

NANORACK ROOF TOP PV MOUNTING SYSTEM

THIS PRODUCT HAS BEEN DESIGNED AND TESTED TO COMPLY WITH THE REQUIREMENTS OF THE 2023 (8TH EDITION) FLORIDA BUILDING CODE INCLUDING HIGH VELOCITY HURRICANE ZONES (HVHZ).

THIS PRODUCT APPROVAL IS FOR THE ROOF TOP PV MOUNTING SYSTEM AS SHOWN ON THESE DRAWINGS. ROOF DETAILS, UPLIFT, SLOPE, ROOF TRUSSES AND OTHER ELEMENTS SHALL BE DESIGNED BY A FLORIDA REGISTERED ENGINEER AND REVIEWED BY THE STRUCTURAL PLANS EXAMINER OF THE CORRESPONDING BUILDING DEPARTMENT.

ENGINEER OF RECORD TO VERIFY THAT ROOF MEMBERS CAN SUPPORT THE PV MODULE ARRAY UNDER ALL CODE LEVEL LOADING CONDITIONS. INSTALLER TO MAINTAIN THE WATERPROOF INTEGRITY OF THE ROOF.

INSTALLATION OF PV MODULE ACCESSORIES SHALL BE DONE IN ACCORDANCE WITH THE CURRENT EDITION OF FLORIDA BUILDING CODE AND THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.

ANCHORS SHALL BE CORROSION RESISTANT, SPACED AS SHOWN ON DETAILS AND INSTALLED PER THE MANUFACTURER'S INSTRUCTIONS. SPECIFIED EMBEDMENT TO BASE MATERIAL SHALL BE BEYOND ROOF COVERING.

DESIGN LOADS SHOWN ARE BASED ON 'ALLOWABLE STRESS DESIGN (ASD)'.

SOLAR MODULES TO BE INSTALLED PARALLEL TO THE ROOF SURFACE WITH A TOLERANCE OF LESS THAN 2 DEGREES.

MAXIMUM ROOF SLOPE TO BE 45 DEGREES.

CONDITIONS NOT SHOWN IN THIS DRAWING ARE TO BE ANALYZED SEPARATELY, AND TO BE REVIEWED BY THE BUILDING OFFICIAL.

Russell N Emery
2024.04.25
09:08:27-06'00'

This item has been digitally signed and sealed by Russell N. Emery on the date adjacent to the seal. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

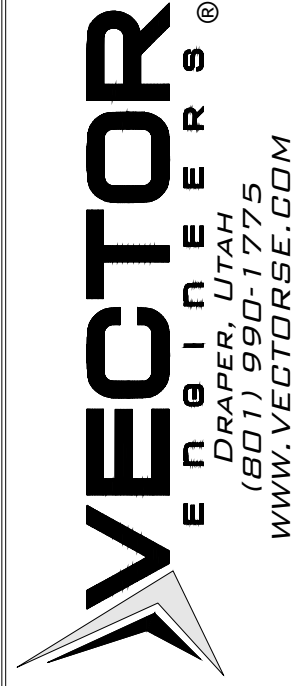
PV MODULES ARE NOT PART OF THIS APPROVAL. FOR PANEL DETAILS, GENERAL NOTES, COMPONENT SIZES, FIRE AND ELECTRICAL SAFETY STANDARDS AND INSTALLATION REQUIREMENTS / LIMITATIONS SEE CORRESPONDING FLORIDA APPROVAL DRAWINGS.

A- CONTRACTOR TO BE RESPONSIBLE FOR THE SELECTION, PURCHASE AND INSTALLATION OF THE PRODUCT BASED ON THIS PRODUCT EVALUATION PROVIDED HE / SHE DOES NOT DEVIATE FROM THE CONDITIONS DETAILED ON THIS DOCUMENT.

B- THIS PRODUCT EVALUATION DOCUMENT (P.E.D.) WILL BE CONSIDERED INVALID IF ALTERED BY ANY MEANS.

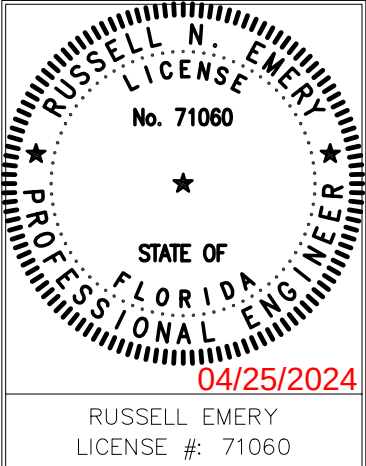
C- SITE SPECIFIC PROJECTS SHALL BE PREPARED BY A FLORIDA REGISTERED ENGINEER OR ARCHITECT WHICH WILL BECOME THE ENGINEER OF RECORD (E.O.R.) FOR THE PROJECT AND WHO WILL BE RESPONSIBLE FOR THE PROPER USE OF THE P.E.D.

D- THIS P.E.D. SHALL BEAR THE DATE AND ORIGINAL SEAL AND SIGNATURE OF THE PROFESSIONAL ENGINEER OF RECORD THAT PREPARED IT.



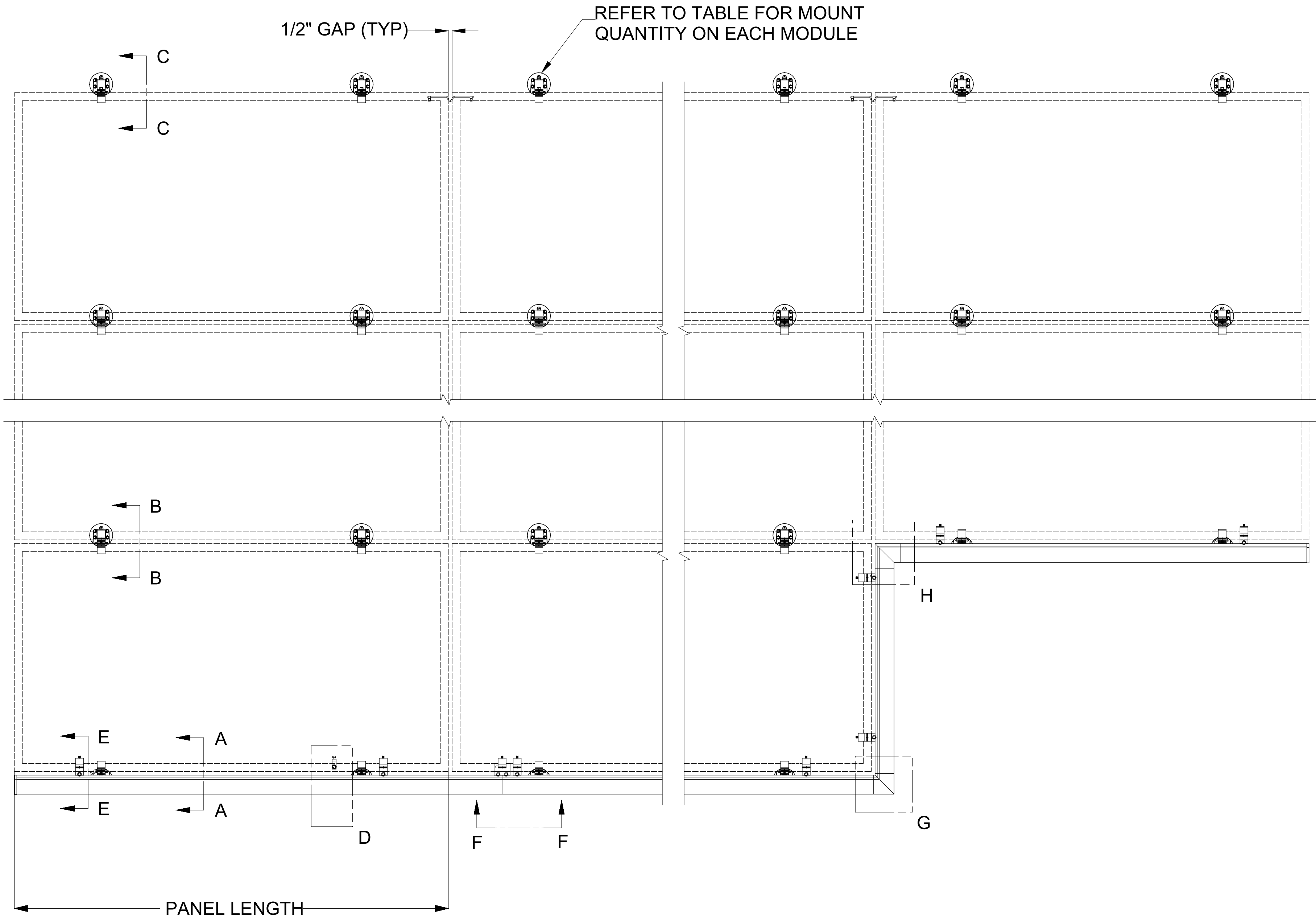
Copyright © 2024
Vector Structural Engineering, LLC
This drawing contains proprietary information belonging to Vector Structural Engineering, LLC, and may be neither wholly nor partially copied or reproduced without the prior written permission of Vector Structural Engineering, LLC.

