REV.	DATE	DCN #	DRAWING TREE #
-	-	-	-
-	-	-	-
-	-	-	-

NOTES CONTINUED:

5. SCRIBE, ENGRAVE, OR MECHANICALLY STAMP (NO INKS OR DYES) DRAWING PART NUMBER, REVISION (AND VARIANT OR "TYPE" IF APPLICABLE) ON NOTED SURFACE OF PART FOLLOWED ON THE NEXT LINE WITH A THREE DIGIT SERIAL NUMBER. SERIAL NUMBERS START AT 001 FOR THE FIRST ARTICLE AND PROCEED CONSECUTIVELY. USE MINIMUM 0.12" HIGH CHARACTERS, UNLESS THE SIZE OF THE PART DICTATES SMALLER CHARACTERS. A VIBRATORY TOOL MAY BE USED. EXAMPLE: DXXXXXXX-VY, TYPE-XX, S/N XXX

6. APPROXIMATE WEIGHT = X.XXX LB.

7. MACHINE ALL SURFACES TO REMOVE OXIDES AND MILL FINISH, USE OF ABRASIVE REMOVAL TECHNIQUES IS NOT ALLOWED. REFER TO LIGO-E0900364

8. ALL PARTS SHALL BE MANUFACTURED IN ACCORDANCE WITH LIGO SPECIFICATION E0900364.

9. ALL HELI-COIL HOLES TO BE PREPARED ACCORDING TO EMHART HELI-COIL PRODUCT CATALOG, HC2000, REV 4

10. ALL HELI-COIL INSERTS TO BE INSTALLED BY LIGO PERSONNEL, AFTER DELIVERY OF FINISHED PARTS, USE NITRONIC 60 THREADED INSERTS.

11. ALL MATERIAL IS TO BE VIRGIN MATERIAL (i.e. NO WELD REPAIRS, PLUGS OR RECYCLED MATERIAL). NO REPAIRS SHALL BE MADE UNLESS APPROVED IN ADVANCE, AND IN WRITING, BY LIGO LABORATORY. REFER TO LIGO-E0900364.

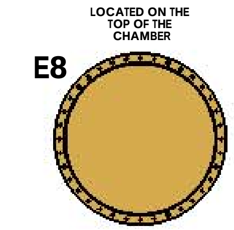
12. SURFACE FINISH TO BE AS-PROCESSED FROM MILL/SUPPLIER, FREE FROM SCRATCHES OR GOUGES.

13. PART WILL BE PORCELAIN COATED PER LIGO SPECIFICATION E1000083 AFTER FABRICATION. THE INDICATED HOLES WILL BE MASKED PRIOR TO PORCELAIN COATING TO APPROXIMATELY 2.5-3X HOLE DIAMETER CENTERED ON BOTH SIDES OF THE HOLE.

14. DIMENSIONS APPLY BEFORE PORCELAIN COATING UNLESS SPECIFIED.

15. BEND RADIUS: UNLESS OTHERWISE NOTED, THE BEND RADIUS SHOULD BE THE MINIMUM REQUIRED TO FORM WITHOUT CRACKING OR REQUIRING ADDITIONAL WORK WHEN FORMING. IN PARTICULAR IF SHEET METAL IS TO BE PORCELAIN COATED, THE BEND RADIUS SHALL BE A MINIMUM OF .12" OUTSIDE RADIUS OF BEND UNLESS OTHERWISE NOTED.

