WYSSLING CONSULTING
CORPORATE EXPERIENCE WITH SMALL BUSINESS VALUE
Scott E. Wyssling, PE
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Gregory T. Elvestad, PE

Scott Wyssling, PE

Digitally signed by Scott Wyssling, PE
DN: C=US, S=Utah, L=Alpine, O=Wyssling Consulting, OU=Owner, CN="Scott Wyssling, PE", E=swyssling@wysslingconsulting.com
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76 North Meadowbrook Drive
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office (201) 874-3483
swyssling@wysslingconsulting.com

February 16, 2024
Revised March 6, 2024

Smartsun
635 Old Barnwell Road
West Columbia, SC 29170

Re: Engineering Services
Tech Residence
155 Edgecombe Drive, Spring Lake, NC
10.920 kW System

To Whom It May Concern:

We have received information regarding solar panel installation on the roof of the above referenced structure. Our evaluation of the structure is to verify the existing capacity of the roof system and its ability to support the additional loads imposed by the proposed solar system.

A. Site Assessment Information

1. Site visit documentation identifying attic information including size and spacing of framing for the existing roof structure.
2. Design drawings of the proposed system including a site plan, roof plan and connection details for the solar panels. This information will be utilized for approval and construction of the proposed system.

B. Description of Structure:

Roof Framing:	Assumed prefabricated wood trusses at 24" on center. All truss members are constructed of 2x4 dimensional lumber.
Roof Material:	Composite Asphalt Shingles
Roof Slope:	23 & 34 degrees
Attic Access:	Inaccessible
Foundation:	Permanent

C. Loading Criteria Used

- **Dead Load**
  - Existing Roofing and framing = 7 psf
  - New Solar Panels and Racking = 3 psf
  - TOTAL = 10 PSF
- **Live Load** = 20 psf (reducible) – 0 psf at locations of solar panels
- **Ground Snow Load** = 10 psf
- **Wind Load** based on ASCE 7-10
  - Ultimate Wind Speed = 120 mph (based on Risk Category II)
  - Exposure Category C

Analysis performed of the existing roof structure utilizing the above loading criteria is in accordance with the 2018 North Carolina Residential Code (2015 IRC)*, including provisions allowing existing structures to not require strengthening if the new loads do not exceed existing design loads by 105% for gravity elements and 110% for seismic elements. This analysis indicates that the existing framing will support the additional panel loading without damage, if installed correctly.*

D. Solar Panel Anchorage

1. The solar panels shall be mounted in accordance with the most recent Unirac installation manual. If during solar panel installation, the roof framing members appear unstable or deflect non-uniformly, our office should be notified before proceeding with the installation.
2. The maximum allowable withdrawal force for a $^{5}/_{16}$" lag screw is 229 lbs per inch of penetration as identified in the National Design Standards (NDS) of timber construction specifications. Based on a minimum penetration depth of 2½", the allowable capacity per connection is greater than the design withdrawal force (demand). Considering the variable factors for the existing roof framing and installation tolerances, the connection using one $^{5}/_{16}$" diameter lag screw with a minimum of 2½" embedment will be adequate and will include a sufficient factor of safety.
3. Considering the wind speed, roof slopes, size and spacing of framing members, and condition of the roof, the panel supports shall be placed no greater than 48" on center.

Based on the above evaluation, this office certifies that with the racking and mounting specified, the existing roof system will adequately support the additional loading imposed by the solar system. This evaluation is in conformance with the 2018 North Carolina Residential Code (2015 IRC), current industry standards, and is based on information supplied to us at the time of this report.

Should you have any questions regarding the above or if you require further information do not hesitate to contact me.

Very truly yours,

Scott E. Wyssling, PE
North Carolina License No. 46546
North Carolina COA P-2308

NORTH CAROLINA PROFESSIONAL SEAL 046546 ENGINEER SCOTT E. WYSSLING

Wyssling Consulting, PLLC
76 N Meadowbrook Drive Alpine UT 84004
North Carolina COA # P-2308

Signed 3/06/2024

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NEW PV ROOF MOUNT SYSTEM DESIGN

SCOPE OF WORK

(28) JINKO JKM390M-72HBL-V
(28) ENPHASE IQ8A-72-2-US
ROOF MOUNT: UNIRAC FLASH KIT PRO
MOUNTING RAILS: UNIRAC NXT UMOUNT RAIL

SITE CONDITION

ASCE 7-10 WIND SPEED -120
EXPOSURE CATEGORY - C
RISK CATEGORY - II
SNOW LOAD - 10 LBS/SQFT

UTILITY COMPANY

SOUTH RIVER EMC

INTERCONNECTION TYPE

LINE SIDE TAP

CODE REFERENCES

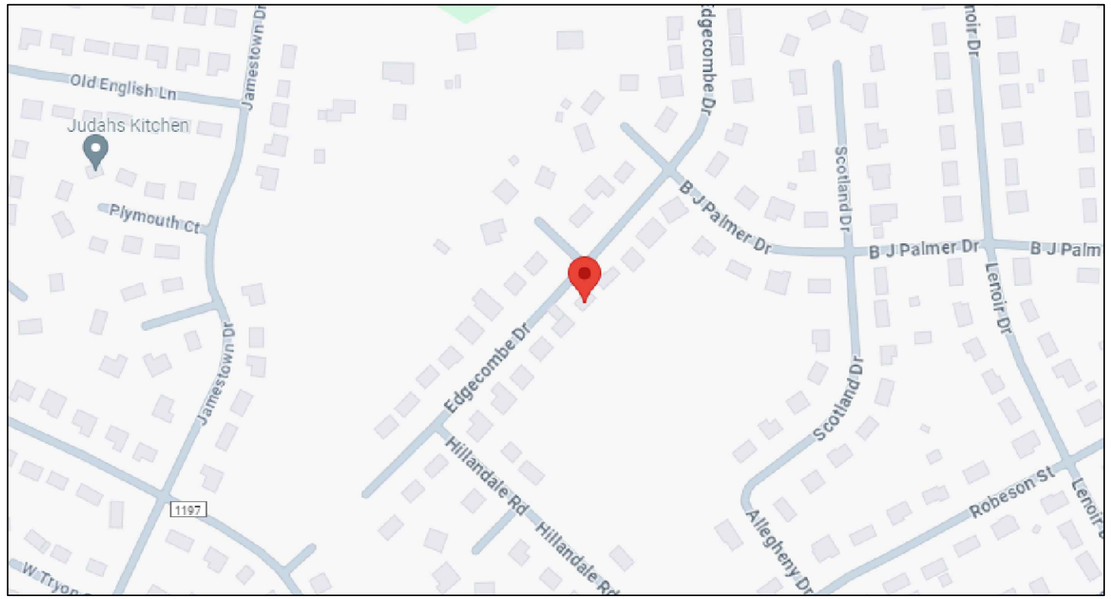
2017 NATIONAL ELECTRICAL CODE
2015 INTERNATIONAL FIRE PREVENTION CODE
2015 INTERNATIONAL BUILDING CODE
2015 INTERNATIONAL RESIDENTIAL CODE

SHEET INDEX

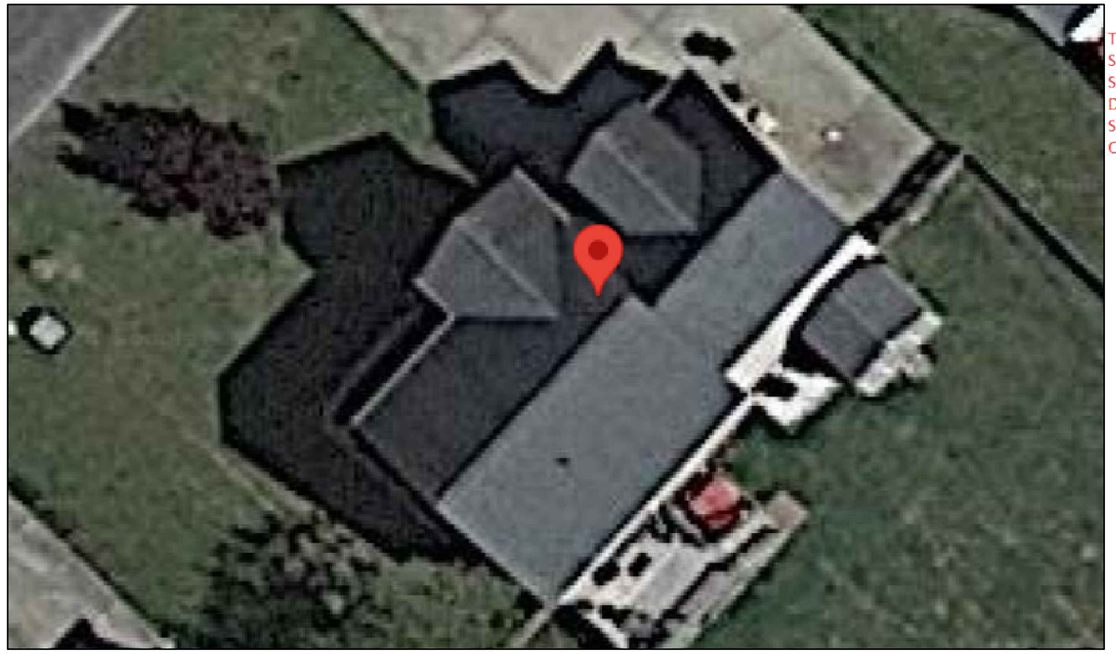
LEGEND

- ROOF ACCESS POINT
(E) - EXISTING
(N) - NEW
M - UTILITY METER
P - PRODUCTION METER
MSP - MAIN SERVICE PANEL
- FIRE CODE SETBACKS
CP - COMBINER PANEL
G - GAS METER
LC - LOAD CENTER
SUB - SUBPANEL
JB - JUNCTION BOX
AC - AC DISCONNECT
- APPROX. CONDUIT/ATTIC RUN
BAT - ENERGY STORAGE
GEN - GENERATOR
MBE - MAIN BREAKER ENCLOSURE
ATS - AUTOMATIC TRANSFER SWITCH
ESS - ENPOWER SMART SWITCH
INV - INVERTER

