

IRONRIDGE AIRE PHOTOVOLTAIC PANEL RACKING SYSTEM WITH QUICKMOUNT Q-BASE ROOF ATTACHMENTS

GENERAL NOTES:

1. THIS SYSTEM MEETS ALL OF THE REQUIREMENTS OF THE 7TH EDITION (2020) FLORIDA BUILDING CODE, INCLUDING THE HVHZ PROVISIONS.
2. THIS SYSTEM HAS BEEN TESTED PER TAS 100(A) AND ASTM D7147. IT IS NOT A PART OF THE BUILDING ENVELOPE, AND IMPACT RESISTANCE IS NOT REQUIRED.
3. THIS SYSTEM SHALL BE INSTALLED PER THE IRONRIDGE AIRE INSTALLATION MANUAL.
4. THE PV PANELS ARE BY OTHERS AND ARE NOT A PART OF THIS APPROVAL.
5. RAIL SPACING TO BE AS SPECIFIED BY THE PV PANEL MANUFACTURER'S INSTALLATION INSTRUCTIONS.
6. THE DESIGN OF THE ROOF SUBSTRATE IS THE RESPONSIBILITY OF THE ENGINEER OF RECORD OR OTHER SPECIALTY ENGINEER, AND IS NOT A PART OF THIS APPROVAL. THE SUBSTRATE MUST SAFELY TRANSMIT THE LOADS APPLIED TO THIS SYSTEM TO THE BUILDING STRUCTURE.
7. FIRE RATINGS OR FIRE RESISTANCE IS NOT A PART OF THIS REVIEW.
8. ALL ANCHORS SECURING THE SYSTEM TO PRESSURE TREATED WOOD SHALL BE CAPABLE OF RESISTING CORROSION CAUSED BY THE CHEMICALS IN THE WOOD.
9. MATERIALS INCLUDING BUT NOT LIMITED TO STEEL/METAL SCREWS THAT COME INTO CONTACT WITH OTHER DISSIMILAR MATERIALS SHALL BE PROTECTED PER FBC REQUIREMENTS.
10. NO INCREASE IN ALLOWABLE STRESS HAS BEEN USED IN THE DESIGN OF THIS PRODUCT. Cd=1.6 WAS USED FOR WOOD SCREWS ONLY.

WINDLOAD NOTES:

1. DESIGN WINDLOADS MUST BE CALCULATED BY A LICENSED PROFESSIONAL ENGINEER OR ARCHITECT FOR EACH PROJECT, PER ASCE 7-16 SECTION 29.4.4. DESIGN WINDLOADS MAY NOT EXCEED THE ALLOWABLE WINDLOADS SHOWN IN THIS CHART.
2. PANEL SYSTEM LOCATION, HEIGHT, AND SPACING MUST MEET THE REQUIREMENTS OF ASCE 7-16 SECTION 29.4.4. WINDLOADS ACT NORMAL TO THE SURFACE OF THE PV PANEL SYSTEM.
3. OTHER CONFIGURATIONS REQUIRE PROJECT SPECIFIC ANALYSIS BY A LICENSED PROFESSIONAL ENGINEER OR ARCHITECT.
4. ALLOWABLE WINDLOADS ARE BASED ON ANCHORING IN WOOD RAFTERS WITH S.G.=0.45 MIN.

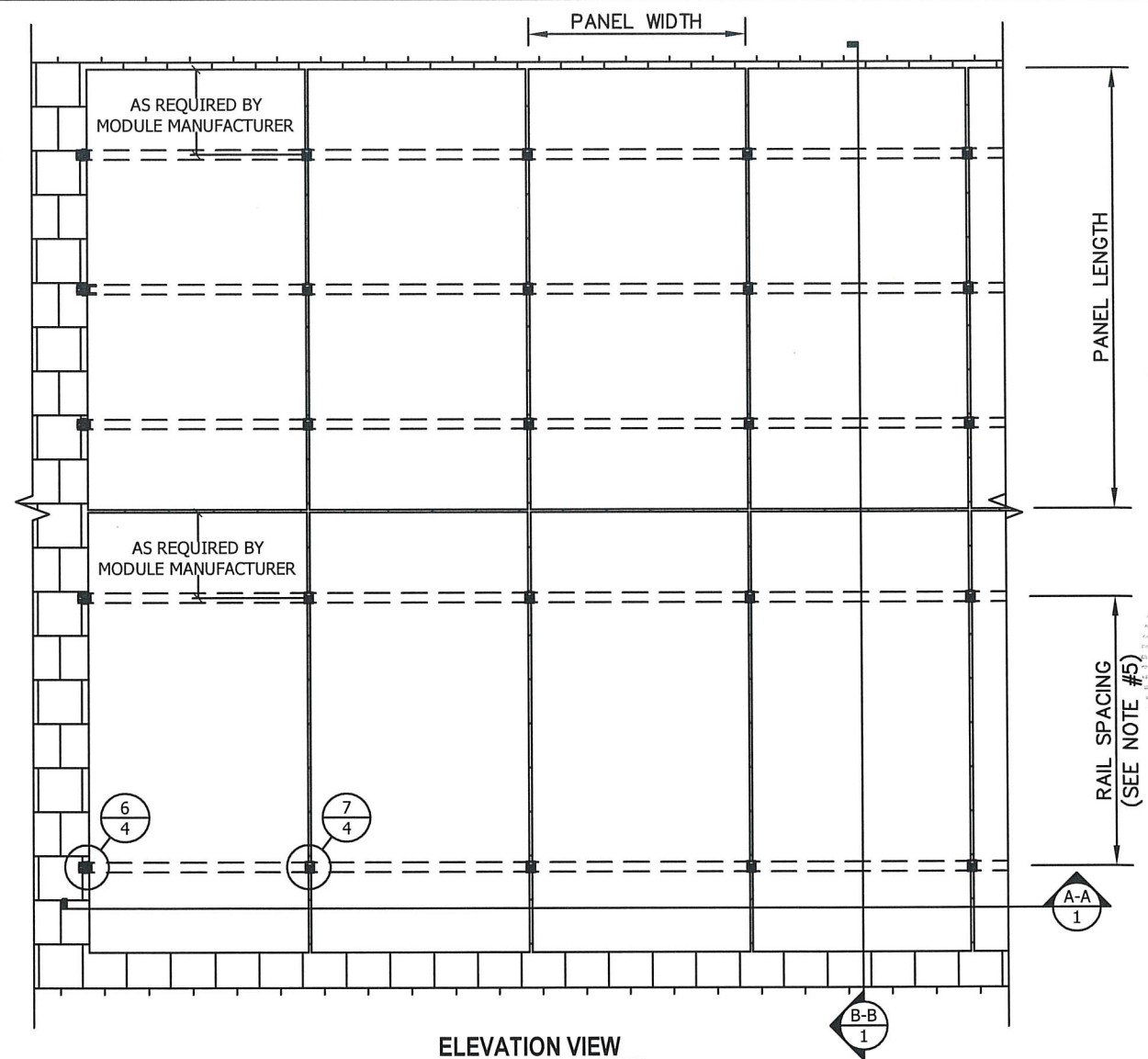
ALLOWABLE WINDLOADS

TWO RAIL SYSTEM					THREE RAIL SYSTEM								
PANEL WIDTH (in)	PANEL LENGTH (in)	ANCHOR SPAN (L) (in)	A1 RAIL (+/- psf)	A2 RAIL (+/- psf)	PANEL WIDTH (in)	PANEL LENGTH (in)	ANCHOR SPAN (L) (in)	A1 RAIL (+/- psf)	A2 RAIL (+/- psf)				
45	67 1/2	16	120.7	120.7	45	67 1/2	16	181.1	181.1				
		24	89.1	120.7			24	133.7	181.1				
		32	79.6	120.7			32	119.4	181.1				
		36	78.2	115			36	117.3	172.5				
		48	64.5	108			48	96.8	162.0				
		64	39.3	66.4			64	59.0	99.6				
	80	72	31.3	54		72	47.0	81.0	80	16	152.9	152.9	
		16	101.9	101.9		24	112.8	152.9		24	100.8	152.9	
		24	75.2	101.9		32	67.2	101.9		36	99.0	145.5	
		32	67.2	101.9		48	66	97		48	81.6	136.4	
		36	66	97		64	54.4	90.9		64	49.8	84.0	
		48	54.4	90.9		72	33.2	56		72	39.6	68.4	
	86	72	26.4	45.6		86	16	142.1	142.1	86	16	142.1	142.1
		16	94.7	94.7			24	105.0	142.1		24	93.8	142.1
		24	70	94.7			32	62.5	94.7		32	93.8	142.1
32		62.5	94.7	36	61.4		90.2	48	92.1		135.3		
36		61.4	90.2	48	50.6		84.6	64	75.9		126.9		
48		50.6	84.6	64	30.9		52.1	72	46.4		78.2		
92 1/2	72	24.5	42.4	92 1/2	72	36.8	63.6	92 1/2	16	132.2	132.2		
	16	88.1	88.1		24	97.5	132.2		24	97.5	132.2		
	24	65	88.1		32	87.2	132.2		32	87.2	132.2		
	32	58.1	88.1		36	85.7	125.9		48	70.5	117.9		
	36	57.1	83.9		64	43.1	72.6		64	43.1	72.6		
	48	47	78.6		72	34.2	59.1		72	34.2	59.1		
45	92 1/2	16	88.1	88.1	45	92 1/2	16	132.2	132.2				
		24	71.2	88.1			24	106.8	132.2				
		32	55.3	88.1			32	83.0	132.2				
		36	48.4	81.6			36	72.6	122.4				
		48	32.2	54.6			48	48.3	81.9				
		64	28.4	48.4			64	42.6	72.6				
		72	27.7	48.4			72	41.6	72.6				

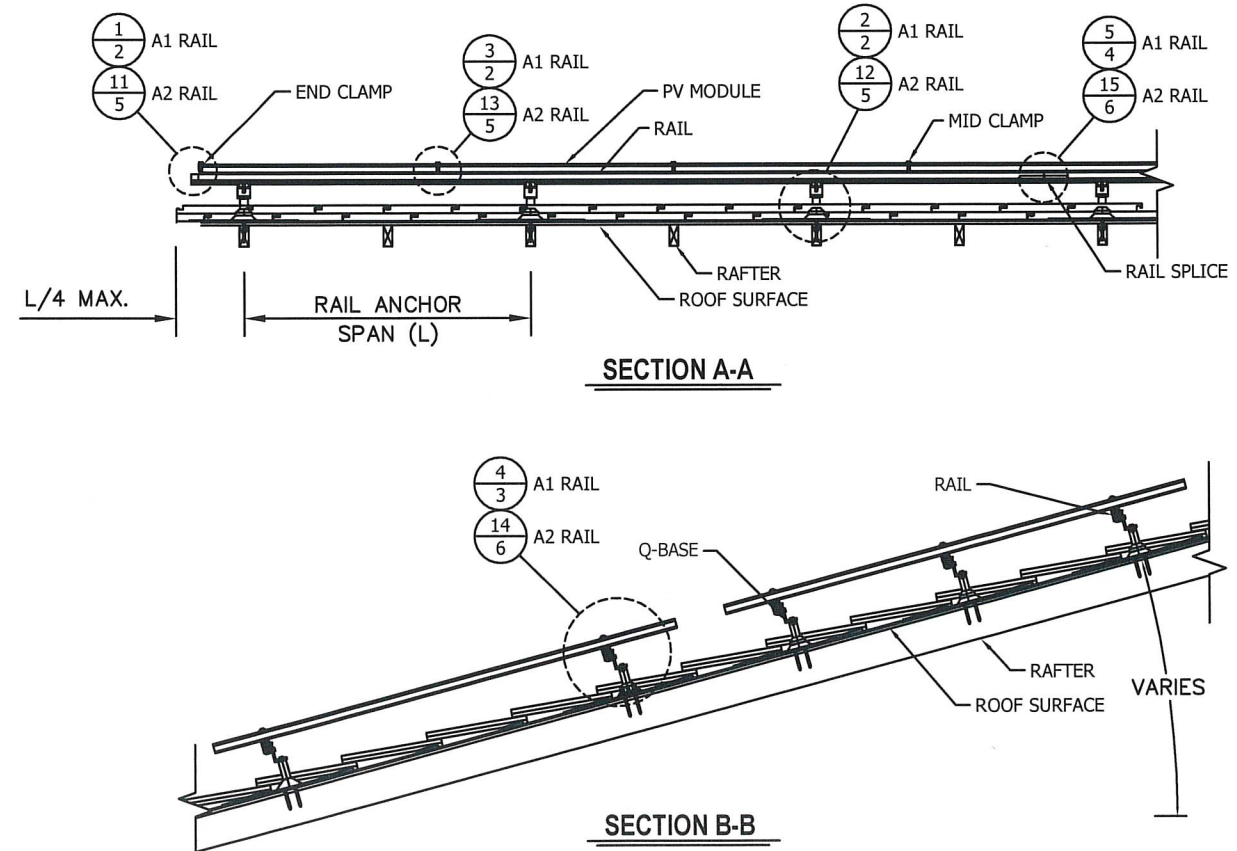
LANDSCAPE LAYOUT:

45	92 1/2	16	88.1	88.1	45	92 1/2	16	132.2	132.2
		24	71.2	88.1			24	106.8	132.2
		32	55.3	88.1			32	83.0	132.2
		36	48.4	81.6			36	72.6	122.4
		48	32.2	54.6			48	48.3	81.9
		64	28.4	48.4			64	42.6	72.6
		72	27.7	48.4			72	41.6	72.6

THREE RAIL SYSTEM:



TWO RAIL SYSTEM:



DATE: 12/30/22
REV.#: 1
1ST SUBMITTAL
PRINTS ISSUED FOR: 1

SEAL: SCOTT WOLTERS, No. 62354, PROFESSIONAL ENGINEER, STATE OF FLORIDA, DEC 30 2022

SCOTT WOLTERS
FL PE# 62354
WOLTERS ENGINEERING
(CO.# 27194)
15211 97TH ROAD N
WEST PALM BEACH, FL 33412
(561) 225-1982

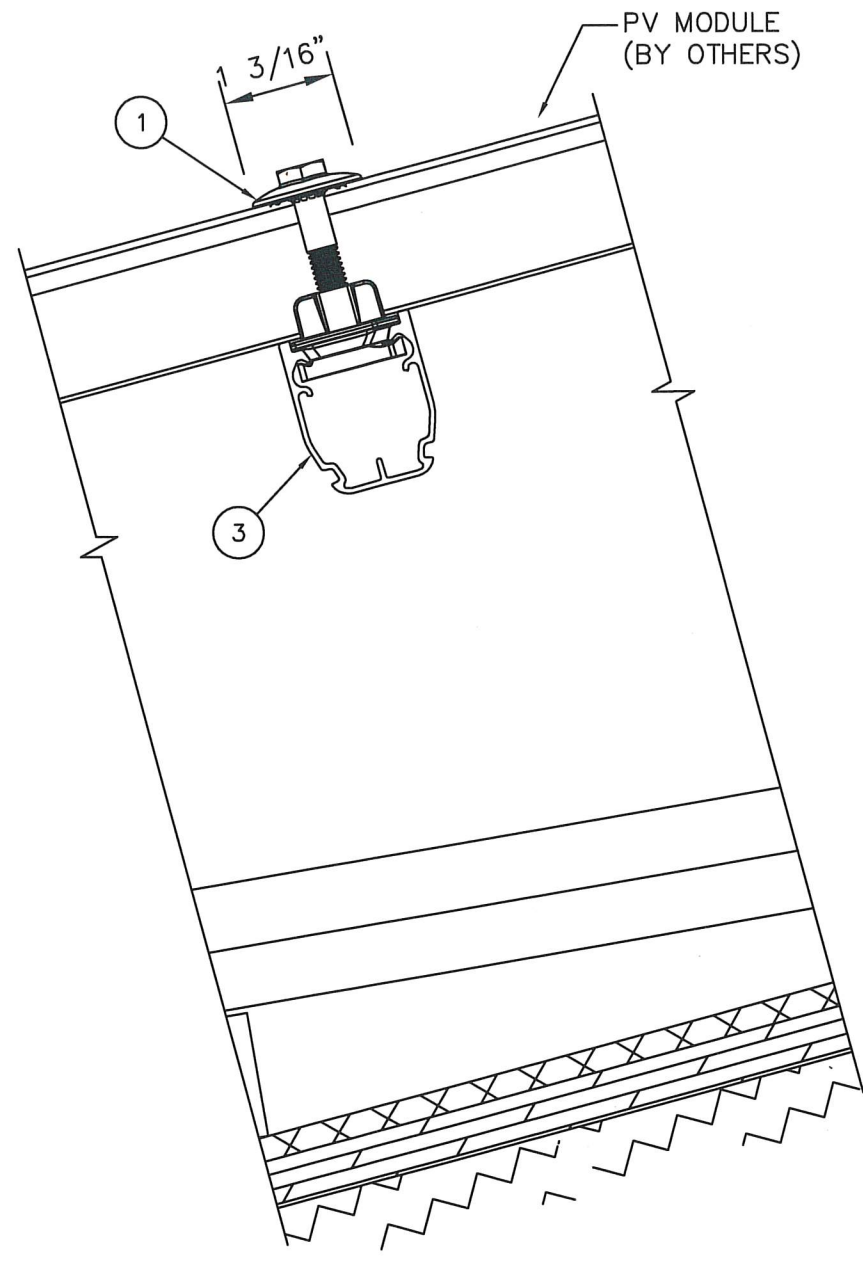
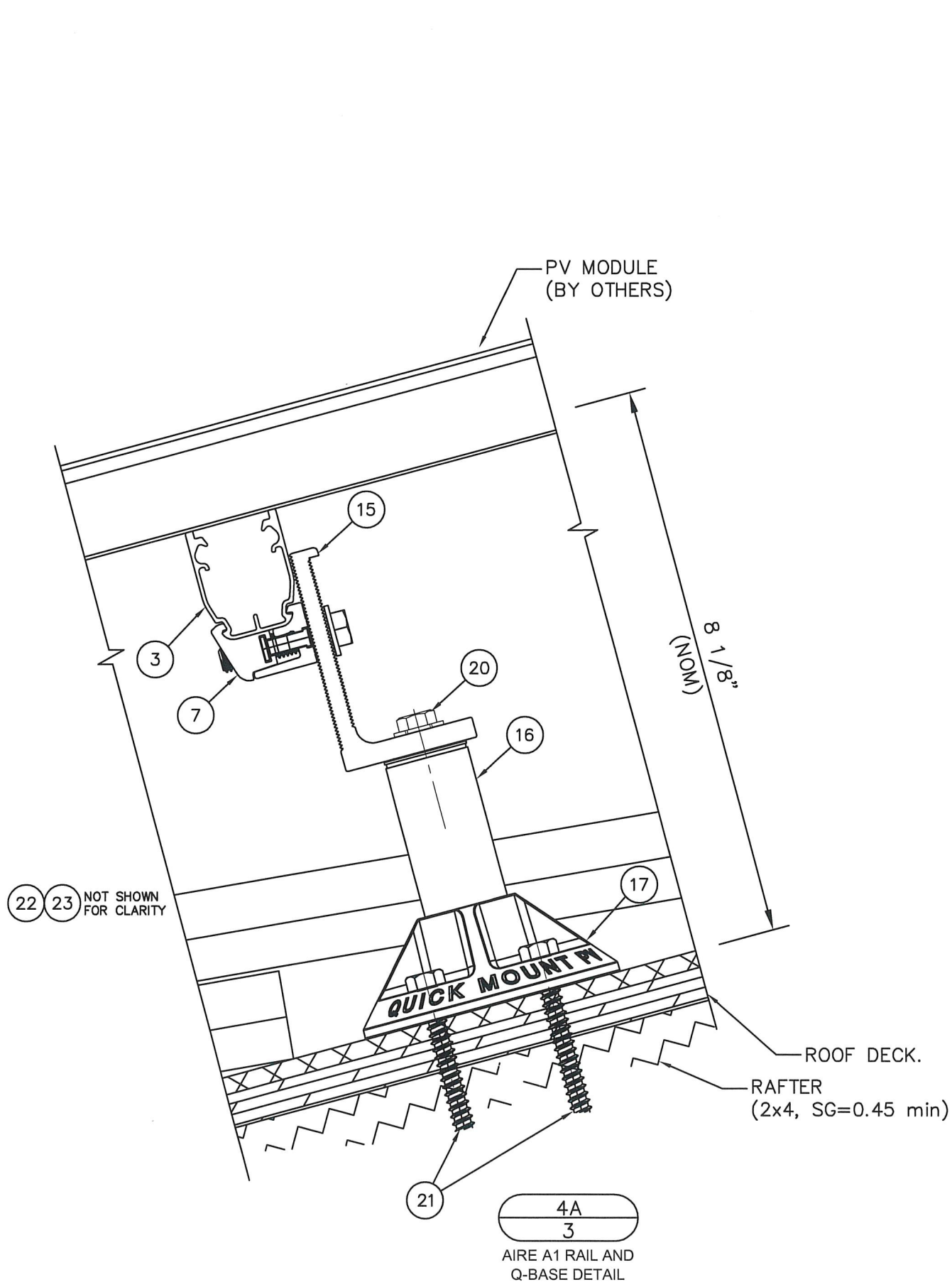
IRONRIDGE

PHONE: (800) 227-9523
info@ironridge.com

28357 INDUSTRIAL BLVD.
HAYWARD, CA 94545

DWG: AIRE-QB
SHEET: 1/12

**IRONRIDGE AIRE PHOTOVOLTAIC PANEL RACKING SYSTEM
WITH QUICKMOUNT Q-BASE ROOF ATTACHMENTS**



4A
3
AIRE A1 RAIL AND Q-BASE DETAIL

4B
3
AIRE A1 RAIL AND MID-CLAMP DETAIL

DATE	12/30/22
REV.#	
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1ST SUBMITTAL	

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SCOTT WOLTERS
FL PE# 62354

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PROFESSIONAL ENGINEER
DEC 30 2022