SUNMODO CORP
NANORACK PV MOUNTING SYSTEM
14800 NE 65TH ST
VANCOUVER, WA 98682



U2716.0368.231

SHEET
1 OF 7



LONG SIDE CLAMPING
PLAN VIEW

DESIGN PRESSURE (PSF)			
SHEATHING MATERIAL	# MOUNTS PER MODULE	DESIGN PRESSURE 4 FASTENERS	DESIGN PRESSURE 5 FASTENERS
MIN 15/32" PLYWOOD	4	41	61
	6	60	90
	8	78	116

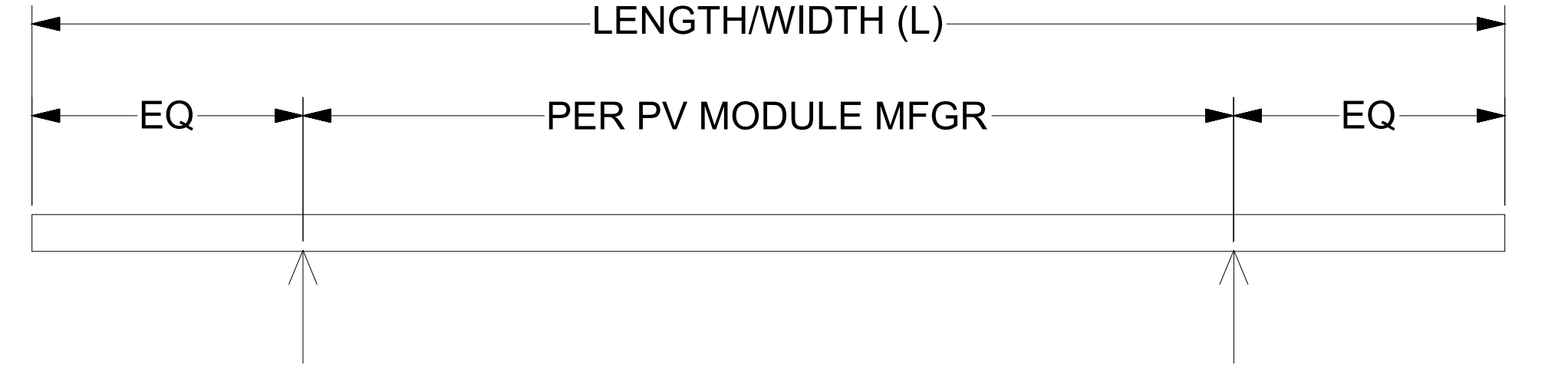
NOTES:

SEE BELOW SKETCHES FOR MOUNT SPACING. TOLERANCE FOR MOUNT SPACING SHALL NOT EXCEED +/- 1". PANEL OVERHANG SHALL NOT EXCEED PANEL MANUFACTURER'S SPECIFICATIONS.

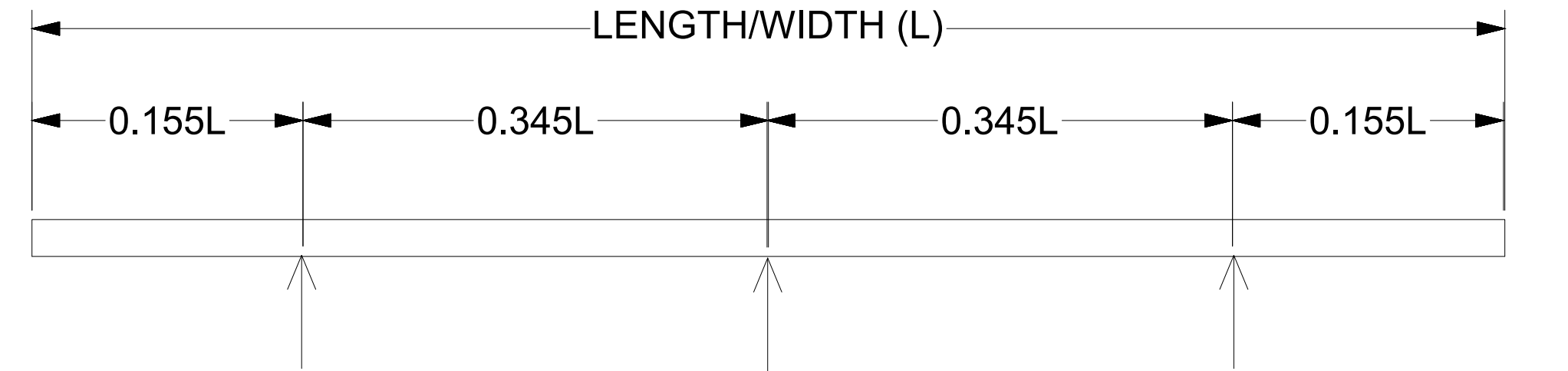
DESIGN LOAD SHOWN IN THE TABLE ARE FOR 72 CELL PANELS (39.5" X 79"). DESIGN LOAD FOR DIFFERENT SIZED MODULES MAY BE CALCULATED AS FOLLOWS:

DESIGN LOAD = LOAD FROM TABLE X (39.5"/NEW PANEL WIDTH) X (79"/NEW PANEL LENGTH).

ARRAY SKIRT MAY BE OMITTED WITH THE USE OF ONE GROUND LUG PER COLUMN OF MODULES FOR PROPER BONDING & GROUNDING.



MOUNT SPACING: 4 MOUNTS PER PANEL



MOUNT SPACING: 6 MOUNTS PER PANEL



MOUNT SPACING: 8 MOUNTS PER PANEL

This item has been digitally signed and sealed by Russell N. Emery on the date adjacent to the seal. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

DATE: 01/19/2024	REV. #	ENG: MH	DWN: MH	CHK: RNE	
				DESCRIPTION	NANOPUS MOUNT
	1				

VECTOR

ENGINEERS

DRAPER, UTAH

(801) 950-1775

WWW.VECTORSE.COM

Copyright © 2024

Vector Structural Engineering, LLC

This drawing contains proprietary information belonging to Vector Structural Engineering, LLC, and may be neither wholly nor partially copied or reproduced without the prior written permission of Vector Structural Engineering, LLC.

SUNMODO CORP

NANORACK PV MOUNTING SYSTEM

14800 NE 65TH ST

VANCOUVER, WA 98682

RUSSELL N. EMERY

PROFESSIONAL ENGINEER

FLORIDA

04/25/2024

RUSSELL EMERY

LICENSE #: 71060

U2716.0368.231

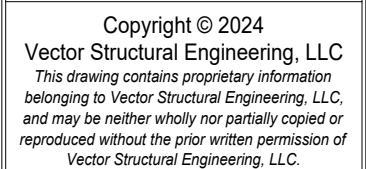


DESIGN PRESSURE (PSF)			
SHEATHING MATERIAL	# MOUNTS PER MODULE	DESIGN PRESSURE 4 FASTENERS	DESIGN PRESSURE 5 FASTENERS
MIN 15/32" PLYWOOD	4	41	61
	6	60	90
	8	78	116

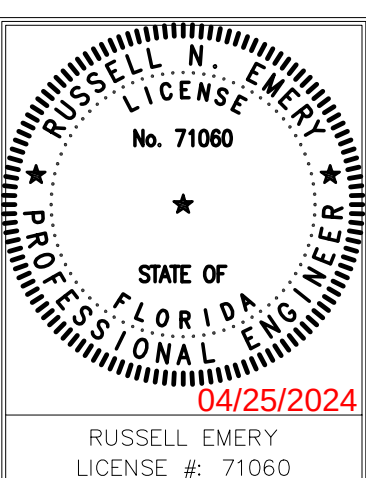
ARRAY SKIRT MAY BE OMITTED WITH THE USE OF ONE GROUND LUG PER COLUMN OF MODULES FOR PROPER BONDING & GROUNDING.



This item has been digitally signed and sealed by Russell N. Emery on the date adjacent to the seal. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

[illegible]

