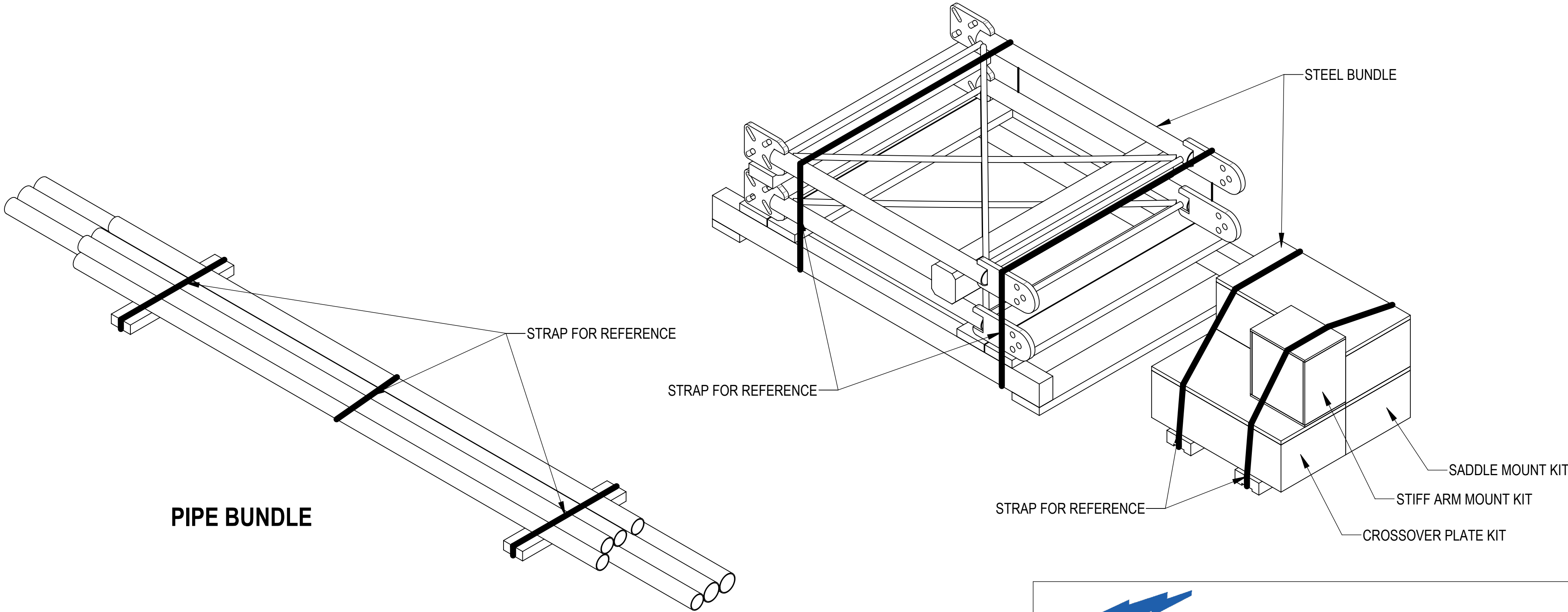


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- 1.0 GENERAL NOTES
- 1.1 ALL METRIC DIMENSIONS ARE IN BRACKETS [X. X]
- 1.2 FOR PATENT INFO: <https://www.adwpat.com>
- 2.0 DESIGN NOTES
- 2.1 ANY HAZARDS OR OBSTRUCTIONS TO THE CLIMBING FACILITY AND SAFETY CLIMB MUST BE IDENTIFIED PRIOR TO INSTALLING 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 5.7° 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	APPROVED
D	TIE BACK PIPES TO FACE PIPES CONNECTION REPLACED XA WITH XP-R	YX1027 12/1/2022	40161600CMO
E	ADDED SHEET 2; ITEM 24 WAS SFG2251; MOVED LOCATION OF ITEM 24 TO THE TOP OF V-ARM; ADDED NOTE FOR POLES DIAMETER IN DETAIL B	RY1002 29AUG23	YW1045 40177837CMO
F	SHEET2: ADDED SFG2152 TO TABLE 1; SHEET5: ADDED LABEL INSTALLATION NOTICE	JL1183 20NOV23	YW1045 40183325CMO
G	CHG PALLET FROM 60X32SFGPALLET TO 48X32PALLET TO MATCH WITH SAP BOM	RY1002 02JUL24	BCROSS 40199404CMO
H	ADDED SFG21HD-8-3-96 TO DRAWING, UPDATED EPA	YMENG 26NOV24	YZ1080 40209683CMO



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TOLERANCES		SAP MATERIAL MASTER	
0 PLACE	X[.X] ± 0.25[6.3]	2 PLACE	.XX[.X] ± 0.06[1.5]
1 PLACE	.X[.X] ± 0.12[3.0]	ANGLES	± 2°
FINISH		MATERIAL	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES INTERPRET PER ANSI Y 14.5M-1994		TITLE	
CE	YX1027	DATE	4/12/2022
RW	YX1027	DATE	06/05/2025
AD	YMENG	DATE	06/05/2025
RE	YMENG	DATE	06/05/2025
ECN 40209683CMO		SCALE	
		1:12	
		DOCUMENT NO.	
		SFG21HD	
SIZE		Auth Group	
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VERSION		STATUS	
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REVISION		B	
DRAWING		VERSION	
08		STATUS	
RE		H	
SHEET		1 OF 8	

DENSITY	lbs/in³
MASS	lbs
VOLUME	in³
SURFACE AREA	in²
HEIGHT	
LENGTH	
WIDTH	

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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-U2080CR	SFG22-HK01	SFG21HD-SB01	XA-2030-3	XA-2030-4	PB0110A0210B	PB0410A0210B	PB0110A0308A0210B	PB0510A0210B	PB0110A0408A0210B	PB0110A0212B	PB0410A0212B	PB0110A0308A0212B	PB0510A0212B	PB0110A0408A0212B	PB0110A0308A0208B	SFG2152					
SFG21HD-10-B	SINGLE SECTR FRM KIT 10'6" FACE, NO AP	273.0	7.08	3.51	12.70	10.50	6.41	20.30	-	1	1	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1				
SFG21HD-10-3-126	SINGLE SECTR FRM KIT 10'6" FACE, (3) 126	392.2							3	1	1	1	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
SFG21HD-10-3-96	SINGLE SECTR FRM KIT 10'6" FACE,(3) 96"	370.6							3	1	1	1	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1
SFG21HD-10-4-126	SINGLE SECTR FRM KIT 10'6" FACE ,(4) 126	431.9							4	1	1	1	-	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1
SFG21HD-10-4-96	SINGLE SECTR FRM KIT 10'6" FACE ,(4) 96"	403.1							4	1	1	1	-	1	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1
SFG21HD-12-B	SINGLE SECTR FRM KIT 12'6" FACE , NO ANT	287.2	8.14	3.51	13.97	11.91	6.41	21.99	-	1	1	1	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1				
SFG21HD-12-3-126	SINGLE SECTR FRM KIT 12'6" FACE ,(3) 126	406.4							3	1	1	1	1	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	1	
SFG21HD-12-3-96	SINGLE SECTR FRM KIT 12'6" FACE ,(3) 96"	384.8							3	1	1	1	1	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	1	
SFG21HD-12-4-126	SINGLE SECTR FRM KIT 12'6" FACE, (4) ANT	446.1							4	1	1	1	-	1	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	1	
SFG21HD-12-4-96	SINGLE SECTR FRM KIT 12'6" FACE,(4) 96"	417.3							4	1	1	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	
SFG21HD-8-3-96	SF,8FT-FACE,(3) 2-3/8"X96"ANT-PIPES	352.1	5.75	3.51	11.11	8.74	6.41	18.18	3	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" X126"	2.25	2.25	2.00	3.19	3.19	2.84

- NOTE:
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 7.08 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 13.83 FT²; (SIDE EPA SAME METHOD AS FRONT EPA).
WHEN 3 SECTOR FRAMES ARE MOUNTED AT THE SAME RELATIVE ELEVATION IN AN ARRANGEMENT, IT HAS A 3-SECTOR EPA OF 12.70 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 30.7 FT².



