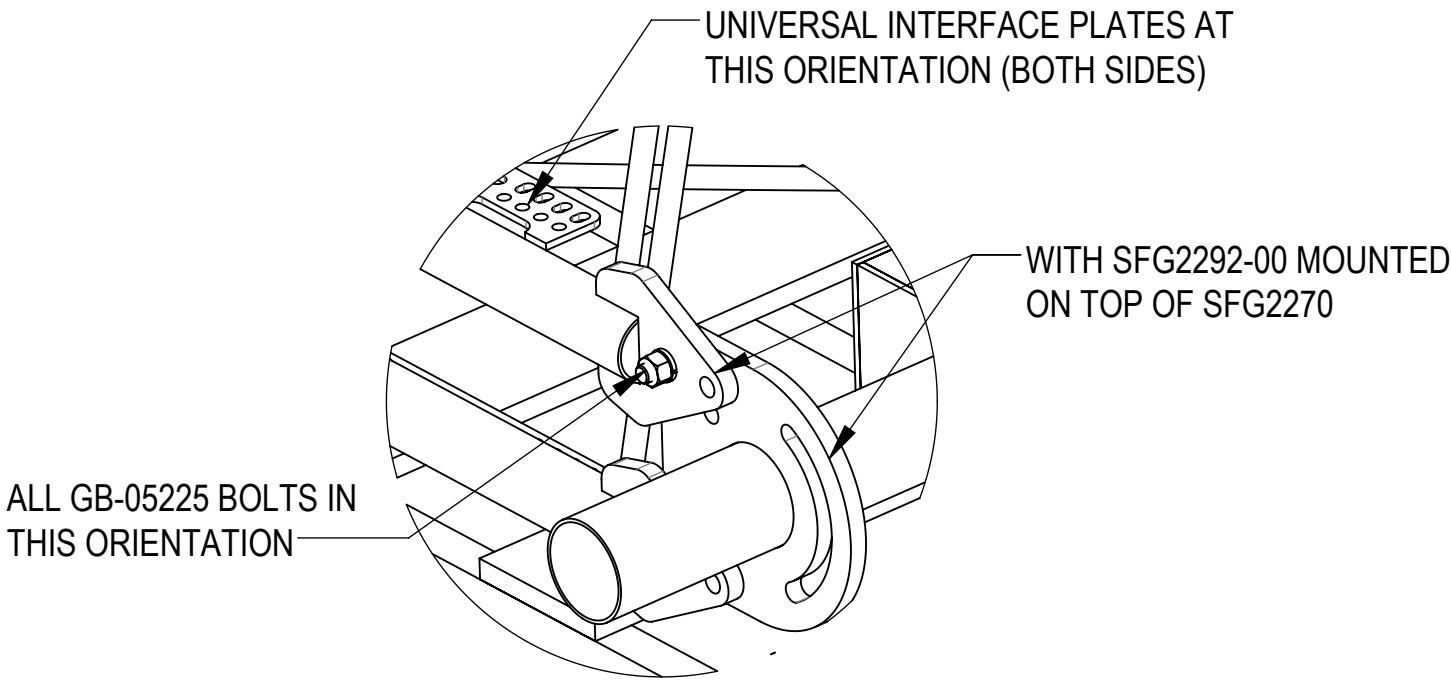
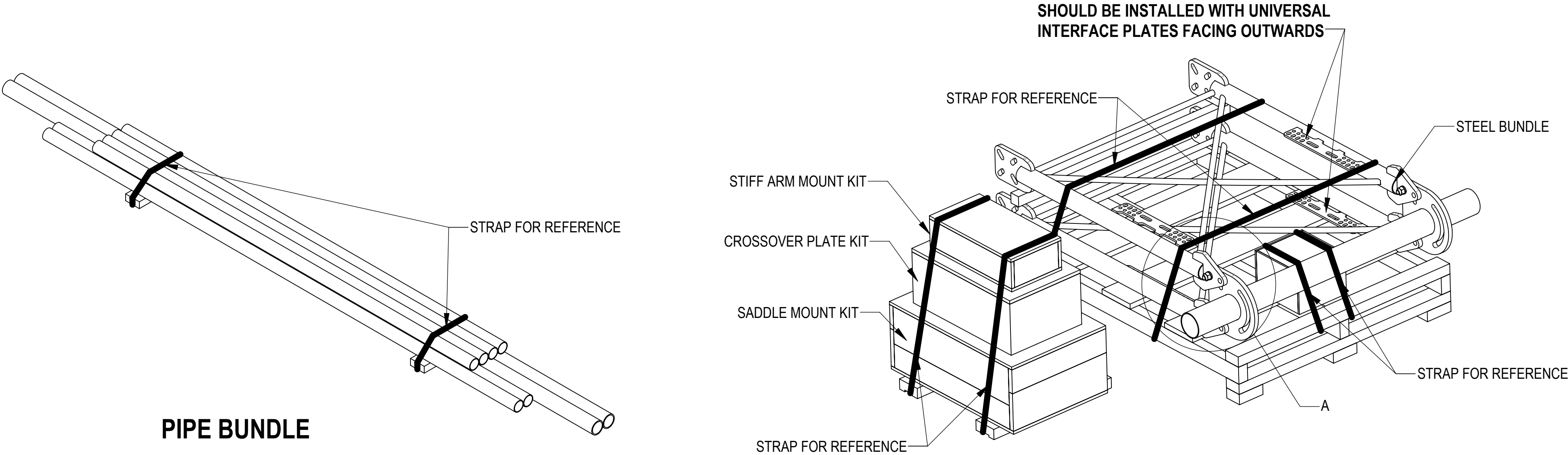


- 1.0 GENERAL NOTES
- 1.1 ALL METRIC DIMENSIONS ARE IN BRACKETS [X. X]
- 1.2 FOR PATENT INFO: <https://www.adwpat.com>
- 2.0 DESIGN NOTES
- 2.1 ANY HAZARDS OR OBSTRUCTIONS TO THE CLIMBING FACILITY AND SAFETY CLIMB MUST BE IDENTIFIED PRIOR TO INSTALLING THE APPURTENANCE. ADDITIONAL PRODUCTS MAY BE REQUIRED TO MAINTAIN THE INTEGRITY OF THE SAFETY CLIMB. DURING INSTALLATION, TEMPORARY AND/OR PERMANENT PRECAUTIONARY MEASURES SHOULD BE TAKEN TO PRESERVE THE CLIMBING FACILITY AND/OR SAFETY CLIMB.
- 2.2 UP TO 5.0° TAPER AVAILABLE ON MODELS THAT SUPPORT ADJUSTMENT
- 3.0 MANUFACTURING/SPECIAL REQUIREMENTS
- 3.1 TIGHTEN ALL BOLTS SECURING FLAT PLATES BY THE TURN-OF-NUT METHOD. TIGHTEN ALL U-BOLTS USING TURN-OF-NUT METHOD WITH ATTENTION TO LEAVE EQUAL DISTANCE AND EQUAL FORCE ON EACH LEG OF THE U-BOLT.
- 4.0 TEST
- 5.0 PACKAGING
- 5.1 PACKAGING SHALL MEET ANDREW REQUIREMENTS PER DOCUMENT IS-PL-3005.
- 5.2 PRINTED DOCUMENT TO BE PLACED INSIDE POLYBAG AND THEN IN SHIPPING CONTAINER.
- 5.3 EXTRA HARDWARE MAY BE SUPPLIED, BAGGED AND SHIPPED.

REVISIONS			
REV.	DESCRIPTION	DATE	ECN
D	CHG QTY SFG2386 TO 1EA, AND GUB-4355 TO 3EA; ADDED SFG2397-00; SFG2270 WAS SFG2290-00, SFG2278 WAS SFG2292-00; ADDED SFG2254 TO THE TOP OF V-ARM	RY1002 14SEP23	YW1045 40178978CMO
E	SHEET2: ADDED SFG2254 TO TABLE 1; SHEET5: ADDED LABEL INSTALLATION NOTICE	JL1183 17NOV23	YW1045 40183325CMO
F	SFG2292-00 (ITEM4) WAS SFG2278; ADDED SHEET5 & 6; SHEET2: UPDATED TABLE 1 TO ADD SFG22HD12-5-WLL	YX1027 06NOV24	BA1025 40208036CMO
G	SHEET 4&8: ADDED AZIMUTH ADJUSTMENT RANGE VIEW & NOTE	JL1183 10JAN25	BA1025 40212102CMO
H	SHEET 2: ADDED SFG22HD-10-3-120 MID IN THE TABLE 1	YC1059 10APR25	XK1001 50102271AMO
J	SHEET 2: ADDED SFG22HD-12-4-120 MID IN THE TABLE 1; CHANGED COMMSCOPE LOGO TO ANDREW	JL1183 05JUN25	YC1015 50103228AMO



DETAIL A
SCALE 1 : 6

ANDREW[®] an Amphenol company											
TOLERANCES						SAP MATERIAL MASTER					
1 PLACE .X[X] ± 0.25[6.3]			3 PLACE .XXX[X] ± 0.06[1.5]			SEE TABLE					
2 PLACE .XX[X] ± 0.12[3.0]			ANGLES ± 2°								
FINISH					MATERIAL						
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES INTERPRET PER ANSI Y 14.5M-1994		NAME	DATE	SFG22HD SECTOR FRAME SERIES							
	CE	RJC	12/13/18								
	RW	JL1183	06/05/2025								
											
	AD	YC1015	06/08/2025	SCALE 1:10	DOCUMENT NO. SFG22HD						
	RE	JL1183	06/08/2025								
	ECN 50103228AMO										
SIZE	Auth Group	INSL	MODEL			DRAWING			SHEET 1 OF 12		
C			VERSION 01	STATUS RE	REVISION B	VERSION 14	STATUS RE	REVISION J			

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PART NUMBERS, WEIGHTS, & EPA

TABLE 1: CONFIGURATIONS

PART NUMBER	DESCRIPTION	WEIGHT (LBS)	MOUNT EPA W/NO ICE (FT²)			MOUNT EPA W/ 1/2" ICE (FT²)			ANTENNA PIPES	INCLUDED PARTS																									
			FRONT (EPA)N	SIDE (EPA)T	3-SECTORS (EPA)A	FRONT (EPA)N	SIDE (EPA)T	3-SECTORS (EPA)A		SM-U2080H	DG23	SFG22HDX-HK03	SFG22HD-SB01	XP-2025-4	XP-2025-6	XP-2025-8	PB02TEA0210K	PB0310A02TEA0210K	PB05TEA0210K	PB02TEA0308A0210K	PB02TEA0212K	PB0410A02TEA0212K	PB06TEA0212K	PB02TEA0408A0212K	PB02TEA0214K	PB0410A02TEA0214K	PB02TEA0408A0214K	PB07TEA0212K	SFG2254						
SFG22HD-10-B	SECTOR FRAME 10' FACE - BASE KIT	472.15	8.11	6.49	17.52	11.62	10.10	26.06	-	1	1	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1					
SFG22HD-10-3-126	SECTOR FRAME 10' FACE, (3) 126" ANT	611.93							3	1	1	1	-	1	-	-	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1
SFG22HD-10-3-120	SECTOR FRAME 10' FACE, (3) 120" ANT	607.45							3	1	1	1	-	1	-	-	-	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1
SFG22HD-10-3-96	SECTOR FRAME 10' FACE, (3) 96" ANT	590.33							3	1	1	1	-	1	-	-	-	-	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1
SFG22HD-12-B	SECTOR FRAME 12' FACE - BASE KIT	495.40	9.17	6.49	18.80	13.03	10.10	27.76	-	1	1	1	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1					
SFG22HD-12-4-126	SECTOR FRAME 12' FACE, (4) 126" ANT	681.77							4	1	1	1	-	-	1	-	-	-	-	-	-	1	-	-	-	-	1	-	-	-	-	-	-	-	1
SFG22HD-12-4-120	SF,12'FP,(4)120"AP	676.23							4	1	1	1	-	-	1	-	-	-	-	-	-	-	-	-	1	-	-	1	-	-	-	-	-	-	1
SFG22HD-12-4-96	SECTOR FRAME 12' FACE, (4) 96" ANT	652.98							4	1	1	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	1
SFG22HD12-5-WLL	SINGLE SECTR FRM KIT 12'6" FACE W/5 ANT	721.44							5	1	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1
SFG22HD-14-B	SECTOR FRAME 14' FACE - BASE KIT	518.66	10.24	6.49	20.08	14.45	10.10	29.46	-	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	1					
SFG22HD-14-4-126	SECTOR FRAME 14' FACE, (4) 126" ANT	705.03							4	1	1	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	1
SFG22HD-14-4-96	SECTOR FRAME 14' FACE, (4) 96" ANT	676.23							4	1	1	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1

- NOTES:
- 1. NO MOUNT PIPES CONSIDERED. IF DESIRED, ADD ANTENNA PIPE PER TABLE 2
 - 2. MOUNT CONNECTION MEMBERS TO TOWER CONSIDERED.
 - 3. 3-SECTOR EPA INCLUDES KA FACTORS.

TABLE 2: EPA OF EACH ANTENNA PIPE

ANTENNA PIPE	MOUNT EPA W/NO ICE (FT²)			MOUNT EPA W/ 1/2" ICE (FT²)		
	FRONT (EPA)N	SIDE (EPA)T	3-SECTORS (EPA)A	FRONT (EPA)N	SIDE (EPA)T	3-SECTORS (EPA)A
2-3/8" X 96"	1.71	1.71	1.52	2.43	2.43	2.16
2-3/8" X 120"	2.14	2.14	1.90	3.04	3.04	2.70
2-3/8" X126"	2.25	2.25	2.00	3.19	3.19	8.50

- NOTES:
- 1. ANTENNA PIPES ARE CONSIDERED SEPARATELY.
 - 2. KA FACTOR OF 3-SECTOR EPA INCLUDED.
 - 3. COMBINE THE ASSOCIATED EPA VALUES IN THE TABLES ABOVE TO DETERMINE THE EPA OF A MOUNT MODEL WITH A LISTED MOUNT PIPE CONFIGURATION. FOR EXAMPLE: SFG22HD-10-3-126 HAS A FRONT EPA OF 8.11 FT² WITH NO ICE PLUS 3 ANTENNA PIPES WITH A FRONT EPA OF 3X2.25=6.75 FT² WITH NO ICE. SO, THE TOTAL FRONT EPA SHOULD BE 14.86 FT²; (SIDE EPA SAME METHOD AS FRONT EPA). WHEN 3 SECTOR FRAME ARE MOUNTED AT THE SAME RELATIVE ELEVATION IN AN ARRANGEMENT, IT HAS A 3-SECTOR EPA OF 17.52 FT² WITH NO ICE PLUS 3 ANTENNA PIPES WITH A 3-SECTOR EPA OF (3X2.00)X3=18.00 FT² WITH NO ICE. SO, THE TOTAL 3-SECTOR EPA SHOULD BE 35.52 FT²;



