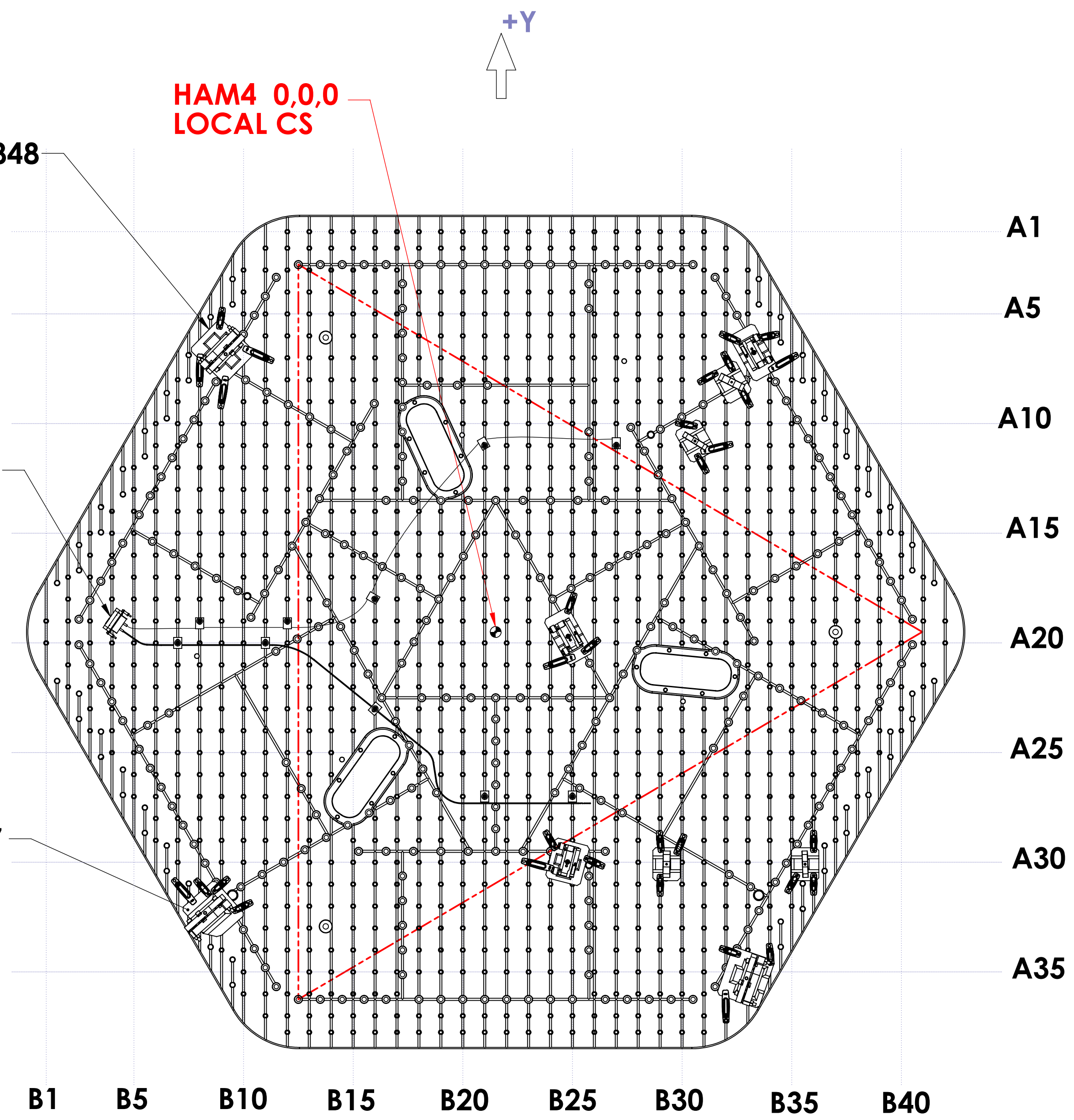


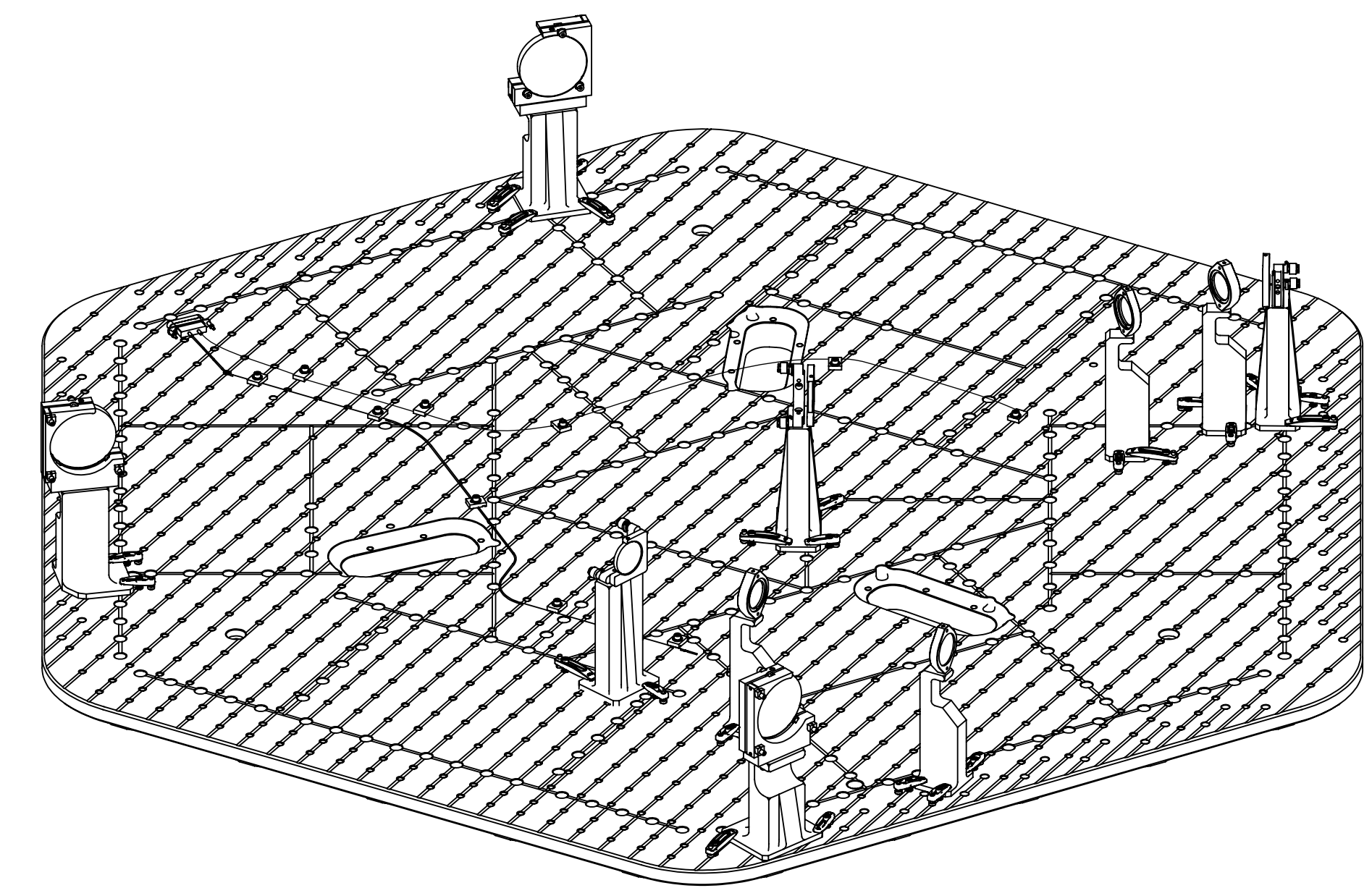
- NOTES CONTINUED:**
- 5. SEE G1000125 FOR HAM ISI SYSTEM ORIENTATION WRT VACUUM CHAMBER AND IFO GLOBAL COORDINATE SYSTEM.
 - 6. SEE D1101296 FOR HAM CHAMBER HOLE TAB.
 - 7. OPTICAL TABLE IS FOR REFERENCE ONLY.
 - 8. SEE D1101847 AND D1101848 FOR OPTICAL COMPONENTS LOCATION WRT HAM4 TABLE ORIGIN (0,0,0).
 - 9. SEE D1102257 FOR CABLE DETAIL DRAWING.
 - 10. ITEM 3 (D1102257-01), MATES WITH D100225(CB1-2nd). SEE D1101814 FOR DETAIL CABLE (ROUTE NO. 1) ROUTING.
 - 11. LENGTH OF CABLE BETWEEN CLAMPS SHOULD HAVE ENOUGH SLACK TO FORM AN 'S' SHAPE BUT NOT TOO LOOSE TO MAKE CONTACT WITH OTHER PARTS ON OPTICAL TABLE.
 - 12. (1/4-20) TORQUE TO 65 in-lb

