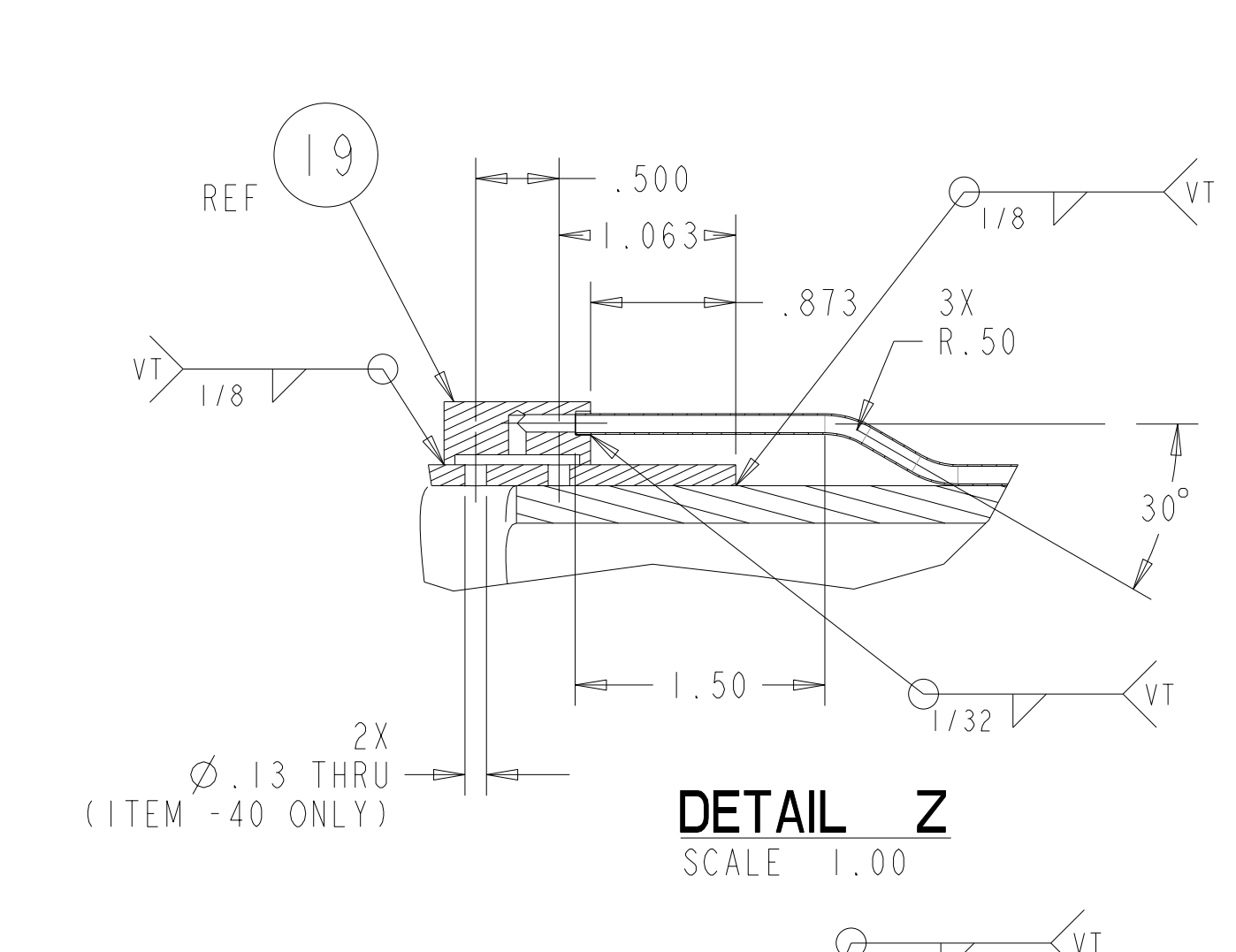
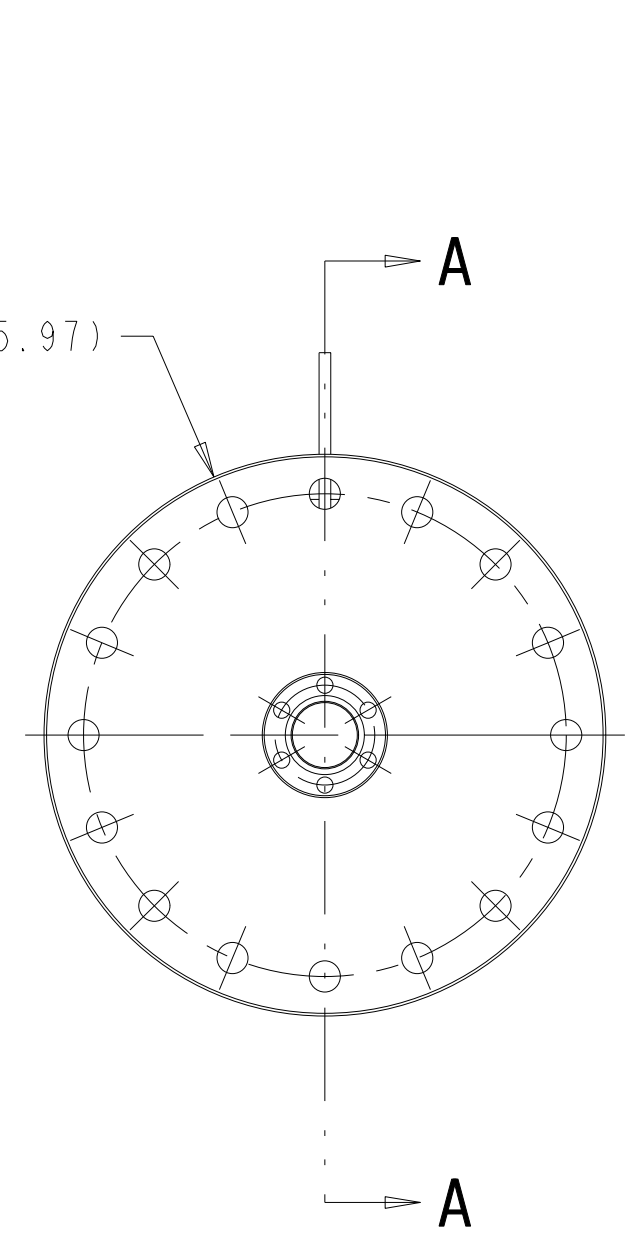
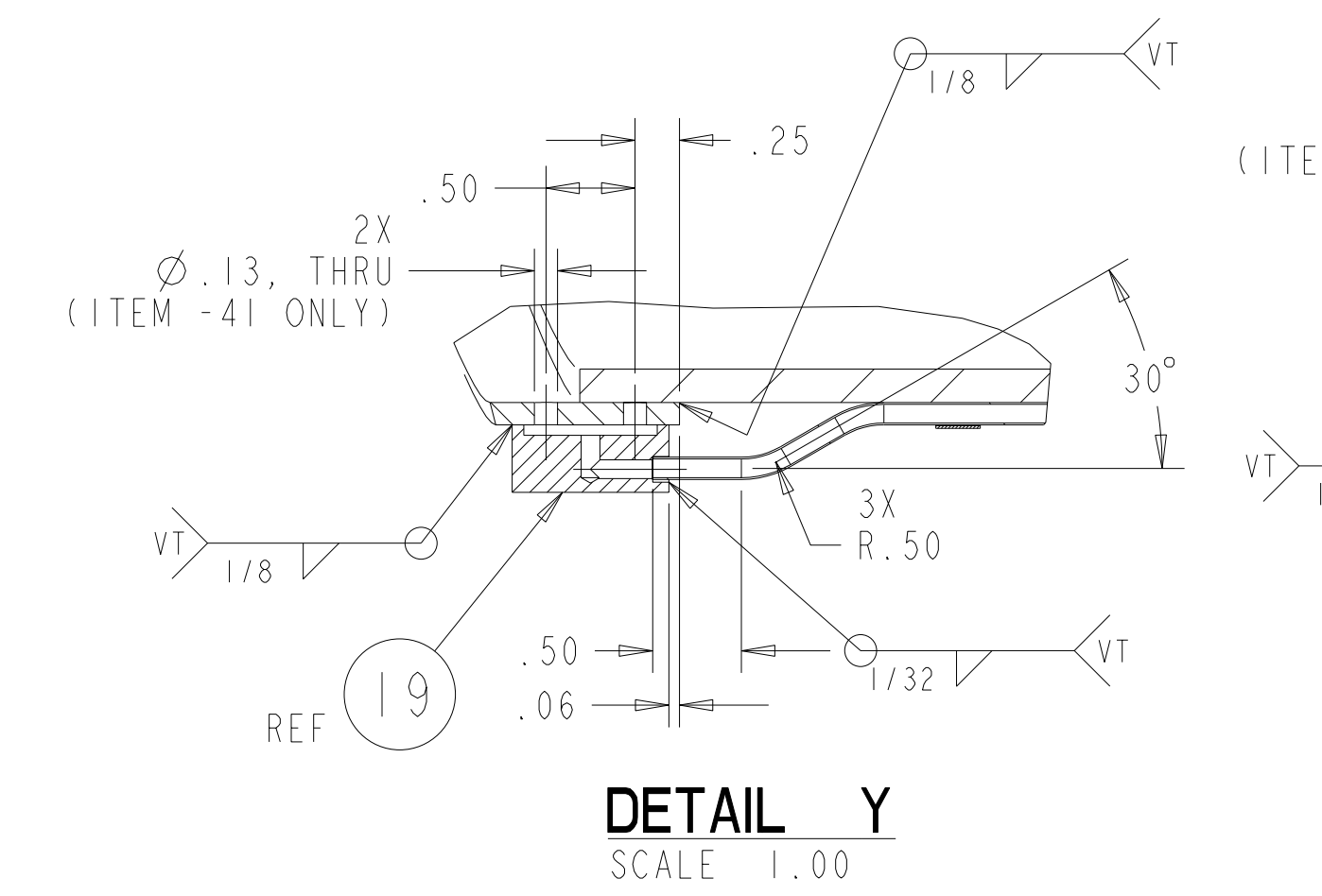


