

# STRUCTURAL ONLY

VSE Project Number: U2716-0219-201

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota,

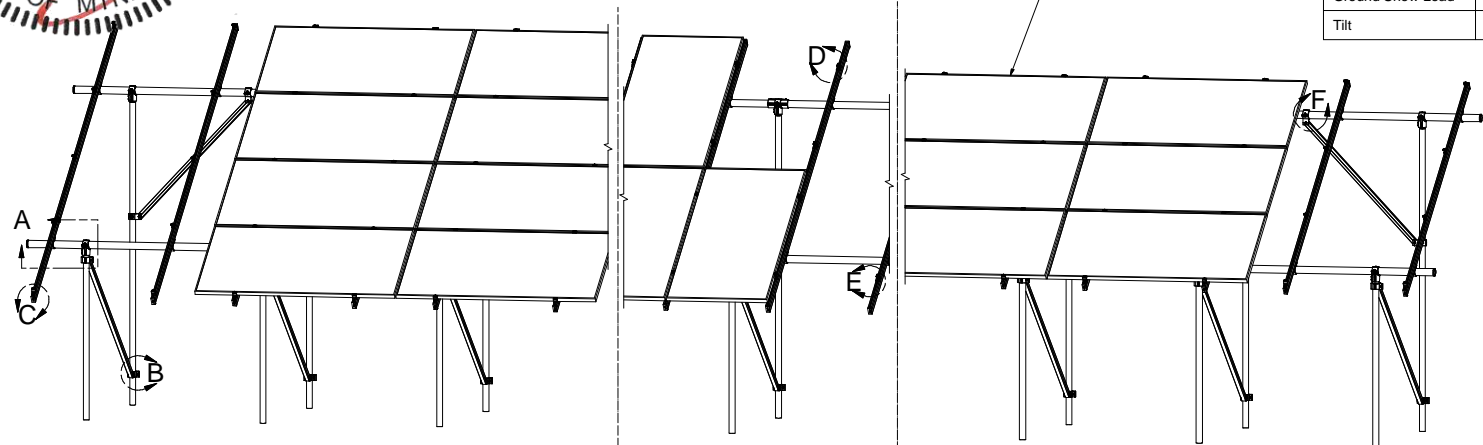
**Brett D. Veazie, License No. 56392, Expiration Date: 30-June-2022**



651 W. GALENA PARK BLVD. STE. 101 DRAPER, UTAH 84020  
PHONE (801) 990-1775 WWW.VECTORSE.COM

**NOTES: UNLESS OTHERWISE SPECIFIED**

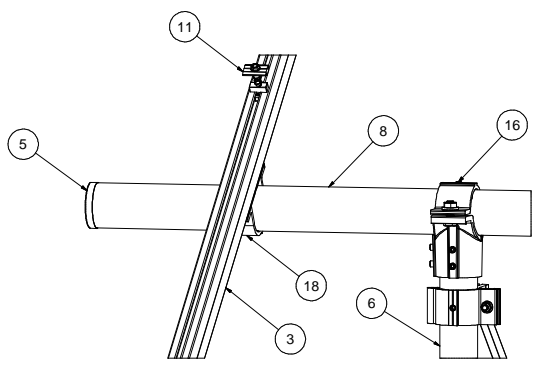
- THIS DRAWING IS NOT FOR CONSTRUCTION UNTIL ENGINEERING HAS REVIEWED AND STAMPED THIS DOCUMENT.
- DIMENSIONS SHOWN ARE INCHES.
- THE SELF-BONDING SYSTEM AND SINGLE GROUND LUG IS FOR USE WITH PV MODULES THAT HAVE A MAXIMUM SERIES FUSE RATING OF 30A.
- MATERIALS ARE AS SPECIFIED OR EQUIVALENT:  
HARDWARE: 304 STAINLESS STEEL  
FABRICATED EXTRUDED PARTS: 6005-T5 ALUMINUM ALLOY  
FABRICATED DIE CAST PARTS: ANSI/AA A380 ALUMINUM ALLOY  
STEEL PIPE: SCHEDULE 40 GALVANIZED  
ALUMINUM PIPE: SCHEDULE 10 ANODIZED
- THE MAXIMUM PERMISSIBLE LENGTH OF ANY STRUCTURE SHALL BE 200 FT. FOR SYSTEMS USING A SHARED RAIL CONFIGURATION, A THERMAL BREAK IS REQUIRED IN THE RAIL EVERY 40 FT. PER THE DRAWING DETAILS.
- 4LXN-3LXN-2PXM-35DEG-GSM-AGM-BGM-PGM.
- APPROVED RAIL PROFILES  
A20288-XXX (HR300 RAIL), A20297-001 (END CAP), K10343-002 (U-CLAMP KIT),  
A20145-XXX (HR350 RAIL), A20285-001 (END CAP), K10343-001 (U-CLAMP KIT),  
A20144-XXX (HR250 RAIL), A20284-001 (END CAP), K10343-001 (U-CLAMP KIT).
- K10224-XXX END CLAMP KIT OR K10299-XXX ADJ. END CLAMP KIT.
- FOUNDATION TYPES:  
GSM = GROUND SCREW GROUND MOUNT  
AGM = HELICAL AUGER GROUND MOUNT  
PGM = POST-IN-CONCRETE GROUND MOUNT  
BSM = BALLAST GROUND MOUNT