WOLTERS ENGINEERING
(COA# 27194)
15211 97TH ROAD N
WEST PALM BEACH, FL 33412
(561) 225-1982

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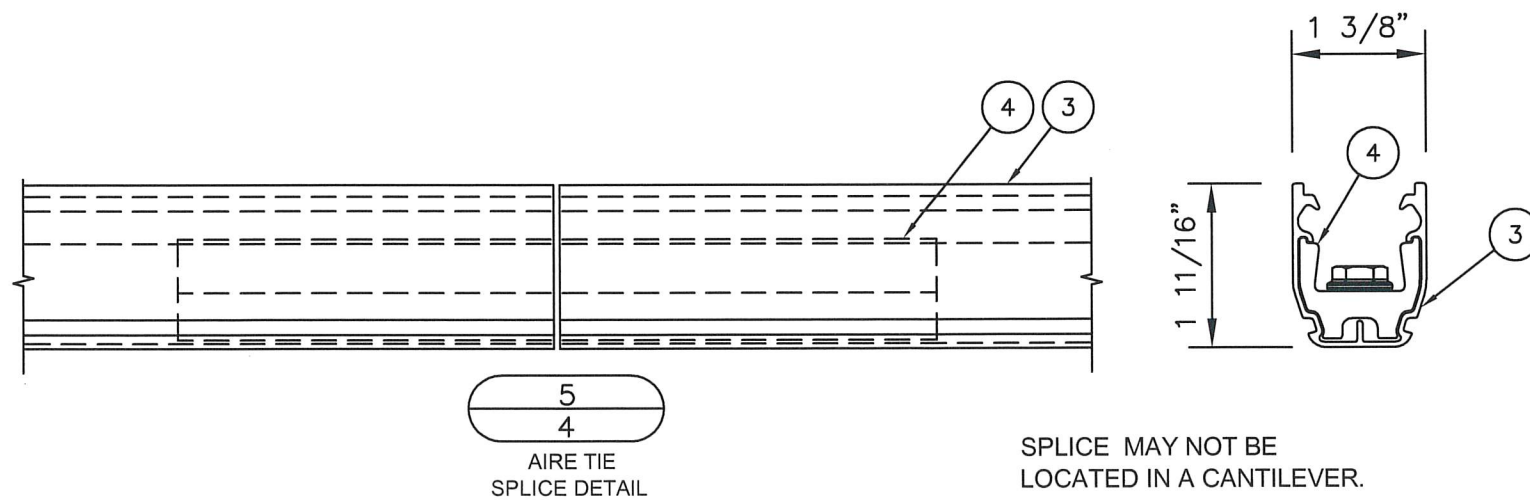
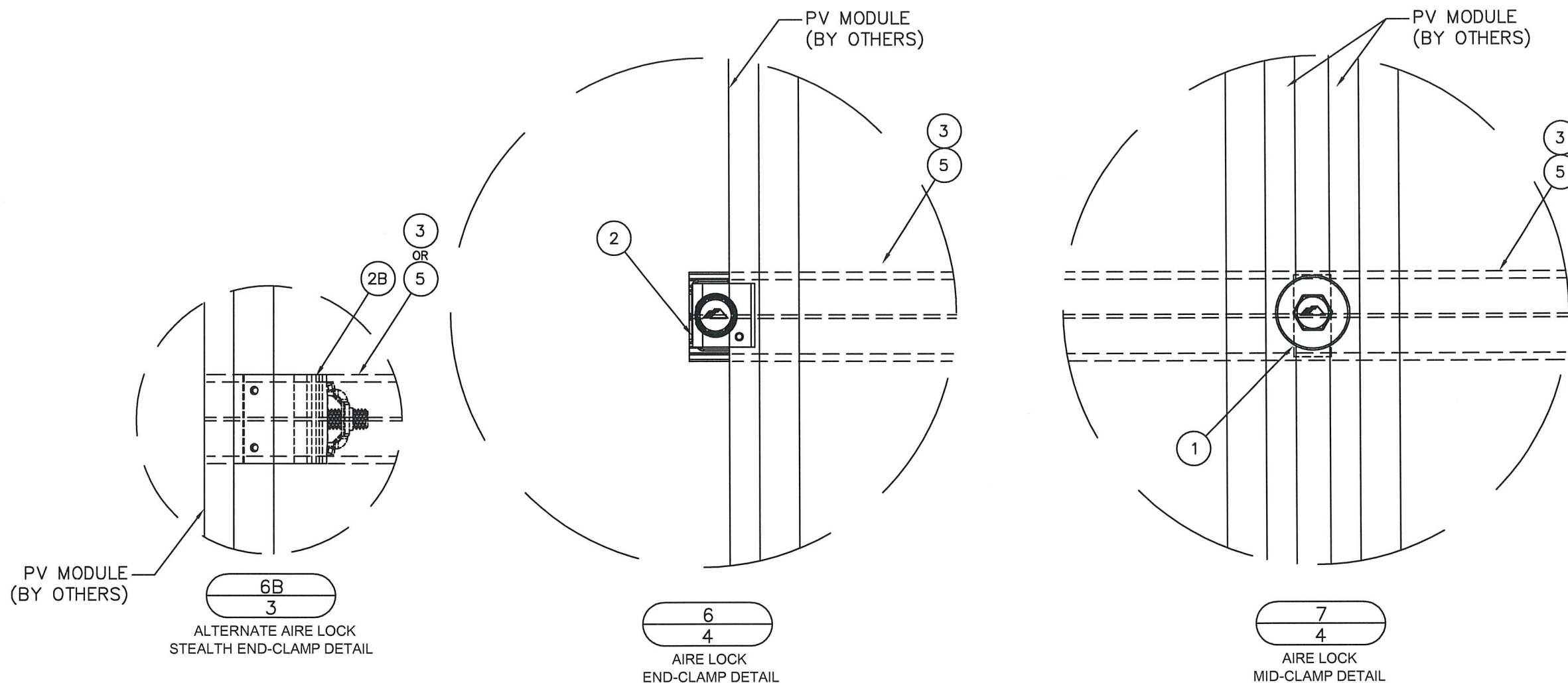
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HAYWARD, CA 94545

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info@ironridge.com

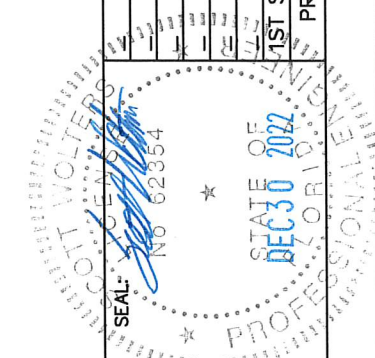
DWG: **AIRE-QB**

SHEET: **3/12**

**IRONRIDGE AIRE PHOTOVOLTAIC PANEL RACKING SYSTEM
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SPLICE MAY NOT BE
LOCATED IN A CANTILEVER.



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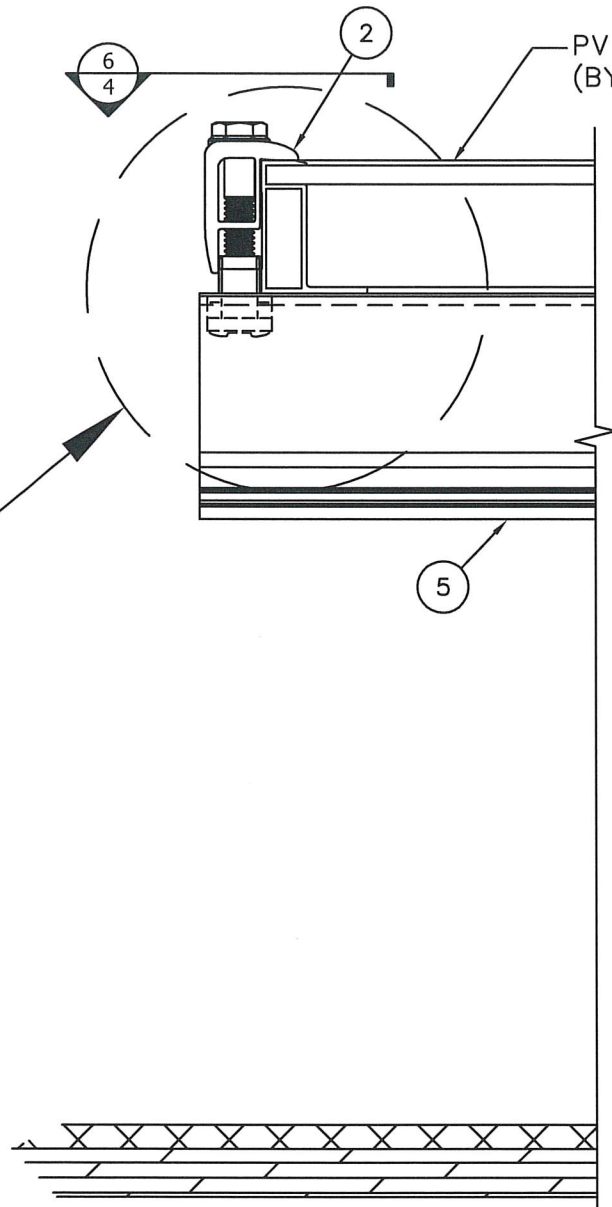
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28357 INDUSTRIAL BLVD.
HAYWARD, CA 94545
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info@ironridge.com

DWG: **AIRE-QB**
SHEET: **4/12**

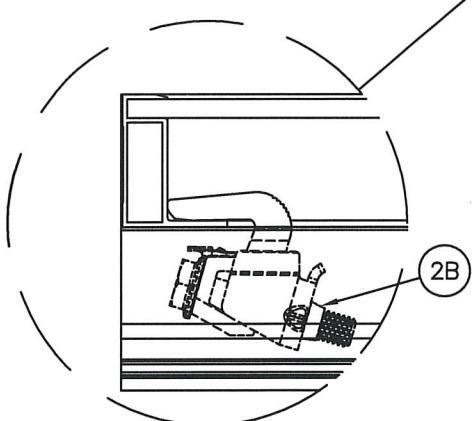
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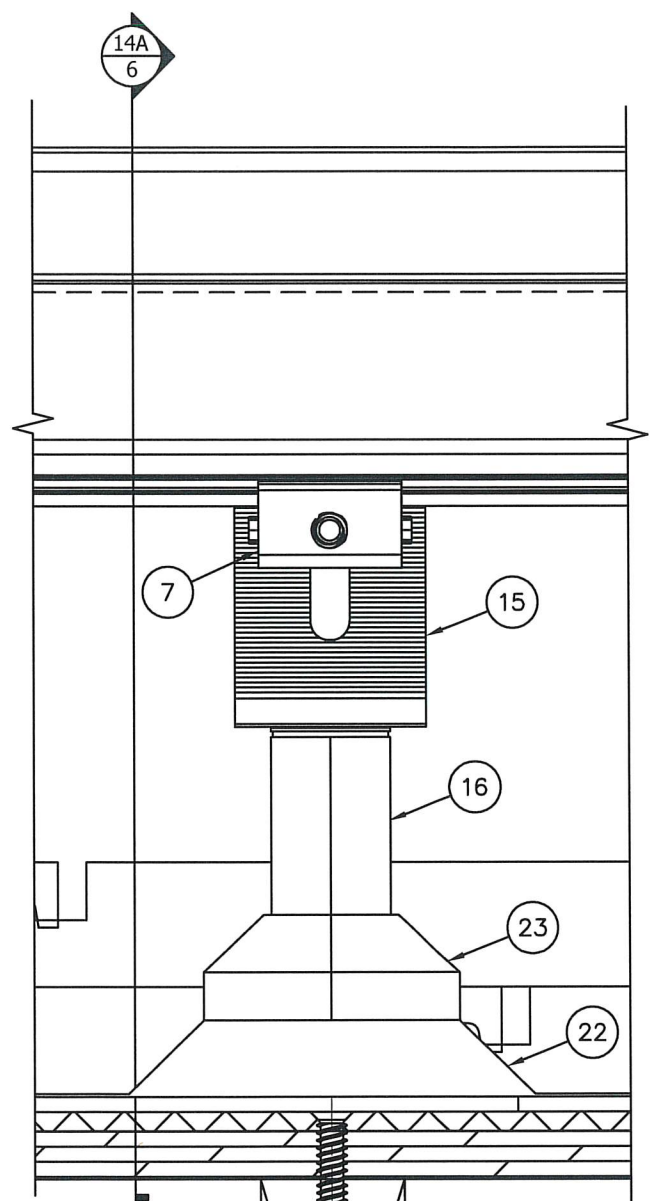


PV MODULE
(BY OTHERS)



11B
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ALTERNATE AIRE LOCK
STEALTH END-CLAMP DETAIL

11
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AIRE LOCK
END-CLAMP DETAIL