VICINITY MAP



PROPERTY MAP



CONTRACTOR

635 OLD BARNWELL ROAD
WEST COLUMBIA SC 29170

JOB TITLE

NEW SOLAR PV ROOF MOUNT SYSTEM

10.92 KW DC INPUT
9.772 KW AC EXPORT

MICHAEL TECH

155 EDGECOMBE DR,
SPRING LAKE, NC, 2839

NORTH CAROLINA PROFESSIONAL SEAL 046546 ENGINEER SCOTT E. WYSSLING

Wyssling Consulting, PLLC
76 N Meadowbrook Drive Alpine UT 84004
North Carolina COA # P-2308

Signed 3/06/2024

ENGINEERING STAMP:

DRAWN BY: LEONI MARLOU EBO
DATE: 02 - 14 - 2024

REVISIONS

DESCRIPTION	DATE	REV

PROJECT INFORMATION

PV1.1

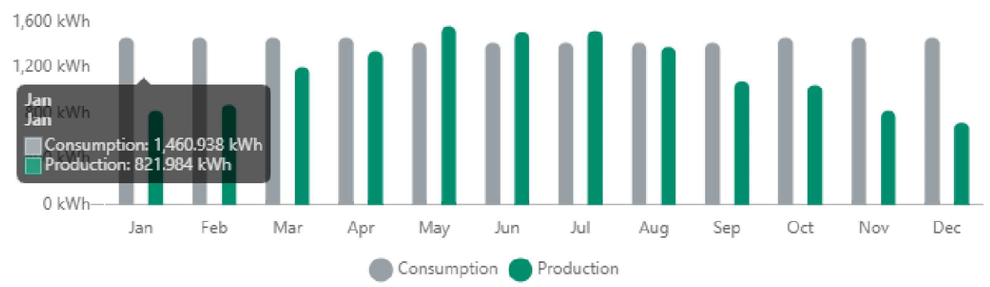
Simulate system | Size 10.92kW | Production 80% | Savings 83%

Production | Utility Bill Savings

ANNUAL PRODUCTION

28	13,866kWh	80%
Panels	Energy	Energy Offset

MONTHLY PRODUCTION (KWH)



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AURORA SOLAR SHADE ANALYSIS

MICHAEL TECH

155 EDGECOMBE DR,
SPRING LAKE, NC, 28390

10.92 KW DC STC
9.772 KW AC

MODULES
(28) JKM390M-72HBL-V

MICROINVERTERS
(28) ENPHASE IQ8A-72-2-US

THE SYSTEM HAS A FIRST YEAR ANNUAL ENERGY PRODUCTION OF: 13866 KWH/YEAR

THIS PRODUCTION IS AN ESTIMATE PREPARED USING AURORA SOLAR SHADE ANALYSIS SOFTWARE. ALL SOLAR SYSTEMS EXPERIENCE PERFORMANCE DEGRADATION OVER THEIR LIFETIME. THIS IS USUALLY APPROXIMATELY 1% PER YEAR, BUT VARIES BASED ON EQUIPMENT USED AND ENVIRONMENTAL CONDITIONS.

CONTRACTOR

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MICHAEL TECH

155 EDGECOMBE DR,
SPRING LAKE, NC, 2839[illegible]

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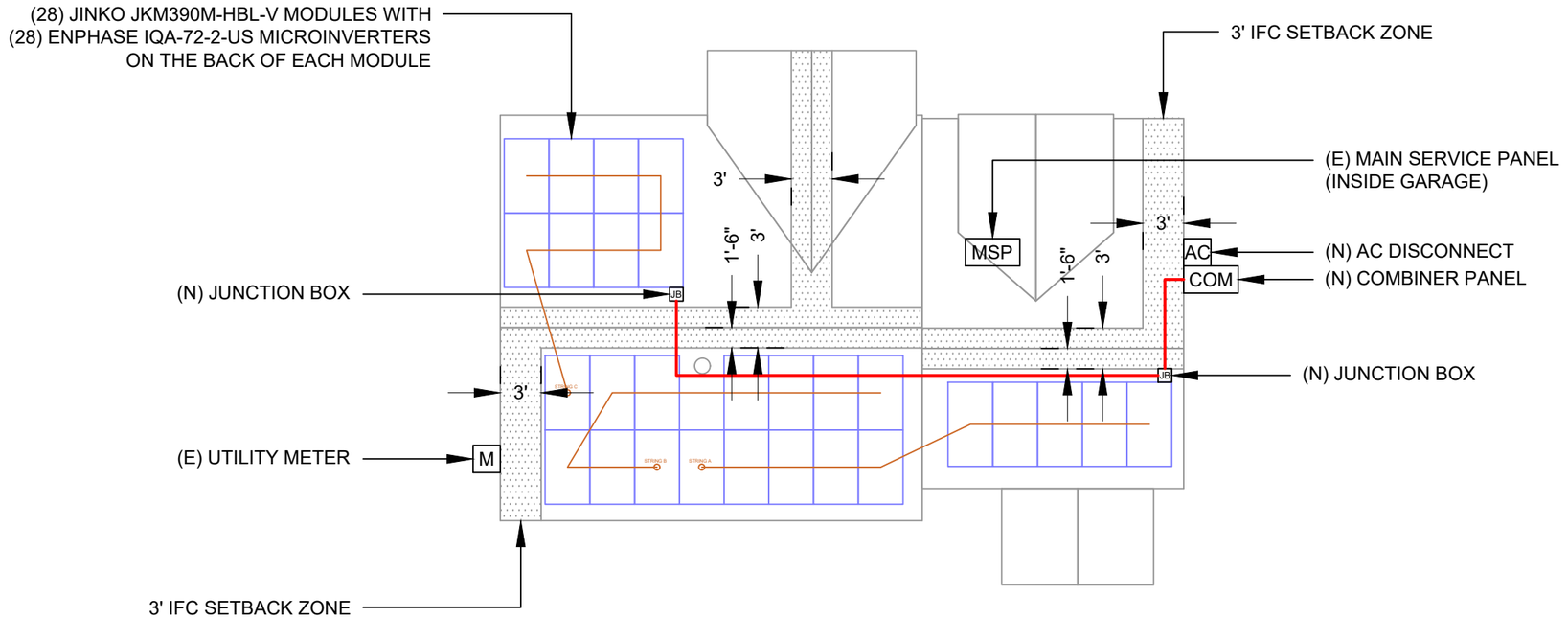
PROJECT INFORMATION

PV1.2

LEGEND

- ROOF ACCESS POINT
- (E) - EXISTING
- (N) - NEW
- M - UTILITY METER
- P - PRODUCTION METER
- MSP - MAIN SERVICE PANEL
- AC - AC DISCONNECT
- CP - COMBINER PANEL
- ENV - ENVOY
- FIRE CODE SETBACKS
- G - GAS METER
- LC - LOAD CENTER
- SUB - SUBPANEL
- JB - JUNCTION BOX
- APPROX. CONDUIT/ATTIC RUN
- BAT - ENERGY STORAGE
- GEN - GENERATOR
- MBE - MAIN BREAKER ENCLOSURE
- INV - INVERTER
- ESS - ENPOWER SMART SWITCH
- APPROX. PROPERTY LINE

FRONT OF RESIDENCE



BACK OF RESIDENCE

ROOF AREAS	
ROOF SECTION 1 - SURFACE AREA	210 SQ.FT
ROOF SECTION 1 - SOLAR COVERAGE	108 SQ.FT
ROOF SECTION 1 - PERCENTAGE COVER	51%
ROOF SECTION 2 - SURFACE AREA	548 SQ.FT
ROOF SECTION 2 - SOLAR COVERAGE	325 SQ.FT
ROOF SECTION 2 - PERCENTAGE COVER	59%
ROOF SECTION 3 - SURFACE AREA	470 SQ.FT
ROOF SECTION 3 - SOLAR COVERAGE	173 SQ.FT
ROOF SECTION 3 - PERCENTAGE COVER	37%
ROOF TOTAL SURFACE AREA	1227 SQ.FT
ROOF TOTAL SOLAR COVERAGE	606 SQ.FT
ROOF TOTAL PERCENTAGE COVER	49%

1 SITE PLAN
SCALE: 3/32" = 1'-0"

NOTE: PROVIDE ADDITIONAL JUNCTION BOXED AS REQUIRED TO COMBINE MODULES ON DIFFERENT ARRAYS INTO A SINGLE STRING.

