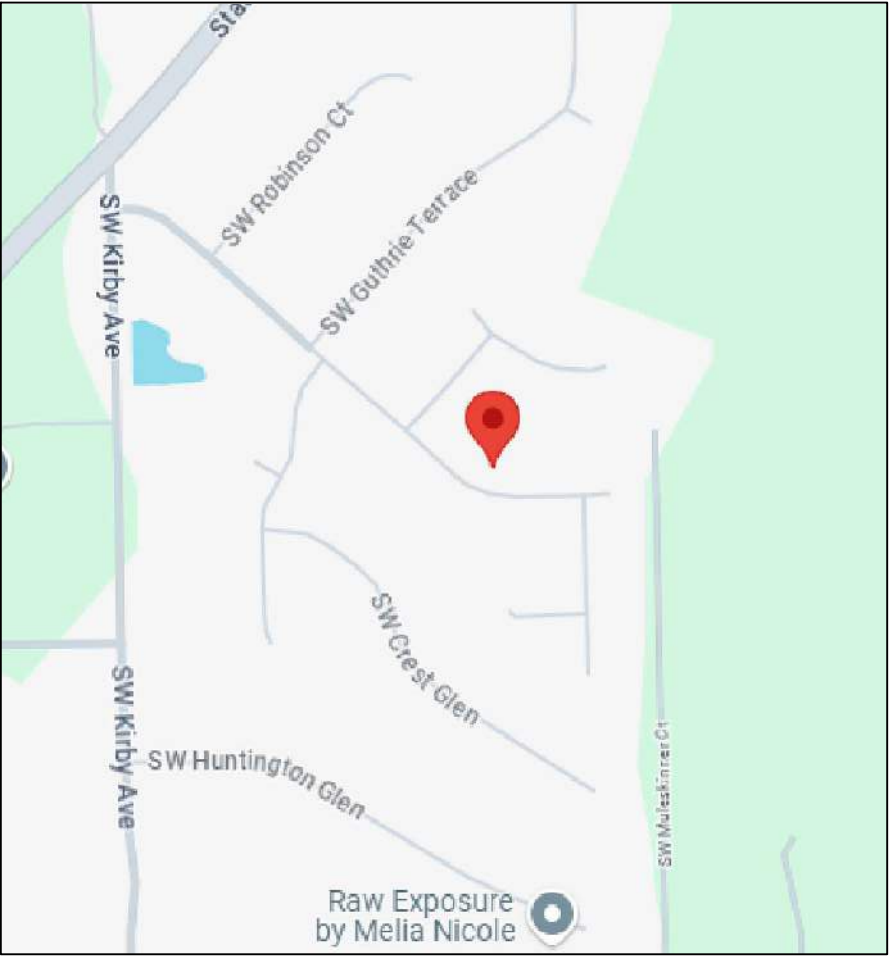
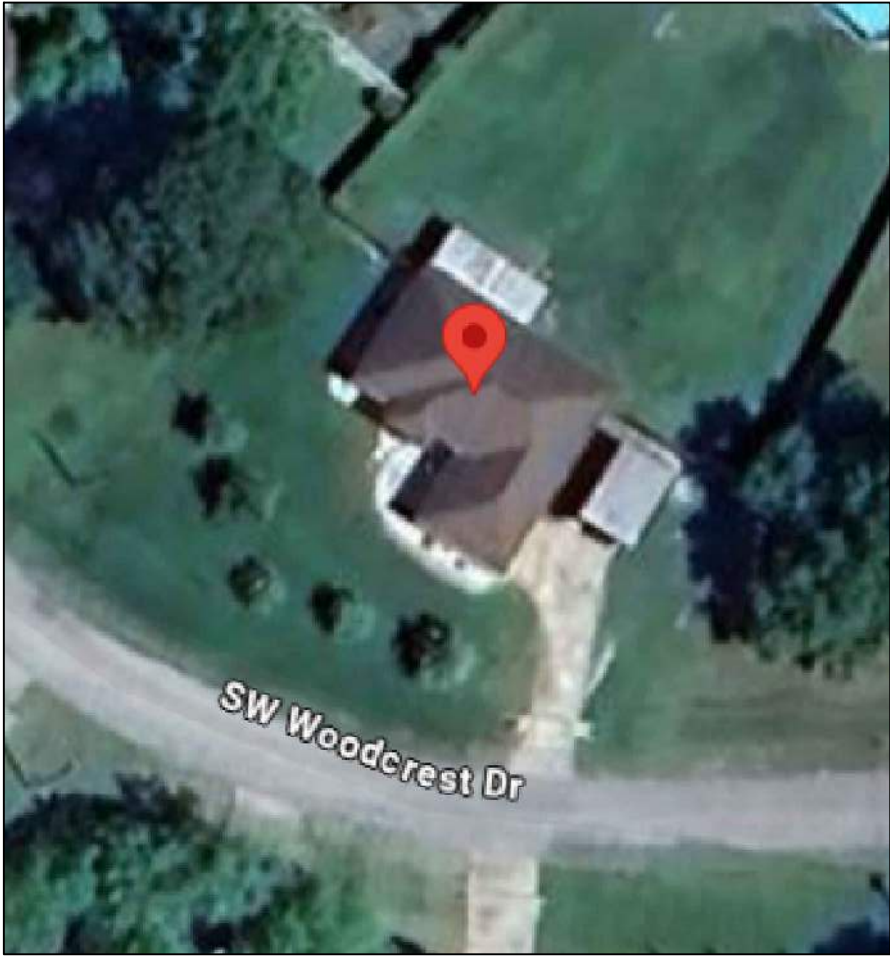


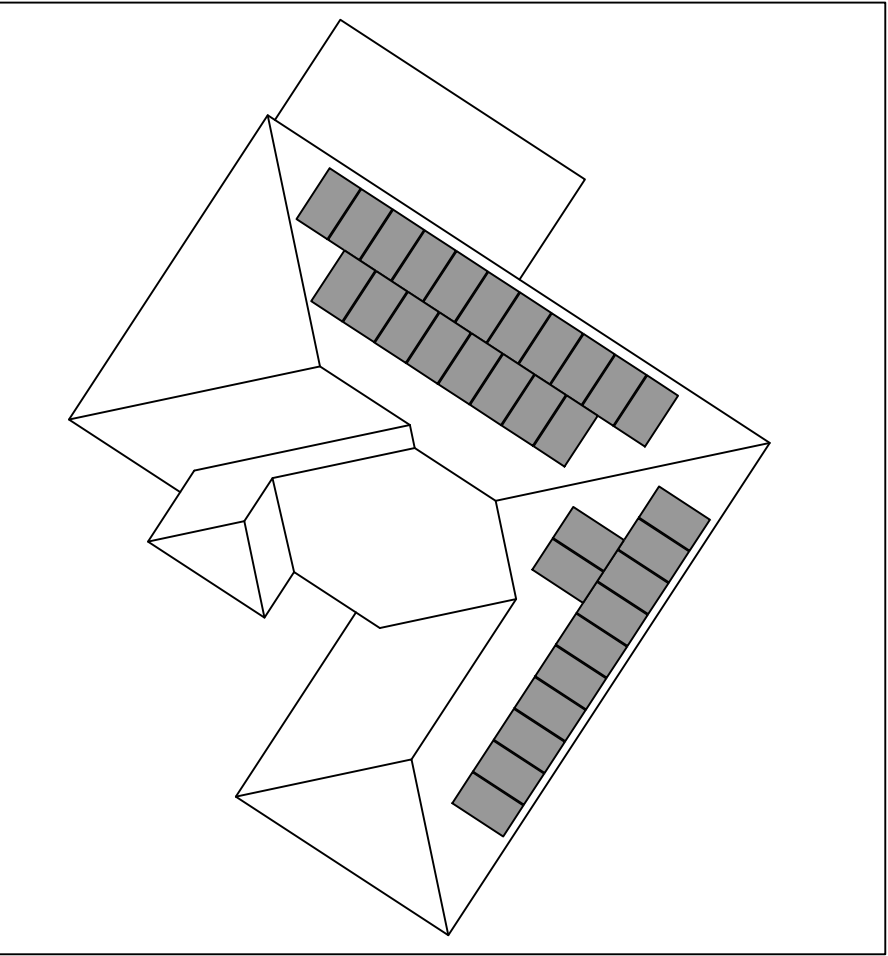
LOCATION MAP



SATELLITE VIEW



INSTALLATION PREVIEW



GENERAL NOTES:

- (1) The contractor shall verify all existing conditions which will affect the installation of all new work. If discrepancies are discovered, engineer must be notified before proceeding with any modification to the approved documents.
- (2) Installer shall assume full responsibility and liability for compliance with regulations per federal OSHA and local regulations pertaining to work practices, protection of workers and visitors to the site.
- (3) All construction shall comply with all state, county, and local codes on their latest edition.
- (4) All materials shall be in new and unused condition.
- (5) Inverter/s must be listed to UL-1741 "Utility interactive"
- (6) Manufacturer's material equipment, etc. Shall be installed per manufacturer's recommendations and instructions.
- (7) The contractor is responsible for the adequate bracing of all structural and nonstructural components during construction.
- (8) Any battery system installed in a location where they are subject to vehicle damage needs to be protected by approved barriers (safety bollards).
- (9) Do not scale drawings, written dimensions take precedence over drawings. If scale or written dimensions do not exist, which are necessary for construction, the contractor must contact the engineer to obtain the latest and most correct documents.
- (10) Information for the basic layout of this drawings was based on existing field dimensions, contractor must verify in field the actual conditions and notify engineer of any discrepancies.
- (11) The contractor is solely responsible for the means and methods of construction and the safety of construction workers.
- (12) All work shall be performed by contractors possessing valid certifications of competency and occupational licenses recognized and accepted by the local government having jurisdiction or by owner.
- (13) To the best of my knowledge, the plans and specifications submitted herewith comply to all existing interpretations and provisions of the applicable building codes at the time of the plans perpetration. No warranty either expressed or implied is herewith given.
- (14) Contractor / owner shall verify all dimensions related to any part of construction prior to beginning work or ordering fabricated materials required for construction.
- (15) Solar contractor is responsible for all installations. Engineer retained on the project is responsible for design only. In case of leans, uplifts, wind damage, incorrect installation or otherwise; Engineer is not responsible for any and all damages to the owner's property.
- (16) Solar contractor will be responsible of sealing the penetrations to the roof substrate. Engineer is not responsible of any property damage caused by water leaking.
- (17) Installation by solar contractor shall be in compliance with Florida Fire Prevention Code (FFPC) 8th Edition, NFPA 1 & NFPA 101 (2021 edition).
- (18) Per NFPA 1 (11.12.1) Photovoltaic systems shall be in accordance with Section 11.12 and NFPA 70.
- (19) This permit is only for solar panels as shown herein. All other site improvements or structures shown in the approved plans, including portions of the structure where the solar panels are being installed is not a part of the scope of this permit and this permit does not evidence the legal or permitted status of the same. Approval of this part shall not be construed as evidence that any portion of the structure(s)/roof, except for the solar panels permitted by this permit (but including any portion of the structure below) is legally permitted or legally permitted by this permit.
- (20) The contractor is obliged to furnish the field inspector with the latest photographs that illustrate the Fire pathway clearance on the roof. These images should distinctly demonstrate compliance with the relevant code regulations, inclusive of appropriate measurements.
- (21) The contractor shall provide onsite an electric meter [amp-multimeter] to demonstrate with the field inspector that the rapid shutdown functions properly.

SHEET INDEX

- PV - 1 COVER PAGE
- PV - 2 STRUCTURAL PLAN
- PV - 3 ELECTRICAL DIAGRAM & WARNING LABELS
- PV - 4 DATA SHEETS



SCOPE OF WORK

SYSTEM SIZE: DC SIZE : 12.245 KW DC
AC SIZE : 11.520 KW AC

(N) (31) MISSION SOLAR MSE395SX9R (395W) PV MODULES
(N) (8) HOYMILES HMS-1600-4T-NA MICROINVERTERS
(N) (1) 125A LOAD CENTER

UNIRAC STRONGHOLD BUTYL MOUNTS WITH UNIRAC RAILS

DESIGN SPECIFICATION

OCCUPANCY: II
CONSTRUCTION: SFR
ZONING: RESIDENTIAL
GROUND SNOW LOAD: 4 psf
WIND EXPOSURE: B
WIND SPEED: 119 mph

AUTHORITIES HAVING JURISDICTION

BUILDING: COLUMBIA COUNTY
ZONING: COLUMBIA COUNTY
UTILITY: CLAY ELECTRIC COOPERATIVE,INC

APPLICABLE CODES & STANDARDS

FLORIDA RESIDENTIAL CODE, 8TH EDITION 2023 (FRC)
FLORIDA BUILDING CODE, 8TH EDITION 2023 (FBC)
FLORIDA FIRE PREVENTION CODE, 8TH EDITION 2023 (FFPC)
FLORIDA EXISTING BUILDING CODE, 8TH EDITION 2023 (FBC EX)
NATIONAL ELECTRICAL CODE, NEC 2023 CODE BOOK, NFPA 70

PROJECT NAME & ADDRESS		JOSHUA AFTON		AMERICAN SOLAR INSTALLATION COMPANY 3241 NW 38th St. Miami, FL 33142	
SYSTEM SIZE		(N) 12.245 KW DC (N) 11.520 KW AC		AHJ STAMP Digitally signed by Matthew R Craig Location: Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies. Date: 2025.03.22 07:53:06-04'00'	
REVISIONS	DATE				
	DESCRIPTION				
REV					
SHEET TITLE COVER PAGE					
DRAWN DATE		03/21/2025			
DRAWN BY		JEROME JAPAL			
REVIEWED BY		-			
SHEET TITLE PV - 1					

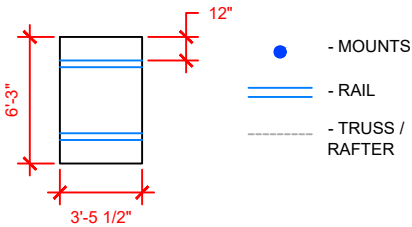
NOTES:

1. ALL CONSTRUCTION / INSTALLATION IS TO COMPLY WITH THE FOLLOWING: ALL DIMENSIONS ARE APPROXIMATE.

2. ROOF VENTS, SKYLIGHTS, WILL NOT BE COVERED UPON PV INSTALLATION.

3. AC DISCONNECT IS LOCATED WITHIN 10FT FROM THE UTILITY METER.

TRUSS/RAFTERS LOCATIONS ARE APPROXIMATE. ACTUAL LOCATIONS MAY DIFFER AND CONTRACTOR MAY NEED TO ADJUST MOUNT LOCATIONS. IN NO CASE SHALL THE MOUNT SPACING EXCEED "MAX. MOUNT SPACING"