SUNMODO CORP
NANORACK PV MOUNTING SYSTEM
14800 NE 65TH ST
VANCOUVER, WA 98682



U2716.0368.231

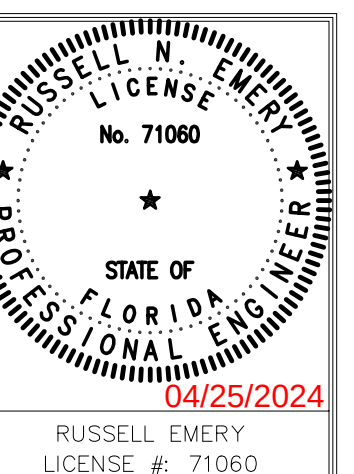
**SHEET
3 OF 7**



VECTOR
ENGINEERS®
DRAPER, UTAH
(801) 990-1775
WWW.VECTORSE.COM

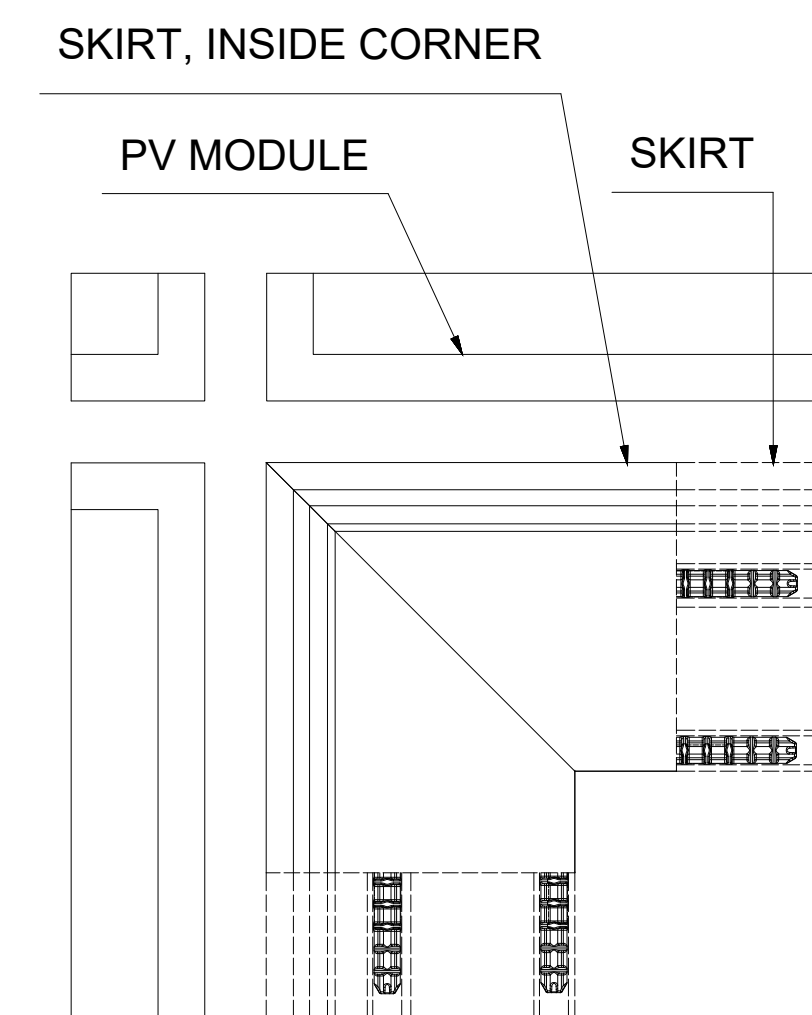
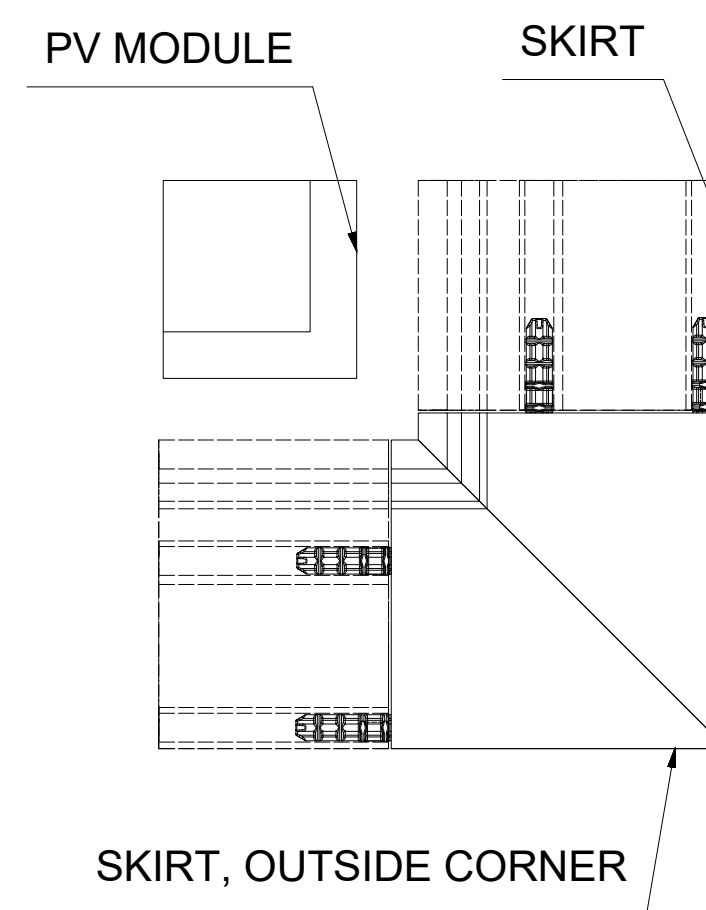
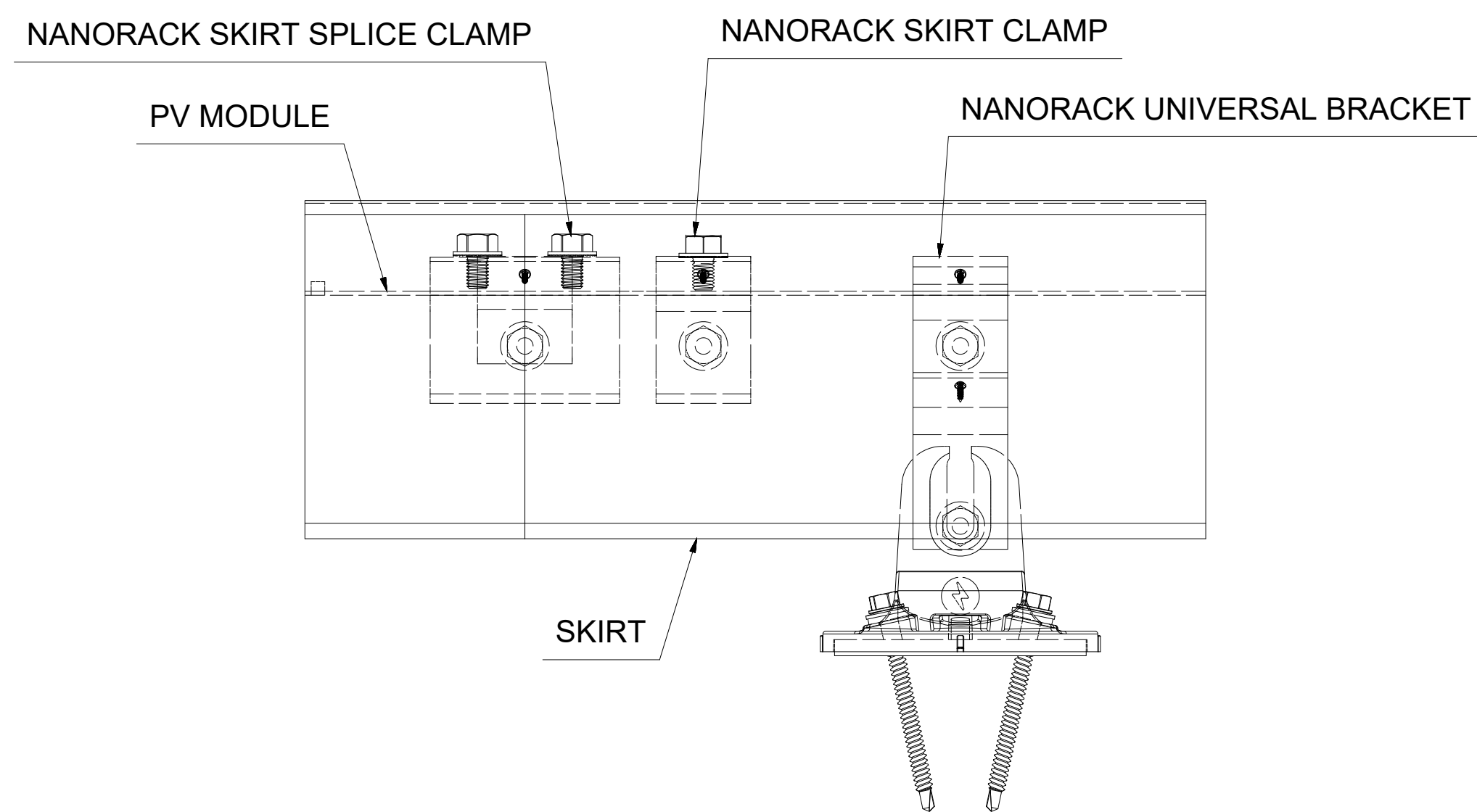
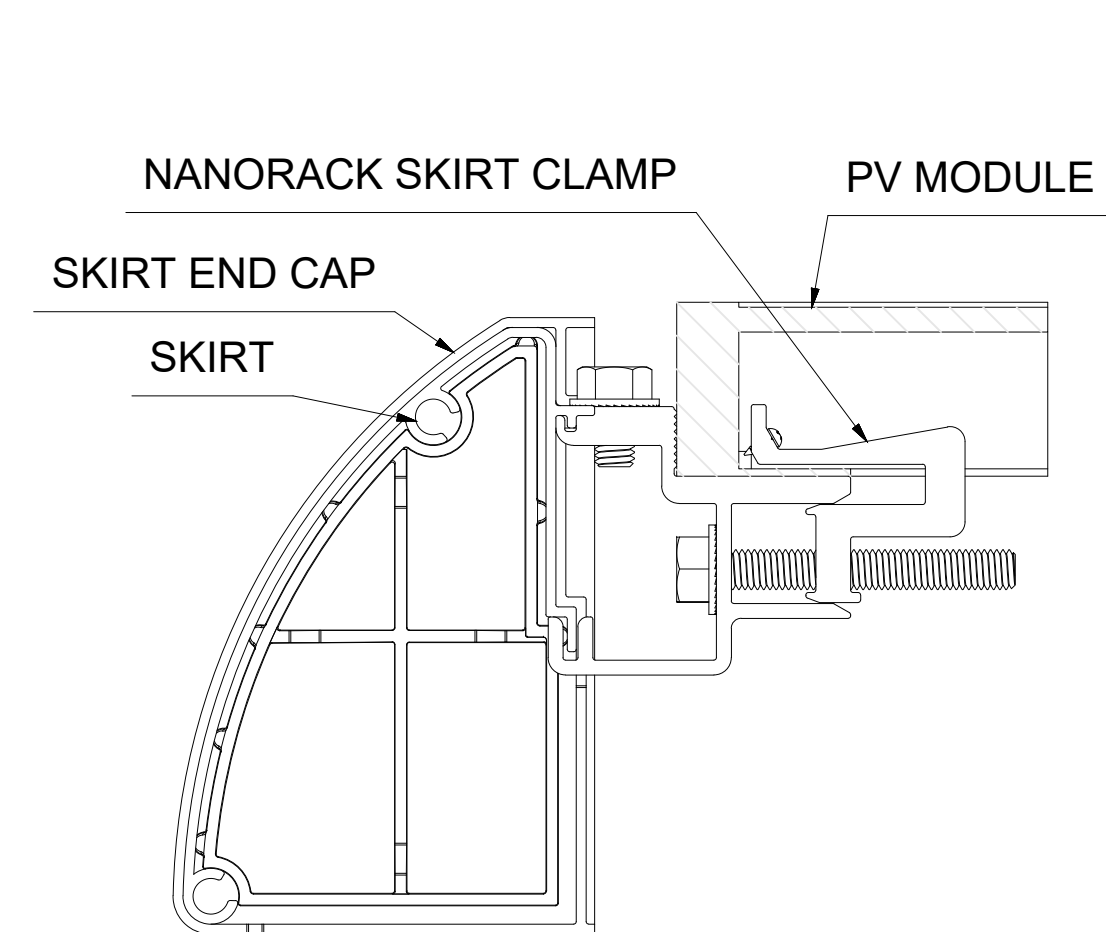
Copyright © 2024
Vector Structural Engineering, LLC
This drawing contains proprietary information
belonging to Vector Structural Engineering, LLC,
and may be neither wholly nor partially copied or
produced without the prior written permission of
Vector Structural Engineering, LLC.