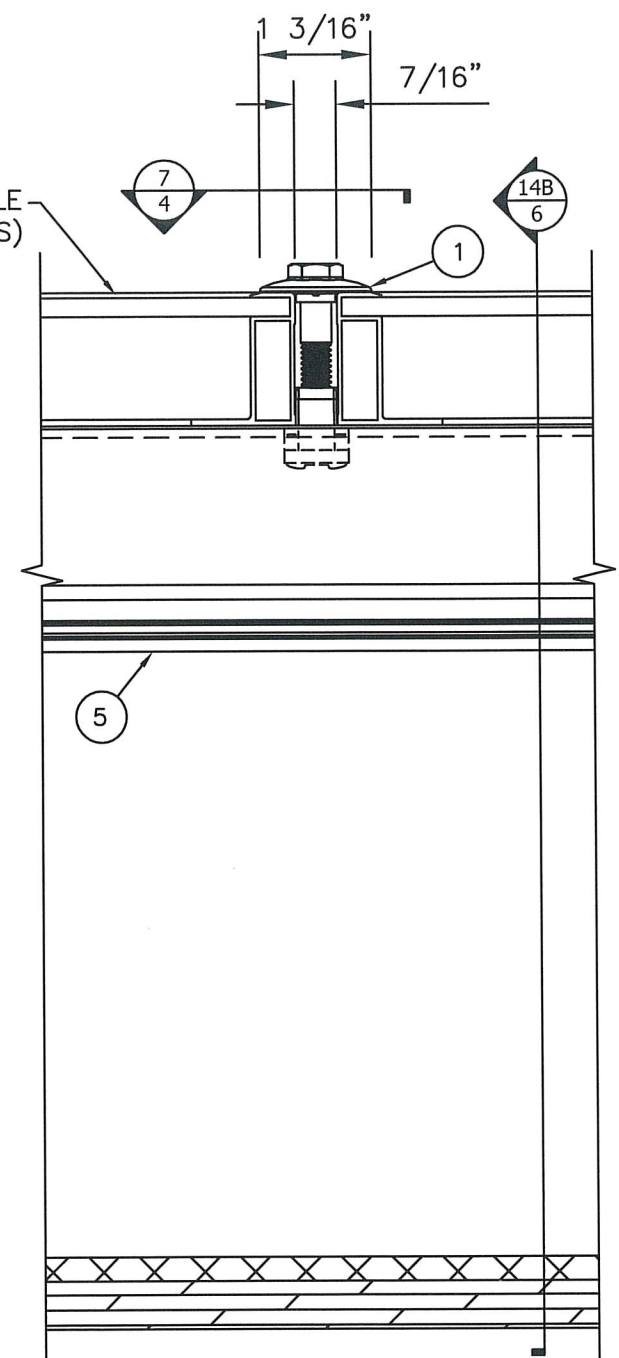


PV MODULE
(BY OTHERS)

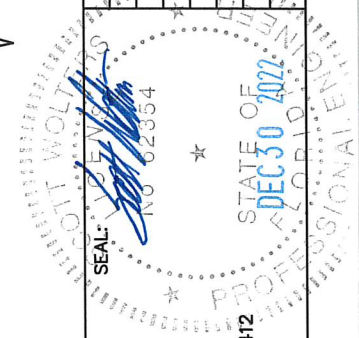
2 3/8"
6 5/16"
(NOM)

12
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Q-BASE DETAIL

RAFTER
(2x4, SG=0.45 min)



13
5
AIRE LOCK
MID-CLAMP DETAIL



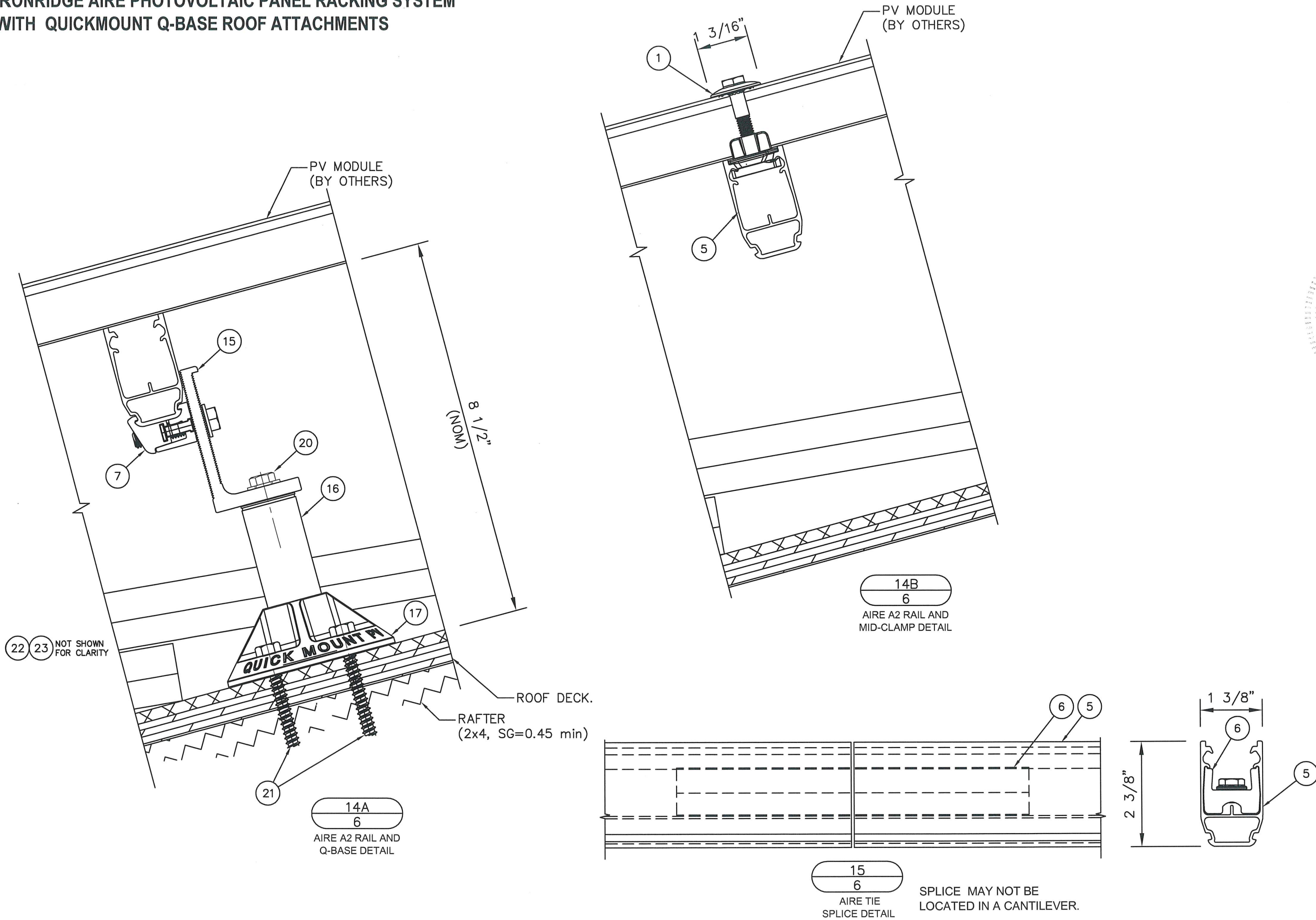
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FL PE# 62354
WOLTERS ENGINEERING
(COA# 27194)
15211 97TH ROAD N
WEST PALM BEACH, FL 33412
(561) 225-1982

IRONRIDGE
28357 INDUSTRIAL BLVD.
HAYWARD, CA 94545
PHONE: (800) 227-9523
Info@ironridge.com

DWG: AIRE-QB
SHEET: 5/12

REV.#	DATE
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**IRONRIDGE AIRE PHOTOVOLTAIC PANEL RACKING SYSTEM
WITH QUICKMOUNT Q-BASE ROOF ATTACHMENTS**



DATE	12/30/22
REV.#	
PRINTS ISSUED FOR	
1ST SUBMITTAL	

SEAL: [Signature] NO. 62354
 STATE OF FLORIDA
 PROFESSIONAL ENGINEER
 DEC 30 2022

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 FL PE# 62354

WOLTERS ENGINEERING
 (COA# 27194)
 15211 97TH ROAD N
 WEST PALM BEACH, FL 33412
 (561) 225-1982

IRONRIDGE

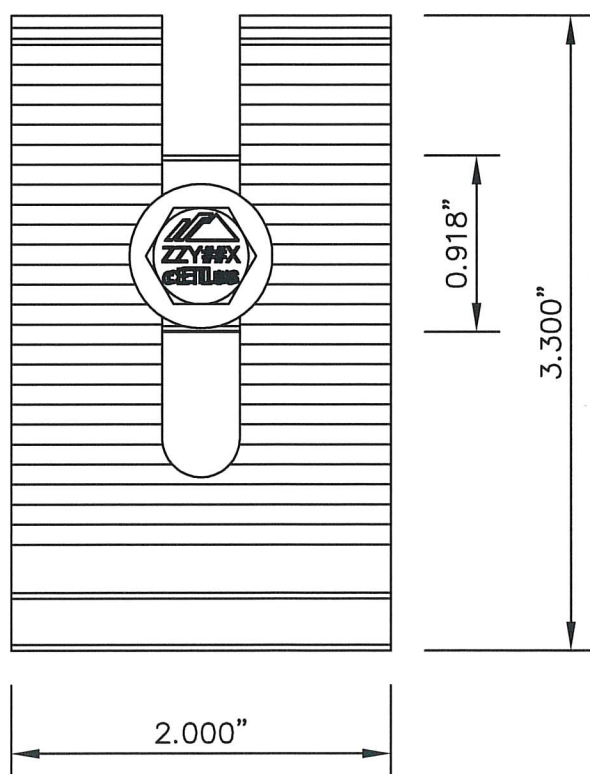
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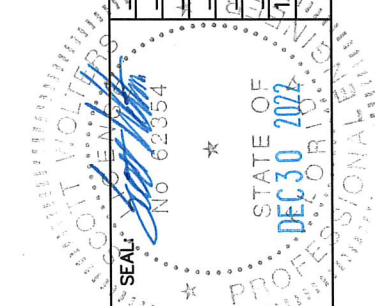
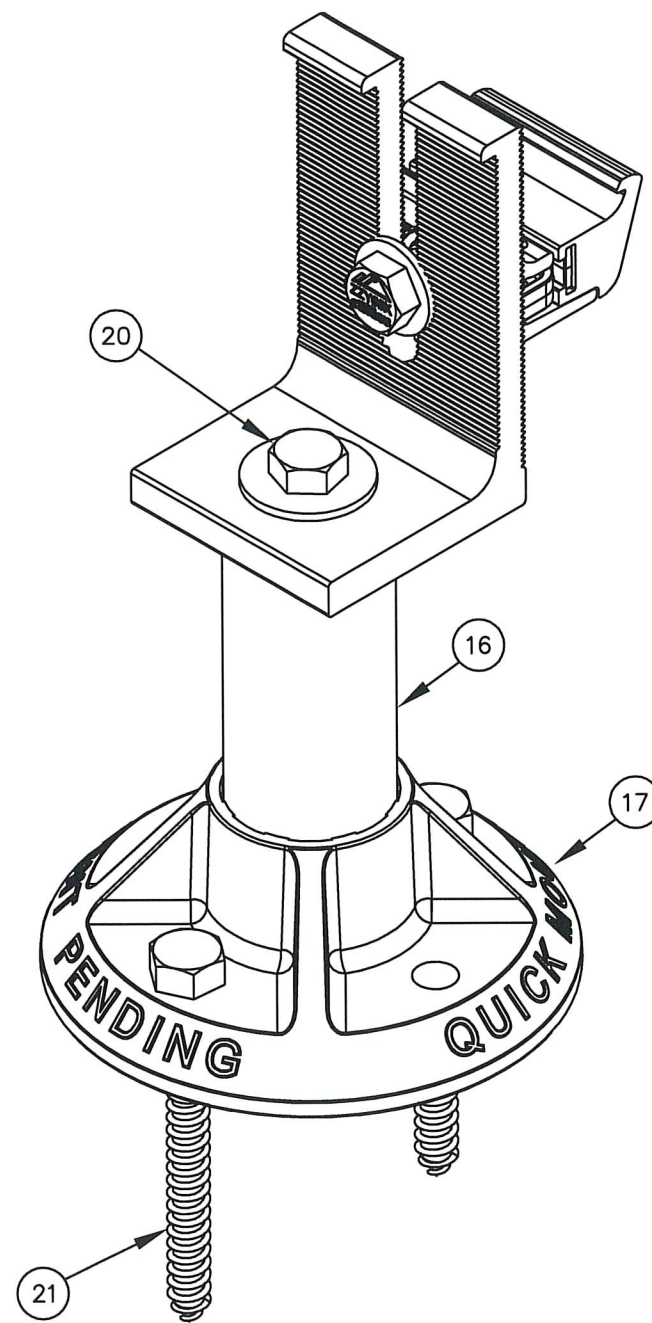
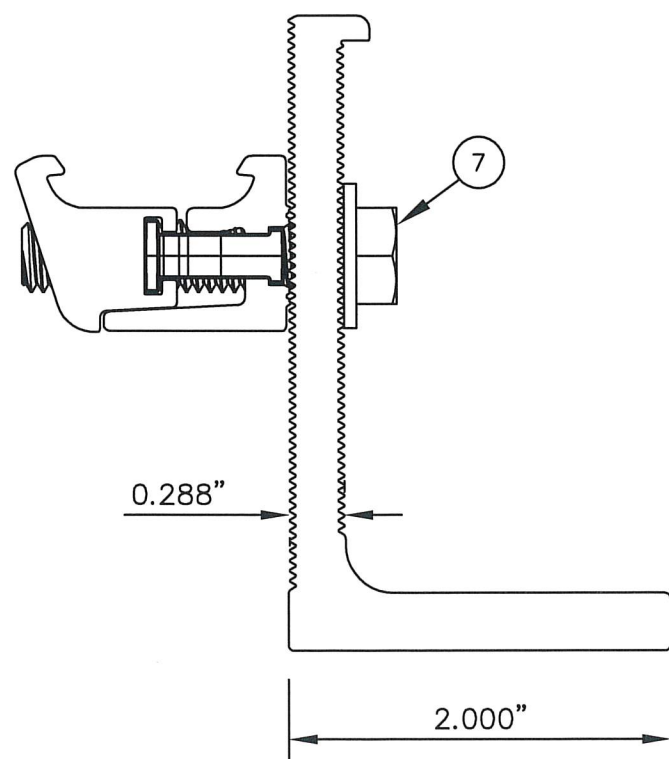
DWG: **AIRE-QB**
 SHEET: **6/12**

