

SCOPE OF WORK:

TO INSTALL A ROOF MOUNTED SOLAR PHOTOVOLTAIC SYSTEM LOCATED AT 325 TURNER DAVIS DR, MADISON, FL 32340, USA. THE POWER GENERATED BY THE PV SYSTEM WILL BE INTERCONNECTED WITH THE UTILITY GRID THROUGH THE EXISTING ELECTRICAL SERVICE EQUIPMENT. THE PV SYSTEM DOES NOT INCLUDE STORAGE BATTERIES

NEW EQUIPMENT SUMMARY

106 JA SOLAR JAM72D30-550/MB MODULES
01 SUNNY TRIPOWER CORE1 50-US (480V) INVERTER
100A FUSED AC DISCONNECT WITH (3) 80A FUSES, NEMA 3R, UL LISTED

SYSTEM RATING

58.30 KWDC
50.00 KWAC
53.36 CEC KWAC

GOVERNING CODES

2021 NFPA 1 (FIRE CODE)
2020 NATIONAL ELECTRICAL CODE
2023 FLORIDA BUILDING CODE (8TH EDITION)
2023 FLORIDA FIRE PREVENTION CODE (8TH EDITION)
FLORIDA ADMINISTRATIVE CODE(FAC)

AHJ NAME: CITY OF MADISON

SHEET INDEX

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GENERAL NOTES:

- THESE CONSTRUCTION DOCUMENTS HAVE BEEN BASED ON FIELD INSPECTIONS AND OTHER INFORMATION AVAILABLE AT THE TIME. ACTUAL FIELD CONDITIONS MAY REQUIRE MODIFICATIONS IN CONSTRUCTION DETAILS.
- ARCHITECT HAS NOT BEEN RETAINED TO SUPERVISE ANY CONSTRUCTION OR INSTALLATION OF ANY EQUIPMENT AT SITE.
- CONTRACTOR SHALL FURNISH ALL LABOR, MATERIAL, EQUIPMENT, TOOLS, OBTAINS ALL PERMITS, LICENSES AND PAY ALL REQUIRED FEES AND COMPLETE INSTALLATION.
- CONTRACTOR HAS THE FULL RESPONSIBILITY TO CHECK AND VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS. ANY DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER BEFORE PROCEEDING WITH THE WORK. ANY WORK STARTED BEFORE CONSULTATION AND ACCEPTANCE BY THE ENGINEER SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE SUBJECT TO CORRECTION BY THEM WITHOUT ADDITIONAL COMPENSATION.
- DAMAGE CAUSED TO THE EXISTING STRUCTURE, PIPES, DUCTS, WINDOWS, WALL, FLOORS, ETC. SHALL BE REPAIRED TO THE ORIGINAL CONDITION OR REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST.
- THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR THE PROPER INSTALLATION AND COMPLETION OF THE WORK WITH APPROVED MATERIALS.
- NO CHANGES ARE TO BE MADE WITHOUT THE CONSULTATION AND APPROVAL OF THE ARCHITECT.
- CONTRACTOR SHALL OBTAIN BUILDING PERMIT. NO WORK TO START UNLESS BUILDING PERMIT IS PROPERLY DISPLAYED.
- ALL WORKMANSHIP AND MATERIALS SHALL BE OF FIRST QUALITY AND IN COMPLIANCE WITH THE REQUIREMENTS OF THE FL BUILDING CODE, THE DEPARTMENT OF ENVIRONMENTAL PROTECTION AND ALL PERTINENT AGENCIES.
- IT IS ESSENTIAL THAT ALL WORK PROCEED WITH THE MAXIMUM COOPERATION OF ALL PARTIES AND WITH MINIMUM INTERFERENCE TO THE OCCUPANTS WITHIN THE BUILDING. THE OWNER'S DIRECTIONS IN THIS REGARD SHALL BE FULLY COMPLIED WITH.
- THE CONTRACTOR SHALL PERFORM THE WORK IN STRICT CONFORMANCE WITH THE LOCAL LAWS, REGULATIONS AND THE NATIONAL ELECTRICAL CODE.
- THE CONTRACTOR SHALL OBTAIN ALL PERMITS, APPROVALS, AFFIDAVITS, CERTIFICATIONS, ETC. AND PAY ALL FEES AS REQUIRED BY THE LOCAL AUTHORITIES.
- CONTRACTORS SHALL OBTAIN FIRE CERTIFICATE. UPON COMPLETION OF WORK.

ELECTRICAL NOTES:

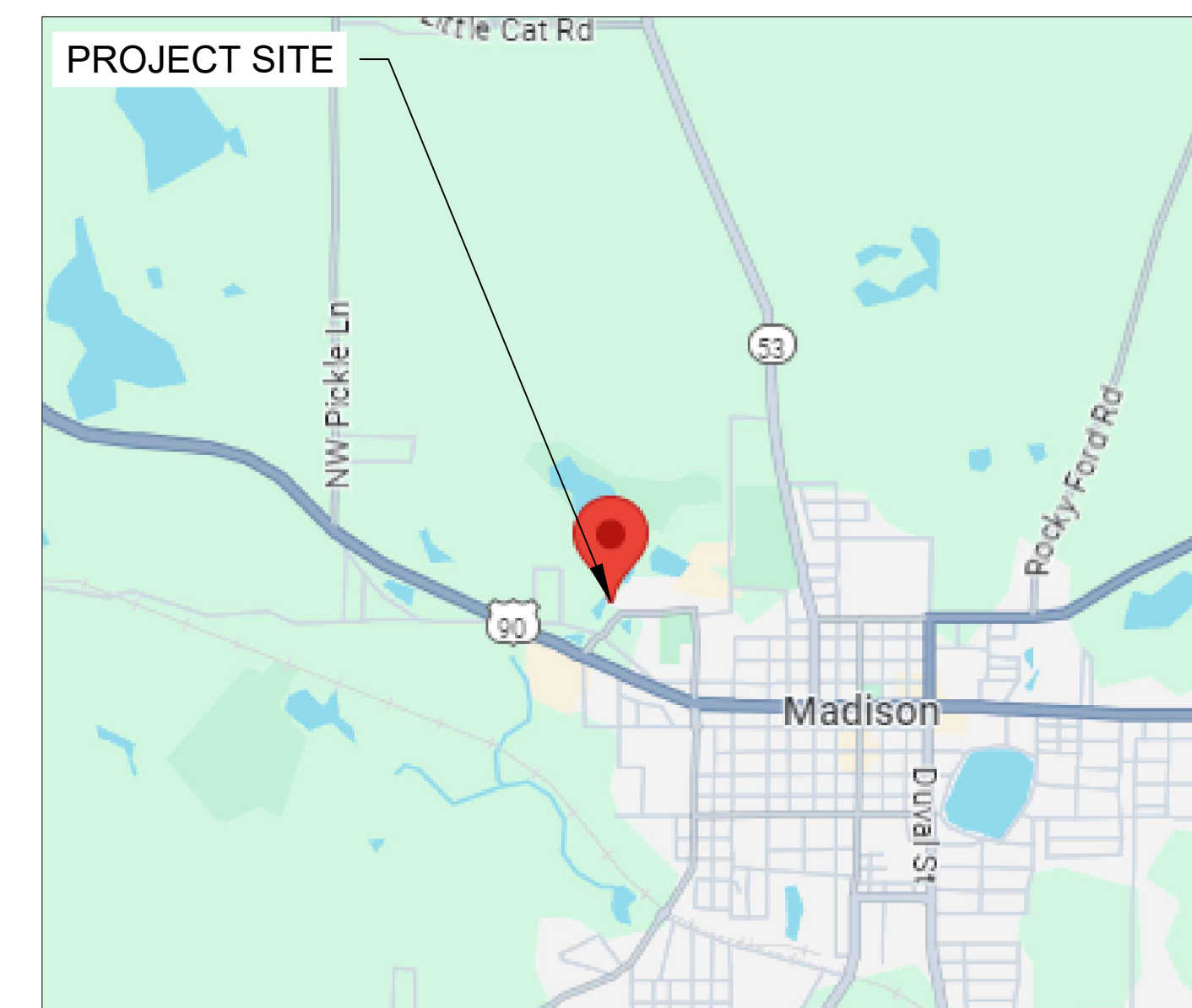
- THE EQUIPMENT AND ALL ASSOCIATED WIRING AND INTERCONNECTION SHALL BE INSTALLED ONLY BY QUALIFIED PEOPLE. A QUALIFIED PERSON IS ONE WHO HAS SKILLS AND KNOWLEDGE RELATED TO THE CONSTRUCTION AND OPERATION OF THE ELECTRICAL EQUIPMENT AND INSTALLATIONS AND HAS RECEIVED SAFETY TRAINING TO RECOGNIZE AND AVOID THE HAZARDS INVOLVED. (NEC 690.4(E) AND 705.6)
- LOCAL UTILITY PROVIDER SHALL BE NOTIFIED PRIOR TO USE AND ACTIVATION OF ANY SOLAR PHOTOVOLTAIC INSTALLATION. FOR A LINE SIDE TAP CONNECTION, UTILITY NEEDS TO BE NOTIFIED WELL IN ADVANCE TO COORDINATE BUILDING ELECTRICAL SHUT OFF.
- NEW CONDUIT ROUTING SHOWN IS ESSENTIALLY SCHEMATIC. SUBCONTRACTOR SHALL LAY OUT RUNS TO SUIT FIELD CONDITIONS AND THE COORDINATION REQUIREMENTS OF OTHER TRADES.
- ARRAY WIRING SHOULD NOT BE READILY ACCESSIBLE EXCEPT TO QUALIFIED PERSONNEL.
- ALL EXTERIOR CONDUIT, FITTINGS, AND BOXES SHALL BE WATERTIGHT AND APPROVED FOR USE IN WET LOCATIONS. (NEC 314.15A).
- WIRING METHODS FOR PV SYSTEM CONDUCTORS AREN'T PERMITTED WITHIN 10 IN. OF THE ROOF DECKING OR SHEATHING EXCEPT WHERE LOCATED DIRECTLY BELOW THE ROOF SURFACE THAT'S COVERED BY PV MODULES AND ASSOCIATED EQUIPMENT WIRING
- BACK-FED BREAKER MUST BE AT THE OPPOSITE END OF BUS BAR FROM THE MAIN BREAKER OR MAIN LUG SUPPLYING CURRENT FROM THE UTILITIES.
- ALL CONDUCTORS AND WIRE TIES EXPOSED TO SUNLIGHT ARE LISTED AS UV RESISTANT.
- CONTRACTOR SHALL FOLLOW ALL ELECTRICAL EQUIPMENT LABELING REQUIREMENTS IN NEC 690 AND NEC 2020
- MEASURE THE LINE-TO-LINE AND LINE-TO-NEUTRAL VOLTAGE OF ALL SERVICE ENTRANCE CONDUCTORS PRIOR TO INSTALLING ANY SOLAR EQUIPMENT.

WIRING AND CONDUIT NOTES:

- ALL CONDUIT SIZES AND TYPES, SHALL BE LISTED FOR ITS PURPOSE AND APPROVED FOR THE SITE APPLICATIONS
- ALL PV CABLES AND HOMERUN WIRES BE #10AWG *USE-2, PV WIRE, OR PROPRIETARY SOLAR CABLING SPECIFIED BY MFR, OR EQUIVALENT; ROUTED TO SOURCE CIRCUIT COMBINER BOXES AS REQUIRED
- ALL CONDUCTORS AND OCPD SIZES AND TYPES SPECIFIED ACCORDING TO [NEC 690.8 (A)(1) & (B)(1)], [NEC 240] [NEC 690.7] FOR MULTIPLE CONDUCTORS
- ALL PV DC CONDUCTORS IN CONDUIT EXPOSED TO SUNLIGHT SHALL BE DERATED ACCORDING TO [NEC TABLE 310.15 (B)(2)(C)] BLACK ONLY**
- EXPOSED ROOF PV DC CONDUCTORS SHALL BE USE-2, 90°C RATED, WET AND UV RESISTANT, AND UL LISTED RATED FOR 600V, UV RATED SPIRAL WRAP SHALL BE USED TO PROTECT WIRE FROM SHARP EDGES
- PHASE AND NEUTRAL CONDUCTORS SHALL BE DUAL RATED THHN/THWN-2 INSULATED, 90°C RATED, WET AND UV RESISTANT, RATED FOR 600V PER NEC 2020 OR 1000V PER NEC 2020
- 4-WIRE DELTA CONNECTED SYSTEMS HAVE THE PHASE WITH THE HIGHER VOLTAGE TO GROUND MARKED ORANGE OR IDENTIFIED BY OTHER EFFECTIVE MEANS
- ALL SOURCE CIRCUITS SHALL HAVE INDIVIDUAL SOURCE CIRCUIT PROTECTION
- VOLTAGE DROP LIMITED TO 5% FOR DC CIRCUITS AND 3% FOR AC CIRCUITS
- AC CONDUCTORS >4AWG COLOR CODED OR MARKED FOR 240V/208V: PHASE A OR L1- BLACK, PHASE B OR L2- RED, PHASE C OR L3- BLUE, NEUTRAL- WHITE/GRAY
- AC CONDUCTORS >4AWG COLOR CODED OR MARKED FOR 480V: PHASE A OR L1- BROWN, PHASE B OR L2- ORANGE, PHASE C OR L3- YELLOW, NEUTRAL- GRAY



1 BUILDING PHOTO SCALE: NTS
PV-0



2 VICINITY MAP SCALE: NTS
PV-0



INDEPENDENT GREEN TECHNOLOGIES LLC
3954 WEST PENISACOLA STREET,
TALLAHASSEE, FL 32304
(850) 576-7657
CONTRACTOR LIC#: CVC56732

REVISIONS		
DESCRIPTION	DATE	REV
REVISION	09/24/2024	A
REVISION	09/27/2024	B

Signature with Seal

PROJECT NAME & ADDRESS

NFC BUILDING 8
COMMERCIAL
325 TURNER DAVIS DR
MADISON, FL 32340, USA
PH.# : (850) 576-7657
Email ID : caden@igtsolar.com

DATE: 09/27/2024

SHEET NAME
COVER PAGE

SHEET SIZE
ARCH FULL
BLEED D
24" X 36"