SUNMODO CORP
NANORACK PV MOUNTING SYSTEM
14800 NE 65TH ST
VANCOUVER, WA 98682



J2716.0368.231

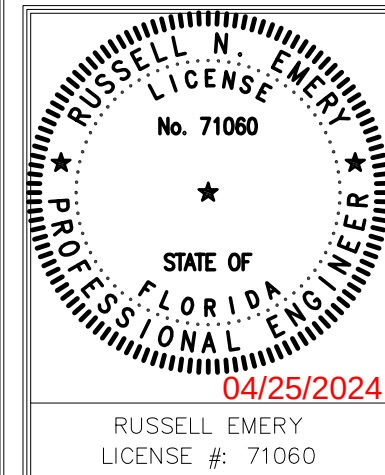
SHEET
4 OF 7



This item has been digitally signed and sealed by Russell N. Emery on the date adjacent to the seal. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

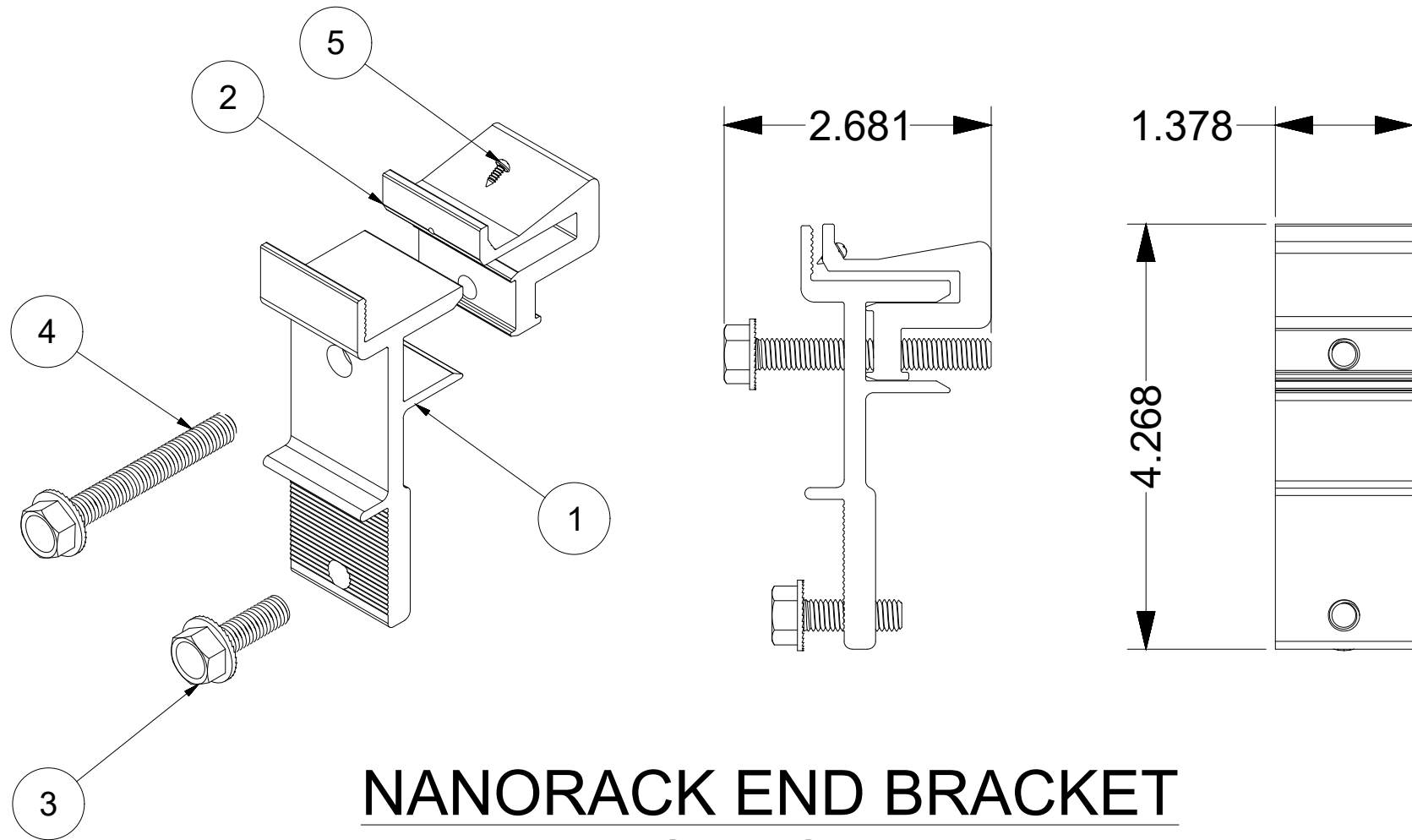


SUNMODO CORP
NANORACK PV MOUNTING SYSTEM
14800 NE 65TH ST
VANCOUVER, WA 98682



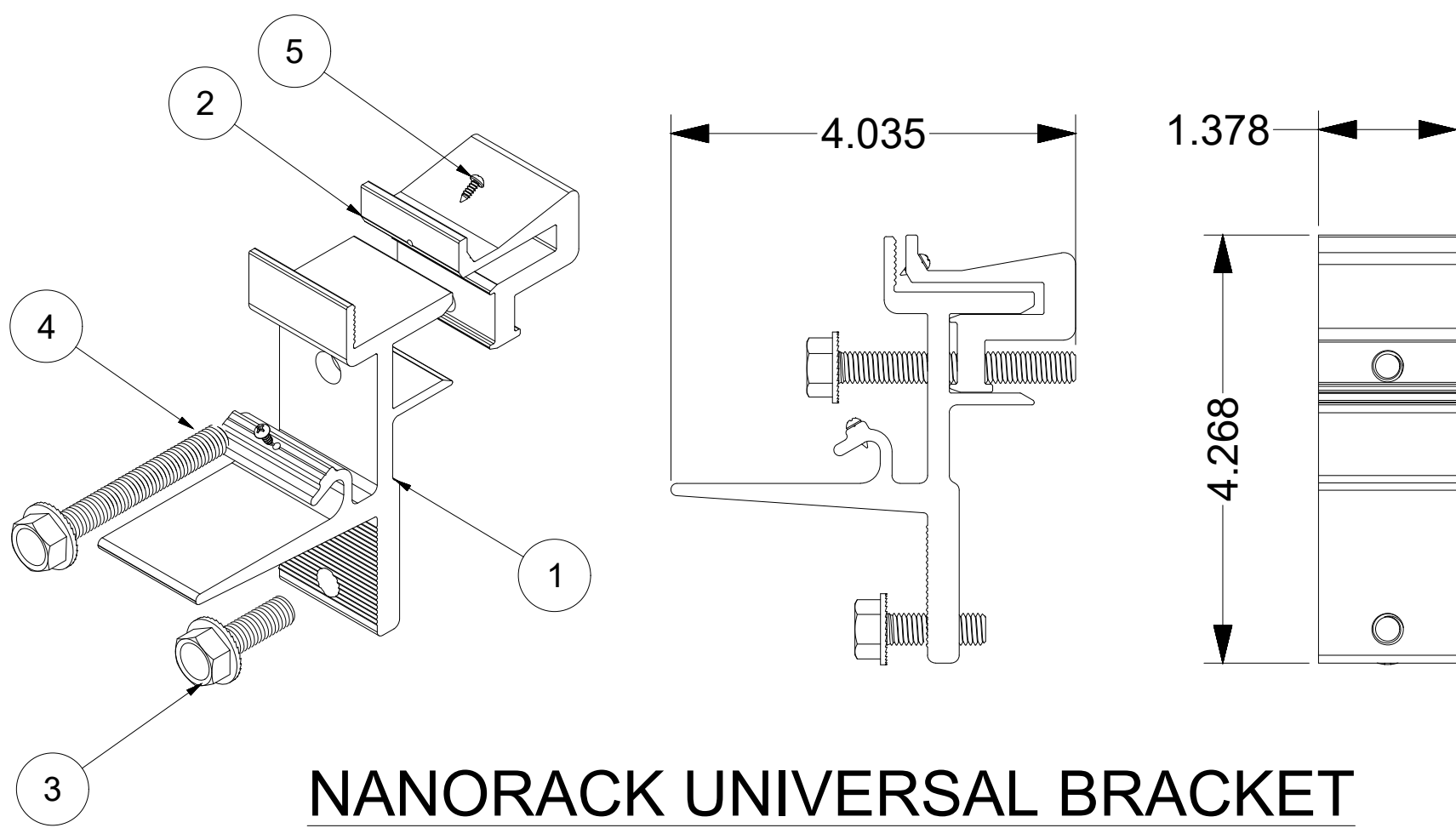
U2716.0368.231

**SHEET
5 OF 7**



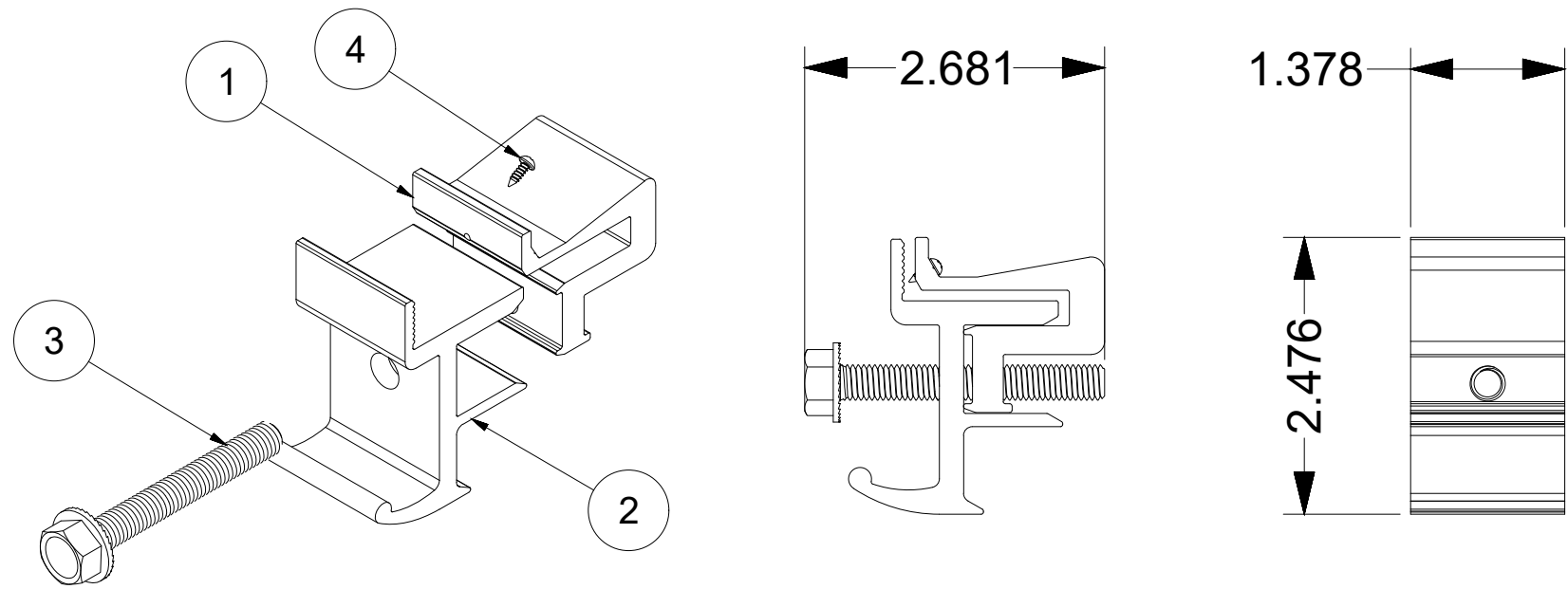
NANORACK END BRACKET
NANORACK-END

5	B10067-001	SELF-TAPPING SCREW M2.2X6.5	STAINLESS STEEL