TITLE

SFG22HD SECTOR FRAME SERIES

SIZE	SCALE	DOCUMENT NO.			
		SFG22HD			
		DRAWING			SHEET
		VERSION	STATUS	REVISION	
		14	RE	J	2 OF 12

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D

C

B

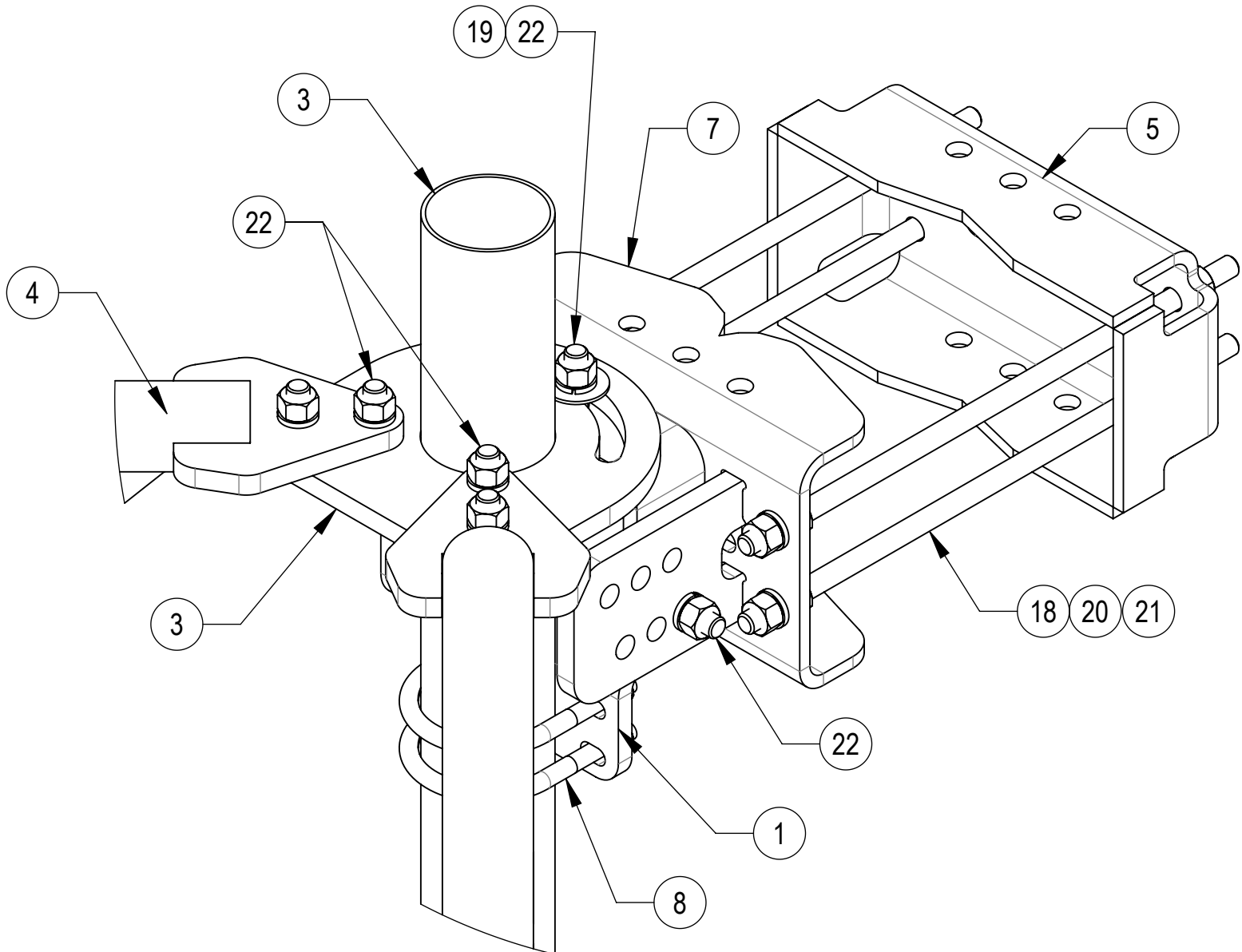
A

D

C

B

A



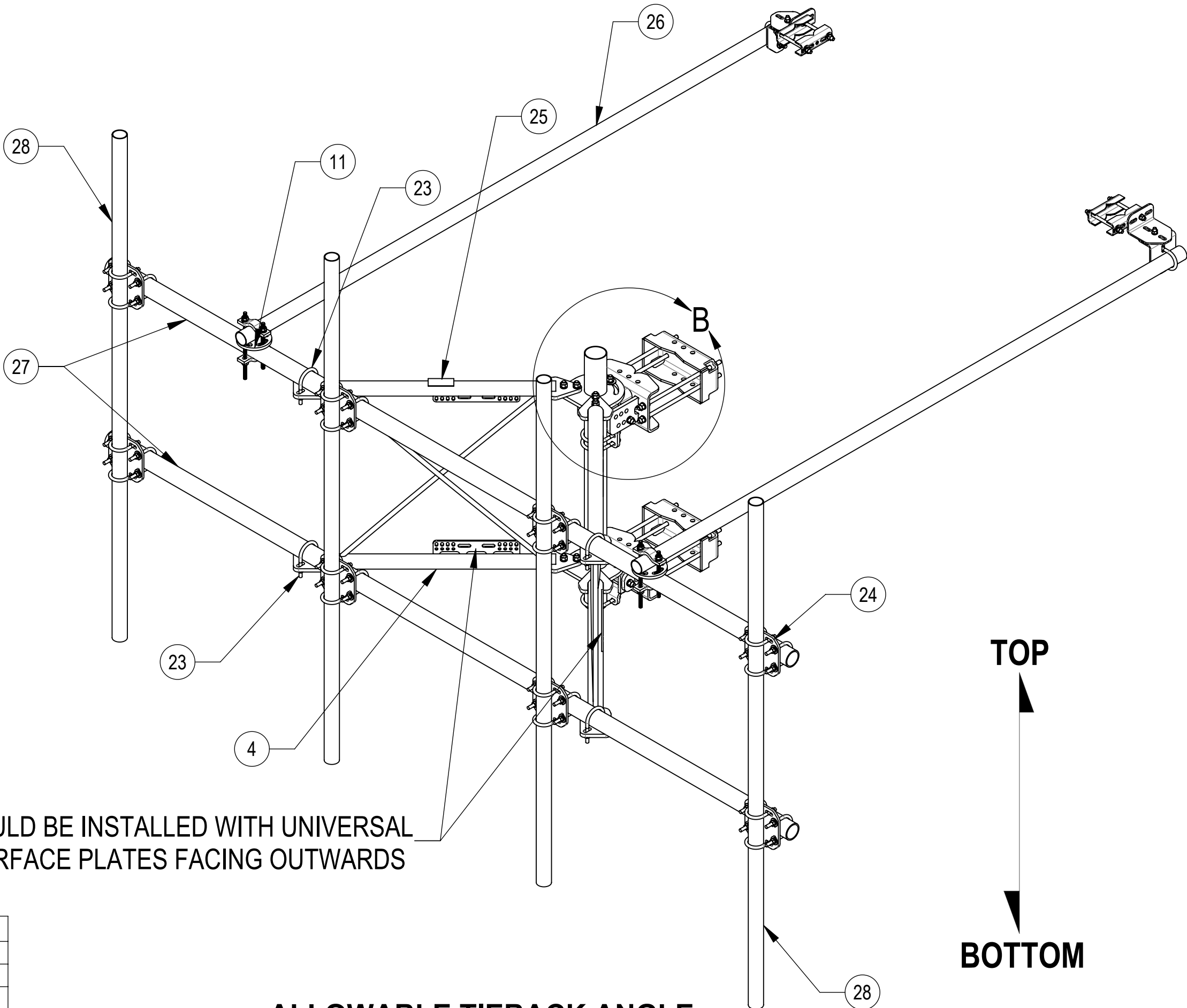
DETAIL B
SCALE 1 : 4

SFG22HD-12-4-96 SHOWN FOR REFERENCE
(NOT ALL CONFIGURATIONS INCLUDE ALL ITEMS SEE NOTES IN TABLE)

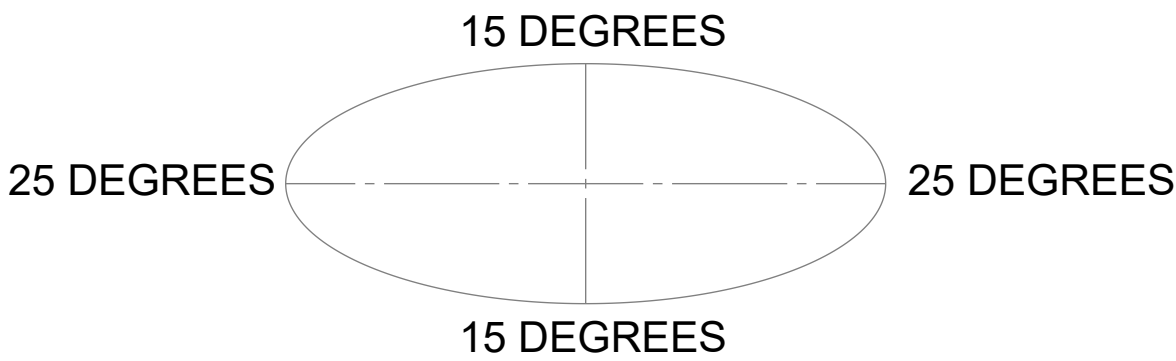
COMPONENT PART NUMBERS PROVIDED FOR ASSEMBLY PURPOSES;
INDIVIDUAL COMPONENTS MAY BE SHIPPED AS PARTS WITHIN AN INCLUDED KIT.

ITEM	PART NO.	DESCRIPTION	QTY.	WEIGHT	NOTE NO.
1	SFG2386	WELDMENT, SFG2 AZIMUTH BRACKET	1	10.07 LBS	
2	SFG2397-00	WELDMENT, G23 AZIMUTH BRACKET	1	7.94 LBS	
3	SFG2270	BACK VERTICAL ARM MOUNT	1	39.26 LBS	
4	SFG2292-00	WELDMENT, V-ARM, SECTOR FRAME 22	2	49.69 LBS	
5	SFG2289	G2 RRU BACK CLAMP, HD	2	18.65 LBS	
6	SFG2381	WELDMENT, HD, LOWER TOWER LEG BRACKET	1	17.42 LBS	
7	SFG2380	WELDMENT, HD, TOP TAPER BRACKET	1	22.78 LBS	
8	GUB-4355	1/2" X 3-5/8" X 5" GALV U-BOLT	3	0.71 LBS	
9	XAU01	ANGLE, CROSSOVER, 1.9-3.5" X 1.9-3.5" OD	4	2.98 LBS	
10	GUB-4240	1/2" X 2-1/2" X 4" GALV U-BOLT	2	0.56 LBS	
11	XP-R	CROSSOVER PLATE, ROUND, UP TO 3.5" OD	2	6.20 LBS	
12	SAB01	FORMED CLAMP	4	1.35 LBS	
13	MT-379-8	1/2" X 8" GALV THREADED ROD	4	0.45 LBS	
14	GWF-04	1/2" GALV FLAT WASHER	8	0.04 LBS	
15	GWL-04	1/2" GALV LOCK WASHER	10	0.01 LBS	
16	GN-04	1/2" GALV HEX NUT	10	0.04 LBS	
17	GB-04145	1/2" X 1-1/2" GALV BOLT KIT	2	0.13 LBS	
18	MT-382-18	5/8" X 18" THREADED ROD	8	1.43 LBS	
19	GWF-05	5/8" GALV FLAT WASHER, 1.7OD	2	0.06 LBS	
20	GWL-05	5/8" GALV LOCK WASHER	16	0.03 LBS	
21	GN-05	5/8" GALV HEX NUT	24	0.08 LBS	
22	GB-05225	5/8" X 2-1/4" GALV BOLT KIT	14	0.28 LBS	
23	GUB-4352	1/2" X 3" X 5-1/4" GALV U-BOLT	4	0.71 LBS	
24	XP-2025	CROSSOVER PLATE KIT, 2-3/8 OD X 2-7/8 OD	8	8.07 LBS	QTY SEE INDIVIDUAL DRAWING
25	SFG2254	LABEL, SFG22HD	1	0.04 LBS	
26	MT-651-120	PIPE, 2.375"OD X 120"	2	29.07 LBS	PART NO. SEE INDIVIDUAL DRAWING
27	MT-546-150	PIPE, 2.875"OD X 150"	2	72.67 LBS	PART NO. SEE INDIVIDUAL DRAWING
28	MT-651-96	2.375" OD X 96" PIPE	4	23.05 LBS	PART NO. AND QTY SEE INDIVIDUAL DRAWING

SHOULD BE INSTALLED WITH UNIVERSAL
INTERFACE PLATES FACING OUTWARDS



ALLOWABLE TIEBACK ANGLE
± 15 DEGREES VERTICAL
± 25 DEGREES HORIZONTAL



TOP
↓
BOTTOM

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TITLE SFG22HD SECTOR FRAME SERIES				
SIZE C	SCALE 1:14	DOCUMENT NO. SFG22HD		
 		DRAWING		
		VERSION 14	STATUS RE	REVISION J
				SHEET 3 OF 12

4

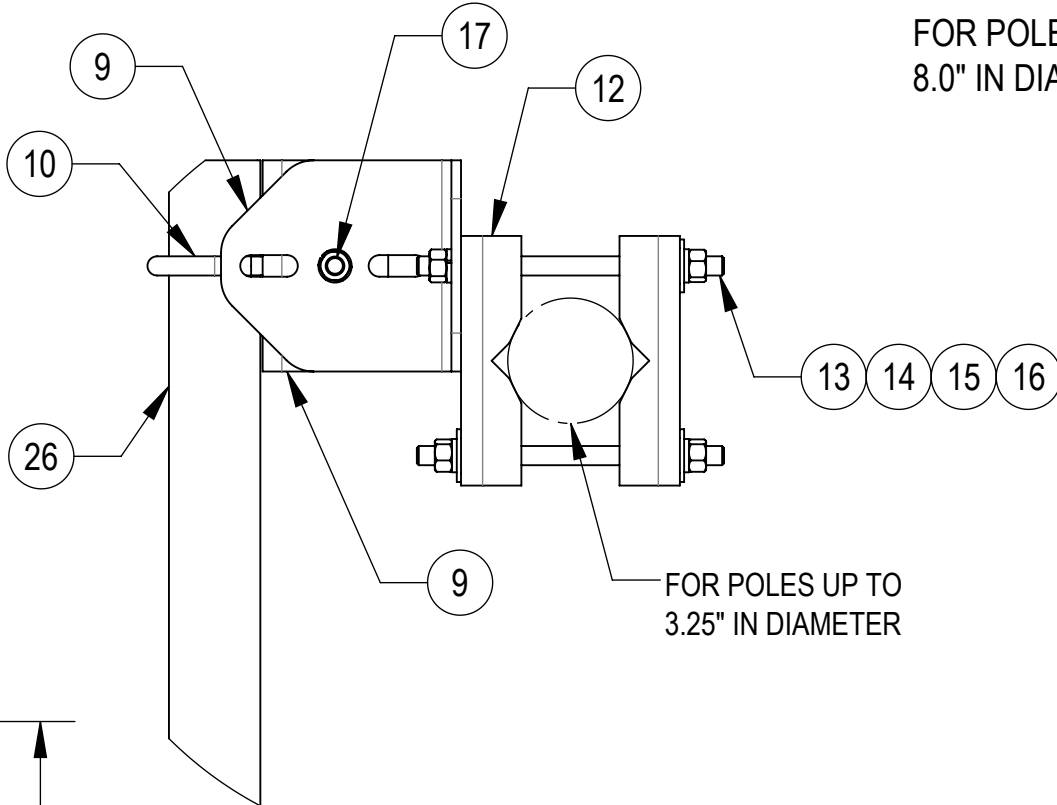
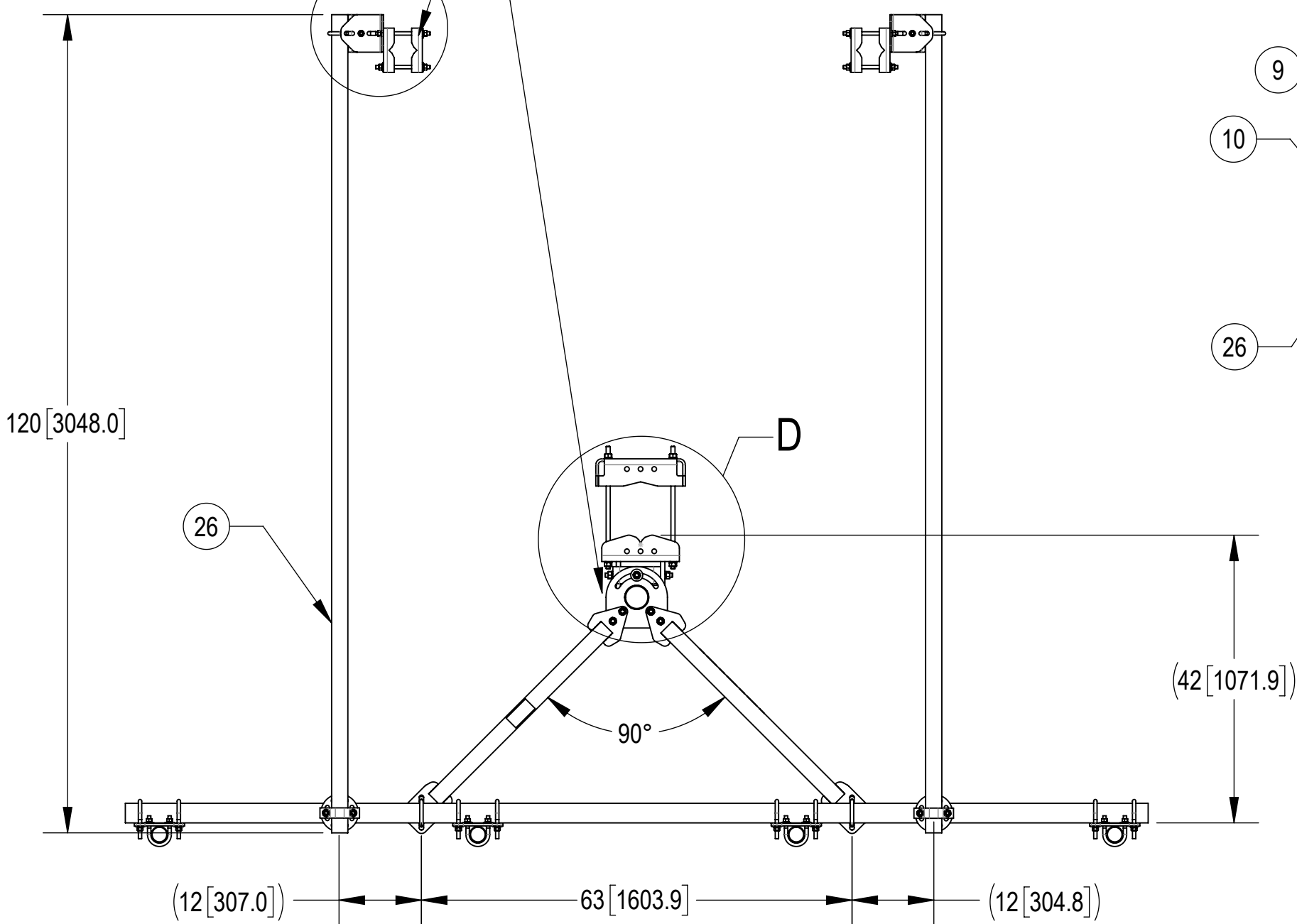
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2