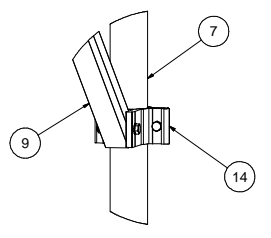
**4L  
4-IN-LANDSCAPE**

**2P  
2-IN-PROTRAIT**

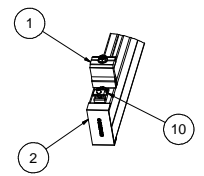
**3L  
3-IN-LANDSCAPE**



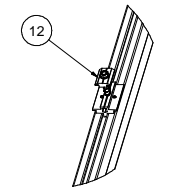
**DETAIL A**



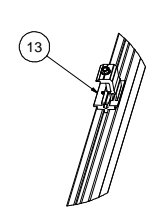
**DETAIL B**



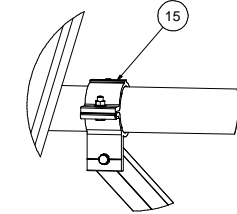
**DETAIL C**



**DETAIL D**



**DETAIL E**



**DETAIL F**

ITEM	PART NUMBER	DESCRIPTION	QTY
18	K10343-001	2.5" AL PIPE U-CLAMP KIT	
17	K10342-001	2.5" PIPE SPLICE KIT	
16	K10341-001	2.5" PIPE TEE KIT	
15	K10222-001	2.5" PIPE CLAMP KIT	
14	K10219-001	2" AL PIPE CLAMP KIT	
13	K10183-XXX	LANDSCAPE GROUNDING END CLAMP KIT	
12	K10182-001	LANDSCAPE GROUNDING MID CLAMP KIT	
11	K10180-001	GROUNDING MID-CLAMP KIT WITH T COLLAR BOLT AND GROUNDING BASE	
10	K10179-001	SELF-GROUNDING LUG KIT	
9	A50164-XXX	1.5" SQ. STL TUBE BRACE, L=XXX	
8	A21168-XXX	PIPE, HSS, 2.875" OD X 12 GAUGE, L=XXX	
7	A21165-XXX (REAR)	PIPE, HSS, 2.375" OD X 12 GAUGE, L=XXX	
6	A21165-XXX (FRONT)	PIPE, HSS, 2.375" OD X 12 GAUGE, L=XXX	
5	A20380-001	2.5" PIPE END CAP	
4		PANEL	
3		HELIO RAIL. VARIES PER NOTE 7	
2		HELIO RAIL END CAP. VARIES PER NOTE 7	
1		END CLAMP KIT. VARIES PER NOTE 8	

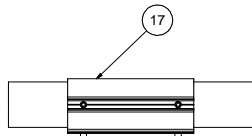
ITEM	PART NUMBER	DESCRIPTION	QTY
<b>SunModo Corp.</b> 14800 NE 65TH STREET, VANCOUVER WA 98682 TITLE: PACKET B4 DATE: 07/06/2020 DRAWING NUMBER: D			
APPROVALS: _____ SCALE: _____ SHEET 1 of 4			

Vector Engineers requires that we review each site specific install and is not liable for installs at site specific locations we have not reviewed.

