

Description of Property: Please describe the building and surrounding environment. Include information on significant structures, landscape features, or other significant features of the property:

Description of Work Proposed: Please give an overview of the work to be undertaken:



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By Devon.Murtha at 11:25 am, Oct 09, 2025

Work Item 1: _____	
Description of Current Condition:	Proposed Work:

Work Item 2: _____	
Description of Current Condition:	Proposed Work:

Work Item 3: _____	
Description of Current Condition:	Proposed Work:

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Back of Home



Front of Home

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Left side of home



Right side of Home

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SolarStack on R3

Critter Guard

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KEY



FIRE SAFETY ZONE



3' PATHWAYS FROM LOWEST ROOF EDGE TO RIDGE PROVIDED PER R324.6.1



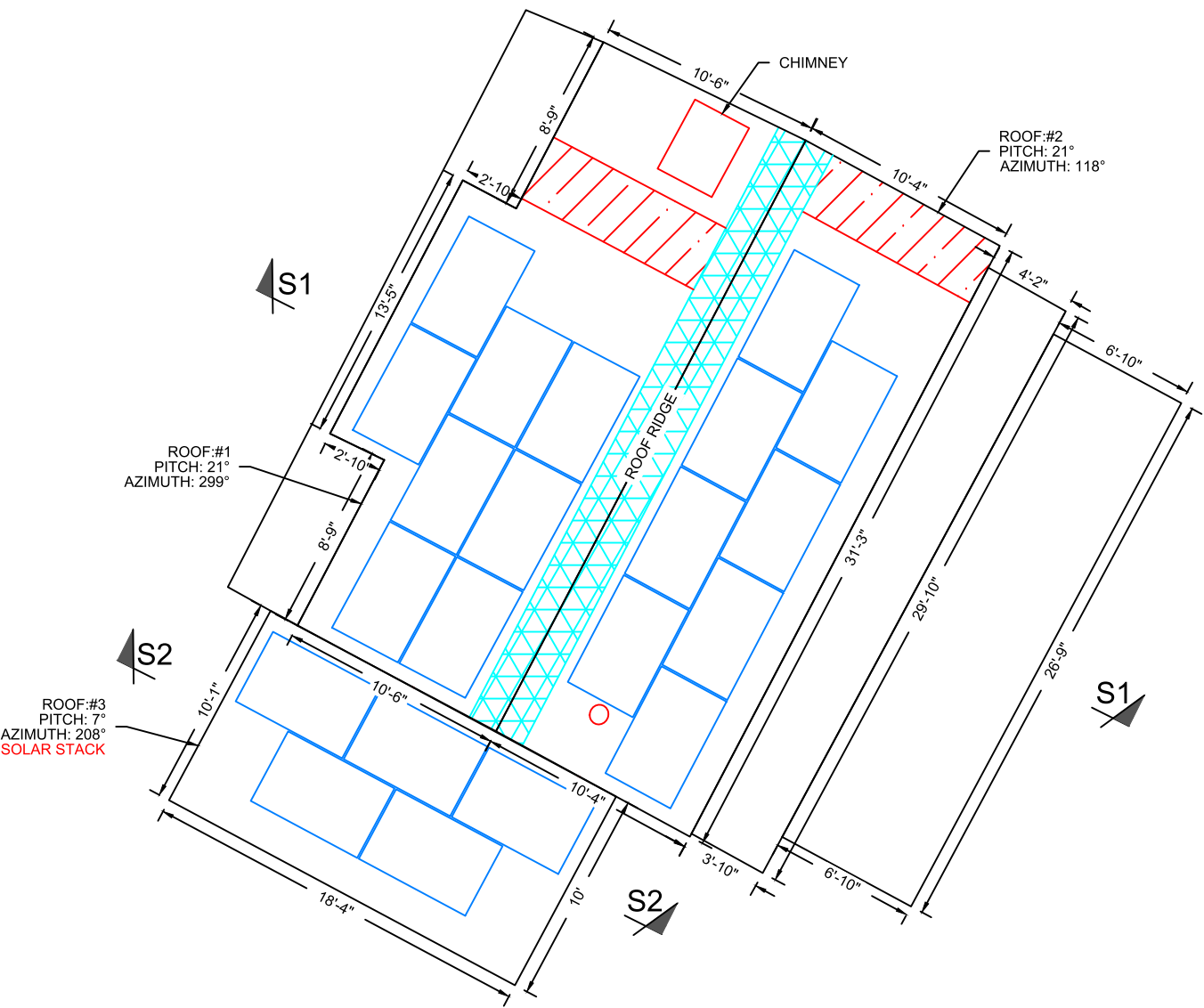
1'6" PATHWAYS PROVIDED ON BOTH SIDES OF RIDGE PER R324.6.2

PLAN VIEW TOTAL ROOF AREA: 1602 SQFT

SOLAR ARRAY AREA: 441.00 SQFT

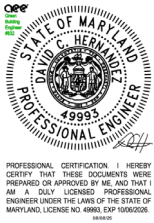
THE SOLAR ARRAY IS 27.5% OF THE PLAN VIEW TOTAL ROOF AREA

- NOTES:
- THE SYSTEM SHALL INCLUDE (21) HANWHA Q.TRON BLK M-G2+ 435W.
 - SNAPNRACK TOPSPEED WILL BE INSTALLED IN ACCORDANCE WITH SNAPNRACK INSTALLATION MANUAL.
 - REFER TO STRUCTURAL DRAWING FOR SECTIONS MARKED AND ADDITIONAL NOTES.



SOLAR PANEL LAYOUT

Scale: 1/8" = 1'-0"



David C. Hernandez, PE

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Date: 2025.08.08 12:03:26 -04:00



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IRC) 2021

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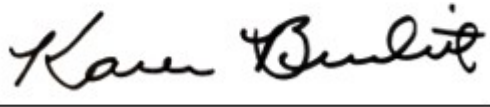


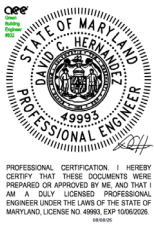
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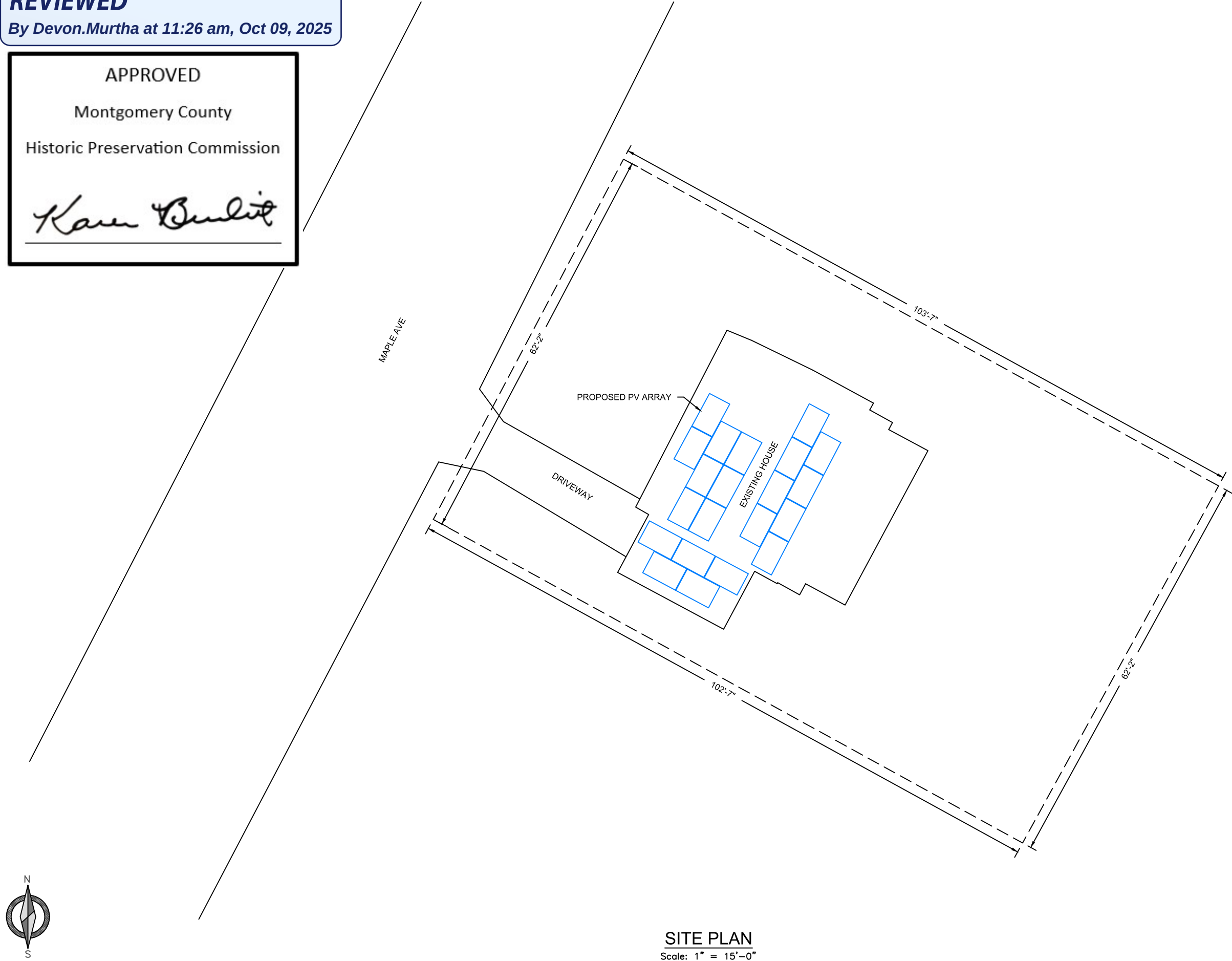
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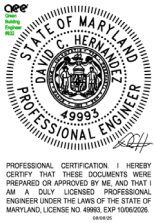
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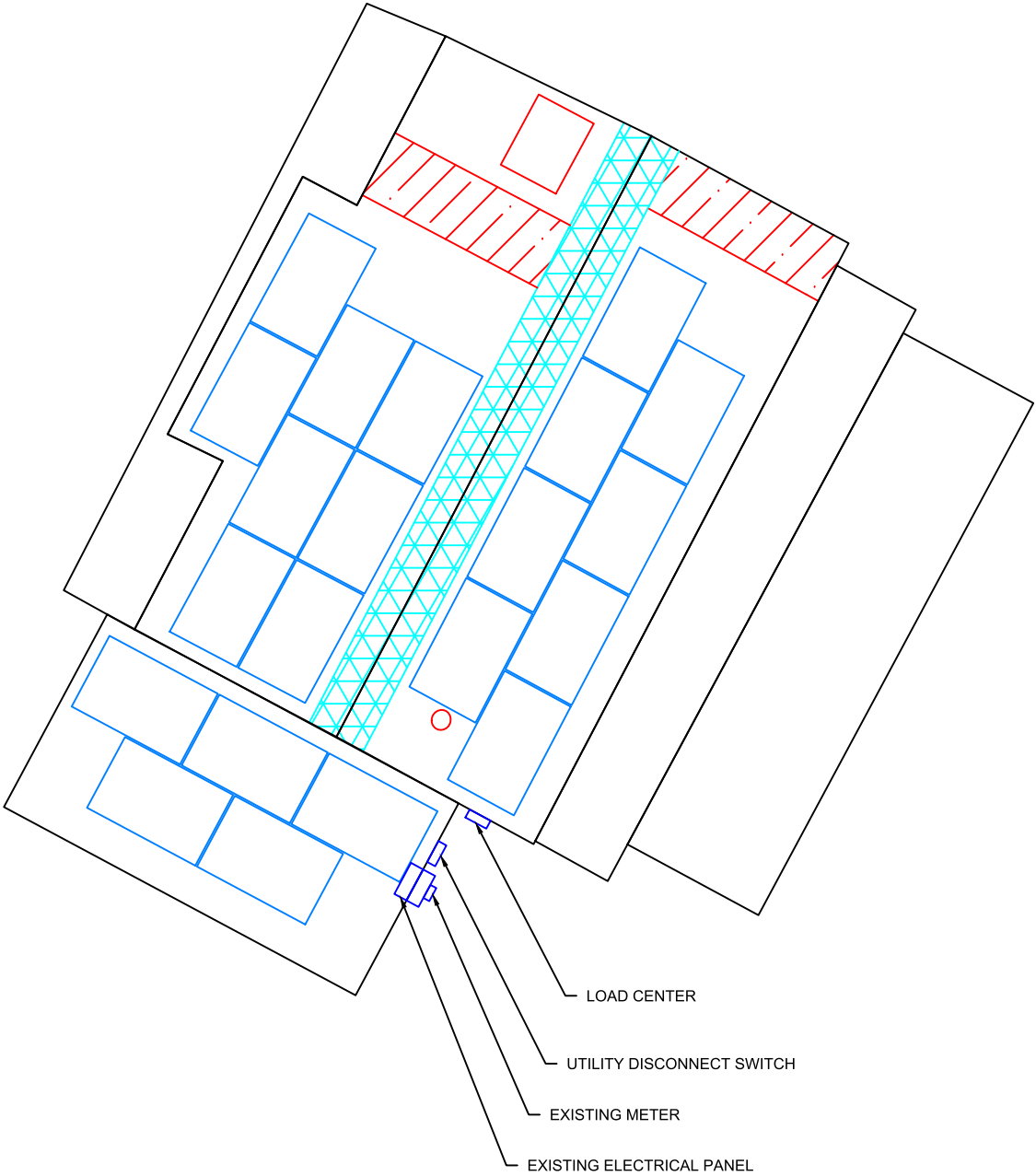
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EQUIPMENT LOCATION PLAN

Scale: NTS

NOTE:

EQUIPMENT LOCATION PLAN IS APPROXIMATE, EXACT LOCATION TO BE VERIFIED WITH INSTALLATION CREW AND HOME OWNER AT THE TIME OF INSTALLATION.



Sheet Name	
Drawn By B	
Scale S NOTED	Job No. M

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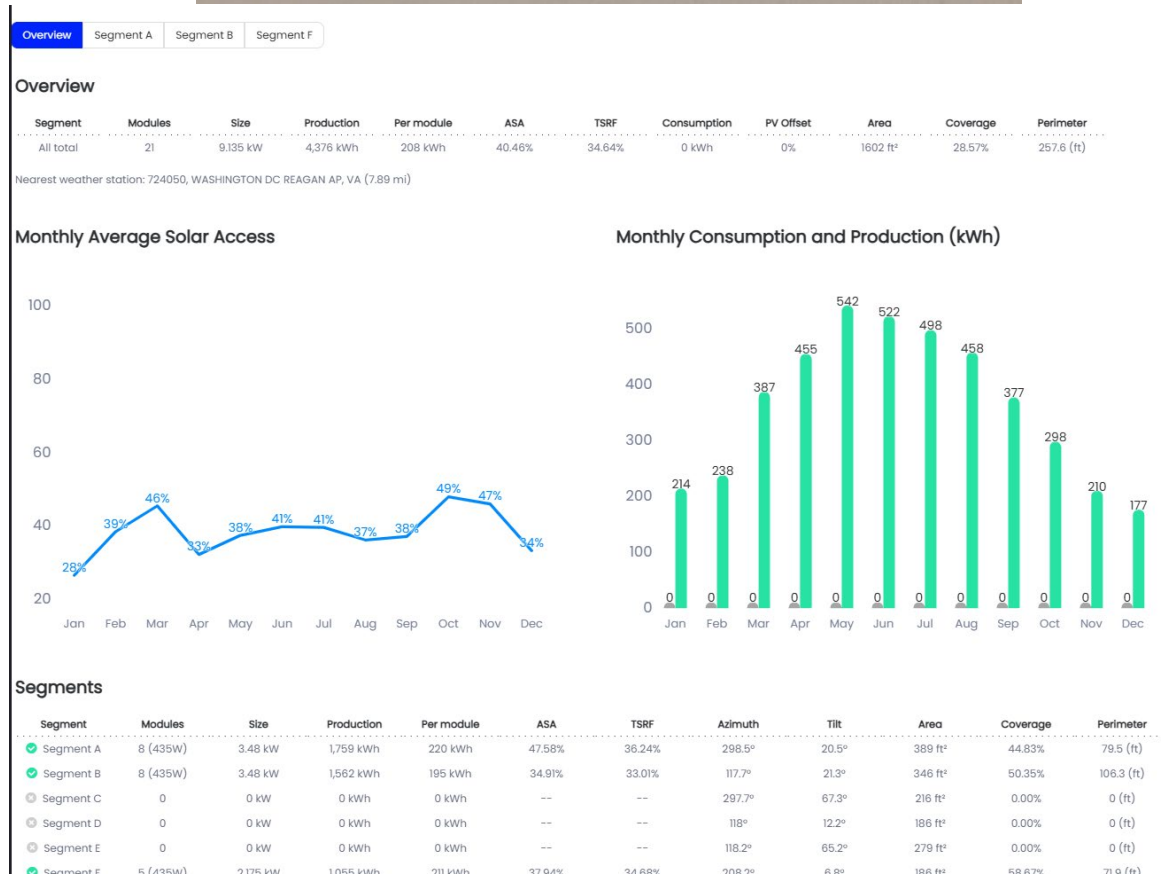
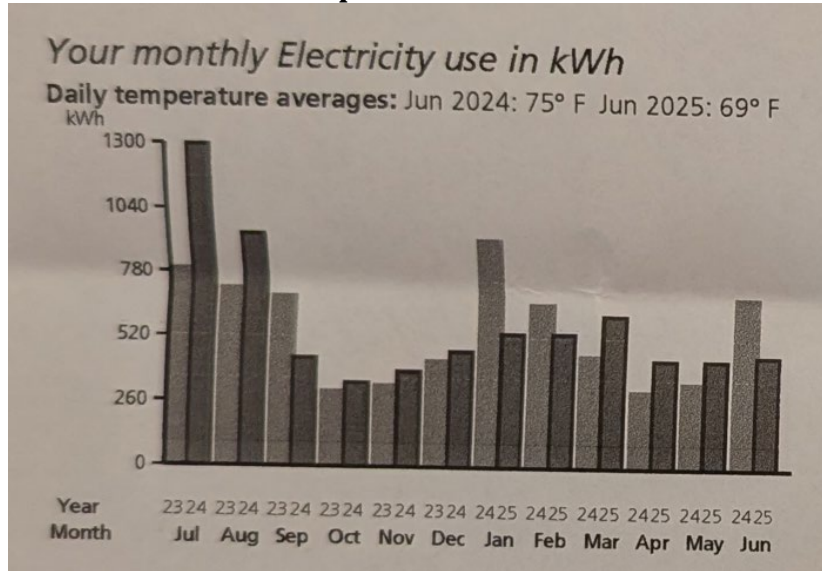
Karen Benoit

09/19/2025

To whom it may concern,

- Justification of panels on the front of the house and lot

Monthly energy consumption for Address vs the production



- The home had an annual usage of roughly 7,190 kWh in 2024. Our proposed system is estimated to have 4,376 kWh in annual production.
- The 8 panels on the front of the home have an average of 220 kWh per panel annually for a 8-panel array estimated to have 1,759 kWh in annual production. The 8 panels on the back of the home have an average of 195 kWh per panel annually for a 8-panel array estimated to have 1,562 kWh in annual production. The 5 panels on the side of the home have an average of 211 kWh per panel annually for a 5-panel array estimated to have 1,055 kWh in annual production.