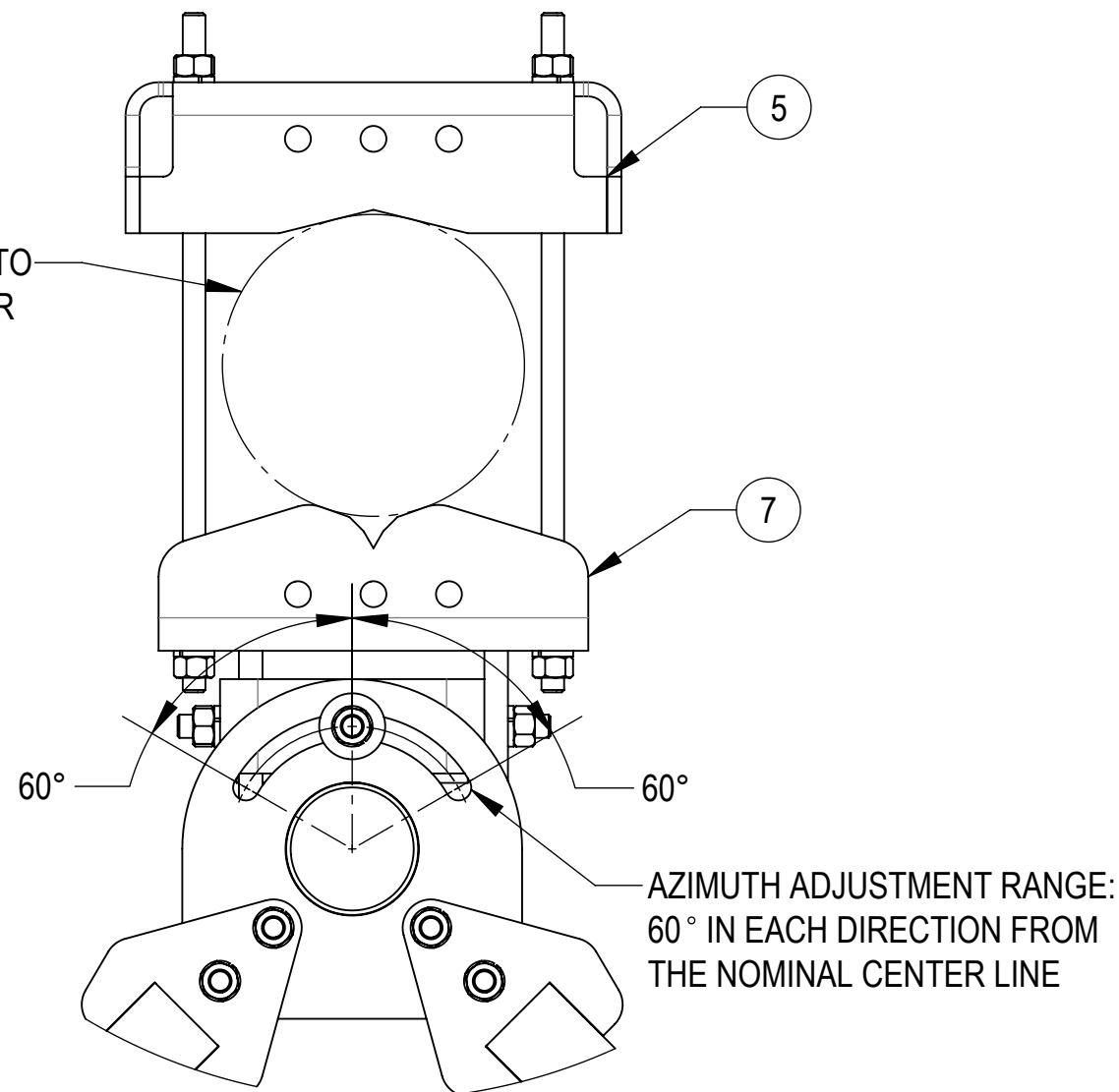
1

C

TIEBACK MUST BE CONNECTED TO A RIGID MEMBER THAT PROVIDES ADEQUATE SUPPORT WITHIN THE LIMITS NOTED IN THE TIEBACK ANGLE RANGE DETAIL. UNLESS APPROVED BY ENGINEER OF RECORD. SPINE STEM OF NEIGHBORING MOUNT IS ACCEPTABLE.



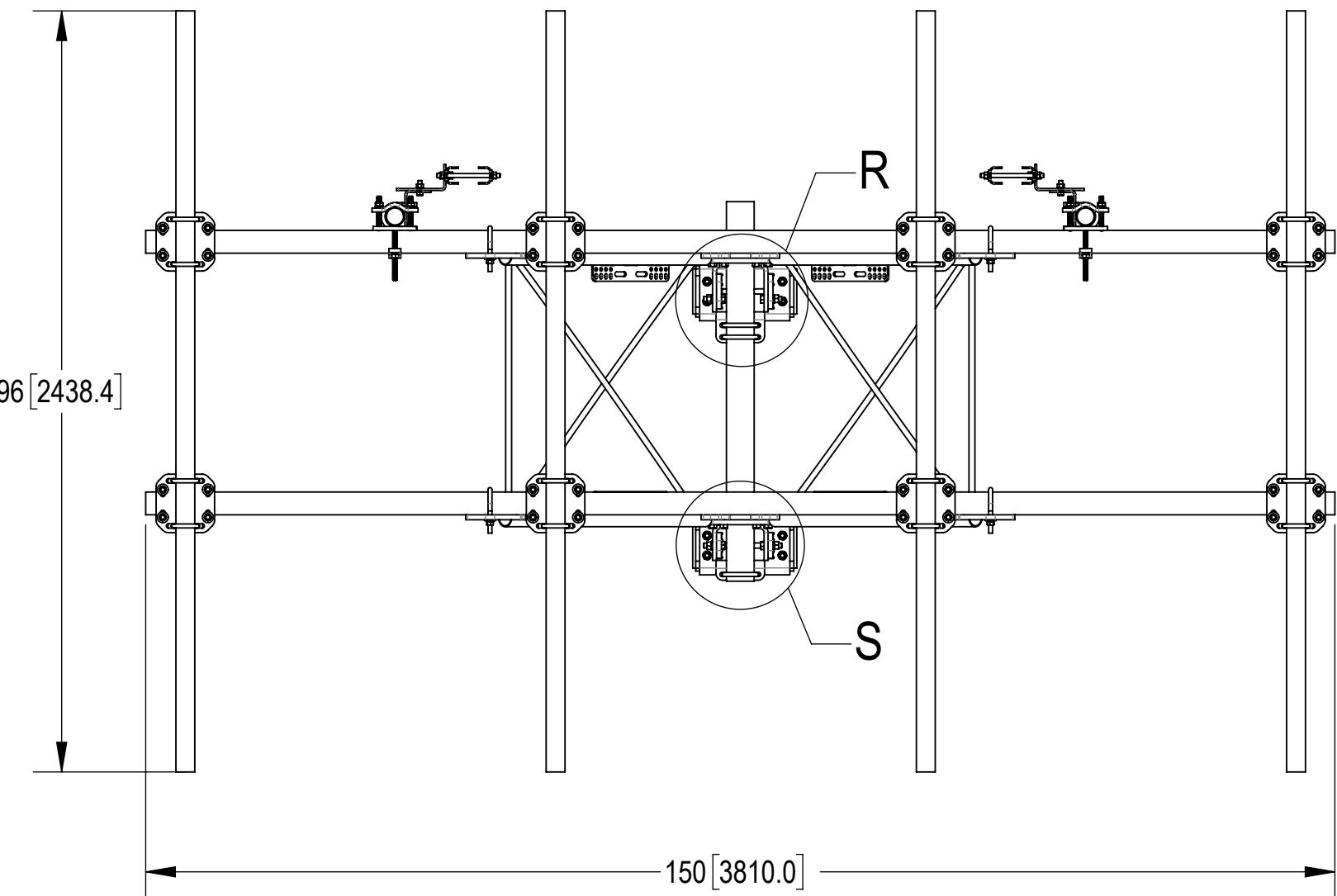
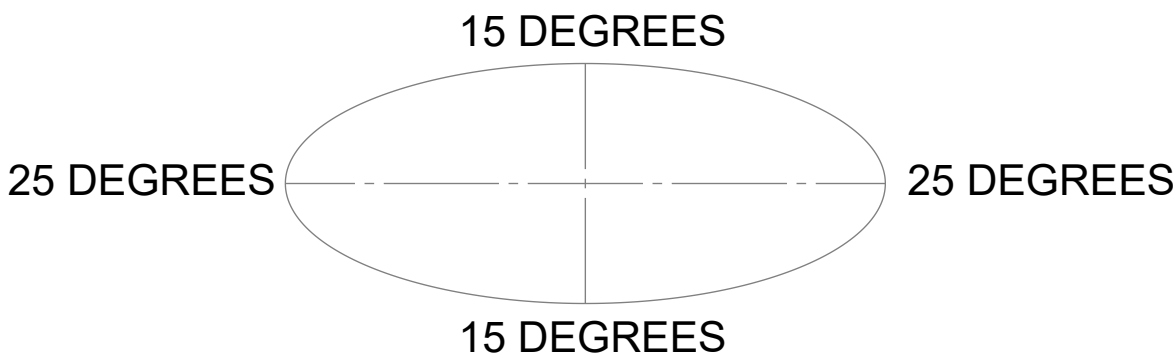
DETAIL C
SCALE 1 : 5



DETAIL D
SCALE 1 : 5

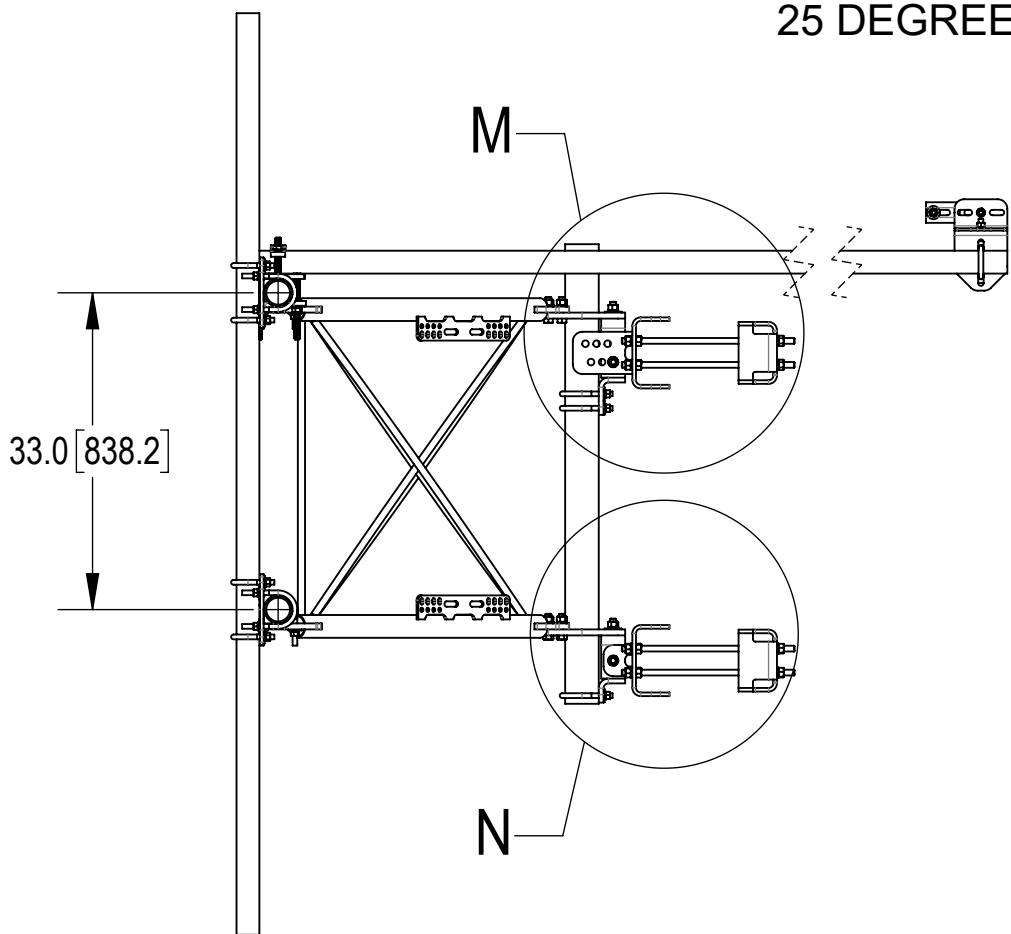
SFG22HD-12-4-96 SHOWN FOR REFERENCE
(NOT ALL CONFIGURATIONS INCLUDE ALL ITEMS
SEE NOTES IN TABLE ON PAGE 3)