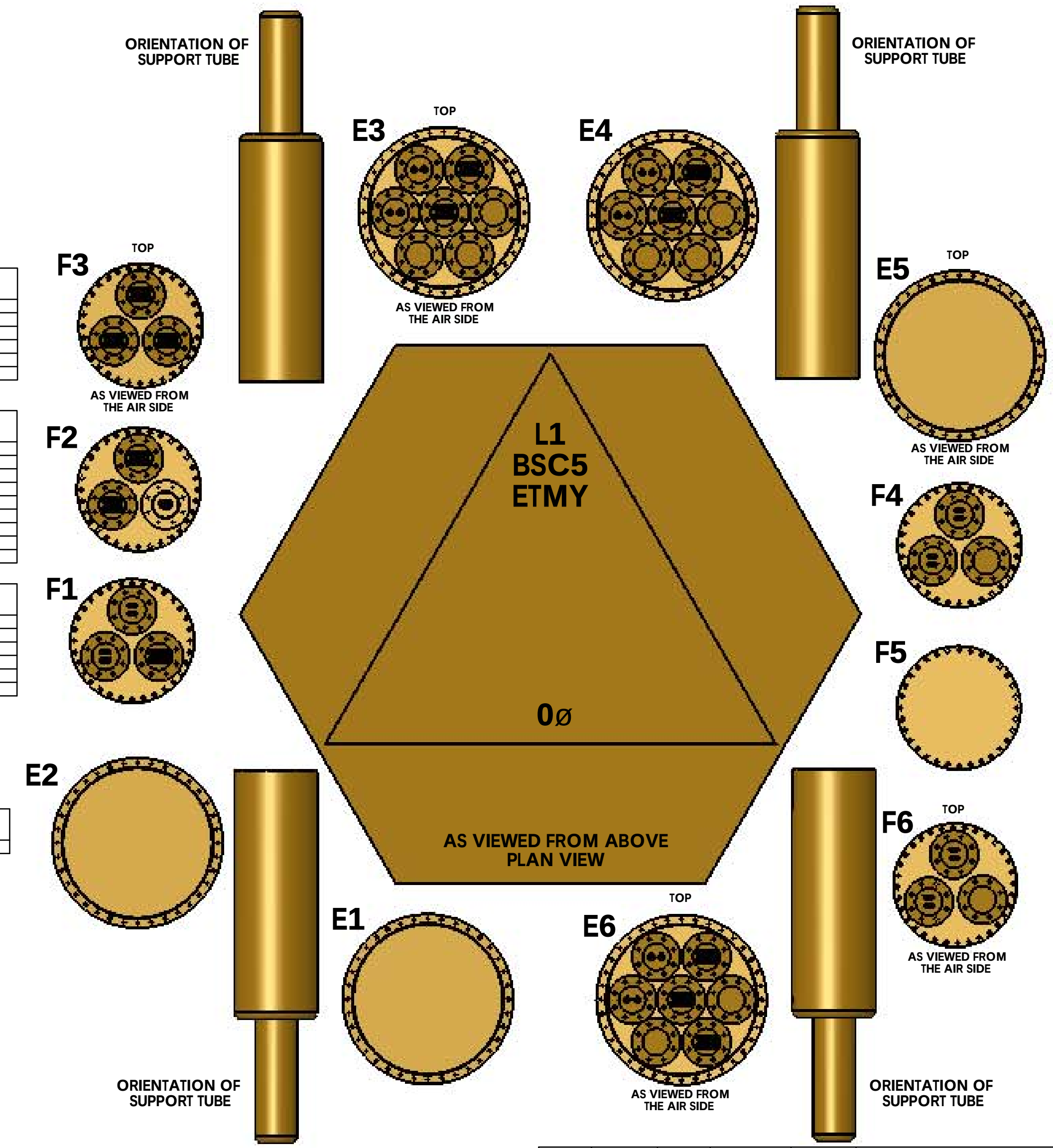
FLANGE	SUBFLANGE	FLANGE TYPE	CONNECTOR	SUBSYSTEM	DESCRIPTION
E7-1		BLANK			-- BLANK (FULL FLANGE) --



FLANGE	SUBFLANGE	FLANGE TYPE	CONNECTOR	SUBSYSTEM	DESCRIPTION
E8		BLANK			-- BLANK (FULL FLANGE) --

FLANGE	SUBFLANGE	FLANGE TYPE	CONNECTOR	SUBSYSTEM	DESCRIPTION
E3-1G1	-1	G	TRIAXIAL-1	SEI	SEI - COARSE HORIZONTAL CAP POS SENS - CORNER #3
E3-1G2	-1	G	TRIAXIAL-2	SEI	SEI -COARSE VERTICAL CAP POS SENS - CORNER #3
E3-2C1	-2	C	25D-1	SEI	SEI -TRILLIUM T240 - CORNER #3
E3-2C2	-2	C	25D-2	SEI	SEI -L-4Cs - CORNER #3
E3-3G1	-3	G	TRIAXIAL-1	SEI	SEI -FINE HORIZONTAL CAP POS SENS - CORNER #3
E3-3G2	-3	G	TRIAXIAL-2	SEI	SEI -FINE VERTICAL CAP POS SENS - CORNER #3
E3-4C1	-4	C	25D-1	SEI	SEI -GS-13s - CORNER #3
E3-4C2	-4	C	25D-2	SEI	SEI -FEED FORWARD L-4Cs - CORNER #3
E3-5	-5	BLANK	***		-- BLANK (SUBFLANGE) --
E3-6	-6	BLANK	***		-- BLANK (SUBFLANGE) --
E3-7	-7	BLANK	***		-- BLANK (SUBFLANGE) --

