

NOTES

1. EXISTING PLUMBING VENTS, SKYLIGHTS,EXHAUST OUTLETS, VENTILATIONS INTAKE AIR OPENINGS SHALL NOT BE COVERED BY THE SOLAR PHOTOVOLTAIC SYSTEM.
2. EQUIPMENT. INVERTERS, MOTOR GENERATORS, PHOTOVOLTAIC MODULES, PHOTOVOLTAIC PANELS, AC PHOTOVOLTAIC MODULES, SOURCE-CIRCUIT COMBINERS, AND CHARGE CONTROLLERS INTENDED FOR USE IN PHOTOVOLTAIC POWER SYSTEMS SHALL BE IDENTIFIED AND LISTED FOR THE APPLICATION. (NEC 690.4(B))
3. ALL OUTDOOR EQUIPMENT SHALL BE NEMA 3R RATED, INCLUDING ALL ROOF MOUNTED TRANSITION BOXES AND NON ROOF SWITCHES. ROOF SWITCHES TO BE NEMA 4 RATED.
4. ALL EQUIPMENT SHALL BE PROPERLY GROUNDED AND BONDED IN ACCORDANCE WITH NEC ARTICLE 250.
- 5.PROTECTION DEVICES FOR PV SOURCE CIRCUITS AND PV OUTPUT CIRCUITS ALSO CONNECTED TO SOURCES HAVING SIGNIFICANTLY HIGHER CURRENT AVAILABILITY (E.G., PARALLEL STRINGS OF MODULES, UTILITY POWER), SHALL BE PROTECTED AT THE SOURCE FROM OVERCURRENT. [NEC 690.9(A)]
- 6.PV SYSTEM CIRCUITS INSTALLED ON OR IN BUILDINGS SHALL INCLUDE A RAPID SHUTDOWN FUNCTION THAT CONTROLS SPECIFIC CONDUCTORS. [NEC 690.12]
- 7.THE UTILITY INTERACTIVE INVERTERS SHALL AUTOMATICALLY DE-ENERGIZE ITS OUTPUT TO THE CONNECTED ELECTRICAL PRODUCTION AND DISTRIBUTION NETWORK UPON LOSS OF VOLTAGE IN THE SYSTEM AND SHALL REMAIN IN THAT STATE UNTIL THE ELECTRICAL PRODUCTION AND DISTRIBUTION NETWORK VOLTAGE HAS BEEN RESTORED. [NEC 705.41]
- 8.ALL CONDUCTOR EXPOSED TO WEATHER SHALL BE LISTED & IDENTIFIED FOR USE IN DIRECT SUNLIGHT. [NEC 310.10(D)(1)]
- 9.THE MODULE CONDUCTORS MUST BE TYPE USE-2 OR LISTED FOR PHOTOVOLTAIC (PV) WIRE. NEC 690.31(C)
- 10.ALL CONDUCTORS SHALL BE MARKED ON EACH END FOR UNIQUE IDENTIFICATION.
- 11.AN INSULATED GROUNDED CONDUCTOR OF 6 AWG OR SMALLER SHALL BE IDENTIFIED AS A CONTINUOUS WHITE FINISH.[NEC 200.6]
- 12.THE OUTPUT OF AN INTERCONNECTED ELECTRICAL POWER SOURCE SHALL BE PERMITTED TO BE CONNECTED TO THE LOAD SIDE. INTERCONNECTING PROVISIONS FOR OTHER POWER SOURCES SHALL COMPLY WITH 705.12(B)(1) THROUGH 705.12(B)(5)
13. EACH SOURCE INTERCONNECTION OF ONE OR MORE POWER SOURCES INSTALLED IN ONE SYSTEM SHALL BE MADE AT A DEDICATED CIRCUIT BREAKER OR FUSIBLE DISCONNECTING MEANS [NEC 705.12(B)(1)]
- 14.THE SUM OF THE AMPERE RATING OF THE OVERCURRENT DEVICES IN CIRCUITS SUPPLYING POWER TO THE BUSBAR OR CONDUCTOR SHALL NOT EXCEED 120% OF THE RATING OF BUSBAR OR CONDUCTOR.[NEC 705.12(B)(3)(2)]
- 15.A CONNECTION AT EITHER END, BUT NOT BOTH ENDS, OF A CENTER-FED PANEL BOARD IN DWELLINGS SHALL BE PERMITTED WHERE THE SUM OF 125 PERCENT OF THE POWER SOURCE(S) OUTPUT CIRCUIT CURRENT AND THE RATING OF THE OVERCURRENT DEVICE PROTECTING THE BUSBAR DOES NOT EXCEED 120 PERCENT OF THE CURRENT RATING OF THE BUSBAR. [NEC 705.12(B)(3)(2)]
- 16.EQUIPMENT CONTAINING OVERCURRENT DEVICES IN CIRCUITS SUPPLYING POWER TO A BUS BAR OR CONDUCTOR

- SHALL BE MARKED TO INDICATE THE PRESENCE OF ALL SOURCES. [NEC 705.12(B)(3)]
- 17.CIRCUIT BREAKER, IF BACKFED, SHALL BE SUITABLE FOR SUCH OPERATION. [NEC 705.12(B)(4)]
- 18.TO MINIMIZE OVERHEATING OF THE BUSBAR IN PANELBOARD, THE PANELBOARD MAIN CIRCUIT BREAKER AND THE PV POWER SOURCE CIRCUIT BREAKER SHALL BE PHYSICALLY LOCATED AT THE OPPOSITE END OF THE BUSBAR.
19. ALL THE NEC REQUIRED WARNING SIGNS, MARKINGS, AND LABELS SHALL BE POSTED ON EQUIPMENT AND DISCONNECTS PRIOR TO ANY INSPECTIONS TO BE PERFORMED BY THE BUILDING DEPARTMENT INSPECTOR.
- 20.WHERE PV SYSTEM DC CIRCUIT'S RUN INSIDE A BUILDING, THEY SHALL BE CONTAINED IN METAL RACEWAYS TYPE MC METAL CLAD CABLE OR METAL ENCLOSURES FROM POINT OF PENETRATION OF THE SURFACE OF THE BUILDING TO THE FIRST READILY ACCESSIBLE DISCONNECTING MEANS. [NEC 690.31(G)]
- 21.FLEXIBLE, FINE-STRANDED CABLES SHALL BE TERMINATED ONLY WITH TERMINALS, LUGS, DEVICES OR CONNECTOR THAT ARE IS IN ACCORDANCE WITH NEC 110.14
- 22.CONNECTORS SHALL BE OF LATCHING OR LOCKING TYPE. CONNECTORS THAT ARE READILY ACCESSIBLE AND OPERATING AT OVER 30V DC OR 15V AC SHALL REQUIRE TOOL TO OPEN AND MARKED "DO NOT DISCONNECT UNDER LOAD" OR "NOT FOR CURRENT INTERRUPTING". [NEC 690.33(C) & (E)(2)]
23. EQUIPMENT GROUNDING CONDUCTOR FOR PV MODULES SMALLER THAN 6AWG SHALL BE PROTECTED FROM PHYSICAL DAMAGE BY A RACEWAY OR CABLE ARMOR. NEC 690.46 & 250.120(C)]
24. AN EQUIPMENT GROUNDING CONDUCTOR SHALL NOT BE SMALLER THAN 14 AWG. [NEC 690.45]
25. FINE STRANDED CABLES USED FOR BATTERY TERMINALS, DEVICES, AND CONNECTIONS REQUIRE LUGS AND TERMINALS IS IN ACCORDANCE WITH NEC 110.14
- 26.GROUNDING ELECTRODE CONDUCTOR(S) SHALL BE INSTALLED IN ONE CONTINUOUS LENGTH WITHOUT A SPLICE OR JOINT. IF NECESSARY,SPLICES OR CONNECTIONS SHALL BE MADE AS PERMITTED. (NEC 250.64 C)
- 27.ALL SMOKE ALARMS, CARBON MONOXIDE ALARMS AND AUDIBLE NOTIFICATION DEVICES SHALL BE LISTED AND LABELED IN ACCORDANCE WITH UL 217 AND UL 2034. THEY WILL BE INSTALLED IN ACCORDANCE WITH NFPA 72 AND NFPA 720
- 28.SMOKE ALARMS AND CARBON MONOXIDE ALARMS WILL BE RETROFITTED INTO THE EXISTING DWELLING. THESE SMOKE ALARMS ARE REQUIRED TO BE IN ALL BEDROOMS,OUTSIDE EACH BEDROOM, AND AT LEAST ONE ON EACH FLOOR OF THE HOUSE CARBON MONOXIDE ALARMS ARE REQUIRED TO BE RETROFITTED OUTSIDE EACH BEDROOM AND AT LEAST ONE ON EACH FLOOR OF THE HOUSE.THESE ALARMS MAY BE SOLELY BATTERY OPERATED IF THE PHOTOVOLTAIC PROJECT DOES NOT INVOLVE THE REMOVAL OF INTERIOR WALL AND ALARMS MUST BE HARD WIRED AND INTERCONNECTED.

GENERAL CONDUCTOR INSULATION KEY
DC CONDUCTORS

- POSITIVE(UNGROUND) RED
NEGATIVE(UNGROUND) BLACK

480/277V AC CONDUCTORS

- PHASE L1 BROWN
PHASE L2 ORANGE
PHASE L3 YELLOW

120/208V OR 240V AC CONDUCTORS

- PHASE L1 BLACK
PHASE L2 RED (SEE NOTE)
PHASE L3 BLUE
NEUTRAL WHITE OR GREY
GROUND GREEN OR BARE Cu

NOTE:THREE PHASE HIGH LEG MUST BE IN ORANGE COLOR PER NFPA 70.