Justification for the Placement of the panels.

- All usable space on the south-facing front roof plane is being utilized in this design. With only the rear roof plane we would be able to fit 14 modules for a 6.09 kW system producing about 2,450 kWh annually. There are also trees on the front of the property that would be limiting visibility from the right-of-way

Shade Map.

- **Rear lower roof:** The lower rear roof was evaluated in the process and determined to be an infeasible location

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While it can physically accommodate up to 6 panels, each panel would produce only approximately 157 kWh/year due to limited solar exposure. This results in a total estimated production of 941 kWh/year for that roof plane. In contrast, the front roof supports 8 panels with a significantly higher output of 220 kWh/year per panel, totaling 1,759 kWh/year. Choosing the rear roof over the front would result in a loss of 818 kWh/year—nearly half the production. Additionally, surrounding vegetation further limits solar access on the rear roof, reinforcing its unsuitability for this project.

Thank you,
Andrew Tam
Design Engineer.

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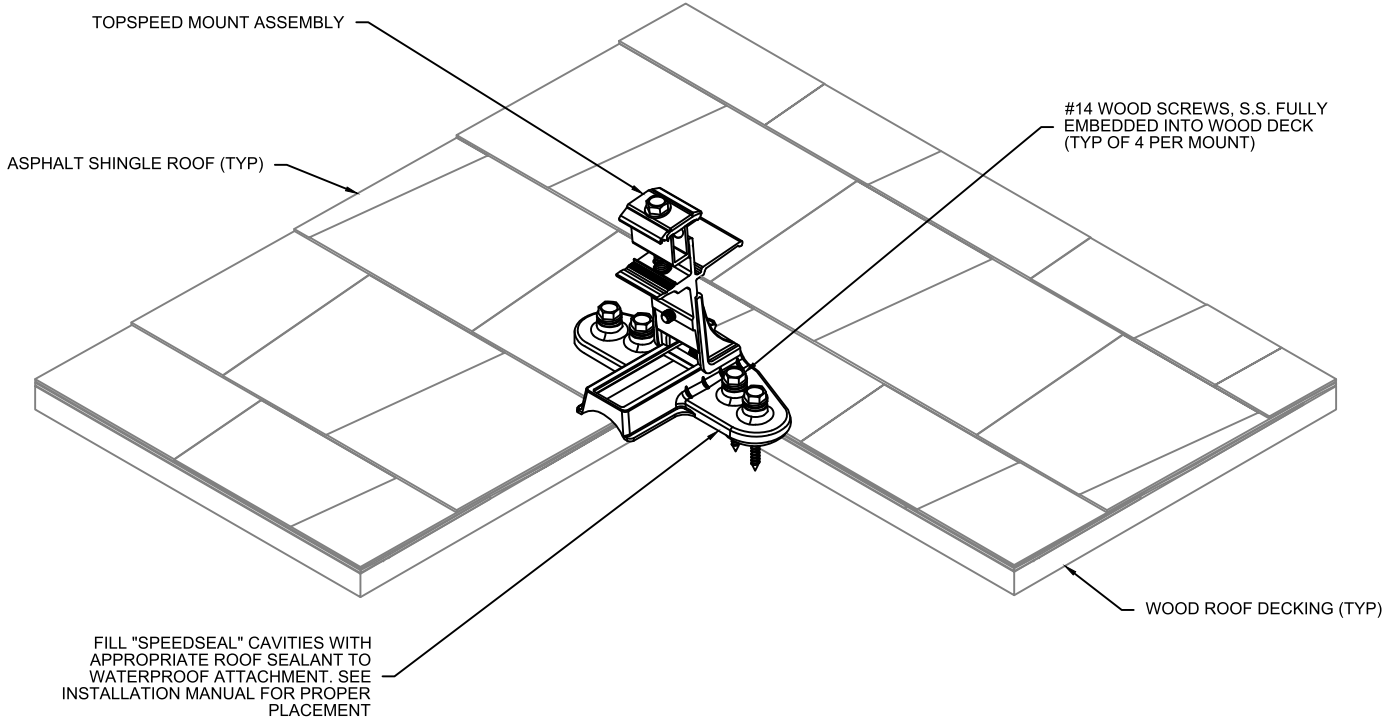
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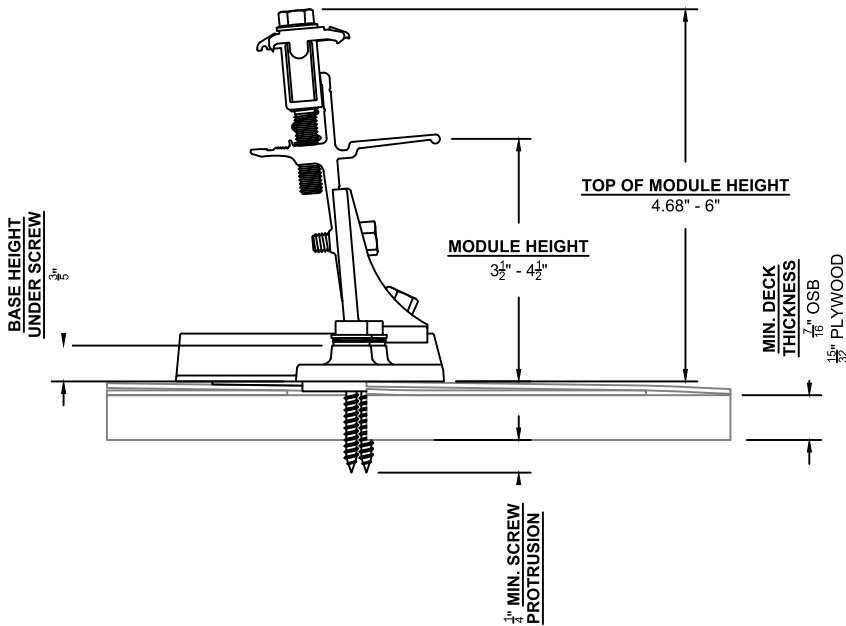
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Structural Details		
S1	Rafter	2x4 O.C. 24"

- NOTES:
- ALL WORK SHALL COMPLY WITH REQUIREMENTS OF INTERNATIONAL RESIDENTIAL CODE (IRC 2021), LOADING CODE (ASCE 7-16), WOOD DESIGN CODE (NDS 2015), AND LOCAL REQUIREMENTS.
 - LOAD CRITERIA PER :
 - EXPOSURE CATEGORY "B"
 - GROUND SNOW LOAD, $P_g = 30$ PSF
 - LATERAL LOAD RISK CATEGORY "II"
 - ULTIMATE DESIGN WIND SPEED = 115 MPH
 - SOLAR PANELS AND RACKING SYSTEMS SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATION.
 - FOLLOW ALL LOCAL AND FEDERAL SAFETY REQUIREMENTS.

STRUCTURAL ATTACHMENT DETAIL

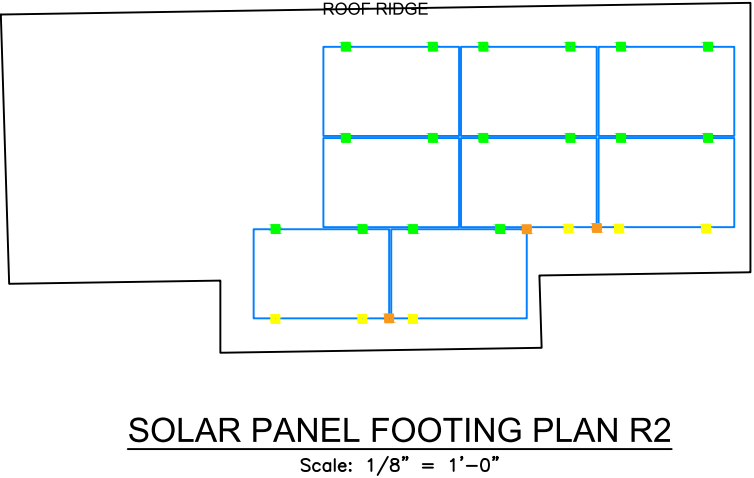
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Bill Of Materials	
Product	Count
Mounts Without Spacers	32
Mounts With Spacers	15
Clamps Without Spacers	0
Clamps With Spacers	7

KEY

- MOUNTS WITHOUT SPACERS
- MOUNTS WITH SPACERS
- CLAMPS WITHOUT SPACERS
- CLAMPS WITH SPACERS

SOLAR PANEL FOOTING PLAN R1
Scale: 1/8" = 1'-0"



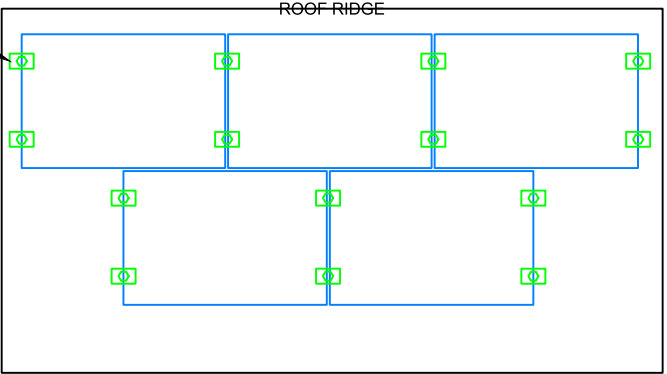
SOLAR PANEL FOOTING PLAN R2
Scale: 1/8" = 1'-0"

NOTES:

1. SNAPNRACK TOPSPEED SHALL BE INSTALLED IN ACCORDANCE WITH SNAPNRACK INSTALLATION MANUAL.
2. ADD TOPSPEED CLAMP IF GREATER THAN (SOLAR PANEL LENGTH / 4) FOR LANDSCAPE OR (SOLAR PANEL WIDTH / 4) FOR PORTRAIT
3. NO SOLAR PANEL SHALL CANTILEVER MORE THAN 1/4 SOLAR PANEL LENGTH OR WIDTH DEPENDING ON ORIENTATION. UNLESS FOR MANUFACTURER SPECIFIED CLAMPING ZONE

Bill Of Materials	
Product	Count
Solar Stack	14

Solar Attachment
(See Sheet S-2 For Details)



SOLAR PANEL FOOTING PLAN R3
Scale: 3/16" = 1'-0"

NOTES:

1. SOLAR STACK SHALL BE INSTALLED IN ACCORDANCE WITH SOLAR STACK INSTALLATION MANUAL.

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PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND LICENSE NO. 49966 EXP. 10/09/2028

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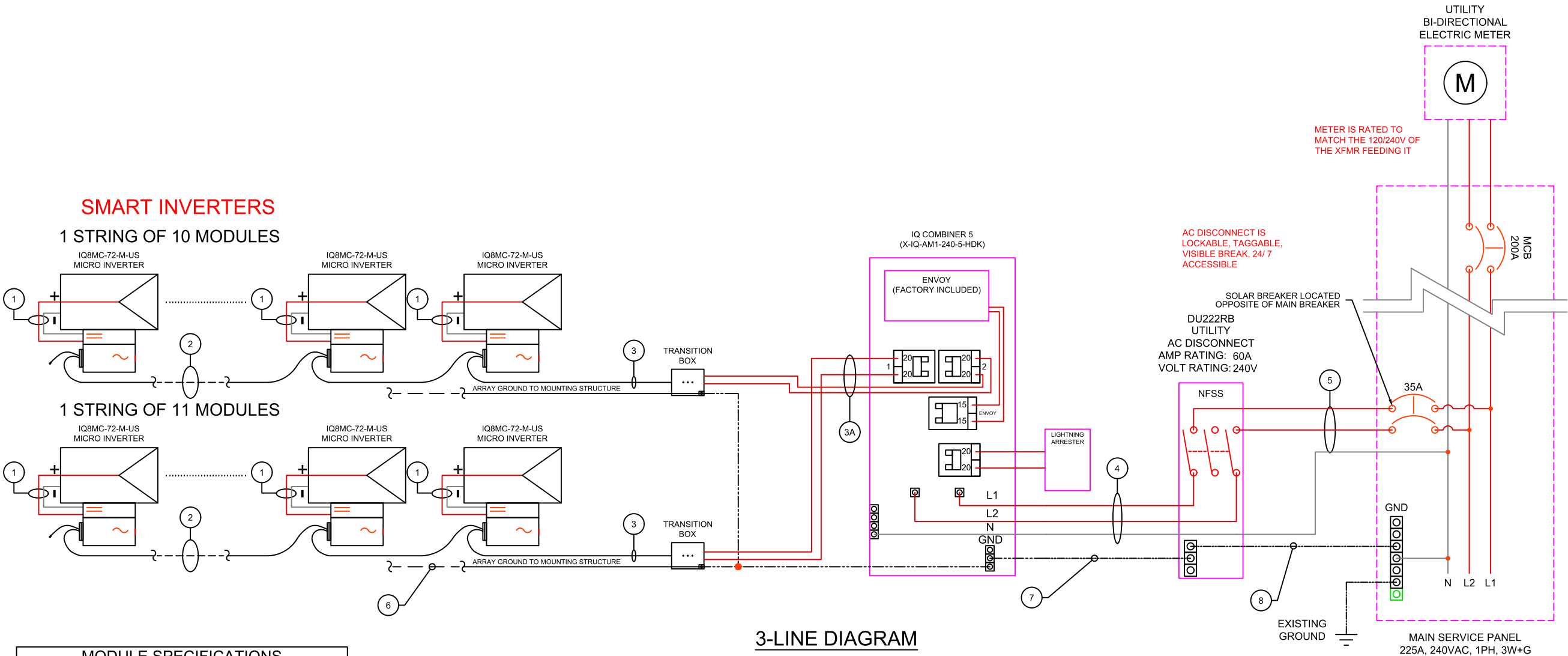
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MODULE SPECIFICATIONS		
MODEL NUMBER	QTRON BLK M-G2+ 435W	
PEAK POWER	435 W	
RATED VOLTAGE (V _{mpp})	33.33 V	
RATED CURRENT (I _{mp})	13.12 A	
OPEN CIRCUIT VOLTAGE (V _{oc})	39.60 V	
SHORT CIRCUIT CURRENT (I _{sc})	13.82 A	
MAXIMUM SYSTEM VOLTAGE	1000VDC	
INVERTER SPECIFICATIONS		
MODEL NUMBER	IQ8MC-72-M-US	
MAXIMUM DC VOLTAGE	60 V	
MAXIMUM POWER OUTPUT	320 W	
NOMINAL AC VOLTAGE	240 VAC	
MAXIMUM AC CURRENT	1.33 A	
CEC EFFICIENCY	97.0%	
ARRAY DETAILS		
NO. OF MODULES PER STRING	10	11
NO. OF STRINGS	1	1
ARRAY WATTS AT STC	4350	4785