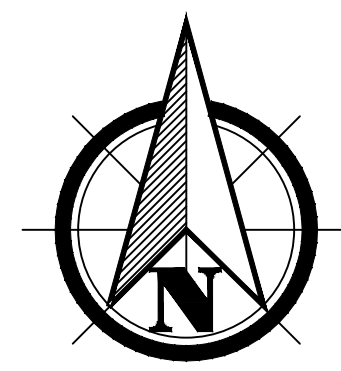
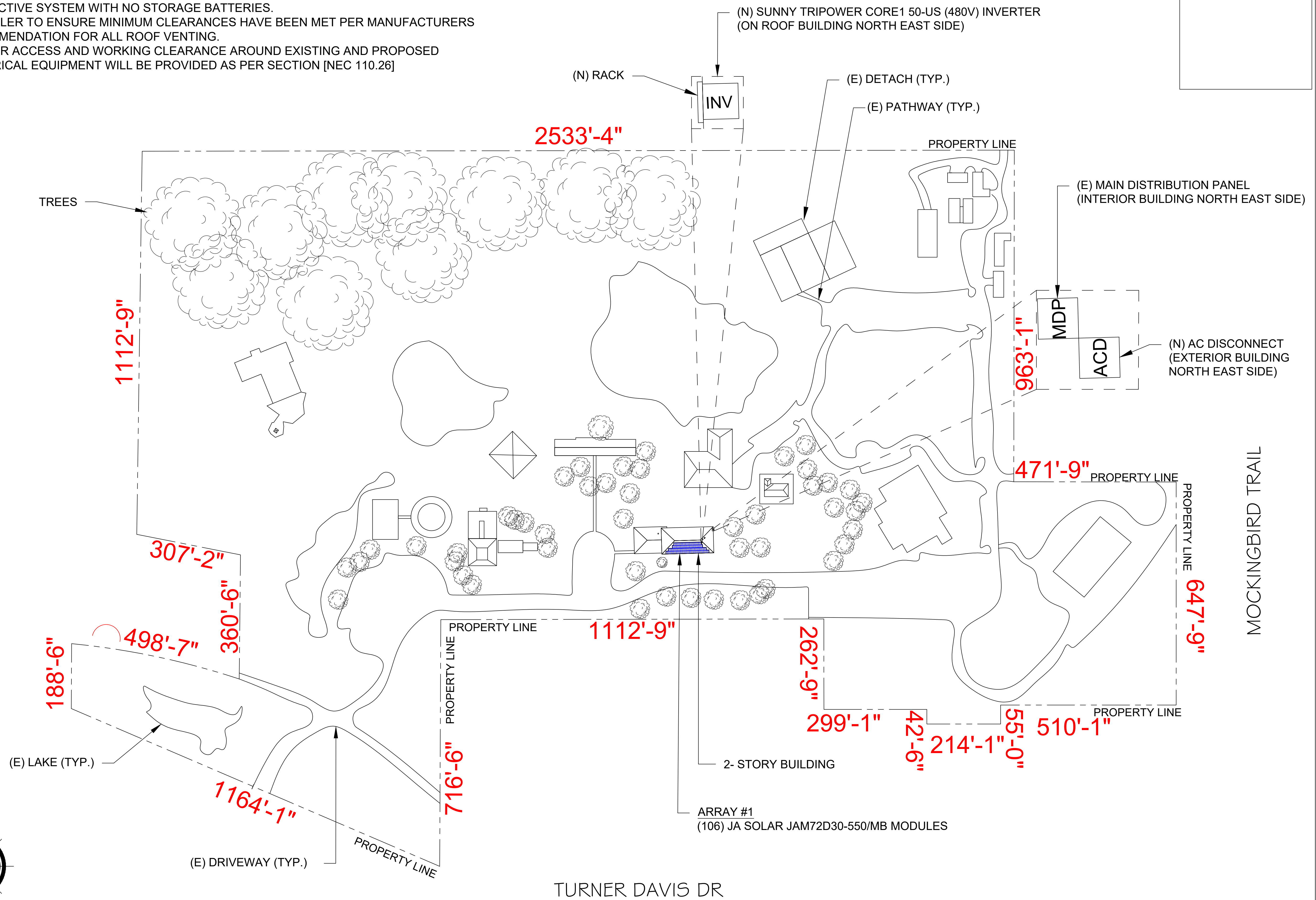
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PV-0

SITE NOTES

- A LADDER SHALL BE IN PLACE FOR INSPECTION IN COMPLIANCE WITH OSHA REGULATIONS.
- THE PV MODULES ARE CONSIDERED NON-COMBUSTIBLE AND THIS SYSTEM IS AN UTILITY INTERACTIVE SYSTEM WITH NO STORAGE BATTERIES.
- INSTALLER TO ENSURE MINIMUM CLEARANCES HAVE BEEN MET PER MANUFACTURERS RECOMMENDATION FOR ALL ROOF VENTING.
- PROPER ACCESS AND WORKING CLEARANCE AROUND EXISTING AND PROPOSED ELECTRICAL EQUIPMENT WILL BE PROVIDED AS PER SECTION [NEC 110.26]

INVERTER IS LOCATED WITHIN ONE FEET OF THE ARRAY FOR UL3741.



1 PLOT PLAN WITH ROOF PLAN

PV-1

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

IGT Solar
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DATE: 09/27/2024

SHEET NAME
 SITE PLAN

SHEET SIZE
 ARCH FULL BLEED D
 24" X 36"

SHEET NUMBER

PV-1

MODULE TYPE, DIMENSIONS & WEIGHT	
NUMBER OF MODULES:	106 MODULES
MODULE TYPE:	JA SOLAR JAM72D30-550/MB
MODULE WEIGHT:	70.1 LBS
MODULE DIMENSIONS:	89.7" X 44.6" = 27.78 SF
UNIT WEIGHT OF AREA:	2.52 PSF

ARRAY DESCRIPTION				
ARRAY	ARRAY TILT	AZIMUTH	SEAM SPACING	ROOF MATERIAL
#1	5°	178°	18" O.C.	STANDING SEAM METAL

ARRAY AREA & ROOF AREA CALC'S				
ROOF	# OF MODULES	ARRAY AREA (Sq. Ft.)	ROOF AREA (Sq. Ft.)	ROOF AREA COVERED BY ARRAY (%)
#1	106	2945	4292.87	69
TOTAL ROOF AREA COVERED BY ARRAY AREA (%)		2945	11471.53	26

DESIGN SPECIFICATION	
RISK CATEGORY:	II
CONSTRUCTION:	COMMERCIAL
ZONING:	COMMERCIAL
SNOW LOAD (ASCE 7-22):	5 PSF
EXPOSURE CATEGORY:	C
WIND SPEED (ASCE 7-22):	116 MPH

INVERTER IS LOCATED WITHIN ONE FEET OF THE ARRAY FOR UL3741.

LEGEND	
INV	- INVERTER
ACD	- AC DISCONNECT
MDP	- MAIN DISTRIBUTION PANEL
○	- VENT, ATTIC FAN (ROOF OBSTRUCTION)
●	- ROOF ATTACHMENT
—	- CONDUIT
—	- RAIL



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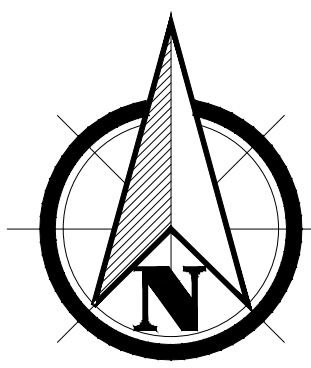
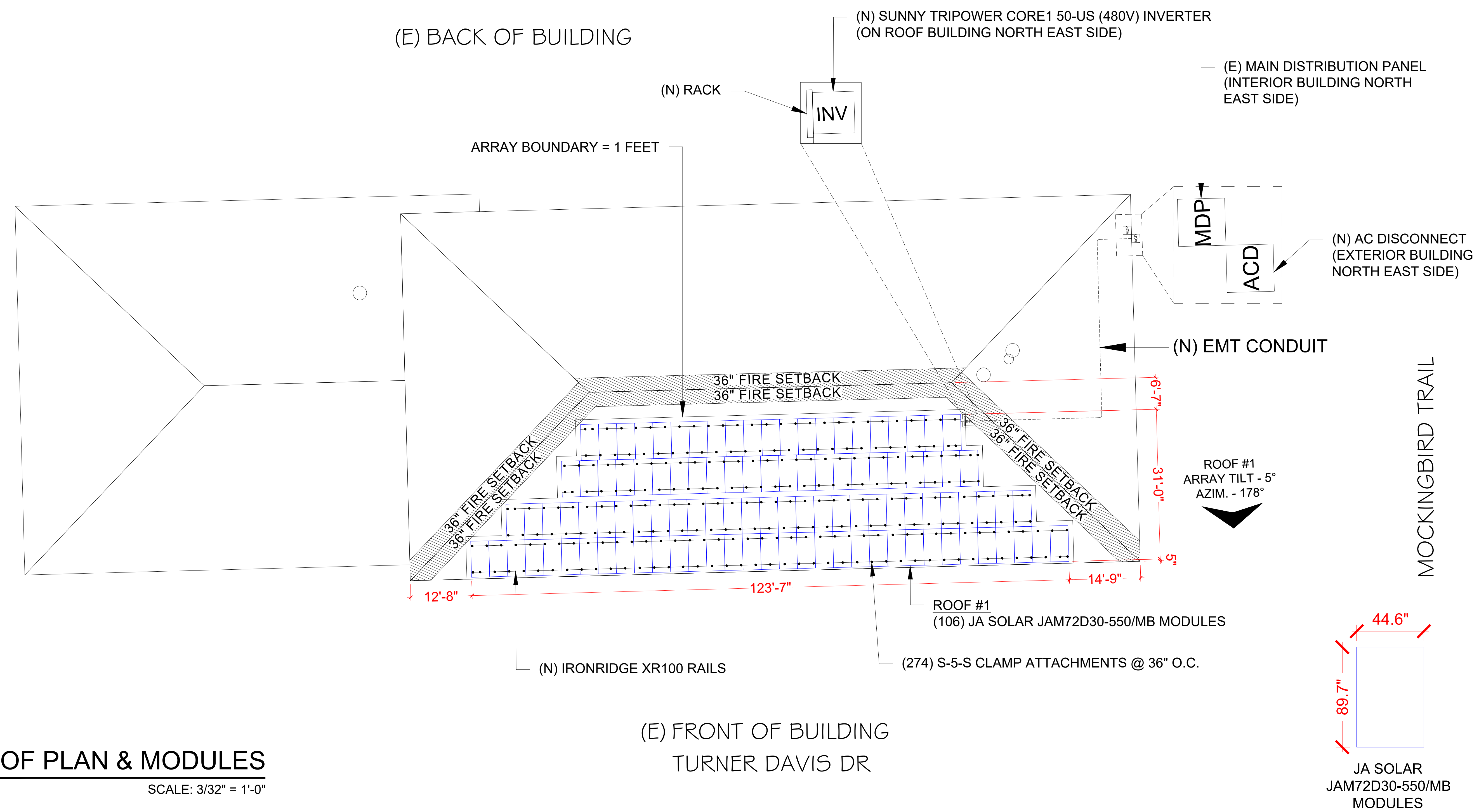
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SHEET NAME
ROOF PLAN & MODULES

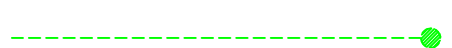
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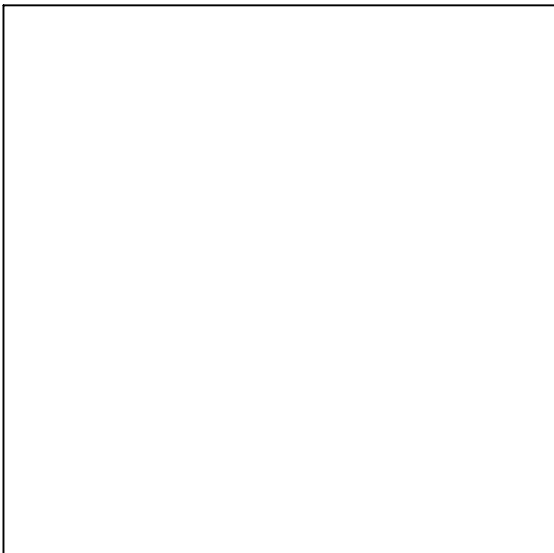
SHEET NUMBER

PV-2



BILL OF MATERIALS		
EQUIPMENT	QTY	DESCRIPTION
SOLAR PV MODULE	106	JA SOLAR JAM72D30-550/MB MODULES
INVERTER	1	SUNNY TRIPOWER CORE1 50-US (480V) INVERTER
AC DISCONNECT	1	100A FUSED AC DISCONNECT WITH (3) 80A FUSES, NEMA 3R, UL LISTED
ATTACHMENT	274	S5! S-5-S SEAM CLAMPS (STANDING SEAM) METAL ROOFING ATTACHMENTS
ATTACHMENT	548	M8-1.25 STAINLESS STEEL HEX FLANGE BOLT (13MM SOCKET)
ATTACHMENT	548	3/8-24 STAINLESS STEEL ROUND POINT SETSCREW (3/16 HEX DRIVE)
RAILS	58	IRONRIDGE XR-100 14FT (168")
BONDED SPLICE	50	SPLICE KIT
CLAMP	204	UNIVERSAL FASTENING OBJECT (UFO)
CLAMP	16	STOPPER SLEEVES
GROUNDING LUG	4	GROUNDING LUG

STRING INFORMATION	
	INVERTER #1 5 x STRINGS OF 18 MODULES 1 x STRING OF 16 MODULES = 106 MODULES



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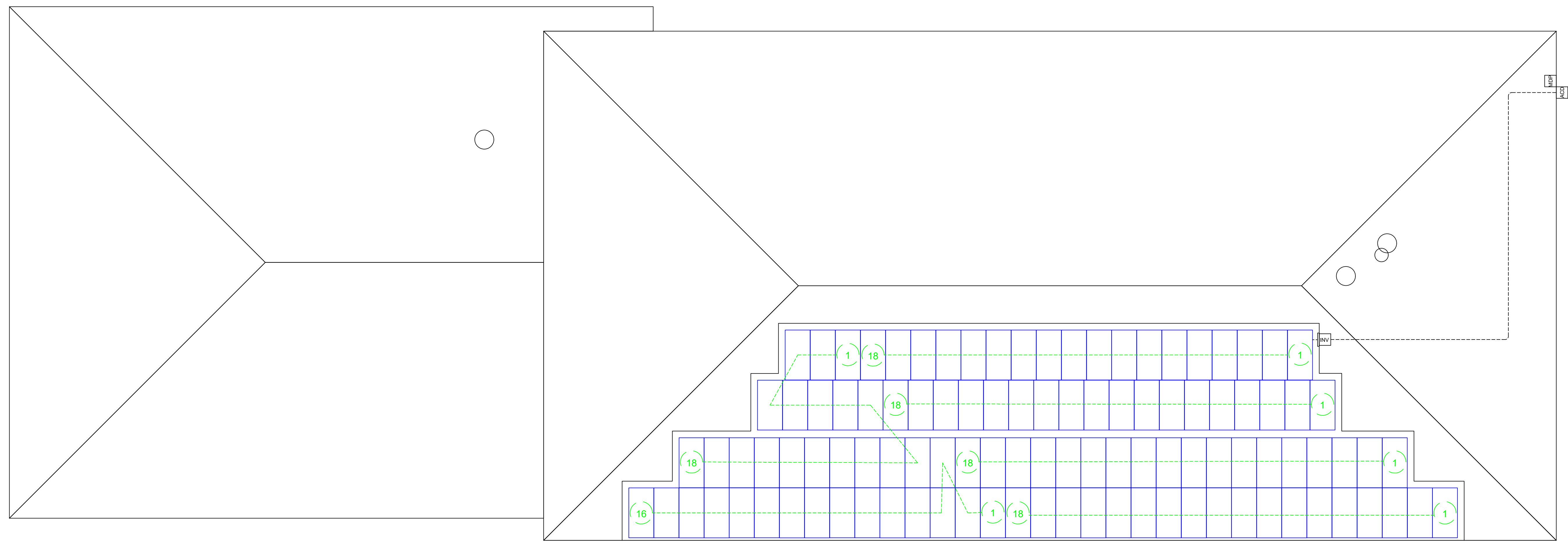
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SHEET NAME
 STRING LAYOUT & BOM