GROUND FAULT PROTECTION

1. PHOTOVOLTAIC INVERTERS SHALL BE EQUIPPED WITH DC GROUND FAULT PROTECTION. INVERTERS ARE ALSO EQUIPPED WITH ANTI-ISLANDING CIRCUITRY.

DISCONNECTING MEANS

1. MEANS SHALL BE PROVIDED TO ISOLATE EACH SOURCE CIRCUIT FROM THE SYSTEM.
2. WHERE A CIRCUIT GROUNDING CONNECTION IS NOT DESIGNED TO BE AUTOMATICALLY INTERRUPTED AS PART OF THE GROUND-FAULT PROTECTION, A SWITCH OR CIRCUIT BREAKER USED AS A DISCONNECTING MEANS SHALL NOT HAVE A POLE ON THE GROUNDED CONDUCTOR.
3. THE GROUNDED CONDUCTOR MAY HAVE A BOLTED OR TERMINAL DISCONNECTING MEANS TO ALLOW MAINTENANCE OR TROUBLESHOOTING BY QUALIFIED PERSONNEL.
4. EQUIPMENT SUCH AS PHOTOVOLTAIC SOURCE CIRCUITS, OVER CURRENT DEVICES, AND BLOCKING DIODES SHALL BE PERMITTED ON THE PHOTOVOLTAIC SIDE OF THE PHOTOVOLTAIC DISCONNECTING MEANS.
5. MEANS SHALL BE PROVIDED TO DISCONNECT INVERTERS FROM ALL UNGROUNDED CONDUCTORS OF ALL SOURCES. IF THE EQUIPMENT IS ENERGIZED FROM MORE THAN ONE SOURCE, THE DISCONNECTING MEANS SHALL BE GROUPED AND IDENTIFIED.
6. A SINGLE DISCONNECTING MEANS SHALL BE PERMITTED FOR THE COMBINED OUTPUT OF ONE OR MORE INVERTERS IN A GRID INTERACTIVE SYSTEM.
7. DISCONNECTING MEANS SHALL BE PROVIDED TO DISCONNECT A FUSE FROM ALL SOURCES OF SUPPLY IF THE FUSE IS ENERGIZED FROM BOTH DIRECTIONS AND IS ACCESSIBLE TO OTHER THAN QUALIFIED PERSONS. SUCH A FUSE IN A PHOTOVOLTAIC SOURCE CIRCUIT SHALL BE CAPABLE OF BEING DISCONNECTED INDEPENDENTLY OF FUSES IN OTHER PHOTOVOLTAIC SOURCE CIRCUITS.



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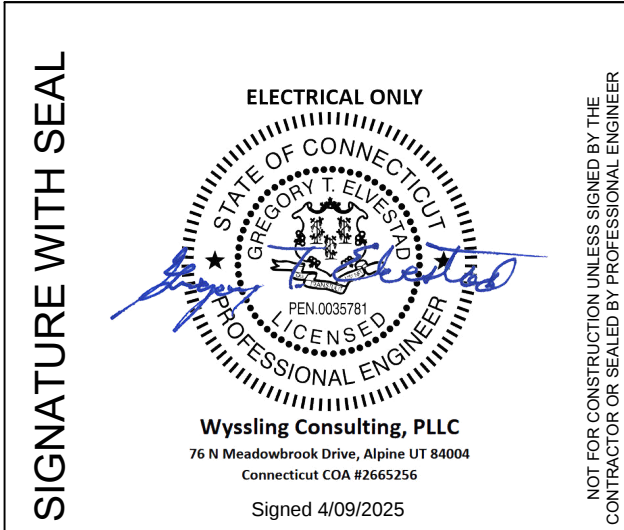
ADVANCED ENERGY EFFICIENCIES
3000 WHITNEY AVE, HAMDEN,
CONNECTICUT 06518, USA
LICENSE NO: ELECTRICAL LICENSE
E-1 CT 200969, MA # 21146-A
PHONE NO: (908) 251-7818

PROJECT NAME & ADDRESS

WESTWOOD
ELEMENTARY

350 W TODD ST,
HAMDEN, CT 06518, USA

SIGNATURE WITH SEAL



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CONTRACTOR OR SEALED BY PROFESSIONAL ENGINEER

REVISIONS	DATE	04/07/2025			
	DESCRIPTION	SITE PLAN & WIRE DIAGRAM			
	REV	A.0			

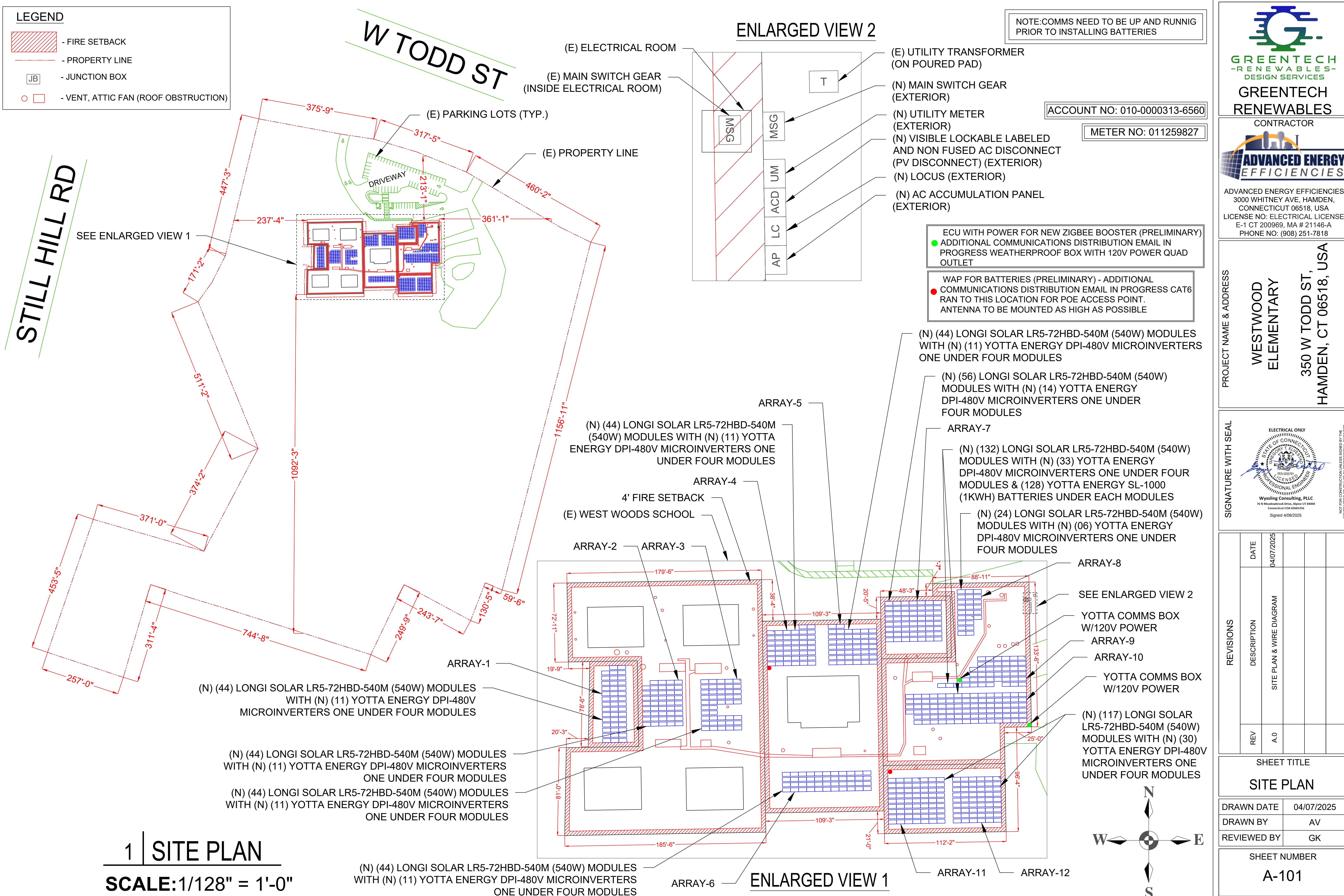
SHEET TITLE

NOTES

DRAWN DATE	04/07/2025
DRAWN BY	AV
REVIEWED BY	GK

SHEET NUMBER

G-001



LEGEND

- FIRE SETBACK
- PROPERTY LINE
- JUNCTION BOX
- VENT, ATTIC FAN (ROOF OBSTRUCTION)

NOTE: COMMS NEED TO BE UP AND RUNNING PRIOR TO INSTALLING BATTERIES

ACCOUNT NO: 010-0000313-6560

METER NO: 011259827

ECU WITH POWER FOR NEW ZIGBEE BOOSTER (PRELIMINARY)
● ADDITIONAL COMMUNICATIONS DISTRIBUTION EMAIL IN PROGRESS WEATHERPROOF BOX WITH 120V POWER QUAD OUTLET

WAP FOR BATTERIES (PRELIMINARY) - ADDITIONAL COMMUNICATIONS DISTRIBUTION EMAIL IN PROGRESS CAT6 RAN TO THIS LOCATION FOR POE ACCESS POINT. ANTENNA TO BE MOUNTED AS HIGH AS POSSIBLE

GREENTECH RENEWABLES

CONTRACTOR

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76 N Meadowbrook Drive, Alford, UT 84004
Connecticut CEA 000526
Signed 4/09/2025