WIRE/CONDUIT SCHEDULE ARRAY			
TAG	DESCRIPTION	WIRE SIZE/TYPE	NOTES
1	Panel to Micro Inverter	PV Wire (Factory Made)	INTEGRATED
2	Micro Inverter to Micro Inverter	Pre-Manufactured Cable	
3	Micro Inverter to Transition Box	Pre-Manufactured Cable	
3A	Transition Box to Load Center	#10 THHN/THWN-2	INTEGRATED
4	Load Center to AC Disconnect	#8 Cu THHN/THWN-2	
5	AC Disconnect to Interconnection Point	#8 Cu THHN/THWN-2	
6	Equipment Grounding Conductor	#8 Cu Bare Copper Wire	
7	Equipment Grounding Conductor	#8 Cu THHN/THWN-2	
8	Grounding Electrode Conductor	#6 Cu	

GENERAL ELECTRIC NOTES: NEC2023

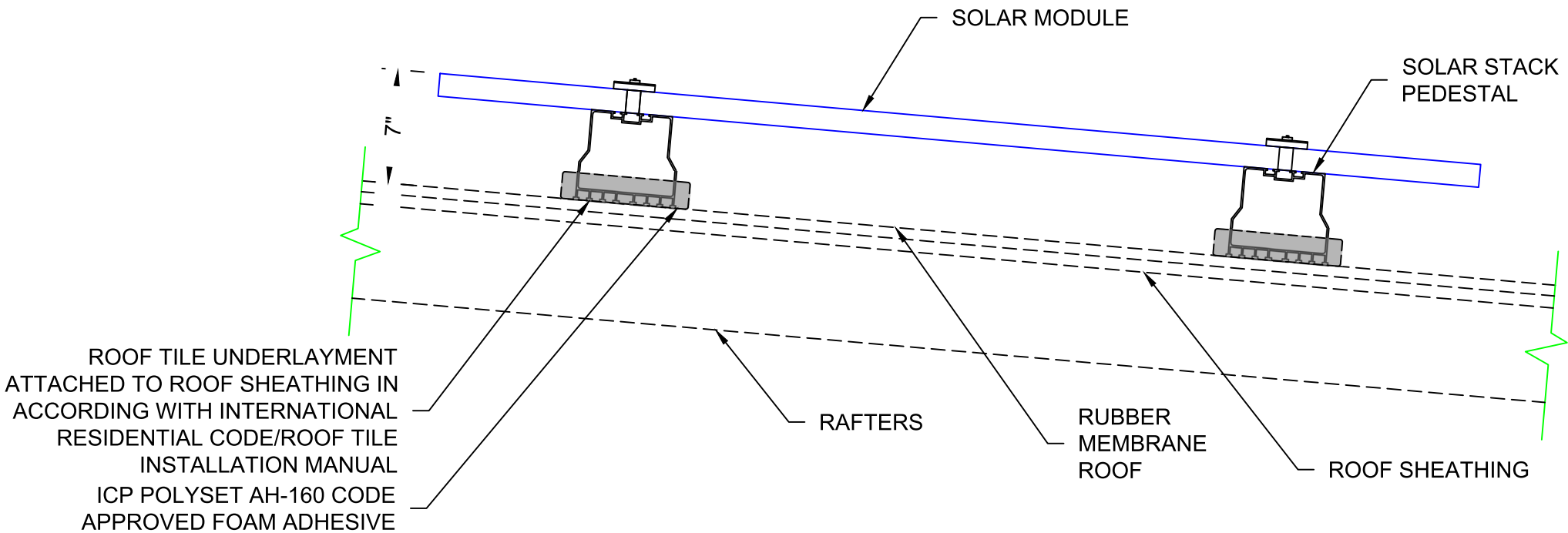
- EQUIPMENT USED SHALL BE NEW, UNLESS OTHERWISE NOTED.
 - EQUIPMENT USED SHALL BE UL LISTED, UNLESS OTHERWISE NOTED.
 - EQUIPMENT SHALL BE INSTALLED PROVIDING ADEQUATE PHYSICAL WORKING SPACE AROUND THE EQUIPMENT AND SHALL COMPLY WITH NEC.
 - COPPER CONDUCTORS SHALL BE USED AND SHALL HAVE AN INSULATION RATING OF 600V, 90°C, UNLESS OTHERWISE NOTED
 - CONDUCTORS SHALL BE SIZED IN ACCORDANCE TO THE NEC. CONDUCTORS AMPACITY SHALL BE DE-RATED FOR TEMPERATURE INCREASE, CONDUIT FILL AND VOLTAGE DROP.
 - ALL CONDUCTORS, EXCEPT PV WIRE SHALL BE INSTALLED IN APPROVED CONDUITS OR RACEWAY. CONDUITS SHALL BE ADEQUATELY SUPPORTED AS PER NEC.
 - AC DISCONNECT SHOWN IS REQUIRED IF THE UTILITY REQUIRES VISIBLE-BLADE SWITCH.
 - EXPOSED NON-CURRENT CARRYING METAL PARTS SHALL BE GROUNDED AS PER NEC.
 - LINE SIDE INTER-CONNECTION SHALL COMPLY WITH NEC.
 - SMS MONITORING SYSTEM AND IT'S CONNECTION SHOWN IS OPTIONAL. IF USED, REFER TO SMS INSTALLATION MANUAL FOR WIRING METHODS AND OPERATION PROCEDURE.
 - ASHRAE FUNDAMENTAL OUTDOOR DESIGN TEMPERATURES DO NOT EXCEED 47°C IN THE U.S. (PHOENIX, AZ OR PALM SPRINGS, CA)
 - FOR LESS THAN 9 CURRENT-CARRYING CONDUCTORS IN ROOF MOUNTED SUNLIGHT CONDUIT USING THE OUTDOOR TEMPERATURE OF 47°C
 - 10AWG CONDUCTOR ARE GENERALLY ACCEPTABLE FOR MODULES WITH AN I_{sc} OF 9.6 AMPS WITH A 15 AMP FUSE.
- WIRE SIZING FOR OCPD
EX (I_{sc} *(1.25)(1.25))/(# OF STRINGS IN PARALLEL) = WIRE AMPACITY OR USING NEC TABLE 690.8

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Structural Details		
S2	Rafter	2x4 O.C. 24"

- NOTES:
- ALL WORK SHALL COMPLY WITH REQUIREMENTS OF INTERNATIONAL RESIDENTIAL CODE (IRC 2021), LOADING CODE (ASCE 7-16), WOOD DESIGN CODE (NDS 2015), AND LOCAL REQUIREMENTS.
 - LOAD CRITERIA PER :
 - EXPOSURE CATEGORY "B"
 - GROUND SNOW LOAD, $P_g = 30$ PSF
 - LATERAL LOAD RISK CATEGORY "II"
 - ULTIMATE DESIGN WIND SPEED = 115 MPH
 - SOLAR PANELS AND RACKING SYSTEMS SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATION.
 - FOLLOW ALL LOCAL AND FEDERAL SAFETY REQUIREMENTS.

STRUCTURAL ATTACHMENT DETAIL

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Building Code

International Residential Code (IRC) 2018

Electrical Code

National Electrical Code (NEC) 2023

Wind Speed

30 mph

Snow Load

30 psf

Roofing

Asph/Flt Shingles

Foundation

Concrete

Other

BLK

Notes

S



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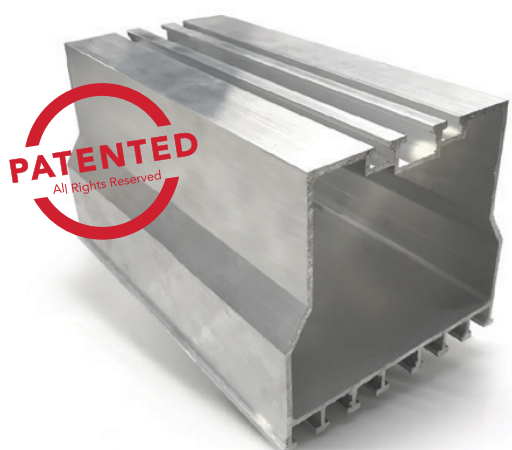
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INSTALLATION MANUAL v.1

SOLAR STACK MOUNTING SYSTEM FOR FLAT ROOFS



ZERO
PENETRATION
SOLAR MOUNTING PEDESTAL

US PATENT No 8,104,231

US PATENT No 8,615,954

US PATENT No 9,315,999

INNOVATIVE

PRODUCTS FOR ROOFING & SOLAR

TABLE OF CONTENTS

INSTALLATION INSTRUCTIONS

1. BEFORE YOU START	
2. IMPORTANT NOTES	
3. SOLAR STACK'S COMPONENTS	
4. PREPARATION OF THE ROOF	7
5. ARRAY LAYOUT	8
6. INSTALLING SOLAR STACK PEDESTALS	9
7. INSTALLING THE MODULES	12
8. INSTALLING THE MODULE CLAMPS	14
9. GROUNDING	16
10. MODULE COMPATIBILITY	18



BEFORE YOU START

Please carefully read through this installation manual before beginning maintenance work. Failure to follow these installation instructions may result in property damage, bodily injury or even death. Please keep this manual safe for future reference.

This installation manual describes proper installation standards required for product reliability. Warranty details are as stated. All installers must thoroughly read this installation manual and follow the installation procedures prior to installation. Failure to follow these guidelines may result in property damage, bodily injury or even death.



IT IS THE INSTALLER'S RESPONSIBILITY TO:

Ensure safe installation of all electrical aspects of the array. All electrical installation and procedures should be conducted by a licensed electrician or solar contractor. Routine maintenance of a module or panel shall not involve breaking or disturbing the bonding path of the system. All work must comply with national, state and local installation procedures, product and safety standards.

Comply with all applicable local or national building and fire codes, including any that may supersede this manual.

Ensure all products are appropriate for the installation, environment, and array under the site's loading conditions.

Use only Solar Stack parts or parts recommended by Solar Stack. Substituting parts may void any applicable warranty.

Ensure provided information is accurate. Issues resulting from inaccurate information are the installer's responsibility.

Ensure bare copper grounding wire does not contact aluminum and zinc-plated steel components, to prevent risk of galvanic corrosion.

If loose components or loose fasteners are found during periodic inspection, re-tighten immediately. If corrosion is found, replace affected components immediately.

Provide an appropriate method of direct-to-earth grounding according to the latest edition of the National Electrical Code, including NEC 250: Grounding and Bonding, and NEC 690: Solar Photovoltaic Systems.

Disconnect AC power before servicing or removing modules, AC modules, micro inverters and power optimizers.

Review module manufacturer's documentation for compatibility and compliance with warranty terms and conditions.

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IMPORTANT NOTES

- Solar Stack Roof mounting systems are UL 2703 listed. Solar Stack Mounting Systems, Mounting devices, Clamping/Retention Devices and PV modules.
- Solar Stack systems have been evaluated for module-to-system bonding and mechanical load to the requirements of UL/ANSI 2703.
- This racking system may be used to ground and/or mount a PV module complying with UL 1703 only when the specific module has been evaluated for grounding and/or mounting in compliance with the included instructions.
- Solar Stack mounting systems were evaluated assuming a 20 Amp maximum series fuse size.
- The system is a non-separately derived system. The following components have been evaluated for bonding as the fault current ground path: PV module, Mid Clamp, End Clamp, Pedestal and Ground Lugs.
- Solar Stack pedestals can be installed on BUR (Build Up Roofing), Mineral surface (Modified Bitumen), EPDM, PVC, TPO, Hypalon and Concrete roofs.



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SOLAR STACK'S COMPONENTS

Solar Stack's innovative design incorporates a patented adhesive that is code-approved.

Solar Stack eliminates potentially disastrous roof penetration (and the roof itself) to remain intact. Since there's no need for structural connection points, installation is significantly simpler. The design cuts labor and installation time in half, avoiding costly, time-consuming work with accessing attic spaces and modifying structural connections.

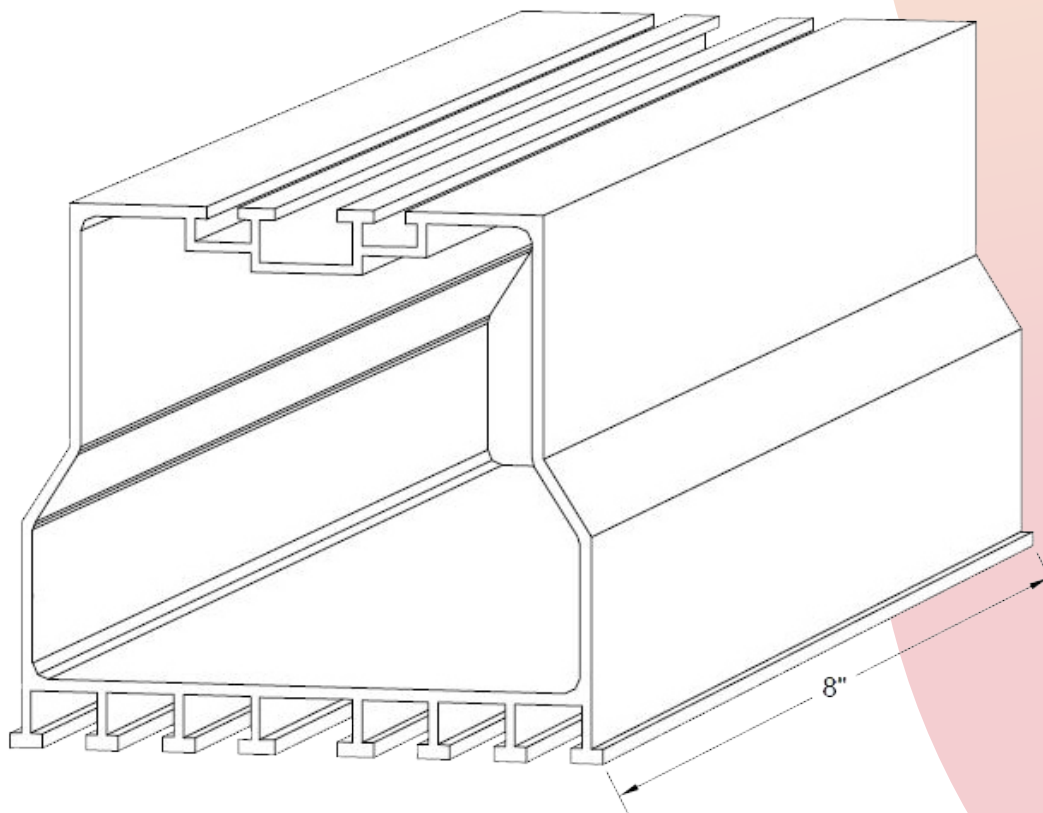
Additionally, Solar Stack eliminates crawling into hot or cold attic spaces to install solar panels. And because there's no drilling, you have total peace of mind that roof leaks won't result from installation. Solar Stack has undergone rigorous testing by accredited facilities and earned the most stringent certifications from the state of Florida for use in High-Velocity Hurricane Zones, ensuring its durability.

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SOLAR STACK'S COMPONENTS

System/Components "SOLAR STACK" or "DOUBLE DOWN" Sc

8 in. "SOLAR STACK " or "DOUBLE DOWN " Solar Pedestal

Overall Product Dimensions:

Length: 8.00 in.

Width: 5.00 in.

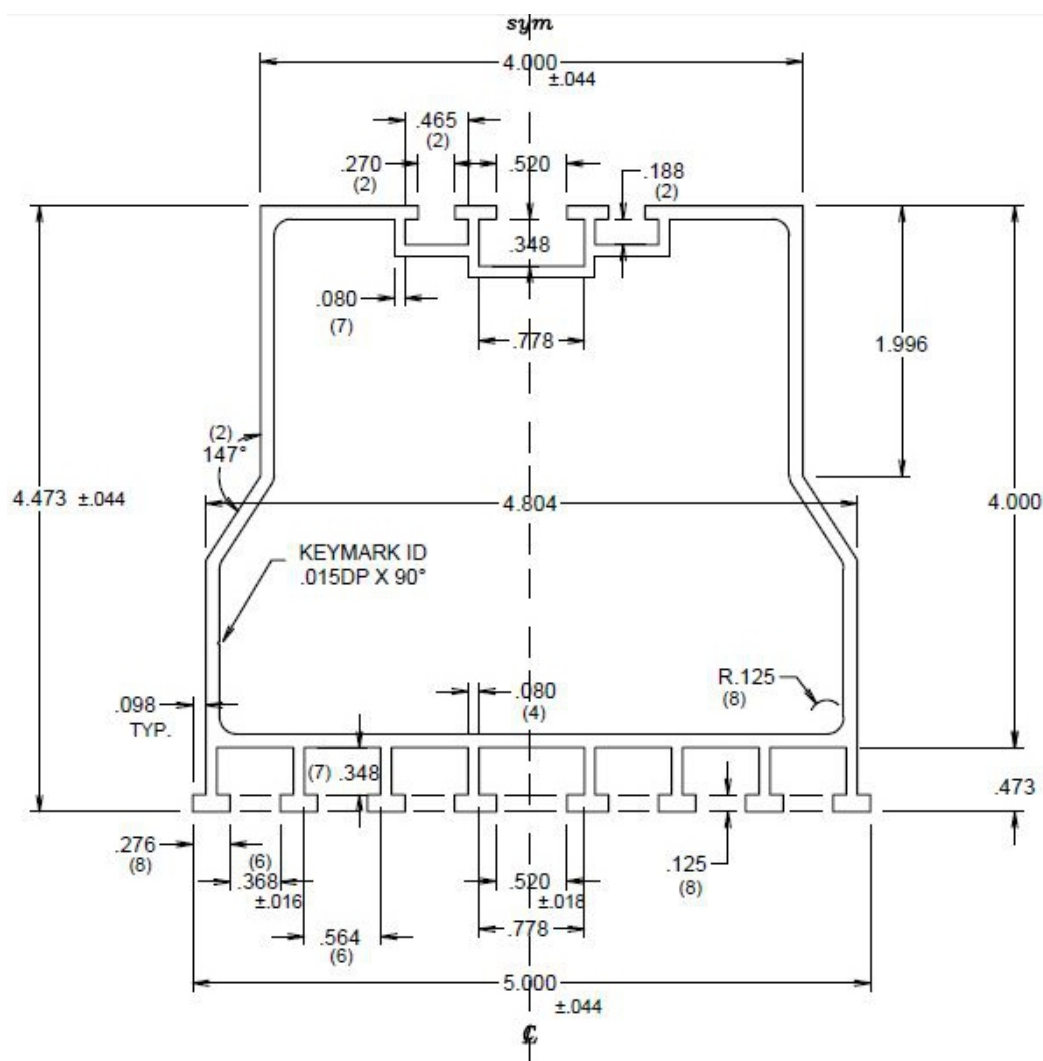
Height: 4.75 in.