TITLE

SECTOR FRAME - SFG21HD

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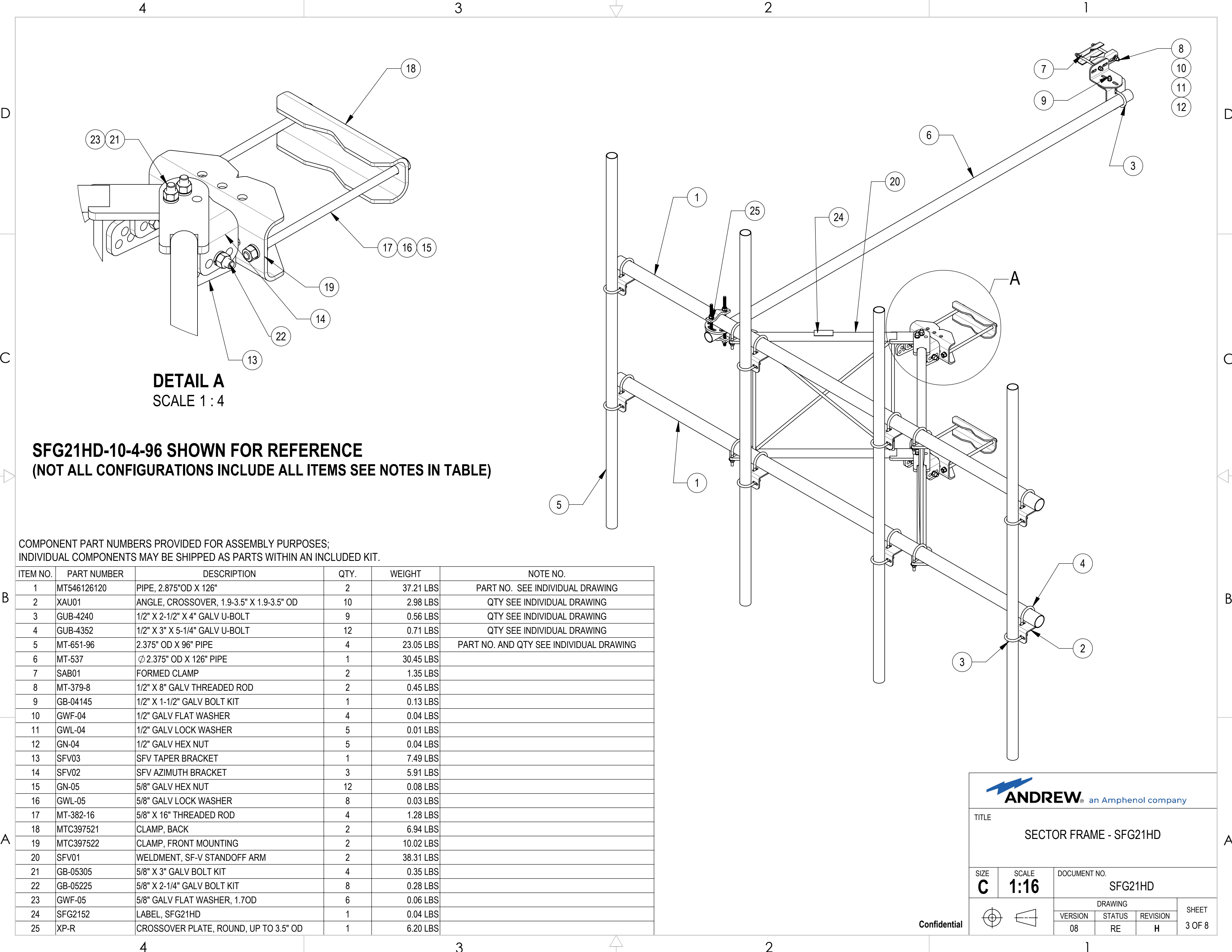
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SFG21HD



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DETAIL A
SCALE 1 : 4

SFG21HD-10-4-96 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 NO.	PART NUMBER	DESCRIPTION	QTY.	WEIGHT	NOTE NO.
1	MT546126120	PIPE, 2.875"OD X 126"	2	37.21 LBS	PART NO. SEE INDIVIDUAL DRAWING
2	XAU01	ANGLE, CROSSOVER, 1.9-3.5" X 1.9-3.5" OD	10	2.98 LBS	QTY SEE INDIVIDUAL DRAWING
3	GUB-4240	1/2" X 2-1/2" X 4" GALV U-BOLT	9	0.56 LBS	QTY SEE INDIVIDUAL DRAWING
4	GUB-4352	1/2" X 3" X 5-1/4" GALV U-BOLT	12	0.71 LBS	QTY SEE INDIVIDUAL DRAWING
5	MT-651-96	2.375" OD X 96" PIPE	4	23.05 LBS	PART NO. AND QTY SEE INDIVIDUAL DRAWING
6	MT-537	Ø 2.375" OD X 126" PIPE	1	30.45 LBS	
7	SAB01	FORMED CLAMP	2	1.35 LBS	
8	MT-379-8	1/2" X 8" GALV THREADED ROD	2	0.45 LBS	
9	GB-04145	1/2" X 1-1/2" GALV BOLT KIT	1	0.13 LBS	
10	GWF-04	1/2" GALV FLAT WASHER	4	0.04 LBS	
11	GWL-04	1/2" GALV LOCK WASHER	5	0.01 LBS	
12	GN-04	1/2" GALV HEX NUT	5	0.04 LBS	
13	SFV03	SFV TAPER BRACKET	1	7.49 LBS	
14	SFV02	SFV AZIMUTH BRACKET	3	5.91 LBS	
15	GN-05	5/8" GALV HEX NUT	12	0.08 LBS	
16	GWL-05	5/8" GALV LOCK WASHER	8	0.03 LBS	
17	MT-382-16	5/8" X 16" THREADED ROD	4	1.28 LBS	
18	MTC397521	CLAMP, BACK	2	6.94 LBS	
19	MTC397522	CLAMP, FRONT MOUNTING	2	10.02 LBS	
20	SFV01	WELDMENT, SF-V STANDOFF ARM	2	38.31 LBS	
21	GB-05305	5/8" X 3" GALV BOLT KIT	4	0.35 LBS	
22	GB-05225	5/8" X 2-1/4" GALV BOLT KIT	8	0.28 LBS	
23	GWF-05	5/8" GALV FLAT WASHER, 1.7OD	6	0.06 LBS	
24	SFG2152	LABEL, SFG21HD	1	0.04 LBS	
25	XP-R	CROSSOVER PLATE, ROUND, UP TO 3.5" OD	1	6.20 LBS	

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TITLE

SECTOR FRAME - SFG21HD

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DOCUMENT NO.

SFG21HD



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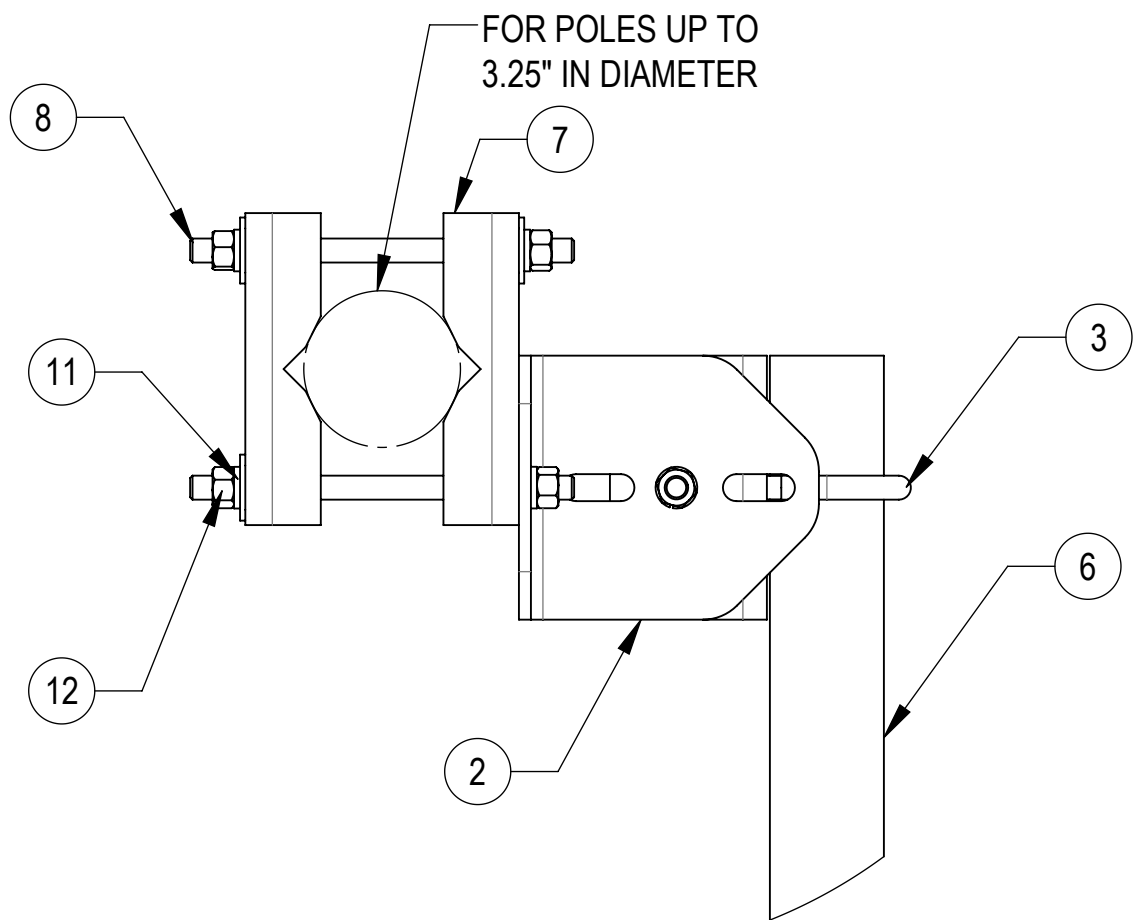
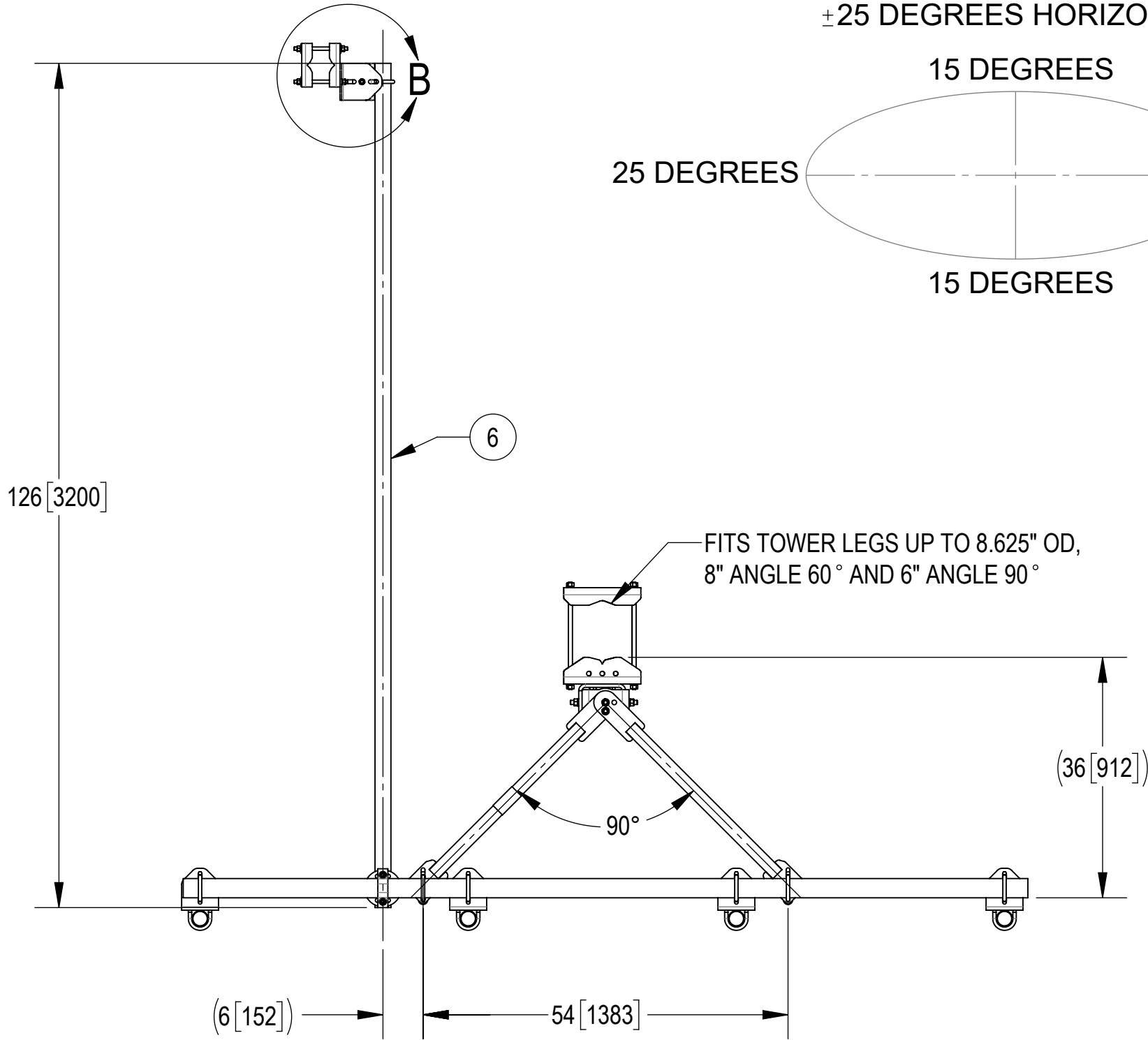
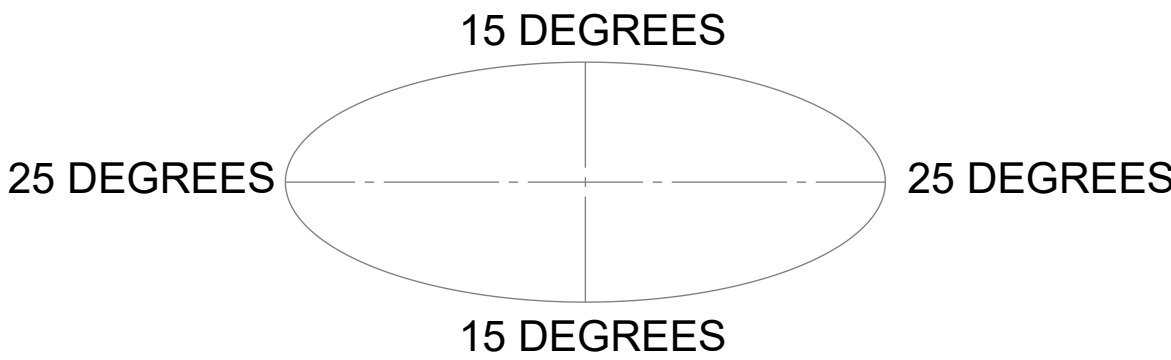
SHEET