NOTE: NFPA-1//FFPC 11.12.2.2.2 ZONES THAT ARE DIMENSIONED AS 18" MEET REQUIREMENTS PER CODE AND INDICATE A 3' SETBACK SPLIT BETWEEN A HIP OR VALLEY.

NFPA-1/FFPC SECTION 11.12.2.2.2 REQUIRED 3 FEET ACCESS, PATHWAYS, AND SETBACKS. DO NOT PLACE ANY PV MODULES IN THIS SPACE.

CONTRACTOR

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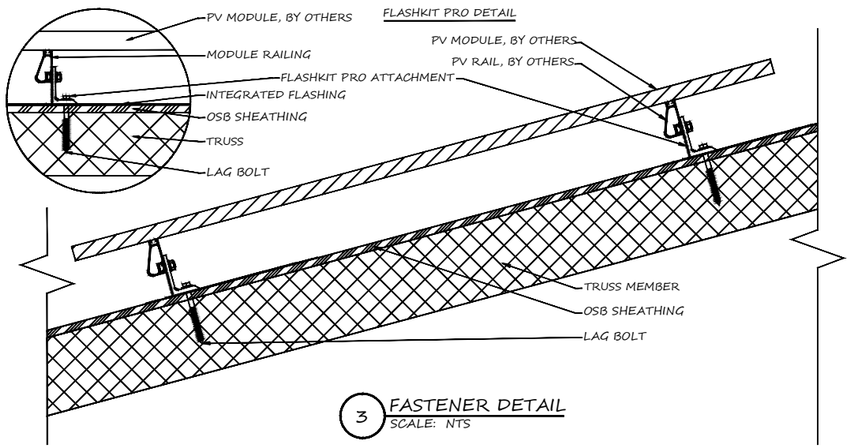
REVISIONS

DESCRIPTION	DATE	REV

SITE INFORMATION

PV2.1



3 FASTENER DETAIL
SCALE: NTS

ROOF INFO						MOUNT			FT	SQ.FT	LBS	
Layout	Count	Azimuth	Tilt	Solar Access	Roof Type	Portrait	Landscape	Count	Rail Length	Array Area	Array Weight	Surface Area
Roof Section 1	5	133	5/12 (22.62°)	96	Comp Shingle	11		11	32	108	248	210
Roof Section 2	15	133	8/12 (33.69°)	97	Comp Shingle	32		32	99	325	744	548
Roof Section 3	8	313	8/12 (33.69°)	99	Comp Shingle	18		18	53	173	396.8	470

ROOF MOUNT, FASTENER AND RAIL	
ROOF MOUNT:	
MAKE	UNIRAC
MODEL	FLASH KIT PRO
MATERIAL	ALUMINUM
FASTENER:	
MAKE	GENERIC
MODEL	LAG BOLT
MATERIAL	SS LAG W/EPDM WASHER
SIZE	5/16" X4"
GENERAL	
WEIGHT	1 LBS
FASTENERS PER MOUNT	1 PER MOUNT
MAX. PULL-OUT FORCE	800 LBS
SAFETY FACTOR	2
DESIGN PULL-OUT FORCE	400 LBS
LAG BOLT EMBEDDED WITH 2.5" OF THREAD IN WOOD TRUSSES MEMBER	
MOUNTING RAIL:	
MAKE	UNIRAC
MODEL	NXT UMOUNT RAIL
MATERIAL	ALUMINUM
WEIGHT	0 LBS
SPACING	48"

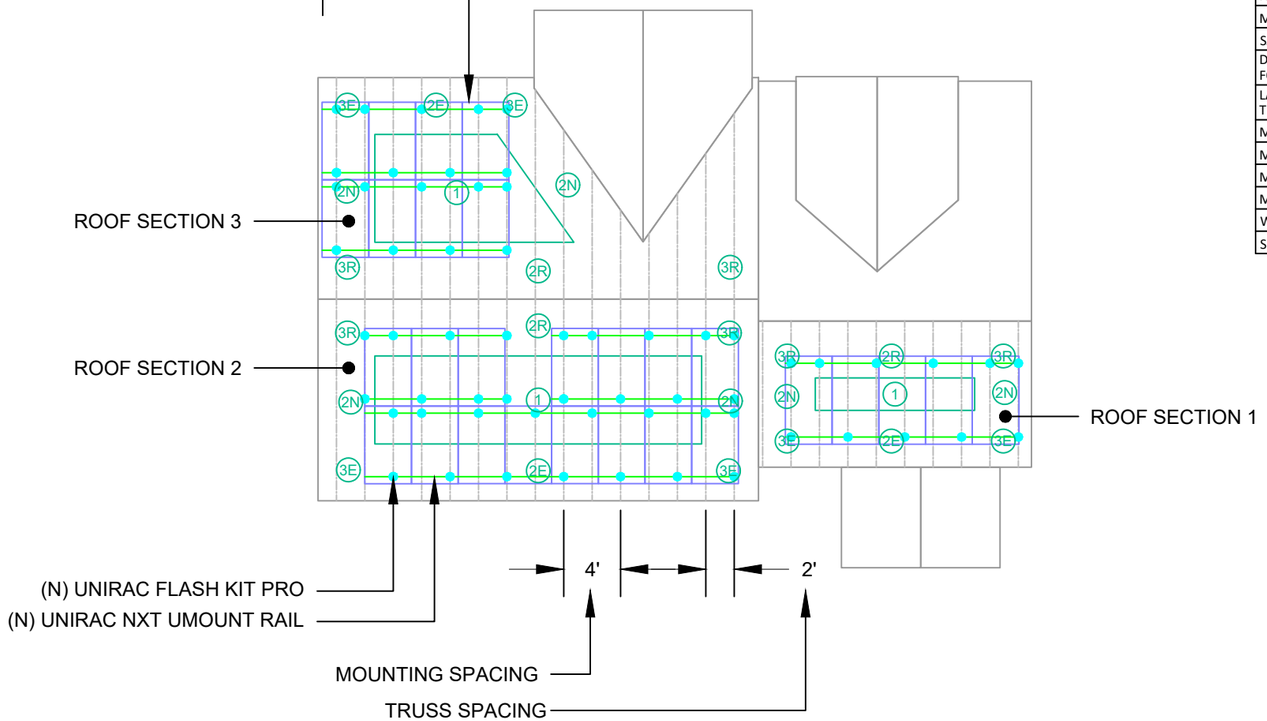
ROOF SUMMARY	
STRUCTURE	
TYPE	TRUSS
MATERIAL	SOUTHERN PINE #2
SIZE	2"x4"
SPACING	24"
DECKING:	
TYPE	OSB
MATERIAL	WOOD COMPOSITE
THICKNESS	7/16"
WEIGHT	1.6 LBS/SQFT
ROOFING:	
TYPE	ARCH SHINGLE
MATERIAL	ASPHALT
WEIGHT	2.3 LBS/SQFT

ATTACHMENTS	
ROOF MOUNT	61
RAIL COUNT	13
SPLICE BAR	14
MID CLAMPS	44
END CLAMPS	24

PV MODULES	
MAKE	JINKO
MODEL	JKM390M-72HBL-V
WIDTH	39 INCHES
LENGTH	79 INCHES
THICKNESS	2 INCHES
WEIGHT	50 LBS

DEAD LOAD CALCULATIONS			
LOAD	QTY	WEIGHT	TOTAL
MODULE	28	49.60	1388.8
MICROINVERTER	28	2.38	66.64
RAILS LINEAR FT	32	0.50	16
ATTACHMENT	61	0.74	45.14
TOTAL ARRAY WEIGHT			1388.80
AREA NAME	QTY	FT2	TOTAL FT2
MODULES	28	21.66	606.46
POINT LOAD (TOTAL ARRAY WEIGHT / # OF ATTACHMENTS)			22.77
DISTRIBUTED LOAD (TOTAL WEIGHT / ARRAY AREA			2.29

(28) JINKO JKM390M-HBL-V MODULES WITH
(28) ENPHASE IQA-72-2-US MICROINVERTERS
ON THE BACK OF EACH MODULE



LEGEND
- ROOF ACCESS POINT
(E) - EXISTING
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M - UTILITY METER
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ESS - ENPOWER SMART SWITCH
- APPROX. PROPERTY LINE

ROOF SECTION
SCALE: 3/32" = 1'-0"