REVISIONS		DATE		
REV	DESCRIPTION			
A.0	SITE PLAN & WIRE DIAGRAM	04/07/2025		

SHEET TITLE

SITE PLAN

DRAWN DATE	04/07/2025
DRAWN BY	AV
REVIEWED BY	GK

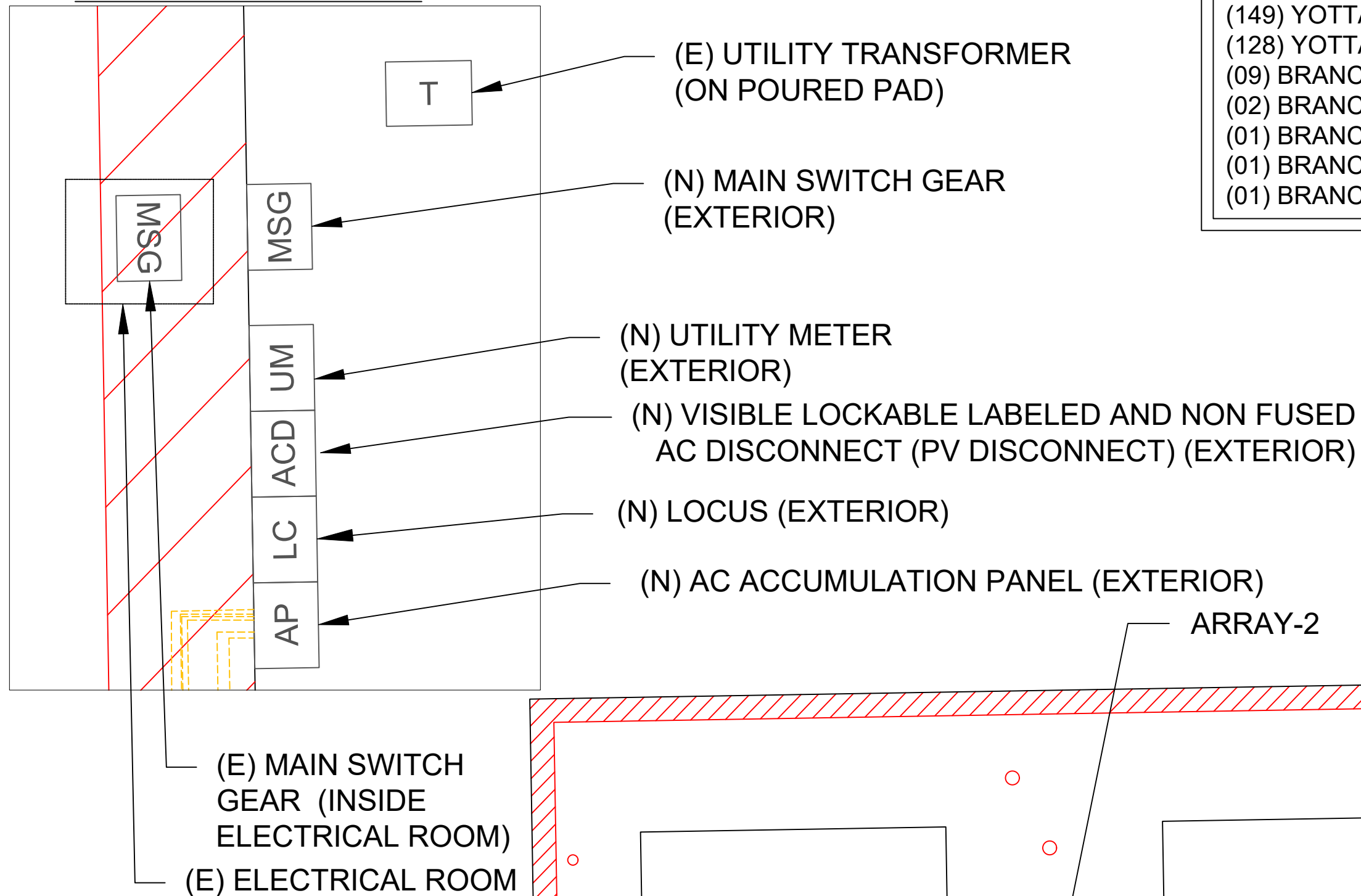
SHEET NUMBER

A-101

1 | SITE PLAN

SCALE: 1/128" = 1'-0"

ENLARGED VIEW



(593) LONGI SOLAR LR5-72HBD-540M (540W) MODULES
(149) YOTTA ENERGY DPI-480V MICROINVERTERS WITH
(128) YOTTA ENERGY SL-1000 (1KWH) BATTERIES
(09) BRANCH CIRCUITS OF (44) MODULES
(02) BRANCH CIRCUITS OF (40) MODULES
(01) BRANCH CIRCUIT OF (43) MODULES
(01) BRANCH CIRCUIT OF (38) MODULES
(01) BRANCH CIRCUIT OF (36) MODULES

DC SYSTEM SIZE: 320.22 kW DC
AC SYSTEM SIZE: 268.2 kW AC

NOTE: COMMS NEED TO BE UP AND RUNNING PRIOR TO INSTALLING BATTERIES

LEGEND

- FIRE SETBACK
- JUNCTION BOX
- VENT, ATTIC FAN (ROOF OBSTRUCTION)

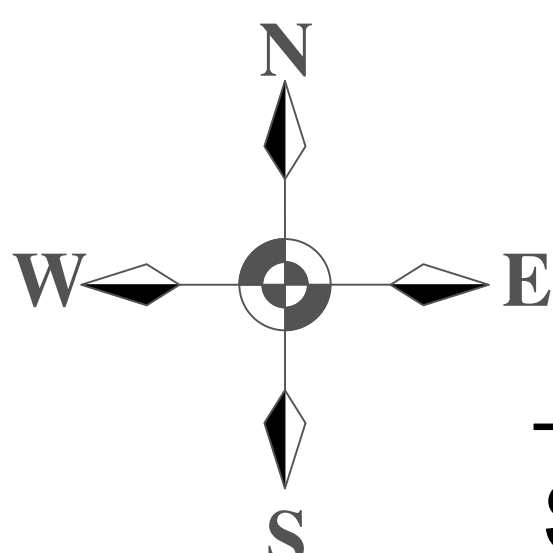
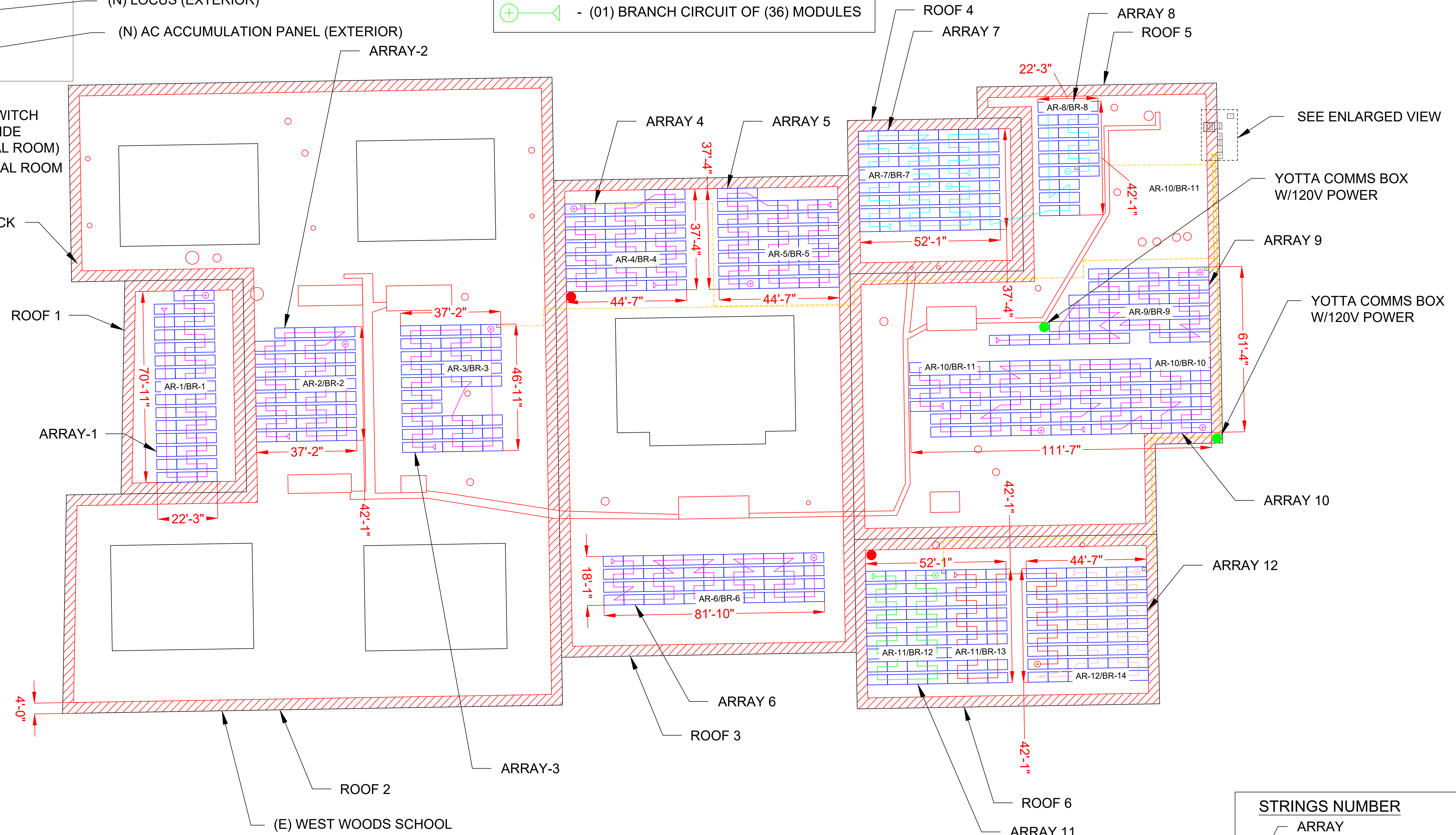
ECU WITH POWER FOR NEW ZIGBEE BOOSTER (PRELIMINARY)
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- (09) BRANCH CIRCUITS OF (44) MODULES
- (02) BRANCH CIRCUITS OF (40) MODULES
- (01) BRANCH CIRCUIT OF (43) MODULES
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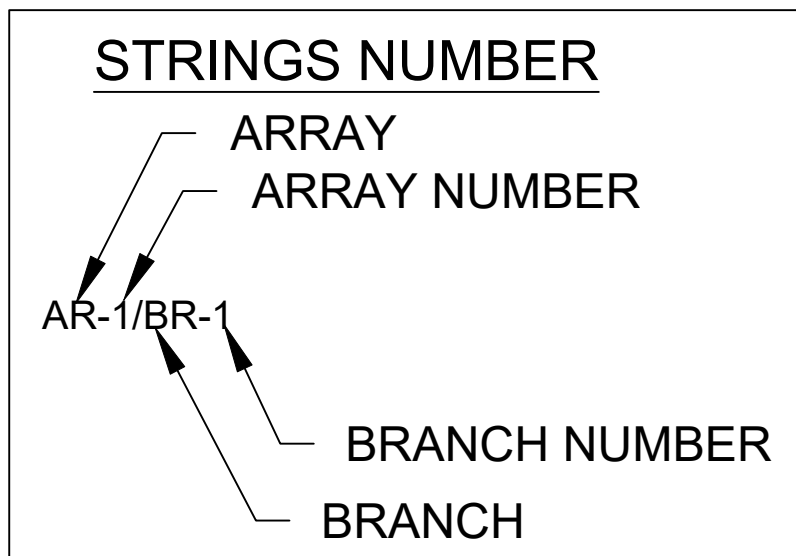
ROOF SECTION (S)

