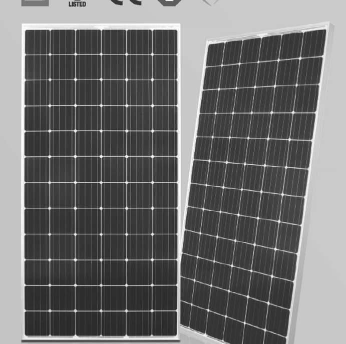
- **25 years — Linear Performance Warranty**: 10 Years product warranty; 25 Years linear performance warranty
- **5,400Pa — Certified Durability**: 5400 Pa snow load; 2400 Pa wind load
- **1500V**: Designed for UL 1500 and TUV 1500; Saving BoS costs
- **PID Free**: Anti-PID Cell; Anti-PID encapsulation technology

Optional Features

- **Floating PV Installation**: Module backside blocks moisture permeability
- **Power Optimization**: Increase the energy output of each individual panel in a system to enhance O&M, shade and age tolerance
- **Black Frame**: Sleek and aesthetic appearance

Product Certificates

IEC 61215 / IEC 61730 : TUV / CE
IEC 61701 Salt Mist Corrosion Level 6
UL 1703 Fire Rating Type 1



:Hansol
www.solar.hansoltechnics.com
Everlasting sustainable energy solution provider

Mono - Crystalline Solar Module (TD-AN3)
72 cells (320~360Watt)

Electrical Data / STC (TD-AN3) : Irradiance of 1000W/㎡, spectrum AM 1.5 and cell temperature of 25°C										
Nominal Max Power	Pmax (Wp)	320	325	330	335	340	345	350	355	360
Voltage at Pmax	Vmp (v)	36.4	36.8	37.2	37.6	38.0	38.4	38.8	39.2	39.6
Current at Pmax	Imp (A)	8.80	8.84	8.88	8.92	8.95	8.99	9.03	9.06	9.10
Open Circuit Voltage	Voc (v)	45.0	45.4	45.8	46.2	46.6	47.0	47.4	47.8	48.2
Short Circuit Current	Isc (A)	9.38	9.42	9.46	9.50	9.54	9.58	9.62	9.65	9.69
Module Efficiency	%	16.05%	16.30%	16.55%	16.80%	17.05%	17.30%	17.55%	17.80%	18.05%
Operating Temperature		-40°C ~ +85°C								
Max. System Voltage		1500 Vdc TUV, 1500 Vdc UL								
Max. Service Fuse Rating		20A								
Max. Reverse Current		20A								
Power tolerance		0 ~ +4.99W								

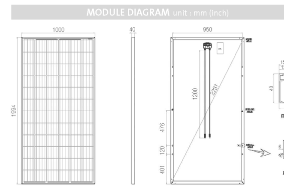
Electrical Data / NOCT (TD-AN3) : Irradiance of 800W/㎡, spectrum AM 1.5 and ambient temperature of 20°C, wind speed 1m/s										
Nominal Max Power	Pmax (Wp)	233.4	237	240.7	244.3	247.8	251.4	255.1	258.6	262.4
Voltage at Pmax	Vmp (v)	33.2	33.5	33.9	34.2	34.5	34.9	35.2	35.6	35.9
Current at Pmax	Imp (A)	7.04	7.07	7.11	7.14	7.17	7.21	7.24	7.27	7.31
Open Circuit Voltage	Voc (v)	41.2	41.6	41.9	42.3	42.6	43.0	43.3	43.7	44.0
Short Circuit Current	Isc (A)	7.57	7.60	7.63	7.66	7.70	7.73	7.76	7.78	7.82

Mechanical Data	
Cell Type	Mono-crystalline, 6 inch
Cell Arrangement	72 (6 x 12)
Dimensions	1994 x 1000 x 40mm
Weight	22.5kg (49.6 lbs)
Frame	Anodized aluminum
Front glass	3.2mm Tempered glass
J-Box	IP68, 3 diodes
Output cable	(+)1200mm, (-)1200mm, 12 AWG
Connectors	MC4 compatible
Module Fire Performance	Type 1
Stand. Packaging	26 pcs (vertical)
Pallets per Container	22
Module Pieces per Container	572