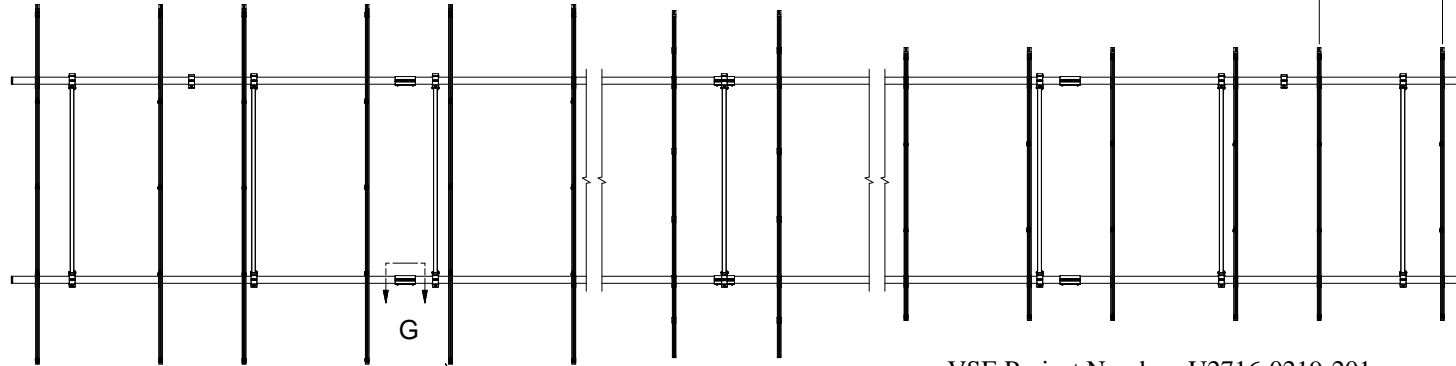
THIS DRAWING IS CONFIDENTIAL PROPERTY OF SUNMODO AND ITS CONTENTS MAY NOT BE DISCLOSED WITHOUT THE PRIOR WRITTEN CONSENT OF SUNMODO CORP.

**NOTES:**  
 1. DIMENSIONS LABELED AS MAX ARE MAXIMUM ALLOWABLE  
 AND MAY RESULT IN END POSTS BEING OUTSIDE ARRAY EDGES.  
 MAXIMUM DIMENSIONS MAY BE REDUCED IF DESIRED.