ROOF 1	ARRAY TILT-10° SLOPE - 0° AZIMUTH - 179° MODULE - 44
ROOF 2	ARRAY TILT-10° SLOPE - 0° AZIMUTH - 179° MODULE - 88
ROOF 3	ARRAY TILT-10° SLOPE - 0° AZIMUTH - 179° MODULE - 132
ROOF 4	ARRAY TILT-10° SLOPE - 0° AZIMUTH - 179° MODULE - 56
ROOF 5	ARRAY TILT-10° SLOPE - 0° AZIMUTH - 179° MODULE - 132
ROOF 6	ARRAY TILT-10° SLOPE - 0° AZIMUTH - 179° MODULE - 117



1 | ELECTRICAL PLAN

SCALE: 1/20" = 1'-0"



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ELECTRICAL ONLY

STATE OF CONNECTICUT

PROFESSIONAL ENGINEER

Wysling Consulting, PLLC
76 N Meridenbrook Drive, Alpine UT 84004
Connecticut CEA 2460526
Signed 4/09/2025

REV	DATE	DESCRIPTION
A.0	04/07/2025	SITE PLAN & WIRE DIAGRAM

SHEET TITLE

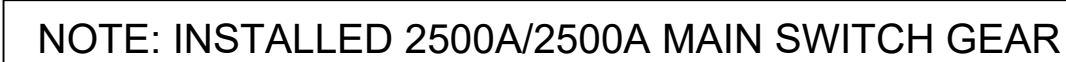
ELECTRICAL PLAN

DRAWN DATE	04/07/2025
DRAWN BY	AV
REVIEWED BY	GK

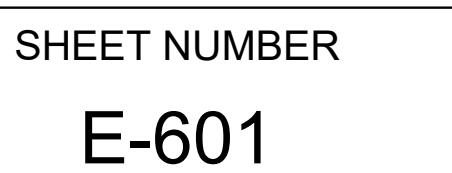
SHEET NUMBER

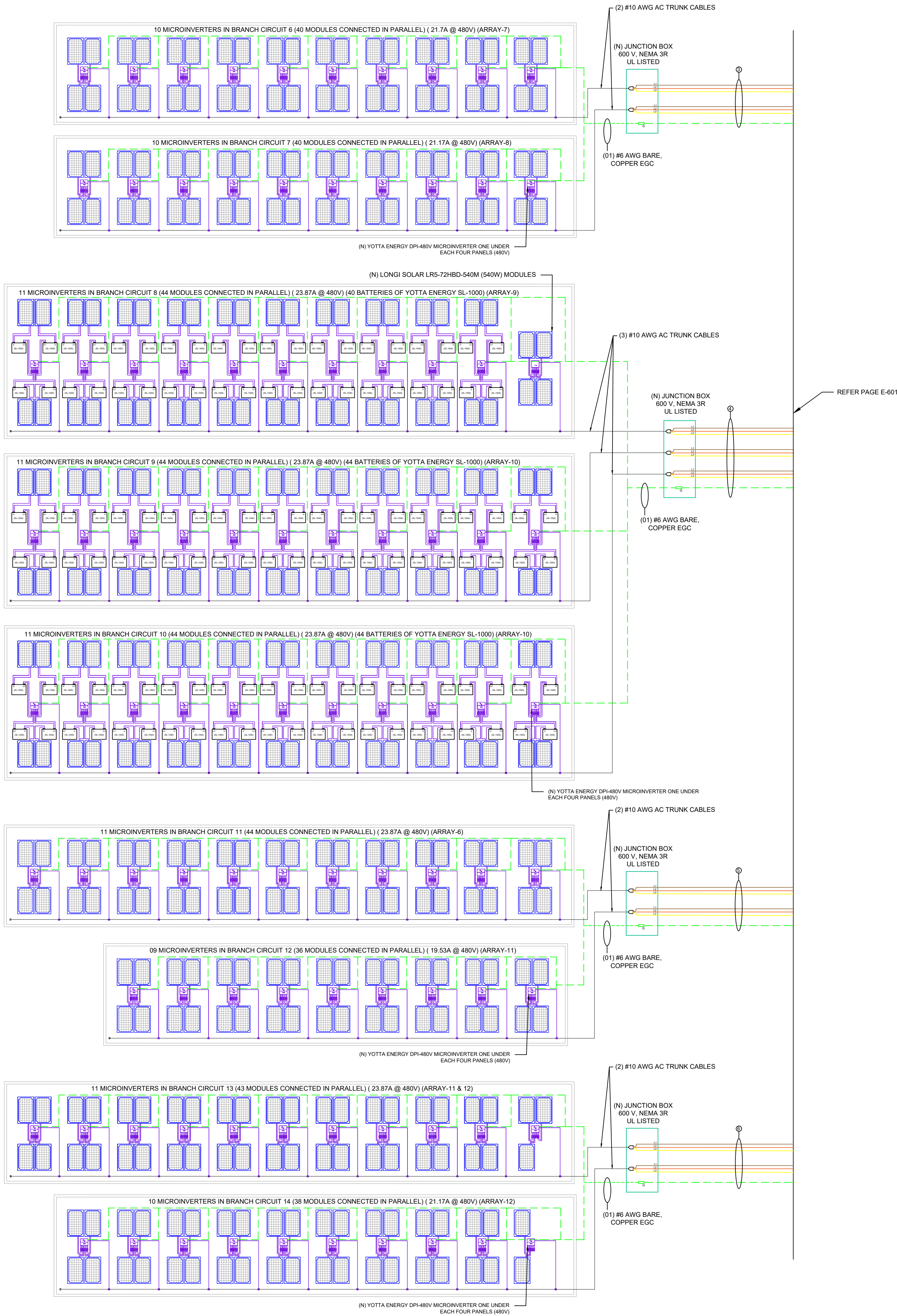
A-102

DC SYSTEM SIZE: 320.22 kW DC
AC SYSTEM SIZE: 268.2 kW AC



ID	PARALLEL FEEDER	PHASE CONDUCTOR QTY, SIZE AND TYPE PER CONDUIT			NEUTRAL			GROUND CONDUCTOR QTY, SIZE AND TYPE PER CONDUIT			CONDUIT SIZE	CONDUIT TYPE
1	1	9	AWG #6	THWN-2, COPPER		N/A		1	AWG #10	THWN-2, COPPER EGC	1-1/4"	EMT
2	1	6	AWG #6	THWN-2, COPPER		N/A		1	AWG #10	THWN-2, COPPER EGC	1"	EMT
3	1	6	AWG #8	THWN-2, COPPER		N/A		1	AWG #10	THWN-2, COPPER EGC	1"	EMT
4	1	9	AWG #8	THWN-2, COPPER		N/A		1	AWG #10	THWN-2, COPPER EGC	1"	EMT
5	1	6	AWG #6	THWN-2, COPPER		N/A		1	AWG #10	THWN-2, COPPER EGC	1"	EMT
6	1	6	AWG #8	THWN-2, COPPER		N/A		1	AWG #10	THWN-2, COPPER EGC	1"	EMT
7	2	3	MCM #300	XHHW, ALUMINUM	1	MCM #300	XHHW, ALUMINUM	1	AWG #1/0	XHHW,ALUMINUM EGC	2-1/2"	EMT
8	2	3	MCM #300	XHHW, ALUMINUM	1	MCM #300	XHHW, ALUMINUM	1	AWG #1/0	XHHW,ALUMINUM EGC	2-1/2"	EMT
9	4	3	MCM #400	XHHW, ALUMINUM	1	MCM #400	XHHW, ALUMINUM	1	AWG #4/0	XHHW,ALUMINUM EGC	4"	EMT