ALLOWABLE TIEBACK ANGLE
± 15 DEGREES VERTICAL
± 25 DEGREES HORIZONTAL



TOP

BOTTOM

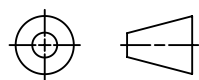


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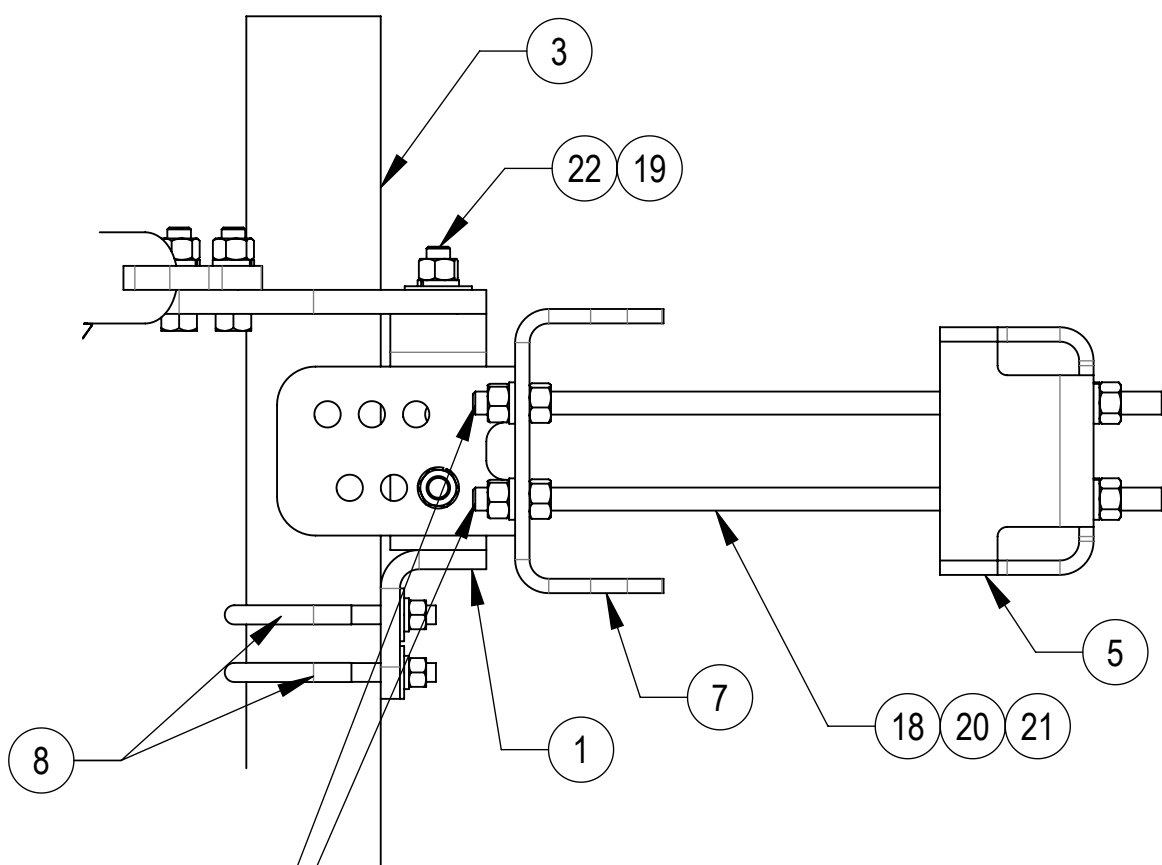
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SFG22HD SECTOR FRAME SERIES

SIZE **C** SCALE **1:20** DOCUMENT NO. **SFG22HD**

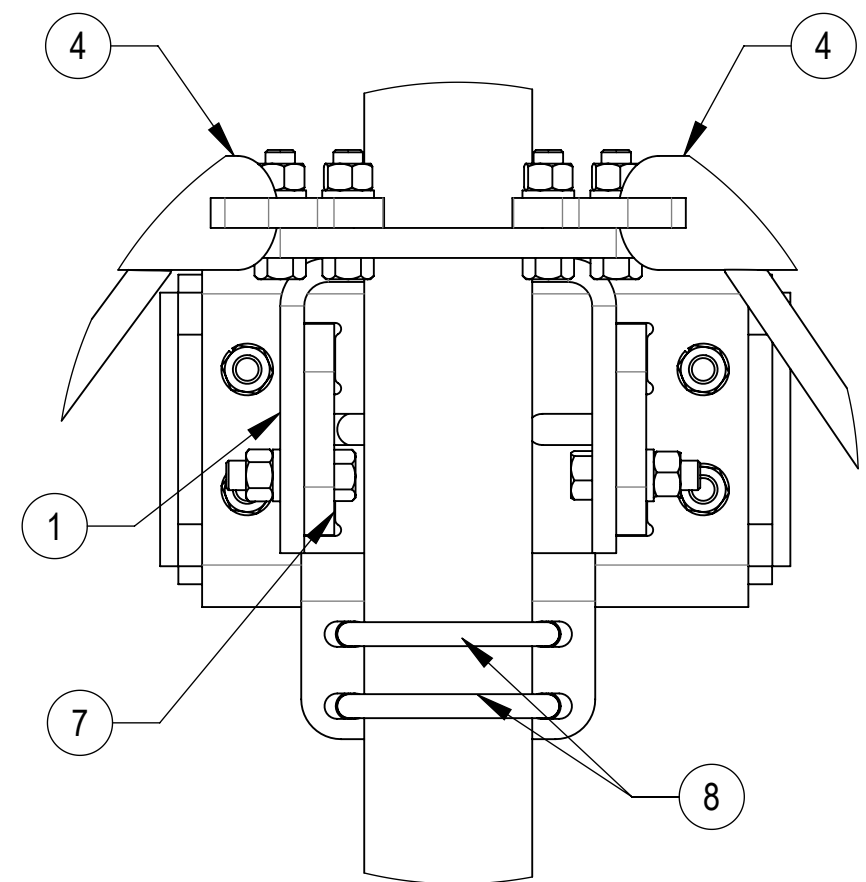


DRAWING
VERSION STATUS REVISION
14 RE J

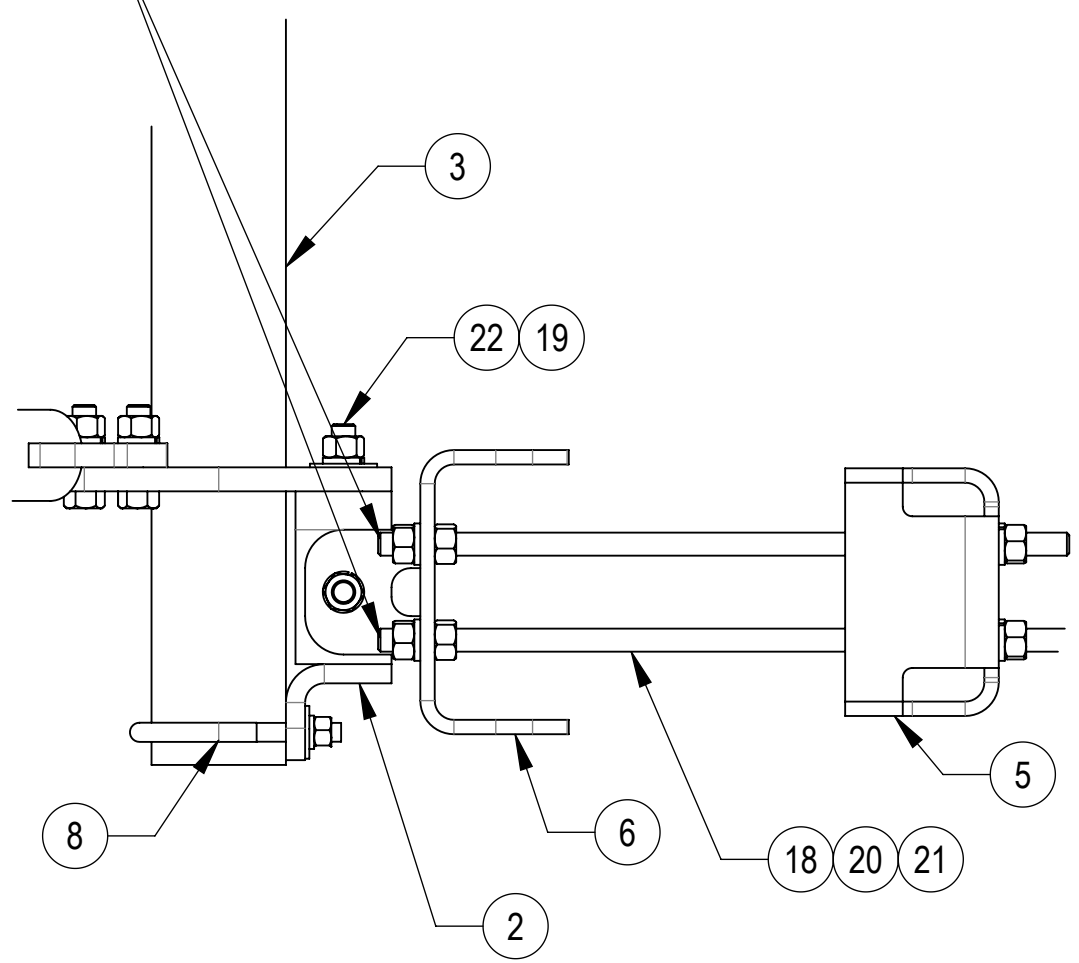
SHEET
4 OF 12



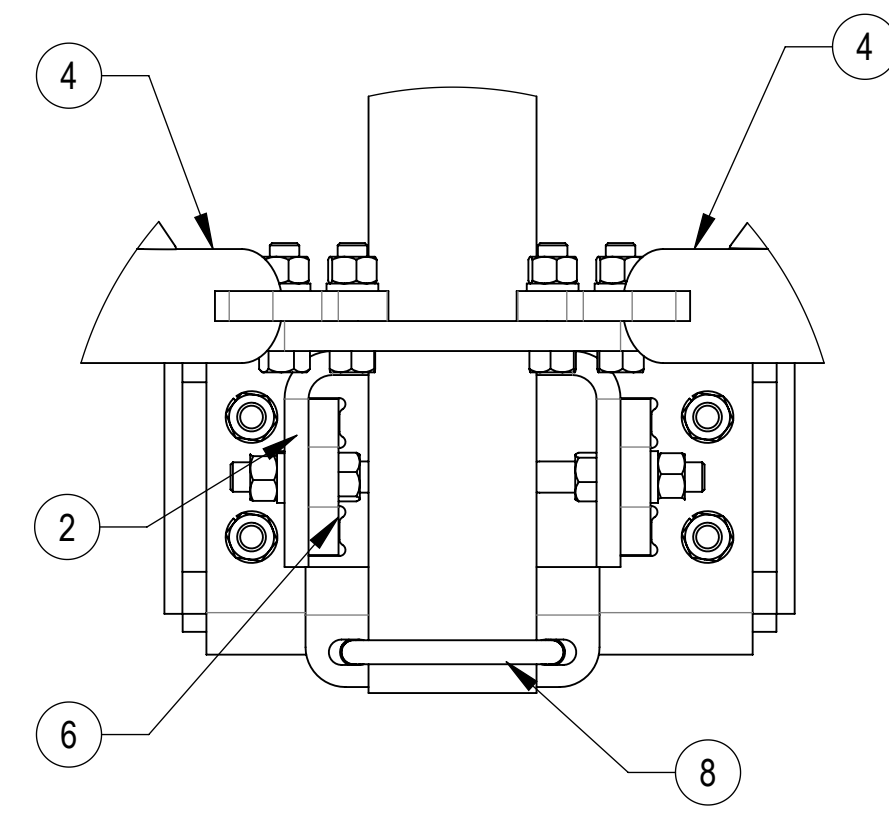
DETAIL M
SCALE 1 : 5



DETAIL R
SCALE 1 : 4



DETAIL N
SCALE 1 : 5



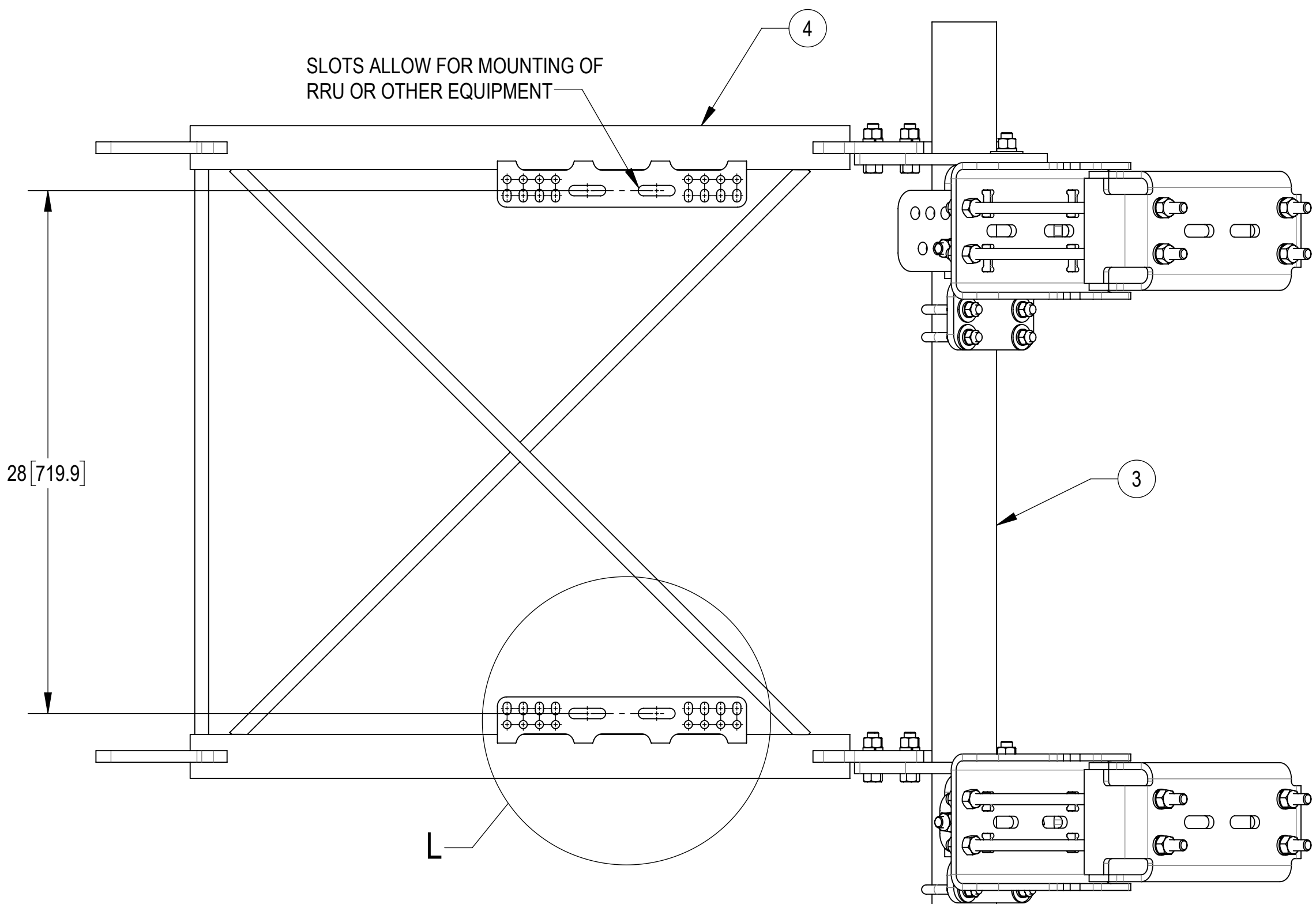
DETAIL S
SCALE 1 : 4

THE THREADED ROD CAN ONLY EXPOSE 4
TO 7 THREADS ON ONE SIDE OF THE
BRACKET, WHICH IS TO PREVENT
INTERFERENCE WITH THE SIDE BOLTS