CONTRACTOR

635 OLD BARNWELL ROAD
WEST COLUMBIA SC 29170

JOB TITLE

NEW SOLAR PV ROOF MOUNT SYSTEM

10.92 KW DC INPUT
9.772 KW AC EXPORT

MICHAEL TECH

155 EDGECOMBE DR,
SPRING LAKE, NC, 28390

NORTH CAROLINA PROFESSIONAL SEAL 046546 ENGINEER SCOTT E. WYSSLING

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DATE: 02 - 14 - 2024

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STRUCTURAL INFORMATION

PV3.1

ID	INITIAL CONDUCTOR LOCATION	FINAL CONDUCTOR LOCATION	MIN. CONDUCTOR SIZE (AWG)		MIN. DIA CONDUIT SIZE (IN.)	# OF PARALLEL CIRCUITS	CURRENT-CARRYING CONDUCTORS IN CONDUIT	OCPD (A)	MIN. EGC SIZE (AWG)		TEMP. CORR. FACTOR		CONDUIT FILL FACTOR	CONT. CURRENT (A)	MAX. CURRENT (A)	BASE AMP. (A)	DERATED AMP. (A)	TERM. AMP. RATING (A)	LENGTH (FT)	VOLTAGE DROP (%)
1	STRING A	JUNCTION BOX	10	PV WIRE	N/A	1	2	N/A	6	BARE COPPER	0.76	55°C	N/A	15.73	19.66	40	N/A	N/A	55.00	0.90
2	STRING B	JUNCTION BOX	10	PV WIRE	N/A	1	2	N/A	6	BARE COPPER	0.76	55°C	N/A	12.1	15.13	40	N/A	N/A	55.00	0.69
3	STRING C	JUNCTION BOX	10	PV WIRE	N/A	1	2	N/A	6	BARE COPPER	0.76	55°C	N/A	12.1	15.13	40	N/A	N/A	55.00	0.69
4	JUNCTION BOX	IQ COMBINER	10	THWN-2 COPPER	0.75 LTNM	1	2	20	10	THWN-2 COPPER	0.76	55°C	1	15.73	19.66	40	30.4	35	35.00	0.57
5	JUNCTION BOX	IQ COMBINER	10	THWN-2 COPPER	0.75 LTNM	2	4	20	10	THWN-2 COPPER	0.76	55°C	0.8	12.1	15.13	40	24.3	35	35.00	0.44
6	IQ COMBINER	AC DISCONNECT	8	THWN-2 COPPER	0.75 LTNM	1	3	50	10	THWN-2 COPPER	0.96	33°C	1	39.93	49.91	55	52.8	50	5.00	0.13
7	AC DISCONNECT	MSP	6	THWN-2 COPPER	0.75 LTNM	1	3	50	6	THWN-2 COPPER	0.96	33°C	1	39.93	49.91	75	72.0	65	5.00	0.08

IQ COMBINER BOX (NEW)	
MAKE	N/A
MODEL	N/A
ENCL. RATING	NEMA 3R
VOLT. RATING	240 VOLTS
BUS RATING	125 AMPS
UL LIST. (Y/N)	YES
MAIN BREAKER (Y/N)	NO
BREAKER RATING	N/A

NOTES:

- BACK-FEED INVERTER OUTPUT VIA (2) 15A & (1) 20A AT THE OPPOSITE END OF THE BUSBAR FROM MAIN BREAKER
- PROVIDE "FED BY MULTIPLE POWER SOURCES" LABEL

MD PANEL (EXISTING)	
MAKE	SIEMENS
MODEL	G3040B1200
ENCL. RATING	NEMA 3R
VOLT. RATING	240 VOLTS
BUS RATING	200 AMPS
UL LIST. (Y/N)	YES
MAIN BREAKER (Y/N)	YES
BREAKER RATING	200 AMPS

NOTES:

- BACK-FEED SOLAR OUTPUT VIA SUPPLY SIDE TAP INSIDE OF MD PANEL

AC DISCONNECT	
MAKE	N/A
MODEL	N/A
ENCL. RATING	NEMA 3R
VOLT. RATING	240 VOLTS
BUS RATING	60 AMPS
UL LIST. (Y/N)	YES
FUSED (Y/N)	YES
FUSE RATING	50 AMPS

NOTES:

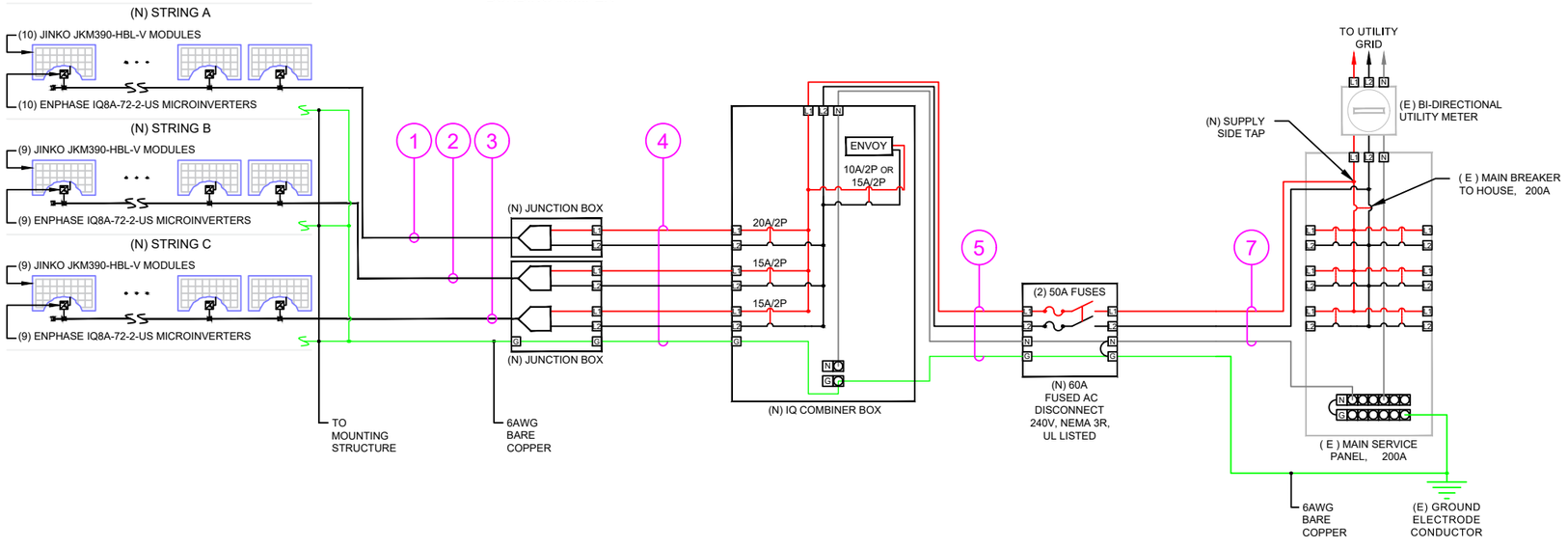
- LOAD-BREAK RATED
- VISIBLE OPEN
- LOCKABLE IN OPEN POSITION
- INSTALL ADJACENT TO METER
- DISCONNECT TO BE READILYACCESSIBLE TO UTILITY COMPANYPERSONNEL AT ALL TIMES
- SERVICE RATED
- PROVIDE NEUTRAL/GROUND BONDING JUMPER

JUNCTION BOX	
MAKE	SOLADECK
MODEL	0783-3R
PRO. RATING	NEMA 3R
VOLT. RATING	600 VOLTS
AMP RATING	120 AMPS
UL LISTING	UL 50

NOTES:

- PROVIDE ADDITIONAL JUNCTION BOXED AS REQUIRED TO COMBINE MODULES ON DIFFERENT ARRAYS INTO A SINGLE STRING

PV MODULE	
MAKE	JINKO
MODEL	JKM390M-72HBL-V
TECHNOLOGY	MONO-CRYST.
NOM. POWER (PNOM)	390 WATTS
NOM. VOLT. (VMP)	39.6 VOLTS
O.C. VOLT. (VOC)	48.6 VOLTS
MAX. SYS. VOLT.	1500 V (UL)
TEMP. COEF. (VTC)	-0.35 %/C
NOM. CURR. (IMP)	9.84 AMPS
S.C. CURR. (ISC)	10.46 AMPS
MAX. SERIES FUSE	0 AMPS



CONTRACTOR

635 OLD BARNWELL ROAD
WEST COLUMBIA SC 29170

JOB TITLE

NEW SOLAR PV ROOF MOUNT SYSTEM

10.92 KW DC INPUT
9.772 KW AC EXPORT

MICHAEL TECH

155 EDGECOMBE DR,
SPRING LAKE, NC, 28390

NORTH CAROLINA PROFESSIONAL SEAL 046546 ENGINEER SCOTT E. WYSSLING

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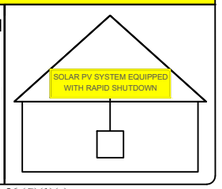
ELECTRICAL INFORMATION

PV4.1

EQUIPMENT LABELS

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



NEC 690.56 (C)(1)(a)
PLACE WITHIN 3FT OF SERVICE DISCONNECTING MEANS TO WHICH THE PV SYSTEMS ARE CONNECTED AND SHALL INDICATE THE LOCATIONS OF RAPID SHUTDOWN SWITCHES

WARNING: PHOTOVOLTAIC POWER SOURCE

NEC 690.31 (G)(3)&(4)
PLACE ON ALL JUNCTION BOXES, EXPOSED RACEWAYS, AND OTHER WIRING METHODS EVERY 10' AND ON EVERY SECTION SEPARATED BY ENCLOSURES, WALLS, PARTITIONS, CEILINGS, OR FLOORS.