Warranties	
Product	10 years
Performance	10 years performance warranty (>90%) 25 years linear power warranty (>80%)

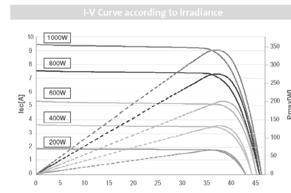
Temperature Characteristics	
Specifications	Data
Temperature coefficient (Pmax)	-0.44
Temperature coefficient (Voc)	-0.31
Temperature coefficient (Isc)	0.04
Normal Operating Cell Temperature	46.0 ± 2°C

MODULE DIAGRAM unit : mm (inch)



1994 X 1000 X 40mm

I-V Curve according to Irradiance



:Hansol www.solar.hansoltechnics.com

140, Gwahaksaneop 1-ro, Oksan-myeon, Heungdeok-gu, Cheongju-si, Chunhcheongbuk-do, Korea
Tel : +82-43-219-3462, Fax : +82-43-219-3410
E-mail : solar@hansol.com

The information included in this Module Datasheet is subject to change without notice and is provided for information purposes only.

Energport — We Make Energy Efficient and Secure

IN STOCK • FREmont, CA QUICK DELIVERY!

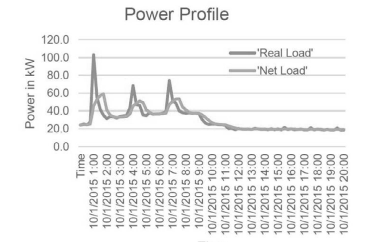
Commercial & Industrial Energy Storage System
AC Rack Series L3020, L3060, L6060, L30120

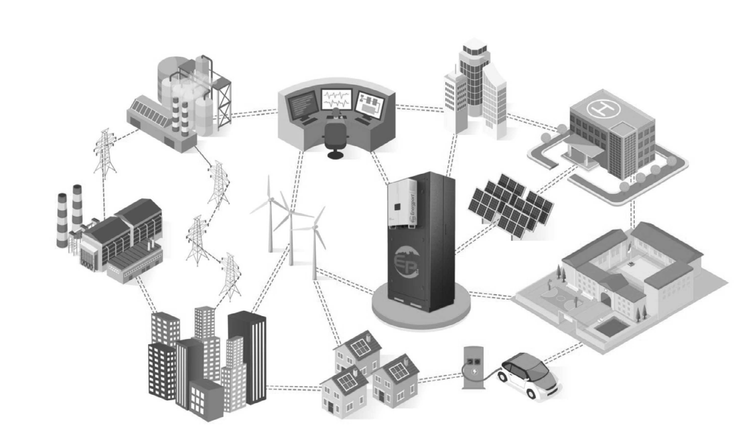
As Lithium-ion battery prices drop and electricity costs continue to climb, LFP battery energy storage systems have become the preferred solution for lowering electric utility bills while reducing environmental impact. After extensive research and development, Energport is proud to offer our newest and most advanced energy storage systems for commercial and industrial applications.

Features:

- Saves electricity cost by reducing demand charges and shifting load to off-peak period
- System payback in less than 4 years
- Simple modular design, scalable for any size and use
- LFP - Safest Lithium ion battery on the market
- Cloud-based optimization and reporting
- Small footprint
- Connects to existing circuits
- Emergency backup as bonus function
- $0 down lease available
- Low APR financing available
- California SGIP rebate available
- 30% federal tax credit with Solar PV
- 15-year design life; 10-year warranty
- Fully installed for less than $0.40/Wh
- CE, UL compliance

