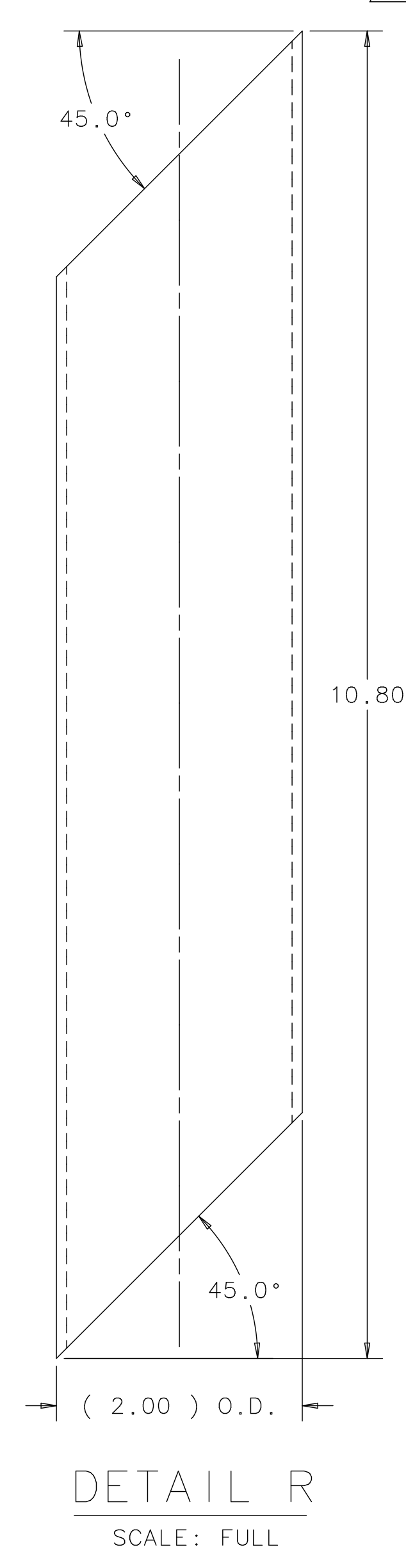
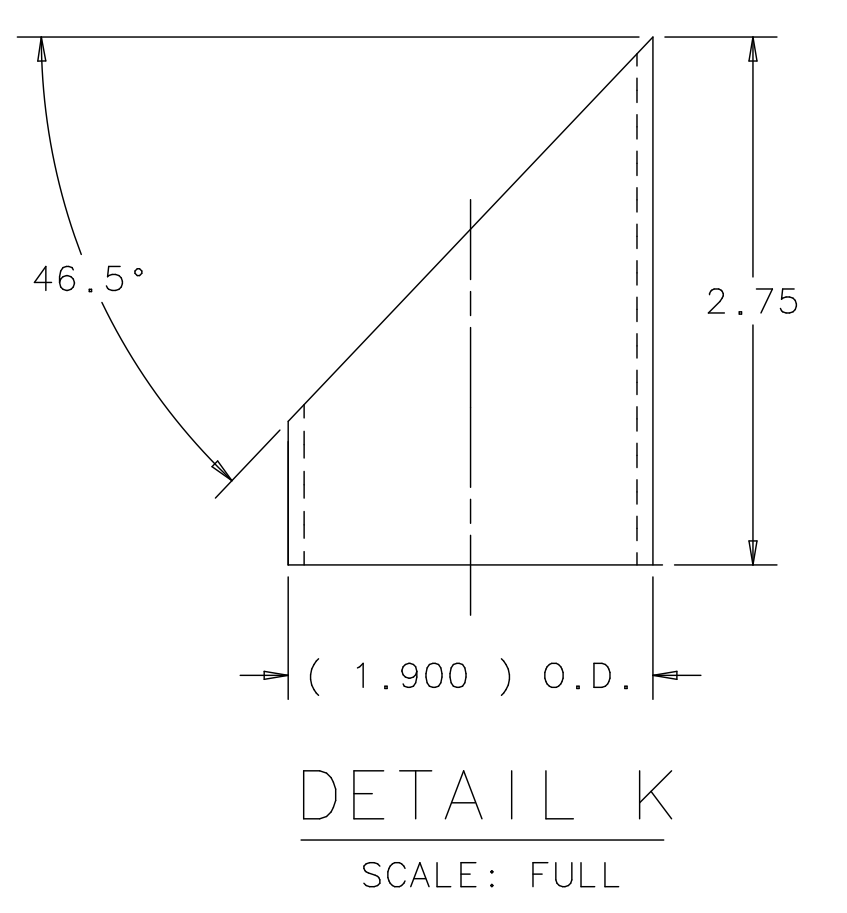
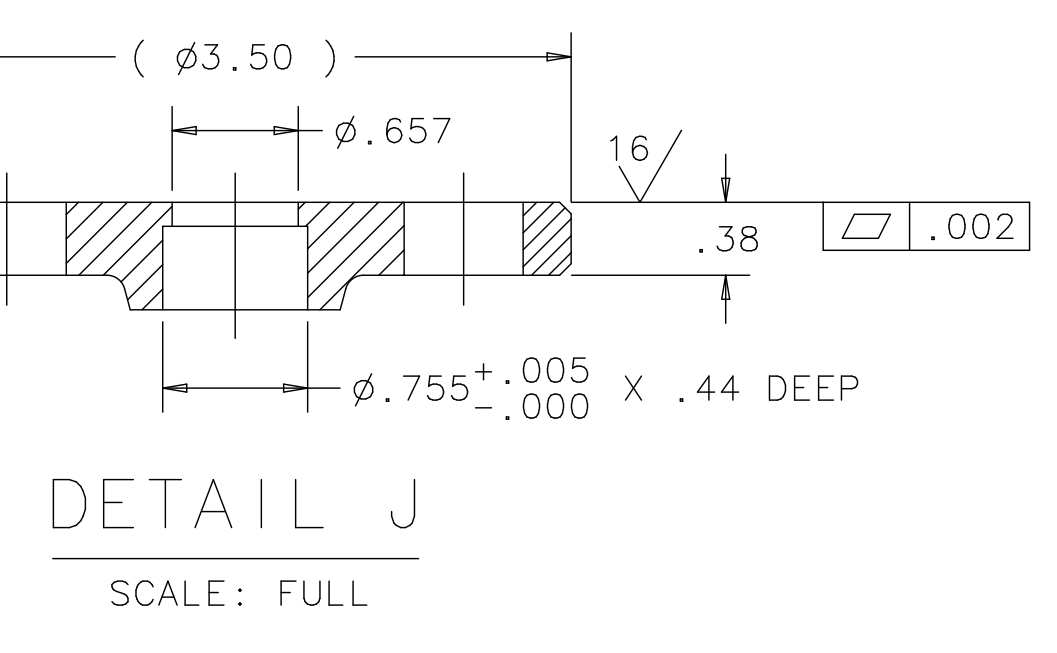
