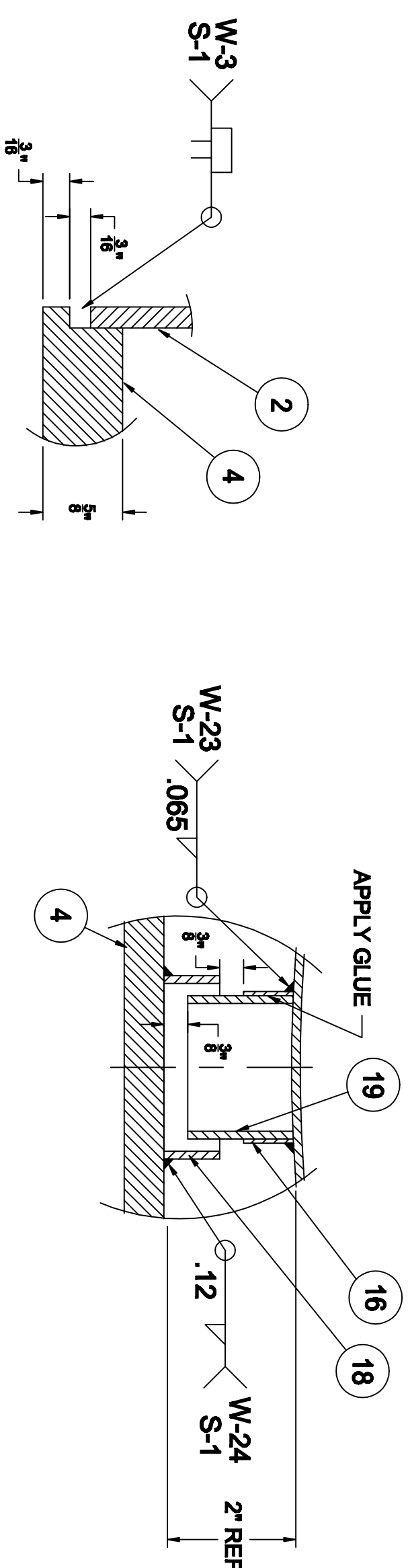


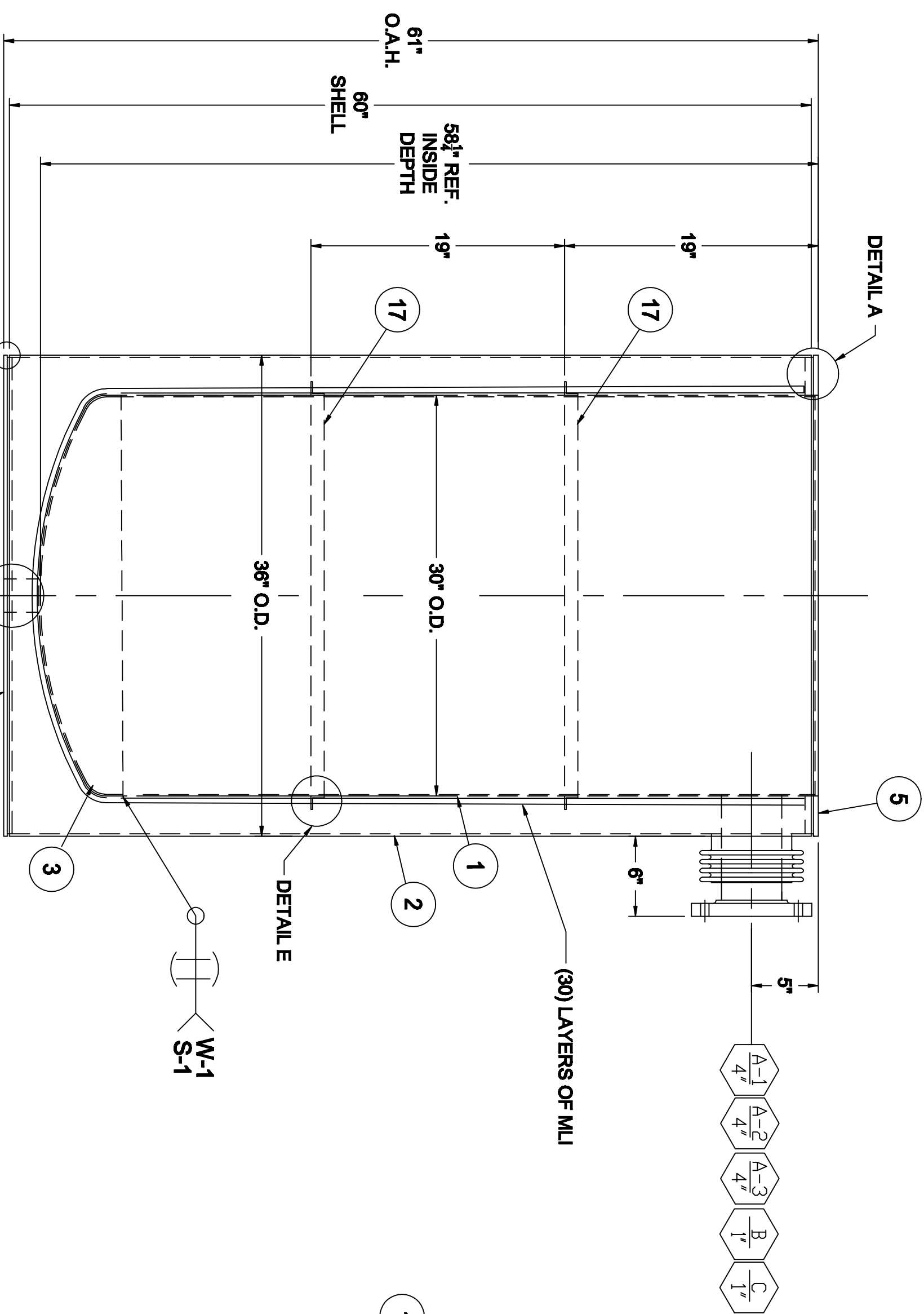
ITEM QTY.	BILL OF MATERIALS	MATERIAL PART NO.
1	11 GA SHEET 53 1/2" x 93 7/8"	SA-240-I-304
2	1 7 GA SHEET 60" x 112 1/2"	SA-240-I-304
3	1 10 GA x 30" O.D. ASME F&D HEAD W/ 1" S.F.	SA-240-I-304
4	1 5/8" THK CIRCLE 36" O.D.	SA-240-I-304
5	1 1" THK RING 36 O.D x 30 1/16" I.D.	SA-240-I-304
6	3 4" SCH40 PIPE 9 1/8" LONG	SA-312-IP304
7	3 4" 150# F.F. S.O. FLANGE	SA-182-F-304
8	3 6" O.D. x 0.65" WALL TUBE	SA-213-IP304
9	3 6" I.D.FLEX HOSE	304 S.S.
10	3 1.4" THK RING 6" O.D. x 4 1/2" I.D.	SA-240-I-304
11	1 ACME PUMP/OUT V1046-31	S.S.
12	1 QF-40-150 VACUUM PUMP OUT	S.S.
13	1 QF-40-SB BLANK FLANGE	304 S.S.
14	1 QF40 - 150-BR-B CENTERING RING ASSEMBLY	304 S.S.
15	1 QF-40-CW WING NUT CLAMP	BUNA-N
16	1 2" SCH5 PIPE 3/4" LONG	ALUMINUM
17	2 1 1/4" x 1 1/4" x 1/8" ANGLE R.L.D. TO 30" I.D.	SA-419-IP304
18	1 2 1/2" SCH5 PIPE 7/8" LONG	G-10
19	1 2 1/4" O.D. x .120" WALL x 1 5/8" LONG	SA-312-IP304
20	3 4" 150# F.F. BLIND FLANGE	SA-182-F-304
21	5/8-11 H.H.BOLT 3 3/4" LG	SA-193-B8
22	5/8-11 NUT	SA-194-8
23	3 O-RING PARKER # 2-357	BUNA-N