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PREPARATION OF THE ROOF

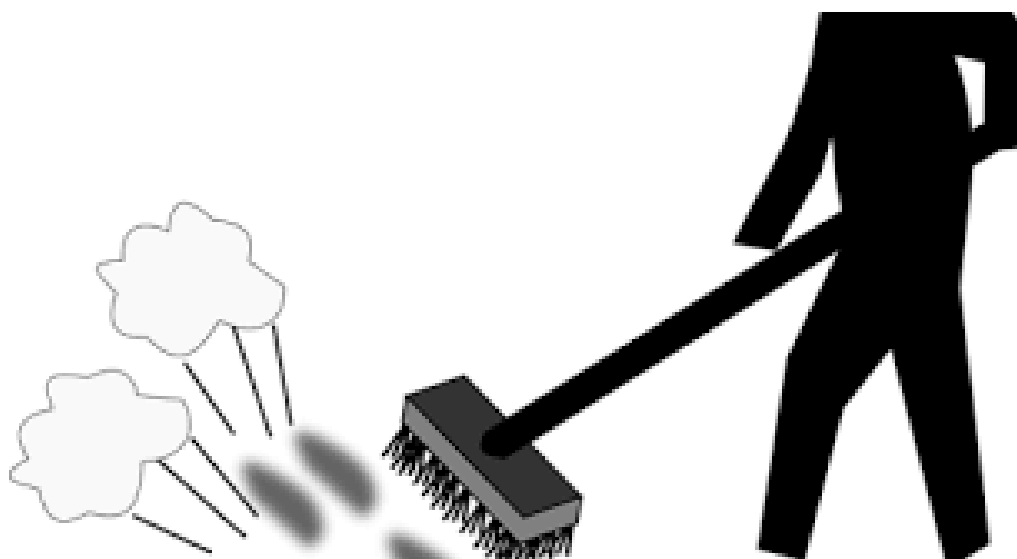
Solar Stack pedestals can be installed on the Asphalt, (with a brush. Make sure that the place where the Solar Stack placed on the roof is clean, dry and flat. The presence of gravel, to instability of the system and/or can cause damage to the roof.

Surface Preparation. All roof surfaces must be free of any water before adhesive is applied. Clean the hole of any sawdust. Follow adhesive manufacturers application instructions.

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In determining the location of the solar panels on the flat roof, it is very important to pay attention to the incoming sunlight. Throughout the day and throughout the year.

Place the solar panels on a roof that has no shadow. The shadow of a chimney, trees and nearby buildings have a detrimental effect on the yield of the solar panels.

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ARRAY LAYOUT

Using your engineered design, locate the array layout on the roof, and determine mount locations.

Measure and determine the spacing between the Solar Stack pedestals according to the solar array design.

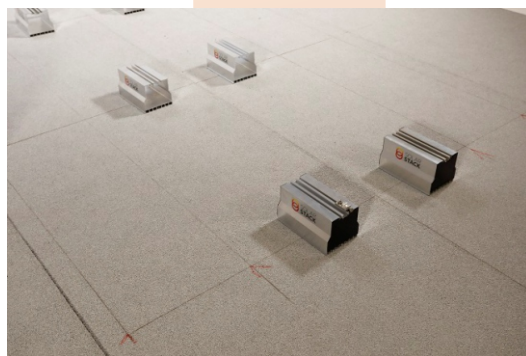
Snap and mark the lines across the roof for all the mounts.

Prepare the Solar Stack pedestals and place them next to the marked lines where they will be installed.

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INSTALLING SOLAR STACK PEDESTALS

Determine the spacing of Solar Stack pedestals for your Surface Preparation. All roof surfaces must be free of a water before adhesive is applied. Clean the surface of roof of materials. Follow adhesive manufacturers application instructions.

Approved adhesive types that can be used for installation can be found in the following table.

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Table 7.1 Uplift Resistance Loads/Pressure ²				
Uplift Load applied to the Top of "SOLAR STACK GEN 3" or "DOUBLE DOWN GEN 3" Assembly (90° To Roof Surface)				
Adhesive Type:	GEN 3 Pedestal Size:	Paddy Dimensions:	Paddy Weight:	Ultimate Load ¹ :
ICP Polyset® AH-160	12"	16-5/8" x 8-7/8"	79.9 grams	-833 LBF
ICP Polyset® AH-160	8"	12-3/8" x 8"	62.6 grams	-658 LBF
DOW Tile Bond	8"	10-1/2" x 7"	55 grams	-383 LBF
DOW Insta-Stik	8"	10-1/2" x 7"	59.8 grams	-400 LBF
DAP Stormbond	8"	10-1/2" x 7"	52.1 grams	-500 LBF
Notes:				
1. Ultimate Loads with 0 margin of safety applied to the test loads.				
2. Assembly was tested for vertical up.				

Table 7-1 (Evaluation report for Florida product approval #FL 21074.6 R4)

INSTALLING SOLAR STACK PEDESTALS

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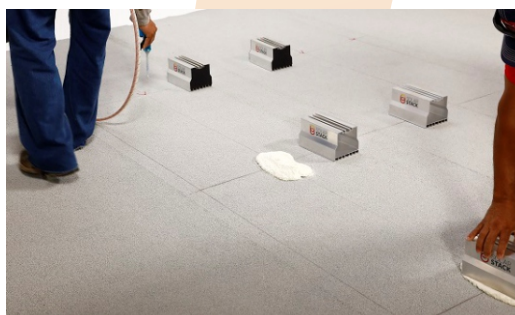
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Dispense adhesive into location of mount, making room for expansion of adhesive.

(Note: All Polyurethane Foam Adhesives will expand up to 3 time's original sprayed size. Take care to allow for expansion and required contact area to Solar Stack Pedestal to ensure performance as designed.)



INSTALLING SOLAR STACK PEDESTAL

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Install Solar Stack pedestal into fresh adhesive and allow to cure in accordance with adhesive manufacturer recommendations.

Adhesive is expanding and Ready for Solar Stack pedestal Installation.



All exposed polyurethane adhesive must be protected from UV exposure. This can be accomplished by coating with an exterior grade outdoor acrylic paint/coating or covering the foam adhesive with another method.



INSTALLING THE MODULES

The next step is to lay down the solar modules and install them to the Solar Stack pedestals. Modules can be installed in portrait or landscape orientation, according to the engineering plans. As well as taking measurements, we'll check that the modules look straight – not just from where we're sitting on the roof, but from down on the ground too.

Modules will be connected with each other, according to the provided engineering plans in regards to the proper stringing.

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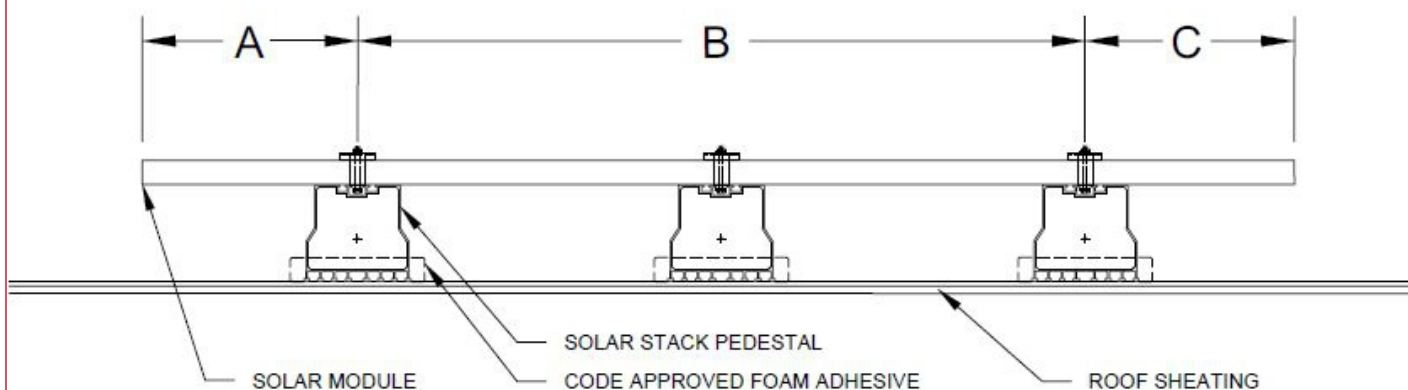


INSTALLING THE MODULES

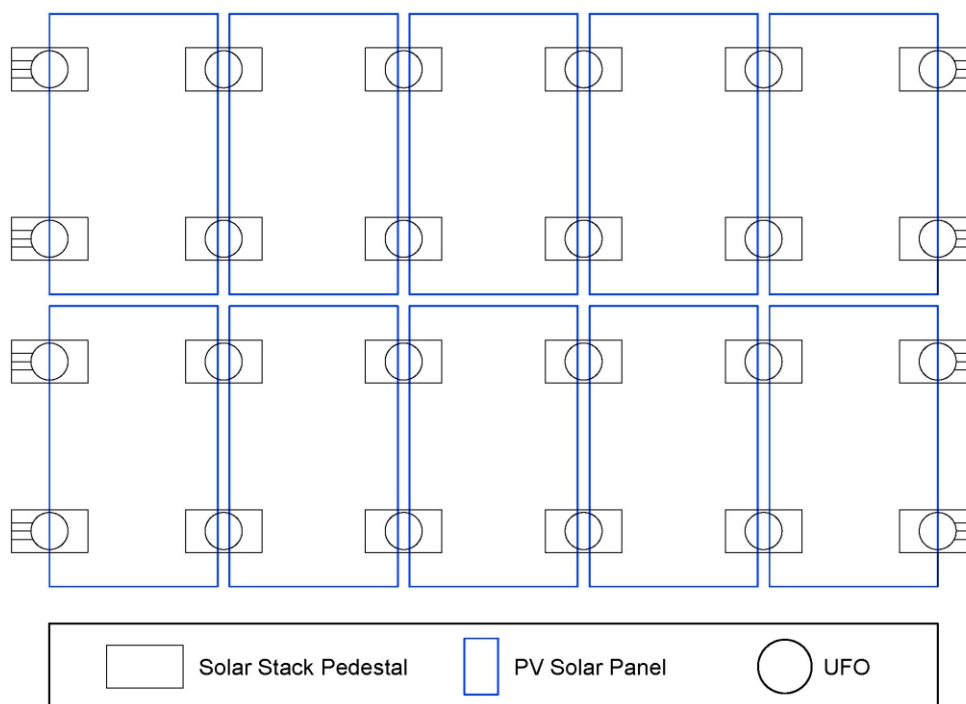
This is a typical module, installed on the Solar Stack pedestals per module/raw, will be determined according to regards to the typical geographical region and existing wind load. If the wind load is greater than HVHZ, then Roof underlayment must be approved and installed according to local regulations and codes. Placement of the pedestals and distance between them will be determined according to the module manufacturer instructions.

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Karen Benoit



Typical module layout with Solar Stacks mounts.



IMPORTANT: Periodic re-inspection of the installation for loose components, loose fasteners and any corrosion, such that if found, the affected components are to be immediately replaced.

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INSTALLING THE MODULE CLAMPS

Clamps hold the modules onto the frame. There are two types: end-clamps and mid-clamps. End-clamps are used at the end of a row of modules fixing the last one in place, while mid-clamps sit between two panels and ensure they're spaced equally.

Attach the modules using the clamps as noted on the drawing:

- Insert the middle clamps and tighten them.
- Insert the end clamps laterally in the pedestal. The end clamps are attached and then tightened at the height of the module frame.



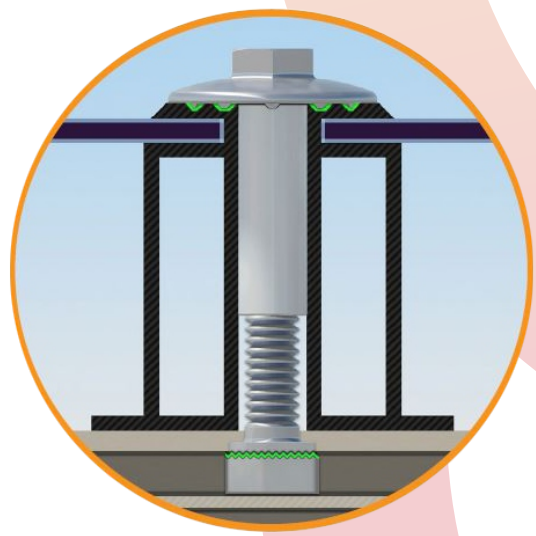
INSTALLING THE MODULE CLAMPS

Modules should be installed to the Solar Stack pedestals using middle/end clamps. There are different types of clamps available for installation. Solar Stack recommends Ironridge UFO clamps.

The Universal Fastening Object (UFO) - Ironridge racking, securely bonds solar modules to the Solar Stack pedestals. It comes assembled and lubricated and can fit wide range of module heights. Stopper Sleeve, snaps onto the UFO, and converts it into bonded end clamp.

The recommended torque to be applied to the following components and connections for proper assembly and bonding for both systems:

End Clamp	80 in-lbs.	Mid Clamp	80 in-lbs.
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GROUNDING

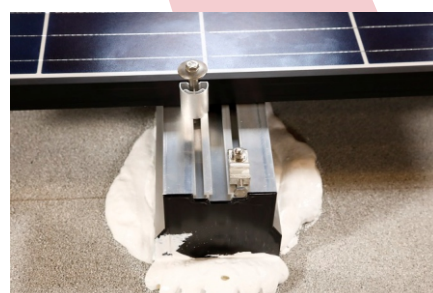
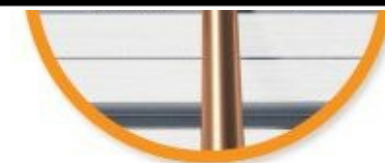
Grounding lug will be mounted at every row. Grounding lugs connects the PV modules to the grounding conductors. Attach the grounding lug to the Solar Stack Pedestal with hardware. Secure the grounding wire to the lug by tightening the set screw and torque Grounding Lug 120 in-lbs. at Pedestal terminal and 5 ft-lbs. at wire terminal.