**RAIL SPACING**  
 LANDSCAPE: PER PANEL MANUFACTURER  
 PORTRAIT: PANEL WIDTH + 0.25"



DETAIL G



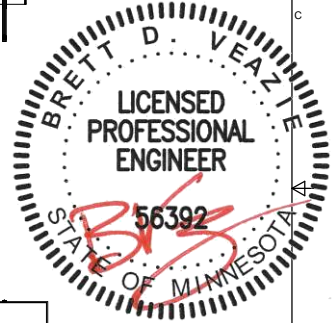
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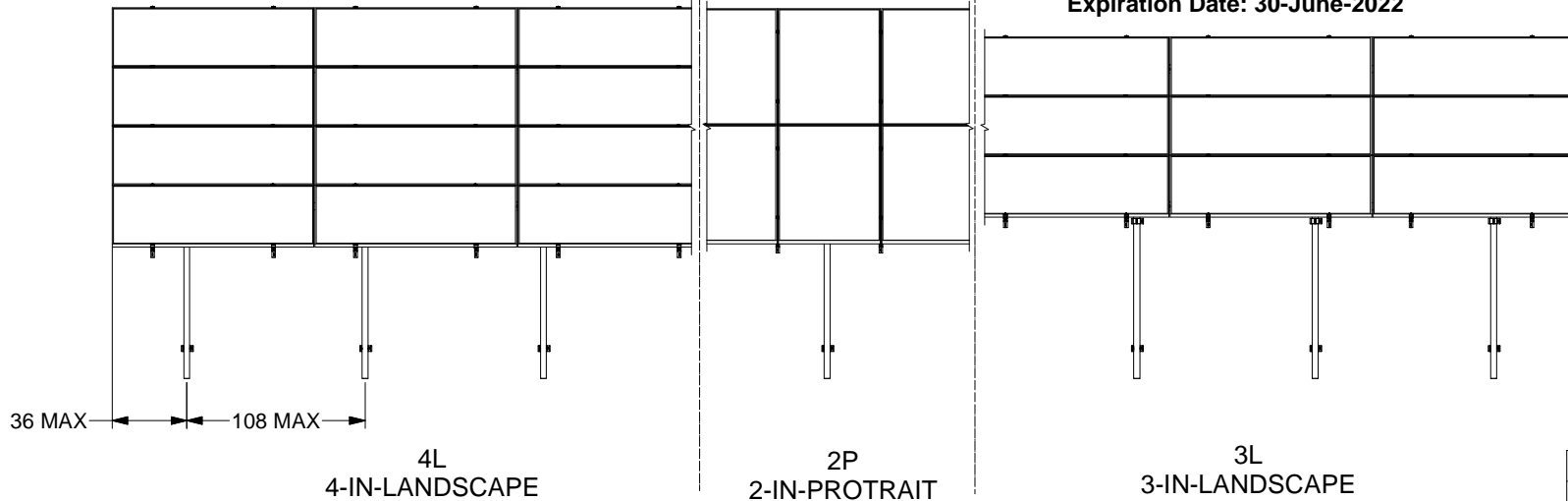


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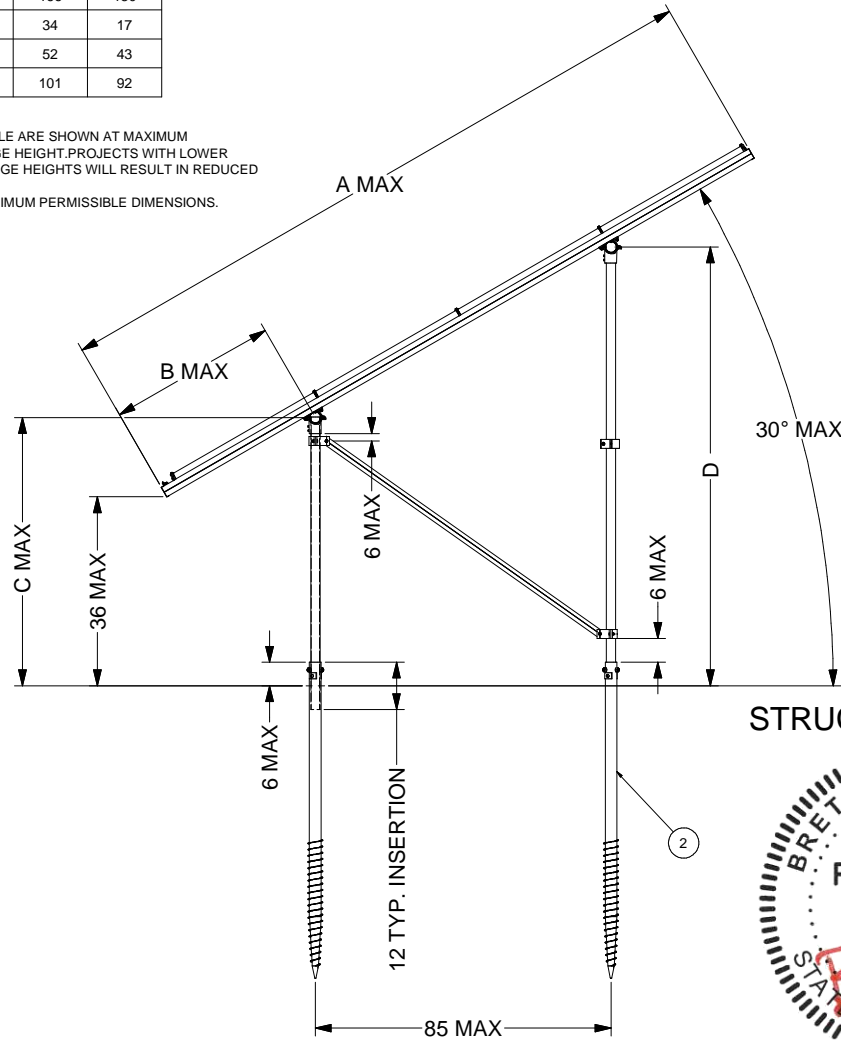
07/06/2020