FLANGE	SUBFLANGE	FLANGE TYPE	CONNECTOR	SUBSYSTEM	DESCRIPTION
E4-1G1	-1	G	TRIAXIAL-1	SEI	SEI - COARSE HORIZONTAL CAP POS SENS - CORNER #2
E4-1G2	-1	G	TRIAXIAL-2	SEI	SEI -COARSE VERTICAL CAP POS SENS - CORNER #2
E4-2C1	-2	C	25D-1	SEI	SEI -TRILLIUM T240 - CORNER #2
E4-2C2	-2	C	25D-2	SEI	SEI -L-4Cs - CORNER #2
E4-3G1	-3	G	TRIAXIAL-1	SEI	SEI -FINE HORIZONTAL CAP POS SENS - CORNER #2
E4-3G2	-3	G	TRIAXIAL-2	SEI	SEI -FINE VERTICAL CAP POS SENS - CORNER #2
E4-4C1	-4	C	25D-1	SEI	SEI -GS-13s - CORNER #2
E4-4C2	-4	C	25D-2	SEI	SEI -FEED FORWARD L-4Cs - CORNER #2
E4-5	-5	BLANK	***		-- BLANK (SUBFLANGE) --
E4-6	-6	BLANK	***		-- BLANK (SUBFLANGE) --
E4-7	-7	BLANK	***		-- BLANK (SUBFLANGE) --



FLANGE	SUBFLANGE	FLANGE TYPE	CONNECTOR	SUBSYSTEM	DESCRIPTION
F3-1C1	-1	C	25D-1	SUS	SUS - QUAD 1
F3-1C2	-1	C	25D-2	SUS	SUS - QUAD 1
F3-2C1	-2	C	25D-1	SUS	SUS - QUAD 1
F3-2C2	-2	C	25D-2	SUS	SUS - QUAD 1
F3-3C1	-3	C	25D-1	SUS	SUS - QUAD 1
F3-3C2	-3	C	25D-2	TCS	TCS - RING HEATER

FLANGE	SUBFLANGE	FLANGE TYPE	CONNECTOR	SUBSYSTEM	DESCRIPTION
F2-1C1	-1	C	25D-1	ISC	ISC - PICOMOTORS
F2-1C2	-1	C	25D-2	ISC	ISC - ETM TRANSMON 1064nm
F2-2C1	-2	C	25D-1	ISC	ISC - ETM TRANSMON 532nm
F2-2C2	-2	C	25D-2	ISC	ISC - TRANSMON BEAM DIVERTER
F2-3E1A	-3	E	5 WAY COAX-1A	SUS	SUS - ESD FOR QUAD 1
F2-3E1B	-3	E	5 WAY COAX-1B	SUS	SUS - ESD FOR QUAD 1
F2-3E1C	-3	E	5 WAY COAX-1C	SUS	SUS - ESD FOR QUAD 1
F2-3E1D	-3	E	5 WAY COAX-1D	SUS	SUS - ESD FOR QUAD 1
F2-3E1E	-3	E	5 WAY COAX-1E	SUS	SUS - ESD FOR QUAD 1

FLANGE	SUBFLANGE	FLANGE TYPE	CONNECTOR	SUBSYSTEM	DESCRIPTION
F1-1B1	-1	B	3PWR-1	SEI	SEI - ISI COILS - COARSE HORIZONTAL - CORNER #3
F1-1B2	-1	B	3PWR-2	SEI	SEI - ISI COILS - COARSE VERTICAL - CORNER #3
F1-2B1	-2	B	3PWR-1	SEI	SEI - ISI COILS - FINE HORIZONTAL - CORNER #3
F1-2B2	-2	B	3PWR-2	SEI	SEI - ISI COILS - FINE VERTICAL - CORNER #3
F1-3C1	-3	C	25D-1	AOS	AOS - ARM CAVITY BAFFLE (1 HOLE)
F1-3C2	-3	C	25D-2		-- NOT ASSIGNED --

FLANGE	SUBFLANGE	FLANGE TYPE	CONNECTOR	SUBSYSTEM	DESCRIPTION
E2		BLANK			-- BLANK (FULL FLANGE) --

FLANGE	SUBFLANGE	FLANGE TYPE	CONNECTOR	SUBSYSTEM	DESCRIPTION
E5		BLANK			-- BLANK (FULL FLANGE) --

FLANGE	SUBFLANGE	FLANGE TYPE	CONNECTOR	SUBSYSTEM	DESCRIPTION
F4-1B1	-1	B	3PWR-1	SEI	SEI - ISI COILS - COARSE HORIZONTAL - CORNER #2
F4-1B2	-1	B	3PWR-2	SEI	SEI - ISI COILS - COARSE VERTICAL - CORNER #2
F4-2B1	-2	B	3PWR-1	SEI	SEI - ISI COILS - FINE HORIZONTAL - CORNER #2
F4-2B2	-2	B	3PWR-2	SEI	SEI - ISI COILS - FINE VERTICAL - CORNER #2
F4-3	-3	BLANK	***		-- BLANK (SUBFLANGE) --