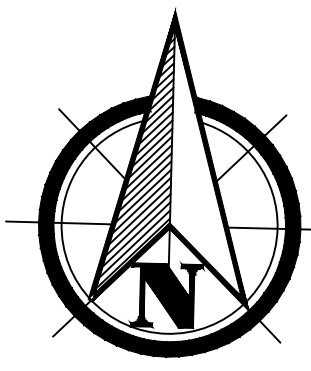
SHEET SIZE
 ARCH FULL BLEED D
 24" X 36"

SHEET NUMBER
 PV-2A

(E) BACK OF BUILDING



TURNER DAVIS DR
 (E) FRONT OF BUILDING



1 | STRING LAYOUT & BOM

PV-2A | SCALE: 1/8" = 1'-0"

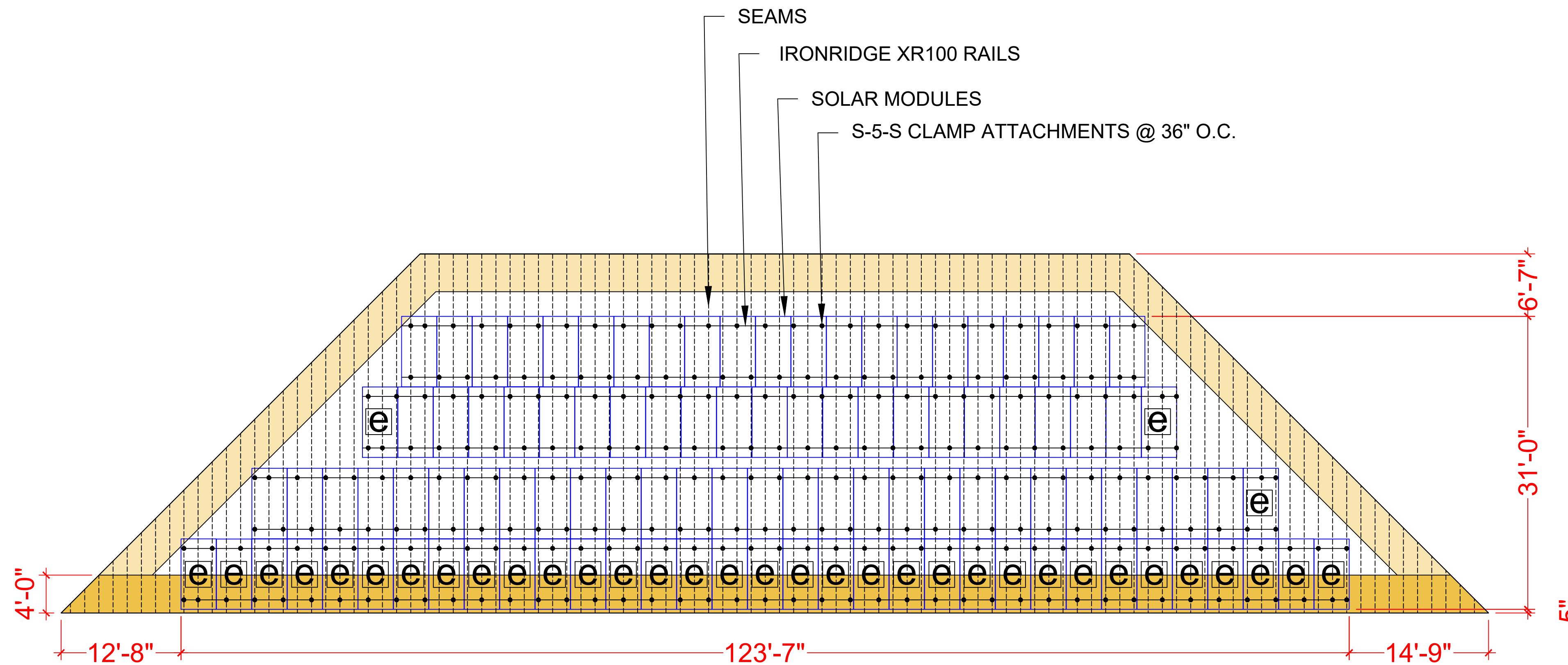
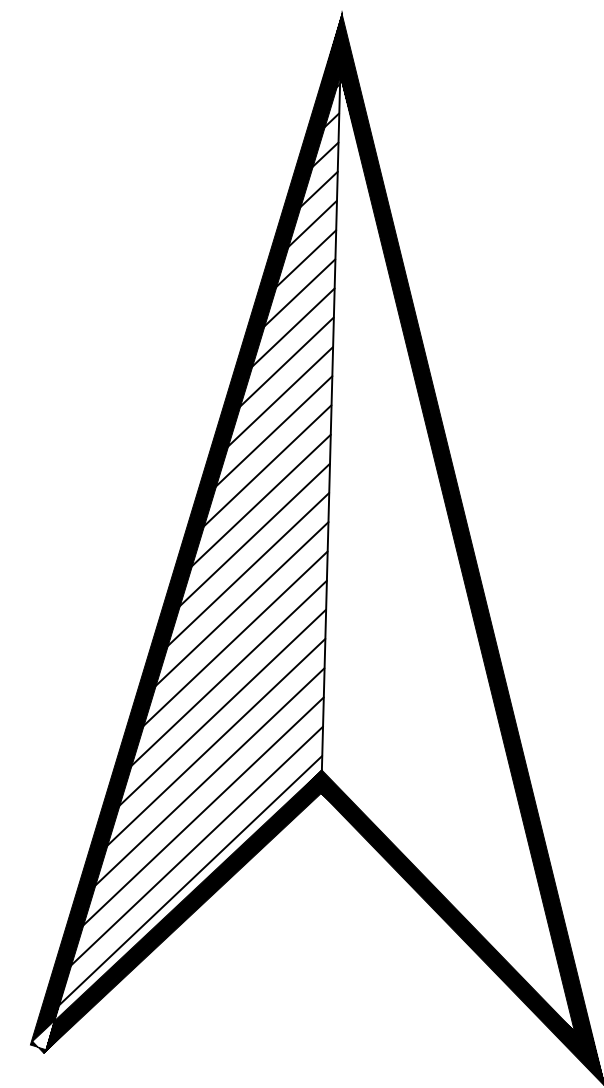
LEGEND

- WIND ZONE 1
- WIND ZONE 2
- WIND ZONE 3
- - - - - SEAM
- JA SOLAR JAM72D30-550/MB
- - - - - IRONRIDGE XR10 RAIL 14FT (168")
- ROOF ATTACHMENT
- VENT, ATTIC FAN (ROOF OBSTRUCTION)
- HIP ROOF
- e - EXPOSED MODULES/ EDGE MODULES

PANEL HEIGHT OF ROOF (H2) 6"

AVERAGE ROOF HEIGHT: 25 FEET

ARRAY DESCRIPTION				
ARRAY	ARRAY TILT	AZIMUTH	SEAM SPACING	ROOF MATERIAL
#1	5°	178°	18" O.C.	STANDING SEAM METAL



ROOF- 1

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DATE: 09/27/2024

SHEET NAME
WIND ZONE CALCULATION

SHEET SIZE
ARCH FULL BLEED D 24" X 36"

SHEET NUMBER

PV-2B



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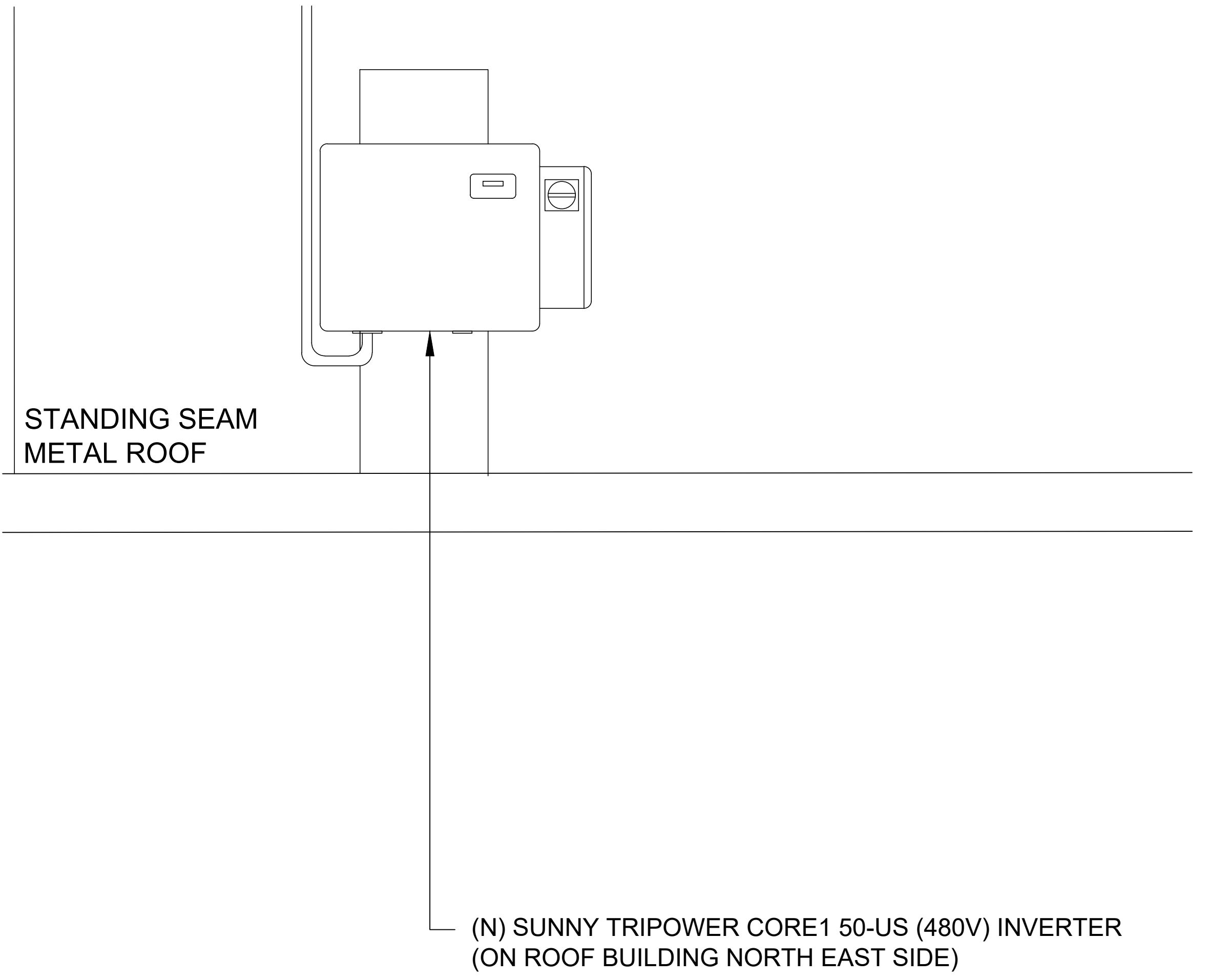
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SHEET NAME
 EQUIPMENT ELEVATION

SHEET SIZE
 ARCH FULL BLEED D
 24" X 36"