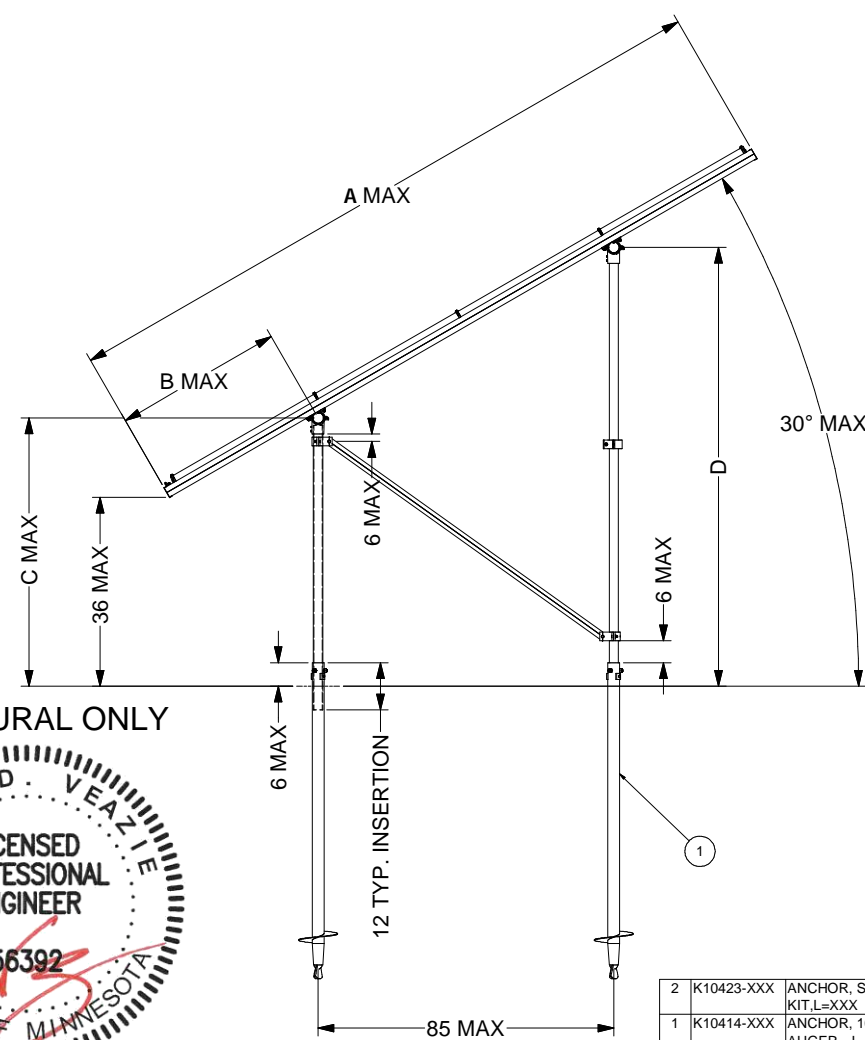
<b>SunModo Corp.</b>	
TITLE	PACKET B4
D	DRAWING NUMBER
SCALE:	SHEET 2 of 4 REV

DIMENSIONS			
ITEM	4L	2P	3L
A	172	166	130
B	37	34	17
C	52	52	43
D	100	101	92

**NOTES**  
 1. DIMENSIONS IN TABLE ARE SHOWN AT MAXIMUM TILT & LEADING EDGE HEIGHT. PROJECTS WITH LOWER TILTS & LEADING EDGE HEIGHTS WILL RESULT IN REDUCED DIMENSIONS.  
 2. MAX DENOTES MAXIMUM PERMISSIBLE DIMENSIONS.

