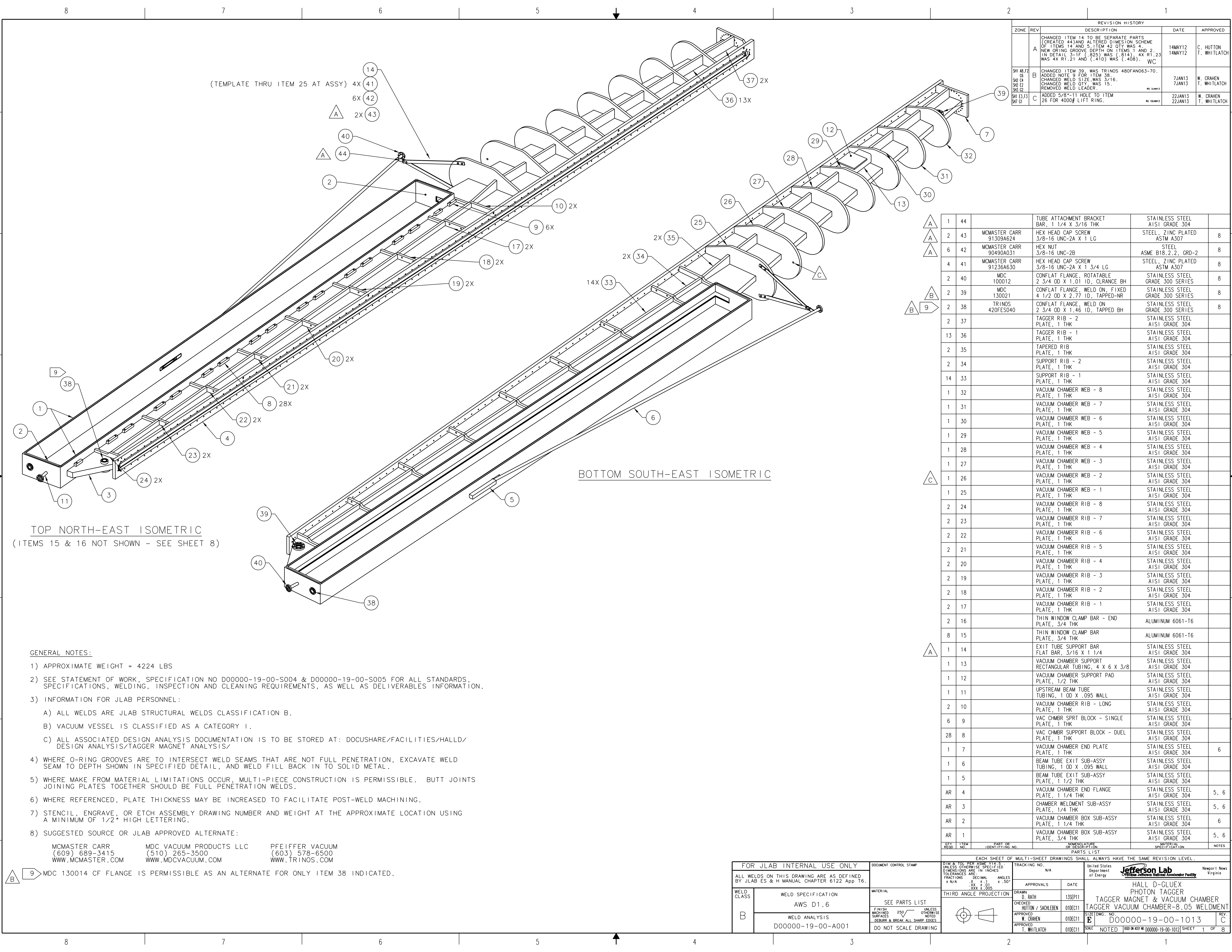




REVISION HISTORY				
ZONE	REV	DESCRIPTION	DATE	APPROVED
SH1 A8.02 902 04 902 02 902 02	A	CHANGED ITEM 14 TO BE SEPARATE PARTS (CREATED 44) AND ALTERED DIMENSION SCHEME OF ITEMS 14 AND 5. ITEM 42 QTY WAS 4. NEW O-RING GROOVE DEPTH ON ITEMS 1 AND 2. IN DETAIL 3-1F (.825) WAS (.814). 4X R1.23 WAS 4X R1.21 AND (.410) WAS (.408). WC	14MAY12 14MAY12	C. HUTTON T. WHITLATCH
	B	CHANGED ITEM 39, WAS TRINOS 480FAN063-70. ADDED NOTE 9 FOR ITEM 39. CHANGED WELD SIZE WAS 3/16. CHANGED WELD QTY. WAS 15. REMOVED WELD LEADER	7JAN13 7JAN13	W. CRAHEN T. WHITLATCH
	C	ADDED 5/8"-11 HOLE TO ITEM 26 FOR 4000# LIFT RING.	22JAN13 22JAN13	W. CRAHEN T. WHITLATCH

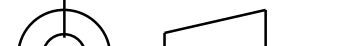
1	44		TUBE ATTACHMENT BRACKET BAR, 1 1/4 X 3/16 THK	STAINLESS STEEL AISI GRADE 304	
2	43	MCMMASTER CARR 91309A624	HEX HEAD CAP SCREW 3/8-16 UNC-2A X 1 LG	STEEL, ZINC PLATED ASTM A307	8
6	42	MCMMASTER CARR 90490A031	HEX NUT 3/8-16 UNC-2B	STEEL ASME B18.2.2, GRD-2	8
4	41	MCMMASTER CARR 91236A630	HEX HEAD CAP SCREW 3/8-16 UNC-2A X 1 3/4 LG	STEEL, ZINC PLATED ASTM A307	8
2	40	MDC 100012	CONFLAT FLANGE, ROTATABLE 2 3/4 OD X 1.01 ID, CLANCE BH	STAINLESS STEEL GRADE 300 SERIES	8
2	39	MDC 130021	CONFLAT FLANGE, WELD ON, FIXED 4 1/2 OD X 2.77 ID, TAPPED-NR	STAINLESS STEEL GRADE 300 SERIES	8
2	38	TRINOS 420FES040	CONFLAT FLANGE, WELD ON 2 3/4 OD X 1.46 ID, TAPPED BH	STAINLESS STEEL GRADE 300 SERIES	8
2	37		TAGGER RIB - 2 PLATE, 1 THK	STAINLESS STEEL AISI GRADE 304	
13	36		TAGGER RIB - 1 PLATE, 1 THK	STAINLESS STEEL AISI GRADE 304	
2	35		TAPERED RIB PLATE, 1 THK	STAINLESS STEEL AISI GRADE 304	
2	34		SUPPORT RIB - 2 PLATE, 1 THK	STAINLESS STEEL AISI GRADE 304	
14	33		SUPPORT RIB - 1 PLATE, 1 THK	STAINLESS STEEL AISI GRADE 304	
1	32		VACUUM CHAMBER WEB - 8 PLATE, 1 THK	STAINLESS STEEL AISI GRADE 304	
1	31		VACUUM CHAMBER WEB - 7 PLATE, 1 THK	STAINLESS STEEL AISI GRADE 304	
1	30		VACUUM CHAMBER WEB - 6 PLATE, 1 THK	STAINLESS STEEL AISI GRADE 304	
1	29		VACUUM CHAMBER WEB - 5 PLATE, 1 THK	STAINLESS STEEL AISI GRADE 304	
1	28		VACUUM CHAMBER WEB - 4 PLATE, 1 THK	STAINLESS STEEL AISI GRADE 304	
1	27		VACUUM CHAMBER WEB - 3 PLATE, 1 THK	STAINLESS STEEL AISI GRADE 304	
1	26		VACUUM CHAMBER WEB - 2 PLATE, 1 THK	STAINLESS STEEL AISI GRADE 304	
1	25		VACUUM CHAMBER WEB - 1 PLATE, 1 THK	STAINLESS STEEL AISI GRADE 304	
2	24		VACUUM CHAMBER RIB - 8 PLATE, 1 THK	STAINLESS STEEL AISI GRADE 304	
2	23		VACUUM CHAMBER RIB - 7 PLATE, 1 THK	STAINLESS STEEL AISI GRADE 304	
2	22		VACUUM CHAMBER RIB - 6 PLATE, 1 THK	STAINLESS STEEL AISI GRADE 304	
2	21		VACUUM CHAMBER RIB - 5 PLATE, 1 THK	STAINLESS STEEL AISI GRADE 304	
2	20		VACUUM CHAMBER RIB - 4 PLATE, 1 THK	STAINLESS STEEL AISI GRADE 304	
2	19		VACUUM CHAMBER RIB - 3 PLATE, 1 THK	STAINLESS STEEL AISI GRADE 304	
2	18		VACUUM CHAMBER RIB - 2 PLATE, 1 THK	STAINLESS STEEL AISI GRADE 304	
2	17		VACUUM CHAMBER RIB - 1 PLATE, 1 THK	STAINLESS STEEL AISI GRADE 304	
2	16		THIN WINDOW CLAMP BAR - END PLATE, 3/4 THK	ALUMINUM 6061-T6	
8	15		THIN WINDOW CLAMP BAR PLATE, 3/4 THK	ALUMINUM 6061-T6	
1	14		EXIT TUBE SUPPORT BAR FLAT BAR, 3/16 X 1 1/4	STAINLESS STEEL AISI GRADE 304	
1	13		VACUUM CHAMBER SUPPORT RECTANGULAR TUBING, 4 X 6 X 3/8	STAINLESS STEEL AISI GRADE 304	
1	12		VACUUM CHAMBER SUPPORT PAD PLATE, 1/2 THK	STAINLESS STEEL AISI GRADE 304	
1	11		UPSTREAM BEAM TUBE TUBING, 1 OD X .095 WALL	STAINLESS STEEL AISI GRADE 304	
2	10		VACUUM CHAMBER RIB - LONG PLATE, 1 THK	STAINLESS STEEL AISI GRADE 304	
6	9		VAC CHMGR SPRT BLOCK - SINGLE PLATE, 1 THK	STAINLESS STEEL AISI GRADE 304	
28	8		VAC CHMGR SUPPORT BLOCK - DUEL PLATE, 1 THK	STAINLESS STEEL AISI GRADE 304	
1	7		VACUUM CHAMBER END PLATE PLATE, 1 THK	STAINLESS STEEL AISI GRADE 304	6
1	6		BEAM TUBE EXIT SUB-ASSY TUBING, 1 OD X .095 WALL	STAINLESS STEEL AISI GRADE 304	
1	5		BEAM TUBE EXIT SUB-ASSY PLATE, 1 1/2 THK	STAINLESS STEEL AISI GRADE 304	
AR	4		VACUUM CHAMBER END FLANGE PLATE, 1 1/4 THK	STAINLESS STEEL AISI GRADE 304	5, 6
AR	3		CHAMBER WELDMENT SUB-ASSY PLATE, 1/4 THK	STAINLESS STEEL AISI GRADE 304	5, 6
AR	2		VACUUM CHAMBER BOX SUB-ASSY PLATE, 1 1/4 THK	STAINLESS STEEL AISI GRADE 304	6
AR	1		VACUUM CHAMBER BOX SUB-ASSY PLATE, 3/4 THK	STAINLESS STEEL AISI GRADE 304	5, 6