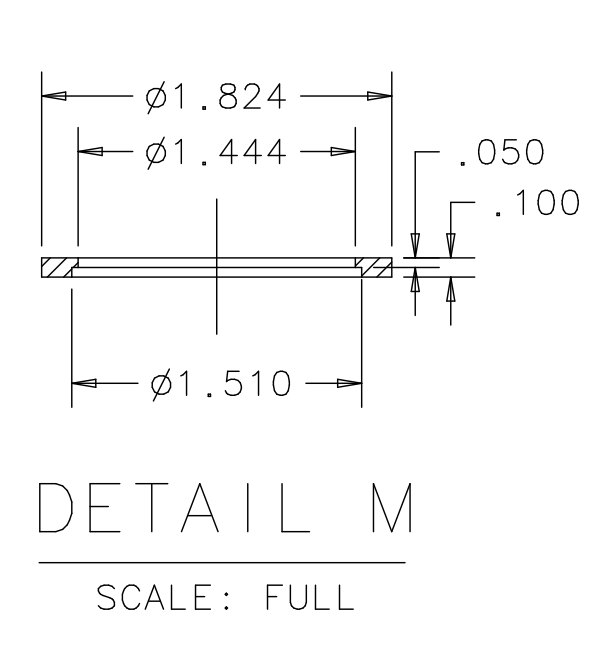
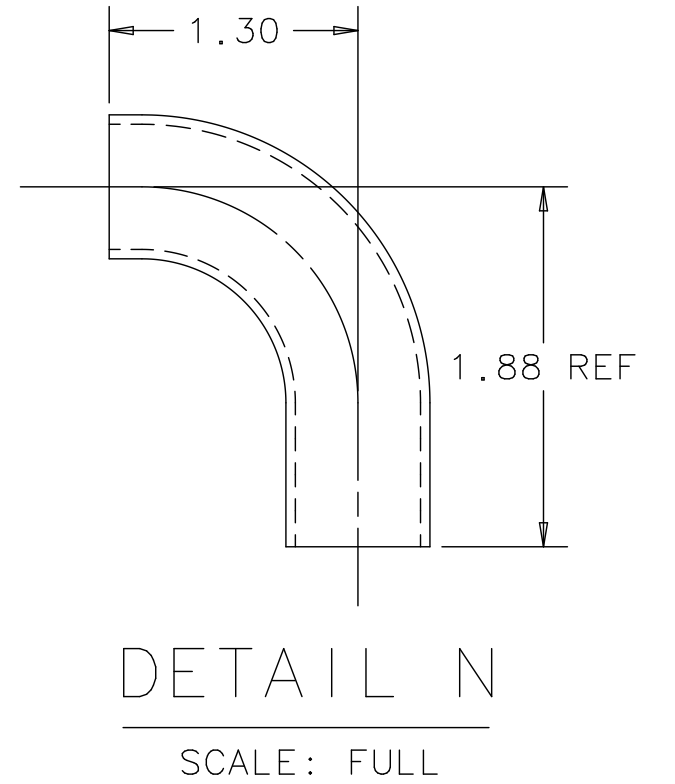
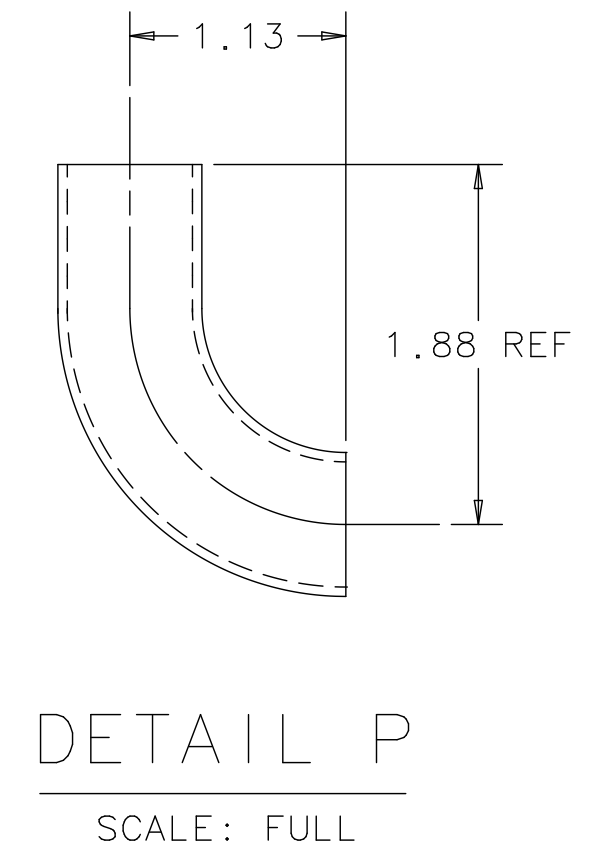