SECTION A-A

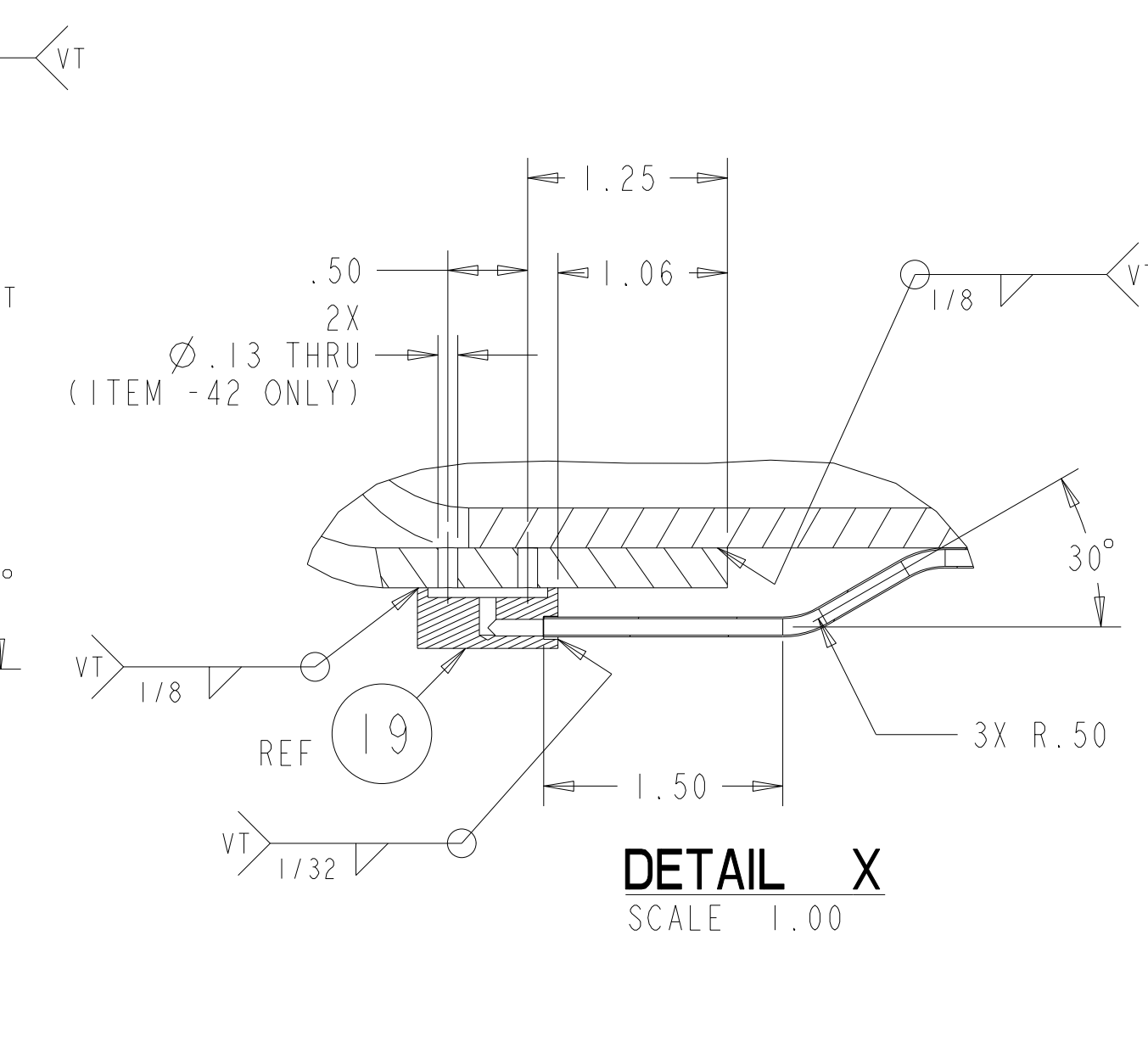


DETAIL Z
SCALE 1.00

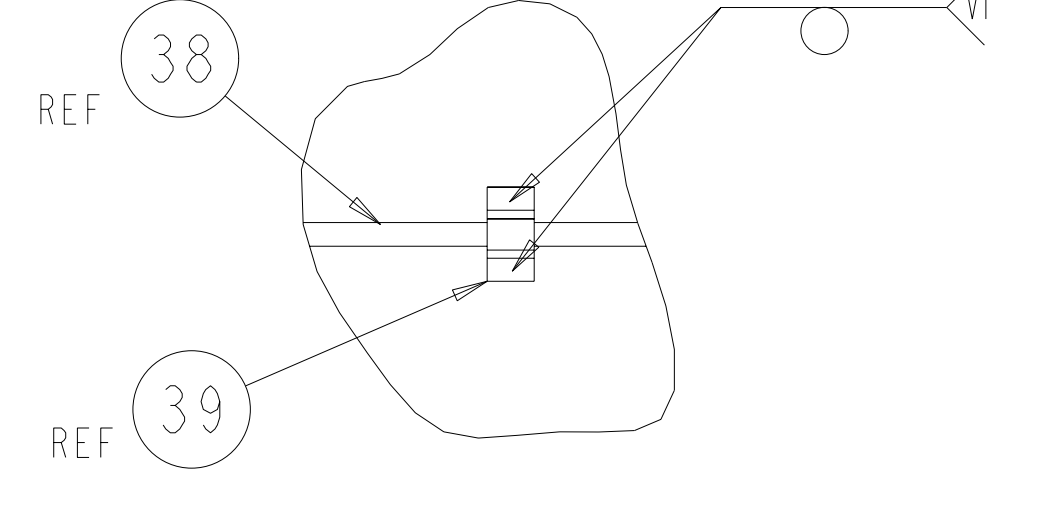
- NOTES:
1. INTERPRET DIMENSIONS AND TOLERANCES PER ANSI Y14.5M.
 2. DIMENSION ARE IN INCHES.
 3. BACKING RING PROFILE OFFSET 1/2" BEYOND CUTOFF END OF PORT EXTENSIONS.
 4. PORT TAKEN FROM DRAWING SEI20-003
 5. FABRICATION, INSPECTION, AND TESTING SHALL BE PERFORMED IN ACCORDANCE WITH SPECIFICATION NCSX-CSPEC-121-02 AND STATEMENT OF WORK NCSX-SOW-121-03.