DETAIL A

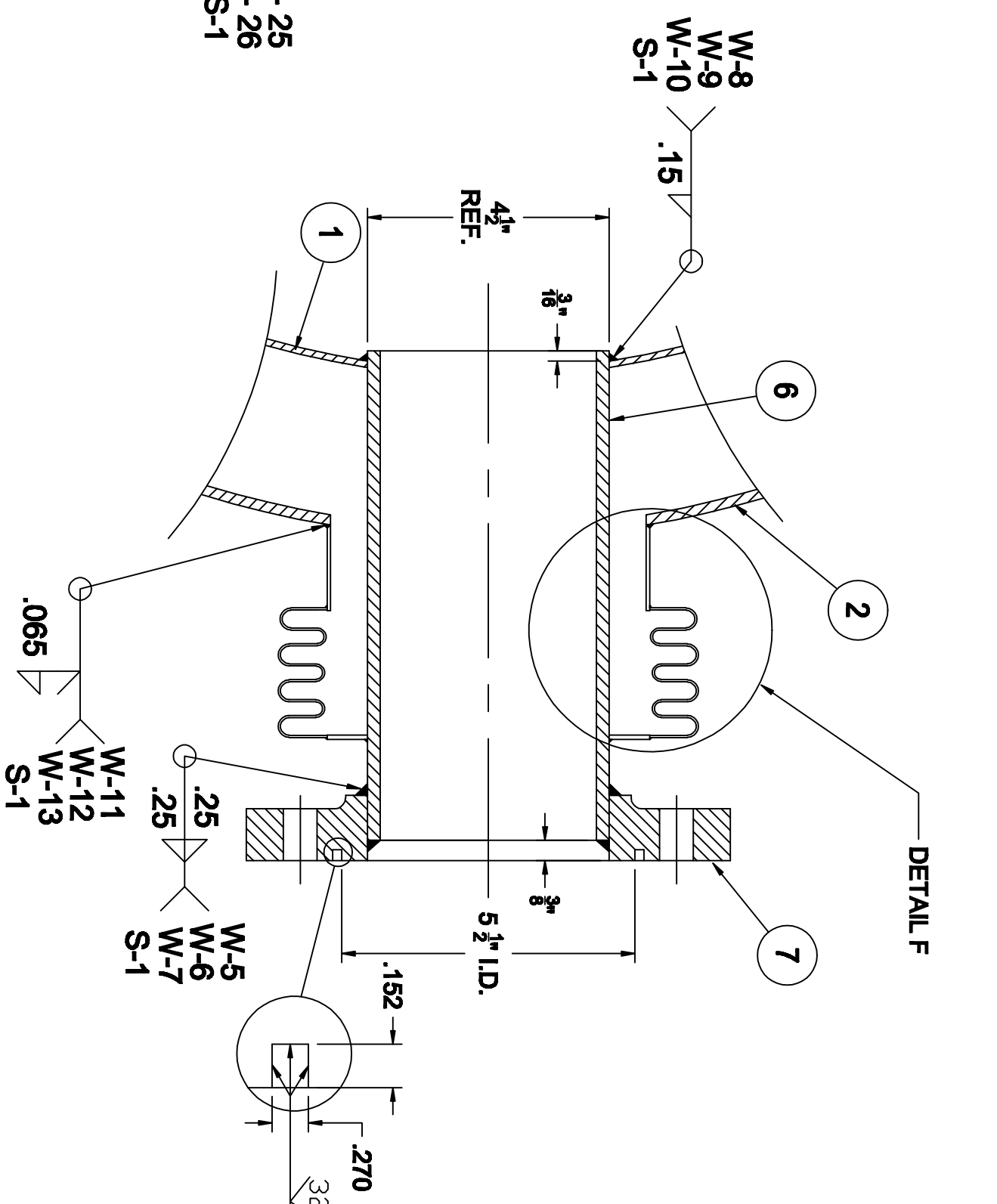


DETAIL B

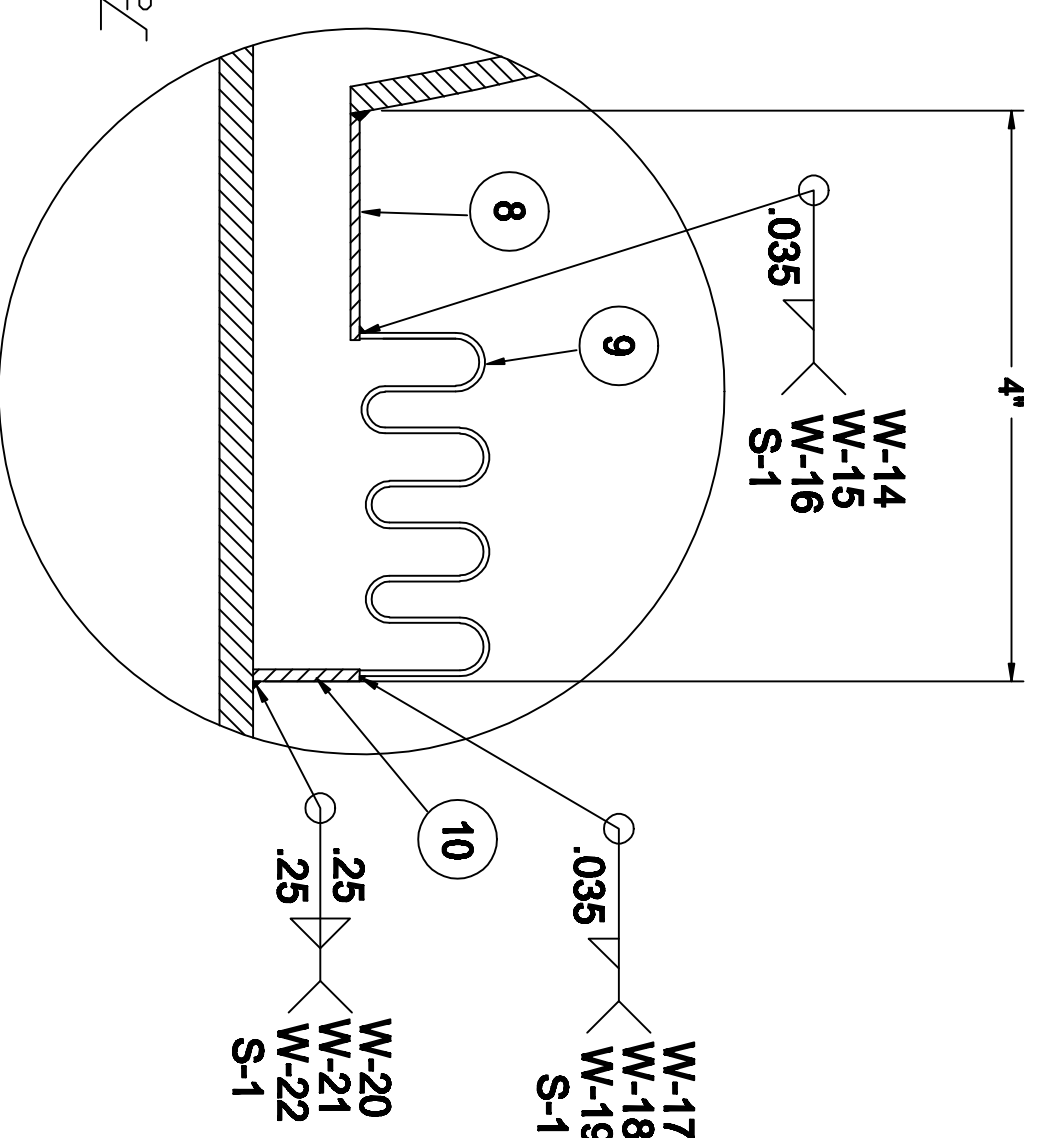
DETAIL D



DETAIL E



DETAIL F



- DESIGN AND MANUFACTURING REQUIREMENTS:
- DESIGNED AND FABRICATED IN ACCORDANCE WITH THE LATEST EDITION OF THE ASME BOILER AND PRESSURE VESSEL CODE SECTION VIII, DIVISION 1.
- ONLY INNER VESSEL REQUIRED STAMP**
- 20 DESIGNED PRESSURE: 35 PSI. INTERNAL.
- 21 INNER VESSEL: 20 PSI. INTERNAL.
- 22 OUTER VESSEL: 5 PSI. INTERNAL, 15 PSI. EXTERNAL.
- 30 DESIGNED TEMPERATURE: 100°F MAXIMUM, -320°F MINIMUM.
- 31 INNER VESSEL: 100°F MAXIMUM, -320°F MINIMUM.
- 32 OUTER VESSEL: 100°F MAXIMUM, -320°F MINIMUM.
- 40 PNEUMATIC TEST WITH DRY NITROGEN.
- 41 INNER VESSEL: 40 PSI
- 42 OUTER VESSEL: 6 PSI
- 50 LEAK TESTING WITH A HELIUM MASS SPECTROMETER LEAK DETECTOR PER FERMI SPECIFICATION CHAPTER 9.
- 60 FLANGE BOLT HOLES TO STRADDLE VESSEL CENTER LINES.
- 70 CLEAN VESSEL OF FOREIGN MATTER, GREASE, WELD SPATTER, ETC., BREAK ALL SHARP EDGES.

PORT "A" DETAIL

Ability Engineering Inc.

UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
FRACTIONS DECIMALS ANGLES
1/16" .005" 15°

INTERNET: WWW.ABILITY-ENG.COM
PHONE: 856-559-3333
FAX: 856-559-3333

DATE: 11/11/11
DRAWN: JAC
CHECKED: JAC
ENGR: JAC

CUSTOMER: **FERMILAB**
TITLE: **BLANCHE CRYOSTAT**

SIZE: DWG. NO. **8568-5593**
SCALE: **1=8"**

REV: **0**
SHEET: **1 OF 1**