RAPID SHUTDOWN SWITCH FOR SOLAR PV SYSTEM

NEC 690.56 (C)(3)
PLACE ON RAPID SHUTDOWN SWITCH OR EQUIPMENT WITH INTEGRATED RAPID SHUTDOWN *REFLECTIVE*

⚠WARNING

DUAL POWER SUPPLY

SOURCES: UTILITY GRID AND PV SOLAR ELECTRIC SYSTEM

NEC 705.12 (B)(3)
PLACE ON ALL EQUIPMENT THAT IS SUPPLIED BY BOTH POWER SOURCES

⚠WARNING

ELECTRIC SHOCK HAZARD

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

NEC 690.13 (B)
PLACE ON PV SYSTEM DISCONNECTING MEANS.

⚠WARNING

FED BY MULTIPLE POWER SOURCES

TOTAL RATING OF ALL OVERCURRENT DEVICES EXCLUDING UTILITY OVERCURRENT DEVICE SHALL NOT EXCEED AMPACITY OF BUSBAR

NEC 705.12 (B)(2)(3)(c)
PLACE ADJACENT TO BACK-FED BREAKER

PV SYSTEM DISCONNECT

NEC 690.13 (B)
PLACE ON PV SYSTEM DISCONNECTING MEANS.

PHOTOVOLTAIC POWER SOURCE

OPERATING AC VOLT. 240 VAC

MAXIMUM OPERATING AC OUTPUT CURRENT 33.8 AMPS

NEC 690.54
PLACE ON INTERCONNECTION DISCONNECTING MEANS

⚠WARNING

POWER SOURCE OUTPUT CONNECTION DO NOT RELOCATE THIS OVERCURRENT DEVICE

NEC 705.12 (B)(2)(3)(b)
PLACE ADJACENT TO BACK-FED BREAKER

EQUIPMENT LABEL NOTES

1. LABELS SHOWN ARE 1/2 THEIR ACTUAL REQUIRED SIZE.
2. LABEL MATERIAL SHALL BE SUITABLE FOR THE EQUIPMENT ENVIRONMENT.
3. CONDUIT SHALL BE MARKED WITH REQUIRED LABEL EVERY 10 FEET.

ELECTRICAL INFORMATION

COMPANY NAME: SMARTSUN

TELEPHONE NUMBER: (803) 728-0747

FLORIDA FIRE PREVENTION CODE 11.12.2.1.5
PLACE ADJACENT TO PV SYSTEM DISCONNECT

CONSTRUCTION NOTES

1. ALL WORK AND EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST NATIONAL, STATE, AND LOCAL CODES AND ORDINANCES
2. FOLLOW MANUFACTURER'S INSTALLATION INSTRUCTIONS, BEST PRACTICES, AND SPECIFICATIONS
3. WIRES SHALL BE RATED AND LABELED "SUNLIGHT RESISTANT" WHERE EXPOSED TO AMBIENT CONDITIONS
4. THE PHOTOVOLTAIC SYSTEM SHALL NOT EXCEED 600 VOLTS OR 800 AMPS
5. EACH ELECTRICAL APPLIANCE SHALL BE PROVIDED WITH A NAMEPLATE GIVING THE IDENTIFYING NAME AND THE RATING IN VOLTS AND AMPERES, OR VOLTS AND WATTS. IF THE APPLIANCE IS TO BE USED ON A SPECIFIC FREQUENCY OR REQUENCIES, IT SHALL BE SO MARKED. WHERE MOTOR OVERLOAD PROTECTION EXTERNAL TO THE APPLIANCES IS REQUIRED, THE APPLIANCE SHALL BE SO MARKED
6. WHERE APPLICABLE, GROUNDING ELECTRODE CONDUCTOR TO BE CONTINUOUS.GROUNDING CRIMPS TO BE IRREVERSIBLE
7. IN ONE- AND TWO-FAMILY DWELLINGS, LIVE PARTS IN PHOTOVOLTAIC SOURCE CIRCUITS AND PHOTOVOLTAIC OUTPUT CIRCUITS OVER 150 VOLTS TO GROUND, SHALL ONLY BE ACCESSIBLE TO QUALIFIED PERSONS WHILE ENERGIZED.
8. PHOTOVOLTAIC SYSTEMS SHALL BE PERMANENTLY MARKED AT VARIOUS EQUIPMENT LOCATIONS TO IDENTIFY THAT A PHOTOVOLTAIC SYSTEM IS INSTALLED AND THAT VARIOUS DANGERS ARE PRESENT.
9. EACH PHOTOVOLTAIC SYSTEM DISCONNECTING MEANS SHALL BE PERMANENTLY MARKED TO IDENTIFY IT AS A PHOTOVOLTAIC SYSTEM DISCONNECT
10. WHERE ALL TERMINALS OF A DISCONNECTING MEANS MAY BE ENERGIZED IN THE OPENPOSITION, A WARNING SIGN SHALL BE MOUNTED ON OR ADJACENT TO THE DISCONNECT
11. A PERMANENT LABEL FOR THE DIRECT-CURRENT PHOTOVOLTAIC POWER SOURCE SHALL BE PROVIDED BY THE INSTALLED AT THE DC DISCONNECT MEANS
12. A PERMANENT PLAQUE OR DIRECTORY, DENOTING ALL ELECTRIC POWER SOURCES SERVING THE PREMISES, SHALL BE INSTALLED AT EACH SERVICE EQUIPMENTLOCATION AND AT LOCATIONS OF ALL POWER PRODUCTION SOURCES.
13. A PERMANENT PLAQUE OR DIRECTORY SHALL BE PROVIDED DENOTING THE LOCATIONSOF THE SERVICE DISCONNECT MEANS AND THE PHOTOVOLTAIC SYSTEM DISCONNECTMEANS IF THEY ARE NOT LOCATED AT THE SAME LOCATION.
14. ALL MODULE GROUND CONNECTIONS SHALL BE MADE IN ACCORDANCE WITH NEC SECTION 690.4 (C)

CONTRACTOR

635 OLD BARNWELL ROAD
WEST COLUMBIA SC 29170

JOB TITLE

NEW SOLAR PV ROOF MOUNT SYSTEM

10.92 KW DC INPUT
9.772 KW AC EXPORT

MICHAEL TECH

155 EDGECOMBE DR,
SPRING LAKE, NC, 2839

NORTH CAROLINA PROFESSIONAL SEAL 046546 ENGINEER SCOTT E. WYSSLING

Wyssling Consulting, PLLC
76 N Meadowbrook Drive Alpine UT 84004
North Carolina COA # P-2308

Signed 3/06/2024

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ENGINEERING STAMP:

DRAWN BY: LEONI MARLOU EBO
DATE: 02 - 14 - 2024

REVISIONS

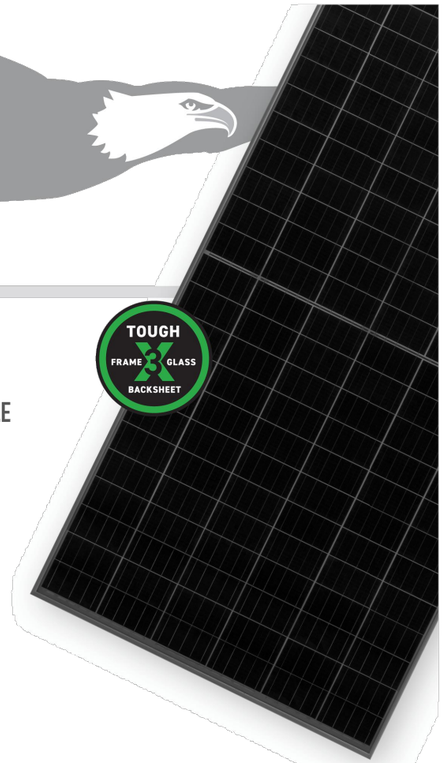
DESCRIPTION	DATE	REV

ELECTRICAL INFORMATION

PV4.2

EAGLE
MODULES

THE MOST DEPENDABLE SOLAR PRODUCT



EAGLE G2 BLACK

380-400 WATT • MONO PERC HALF-CELL MODULE

Positive power tolerance of 0~+3%

*PRELIMINARY VERSION

- NYSE-listed since 2010, Bloomberg Tier 1 manufacturer
- Top performance in the strictest 3rd party labs
- Automated manufacturing utilizing artificial intelligence
- Vertically integrated, tight controls on quality
- Premium solar module factory in Jacksonville, Florida

KEY FEATURES

Superior Aesthetics
Black backsheet and black frame create ideal look for residential applications.

Diamond Half-Cell Technology
World-record breaking efficient mono PERC half-cells deliver high power in a small footprint.

Thick and Tough
Fire Type 1 rated module engineered with a thick frame, 3.2mm front side glass, and thick backsheet for added durability.