4	B10063-005	SERRATED-FLANGE HEX HEAD SCREW M8X60	STAINLESS STEEL
3	B10063-001	SERRATED-FLANGE HEX HEAD SCREW M8X25	STAINLESS STEEL
2	A20532-001	NANORACK MODULE CLAMP BASE	ALUMINUM 6061
1	A20528-001	NANORACK END CLAMP	ALUMINUM 6061
ITEM	PART NUMBER	DESCRIPTION	MATERIAL



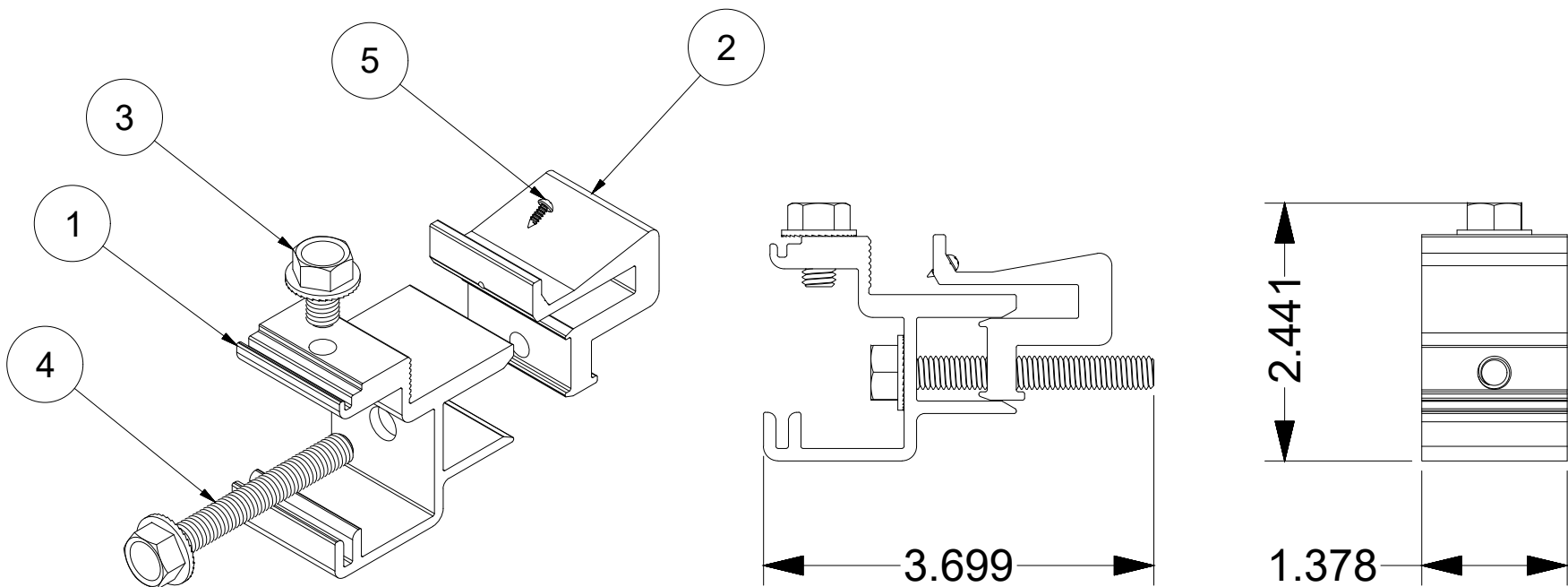
NANORACK UNIVERSAL BRACKET
NANORACK-END

5	B10067-001	SELF-TAPPING SCREW M2.2X6.5	STAINLESS STEEL
4	B10063-005	SERRATED-FLANGE HEX HEAD SCREW M8X60	STAINLESS STEEL
3	B10063-001	SERRATED-FLANGE HEX HEAD SCREW M8X25	STAINLESS STEEL
2	A20532-001	NANORACK MODULE CLAMP BASE	ALUMINUM 6061
1	A20529-001	NANORACK MID CLAMP	ALUMINUM 6061
ITEM	PART NUMBER	DESCRIPTION	MATERIAL