REV	DESCRIPTION	DATE			
A.0	SITE PLAN & WIRE DIAGRAM	04/07/2025			

SHEET TITLE	
ELECTRICAL LINE DIAGRAM	
DRAWN DATE	04/07/2025
DRAWN BY	AV
REVIEWED BY	GK
SHEET NUMBER	
E-601.1	

SOLAR MODULE SPECIFICATIONS		
MANUFACTURER / MODEL #	LONGI SOLAR LR5-72HBD-540M (540W) MODULES	
	STC	5% BI-FACIAL GAIN
VMP	41.65V	41.65V
IMP	12.97A	13.61A
VOC	49.50V	49.50V
ISC	13.85A	14.54A
TEMP. COEFF. VOC	-0.265% /°C	
PTC RATING	503.5W	
MODULE DIMENSION	88.81×44.60×1.37 (In Inch)	

PERCENT OF VALUES	NUMBER OF CURRENT CARRYING CONDUCTORS IN EMT
0.80	4-6
0.70	7-9
0.50	10-20

5% BIFACIAL GAIN CALCULATION
Imp = 12.97A X 1.05 = 13.61A
Isc = 13.85A X 1.05 = 14.54A

INVERTER SPECIFICATIONS	
MANUFACTURER / MODEL #	YOTTA ENERGY DPI-480V MICROINVERTERS
NOMINAL AC POWER	1800 W
NOMINAL OUTPUT VOLTAGE	480VAC
NOMINAL OUTPUT CURRENT	2.17 A

BATTERY SPECIFICATIONS	
MANUFACTURER / MODEL #	YOTTA ENERGY SL-1000 BATTERIES
USABLE CAPACITY	1kWH
NOMINAL OUTPUT VOLTAGE	38.4V
MAX. DISCHARGE CURRENT	15A

AMBIENT TEMPERATURE SPECS°C	
RECORD LOW TEMP	-14°
AMBIENT TEMP (HIGH TEMP 2%)	30°
CONDUIT HEIGHT	7/8"
ROOF TOP TEMP	30°
CONDUCTOR TEMPERATURE RATE	90°

120% RULE FOR BACKFEED BREAKER - NEC 705.12(B)(3)(2)	
MCB RATING	2500 A
BUS BAR RATING	2500 A
PV BREAKER RATING	450 A
(120% X BUS BAR RATING)- MCB RATING	500 A
PV BREAKER RATING IS LESS THAN ALLOWABLE	YES

AC WIRE CALCULATION

WIRE ID	PARALLEL FEEDERS	EXPECTED WIRE TEMP (In Celsius)	TEMP. CORRECTION PER TABLE 310.15(B)(1)	NO. OF CURRENT CARRYING CONDUCTORS	CONDUIT FILL CORRECTION PER NEC 310.15(C)(1)	CIRCUIT CONDUCTOR SIZE	CIRCUIT CONDUCTOR AMPACITY @75°(PER FEEDER SET)	CIRCUIT CONDUCTOR AMPACITY @90°(PER FEEDER SET)	REQUIRED CIRCUIT CONDUCTOR AMPACITY PER NEC 690.8(A)(1)(e) TOTAL INVERTER OUTPUT CURRENT	MIN. OCPD REQUIRED PER NEC 690.9 (B) TOTAL INVERTER OUTPUT X 1.25	DERATED AMPACITY OF CIRCUIT CONDUCTOR PER NEC TABLE 310.16 TEMP. CORRECTION PER TABLE 310.15(B)(1) X CONDUIT FILL CORRECTION PER NEC 310.15(C)(1) X CIRCUIT CONDUCTOR AMPACITY @90° (PER FEEDER SET)	DERATED AMPACITY OF CIRCUIT CONDUCTOR IS GREATER THAN REQUIRED	ESTIMATED DISTANCE (FT)	EXPECTED VOLTAGE DROP (%)
1	1	30°	1.00	9	0.70	#6 AWG	65A	75A	23.87A	29.83A	52.5A	YES	320	1.35
2	1	30°	1.00	6	0.80	#6 AWG	65A	75A	23.87A	29.83A	60A	YES	300	1.27
3	1	30°	1.00	6	0.80	#8 AWG	50A	55A	21.7A	27.13A	44A	YES	60	0.37
4	1	30°	1.00	9	0.70	#8 AWG	50A	55A	23.87A	29.83A	38.5A	YES	40	0.27
5	1	30°	1.00	6	0.80	#6 AWG	65A	75A	23.87A	29.83A	60A	YES	240	1.01
6	1	30°	1.00	6	0.80	#8 AWG	50A	55A	19.53A	24.41A	44A	YES	180	1.21
7	2	30°	1.00	3	1	#300 MCM (AL)	2 x 230A	2 x 260A	323.33A	404.16A	520A	YES	10	0.04
8	2	30°	1.00	3	1	#300 MCM (AL)	2 x 230A	2 x 260A	323.33A	404.16A	520A	YES	10	0.04
9	4	30°	1.00	3	1	#400 MCM (AL)	4 x 270A	4 x 305A	1000A	1000A	1220A	YES	10	0.05
TOTAL AC VOLTAGE DROP (%) (TAG 1, 8 & 9)														1.44



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REVISIONS	DATE	04/07/2025			
	DESCRIPTION	SITE PLAN & WIRE DIAGRAM			
	REV	A.0			

SHEET TITLE
**ELECTRICAL
CALCULATIONS**

DRAWN DATE	04/07/2025
DRAWN BY	AV
REVIEWED BY	GK

SHEET NUMBER
E-602

1

WARNING

ELECTRICAL SHOCK HAZARD

TERMINALS ON THE LINE AND
LOAD SIDES MAY BE ENERGIZED
IN THE OPEN POSITION

LABEL LOCATION: COMBINER PANEL, AC
DISCONNECT, POINT OF INTERCONNECTION
PER CODE: NEC 706.15(C)(4), NEC 690.13(B)

2

WARNING

TURN OFF PHOTOVOLTAIC AC
DISCONNECT PRIOR TO
WORKING INSIDE PANEL

LABEL LOCATION: COMBINER PANEL(S), MAIN SERVICE DISCONNECT
PER CODE: NEC 110.27(C), OSHA 1910.145(f)(7)

3

PHOTOVOLTAIC POWER SOURCE

LABEL LOCATION: DC CONDUIT/RACEWAYS
PER CODE: NEC 690.31(D)(2)

4

SOLAR PV DC CIRCUIT

LABEL LOCATION: DC CONDUIT/RACEWAYS
PER CODE: NEC 690.31(D)(2)

5

PHOTOVOLTAIC SYSTEM AC DISCONNECT

RATED AC OUTPUT CURRENT: **323.33 A**

NOMINAL OPERATING AC VOLTAGE: **480 V**

LABEL LOCATION: AC DISCONNECT/POINT OF INTERCONNECTION
PER CODE: NEC 690.54

6

WARNING DUAL POWER SOURCE

SECOND SOURCE IS PHOTOVOLTAIC SYSTEM

LABEL LOCATION: MAIN SERVICE DISCONNECT, PRODUCTION/NET METER
PER CODE: NEC 690.59, 705.12(C)

7

PV SYSTEM

DISCONNECT

LABEL LOCATION: AC DISCONNECT
PER CODE: NEC 690.13(B)

8

**MAIN PHOTOVOLTAIC
SYSTEM DISCONNECT**

LABEL LOCATION: MAIN SERVICE DISCONNECT, UTILITY METER
PER CODE: NEC 690.13(B)

9

WARNING

THIS EQUIPMENT FED BY MULTIPLE
SOURCES:
TOTAL RATING OF ALL OVERCURRENT
DEVICES EXCLUDING MAIN POWER
SUPPLY SHALL NOT EXCEED
AMPACITY OF BUSBAR

LABEL LOCATION: AC DISCONNECT
PER CODE: NEC 705.12(B)(3)(3)

10

WARNING

POWER SOURCE OUTPUT
CONNECTION. DO NOT RELOCATE
THIS OVERCURRENT DEVICE.

LABEL LOCATION: POINT OF INTERCONNECTION
PER CODE: NEC 705.12(B)(3)(2)

11

**SOLAR PV SYSTEM EQUIPPED
WITH RAPID SHUTDOWN**

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

LABEL LOCATION: MAIN SERVICE DISCONNECT
PER CODE: NEC 690.56(C)

12

**RAPID SHUTDOWN SWITCH
FOR SOLAR PV SYSTEM**

LABEL LOCATION: RSD INITIATION DEVICE, AC DISCONNECT
PER CODE: NEC 690.56(C)(2)

13

CAUTION

PHOTOVOLTAIC SYSTEM CIRCUIT IS BACKFED

LABEL LOCATION: MAIN SERVICE DISCONNECT
PER CODE: NEC 705.12(D), NEC 690.59

14

**DO NOT DISCONNECT
UNDER LOAD**

LABEL LOCATION: MAIN SERVICE DISCONNECT
PER CODE: NEC 690.15(B) & NEC 690.33(D)(2)