Shade Tolerant
Twin array design allows continued performance even with shading by trees or debris.

Protected Against All Environments
Certified to withstand humidity, heat, rain, marine environments, wind, hailstorms, and packed snow.

Warranty
12-year product and 25-year linear power warranty.

- ISO9001:2008 Quality Standards
- ISO14001:2004 Environmental Standards
- IEC61215, IEC61730 certification pending
- ISO 45001 2018 Occupational Health & Safety Standards
- UL1703/61730 certification pending

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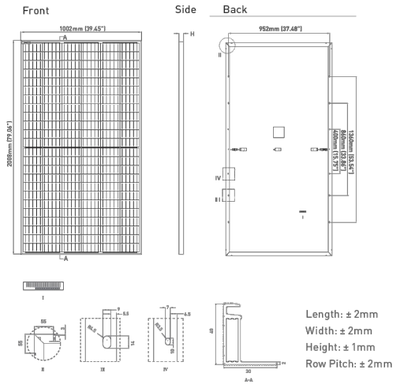
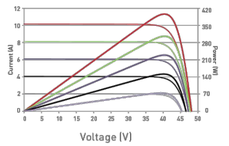
ENGINEERING DRAWINGS

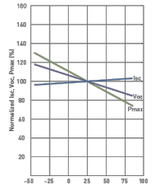


ELECTRICAL PERFORMANCE & TEMPERATURE DEPENDENCE

Current-Voltage & Power-Voltage Curves (400W)



Temperature Dependence of Isc, Voc, Pmax



MECHANICAL CHARACTERISTICS

Cells	Mono PERC Diamond Cell (158.75 x 158.75mm)
No. of Half Cells	144 (6 x 24)
Dimensions	2008 x 1002 x 40mm (79.06 x 39.45 x 1.57in)
Weight	22.5kg (49.6lbs)
Front Glass	3.2mm, Anti-Reflection Coating High Transmission, Low Iron, Tempered Glass
Frame	Anodized Aluminum Alloy
Junction Box	IP68 Rated
Output Cables	12 AWG, 1400mm (55.12in)
Connector	Staubli MC4 Series
Fire Type	Type 1
Pressure Rating	5400Pa (Snow) & 2400Pa (Wind)
Hailstone Test	50mm Hailstones at 35m/s

TEMPERATURE CHARACTERISTICS

Temperature Coefficients of Pmax	-0.35%/°C
Temperature Coefficients of Voc	-0.29%/°C
Temperature Coefficients of Isc	0.048%/°C
Nominal Operating Cell Temperature (NOCT)	45±2°C

MAXIMUM RATINGS

Operating Temperature (°C)	-40°C~+85°C
Maximum System Voltage	1500VDC (UL and IEC)
Maximum Series Fuse Rating	20A

PACKAGING CONFIGURATION

(Two pallets = One stack)

27pcs/pallet, 54pcs/stack, 594pcs/40'HQ Container

WARRANTY

12-year product and 25-year linear power warranty

1st year degradation not to exceed 2.5%, each subsequent year not to exceed 0.6%, minimum power at year 25 is 83.1% or greater.

ELECTRICAL CHARACTERISTICS

Module Type	JKM380M-72HBL-V		JKM385M-72HBL-V		JKM390M-72HBL-V		JKM395M-72HBL-V		JKM400M-72HBL-V	
	STC	NOCT	STC	NOCT	SCT	NOCT	STC	NOCT	STC	NOCT
Maximum Power (Pmax)	380Wp	279Wp	385Wp	283Wp	390Wp	287Wp	395Wp	291Wp	400Wp	294Wp
Maximum Power Voltage (Vmp)	39.10V	36.5V	39.37V	36.8V	39.64V	37.0V	39.90V	37.4V	40.16V	37.6V
Maximum Power Current (Imp)	9.72A	7.67A	9.78A	7.71A	9.84A	7.75A	9.90A	7.77A	9.96A	7.82A
Open-circuit Voltage (Voc)	48.2V	45.4V	48.4V	45.6V	48.6V	45.8V	48.8V	46.0V	49.1V	46.2V
Short-circuit Current (Isc)	10.30A	8.32A	10.38A	8.38A	10.46A	8.45A	10.54A	8.51A	10.61A	8.57A
Module Efficiency STC (%)	18.89%		19.14%		19.38%		19.63%		19.88%	

***STC:** Irradiance 1000W/m² | Cell Temperature 25°C | AM = 1.5
NOCT: Irradiance 800W/m² | Ambient Temperature 20°C | AM = 1.5 | Wind Speed 1m/s

*Power measurement tolerance: ±3%

**PRELIMINARY VERSION*
The company reserves the final right for explanation on any of the information presented hereby. JKM380-400M-72HBL-V-D1-US

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CONTRACTOR

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ENGINEERING STAMP:

DRAWN BY: LEONI MARLOU EBO
DATE: 02 - 14 - 2024

REVISIONS

DESCRIPTION	DATE	REV

LABELS,
DETAILS & SPECS

PV5.1

ENPHASE.

DATA SHEET

IQ8M and IQ8A Microinverters

Our newest IQ8 Microinverters are the industry's first microgrid-forming, software-defined microinverters with split-phase power conversion capability to convert DC power to AC power efficiently. The brain of the semiconductor-based microinverter is our proprietary application-specific integrated circuit (ASIC) which enables the microinverter to operate in grid-tied or off-grid modes. This chip is built in advanced 55nm technology with high speed digital logic and has super-fast response times to changing loads and grid events, alleviating constraints on battery sizing for home energy systems.

Part of the Enphase Energy System, IQ8 Series Microinverters integrate with the Enphase IQ Battery, Enphase IQ Gateway, and the Enphase App monitoring and analysis software.

Enphase 25 year limited warranty

IQ8 Series Microinverters redefine reliability standards with more than one million cumulative hours of power-on testing, enabling an industry-leading limited warranty of up to 25 years.

Connect PV modules quickly and easily to IQ8 Series Microinverters using the included Q-DCC-2 adapter cable with plug-n-play MC4 connectors.

CERTIFIED SAFETY

IQ8 Series Microinverters are UL Listed as PV Rapid Shut Down Equipment and conform with various regulations, when installed according to manufacturer's instructions.

IQ8MA-DS-0003-01-EN-US-2021-10-19

Easy to install

- Lightweight and compact with plug-n-play connectors
- Power Line Communication (PLC) between components
- Faster installation with simple two-wire cabling

High productivity and reliability

- Produce power even when the grid is down
- More than one million cumulative hours of testing
- Class II double-insulated enclosure
- Optimized for the latest high-powered PV modules

Microgrid-forming

- Complies with the latest advanced grid support
- Remote automatic updates for the latest grid requirements
- Configurable to support a wide range of grid profiles
- Meets CA Rule 21 (UL 1741-SA) requirements

IQ8M and IQ8A Microinverters

INPUT DATA (DC)		IQ8M-72-2-US	IQ8A-72-2-US
Commonly used module pairings[1]	W	260 – 460	295 – 500
Module compatibility		60-cell/120 half-cell and 72-cell/144 half-cell	
MPPT voltage range	V	33 – 45	36 – 45
Operating range	V	25 – 58	
Min/max start voltage	V	30 / 58	
Max input DC voltage	V	60	
Max DC current[2] [module Isc]	A	15	
Overvoltage class DC port		II	
DC port backfeed current	mA	0	
PV array configuration		1x1 Ungrounded array; No additional DC side protection required; AC side protection requires max 20A per branch circuit	
OUTPUT DATA (AC)		**IQ8M-72-2-US**	**IQ8A-72-2-US**
Peak output power	VA	330	366
Max continuous output power	VA	325	349
Nominal (L-L) voltage/range[3]	V	240 / 211 – 264	
Max continuous output current	A	1.35	1.45
Nominal frequency	Hz	60	
Extended frequency range	Hz	50 – 68	
Max units per 20 A (L-L) branch circuit[4]		11	
Total harmonic distortion		<5%	
Overvoltage class AC port		III	
AC port backfeed current	mA	30	
Power factor setting		1.0	
Grid-tied power factor (adjustable)		0.85 leading – 0.85 lagging	
Peak efficiency	%	97.6	97.6
CEC weighted efficiency	%	97	97.5
Night-time power consumption	mW	60	
MECHANICAL DATA			
Ambient temperature range		-40°C to +60°C (-40°F to +140°F)	
Relative humidity range		4% to 100% (condensing)	
DC Connector type		MC4	
Dimensions (HxWxD)		212 mm (8.3") x 175 mm (6.9") x 30.2 mm (1.2")	
Weight		1.08 kg (2.38 lbs)	
Cooling		Natural convection – no fans	
Approved for wet locations		Yes	
Acoustic noise at 1 m		<60 dBA	
Pollution degree		PD3	
Enclosure		Class II double-insulated, corrosion resistant polymeric enclosure	
Environ. category / UV exposure rating		NEMA Type 6 / outdoor	
COMPLIANCE			
Certifications		CA Rule 21 (UL 1741-SA), UL 62109-1, UL1741/IEEE1547, FCC Part 15 Class B, ICES-0003 Class B, CAN/CSA-C22.2 NO. 107.1-01 This product is UL Listed as PV Rapid Shut Down Equipment and conforms with NEC 2014, NEC 2017, and NEC 2020 section 690.12 and C22.1-2018 Rule 64-218 Rapid Shutdown of PV Systems, for AC and DC conductors, when installed according to manufacturer's instructions.	

