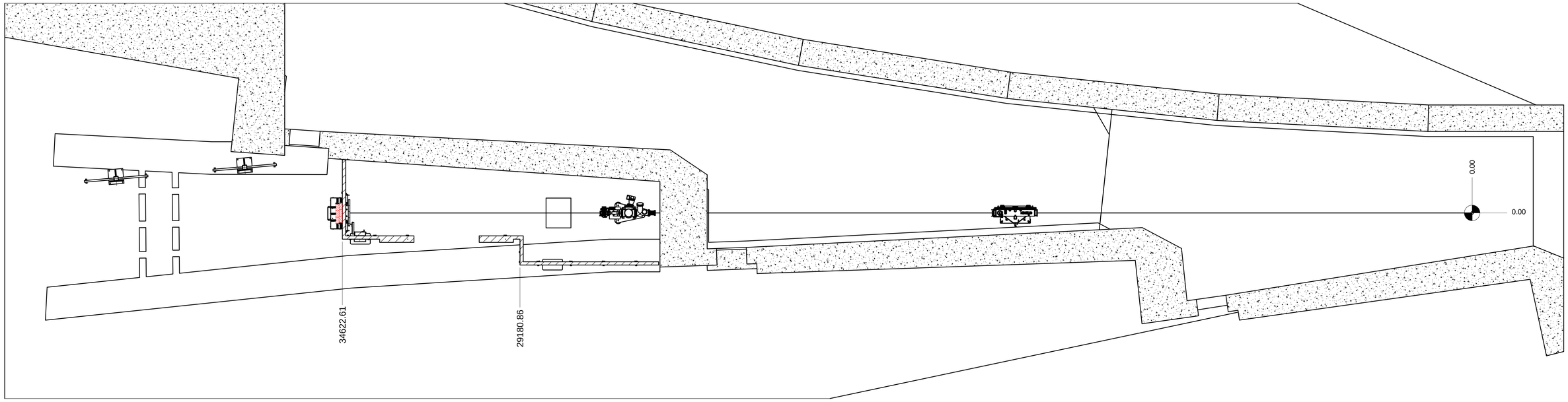
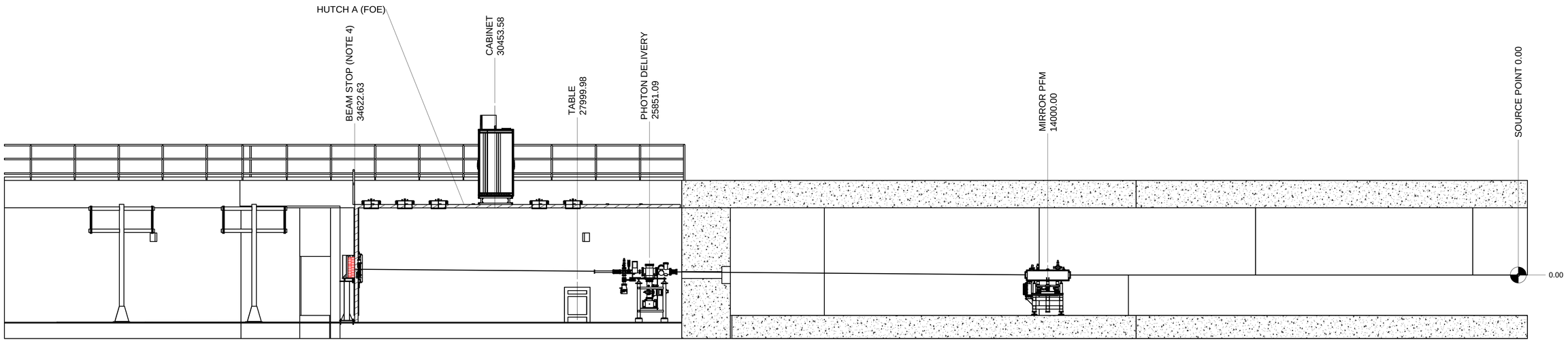
REVISION HISTORY					
REV	DESCRIPTION	DATE	DESIGNER	CHECKED BY	ENGINEER
A	RELEASE PER ECO-004174	3/2015	L.REFFI	C.STELMACH	M.SULLIVAN