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GROUNDING

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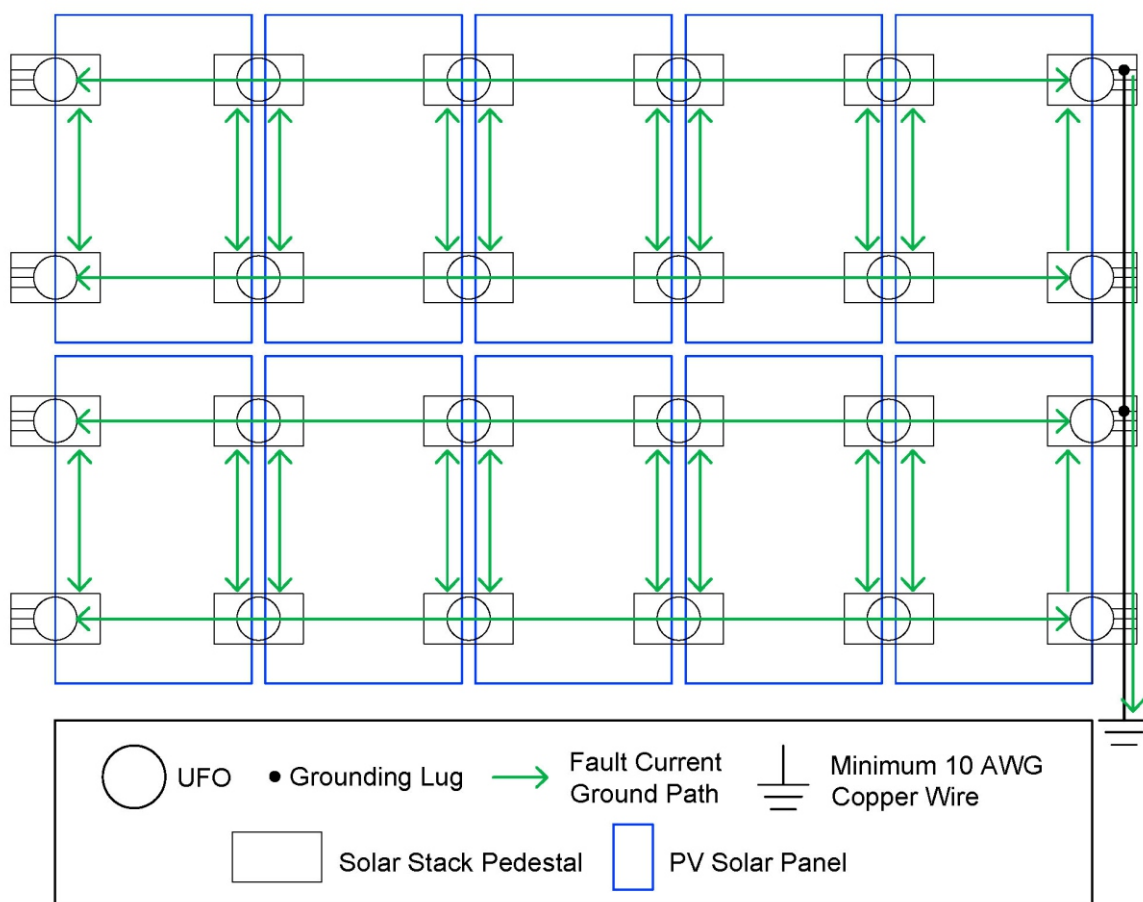
Historic Preservation Commission

Karen B. Smith

Entire solar array must be grounded. Modules should be bonded to Solar Stack pedestals with the manufacturer approved middle/end clamps or UFO clamps. The UFO family of components eliminates the need for additional hardware by bonding PV modules directly to the Solar Stack pedestals. The hardware forms secure electrical bonds with both the module and the pedestal, resulting in many parallel grounding paths throughout the system. This leads to safer and more reliable installations.

Grounding wire should be installed, in a way that will electrically bond the module rows between each other. Grounding lug will be installed on the Solar Stack pedestal (one per each row) and bond the grounding wire. Grounding wire should be min #10 AWG (Bare Copper wire) size. If other than specified, then must be determined by a Professional Engineer, in accordance to the National Electric Code.

Grounding conductors, from each row of the array, must be bonded together, in order to form a solid electrical connection/system, which will continue to the closest Junction or Combiner box. From that point, according to the Professional Engineer ampacity calculations, based on the NEC, proper grounding wire will continue to run all the way down to the determined system grounding point.



The system is a non-separately derived system. The following components have been evaluated for bonding as the fault current ground path: PV module, Mid Clamp, End Clamp, Pedestal and Ground Lugs.

MODULE COMPATIBILITY

Solar Stack racking system may be used to ground and/c UL 1703 only when the specific module has been evaluated compliance with the included instructions.

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REVIEWED

By Devon.Murtha at 11:28 am, Oct 09, 2025

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Karen Benoit



SnapNrack™

Solar Mounting Solutions

TopSpeed™ Mounting System

Installation Manual

snapnrack.com



Fire

SnapNrack TopSpeed™ has been investigated for a Class A System Fire Classification for Steep-Sloped and low sloped roofs with Type 1 and Type 2 modules. Because the system was tested at 5 inches above the test roof fixture, TopSpeed™ can be installed without any height restrictions due to System Fire Classification. See Appendix A for potential module-specific height restrictions due to module temperature. The Skirt is considered an optional component with respect to Fire Classification, as SnapNrack TopSpeed™ maintains the same Fire Classification Rating both with and without the skirt.

NOTE: Modules with an asterisk* have a fire rating that is different from Type 1, Type 2 or Type 29. SNR systems have only been evaluated for use with Type 1, Type 2, or Type 29 modules. Modules with a different fire type rating should be considered to not have been evaluated for use with SNR systems with respect to a system fire rating.

Inspection Practices

SnapNrack recommends a periodic re-inspection of the completed installation for loose components, loose fasteners, and any corrosion, such that if found, the affected components are to be immediately replaced.

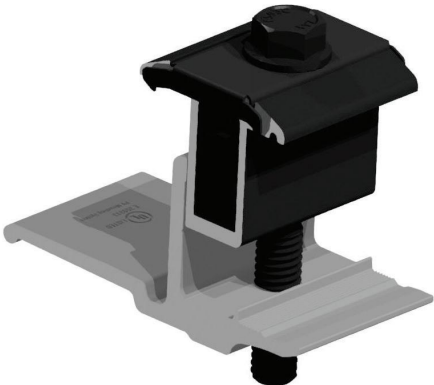
Component Details

TopSpeed™ Structural Components



TopSpeed™ Mount

SnapNrack TopSpeed™ Mount assembly including SpeedSeal™ base, clamp top, and (4) SnapNrack #14 SS Wood Screws with 1/2" Hex Head.



TopSpeed™ Clamp

SnapNrack TopSpeed™ Clamp assembly including including Link bottom, Link top, and springs.



Universal Skirt

SnapNrack Universal Skirt in double portrait or single landscape lengths.

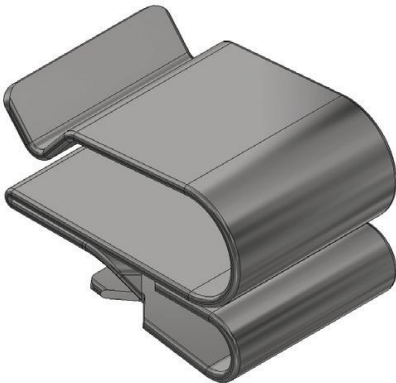


Wire Managements Components



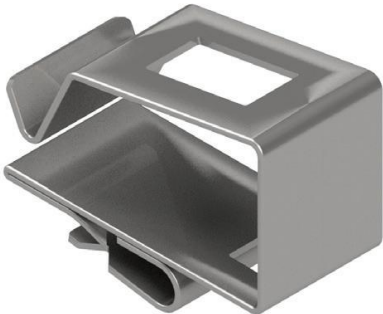
Skirt Spacers

SnapNrack Universal Skirt Spacer for 40mm, 38mm, 35mm, 32mm, and 30mm modules.



Smart Clip

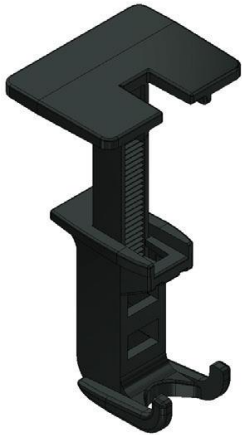
Module frame cable clip, holds two PV wires or Enphase IQ-Cables.



Smart Clip XL

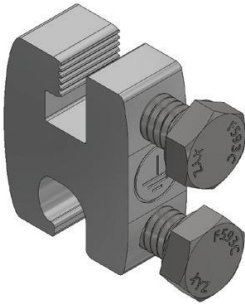
Module frame cable clip, holds six PV wires or four Enphase IQ-Cable.

Grounding/MLPE Components



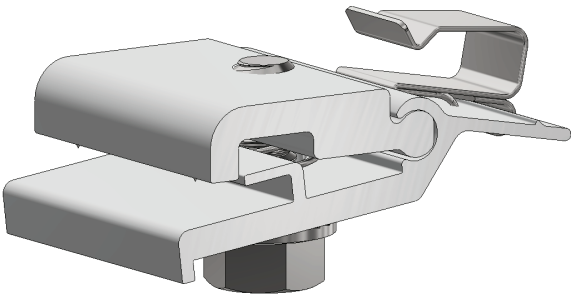
Wire Saver

Designed to secure conductors that become loose and hang below the array, holds one conductor.



Ground Lug

SnapNrack Ground Lug assembly used for attaching the Equipment Grounding Conductor on to one module or any TopSpeed™ Mount per array.



MLPE Frame Attachment Kit

Attaches MLPEs (Module Level Performance Enhancers) and other related equipment to the module frame.



Component Details

Hardware Torque Specifications

The recommended torque to be applied to components for proper assembly and bonding are as follows:

Hardware Description	Torque Specification
All TopSpeed™ ½” bolts; System Leveling Bolt, TopSpeed™ Mount Clamping Bolt, Clamp Bolt	16 ft-lb
Ground Lug model 242-92202 to Module Frame or anywhere on the TopSpeed™ Mount, and Ground Lug model 242-92202 to Grounding Electrode Conductor (6-12 SOL)	8 ft-lb
MLPE Frame Attachment Kit, MLPE Rail Attachment Kit	10 ft-lb
SolarEdge Frame Mounted Microinverter Bracket to Module Frame	11 ft-lb
Enphase Frame Mounted Microinverter Bracket to Module Frame	13 ft-lb
Ground Lug model SGB-4 to module	75 in-lb
Ground Lug model SGB-4 to Grounding Electrode Conductor (4-14 SOL or STR)	35 in-lb
Ground Lug model GBL-4DBT to module	35 in-lb
Ground Lug model GBL-4DBT to Grounding Electrode Conductor (10-14 SOL or STR)	20 in-lb
Ground Lug model GBL-4DBT to Grounding Electrode Conductor (8 SOL or STR)	25 in-lb
Ground Lug model GBL-4DBT to Grounding Electrode Conductor (4-6 SOL or STR)	35 in-lb



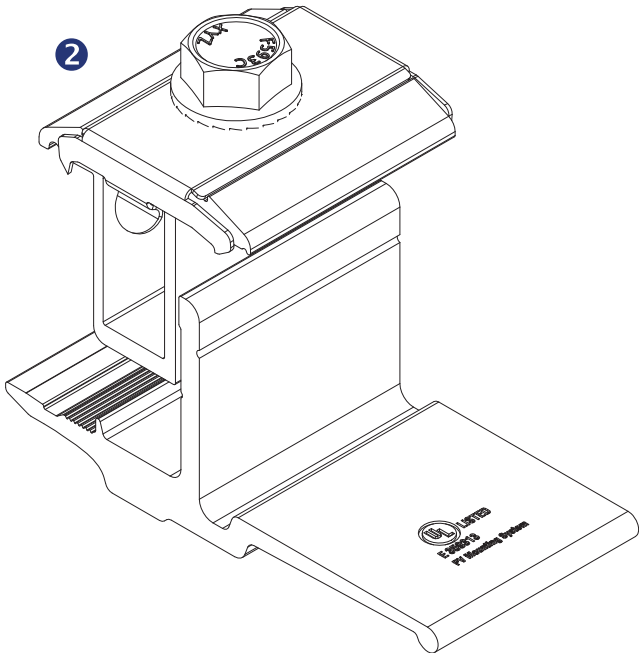
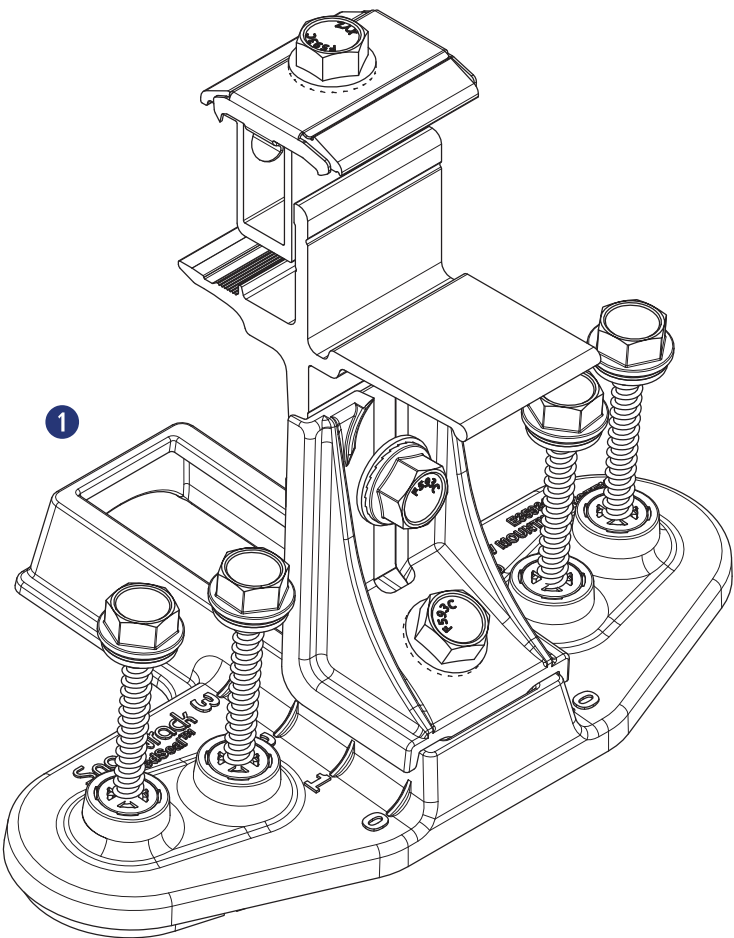
Module Installation

Required Tools

- Socket Wrench
- Torque Wrench
- 1/2" Socket
- Roofing Sealant

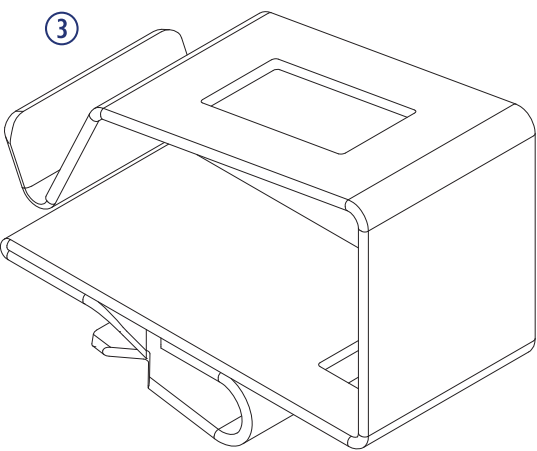
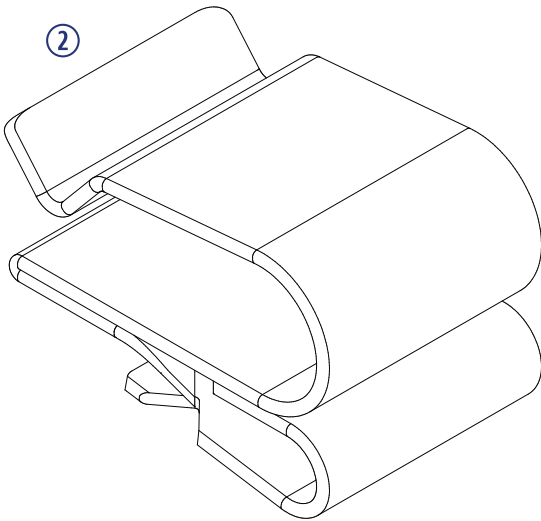
Materials Included

- ① SnapNrack TopSpeed™ Mount
- ② SnapNrack TopSpeed™ Clamp



Other Materials Required

- ② SnapNrack Smart Clip (2-5 per module)
See Wire Management section for details
- ③ SnapNrack Smart Clip XL (10-20 per array)
See Wire Management section for details





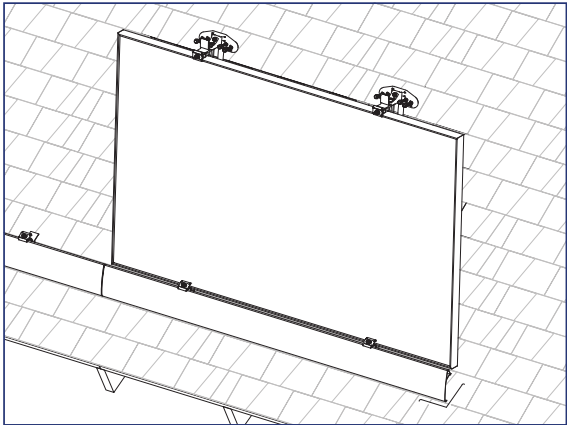
Module Installation

INSTALLATION INSTRUCTIONS - BOTTOM ROW

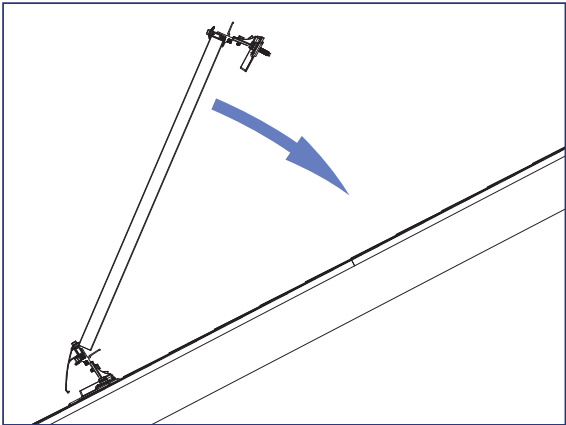
Recommended Best Practice:
Attach all TopSpeed™ mounts as the modules are being prepped with MLPEs on the ground. Attach Mounts before attaching MLPEs to simplify wire management.