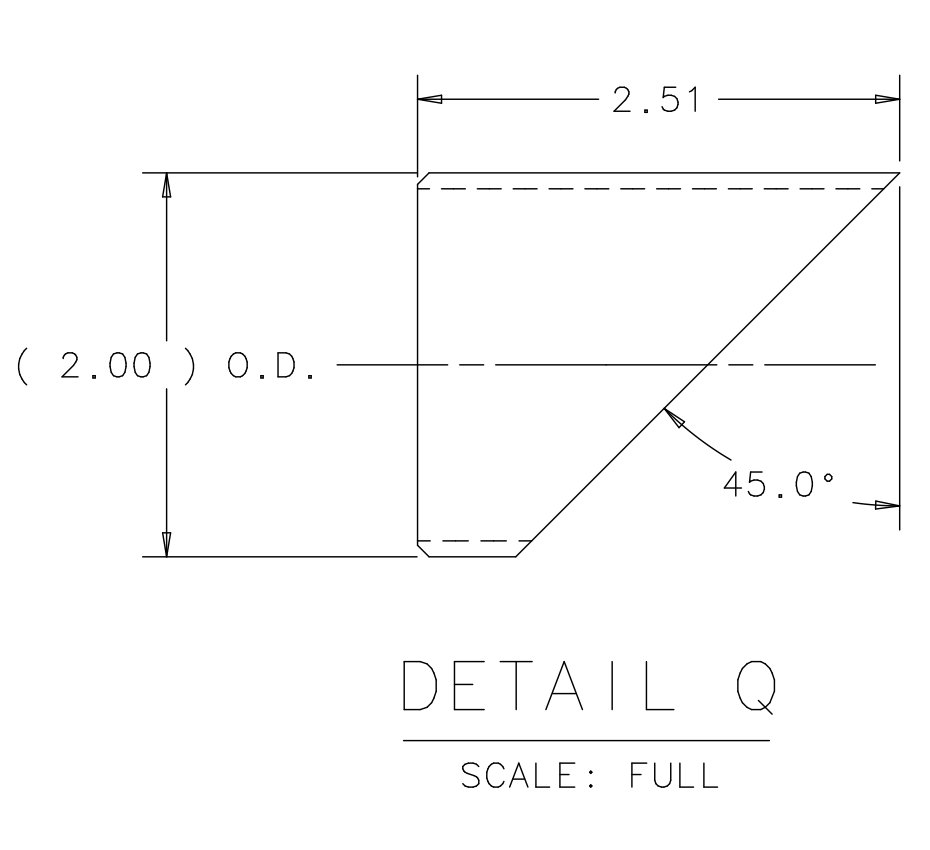
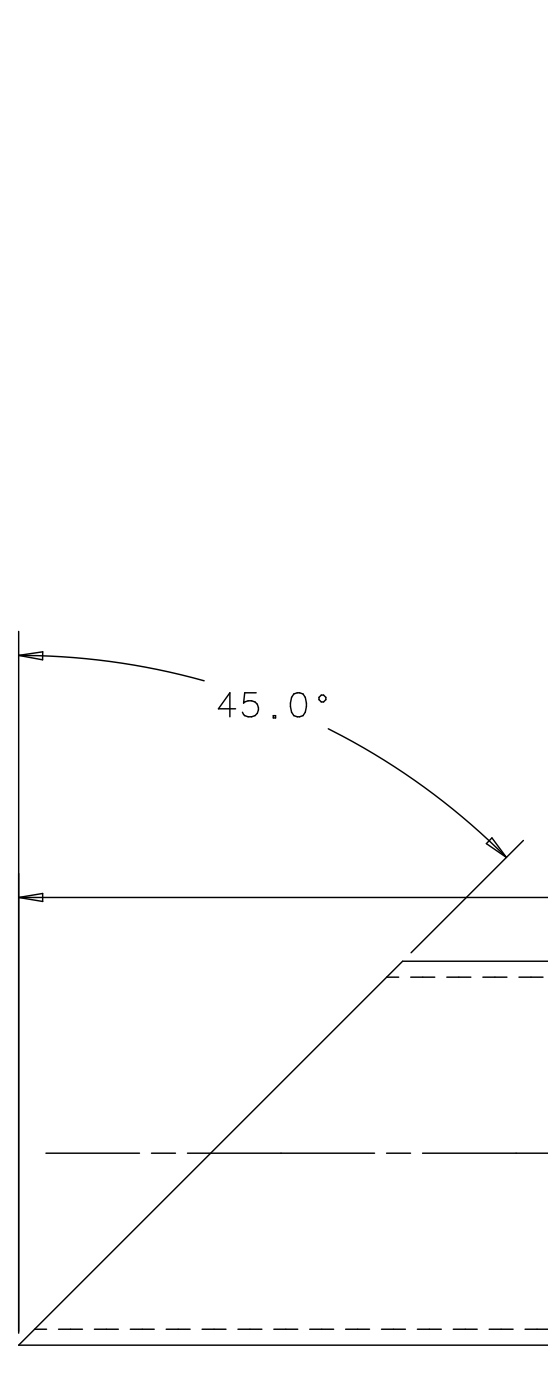
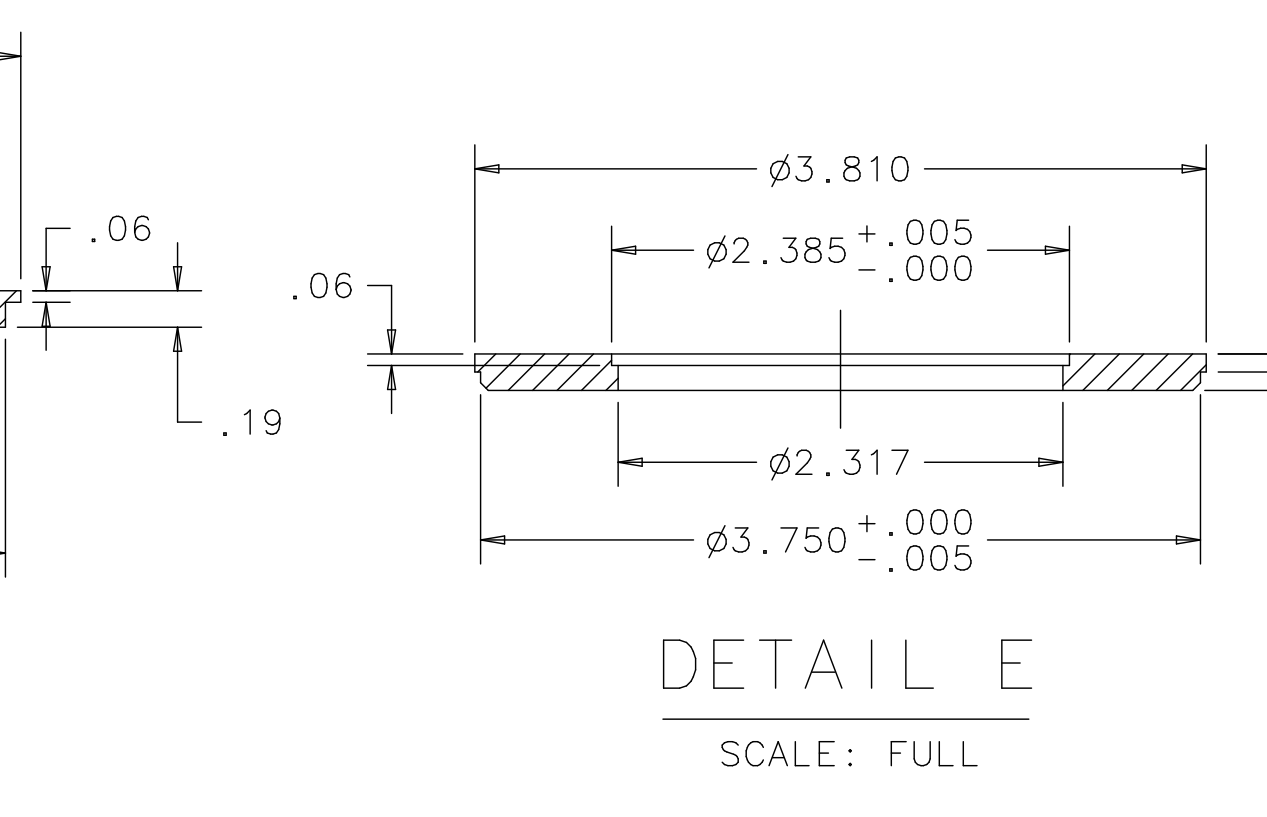