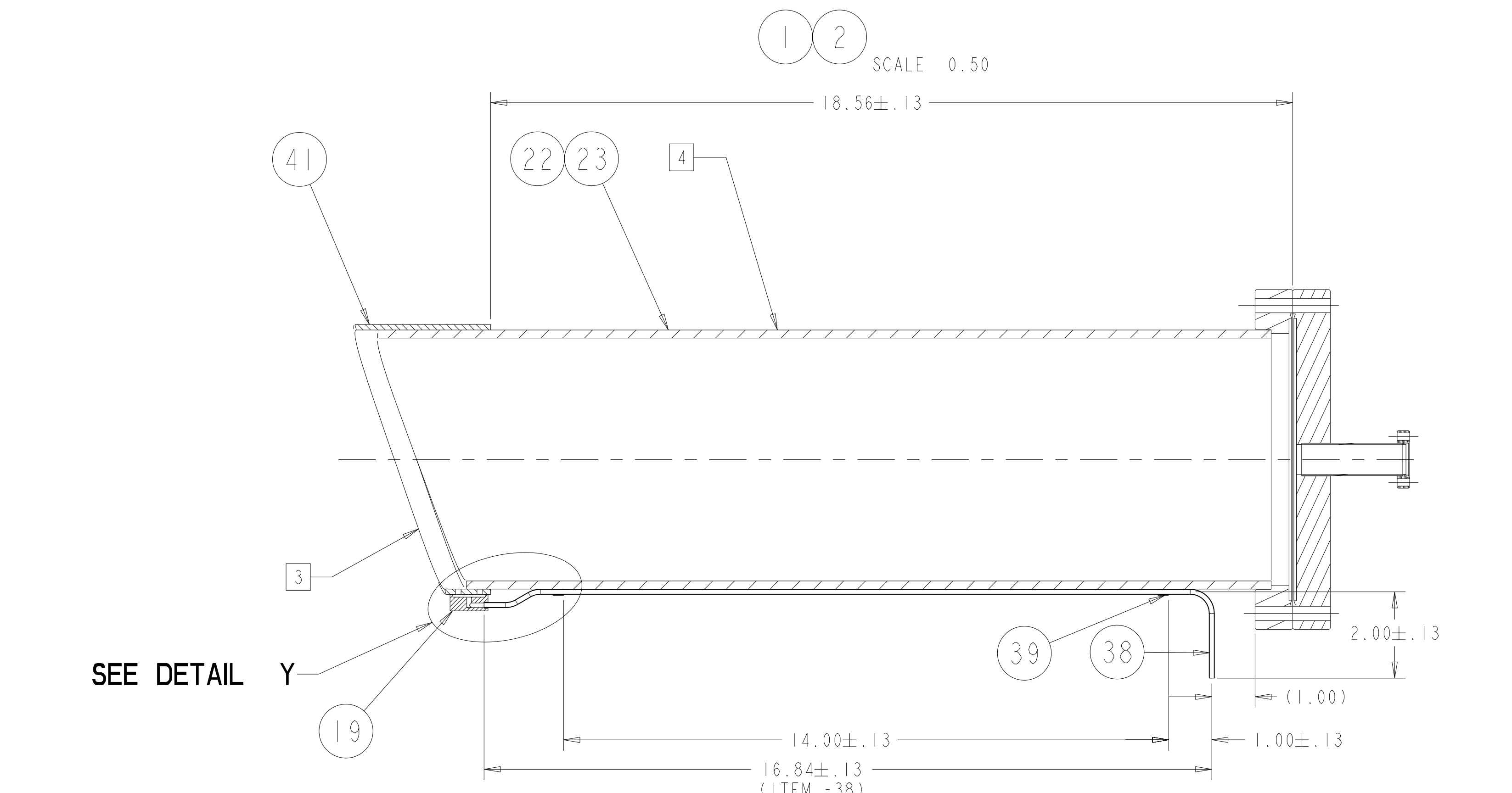
DETAIL Y
SCALE 1.00



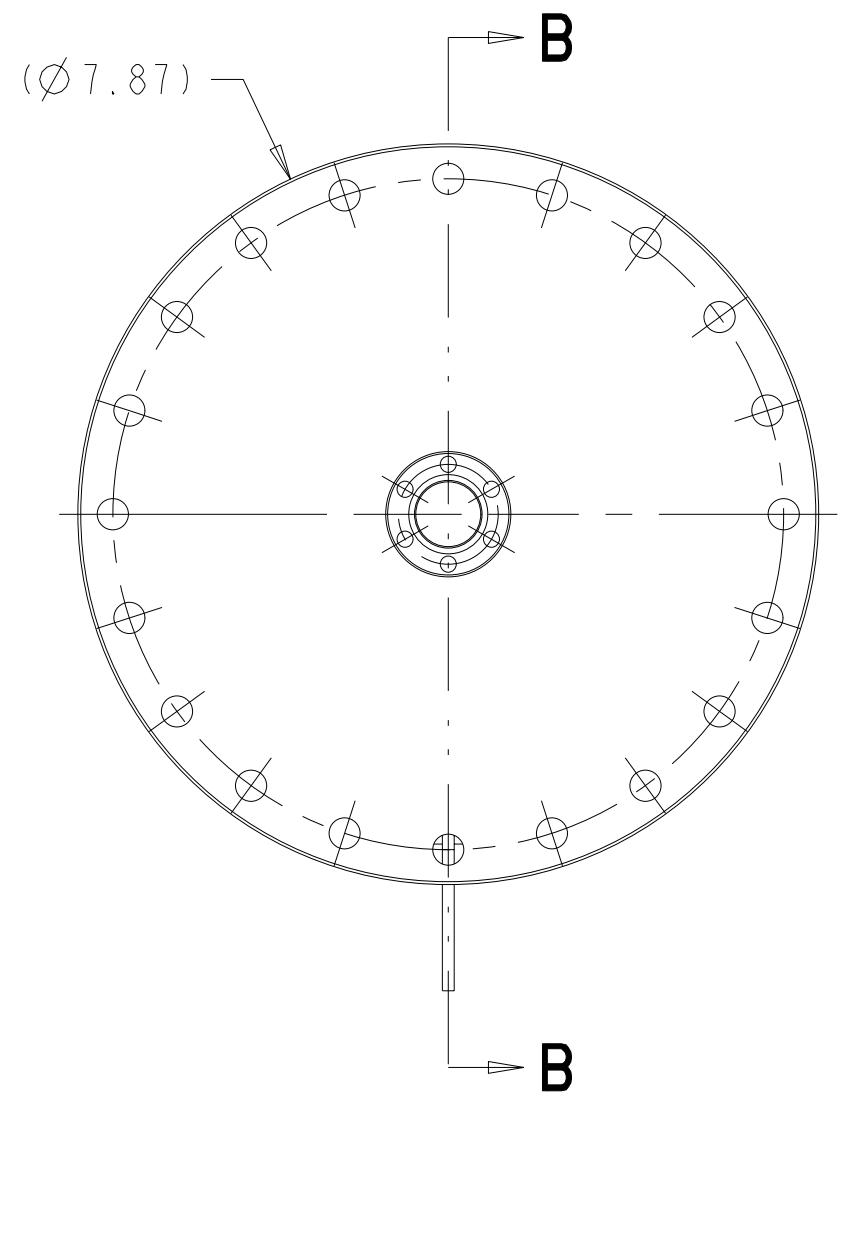
DETAIL X
SCALE 1.00



TYPICAL TUBE CLIP WELDEMNT
SCALE 1.00



SECTION B-B

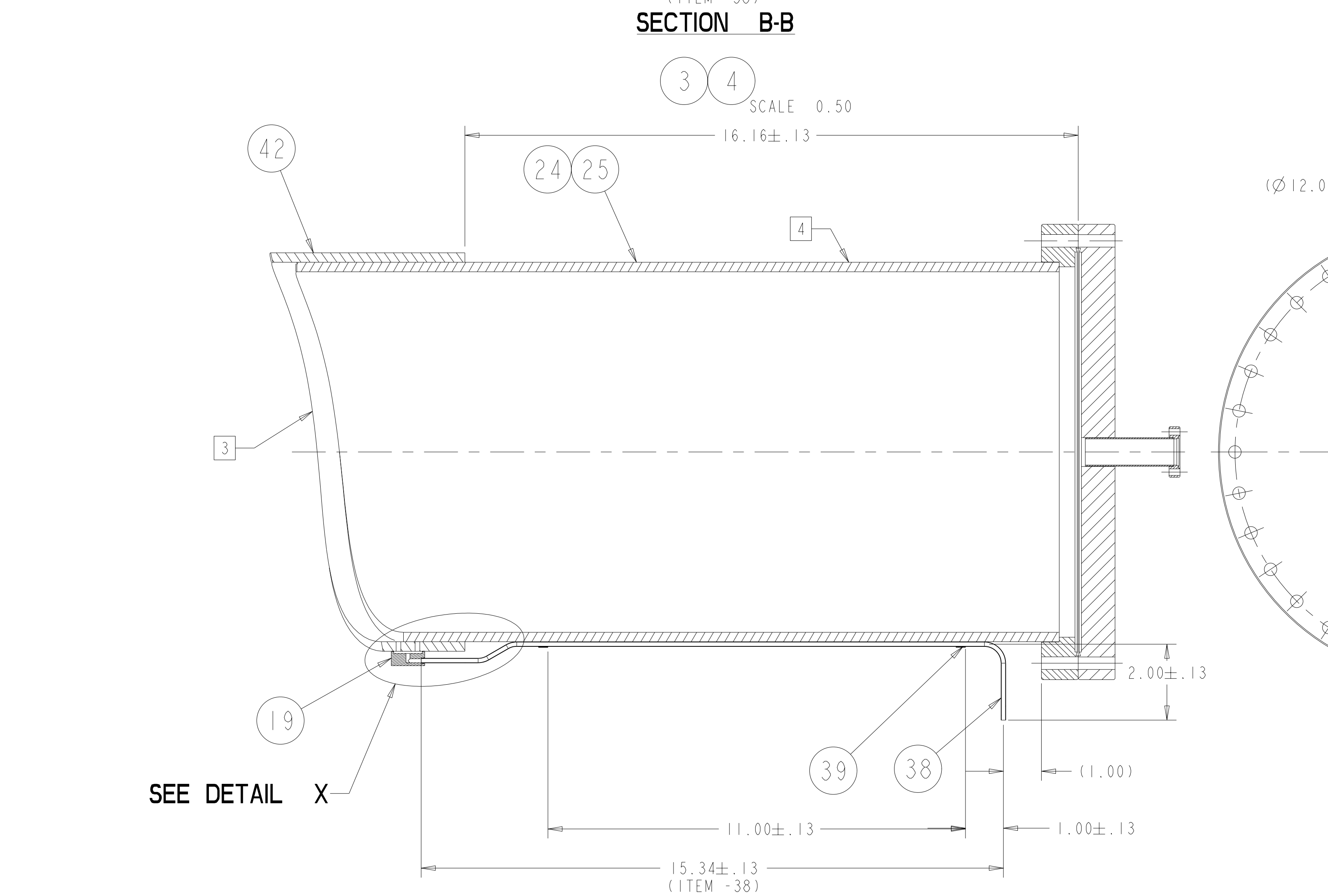


REV	DESCRIPTION	BY	DATE	CHK	DEPT	DATE	PE	REQ	DATE	ORNL	DOE	DATE
49	FILLER METAL, WELD											
48	PORT 15 BACKING RING											
47	PORT 11 BACKING RING											
46	PORT 10 BACKING RING											
45	PORT 9 BACKING RING											
44	PORT 8 BACKING RING											
43	PORT 7 BACKING RING											
42	PORT 6 BACKING RING											
41	PORT 5 BACKING RING											
40	PORT 2 BACKING RING											
39	TUBE CLIP											
38	TUBING Ø.125 X .03 WALL											
37	PORT 15B EXTENSION											
36	PORT 15A EXTENSION											
35	PORT 11B EXTENSION											
34	PORT 11A EXTENSION											
33	PORT 10B EXTENSION											
32	PORT 10A EXTENSION											
31	PORT 9B EXTENSION											
30	PORT 9A EXTENSION											
29	PORT 8B EXTENSION											
28	PORT 8A EXTENSION											
27	PORT 7B EXTENSION											
26	PORT 7A EXTENSION											
25	PORT 6B EXTENSION											
24	PORT 6A EXTENSION											
23	PORT 5B EXTENSION											
22	PORT 5A EXTENSION											
21	PORT 2B EXTENSION											
20	PORT 2A EXTENSION											
19	LEAK TEST BLOCK											
18	PORT 15B WELDMNT											
17	PORT 15A WELDMNT											
16	PORT 11B WELDMNT											
15	PORT 11A WELDMNT											
14	PORT 10B WELDMNT											
13	PORT 10A WELDMNT											
12	PORT 9B WELDMNT											
11	PORT 9A WELDMNT											
10	PORT 8B WELDMNT											
9	PORT 8A WELDMNT											
8	PORT 7B WELDMNT											
7	PORT 7A WELDMNT											
6	PORT 6B WELDMNT											
5	PORT 6A WELDMNT											
4	PORT 5B WELDMNT											
3	PORT 5A WELDMNT											
2	PORT 2B WELDMNT											
1	PORT 2A WELDMNT											

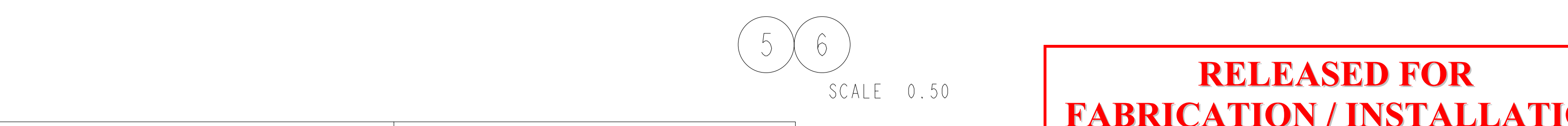
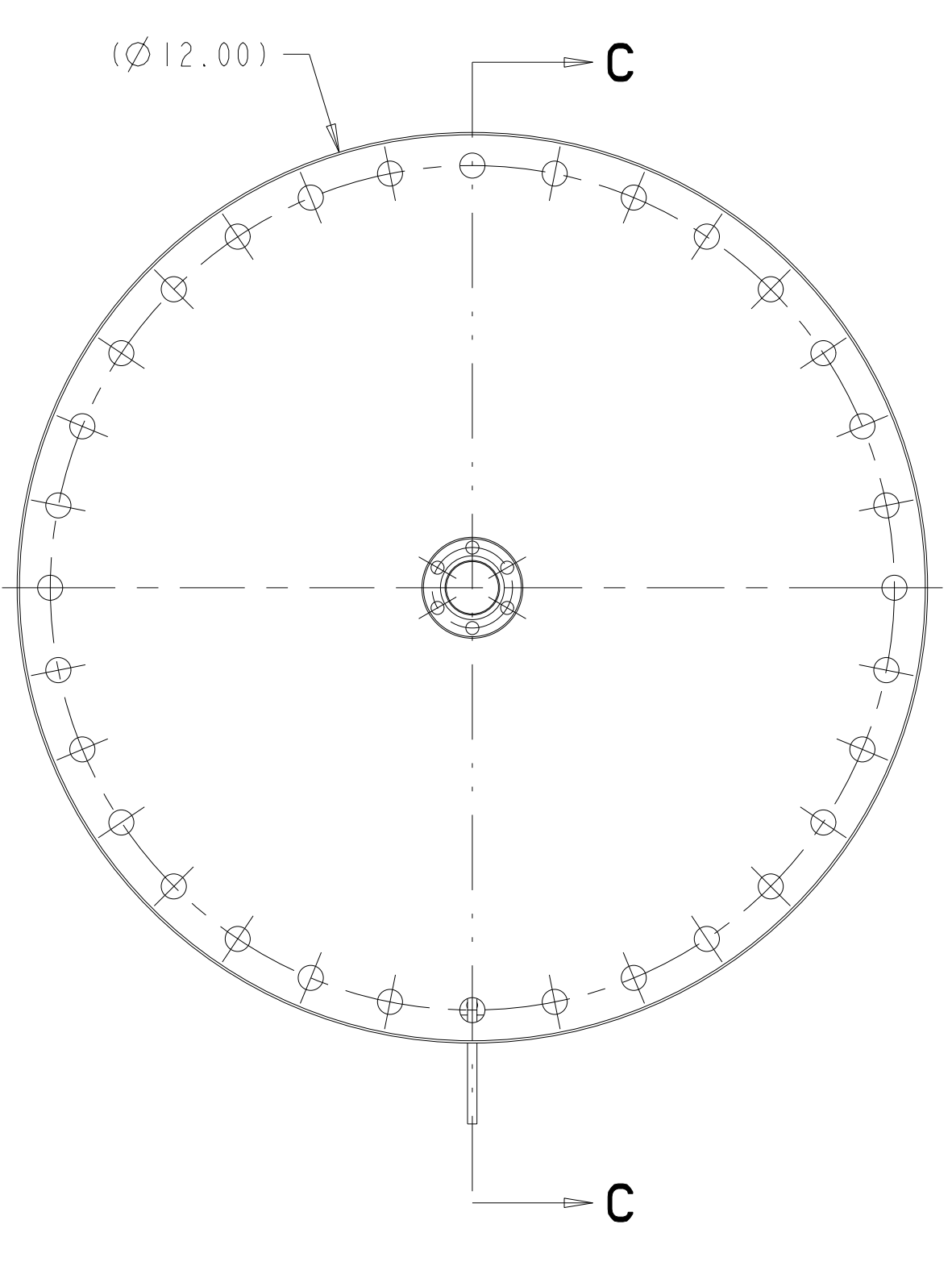
CAGE CODE	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	MATERIAL	SPECIFICATION	FIND NO