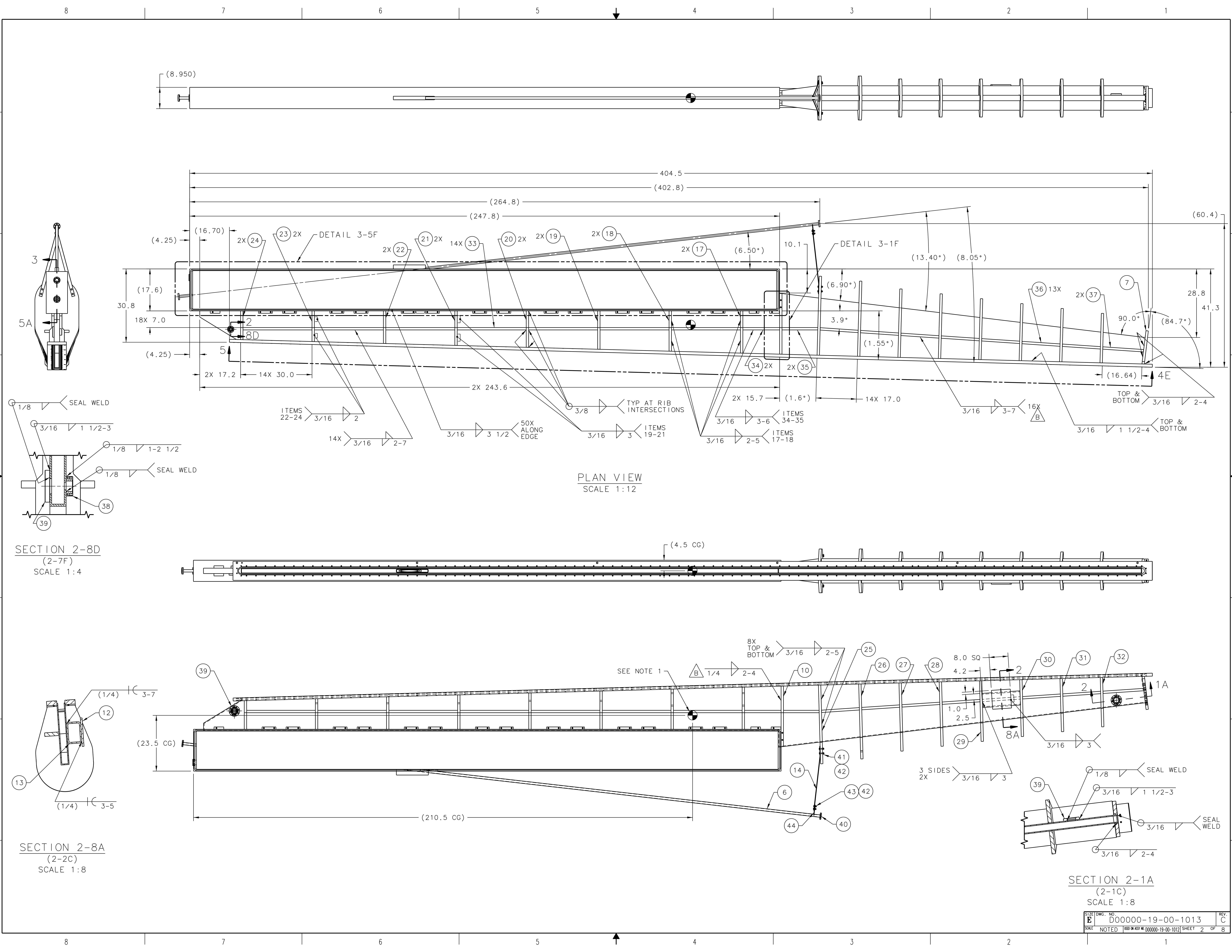
GENERAL NOTES:

- APPROXIMATE WEIGHT = 4224 LBS
- SEE STATEMENT OF WORK, SPECIFICATION NO D00000-19-00-S004 & D00000-19-00-S005 FOR ALL STANDARDS, SPECIFICATIONS, WELDING, INSPECTION AND CLEANING REQUIREMENTS, AS WELL AS DELIVERABLES INFORMATION.
- INFORMATION FOR JLAB PERSONNEL:
 - ALL WELDS ARE JLAB STRUCTURAL WELDS CLASSIFICATION B.
 - VACUUM VESSEL IS CLASSIFIED AS A CATEGORY I.
 - ALL ASSOCIATED DESIGN ANALYSIS DOCUMENTATION IS TO BE STORED AT: DOCUSHARE/FACILITIES/HALLD/DESIGN ANALYSIS/TAGGER MAGNET ANALYSIS/
- WHERE O-RING GROOVES ARE TO INTERSECT WELD SEAMS THAT ARE NOT FULL PENETRATION, EXCAVATE WELD SEAM TO DEPTH SHOWN IN SPECIFIED DETAIL, AND WELD FILL BACK IN TO SOLID METAL.
- WHERE MAKE FROM MATERIAL LIMITATIONS OCCUR, MULTI-PIECE CONSTRUCTION IS PERMISSIBLE. BUTT JOINTS JOINING PLATES TOGETHER SHOULD BE FULL PENETRATION WELDS.
- WHERE REFERENCED, PLATE THICKNESS MAY BE INCREASED TO FACILITATE POST-WELD MACHINING.
- STENCIL, ENGRAVE, OR ETCH ASSEMBLY DRAWING NUMBER AND WEIGHT AT THE APPROXIMATE LOCATION USING A MINIMUM OF 1/2" HIGH LETTERING.
- SUGGESTED SOURCE OR JLAB APPROVED ALTERNATE:

MCMMASTER CARR (609) 689-3415 WWW.MCMMASTER.COM	MDC VACUUM PRODUCTS LLC (510) 265-3500 WWW.MDCVACUUM.COM	PFEIFFER VACUUM (603) 578-6500 WWW.TRINOS.COM
---	--	---

9 MDC 130014 CF FLANGE IS PERMISSIBLE AS AN ALTERNATE FOR ONLY ITEM 38 INDICATED.

FOR JLAB INTERNAL USE ONLY			DOCUMENT CONTROL STAMP			DIM & TOL PER ASME Y14.5 - UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE FRACTIONS ± N/A DECIMAL ± .1 ANGLES ± .50° ± .005			TRACKING NO. N/A			United States Department of Energy			Jefferson Lab Continuous Accelerator Facility			Newport News Virginia		
ALL WELDS IN THIS DRAWING ARE AS DEFINED BY JLAB ES & H MANUAL, CHAPTER 6122 APP T6.																				
WELD CLASS		WELD SPECIFICATION				MATERIAL		THIRD ANGLE PROJECTION		DRAWN BY		DATE		HALL D-GLUEX PHOTON TAGGER TAGGER MAGNET & VACUUM CHAMBER TAGGER VACUUM CHAMBER-8.05 WELDMENT						
B		AWS D1.6				SEE PARTS LIST				13SEP11										
		WELD ANALYSIS				F FINISH 250 UNLESS MACHINED SURFACES DEBUR & BREAK ALL SHARP EDGES DO NOT SCALE DRAWING				CHECKED BY		01DEC11		SIZE (DWG. NO.) E D00000-19-00-1013 REV. C						
		D00000-19-00-A001								APPROVED BY		01DEC11		SCALE NOTED		USED ON KIST NO. D00000-19-00-1012 SHEET 1 OF 8				



Technical drawing of a ship's hull structure, showing various views and sections.

PLAN VIEW
SCALE 1:12

SECTION 2-8D
(2-7F)
SCALE 1:4

SECTION 2-8A
(2-2C)
SCALE 1:8

SECTION 2-1A
(2-1C)
SCALE 1:8

DETAILS:

- DETAIL 3-5F
- DETAIL 3-1F
- DETAIL 3-7
- DETAIL 3-8
- DETAIL 3-9
- DETAIL 3-10
- DETAIL 3-11
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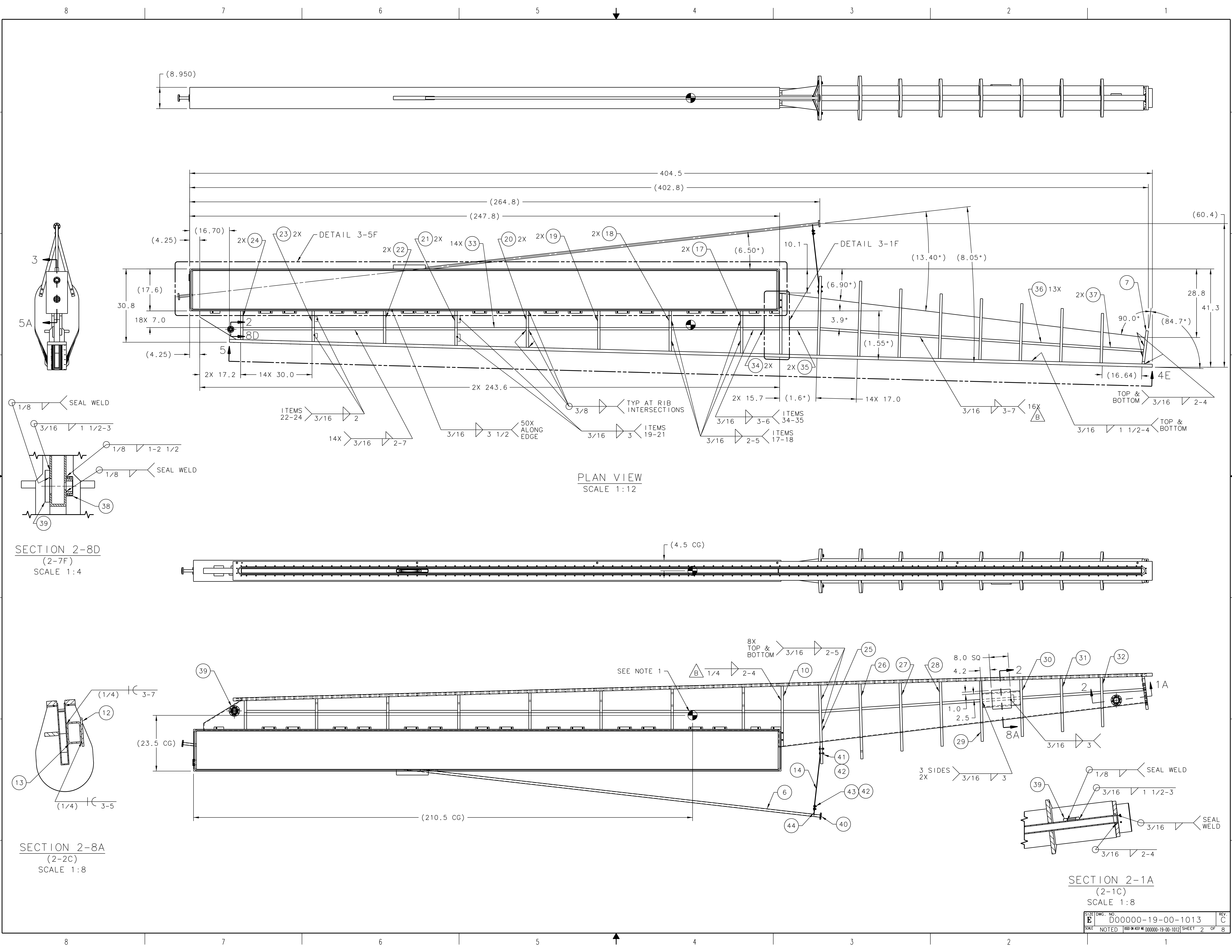
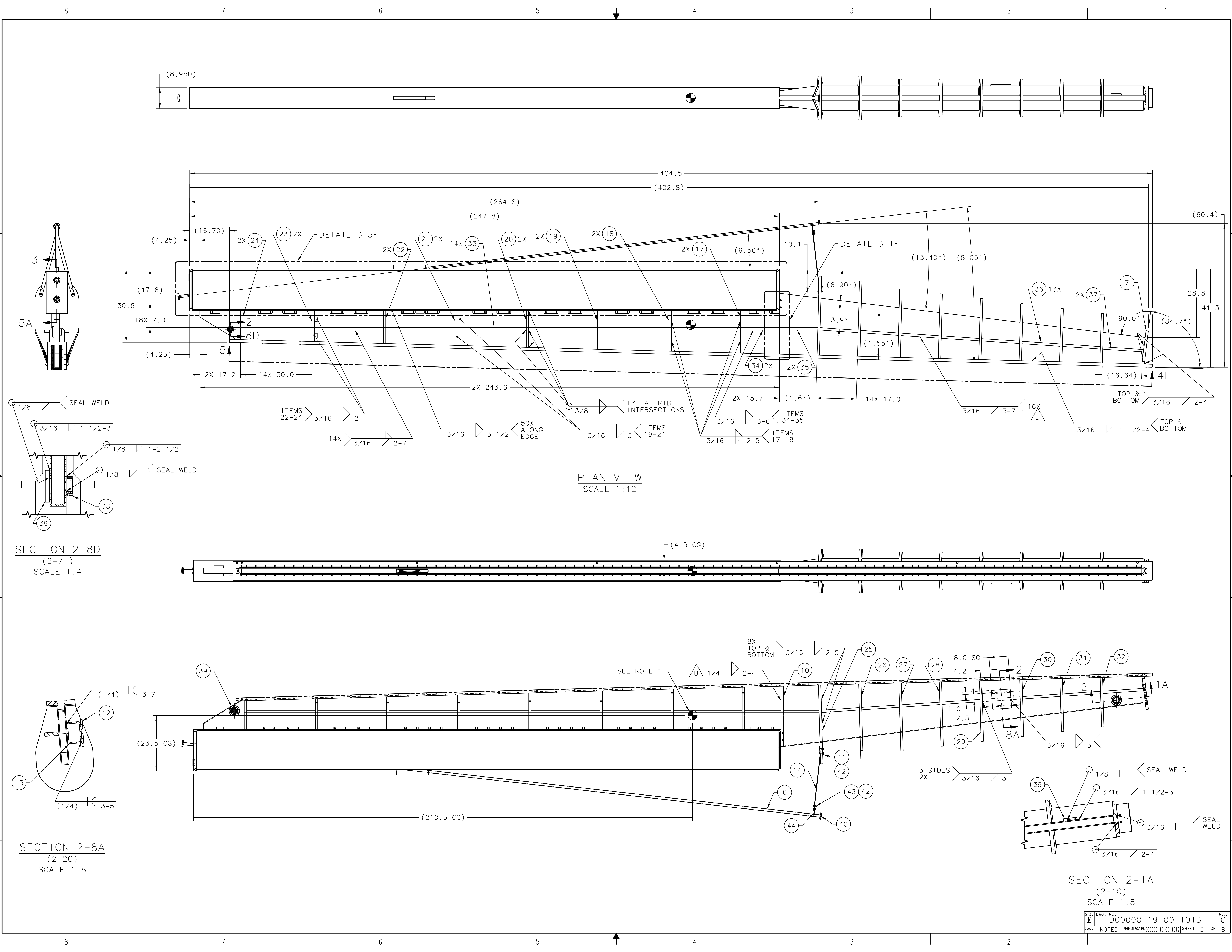
- ITEMS 22-24
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NOTES:

- SEE NOTE 1
- 50X ALONG EDGE
- 8X TOP & BOTTOM
- 3 SIDES
- 8.0 SQ
- 4.2
- 1.0
- 2.5
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REVISIONS:

REV	DESCRIPTION
1	INITIAL DESIGN
2	REVISIONS
3	REVISIONS
4	REVISIONS
5	REVISIONS
6	REVISIONS
7	REVISIONS
8	REVISIONS
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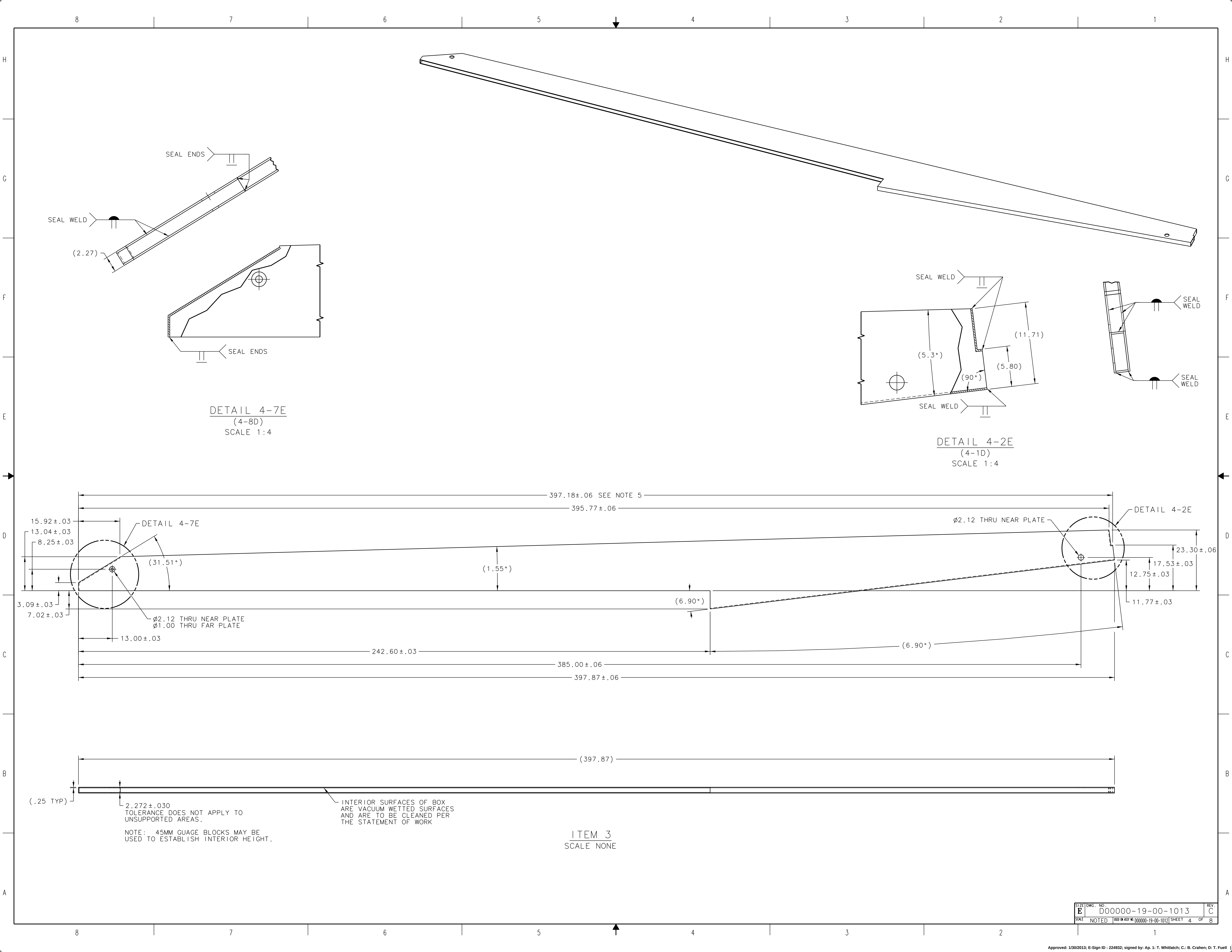


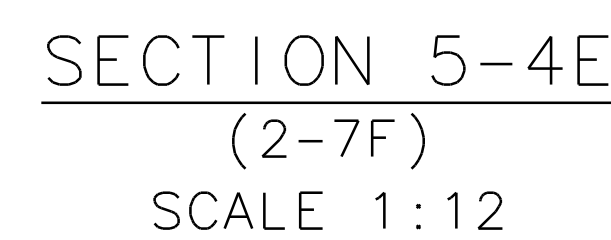
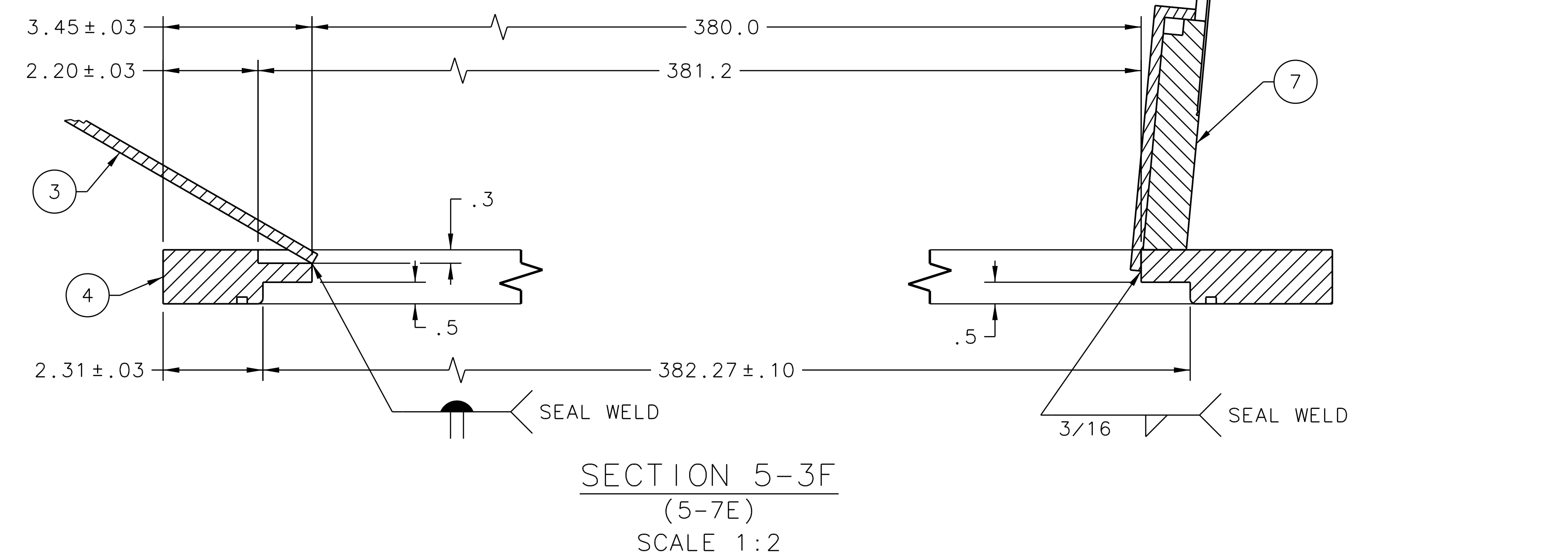
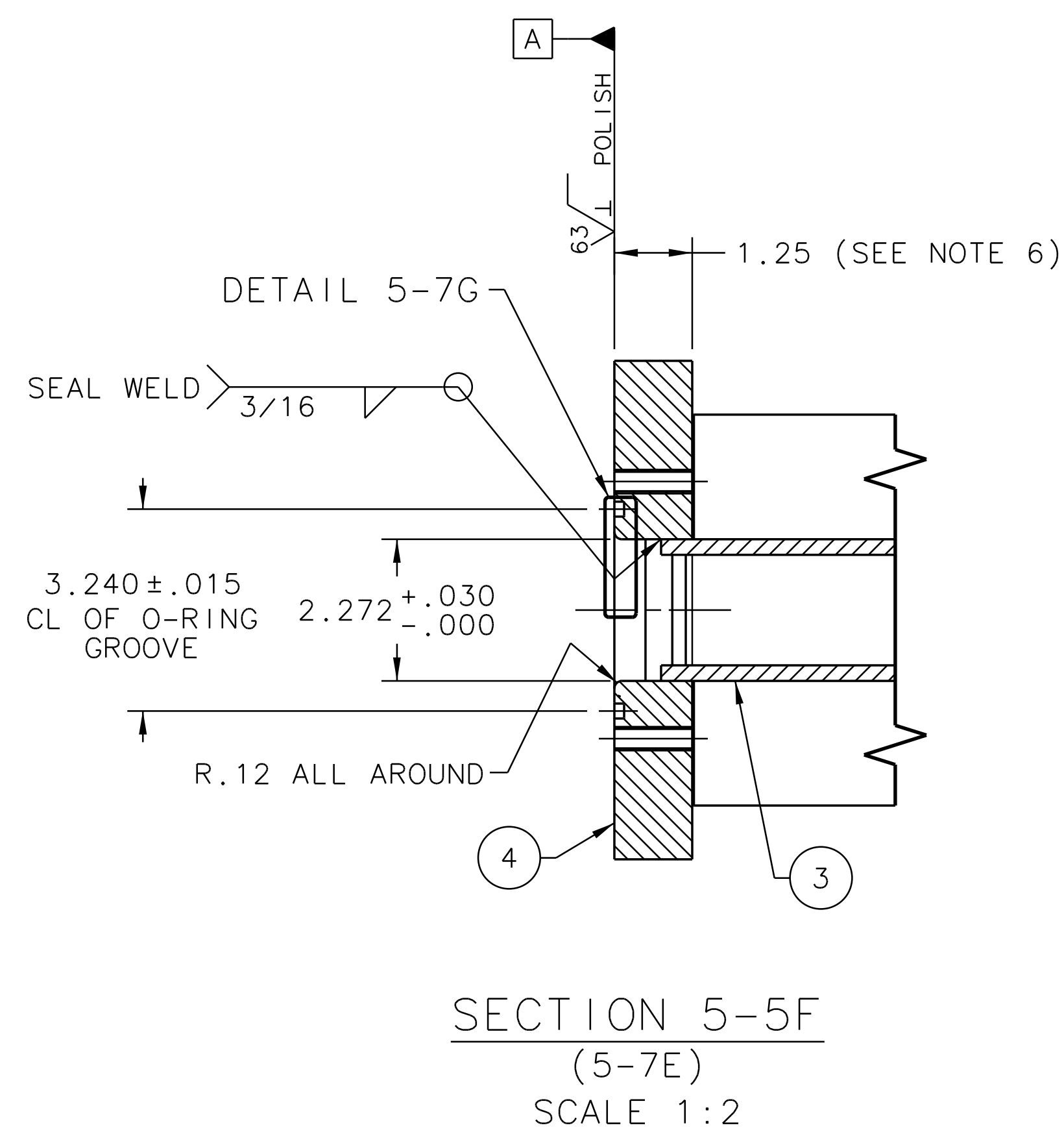
This technical drawing illustrates the structural details of a ship's hull section. The main component shown is a longitudinal hull girder with various stiffeners and internal structures.

