

NOTES

1 ELEMENTS CROSS THE ELECTRON BEAM AS READ (FROM LEFT-TO-RIGHT)

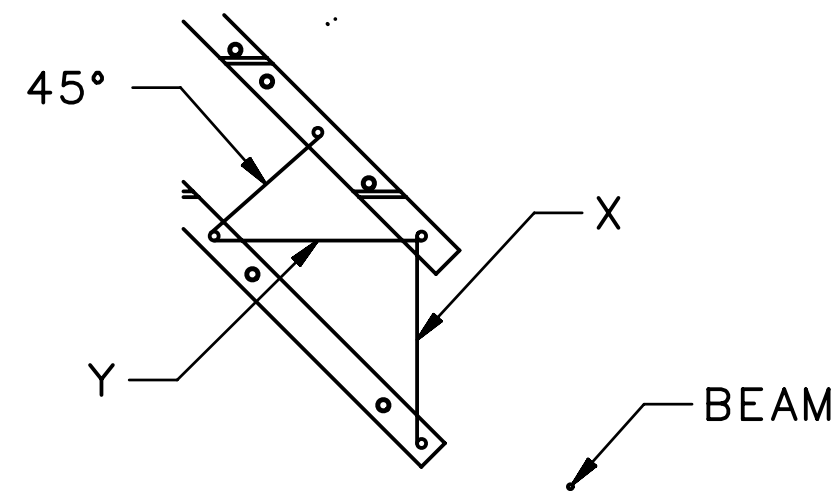
2 MACHINE CENTER IS 400.0948 METERS UPSTREAM OF *HALL CENTER*

3 CONTENTS:

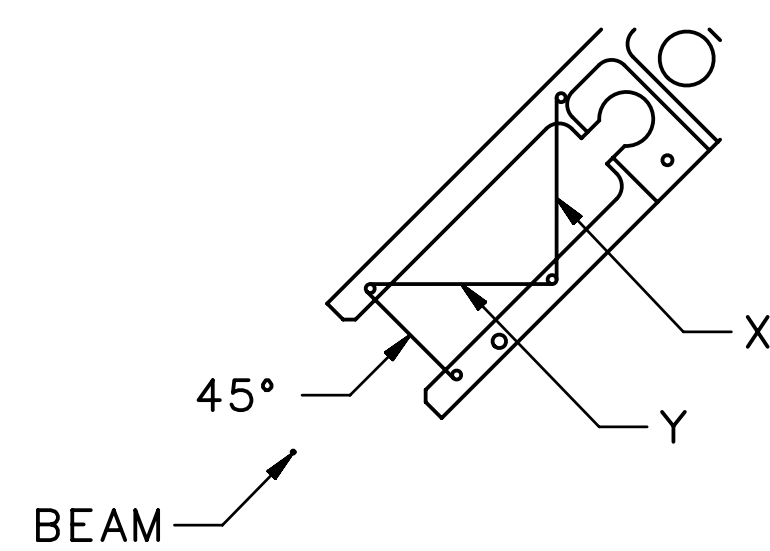
- PAGE 1: COMPONENT POSITIONING FOR REFERENCE BY COUNTING-ROOM & MCC OPERATORS
- PAGE 2: COMPONENT POSITIONING FOR REFERENCE BY COUNTING-ROOM & MCC OPERATORS CONT'D
- PAGE 3: COMPONENT IDENTIFICATION FOR INSTALLATION BY TECHNICAL STAFF
- PAGE 4: BEAMLINE SHIELDING
- PAGE 5: IDENTIFICATION OF MATERIALS IN THE BEAM