REV.	DATE	DCN #	DRAWING TREE #
v1	02-MAY-12	E110986-v1	E110987-v1
-	-	-	-
-	-	-	-

D1101846-ALIGO TCS HWS OPTICS ASSY IN VAC. L1 HAM4 PART PDM REV: X-082, DRAWING PDM REV: X-043



6 7 **TOP VIEW**



ITEM NO.	PART NUMBER	DESCRIPTION	MATERIAL	REQ	SPARE	TOTAL
8	WF-25	Washer, Flat, .255ID X .468OD X.032TH .25, 18-8 SSSL	18-8 SSSL	10	5	15
7	C-2014-NA	SHCS, 1/4-20 UNC-2A X .875 LG, SILVER PLATED, UC-COMPONENTS	18-8 SSSL Au PLT	42	8	50
6	BC-6	Adjustable-Height Base Clamp, Long, 1/4-20 Tapped Holes, NEWPORT	Stainless Steel	9	3	12
5	BC-5	Adjustable-Height Base Clamp, Short, 1/4-20 Tapped Holes, NEWPORT	Stainless Steel	23	2	25
4	D1102296	ALIGO TCS TEMP-SENSOR CABLE CLAMP	6061 Alloy	10	5	15
3	D1102257-01	ALIGO CABLE, TCS TEMPERATURE SENSOR, ASSY	N/A	1	0	1
2	D1101848	ALIGO TCS HWS OPTO MECHANICAL LAYOUT, ITMY, L1	N/A	1	0	1
1	D1101847	ALIGO TCS HWS OPTO MECHANICAL LAYOUT, ITMX, L1	N/A	1	0	1

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 APPROXIMATELY 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	N/A
FINISH	N/A μinch
ANGULAR ± 1.0°	

ALIGO CALIFORNIA INSTITUTE OF TECHNOLOGY MASSACHUSETTS INSTITUTE OF TECHNOLOGY

SYSTEM: **ADVANCED LIGO** SUB-SYSTEM: **AOS** NEXT ASSY: **D1101863**

PART NAME		DESIGNER		DATE		SIZE		DWG. NO.		REV.	
ALIGO TCS HWS OPTICS ASSY IN VACUUM, L1 HAM4		A. BROOKS		NOV-22-2011		D		D1101846		v1	
DRAFTER		A. COLE		22-NOV-11							
CHECKER		M. JACOBSON		02-MAY-12							
APPROVAL		A. BROOKS		03-MAY-12		SCALE: 1:24		PROJECTION:		SHEET 1 OF 4	