SPECIFICATIONS		REFERENCE
Project	NPB PROJECT	TBD
Source	Three Pole Wiggler (3PW)	LT-C-SPC-SR-ID-BL-3PW-001 VERSION 1
Beam Line Name	X-RAY FOOTPRINTING BEAMLINE	TBD
Abbreviation	XFP	TBD
Period of insertion device	N/A	TBD
Cell	17-BM	TBD
Length of Source	250 mm	LT-C-SPC-SR-ID-BL-3PW-001 VERSION 1
Location of Source (from Start of Bending Magnet)	366 mm	TBD
Ray Tracing Procedure		PS-C-XFD-PRC-008 VERSION 2
Front End Ray Tracing Drawing		SR-FE-3PW-7001 REV B

NOTES:
1. REFERENCE DRAWING SR-FE-3PW-7001.
2. UNLESS OTHERWISE SPECIFIED THE 3PW SOURCE POINT IS THE ORIGIN FOR ALL DIMENSIONS.
3. UNLESS OTHERWISE SPECIFIED ALL ORDINATE DIMENSIONS ARE TO THE CENTER OF EACH COMPONENT.
4. BRS DIMENSIONS FROM UPSTREAM SIDE OF LEAD STOP.

BEAMSTOP IS A CREDITED RADIATION SAFETY COMPONENT.
BEAMSTOP IS A TOP OFF SAFETY CREDITED COMPONENT OR ASSEMBLY.
ANY CHANGES TO THIS DRAWING REQUIRES APPROVAL OF THE TECHNICAL AUTHORITY FOR TOP OFF SAFETY.

XFP, CELL 17-BM, COMPONENT LAYOUT

HATCH LEGEND	
	Lead
	Concrete or Stainless Steel
	Lead (SS)

UNLESS OTHERWISE SPECIFIED
ALL DIMENSIONS ARE IN INCHES
DIMENSIONS IN BRACKETS [xx.xx] (WHERE PRESENT) ARE MILLIMETERS AND ARE FOR REFERENCE ONLY
INTERPRET DRAWING AS PER ANSI Y14.5-1994 OR Y32.2-1975
DIMENSIONAL TOLERANCES: X. ± 0.060, .X ± 0.030, .XX ± 0.015, .XXX ± 0.005
ANGULAR TOLERANCE: ± .5°
FINISH: 125
BREAK EDGES & SHARP CORNERS 0.005 MIN. TO 0.030 MAX.
THIRD ANGLE PROJECTION
SCALE: SEE DWG VIEW

BROOKHAVEN NATIONAL LABORATORY
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UPTON, NEW YORK 11973
Exploring Life's Mysteries. Protecting its Future

DRAWN BY	L.REFFI	3/2016
CHECKED BY	C.STELMACH	3/2016
VACUUM APPROVAL		
ENGINEER APPROVAL	M.SULLIVAN	3/2016
SUPERVISOR APPROVAL	A.BROADBENT	3/2016
ESH APPROVAL	L.STEIGLER	3/2016
QA APPROVAL	J.ZIPPER	3/2016