**IRONRIDGE AIRE PHOTOVOLTAIC PANEL RACKING SYSTEM
WITH QUICKMOUNT Q-BASE ROOF ATTACHMENTS**

BILL OF MATERIALS- QuickMount Q-Base		
#	DESCRIPTION	MATERIALS/NOTES
15	OPEN SLOT L-FOOT, MILL OR BLACK	6000 SERIES AL
16	1 1/4" DIAMETER POST (3 1/4" MIN 12" MAX)	6000 SERIES AL
17	QBASE BASE	300 SERIES AL
18	5/16" X 3/4" CAP SCREW, HEX	COATED STEEL
19	5/16" X 1 1/4" OD WASHER	300 SERIES SS & EPDM
20	5/16" X 1" CAP SCREW, HEX	300 SERIES SS
21	5/16" X 3" HEX HEAD LAG SCREW	300 SERIES SS
22	QBASE FLASHING	3000 SERIES AL
23	COUNTER-FLASHING CAP	EPDM



15



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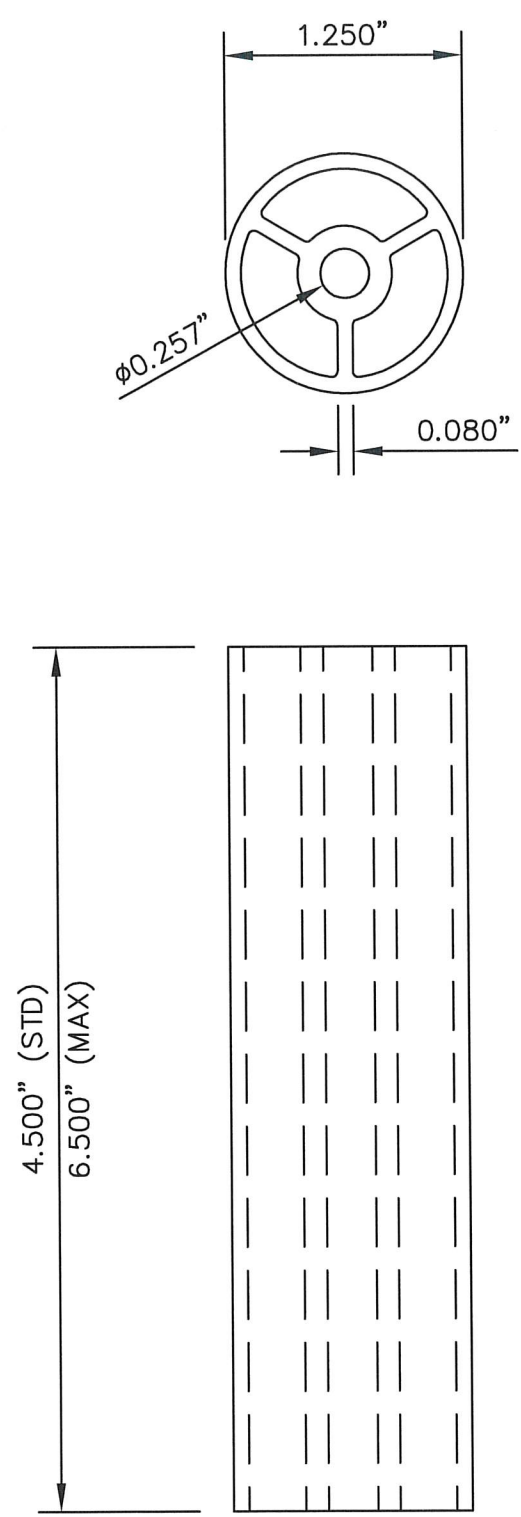
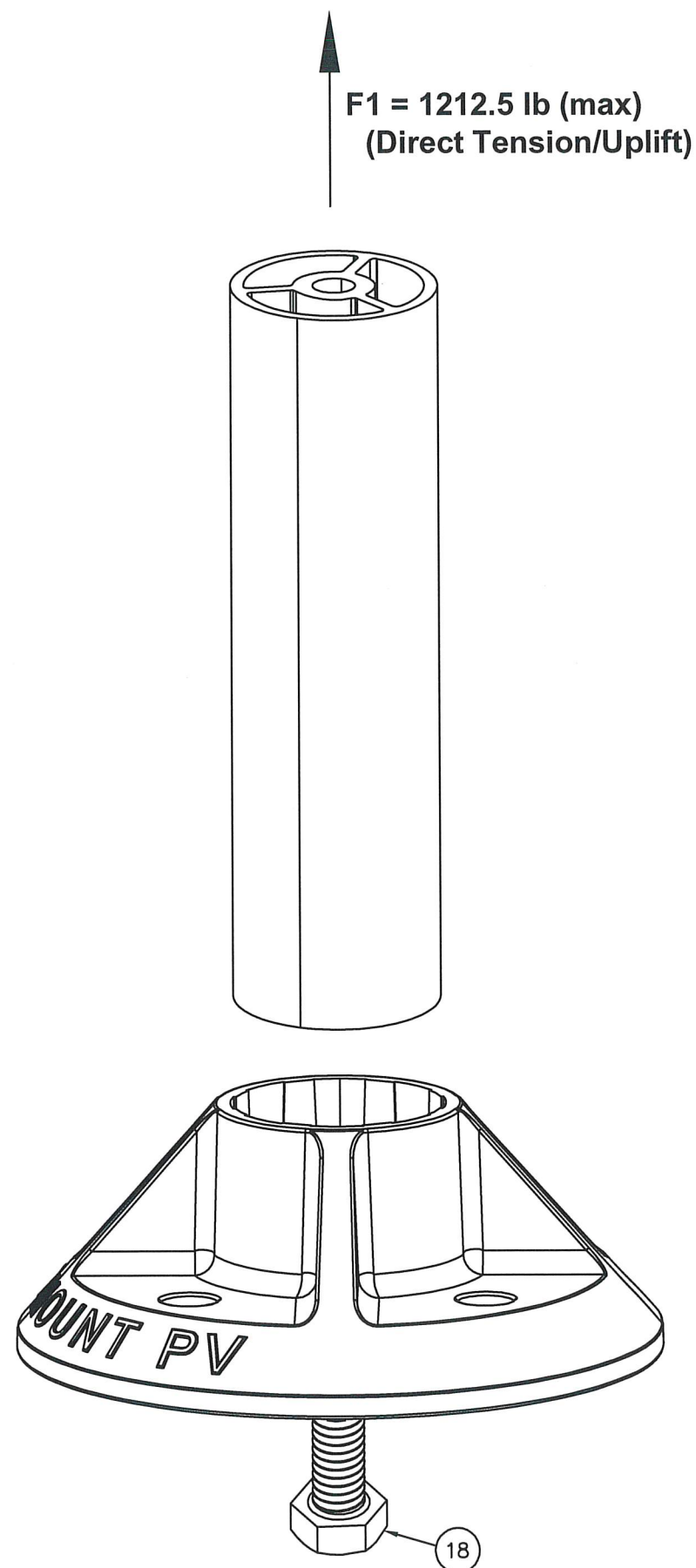
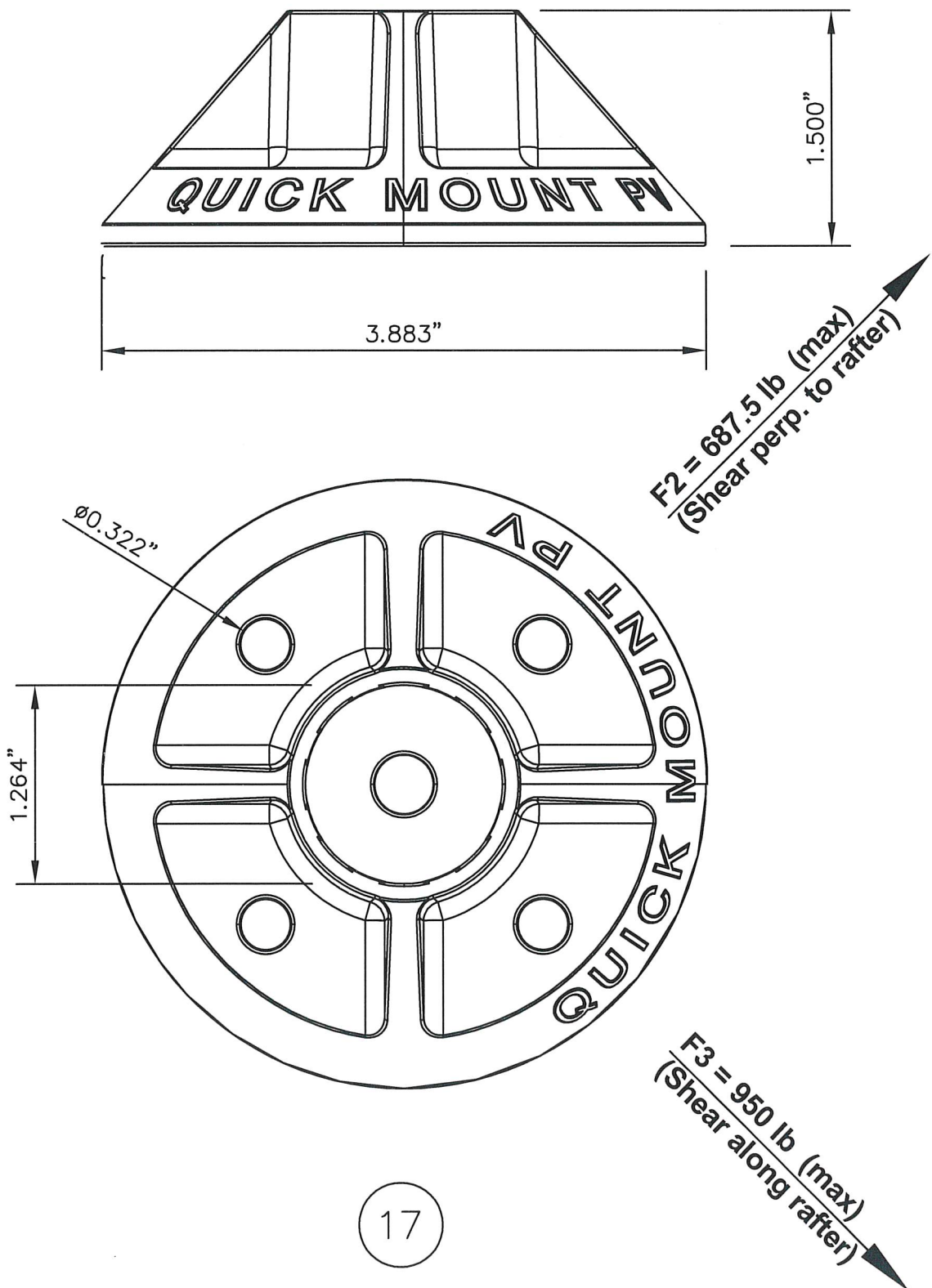
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HAYWARD, CA 94545
PHONE: (800) 227-9523
info@ironridge.com

DWG: AIRE-QB
SHEET: 7/12

REV#	DATE
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PRINTS ISSUED FOR

**IRONRIDGE AIRE PHOTOVOLTAIC PANEL RACKING SYSTEM
WITH QUICKMOUNT Q-BASE ROOF ATTACHMENTS**



ANCHOR CAPACITY:
ANCHOR CAPACITIES LISTED ARE
PER FLPA# 29846.