Install Note:
It is recommended that module leads and connectors are prepared for installation using SnapNrack Smart Clips before being brought to the rooftop.

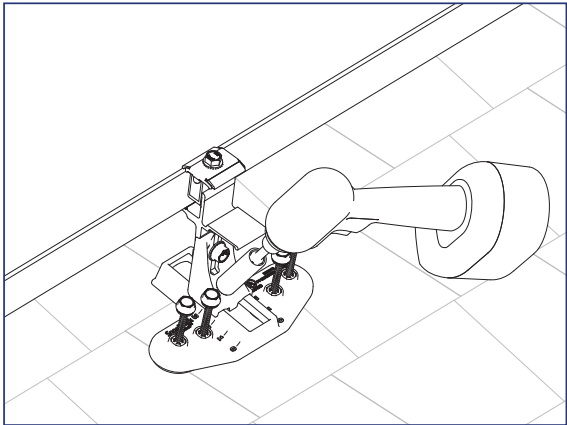
- With no MLPE, secure module leads to module frame to allow access to connectors while modules are installed
- Secure MLPE device to module frame with SnapNrack MLPE Frame Attachment Kit and connect module leads to MLPE, and manage leads by positioning connectors to allow access during installation



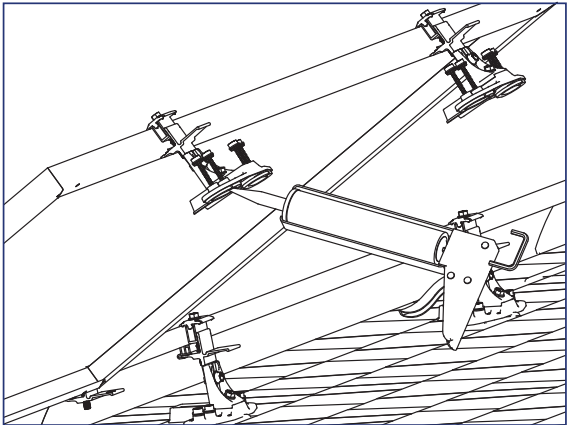
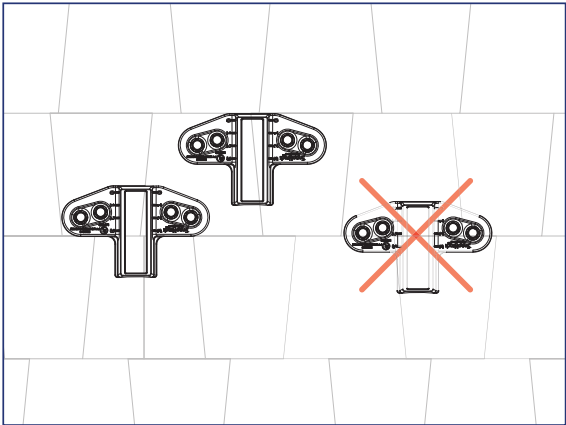
1) Rest downslope edge of module on the Mounts and/or Clamps position module so side edge is flush with marked edge of array layout or Skirt.



2) Lower upslope edge of module while simultaneously applying slight pressure to seat module into Mounts and/or Clamps.



3) When module is level with roof verify the Speedseal™ portion of the TopSpeed™ Mounts are positioned entirely on one course of composition. If required listen the 1/2" nut and adjust the base as needed then tighten the bolt.



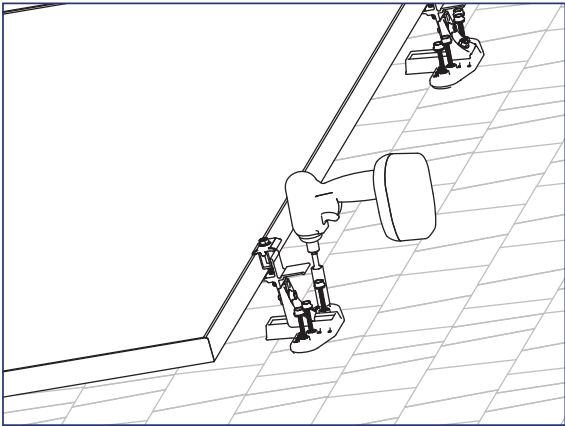
4) Lift the upslope edge of the module and fill the SpeedSeal™ reservoir with roofing sealant.

Install Note:
Roof sealant should be expelled from both vents of the TopSpeed™ Mount as it is installed to assure the proper amount of roof sealant has been applied. If sealant is not expelled from all four vents, remove TopSpeed™ Mount, add more sealant to the cavity, then reinstall.

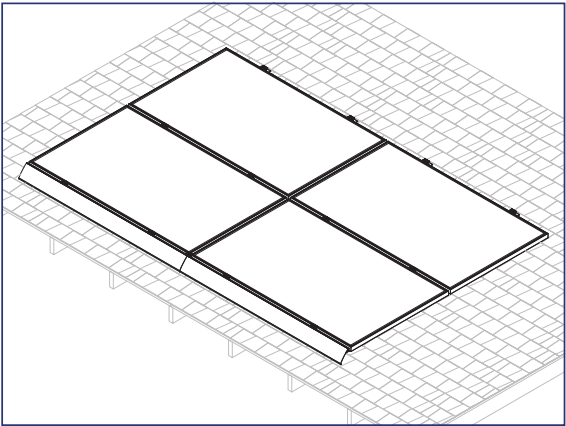


Module Installation

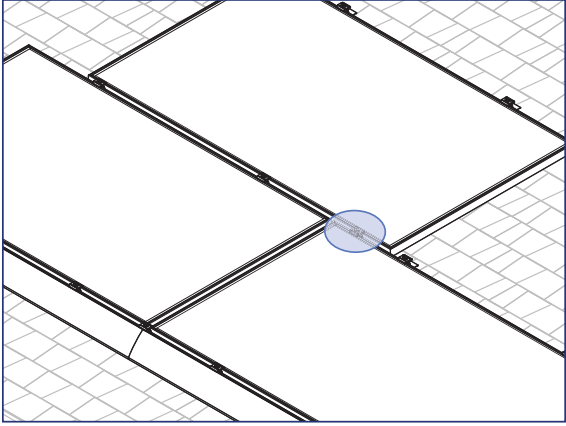
INSTALLATION INSTRUCTIONS - BOTTOM ROW



5) Lower the module to the roof and drive the (4) pre installed Snaprack #14 Wood Screws with 1/2" hex head into the roof sheathing.



6) Repeat steps 1 through 5 for additional modules in the array.



7) For staggered arrays and arrays with mixed orientation, use the TopSpeed™ Clamp as needed to support the modules.

Install Note:

Roof sealant should be expelled from both vents of the TopSpeed™ Mount as it is installed to assure the proper amount of roof sealant has been applied. If sealant is not expelled from both vents, remove TopSpeed™ Mount, add more sealant to the cavity, then reinstall.

When installing a TopSpeed™ Clamp for support of an over cantilevered module, the clamp shall be installed 2-6" from the edge of the upslope (cantilevered) module.

Grounding Specifications

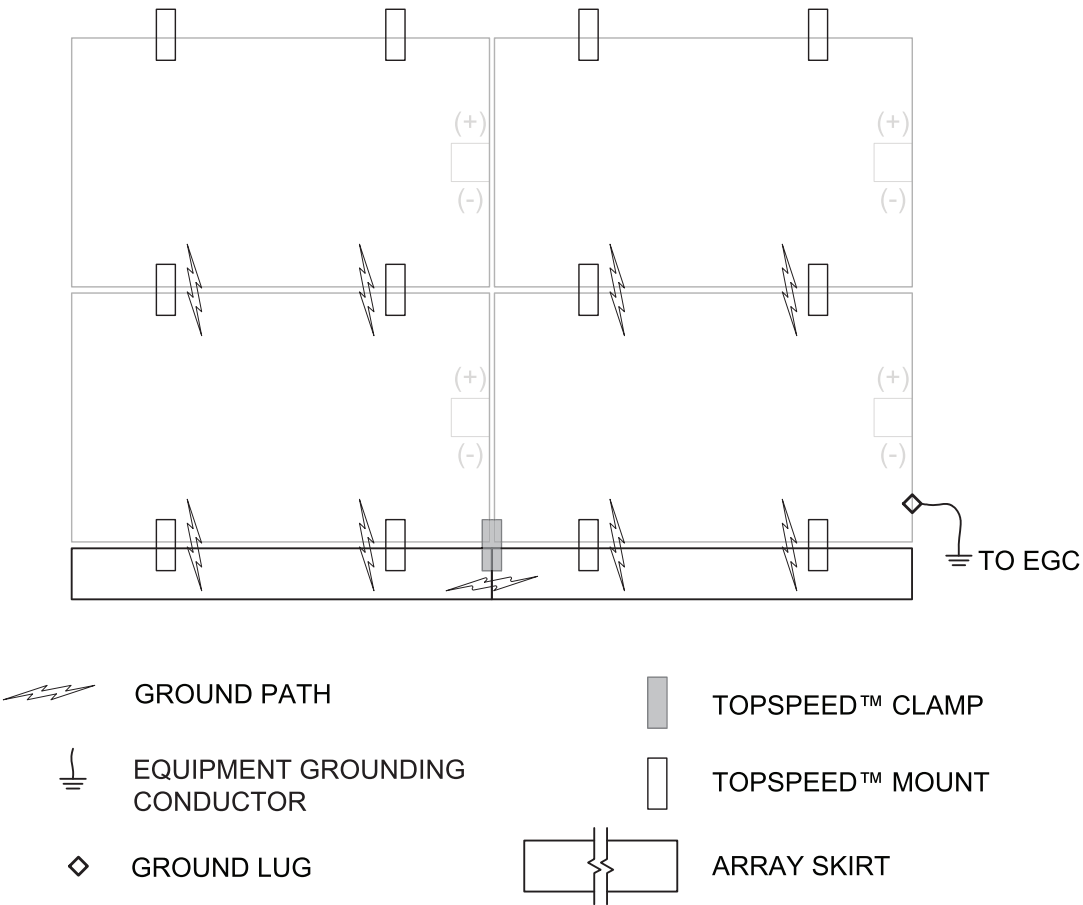


GROUND PATH DETAILS

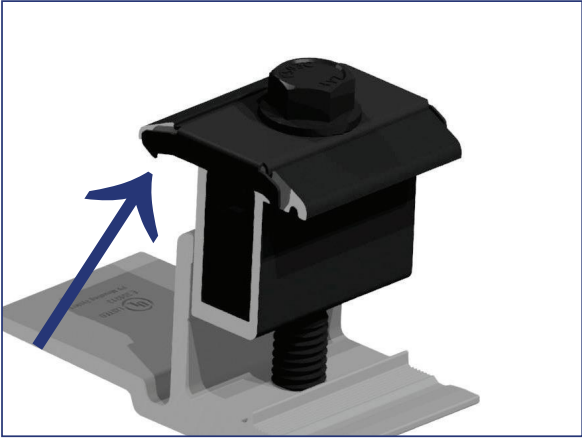
All TopSpeed™ components in the fault current ground path have been Certified to be used multiple times for grounding/bonding. The UL 2703 Listing does not specify a maximum number of uses for the Mount, Link, or Ground Lug. Review the requirements of the National Electrical Code (NEC) Article 250 to select the appropriate Equipment Grounding Conductor size based on the short-circuit current of the PV system.

When using Ground Lug R the following components are part of the fault current ground path:

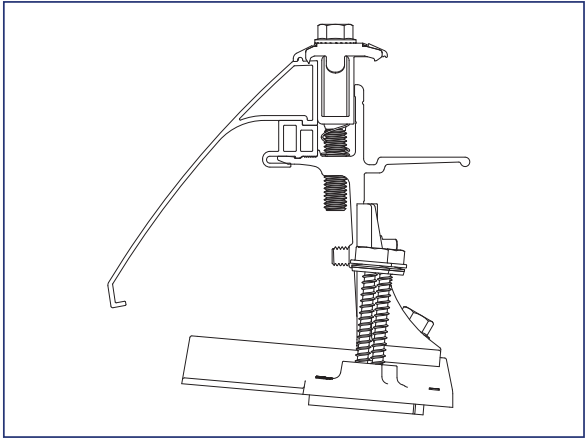
- SnapNrack, TopSpeed™ Mount
- SnapNrack, TopSpeed™ Clamp



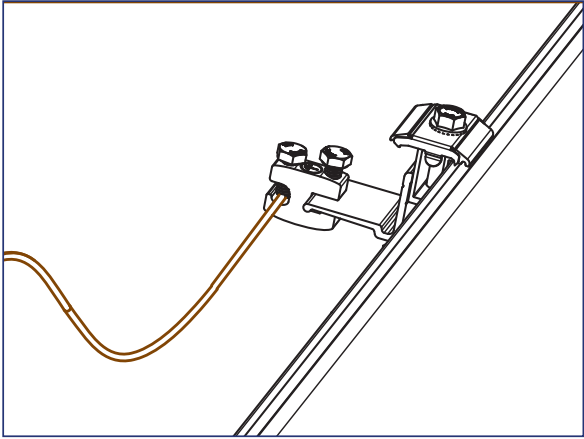
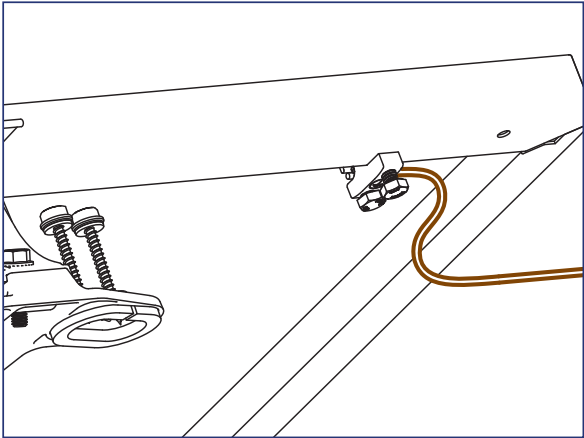
GROUNDING METHOD DETAILS



1) Row to row module bonding provided by bonding clips in Mount assembly and Clamp assembly.

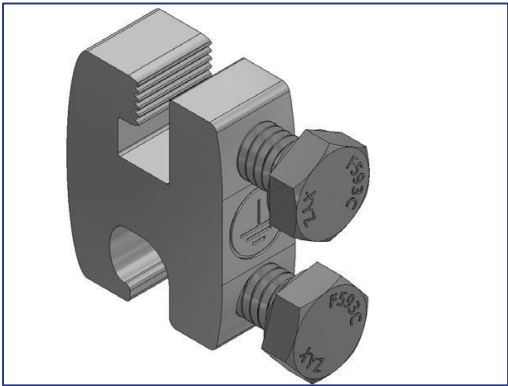


2) Column to column bonding provided by Universal Skirt and bonding clips in the Clamp assembly and/or the RL Universal Link assembly.
Module heights evaluated for bonding with Link Bonding Clamps: 40mm, 38mm, 35mm, 32mm, 30mm



3) Each continuous array is connected to Equipment Grounding Conductor through Ground Lug (242-92202) installed on one module per array.

Optionally; Install Ground Lug on the Mount Landing Pad at the top of the array.



GROUNDING MARKING DETAILS

The Ground Lug is marked with the ground symbol.



Maintaining the Grounding Bonding When Removing a Module

INSTRUCTION FOR MAINTAINING THE GROUNDING BONDING MODULE FOR SERVICING

CAUTION: Module removal may disrupt the bonding path and could introduce the risk of electric shock. Additional steps may be required to maintain the bonding path. Modules should only be removed by qualified persons in compliance with the instructions in this manual.

Module removal is not presented as a frequently expected occurrence and will not be required as part of routine maintenance.