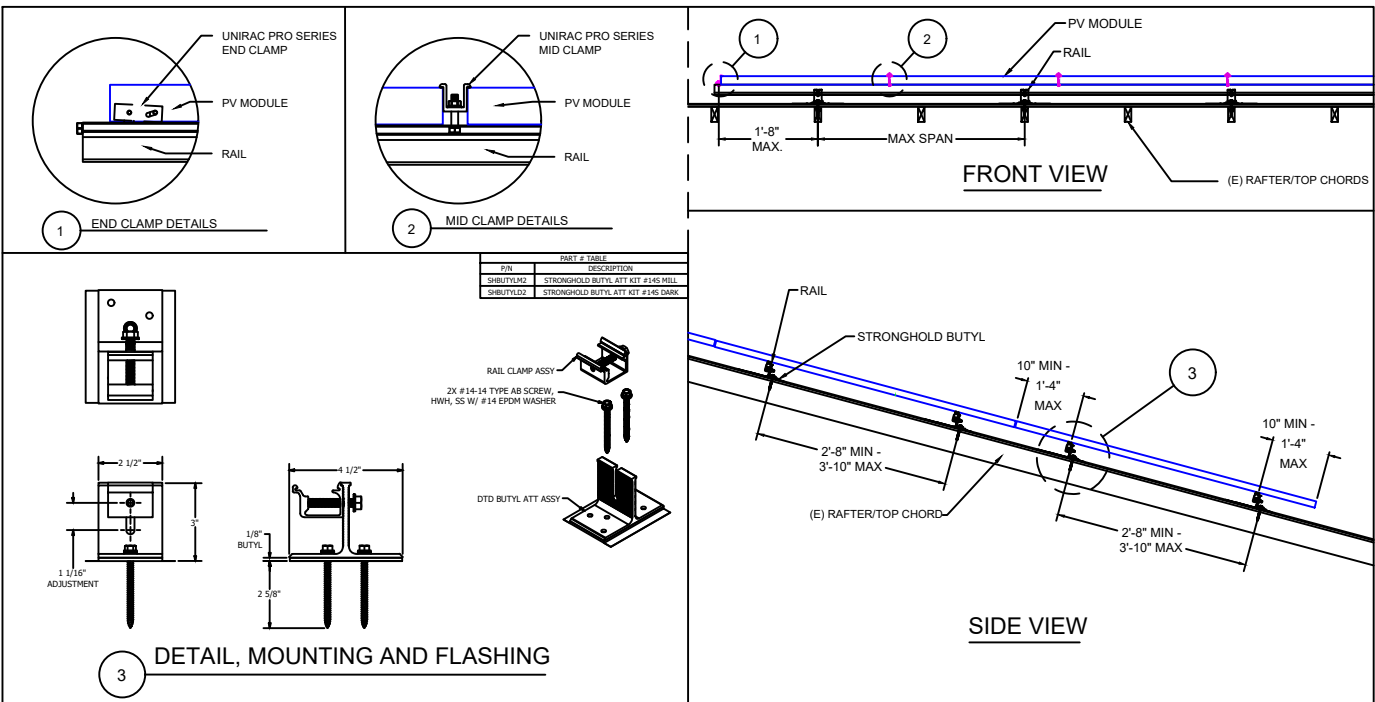
NOTES:

1. LOCATION OF JUNCTION BOX(ES), AC DISCONNECT(S), AC COMBINER PANEL(S), AND OTHER ELECTRICAL EQUIPMENT RELEVANT TO PV INSTALLATION SUBJECT TO CHANGE BASED ON SITE CONDITIONS.

2. SETBACKS AT RIDGES CAN BE REDUCED TO 18 INCHES IF TOTAL PV AREA IS WITHIN 33% OF TOTAL ROOF AREA IN COMPLIANCE WITH IBC 2023:

TOTAL ROOF AREA = 2472.8318 SQFT
TOTAL PV AREA = 31(75.08" X 41.5")/(144 IN^2) = 670.84 SQFT
(670.84 SQFT/2472.8318 SQFT)100 = 27.13%
TOTAL PV AREA POPULATES 27.13% OF TOTAL ROOF AREA

ROOF SECTION(S)			
	MODULE	TILT	AZIMUTH
ROOF 1	19	25°	33°
ROOF 2	12	25°	147°



MODULE TYPE, DIMENSIONS & WEIGHT:

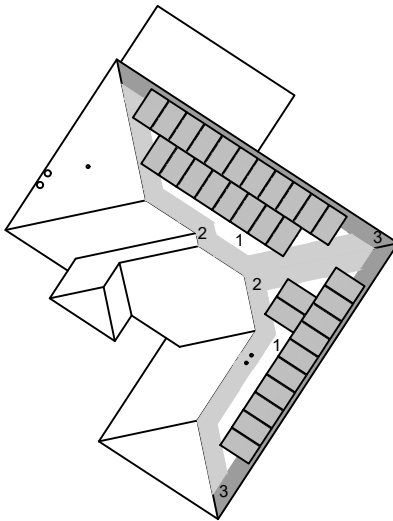
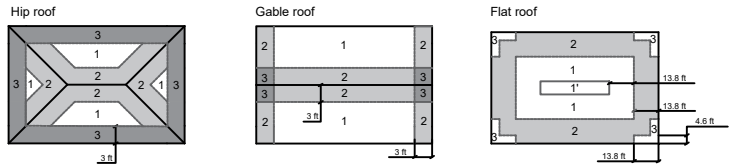
NUMBER OF PANELS IN ARRAY = 31 MODULES
MODULE TYPE = MISSION SOLAR MSE395SX9R PV MODULES
NUMBER OF CONNECTIONS TO ROOF = 63
WEIGHT OF INDIVIDUAL PANEL = 48.5 LBS / 22.00 KG
MOUNTING SYSTEM WEIGHT: 1.5 LBS PER MODULE
TOTAL WEIGHT OF ARRAY: 1503.50 LBS
WEIGHT AT EACH CONNECTION: 1503.50 LBS / 63 = 23.87 LBS
SOLAR PANEL AREA = 75.08" X 41.5" = 21.64 SQFT
TOTAL ARRAY AREA = 31X21.64 = 670.84 SQFT
DISTRIBUTED LOAD = 1503.50/670.84 = 2.24 PSF

PHOTOVOLTAIC MODULE GENERAL NOTES

- APPLICABLE CODE: 2023 FLORIDA BUILDING CODE 8th ED. & ASCE 7-22 MINIMUM DESIGN LOADS FOR BUILDING AND OTHER STRUCTURES
- BOLT DIAMETER AND EMBEDMENT LENGTHS ARE DESIGNED PER NDS(2023) REQUIREMENTS. ALL BOLT CAPACITIES ARE BASED ON A WOOD ROOF RAFTER AS EMBEDMENT MATERIAL
- ALL WIND DESIGN CRITERIA AND PARAMETERS ARE FOR HIP AND GABLE RESIDENTIAL ROOFS, CONSIDERING FROM A 7° TO A MAXIMUM 27° (2/12 TO A MAXIMUM 6/12 PITCH) ROOF IN SCHEDULE. ALL RESIDENTIAL ROOFS SHALL NOT EXCEED 30'-0" MEAN ROOF HEIGHT.
- ROOF SEALANTS SHALL CONFORM TO ASTM C920 AND ASTM 6511.
- THIS SHEET REFLECTS STRUCTURAL CONNECTIONS ONLY. REFER TO MANUFACTURER'S MANUAL FOR ALL ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND SOLAR SPECS.
- ALL ALUMINUM COMPONENTS SHALL BE ANODIZED ALUMINUM 6105-T5 UNLESS OTHERWISE NOTED.
- LAG BOLTS SHALL BE ASTM A276 STAINLESS STEEL UNLESS OTHERWISE NOTED.
- ALL RAILING AND MODULES SHALL BE INSTALLED PER MANUFACTURER'S INSTRUCTIONS.
- I CERTIFY THAT THE INSTALLATION OF THE MODULES IS IN COMPLIANCE WITH FBC: BUILDING CHAPTER 16 AND FBC: RESIDENTIAL CHAPTER 3. BUILDING STRUCTURE WILL SAFELY ACCOMMODATE CALCULATED WIND LATERAL AND UPLIFT FORCES, AND EQUIPMENT DEAD LOADS.