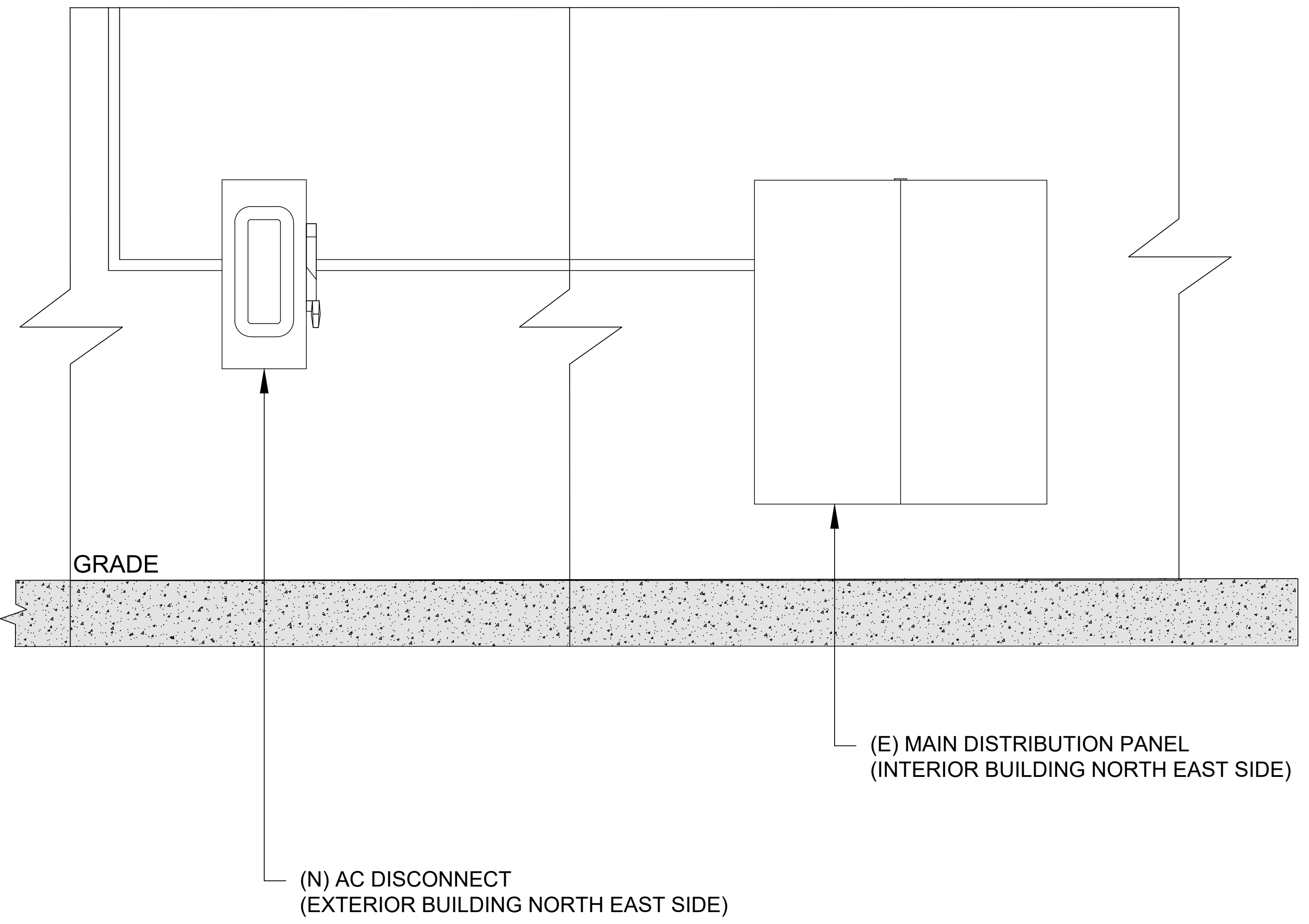
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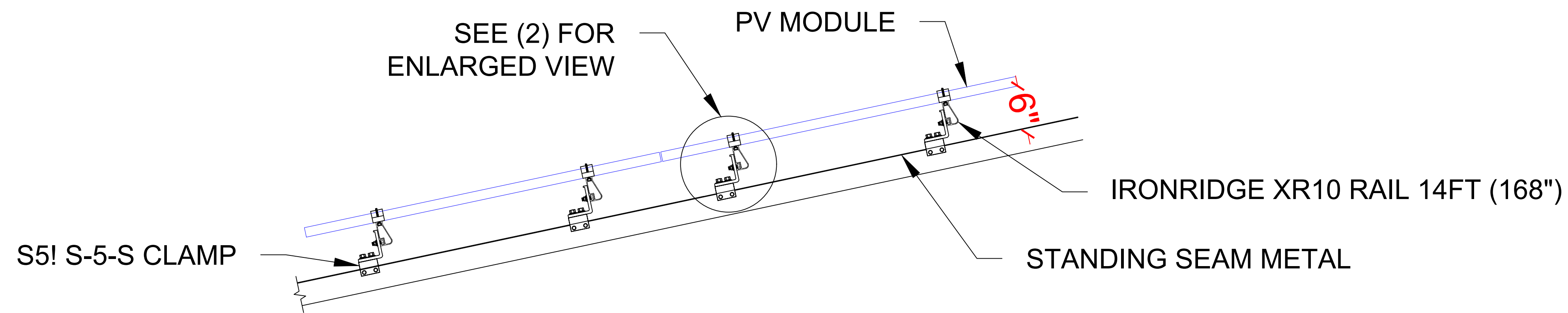
EQUIPMENT ELEVATION
(ON ROOF BUILDING
NORTH EAST SIDE)



EQUIPMENT ELEVATION
EXTERIOR WALL OF THE
BUILDING NORTH EAST SIDE

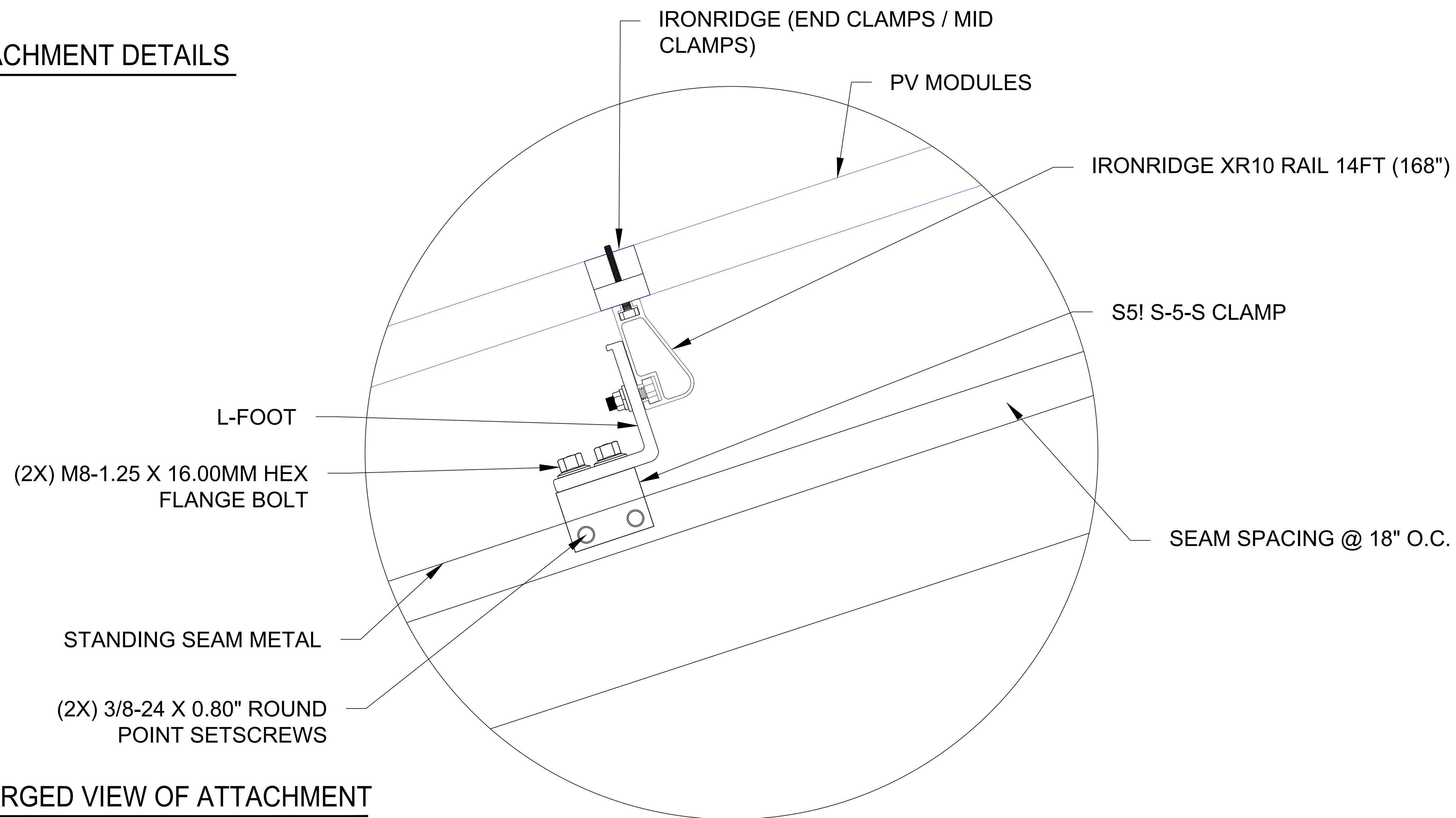
EQUIPMENT ELEVATION
INTERIOR WALL OF THE
BUILDING NORTH EAST SIDE





1 | ATTACHMENT DETAILS

PV-3



2 | ENLARGED VIEW OF ATTACHMENT

PV-3

SCALE: NTS

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ATTACHMENT
DETAILS

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ARCH FULL
BLEED D
24" X 36"

SHEET NUMBER

PV-3

ID	TYPICAL	INITIAL CONDUCTOR LOCATION	FINAL CONDUCTOR LOCATION	CONDUCTOR			CONDUIT	NO# OF CIRCUITS	CURRENT-CARRYING CONDUCTORS IN CONDUIT	CONDUIT FILL PERCENT	OCPD	EGC		TEMP. CORR. FACTOR		CONDUIT FILL FACTOR	CONT. CURRENT	MAX. CURRENT	BASE AMP.	DERATED AMP.	WIRE AMP. TEMP. RATING	LENGTH	VOLTAGE DROP
				10 AWG	PV WIRE	COPPER						THWN-2	COPPER	0.96	(35°C)								
1	6	ARRAY	INVERTER	10 AWG	PV WIRE	COPPER	MIN 1" Dia EMT	6	12	33.62%	N/A	8 AWG	THWN-2, COPPER	0.96	(35°C)	0.5	14.00A	17.5A	40A	19.02A	90°C	1FT	0.01%
2	1	INVERTER	FUSED AC DISCONNECT	3 AWG	THWN-2	COPPER	MIN 1.25" Dia EMT	1	4	28.38%	80A	8 AWG	THWN-2, COPPER	0.96	(35°C)	0.8	64.0A	80.0A	115A	88.32A	90°C	90FT	0.64%
3	1	FUSED AC DISCONNECT	MSP	3 AWG	THWN-2	COPPER	MIN 1.25" Dia EMT	1	4	28.38%	N/A	8 AWG	THWN-2, COPPER	0.96	(35°C)	0.8	64.0A	80.0A	115A	88.32A	90°C	5FT	0.04%

NOTE:- ALL EQUIPMENT TERMINAL TEMPERATURE RATINGS AT 75°C

NEW EQUIPMENT SUMMARY

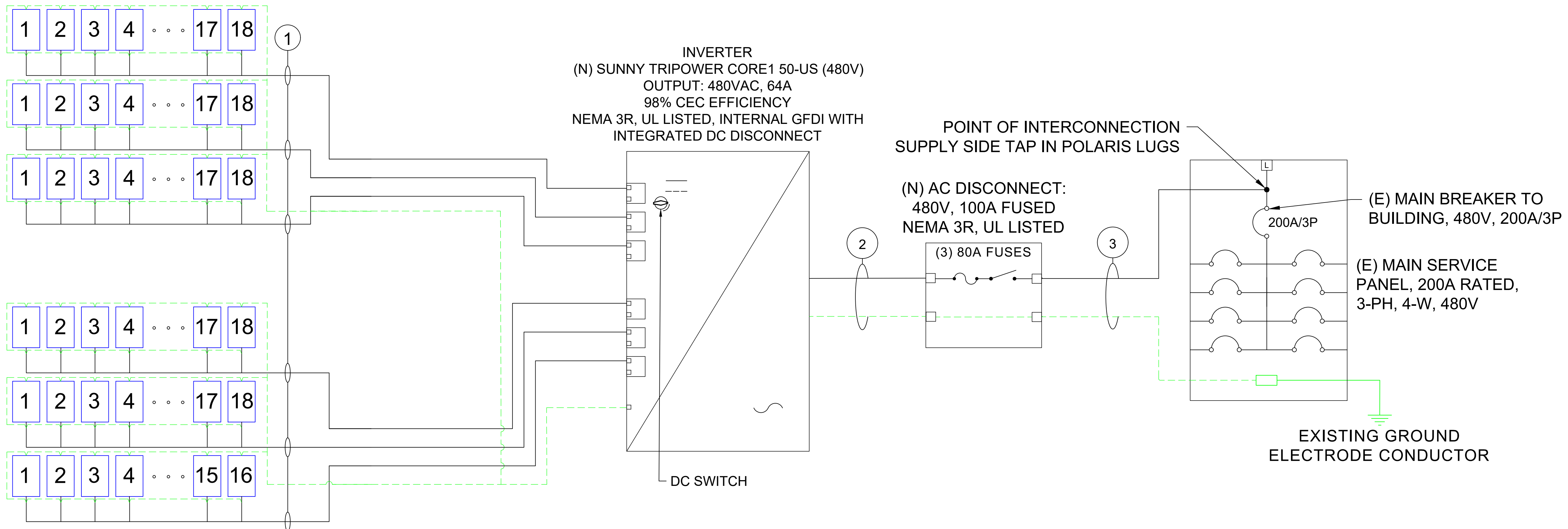
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01 SUNNY TRIPOWER CORE1 50-US (480V) INVERTER

100A FUSED AC DISCONNECT WITH (3) 80A FUSES, NEMA 3R, UL LISTED

INVERTER IS LOCATED WITHIN ONE FEET OF THE ARRAY FOR UL3741.

106 JA SOLAR JAM72D30-550/MB MODULES
5 x STRINGS OF 18 MODULES
1 x STRING OF 16 MODULES



SYSTEM RATING
58.30 KWDC
50.00 KWAC
53.36 CEC KWAC

SERVICE INFO

AHJ: CITY OF MADISON
 MAIN DISTRIBUTION PANEL: 200A
 MAIN BREAKER RATING: 200A
 SERVICE VOLTAGE: 480V
 SERVICE FEED SOURCE: OVERHEAD

INDEPENDENT GREEN TECHNOLOGIES LLC
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SHEET NAME
 ELECTRICAL LINE
 DIAGRAM & CALCS.