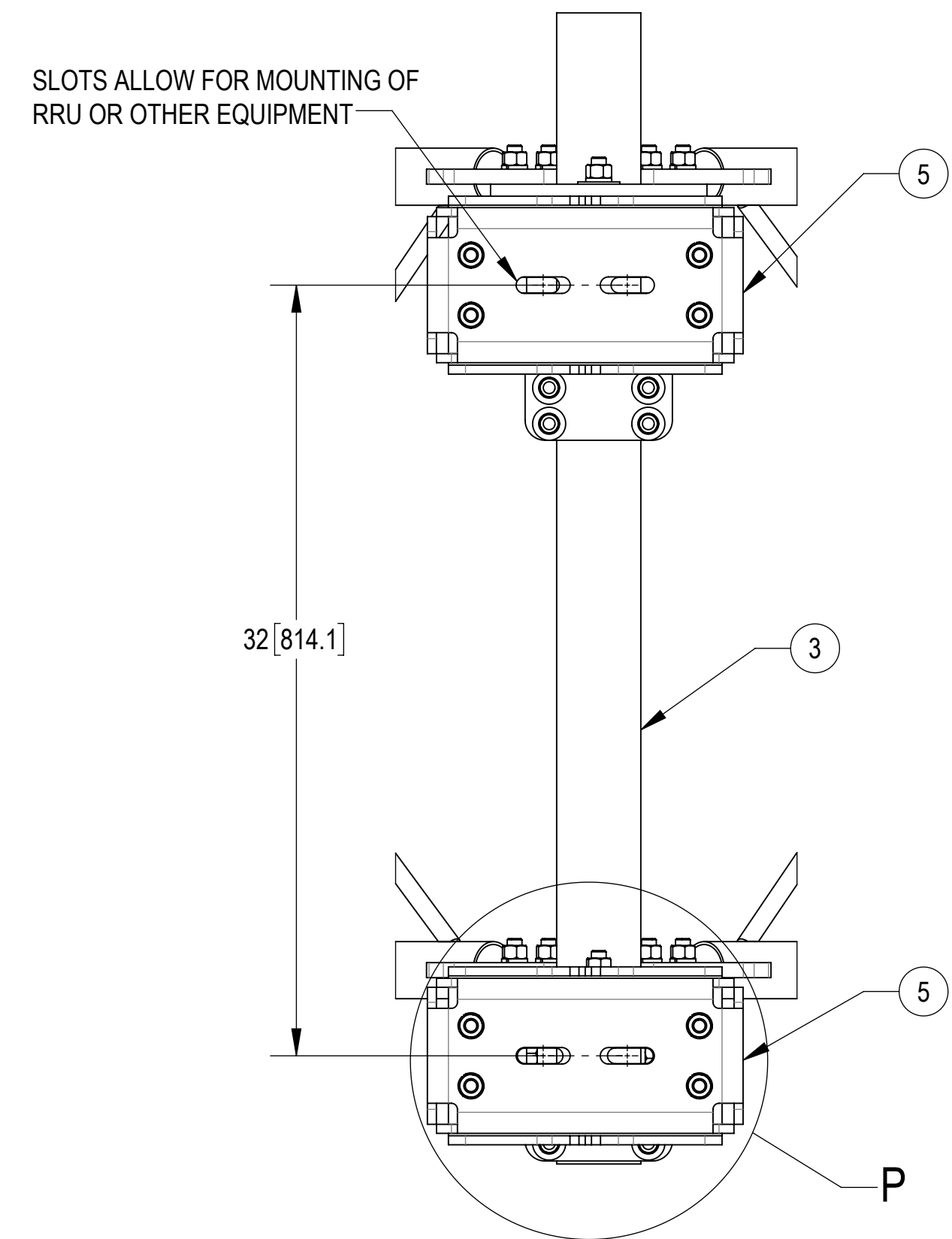


TITLE				
SFG22HD SECTOR FRAME SERIES				
SIZE	SCALE	DOCUMENT NO.		
C	1:4	SFG22HD		
		DRAWING		
		VERSION	STATUS	REVISION
		14	RE	J
				SHEET
				5 OF 12

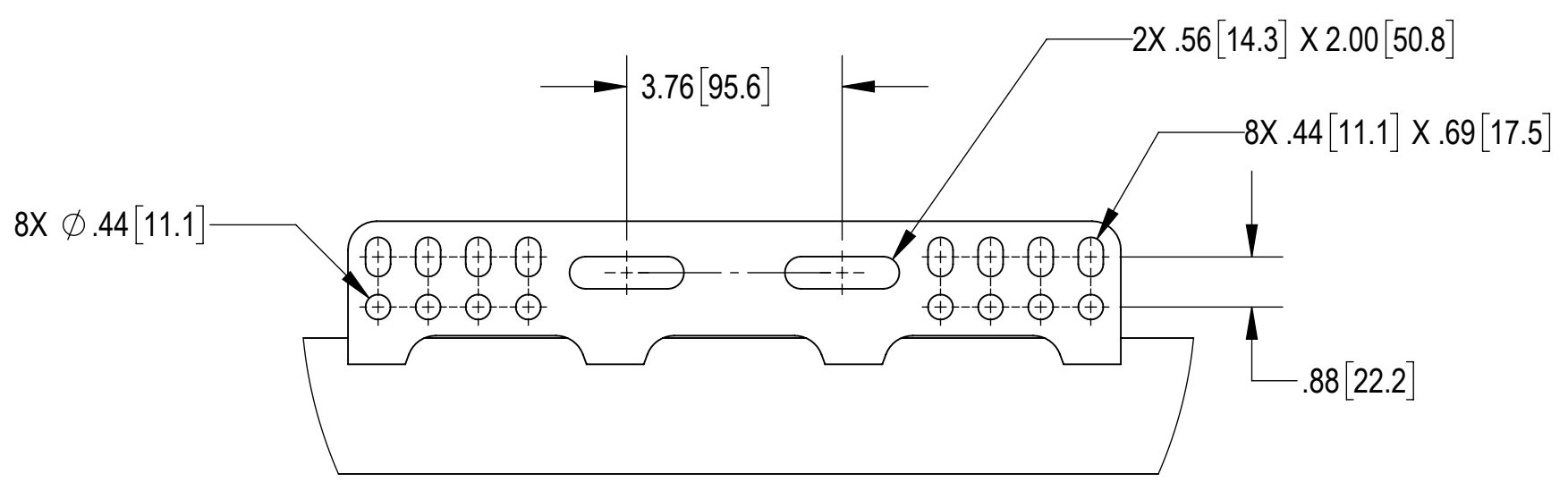
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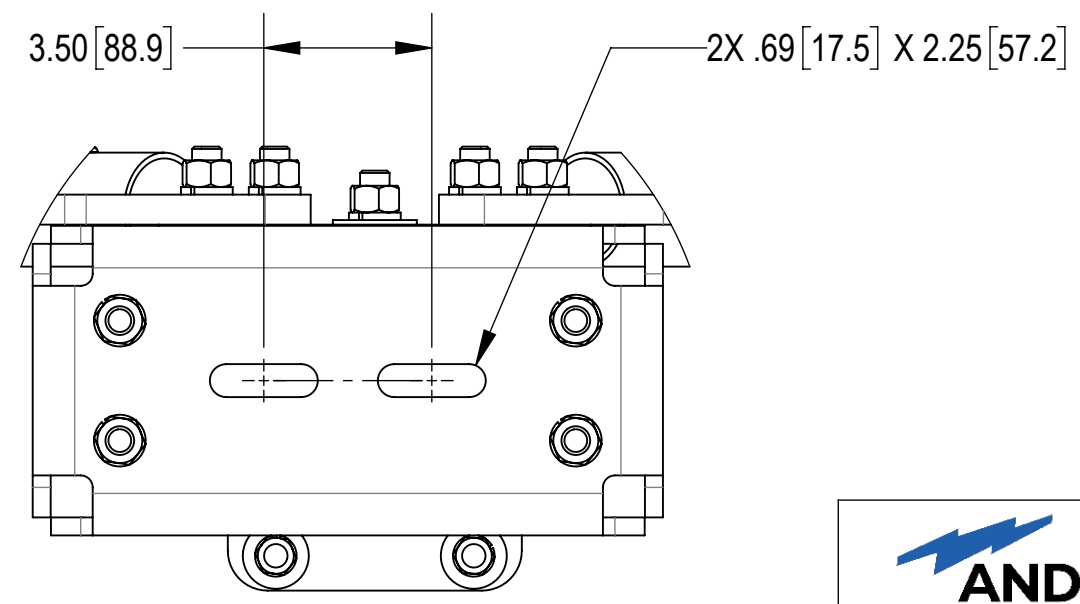
SIDE VIEW



BACK CROP VIEW

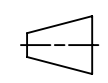


DETAIL L
SCALE 1 : 3



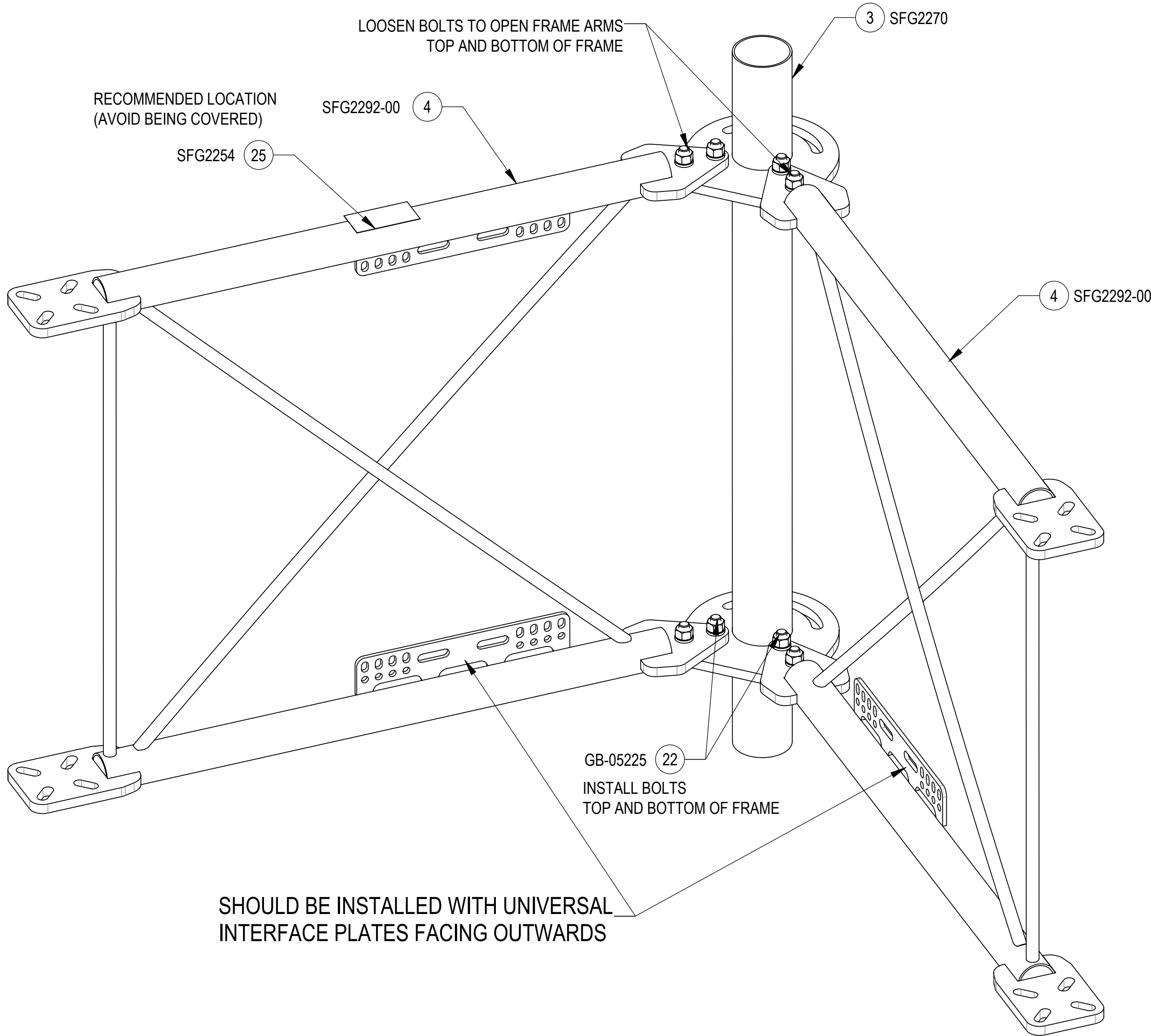
DETAIL P
SCALE 1 : 4

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TITLE SFG22HD SECTOR FRAME SERIES				
SIZE C	SCALE 1:24	DOCUMENT NO. SFG22HD		
 		DRAWING		
		VERSION 14	STATUS RE	REVISION J
				SHEET 6 OF 12

INSTALLATION SEQUENCE - REFERENCE ONLY

STEP 1: LOOSEN BOLT KITS (GB-05225) TO OPEN FRAME SUPPORT ARMS. INSTALL ADDITIONAL 4X BOLT KITS (GB-05225).
PLACE LABEL (SFG2254) ON TOP OF STANDOFF ARMS (SFG2292-00). (WIPE GALVANIZED SURFACE WITH ALCOHOL CLEANER BEFORE
APPLYING LABEL)