(1) No enforced DC/AC ratio. See the compatibility calculator at https://link.enphase.com/module-compatibility (2) Maximum continuous input DC current is 10.6A (3) Nominal voltage range can be extended beyond nominal if required by the utility. (4) Limits may vary. Refer to local requirements to define the number of microinverters per branch in your area.

IQ8MA-DS-0003-01-EN-US-2021-10-19

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REVISIONS

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EQUIPMENT SPEC SHEETS

PV5.2

Data Sheet
Enphase Networking

IQ Combiner 4/4C

The **IQ Combiner 4/4C** with IQ Gateway and integrated LTE-M1 cell modem (included only with IQ Combiner 4C) consolidates interconnection equipment into a single enclosure. It streamlines IQ Microinverters and storage installations by providing a consistent, pre-wired solution for residential applications. It offers up to four 2-pole input circuits and Eaton BR series busbar assembly.

X-IQ-AM1-240-4C
X2-IQ-AM1-240-4C (IEEE 1547:2018)

X-IQ-AM1-240-4
X2-IQ-AM1-240-4 (IEEE 1547:2018)

Smart

- Includes IQ Gateway for communication and control
- Includes Mobile Connect cellular modem (CELLMODEM-M1-06-SP-05), included only with IQ Combiner 4C
- Includes solar shield to match Enphase IQ Battery aesthetics and deflect heat
- Supports Wi-Fi, Ethernet, or cellular connectivity
- Optional AC receptacle available for PLC bridge
- Provides production metering and consumption monitoring

Simple

- Mounts on single stud with centered brackets
- Supports bottom, back and side conduit entry
- Allows up to four 2-pole branch circuits for 240VAC plug-in breakers (not included)
- 80A total PV or storage branch circuits

Reliable

- Durable NRTL-certified NEMA type 3R enclosure
- Five-year limited warranty
- Two years labor reimbursement program coverage included for both the IQ Combiner SKU's
- UL listed
- X2-IQ-AM1-240-4 and X2-IQ-AM1-240-4C comply with IEEE 1547:2018 (UL 1741-SB, 3rd Ed.)

UL LISTED

To learn more about Enphase offerings, visit **enphase.com**
IQ-C-4-4C-DS-0103-EN-US-12-29-2022

ENPHASE.

IQ Combiner 4/4C

MODEL NUMBER	
IQ Combiner 4 X-IQ-AM1-240-4 X2-IQ-AM1-240-4 (IEEE 1547:2018)	IQ Combiner 4 with IQ Gateway printed circuit board for integrated revenue grade PV production metering (ANSI C12.20 ± 0.5%) and consumption monitoring (± 2.5%). Includes a silver solar shield to match the IQ Battery and IQ System Controller 2 and to deflect heat.
IQ Combiner 4C X-IQ-AM1-240-4C X2-IQ-AM1-240-4C (IEEE 1547:2018)	IQ Combiner 4C with IQ Gateway printed circuit board for integrated revenue grade PV production metering (ANSI C12.20 ± 0.5%) and consumption monitoring (± 2.5%). Includes Mobile Connect cellular modem (CELLMODEM-M1-06-SP-05), a plug-and-play industrial-grade cell modem for systems up to 60 microinverters. (Available in the US, Canada, Mexico, Puerto Rico, and the US Virgin Islands, where there is adequate cellular service in the installation area.) Includes a silver solar shield to match the IQ Battery and IQ System Controller and to deflect heat.
ACCESSORIES AND REPLACEMENT PARTS	(not included, order separately)
Supported microinverters	IQ6, IQ7, and IQ8. (Do not mix IQ6/7 Microinverters with IQ8)
Communications Kit COMMS-CELLMODEM-M1-06 CELLMODEM-M1-06-SP-05 CELLMODEM-M1-06-AT-05	 - Includes COMMS-KIT-01 and CELLMODEM-M1-06-SP-05 with 5-year Sprint data plan - 4G based LTE-M1 cellular modem with 5-year Sprint data plan - 4G based LTE-M1 cellular modem with 5-year AT&T data plan
Circuit Breakers BRK-10A-2-240V BRK-15A-2-240V BRK-20A-2P-240V BRK-15A-2P-240V-B BRK-20A-2P-240V-B	Supports Eaton BR210, BR215, BR220, BR230, BR240, BR250, and BR260 circuit breakers. Circuit breaker, 2 pole, 10A, Eaton BR210 Circuit breaker, 2 pole, 15A, Eaton BR215 Circuit breaker, 2 pole, 20A, Eaton BR220 Circuit breaker, 2 pole, 15A, Eaton BR215B with hold down kit support Circuit breaker, 2 pole, 20A, Eaton BR220B with hold down kit support
XA-SOLARSHIELD-ES	Replacement solar shield for IQ Combiner 4/4C
XA-PLUG-120-3	Accessory receptacle for Power Line Carrier in IQ Combiner 4/4C (required for EPLC-01)
X-IQ-NA-HD-125A	Hold-down kit for Eaton circuit breaker with screws
Consumption monitoring CT (CT-200-SPLIT/CT-200-CLAMP)	A pair of 200A split core current transformers
ELECTRICAL SPECIFICATIONS	
Rating	Continuous duty
System voltage	120/240VAC, 60 Hz
Eaton BR series busbar rating	125A
Max. continuous current rating	65A
Max. continuous current rating (input from PV/storage)	64A
Max. fuse/circuit rating (output)	90A
Branch circuits (solar and/or storage)	Up to four 2-pole Eaton BR series Distributed Generation (DG) breakers only (not included)
Max. total branch circuit breaker rating (input)	80A of distributed generation/95A with IQ Gateway breaker included
IQ Gateway breaker	10A or 15A rating GE/Siemens/Eaton included
Production metering CT	200A solid core pre-installed and wired to IQ Gateway
MECHANICAL DATA	
Dimensions (WxHxD)	37.5 cm x 49.5 cm x 16.8 cm (14.75 in x 19.5 in x 6.63 in). Height is 53.5 cm (21.06 in) with mounting brackets.
Weight	7.5 kg (16.5 lbs)
Ambient temperature range	-40°C to +46°C (-40°F to 115°F)
Cooling	Natural convection, plus heat shield
Enclosure environmental rating	Outdoor, NRTL-certified, NEMA type 3R, polycarbonate construction
Wire sizes	• 20A to 50A breaker inputs: 14 to 4 AWG copper conductors • 60A breaker branch input: 4 to 1/0 AWG copper conductors • Main lug combined output: 10 to 2/0 AWG copper conductors • Neutral and ground: 14 to 1/0 copper conductors • Always follow local code requirements for conductor sizing.
Altitude	Up to 3,000 meters (9,842 feet)
INTERNET CONNECTION OPTIONS	
Integrated Wi-Fi	IEEE 802.11b/g/n
Cellular	CELLMODEM-M1-06-SP-05, CELLMODEM-M1-06-AT-05 (4G based LTE-M1 cellular modem). Note that an Mobile Connect cellular modem is required for all Enphase Energy System installations.
Ethernet	Optional, IEEE 802.3, Cat5E (or Cat6) UTP Ethernet cable (not included)
COMPLIANCE	
Compliance, IQ Combiner	CA Rule 21 (UL 1741-SA) IEEE 1547:2018 - UL 1741-SB, 3rd Ed. (X2-IQ-AM1-240-4 and X2-IQ-AM1-240-4C) CAN/CSA C22.2 No. 107.1, Title 47 CFR, Part 15, Class B, ICES 003 Production metering: ANSI C12.20 accuracy class 0.5 (PV production) Consumption metering: accuracy class 2.5
Compliance, IQ Gateway	UL 60601-1/CANCSA 22.2 No. 61010-1

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EQUIPMENT SPEC SHEETS

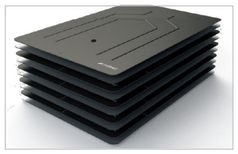
PV5.3

FLASHKIT PRO

UNIRAC
FEATURING SHED & SEAL TECHNOLOGY

FLASHKIT PRO is the complete attachment solution for composition shingle roofs. Featuring Unirac's patented **SHED & SEAL** technology, a weather proof system which provides the ultimate protection against roof leaks. Kitted in 10 packs for maximum convenience, flashings and hardware are available in Mill or Dark finishes. With **FLASH**KIT pro, you have everything you need for a quick, professional installation.

