

- 1.0 GENERAL NOTES
- 1.1 ALL METRIC DIMENSIONS ARE IN BRACKETS [X.X]
- 1.2 FOR PATENT INFO: <https://www.cs-pat.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 COMMSCOPE 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	APPROVED
A	INITIAL RELEASE	RY1002 22NOV23	YC1015 40183018CMO
B	ADDED SFG23HDXL-14-4-96, SFG23HDXL-14-4-126, SFG23HDXL-14-5-96, SFG23HDXL-14-5-126, SFG23HDXL-13-4-96 AND SFG23HDXL-13-4-126 TO SERIES	RY1002 11DEC23	YC1015 40182550CMO
C	CHG PALLET FROM QVPALLET TO 74X38PALLET; UPDATED SFG23180-00 TO ADD UNIVERSAL INTERFACE PLATES	RY1002 31JUL24	XK1001 40199966CMO
D	UPDATED EPA TABLE	YMENG 12DEC24	CB1094 40210882CMO

SHOULD BE INSTALLED WITH UNIVERSAL INTERFACE PLATES FACING OUTWARDS

STRAP FOR REFERENCE

A

PIPE BUNDLE

STRAP FOR REFERENCE

STEEL BUNDLE

STRAP FOR REFERENCE

STIFF ARM MOUNT KIT

WITH SFG23180-00 MOUNTED ON TOP OF SFG2206

ALL GB-05225 BOLTS IN THIS ORIENTATION

SADDLE MOUNT KIT

STEEL BUNDLE HARDWARE KIT

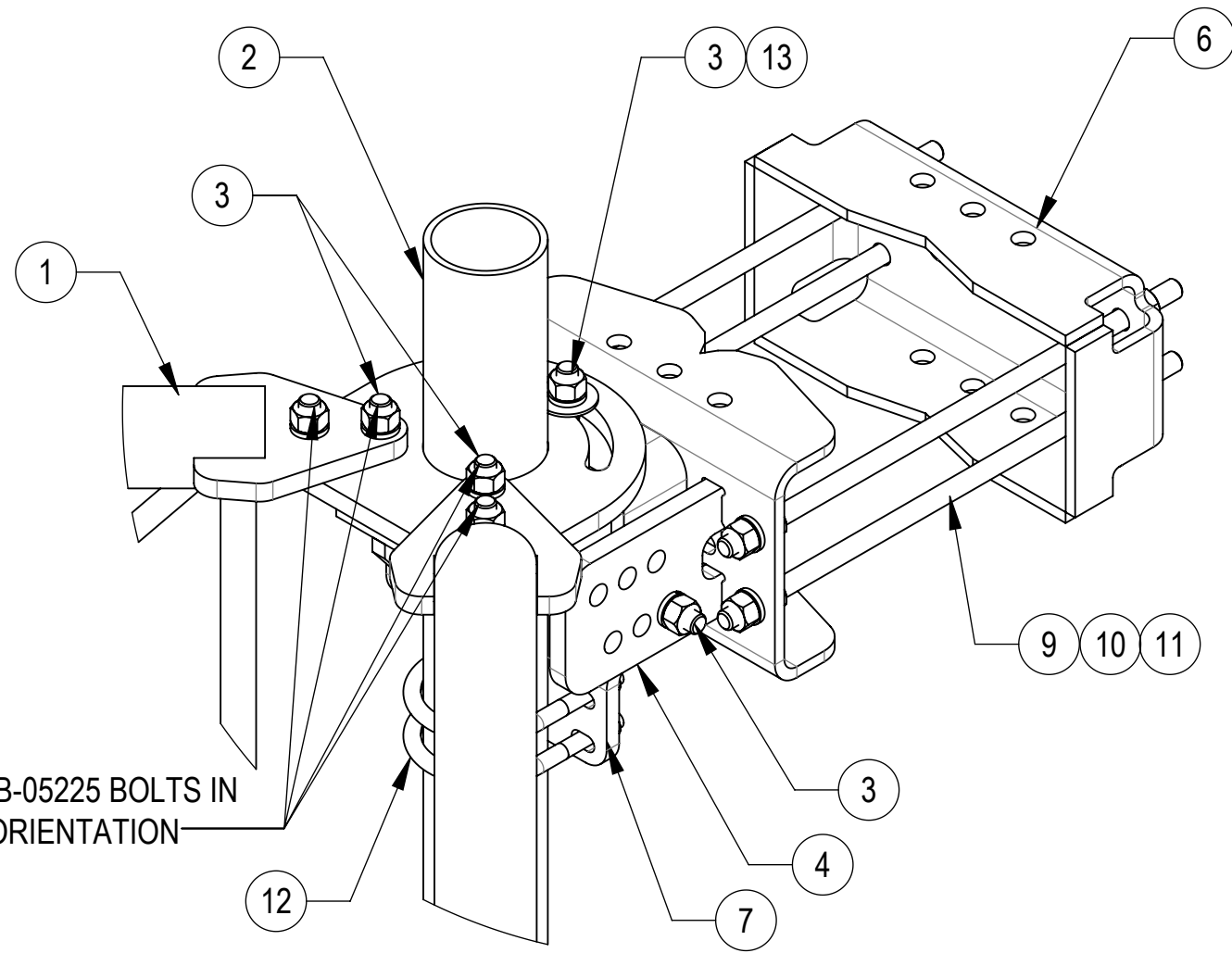
UNIVERSAL INTERFACE PLATES AT THIS ORIENTATION (BOTH SIDES)

DETAIL A  
SCALE 1 : 5

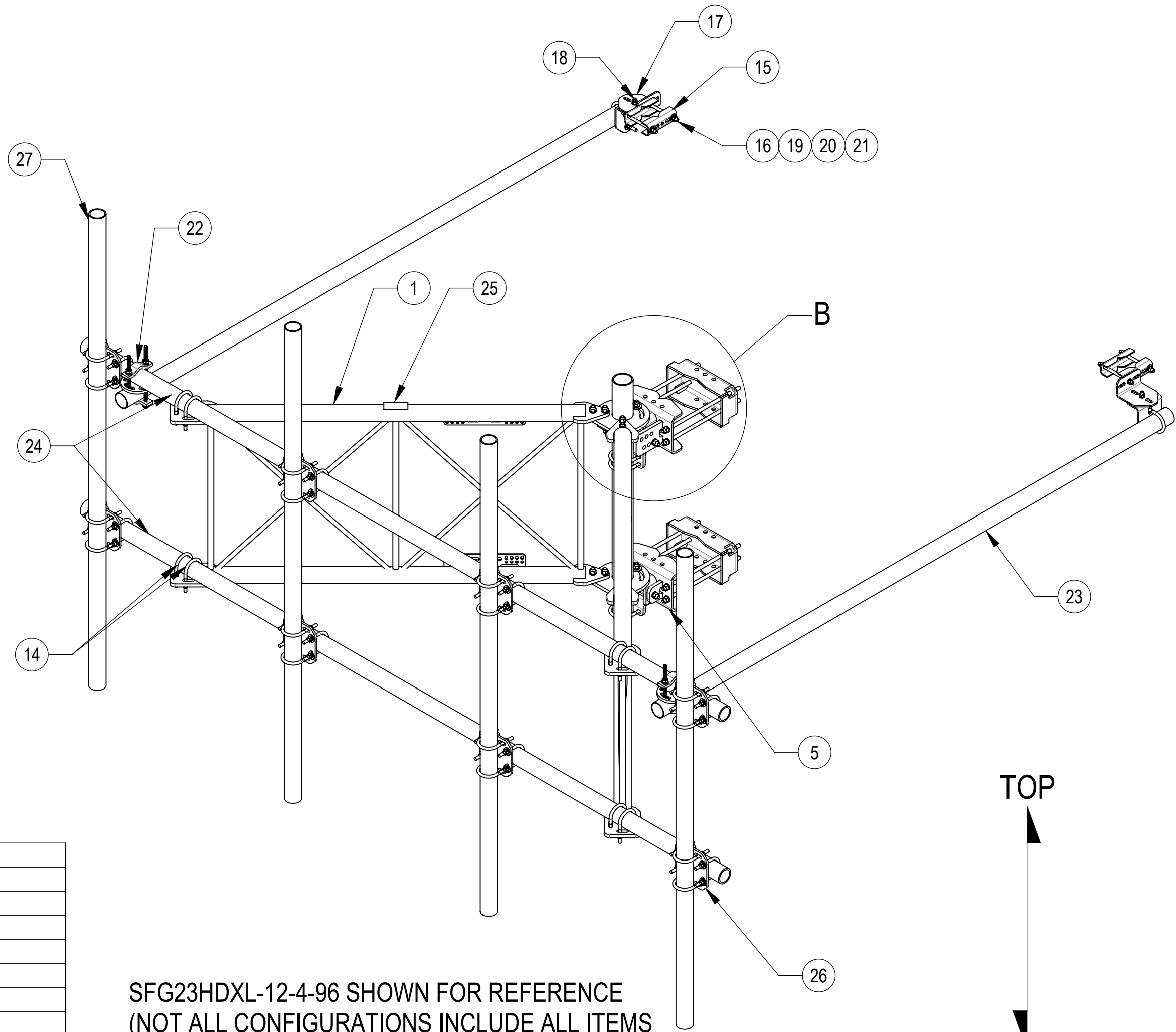
COMMSCOPE, INC. OF NORTH CAROLINA											
TOLERANCES						SAP MATERIAL MASTER					
1 PLACE .X[X] ± 0.2[6.3]			3 PLACE .XXX[X] ± 0.060[1.5]			SEE TABLE 1					
2 PLACE .XX[X] ± 0.12[3.0]			ANGLES ± 2°								
FINISH						MATERIAL					
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES INTERPRET PER ANSI Y 14.5M-1994	NAME		DATE		TITLE						
	CE	RY1002	22NOV23		SFG23HDXL SECTOR FRAME SERIES						
	RW	YMENG	12/16/2024								
	AD	CB1094	12/17/2024								
	RE	YMENG	12/17/2024								
ECN 40210882CMO				SCALE							DOCUMENT NO.
				1:12		SFG23HDXL					
SIZE		Auth Group		INSL		MODEL		DRAWING			
C		⊕		◁		VERSION		STATUS		REVISION	
						04		RE		D	
								03		RE	
								D			
										SHEET	
										1 OF 12	

DENSITY	lbs/in <sup>3</sup>
MASS	lbs
VOLUME	in <sup>3</sup>
SURFACE AREA	in <sup>2</sup>
HEIGHT	
LENGTH	
WIDTH	



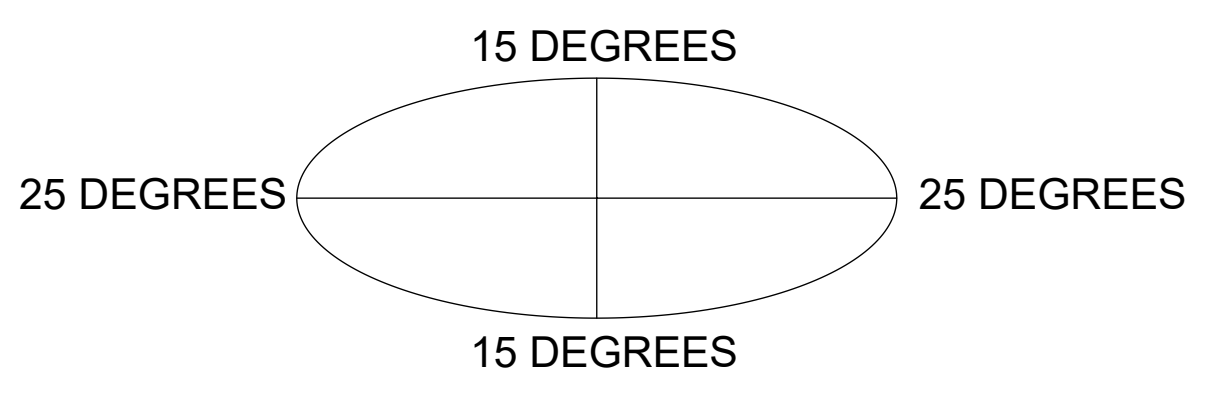


**DETAIL B**  
SCALE 1 : 5



SFG23HDXL-12-4-96 SHOWN FOR REFERENCE  
(NOT ALL CONFIGURATIONS INCLUDE ALL ITEMS  
SEE NOTES IN TABLE)

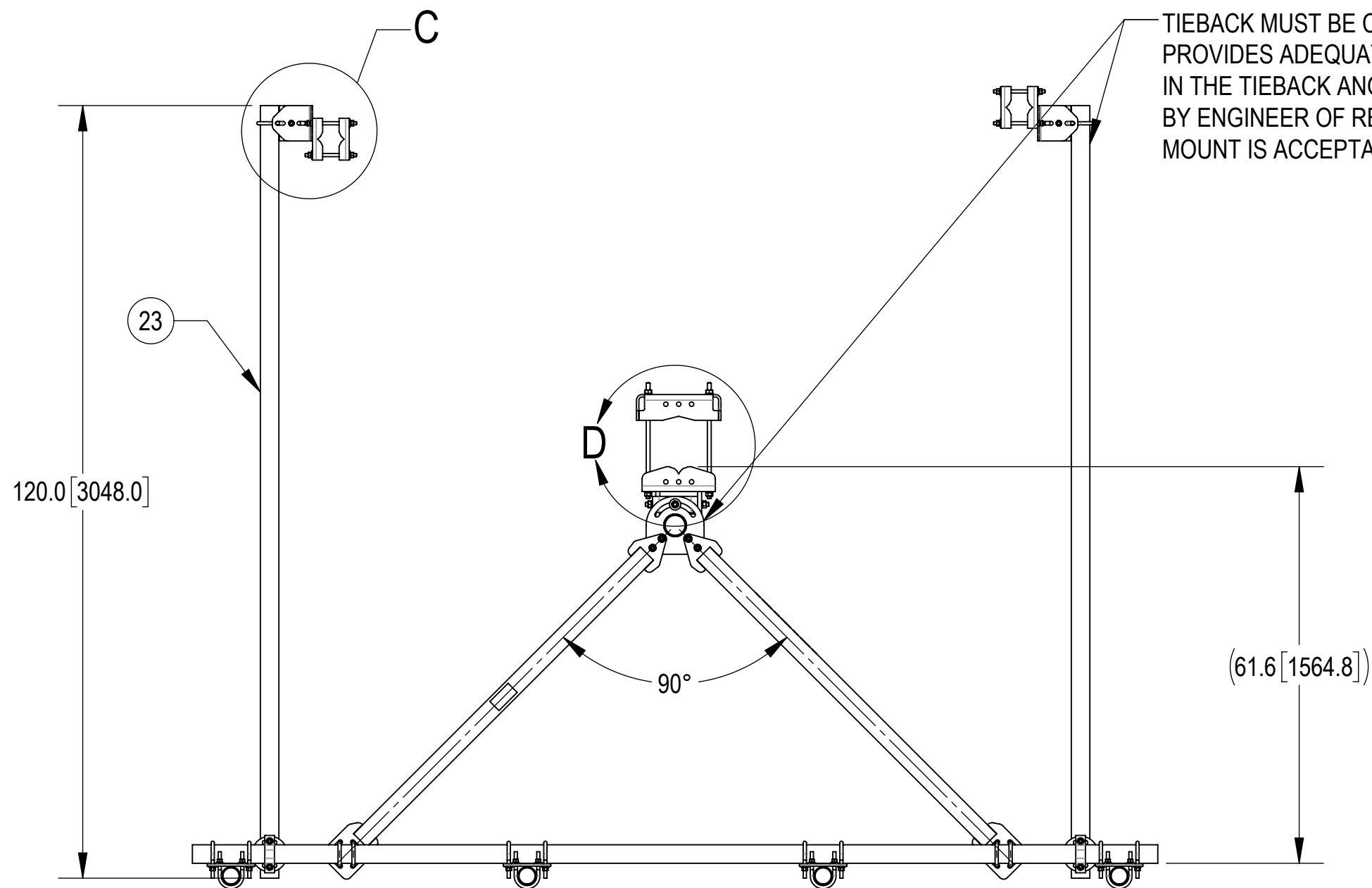
**ALLOWABLE TIEBACK ANGLE**  
± 15 DEGREES VERTICAL  
± 25 DEGREES HORIZONTAL



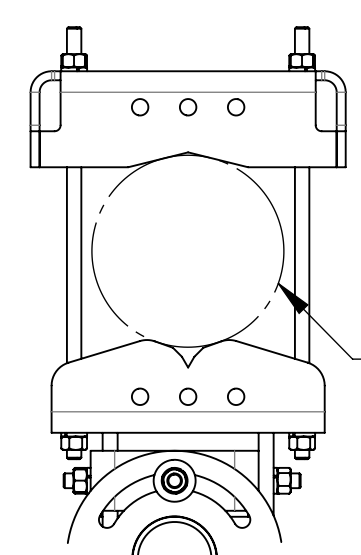
COMPONENT PART NUMBERS PROVIDED FOR ASSEMBLY PURPOSES;  
INDIVIDUAL COMPONENTS MAY BE SHIPPED AS PARTS WITHIN AN INCLUDED KIT.

