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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.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 FITS MONOPOLES 15" TO 50" OD.

3.0 MANUFACTURING/SPECIAL REQUIREMENTS

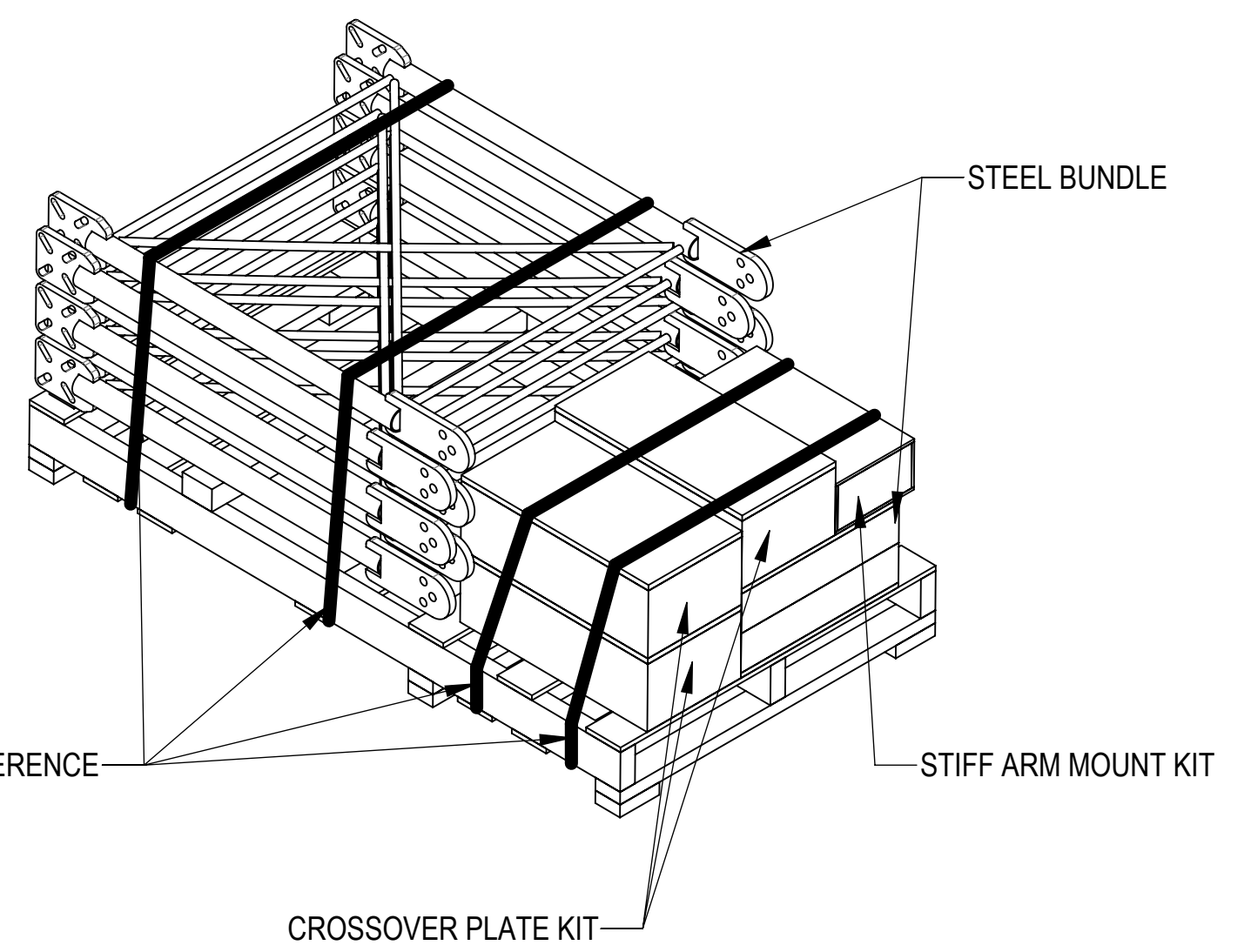
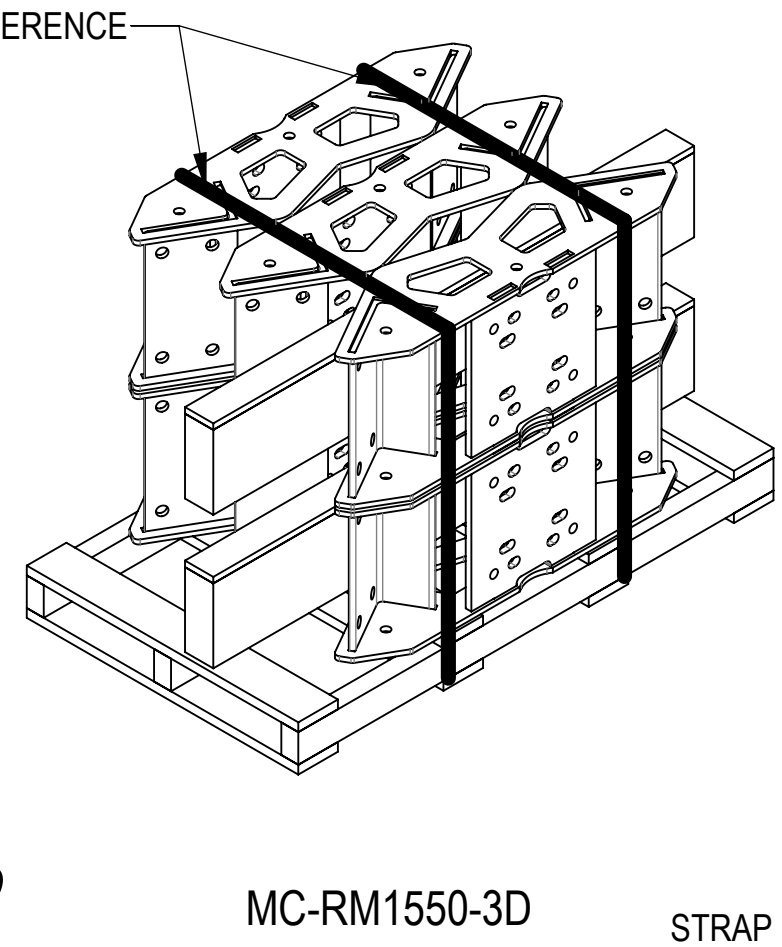
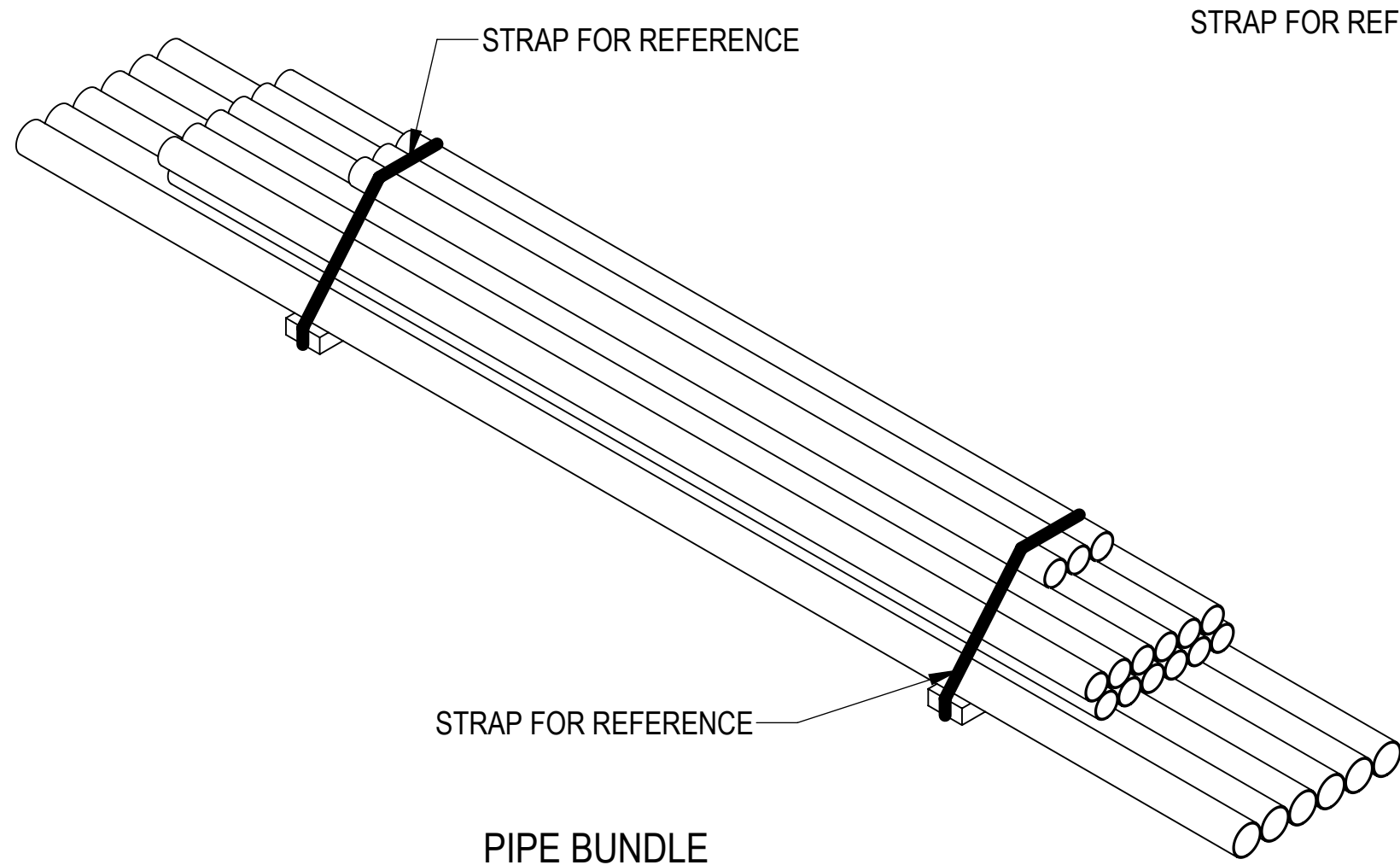
- 3.1 TIGHTEN ALL BOLTS SECURING FLAT PLATES BY THE TURN-OF-NUT METHOD. TIGHTEN ALL U-BOLTS USING TURN-OF-NUT METHOD WITH ATTENTION TO LEAVE EQUAL DISTANCE AND EQUAL FORCE ON EACH LEG OF THE U-BOLT.