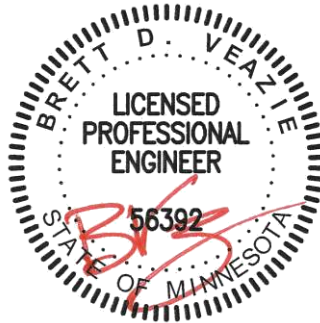


**GROUND SCREW GOUND MOUNT (GSM)**



**AUGER GOUND MOUNT (AGM)**

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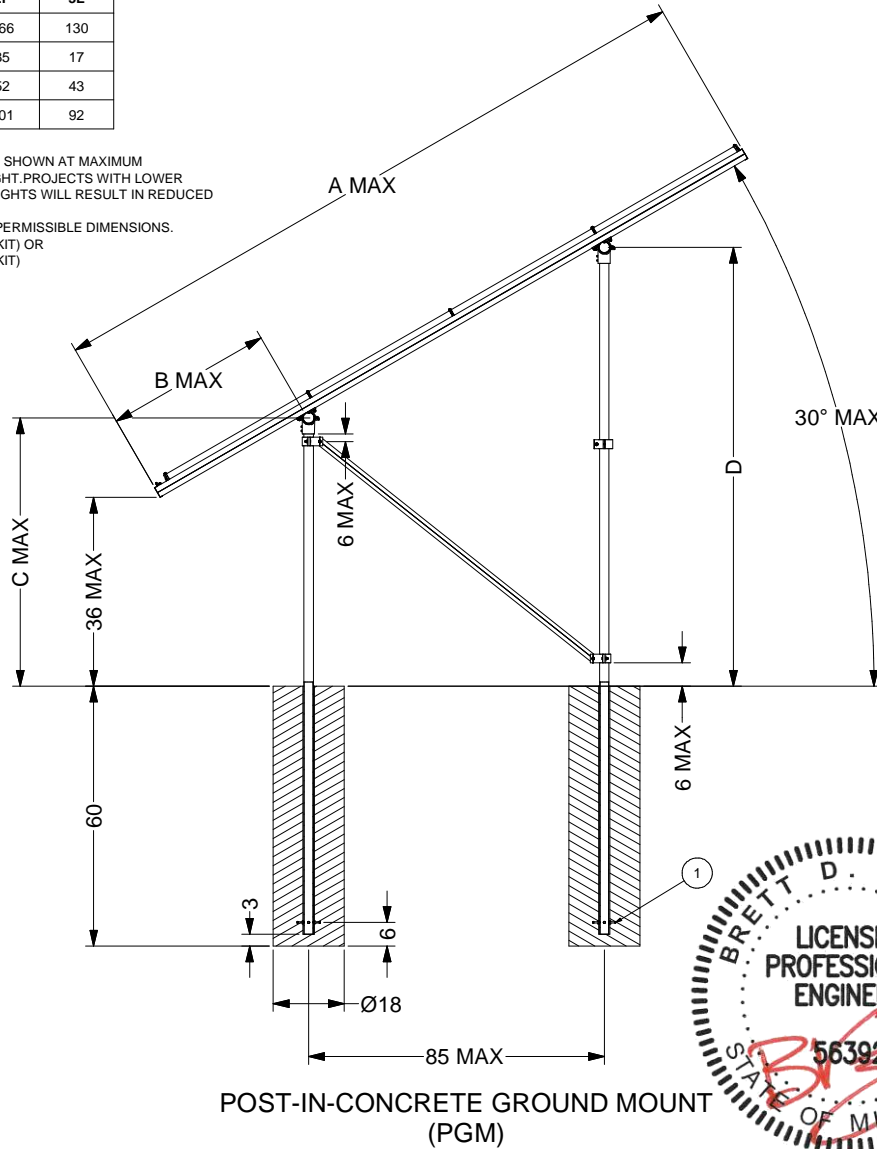
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2	K10423-XXX	ANCHOR, SCREW AUGER KIT, L=XXX	
1	K10414-XXX	ANCHOR, 10" HELIX SCREW AUGER, L=XXX	
ITEM	PART NUMBER	DESCRIPTION	QTY
<b>SunModo Corp.</b>			
TITLE: PACKET B4			
D: DRAWING NUMBER			
SCALE:		SHEET 3 of 4	REV