ITEM	PART NO.	DESCRIPTION	QTY.	WEIGHT	NOTE
1	SFG23180-00	ARM, STANDOFF, SFG23	2	123.43 LBS	
2	SFG2206	WELDMENT, ARM MOUNT	1	51.60 LBS	
3	GB-05225	5/8" X 2-1/4" GALV BOLT KIT	14	0.28 LBS	
4	SFG2380	WELDMENT, HD, TOP TAPER BRACKET	1	22.78 LBS	
5	SFG2381	WELDMENT, HD, LOWER TOWER LEG BRACKET	1	17.42 LBS	
6	SFG2289	G2 RRU BACK CLAMP, HD	2	18.65 LBS	
7	SFG2386	WELDMENT, SFG2 AZIMUTH BRACKET	1	10.07 LBS	
8	SFG2397-00	WELDMENT, G23 AZIMUTH BRACKET	1	7.94 LBS	
9	MT-382-18	5/8" X 18" THREADED ROD	8	1.43 LBS	
10	GWL-05	5/8" GALV LOCK WASHER	16	0.03 LBS	
11	GN-05	5/8" GALV HEX NUT	24	0.08 LBS	
12	GUB-4355	1/2" X 3-5/8" X 5" GALV U-BOLT	3	0.71 LBS	
13	GWF-05	5/8" GALV FLAT WASHER, 1.7OD	2	0.06 LBS	
14	GUB-4352	1/2" X 3" X 5-1/4" GALV U-BOLT	10	0.71 LBS	
15	SAB01	FORMED CLAMP	4	1.35 LBS	
16	MT-379-8	1/2" X 8" GALV THREADED ROD	4	0.45 LBS	
17	XAU01	ANGLE, CROSSOVER, 1.9-3.5" X 1.9-3.5" OD	4	2.98 LBS	
18	GB-04145	1/2" X 1-1/2" GALV BOLT KIT	2	0.13 LBS	
19	GWF-04	1/2" GALV FLAT WASHER	8	0.04 LBS	
20	GWL-04	1/2" GALV LOCK WASHER	10	0.01 LBS	
21	GN-04	1/2" GALV HEX NUT	10	0.04 LBS	
22	XP-R	CROSSOVER PLATE, ROUND, UP TO 3.5" OD	2	6.20 LBS	
23	MT546120120	PIPE, 2.875"OD X 120"	2	35.44 LBS	
24	MT546150276	PIPE, 2.875"OD X 150"	2	96.11 LBS	PART NO. SEE INDIVIDUAL DRAWING
25	SFG2399	LABEL, SFG23HDXL	1	0.04 LBS	
26	XP-2525	CROSSOVER PLATE KIT, 2-7/8 OD X 2-7/8 OD	8	8.37 LBS	QTY. SEE INDIVIDUAL DRAWING
27	MT54696	PIPE, 2.875"OD X 96"	4	45.96 LBS	PART NO. SEE INDIVIDUAL DRAWING

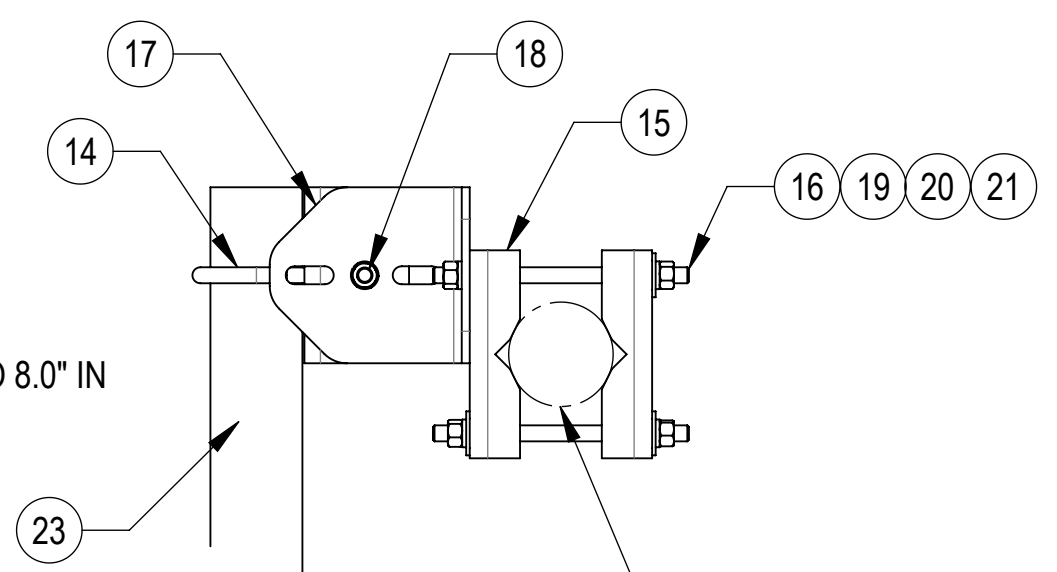
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TITLE SFG23HDXL SECTOR FRAME SERIES				
SIZE <b>C</b>	SCALE <b>1:16</b>	DOCUMENT NO. <b>SFG23HDXL</b>		
DRAWING		VERSION	STATUS	REVISION
		03	RE	D
				SHEET 3 OF 12



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.



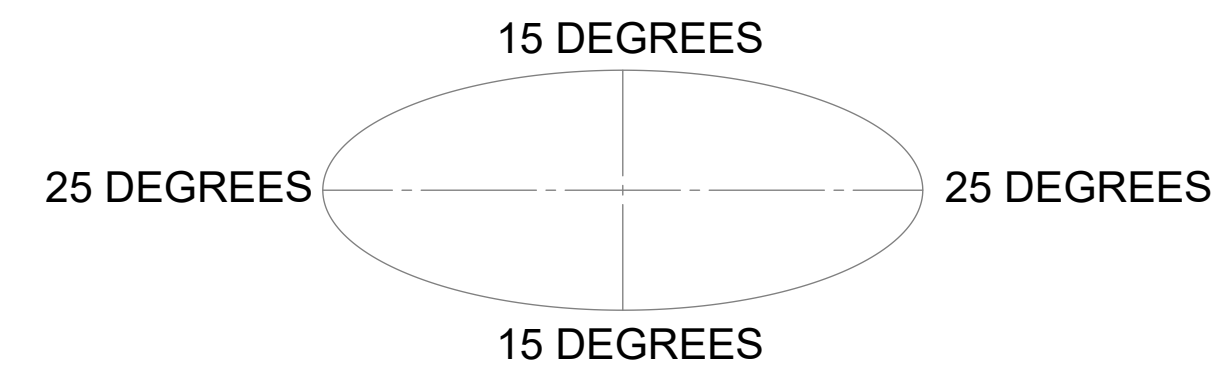
DETAIL D  
SCALE 1 : 8



DETAIL C  
SCALE 1 : 6

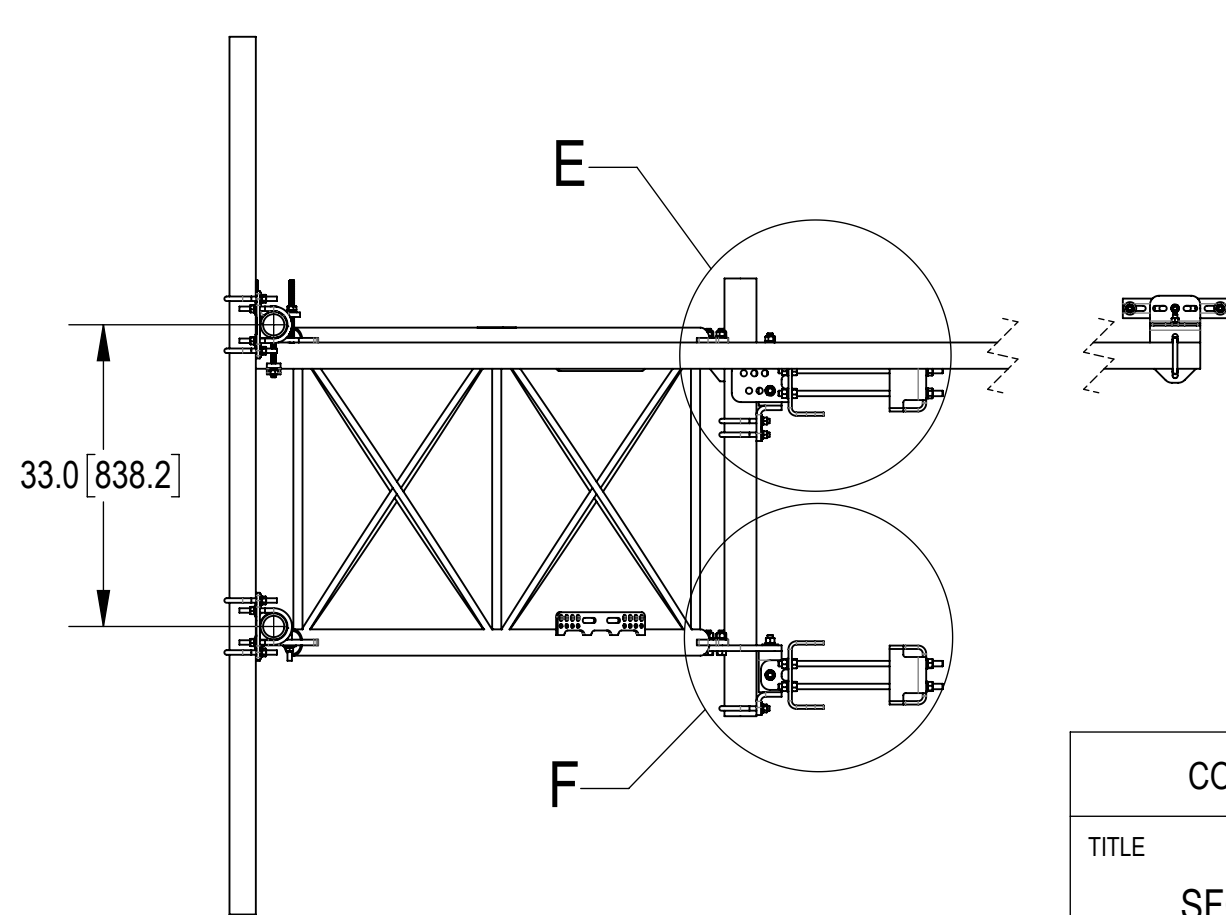
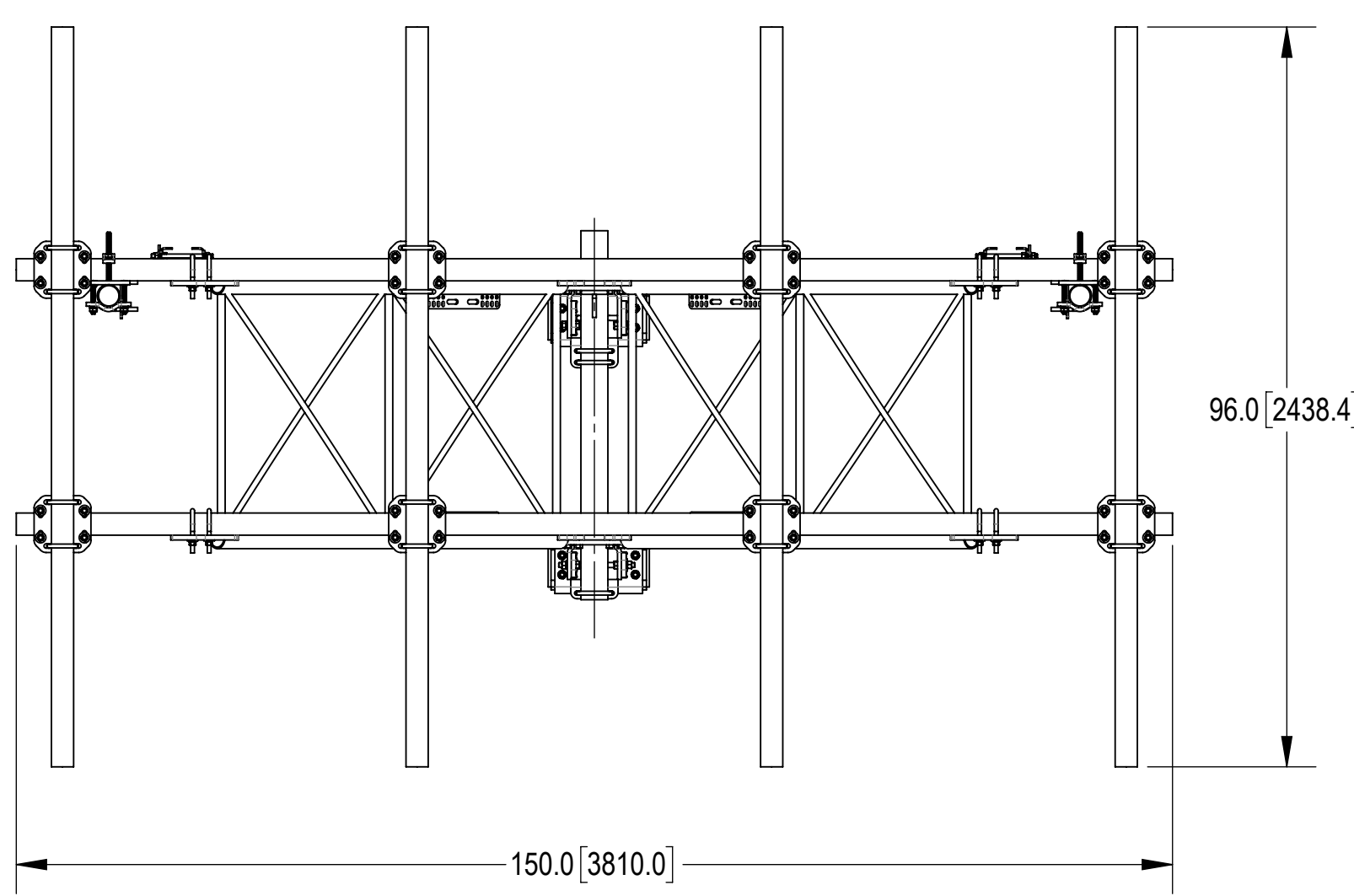
**ALLOWABLE TIEBACK ANGLE**