4 BEAM-TUBE IDENTIFICATION:

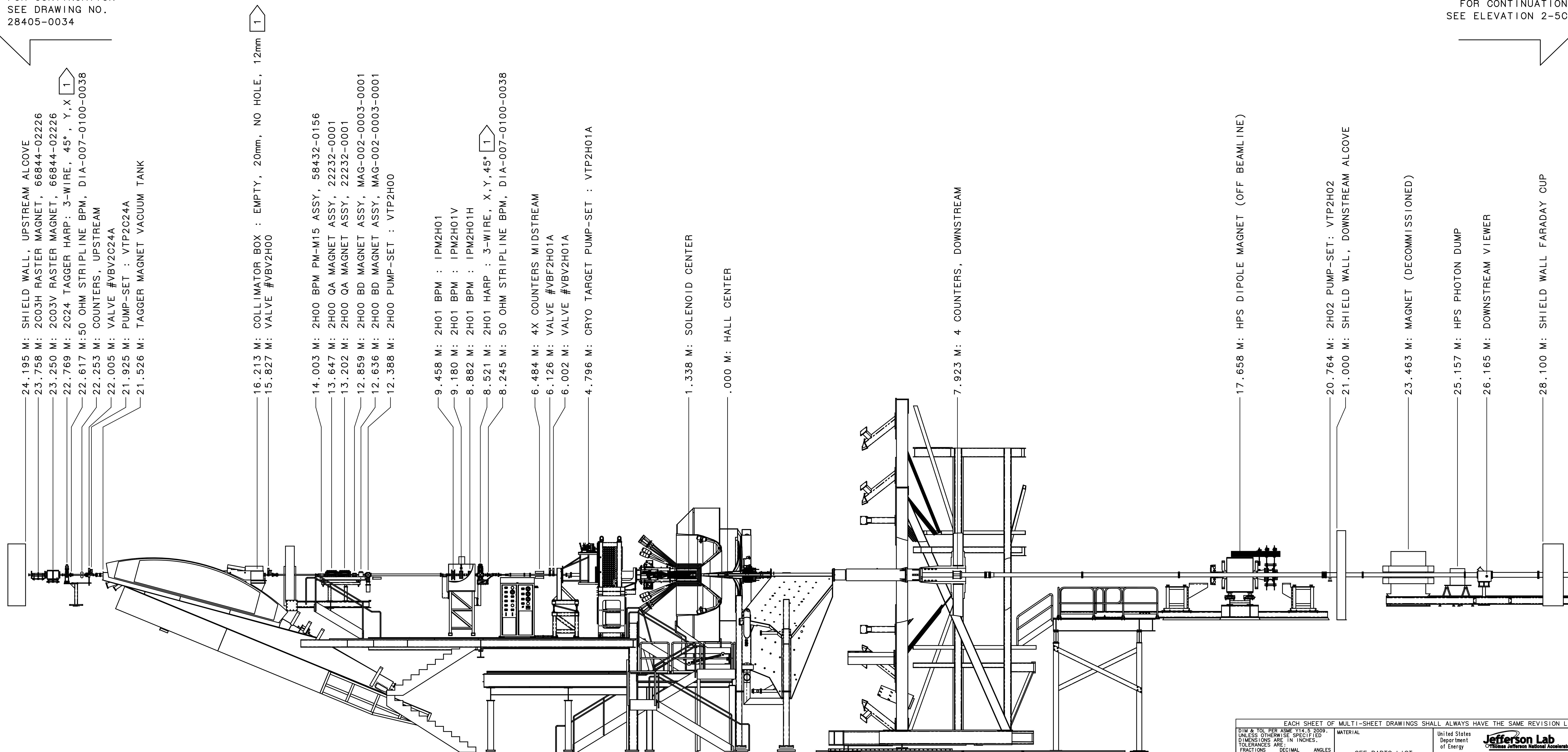
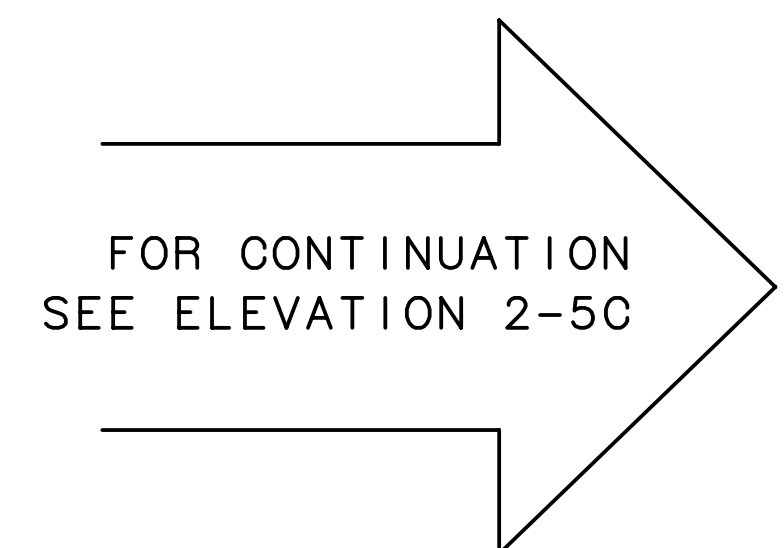
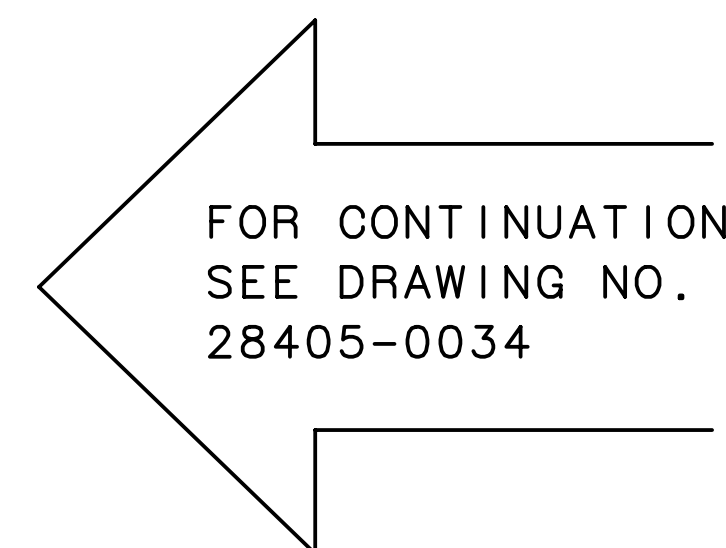
- FORMAT: A - B - C, L
- A = UPSTREAM FLANGE SIZE
- B = TUBE OD
- C = DOWNSTREAM FLANGE SIZE
- L = LENGTH
- CONFLAT FLANGES UNLESS SPECIFIED