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 MAYBE SUPPLIED, BAGGED AND SHIPPED.

| REVISIONS | | | |
|-----------|--|-------------------|-----------------------|
| REV. | DESCRIPTION | DATE | APPROVED |
| A | INITIAL RELEASE | ES 25APR19 | RD1048 8000032387 |
| B | MCG21HD SERIES BOM STANDARDIZATION | YX1027 18APR22 | BCROSS 40146977CMO |
| C | NOTES STANDARDIZATION; TIE BACK PIPES TO FACE PIPES CONNECTION REPLACED XA WITH XP-R | YX1027 24OCT22 | BCROSS 40159351CMO |
| D | ADDED SHEET 2; ITEM 13 WAS SFG2251; MOVED LOCATION OF ITEM 13 TO THE TOP OF V-ARM | RY1002 28AUG23 | YW1045 40177837CMO |



| | | | | | | | | | | | |
|---|-------------|----------------|------------------------------|-------------------------------|----------|---------------------|--------|----------|--------|--|--|
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| TOLERANCES | | | | | | SAP MATERIAL MASTER | | | | | |
| 1 PLACE .X[X] ± 0.25[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 | YX1027 | 4/18/2022 | SECTOR FRAME - MCG21HD | | | | | | | |
| | RW | YMENG | 09/21/2023 | | | | | | | | |
| | AD | YW1045 | 09/21/2023 | | | | | | | | |
| | RE | YMENG | 10/30/2023 | | | | | | | | |
| ECN | 40177837CMO | | | | | | | | | | |
| | SCALE | DOCUMENT NO. | | | | | | | | | |
| | 1:12 | MCG21HD | | | | | | | | | |
| SIZE | Auth Group | INSL | MODEL | | | DRAWING | | | SHEET | | |
| C | | | VERSION | STATUS | REVISION | VERSION | STATUS | REVISION | 1 OF 7 | | |
| | | | 03 | RE | B | 03 | RE | D | | | |

| | |
|--------------|---------------------|
| DENSITY | lbs/in ³ |
| MASS | lbs |
| VOLUME | in ³ |
| SURFACE AREA | in ² |
| HEIGHT | |
| LENGTH | |
| WIDTH | |

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PART NUMBERS, WEIGHTS, & EPA

TABLE 1: CONFIGURATIONS

| PART NUMBER | DESCRIPTION | WEIGHT (LBS) | (EPA)A (FT ²)* | (EPA)A 1/2" ICE THICKNESS (FT ²)* | ANTENNA PIPES | INCLUDED PARTS | | | | | | | | | | | | | | |
|--------------------|--|--------------|----------------------------|---|---------------|----------------|------------|--------------|--------------|-----------|-----------|-------------------|-------------------|-------------------|-------------------|--------------|--------------|-------------------|--------------|-------------------|
| | | | | | | MC-RM1550-3D | MCG22-HK01 | MCG21HD-SB01 | PB0306A0610B | XA-2030-3 | XA-2030-4 | PB0908A0306A0610B | PB0910A0306A0610B | PB1208A0306A0610B | PB1210A0306A0610B | PB0308A0612B | PB1208A0612B | PB0910A0308A0612B | PB1508A0612B | PB1210A0308A0612B |
| MCG21HD-10M-B | TRPL SECTR FRM KIT 10'6" FACE, NO AP | 1082.7 | 12.18 | 19.43 | - | 1 | 1 | 1 | 1 | - | - | - | - | - | - | - | - | - | - | |
| MCG21HD-10M-9-96 | TRPL SECTR FRM KIT 10'6" FACE, 9 96" AP | 1375.5 | | | 9 | 1 | 1 | 1 | - | 3 | - | 1 | - | - | - | - | - | - | - | - |
| MCG21HD-10M-9-126 | TRPL SECTR FRM KIT 10'6" FACE, 9 126" AP | 1440.3 | | | 9 | 1 | 1 | 1 | - | 3 | - | - | 1 | - | - | - | - | - | - | - |
| MCG21HD-10M-12-96 | TRPL SECTR FRM KIT 10'6" FACE, 12 96" AP | 1473.1 | | | 12 | 1 | 1 | 1 | - | - | 3 | - | - | 1 | - | - | - | - | - | - |
| MCG21HD-10M-12-126 | TRPL SECTR FRM KIT 10'6" FACE, 12 126"AP | 1559.5 | | | 12 | 1 | 1 | 1 | - | - | 3 | - | - | - | 1 | - | - | - | - | - |
| MCG21HD-12M-B | TRPL SECTR FRM KIT 12'6" FACE, NO AP | 1142.7 | 13.84 | 21.68 | - | 1 | 1 | 1 | - | - | - | - | - | - | 1 | - | - | - | | |
| MCG21HD-12M-9-96 | TRPL SECTR FRM KIT 12'6" FACE, 9 96" AP | 1418.0 | | | 9 | 1 | 1 | 1 | - | 3 | - | - | - | - | - | - | 1 | - | - | |
| MCG21HD-12M-9-126 | TRPL SECTR FRM KIT 12'6" FACE, 9 126" AP | 1482.8 | | | 9 | 1 | 1 | 1 | - | 3 | - | - | - | - | - | - | - | 1 | - | |
| MCG21HD-12M-12-96 | TRPL SECTR FRM KIT 12'6" FACE, 12 96" AP | 1533.1 | | | 12 | 1 | 1 | 1 | - | - | 3 | - | - | - | - | - | - | - | 1 | - |
| MCG21HD-12M-12-126 | TRPL SECTR FRM KIT 12'6" FACE, 12 126"AP | 1619.5 | | | 12 | 1 | 1 | 1 | - | - | 3 | - | - | - | - | - | - | - | - | 1 |

* (EPA)A DOES NOT INCLUDE ANTENNA PIPES AND MOUNTING HARDWARE. IF DESIRED, ADD ANTENNA PIPE PER TABLE 2

TABLE 2: EPA OF EACH ANTENNA PIPE

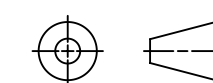
| ANTENNA PIPE | (EPA)A (FT ²) | (EPA)A W/ 1/2" ICE THICKNESS (FT ²) |
|--------------|---------------------------|---|
| 2-3/8" X 96" | 1.53 | 2.17 |
| 2-3/8" X126" | 2.00 | 2.83 |

- 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, MCG21HD-10M-9-96 HAS A 3-SECTOR EPA OF 12.18 FT² WITH NO ICE PLUS 9 ANTENNA PIPES WITH A 3-SECTOR EPA OF 9X1.53=13.77 FT² WITH NO ICE. SO, THE TOTAL EPA OF 25.95 FT² FOR THE MCG21HD-10M-9-96.