PARTS LIST

WELDING ENGINEER
APPROVED R PARSELLS DATE: 6/04



SECTION C-C



SECTION D-D

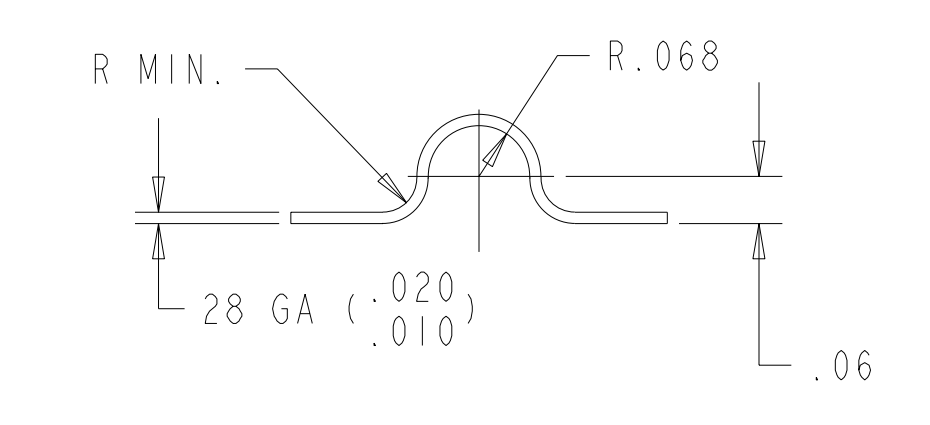
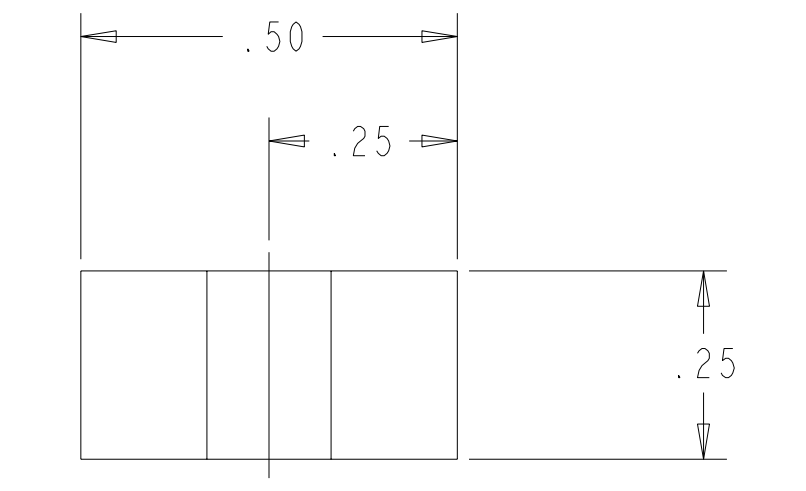
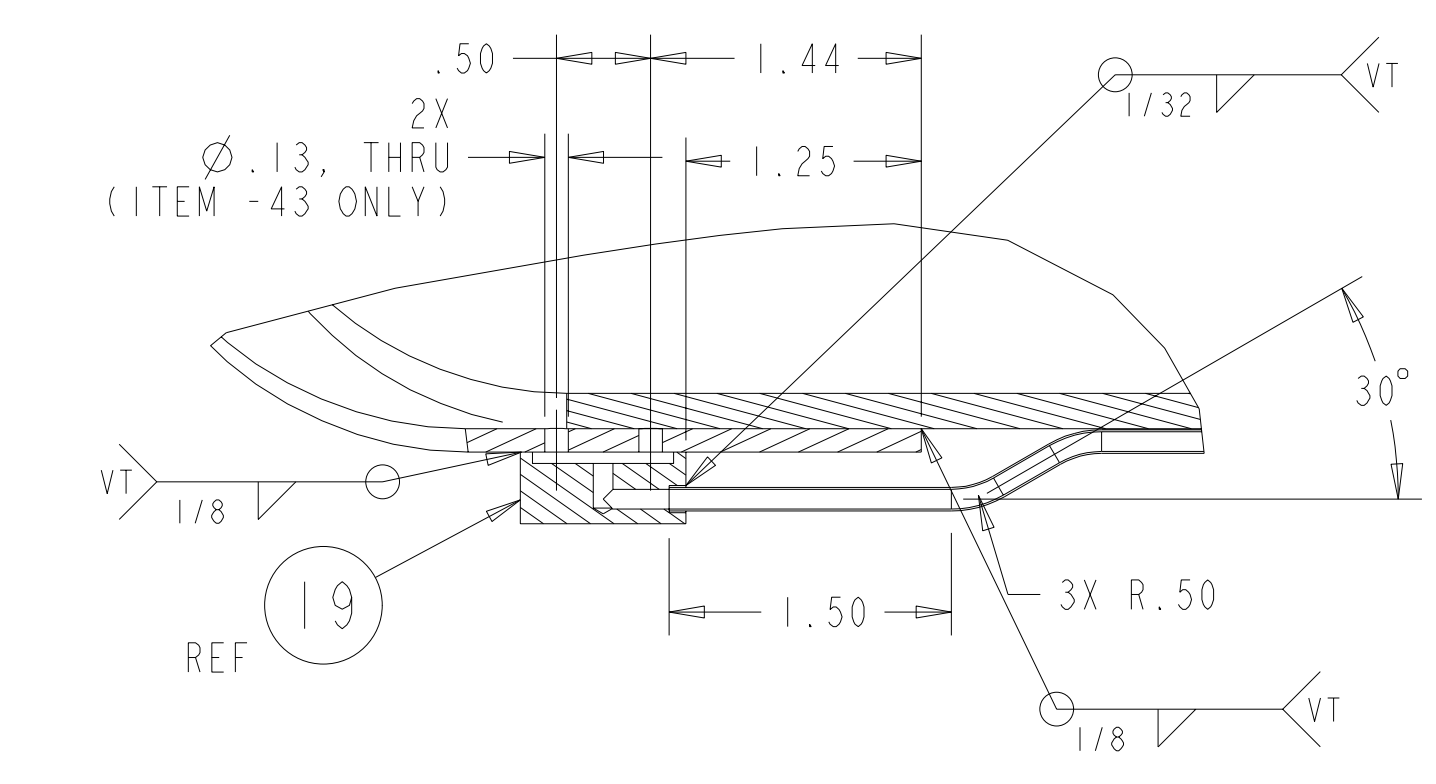
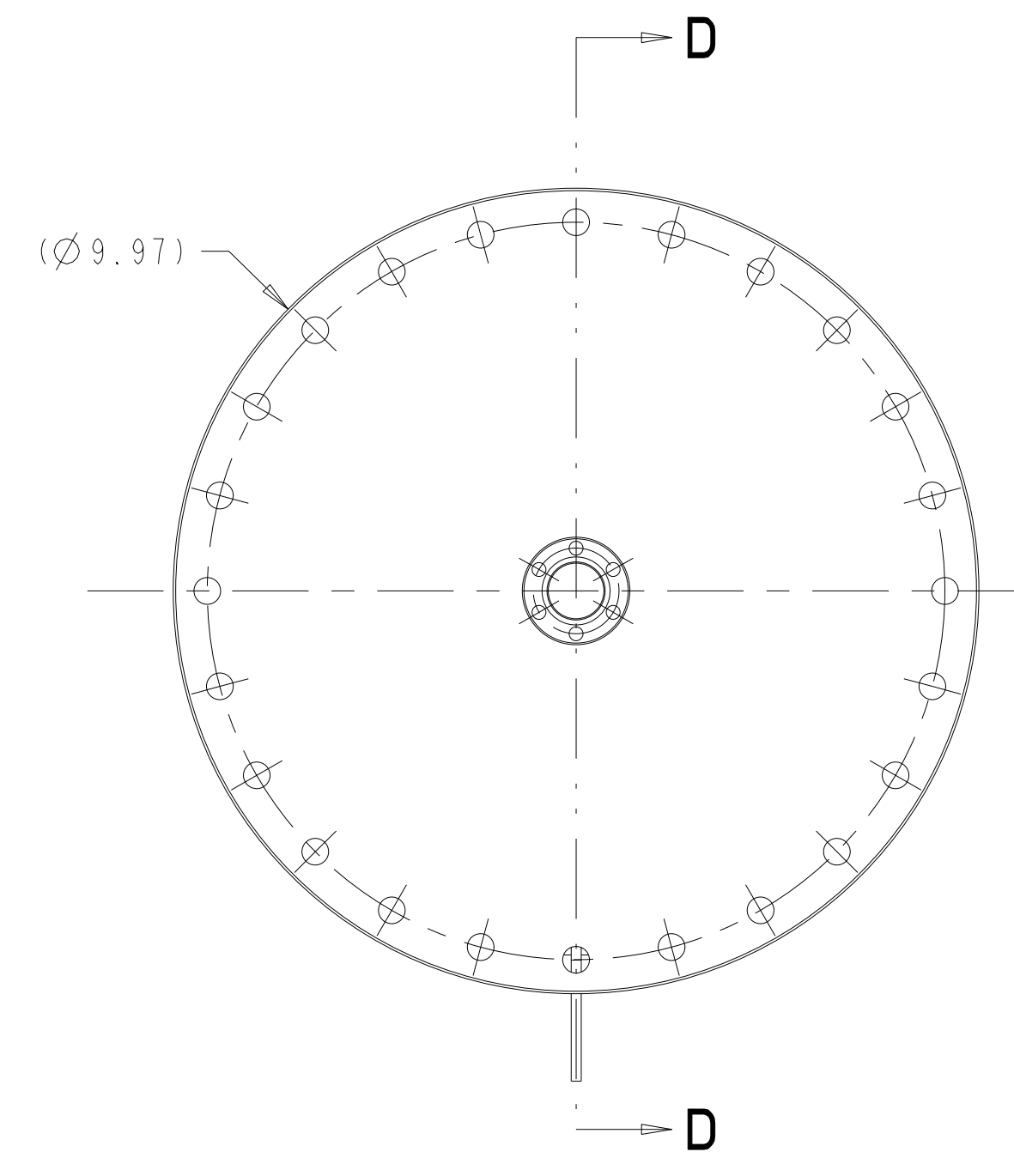
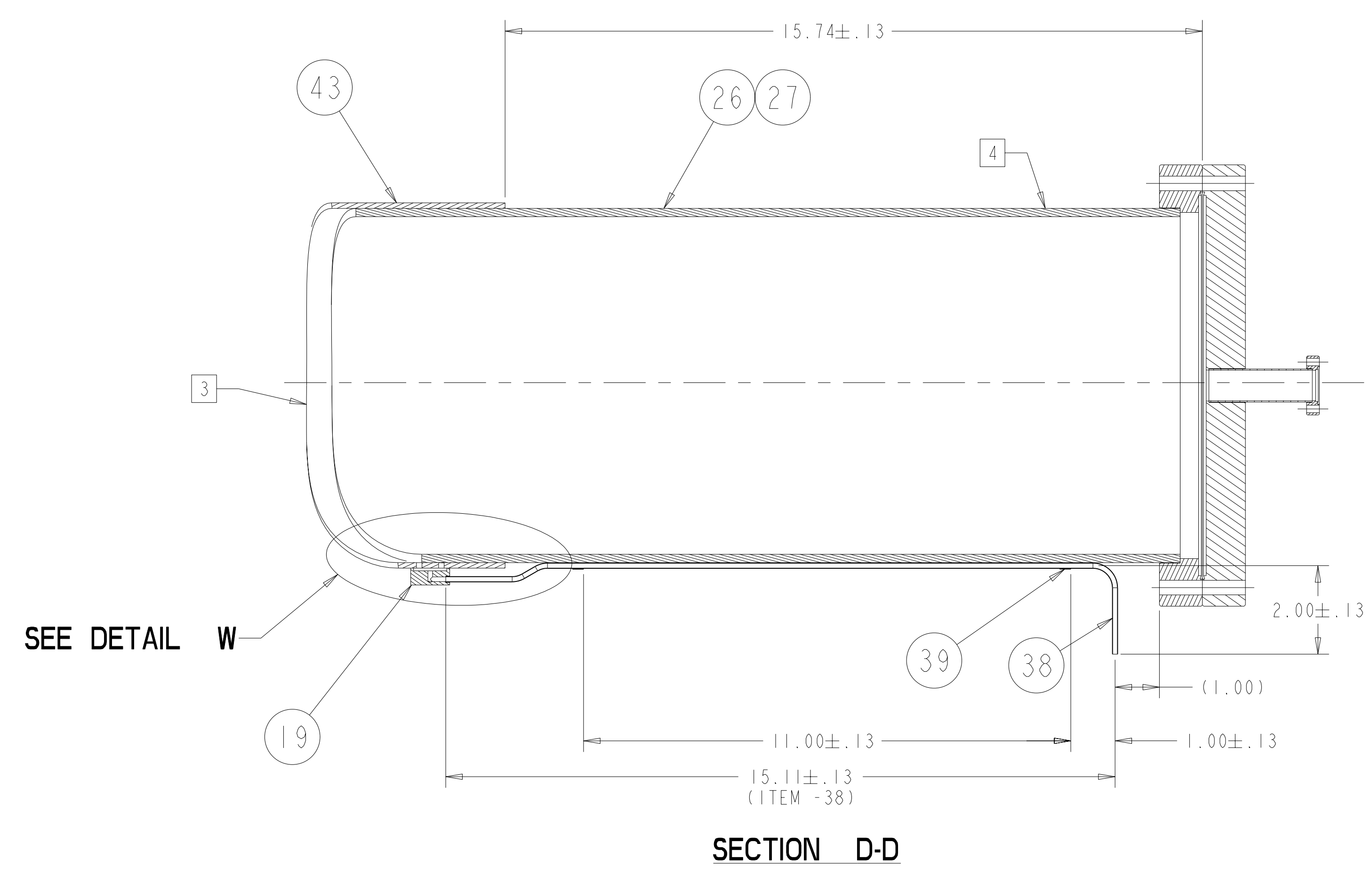
RELEASED FOR FABRICATION / INSTALLATION
PPPL Drafting:

THIS DRAWING PRODUCED ON PRO-ENGINEER

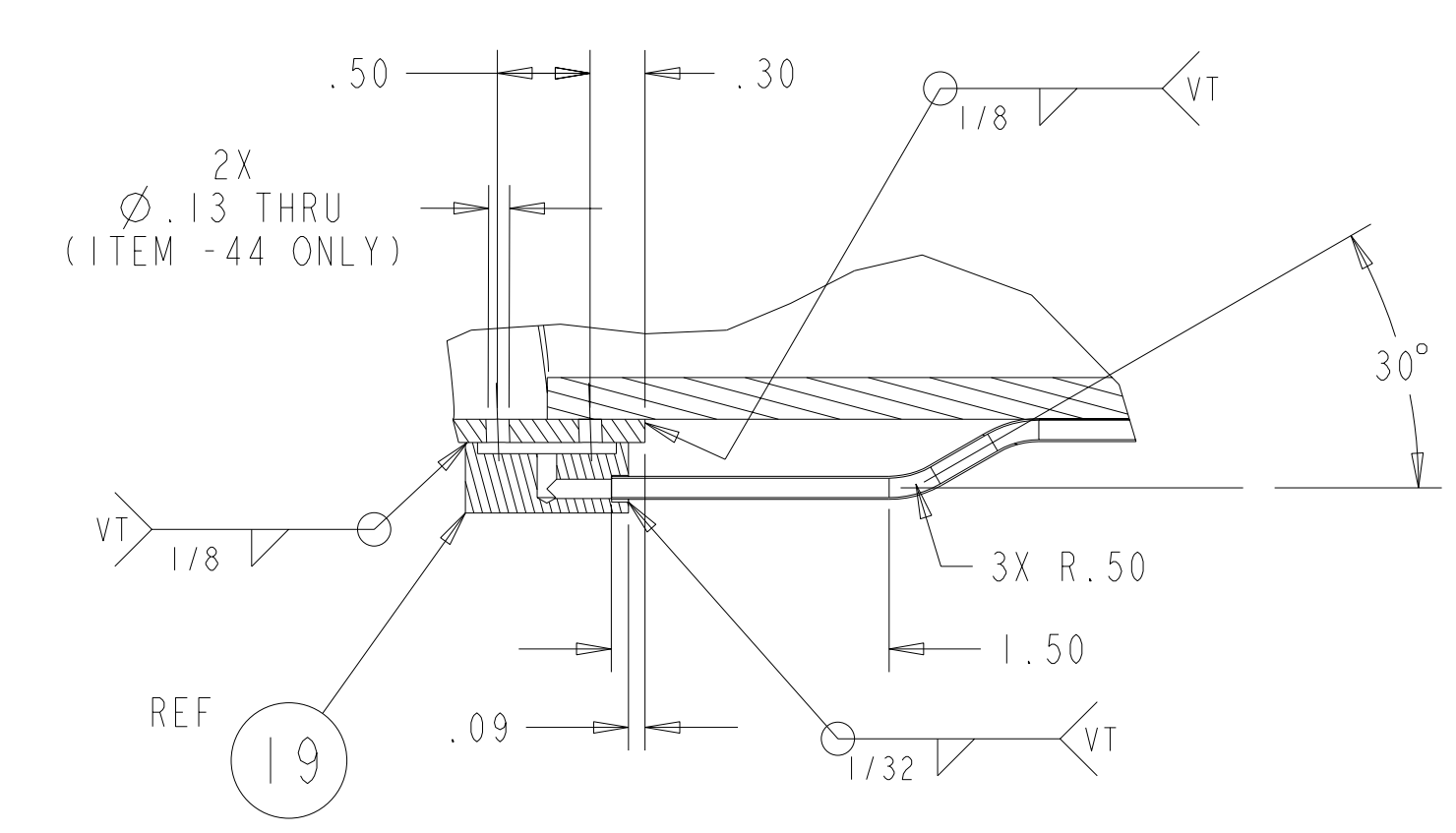
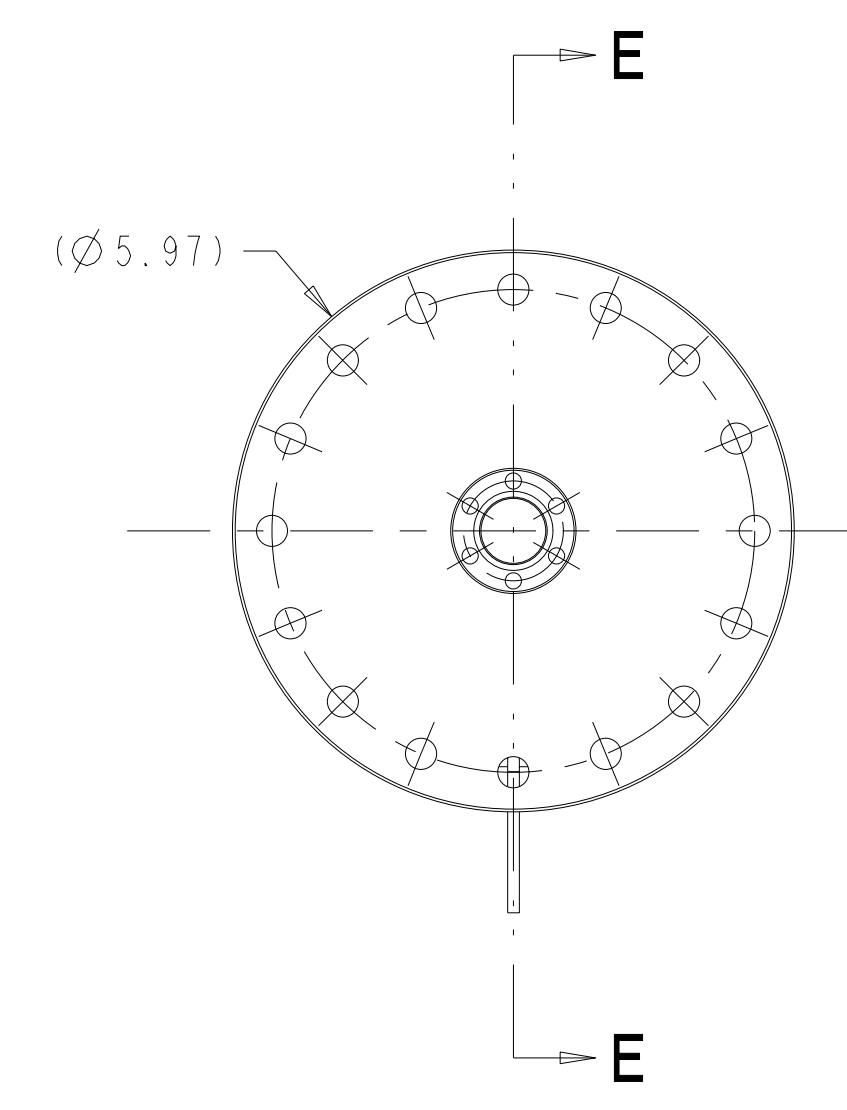
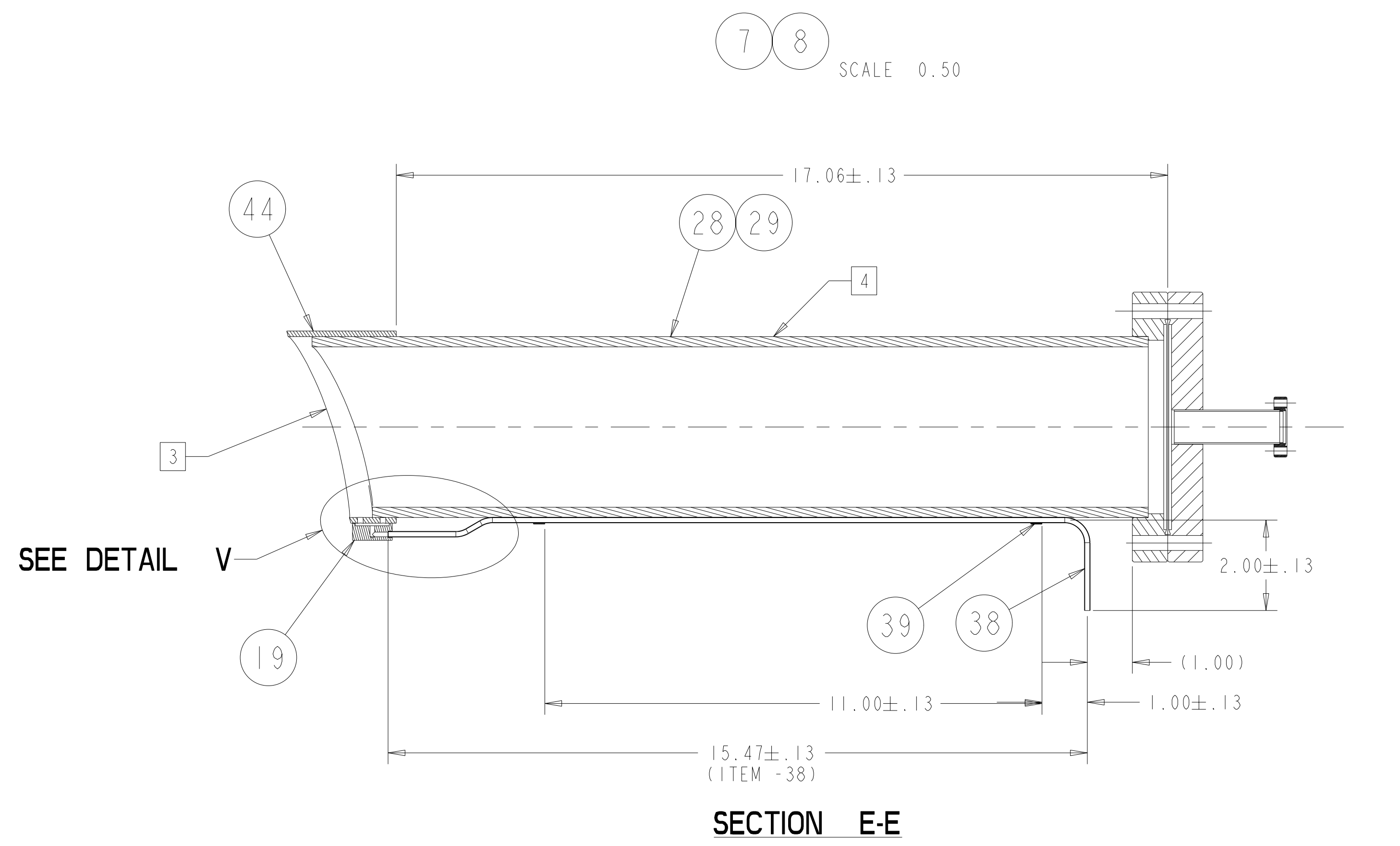
NO REPRESENTATION OR WARRANTY, EXPRESSED OR IMPLIED, IS MADE AS TO THE ACCURACY, COMPLETENESS OR USEFULNESS OF THE INFORMATION OR STATEMENTS CONTAINED IN THESE DRAWINGS, OR THAT THE USE OR DISCLOSURE OF ANY INFORMATION, APPARATUS, METHOD OR PROCESS DISCLOSED IN THESE DRAWINGS MAY NOT INFRINGE PRIVATE RIGHTS OF OTHERS. NO LIABILITY IS ASSUMED WITH RESPECT TO THE USE OF, OR FOR DAMAGES RESULTING FROM THE USE OF, ANY INFORMATION, APPARATUS, METHOD OR PROCESS DISCLOSED IN THESE DRAWINGS. DRAWINGS MADE AVAILABLE FOR INFORMATION TO BIDDER ARE NOT TO BE USED FOR OTHER PURPOSES, AND ARE TO BE RETURNED UPON REQUEST OF THE FORWARDING CONTRACTOR.

SCALE NOTED												DES P. L. GORANSON 8/03				UT-BATTELLE Oak Ridge National Laboratory managed for the DEPARTMENT OF ENERGY under U.S. GOVERNMENT CONTRACT DE-AC05-90OR22725 UT-BATTELLE, LLC, Oak Ridge, Tennessee																																											
TOLERANCES UNLESS OTHERWISE SPECIFIED												CHK D. W. SPARKS 6/04				PROJECT NAME																																											
FRACTIONS : FE :												SECT :				NATIONAL COMPACT STELLARATOR EXPERIMENT																																											
XX DECIMALS ±.01												DEPT :				VACUUM VESSEL																																											
XXX DECIMALS ±.005												CR :				PORT EXTENSION																																											
ANGLES ±0°15'												PJ :				WELDMNT																																											
BREAK SHARP EDGES .06 MAX												REQ :				VERSION NO. 27																																											
FINISH .125 UNLESS OTHERWISE SPECIFIED												PPPL DRFT J. SIEGEL 6/04				PLANT X-10				BLDG 5700				FL 3				SHT 1				TYPE 3				CLASS S																							
REV												DESCRIPTION				BY				DATE				CHK				DEPT				DATE				PE				REQ				DATE				ORNL				DOE				DATE			
DRAWING APPROVALS																																																											
RELEASE LEVEL Fabrication																																																											
SEI20-005																																																											
REV 0																																																											