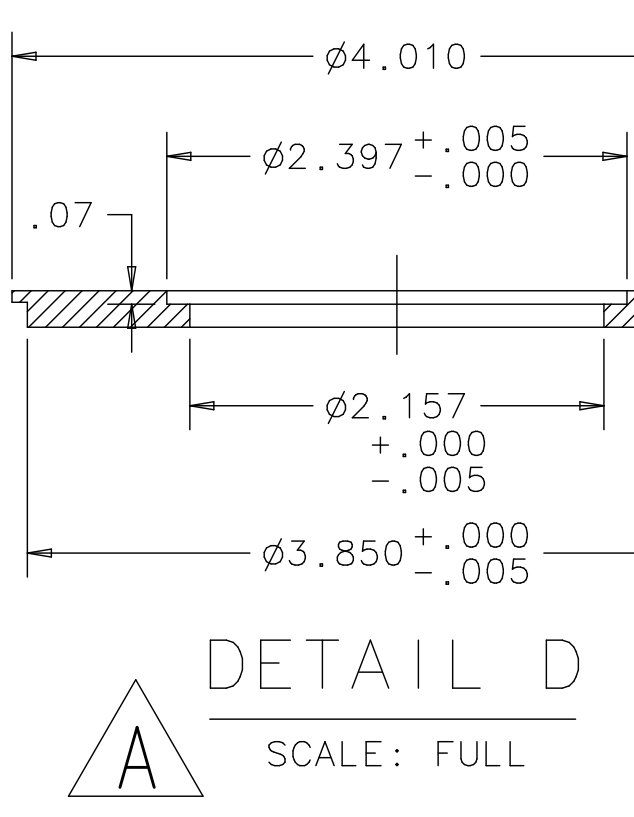
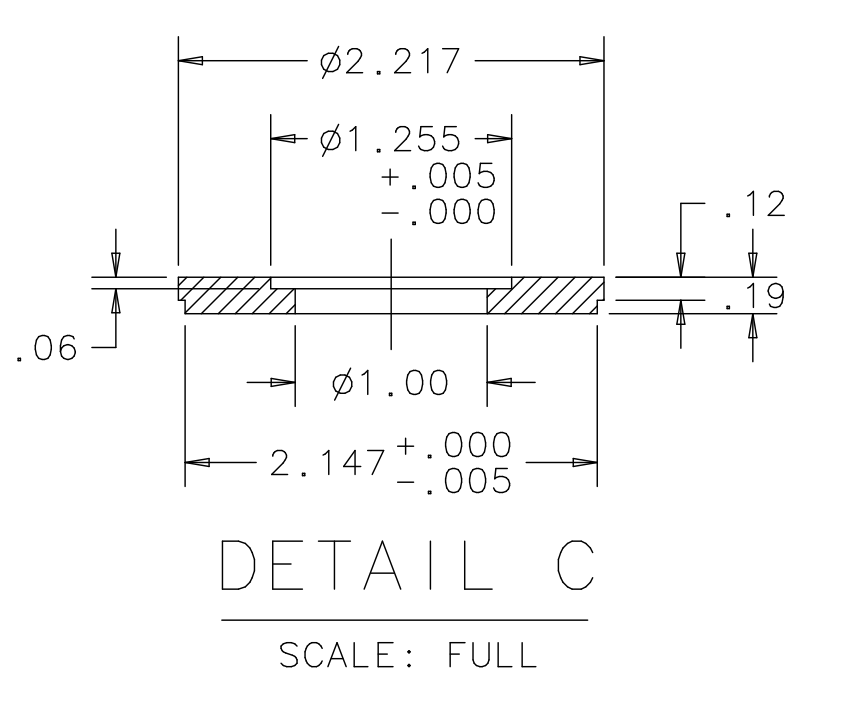
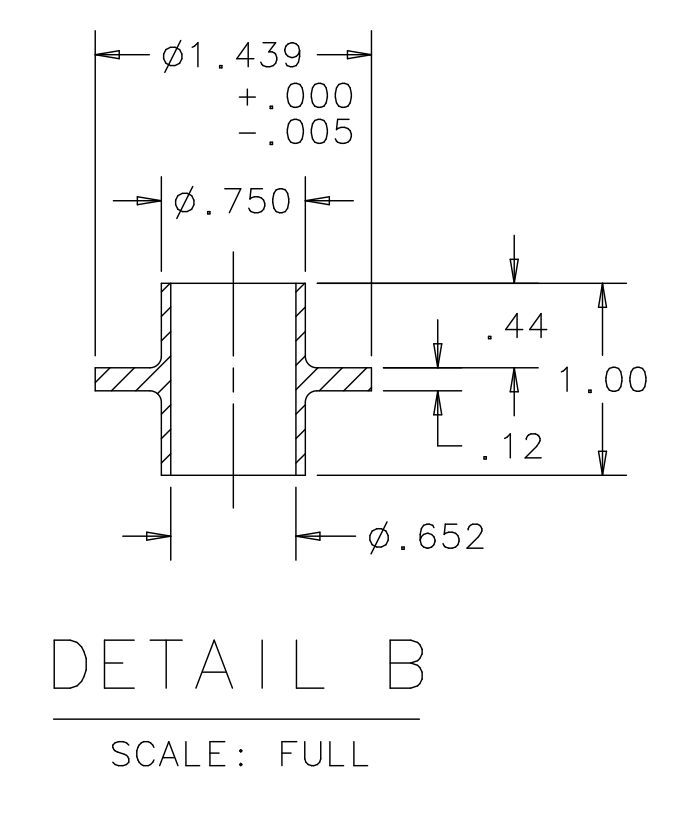