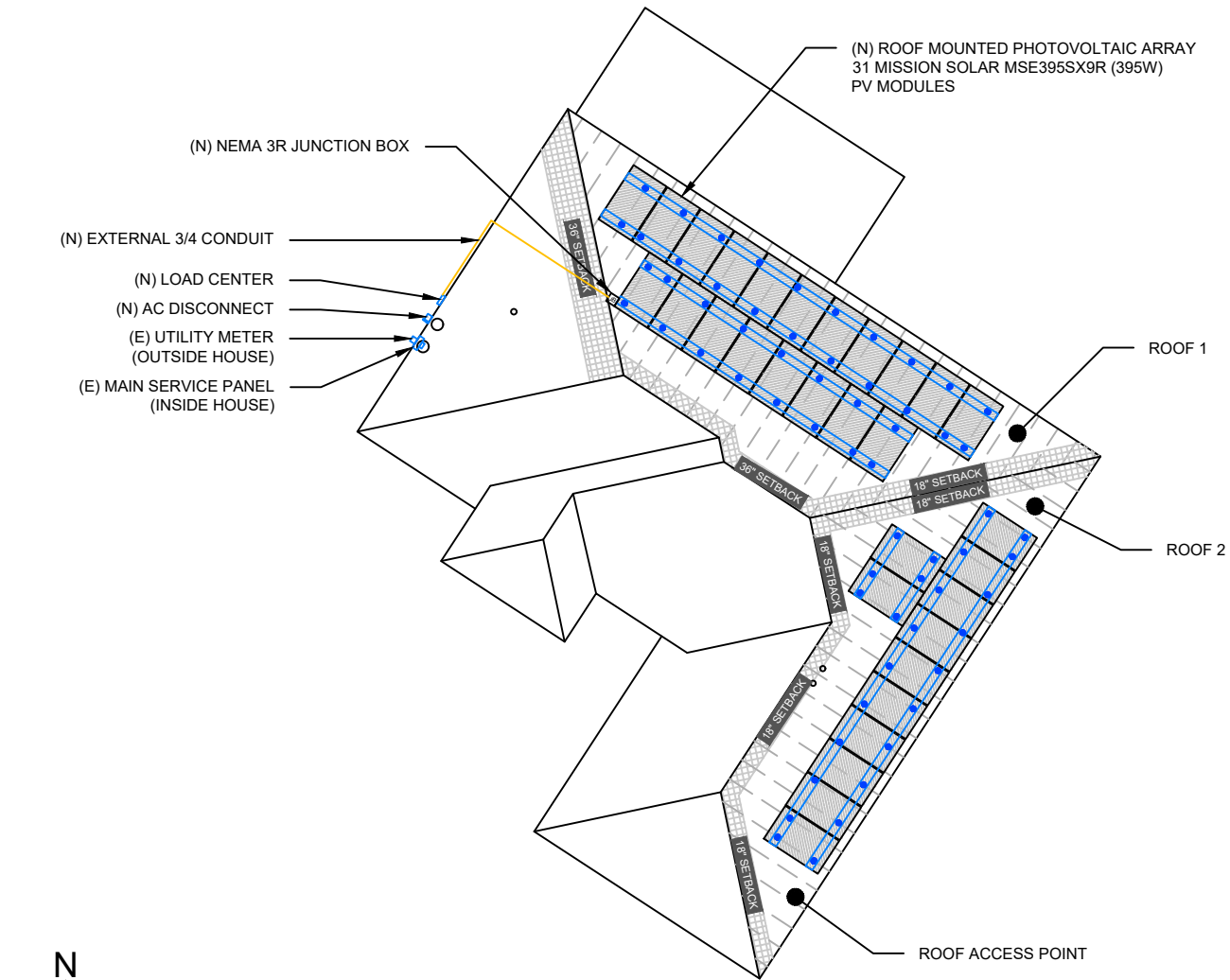
WIND LOAD INFORMATION:
THIS SYSTEM HAS BEEN DESIGN TO MEET THE REQUIREMENTS OF THE 8TH EDITION OF THE FLORIDA BUILDING CODE AND USED THE FOLLOWING DESIGN PARAMETERS:
ULTIMATE WIND SPEED: 119 MPH
EXPOSURE CATEGORY: B
RISK CATEGORY: II
MEAN ROOF HEIGHT: 15

- WIND ZONE 1
- WIND ZONE 2
- WIND ZONE 3



Roof Wind Zones and module exposure as per ASCE 7-22 Figure 30.3-2A to 2I and ASCE 7-22 29.4.4

SCALE: 1/32" = 1'-0"



SITE PLAN
SCALE: 1/16" = 1'-0"

AMERICAN SOLAR
INSTALLATION COMPANY
3241 NW 38th St. Miami, FL 33142

383 SW WOODCREST DR,
LAKE CITY, FL 32024

JOSHUA AFTON

AHJ STAMP

Digitally signed by
Matthew R Craig
Location: Printed
copies of this
document are not
considered signed
and sealed and the
signature must be
verified on any
electronic copies.
Date: 2025.03.22
07:53:07-04'00'

SYSTEM SIZE

(N) 12.245 KW DC
(N) 11.520 KW AC

REV	DESCRIPTION	DATE			

SHEET TITLE
LAYOUT PLAN

DRAWN DATE	03/21/2025
DRAWN BY	JEROME JAPAL
REVIEWED BY	-

SHEET TITLE
PV - 2

NOTES:
1. LOCATION OF JUNCTION BOX(ES), AC DISCONNECT(S), AC COMBINER PANEL(S), AND OTHER ELECTRICAL EQUIPMENT RELEVANT TO PV INSTALLATION SUBJECT TO CHANGE BASED ON SITE CONDITIONS.
2. SETBACKS AT RIDGES CAN BE REDUCED TO 18 INCHES IF TOTAL PV AREA IS WITHIN 33% OF TOTAL ROOF AREA IN COMPLIANCE WITH IBC 2023:
TOTAL ROOF AREA = 2472.8318 SQFT
TOTAL PV AREA = 31(75.08" X 41.5")/(144 IN^2)
= 670.84 SQFT
(670.84 SQFT/2472.8318 SQFT)100 = 27.13%
TOTAL PV AREA POPULATES 27.13% OF TOTAL ROOF AREA

MODULE TYPE, DIMENSIONS & WEIGHT:

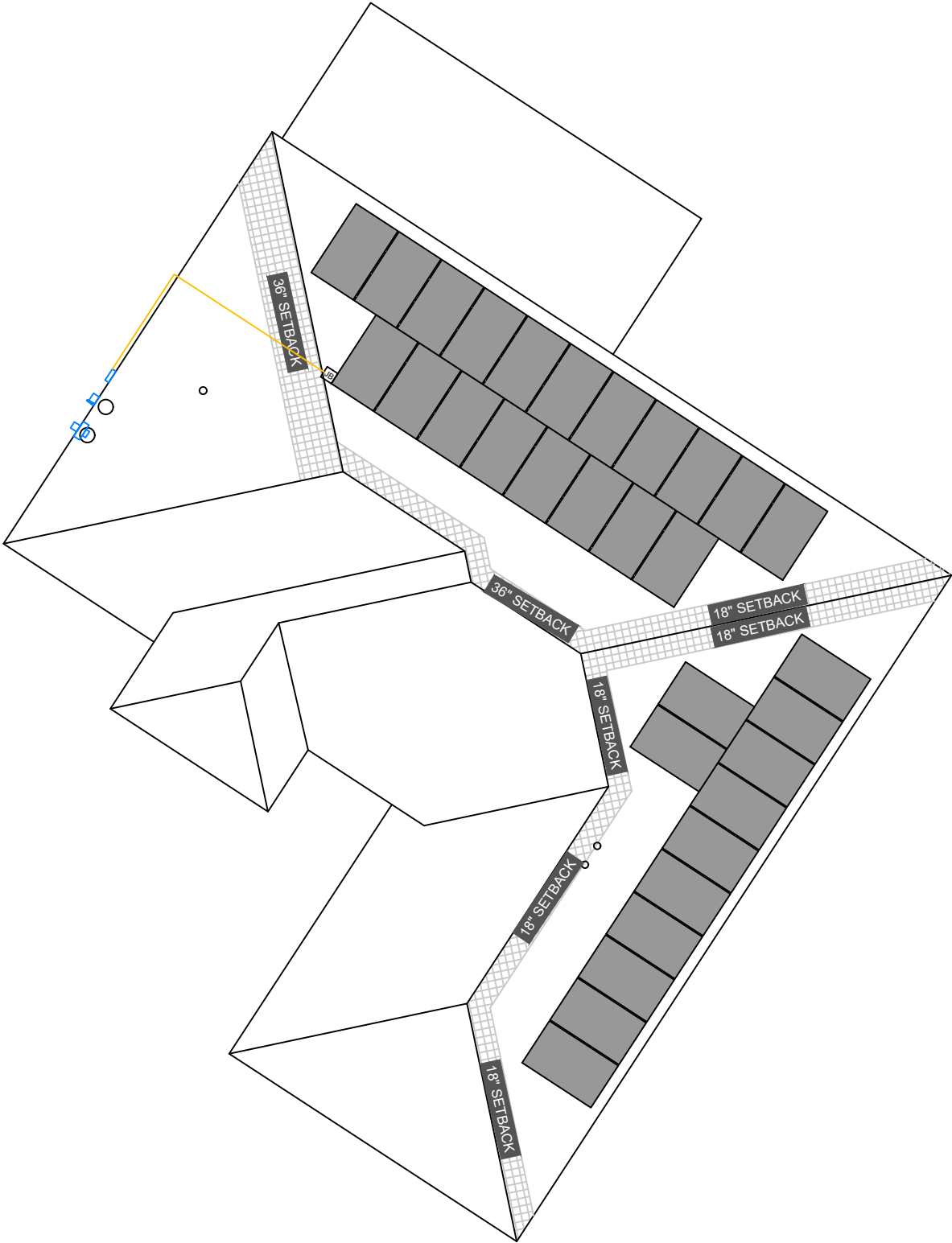
NUMBER OF PANELS IN ARRAY = 31 MODULES
MODULE TYPE = MISSION SOLAR MSE395SX9R PV MODULES
NUMBER OF CONNECTIONS TO ROOF = 63
WEIGHT OF INDIVIDUAL PANEL = 48.5 LBS / 22.00 KG
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TOTAL WEIGHT OF ARRAY: 1503.50 LBS
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DISTRIBUTED LOAD = 1503.50/670.84 = 2.24 PSF

- NOTES:
- ALL CONSTRUCTION / INSTALLATION IS TO COMPLY WITH THE FOLLOWING:
ALL DIMENSIONS ARE APPROXIMATE.
 - ROOF VENTS, SKYLIGHTS, WILL NOT BE COVERED UPON PV INSTALLATION.
 - AC DISCONNECT IS LOCATED WITHIN 10FT FROM THE UTILITY METER.



SITE PLAN

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



ROOF SECTION(S)			
	MODULE	TILT	AZIMUTH
ROOF 1	19	25°	33°
ROOF 2	12	25°	147°

AMERICAN SOLAR
INSTALLATION COMPANY
3241 NW 38th St. Miami, FL 33142

PROJECT NAME & ADDRESS

JOSHUA AFTON
383 SW WOODCREST DR,
LAKE CITY, FL 32024

AHJ STAMP

Digitally signed by
Matthew R Craig
Location: Printed
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07:53:07-04'00'

SYSTEM SIZE

(N) 12.245 KW DC
(N) 11.520 KW AC

REVISIONS		DATE			
REV	DESCRIPTION				

SHEET TITLE

ROOF LAYOUT

DRAWN DATE

03/21/2025

DRAWN BY

JEROME JAPAL

REVIEWED BY

-

SHEET TITLE

PV - 2 (2)

"ALL EXPOSED PV ROOFTOP CONDUCTORS THAT ARE NOT LOCATED UNDER THE ARRAY MODULES, SHALL INCLUDE LISTED JUNCTION BOXES AT BOTH ENDS OF THE RACEWAY TO TRANSITION FROM EXPOSED CONDUCTORS TO THE LISTED RACEWAYS."

PHOTOVOLTAIC INSTALLATION ELECTRICAL DIAGRAM
RATED 12,245 DC WATTS UNDER (STC)

- (1) BRANCHED CIRCUITS OF 16 MODULES
(1) BRANCHED CIRCUITS OF 15 MODULES

ADDITIONAL NOTES:
MARKING IS REQUIRED ON ALL INTERIOR AND EXTERIOR DC CONDUIT, RACEWAYS, ENCLOSURES, CABLE ASSEMBLIES, AND JUNCTION BOXES TO ALERT THE FIRE SERVICE TO AVOID CUTTING THEM. MARKING SHOULD BE PLACED ON ALL INTERIOR AND EXTERIOR DC CONDUIT, RACEWAYS, ENCLOSURES, AND CABLE ASSEMBLIES, AT A MINIMUM OF EVERY 10 FEET, AT TURNS AND ABOVE AND OR BELOW PENETRATIONS AND ALL DC COMBINER AND JUNCTION BOXES

AMBIENT TEMPERATURE SPECS	
RECORD LOW TEMP	6°
AMBIENT TEMP (HIGH TEMP 2%)	35°
CONDUCTOR HEIGHT	0.5"
CONDUCTOR TEMPERATURE RATE	90°

PERCENT OF VALUES	NUMBER OF CURRENT CARRYING CONDUCTORS IN EMT
.80	4-6
.70	7-9
.50	10-20

NOTE:
1. SUBJECT PV SYSTEM HAS BEEN DESIGNED TO MEET THE REQUIREMENT OF THE NEC 2023, NFPA 70 AND THOSE SET FORTH BY THE FLORIDA SOLAR ENERGY CENTER CERTIFICATION, INCLUDING MAXIMUM NUMBER OF MODULE STRINGS, MAXIMUM NUMBER OF MODULES PER STRING, MAXIMUM OUTPUT, MODULE MANUFACTURER AND MODEL NUMBER, INVERTER MANUFACTURER AND MODEL NUMBER, AS APPLICABLE.
2. PROVIDE TAP BOX IN COMPLIANCE WITH 312.8 IF PANEL GUTTER SPACE IS INADEQUATE.