UNIRAC 25 YEAR FULL SYSTEM WARRANTY



TRUSTED WATER SEAL FLASHINGS
FEATURING SHED & SEAL TECHNOLOGY

YOUR COMPLETE SOLUTION
Flashings, lags, continuous slot L-Feet and hardware

CONVENIENT 10 PACKS
Packaged for speed and ease of handling

THE COMPLETE ROOF ATTACHMENT SOLUTION

FOR QUESTIONS OR CUSTOMER SERVICE VISIT UNIRAC.COM OR CALL (505) 248-2702

FLASHKIT PRO

INSTALLATION GUIDE

UNIRAC
FEATURING SHED & SEAL TECHNOLOGY

FLASHKIT PRO IS THE COMPLETE FLASHING AND ATTACHMENT SOLUTION FOR COMPOSITION ROOFS.

INSTALL **FLASH**KIT PRO FLASHING

INSTALL L-FOOT

ATTACH L-FOOT TO RAIL

PRE-INSTALL

- Locate roof rafters and snap chalk lines to mark the installation point for each roof attachment.
- Drill a 7/32" pilot hole at each roof attachment. Fill each pilot hole with sealant.

STEP 1 INSTALL **FLASH**KIT PRO FLASHING

- Add a U-shaped bead of roof sealant to the underside of the flashing with the open side of the U pointing down the roof slope. Slide the aluminum flashing underneath the row of shingles directly up slope from the pilot hole as shown. Align the indicator marks on the lower end of the flashing with the chalk lines on the roof to center the raised hole in the flashing over the pilot hole in the roof. When installed correctly, the flashing will extend under the two courses of shingles above the pilot hole.

STEP 2 INSTALL L-FOOT

- Fasten L-foot and Flashing into place by passing the included lag bolt and pre-installed stainless steel-backed EPDM washer through the L-foot EPDM grommet, and the raised hole in the flashing, into the pilot hole in the roof rafter.
- Drive the lag bolt down until the L-foot is held firmly in place. It is normal for the EPDM on the underside of the stainless steel backed EPDM washer to compress and expand beyond the outside edge of the steel washer when the proper torque is applied.

TIP:

- Use caution to avoid over-torqueing the lag bolt if using an impact driver.
- Repeat Steps 1 and 2 at each roof attachment point.

STEP 3 ATTACH L-FOOT TO RAIL

- Insert the included 3/8"-16 T-bolts into the lower slot on the Rail (sold separately), spacing the bolts to match the spacing between the roof attachments.
- Position the Rail against the L-Foot and insert the threaded end of the T-Bolt through the continuous slot in the L-Foot. Apply anti-seize to bolt threads to prevent galling of the T-bolt and included 3/8" serrated flange nut. Place the 3/8" flange nut on the T-bolt and finger tighten. Repeat STEP 3 until all L-Feet are secured to the Rail with a T-bolt. Adjust the level and height of the Rail and torque each bolt to 30ft-lbs.

FASTER INSTALLATION. 25-YEAR WARRANTY.

FOR QUESTIONS OR CUSTOMER SERVICE VISIT UNIRAC.COM OR CALL (505) 248-2702

CONTRACTOR

635 OLD BARNWELL ROAD
WEST COLUMBIA SC 29170

JOB TITLE

NEW SOLAR PV ROOF MOUNT SYSTEM

10.92 KW DC INPUT
9.772 KW AC EXPORT

MICHAEL TECH

155 EDGECOMBE DR,
SPRING LAKE, NC, 28390

NORTH CAROLINA PROFESSIONAL SEAL 040546 ENGINEER SCOTT E. WYSSLING

Wyssling Consulting, PLLC
76 N Meadowbrook Drive Alpine UT 84004
North Carolina COA # P-2308

Signed 3/06/2024

ENGINEERING STAMP:

DRAWN BY: LEONI MARLOU EBO
DATE: 02 - 14 - 2024

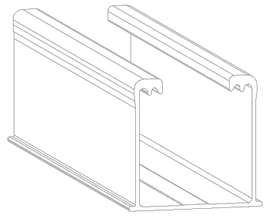
REVISIONS

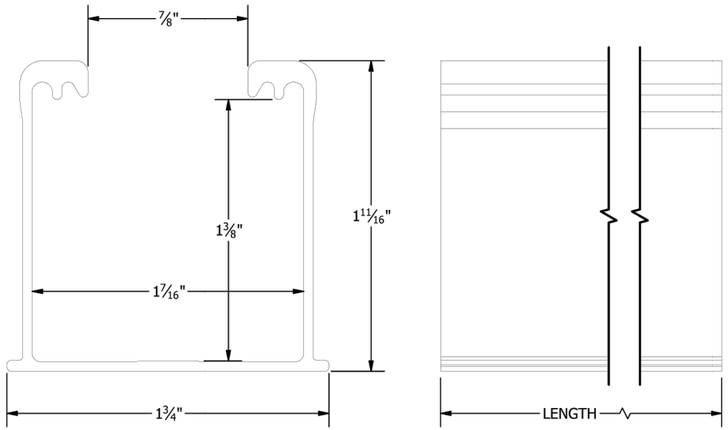
DESCRIPTION	DATE	REV

EQUIPMENT SPEC SHEET

PV5.4

PART # TABLE		
P/N	DESCRIPTION	LENGTH
084RLM1	NXT UMOUNT RAIL 84" MILL	84"
084RLD1	NXT UMOUNT RAIL 84" DARK	84"
168RLM1	NXT UMOUNT RAIL 168" MILL	168"
168RLD1	NXT UMOUNT RAIL 168" DARK	168"
208RLM1	NXT UMOUNT RAIL 208" MILL	208"
208RLD1	NXT UMOUNT RAIL 208" DARK	208"
246RLM1	NXT UMOUNT RAIL 246" MILL	246"
246RLD1	NXT UMOUNT RAIL 246" DARK	246"
171RLM1	NXT UMOUNT RAIL 171" MILL	171.50"
171RLD1	NXT UMOUNT RAIL 171" DARK	171.50"





UNIRAC
1411 BROADWAY BLVD. NE
ALBUQUERQUE, NM 87102 USA
PHONE: 505.242.6411
WWW.UNIRAC.COM

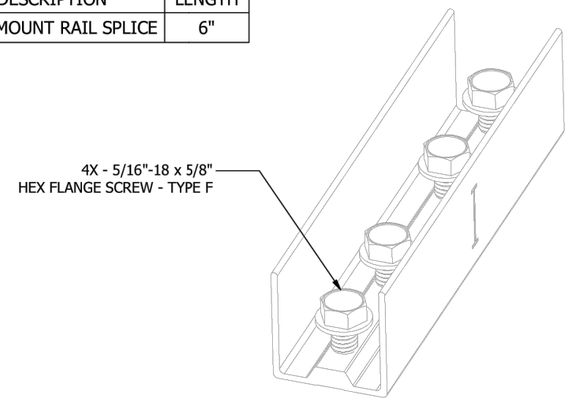
PRODUCT LINE:	NXT UMOUNT
DRAWING TYPE:	PART DETAIL
DESCRIPTION:	RAIL
REVISION DATE:	11/17/2022

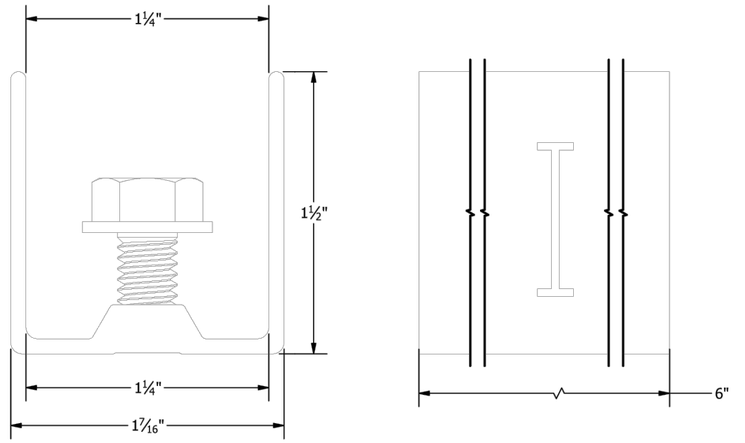
DRAWING NOT TO SCALE
ALL DIMENSIONS ARE NOMINAL

PRODUCT PROTECTED BY ONE OR MORE US PATENTS
LEGAL NOTICE

NU-P01
SHEET

PART # TABLE		
P/N	DESCRIPTION	LENGTH
RLSPLCM2	NXT UMOUNT RAIL SPLICE	6"





UNIRAC
1411 BROADWAY BLVD. NE
ALBUQUERQUE, NM 87102 USA
PHONE: 505.242.6411
WWW.UNIRAC.COM

PRODUCT LINE:	NXT UMOUNT
DRAWING TYPE:	PART DETAIL
DESCRIPTION:	RAIL SPLICE
REVISION DATE:	8/24/2023

DRAWING NOT TO SCALE
ALL DIMENSIONS ARE NOMINAL

PRODUCT PROTECTED BY ONE OR MORE US PATENTS
LEGAL NOTICE

NU-P02
SHEET

CONTRACTOR

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WEST COLUMBIA SC 29170

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ENGINEERING STAMP:

DRAWN BY: LEONI MARLOU EBO
DATE: 02 - 14 - 2024

REVISIONS

DESCRIPTION	DATE	REV

EQUIPMENT SPEC SHEET

PV5.5