Power Profile





Specifications by Model	L3060	L6060	L3020	L30120
Nominal Voltage (V) 3 Phase	480V/60Hz	480V/60Hz	480V/60Hz	480V/60Hz
Power Rated (kW AC)	29	60	29	29
Battery Capacity (kWh DC)	64.5	64.5	22.1	129.0
Duration of Discharge (Hours)	2.2	1.1	0.67	4.6
Nominal Voltage	358.4	358.4	204.8	716.8
DC Amp-Hours	180	180	108	180
Inverter CEC-AC Efficiency	97%	97%	97%	97%
Dimension (DxWxH) 42U Rack	800 mm x 600 mm x 2000 mm (32" x 24" x 80")			800 x 1200 x 2000 32" x 48" x 80"
Weight	660 kg (1500 lbs)	700 kg (1550 lbs)	220 kg (485 lbs)	1360 kg (3020 lbs)
Real Time Power Monitor	Yes	Yes	Yes	Yes
Web / Smartphone App	Yes	Yes	Yes	Yes
Compliance	CE, UL	CE, UL	CE, UL	CE, UL
Warranty Length	10 years	10 years	10 years	10 years
California SGIP Eligibility (60% cost)	Yes	Yes	Yes	Yes
Financing Options	Lease, Finance, Buy			

Energport Inc.
48660 Kato Rd, Fremont, CA 94538
www.energport.com
510.279.3183 ext. 120
844.990.0055 (Toll Free)
info@energport.com

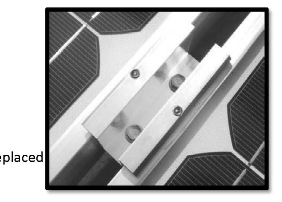
Skyline SOLAR AZ

THIS INSTRUCTION BOOKLET IS TO ACCOMPANY EACH BOX OF TGMC CLAMPS

SkyGrip™ Solar Top Grounding Middle Clamp- INSTALLATION GUIDE

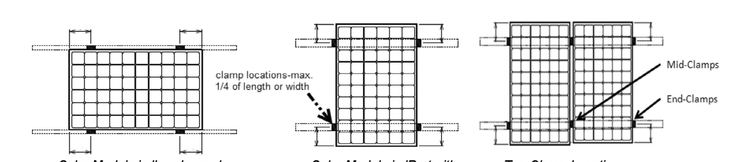
Product Features

- PV Module Mounting & Grounding Clamp
- One Part for Varied Module Frame Heights
- Removes Cost of Other Grounding Devices
- Replaces Copper Lugs & Wire Management
- Improves Time of Installation
- Choice of Clamp Hardware -TEK Screws or Bolt
- Clamp and 3/16" set screws are reusable if PV Module is Replaced
- TUV Rheinland Listed – UL2703 (Bonding Only)



The SkyGrip 'TGMC' is engineered to perform structural Top-Down fastening and provide superior ground bonding of coated aluminum solar module frames to galvanized or painted steel with self-drilling screws or stainless steel bolt attachment method, or to aluminum structures using the stainless-steel bolt attachment method. This aluminum middle-clamp is applicable for securing and grounding solar modules of frame heights from 31-50mm. Clamp can also be installed using two dual heat treated #12-14 self-drilling screws, or a single 5/16" stainless steel bolt with flat washer and nylon locking nut. The '302 stainless steel cup-point' set screws when secure penetrate anodized and conformal coated module frames for a lasting, corrosion resistant grounded connection from the solar module to supporting rails.