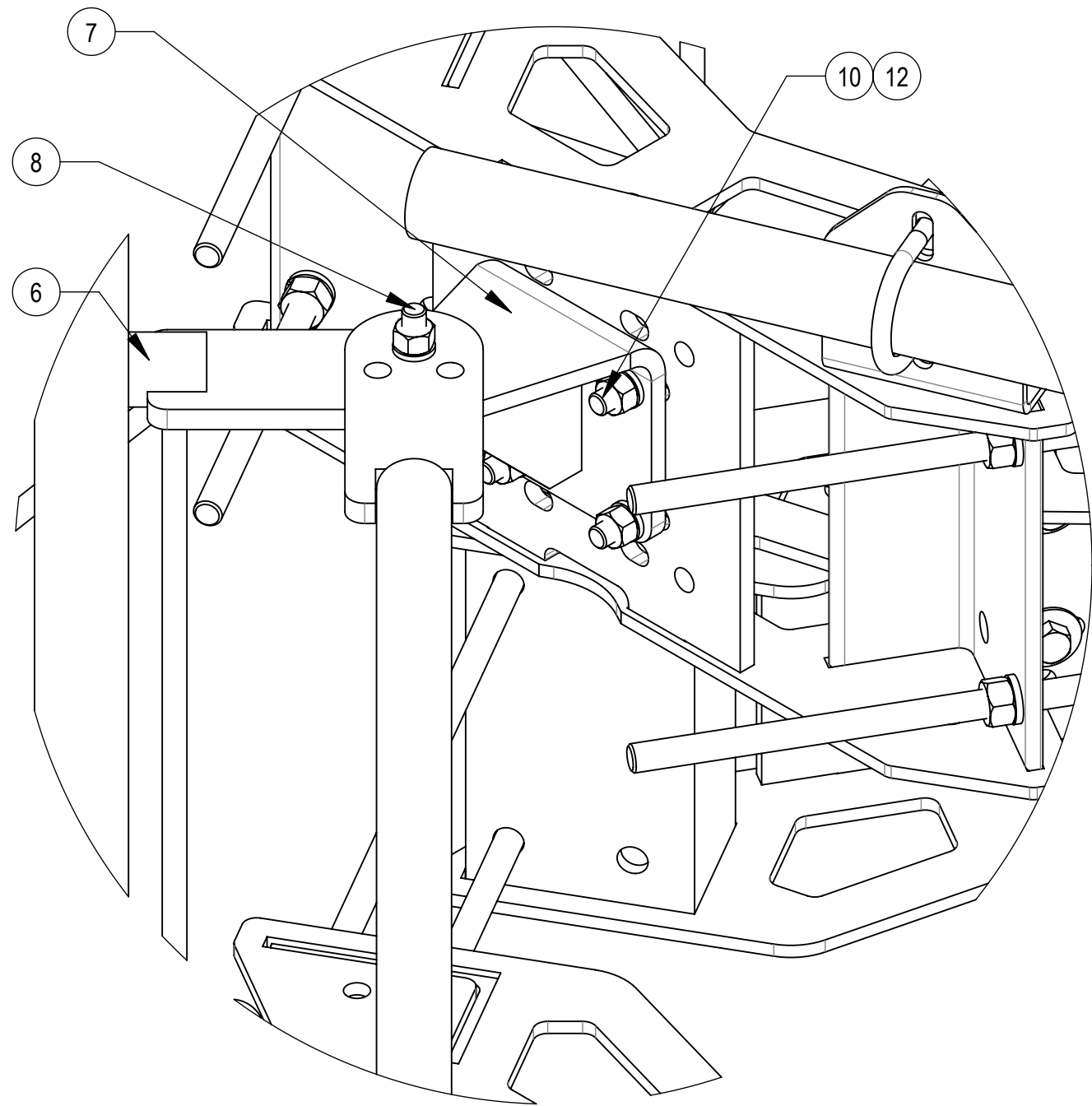
COMMSCOPE, INC. OF NORTH CAROLINA

TITLE
SECTOR FRAME - MCG21HD

| | | |
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| SIZE C | SCALE 1:30 | DOCUMENT NO. MCG21HD |
|------------------|----------------------|--------------------------------|

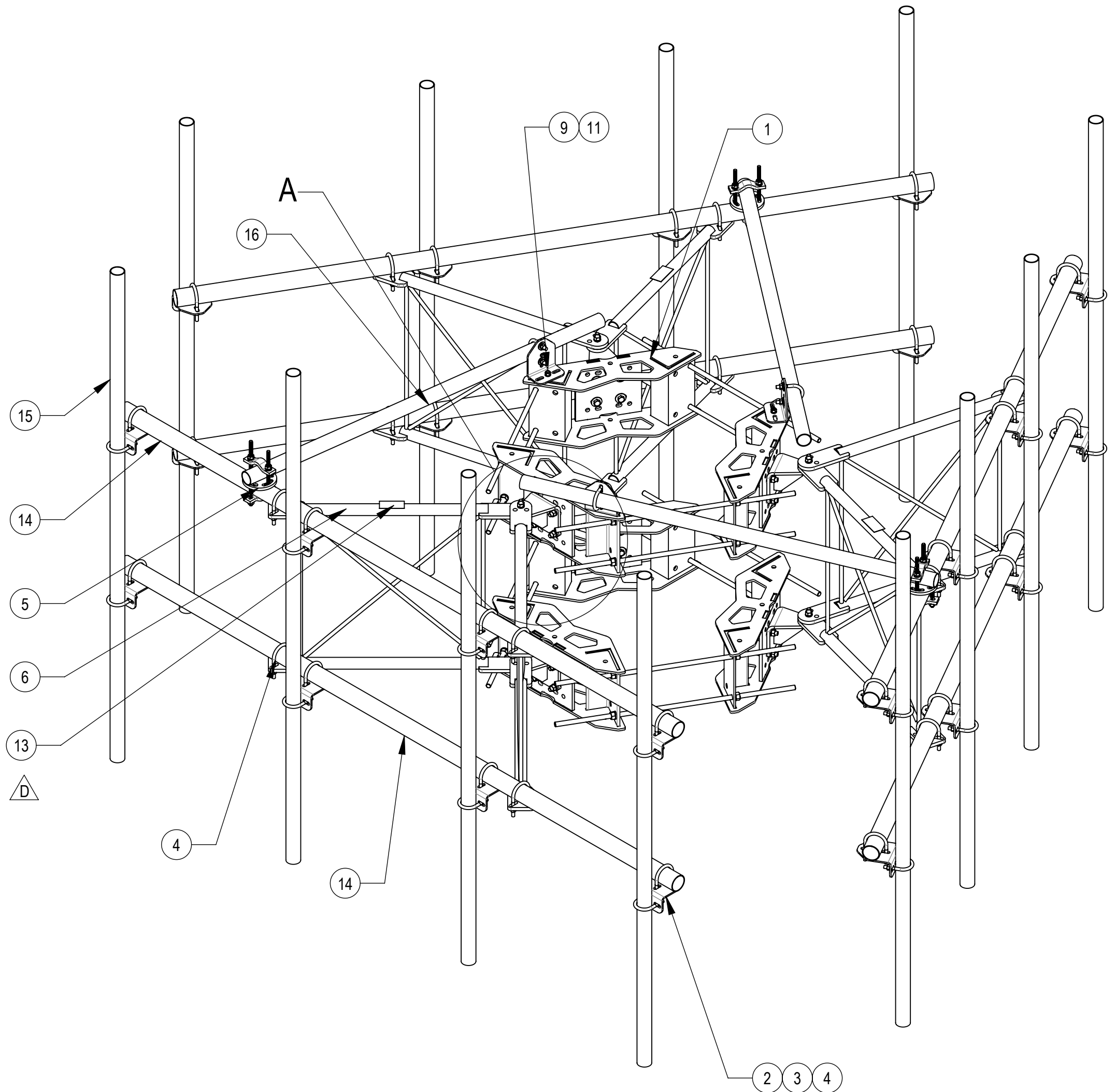


| DRAWING | | | SHEET 2 OF 7 |
|---------|--------|----------|-----------------|
| VERSION | STATUS | REVISION | |
| 03 | RE | D | |



DETAIL A
SCALE 1 : 4

MCG21HD-10M-12-96 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 |
|------|-------------|--|------|------------|---|
| 1 | MC-RM1550-3 | 15" - 50" OD RINGMOUNT | 2 | 229.90 LBS | |
| 2 | XAU01 | ANGLE, CROSSOVER, 1.9-3.5" X 1.9-3.5" OD | 27 | 2.98 LBS | QTY SEE INDIVIDUAL DRAWING |
| 3 | GUB-4240 | 1/2" X 2-1/2" X 4" GALV U-BOLT | 27 | 0.56 LBS | QTY SEE INDIVIDUAL DRAWING |
| 4 | GUB-4352 | 1/2" X 3" X 5-1/4" GALV U-BOLT | 36 | 0.71 LBS | QTY SEE INDIVIDUAL DRAWING |
| 5 | XP-R | CROSSOVER PLATE, ROUND, UP TO 3.5" OD | 3 | 6.20 LBS | |
| 6 | SFV01 | WELDMENT, SF-V STANDOFF ARM | 6 | 38.31 LBS | |
| 7 | MCG2305 | BRACKET, MCG12 | 6 | 10.35 LBS | |
| 8 | GB-05305 | 5/8" X 3" GALV BOLT KIT | 6 | 0.35 LBS | |
| 9 | GB-04145 | 1/2" X 1-1/2" GALV BOLT KIT | 3 | 0.13 LBS | |
| 10 | GB-05225 | 5/8" X 2-1/4" GALV BOLT KIT | 24 | 0.28 LBS | |
| 11 | GWF-04 | 1/2" GALV FLAT WASHER | 3 | 0.04 LBS | |
| 12 | GWF-05 | 5/8" GALV FLAT WASHER, 1.7OD | 24 | 0.06 LBS | |
| 13 | SFG2152 | LABEL, SFG21HD | 3 | 0.04 LBS | |
| 14 | MT546126120 | PIPE, 2.875"OD X 126" | 6 | 37.21 LBS | PART NO. SEE INDIVIDUAL DRAWING |
| 15 | MT-651-96 | 2.375" OD X 96" PIPE | 12 | 23.05 LBS | PART NO. AND QTY SEE INDIVIDUAL DRAWING |
| 16 | MT-651 | 2.375" OD X 72" PIPE | 3 | 17.44 LBS | PART NO. SEE INDIVIDUAL DRAWING |