SECTION C-C
2H01, 3-WIRE X,Y,45°



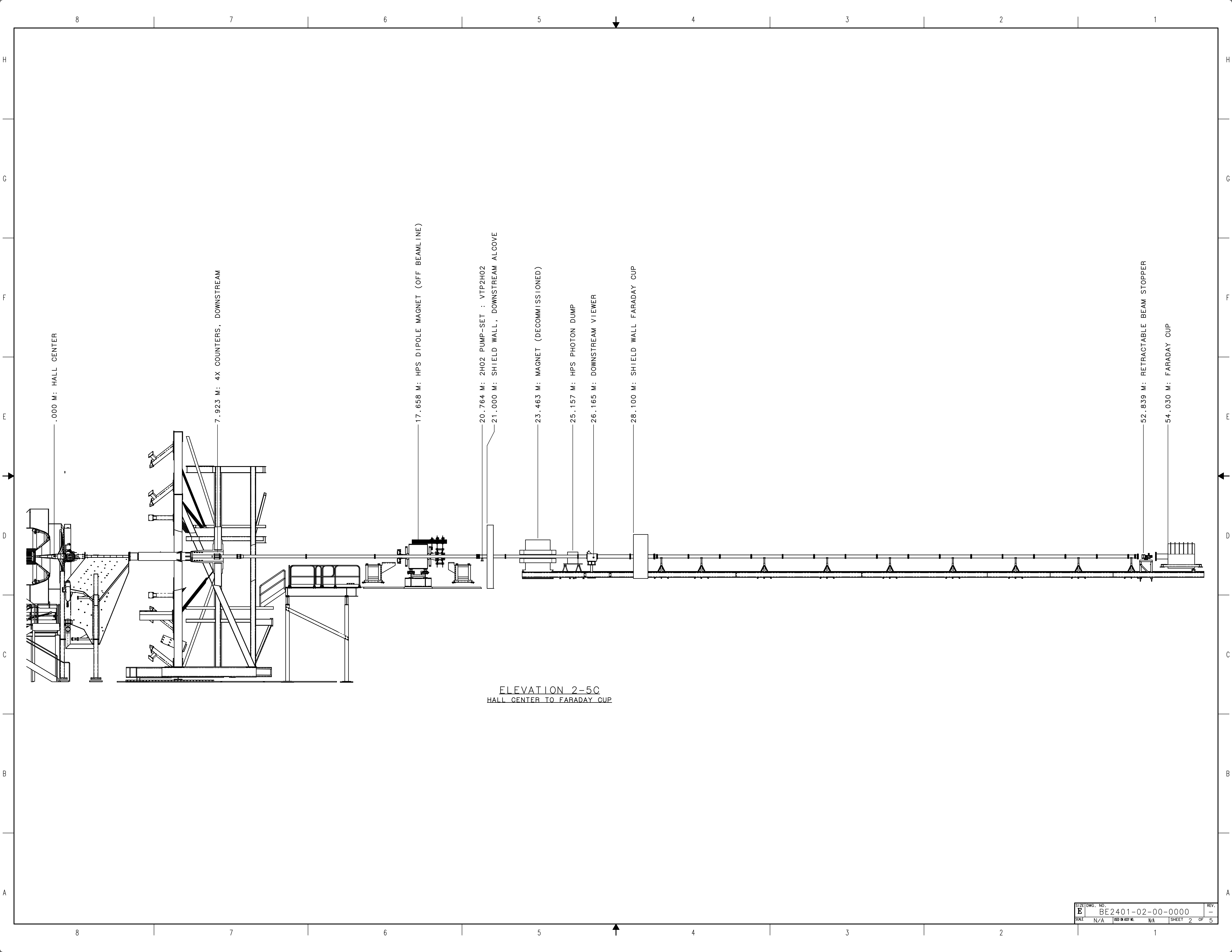
SECTION B-B
2H00, 3-WIRE,45°,Y,X



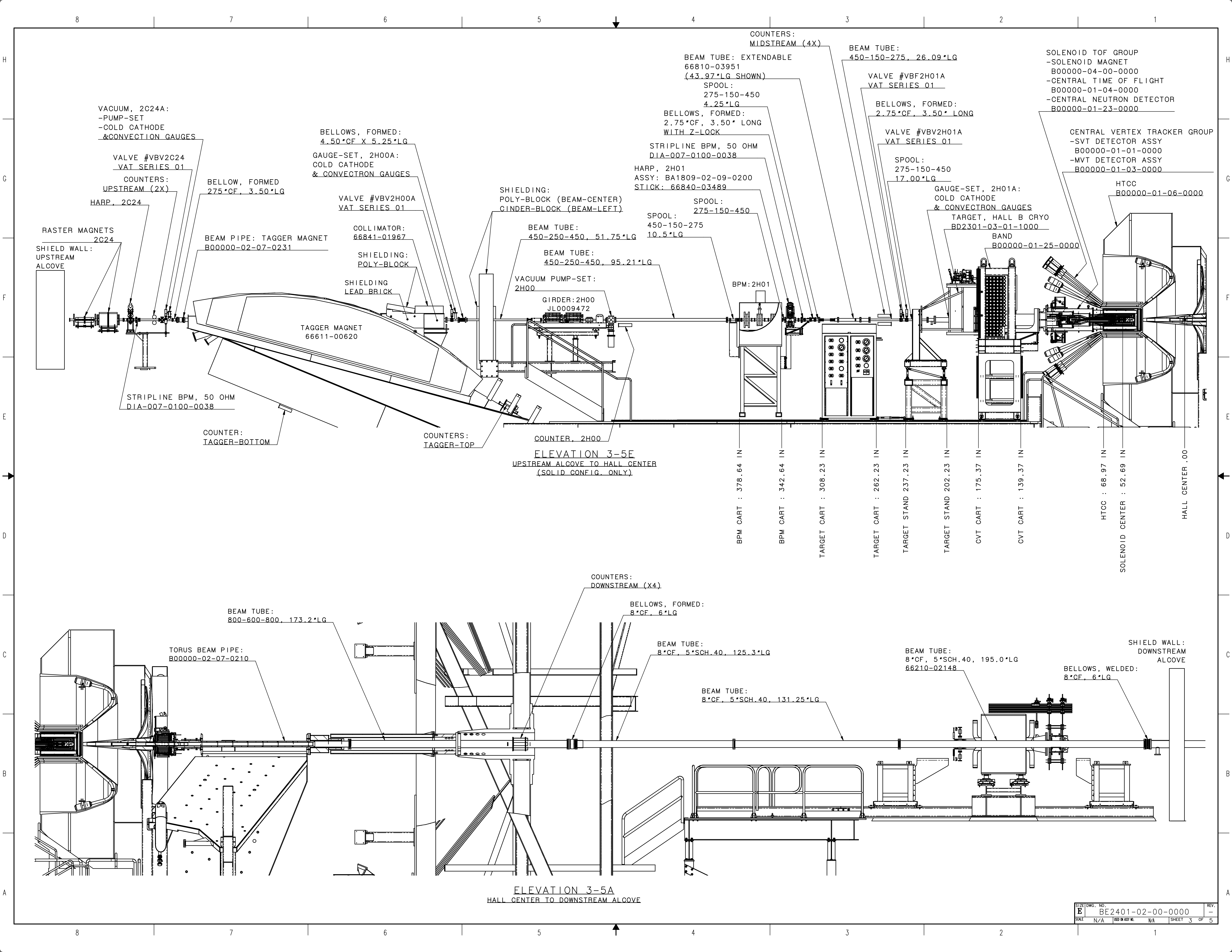
- 24.195 M: SHIELD WALL, UPSTREAM ALCOVE
- 23.758 M: 2003V RASTER MAGNET, 66844-02226
- 23.250 M: 2003V RASTER MAGNET, 66844-02226
- 22.769 M: 2024 TAGGER HARP: 3-WIRE, 45°, Y, X
- 22.617 M: 50 OHM STRIPLINE BPM, DIA-007-0100-0038
- 22.253 M: COUNTERS, UPSTREAM
- 22.005 M: VALVE #VBV2C24A
- 21.925 M: PUMP-SET : VTP2C24A
- 21.526 M: TAGGER MAGNET VACUUM TANK
- 16.213 M: COLLIMATOR BOX : EMPTY, 20mm, NO HOLE, 12mm
- 15.827 M: VALVE #VBV2H00
- 14.003 M: 2H00 BPM PM-M15 ASSY, 58432-0156
- 13.647 M: 2H00 QA MAGNET ASSY, 22232-0001
- 13.202 M: 2H00 QA MAGNET ASSY, 22232-0001
- 12.859 M: 2H00 BD MAGNET ASSY, MAG-002-0003-0001