GROUNDING & GENERAL NOTES

- PV INVERTER IS UNGROUNDED, TRANSFORMER-LESS TYPE
- DC EGC AND AC EGC TO BE SPLICED TO EXISTING ELECTRODE
- ANY EXISTING WIRING INVOLVED WITH PV SYSTEM CONNECTION THAT IS FOUND TO BE INADEQUATE PER CODE SHALL BE CORRECTED PRIOR TO FINAL INSPECTION
- JUNCTION BOX QUANTITIES, AND PLACEMENT SUBJECT TO CHANGE IN THE FIELD - JUNCTION BOXES DEPICTED ON ELECTRICAL DIAGRAM REPRESENT WIRE TYPE TRANSITIONS
- AC DISCONNECT NOTED IN EQUIPMENT SCHEDULE OPTIONAL IF OTHER AC DISCONNECTING MEANS IS LOCATED WITHIN 10' OF SERVICE DISCONNECT
- SIZING OF OVERCURRENT PROTECTION DEVICES ARE ROUNDED TO THE NEAREST WHOLE AMPERE WITH DECIMAL FRACTIONS SMALLER THAN 0.5 DROPPED ACCORDING TO 220.5(B)

INTERCONNECTION NOTES

- INTERCONNECTION SIZING, LIMITATIONS AND COMPLIANCE DETERMINED IN ACCORDANCE WITH [NEC 705.12]
- GROUND FAULT PROTECTION IN ACCORDANCE WITH [NEC 215.9], [NEC 230.95] AND [NEC 690.41]
- ALL EQUIPMENT TO BERATED FOR BACKFEEDING
- PV BREAKER TO BE POSITIONED AT THE OPPOSITE END OF THE BUSBAR RELATED TO THE MAIN BREAKER

DISCONNECT NOTES

- DISCONNECTING SWITCHES SHALL BE WIRED SUCH THAT WHEN THE SWITCH IS OPENED THE CONDUCTORS REMAINING LIVE ARE CONNECTED TO THE TERMINALS MARKED "LINE SIDE" (TYPICALLY THE UPPER TERMINALS)
- AC DISCONNECT MUST BE ACCESSIBLE TO QUALIFIED UTILITY PERSONNEL, BE LOCKABLE, AND BE A VISIBLE-BREAK SWITCH

WIRE SCHEDULE											
TAG	CONDUCTOR DETAILS	GROUND DETAILS	CONDUIT SIZE	CONDUCTOR RATING	AMBIENT TEMP	DEGREE COLUMN	TEMP DERATE	# OF CONDUCTOR DERATE	CONDUCTOR RATING W/ DERATES	CONDUIT FILL	
1	(2) #12 PV CABLE CU	(1) #6 AWG BARE CU	FREE AIR	30 A	35°C	90°C	0.96	1	28.8 A	FREE AIR	
2	(4) #10 AWG THHN/THWN-2, CU	(1) #8 AWG THWN-2, CU	3/4" EMT OR PVC	40 A	35°C	90°C	0.96	0.8	30.72 A	22.0%	
3	(3) #6 AWG THWN-2, CU	(1) #8 AWG THWN-2, CU	3/4" EMT OR PVC	75 A	35°C	90°C	0.96	1	72 A	34.1%	

SOLAR MODULE SPECIFICATIONS	
MANUFACTURER / MODEL	MISSION SOLAR MSE395SX9R (395W) PV MODULES
VMP	36.99 V
IMP	10.68 A
VOC	45.18 V
ISC	11.24 A
DIMENSION	75.08" L X 41.5"W X 1.57" D

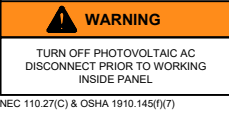
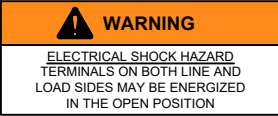
INVERTER SPECIFICATIONS	
MANUFACTURER / MODEL	HOYMILES HMS-1600-4T-NA MICROINVERTERS
MAXIMUM OUTPUT POWER	1440 W
NOMINAL VOLTAGE	240 A
NOMINAL OUTPUT CURRENT	6 A
INVERTER QUANTITY	8

PV OVERCURRENT PROTECTION ...NEC 690.9(B)
= TOTAL INVERTER O/P CURRENT x 1.25
= (8 x 6) x 1.25 = 60.00 A

SELECTED OCPD = 60 A ...NEC 240.6

WARNING LABELS

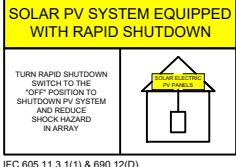
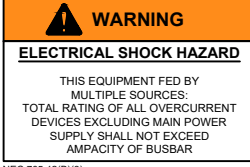
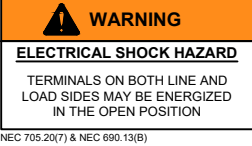
LABEL LOCATION : COMBINER BOX / CIRCUITS / CONDUIT COMBINER BOX / ENCLOSURES / EMT ENCLOSURES



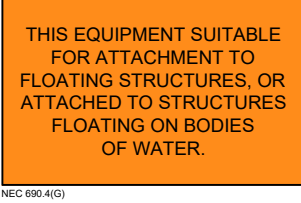
LABEL LOCATION : EMT / CONDUIT RACEWAYS



LABEL LOCATION : AC DISCONNECT / BREAKER / POINTS OF CONNECTION



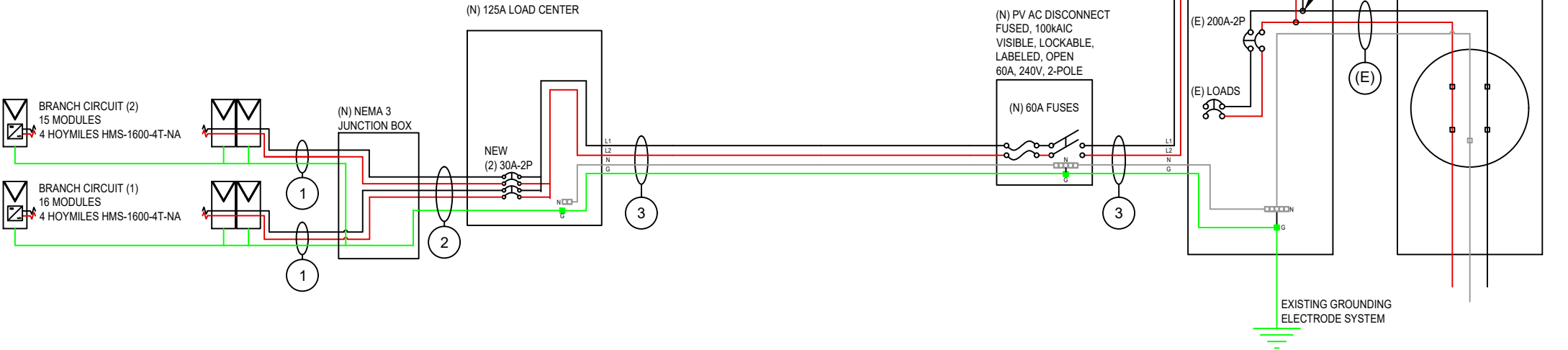
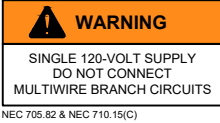
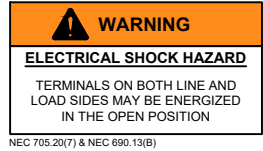
LABEL LOCATION : BUILDING / STRUCTURE



LABEL LOCATION : MAIN SERVICE DISCONNECT / UTILITY METER

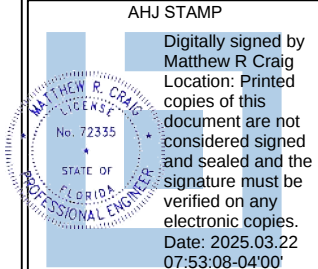


LABEL LOCATION : MAIN SERVICE DISCONNECT



AMERICAN SOLAR
INSTALLATION COMPANY
3241 NW 38th St. Miami, FL 33142

PROJECT NAME & ADDRESS
JOSHUA AFTON
383 SW WOODCREST DR,
LAKE CITY, FL 32024



SYSTEM SIZE
(N) 12.245 KW DC
(N) 11.520 KW AC

REVIEWS	DATE				
	DESCRIPTION				
REV					

SHEET TITLE
ELECTRICAL
DIAGRAM AND
LABELS

DRAWN DATE	03/21/2025
DRAWN BY	JEROME JAPAL
REVIEWED BY	-

SHEET TITLE
PV - 3

MSE PERC 66

MISSION SOLAR ENERGY

395W
Standard power output (1000 W/m²)

**True American Quality
True American Brand**

Mission Solar Energy's Advanced PERC solar cells are the most efficient and durable solar cells in the industry. The advanced PERC solar cells are made in the USA and are the most efficient and durable solar cells in the industry. The advanced PERC solar cells are made in the USA and are the most efficient and durable solar cells in the industry.