Top clamp attachments may be installed on the solar module's short or long side of the aluminum frame. Follow the solar module manufacturer's mounting instructions for clamp placement guidelines. Two (2) Middle Clamps are required between adjacent modules providing a minimum of two grounding intersections between first & last module (example: if row = 7 modules, then Middle Clamp quantity =12). End Clamps (non-grounding) are positioned at the end of the first and last module in a row. Note: Four (4) End-Clamps 'per row' are needed. If extra drilling of holes is needed, it is required that the holes be deburred



Solar Module in 'Landscape' — Solar Module in 'Portrait' — Top Clamp Locations

V4.6 (10-25-2017) Tel: (480)926-0122 www.skylinesolaraz.com Page 2

String Inverter (SUN2000-33/36/40KTL-US)

HUAWEI

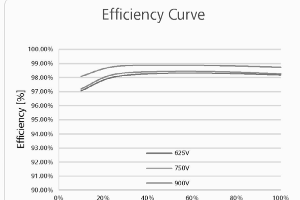
Smart
- 4 MPPTs for versatile adaptions to different layouts
- 8 strings intelligent monitoring and fast trouble-shooting
- Power Line Communication (PLC) supported
- Smart String I-V Diagnosis supported

Safe
- DC AFCI compliant to UL 1699B
- DC disconnect integrated, safe and convenient for maintenance
- Category surge arresters for both DC and AC
- Ground fault protection
- Residual Current Detection (RCD) protection

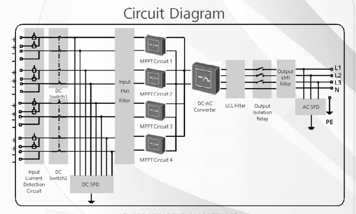
Efficient
- Max. efficiency 98.9%, CEC. efficiency 98.5%

Reliable
- Natural cooling technology
- Protection rating of NEMA 4X

Efficiency Curve



Circuit Diagram



SUN2000-33/36/40KTL-US

Always Available for Highest Yields — www.huawei.com/solar US 20161020

String Inverter (SUN2000-33/36/40KTL-US)

HUAWEI

Technical Specifications	SUN2000-33KTL-US	SUN2000-36KTL-US	SUN2000-40KTL-US
Efficiency			
Max. Efficiency	98.9%	98.9%	98.9%
CEC. Efficiency	98.5%	98.5%	98.5%
Input			
Max. Input Voltage	1,000 V	1,000 V	1,000 V
Max. Current per MPPT	22 A	22 A	22 A
Max. Short Circuit Current per MPPT	30 A	30 A	30 A
Min. Start Input Voltage	250 V	250 V	250 V
Full Power MPPT Voltage Range	460 V ~ 850 V	490 V ~ 850 V	530 V ~ 850 V
MPPT Operating Voltage Range	200 V - 1000 V	200 V - 1000 V	200 V - 1000 V
Rated Input Voltage	720 V	720 V	720 V
Max. Number of Inputs	8	8	8
Number of MPP Trackers	4	4	4
Output			
Rated AC Active Power	33,300 W	36,000 W	40,000 W
Max. AC Apparent Power	36,600 VA	40,000 VA	44,000 VA
Max. AC Active Power (cosφ=1)	36,600 W	40,000 W	44,000 W
Rated Output Voltage	277V / 480V, 3W+PE / 3W+N+PE	277V / 480V, 3W+PE / 3W+N+PE	277V / 480V, 3W+PE / 3W+N+PE
Rated Output Current	40.1 A	43.4 A	48.2 A
Rated AC Grid Frequency	60 Hz	60 Hz	60 Hz
Max. Output Current	44.1 A	48.2 A	53 A
Adjustable Power Factor	0.8 LG ... 0.8 LD	0.8 LG ... 0.8 LD	0.8 LG ... 0.8 LD
Max. Total Harmonic Distortion	< 3%	< 3%	< 3%
Protection			
Input-side Disconnection Device	Yes		
Anti-Islanding Protection	Yes		
DC Reverse-Polarity Protection	Yes		
PV-array String Fault Monitoring	Yes		
DC Surge Arrester	Category C		
AC Surge Arrester	Category C		
Insulation Monitoring	Yes		
Residual Current Detection	Yes		
Communication			
Display	LED Indicators		
USB / Bluetooth +APP	Yes		
RS485	Yes		
PLC	Yes		
General			
Dimensions (W×H×D)	36.6 x 21.7 x 10.2 inches (930 × 550 × 260 mm)		
Weight	121 lb. (55 kg)		
Operation Temperature Range	-13°F ~ 140°F (-25 °C ~ 60 °C)		
Cooling	Natural Convection		
Max. Operating Altitude Without Derating	16,404 ft. (5,000 m)		
Relative Humidity	0 ~ 100%		
DC Connector	Amphenol Helios H4		
AC Connector	Waterproof PG Terminal + OT Connector		
Protection Rating	NEMA 4X		
Internal Consumption at Night	< 1 W		
Topology	Transformerless		
Standards Compliance			
Safety /EMC	UL 1741, UL 1699B, UL 1998, CSA C22.2 #107.1-01, FCC Part 15		
Grid Code	IEEE 1547, IEEE 1547.1		