- PLAN VIEW (SCALE 1:12):** Shows the top-down perspective of the hull section. Key dimensions include a total length of 404.5 units and a width of 60.4 units at the stern. Numerous stiffeners are identified by callouts such as 2X 24, 2X 23, 2X 22, 2X 21, 14X 33, 2X 20, 2X 19, 2X 18, 2X 17, 2X 16, 2X 15, 2X 14, 2X 13, 2X 12, 2X 11, 2X 10, 2X 9, 2X 8, 2X 7, 2X 6, 2X 5, 2X 4, 2X 3, 2X 2, 2X 1, 2X 0, 2X -1, 2X -2, 2X -3, 2X -4, 2X -5, 2X -6, 2X -7, 2X -8, 2X -9, 2X -10, 2X -11, 2X -12, 2X -13, 2X -14, 2X -15, 2X -16, 2X -17, 2X -18, 2X -19, 2X -20, 2X -21, 2X -22, 2X -23, 2X -24, 2X -25, 2X -26, 2X -27, 2X -28, 2X -29, 2X -30, 2X -31, 2X -32, 2X -33, 2X -34, 2X -35, 2X -36, 2X -37, 2X -38, 2X -39, 2X -40, 2X -41, 2X -42, 2X -43, 2X -44, 2X -45, 2X -46, 2X -47, 2X -48, 2X -49, 2X -50. Details 3-5F and 3-1F are also indicated.
- SECTION 2-8D (2-7F) (SCALE 1:4):** A cross-section view showing the internal structure of the hull girder, including the keel, bottom plates, and stiffeners. It highlights the connection between the hull and the deck.
- SECTION 2-8A (2-2C) (SCALE 1:8):** Another cross-section view, showing the hull girder from a different angle, emphasizing the internal stiffening and the relationship between the hull and the deck.
- SECTION 2-1A (2-1C) (SCALE 1:8):** A detailed cross-section of the hull girder, showing the internal structure, including the keel, bottom plates, and stiffeners. It includes a note "SEE NOTE 1" and a dimension of 210.5 CG.

The drawing uses standard engineering notation for dimensions, tolerances, and material specifications. Callouts identify specific components and their locations within the hull structure.

[illegible]