3 OF 8

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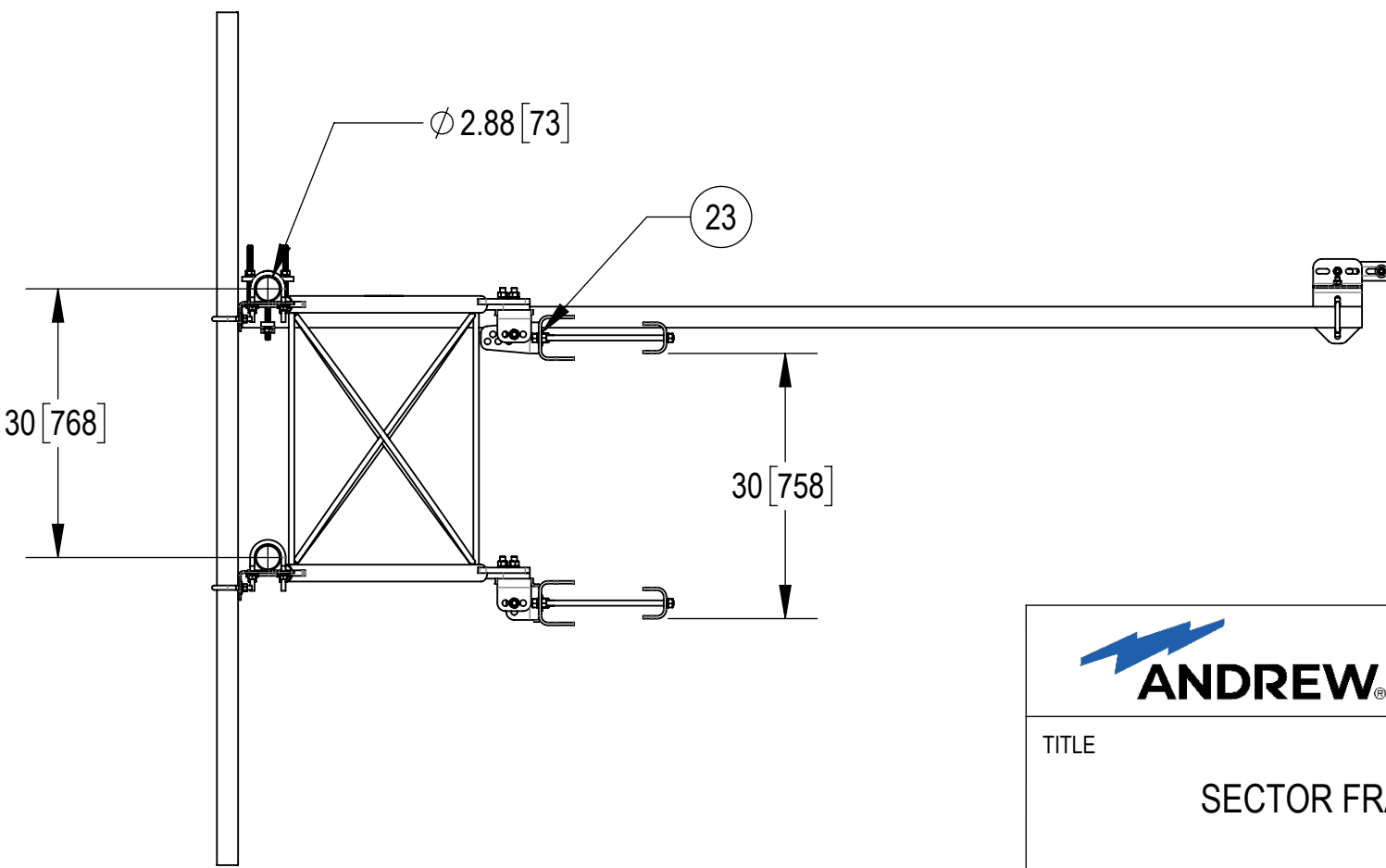
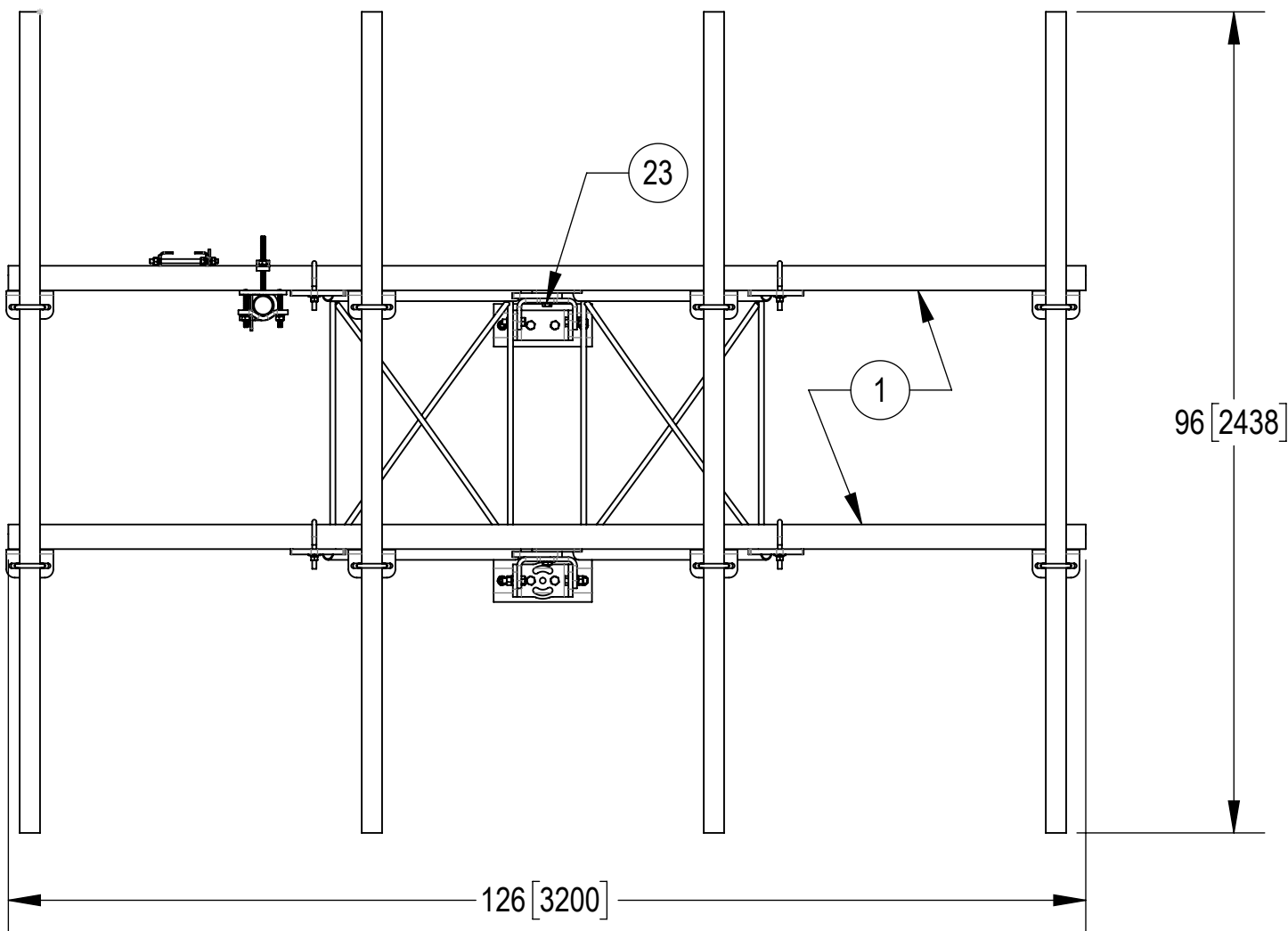
ALLOWABLE TIEBACK ANGLE