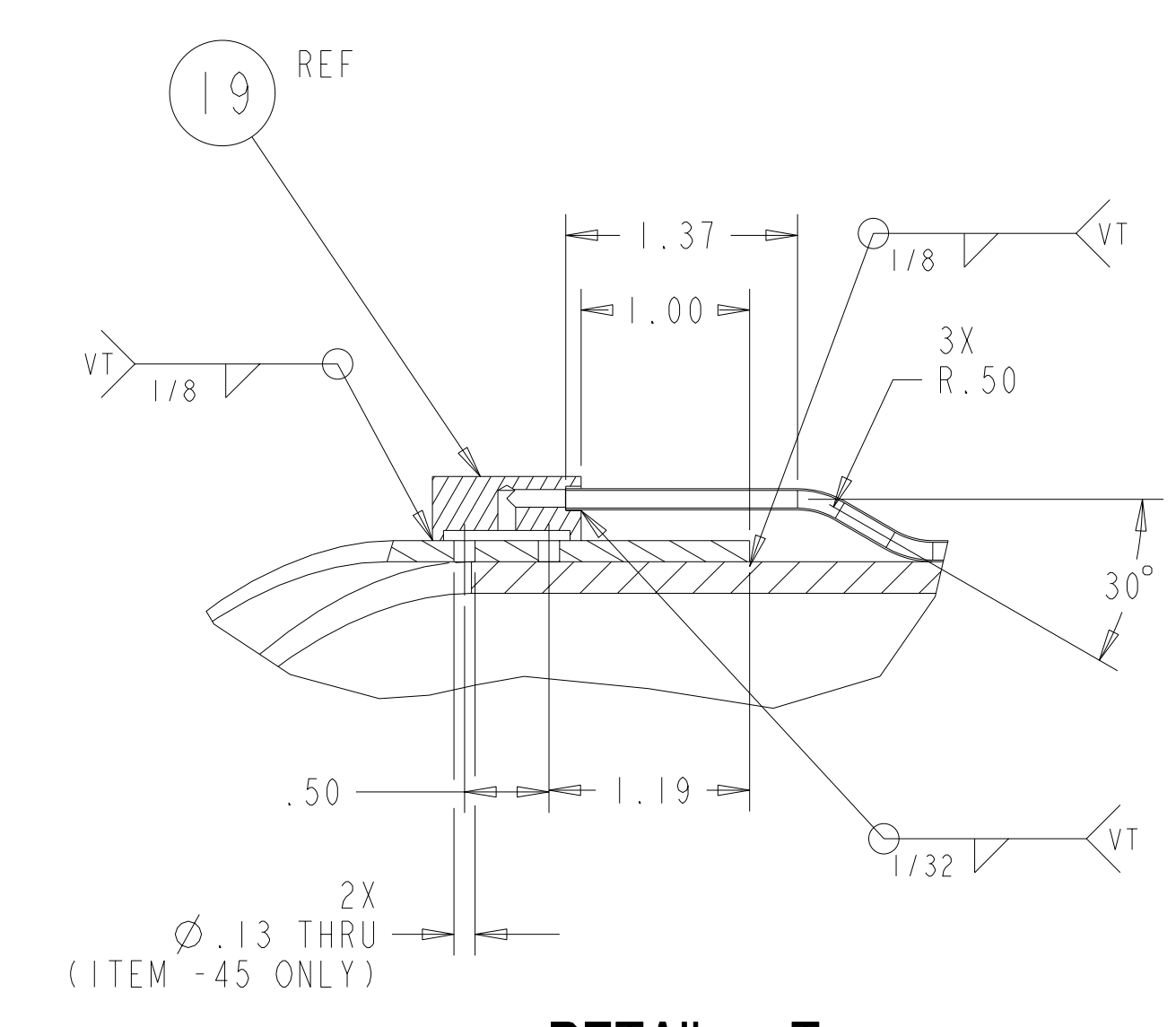
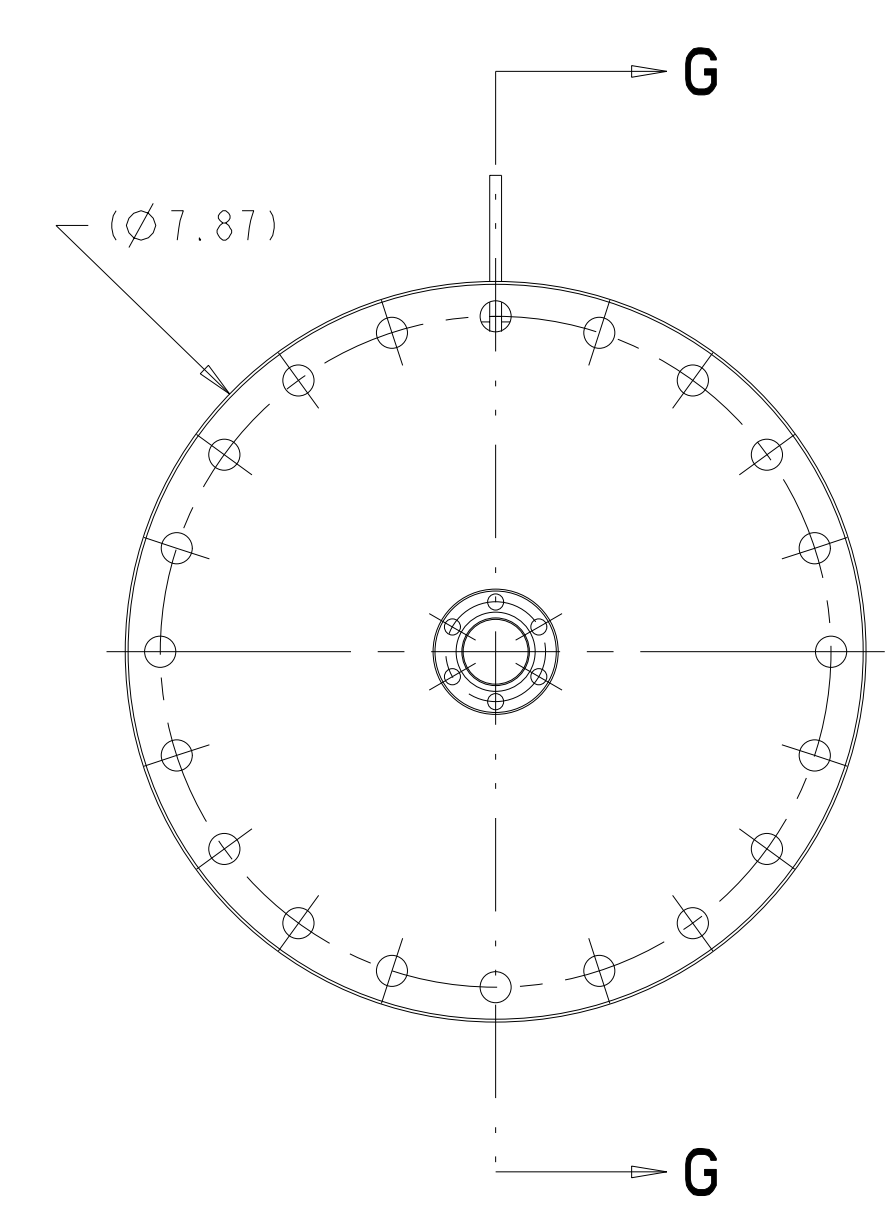
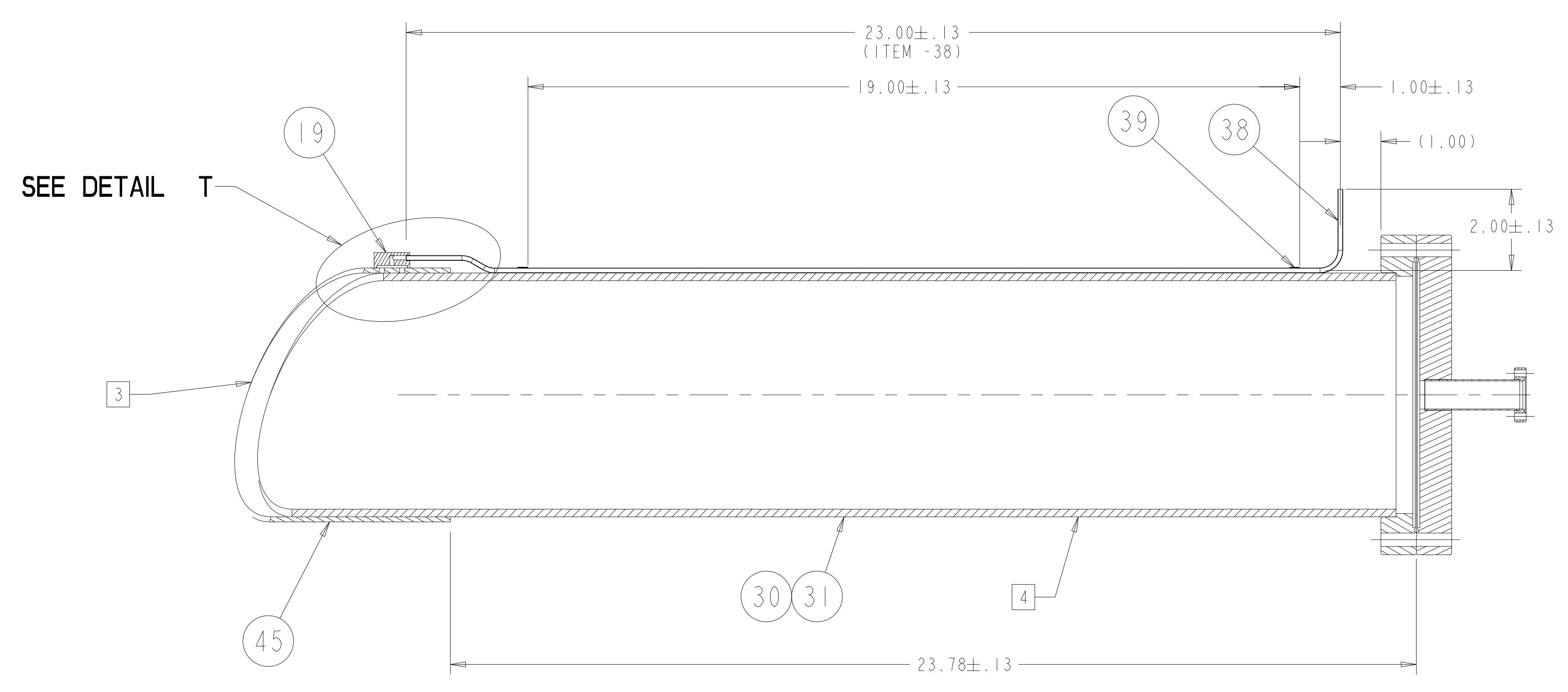
FOR NOTES AND PARTS LIST SEE SHEET 1



7 8 SCALE 0.50



9 10 SCALE 0.50



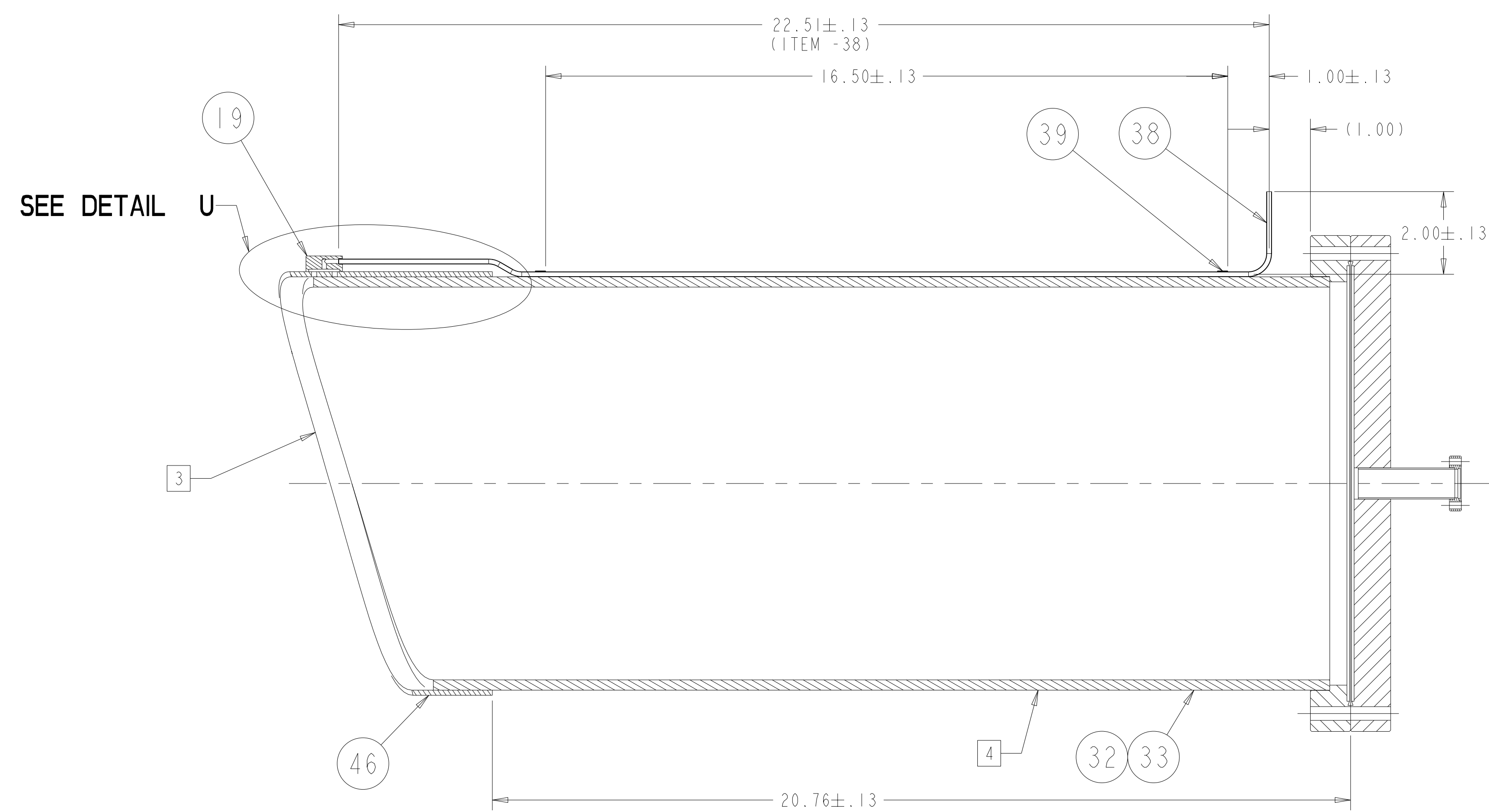
11 12 SCALE 0.50

RELEASED FOR FABRICATION / INSTALLATION
PPPL Drafting:

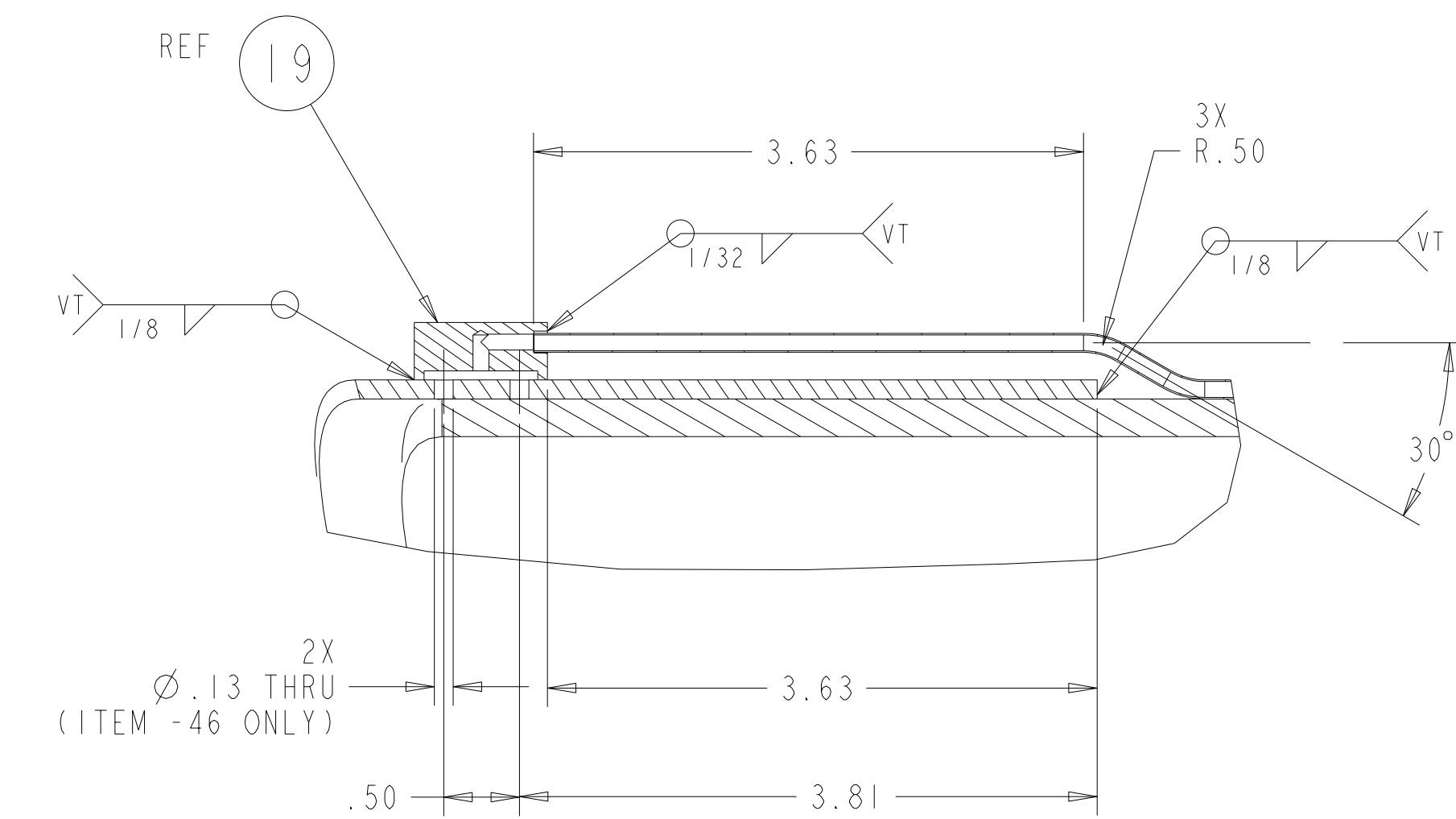
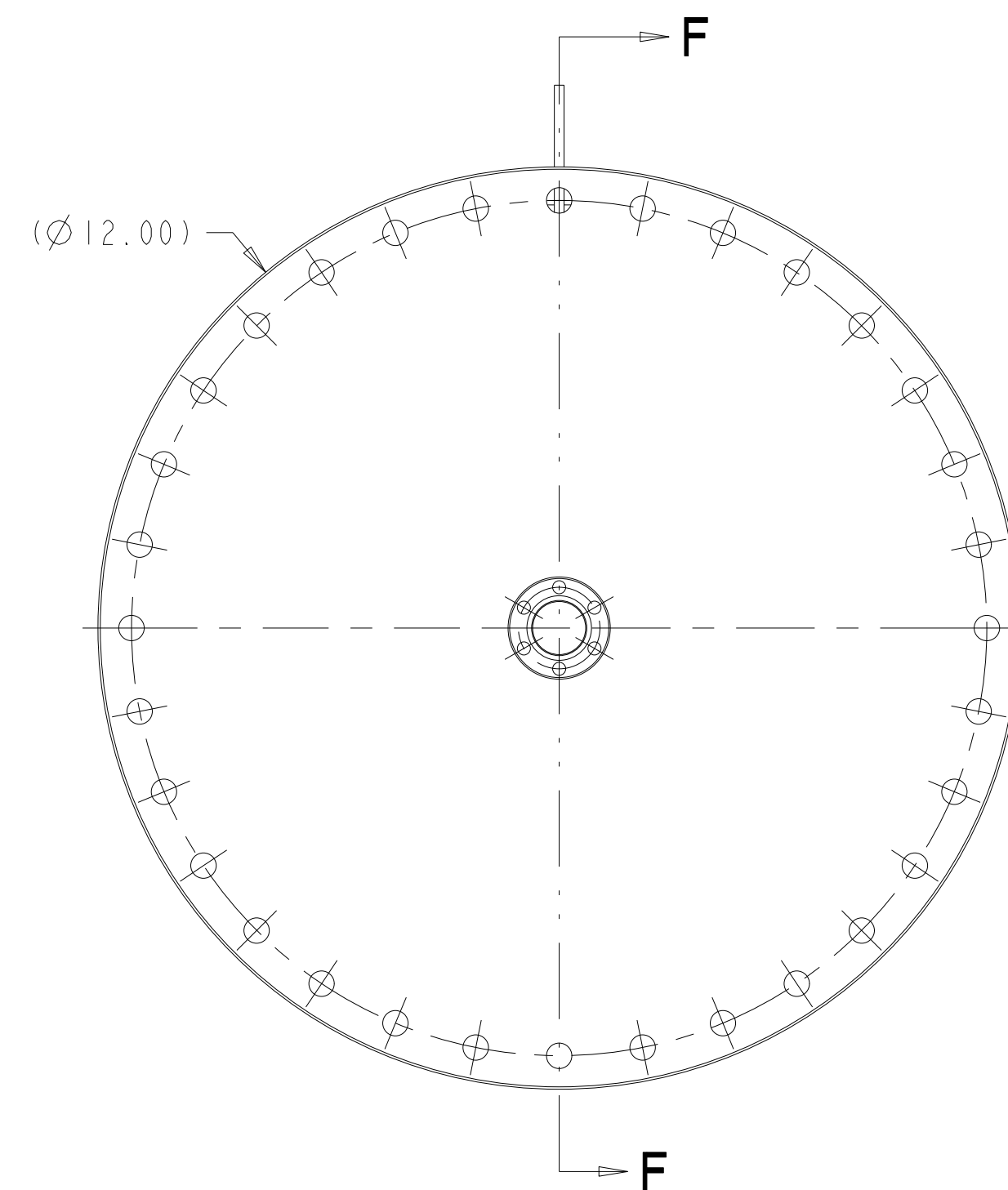
UT-BATTELLE		Oak Ridge National Laboratory managed for the DEPARTMENT OF ENERGY under U.S. GOVERNMENT CONTRACT DE-AC05-00OR22725 UT-BATTELLE, LLC, Oak Ridge, Tennessee				
PROJECT NAME						
NATIONAL COMPACT STELLARATOR EXPERIMENT						
VACUUM VESSEL PORT EXTENSION WELDMENT						
VERSION NO.	PLANT	BLDG	FL	SHT	OF	TYPE CLASS
27	X-10	5700	3	2	3	S U
RELEASE LEVEL		SE120-005			REV 0	
Fabrication						

SE120-005

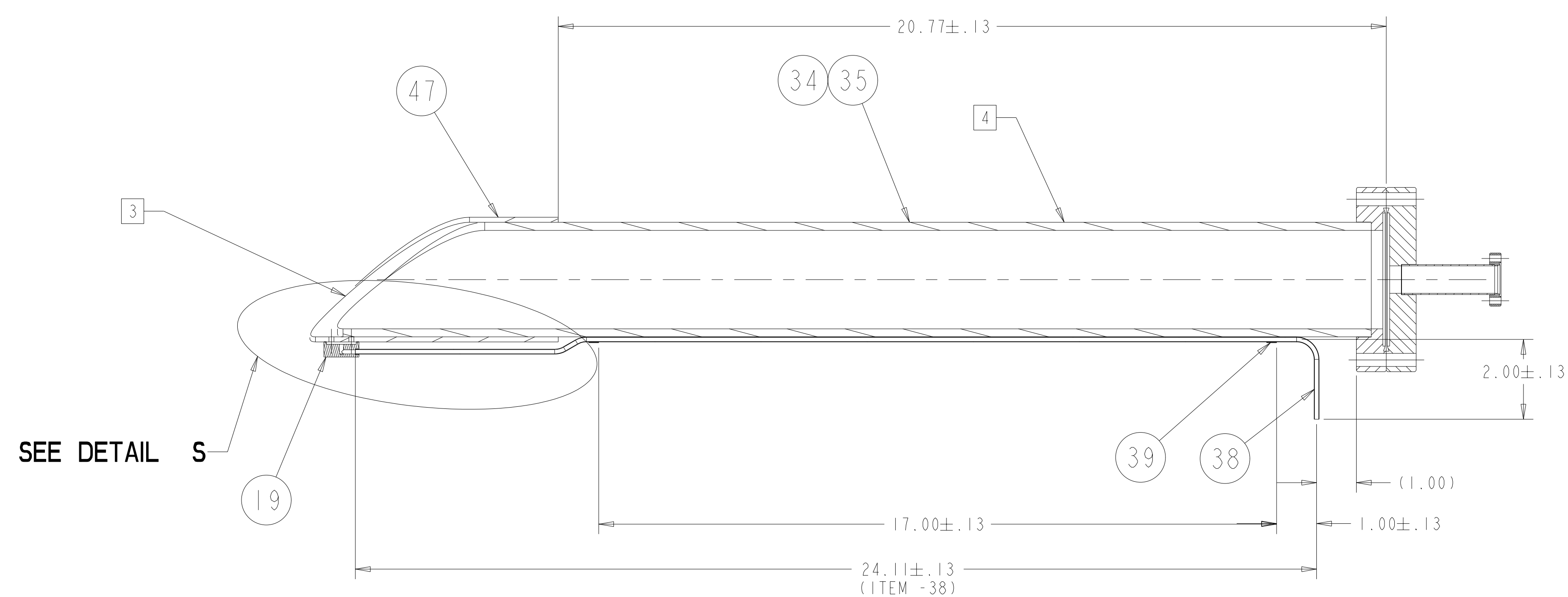
FOR NOTES AND PARTS LIST SEE SHEET 1



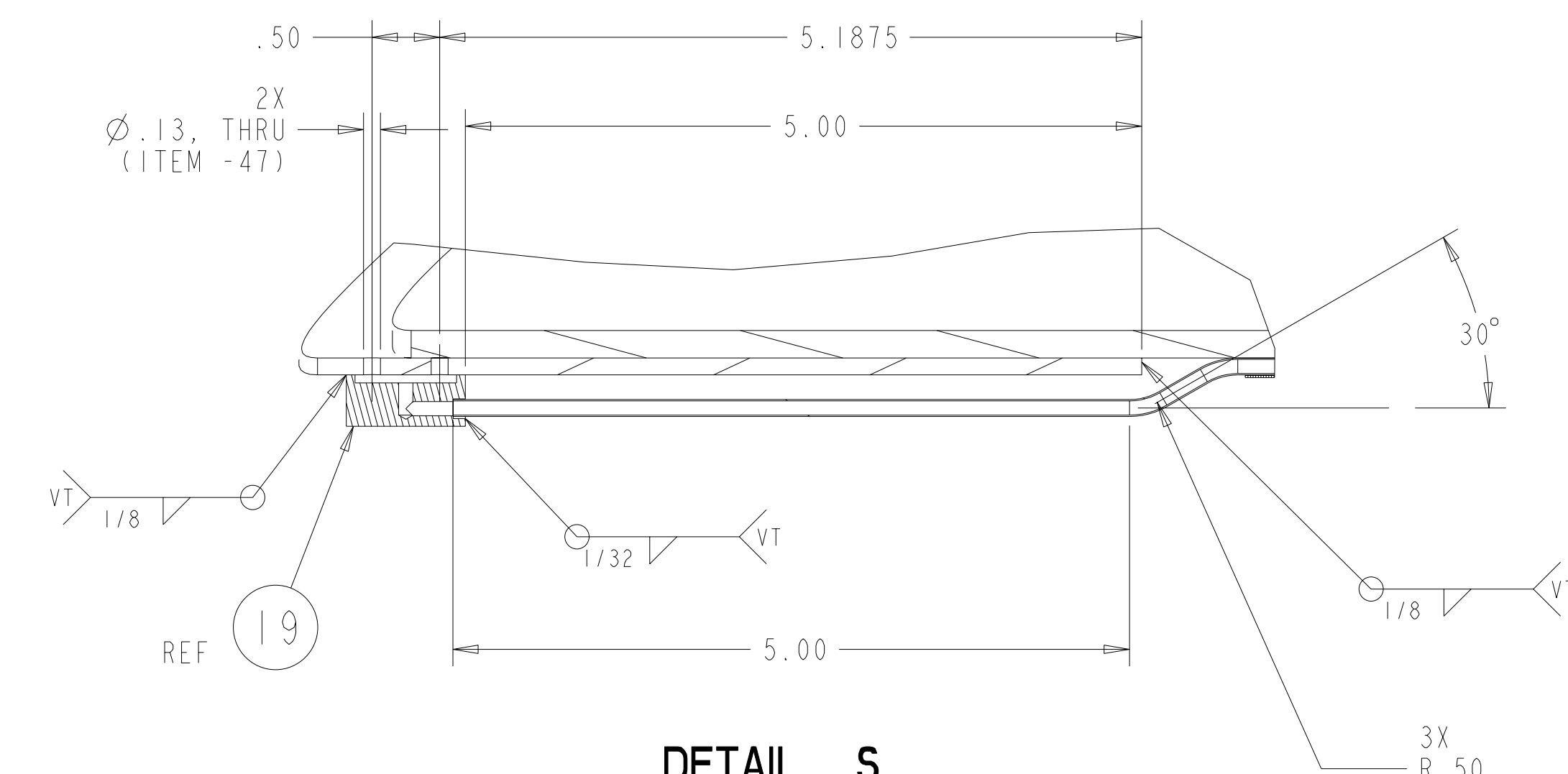
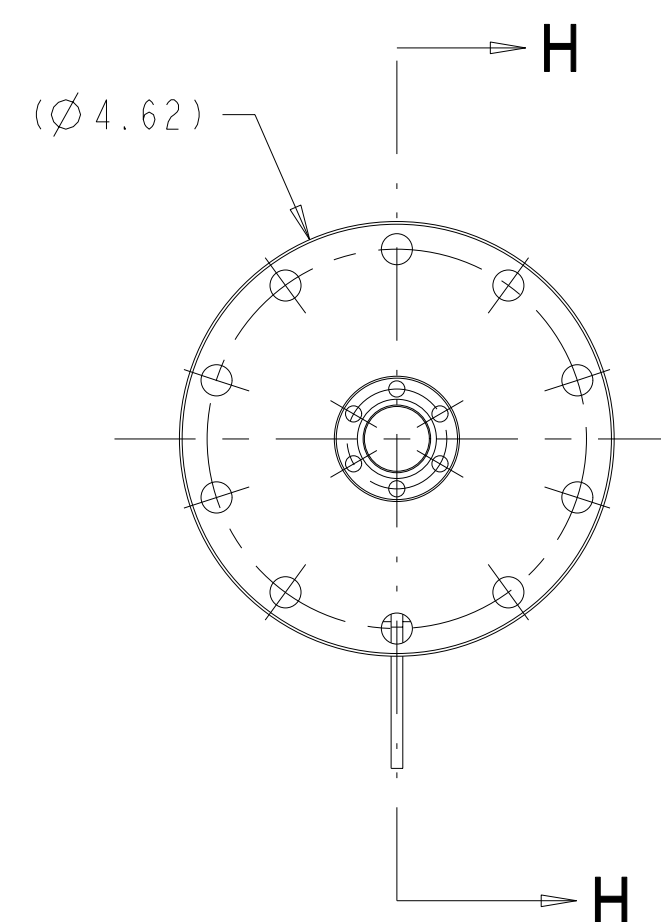
SECTION F-F
13 14 SCALE 0.50