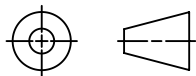
ISO VIEW

TOP
BOTTOM



TITLE
SFG22HD SECTOR FRAME SERIES

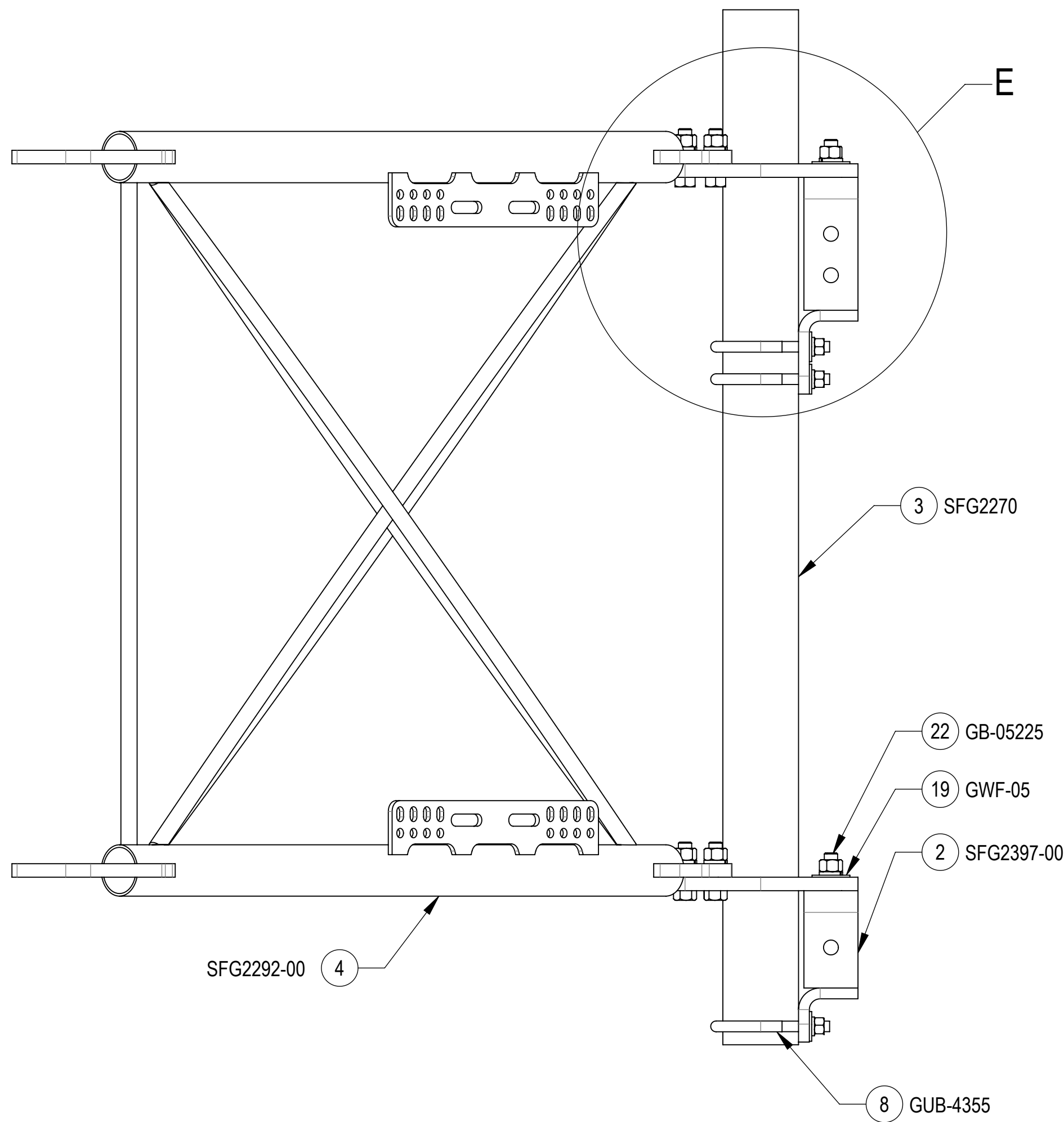
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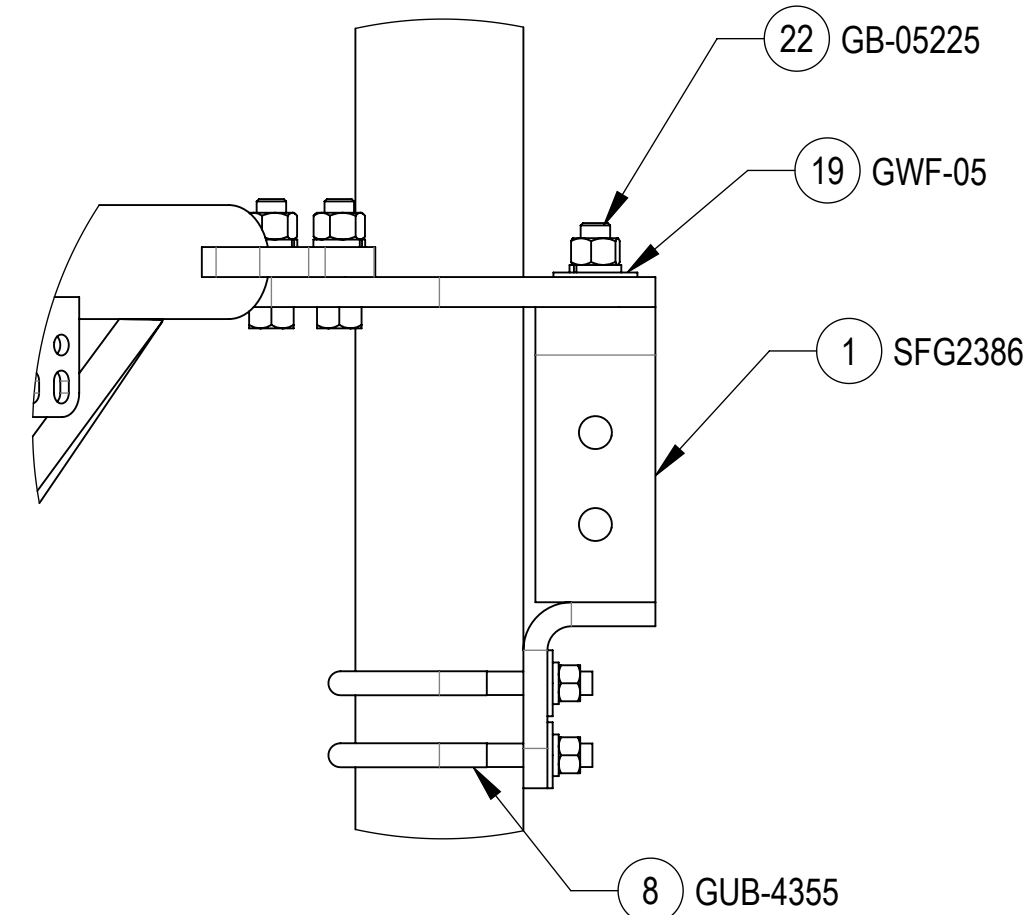
DRAWING			SHEET 7 OF 12
VERSION	STATUS	REVISION	
14	RE	J	

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STEP 2: AT TOP, ATTACH AZIMUTH/TAPER BRACKET (SFG2386) TO BACK VERTICAL ARM MOUNT (SFG2270) USING BOLT KITS (GB-05225), U-BOLTS (GUB-4355) AND FLAT WASHERS (GWF-05).
AT BOTTOM, ATTACH AZIMUTH/TAPER BRACKET (SFG2397-00) TO BACK VERTICAL ARM MOUNT (SFG2270) USING BOLT KITS (GB-05225), U-BOLTS (GUB-4355) AND FLAT WASHERS (GWF-05).

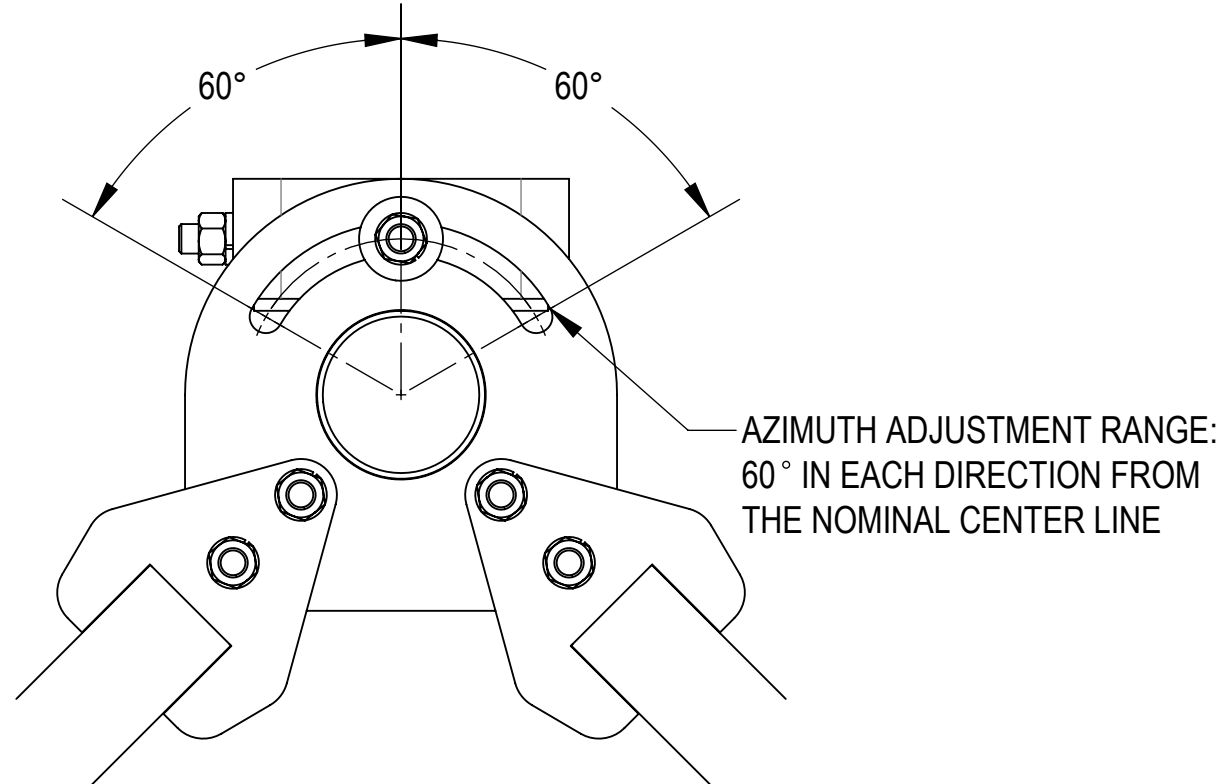


SIDE VIEW



DETAIL E
SCALE 1 : 4

TOP
↓
BOTTOM

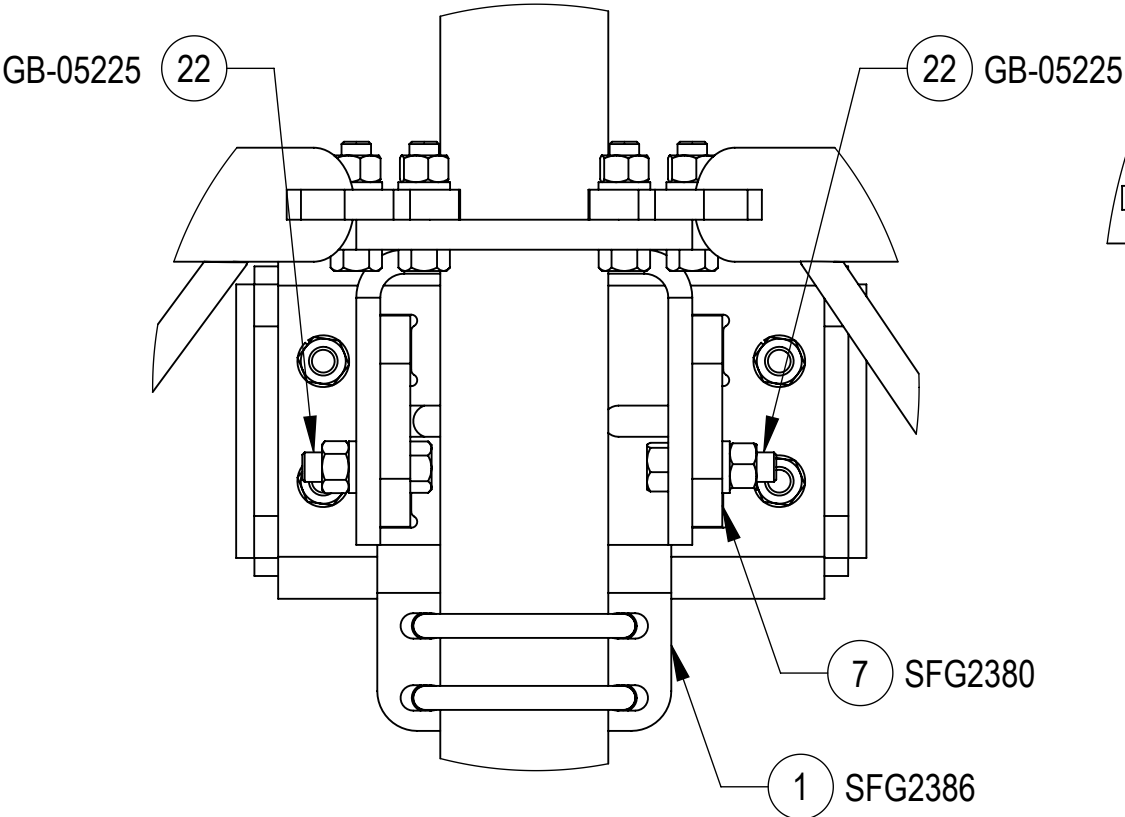


TOP CROP VIEW

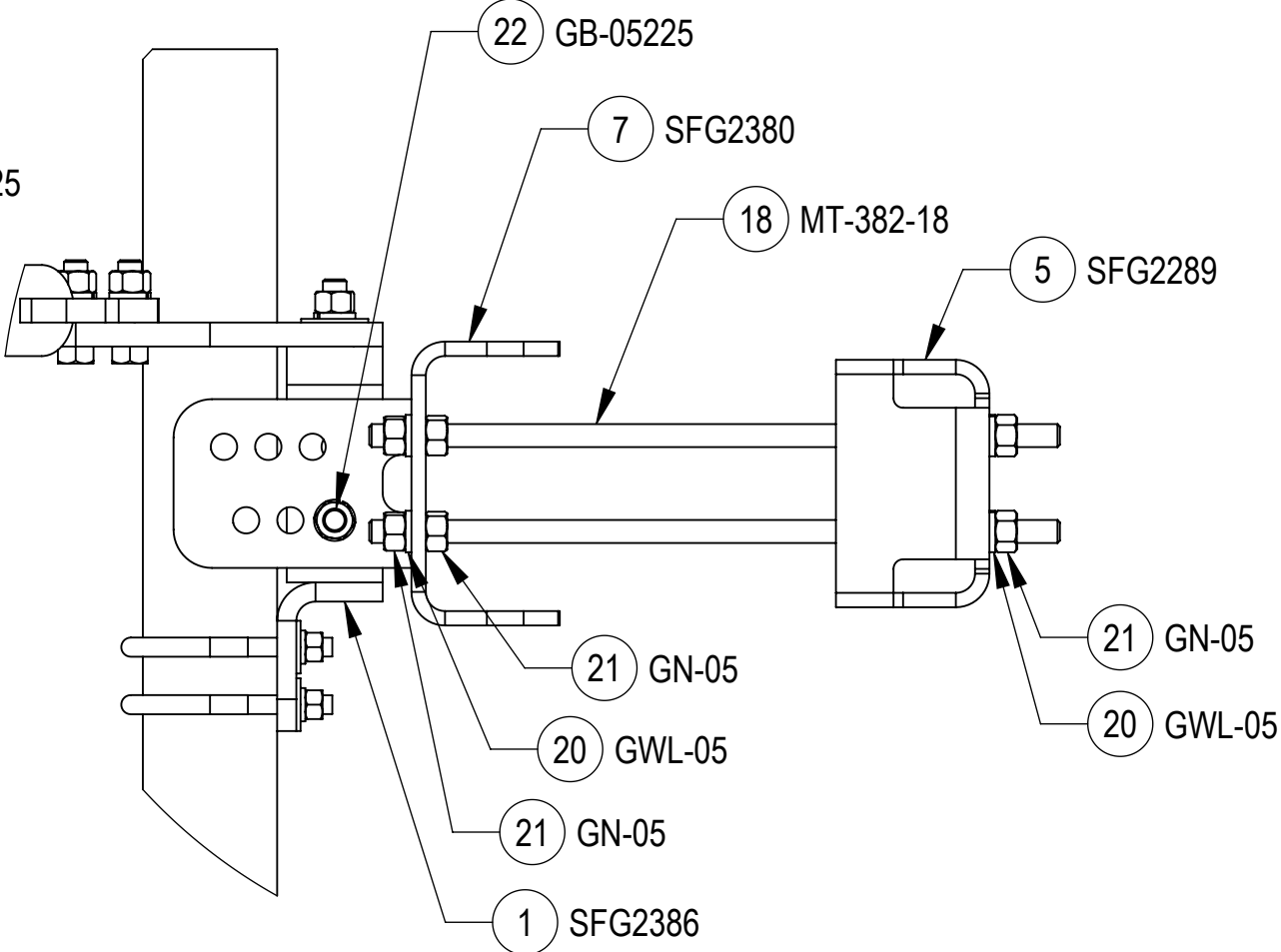
 ANDREW® <i>an Amphenol company</i>					
TITLE SFG22HD SECTOR FRAME SERIES					
SIZE C	SCALE 1:6	DOCUMENT NO. SFG22HD			
		DRAWING			SHEET 8 OF 12
		VERSION	STATUS	REVISION	
		14	RE	J	

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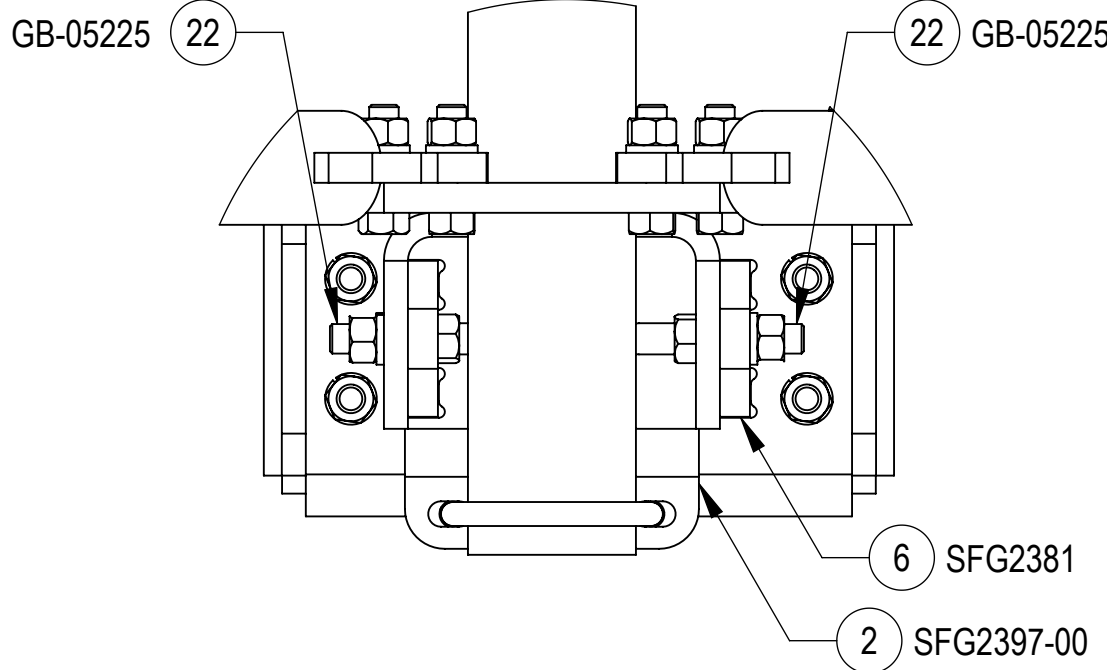
STEP 3: AT TOP, ATTACH TOP TAPER BRACKET (SFG2380) TO AZIMUTH/TAPER BRACKET (SFG2386) USING BOLT KITS (GB-05225);
AT BOTTOM, ATTACH LOWER TOWER LEG BRACKET (SFG2381) TO AZIMUTH/TAPER BRACKET (SFG2397-00) USING BOLT KITS (GB-05225).