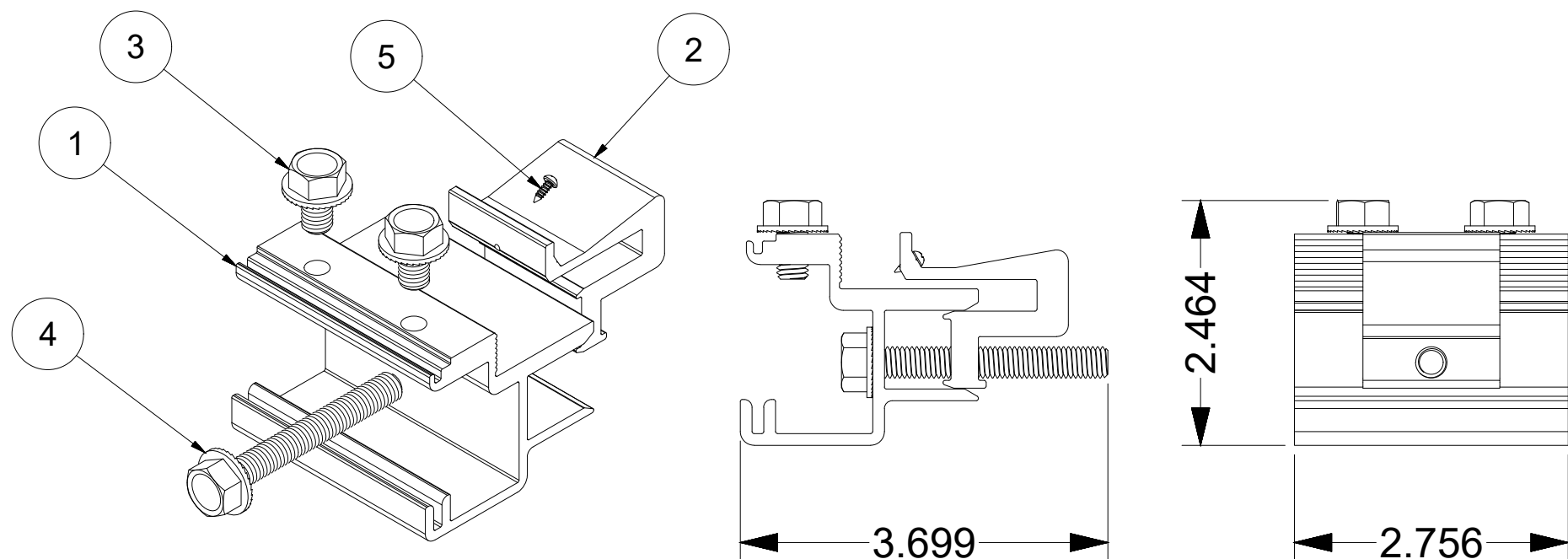
NANORACK MODULE HOOK KIT
NANORACK-HOOK

4	B10067-001	SELF-TAPPING SCREW M2.2X6.5	STAINLESS STEEL
3	B10063-005	SERRATED-FLANGE HEX HEAD SCREW M8X60	STAINLESS STEEL
2	A20533-001	NANORACK MODULE HOOK BASE	ALUMINUM 6061
1	A20532-001	NANORACK MODULE CLAMP BASE	ALUMINUM 6061
ITEM	PART NUMBER	DESCRIPTION	MATERIAL



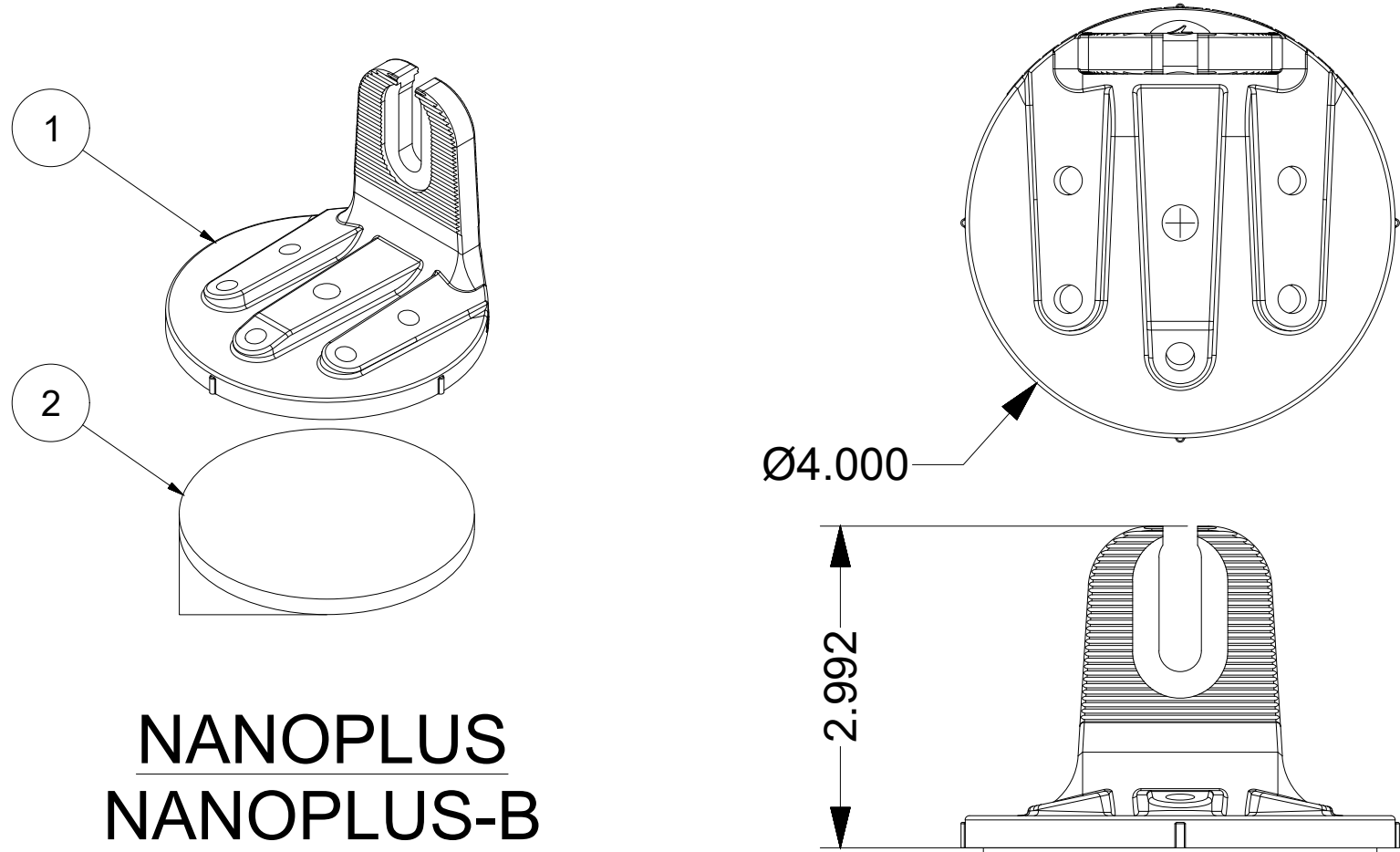
NANORACK SKIRT ATTACHMENT CLAMP
NANORACK-END

5	B10067-001	SELF-TAPPING SCREW M2.2X6.5	STAINLESS STEEL
4	B10063-005	SERRATED-FLANGE HEX HEAD SCREW M8X60	STAINLESS STEEL
3	B10063-004	SERRATED-FLANGE HEX HEAD SCREW M8X12	STAINLESS STEEL
2	A20532-001	NANORACK MODULE CLAMP BASE	ALUMINUM 6061
1	A20530-001	NANORACK SKIRT BRACKET	ALUMINUM 6061
ITEM	PART NUMBER	DESCRIPTION	MATERIAL



NANORACK SKIRT SPLICE CLAMP

5	B10067-001	SELF-TAPPING SCREW M2.2X6.5	STAINLESS STEEL
4	B10063-005	SERRATED-FLANGE HEX HEAD SCREW M8X60	STAINLESS STEEL
3	B10063-004	SERRATED-FLANGE HEX HEAD SCREW M8X12	STAINLESS STEEL
2	A20532-001	NANORACK MODULE CLAMP BASE	ALUMINUM 6061
1	A20530-002	NANORACK SKIRT BRACKET	ALUMINUM 6061
ITEM	PART NUMBER	DESCRIPTION	MATERIAL



NANOPLUS
NANOPLUS-B

2	C50009-XXX	NANO GASKET, NEOPRENE FOAM W/ OPT MASTIC TAPE	RUBBER
1	A50259-BK1	BLACK NANOPLUS MOUNT	ALUMINUM 6061
ITEM	PART NUMBER	DESCRIPTION	MATERIAL

This item has been digitally signed and sealed by Russell N. Emery on the date adjacent to the seal. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

DATE: 01/19/2024	ENG: MH	CHK: RNE
REV: #	BY: MH	DESCRIPTION: NANOPLUS MOUNT

Copyright © 2024
Vector Structural Engineering, LLC
This drawing contains proprietary information
belonging to Vector Structural Engineering, LLC,
and may be neither wholly nor partially copied or
reproduced without the prior written permission of
Vector Structural Engineering, LLC.