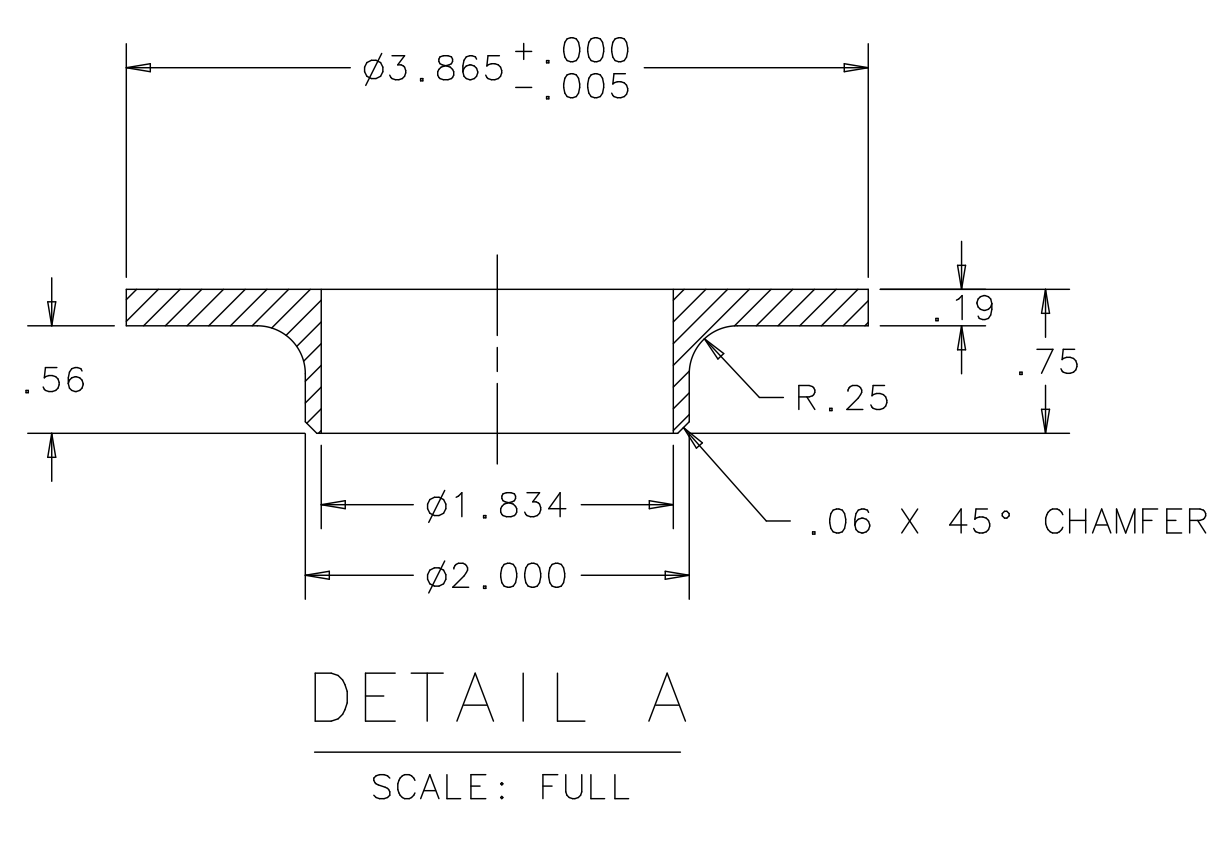
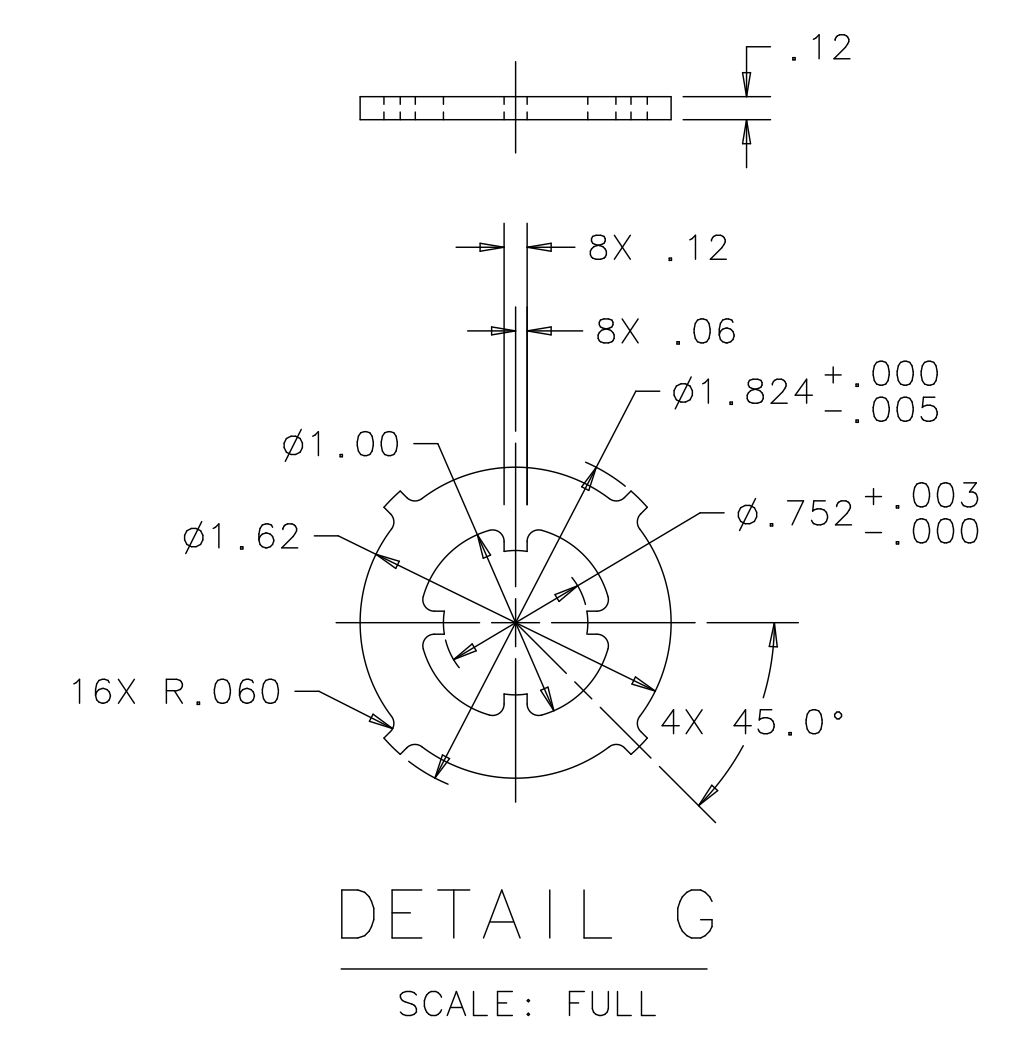
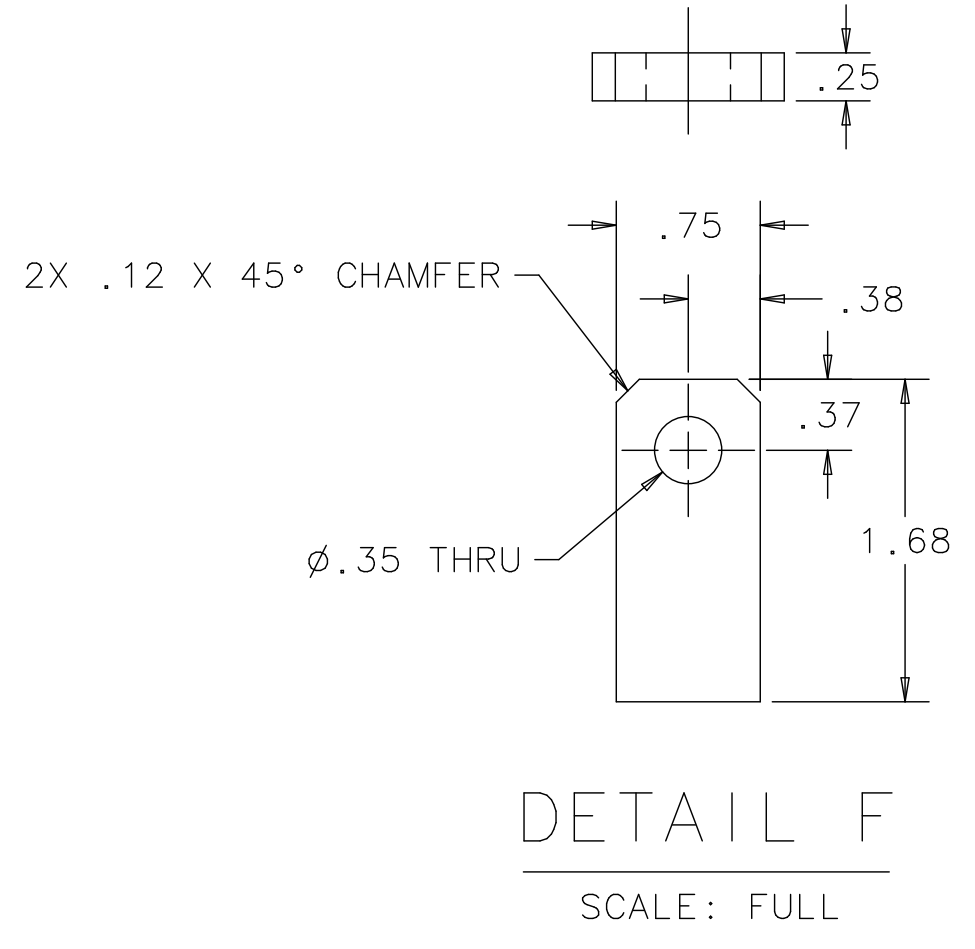