SHEET SIZE
 ARCH FULL
 BLEED D
 24" X 36"

SHEET NUMBER

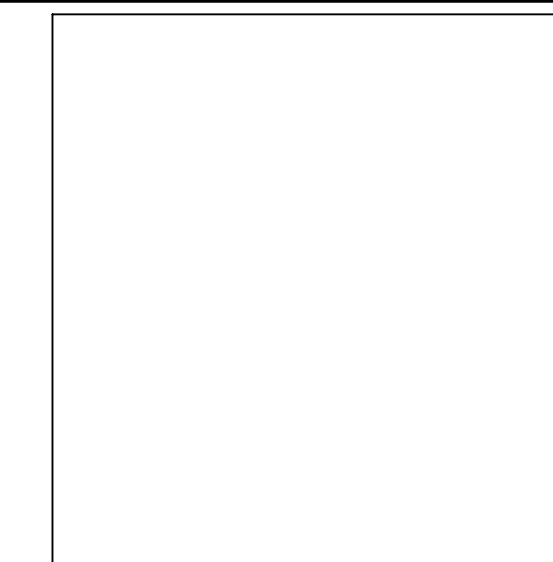
PV-4

SOLAR MODULE SPECIFICATIONS	
MANUFACTURER / MODEL	JA SOLAR JAM72D30-550/MB
VMP	41.96 A
IMP	13.11 A
VOC	49.90 V
ISC	14.00A
TEMP. COEFF. VOC	-0.275%/°C
MODULE DIMENSION	89.7"(L) x 44.6"(W)
PANEL WATTAGE	550W

INVERTER SPECIFICATIONS	
MANUFACTURER / MODEL	SUNNY TRIPOWER CORE1 50-US (480V)
NOMINAL AC POWER	50000 W
NOMINAL OUTPUT CURRENT	64.0 A
NOMINAL OUTPUT VOLTAGE	480 VAC

AMBIENT TEMPERATURE SPECS	
RECORD LOW TEMP	-7°C
AMBIENT TEMP (HIGH TEMP 2%)	35°C
CONDUIT HEIGHT	7/8"
MODULE TEMPERATURE COEFFICIENT OF VOC	-0.275%/°C

PERCENT OF VALUES	NUMBER OF CURRENT CARRYING CONDUCTORS IN EMT
0.80	4-6
0.70	7-9
0.50	10-20
0.45	21-30




INDEPENDENT GREEN TECHNOLOGIES LLC
3954 WEST PENNSACOLA STREET,
TALLAHASSEE, FL 32304
(850) 576-7657
CONTRACTOR LIC#: CVC56732

REVISIONS		
DESCRIPTION	DATE	REV
REVISION	09/24/2024	A
REVISION	09/27/2024	B

Signature with Seal

PROJECT NAME & ADDRESS

NFC BUILDING 8
COMMERCIAL
325 TURNER DAVIS DR
MADISON, FL 32340, USA
PH.# : (850) 576-7657
Email ID : caden@igtsolar.com

DATE: 09/27/2024

SHEET NAME
SPECIFICATIONS & NOTES

SHEET SIZE
ARCH FULL
BLEED D
24" X 36"

SHEET NUMBER

PV-4A

! WARNING
TURN OFF PHOTOVOLTAIC AC DISCONNECT PRIOR TO WORKING INSIDE PANEL

CODE : PER NEC 110.27(C) & OSHA 1910.145(f)(7)

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

CODE : PER NEC 110.27(C) & OSHA 1910.145(f)(7)

! WARNING
RACEWAY IS ENERGIZED WHEN IN THE OPEN POSITION. DO NOT RELOCATE OR CUT

1 Junction Box
Scale: NTS

2 Conduit
FROM AC DISCONNECT TO TAP LOCATION

! WARNING
THE DISCONNECTION OF THE GROUNDED CONDUCTOR(S) MAY RESULT IN OVERVOLTAGE OF THE EQUIPMENT

CODE : PER NEC 690.13(B)

PHOTOVOLTAIC SYSTEM AC DISCONNECT
RATED AC OUTPUT CURRENT 64 AMPS
NOMINAL OPERATING AC VOLTAGE 480 VOLTS

LABEL LOCATION:
POINT OF INTERCONNECTION:
(PER CODE: NEC 690.54)

3 Inverter
Scale: NTS

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

CODE : PER NEC 690.13(B)

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

CODE : PER NEC 706.15(C)(4) and NEC 690.13(B)

4 AC Disconnects
Scale: NTS

! WARNING
TURN OFF PHOTOVOLTAIC AC DISCONNECT PRIOR TO WORKING INSIDE PANEL

CODE : PER NEC 690.13(B)

! WARNING
ELECTRIC 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

CODE : PER NEC 706.15(C)(4) and NEC 690.13(B)

5 Panel Board
Scale: NTS

! WARNING
WARNING DUAL POWER SOURCE SECOND SOURCE IS PHOTOVOLTAIC SYSTEM

CODE : PER NEC 690.59 and NEC 705.12(D)(3)

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

CODE : PER NEC 705.12(B)(3)(2)

! WARNING
Arc Flash and Shock Hazard
Appropriate PPE Required

FLASH PROTECTION		SHOCK PROTECTION	
Incident Energy at:		Shock Risk When Cover is Removed:	
Min. Arc Rating:		NOMINAL OUTPUT VOLTAGE:	
Arc Flash Boundary:		NOMINAL OUTPUT CURRENT:	
Cloze Class:		Bus Name:	
PPE: Shirt & pants or coverall Nonmetallic (ASTM F 1506) or Unbleached Flax + hard hat + safety glasses + hearing protection		PNL_P.5 Prot Dev: 100/3 BS-18 LAB PNL	

PANEL BOARD ENERGIES FROM TWO SOURCES OF AC POWER
SOLAR 64A AT 480V
UTILITY GRID 200A AT 480V

CODE : PER NEC 690.54

MAIN PHOTOVOLTAIC SYSTEM DISCONNECT

CODE : PER NEC 690.13(B)

RAPID SHUTDOWN FOR SOLAR PV SYSTEM

CODE : PER NEC 690.56(C)(2)

DO NOT DISCONNECT UNDER LOAD

CODE : PER NEC 690.15(B) and NEC 690.33(D)(2)

! WARNING
TURN OFF PHOTOVOLTAIC AC DISCONNECT PRIOR TO WORKING INSIDE PANEL

CODE : PER NEC 110.27(C) and OSHA 1910.145(f)(7)

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

CODE : PER NEC 706.15(C)(4) and NEC 690.13(B)

! WARNING
SINGLE 120-VOLT SUPPLY DO NOT CONNECT MULTI WIRE BRANCH CIRCUITS

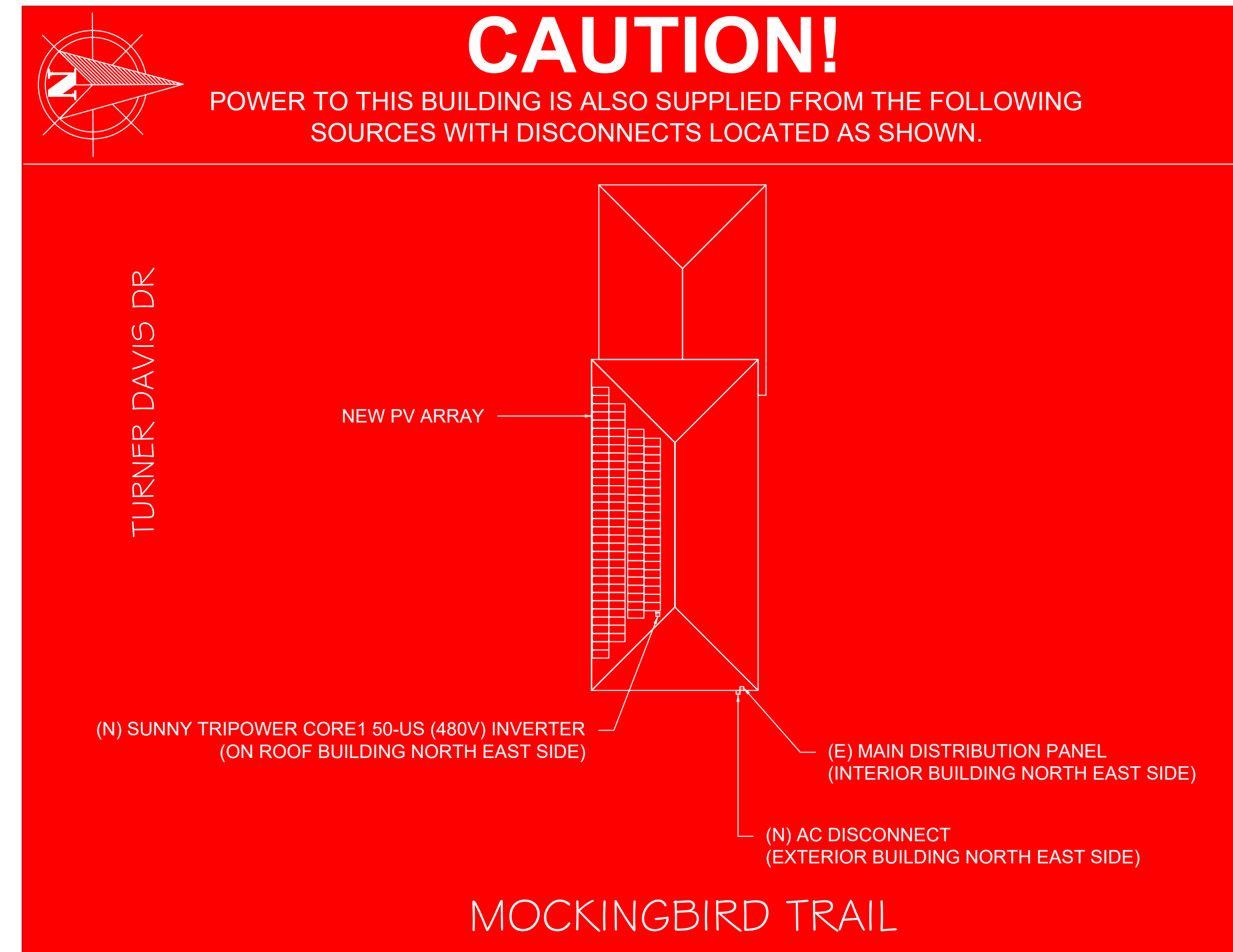
CODE : PER NEC 706.15(C)(4) and NEC 690.13(B)

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

CODE : PER NEC 605.11.3.1(1) and NEC 690.56(C)

6 Main Service Panel
Scale: NTS



CODE: PER NEC 705.10 & 690.56(A)(B)
LABEL LOCATION:
MAIN SERVICE PANEL & UTILITY METER&SUB PANEL, INVERTER, AC DISCONNECT

CONTRACTORS NOTES:

- ALL OF THESE LABELS ARE APPLICABLE.

ADHESIVE FASTENED SIGNS:

- ANSI Z535.4-2011 PRODUCT SAFETY SIGNS AND LABELS, PROVIDES GUIDELINES FOR SUITABLE FONT SIZES, WORDS, COLORS, SYMBOLS, AND LOCATION REQUIREMENTS FOR LABELS. NEC 110.21(B)(1)
- THE LABEL SHALL BE OF SUFFICIENT DURABILITY TO WITHSTAND THE ENVIRONMENT INVOLVED. NEC 110.21(B)(3)
- ADHESIVE FASTENED SIGNS MAY BE ACCEPTABLE IF PROPERLY ADHERED. VINYL SIGNS SHALL BE WEATHER RESISTANT.

IGT Solar

INDEPENDENT GREEN TECHNOLOGIES LLC
3954 WEST PENACOLA STREET,
TALLAHASSEE, FL 32304
(850) 576-7657
CONTRACTOR LIC#: CV056732

REVISIONS		
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Signature with Seal

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NFC BUILDING 8
COMMERCIAL
325 TURNER DAVIS DR
MADISON, FL 32340, USA
PH.# : (850) 576-7657
Email ID : caden@igtsolar.com

DATE: 09/27/2024

SHEET NAME
SIGNAGE & WARNING LABEL

SHEET SIZE
ARCH FULL BLEED D
24" X 36"

SHEET NUMBER

PV-5

Harvest the Sunshine

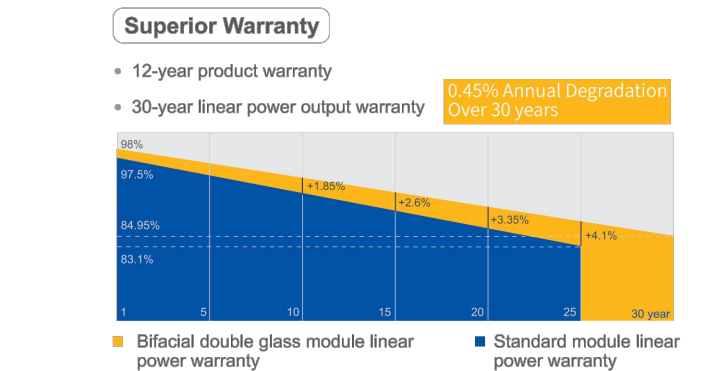
DEEP BLUE 3.0

550W MBB Bifacial Mono PERC Half-cell Double Glass Module
JAM72D30 525-550/MB

Introduction

Assembled with 18BB bifacial PERCUM cells and half-cell configuration, these double glass modules have the capability of converting the incident light from both sides together with the power into electricity, providing higher output power, lower temperature coefficient, less shading loss, as well as enhanced tolerance for mechanical loading.

- Higher output power
- More reliable, more stable power generation
- Less shading effect
- Lower temperature coefficient



- Comprehensive Certificates**
- IEC 61215, IEC 61730, UL 61215, UL 61730
 - ISO 9001:2015 Quality management systems
 - ISO 14001:2015 Environmental management systems
 - ISO 45001:2018 Occupational health and safety management systems
 - IEC 62941:2019 Terrestrial photovoltaic (PV) modules - Quality system for PV module manufacturing

JA SOLAR

www.jasolar.com

Specifications subject to technical changes and tests. JA Solar reserves the right of final interpretation.

SUNNY TRIPower CORE1 STP 50-40

SMA

2017 Solar award WINNER

World's first free standing inverter

Up to 60% faster installation for commercial PV systems

SMA ShadeFix (STRONG LEVEL OPTIMIZATION)

Cost-Effective

- Floor-mounted device easy to install
- No DC fuses required
- Integrated DC disconnect

Highly Integrated

- Integrated WiFi access with any mobile device
- 12 direct string inputs reduce labor and material costs
- AC/DC over-voltage protection (optional)

Fastest Installation

- Fast grid connection due to easy inverter configuration and commissioning
- Completely accessible connection area

Maximum Yields

- Up to 150% DC/AC ratio
- Yield increase without installation effort due to integrated shade management SMA ShadeFix

SUNNY TRIPower CORE1
Stands on its own

The Sunny Tripower CORE1 is the world's first free-standing string inverter for decentralized rooftop and ground-based PV systems as well as covered parking spaces. The CORE1 is the third generation in the successful Sunny Tripower product family and is revolutionizing the world of commercial inverters with its innovative design. SMA engineers developed an inverter that combines a unique design with an innovative installation method to significantly reduce installation time and provide all target groups with a maximum return on investment.

From delivery and installation to operation, the Sunny Tripower CORE1 generates widespread savings in logistics, labor, materials and services. Commercial PV installations are now quicker and easier to complete than ever before.