±15 DEGREES VERTICAL  
±25 DEGREES HORIZONTAL



SFG23HDXL-12-4-96 SHOWN FOR REFERENCE  
(NOT ALL CONFIGURATIONS INCLUDE ALL ITEMS  
SEE NOTES IN TABLE ON PAGE 3)

TOP  
↓  
BOTTOM



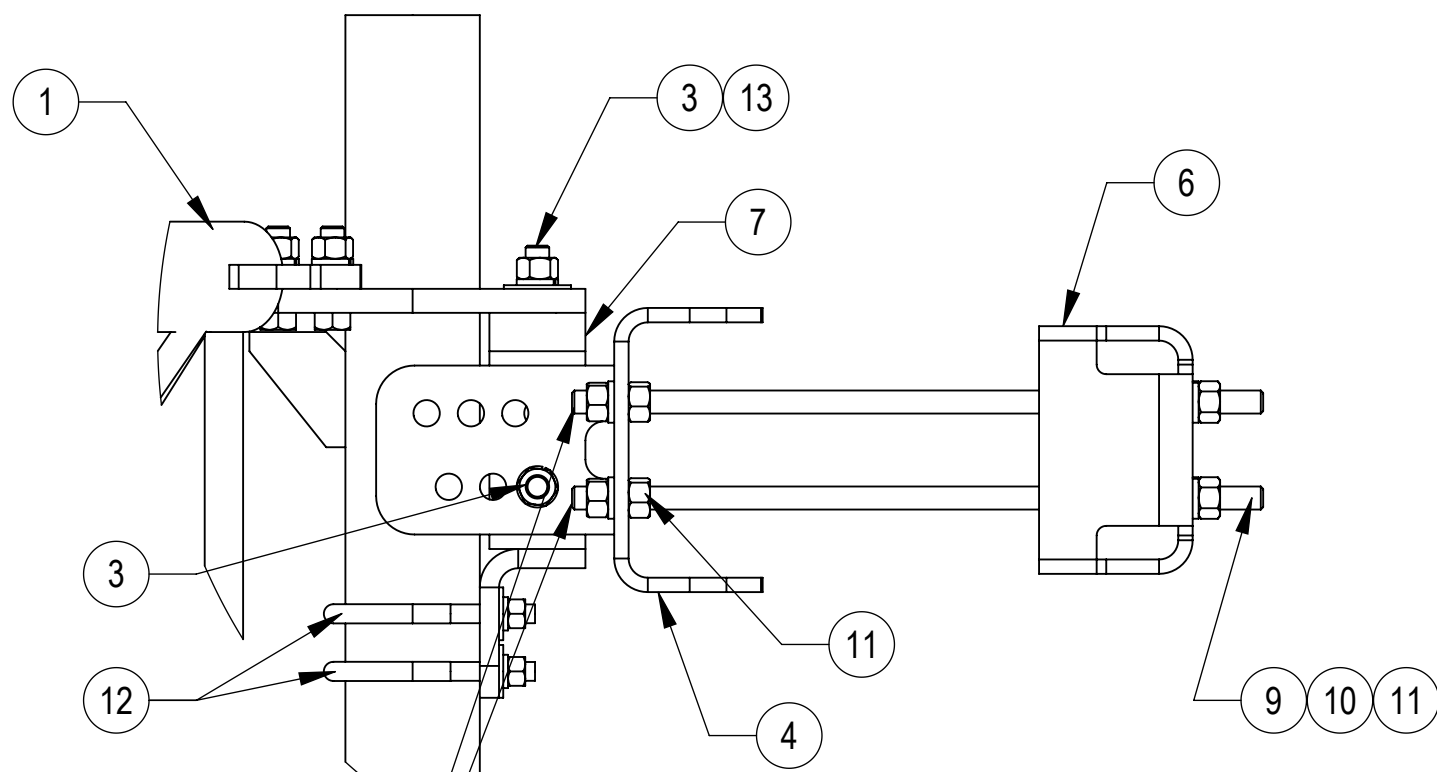
COMMScope, INC. OF NORTH CAROLINA				
TITLE SFG23HDXL SECTOR FRAME SERIES				
SIZE C	SCALE 1:21	DOCUMENT NO. SFG23HDXL		
		DRAWING		SHEET
		VERSION	STATUS	REVISION
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				4 OF 12

4

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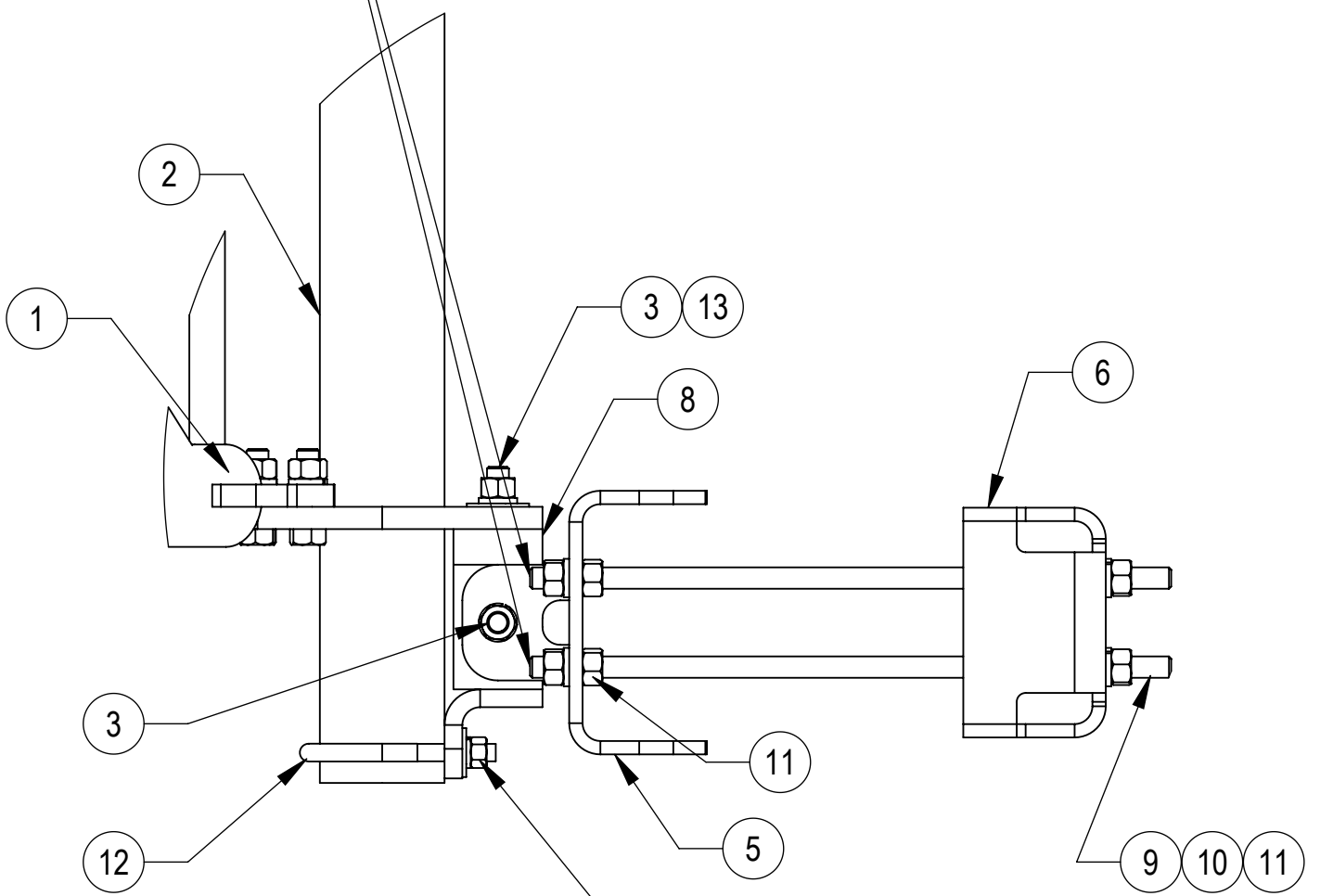
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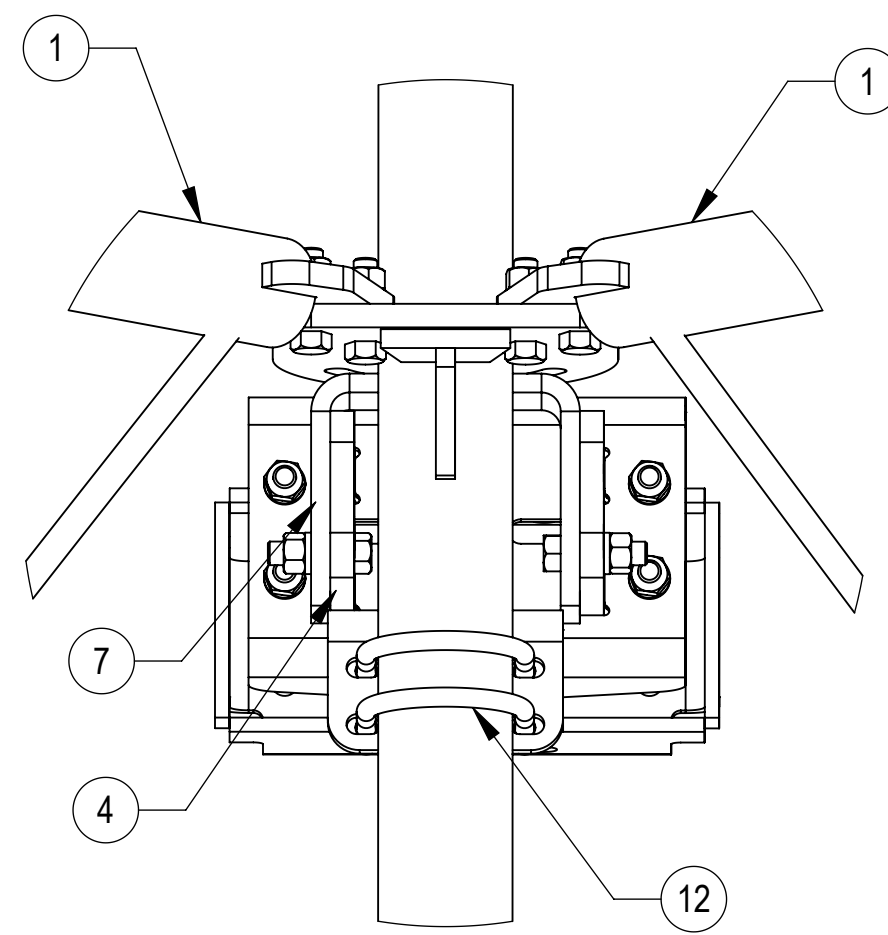
**DETAIL E**  
SCALE 1 : 5