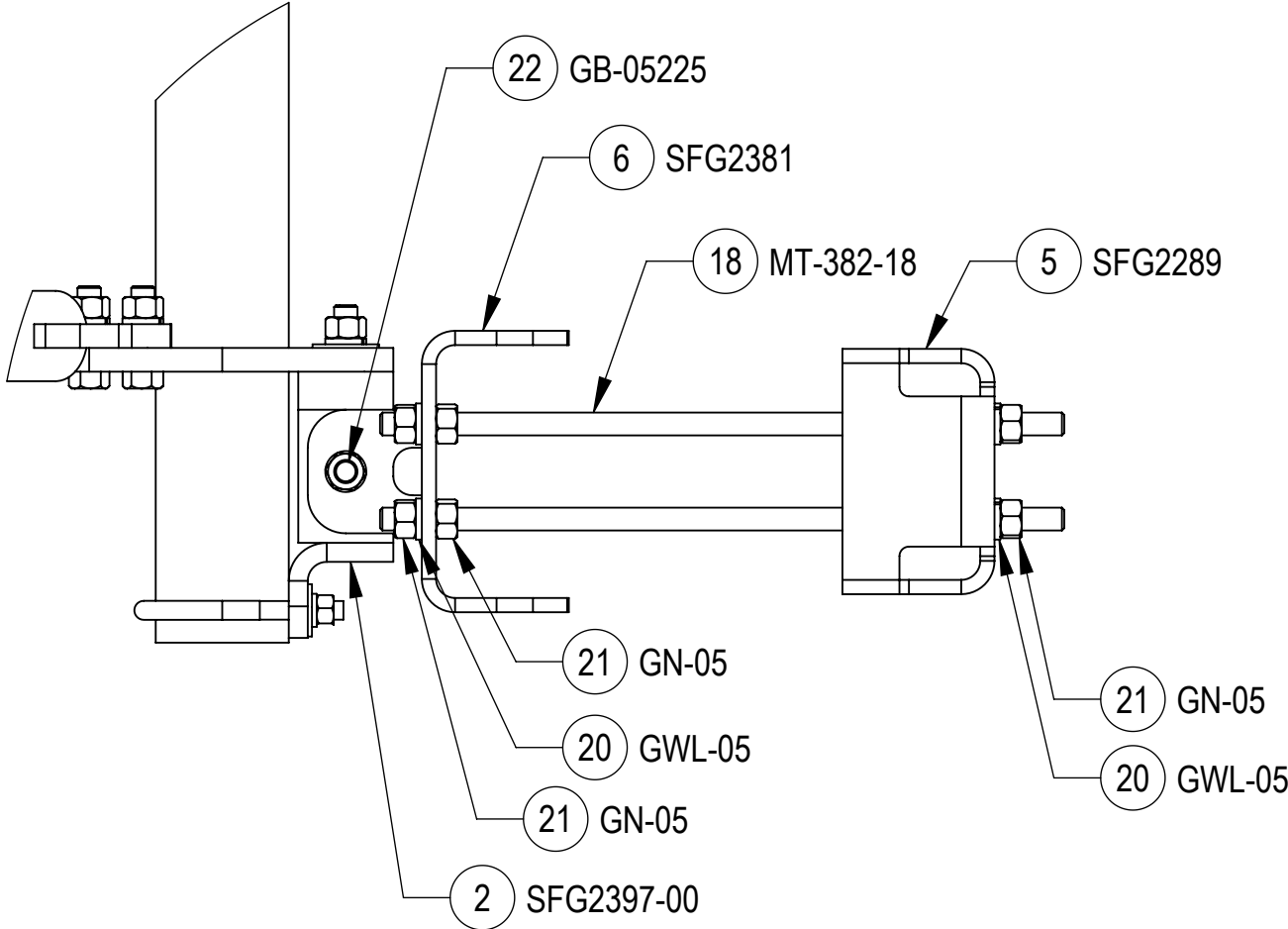
DETAIL FRONT VIEW OF TOP MOUNT
SCALE 1 : 4



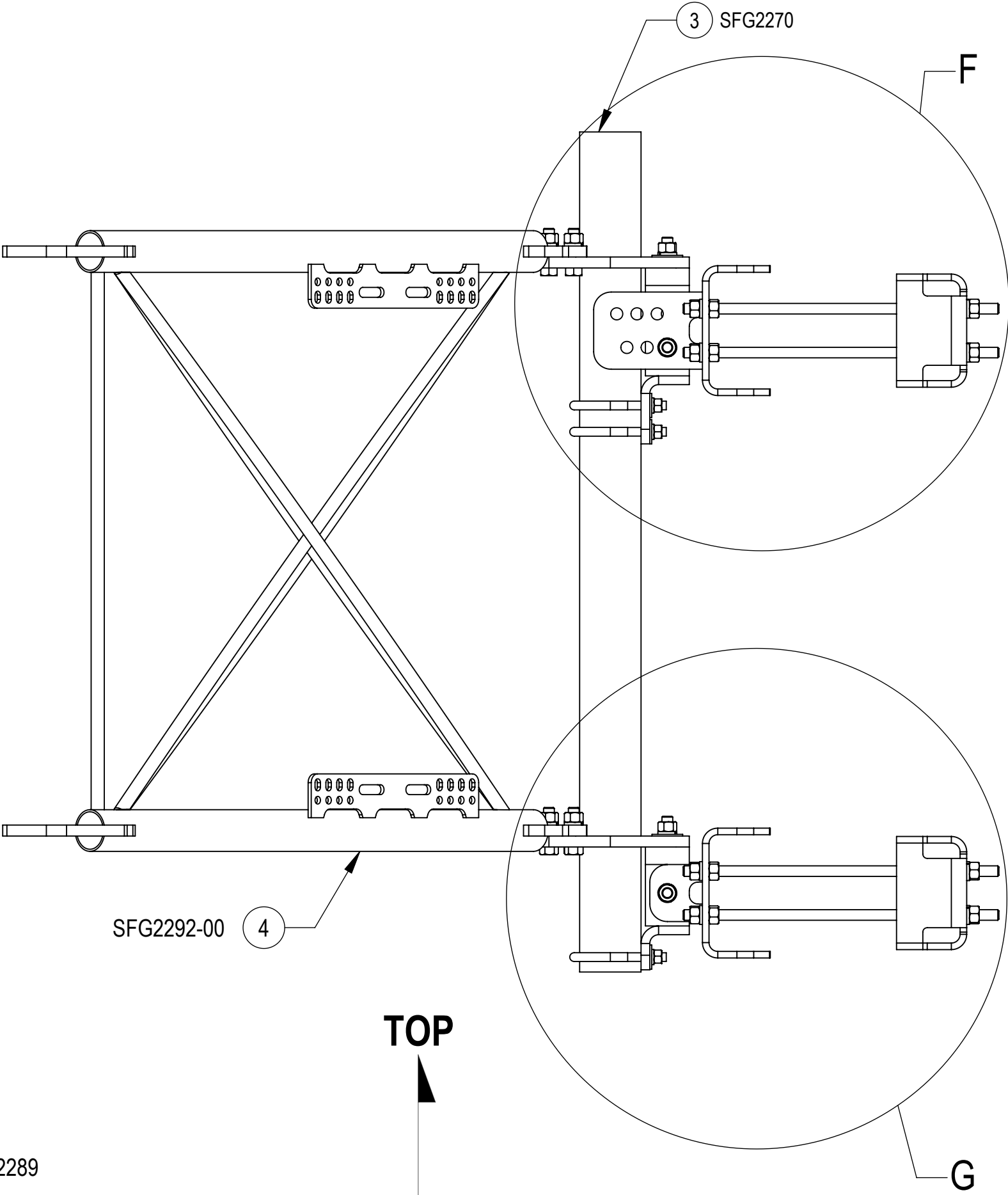
DETAIL F
SCALE 1 : 5



DETAIL FRONT VIEW OF BOTTOM MOUNT
SCALE 1 : 4



DETAIL G
SCALE 1 : 5



TOP

BOTTOM

ANDREW an Amphenol company

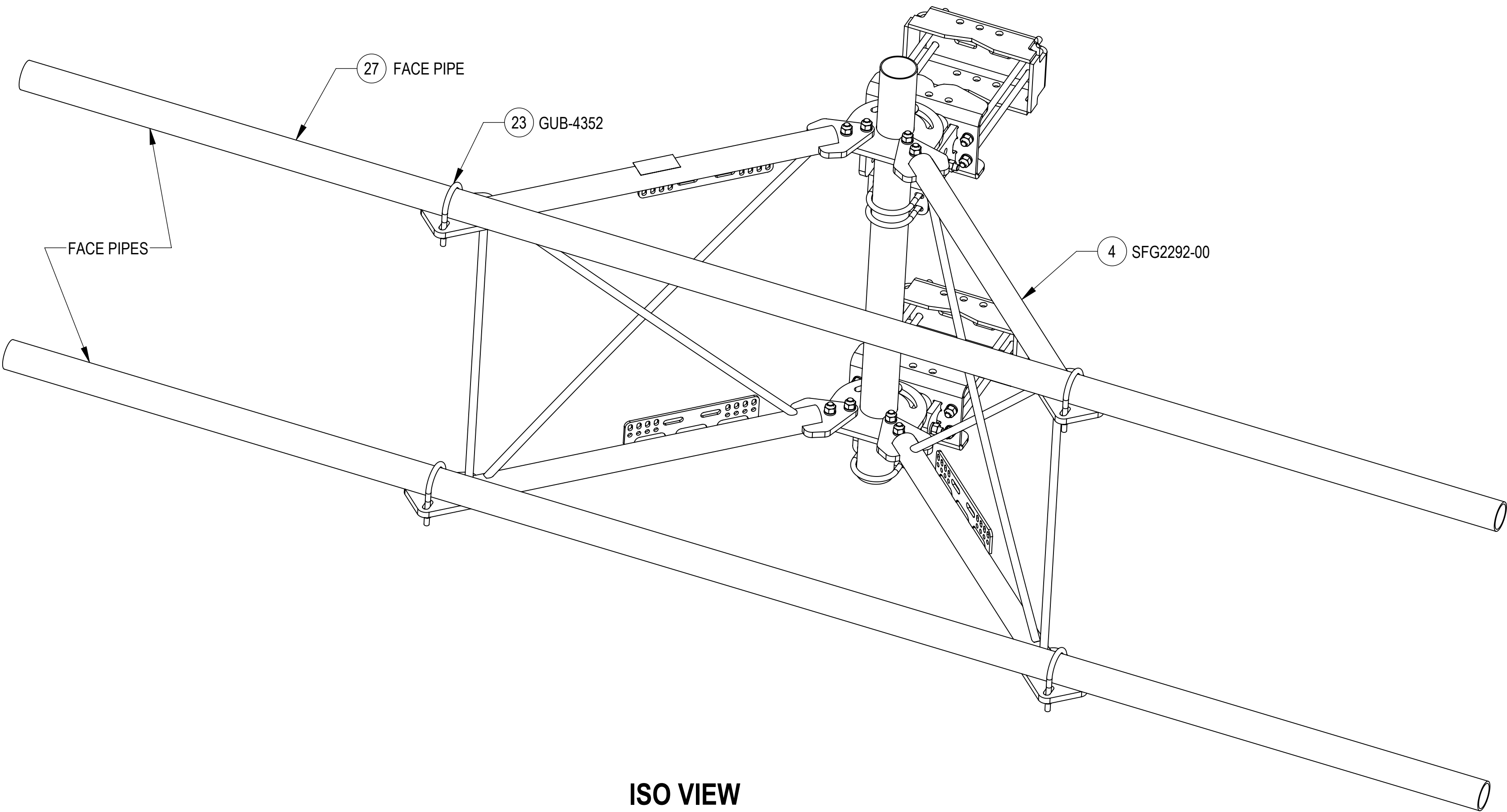
TITLE
SFG22HD SECTOR FRAME SERIES

SIZE **C** SCALE **1:6** DOCUMENT NO. **SFG22HD**

DRAWING
VERSION STATUS REVISION SHEET
14 RE J 9 OF 12

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STEP 4: ATTACH FACE PIPES TO V-ARM (SFG2292-00) USING U-BOLTS (GUB-4352).