Beyond the Best. Beyond Mission Solar Energy.

World Reliability

- 25-year warranty
- 10-year warranty
- 10-year warranty

Advanced Technology

- PERC
- 25-year warranty
- 10-year warranty

Enhance Solar Performance

- 25-year warranty
- 10-year warranty
- 10-year warranty

MA/Design and Government Projects

- 25-year warranty
- 10-year warranty
- 10-year warranty

FRAMING FRAME WARRANTY

25-year warranty on framing frame warranty. 10-year warranty on framing frame warranty. 10-year warranty on framing frame warranty.

CERTIFICATIONS

ISO 9001, ISO 14001, ISO 45001, ISO 50001, ISO 26000, ISO 27001, ISO 28000, ISO 29000, ISO 30000, ISO 31000, ISO 33000, ISO 34000, ISO 35000, ISO 36000, ISO 37000, ISO 38000, ISO 39000, ISO 40000, ISO 41000, ISO 42000, ISO 43000, ISO 44000, ISO 45000, ISO 46000, ISO 47000, ISO 48000, ISO 49000, ISO 50000, ISO 51000, ISO 52000, ISO 53000, ISO 54000, ISO 55000, ISO 56000, ISO 57000, ISO 58000, ISO 59000, ISO 60000, ISO 61000, ISO 62000, ISO 63000, ISO 64000, ISO 65000, ISO 66000, ISO 67000, ISO 68000, ISO 69000, ISO 70000, ISO 71000, ISO 72000, ISO 73000, ISO 74000, ISO 75000, ISO 76000, ISO 77000, ISO 78000, ISO 79000, ISO 80000, ISO 81000, ISO 82000, ISO 83000, ISO 84000, ISO 85000, ISO 86000, ISO 87000, ISO 88000, ISO 89000, ISO 90000, ISO 91000, ISO 92000, ISO 93000, ISO 94000, ISO 95000, ISO 96000, ISO 97000, ISO 98000, ISO 99000, ISO 100000, ISO 101000, ISO 102000, ISO 103000, ISO 104000, ISO 105000, ISO 106000, ISO 107000, ISO 108000, ISO 109000, ISO 110000, ISO 111000, ISO 112000, ISO 113000, ISO 114000, ISO 115000, ISO 116000, ISO 117000, ISO 118000, ISO 119000, ISO 120000, ISO 121000, ISO 122000, ISO 123000, ISO 124000, ISO 125000, ISO 126000, ISO 127000, ISO 128000, ISO 129000, ISO 130000, ISO 131000, ISO 132000, ISO 133000, ISO 134000, ISO 135000, ISO 136000, ISO 137000, ISO 138000, ISO 139000, ISO 140000, ISO 141000, ISO 142000, ISO 143000, ISO 144000, ISO 145000, ISO 146000, ISO 147000, ISO 148000, ISO 149000, ISO 150000, ISO 151000, ISO 152000, ISO 153000, ISO 154000, ISO 155000, ISO 156000, ISO 157000, ISO 158000, ISO 159000, ISO 160000, ISO 161000, ISO 162000, ISO 163000, ISO 164000, ISO 165000, ISO 166000, ISO 167000, ISO 168000, ISO 169000, ISO 170000, ISO 171000, ISO 172000, ISO 173000, ISO 174000, ISO 175000, ISO 176000, ISO 177000, ISO 178000, ISO 179000, ISO 180000, ISO 181000, ISO 182000, ISO 183000, ISO 184000, ISO 185000, ISO 186000, ISO 187000, ISO 188000, ISO 189000, ISO 190000, ISO 191000, ISO 192000, ISO 193000, ISO 194000, ISO 195000, ISO 196000, ISO 197000, ISO 198000, ISO 199000, ISO 200000, ISO 201000, ISO 202000, ISO 203000, ISO 204000, ISO 205000, ISO 206000, ISO 207000, ISO 208000, ISO 209000, ISO 210000, ISO 211000, ISO 212000, ISO 213000, ISO 214000, ISO 215000, ISO 216000, ISO 217000, ISO 218000, ISO 219000, ISO 220000, ISO 221000, ISO 222000, ISO 223000, ISO 224000, ISO 225000, ISO 226000, ISO 227000, ISO 228000, ISO 229000, ISO 230000, ISO 231000, ISO 232000, ISO 233000, ISO 234000, ISO 235000, ISO 236000, ISO 237000, ISO 238000, ISO 239000, ISO 240000, ISO 241000, ISO 242000, ISO 243000, ISO 244000, ISO 245000, ISO 246000, ISO 247000, ISO 248000, ISO 249000, ISO 250000, ISO 251000, ISO 252000, ISO 253000, ISO 254000, ISO 255000, ISO 256000, ISO 257000, ISO 258000, ISO 259000, ISO 260000, ISO 261000, ISO 262000, ISO 263000, ISO 264000, ISO 265000, ISO 266000, ISO 267000, ISO 268000, ISO 269000, ISO 270000, ISO 271000, ISO 272000, ISO 273000, ISO 274000, ISO 275000, ISO 276000, ISO 277000, ISO 278000, ISO 279000, ISO 280000, ISO 281000, ISO 282000, ISO 283000, ISO 284000, ISO 285000, ISO 286000, ISO 287000, ISO 288000, ISO 289000, ISO 290000, ISO 291000, ISO 292000, ISO 293000, ISO 294000, ISO 295000, ISO 296000, ISO 297000, ISO 298000, ISO 299000, ISO 300000, ISO 301000, ISO 302000, ISO 303000, ISO 304000, ISO 305000, ISO 306000, ISO 307000, ISO 308000, ISO 309000, ISO 310000, ISO 311000, ISO 312000, ISO 313000, ISO 314000, ISO 315000, ISO 316000, ISO 317000, ISO 318000, ISO 319000, ISO 320000, ISO 321000, ISO 322000, ISO 323000, ISO 324000, ISO 325000, ISO 326000, ISO 327000, ISO 328000, ISO 329000, ISO 330000, ISO 331000, ISO 332000, ISO 333000, ISO 334000, ISO 335000, ISO 336000, ISO 337000, ISO 338000, ISO 339000, ISO 340000, ISO 341000, ISO 342000, ISO 343000, ISO 344000, ISO 345000, ISO 346000, ISO 347000, ISO 348000, ISO 349000, ISO 350000, ISO 351000, ISO 352000, ISO 353000, ISO 354000, ISO 355000, ISO 356000, ISO 357000, ISO 358000, ISO 359000, ISO 360000, ISO 361000, ISO 362000, ISO 363000, ISO 364000, ISO 365000, ISO 366000, ISO 367000, ISO 368000, ISO 369000, ISO 370000, ISO 371000, ISO 372000, ISO 373000, ISO 374000, ISO 375000, ISO 376000, ISO 377000, ISO 378000, ISO 379000, ISO 380000, ISO 381000, ISO 382000, ISO 383000, ISO 384000, ISO 385000, ISO 386000, ISO 387000, ISO 388000, ISO 389000, ISO 390000, ISO 391000, ISO 392000, ISO 393000, ISO 394000, ISO 395000, ISO 396000, ISO 397000, ISO 398000, ISO 399000, ISO 400000, ISO 401000, ISO 402000, ISO 403000, ISO 404000, ISO 405000, ISO 406000, ISO 407000, ISO 408000, ISO 409000, ISO 410000, ISO 411000, ISO 412000, ISO 413000, ISO 414000, ISO 415000, ISO 416000, ISO 417000, ISO 418000, ISO