JA SOLAR

JAM72D30 525-550/MB

MECHANICAL DIAGRAMS

SPECIFICATIONS

Cell	Mono
Weight	31.8kg
Dimensions	2278x2mm/1134x2mm/30x1mm
Cable Cross Section Size	4mm² (IEC), 12 AWG(UL)
No. of cells	144(8*24)
Junction Box	IP68, 3 diodes
Connector	QC 4-10-30V/MCA-EV02A
Cable Length (Including Connector)	Pinmax:200mm(+200mm)/ Landscape:1300mm(+1300mm)
Front Glass/Back Glass	2.0mm/2.0mm
Packaging Configuration	36cells/Pallet 720cells/40HQ Container

ELECTRICAL PARAMETERS AT STC

TYPE	JAM72D30 -525MB	JAM72D30 -530MB	JAM72D30 -535MB	JAM72D30 -540MB	JAM72D30 -545MB	JAM72D30 -550MB
Rated Maximum Power(P _{max}) [W]	525	530	535	540	545	550
Open Circuit Voltage(V _{oc}) [V]	49.15	49.30	49.45	49.60	49.75	49.90
Maximum Power Voltage(V _{mp}) [V]	41.15	41.31	41.47	41.64	41.80	41.96
Short Circuit Current(I _{sc}) [A]	13.85	13.72	13.79	13.86	13.93	14.00
Maximum Power Current(I _{mp}) [A]	12.78	12.83	12.86	12.97	13.04	13.11
Module Efficiency [%]	20.3	20.5	20.7	20.9	21.1	21.3

ELECTRICAL CHARACTERISTICS WITH 10% SOLAR IRRADIATION RATIO

TYPE	JAM72D30 -525MB	JAM72D30 -530MB	JAM72D30 -535MB	JAM72D30 -540MB	JAM72D30 -545MB	JAM72D30 -550MB
Rated Max Power(P _{max}) [W]	525	530	535	540	545	550
Open Circuit Voltage(V _{oc}) [V]	49.54	49.67	49.80	49.93	50.03	50.21
Max Power Voltage(V _{mp}) [V]	41.14	41.31	41.47	41.65	41.78	41.95
Short Circuit Current(I _{sc}) [A]	14.61	14.68	14.76	14.83	14.91	14.98
Max Power Current(I _{mp}) [A]	13.65	13.73	13.80	13.88	13.95	14.03

CHARACTERISTICS

Technical data*	Sunny Tripower CORE1 33-US	Sunny Tripower CORE1 50-US	Sunny Tripower CORE1 60-US
Input (DC)			
Maximum array power	50000 Wp STC	75000 Wp STC	97500 Wp STC
Maximum system voltage	1000 V	1000 V	1000 V
Rated MPPT voltage range	330 V - 800 V	500 V - 800 V	550 V - 800 V
MPPT operating voltage range	150 V - 1000 V	150 V - 1000 V	150 V - 1000 V
Minimum DC voltage / start voltage	150 V / 188 V	150 V / 188 V	150 V / 188 V
MPPT resolution / strings per MPPT input	4/2	4/2	4/2
Maximum operating input current / per MPPT input	120 A / 20 A	120 A / 20 A	120 A / 20 A
Maximum short circuit current per MPPT / per string input	30 A / 30 A	30 A / 30 A	30 A / 30 A
Output (AC)			
AC nominal power	33000 W	50000 W	62500 W
Maximum apparent power	33000 VA	50000 VA	66000 VA
Output phases / line connections	2 / 3 phase	2 / 3 phase	2 / 3 phase
Nominal AC voltage	480 V / 277 V WYE	480 V / 277 V WYE	480 V / 277 V WYE
AC voltage range	244 V - 305 V	244 V - 305 V	244 V - 305 V
Maximum output current	40 A	64 A	79.5 A
Rated grid frequency	60 Hz	60 Hz	60 Hz
Grid frequency range	50 Hz, 60 Hz / ±6 Hz	50 Hz, 60 Hz / ±6 Hz	50 Hz, 60 Hz / ±6 Hz
Power factor at rated power / adjustable displacement	1 / 0 lagging, 0.0 lagging	1 / 0 lagging, 0.0 lagging	1 / 0 lagging, 0.0 lagging
Harmonic THD	< 3%	< 3%	< 3%
Efficiency			
CEC efficiency (preliminary)	97.5%	98%	98%
Protection and safety features			
Load rated DC disconnect	•	•	•
Load rated AC disconnect	•	•	•
Ground fault monitoring: Res / Differential current	•	•	•
DC AICD on-fault protection	•	•	•
Surge-TC signal for rapid shutdown	•	•	•
DC reverse polarity protection	•	•	•
AC short circuit protection	•	•	•
DC surge protection: Type 2 / Type 1+2	•	•	•
AC surge protection: Type 2 / Type 1+2	•	•	•
Protection class / overvoltage category (in per UL 84D)	•	•	•
General data			
Device dimensions (W/H/D)	621 mm / 733 mm / 569 mm (24.4 in x 28.8 in x 22.4 in)	843 mm / 843 mm	843 mm / 843 mm
Device weight	84 kg (185 lbs)	115 kg (253 lbs)	115 kg (253 lbs)
Operating temperature range	-25 °C - +60 °C (13 °F - +140 °F)	-25 °C - +60 °C (13 °F - +140 °F)	-25 °C - +60 °C (13 °F - +140 °F)
Storage temperature range	-40 °C - +70 °C (-40 °F - +158 °F)	-40 °C - +70 °C (-40 °F - +158 °F)	-40 °C - +70 °C (-40 °F - +158 °F)
Audible noise emissions (full power @ 1m and 25 °C)	65 dB(A)	65 dB(A)	65 dB(A)
Internal consumption at night	5 W	5 W	5 W
Topology	Transformerless	Transformerless	Transformerless
Cooling Concept	OpenCool (forced convection, variable speed fan)	OpenCool (forced convection, variable speed fan)	OpenCool (forced convection, variable speed fan)
Enclosure protection rating	Type 4X; IP65 (in per UL 508)	Type 4X; IP65 (in per UL 508)	Type 4X; IP65 (in per UL 508)
Maximum permissible relative humidity (non-condensing)	100%	100%	100%
Additional information			
Mounting	Free-standing with included mounting feet	Free-standing with included mounting feet	Free-standing with included mounting feet
DC connection	Anphered UTIX PV connectors	Anphered UTIX PV connectors	Anphered UTIX PV connectors
AC connection	Screw terminals: 4 AWG to 4/0 AWG CU/AL	Screw terminals: 4 AWG to 4/0 AWG CU/AL	Screw terminals: 4 AWG to 4/0 AWG CU/AL
IEC indicators (Status / Fault / Communication)	•	•	•
Network interfaces (Ethernet / WLAN / RS485)	•	•	•
Data protocols (SMA Modbus / Varidrop / Modbus / Webconnect)	•	•	•
Manufacturing relay	•	•	•
Optiflex Global Peak (shaded-release MPPT tracking)	•	•	•
Integrated Plant Control / Q on Demand 24/7	•	•	•
On-Grid capable / SMA Fuel Sense Controller compatible	•	•	•
SMA Smart Connected (production monitoring and service support)	•	•	•
Certifications and approvals			
Certifications and approvals	UL 1741, UL 1699B, UL 1988, IEEE 1547, CALSUSA-C22.2 No. 62109	UL 1741, UL 1699B, UL 1988, IEEE 1547, CALSUSA-C22.2 No. 62109	UL 1741, UL 1699B, UL 1988, IEEE 1547, CALSUSA-C22.2 No. 62109
FCC compliance	•	•	•
Grid interconnection standards	UL 1741 SA - CA Rule 21, HECO Rule 14H	UL 1741 SA - CA Rule 21, HECO Rule 14H	UL 1741 SA - CA Rule 21, HECO Rule 14H
Advanced grid support capabilities	LVRT, LVRT2, Volt-VAr, Volt/Watt, Frequency/Watt, Ramp Rate Control, Fixed Power Factor	LVRT, LVRT2, Volt-VAr, Volt/Watt, Frequency/Watt, Ramp Rate Control, Fixed Power Factor	LVRT, LVRT2, Volt-VAr, Volt/Watt, Frequency/Watt, Ramp Rate Control, Fixed Power Factor
Warranty			
Standard	10 years	10 years	10 years
Optional extensions	15 / 20 years	15 / 20 years	15 / 20 years
© Optional features	• Standard features	- Not available	* Preliminary data as of June 2018
Type designation	STP33-US-41	STP50-US-41	STP60-US-41
Accessories			
SMA Data Manager III (EMASUS-1)	•	•	•
SMA Smart Modbus (MS30US-40)	•	•	•
Grounding Monitoring System (GMS-RTS-1)	•	•	•
AC Surge Protection Module 60 (AC_SPM_RT1-60), AC_SPM_RT2_1112, AC Surge Protection Module 100 (DC_SPM_RT1-100), DC_SPM_RT2_1112	•	•	•

Toll Free +1 888 4 SMA USA
www.SMA-America.com

SMA America, LLC

IGT Solar

INDEPENDENT GREEN TECHNOLOGIES LLC
3954 WEST PENISACOLA STREET, TALLAHASSEE, FL 32304
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CONTRACTOR LIC#: CVC056732

REVISIONS

DESCRIPTION	DATE	REV
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**NFC BUILDING 8
COMMERCIAL
325 TURNER DAVIS DR
MADISON, FL 32340, USA
PH.# : (850) 576-7657
Email ID : caden@igtsolar.com**

DATE: 09/27/2024

SHEET NAME
EQUIPMENT SPECIFICATIONS

SHEET SIZE
ARCH FULL BLEED D 24" X 36"

SHEET NUMBER

PV-6

S-5![®] The Right Way![®]

S-5-S and S-5-S Mini

S-5-S Clamp

The S-5-S clamp was created specifically for popular snap-together profiles—including residential profiles by Taylor Metals and Easy Lock Standing Seam. For horizontal seams under .540 inches (like the Firestone UC4) the S-5-S or S-5-S Mini can be used to avoid the necessity of crimping the seam.

Its simple design and size make it perfect for use with S-5! snow retention products and other heavy-duty applications. Installation is as simple as setting the patented round-point setscrews into the clamp, placing the clamp on the seam, and tightening them to the specified tension. Then, affix ancillary items using the bolt provided with the product. Go to www.S-5.com/tools for information and tools available for properly attaching and tensioning S-5! clamps.

S-5-S Mini Clamp

The S-5-S Mini is a bit shorter than the S-5-S and has one setscrew rather than two. The mini is the choice for attaching all kinds of rooftop accessories: signs, walkways, satellite dishes, antennas, rooftop lighting, lightning protection systems, solar arrays, exhaust stack bracing, conduit, condensate lines, mechanical equipment—just about anything![†]

The S-5-S clamp was created specifically for popular snap-together profiles.

The right way to attach almost anything to metal roofs!

*S-5! mini clamps are not compatible with, and should not be used with, S-5! products with "Pneumatic" or "Collector" snow retention systems.

888-825-3432 | www.S-5.com

S-5![®] The Right Way![®]

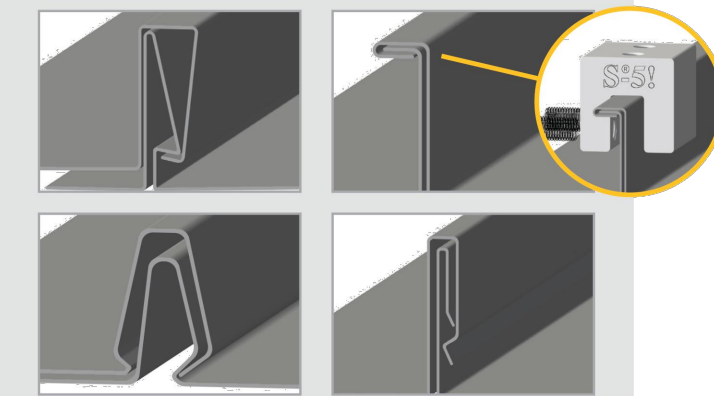
The strength of the S-5-S clamp is in its simple design. The patented setscrews will slightly dimple the metal seam material but not pierce it—leaving roof warranties intact.

The S-5-S and S-5-S Mini clamps are each furnished with the hardware shown to the right. Each box also includes a bit tip for tightening setscrews using an electric screw gun. A structural aluminum attachment clamp, the S-5-S is compatible with most common metal roofing materials excluding copper. All included hardware is stainless steel. Please visit www.S-5.com for more information including CAD details, metallurgical compatibilities and specifications.

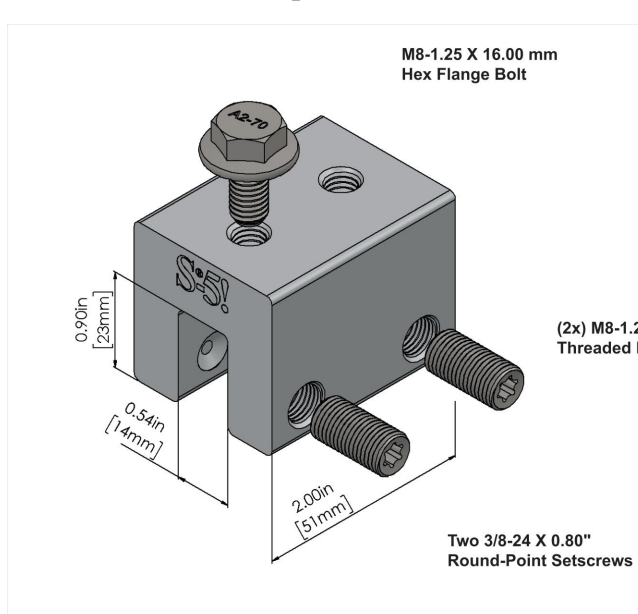
The S-5-S clamp has been tested for load-to-failure results on most major brands and profiles of standing seam roofing. The independent lab test data found at www.S-5.com can be used for load-critical designs and applications. S-5! holding strength is unmatched in the industry. Profiles that are shaped as illustrated below will work with the S-5-S and S-5-S Mini. In order for the S-5-S or S-5-S Mini to fit these types of seams, the finished seam must:

- Be at least 1.00" high.
- Have a height distance less than or equal to 0.25" between the male portion of the panel and female portion of the panel.

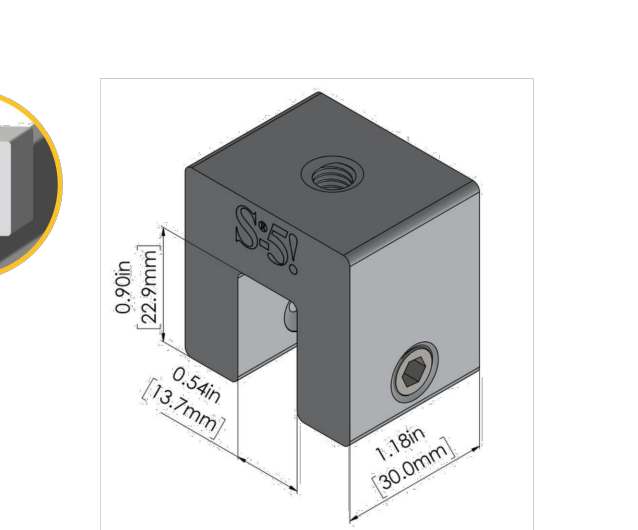
Example Profiles



S-5-S Clamp



S-5-S Mini Clamp



Please note: All measurements are rounded to the second decimal place.