NSLS II NATIONAL SYNCHROTRON LIGHT SOURCE II

PHOTON DIVISION
XFP, RAY TRACING
RAY TRACING

E	PD-XFP-RAYT-0001	A
SHEET SIZE	DRAWING/PART NUMBER	REVISION

NEXT ASSY: N/A
PROJECT: NSLS-II
WBS# 7.01.05.02
ESH&Q RISK LEVEL A-1
SHEET 1 OF 3

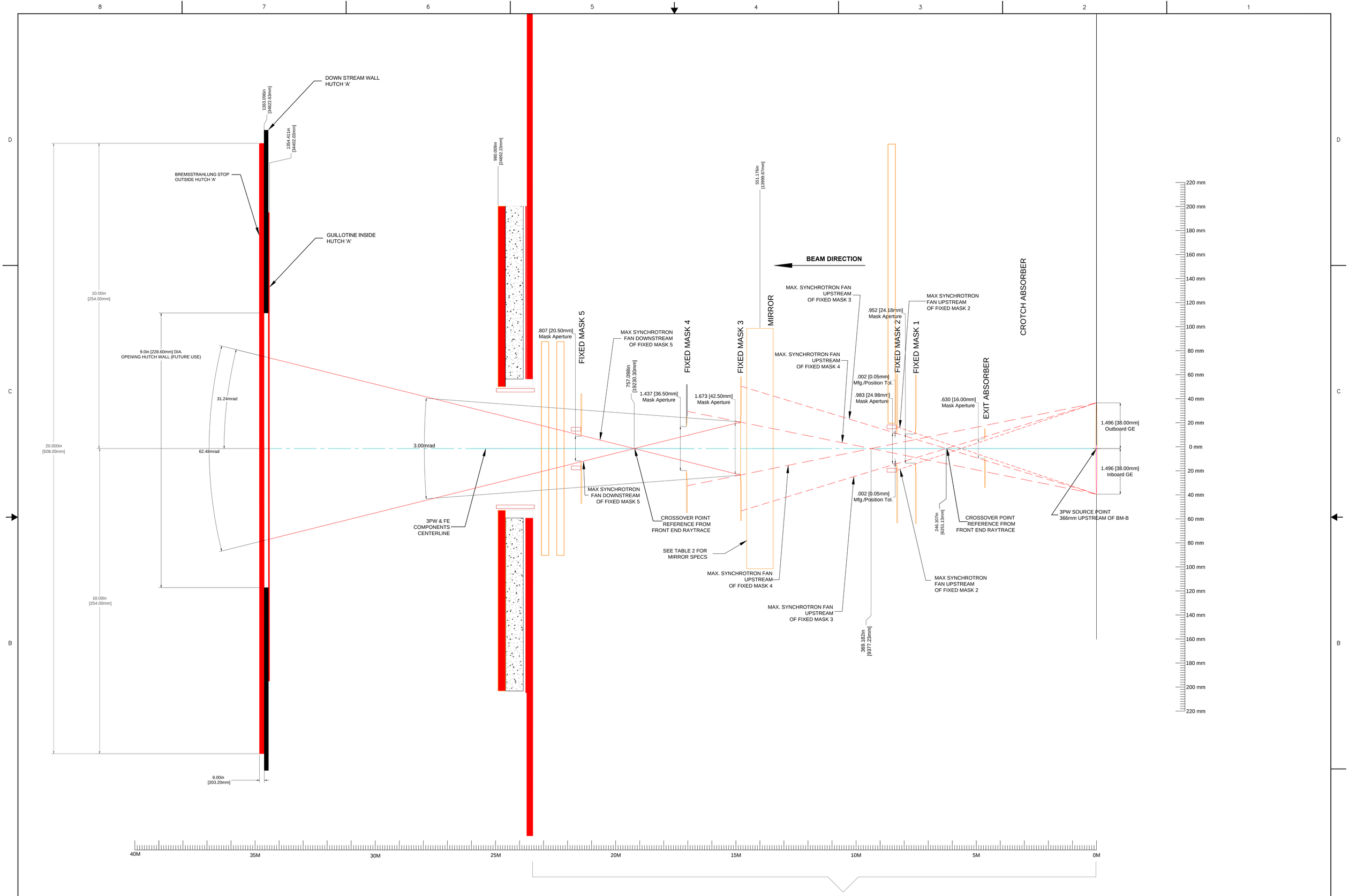


TABLE 2

XFP BEAMLINE FE MIRROR SPECIFICATIONS

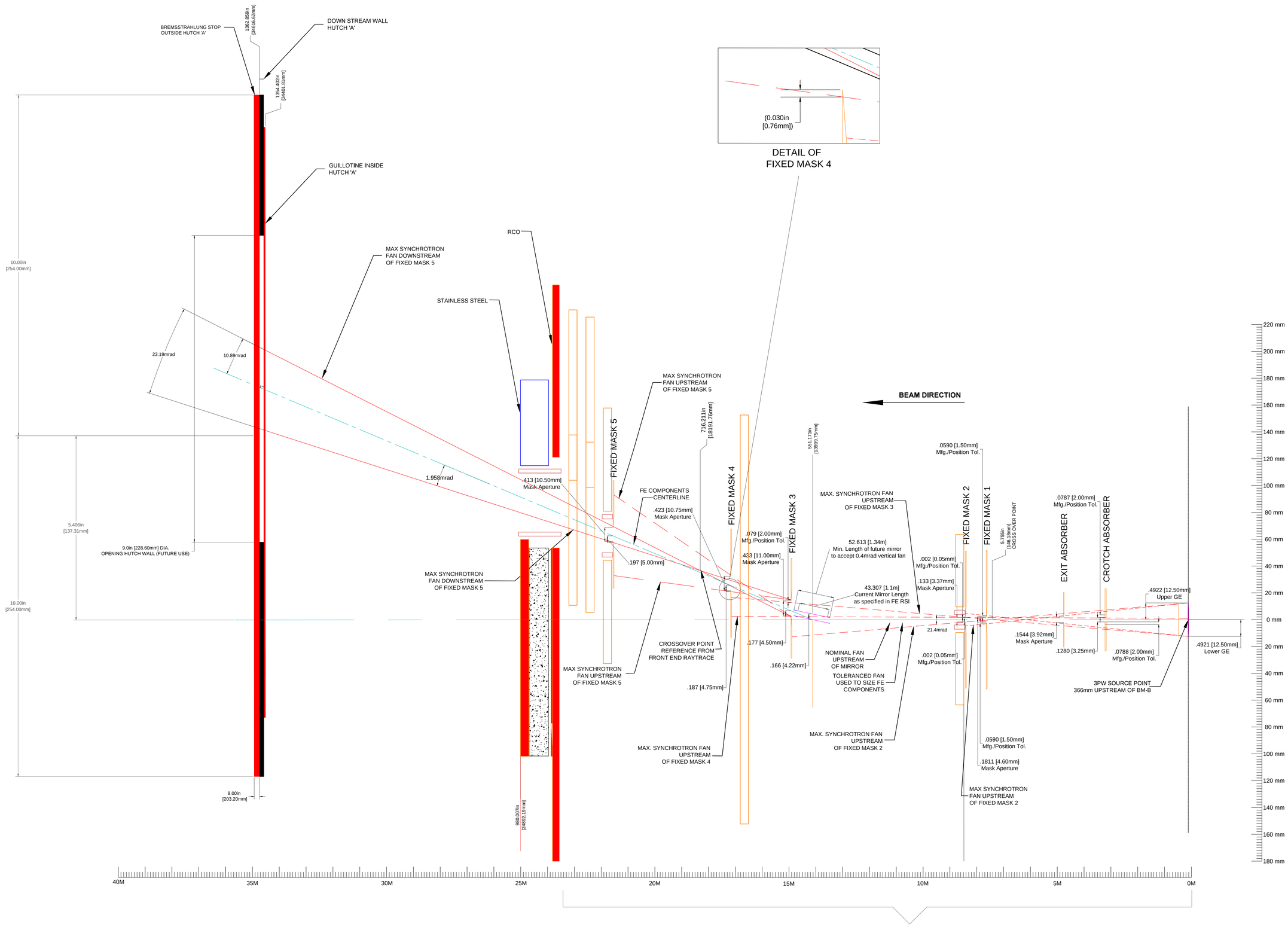
Mirror material	Silicon
Mirror altitude	Vertical up
Mirror size (LxW, m)	1.1 x 0.1
Mirror figure	Toroid
Mirror incidence angle (mrad)	4.2
Mirror acceptance (mrad V)	0.4
Mirror acceptance (mrad H)	3.0
Mirror center position (m) from source	14

HORIZONTAL
SCALE: X:Z = 1:50

SEE FRONT END RAY TRACING
SR-FE-3PW-7001

XFP, CELL 17-BM,
MAXIMUM SYNCHROTRON
RAY TRACING
HORIZONTAL

E (SHEET SIZE)	PD-XFP-RAYT-0001 (DRAWING/PART NUMBER)	A (REVISION)
ESH&Q RISK LEVEL	A-1	SHEET 2 OF 3



*CENTER OF THE STOP AT 137.30mm ABOVE ORBIT PLANE (1400mm) DEFINED FROM 17-BM XFP RADIATION SHIELDING ANALYSIS REPORT NUMBER 218, DATE 06/21/2016. (SEE TABLE 1.2)

VERTICAL
SCALE: Y:Z = 1:50

XFP, CELL 17-BM,
MAXIMUM SYNCHROTRON
RAY TRACING VERTICAL

E (SHEET SIZE)	PD-XFP-RAYT-0001 (DRAWING/PART NUMBER)	A (REVISION)
ESH&Q RISK LEVEL	A-1	SHEET 3 OF 3