±15 DEGREES VERTICAL
±25 DEGREES HORIZONTAL



DETAIL B
SCALE 1 : 4

SFG21HD-10-4-96 SHOWN FOR REFERENCE
(NOT ALL CONFIGURATIONS INCLUDE ALL ITEMS SEE
NOTES IN TABLE ON PAGE 3)

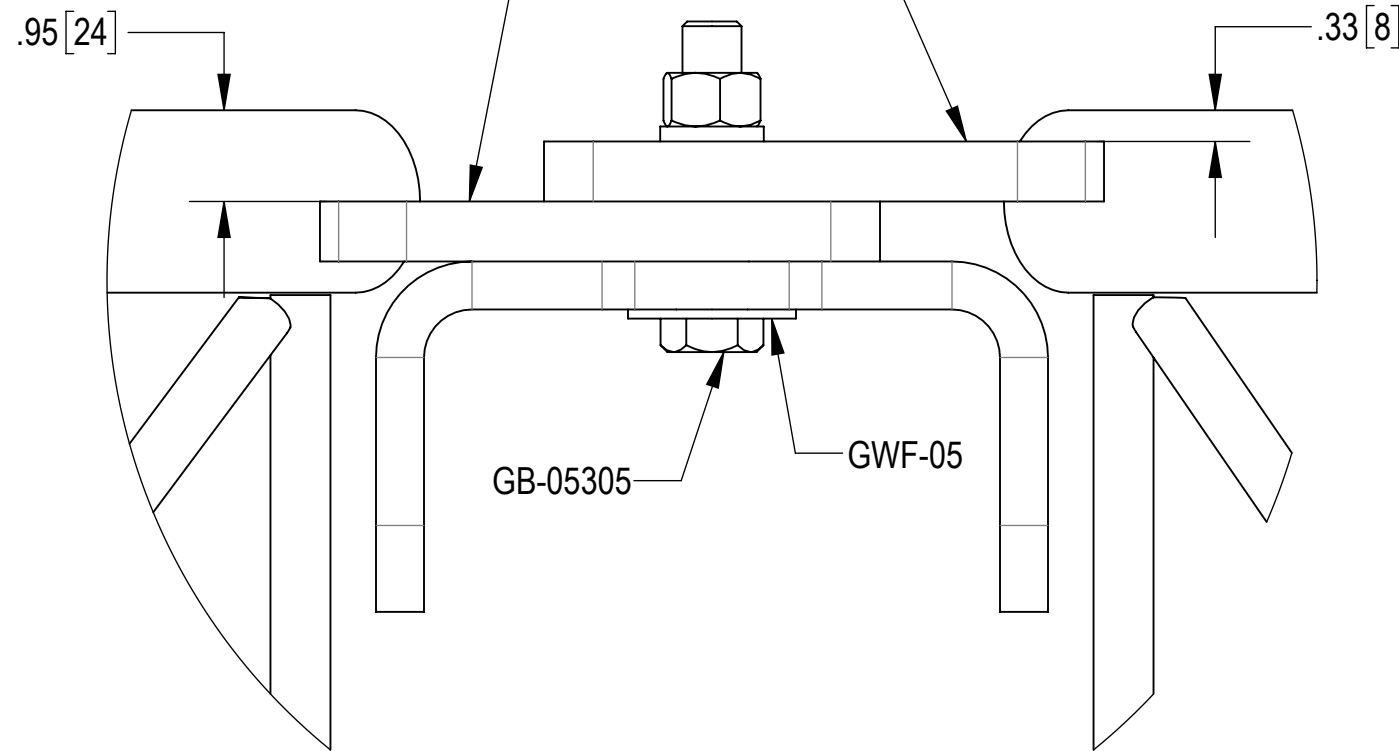


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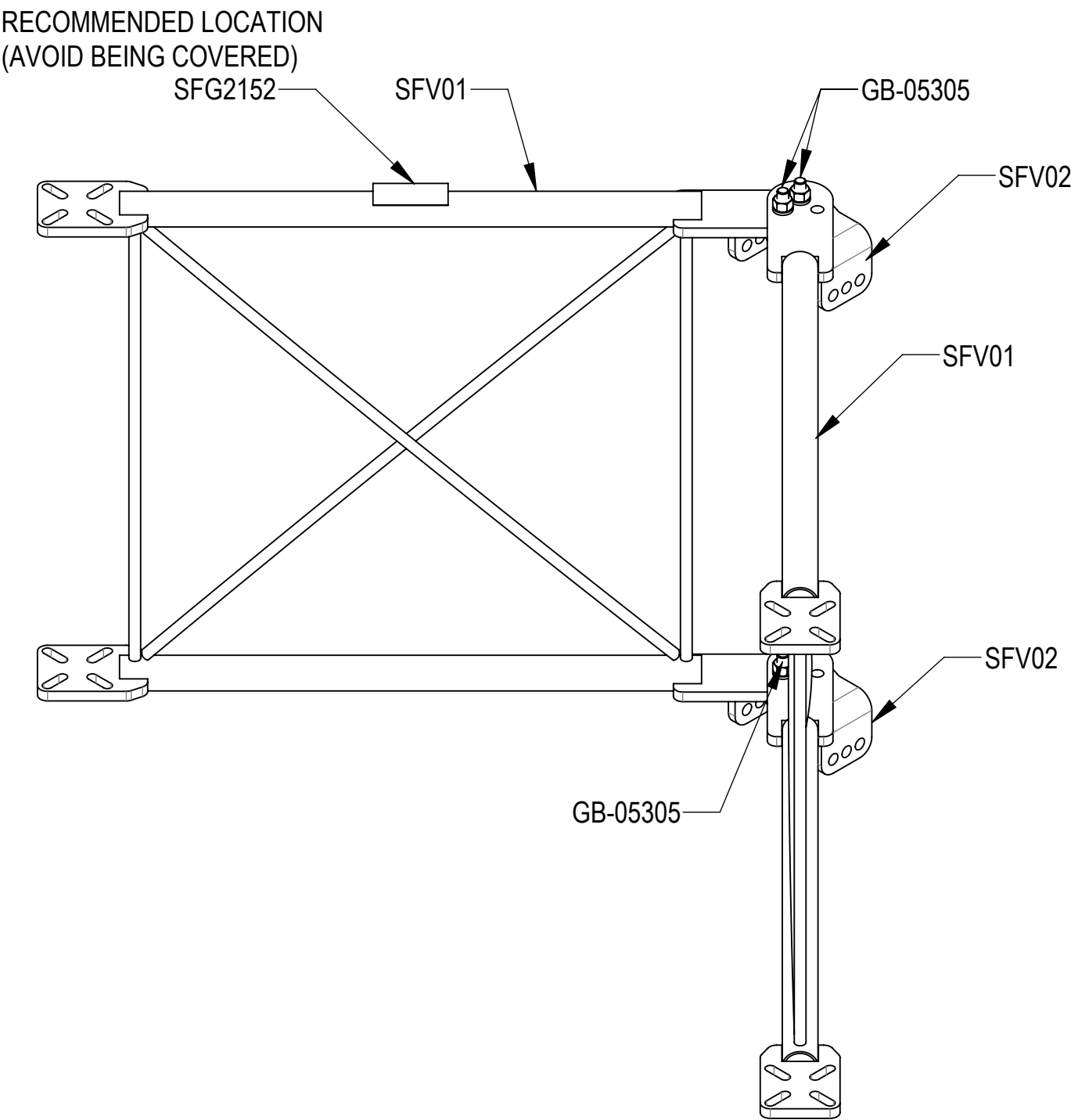
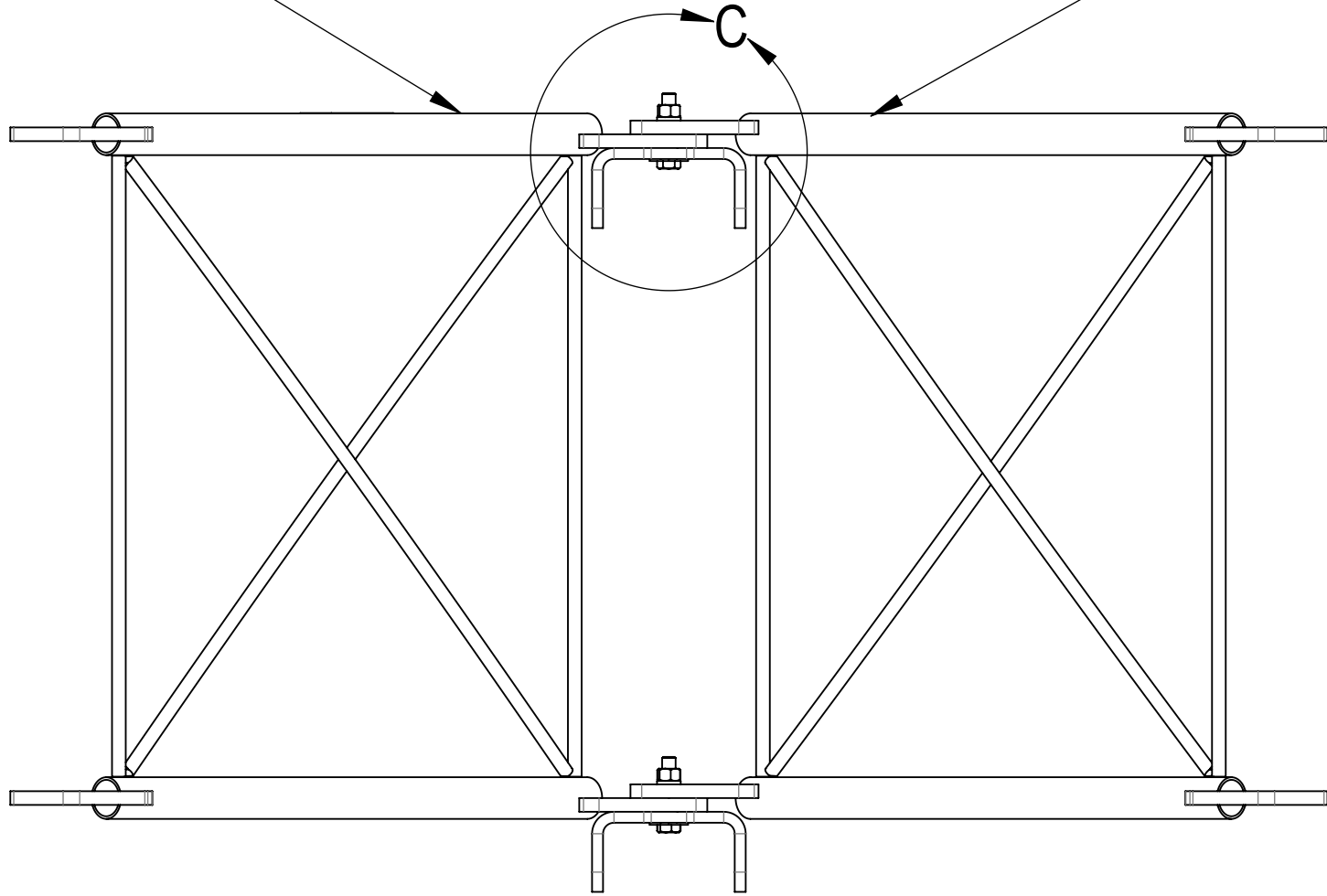
STEP1: ATTACH STANDOFF ARMS (SFV01) TO AZIMUTH BRACKETS (SFV02) USING BOLT KITS (GB-05305) AND FLAT WASHERS (GWF-05)
PLACE LABEL (SFG2152) ON TOP OF STANDOFF ARMS (SFV01). (WIPE GALVANIZED SURFACE WITH ALCOHOL CLEANER BEFORE
APPLYING LABEL)