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

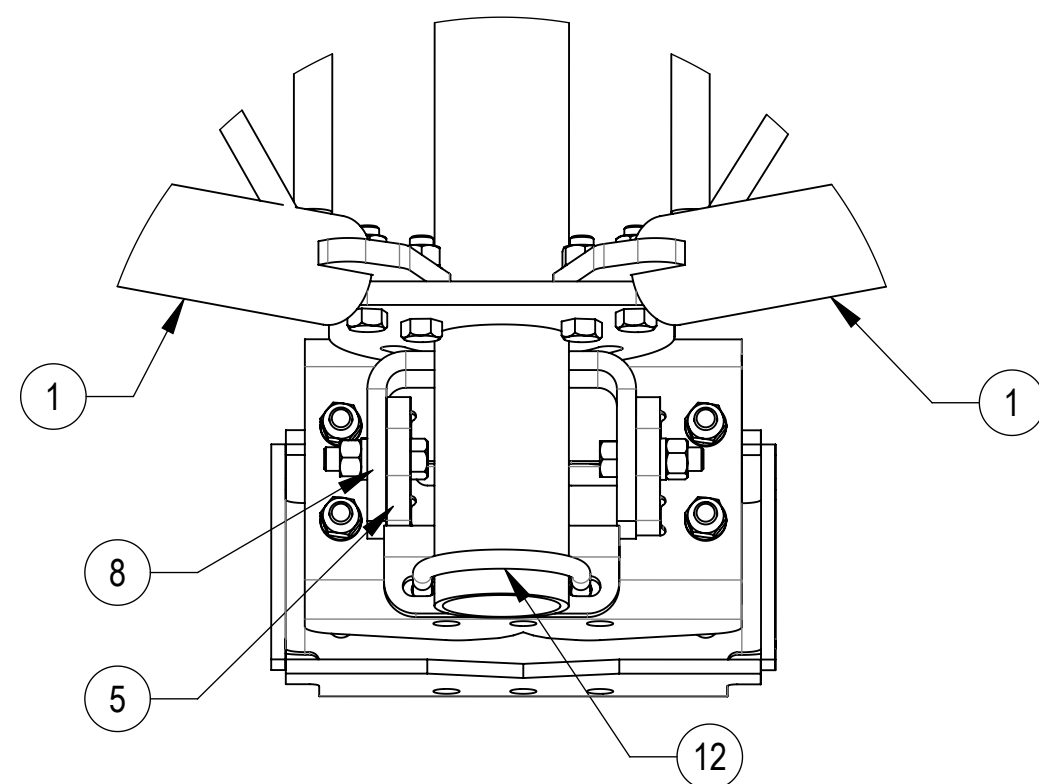


**DETAIL F**  
SCALE 1 : 5

DO NOT OVER TIGHTEN, END OF POLE CAN BE DAMAGED



**DETAIL ISO TOP ROTATED VIEW**  
SCALE 1 : 5



**DETAIL ISO BOTTOM ROTATED VIEW**  
SCALE 1 : 5

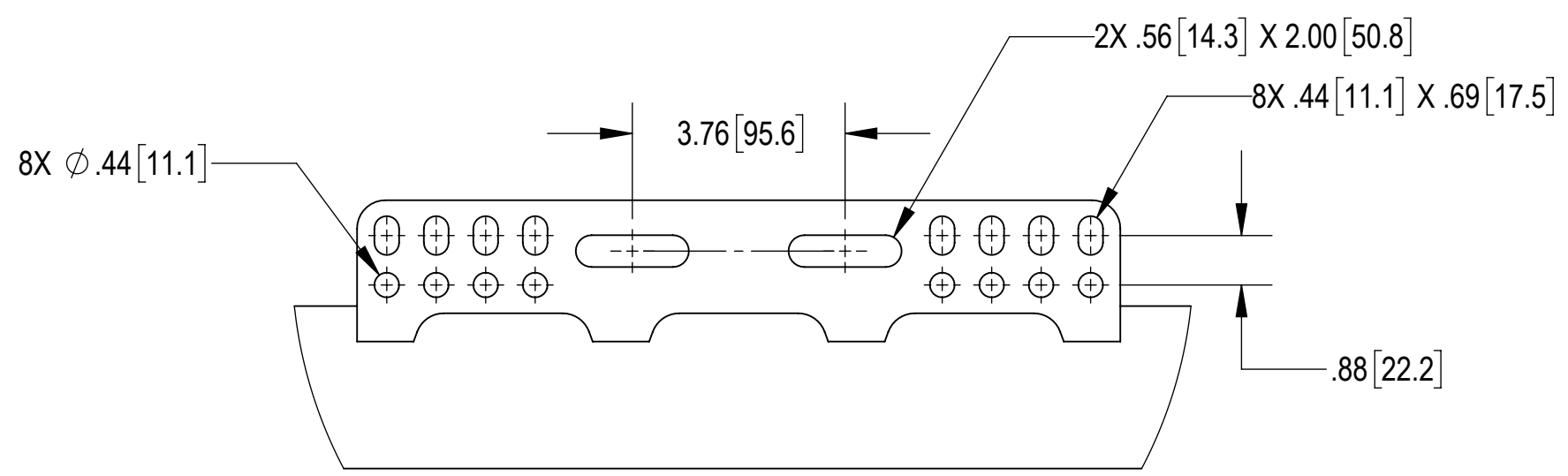
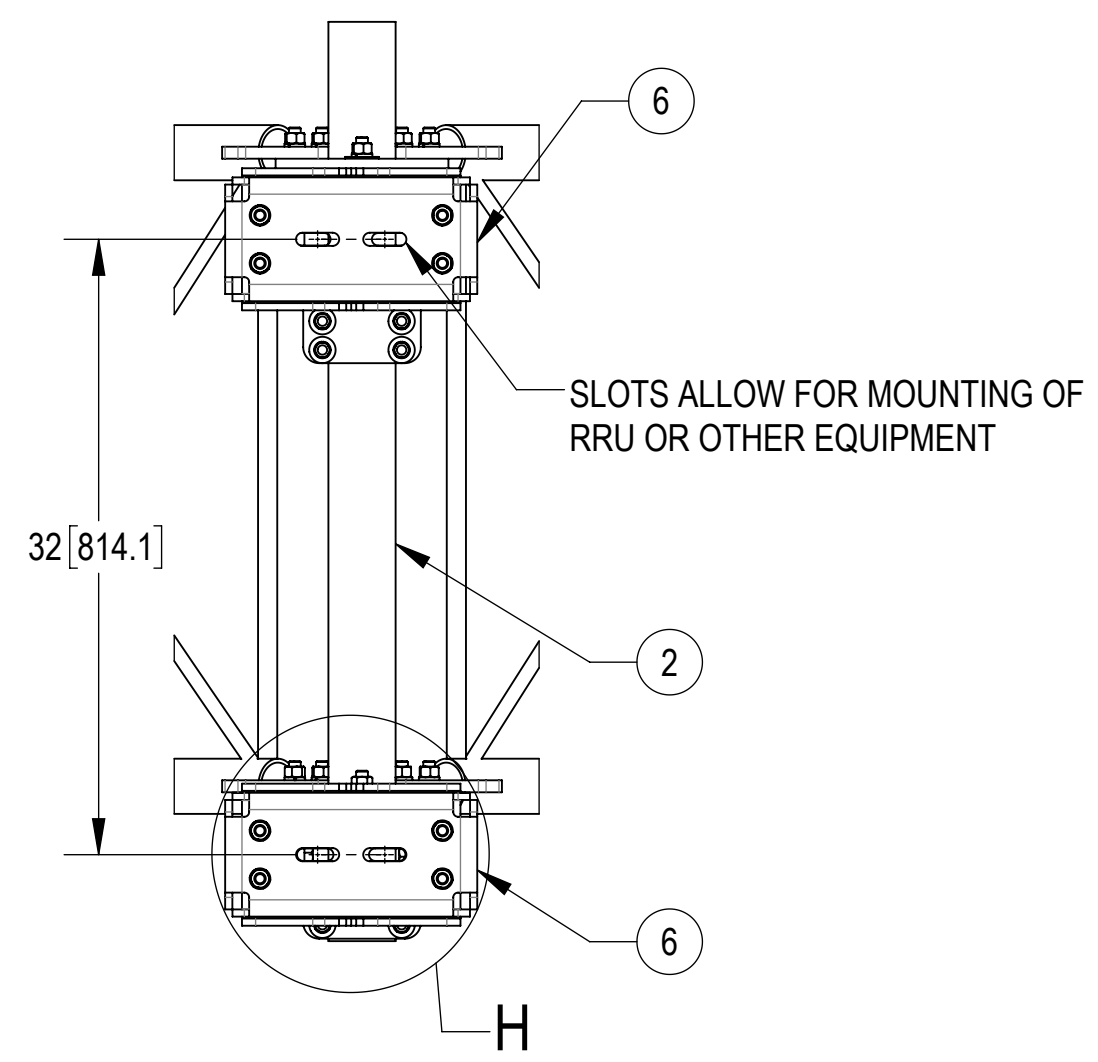
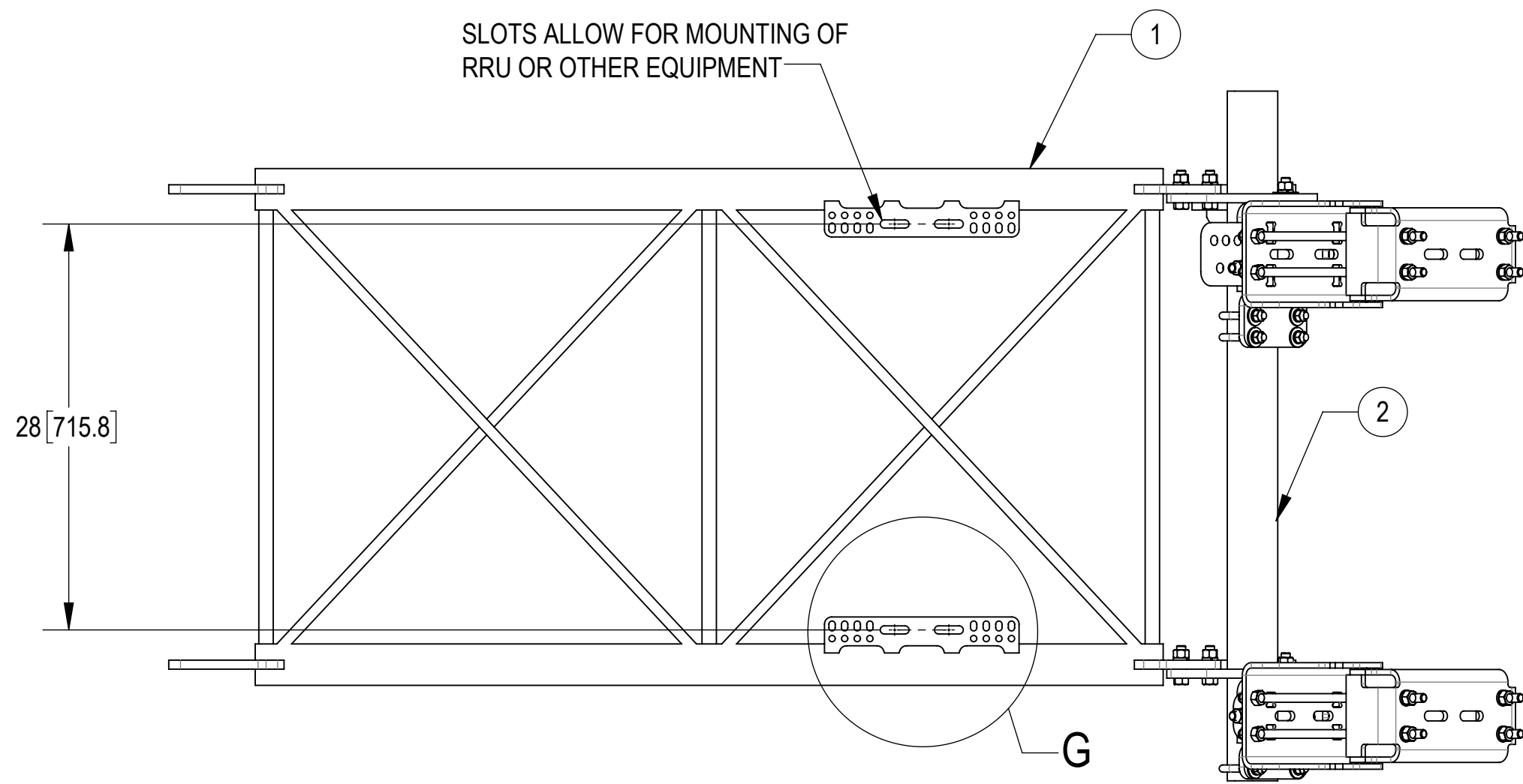
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TITLE SFG23HDXL SECTOR FRAME SERIES				
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		VERSION	STATUS	REVISION
		03	RE	D
				5 OF 12

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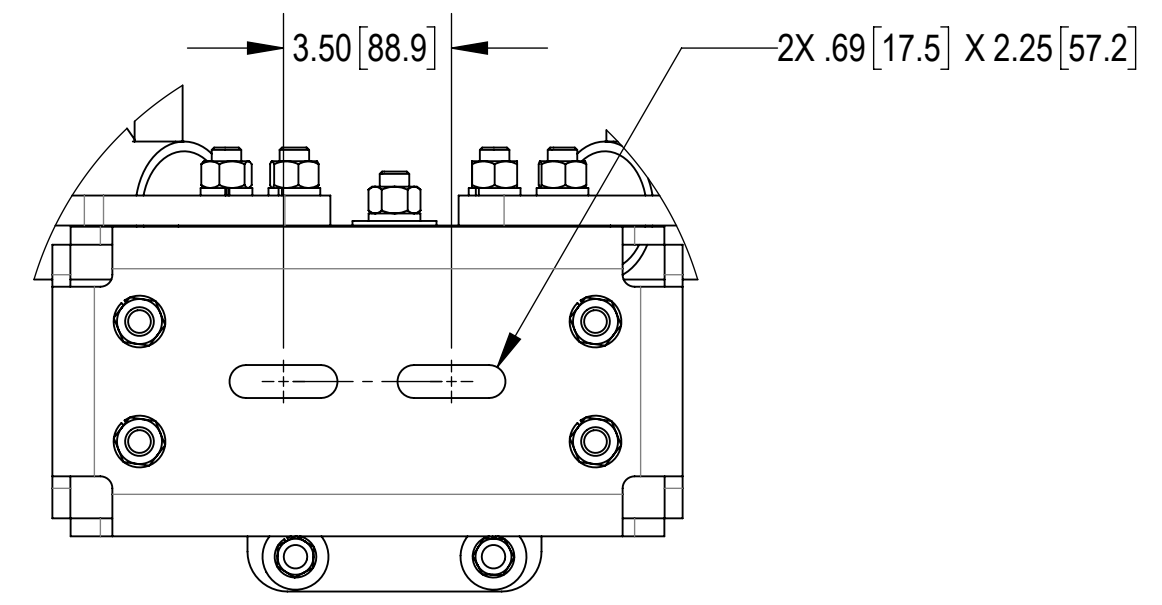
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DETAIL G  
SCALE 1 : 3

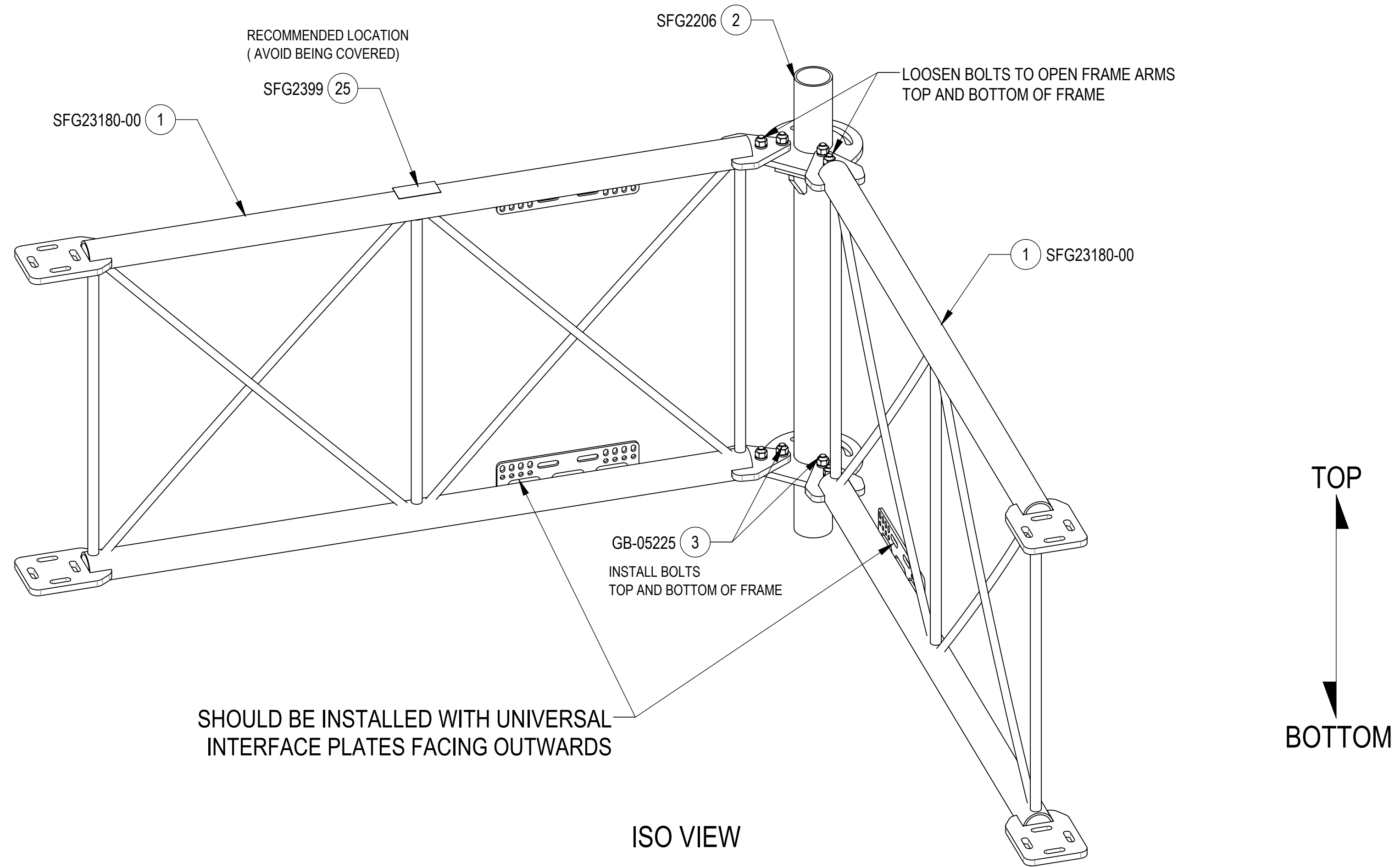


DETAIL H  
SCALE 1 : 4

COMMSCOPE, INC. OF NORTH CAROLINA				
TITLE SFG23HDXL SECTOR FRAME SERIES				
SIZE C	SCALE 1:10	DOCUMENT NO. SFG23HDXL		
DRAWING		VERSION	STATUS	REVISION
SHEET		03	RE	D
6 OF 12				

INSTALLATION SEQUENCE - REFERENCE ONLY

STEP 1: LOOSEN BOLT KITS (GB-05225) TO OPEN STANDOFF ARMS(SFG23180-00). INSTALL ADDITIONAL 4X BOLT KITS (GB-05225). ATTACH LABEL (SFG2399) ON TOP OF STANDOFF ARMS(SFG23180-00) . (WIPE GALVANIZED SURFACE WITH ALCOHOL CLEANER BEFORE APPLYING LABEL.)