8 7 6 5 4 3 2 1

H
G
F
E
D
C
B
A

H
G
F
E
D
C
B
A

SCREW HOLE: A18, B16

7
8
4

SCREW HOLE: A11, B21

7 8 4

HAM4 0,0,0
LOCAL CS

SCREW HOLE: A11, B27

4 8 7

A5

A5

A10

A15

A20

A25

A30

A35

8 (639)
25.2

8 D1101848
(HWSY STEER M1)

SCREW HOLE: A19, B12

7 8 4

SCREW HOLE: A19, B8

7 8 4

SCREW HOLE: A20, B7

7 8 4

MATE WITH D1000225 (CBL1-2nd)
TO FLANGE D6-3C1
@ CONNECTOR BRACKET
PROVIDED BY SEI/SYS

10

11 9 3

SCREW HOLE: A20, B11

4
7
8

SCREW HOLE: A23, B16

4
8
7

8 (655.4)
25.8

8 D1101847
(HWSX STEER M1)

8 (669)
26.3

SCREW HOLE: A27, B21

4
8
7

SCREW HOLE: A27, B24

4 8 7

B1

B5

B10

B15

B20

B25

B30

B35

B40

+Y

+X

COORDINATES FOR CABLE CLAMPS

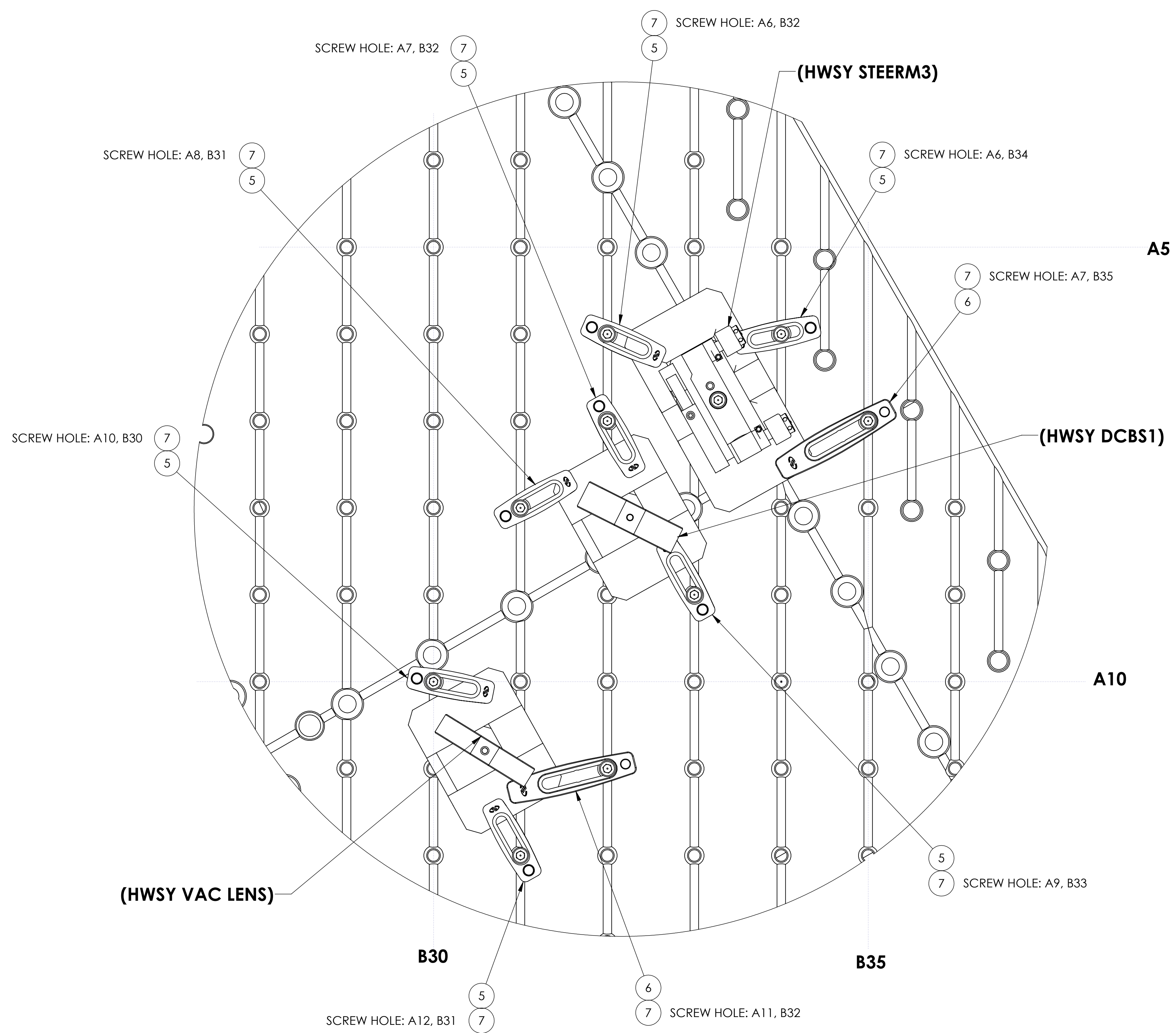
LIGO CALIFORNIA INSTITUTE OF TECHNOLOGY
MASSACHUSETTS INSTITUTE OF TECHNOLOGY

SIZE	DWG. NO.	REV.
D	D1101846	v1
SCALE: 1:24	PROJECTION:	SHEET 2 OF 4

D:\101846_dlgots_cbl_hws_optics Assy IN VAC. L1 HAM4 PART PDM REV: X-082 DRAWING PDM REV: X-043