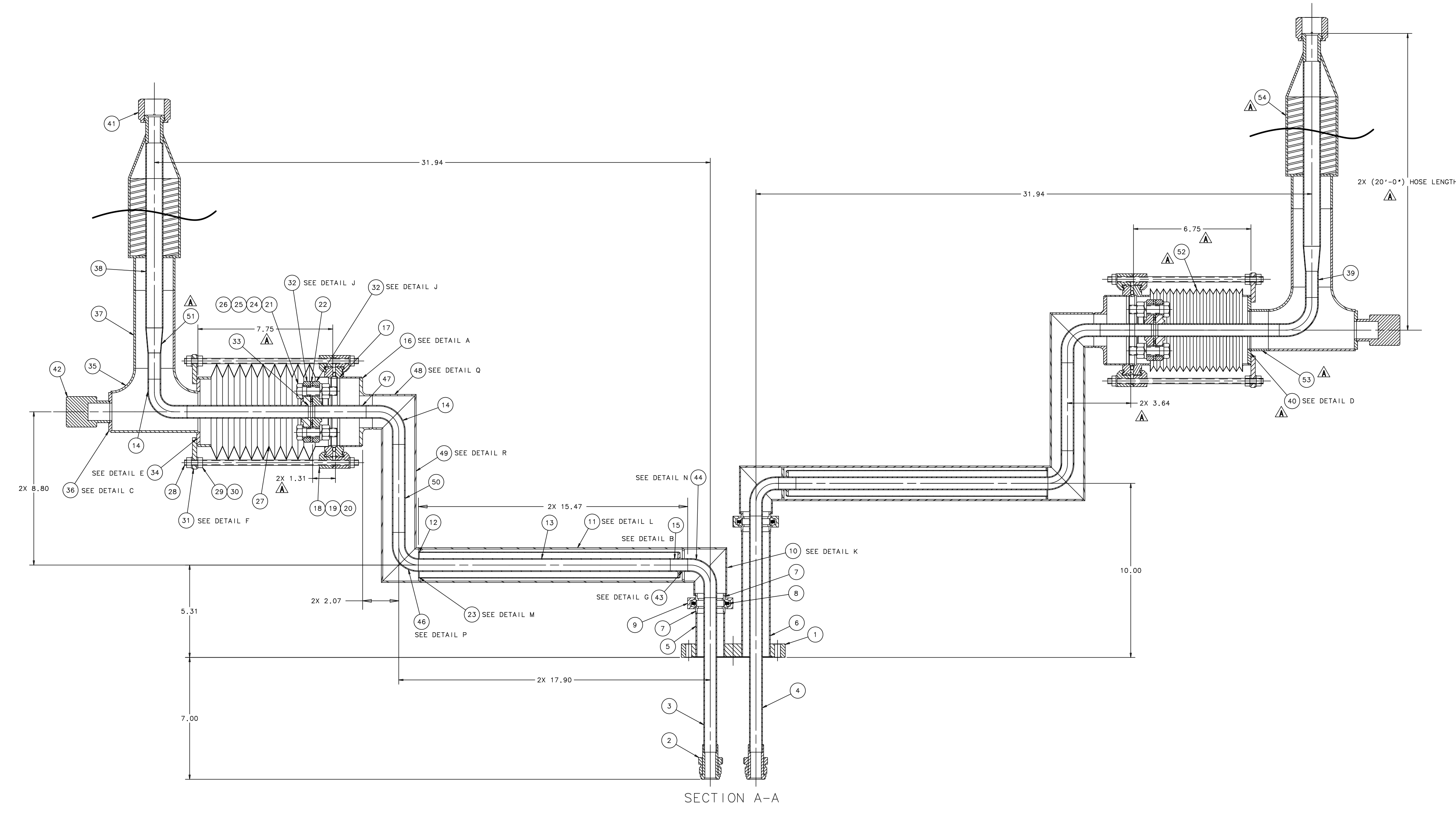


REV	DESCRIPTION	DRAWN APPROVED	DATE
A	ADDED ITEMS 51-54 & DIMS. (20"-0") HOSE LENGTH, 6.75, 2X 3.64, 7.75, CHANGED ITEMS 27, 38, 40, 41, 2X 1.31 WAS 1.31	R. REINERT	24SEP2009



ITEM	PART NO.	DESCRIPTION OR SIZE	QTY.