15

**MAXIMUM DC VOLTAGE
OF PV SYSTEM**

LABEL LOCATION: DC DISCONNECT/INVERTER/PV DIST.
EQUIPMENT PER CODE: NEC 690.53

16

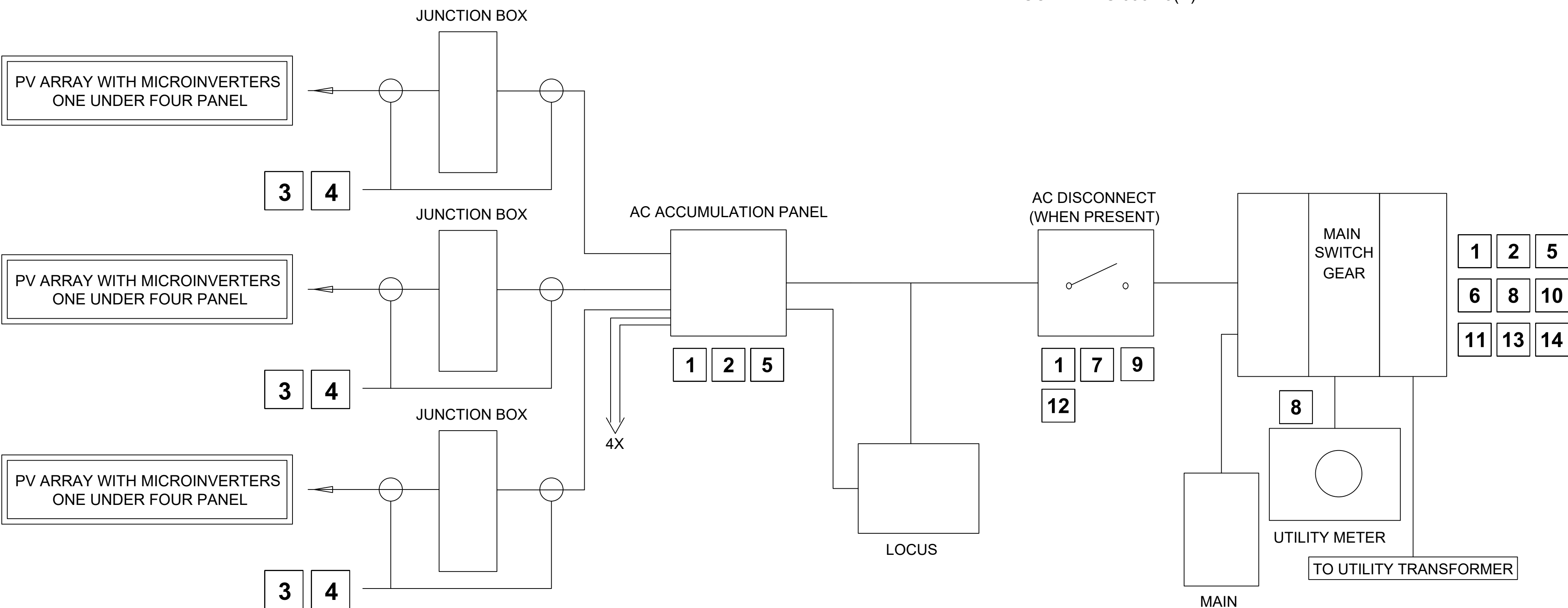
WARNING

ELECTRICAL SHOCK HAZARD

TERMINALS ON BOTH LINE AND
LOAD SIDES MAY BE ENERGIZED
IN THE OPEN POSITION

DC VOLTAGE IS ALWAYS PRESENT WHEN
SOLAR MODULES ARE EXPOSED TO SUNLIGHT

LABEL LOCATION: DC DISCONNECT
PER CODE: NEC 690.13(B)



**GREENTECH
RENEWABLES**

CONTRACTOR

ADVANCED ENERGY EFFICIENCIES
3000 WHITNEY AVE, HAMDEN,
CONNECTICUT 06518, USA
LICENSE NO: ELECTRICAL LICENSE
E-1 CT 200969, MA # 21146-A
PHONE NO: (908) 251-7818

PROJECT NAME & ADDRESS

**WESTWOOD
ELEMENTARY**

**350 W TODD ST,
HAMDEN, CT 06518, USA**

SIGNATURE WITH SEAL

Wyssling Consulting, PLLC
76 N Meadowbrook Drive, Alpine UT 84004
Connecticut CEA 9260526
Signed 4/09/2025

NOT FOR CONSTRUCTION UNLESS SIGNED BY THE
CONTRACTOR OR SEaled BY PROFESSIONAL ENGINEER

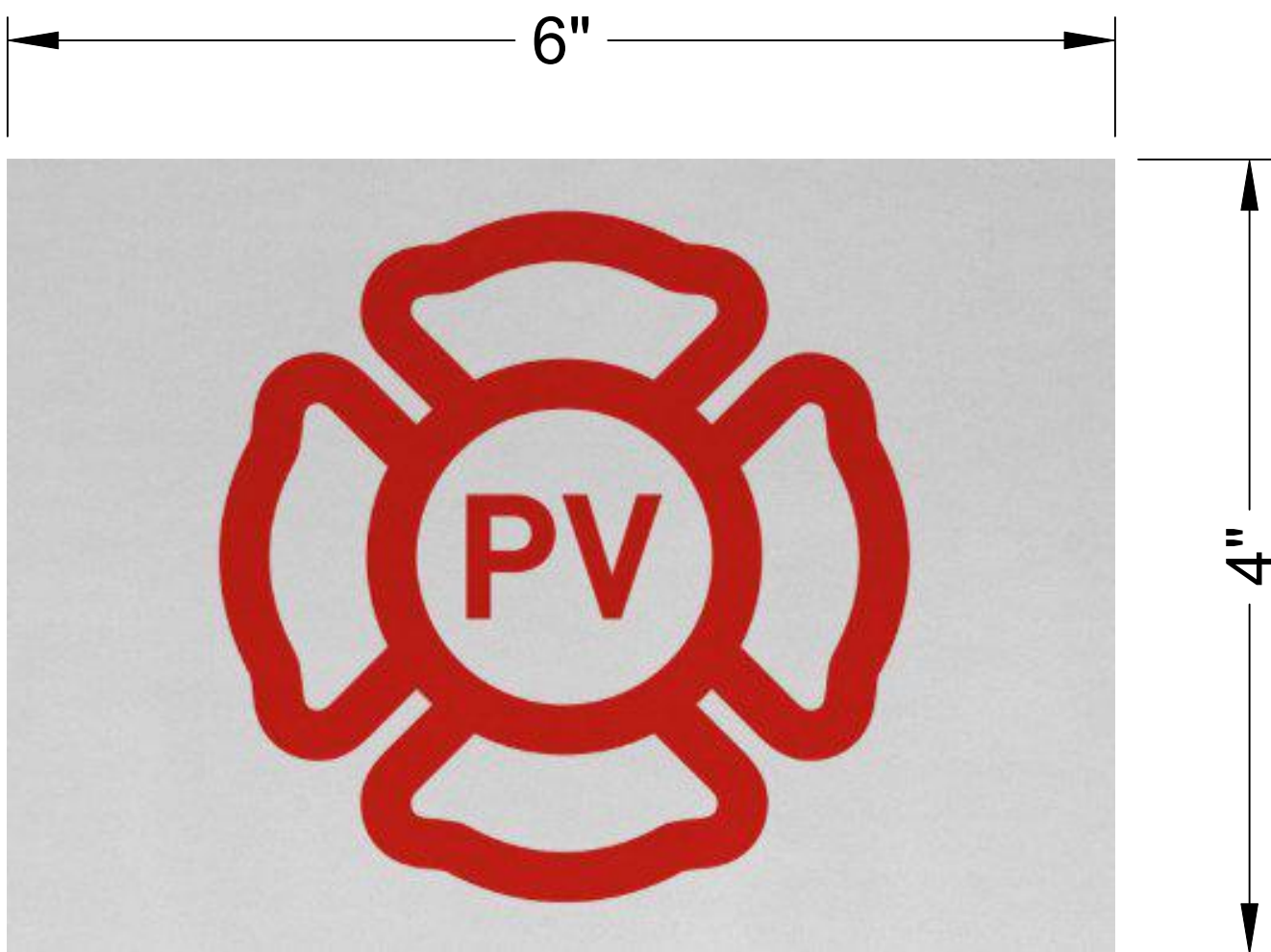
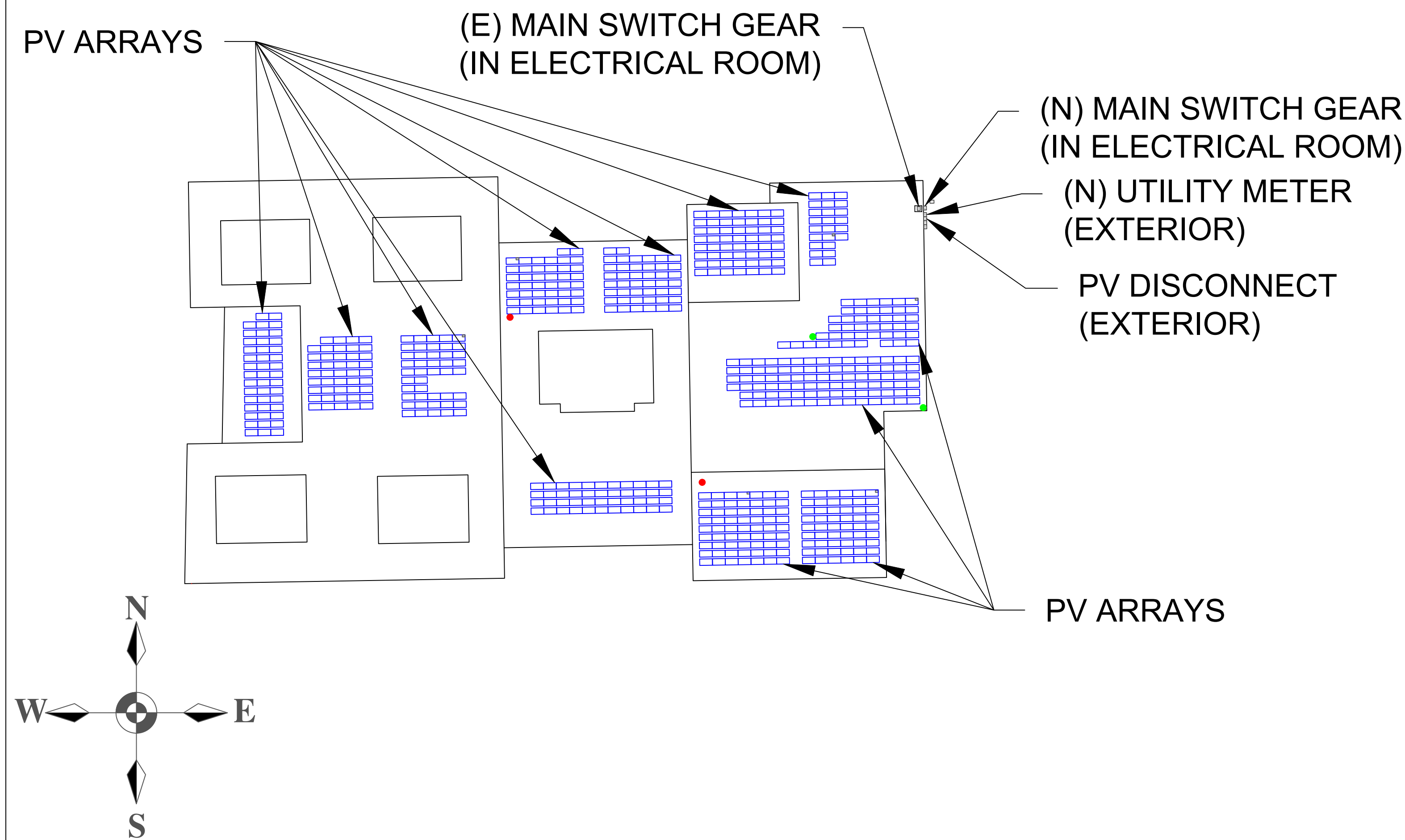
REVISIONS	DATE			
	DESCRIPTION			
	SITE PLAN & WIRE DIAGRAM			
REV	A.O			