COMMSCOPE, INC. OF NORTH CAROLINA				
TITLE SFG23HDXL SECTOR FRAME SERIES				
SIZE C	SCALE 1:32	DOCUMENT NO. SFG23HDXL		
		DRAWING		SHEET
		VERSION 03	STATUS RE	REVISION D
				7 OF 12

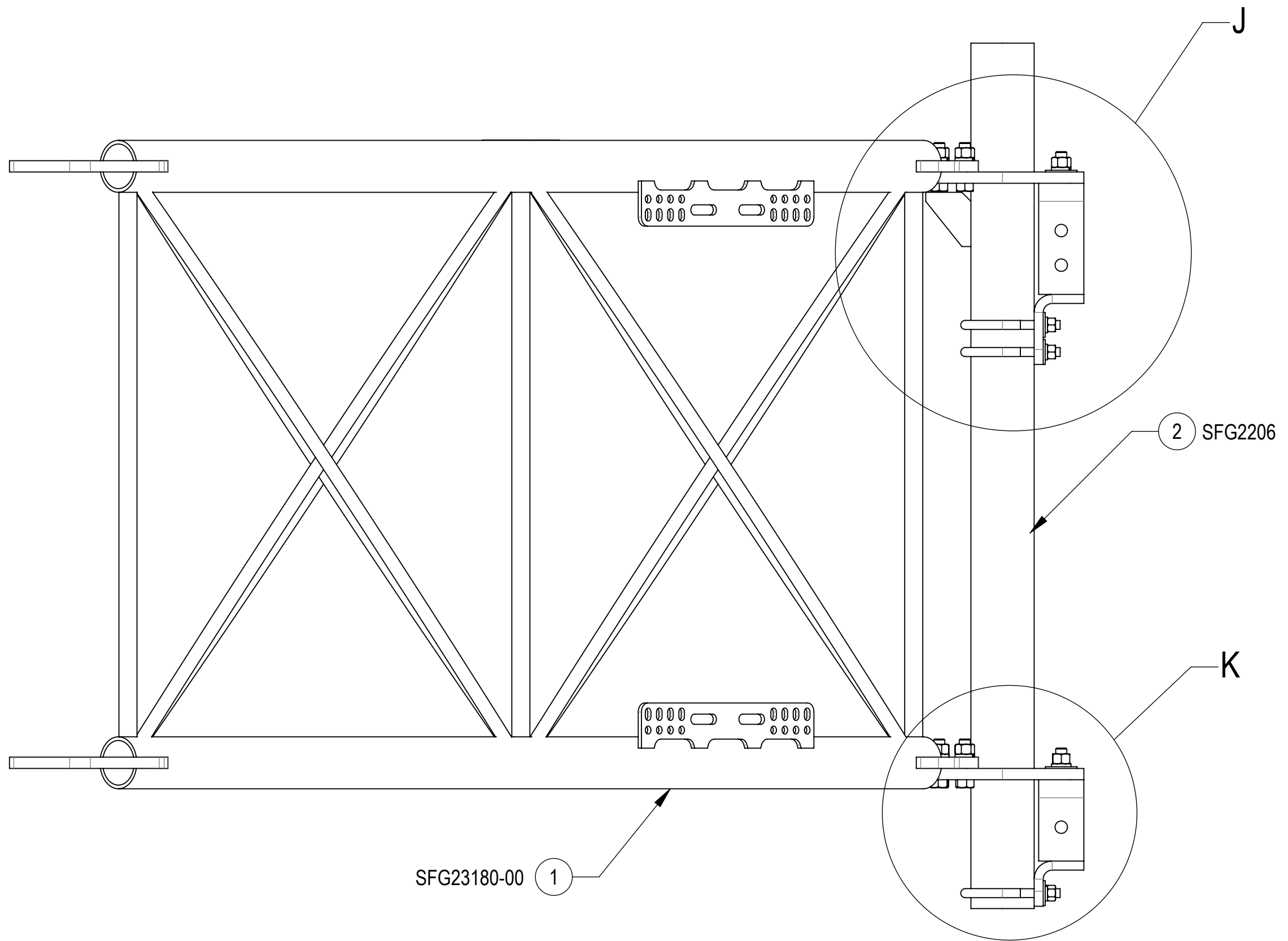
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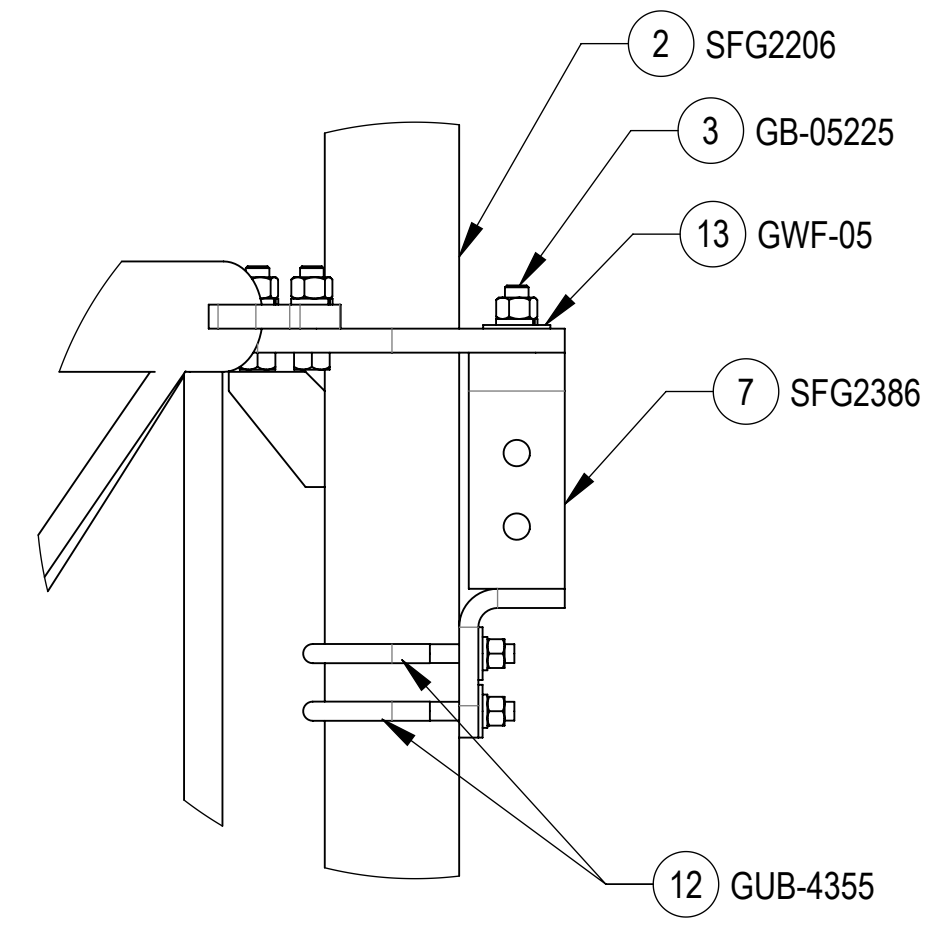
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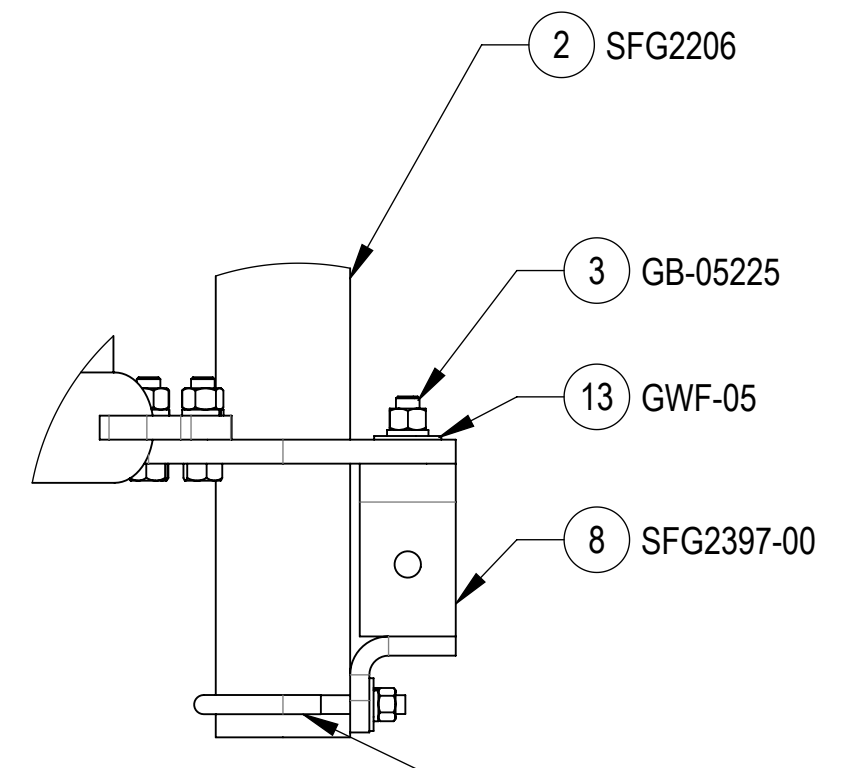
STEP 2: AT TOP, ATTACH AZIMUTH BRACKET (SFG2386) TO BACK VERTICAL ARM MOUNT (SFG2206) USING BOLT KITS (GB-05225), U-BOLTS (GUB-4355) AND FLAT WASHERS (GWF-05).  
 AT BOTTOM, ATTACH AZIMUTH BRACKET (SFG2397-00) TO BACK VERTICAL ARM MOUNT (SFG2206) USING BOLT KITS (GB-05225), U-BOLTS (GUB-4355) AND FLAT WASHERS (GWF-05).



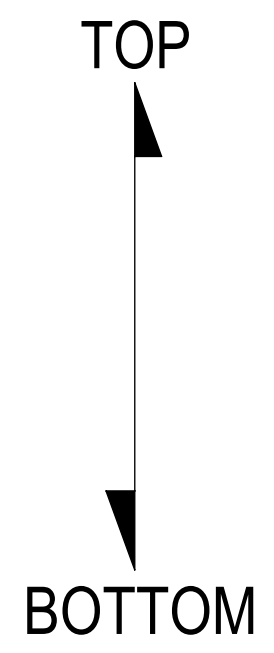
SIDE VIEW



DETAIL J  
SCALE 1 : 5



DETAIL K  
SCALE 1 : 5



COMMSCOPE, INC. OF NORTH CAROLINA				
TITLE SFG23HDXL SECTOR FRAME SERIES				
SIZE <b>C</b>	SCALE <b>1:24</b>	DOCUMENT NO. SFG23HDXL		
		DRAWING		SHEET 8 OF 12
		VERSION 03	STATUS RE	