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EATON
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Heavy Duty Safety Switch

DH368NGK

UPC:782114312933

Dimensions:
- **Height:** 21 IN
- **Length:** 72 IN
- **Width:** 48 IN

Weight:465 LB

Warranties:
- Eaton Selling Policy 25-000, one (1) year from the date of installation of the Product or eighteen (18) months from the date of shipment of the Product, whichever occurs first.

Specifications:
- **Type:** Single-Throw
- **Amperage Rating:** 1200A
- **Enclosure:** NEMA 1
- **Enclosure Material:** Painted steel
- **Fuse Class Provision:** Class L fuses
- **Fuse Configuration:** Fusible with neutral
- **Number Of Poles:** Three-pole
- **Number Of Wires:** Four-wire
- **Product Category:** Heavy Duty, Fusible with neutral
- **Voltage Rating:** 600V

Supporting documents:
- Eatons Volume 2-Commercial Distribution
- Eaton Specification Sheet - DH368NGK

Certifications:
- UL Listed

Product compliance: No Data

CANOPY SERIES

CPSERIES
Garage Lighting Series

Parking Garage
SCS-CP-xxW-xxxV-XXK-X-XX
APPLICATIONS: Parking Garage / Outdoor
CERTIFICATIONS: CE • RoHS • DLC • UL

MODEL NAME:	SCS-CP-XXW-XXV-XXK-X-X		
Fixture-type / IP Rating		Indoor / Outdoor lighting (Wet location) Parking Garage / Gas Station	
Power Consumption		45W	60W
CCT		3000K / 4000K / 5000K / 5700K	
Luminous Flux		5,300lm	7,020lm
Luminous Efficacy		117lm/W	
Color Rendering Index		>80	
Input Voltage / Driver Type		100-277 VAC / Meanwell / Dim-Capable Option	
Power Factor / Frequency		>0.95 / 50/60 Hz	
Size (L x W x T)		10" x 10" x 3.3"	
Material	Body	Aluminum	
	Optic	PC, 150 Degree Beam Angle	
	Cover	PC (Clear)	
Total Harmonic Distortion		<20%	
Mounting Option(s)		Surface / Flush Mount	
Operating Temperature		-30 - +45°C	
Lifetime / Warranty		50,000 Hours / 5 Years	

ORDERING INFORMATION

SCS		xxxW	xxxV	xxK	x	x
Product Family	Fixture Type	Power Consumption	Line Voltage	CCT (K)	Dimmable	Motion Sensor
SCS	WSD	60W	277=100-277VAC	3x: 3000-3900K 4x: 4000-4900K 5x: 5000-5700K	Yes No	Yes No

Locus ENERGY — A GENSCAPE COMPANY

LGate 320
COMMERCIAL SOLAR MONITORING SOLUTION

The LGate 320 is a three-phase electronic watt-hour meter for remote monitoring of solar photovoltaic systems. It features a smart communications module to automatically transmit meter data over cellular or Ethernet networks allowing system owners and operators to easily manage distributed solar assets.