SHEET TITLE	
WARNING LABELS	
DRAWN DATE	04/07/2025
DRAWN BY	AV
REVIEWED BY	GK

SHEET NUMBER
E-603

CAUTION

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





GREENTECH
-RENEWABLES-
DESIGN SERVICES

GREENTECH
RENEWABLES

CONTRACTOR



ADVANCED ENERGY
EFFICIENCIES

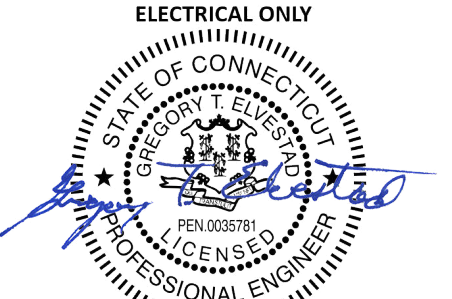
ADVANCED ENERGY EFFICIENCIES
3000 WHITNEY AVE, HAMDEN,
CONNECTICUT 06518, USA
LICENSE NO: ELECTRICAL LICENSE
E-1 CT 200969, MA # 21146-A
PHONE NO: (908) 251-7818

PROJECT NAME & ADDRESS

WESTWOOD
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HAMDEN, CT 06518, USA

SIGNATURE WITH SEAL



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REV	DESCRIPTION	DATE			
A.0	SITE PLAN & WIRE DIAGRAM	04/07/2025			

SHEET TITLE

PLACARDS

DRAWN DATE	04/07/2025
DRAWN BY	AV
REVIEWED BY	GK

SHEET NUMBER

E-604

Hi-MO 5

LR5-72HBD 530~550M

- Based on M10 wafer, best choice for ultra-large power plants
- Advanced module technology delivers superior module efficiency
 - M10 Gallium-doped Wafer
 - Smart Soldering
 - 9-busbar Half-cut Cell
- Globally validated bifacial energy yield
- High module quality ensures long-term reliability

12 12-year Warranty for Materials and Processing

30 30-year Warranty for Extra Linear Power Output

Complete System and Product Certifications

IEC 61215, IEC 61730, UL 61730
ISO 9001:2015 ISO 14001:2015
ISO 45001:2018 ISO 50001:2018
IEC 62941: Guideline for module design qualification and type approval

LONGI



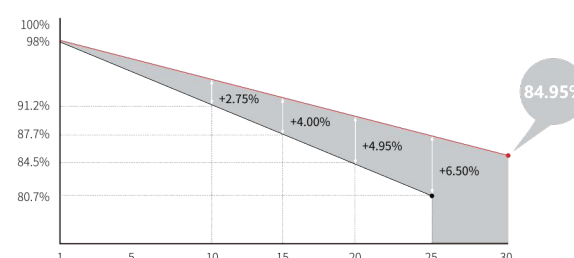
Hi-MO 5

LR5-72HBD 530~550M

21.5% EFFICIENCY 0~3% TOLERANCE <2% POWER DEGRADATION 0.45% POWER DEGRADATION HALF-CELL Lower operating temperature

Additional Value

30-Year Power Warranty



Mechanical Parameters

Cell Orientation	144 (8 x 24)
Junction Box	IP68, three diodes
Output Cable	4mm ² x480, 200mm x 2.400mm length can be customized
Glass	Dual glass, 2.0x2.0mm heat strengthened glass
Frame	Anodized aluminum alloy frame
Weight	32.5kg
Dimension	2256 x 1133 x 25mm
Packaging	33pcs per pallet / 150pcs per 20' GP / 600pcs or 500pcs only for USA per 40' HC

Electrical Characteristics

Module Type	STC: AM1.5 1000W/m ² 25°C	NOCT: AM1.5 800W/m ² 20°C 1m/s	Test Uncertainty for Pmax: ±3%
LR5-72HBD-530M	530	530	530
LR5-72HBD-535M	535	535	535
LR5-72HBD-540M	540	540	540
LR5-72HBD-545M	545	545	545
LR5-72HBD-550M	550	550	550

Electrical characteristics with different rear side power gain (reference to 540W front)

Power gain	Voc/V	Isc/A	Vmp/V	Imp/A	Pmax/gain
567	49.50	14.54	41.65	13.61	5%
594	49.50	15.23	41.65	14.26	10%
621	49.50	15.92	41.65	14.91	15%
648	49.50	16.61	41.65	15.56	20%
675	49.50	17.31	41.65	16.21	25%

Operating Parameters

Operational Temperature	-40°C ~ +60°C
Power Output Tolerance	0 ~ 3%
Voc and Isc Tolerance	±3%
Maximum System Voltage	DC 1500V (IEC/UL)
Maximum Series Fuse Rating	30A
Nominal Operating Cell Temperature	45 ± 2°C
Protection Class	Class II
Bi-Directionality	70 ± 5%
Fire Rating	UL type 99 IEC Class C

Mechanical Loading

Front Side Maximum Static Loading	5400Pa
Rear Side Maximum Static Loading	2400Pa
Hailstone Test	25mm Hailstone at the speed of 23m/s

Temperature Ratings (STC)

Temperature Coefficient of Isc	+0.050%/°C
Temperature Coefficient of Voc	-0.265%/°C
Temperature Coefficient of Pmax	-0.340%/°C

LONGI

No.8369 Shangyuan Road, Xi'an Economic and Technological Development Zone, Xi'an, Shaanxi, China.
Web: www.longi.com

Specifications included in this datasheet are subject to change without notice. LONGI reserves the right of final interpretation. (2023/01/10/17)

YOTTA ENERGY

DPI-208 & DPI-480 3-Phase Microinverters

Yotta's Dual Power Inverters (DPI-208 and DPI-480) are native 3-phase microinverters that each support four high capacity solar modules and deliver outstanding performance. The internals are protected with silicone to reduce stress on the electronics, increase its waterproof properties, dissipate heat, and to provide maximum system reliability. Yotta's DPI-208 and DPI-480 are powerful plug-and-play MLPE inverters that install faster than any other solution in the market and comply with rapid shutdown requirements. Their design improves thermal dissipation while maximizing power production.

- DPI (Dual Power Inverter) designed to work with PV or Yotta's SolarLEAF energy storage technology
- Native 3-phase power output (208V or 480V)
- Low Voltage DC input (<60V)
- 4 Solar Module Input Channels, 2 MPPT's
- Continuous rated AC output power 1728VA @208V and 1800VA @480V
- Engineered for high-capacity PV modules
- Maximum input current 20A
- Integrated Safety Protection Relay
- Rapid Shutdown Compliant
- Adjustable Power Factor



3 PHASE GRID

208 or 480V OUTPUT VOLTAGE

PLAY & STORAGE READY

RAPID SHUTDOWN COMPLIANT

SAFETY PROTECTION RELAY

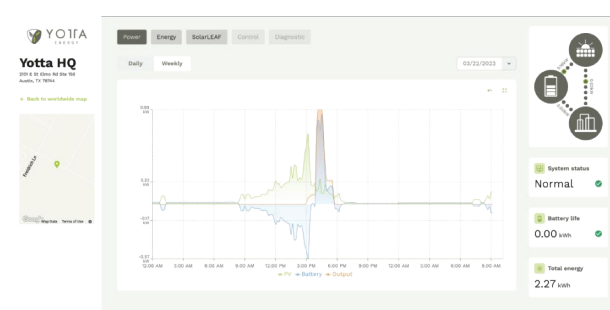
ADJUSTABLE POWER FACTOR

ADVANCED HEAT DISSIPATION TECHNOLOGY

REMOTE DIAGNOSIS

Yotta Vision Monitoring

- Monitors and Analyzes each solar module and microinverter
- Allows Remote Access to the solar array
- Displays Performance Issues and Alerts the user to events
- Real Time Communication
- Graphs system solar output over time to boost troubleshooting