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|--|----------------------|--------------------------------|--------|-----------------|
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| TITLE SECTOR FRAME - MCG21HD | | | | |
| SIZE C | SCALE 1:16 | DOCUMENT NO. MCG21HD | | |
| DRAWING | | VERSION | STATUS | REVISION |
| | | 03 | RE | D |
| | | | | SHEET 3 OF 7 |

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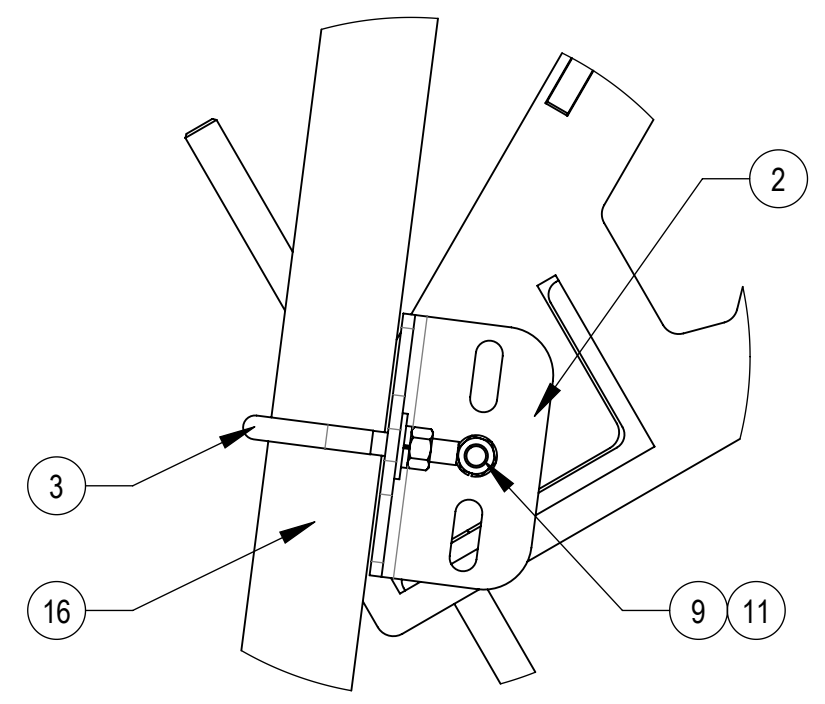
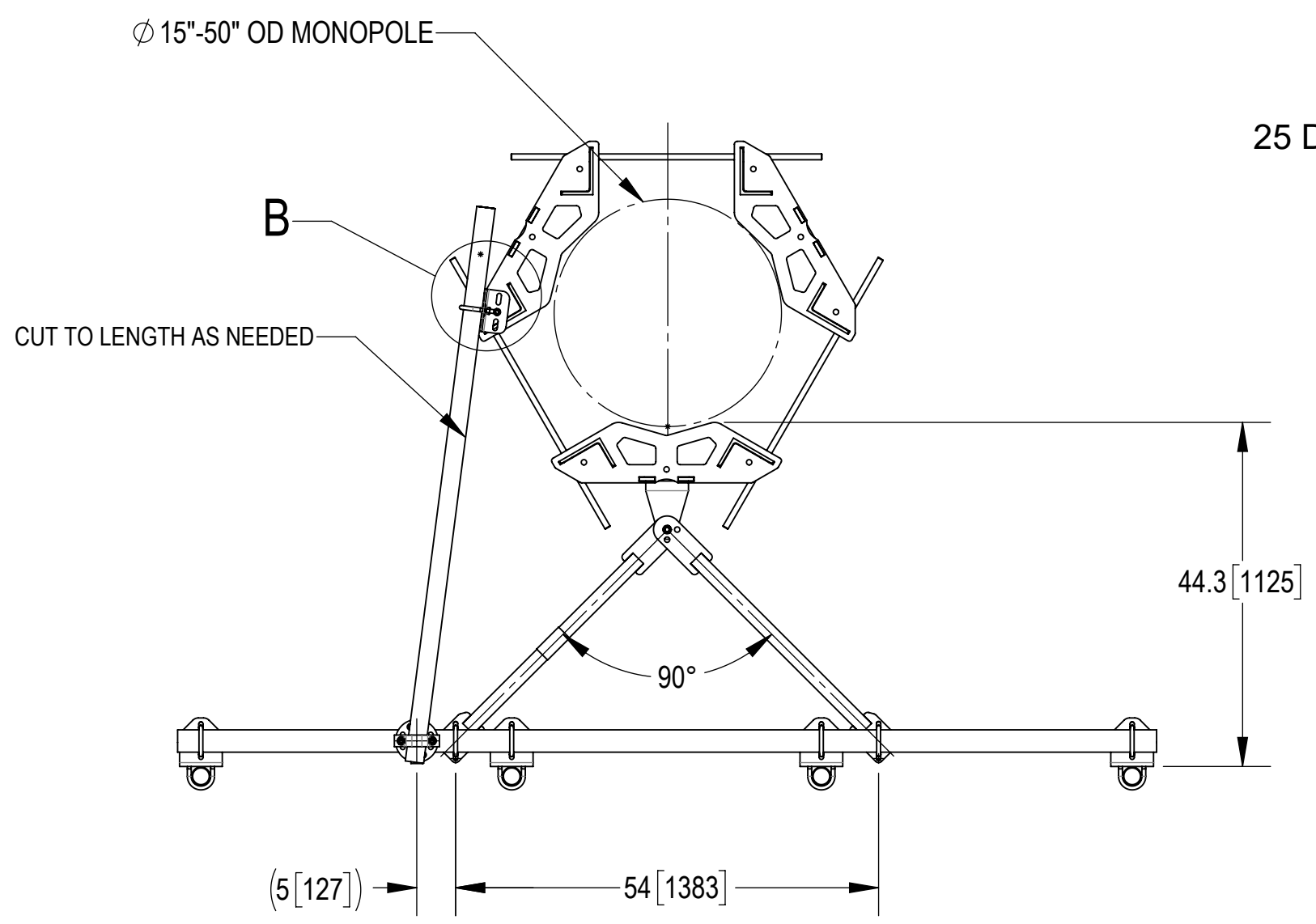
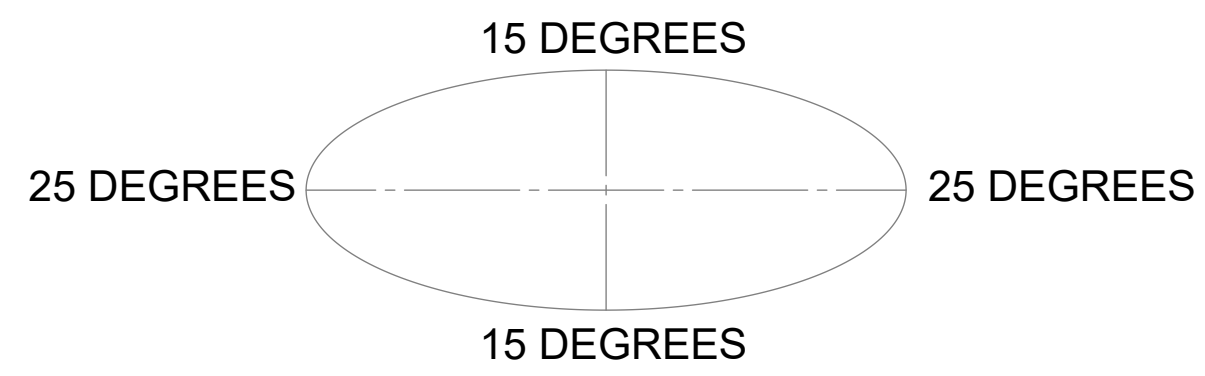
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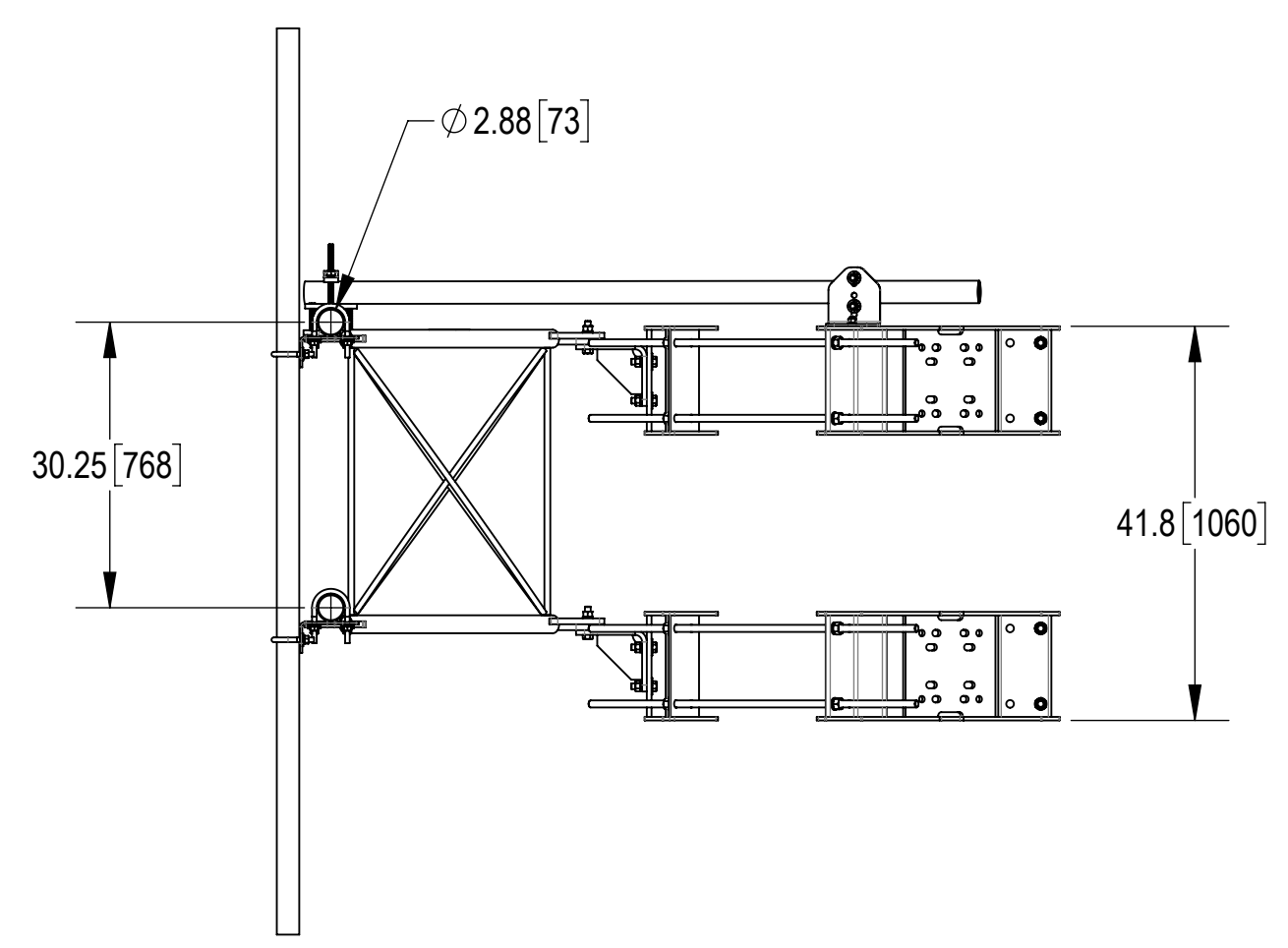
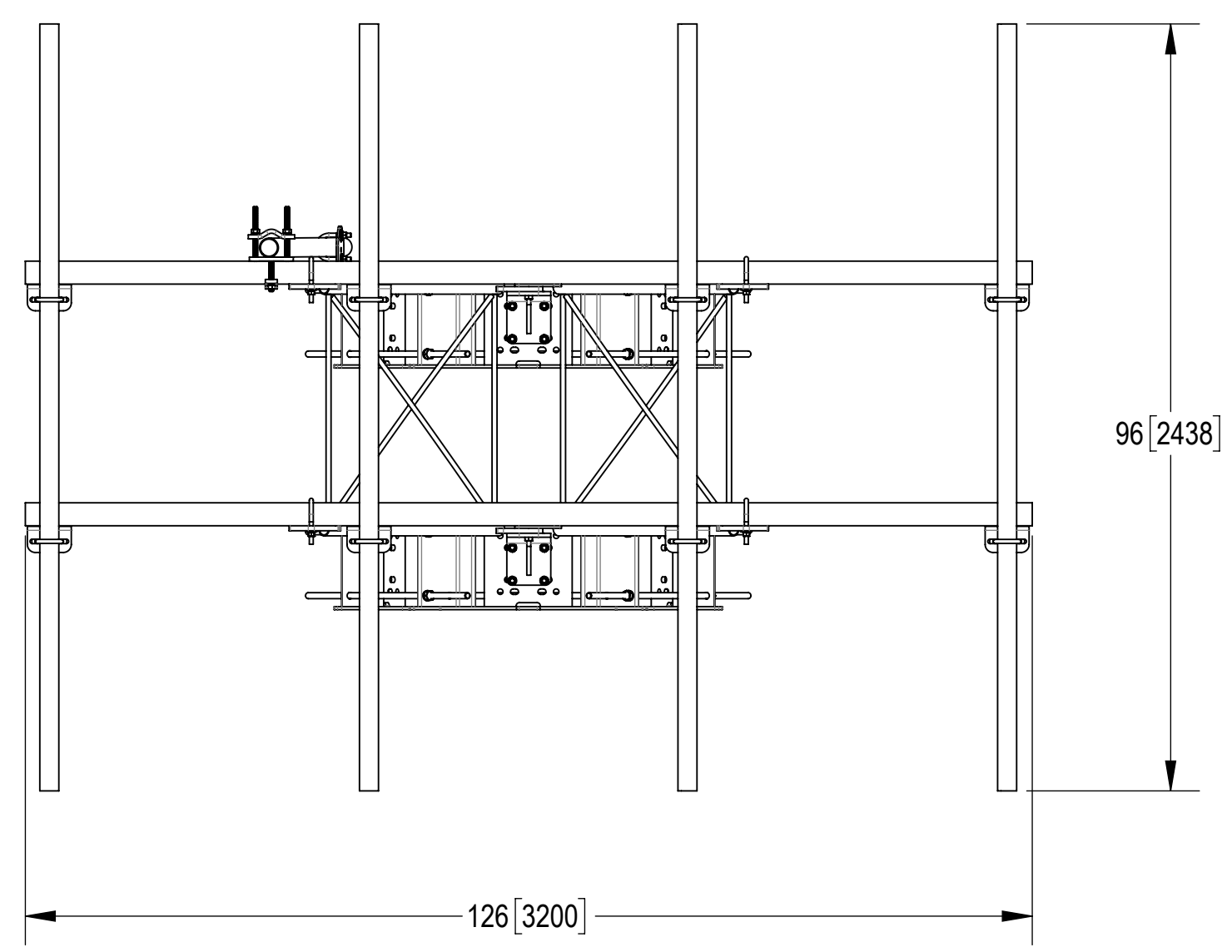
ALLOWABLE TIEBACK ANGLE