LOWER ARM "UPSIDE DOWN" UPPER ARM "RIGHT SIDE UP"



DETAIL C
SCALE 1 : 2

STANDOFF ARM ORIENTATION IS CRITICAL!
WHEN ASSEMBLED, ARMS SHOULD BE LEVEL
WITH EACH OTHER. ALSO SEE DETAIL C ABOVE



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TITLE
SECTOR FRAME - SFG21HD

SIZE **C** SCALE **1:8** DOCUMENT NO. **SFG21HD**



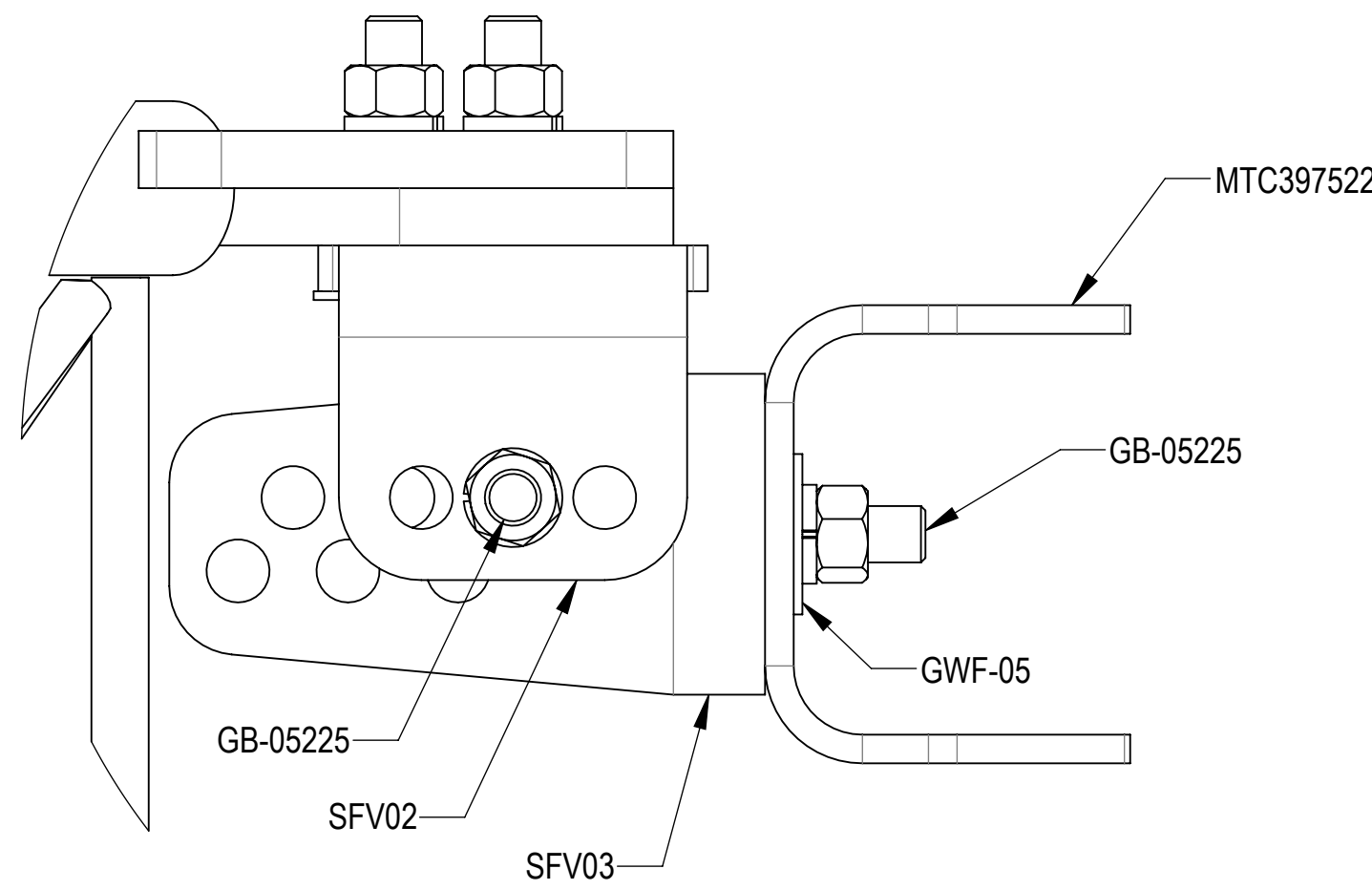
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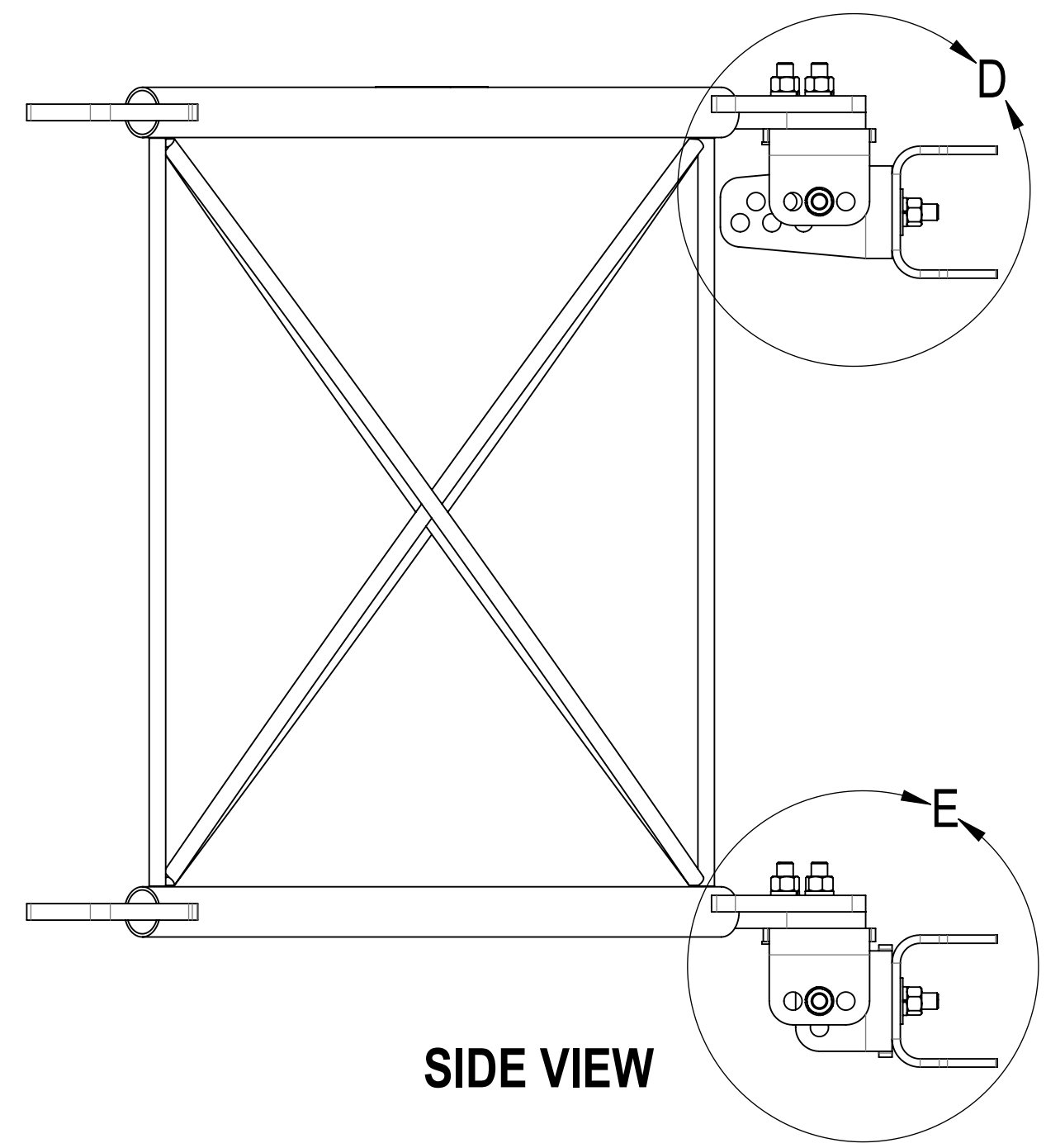
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STEP 2A: ON TOP, ATTACH TAPER BRACKET (SFV03) TO AZIMUTH BRACKET (SFV02) USING BOLT KITS (GB-05225).
SEE ISO ROTATED VIEW. ATTACH TAPER BRACKET (SFV03) TO CLAMP, FRONT MTG (MTC397522) USING BOLT KITS (GB-05225)
AND FLAT WASHERS (GWF-05).