8

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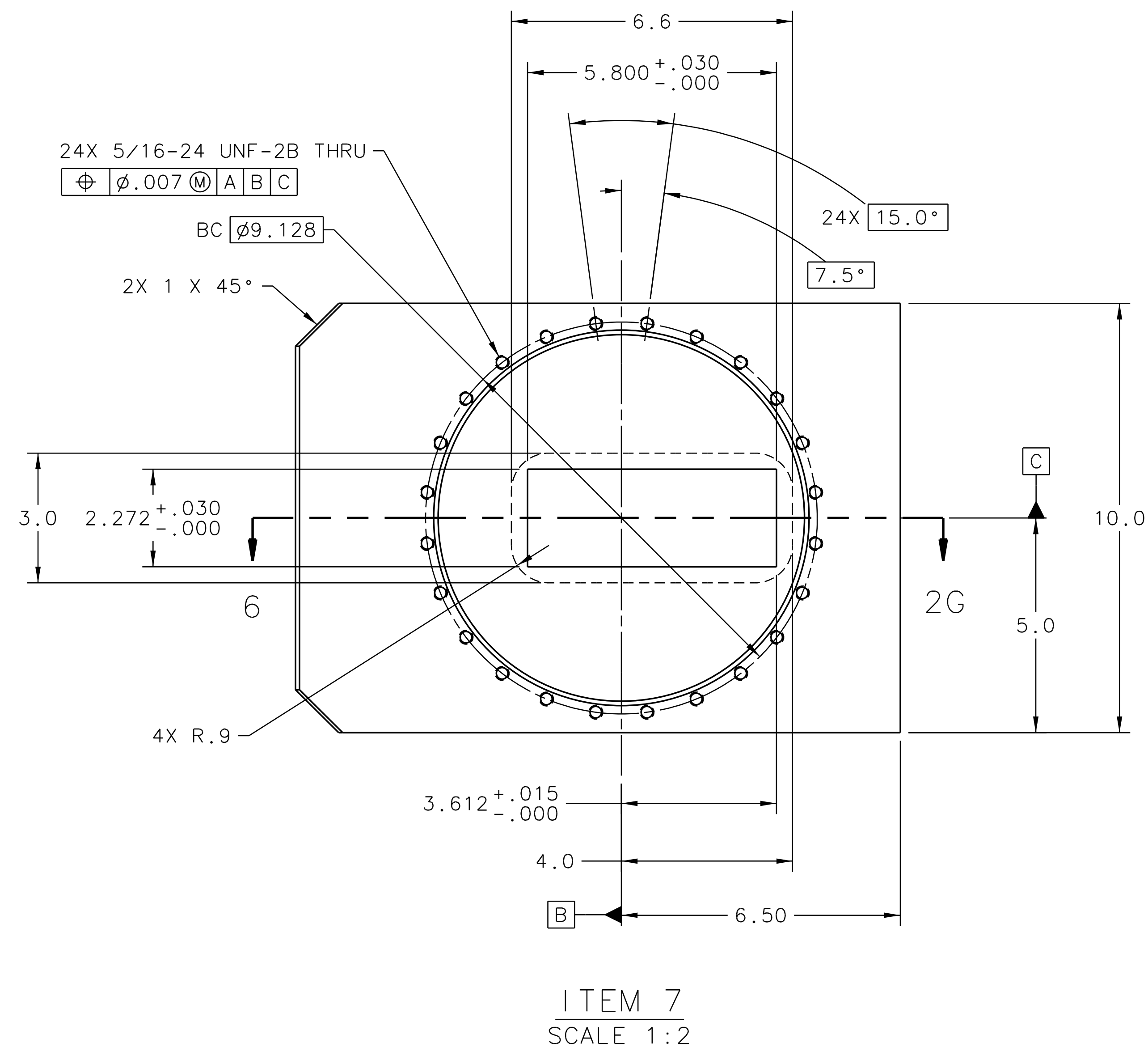
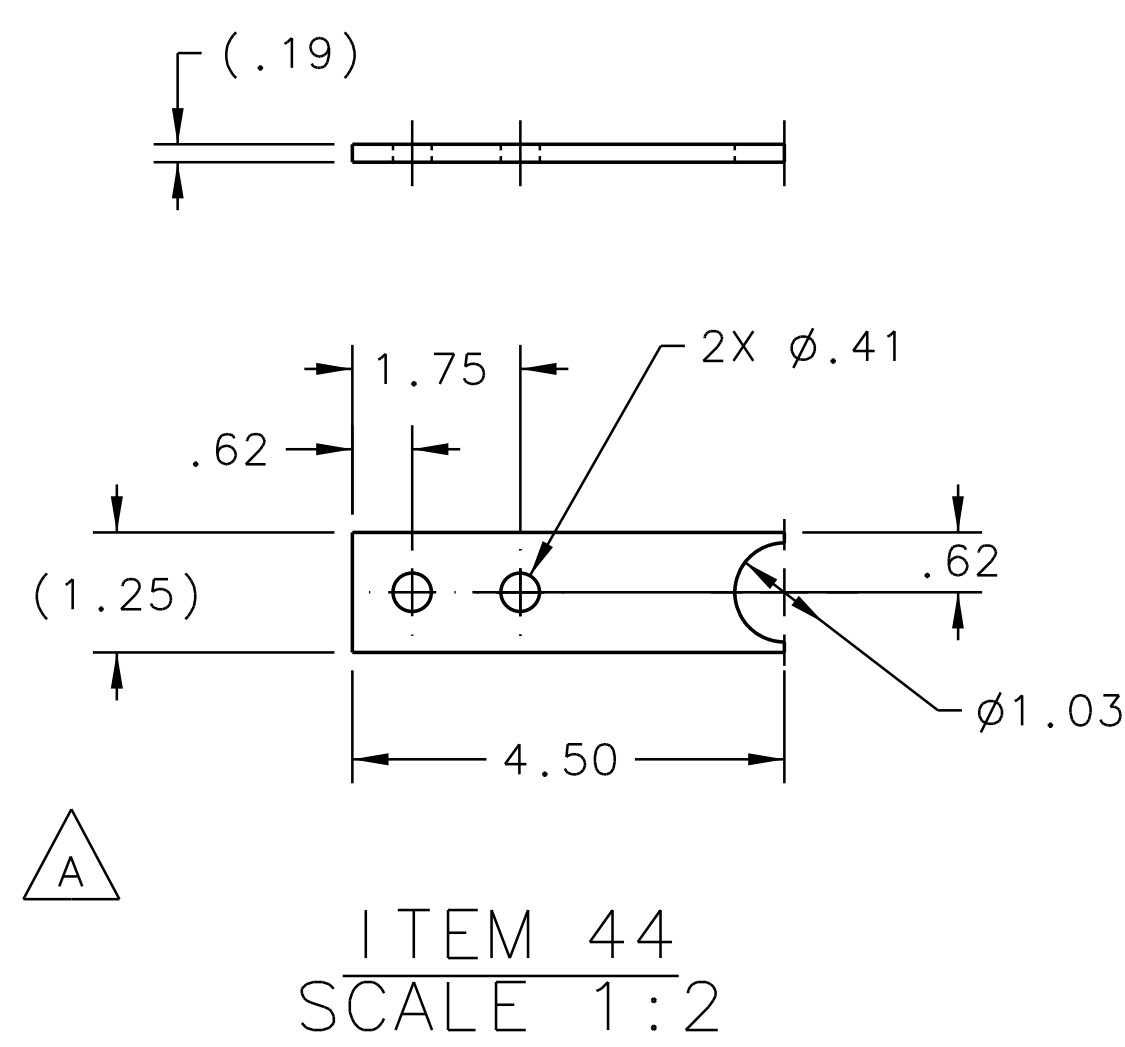
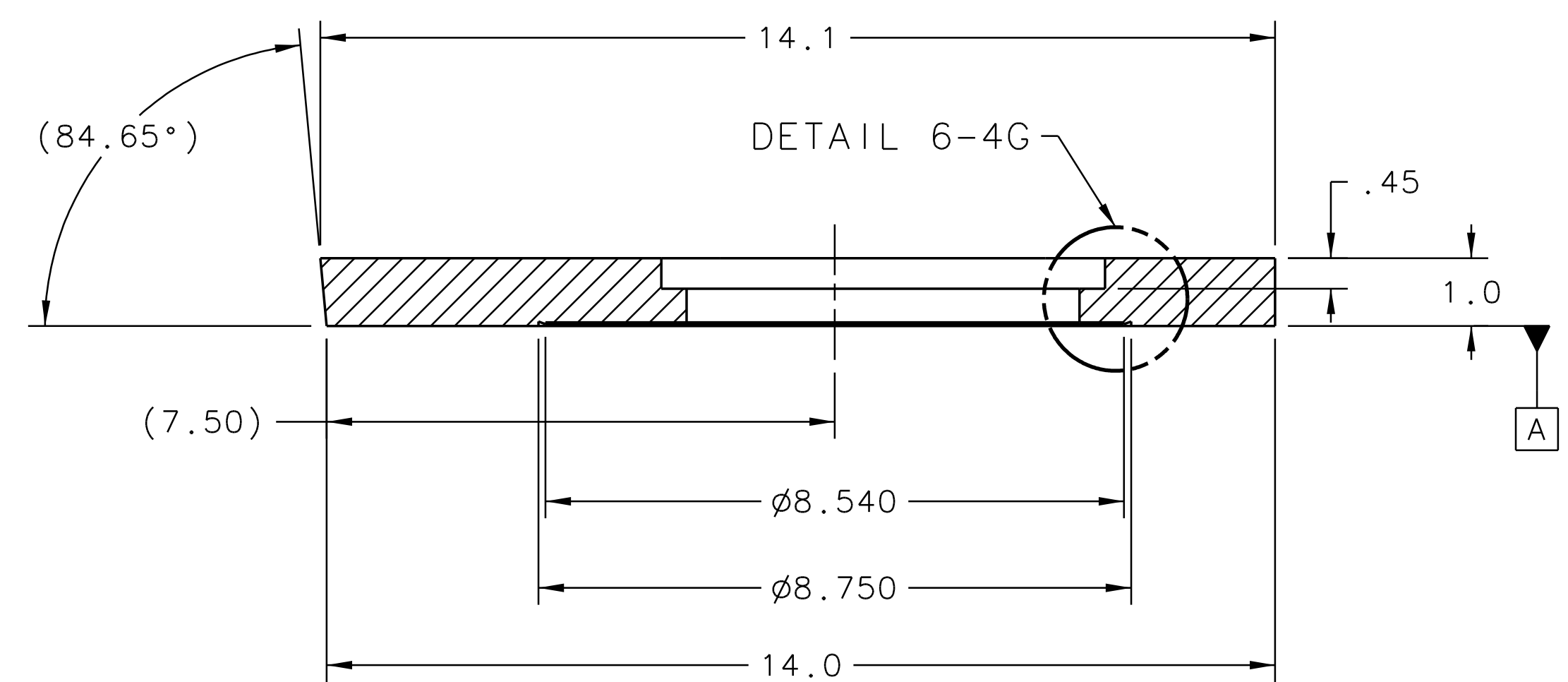
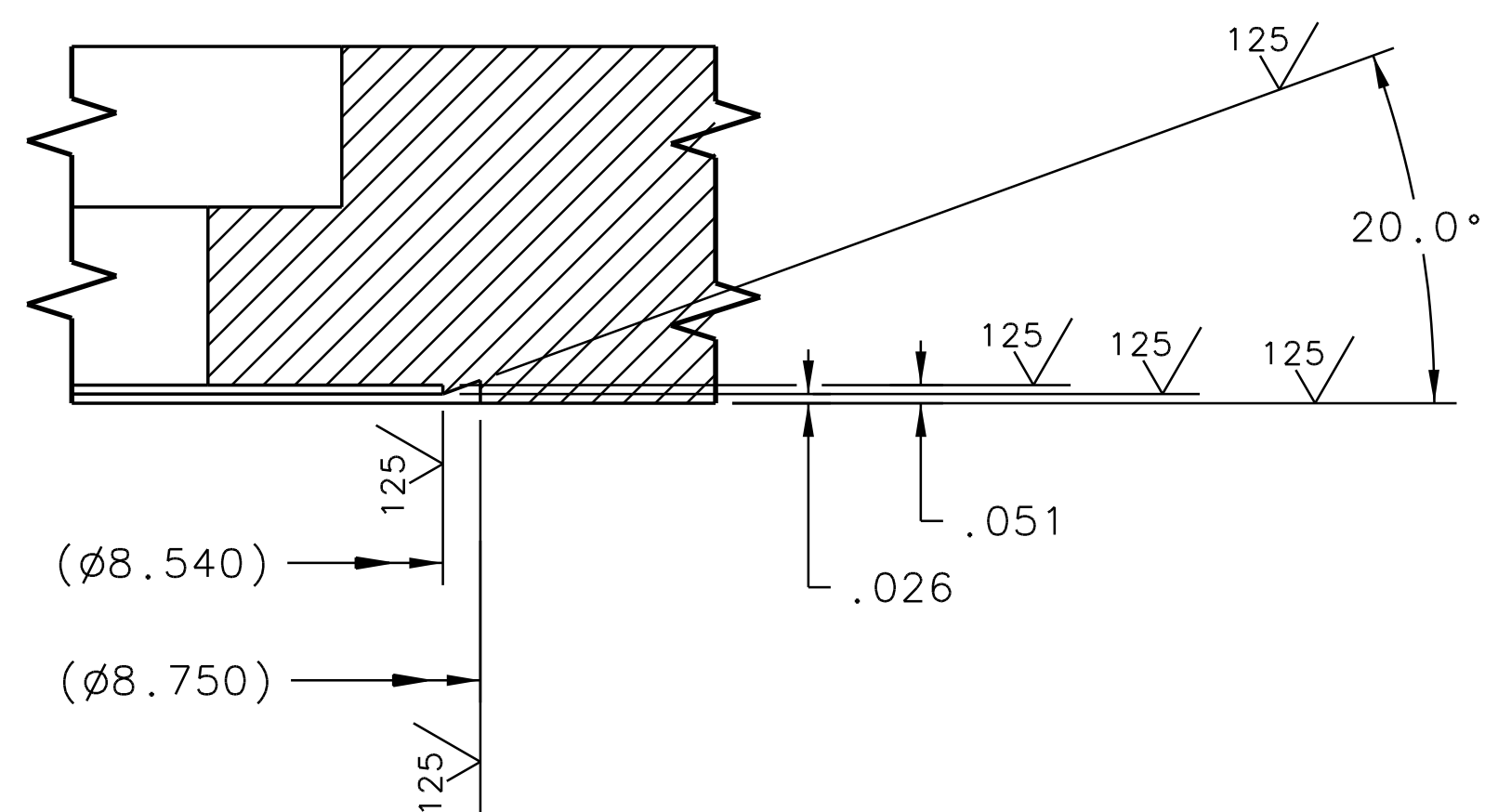
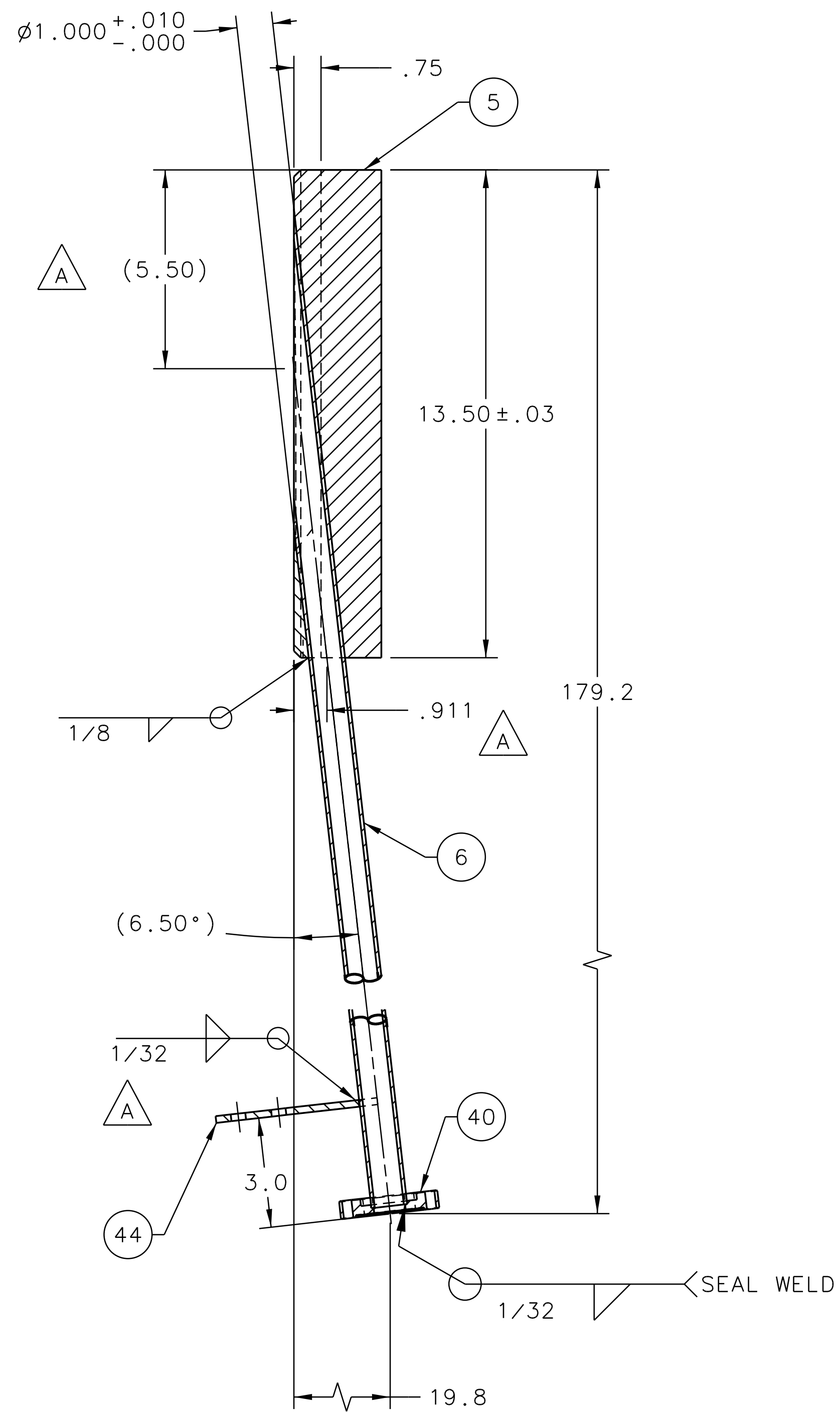
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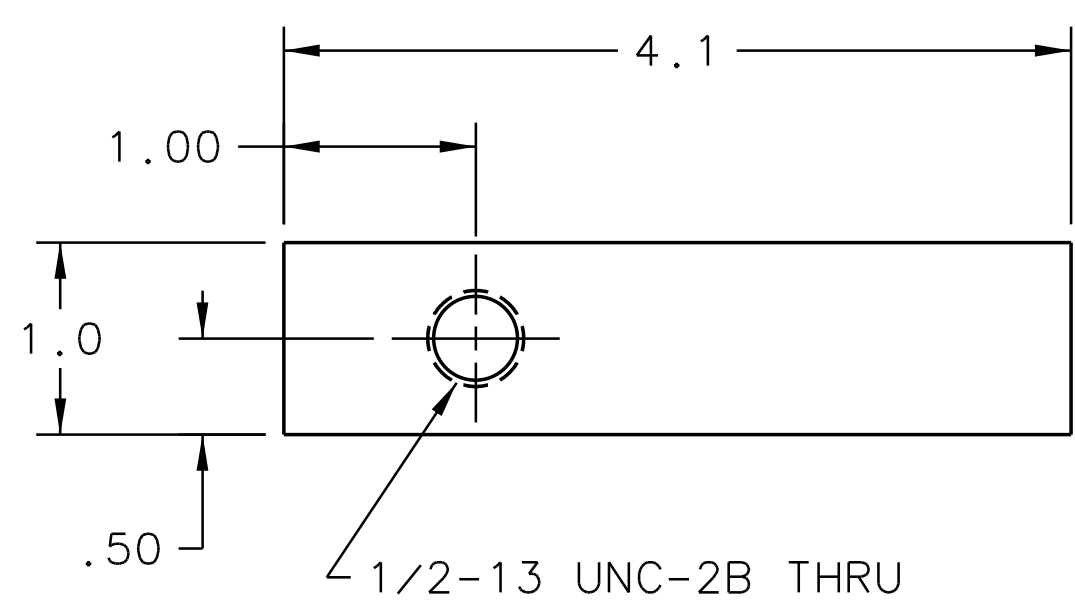
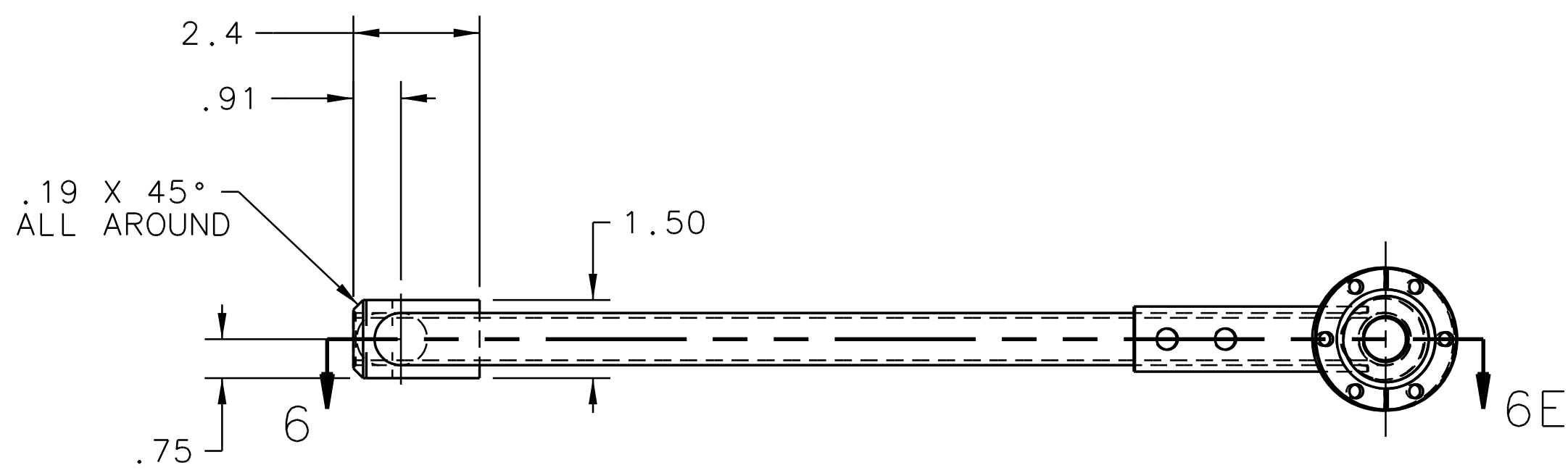
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4X R.5