28357 INDUSTRIAL BLVD.
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info@ironridge.com

DWG: **AIRE-QB**

SHEET: **8/12**

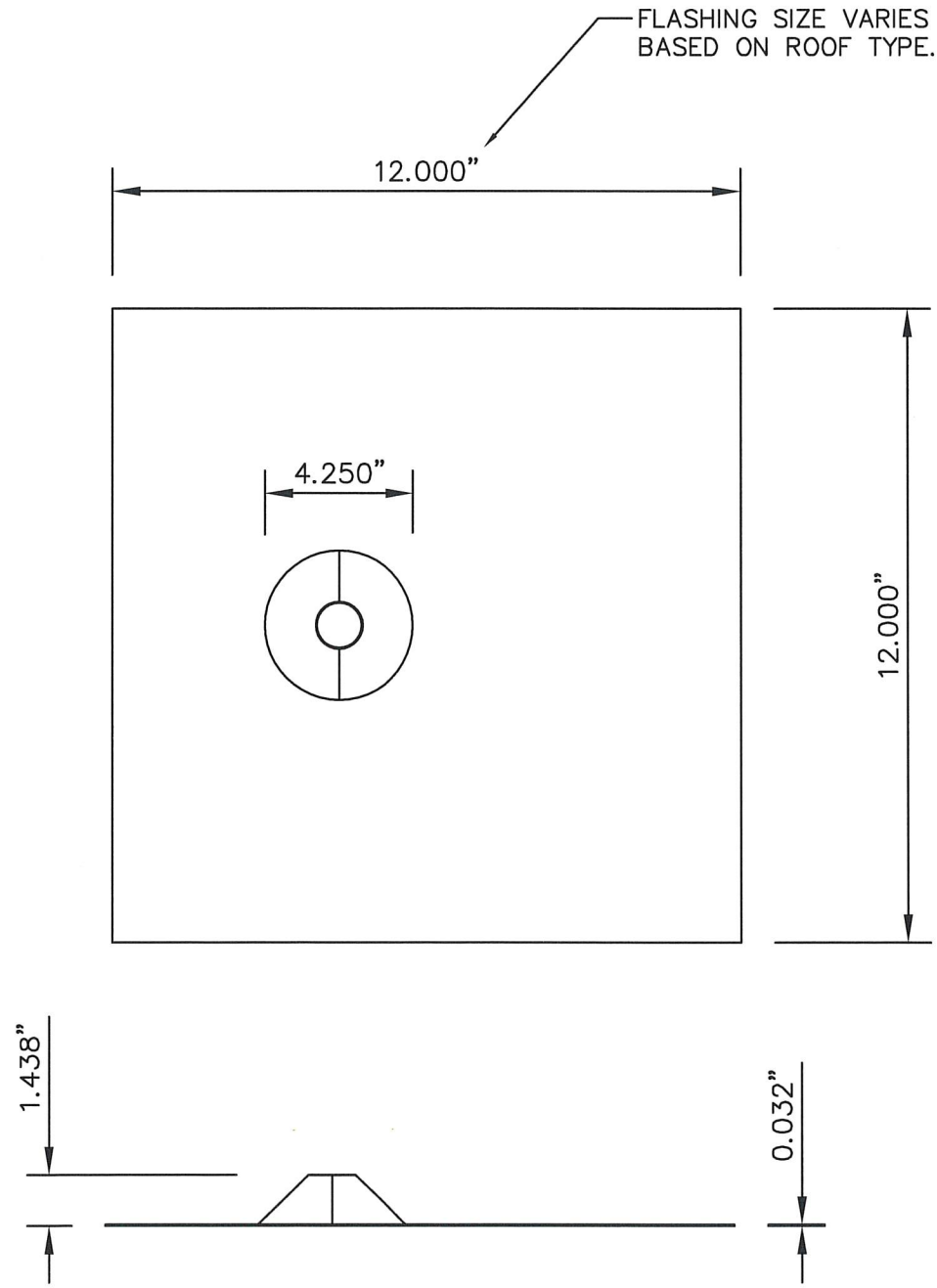
SEAL:

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FL PE# 62354

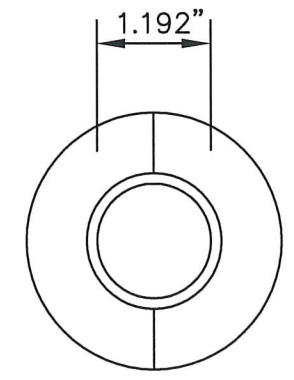
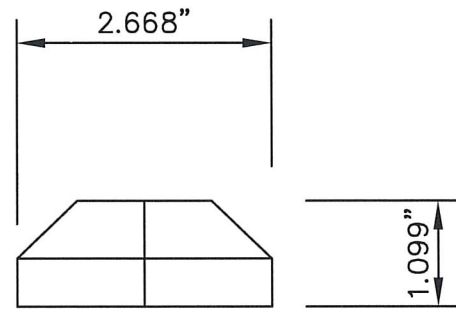
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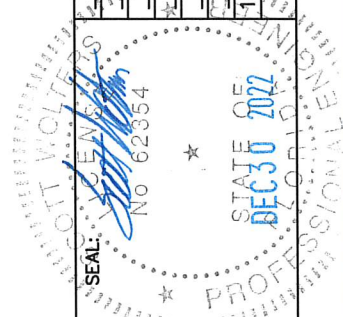
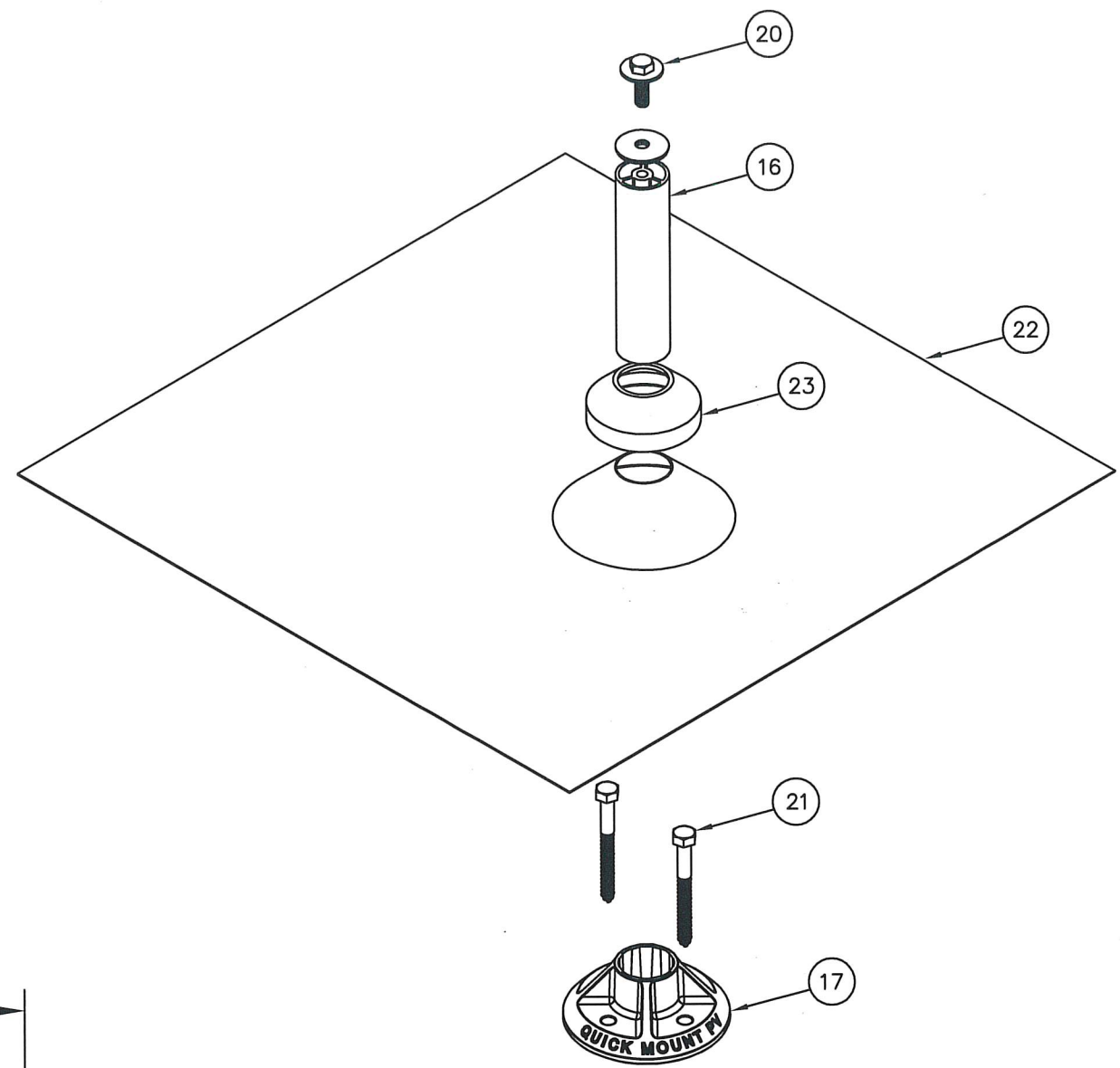
**IRONRIDGE AIRE PHOTOVOLTAIC PANEL RACKING SYSTEM
WITH QUICKMOUNT Q-BASE ROOF ATTACHMENTS**



22



23



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No. 62354
STATE OF FLORIDA
PROFESSIONAL ENGINEER
DEC 30 2022

SCOTT WOLTERS
FL PE# 62354
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IRONRIDGE