SUNMODO CORP

NANORACK PV MOUNTING SYSTEM

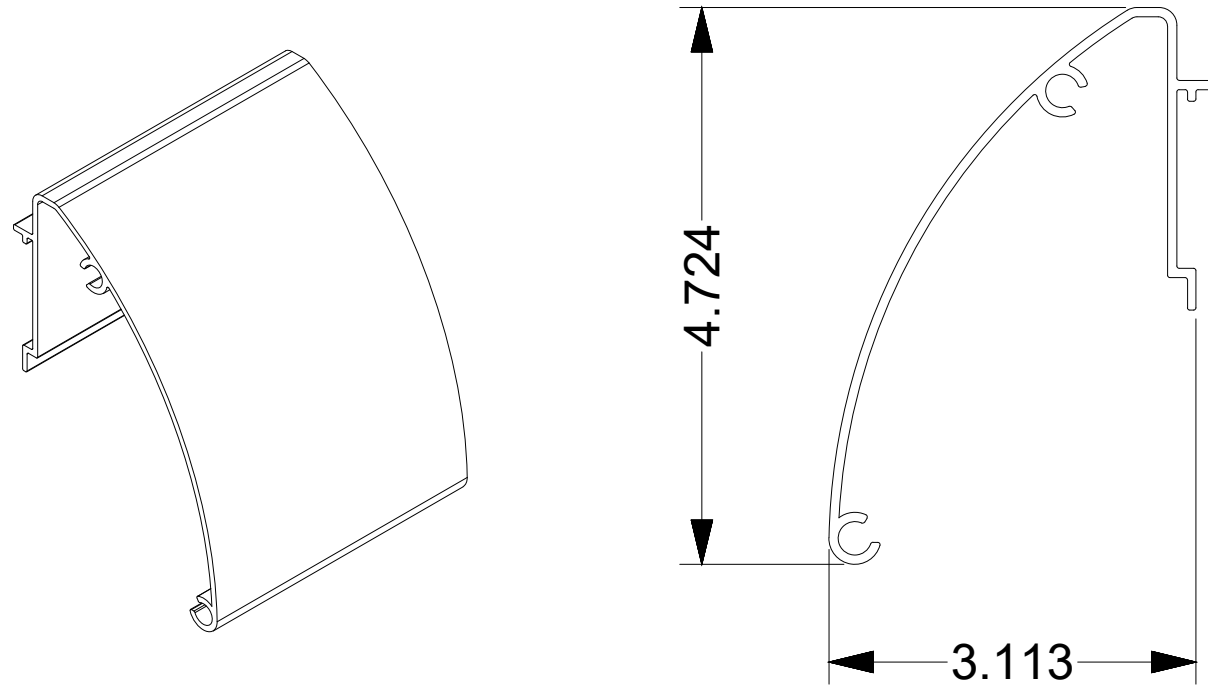
14800 NE 65TH ST
VANCOUVER, WA 98682

04/25/2024

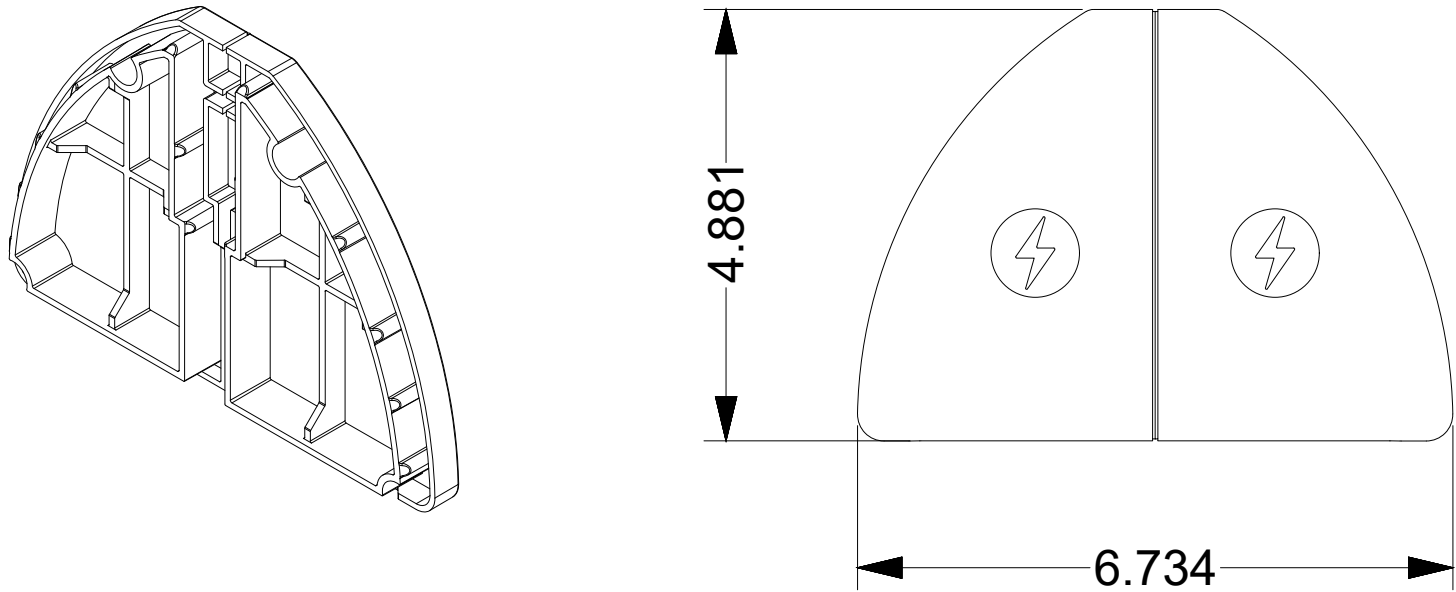
RUSSELL EMERY
LICENSE #: 71060

U2716.0368.231

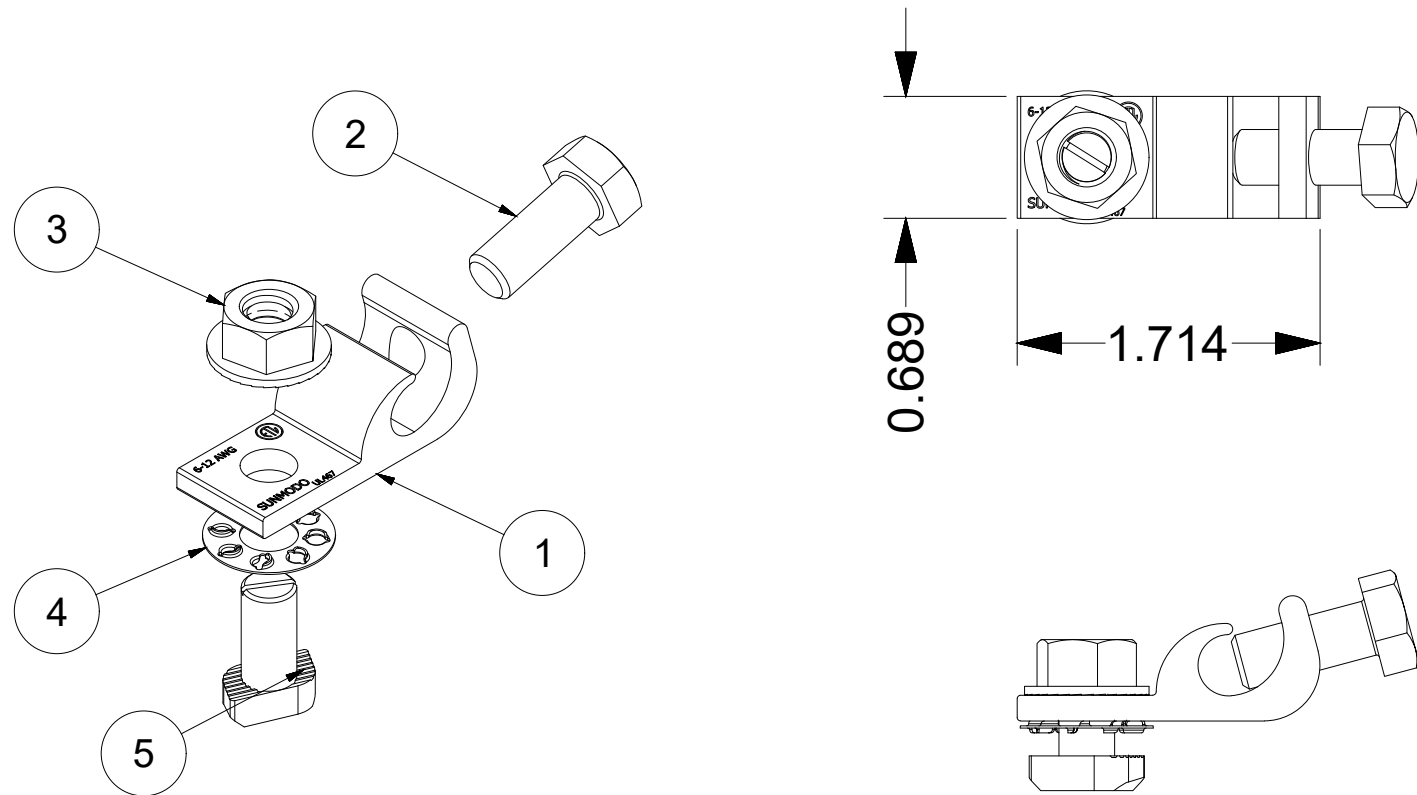
SHEET
6 OF 7



SKIRT
SKIRT-84-B

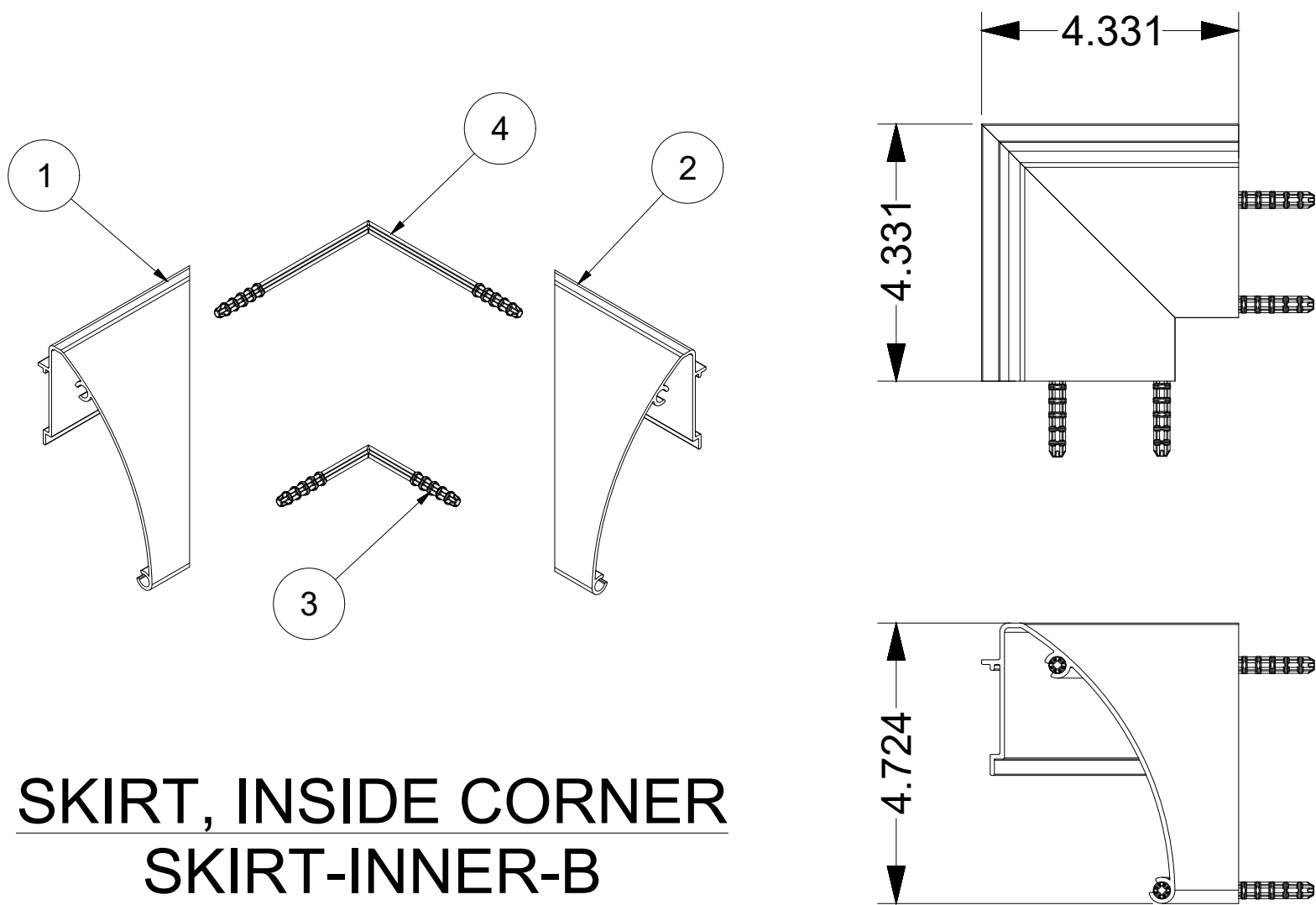


SKIRT END CAP
SKIRT-CAP-B

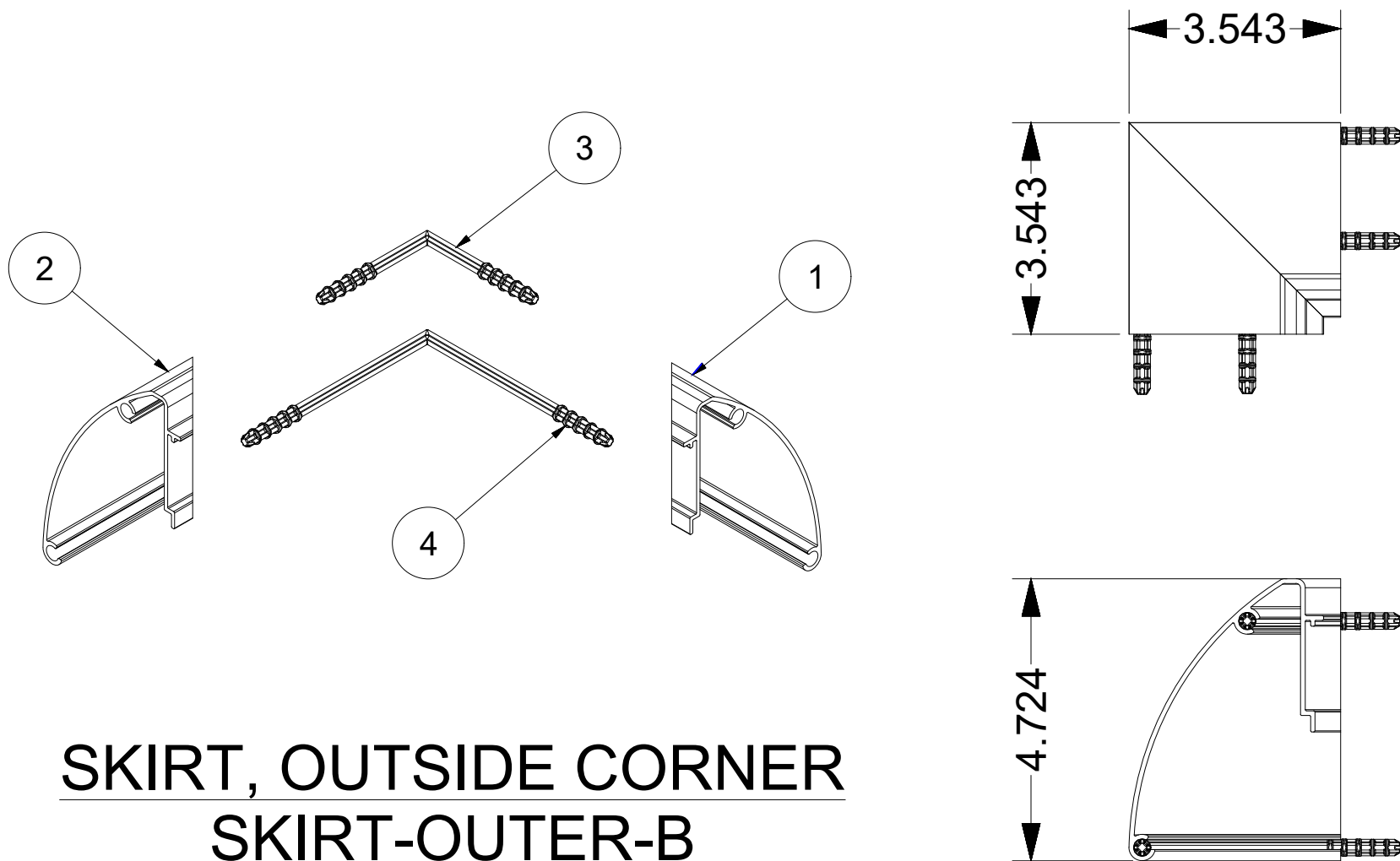


GROUNDING LUG
GRND SMR

5	B20053-002	T-BOLT M8 X16	STAINLESS STEEL
4	B15086-001	GROUNDING SPACER	STAINLESS STEEL
3	B10020-001	FLANGE NUT M8	STAINLESS STEEL
2	B10019-001	HEX CAP SCREW M8 X 20	STAINLESS STEEL
1	A20462-001	GROUND LUG	BRASS
ITEM	PART NUMBER	DESCRIPTION	MATERIAL



SKIRT, INSIDE CORNER
SKIRT-INNER-B



SKIRT, OUTSIDE CORNER
SKIRT-OUTER-B

4	C50020-BK2	PLASTIC CORNER DOWEL	PC/ABS PLASTIC
3	C50020-BK1	PLASTIC CORNER DOWEL	PC/ABS PLASTIC
2	A20517-BK2	BLACK SKIRT CONCAVE CORNER-R	ALUMINUM 6061
1	A20517-BK1	BLACK SKIRT CONCAVE CORNER-L	ALUMINUM 6061
ITEM	PART NUMBER	DESCRIPTION	MATERIAL