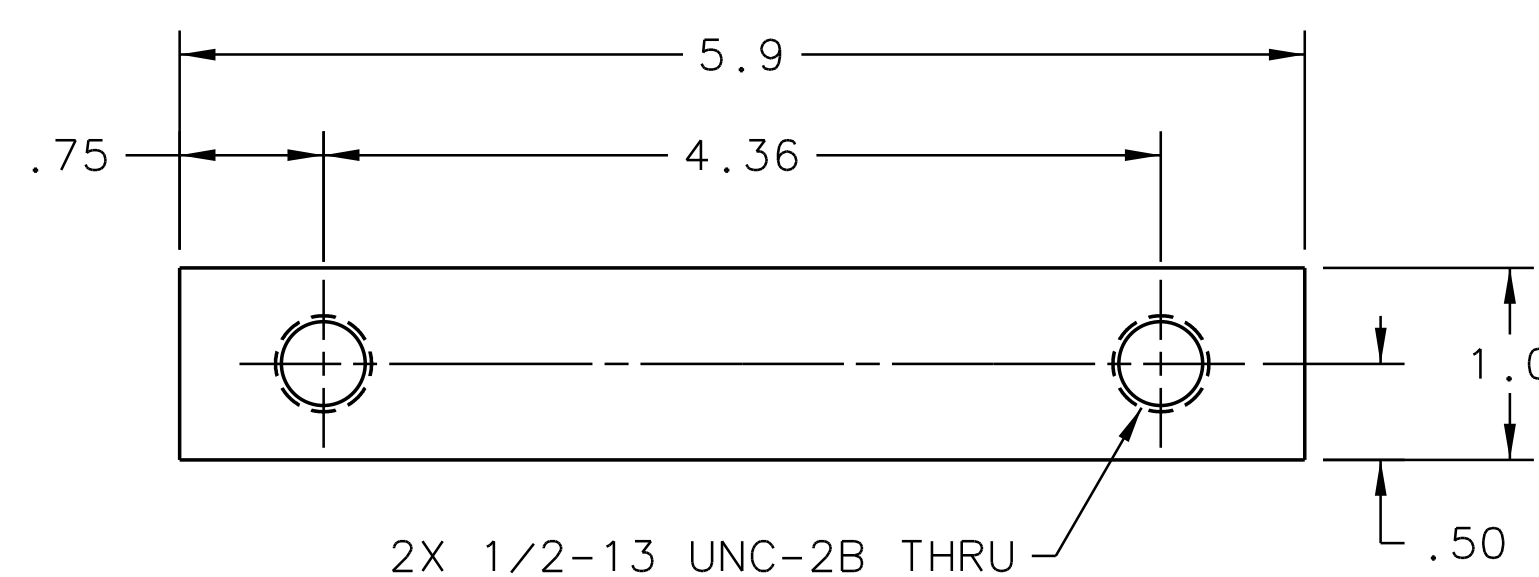
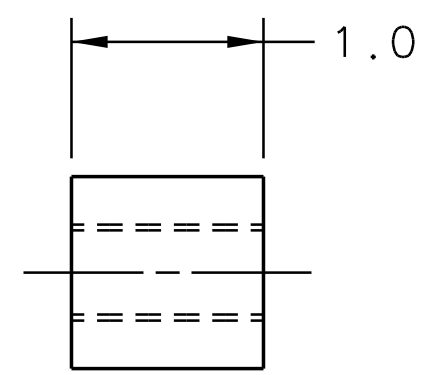
1/16 SEAL WELD



BEAM TUBE EXIT SUB-ASSY
(CONSISTS OF ITEMS 5, 6, & 40)
SCALE NONE

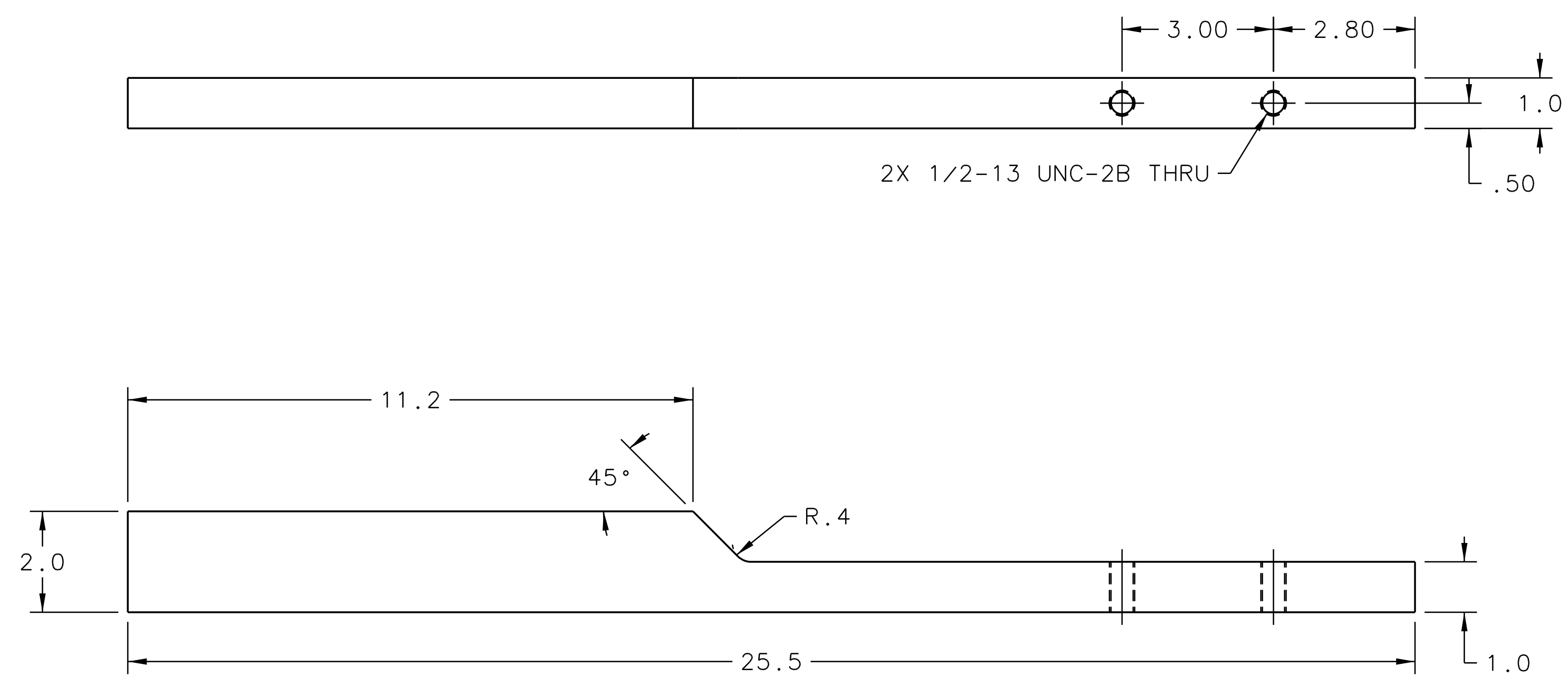
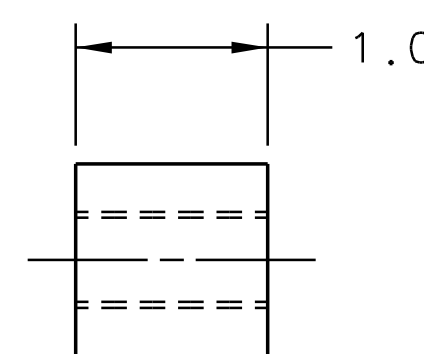


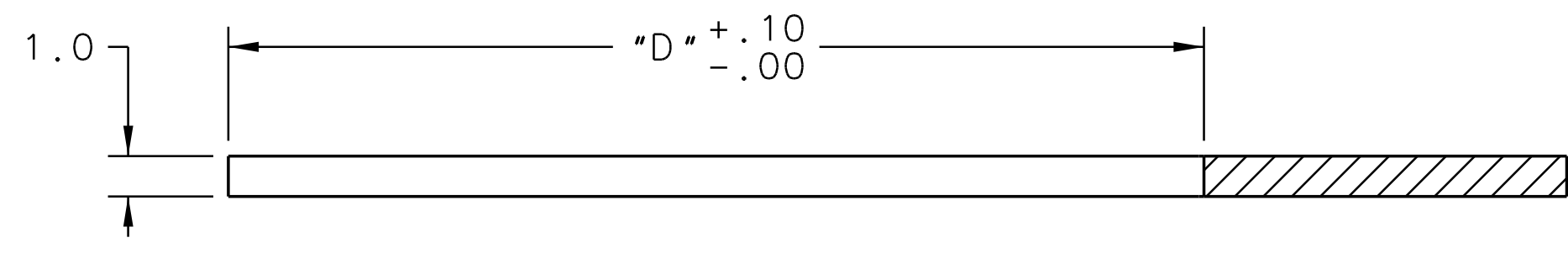
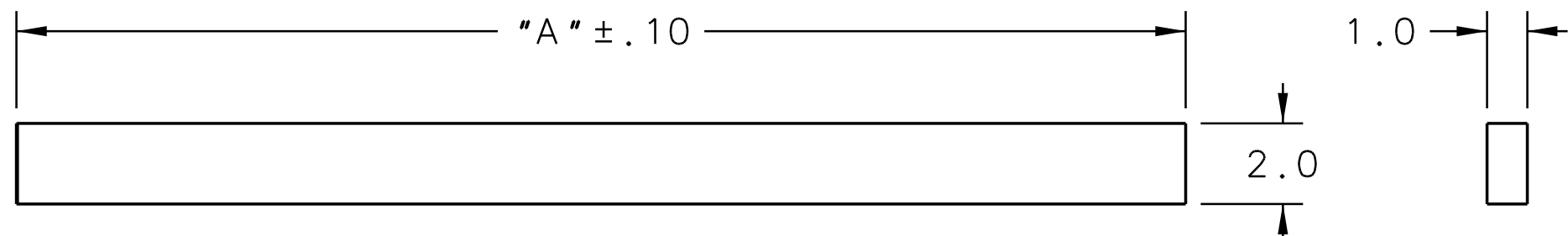
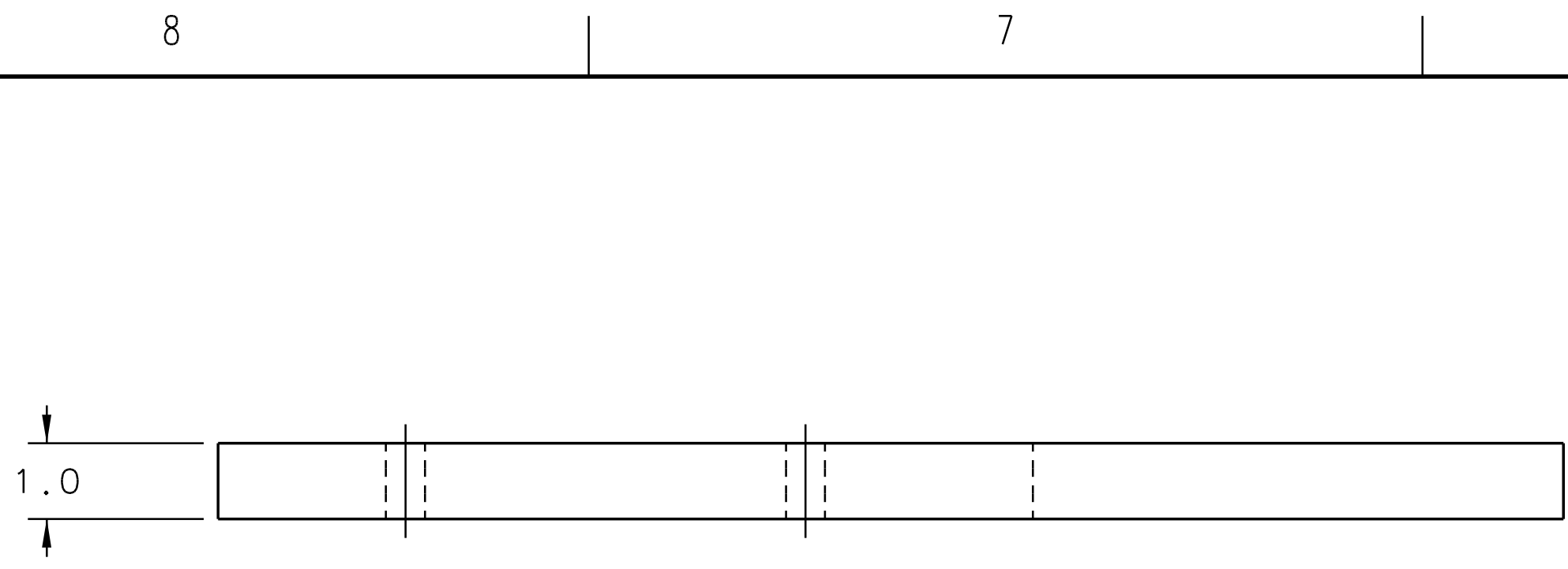
NOTE: ALTERNATE CONSTRUCTION PERMISSIBLE, HOLE MAY BE OMITTED UNTIL AFTER WELDING. ∇ 5/8 MIN FULL THREAD, DO NOT BREAK THRU.



NOTE: ALTERNATE CONSTRUCTION PERMISSIBLE, HOLES MAY BE OMITTED UNTIL AFTER WELDING. ∇ 5/8 MIN FULL THREAD, DO NOT BREAK THRU.