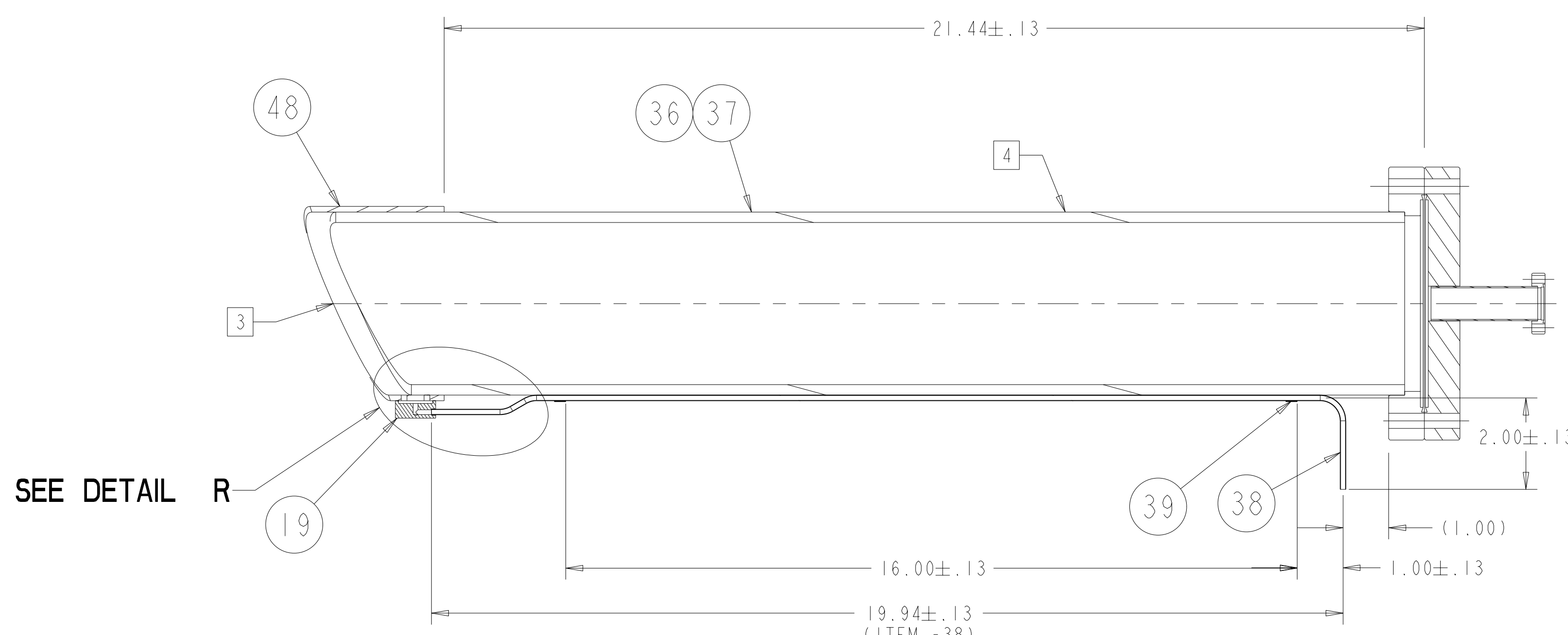
DETAIL U
SCALE 1.00



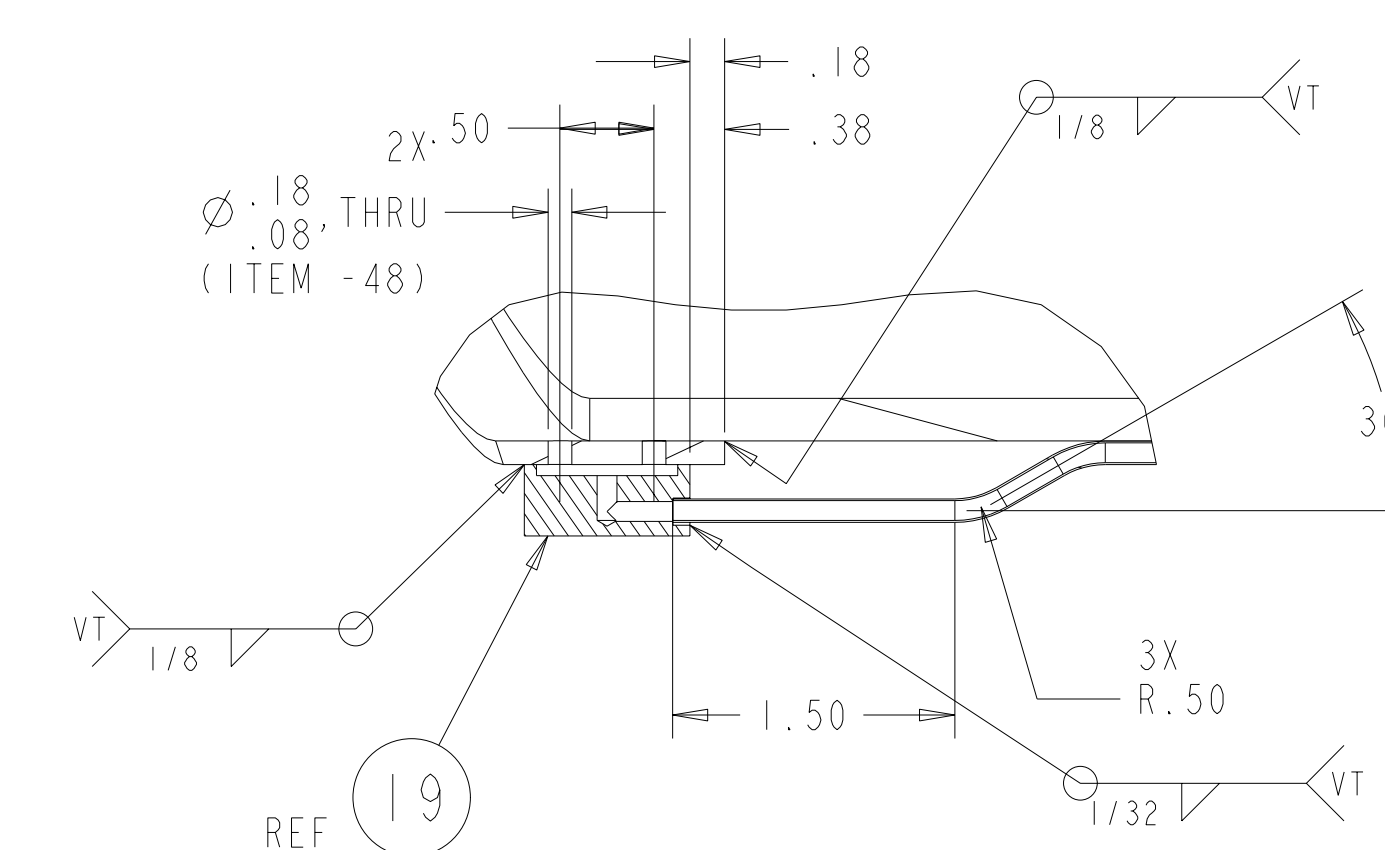
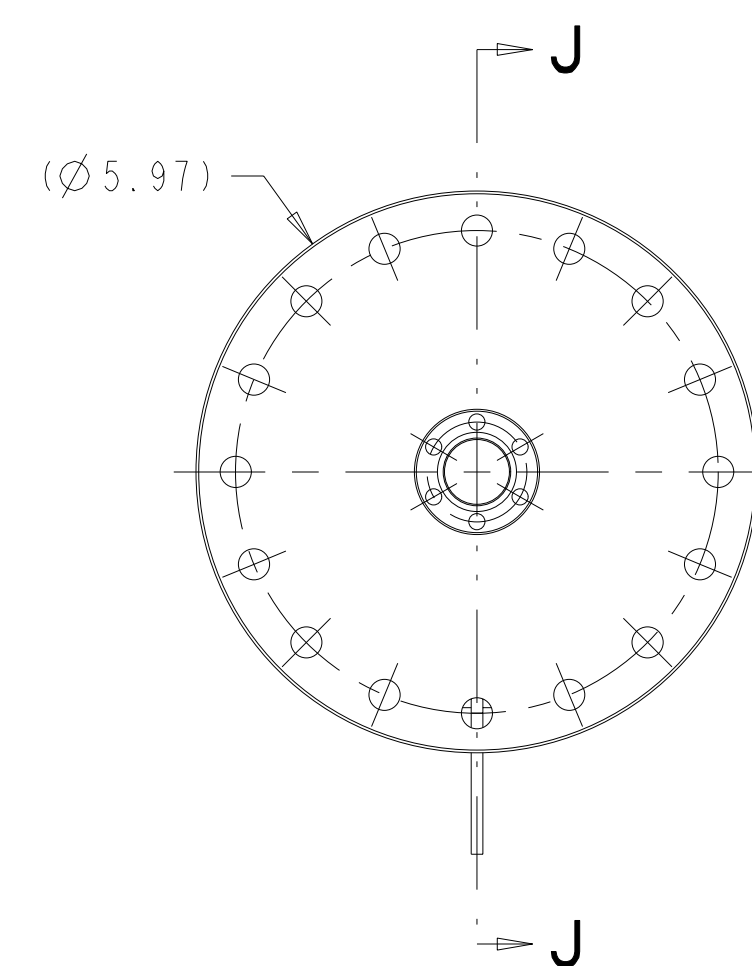
SECTION H-H
15 16 SCALE 0.50



DETAIL S
SCALE 1.00



SECTION J-J
17 18 SCALE 0.50



DETAIL R
SCALE 1.00

**RELEASED FOR
FABRICATION / INSTALLATION**
PPPL Drafting:

Oak Ridge National Laboratory managed for the DEPARTMENT OF ENERGY under U.S. GOVERNMENT CONTRACT DE-AC05-00OR22725 UT-BATTELLE, LLC, Oak Ridge, Tennessee						
PROJECT NAME NATIONAL COMPACT STELLARATOR EXPERIMENT						
VACUUM VESSEL PORT EXTENSION WELDMENT						
VERSION NO. 27	PLANT X-10	BLDG 5700	FL 3	SHT OF 3	TYPE S	CLASS U
RELEASE LEVEL Fabrication		SE120-005			REV 0	