Distributed by

S-5! Warning! Please use this product responsibly!
Products are protected by multiple U.S. and foreign patents. Visit the website at www.S-5.com for complete information on patents and trademarks. For maximum holding strength, set screws should be tensioned and re-tensioned at the seam material compression. Clamp setscrew tension should be verified using a calibrated torque wrench between 100 and 150 inch-pounds when used on Edge-Test, and between 120 and 150 inch-pounds for all other metals and bilinear gauges of steel. Consult the S-5! website at www.S-5.com for published data regarding holding strength.
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IRONRIDGE

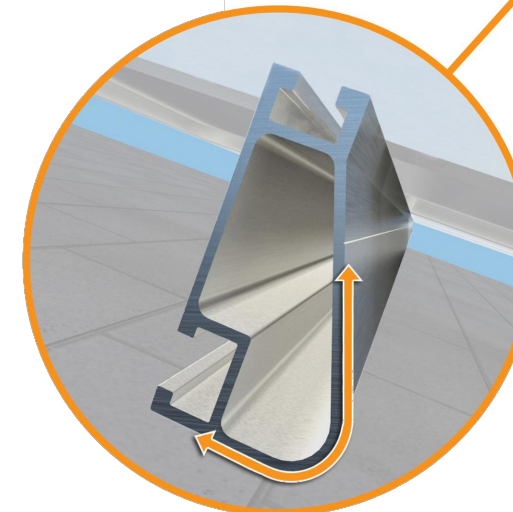
XR Rail[®] Family

Tech Brief

Solar Is Not Always Sunny

Over their lifetime, solar panels experience countless extreme weather events. Not just the worst storms in years, but the worst storms in 40 years. High winds capable of ripping panels from a roof, and snowfalls weighing enough to buckle a panel frame.

XR Rails[®] are the structural backbone preventing these results. They resist uplift, protect against buckling and safely and efficiently transfer loads into the building structure. Their superior spanning capability requires fewer roof attachments, reducing the number of roof penetrations and the amount of installation time.



Force-Stabilizing Curve
Sloped roofs generate both vertical and lateral forces on mounting rails which can cause them to bend and twist. The curved shape of XR Rails[®] is specially designed to increase strength in both directions while resisting the twisting. This unique feature ensures greater security during extreme weather and a longer system lifetime.

Compatible with Flat & Pitched Roofs

XR Rails[®] are compatible with FlashFoot[®] and other pitched roof attachments.

Corrosion-Resistant Materials

All XR Rails[®] are made of 6000-series aluminum alloy, then protected with an anodized finish. Anodizing prevents surface and structural corrosion, while also providing a more attractive appearance.

IRONRIDGE

UFO[®] Family of Components

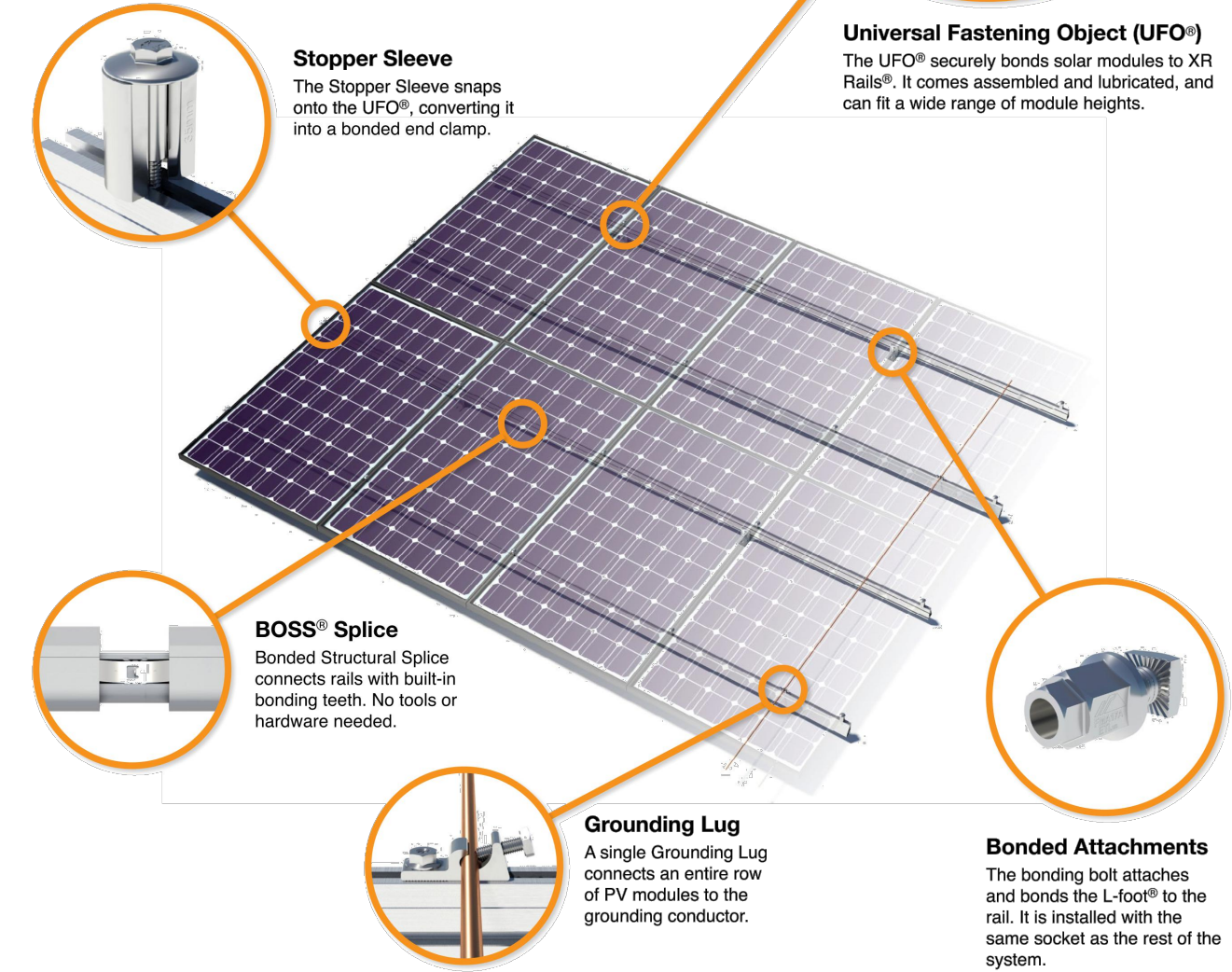
Tech Brief

Simplified Grounding for Every Application

The UFO[®] family of components eliminates the need for separate grounding hardware by bonding solar modules directly to IronRidge[®] XR Rails[®]. All system types that feature the UFO[®] family—Flush Mount[®], Tilt Mount[®], and Ground Mount[®]—are fully listed to the UL 2703 standard.

UFO[®] hardware forms secure electrical bonds with both the module and the rail, resulting in many parallel grounding paths throughout the system. This leads to safer and more reliable installations.

Only for installation and use with IronRidge products in accord with written instructions. See IronRidge.com/UFO



Stopper Sleeve
The Stopper Sleeve snaps onto the UFO[®], converting it into a bonded end clamp.

Universal Fastening Object (UFO[®])
The UFO[®] securely bonds solar modules to XR Rails[®]. It comes assembled and lubricated, and can fit a wide range of module heights.

BOSS[®] Splice
Bonded Structural Splice connects rails with built-in bonding teeth. No tools or hardware needed.

Grounding Lug
A single Grounding Lug connects an entire row of PV modules to the grounding conductor.

Bonded Attachments
The bonding bolt attaches and bonds the L-foot[®] to the rail. It is installed with the same socket as the rest of the system.

Tech Brief

XR Rail[®] Family

The XR Rail[®] Family offers the strength of a curved rail in three targeted sizes. Each size supports specific design loads, while minimizing material costs. Depending on your location, there is an XR Rail[®] to match.



Rail Selection

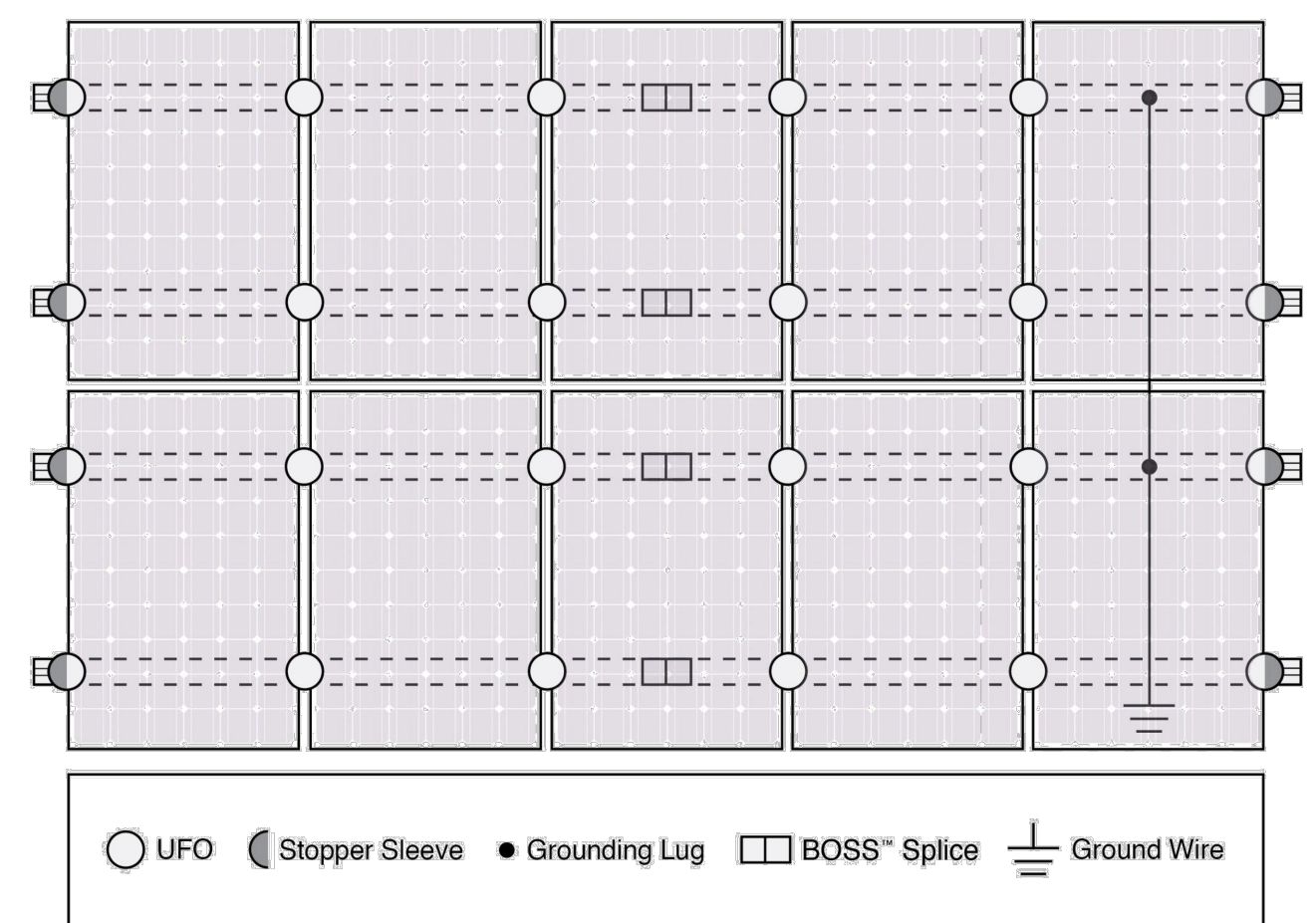
The table below was prepared in compliance with applicable engineering codes and standards.* Values are based on the following criteria: ASCE 7-16, Gable Roof Flush Mount, Roof Zones 1 & 2e, Exposure B, Roof Slope of 8 to 20 degrees and Mean Building Height of 30 ft. Visit IronRidge.com for detailed certification letters.

Snow (PSF)	Wind (MPH)	Rail Span					
		4'	5' 4"	6'	8'	10'	12'
None	90						
	120						
	140	XR10					
	160						
20	90						
	120						
	140						
	160						
30	90						
	160						
40	90						
	160						
80	160						
	160						
120	160						
	160						

*Table is meant to be a simplified span chart for conveying general rail capabilities. Use approved certification letters for actual design guidance.

Tech Brief

System Diagram



Approved Enphase microinverters can provide equipment grounding of IronRidge systems, eliminating the need for grounding lugs and field installed equipment ground conductors (EGC). A minimum of two microinverters mounted to the same rail and connected to the same Engage cable is required. Refer to installation manuals for additional details.

UL Certification

The IronRidge[®] Flush Mount[®], Tilt Mount[®], and Ground Mount Systems have been listed to UL 2703 by Intertek Group plc.

UL 2703 is the standard for evaluating solar mounting systems. It ensures these devices will maintain strong electrical and mechanical connections over an extended period of time in extreme outdoor environments.

Go to IronRidge.com/UFO

Feature	Cross-System Compatibility		
	Flush Mount	Tilt Mount	Ground Mount
XR Rails [®]	✓	✓	XR100 & XR1000
UFO/Stopper	✓	✓	✓
BOSS [®] Splice	✓	✓	N/A
Grounding Lugs	1 per Row	1 per Row	1 per Array
Microinverters & Power Optimizers	Compatible with most MLPE manufacturers. Refer to system installation manual.		
Fire Rating	Class A	Class A	N/A
Modules	Tested or Evaluated with over 400 Framed Modules. Refer to installation manuals for a detailed list.		

INDEPENDENT GREEN TECHNOLOGIES LLC
3964 WEST PENNSACOLA STREET,
TALLAHASSEE, FL 32304
(850) 576-7657
CONTRACTOR LIC#: CVC056732

REVISIONS		
DESCRIPTION	DATE	REV
REVISION	09/24/2024	A
REVISION	09/27/2024	B

Signature with Seal

PROJECT NAME & ADDRESS

NFC BUILDING 8
COMMERCIAL
325 TURNER DAVIS DR
MADISON, FL 32340, USA
PH.# : (850) 576-7657
Email ID : caden@igtsolar.com

DATE: 09/27/2024

SHEET NAME
EQUIPMENT SPECIFICATIONS

SHEET SIZE
ARCH FULL BLEED D 24" X 36"

SHEET NUMBER

PV-7

POLARIS™ Dual-Rated Two-Wire II, IIO, IIH Series



SPECIFICATIONS

- UL Listed 496B Wire Connector (City location).
- Temperature Rating (Package 4375C): Cold temperature rated to -45 °C, rated 600V, 90 °C.
- Wire Type: Best rated for use with copper and/or aluminum cables. Not for ferrous metal. See Note 15 (see page 15).
- Torque Chart: See page 24.