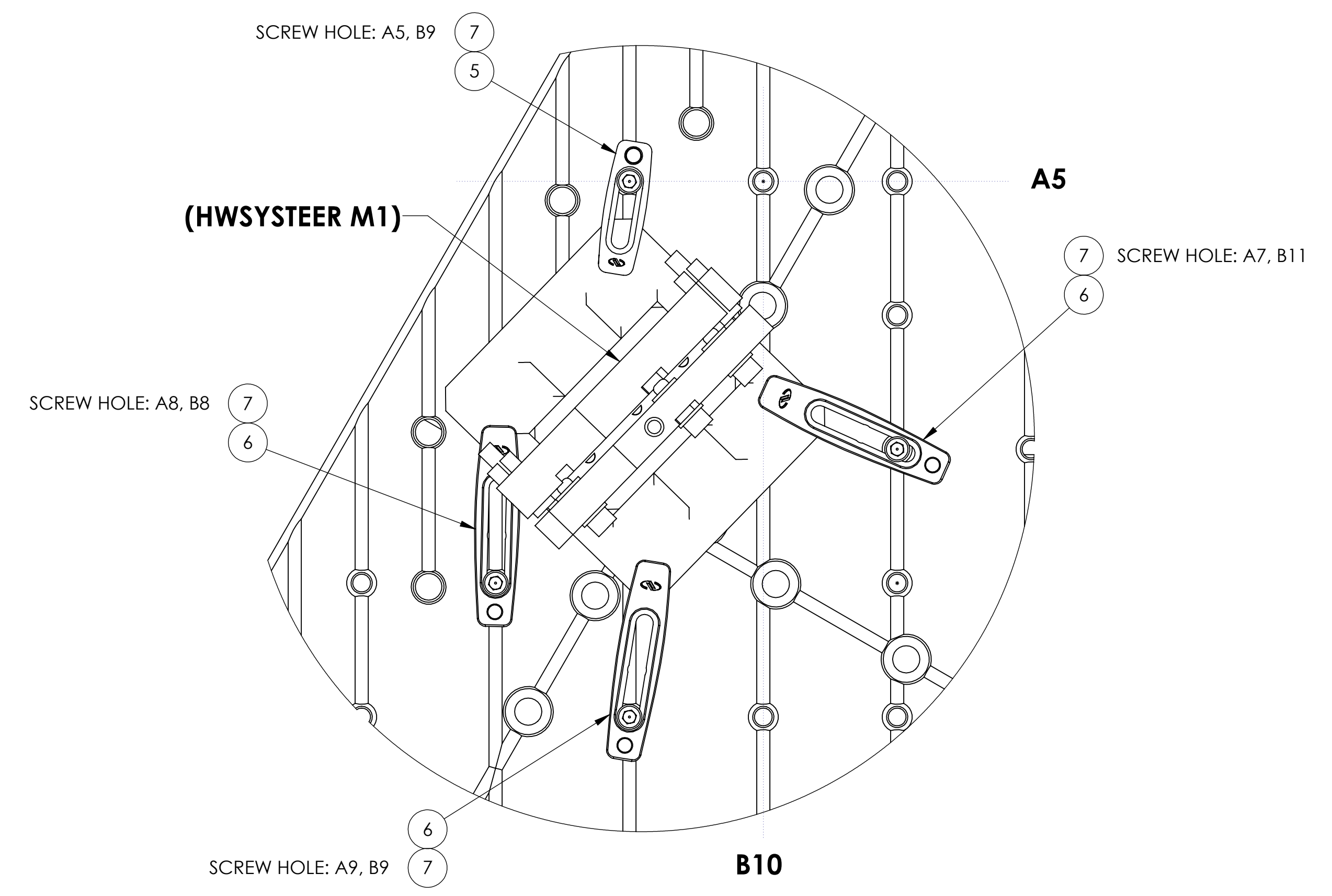
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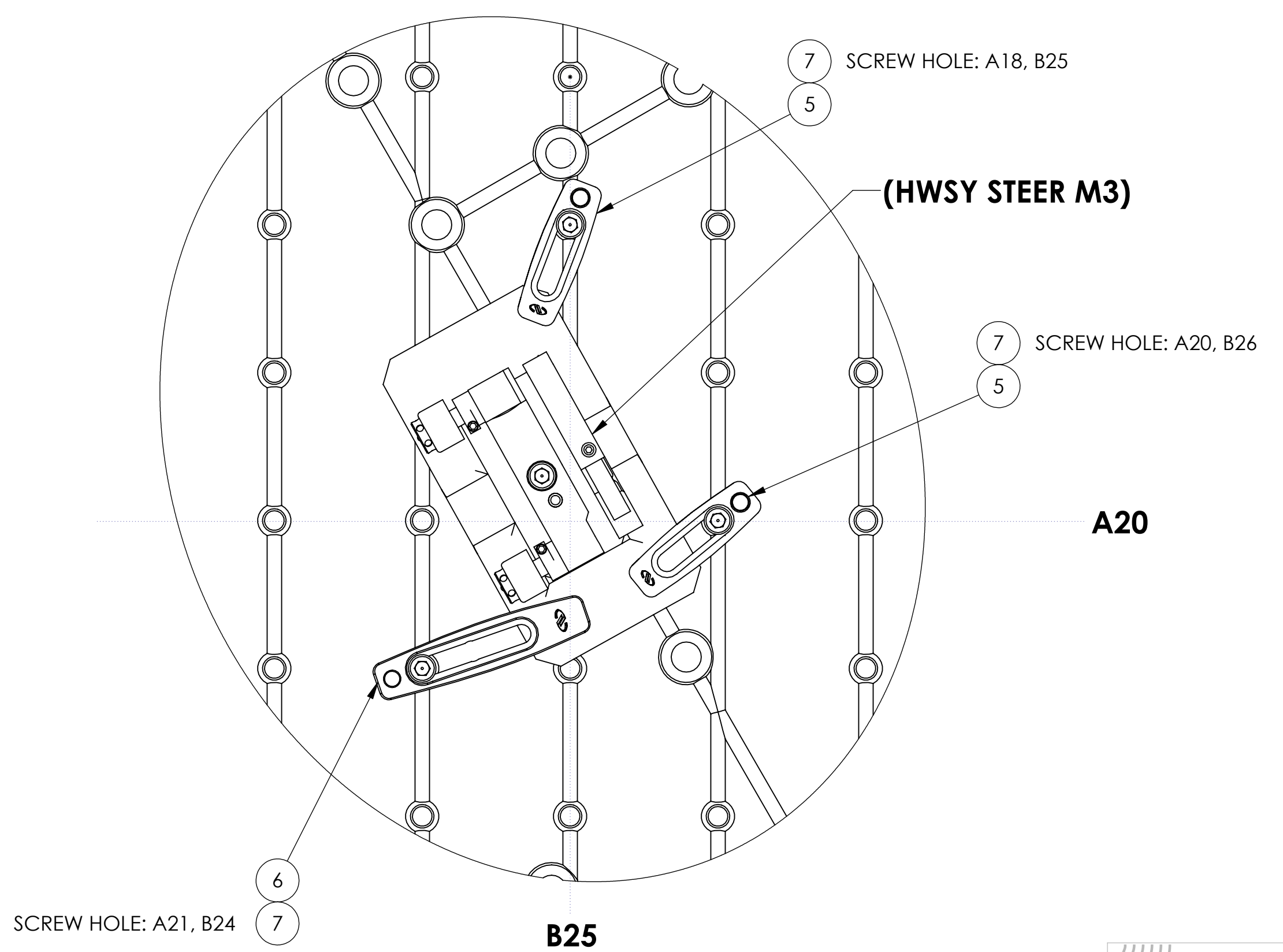