- 12.636 M: 2H00 BD MAGNET ASSY, MAG-002-0003-0001
- 12.388 M: 2H00 PUMP-SET : VTP2H00
- 9.458 M: 2H01 BPM : IPM2H01
- 9.180 M: 2H01 BPM : IPM2H01V
- 8.882 M: 2H01 BPM : IPM2H01H
- 8.521 M: 2H01 HARP : 3-WIRE, X,Y,45°
- 8.245 M: 50 OHM STRIPLINE BPM, DIA-007-0100-0038
- 6.484 M: 4X COUNTERS MIDSTREAM
- 6.126 M: VALVE #VBF2H01A
- 6.002 M: VALVE #VBV2H01A
- 4.796 M: CRYO TARGET PUMP-SET : VTP2H01A
- 1.338 M: SOLENOID CENTER
- .000 M: HALL CENTER
- 7.923 M: 4 COUNTERS, DOWNSTREAM
- 17.658 M: HPS DIPOLE MAGNET (OFF BEAMLINE)
- 20.764 M: 2H02 PUMP-SET : VTP2H02
- 21.000 M: SHIELD WALL, DOWNSTREAM ALCOVE
- 23.463 M: MAGNET (DECOMMISSIONED)
- 25.157 M: HPS PHOTON DUMP
- 26.165 M: DOWNSTREAM VIEWER
- 28.100 M: SHIELD WALL FARADAY CUP