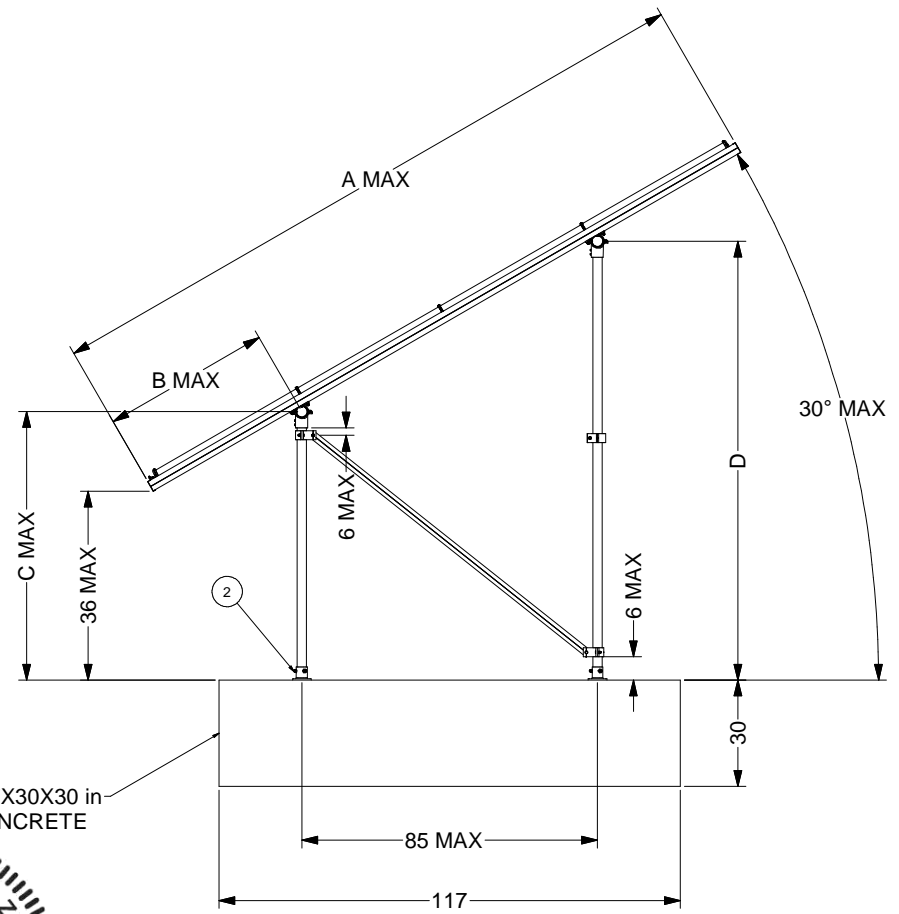


DIMENSIONS			
ITEM	4L	2P	3L
A	172	166	130
B	36	35	17
C	53	52	43
D	103	101	92

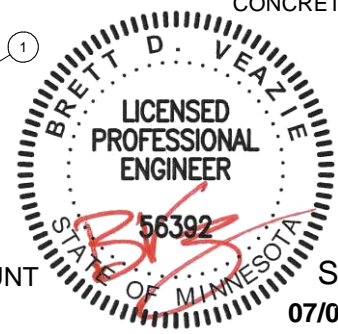
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  2. MAX DENOTES MAXIMUM PERMISSIBLE DIMENSIONS.
  3. K10268-005 (2" PIPE BASE KIT) OR K10302-001 (2" PIPE BASE KIT)



POST-IN-CONCRETE GROUND MOUNT (PGM)



BALLAST GROUND MOUNT (BGM)



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2		POST BASE. VARIES PER NOTE	
3		EMBEDDED 2.0" PIPE CLAMP KIT	
1	K10186-001	EMBEDDED 2.0" PIPE CLAMP KIT	
ITEM	PART NUMBER	DESCRIPTION	QTY
<b>SunModo Corp.</b>			
TITLE: PACKET B4			
D: DRAWING NUMBER			
SCALE: SHEET 4 of 4 REV			