The LGate 320 combines a revenue-grade, solid-state power meter with an advanced communications gateway. These components work in conjunction to remotely monitor the performance of commercial solar energy installation regardless of panel or inverter type. The LGate 320 is a one-piece completely under glass meter which installs easily using a standard socket base. Performance data is uploaded in near real-time to the Locus Energy Solar-OS™ and SolarNOC monitoring platforms which provide a suite of tools and analytics for asset managers.

DATA COLLECTION
AC energy data is collected by the meter and passed to the communications module. Additional system performance data can be collected directly from meteorological sensors and supported inverters via RS-485 or Zigbee connections. All data is stored in non-volatile memory and then automatically uploaded to the Solar-OS and SolarNOC platforms.

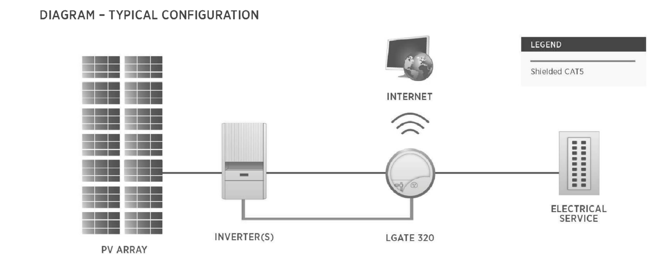
NETWORK CONNECTIVITY
The communications gateway inside the LGate 320 supports plug and play connectivity through a cellular or Ethernet network connection. Once the unit is installed and powered on, it will immediately begin transmitting data without any configuration. For maximum reliability, the communications gateway will automatically route uploads between the wireless and wired connections if either of the networks are unavailable.

FEATURES
- ANSI C12.20 power meter
- RS-485 and Zigbee inputs
- GSM cellular or Ethernet connectivity
- Over the air firmware updates
- Easy, low cost installation
- Doesn't require entrance into the building
- Plug and play activation
- LCD display

LGATE 320 | LOCUSENERGY.COM | sales@locusenergy.com | 877.562.8736

Locus

DIAGRAM – TYPICAL CONFIGURATION



DIMENSIONS

SPECIFICATIONS

DATALOGGER	
Processor	ARM9 embedded CPU
OS	Custom version of Linux 2.6, OTA firmware updates
Memory	128 MB RAM
Display	LCD screen

I/O
RS485 2 wire and 4 wire
Modbus
Zigbee

COMMUNICATIONS	
LAN	RJ45 10/100 Ethernet, full half duplex, auto polarity
Cellular	3G GSM
Networking	DHCP or static

POWER	
Accuracy	ANSI 12.20 (Class 0.2%)
Voltage Inputs	120 - 480 VAC
Max. Current Input	320 A
Service Type	Three phase, Wye or Delta 4-wire
Socket Type	16S

COMPLIANCE
ANSI 12.20 class 0.2%
FCC Part 15B
PTCRB
AT&T Carrier Compliance

PHYSICAL	
Enclosure	NEMA 3R Type
Weight	2 lbs 2 oz
Dimensions	6.95" x 6.5" x 7.3"
Environment	-20 to 60C, all-weather
Warranty	5 year limited warranty

LGATE 320 | LOCUSENERGY.COM | sales@locusenergy.com | 877.562.8736

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Project:
MORENO VALLEY, CA 92553

Project Details:
694.96 kWstc, 639.8 kW AC
AHJ: MORENO VALLEY, CITY OF

Engineering Approval:

REVISIONS		
DESCRIPTION	DATE	REV
SCE SLD	4/9/2018	1
SCE SLD & PLOT PLAN	4/23/2018	2
ORIGINAL	4/27/2018	A
CONDUIT, SPECS	5/1/2018	B

Sheet Title:
EQUIPMENT DATA SHEETS

Sheet Number:
D1.0

Sheet Size:
ARCH D - 36" x 24"

DESIGN & DRAFTING BY:
NABCEP CERTIFIED PV Installation Professional
RICHARD DOBBINS
PV-102216-011268

SepiSolar
POWER BY DESIGN

Reviewed & Approved by:
AD
NABCEP CERTIFIED PV Installation Professional