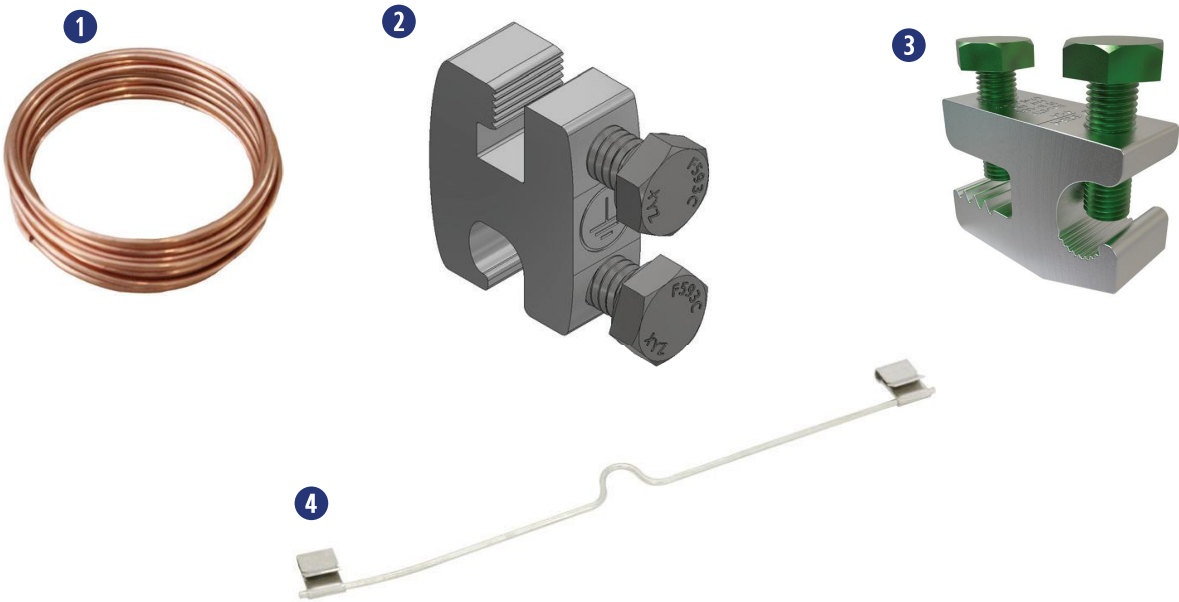
Scenarios that could result in a disruption of the bonding path are described, for example irregularly-shaped arrays, arrays consisting of individual rows, and any other scenario where module removal could disrupt the bonding path. In most cases, the removal of a module for servicing will not disturb or break grounding continuity. If a module is to be removed that will break continuity, these are the steps that must be taken to maintain a continuously bonded SnapNrack TopSpeed™ System.

Required Tools

- Socket Wrench
- Torque Wrench
- 1/2” Socket
- 7/16” Socket

Required Materials

- ① #10 Or Larger Bare Copper Conductor
- ② SnapNrack Ground Lug part no. 242-92202
- ③ Ilsco Part No. SGB-4
- ④ DnoRaxx Dynobond™

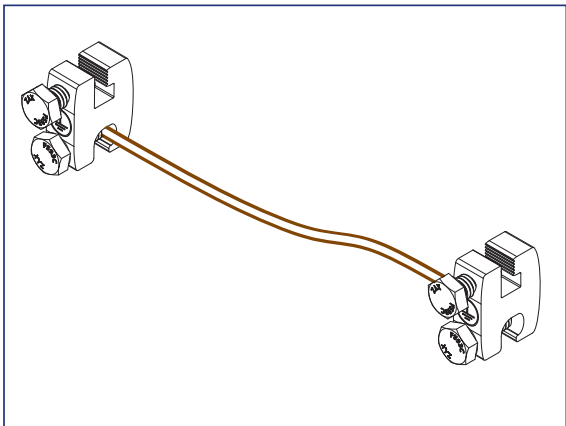


Maintaining the Grounding Bonding When Removing a Module

JUMPER ASSEMBLY INSTRUCTION & INSTALLATION

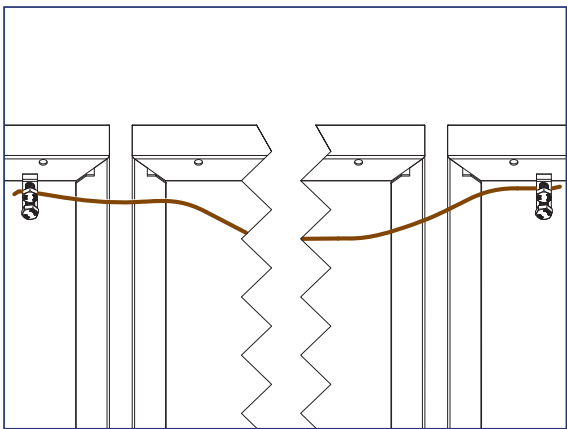
CAUTION: Do Not Remove the Module until the Jumper is installed

1) Identify the existing ground path at the location of module removal and choose an appropriate length of #10 bare copper to bridge the soon to be broken ground path.



Example of assembled bonding jumper using (2) SnapNrack Ground Lugs

- 2) Attach one ground lug to each end of #10 bare copper wire. See recommended options below:
1. (2) SnapNrack Ground Lug part no. 242-922022
 2. (2) Ilsco part no. SGB-4
 3. (1) DroRaxx DynoBond™



3) Before the module is removed, attach the assembled bonding jumper. Depending on where the module will be removed and choice of ground lug, jumper attachment locations will vary.

- SnapNrack Ground Lug part no. 242-92202 or Ilsco SGB-4 lugs can be attached to module frames or anywhere on the TopSpeed™ Mount.
- DynoRaxx DynoBond™ is approved and appropriate when a short bonding jumper is needed from module to module.

4) Service the array. With the bonding jumper installed, it is now safe to remove the module for service or maintenance.

5) After Servicing the array reinstall the module and original ground path. Only then Remove the bonding jumper.

Caution: Do not remove the bonding jumper until original ground path is established.



Q.TRON BLK M-G2+ SERIES

415 - 440 Wp | 108 Cells
22.5 % Maximum Module Efficiency

MODEL Q.TRON BLK M-G2+



The ideal solution for:



Rooftop arrays on
residential buildings

REVIEWED
By Devon.Murtha at 11:31 am, Oct 09, 2025



High performance Qcells N-type solar cells

Q.ANTUM NEO Technology with optimized module layout boosts module efficiency up to 22.5 %.



A reliable investment

Inclusive 25-year product warranty and 25-year linear performance warranty¹.



Enduring high performance

Long-term yield security with Anti LeTID Technology, Anti PID Technology², Hot-Spot Protect.



Extreme weather rating

High-tech aluminium alloy frame, certified for high snow (8100 Pa) and wind loads (3600 Pa).



Innovative all-weather technology

Optimal yields, whatever the weather with excellent low-light and temperature behaviour.



The most thorough testing programme in the industry

Qcells is the first solar module manufacturer to pass the most comprehensive quality programme in the industry: The new “Quality Controlled PV” of the independent certification institute TÜV Rheinland.

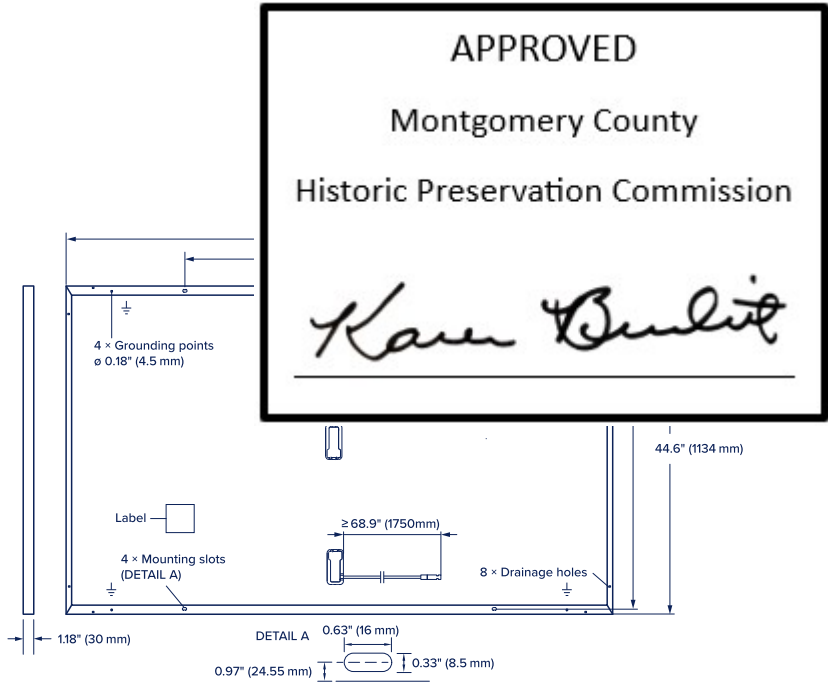
¹ See data sheet on rear for further information.
² APT test conditions according to IEC/TS 62804-1:2015, method A (~1500 V, 96 h)



Q.TRON BLK M-G2+ SERIES

Mechanical Specification

Format	67.8 in × 44.6 in × 1.18 in (including frame) (1722 mm × 1134 mm × 30 mm)
Weight	46.7 lbs (21.2 kg)
Front Cover	0.13 in (3.2 mm) thermally pre-stressed glass with anti-reflection technology
Back Cover	Composite film
Frame	Black anodised aluminium
Cell	6 × 18 monocrystalline Q.ANTUM NEO solar half cells
Junction box	2.09-3.98 in × 1.26-2.36 in× 0.59-0.71 in (53-101mm × 32-60 mm × 15-18 mm), Protection class IP67, with bypass diodes
Cable	4 mm ² Solar cable; (+) ≥68.9 in (1750mm), (–) ≥68.9 in (1750mm)
Connector	Stäubli MC4; IP68

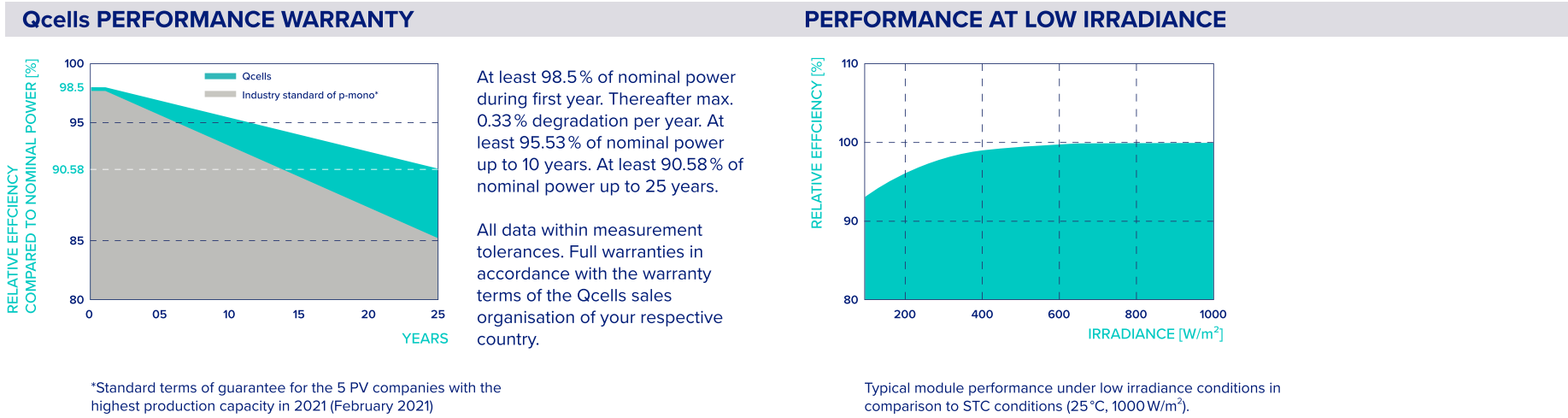


Electrical Characteristics

POWER CLASS				415	420	425	430	435	440
MINIMUM PERFORMANCE AT STANDARD TEST CONDITIONS, STC ¹ (POWER TOLERANCE +5 W/−0 W)									
Minimum	Power at MPP ¹	P _{MPP}	[W]	415	420	425	430	435	440
	Short Circuit Current ¹	I _{SC}	[A]	13.49	13.58	13.66	13.74	13.82	13.90
	Open Circuit Voltage ¹	V _{OC}	[V]	38.47	38.75	39.03	39.32	39.60	39.88
	Current at MPP	I _{MPP}	[A]	12.83	12.91	12.98	13.05	13.13	13.20
	Voltage at MPP	V _{MPP}	[V]	32.34	32.54	32.74	32.94	33.14	33.33
	Efficiency ¹	η	[%]	≥21.3	≥21.5	≥21.8	≥22.0	≥22.3	≥22.5

MINIMUM PERFORMANCE AT NORMAL OPERATING CONDITIONS, NMOT ²									
Minimum	Power at MPP	P _{MPP}	[W]	313.7	317.5	321.2	325.0	328.8	332.6
	Short Circuit Current	I _{SC}	[A]	10.87	10.94	11.00	11.07	11.14	11.20
	Open Circuit Voltage	V _{OC}	[V]	36.50	36.77	37.04	37.31	37.58	37.84
	Current at MPP	I _{MPP}	[A]	10.10	10.15	10.21	10.27	10.33	10.38
	Voltage at MPP	V _{MPP}	[V]	31.07	31.26	31.46	31.65	31.84	32.03

¹Measurement tolerances P_{MPP} ±3%; I_{SC}; V_{OC} ±5% at STC: 1000 W/m², 25 ±2 °C, AM 1.5 according to IEC 60904-3 • ²800 W/m², NMOT, spectrum AM 1.5



TEMPERATURE COEFFICIENTS							
Temperature Coefficient of I _{SC}	α	[%/K]	+0.04	Temperature Coefficient of V _{OC}	β	[%/K]	–0.24
Temperature Coefficient of P _{MPP}	γ	[%/K]	–0.30	Nominal Module Operating Temperature	NMOT	[°F]	109 ± 5.4 (43 ± 3 °C)

Properties for System Design

Maximum System Voltage	V _{sys}	[V]	1000 (IEC)/1000 (UL)	PV module classification	Class II
Maximum Series Fuse Rating		[A DC]	25	Fire Rating based on ANSI/UL 61730	C / TYPE 2
Max. Design Load, Push / Pull ³		[lbs / ft ²]	113 (5400 Pa) / 50 (2400 Pa)	Permitted Module Temperature on Continuous Duty	–40 °F up to +185 °F (–40 °C up to +85 °C)
Max. Test Load, Push / Pull ³		[lbs / ft ²]	169 (8100 Pa) / 75 (3600 Pa)		

³ See Installation Manual

Qualifications and Certificates

Quality Controlled PV -
TÜV Rheinland;
IEC 61215:2016;
IEC 61730:2016.
This data sheet complies
with DIN EN 50380.



*UL and California Energy Commission (CEC) listings pending



Qcells pursues minimizing paper output in consideration of the global environment.

Note: Installation instructions must be followed. Contact our technical service for further information on approved installation of this product.
Hanwha Q CELLS America Inc. 400 Spectrum Center Drive, Suite 1400, Irvine, CA 92618, USA | TEL +1 949 748 59 96 | EMAIL hqc-inquiry@qcells.com | WEB www.qcells.com





IQ8MC Microinverter

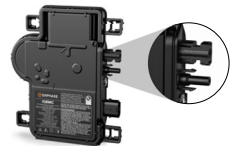
Our newest IQ8 Series Microinverters are the industry's first microgrid-forming*, software-defined microinverters with split-phase power conversion capability to convert DC power to AC power efficiently. The brain of the semiconductor-based microinverter is our proprietary application-specific integrated circuit (ASIC), which enables the microinverter to operate in grid-tied or off-grid modes. This chip is built in advanced 55-nm technology with high-speed digital logic and has superfast 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 IQ Battery, IQ Gateway, and the Enphase App monitoring and analysis software.



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 the IQ8 Series Microinverters that have integrated MC4 connectors.



IQ8 Series Microinverters are UL Listed as PV rapid shutdown equipment and conforms with various regulations when installed according to the manufacturer's instructions.

Easy to install

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

High productivity and reliability

- Produces 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) and IEEE 1547:2018 (UL 1741-SB)

NOTE:

- IQ8 Microinverters cannot be mixed together with previous generations of Enphase microinverters (IQ7 Series, IQ6 Series, and so on) in the same system.
- IQ Microinverters ship with default settings that meet North America's IEEE 1547 interconnection standard requirements. Region-specific adjustments may be requested by an Authority Having Jurisdiction (AHJ) or utility representative. An IQ Gateway is required to make these changes during installation.

*Meets UL 1741 only when installed with IQ System Controller 2 or 3.

COVER LETTER

SOLAR STACK – Roof solar mounting pedestal

Date: January 9, 2025
Re: Solar Stack pedestal – Cover Letter
Subj: State of Maryland, USA

SOLAR STACK Florida Product Approval (FL#21074) is in compliance with:

- ASCE 7-16 IRC – 2018 IBC - 2018

Performance evaluation is summarized in Table 7.1 below:

7.0 One Structural Connection Performance:

7.1 Uplift Resistance:

Table 7.1					
SOLAR STACK attached to Adhesive					
Ultimate Uplift Resistance Loads (LBF) ^{1,2}					
#	Uplift Load applied to the Top of “SOLAR STACK” Assembly (90° To Roof Surface)				
	Adhesive Type:	Pedestal Size: (Length)	Paddy Dimensions: (minimum)	Paddy Weight: Per pedestal (nominal)	Ultimate Load Tension (LBF) ^{1,2}
1	ICP AH-160 Blue	12”	4” dia. x 12” long x 1” high	83.6 grams	-1025
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9	ICP APOC Polyset RTA-1	8”	5” dia. x 8” long x 1-1/2” high	47.3 grams	-882
10	ICP APOC Polyset RTA-1	6”	5” dia. x 6” long x 1-1/2” high	40.4 grams	-432
11	ICP APOC Polyset RTA-1	4”	5” dia. x 4” long x 1-1/2” high	27.1 grams	-320
Notes:					
1. Ultimate Loads (LBF) with 0 margin of safety applied to the test loads.					
2. Assembly was tested for vertical up.					