54	COML	HOSE VAC. JACKETED 20"-0" LG..	2
53	COML	PIPE 2" SCH. 10 X 1.00LG., S.S. 304	1
52	COML	BELLOWS-ISO 100, TRIM 1 FLANGE, P/N ISO100-400-F, LOS VACUUM	1
51	COML	COUPLING, TUBE REDUCER, 75" TO 1.00" DIA, 8-12, TUBULEY TUBULAR, .035 WALL	2
50	COML	TUBING, .75" O.D. X .049 WALL X 5.05 LG., S.S. 304	2
49	DETAIL R	PIPE, 2" SCH. 10 X 10.80 LG., S.S. 304	2
48	DETAIL Q	PIPE, 2" SCH. 10 X 2.51 LG., S.S. 304	2
47	COML	TUBING, .75" O.D. X .049 WALL X 2.95 LG., S.S. 304	2
46	DETAIL P	ELBOW, 3/4" O.D. TUBE, 90°, M X M, STN. STL.	2
45	COML	VOR FITTING, FEMALE, 1" O.D. TUBE, S.S. 304	4
44	DETAIL N	ELBOW, 3/4" O.D. TUBE, 90°, M X M, STN. STL.	2
43	DETAIL G	SPACER, 3/4" PIPE X 2.000" O.D. TUBE C-10	2
42	COML	VACUUM SEAL-OFF VALVE, CV1 P/N V-1046-31	2
41	COML	VOR FITTING, FEMALE, 1" O.D. TUBE, S.S. 304	2
40	DETAIL D	BLANK-OFF PLATE, 304 SST.	1
39	COML	TUBING, .75" O.D. X .049 WALL X 1.51 LG., S.S. 304	1
38	COML	TUBING, 1.00" O.D. X .049 WALL X 6.20 LG., S.S. 304	1
37	COML	PIPE, 2" SCH. 10 X 4.67 LG., S.S. 304	1
36	DETAIL C	TEE, BLANK-OFF PLATE, VACUUM PUMP-OUT, S.S. 304	2
35	COML	TEE, STRAIGHT, 2" SCH. 10, S.S. 304	2
34	DETAIL E	BELLOWS MOUNTING FLANGE, S.S. 304	2
33	COML	TUBING, .75" O.D. X .049 WALL, X 6.97 LG., S.S. 304	2
32	DETAIL J	FLANGE, 1/2" CLASS 150# BLIND, S.S. 304	4
31	DETAIL F	BELLOWS ROD TAB, S.S. 304	8
30	COML	FLAT WASHER, MB NOMINAL, S.S. 304	24
29	COML	STD. HEX NUT, MB X 1.25, S.S. 304	12
28	COML	CONTINUOUS THREADED ROD, MB X 1.25 X 10.00 LG., S.S. 304	8
27	MC-436867	BELLOWS, WELDED, 4.000 O.D. X 1.25 WALL, CUFF, S.S. 304	1
26	COML	STD. HEX NUT, 1/2"-13 UNC, S.S. 304	8
25	COML	LOCKWASHER, 1/2" NOMINAL, S.S. 304	8
24	COML	HHCS, 1/2"-13 UNC X 2.00 LG., S.S. 304	8
23	DETAIL M	FLANGE, VACUUM BREAK, S.S. 304	2
22	FURNI SHED	GASKET, 1/2" NOMINAL PIPE SIZE VENDOR: PSI (PIPELINE SEAL & INSULATOR, INC)	2
21	COML	FLANGED SLEEVE BEARING (ISOLATOR) 1/2" I.D. X 5/8" O.D., McMASTER-CARR P/N 270525	8
20	COML	DOUBLE CLAW CLAMP FOR ISO NW 100 FLANGE	8
19	COML	ISO NW100 CENTERING RING ASSY., S.S. 304 V/VITON O-RING	2
18	COML	ISO NW100 (4" O.D. TUBE) CLAW CLAMP FLANGE, S.S. 304	4
17	COML	TUBING, 4.000 O.D. X .065 WALL X 1.25 LG., S.S. 304	2
16	DETAIL A	FLANGE, VACUUM BREAK, EXTERNAL, S.S. 304	2
15	DETAIL B	FLANGE, VACUUM BREAK, INTERNAL, S.S. 304	2
14	COML	ELBOW, .75" O.D. TUBE, 90°, M X M, STN. STL.	4
13	COML	TUBING, .750 O.D. X .049 WALL X 14.48 LG., S.S. 304	2
12	COML	TUBING, 1.13 O.D. X .028 WALL, X 14.92 LG., S.S. 304	2
11	DETAIL L	TUBING, 2.000 O.D. X .083 WALL, S.S.304	2
10	DETAIL K	PIPE, 1 1/2" SCH. 5, S.S. 304	2
9	COML	HINGED CLAMP NW40, PLASTIC	2
8	COML	CENTERING RING W/O-RING, ISO KF NW40, PLASTIC RING	2
7	COML	ISO KF NW40 SOCKET WELD FLANGE, STN. STL.	4
6	COML	PIPE, 1 1/4" SCH. 5 X 7.18 LG., S.S. 304	1
5	COML	PIPE, 1 1/4" SCH. 5 X 2.48 LG., S.S. 304	1
4	COML	TUBING, .750 O.D. X .049 WALL X 13.57 LG., S.S. 304	1
3	COML	TUBING, .750 O.D. X .049 WALL X 8.88 LG., S.S. 304	1
2	COML	VOR FITTING, MALE, 3/4" O.D. TUBE, S.S. 304	2
1	COML	MODIFIED LN2 FEED THRU FLANGE REFERENCE DWG. MD-436259	1

PARTS LIST			
UNLESS OTHERWISE SPECIFIED	ORIGINATOR	H. CEASE	20-MAR-2009
.XX	.XXX	ANGLE	DRAWN W. CYKO
± .01	± .005	± 1°	CHECKED H. CEASE
APPROVED		H. CEASE	16-JUN-2009
USED ON			
MATERIAL			
SEE PARTS LIST ABOVE			

FERMI NATIONAL ACCELERATOR LABORATORY
UNITED STATES DEPARTMENT OF ENERGY

DECAM/CAMERA
CRYO PIPING ASSEMBLY
CAMERA TEST VESSEL

SCALE	DRAWING NUMBER	SHEET	REV
1:2 AS NOTED	4900.124-ME-436836	1 OF 1	A

CREATED WITH: Ideas12NXSeries | GROUP: PPD/MECHANICAL DEPARTMENT