ELEVATION 1-5A
UPSTREAM ALCOVE TO DOWNSTREAM ALCOVE
(SOLID TARGET CONFIG. ONLY)

EACH SHEET OF MULTI-SHEET DRAWINGS SHALL ALWAYS HAVE THE SAME REVISION LEVEL.		United States Department of Energy	
<small> DIM & TOL PER ASME Y14.5 2009. UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: FRACTIONS DECIMAL ANGLES ± 1/16 ± .01 ± .50° XX ± .01 ± .005 </small>		Jefferson Lab <small>Thomas Jefferson National Accelerator Facility</small> Newport News Virginia	
THIRD ANGLE PROJECTION		SEE PARTS LIST	
<small> FINISH MACHINED SURFACES DEBUR & BREAK ALL SHARP EDGES UNLESS OTHERWISE NOTED 125 </small>		BE2401 HALL B, RN GRPE, 2024 02 BEAM LINE 00 INSTALLATION TEMPLATE 0000 BEAMLINE ASSEMBLY	
DO NOT SCALE DRAWING	DATE 11/2/2023	SCALE N/A	REV. -
DRAWN CHRIS QUITRIE	DATE 11/2/2023	REV. ON ASSY NO. N/A	SHEET 1 OF 5



ELEVATION 2-5C
HALL CENTER TO FARADAY CUP



VACUUM, 2C24A:
-PUMP-SET
-COLD CATHODE
& CONVECTION GAUGES

VALVE #VBV2C24
VAT SERIES 01

COUNTERS:
UPSTREAM (2X)
HARP, 2C24

RASTER MAGNETS
2C24
SHIELD WALL:
UPSTREAM
ALCOVE

BELLOW, FORMED
275*CF, 3.50*LG

BEAM PIPE: TAGGER MAGNET
B00000-02-07-0231

BELLOWS, FORMED:
4.50*CF X 5.25*LG

GAUGE-SET, 2H00A:
COLD CATHODE
& CONVECTRON GAUGES

VALVE #VBV2H00A
VAT SERIES 01

COLLIMATOR:
66841-01967

SHIELDING:
POLY-BLOCK

SHIELDING
LEAD BRICK

TAGGER MAGNET
66611-00620

STRIPLINE BPM, 50 OHM
DIA-007-0100-0038

COUNTER:
TAGGER-BOTTOM

COUNTERS:
TAGGER-TOP

SHIELDING:
POLY-BLOCK (BEAM-CENTER)
CINDER-BLOCK (BEAM-LEFT)

BEAM TUBE:
450-250-450, 51.75*LG

BEAM TUBE:
450-250-450, 95.21*LG

VACUUM PUMP-SET:
2H00

GIRDER: 2H00
JL0009472

SPPOOL:
450-150-275
10.5*LG

SPPOOL:
275-150-450

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275-150-450

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275-150-450

SPPOOL:
275-150-450

COUNTERS:
MIDSTREAM (4X)

BEAM TUBE: EXTENDABLE
66810-03951
(43.97*LG SHOWN)

SPOOL:
275-150-450
4.25*LG

BELLOWS, FORMED:
2.75*CF, 3.50* LONG
WITH Z-LOCK

STRIPLINE BPM, 50 OHM
DIA-007-0100-0038

HARP, 2H01
ASSY: BA1809-02-09-0200
STICK: 66840-03489

SPPOOL:
275-150-450

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275-150-450

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275-150-450

SPPOOL:
275-150-450

BEAM TUBE:
450-150-275, 26.09*LG

VALVE #VBV2H01A
VAT SERIES 01

BELLOWS, FORMED:
2.75*CF, 3.50* LONG

VALVE #VBV2H01A
VAT SERIES 01

SPPOOL:
275-150-450
17.00*LG

GAUGE-SET, 2H01A:
COLD CATHODE
& CONVECTRON GAUGES

TARGET, HALL B CRYO
BD2301-03-01-1000

BAND
B00000-01-25-0000

SOLENOID TOF GROUP
-SOLENOID MAGNET
B00000-04-00-0000
-CENTRAL TIME OF FLIGHT
B00000-01-04-0000
-CENTRAL NEUTRON DETECTOR
B00000-01-23-0000

CENTRAL VERTEX TRACKER GROUP
-SVT DETECTOR ASSY
B00000-01-01-0000
-MVT DETECTOR ASSY
B00000-01-03-0000

HTCC
B00000-01-06-0000

ELEVATION 3-5E
UPSTREAM ALCOVE TO HALL CENTER
(SOLID CONFIG. ONLY)

BPM CART : 378.64 IN
BPM CART : 342.64 IN
TARGET CART : 308.23 IN
TARGET CART : 262.23 IN
TARGET STAND 237.23 IN
TARGET STAND 202.23 IN
CVT CART : 175.37 IN
CVT CART : 139.37 IN
HTCC : 68.97 IN
SOLENOID CENTER : 52.69 IN
HALL CENTER .00

COUNTERS:
DOWNSTREAM (X4)