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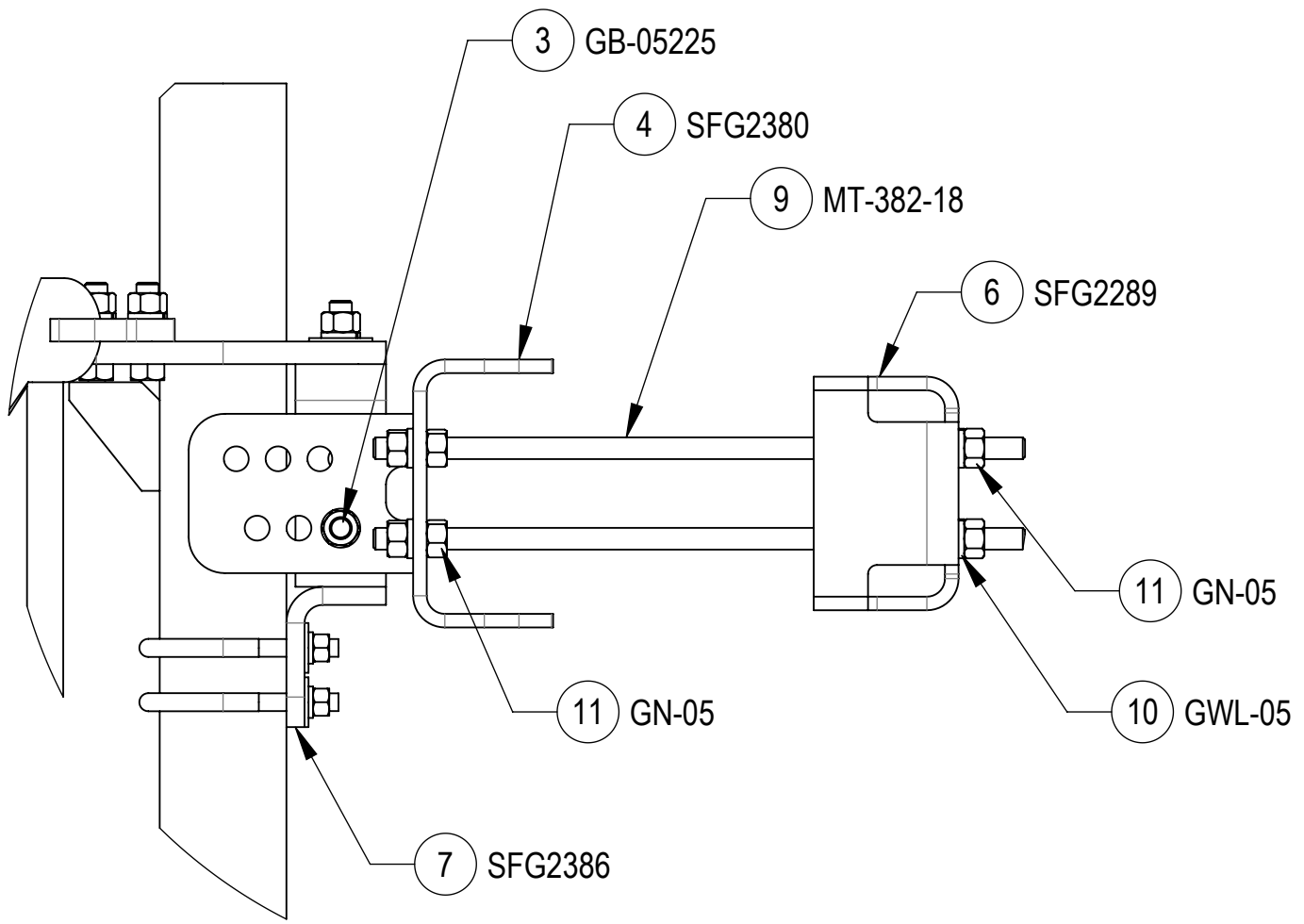
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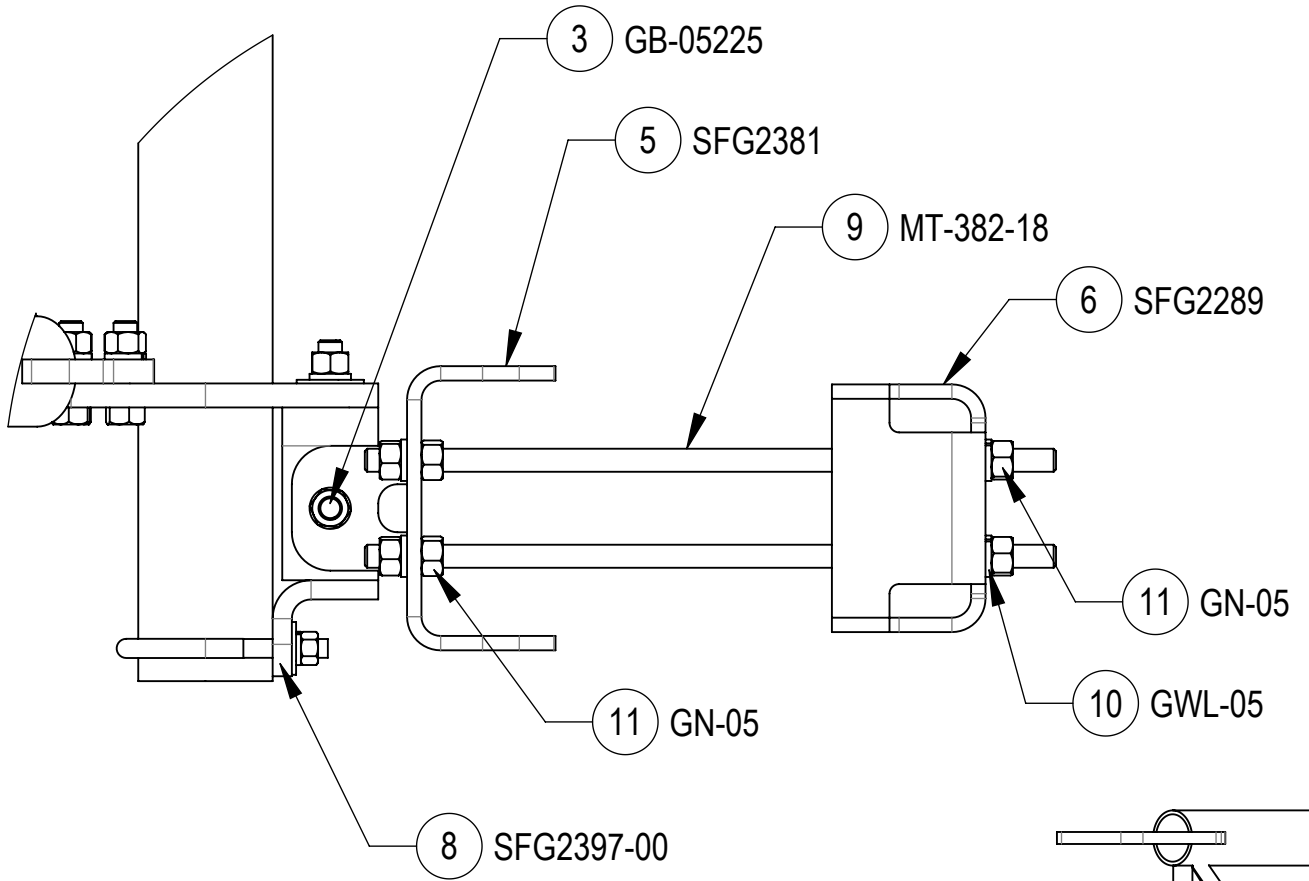
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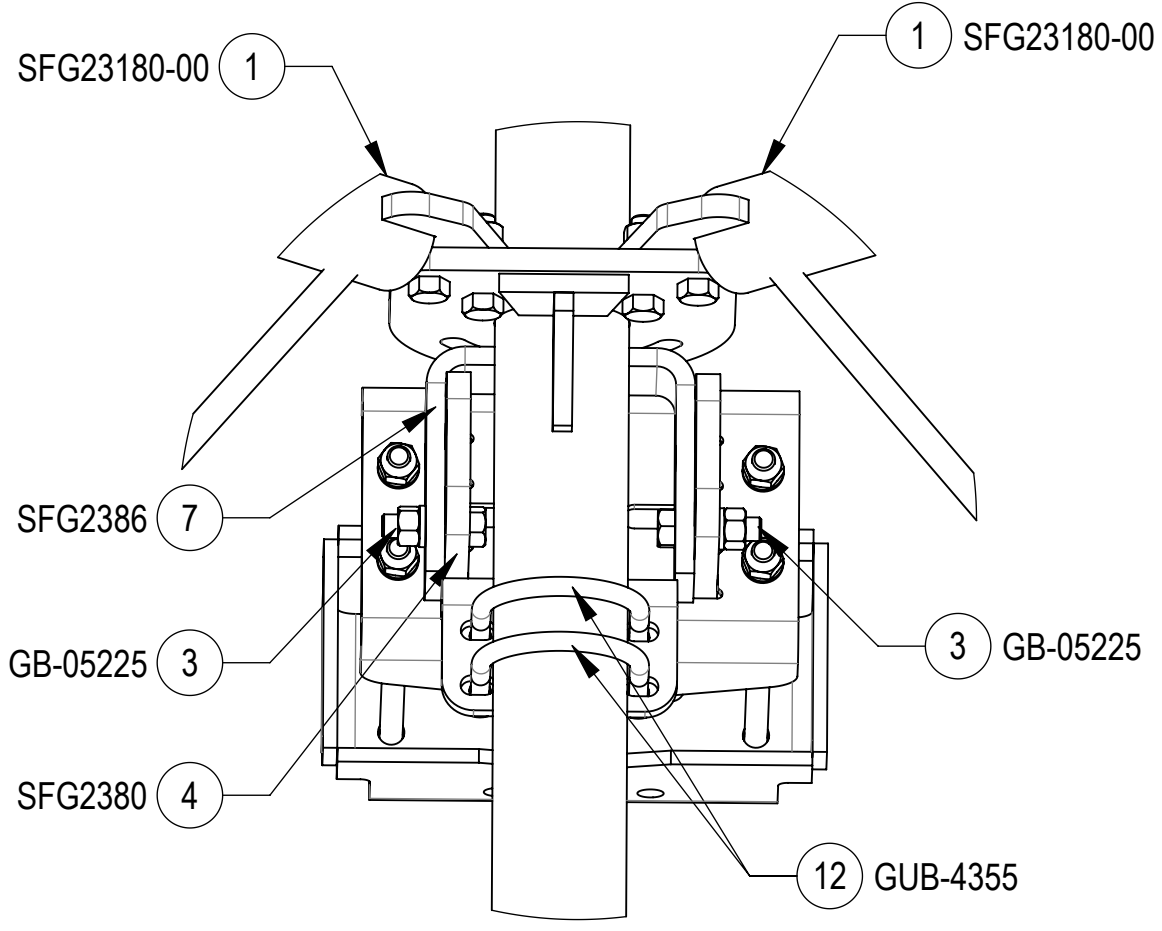
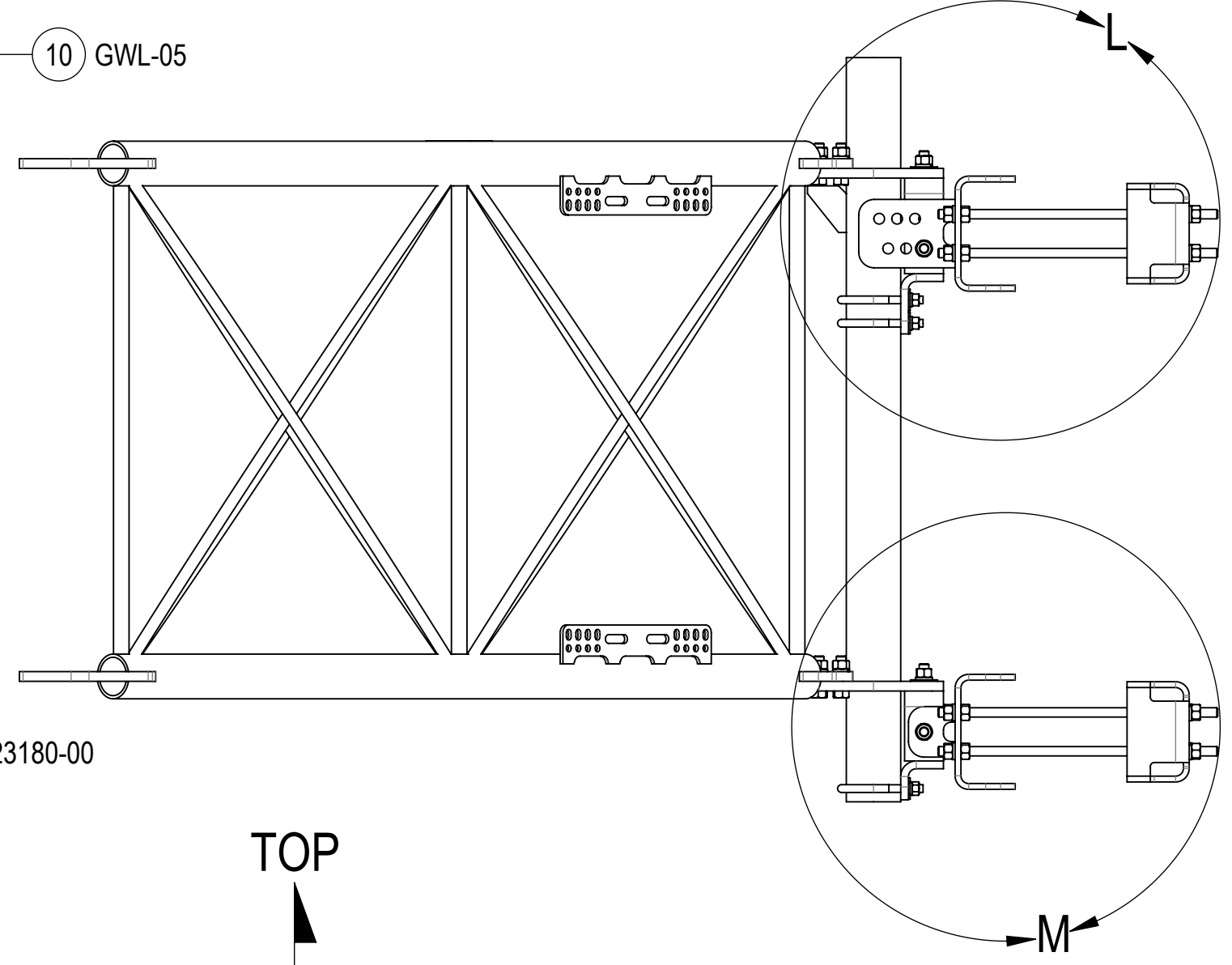
STEP 3: AT TOP, ATTACH TOP TAPER BRACKET (SFG2380) AZIMUTH BRACKET (SFG2386) USING BOLTS KITS (GB-05225);  
 AT BOTTOM, ATTACH LOWER TOWER LEG BRACKET (SFG2381) TO AZIMUTH BRACKET (SFG2397-00) USING BOLTS KITS (GB-05225).