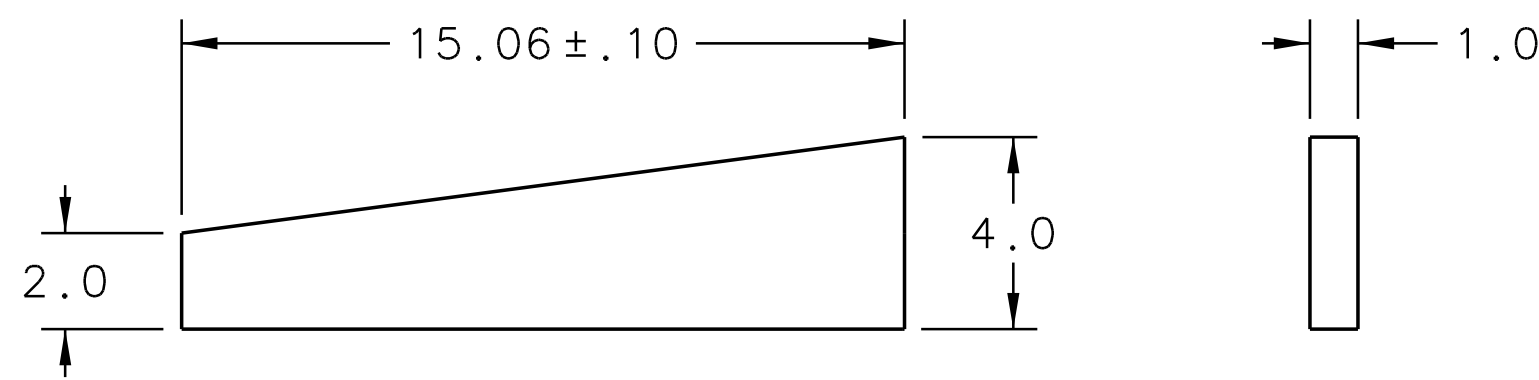
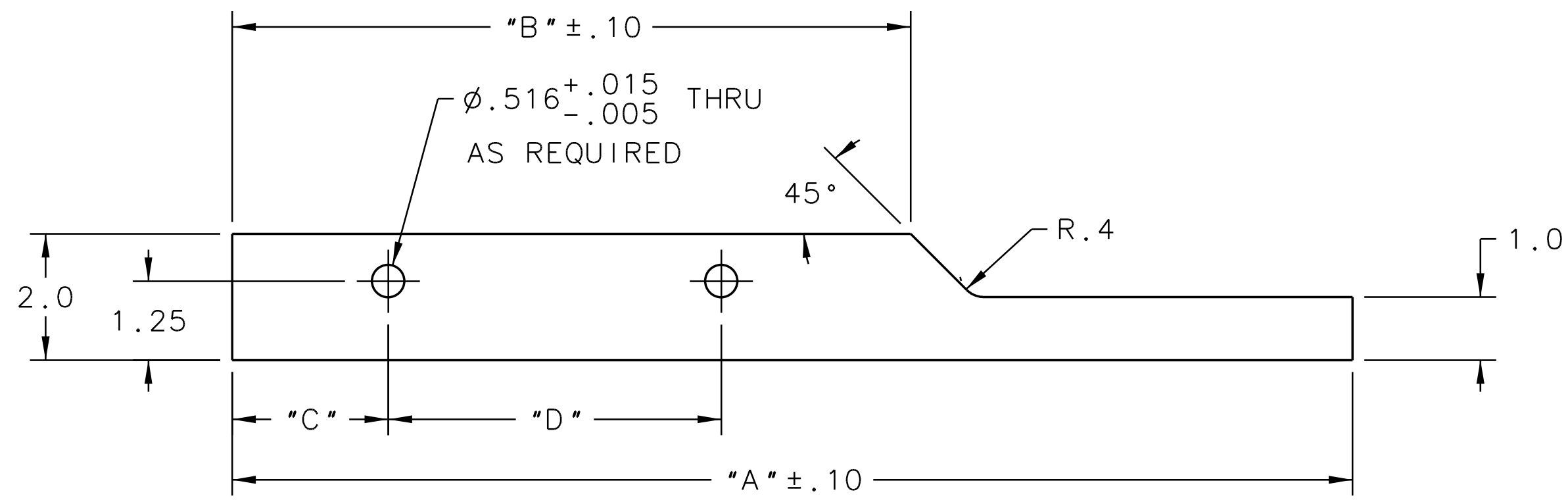
ITEM 8
SCALE 1:1





15.43	34
29.00	33
A	ITEM NO

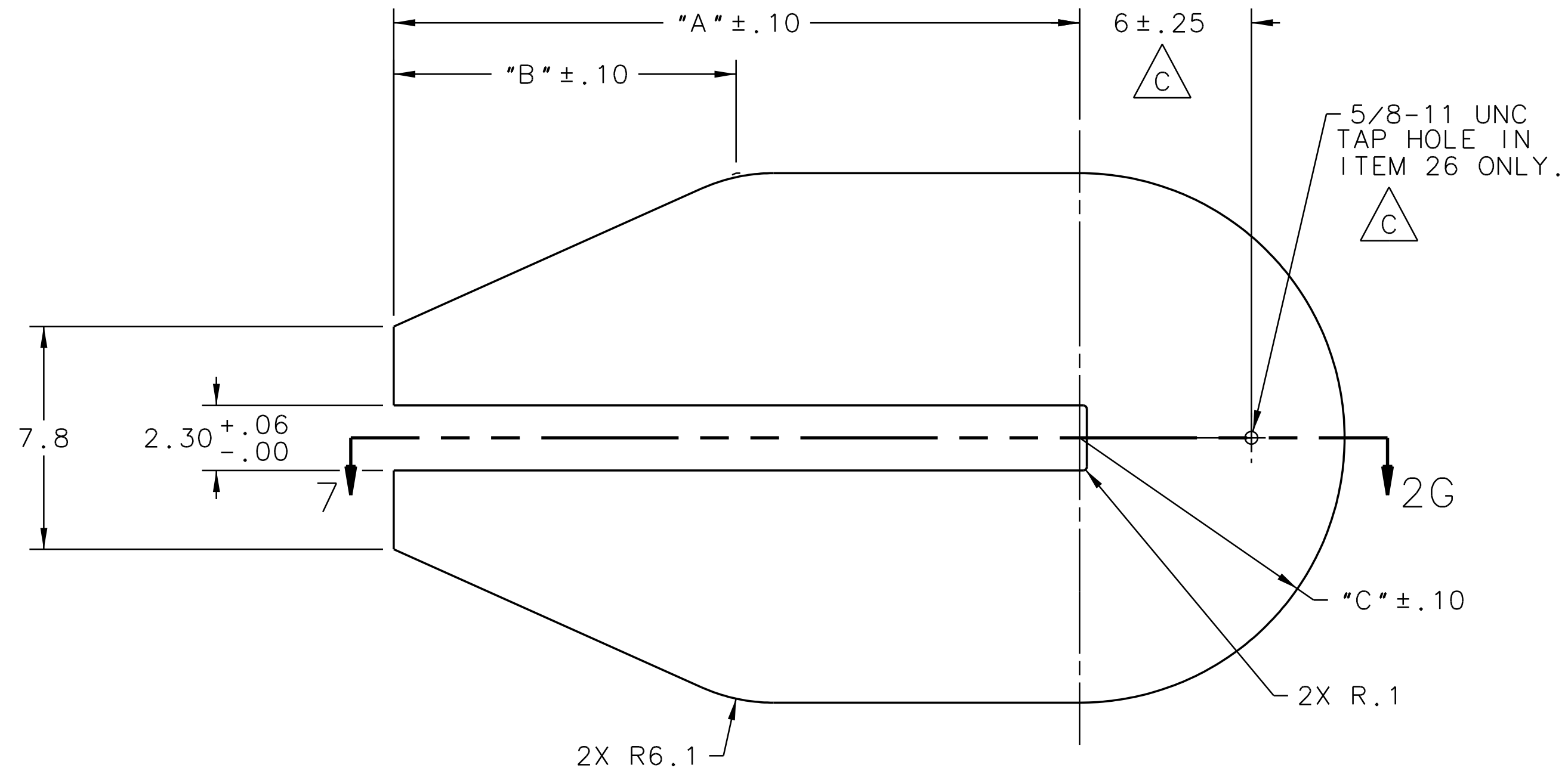
ITEMS 33-34
SCALE 1:4



ITEM 35
SCALE 1:4

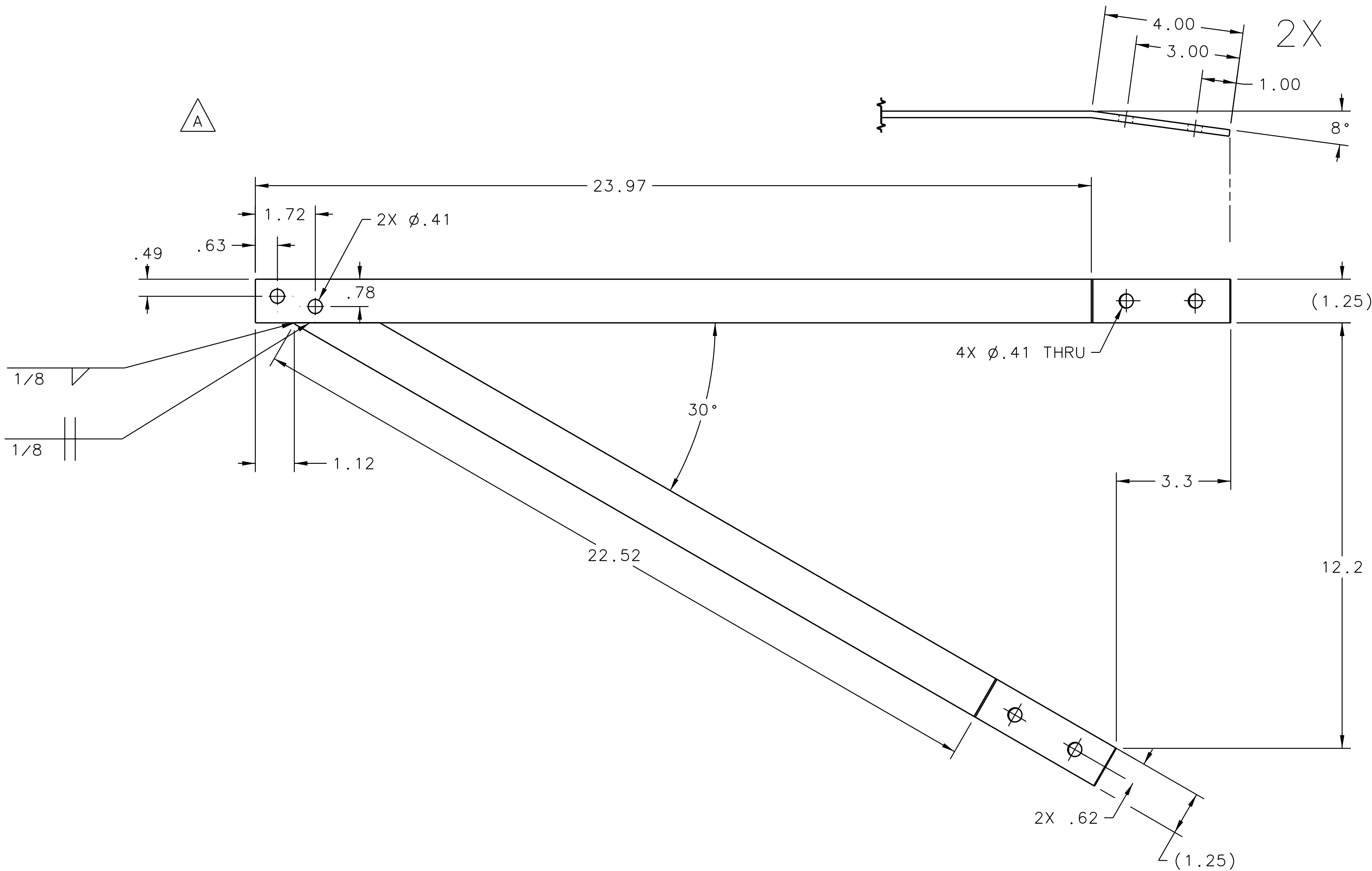
-	-	5.07	12.07	24
-	1.88	5.88	12.88	23
-	2.69	6.69	13.69	22
-	3.50	7.50	14.50	21
-	3.32	8.32	15.32	20
-	4.13	9.13	16.13	19
5.277	1.66	9.94	16.94	18
5.277	2.47	10.75	17.75	17
D	C	B	A	ITEM NO