BELLOWS, FORMED:
8*CF, 6*LG

BEAM TUBE:
8*CF, 5*SCH.40, 125.3*LG

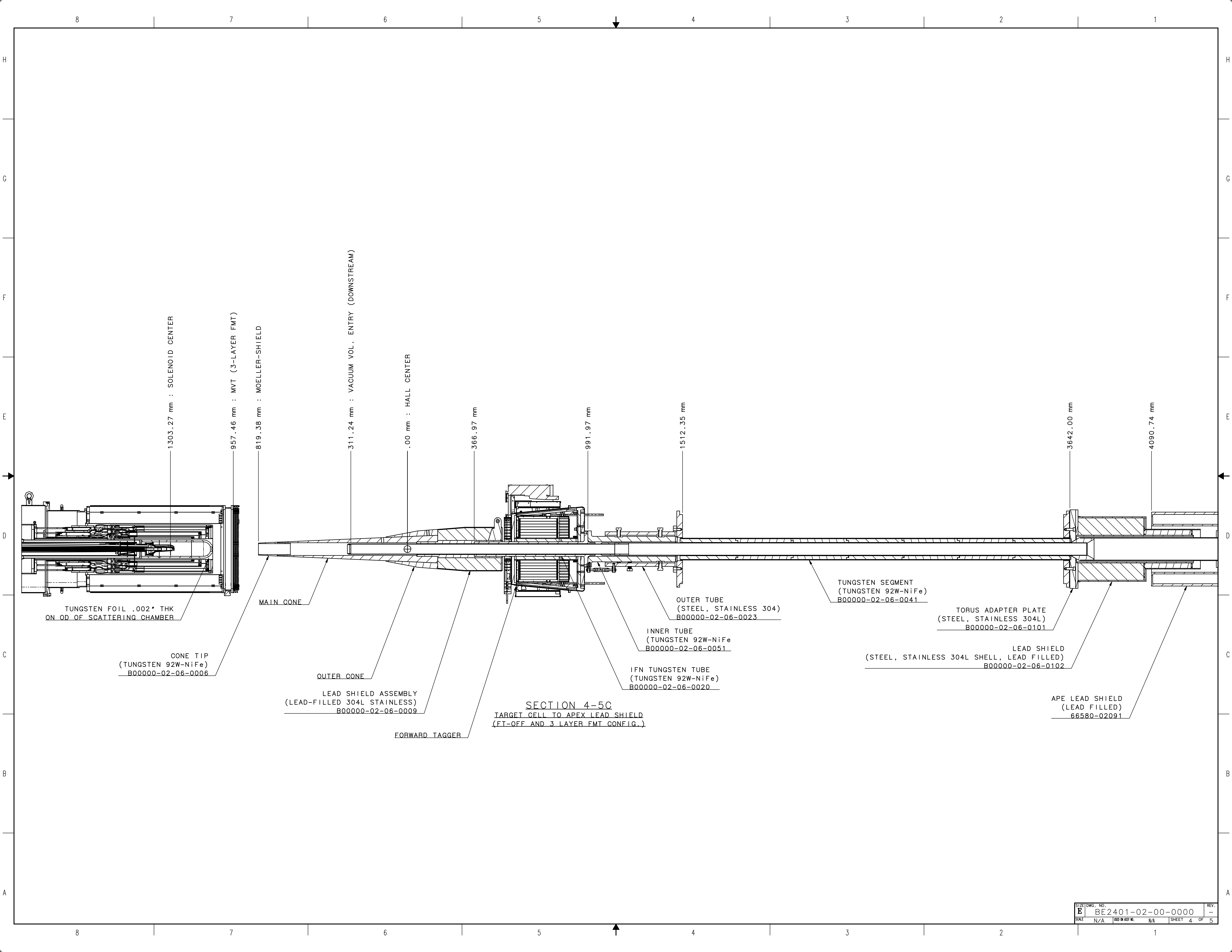
BEAM TUBE:
8*CF, 5*SCH.40, 131.25*LG

BEAM TUBE:
8*CF, 5*SCH.40, 195.0*LG

BELLOWS, WELDED:
8*CF, 6*LG