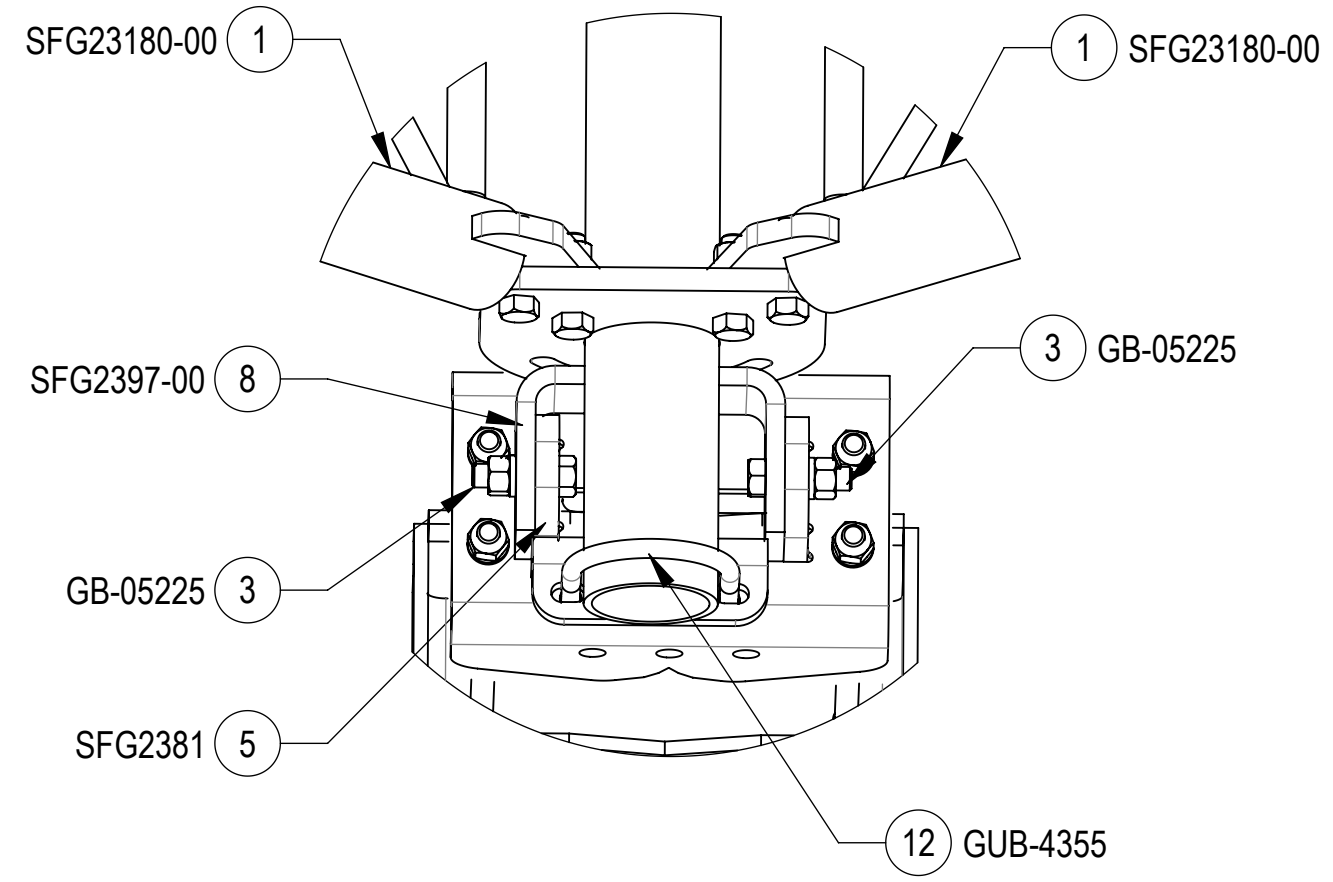
DETAIL L  
SCALE 1 : 5



DETAIL M  
SCALE 1 : 5



DETAIL ISO TOP ROTATED VIEW  
SCALE 1 : 5

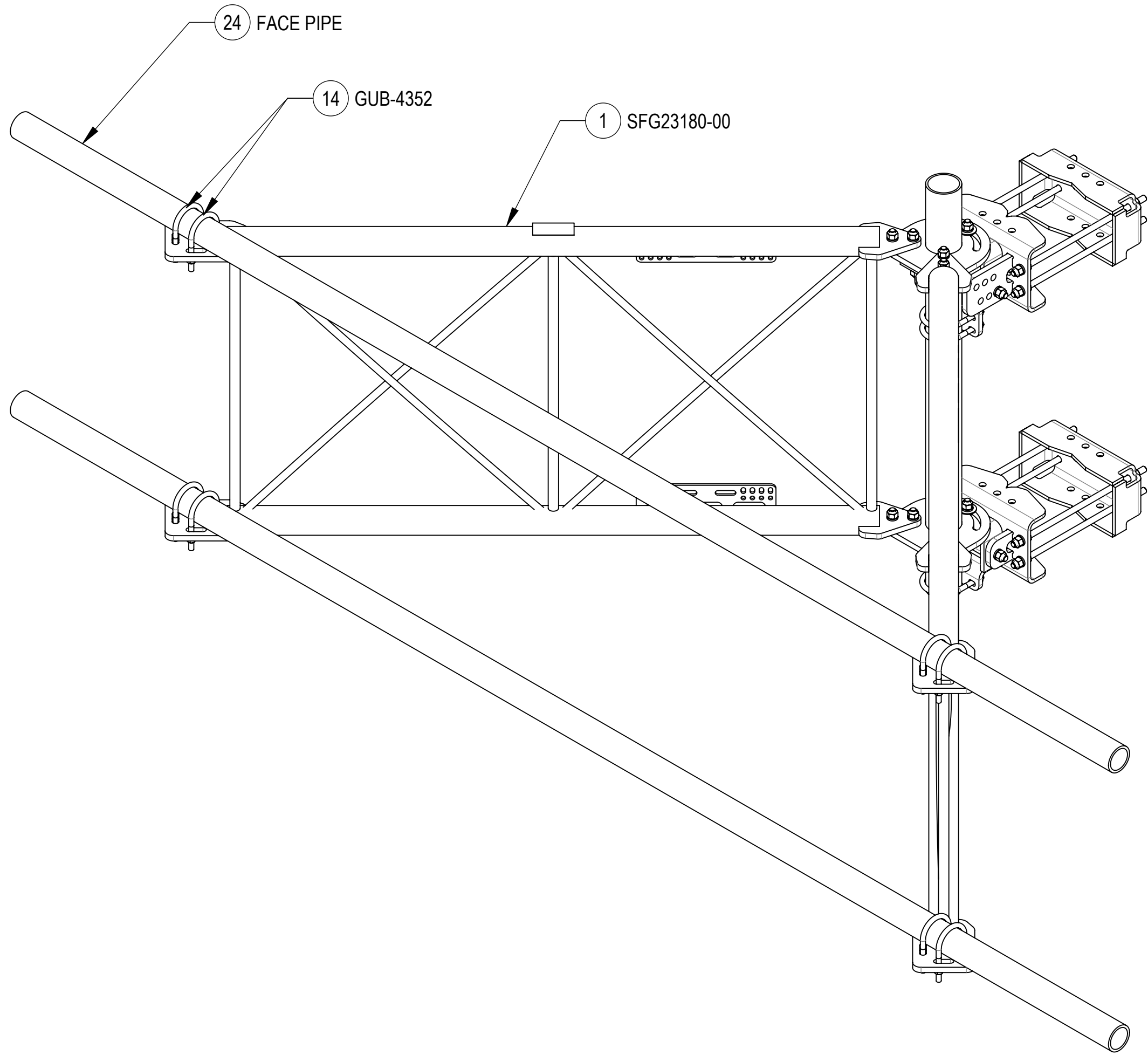


DETAIL ISO BOTTOM ROTATED VIEW  
SCALE 1 : 5


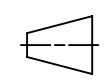
TOP  
↓  
BOTTOM

COMMSCOPE, INC. OF NORTH CAROLINA				
TITLE SFG23HDXL SECTOR FRAME SERIES				
SIZE C	SCALE 1:24	DOCUMENT NO. SFG23HDXL		
		DRAWING		SHEET
		VERSION 03	STATUS RE	REVISION D
				9 OF 12

STEP 4: ATTACH FACE PIPES TO STANDOFF ARMS (SFG23180-00) USING U-BOLTS (GUB-4352).

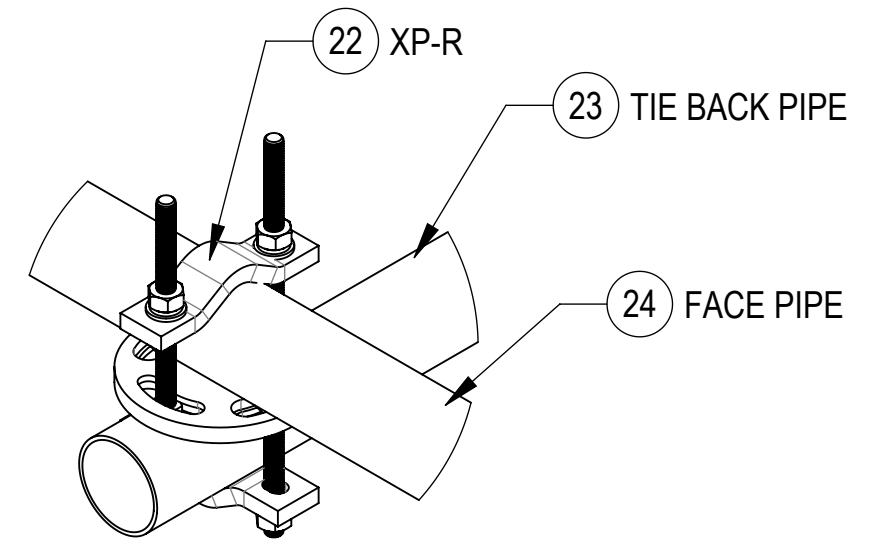
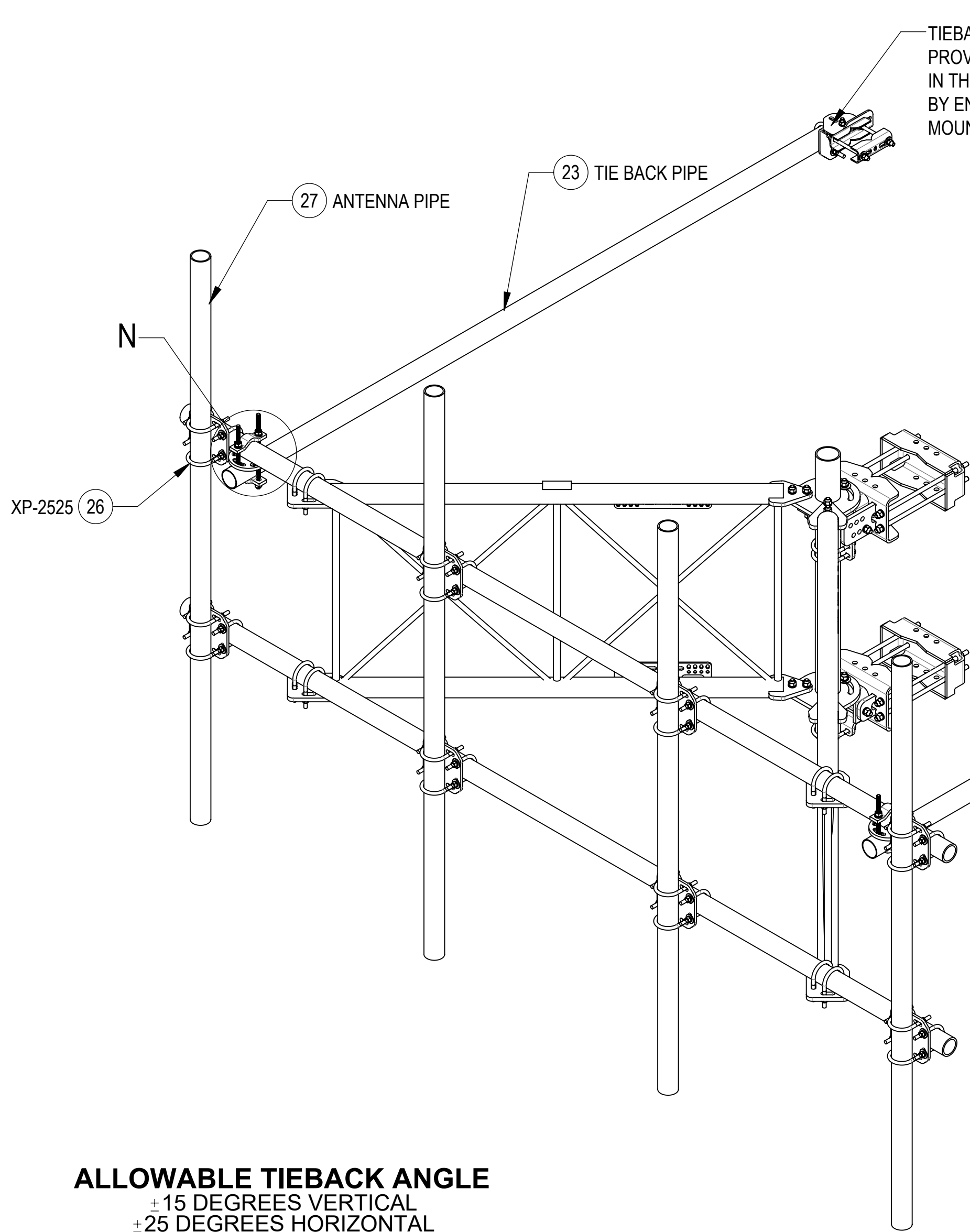


TOP  
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 BOTTOM

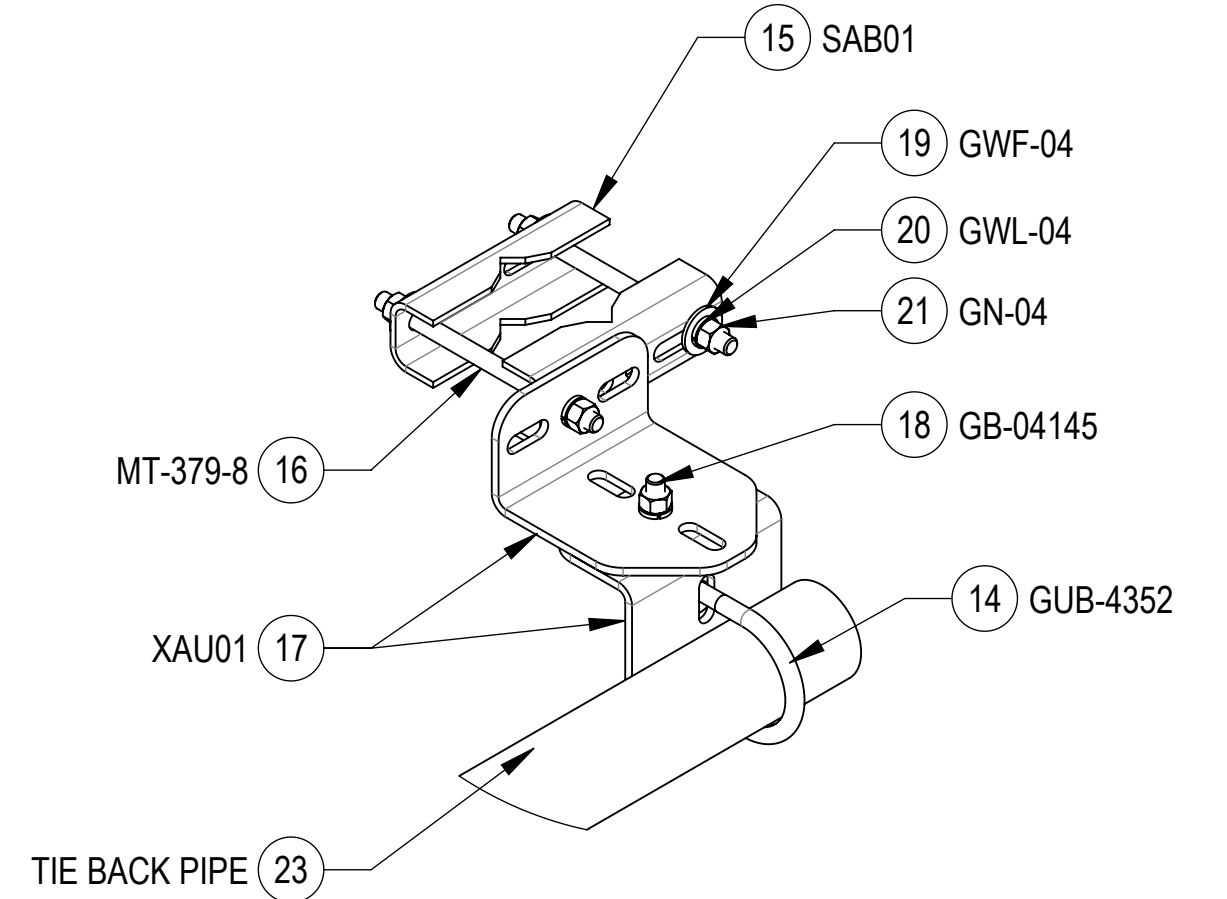
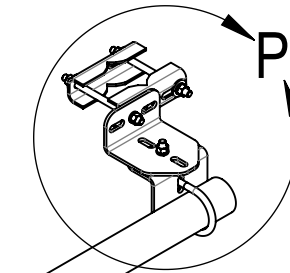
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SIZE <b>C</b>	SCALE <b>1:24</b>	DOCUMENT NO. SFG23HDXL		
 		DRAWING		SHEET
		VERSION 03	STATUS RE	REVISION D

**STEP 5: ATTACH ANTENNA PIPES TO FACE PIPES USING CROSSOVER PLATE KITS (XP-2525).  
ATTACH TIE BACK PIPES TO FACE PIPES USING ROUND CROSSOVER PLATE KITS (XP-R).**

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.