STEP 2B: ON BOTTOM, ATTACH AZIMUTH BRACKET (SFV02) TO AZIMUTH BRACKET (SFV02) USING BOLT KITS (GB-05225).
ATTACH AZIMUTH BRACKET (SFV02) TO CLAMP, FRONT MTG (MTC397522) USING BOLT KITS(GB-05225)
AND FLAT WASHERS (GWF-05).

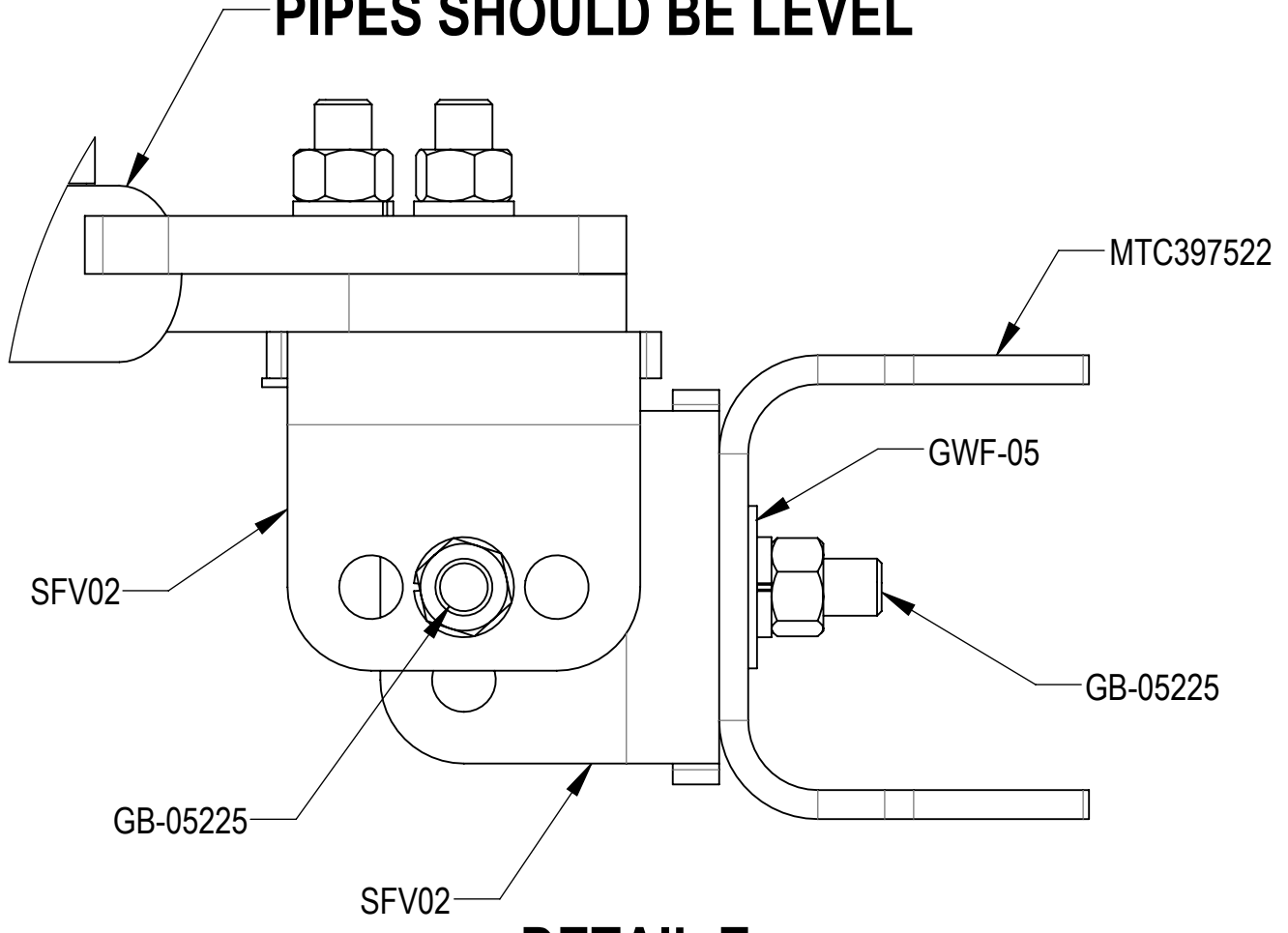


DETAIL D
SCALE 1 : 2

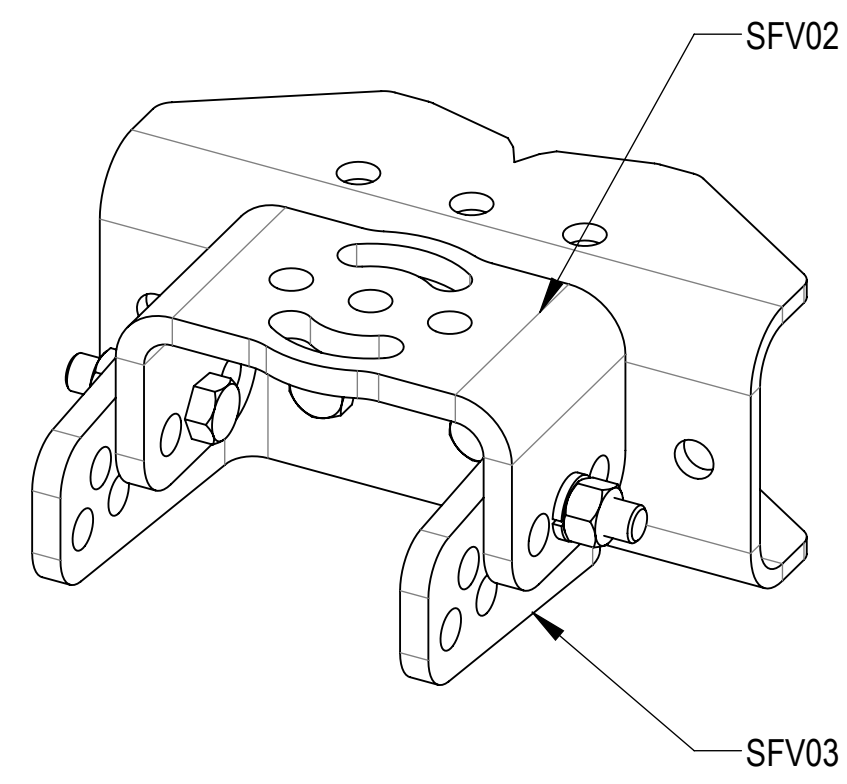


SIDE VIEW

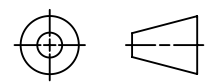