±15 DEGREES VERTICAL
±25 DEGREES HORIZONTAL



DETAIL B
SCALE 1 : 4

MCG21HD-10M-12-96 SHOWN FOR REFERENCE
(NOT ALL CONFIGURATIONS INCLUDE ALL ITEMS SEE NOTES IN TABLE ON SHEET 3)



| | | | | |
|-----------------------------------|--------|--------------|--------|-------|
| COMMSCOPE, INC. OF NORTH CAROLINA | | | | |
| TITLE | | | | |
| SECTOR FRAME - MCG21HD | | | | |
| SIZE | SCALE | DOCUMENT NO. | | |
| C | 1:20 | MCG21HD | | |
| DRAWING | | | | SHEET |
| VERSION | STATUS | REVISION | 4 OF 7 | |
| 03 | RE | D | | |

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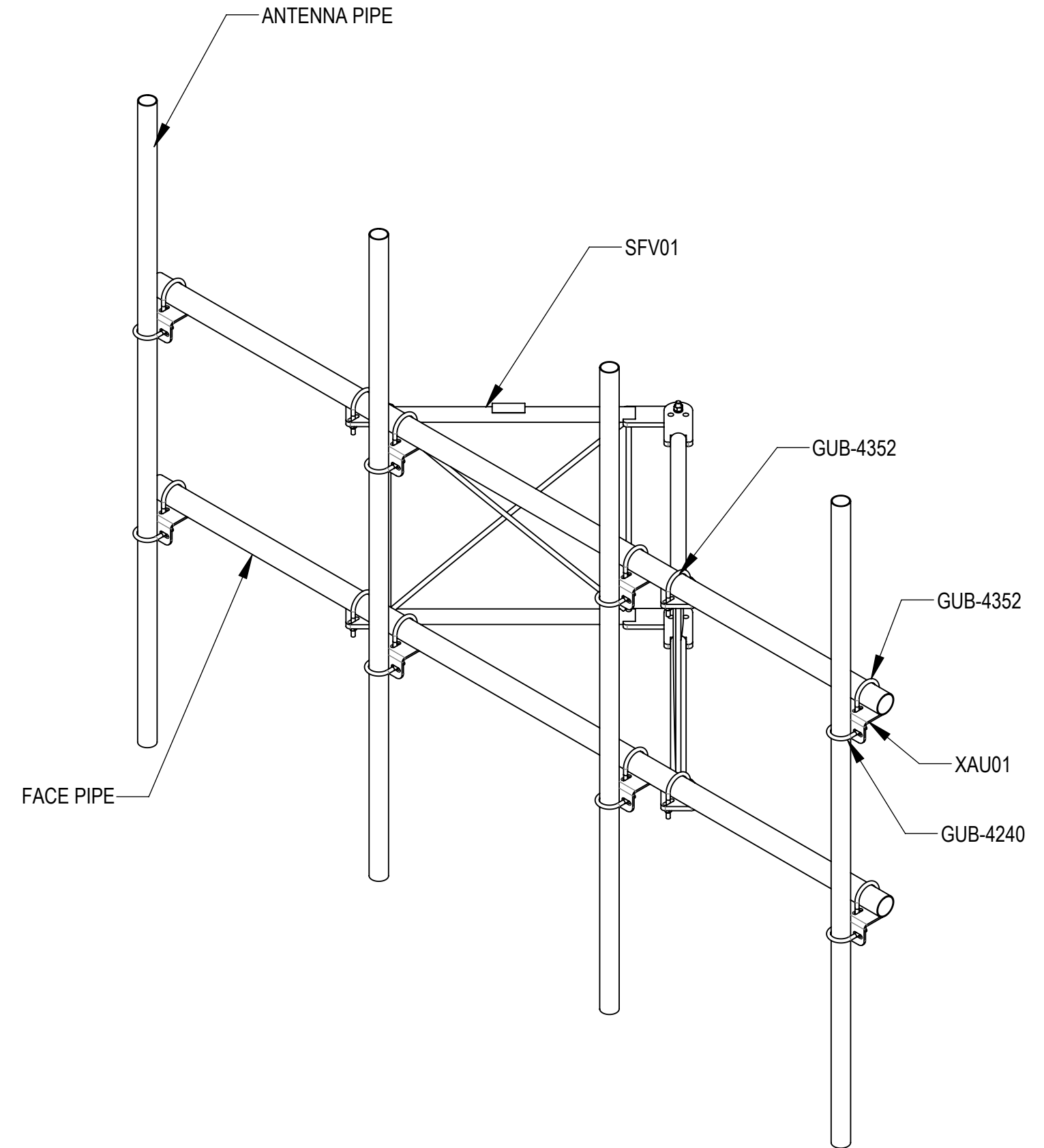
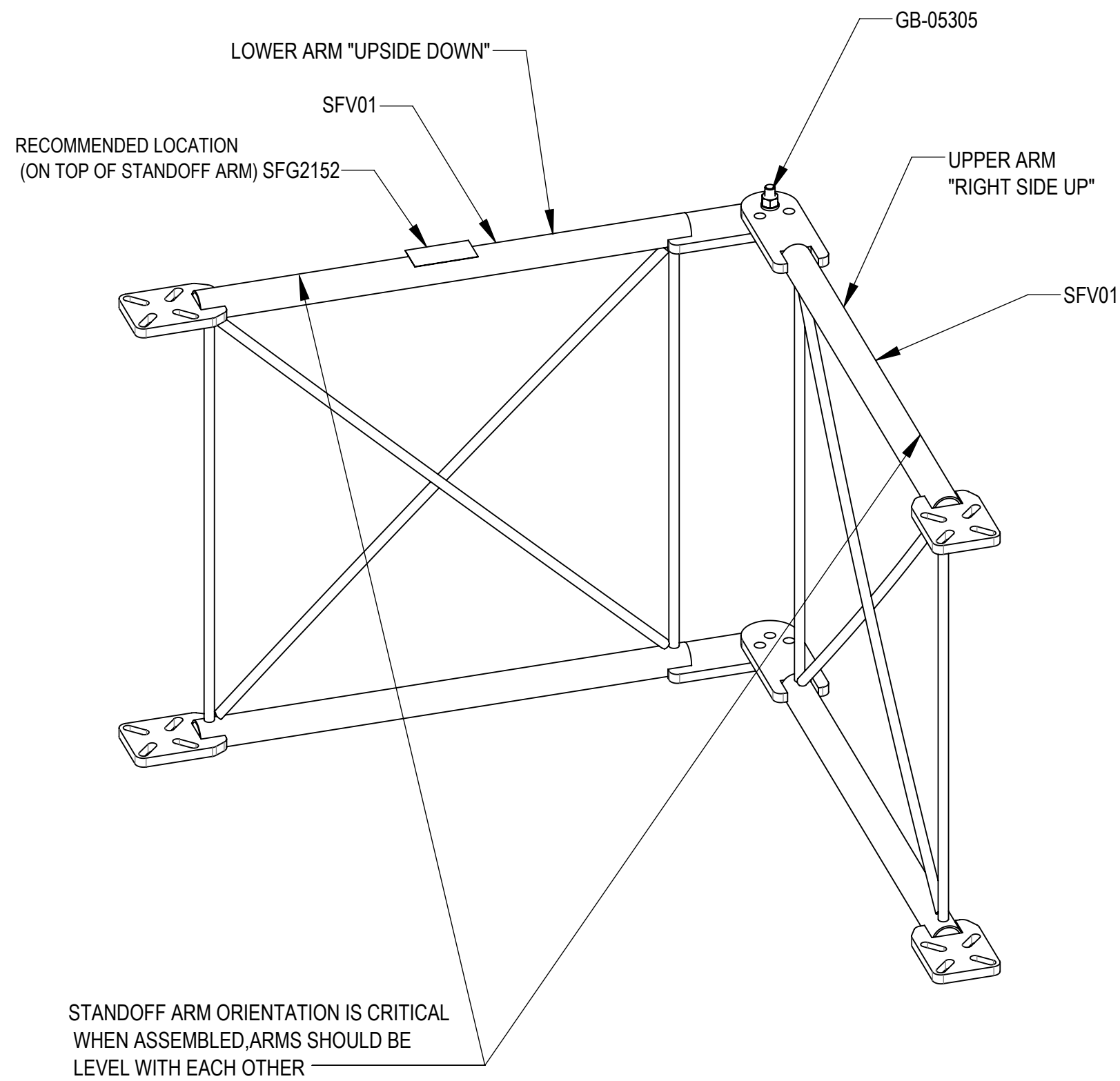
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STEP 1: ATTACH STANDOFF ARMS (SFV01) USING (GB-05305) BOLT KITS

STEP 2: ATTACH FACE PIPES TO STANDOFF ARMS (SFV01) USING U-BOLTS (GUB-4352) AND THEN ATTACH ANTENNA PIPES TO FACE PIPES USING CROSSOVER ANGLES (XAU01) AND U-BOLTS (GUB-4240 AND GUB-4352)