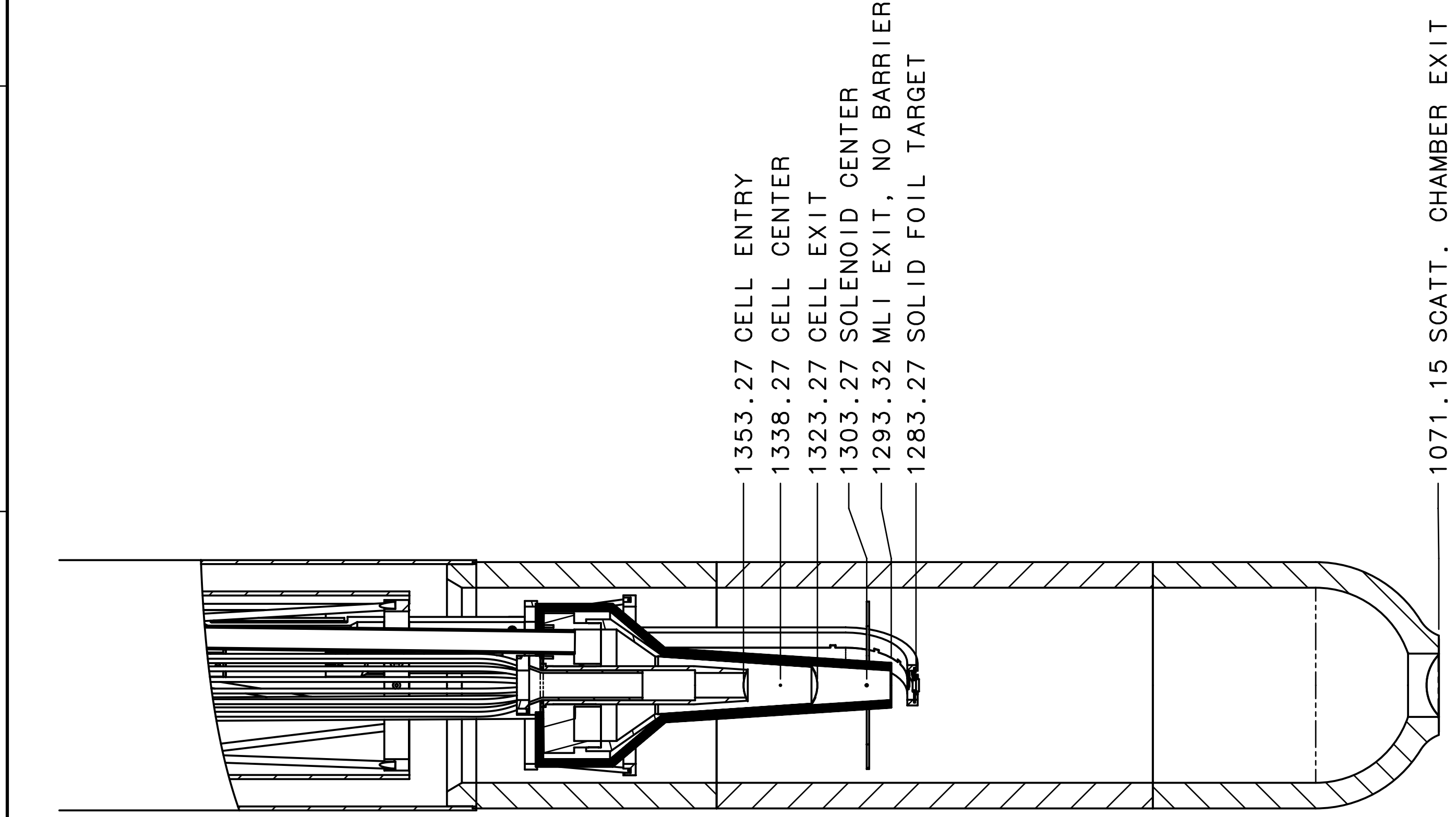
SHIELD WALL:
DOWNSTREAM
ALCOVE

ELEVATION 3-5A
HALL CENTER TO DOWNSTREAM ALCOVE



8 7 6 5 4 3 2 1

H G F E D C B A



ELEVATION 5-7E
TARGET CELL TO HALL CENTER
(SOLID TARGET CONFIG.)