STANDOFF ARM ORIENTATION
IS CRITICAL! WHEN ASSEMBLED,
PIPES SHOULD BE LEVEL



DETAIL E
SCALE 1 : 2

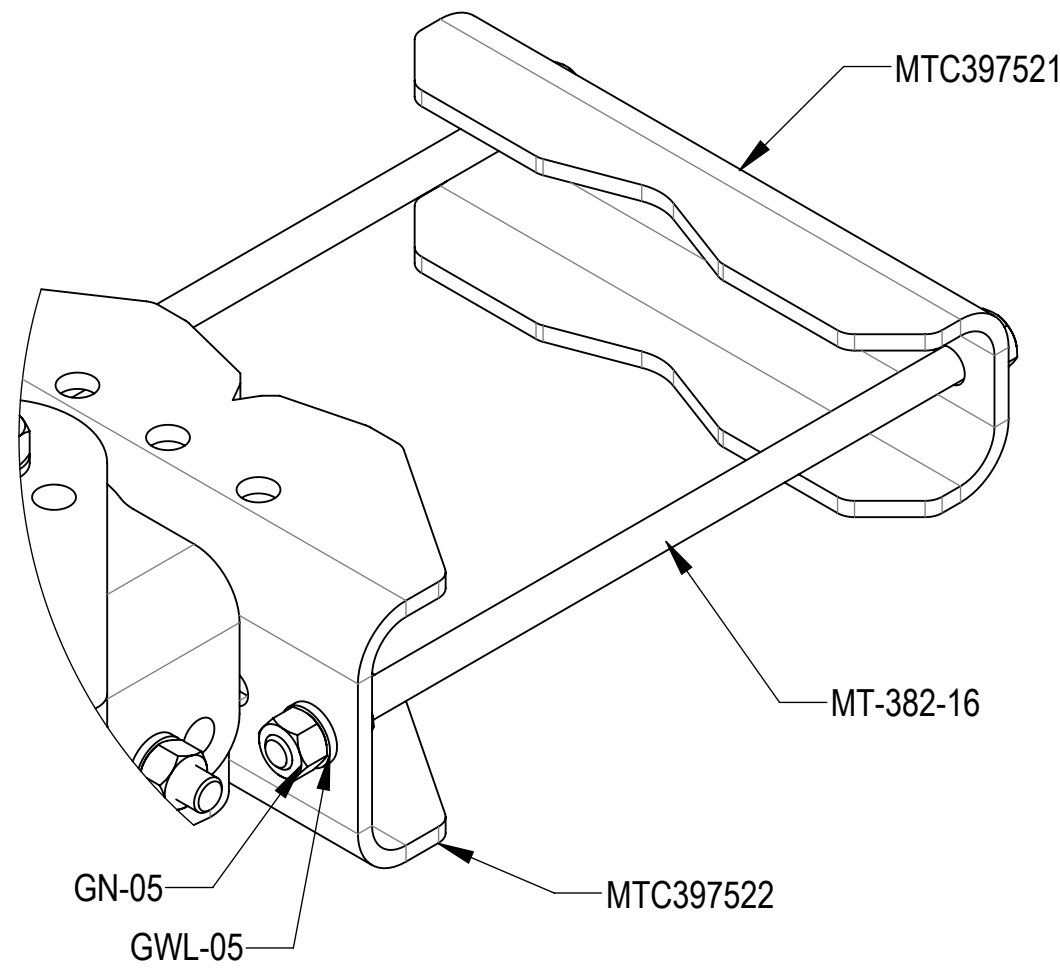


ISO ROTATED VIEW

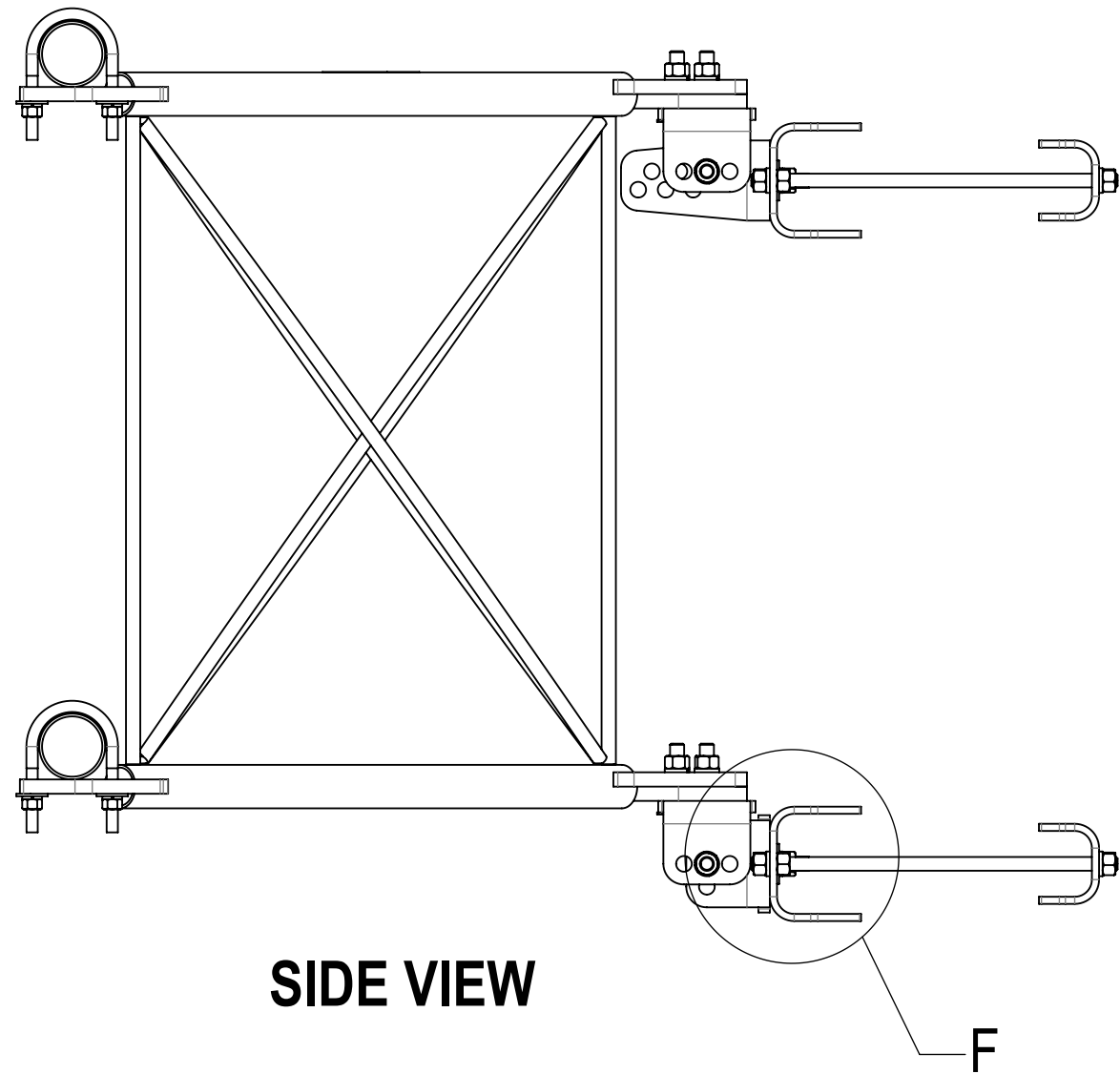
				
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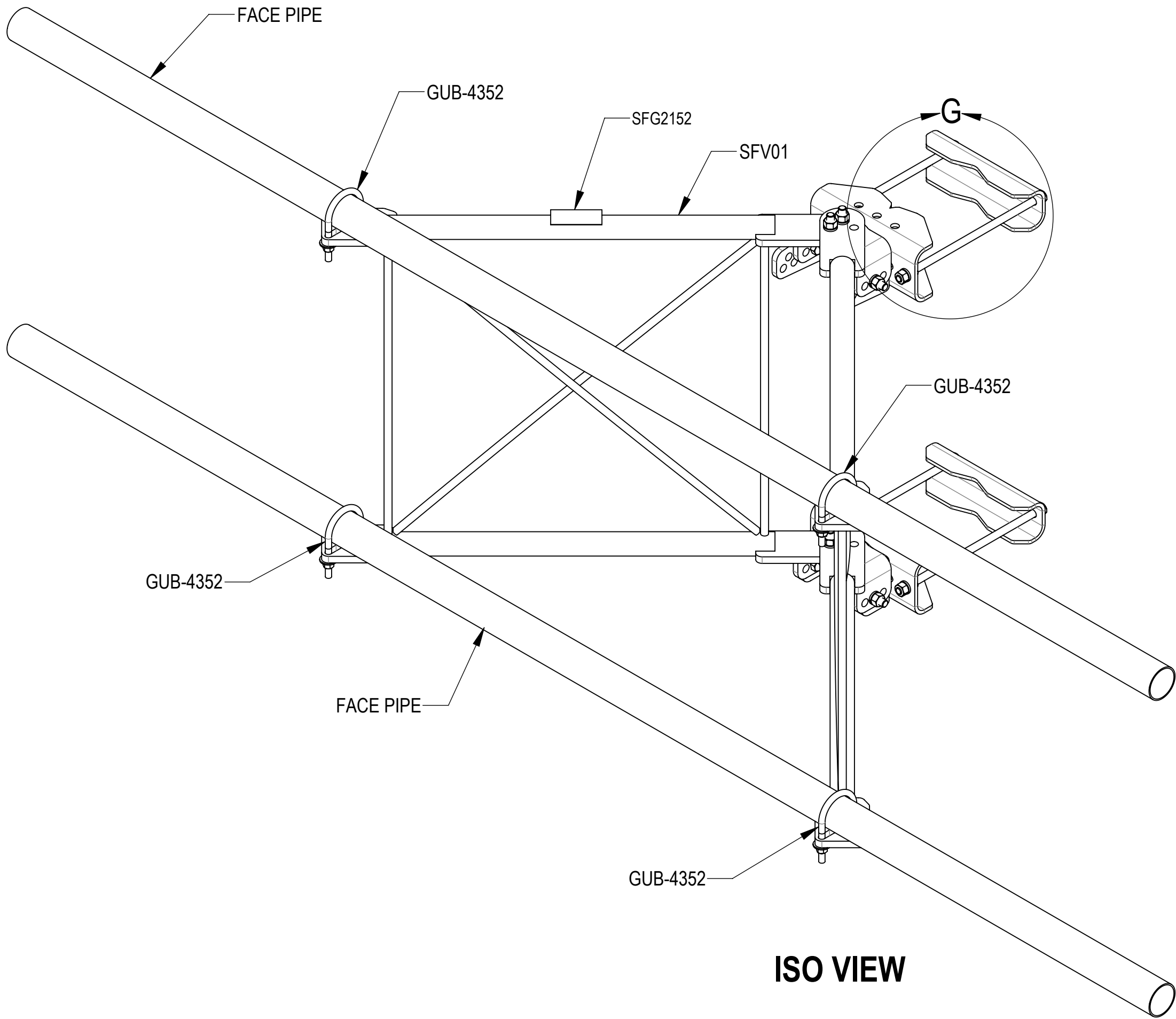
STEP 3: ATTACH FACE PIPES TO STANDOFF ARMS (SFV01) USING U-BOLTS (GUB-4352).