28357 INDUSTRIAL BLVD.
HAYWARD, CA 94545

PHONE: (800) 227-9523
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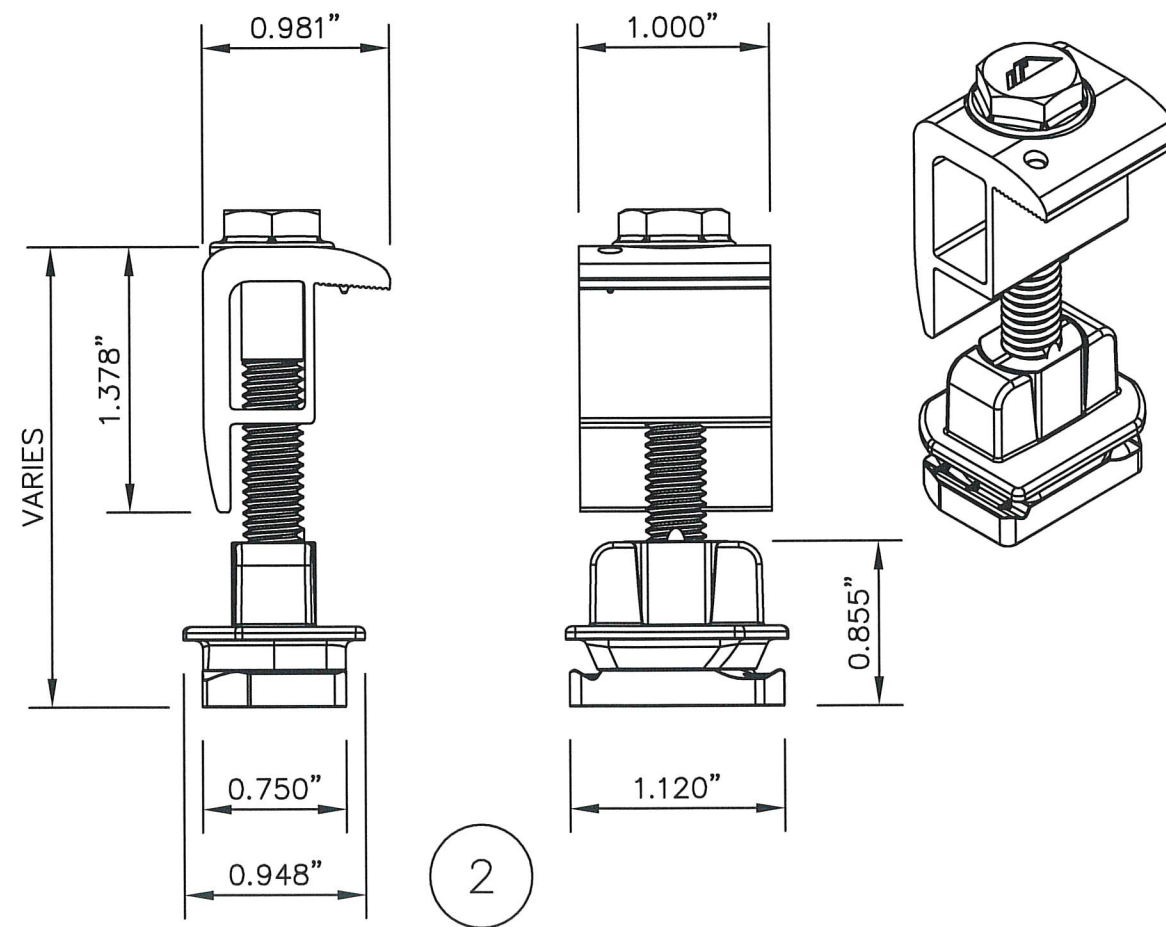
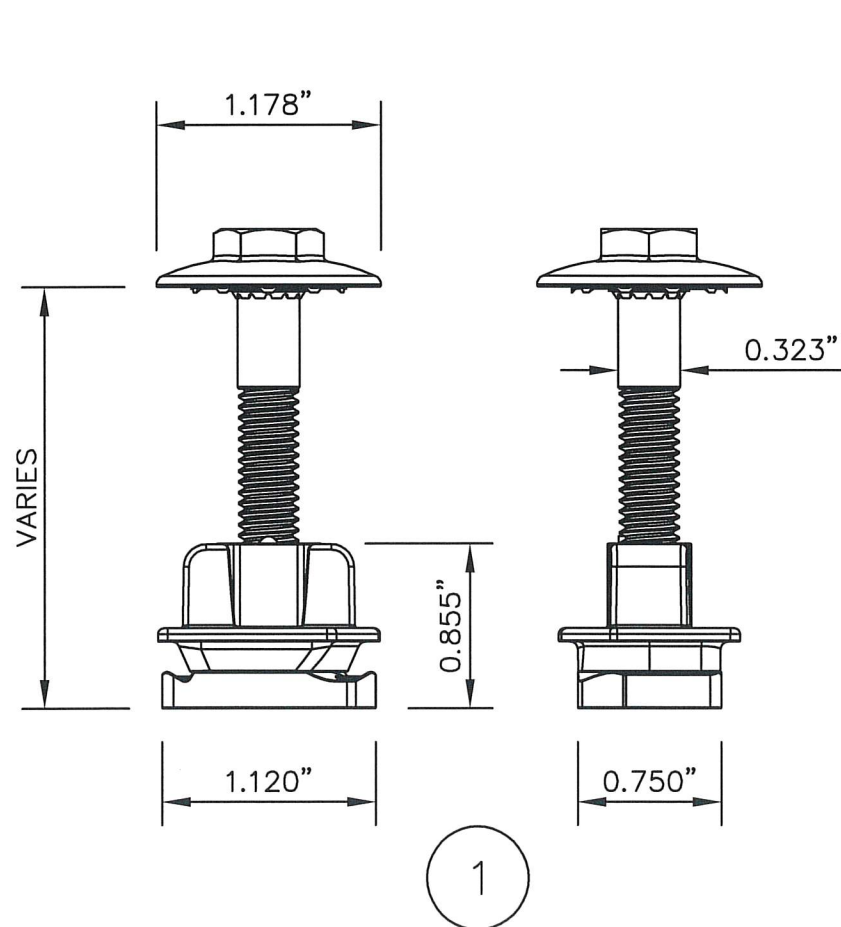
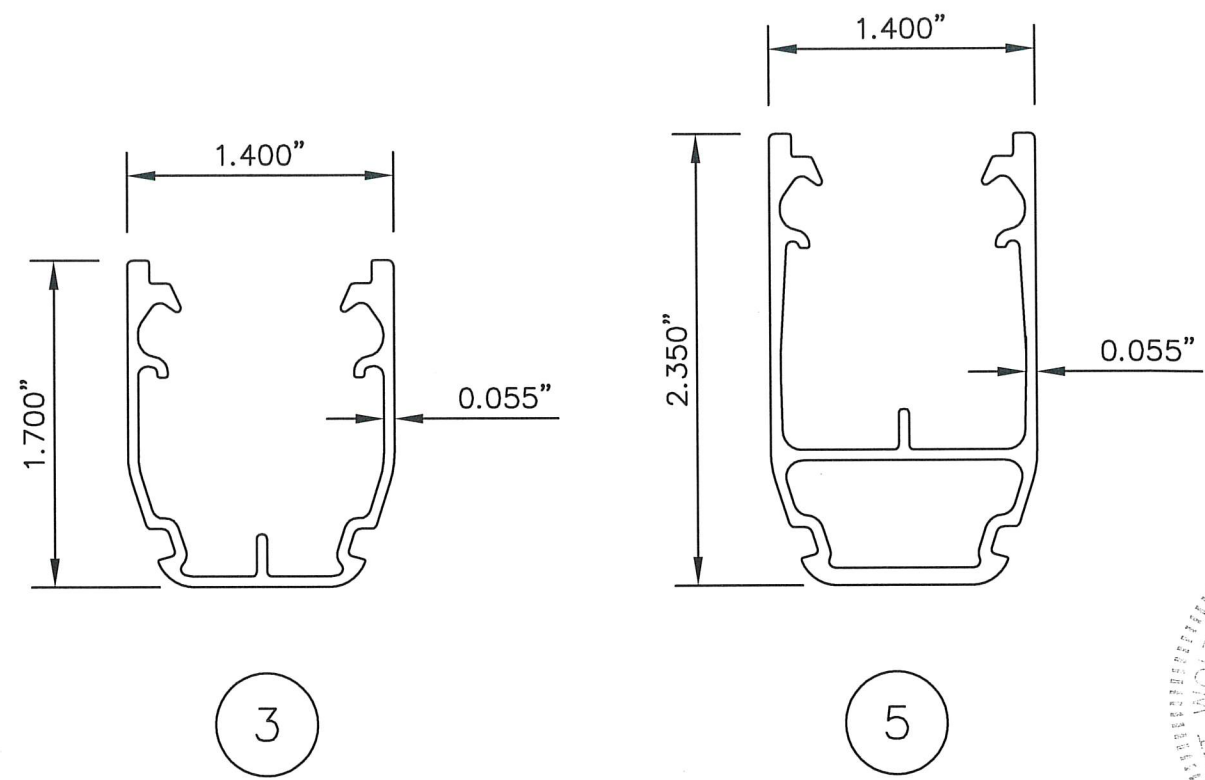
DWG: AIRE-QB
SHEET: 9/12

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WITH QUICKMOUNT Q-BASE ROOF ATTACHMENTS**

BILL OF MATERIALS- Aire System		
#	DESCRIPTION	MATERIALS/NOTES
1	AIRE LOCK MID-CLAMP ASSEMBLY	6000 SERIES AL & 300 SERIES SS
2	AIRE LOCK END-CLAMP ASSEMBLY	6000 SERIES AL & 300 SERIES SS
2A	AIRE LOCK STEALTH END-CLAMP ASSEMBLY	6000 SERIES AL & 300 SERIES SS
3	A1 RAIL	6000 SERIES AL
4	A1 TIE (SPLICE)	6000 SERIES AL & 300 SERIES SS
5	A2 RAIL	6000 SERIES AL
6	A2 TIE (SPLICE)	6000 SERIES AL & 300 SERIES SS
7	AIRE RAIL DOCK ASSEMBLY WITH 3/8" X 1 3/4" HWH CAP SCREW	6000 SERIES AL & 300 SERIES SS
8	A1 END CAP (OPTIONAL)	POLYMERIC
9	A2 END CAP (OPTIONAL)	POLYMERIC
10	CONTOUR CLAMP ASSEMBLY (OPTIONAL)	6000 SERIES AL & 300 SERIES SS
11	CONTOUR TRIM (OPTIONAL)	6000 SERIES AL

FOR 6000 SERIES EXTRUSIONS $F_{UT}=38$ ksi min, $F_Y=34$ ksi min.
FOR 300 SERIES STAINLESS STEEL $F_Y=65$ ksi min