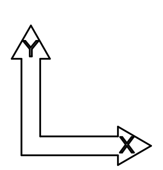
FLANGE	SUBFLANGE	FLANGE TYPE	CONNECTOR	SUBSYSTEM	DESCRIPTION
F5		BLANK			-- BLANK (FULL FLANGE) --

FLANGE	SUBFLANGE	FLANGE TYPE	CONNECTOR	SUBSYSTEM	DESCRIPTION
F6-1B1	-1	B	3PWR-1	SEI	SEI - ISI COILS - COARSE HORIZONTAL - CORNER #1
F6-1B2	-1	B	3PWR-2	SEI	SEI - ISI COILS - COARSE VERTICAL - CORNER #1
F6-2B1	-2	B	3PWR-1	SEI	SEI - ISI COILS - FINE HORIZONTAL - CORNER #1
F6-2B2	-2	B	3PWR-2	SEI	SEI - ISI COILS - FINE VERTICAL - CORNER #1
F6-3	-3	BLANK	***		-- BLANK (SUBFLANGE) --

FLANGE	SUBFLANGE	FLANGE TYPE	CONNECTOR	SUBSYSTEM	DESCRIPTION
E1		BLANK			-- BLANK (FULL FLANGE) --

FLANGE	SUBFLANGE	FLANGE TYPE	CONNECTOR	SUBSYSTEM	DESCRIPTION
E6-1G1	-1	G	TRIAXIAL-1	SEI	SEI - COARSE HORIZONTAL CAP POS SENS - CORNER #1
E6-1G2	-1	G	TRIAXIAL-2	SEI	SEI -COARSE VERTICAL CAP POS SENS - CORNER #1
E6-2C1	-2	C	25D-1	SEI	SEI -TRILLIUM T240 - CORNER #1
E6-2C2	-2	C	25D-2	SEI	SEI -L-4Cs - CORNER #1
E6-3G1	-3	G	TRIAXIAL-1	SEI	SEI -FINE HORIZONTAL CAP POS SENS - CORNER #1
E6-3G2	-3	G	TRIAXIAL-2	SEI	SEI -FINE VERTICAL CAP POS SENS - CORNER #1
E6-4C1	-4	C	25D-1	SEI	SEI -GS-13s - CORNER #1
E6-4C2	-4	C	25D-2	SEI	SEI -FEED FORWARD L-4Cs - CORNER #1
E6-5	-5	BLANK	***		-- BLANK (SUBFLANGE) --
E6-6	-6	BLANK	***		-- BLANK (SUBFLANGE) --
E6-7C1	-7	C	25D-1	SUS	SUS - DOUBLE (AOS)
E6-7C2	-7	C	25D-2	SUS	SUS - DOUBLE (AOS)

SUBFLANGE TYPE >	A	B	C	D	E	F	G	BLANK
CONNECTORS >	BNC	3PWR	25D	5 WAY COAX (2 PER FLANGE)	5 WAY COAX (1 PER FLANGE)	25PIN FULL FLANGE	TRI-AXIAL	BLANK
SUBSYSTEMS v								
SEI (ISI)		12	12				12	
SUS			7		1			
ISC			4					
I/O								
TCS			1					
PSL								
AOS			1					
NOT ASSIGNED			1					17
TOTALS (CONNECTORS)	0	12	26	0	1	0	12	
TOTALS (FLANGES)	0	6	13	0	1	0	6	17



DIMENSIONS ARE IN

TOLERANCES:
.XX ±
.XXX ±
ANGULAR ± °

NOTES AND TOLERANCES: (UNLESS OTHERWISE SPECIFIED)

1. INTERPRET DRAWING PER ASME Y14.5-1994.
2. REMOVE ALL SHARP EDGES, .005-.015. FOR MACHINED PARTS. ROUND ALL EDGES APPROXIMATLEY R.02 FOR SHEET METAL PARTS.
3. DO NOT SCALE FROM DRAWING.
4. ALL MACHINING FLUIDS MUST BE FULLY SYNTHETIC, FULLY WATER SOLUBLE AND FREE OF SULFUR, SILICONE, AND CHLORINE.

MATERIAL: Material <not specified>
FINISH: µinch

LIGO — CALIFORNIA INSTITUTE OF TECHNOLOGY / MASSACHUSETTS INSTITUTE OF TECHNOLOGY

SYSTEM:
SUB-SYSTEM: ALL
NEXT ASSY:

PART NAME: FLANGE LAYOUT L1 BS CHAMBER 5 (BSC5 or ETMY)

DESIGNER		
DRAFTER	E. BROWN	MAY/31/2012
CHECKER		
APPROVAL		

SIZE: E
DWG. NO. D1003092
REV. v5
SCALE: 1:16
PROJECTION:
SHEET 1 OF 1