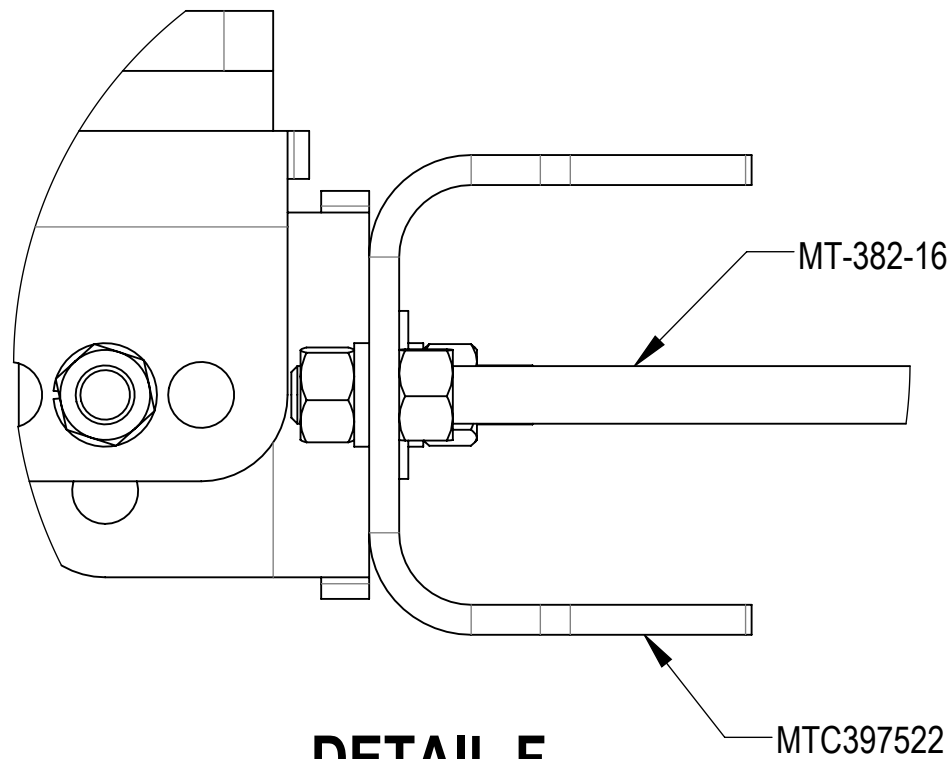
DETAIL G
SCALE 1 : 3



SIDE VIEW



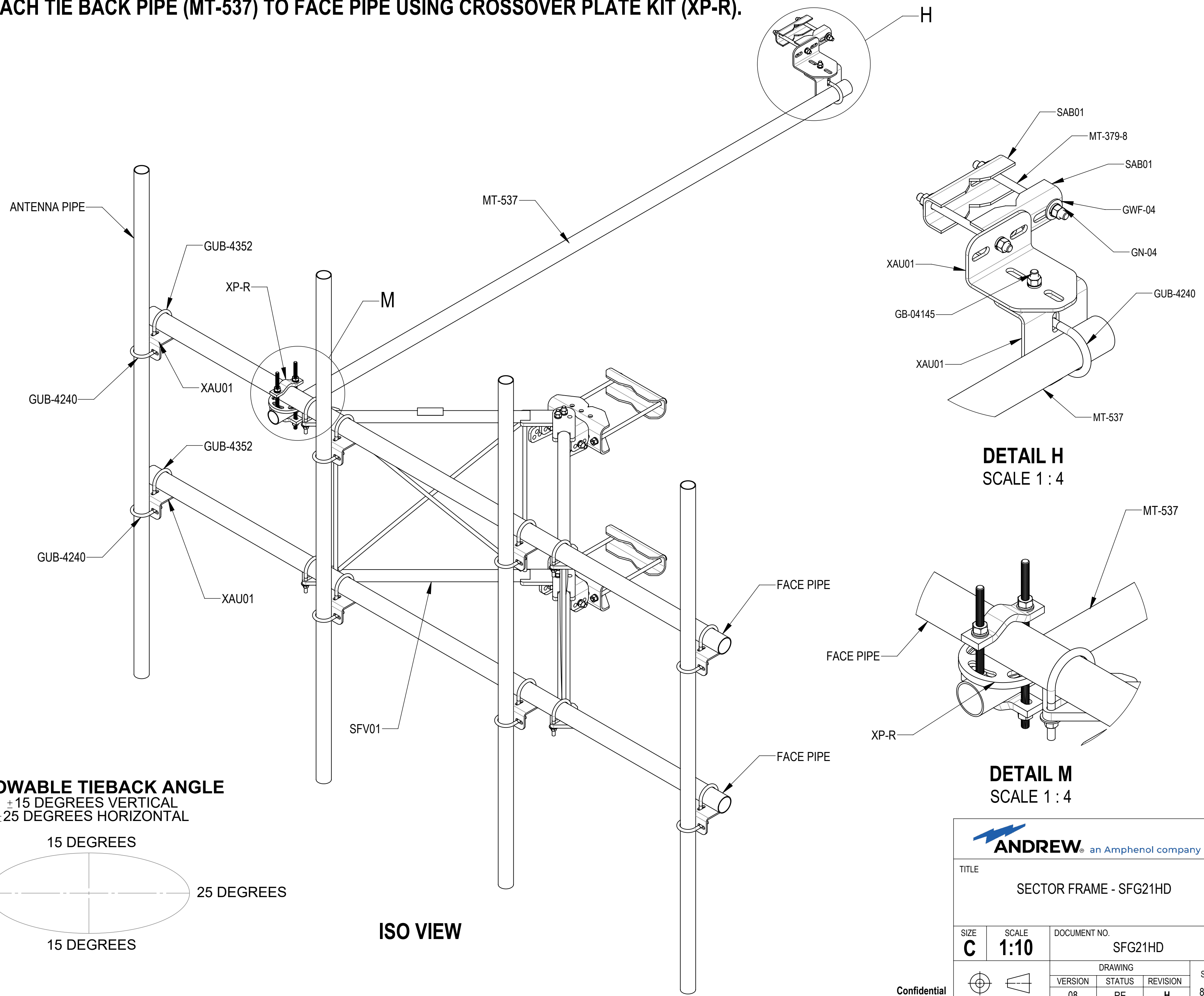
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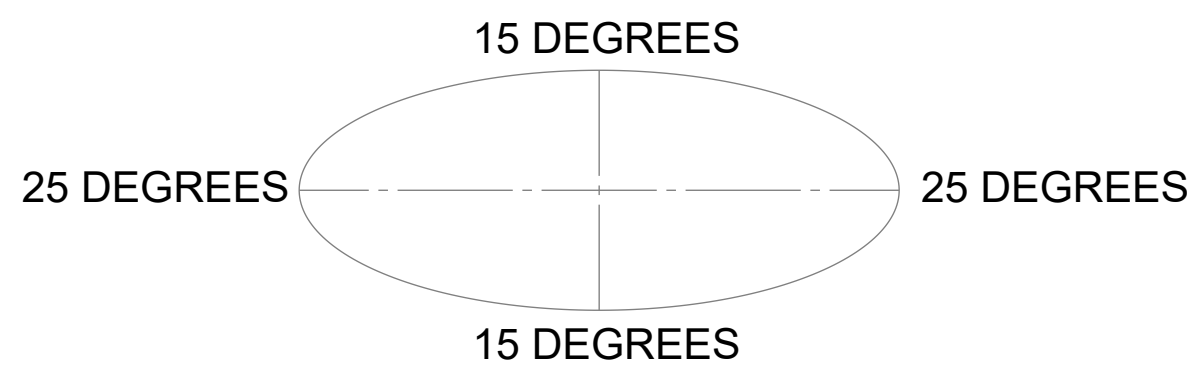
DETAIL F
SCALE 1 : 2

				
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STEP 4: ATTACH ANTENNA PIPES TO FACE PIPES USING CROSSOVER PLATES (XAU01) AND U-BOLTS (GUB-4352 & GUB-4240). ATTACH TIE BACK PIPE (MT-537) TO FACE PIPE USING CROSSOVER PLATE KIT (XP-R).



ALLOWABLE TIEBACK ANGLE
±15 DEGREES VERTICAL
±25 DEGREES HORIZONTAL



ISO VIEW

DETAIL H
SCALE 1 : 4

DETAIL M
SCALE 1 : 4

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TITLE				
SECTOR FRAME - SFG21HD				
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