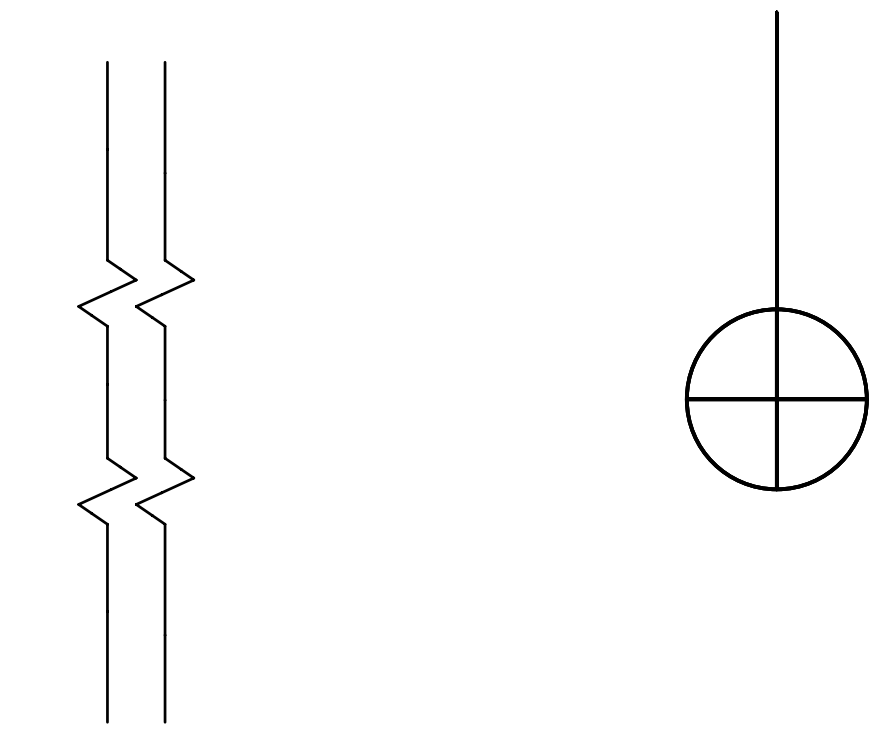
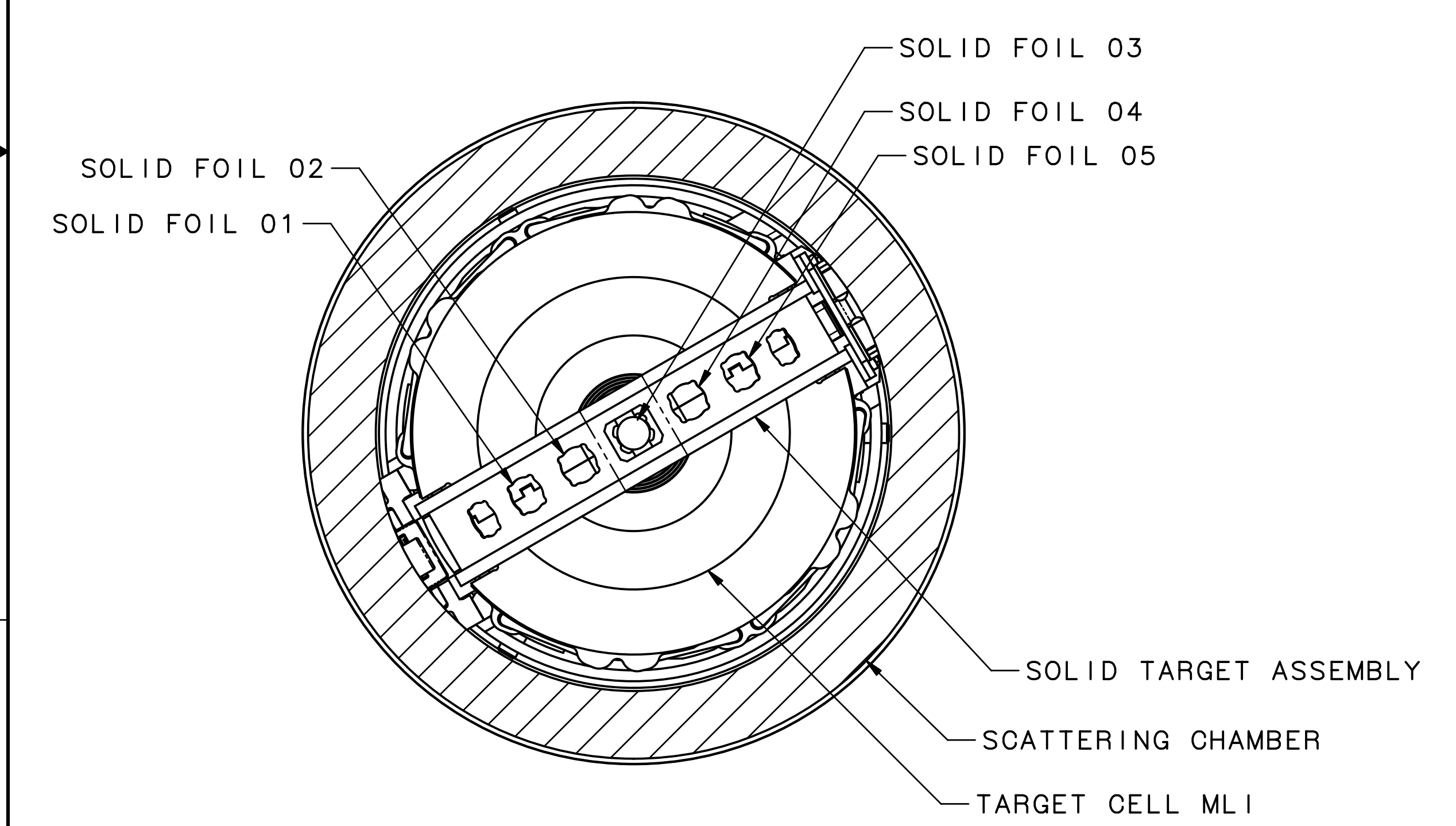


TABLE -A-
MATERIALS IN THE BEAM LINE

ITEM	DRAWING NO.	MATERIAL	THICKNESS
TARGET CELL ENTRY	BD2301-03-01-0100	ALUMINUM	30um
TARGET CELL EXIT		ALUMINUM	30um
SOLID FOIL 01	TBD	CARBON	2220 um
SOLID FOIL 02	TBD	ALUMINUM	1820 um
SOLID FOIL 03	TBD	COPPER	360 um
SOLID FOIL 04	TBD	TIN	300 um
SOLID FOIL 05	TBD	LEAD	140 um
SCATTERING CHAMBER EXIT	B00000-03-01-0300	ALUMINUM	75um
VACUUM VOL. ENTRY (DOWNSTREAM)	B00000-02-07-0210	ALUMINUM	75um



SECTION A-A

8 7 6 5 4 3 2 1

H G F E D C B A