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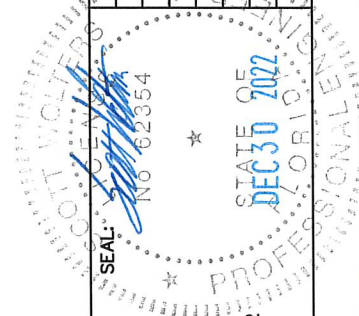
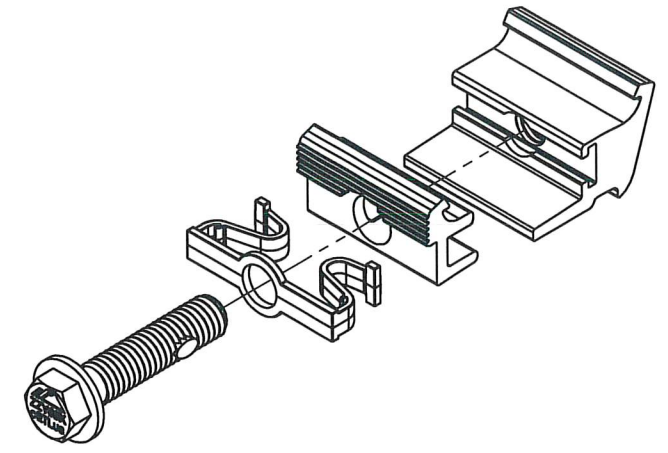
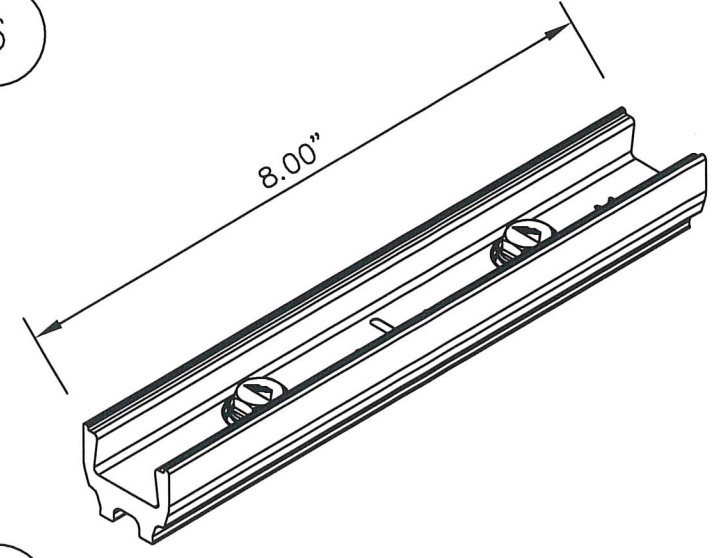
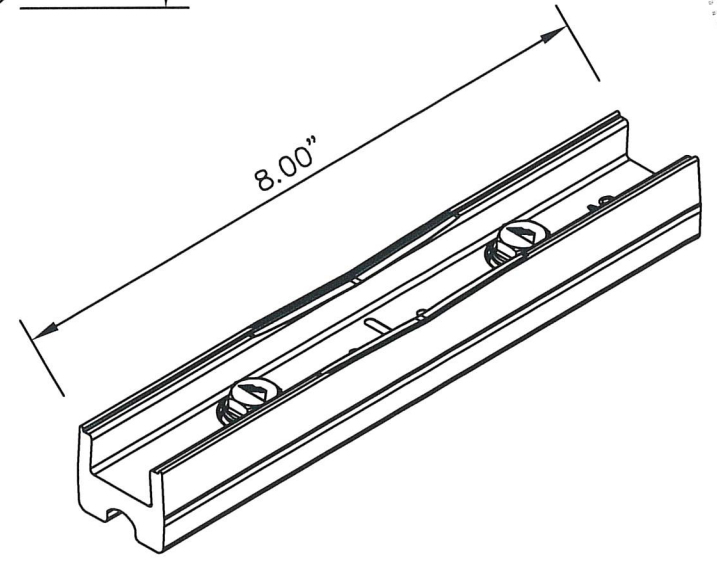
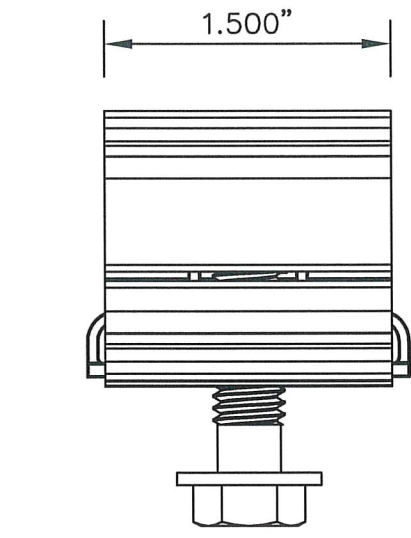
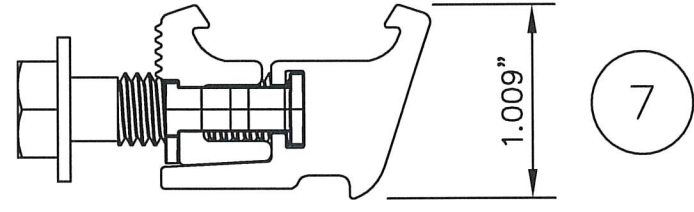
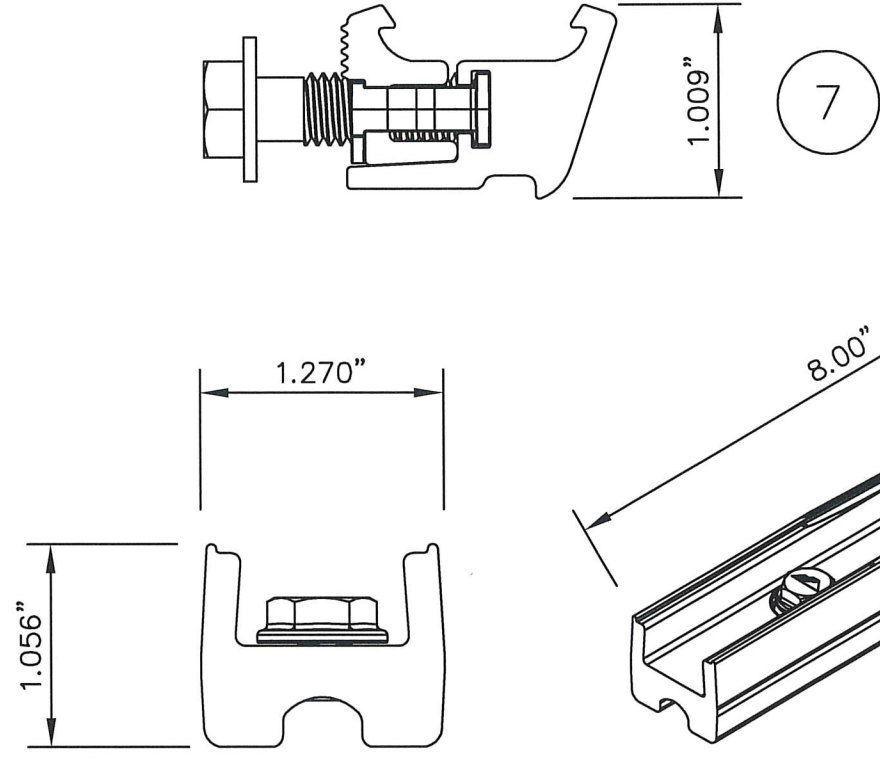
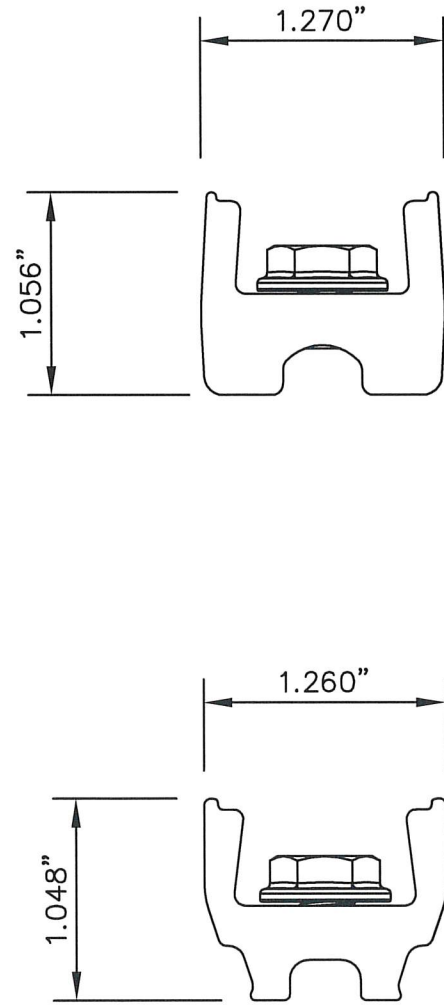
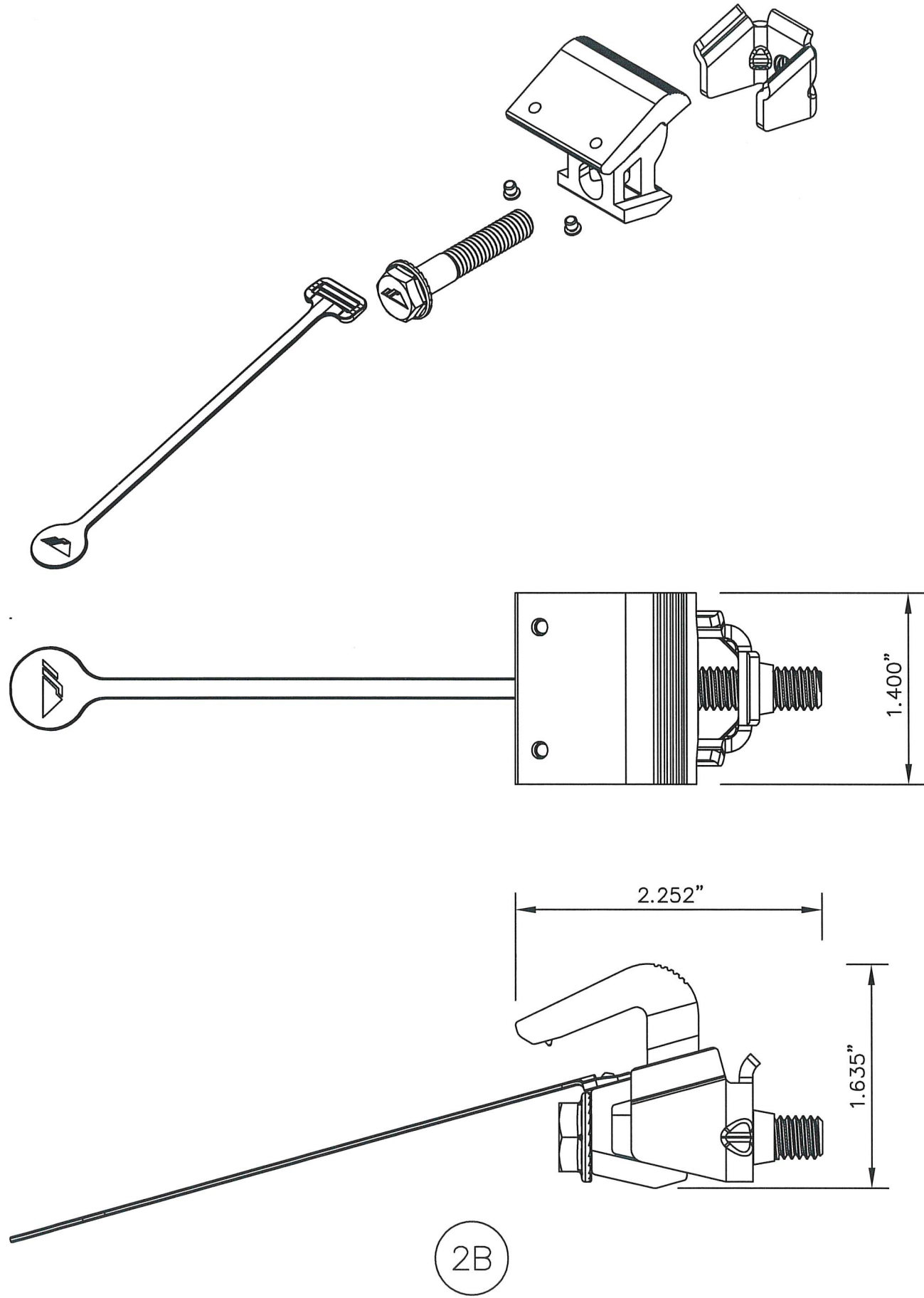
STATE OF FLORIDA
 PROFESSIONAL ENGINEER
 DEC 30 2022

JST SUBMITTAL
 PRINTS ISSUED FOUR
 REV.# 12/30/22
 DATE

28357 INDUSTRIAL BLVD.
 HAYWARD, CA 94545
 PHONE: (800) 227-9523
 info@ironridge.com

DWG: AIRE-QB
 SHEET: 10/12

**IRONRIDGE AIRE PHOTOVOLTAIC PANEL RACKING SYSTEM
WITH QUICKMOUNT Q-BASE ROOF ATTACHMENTS**



SCOTT WOLTERS
FL PE# 62354
WOLTERS ENGINEERING
(COA# 27194)
15211 97TH ROAD N
WEST PALM BEACH, FL 33412
(561) 225-1982

IRONRIDGE
28357 INDUSTRIAL BLVD.
HAYWARD, CA 94545
PHONE: (800) 227-9523
info@ironridge.com

DWG: AIRE-QB
SHEET: 11/12

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