ITEMS 17-24
SCALE 1:2

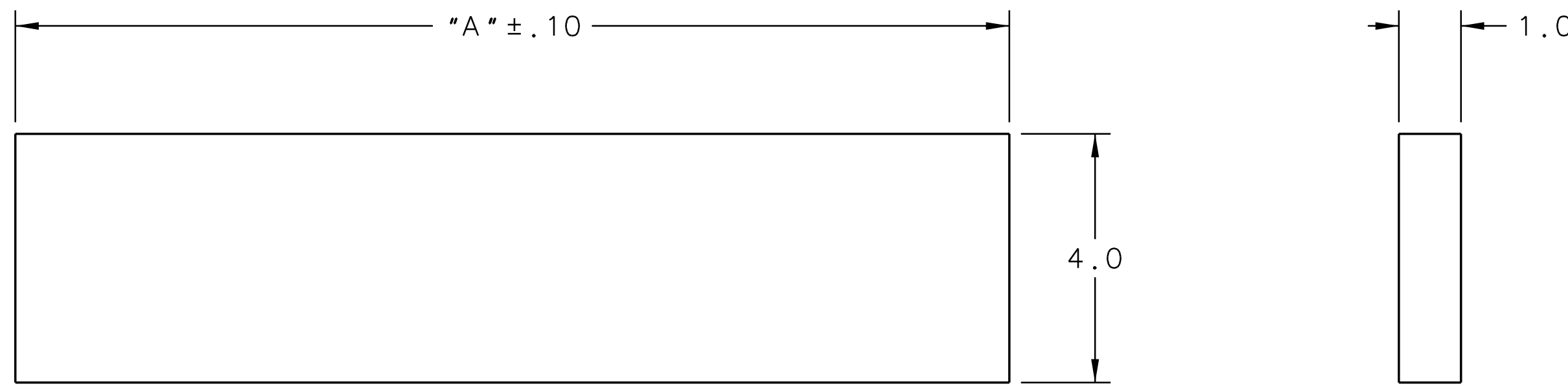


13.05	8.00	-	12.80	32
14.65	8.00	-	14.40	31
16.25	8.00	12.02	16.00	30
17.83	8.00	11.40	17.50	29
19.42	8.00	11.40	19.17	28
21.01	8.00	11.40	20.76	27
22.61	9.25	11.40	22.36	26
24.20	9.25	11.95	23.95	25
D	C	B	A	ITEM NO

ITEMS 25-32
SCALE 1:4

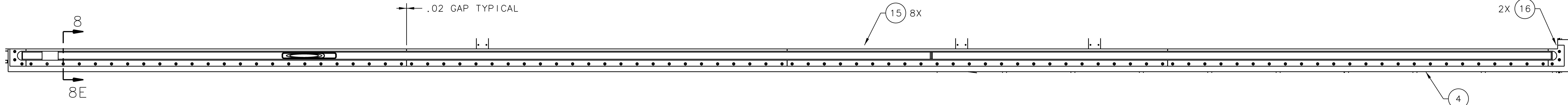


ITEM 14
SCALE 1:2

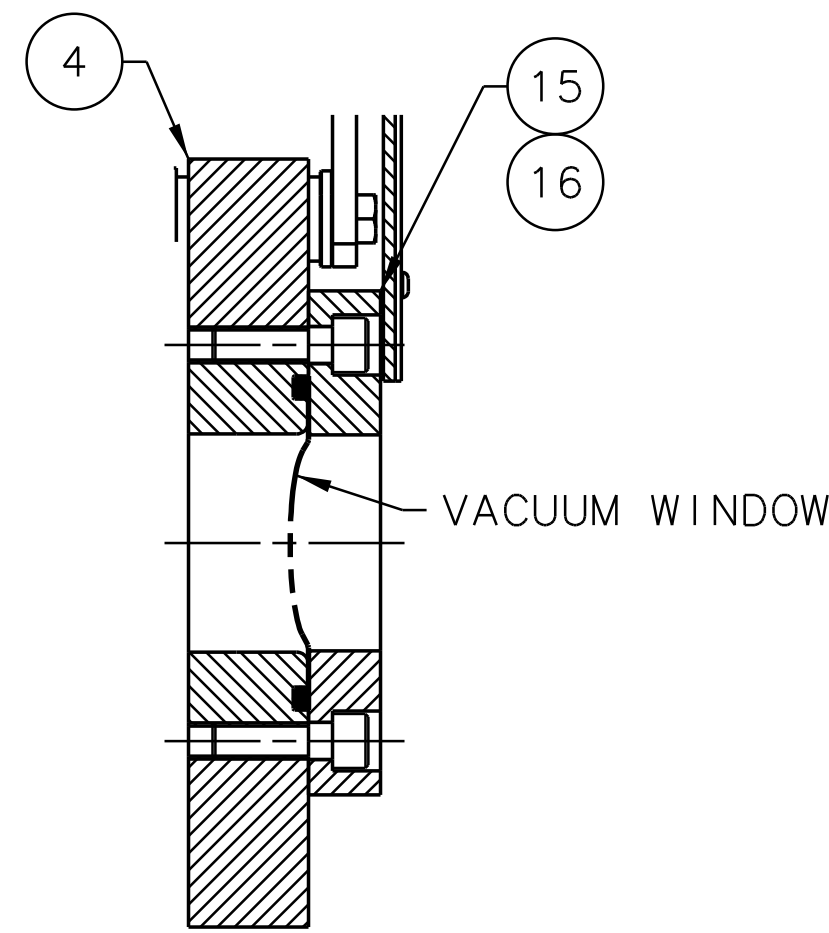


17.13	37
16.00	36
A	ITEM NO

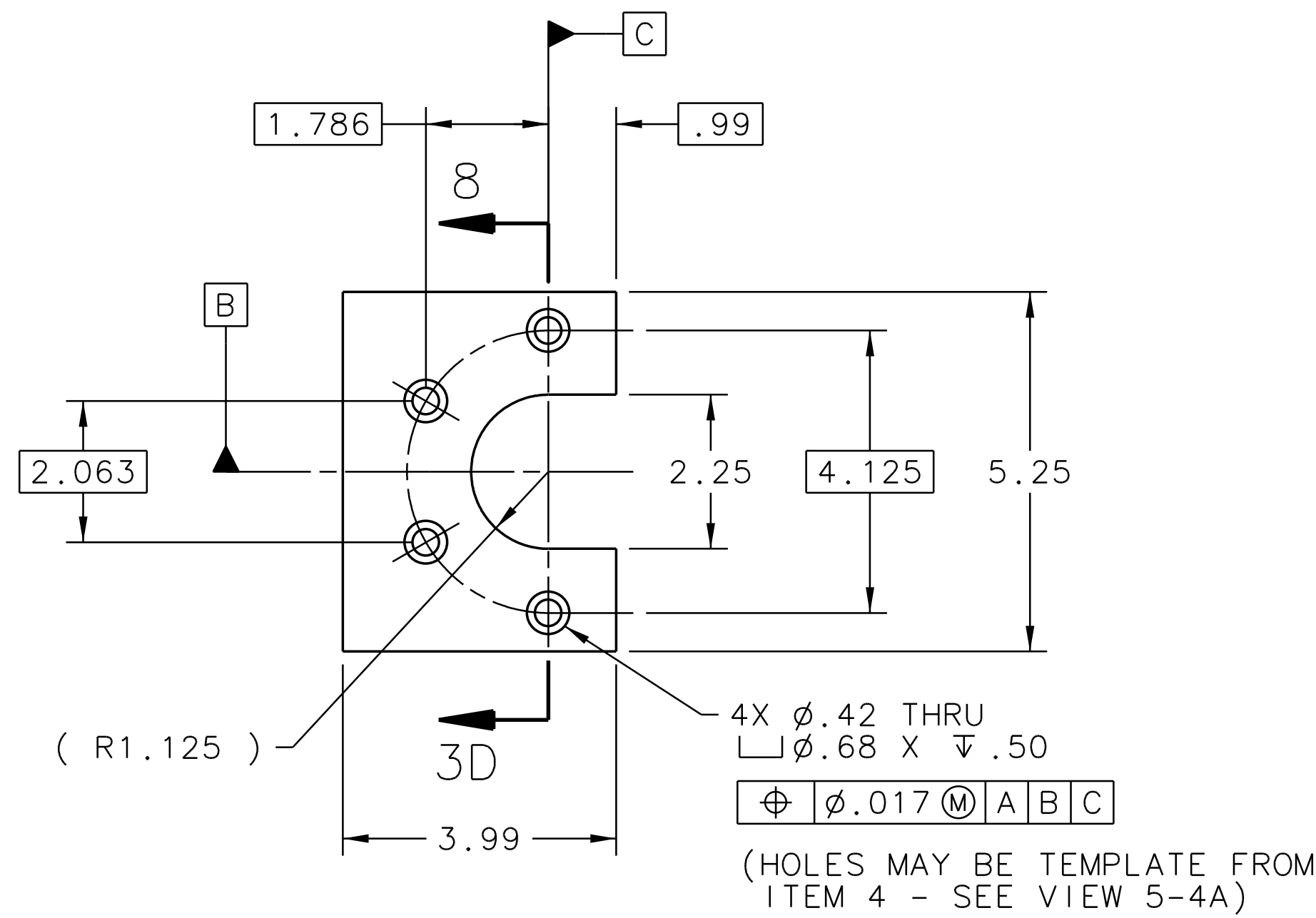
ITEMS 36-37
SCALE 1:2



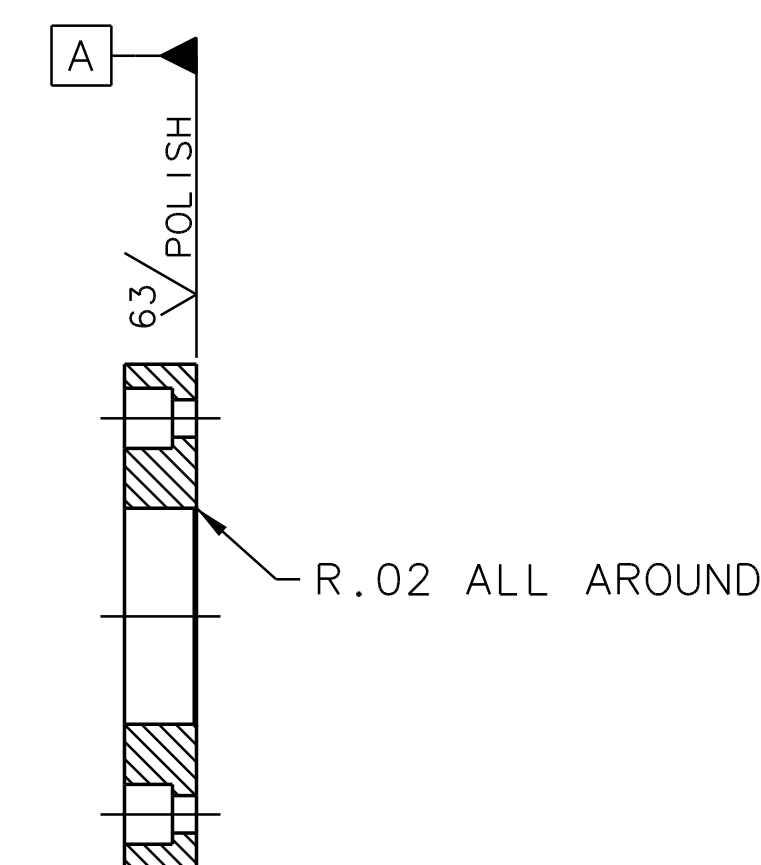
VIEW 8-5G
(ITEM 4, WITH CLAMP BARS, ITEMS 15 & 16)
SCALE 1:10



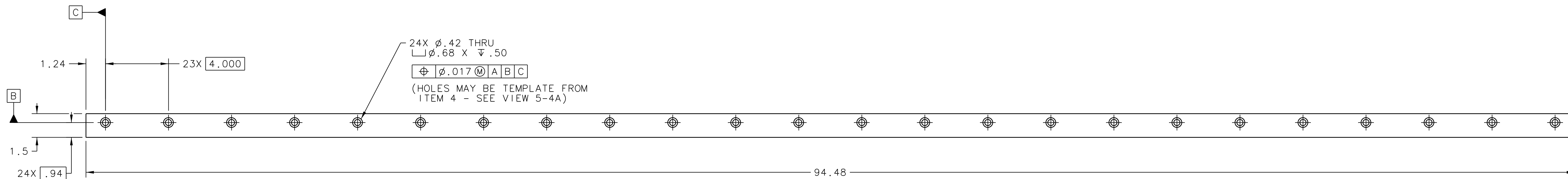
SECTION 8-8E
(8-8H)
FOR REFERENCE ONLY



ITEM 16
SCALE 1:2



SECTION 8-3D
(8-5F)
SCALE 1:2



ITEM 15
SCALE NONE