The installation of solar rack system shall be as follows:

The unified panel assembly shall be supported on Solar Stack adhered solar mounting feet (pedestal) providing an average of 2.5 mounting feet per module. The brackets, clamps, bolts, screws, nuts, etc that attach the PV modules to the top side of the Solar Stack pedestals (8 inches long and 5 inches wide). Foot attachment to the roof shall be provided with a minimum of 2 per module long side and shared between modules. Mounting feet shall be adhered to the roof deck per the manufacturer’s standard installation details to attach the Solar Stack to the roof membrane.

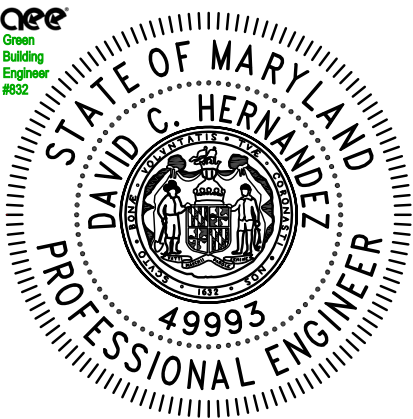
Solar panel mounting systems installed parallel to the plane of a roof shall be no more than 12" above the roof when measured perpendicular to the roof surface. When installed as per the above specifications the system shall meet required 115 MPH wind load, 10 PSF Dead Load, 20 PSF Live Load and 35 PSF Ground Snow load requirements

This review is for structural review only and does not express or imply any review of the roofing materials for weather tightness, condition, or lifespan. Review of the roofing materials should be performed by the installation contractor or a certified roofing professional. Should you have any further questions or comments please feel free to contact our office.

Respectfully,

Digitally signed by David C Hernandez

Date: 2025.01.15 05:32:36 -05'00'



PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 49993, EXP 10/06/2026.



DAVID C. HERNANDEZ, PE

513-418-8812

4912 Prospect Ave., Blue Ash OH 45242

davehernandezpe@gmail.com

DATE: August 8, 2025

RE: 7411 Maple Ave, Takoma Park, MD 20912, USA

To Whom It May Concern,

As per your request, Exactus Energy has inspected the structure and has conducted a structural assessment of the building at the above address.

PV solar panels are proposed to be installed on roof areas as shown in the submitted plans. The panels are clamped to rails which are attached to the roof with 8" Solar Stack Pedestal mounting system adhered with ICP POLYSET AH-160 foam adhesive for Roof 3 and attached to the roof decking with a rail-less mounting system for Roof 1 and Roof 2. The PV system (PV modules, racking, mounting hardware, etc.) shall be installed according to the manufacturer's approved installation specifications. The Engineer of Record and Exactus Energy claim no responsibility for misuse or improper installation.

It was found that the roof structures satisfactorily meet the applicable standards included in the 2021 IBC/IRC, and ASCE 7-16 as well as the design criteria shown below:

Design Criteria:		
Risk Category	=	II
Exposure Category	=	B
Wind speed	=	115 mph
Ground snow load	=	30 psf
Roof dead load	=	12 psf
Solar system dead load	=	3 psf

Overall, the roof area is structurally adequate to support the PV alteration with no modifications or reinforcements as required.

This letter was completed in accordance to recognized design standards, professional engineering experience, and judgement. Prior to installation, the on-site contractor must notify Exactus Energy if there are any discrepancies, or damages to the members, that was not addressed in the plan set.

If you have any further questions, please do not hesitate to contact me.

Acknowledged by:

David C. Hernandez, PE

Digitally signed by David C. Hernandez, PE
Date: 2025.08.08 12:03:26 -04:00



PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 49993, EXP. 10/06/2026.

REVIEWED

By Devon.Murtha at 11:32 am, Oct 09, 2025

APPROVED

Montgomery County

Historic Preservation Commission

Karen Benoit

DAVID C. HERNANDEZ, PE

513-418-8812



4912 Prospect Ave., Blue Ash OH 45242



davehernandezpe@gmail.com



SEISMIC CHECK

Breakdown of Loads		
Asphalt Shingles:	7	psf
Insulation:	1.5	psf
Plywood Sheathing:	1.5	psf
Rafters:	1	psf
Misc:	1	psf
Live load:	20	psf

Existing Roof Seismic Weight			
Element	Unit Weight (psf)	Area (Sq.ft)	Weight (lbs)
Roof DL	12	1602.00	19224
Exterior Walls	7	2763.15	19342.05093
Interior Walls	6	2763.15	16578.9008
Existing Seismic Weight @Roof Level, We =			55144.95173

New PV System Seismic Weight			
Element	Unit Weight (psf)	Area (Sq.ft)	Weight (lbs)
Pv System	3	441.00	1323.00
Seismic Weight of New PV System, Wpv =			1323.00

% Increase in Lateral (Seismic) Weight @Roof Level Due to PV System Addition, %-increase = Wpv / We	2.40%	c
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	COMPANY	PROJ
	Aug. 8, 2025 01:26	Roof 1.wwb

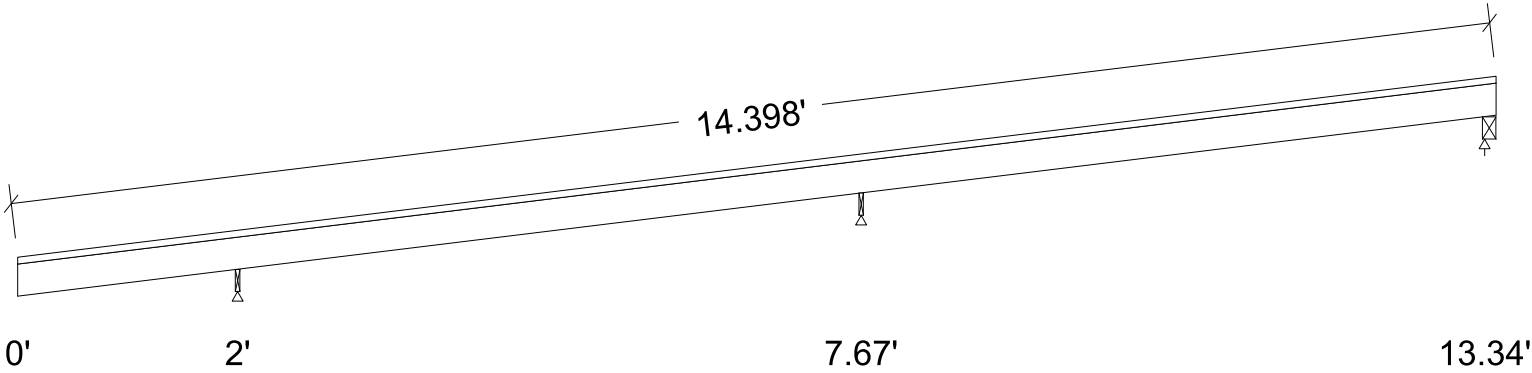
Design Check Calculation Sheet

WoodWorks Sizer 13.2.1

Loads:

Load	Type	Distribution	Pat-tern	Location [ft]		Magnitude		Unit
				Start	End	Start	End	
D-ROOF	Dead	Full Area	No			12.00 (24.0")		psf
S1	Snow	Partial Area	No	0.00	1.00	23.10 (24.0")		psf
L1	Roof live	Partial Area	No	0.00	1.00	20.00 (24.0")		psf
S2	Snow	Partial Area	No	11.50	13.33	23.10 (24.0")		psf
L2	Roof live	Partial Area	No	11.50	13.33	20.00 (24.0")		psf
S3	Snow	Partial Area	No	1.00	11.50	18.94 (24.0")		psf
D-PV	Dead	Partial Area	No	1.00	11.50	3.00 (24.0")		psf

Maximum Reactions (lbs), Bearing Capacities (lbs) and Bearing Lengths (in) :



Unfactored:							
Dead			140		207		66
Snow			185		245		99
Roof Live			49		3		61
Factored:							
Total			324		451		166
Bearing:							
F'theta			468		468		468
Capacity							
Joist			615		615		1053
Support			398		586		1195
Des ratio							
Joist			0.53		0.73		0.16
Support			0.81		0.77		0.14
Load comb			#3		#3		#3
Length			0.50*		0.50*		1.50
Min req'd			0.50*		0.39**		0.50*
Cb			1.75		1.75		1.00
Cb min			1.75		1.75		1.00
Cb support			1.25		1.25		1.25
Fcp sup			425		625		425

*Minimum bearing length setting used: 1/2" for end supports and 1/2" for interior supports

**Minimum bearing length governed by the required width of the supporting member.



Project Roof Mounted Solar PV Installation Property Owner Deborah Nelson

Address 7411 Maple Ave, Takoma Park, MD 20912, USA

- ☒ I reviewed the design of the photovoltaic (PV) system, as designed by the manufacturer, and the design criteria utilized for the mounting equipment and panel mounting assembly (rack system) for the installation of (21) panels supported by the rack system, as shown on the drawings prepared for the above referenced address. I certify that the configurations and design criteria meet the standards and requirements of the International Residential Code (IRC) in COMCOR 08.00.02.
- ☒ The attachment of the rack system to the building at the above address, including the location, number, and type of attachment points; the number of fasteners per attachment point; and the specific type of fasteners (size, diameter, length, minimum embedment into structural framing, etc.) meets the standards and requirements of the IRC adopted by Montgomery County in COMCOR 08.00.02.
- ☒ I evaluated the existing roof structure of the building at the above address and analyzed its capacity to support the additional loads imposed by the PV system. I certify that no structural modifications of the existing roof structure are required. The existing roof structure meets the standards and requirements of the IRC, adopted by Montgomery County in COMCOR 08.00.02, necessary to support the PV system.
- ☐ I evaluated the existing roof structure of the building at the above address and analyzed its capacity to support the additional loads imposed by the PV system. Structural modifications of the existing roof structure are required. I certify that the roof structure, as modified on the drawings for this project, will support the additional loads imposed by the PV system. I further certify that design of the modified roof structure meets the standards and requirements of the IRC, adopted by Montgomery County in COMCOR 08.00.02.
- ☒ I prepared or approved the construction documents for the mounting equipment, rack system, roof structure for this project.

Re-installations:

- ☐ I certify that the reinstallation of the photovoltaic system (PV) as shown on the approved drawings for permit _____ (show original permit #) does not alter the approval under the permit or make the PV system, attachment to the building, and roof framing unsafe.

49993

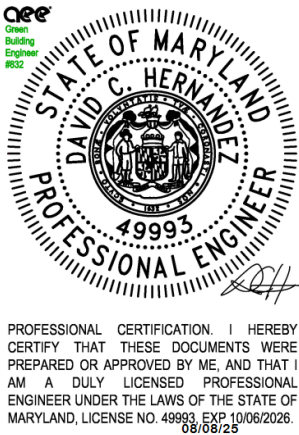
Maryland PE License Number

Date 08/08/2025

Signature David C. Hernandez, PE

Digitally signed by David C. Hernandez,
Date: 2025.08.08 12:03:26 -04:00

Seal



REVIEWED

By Devon.Murtha at 11:33 am, Oct 09, 2025



Because Tomorrow Matters

APPROVED

Montgomery County

Historic Preservation Commission

Karen B. Smith

Property Owners Name: _____

Property Owners Address: _____

Address of installation if different than owner's address:

I certify that:

- o I prepared or approved the electrical drawings and related documents for the photovoltaic {PV} system at the above location.
- o The design of the PV system, and all electrical Installations and equipment, meets the standards and requirements of the National Electrical Code as adopted by Montgomery County in COMCOR 17.02.01.
- o I reviewed and completed the Worksheet for PV System, which was attached to the permit application for the PV system at the **above** location.

15732

State Master Electrician License Number

Date: _____

Signature: *Matt Huser*



11/19/24, 4:30 PM

QIMS.E359313 - Mounting Systems, Mounting Devices, Clamping Devices and Ground L

UL Product iQ®

Mounting Systems, Mounting Devices, Clamping Devices and Ground Lugs for Use with Photovoltaic Modules and Panels

COMPANY

SUNRUN SOUTH LLC, DBA SNAPNRACK
775 Fiero Ln
Suite 200
San Luis Obispo, CA 93401 United States

E359313

Cat. No.	Investigated for Bonding	Investigated for Mechanical Loading	System Fire Classification (A, B or C)	Tested in Combination With
Photovoltaic mounting system				

City Of Takoma Park

APPROVED

Montgomery County

Historic Preservation Commission



The City of Takoma Park permits for the following issues:

Tree Impact Assessment/Tree Protection Plan/Tree Removal Application

Construction activities that occur within 50 feet of any urban forest tree (7 a located on the project property or on an adjacent property, may require a Tree Protection Plan Permit. Make sure to submit a request for a Tree Impact Assessment and schedule a site visit with the City's Urban Forest Manager if any urban forest tree is in the vicinity of proposed construction activities. See the Tree Permits section of the City website for the specific conditions in which a Tree Impact Assessment is required. Depending on the Urban Forest Manager's conclusion following the Tree Impact Assessment, you may need to prepare a full Tree Protection Plan and apply for a Tree Protection Plan Permit as well. Separately, the removal of any urban forest tree will require a Tree Removal Permit application. The tree ordinance is detailed in the City Code, section 12.12. For permit information check: <https://takomaparkmd.gov/services/permits/tree-permits>. The City's Urban Forest Manager can be reached at 301-891-7612 or urbanforestmanager@takomaparkmd.gov.

Stormwater Management:

If you plan to develop or redevelop property, you may be required to provide appropriate stormwater management measures to control or manage runoff, as detailed in City Code section 16.04. All commercial or institutional development in the city must apply for a Stormwater Management Permit regardless of the size of the land disturbance. Additions or modifications to existing detached single-family residential properties do not require a Stormwater Management permit if the project does not disturb more than 5,000 square feet of land area. For more information visit: <https://takomaparkmd.gov/government/public-works/stormwater-management-program/>. The City Engineer should be contacted to determine if a City permit is required. The City Engineer can be reached at 301-891-7620.

City Right of Way:

- To place a **construction dumpster or storage container** temporarily on a City right of way (usually an adjacent road), you will need to obtain a permit. A permit is not required if the dumpster is placed in a privately-owned driveway or parking lot.
- If you plan to install a new **driveway apron**, or enlarge or replace an existing driveway apron, you need a Driveway Apron Permit.
- If you plan to construct a **fence** in the City right of way, you need to request a Fence Agreement. If approved, the Agreement will be recorded in the Land Records of Montgomery County.

For more information and applications for City permits, see: <https://takomaparkmd.gov/services/permits/> or contact the Department of Public Works at 301-891-7633.

Failure to comply with the City's permitting requirements could result in the issuance of a Stop Work Order and other administrative actions within the provisions of the law.

eSigned via GovOS.com

Key: 38bf2056622713c0bf979ea7ee94776a

Tina Crouse

08-11-2025

eSigned via GovOS.com

Key: 19fe84f123e68a3ff4576219059d5fbc

08-14-2025

COVER LETTER

SOLAR STACK – Roof solar mounting pedestal

Date: January 9, 2025
Re: Solar Stack pedestal – Cover Letter
Subj: State of Maryland, USA

SOLAR STACK Florida Product Approval (FL#21074) is in compliance with:

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Performance evaluation is summarized in Table 7.1 below:

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7.1 Uplift Resistance:

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SOLAR STACK attached to Adhesive					
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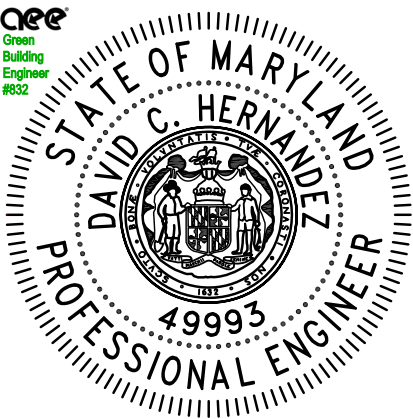
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Respectfully,

David C Hernandez

Digitally signed by David C Hernandez
Date: 2025.01.15 05:32:36 -05'00'



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REVIEWED

By Devon.Murtha at 11:33 am, Oct 09, 2025



DEPARTMENT OF PERMITTING SERVICES

Marc Elrich
County Executive

HISTORIC AREA WORK PERMIT

Application Date: 8/17/2025

APPROVED

Montgomery County

Historic Preservation Commission

A handwritten signature in black ink, appearing to read "Karen B. Smith", written over a horizontal line.

Application No: 1129593
AP Type: HISTORIC
Customer No: 1408761

Affidavit Acknowledgement

The Contractor is the Primary applicant authorized by the property owner
This application does not violate any covenants and deed restrictions

Primary Applicant Information

Address 7411 MAPLE AVE
TAKOMA PARK, MD 20912

Othercontact Solar Energy World (Primary)

Historic Area Work Permit Details

Work Type ALTER

Scope of Work INSTALL (21) ROOF MOUNTED SOLAR PANELS, 9.13 KW