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|-----------------------------------|--------|--------------|--------|-------|
| COMMSCOPE, INC. OF NORTH CAROLINA | | | | |
| TITLE | | | | |
| SECTOR FRAME - MCG21HD | | | | |
| SIZE | SCALE | DOCUMENT NO. | | |
| C | 1:20 | MCG21HD | | |
| DRAWING | | | | SHEET |
| VERSION | STATUS | REVISION | 5 OF 7 | |
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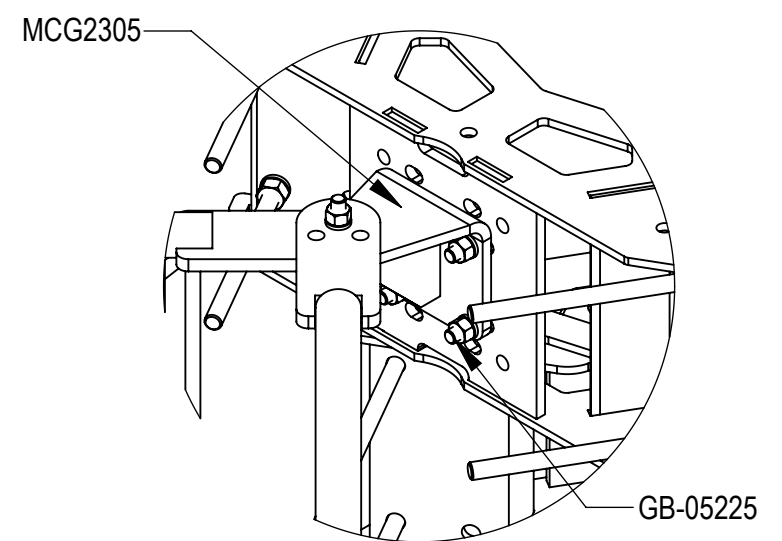
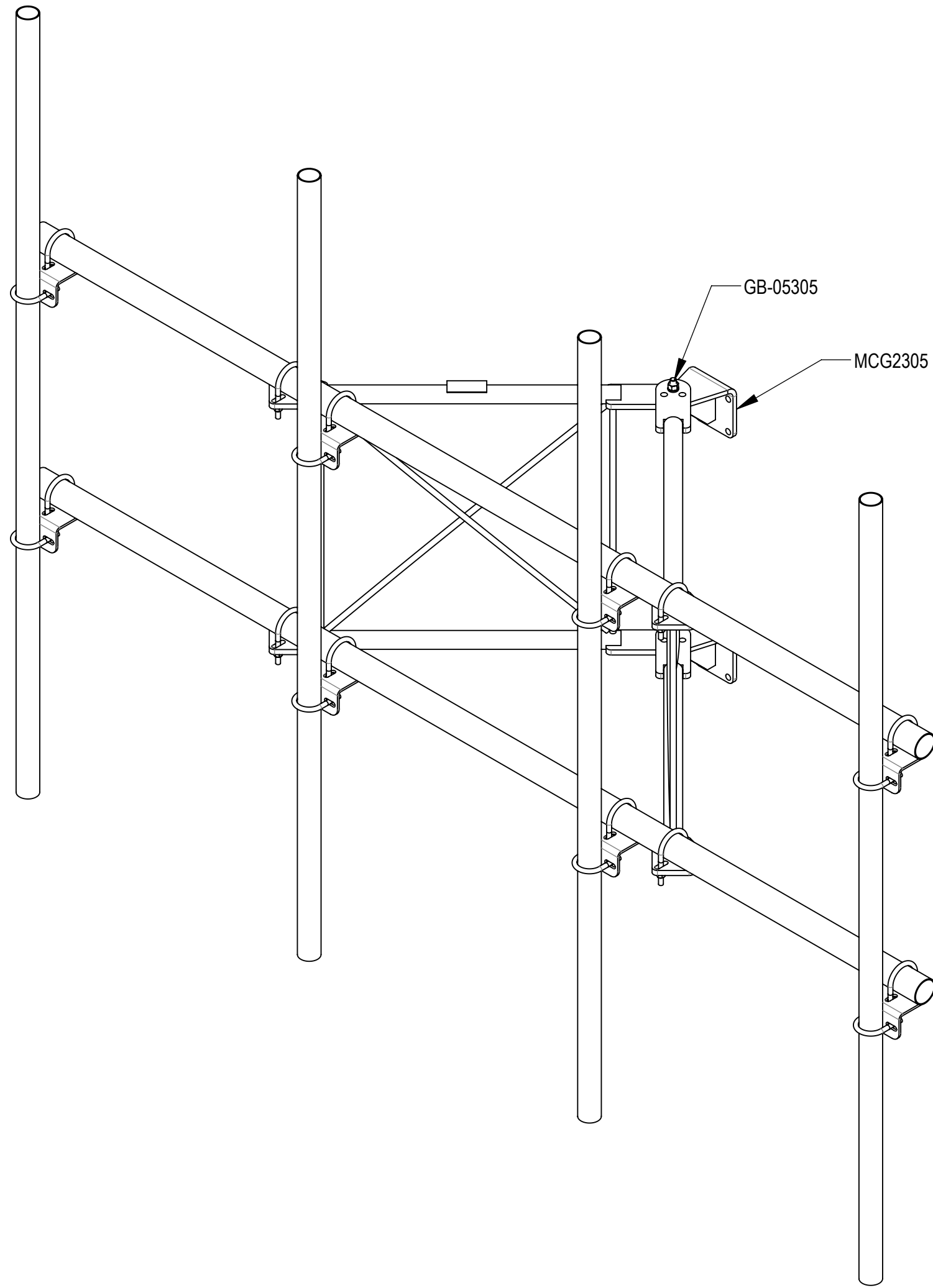
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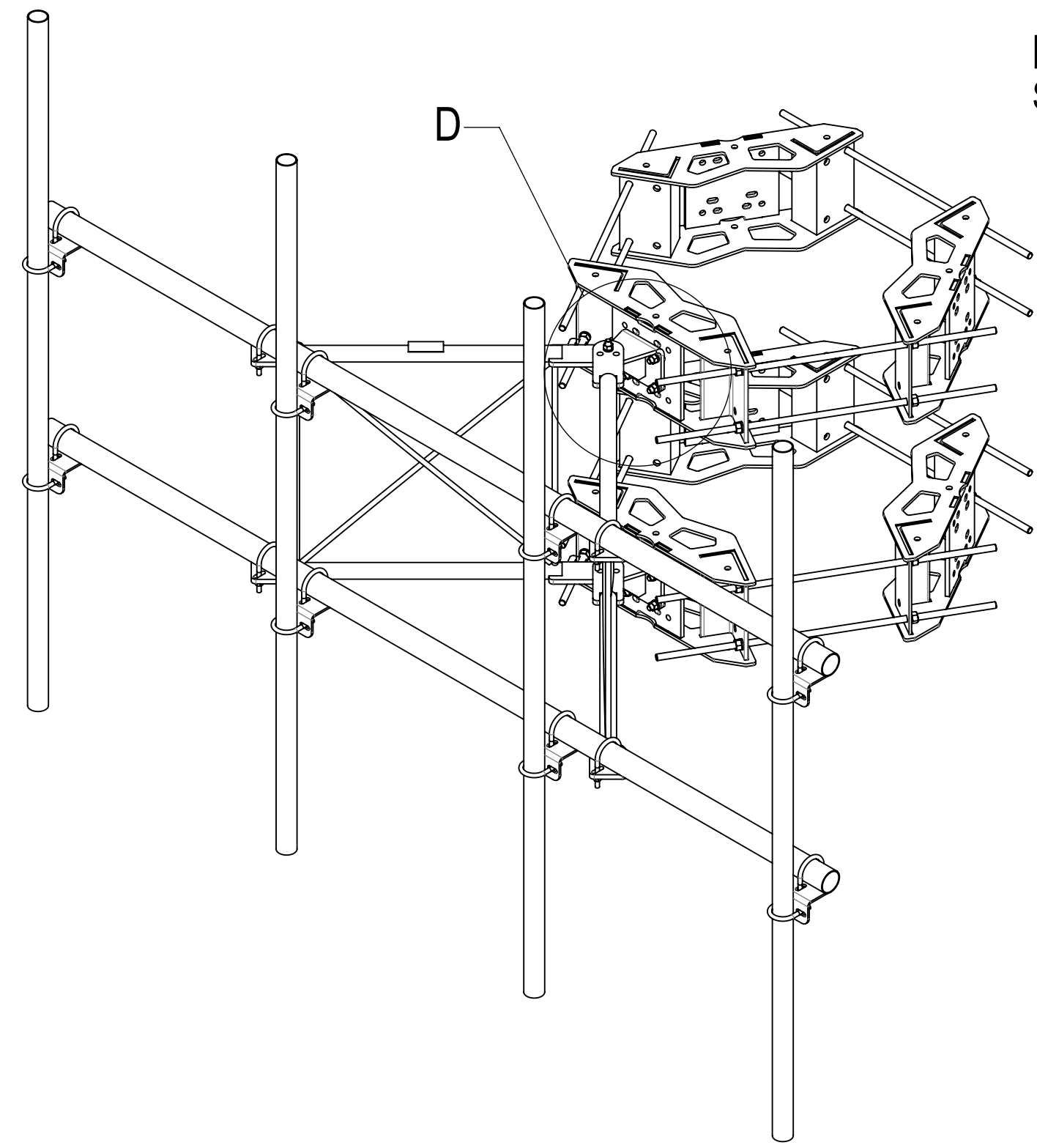
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STEP 3: ATTACH BRACKETS (MCG2305) TO STANDOFF ARMS (SFV01) USING BOLT KITS (GB-05305)

STEP 4: ATTACH BRACKETS (MCG2305) TO RINGMOUNTS USING BOLT KITS (GB-05225)



DETAIL D
SCALE 1 : 8



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|-----------------------------------|----------------------|--------------------------------|--------|----------|
| COMMSCOPE, INC. OF NORTH CAROLINA | | | | |
| TITLE SECTOR FRAME - MCG21HD | | | | |
| SIZE C | SCALE 1:24 | DOCUMENT NO. MCG21HD | | |
| | | DRAWING | | SHEET |
| | | VERSION | STATUS | REVISION |
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| | | | | 6 OF 7 |