Green Energy for All

Microinverter Datasheet

HMS-1600-4T-NA
HMS-1800-4T-NA
HMS-2000-4T-NA

Description

The HMS series microinverter is a 400V series microinverter designed for residential and commercial applications. It is a high-efficiency, high-power, and high-voltage microinverter. It is designed to be installed on the roof of a building, and it is designed to be installed on the roof of a building. It is designed to be installed on the roof of a building, and it is designed to be installed on the roof of a building.

The HMS series microinverter is designed to be installed on the roof of a building, and it is designed to be installed on the roof of a building. It is designed to be installed on the roof of a building, and it is designed to be installed on the roof of a building.

Features

- 1. High efficiency and high power
- 2. High efficiency and high power
- 3. High efficiency and high power

- 4. High efficiency and high power
- 5. High efficiency and high power
- 6. High efficiency and high power

Technical Specifications

Model	HMS-1600-4T-NA	HMS-1800-4T-NA	HMS-2000-4T-NA
Input Voltage (V)	120V-240V	120V-240V	120V-240V
Output Voltage (V)	400V	400V	400V
Output Power (W)	1600	1800	2000
Efficiency (%)	97.5	97.5	97.5
Temperature Range (°C)	-40 to +60	-40 to +60	-40 to +60
Dimensions (mm)	120 x 120 x 120	120 x 120 x 120	120 x 120 x 120
Weight (kg)	0.5	0.5	0.5
Installation	Roof	Roof	Roof
Warranty	5 years	5 years	5 years

PART # TABLE	
P/N	DESCRIPTION
004BUTYLM	SM DTD ATT W BUTYL, MILL
004BUTYLD	SM DTD ATT W BUTYL, DARK

1411 BROADWAY BLD. VE
ALBUQUERQUE, NM 87102 USA
PHONE: 505.242.6411
WWW.UNIRAC.COM

PRODUCT LINE:	SM BUTYL	DRAWING NOT TO SCALE ALL DIMENSIONS ARE NOMINAL
DRAWING TYPE:	ASSEMBLY	
DESCRIPTION:	SOLAR MOUNT	
REVISION DATE:	12/8/2023	
PRODUCT PROTECTED BY ONE OR MORE US PATENTS		LEGAL NOTICE

SM-A19

SHEET

SOLARMOUNT

UNIRAC

SOLARMOUNT defined the standard in solar racking. Features are designed to get installers off the roof faster. Our grounding & bonding process eliminates copper wire and grounding stops to reduce costs. Systems can be configured with standard or light rail to meet your design requirements at the lowest cost possible. The superior aesthetics package provides a streamlined clean edge for enhanced curb appeal, with no special brackets required for installation.

Now Featuring:
THE NEW FACE OF SOLAR RACKING
 Superior Aesthetics Package

LOSE ALL OF THE COPPER & LUGS
 Zero grounding/copper connection and/or lugs.

SMALL IS THE NEXT NEW BIG THING
 Light Rail is a UniRac standard with all 20 Components.

ENHANCED DESIGN & LAYOUT TOOLS
 Helping design time. Simplifies, saves, reduces.

FAST INSTALLATION. SUPERIOR AESTHETICS

OPTIMIZED COMPONENTS • VERSATILITY • DESIGN TOOLS • QUALITY PROVIDER

SOLARMOUNT

UNIRAC

OPTIMIZED COMPONENTS

INTEGRATED BONDING & PRE-ASSEMBLED PARTS

UniRac's parts are pre-assembled and pre-wired to include insulation, clips and wire. UniRac's parts are pre-wired & bonded to include insulation, clips and wire. UniRac's parts are pre-wired & bonded to include insulation, clips and wire. UniRac's parts are pre-wired & bonded to include insulation, clips and wire.

VERSATILITY

ONE PRODUCT - MANY APPLICATIONS

UniRac's parts are pre-assembled and pre-wired to include insulation, clips and wire. UniRac's parts are pre-wired & bonded to include insulation, clips and wire. UniRac's parts are pre-wired & bonded to include insulation, clips and wire. UniRac's parts are pre-wired & bonded to include insulation, clips and wire.

AUTOMATED DESIGN TOOL

DESIGN PLATFORM AT YOUR SERVICE

UniRac's parts are pre-assembled and pre-wired to include insulation, clips and wire. UniRac's parts are pre-wired & bonded to include insulation, clips and wire. UniRac's parts are pre-wired & bonded to include insulation, clips and wire. UniRac's parts are pre-wired & bonded to include insulation, clips and wire.

INTEGRATED BONDING
 & PRE-ASSEMBLED PARTS

INTEGRATED BONDING
 & PRE-ASSEMBLED PARTS

INTEGRATED BONDING
 & PRE-ASSEMBLED PARTS

INTEGRATED BONDING
 & PRE-ASSEMBLED PARTS

UNIRAC'S DESIGN TOOL

UNIRAC'S DESIGN TOOL

UNIRAC CUSTOMER SERVICE MEANS THE HIGHEST LEVEL OF PRODUCT SUPPORT

TECHNICAL SUPPORT

UniRac's technical support team is available to answer questions & troubleshoot issues in real time. UniRac's technical support team is available to answer questions & troubleshoot issues in real time. UniRac's technical support team is available to answer questions & troubleshoot issues in real time.

CUSTOMER SERVICE

UniRac's customer service team is available to answer questions & troubleshoot issues in real time. UniRac's customer service team is available to answer questions & troubleshoot issues in real time. UniRac's customer service team is available to answer questions & troubleshoot issues in real time.

QUALITY PRODUCTS

UniRac's quality products are made with the highest quality materials & are designed to last. UniRac's quality products are made with the highest quality materials & are designed to last. UniRac's quality products are made with the highest quality materials & are designed to last.

FAST SERVICE

UniRac's fast service team is available to answer questions & troubleshoot issues in real time. UniRac's fast service team is available to answer questions & troubleshoot issues in real time. UniRac's fast service team is available to answer questions & troubleshoot issues in real time.

JOSHUA AFTON

383 SW WOODCREST DR,
LAKE CITY, FL 32024

AMERICAN SOLAR
INSTALLATION COMPANY
3241 NW 38th St. Miami, FL 33142

Digitally signed by
Matthew R Craig
Location: Printed
copies of this
document are not
considered signed
and sealed and the
signature must be
verified on any
electronic copies.
Date: 2025.03.22
07:53:08-04'00'

(N) 12.245 KW DC
(N) 11.520 KW AC

REVISIONS		
REV	DESCRIPTION	DATE

SHEET TITLE

DATA SHEETS

DRAWN DATE	03/04/2025
DRAWN BY	JEROME JAPAL
REVIEWED BY	-

SHEET TITLE
PV - 4