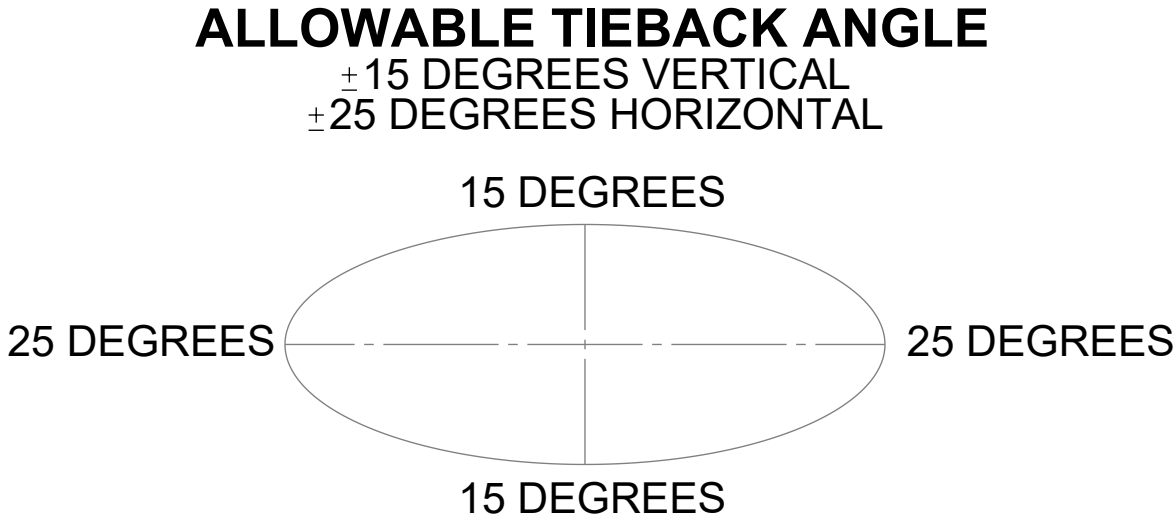
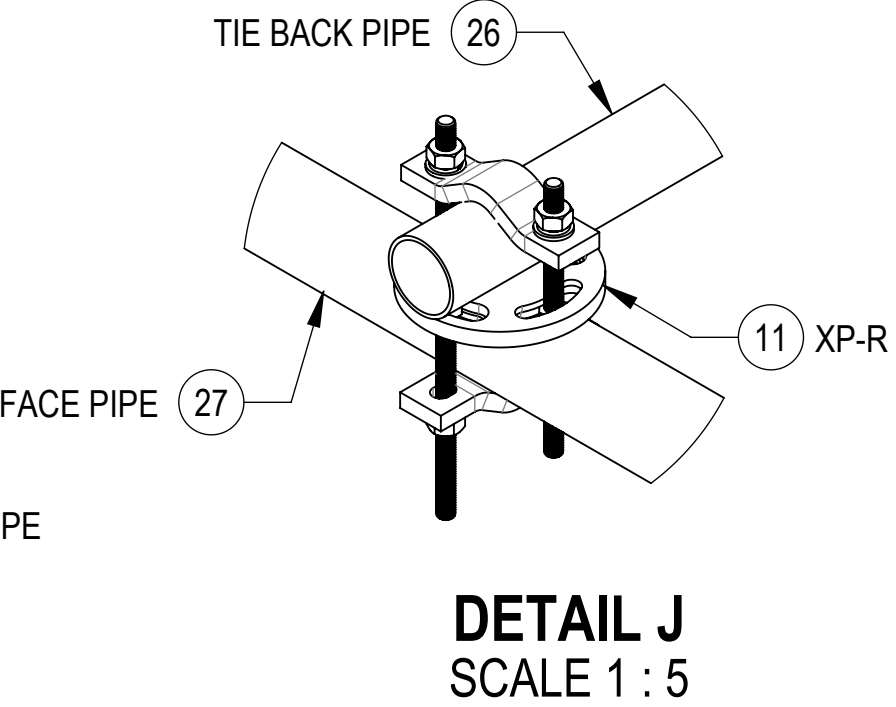
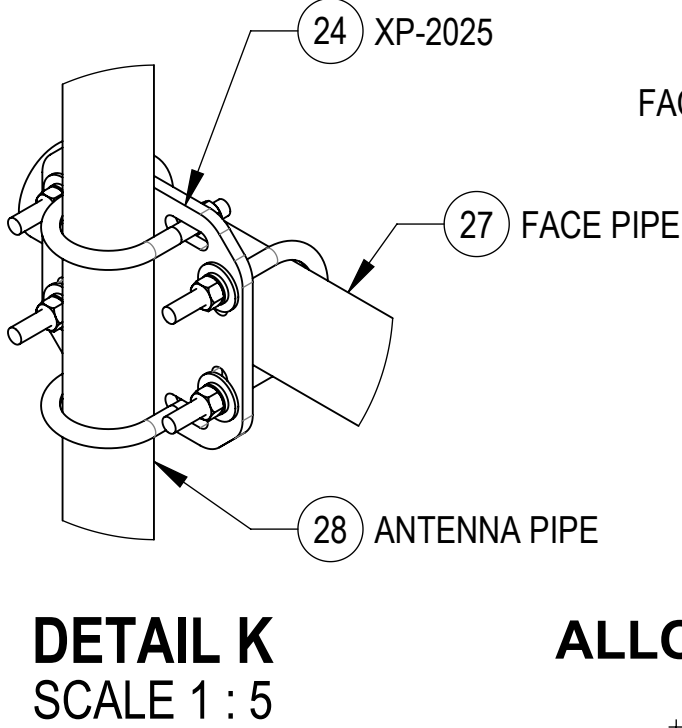
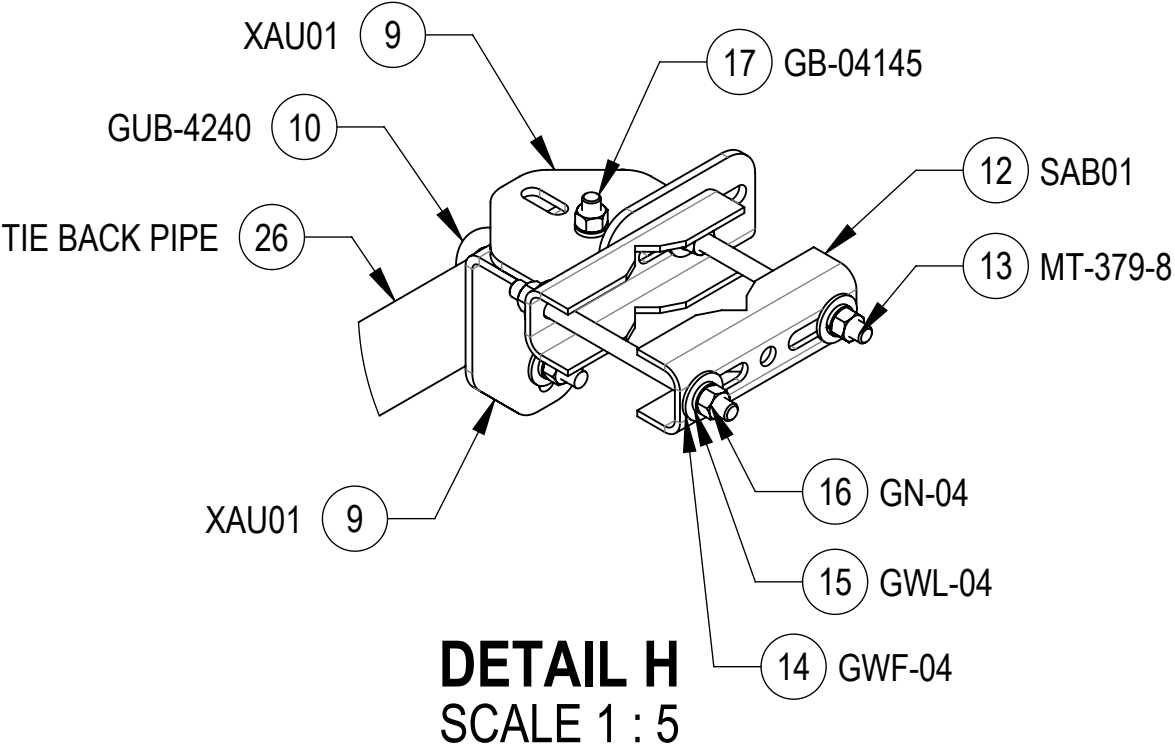
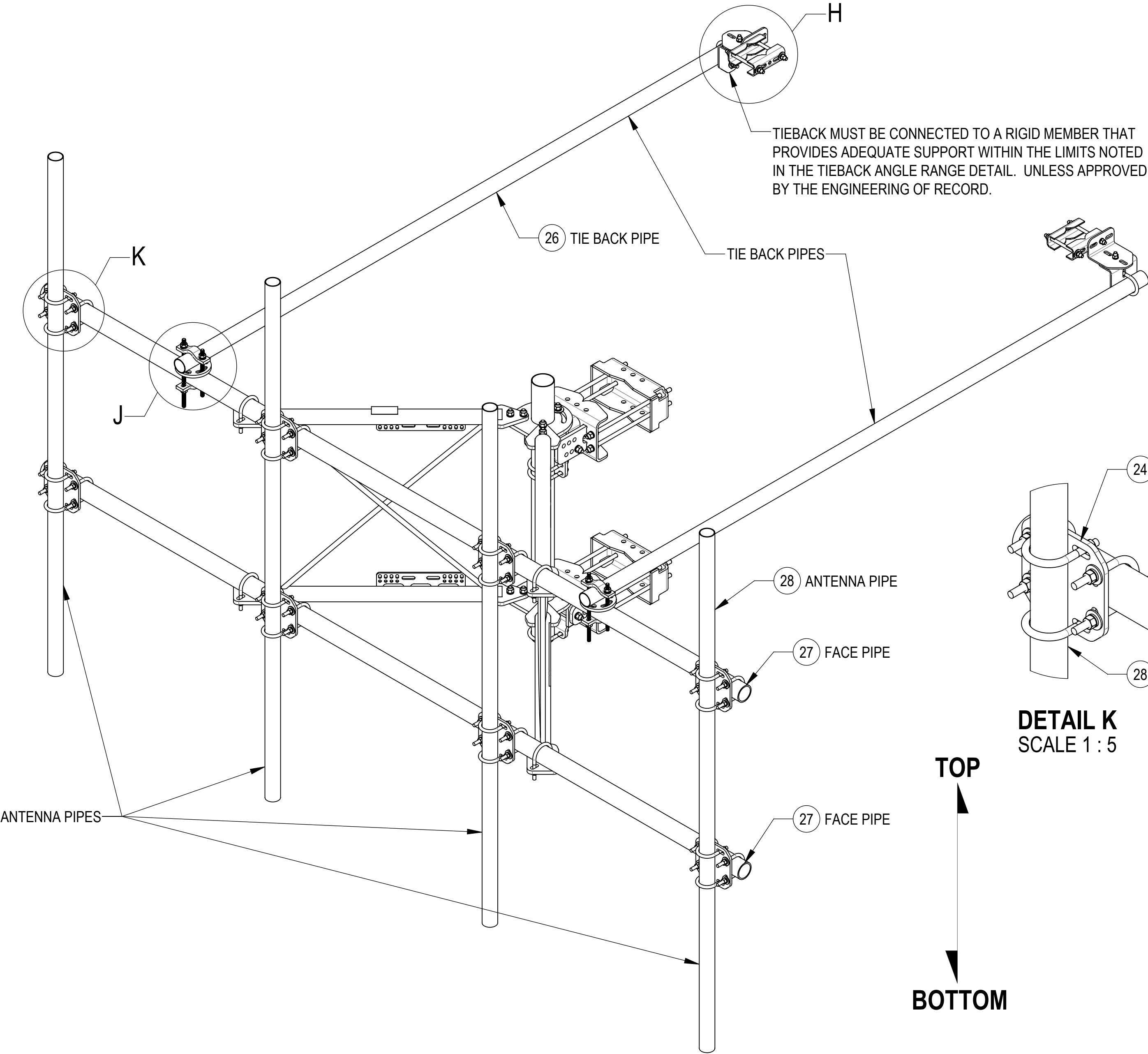


ISO VIEW

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TITLE SFG22HD SECTOR FRAME SERIES				
SIZE C	SCALE 1:8	DOCUMENT NO. SFG22HD		
 		DRAWING		
		VERSION 14	STATUS RE	REVISION J
				SHEET 10 OF 12

STEP 5: ATTACH ANTENNA PIPES TO FACE PIPES USING CROSSOVER PLATE KITS (XP-2025).
ATTACH TIE BACK PIPES TO FACE PIPES USING ROUND CROSSOVER PLATE KITS (XP-R).



TOP
↓
BOTTOM

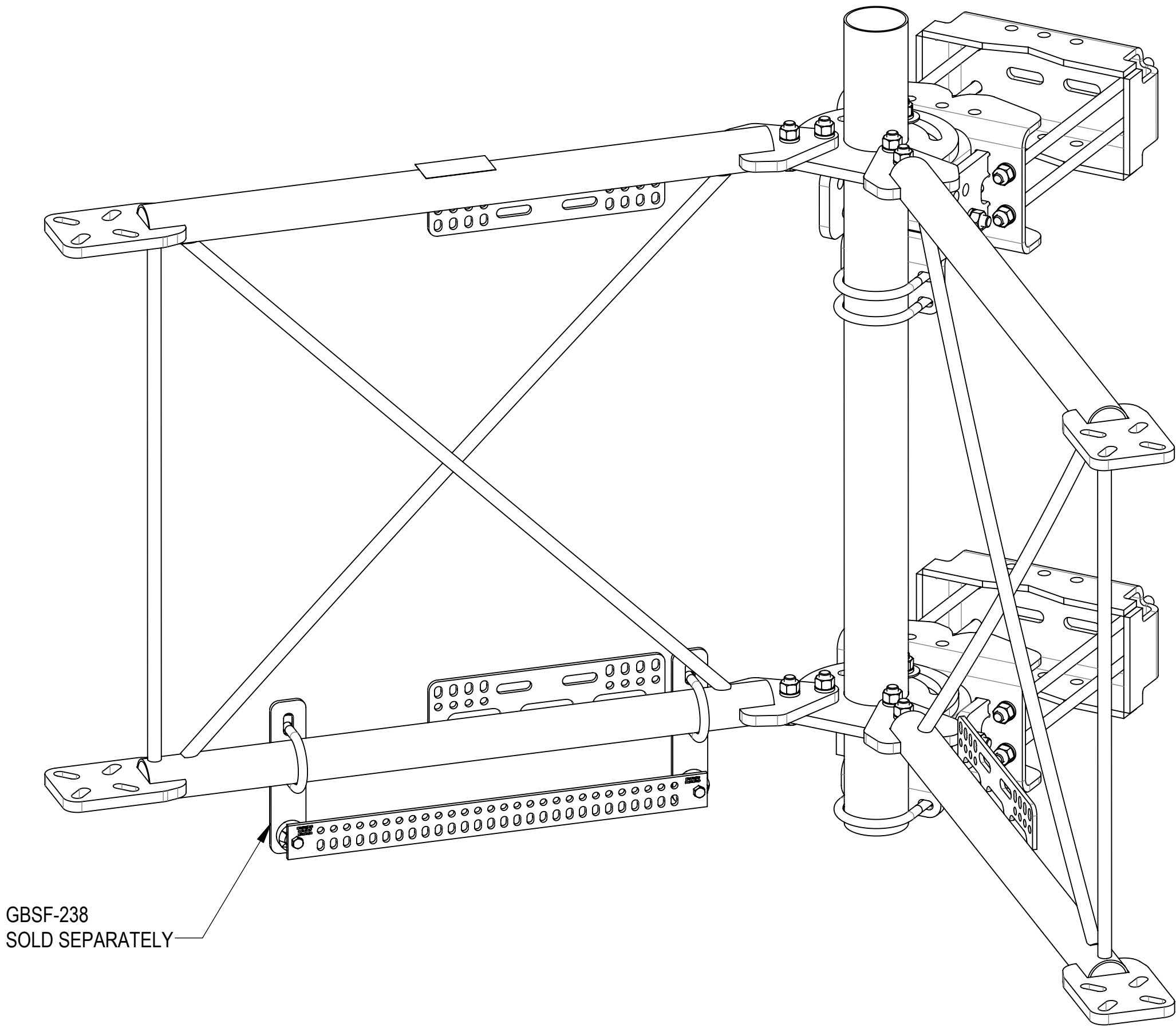
ISO VIEW

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TITLE SFG22HD SECTOR FRAME SERIES				
SIZE C	SCALE 1:12	DOCUMENT NO. SFG22HD		
 		DRAWING		
		VERSION 14	STATUS RE	REVISION J
				SHEET 11 OF 12

OPTIONAL ACCESSORIES:

BUSS BAR MOUNT KIT GBSF-238 IS WELL SUITED TO BE USED SHOULD THE NEED ARISE
NOTE THAT THIS KIT DOES NOT INCLUDE THE ISOLATORS OR BUSS BAR



ISO VIEW

				
TITLE SFG22HD SECTOR FRAME SERIES				
SIZE C	SCALE 1:12	DOCUMENT NO. SFG22HD		
 		DRAWING		
		VERSION 14	STATUS RE	REVISION J
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