- FEATURES**
- Innovative connectors, suitable for connecting two wires.
 - For sizes 1/0 AWG and smaller, available in two styles: wires being connected from the same side of the connector (Figure 1) or opposite sides of the connector (Figure 2).
 - For sizes 250 MCM and larger, provided with open wire entry ports on both sides of the connector (Figure 3), which allows for access from either side. This style is supplied with removable access plugs to close the entry port not being utilized.
 - Aluminum and chemical resistant.
 - UV resistant.
 - Will not support combustion.

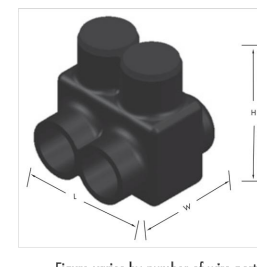
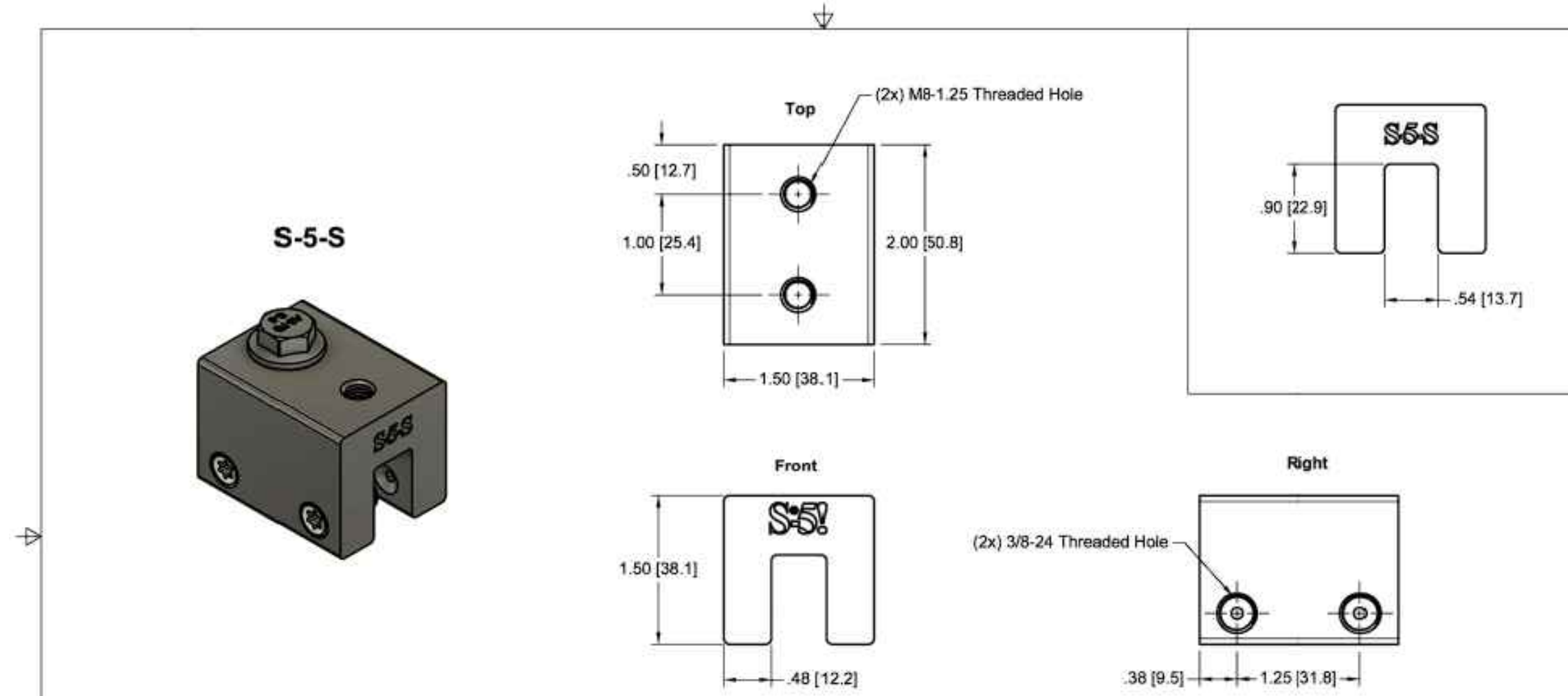
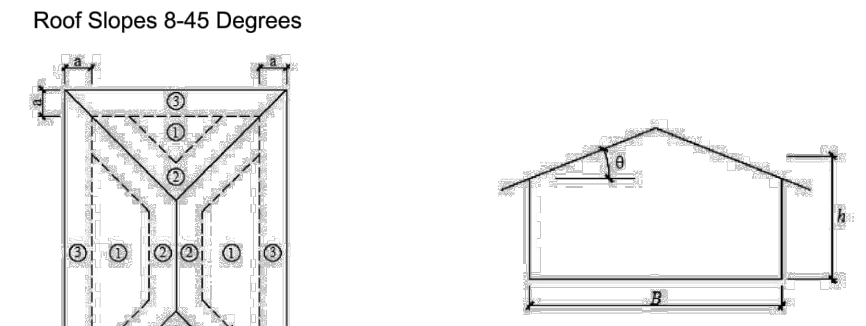
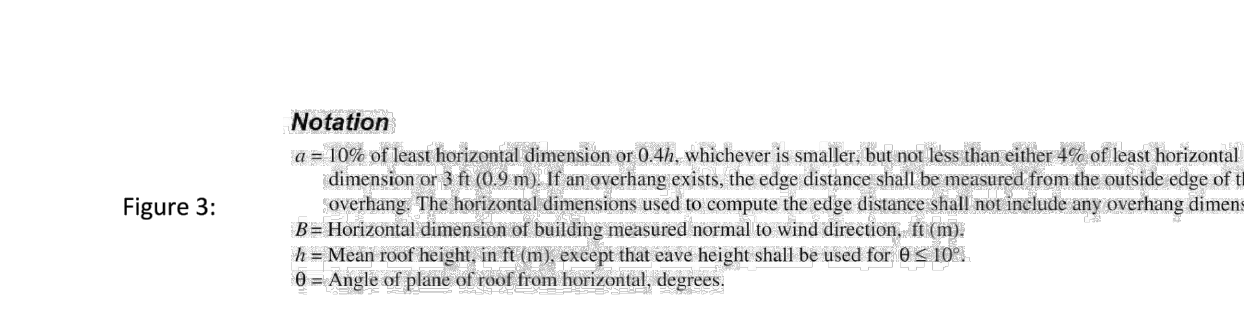


Figure varies by number of wire ports.

CAT. NO.	FIG. NO.	NO. OF PORTS	WIRE RANGE	LENGTH (L) (IN.)	WIDTH (W) (IN.)	HEIGHT (H) (IN.)	MAX. TORQUE VALUE (IN. LB.)	HEX. WRENCH SIZE (IN.)	STD. CTR. DTY.
II-4	1	2	4-14 AWG	1.120	1.380	1.380	45	5/16	12
IIO-4	2	2	4-14 AWG	1.120	1.250	1.380	45	5/16	12
II-4A	1	2	4-14 AWG	1.120	1.180	1.380	45	1/8	6
III-0	1	2	1/0-14 AWG	1.620	1.620	1.750	180	3/16	6
IIO-0	2	2	1/0-14 AWG	1.620	1.750	1.750	180	3/16	6
III-0	1	2	3/0-4 AWG	1.840	1.870	2.50	250	1/4	6
IIO-0	2	2	3/0-4 AWG	1.840	1.870	1.870	250	1/4	6
II-250	3	2	250 MCM-6 AWG	2.120	2.250	2.250	360	5/16	6
III-350	3	2	350 MCM-4 AWG	2.470	2.500	2.440	400	5/16	4
II-500	3	2	500 MCM-4 AWG	2.810	2.870	2.940	450	5/16	4
II-600	3	2	600 MCM-4 AWG	2.340	2.940	3.050	550	5/16	4
II-750 (Not UL Listed)	3	2	750-250 MCM	3.480	3.500	3.500	550	3/8	2
IIH-750	4	2	750-1/0 MCM	3.480	4.500	3.500	550	5/16	2

Wind Speed (mph)	Exposure B									Exposure C									Exposure D																		
	Ground Snow: 0 psf			10 psf			Exposed Mod.			Edge Mod.			Ground Snow: 0 psf			10 psf			Exposed Mod.			Edge Mod.			Ground Snow: 0 psf			10 psf			Exposed Mod.			Edge Mod.			
115	9-20	112	112	106	96	96	100	86	82	76	65	65	105	90	86	96	90	86	79	72	66	64	55	50	96	81	77	96	81	77	72	64	59	57	44	40	
120	21-27	110	110	110	93	93	110	96	96	92	75	75	110	100	100	93	93	93	86	77	76	64	64	50	45	90	90	88	72	72	72	66	66	51	51		
130	28-45	107	107	107	92	92	105	107	88	84	83	72	107	107	92	92	88	88	72	72	69	58	58	50	45	88	79	83	80	79	64	64	60	41	41		
140	46-60	112	106	100	96	96	96	96	81	77	72	65	64	68	85	81	96	85	81	75	66	64	60	50	45	88	79	88	76	73	66	59	53	44	38		
150	61-70	110	110	110	93	93	110	91	91	88	72	72	110	96	96	93	96	73	73	73	59	59	108	85	85	83	85	85	84	66	66	66	66	51	51		
160	71-75	107	107	106	92	92	101	102	84	80	79	67	105	107	87	92	87	84	83	88	68	66	55	50	45	86	79	92	92	79	76	75	61	64	60	41	
170	76-85	111	96	91	96	96	91	84	73	72	66	59	55	88	77	73	68	77	73	67	59	54	52	41	36	79	69	66	79	69	66	60	60	49	44	38	
180	86-95	110	105	105	93	93	104	82	82	80	65	65	109	86	86	86	86	84	66	66	67	51	51	98	77	77	77	77	77	77	77	77	77	77	61	41	
190	96-100	107	107	97	92	92	92	96	76	74	73	61	96	97	79	92	92	79	76	75	61	64	60	42	87	87	72	87	87	72	87	64	60	51	38		
200	101	86	82	86	86	82	76	69	64	60	51	48	79	72	67	79	72	67	61	49	41	45	38	38	72	64	60	72	64	60	51	35	38	38	26	26	
210	102	110	96	93	93	93	96	75	74	60	60	60	99	78	78	93	78	78	77	61	61	64	42	42	89	72	72	89	72	72	69	50	50	54	34	24	
220	103	110	88	88	88	88	87	69	69	69	54	51	72	72	72	91	72	72	72	53	53	57	35	35	82	64	64	64	64	64	64	38	38	45	29	29	
230	104	99	100	82	92	92	82	79	77	64	64	48	82	81	86	82	81	86	64	64	38	51	42	26	74	73	60	74	73	60	58	53	26	41	37	20	
240	105	83	73	72	63	72	64	54	48	48	38	38	66	59	53	66	59	53	45	38	38	34	24	60	45	39	60	45	39	60	45	39	60	24	31	20	
250	106	103	81	81	81	81	80	64	64	64	48	48	83	66	66	66	66	64	41	41	48	32	32	75	59	59	75	59	59	58	32	32	38	26	26		
260	107	67	67	64	77	67	64	59	44	38	43	38	69	61	50	42	61	50	42	38	27	25	26	22	21	59	38	59	38	59	38	34	21	35	17		
270	108	56	76	76	76	76	74	58	58	60	39	39	77	61	61	77	61	61	60	33	33	41	27	27	72	51	51	72	51	51	48	28	28	33	24	24	
280	109	86	85	72	86	85	72	68	66	60	56	48	29	72	69	57	69	57	54	41	24	26	27	17	64	61	35	64	61	35	41	29	17	30	22	13	
290	110	74	65	64	74	65	64	65	39	38	40	27	59	49	44	38	69	44	38	69	24	38	23	19	48	38	48	38	38	38	38	21	20	34	16	16	
300	111	92	73	73	92	73	73	72	54	54	37	37	75	59	59	75	59	59	58	32	32	38	25	25	67	45	45	45	45	45	45	45	45	45	45	45	45
310	112	64	60	72	64	60	61	55	32	38	28	26	67	41	35	67	41	35	33	22	24	26	16	64	59	30	64	59	30	36	26	16	28	20	13	15	
320	113	89	72	72	69	72	69	50	50	55	34	34	72	55	55	72	55	55	53	29	29	35	24	24	64	41	41	64	41	41	38	24	24	29	20	20	
330	114	81	79	65	81	79	65	64	61	35	48	39	25	66	64	44	66	64	44	44	32	32	24	14	60	57	29	60	57	29	32	25	14	22	19	11	



- General Notes:
- S-5-S
 - 0.9" 3/8-24 T30 Drive SetScrew
 - M8-1.25 16 mm Bolt
 - Example roof

MATERIAL: 6000 Series AL
TYP. CORROSION W.T.: 0.013 lbs
MANUFACTURER: S-5-S [CCD]
DATE: 3/14/2022

DESCRIPTION: S08-A-8-E
PROJECT: SNLR
SCALE: 1:1

S-5-S PRODUCTS ARE PROTECTED BY MULTIPLE U.S. AND FOREIGN PATENTS. VISIT OUR WEBSITE AT WWW.S-5.COM FOR COMPLETE INFORMATION ON PATENTS AND TRADEMARKS.

IRONRIDGE
XR100® Rail

APPROVED MATERIALS:
6005-T6, 6005A-T61, 6105-T5, 6N01-T6
(34,000 PSI YIELD STRENGTH MINIMUM)

Clear Part Number	Black Part Number	Description / Length	Material	Weight
XR-100-132A	XR-100-132B	XR100, Rail 132" (11 Feet)	6000 Series Aluminum	7.50 lbs.
XR-100-168A	XR-100-168B	XR100, Rail 168" (14 Feet)		9.55 lbs.
XR-100-204A	XR-100-204B	XR100, Rail 204" (17 Feet)		11.60 lbs.

Cut Sheet

IGT Solar
INDEPENDENT GREEN TECHNOLOGIES LLC
3964 WEST PENNSACOLA STREET,
TALLAHASSEE, FL 32304
(850) 576-7657
CONTRACTOR LIC#: CV056732

REVISIONS

DESCRIPTION	DATE	REV
REVISION	09/24/2024	A
REVISION	09/27/2024	B

Signature with Seal

PROJECT NAME & ADDRESS

NFC BUILDING 8
COMMERCIAL
325 TURNER DAVIS DR
MADISON, FL 32340, USA
PH.# : (850) 576-7657
Email ID : caden@igtsolar.com

DATE: 09/27/2024
SHEET NAME
EQUIPMENT SPECIFICATIONS
SHEET SIZE
ARCH FULL BLEED D 24" X 36"
SHEET NUMBER

PV-8