Ver. 5.5
July 2023

www.yottaenergy.com

DPI-208 & DPI-480 3-Phase Microinverter Data Sheet

MODEL	DPI-208	DPI-480
INPUT DATA (DC)		
Peak Power Tracking Voltage	32V-45V	
Operating Voltage Range	26V-60V	
Maximum Input Voltage	60V	
Maximum Input Current	20A x 4	
Maximum Input Short Circuit Current	25A per input	
OUTPUT DATA (AC)		
Maximum Continuous Output Power	1728VA	1800VA
Nominal Output Voltage/Range ⁽¹⁾	208V/183V-229V	480V/422V-528V
Adjustable Output Voltage Range	166V-240V	385V-552V
Nominal Output Current	4.8Ax3	2.17Ax3
Maximum Output Fault Current (AC) and Duration	L-L:85.4Apk, 13.6ms of duration, 4.967Arms	L-L:35.1Apk, 13.9ms of duration, 2.199Arms
Grid Connections	208V 3-Phase (208V/120V, 240 Delta)	480V 3-Phase (480V/277V, 480 Delta)
EFFICIENCY		
Peak Efficiency		96.5%
Nominal MPPT Efficiency		99.5%
Night Power Consumption		40mW
MECHANICAL DATA		
Operating Ambient Temperature Range ⁽²⁾		-40°F to +149°F (-40°C to +65°C)
Storage Temperature Range		-40°F to +185°F (-40°C to +85°C)
Dimensions (W x H x D)		14" x 9.5" x 1.8" (359mm X 242mm X 46mm)
Weight		13 lbs (6kg)
DC Connector Type		Stäubli MC4 PV-ADBP4-S2&ADSP4-S2
Cooling		Natural Convection - No Fans
Enclosure Environmental Rating		Type 6
FEATURES		
Communication (Inverter To ECU) ⁽⁴⁾		Encrypted ZigBee
Isolation Design		High Frequency Transformers, Galvanically isolated
Energy Management		Yotta EMA (Web and App)
Warranty		10 Years Standard ; 25 Years Optional
CERTIFICATE & COMPLIANCE		
Safety, EMC & Grid Compliances		UL-1741; CA Rule 21 (UL 1741 SA and UL 1741 SB); CSA C22.2 No. 1071-16; HECO RULE 14H AND RULE 22; FCC Part 15; ANSI C63.4; IEC61801-2; IEEE1547; NEC2014 & NEC2017 Section 680.11 DC Arc-Fault circuit; Protection NEC2014 & NEC2017 & NEC2020; Section 690.32 Rapid Shutdown of PV systems on Building

⁽¹⁾ Nominal voltage/temperature range can be extended beyond nominal if required by the utility.
⁽²⁾ Cooling may vary with local requirements to control the number of microinverters per branch in your area.
⁽³⁾ Inverter may enter low power mode in environments with poor ventilation or limited heat dissipation.
⁽⁴⁾ Recommended for more than 50 inverters register to use ECU for stable communication.

YOTTA ENERGY INC.
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+1 (512) 856 7788

GREENTECH
-RENEWABLES-
DESIGN SERVICES

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RENEWABLES

CONTRACTOR

ADVANCED ENERGY EFFICIENCIES

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PHONE NO: (908) 251-7818

PROJECT NAME & ADDRESS

WESTWOOD
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350 W TODD ST,
HAMDEN, CT 06518, USA

SIGNATURE WITH SEAL

REV	DESCRIPTION	DATE	REVISIONS
A.0	SITE PLAN & WIRE DIAGRAM	04/07/2025	

SHEET TITLE
RESOURCE
DOCUMENT

DRAWN DATE	04/07/2025
DRAWN BY	AV
REVIEWED BY	GK

SHEET NUMBER

R-001

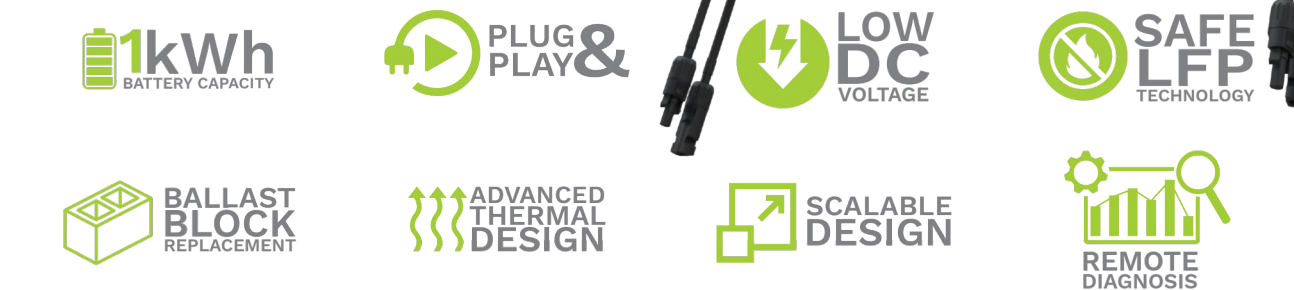
YOTTA ENERGY

SL-1000 Commercial Energy Storage Solution

Yotta's SolarLEAF™ (SL-1000) is a fully-integrated energy storage technology that seamlessly integrates behind photovoltaic (PV) modules on commercial rooftops which solves one of the industry's biggest challenges of "Where do you put the batteries?". Engineered with an advanced passive thermal regulation technology, SolarLEAF™ safely enables a distributed format while maximizing the life and performance of the battery under extreme thermal conditions.

The SolarLEAF's modular design is able to scale to meet the changing needs of commercial buildings while optimizing for today's needs. With its plug-and-play design and direct integration with Yotta's Dual Power Inverters, deployment of the technology is a breeze.

- Best in class fire safety
- Plug-and-play for simplified deployment
- Low Voltage DC architecture (<60V)
- Single phase or 3-phase (208V or 480V) options
- Engineered for high-capacity PV modules
- Light-weight design for ease of handling during installation
- High efficiency DC-coupled architecture delivers more savings
- Modular design that can expand to meet the changing needs of buildings
- Solid-State Design means no annual maintenance required



Yotta Vision Monitoring

- Monitors and Analyzes each solar module and battery
- Allows Remote Access to the solar array
- Displays Performance Issues and Alerts the user to events
- Real Time Communication
- Performance Reporting to support troubleshooting

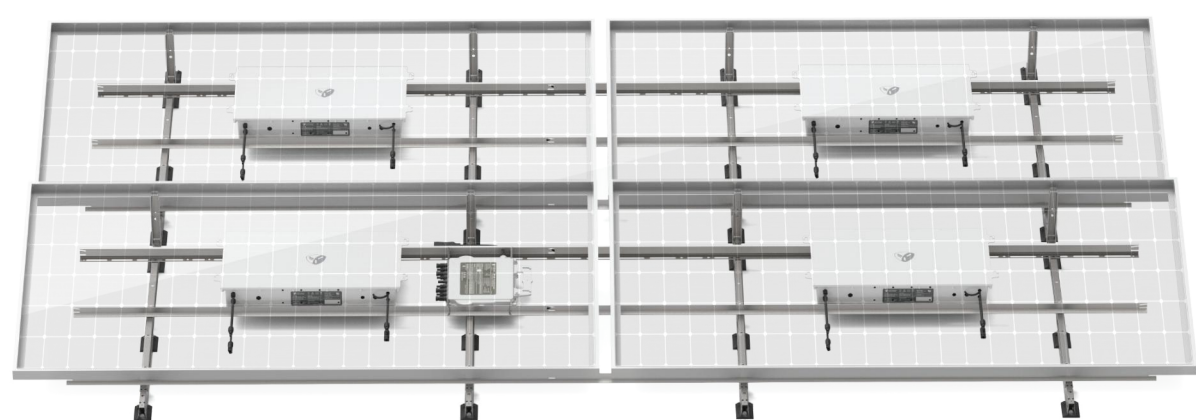
Ver. 3.3
December 2023

www.yottaenergy.com

SolarLEAF™ (SL-1000) Data Sheet

MODEL	SL-1000
ELECTRICAL	
Solar PV Input	Up to 750W
Module Compatibility	Voc(max) 60V - Isc(max) 15A
Inverter Compatibility	Yotta DPI Microinverter
DC Voltage - Nominal	38.4V
Amp Hours	26.4Ah
Rated Capacity	1000Wh @ (100% DoD) 800Wh @ (80% DoD)
Allowable Depth of Discharge (DoD) (1)	Up to 100%
Input Voltage Range (1)	0-59.9V
Output Voltage Range	22-45V
MPPT Operating Range	20-50V
Max Continuous Current (charge & discharge)	15A
Max Power Output (2) (discharge)	Up to 675W
Chemistry	Lithium Iron Phosphate
Cycle Life	6,000+ Cycles @ 80% DoD
MECHANICAL	
Weight	56.7 lbs (25.7kg)
Roof Loading	27 / 3.0 psf typical
Mounting Options	Attaches to PV or ballast racking
Ambient Op. Temp.	-20° to 43°C max continuous (-4° to 109°F)
Storage Temp.	-20° to 55°C (-4° to 114°F)
Dimensions	15.75 x 26.25 x 4.25 (in)
SAFETY AND WARRANTY	
Warranty	10 Years
Enclosure	NEMA 4X, IP67
Certifications	UL1973 UL9540 UN38.3
MONITORING COMPLIANCE	
Yotta Vision UL9540, UL1973	

(1) Maximum operating ranges. Refer to warranty for recommended conditions.
(2) From battery, but further limited by solar inverter.



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