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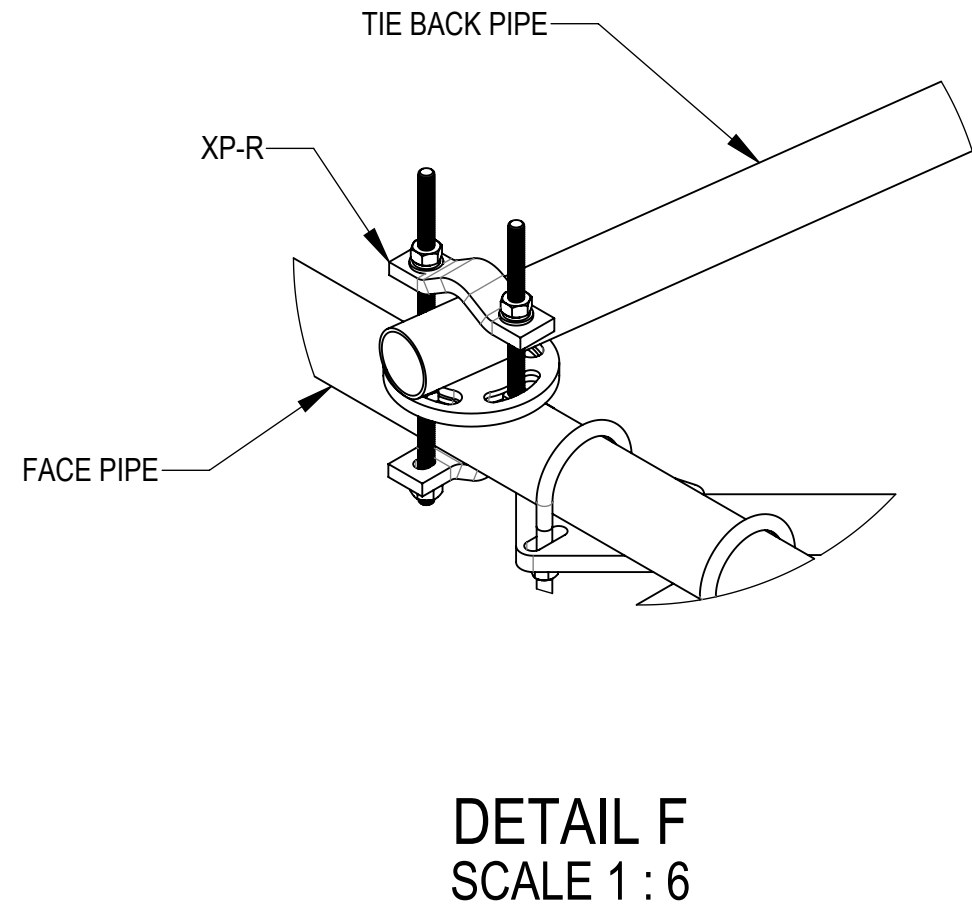
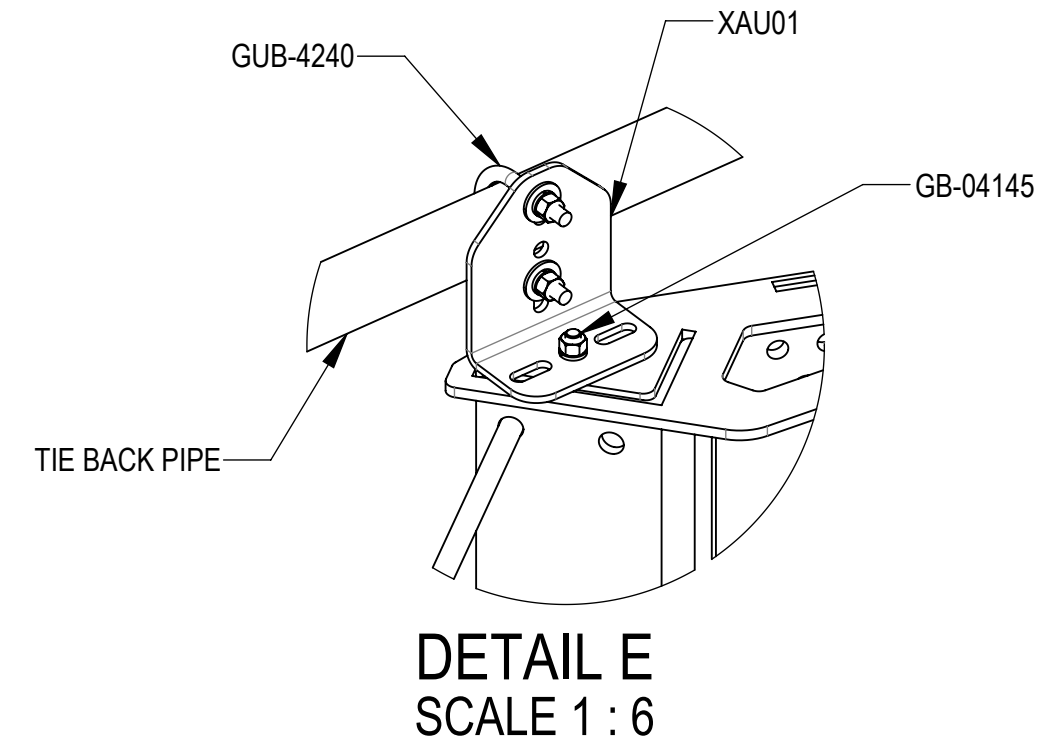
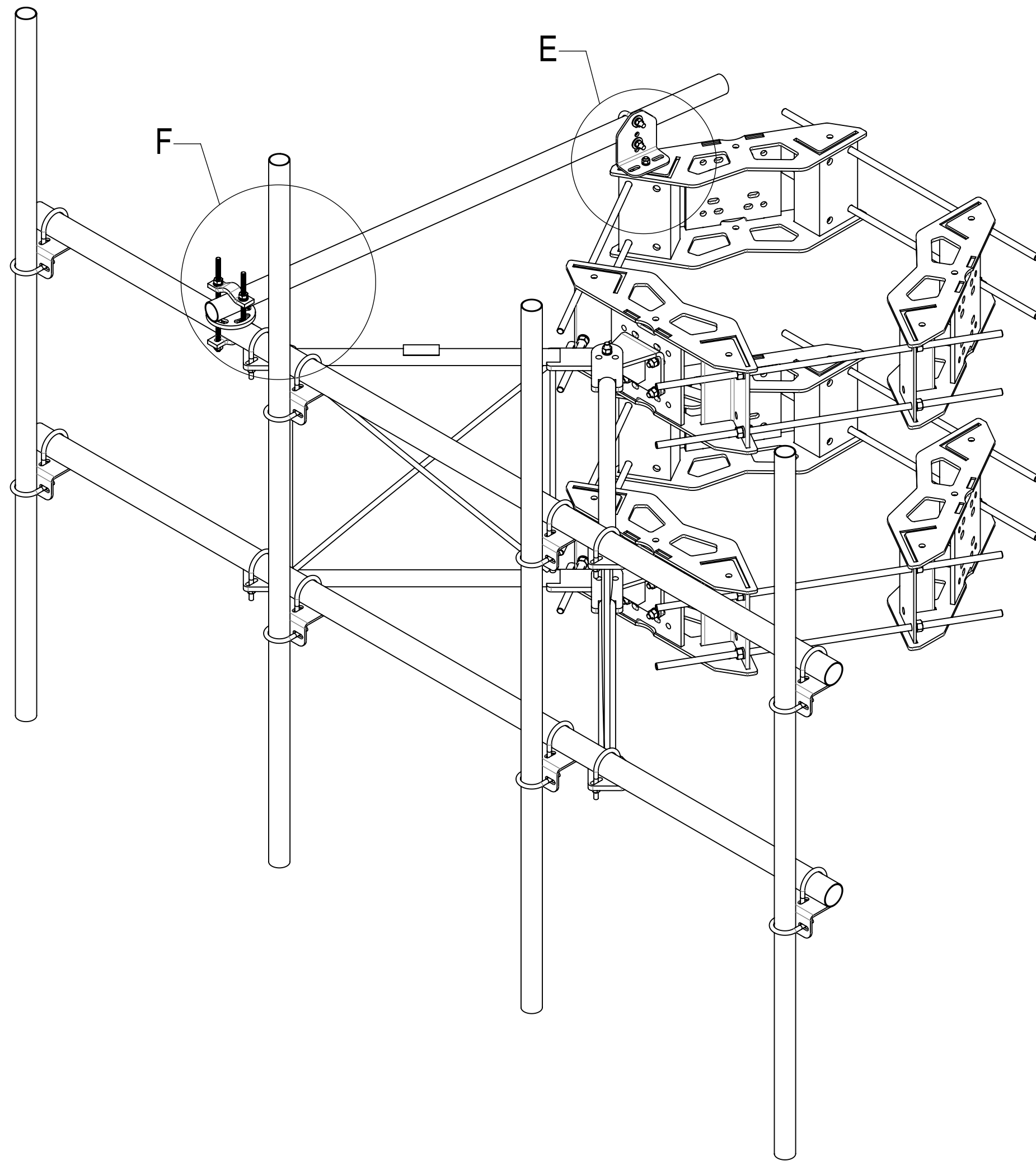
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A

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



| | | | | |
|-----------------------------------|-------|--------------|--------|----------|
| COMMSCOPE, INC. OF NORTH CAROLINA | | | | |
| TITLE | | | | |
| SECTOR FRAME - MCG21HD | | | | |
| SIZE | SCALE | DOCUMENT NO. | | |
| C | 1:8 | MCG21HD | | |
| | | DRAWING | | |
| | | VERSION | STATUS | REVISION |
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| | | | | SHEET |
| | | | | 7 OF 7 |