4	C50020-BK2	PLASTIC CORNER DOWEL	PC/ABS PLASTIC
3	C50020-BK1	PLASTIC CORNER DOWEL	PC/ABS PLASTIC
2	A20517-BK4	BLACK SKIRT CONVEX CORNER-R	ALUMINUM 6061
1	A20517-BK3	BLACK SKIRT CONVEX CORNER-L	ALUMINUM 6061
ITEM	PART NUMBER	DESCRIPTION	MATERIAL

This item has been digitally signed and sealed by Russell N. Emery on the date adjacent to the seal. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

DATE: 01/19/2024	REV. #	ENG: MH	DWG: MH	CHK: RNE
04/24/24	1	BY: MH	DESCRIPTION	NANOPUS MOUNT

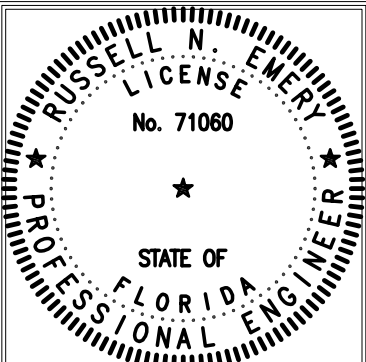


Copyright © 2024
Vector Structural Engineering, LLC
This drawing contains proprietary information
belonging to Vector Structural Engineering, LLC,
and may be neither wholly nor partially copied or
reproduced without the prior written permission of
Vector Structural Engineering, LLC.

SUNMODO CORP

NANORACK PV MOUNTING SYSTEM

14800 NE 65TH ST
VANCOUVER, WA 98682



04/25/2024

RUSSELL N. EMERY
LICENSE # 71060

U2716.0368.231

SHEET
7 OF 7