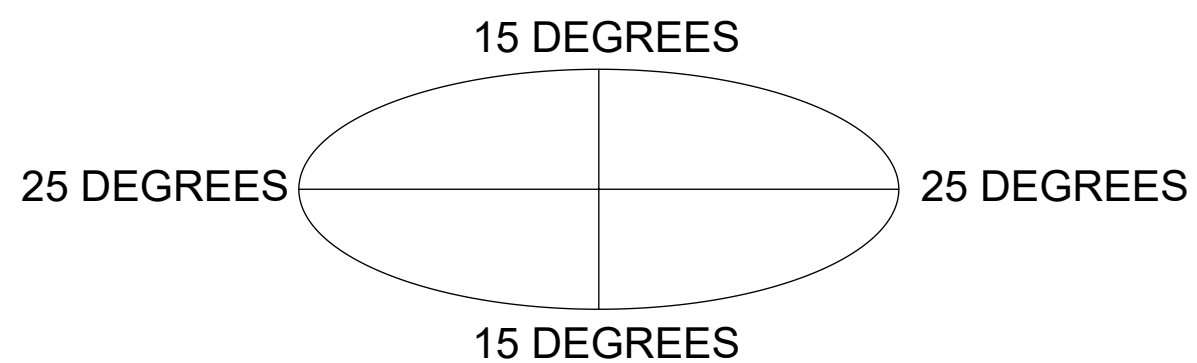


**DETAIL N**  
SCALE 1 : 5



**DETAIL P**  
SCALE 1 : 5

**ALLOWABLE TIEBACK ANGLE**  
±15 DEGREES VERTICAL  
±25 DEGREES HORIZONTAL



TOP  
BOTTOM

COMMSCOPE, INC. OF NORTH CAROLINA				
TITLE SFG23HDXL SECTOR FRAME SERIES				
SIZE C	SCALE 1:24	DOCUMENT NO. SFG23HDXL		
		DRAWING		SHEET
		VERSION 03	STATUS RE	REVISION D
				11 OF 12

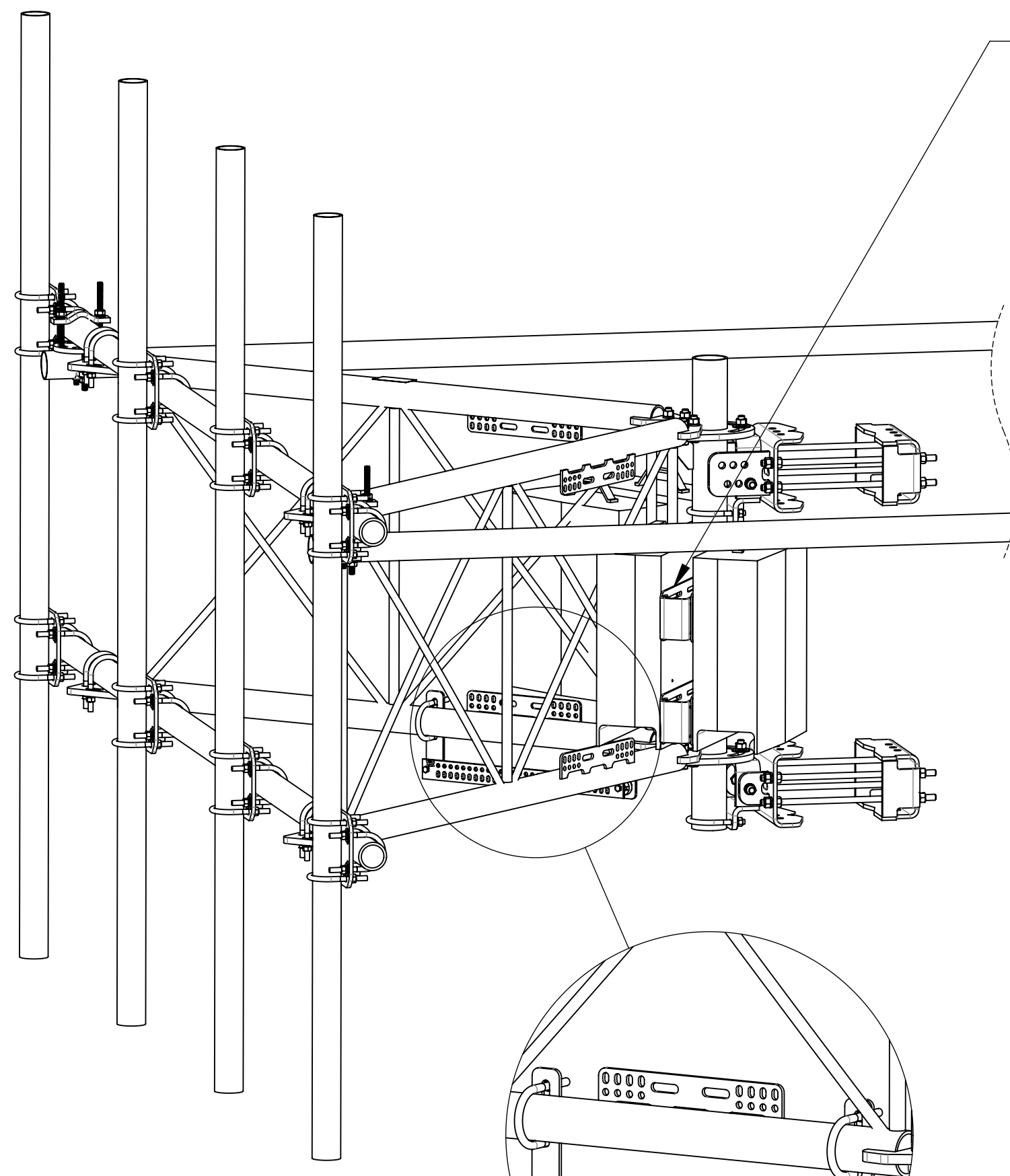
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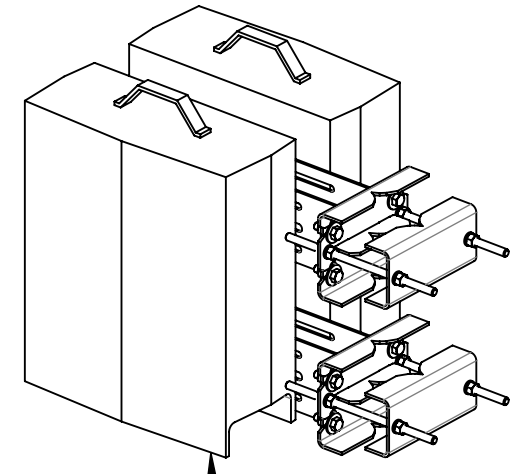
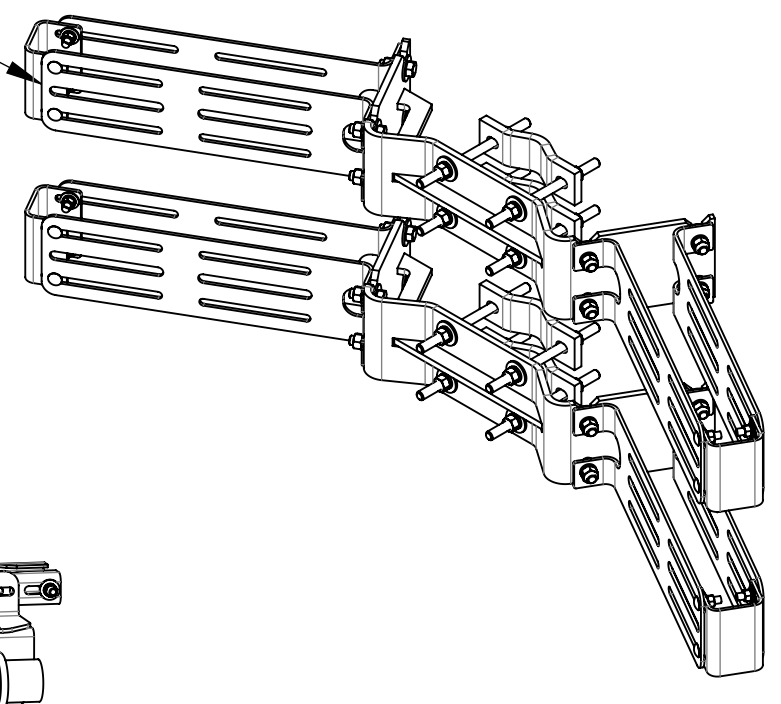
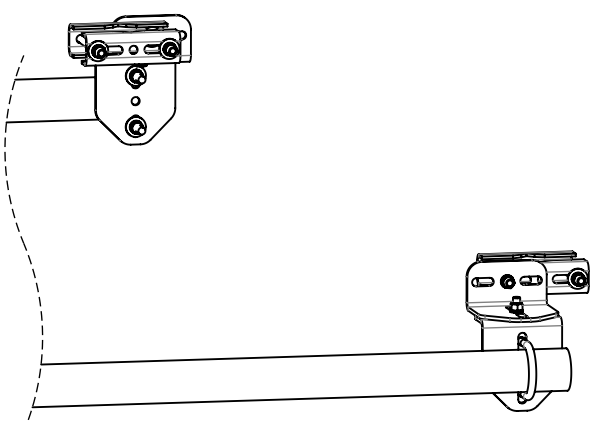
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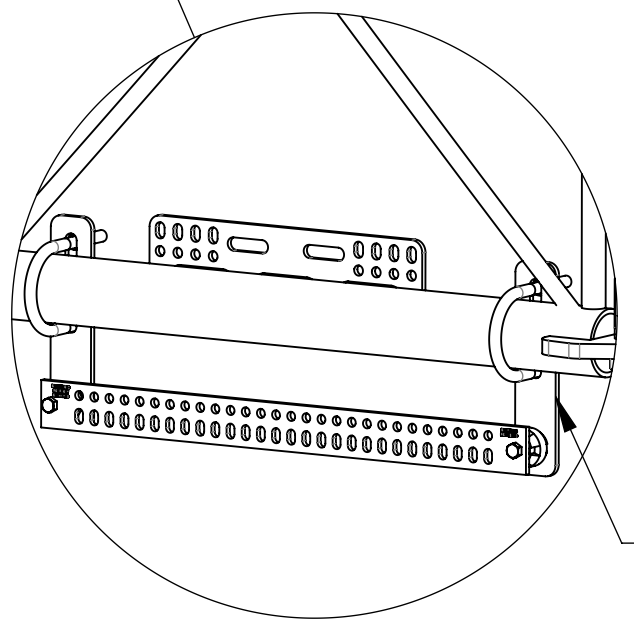
**ACCESSORIES ORDERED SEPARATELY:**



RR-APEX4  
APEX 4 RRU MOUNTING

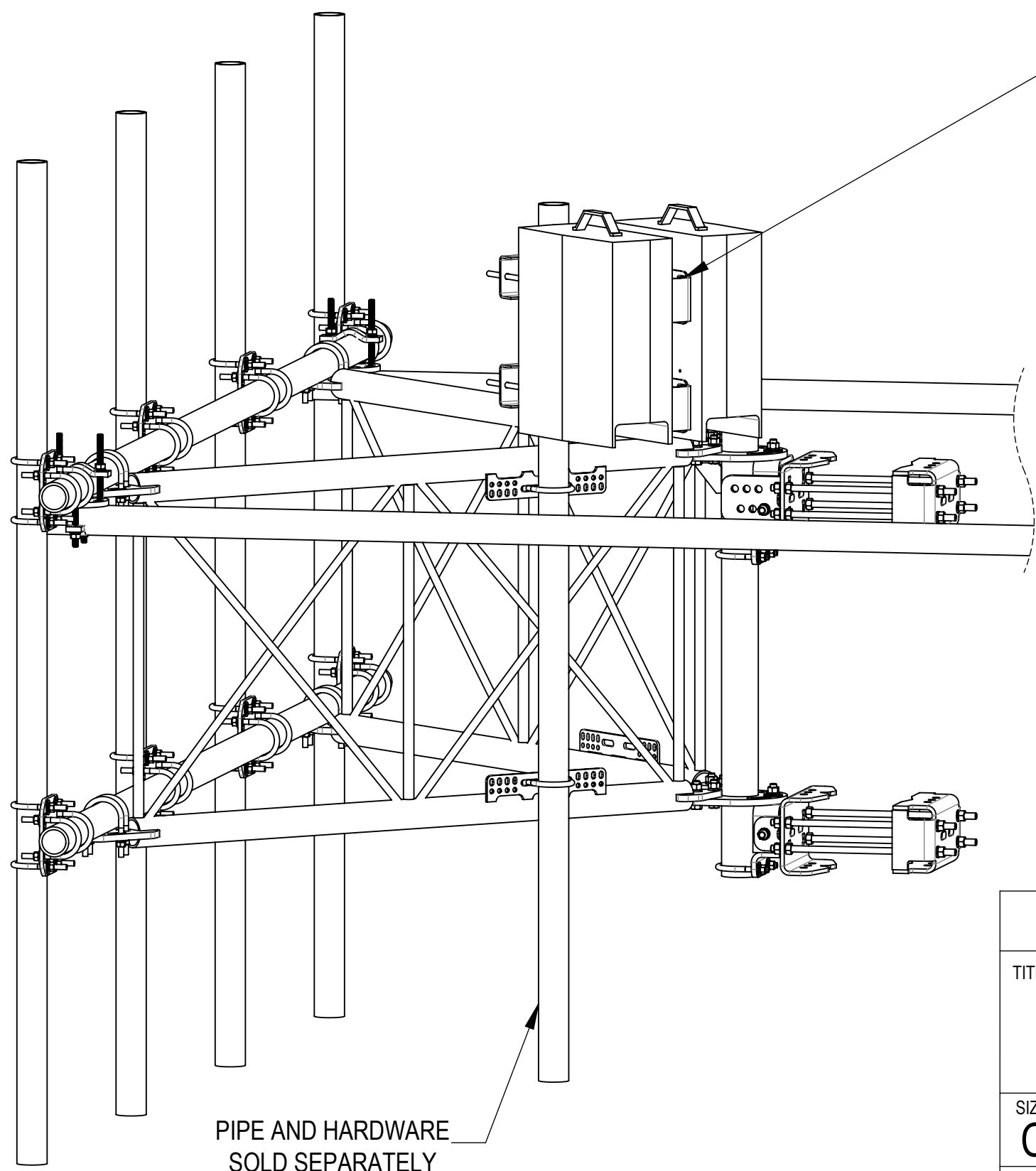


RR-FA2  
FAST ACCESS RRU MOUNT

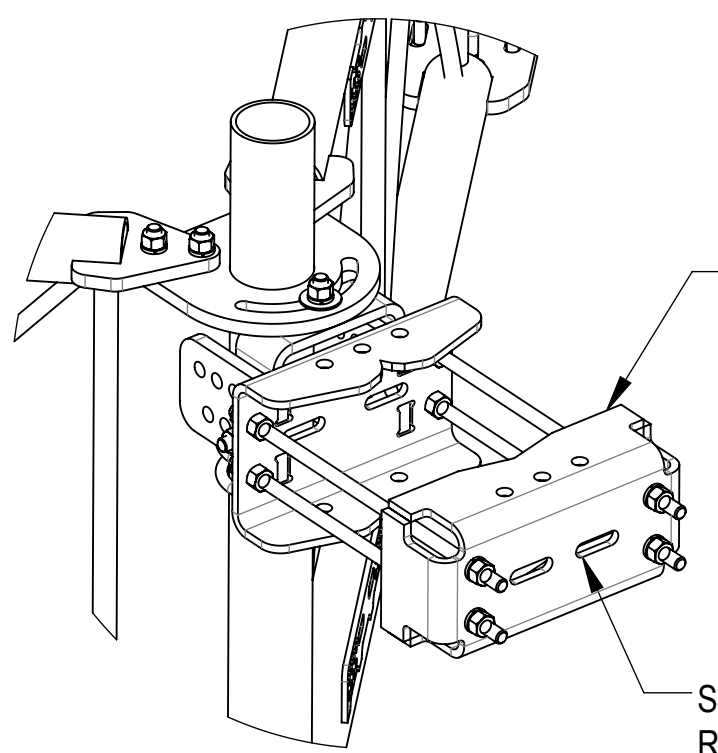


**DETAIL Q**  
SCALE 1 : 8

GBSF278



PIPE AND HARDWARE  
SOLD SEPARATELY



6 SFG2289

SLOTS ALLOW FOR MOUNTING OF  
RRU OR OTHER EQUIPMENT

COMMSCOPE, INC. OF NORTH CAROLINA				
TITLE SFG23HDXL SECTOR FRAME SERIES				
SIZE C	SCALE 1:12	DOCUMENT NO. SFG23HDXL		
		DRAWING		SHEET
		VERSION 03	STATUS RE	REVISION D

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