DETAIL A
SCALE 1 : 1.5

COORDINATES FOR BASE CLAMPS



DETAIL B
SCALE 1 : 1.5



DETAIL C
SCALE 1 : 1.5

		CALIFORNIA INSTITUTE OF TECHNOLOGY MASSACHUSETTS INSTITUTE OF TECHNOLOGY	
SIZE	DWG. NO.	REV.	
D	D1101846	v1	
SCALE: 1:24	PROJECTION:	SHEET 3 OF 4	

D:\101846_LIGO\TCS\HWS\OPTICS\ASSY\IN VAC_L1_HAM4_PRT.PDM REV:K082_DRAWING.PDM REV:X045

8 7 6 5 4 3 2 1

H
G
F
E
D
C
B
A

H
G
F
E
D
C
B
A

SCREW HOLE: A29, B29 (7) (5) (HWSX DCBS1) (7) (5) SCREW HOLE: A29, B30

SCREW HOLE: A31, B8 (7) (5) (HWSX STEER M1) (7) (5) SCREW HOLE: A31, B9

SCREW HOLE: A29, B24 (7) (5)

A25

A30

(HWSX STEER M3)

SCREW HOLE: A29, B36 (7) (5)

(HWSX VAC LENS)

SCREW HOLE: A30, B23 (6) (7)

A30

SCREW HOLE: A31, B36 (5) (7)

SCREW HOLE: A30, B26 (5) (7)

SCREW HOLE: A31, B35 (5) (7)

B10

DETAIL E
SCALE 1 : 1.5

SCREW HOLE: A31, B29 (5) (7)

SCREW HOLE: A34, B34 (5) (7) A35

(HWSX STEER M2)

SCREW HOLE: A36, B32 (6) (7)

SCREW HOLE: A34, B32 (5) (7)

B25

B30

B35

DETAIL D
SCALE 1 : 2

COORDINATES FOR BASE CLAMPS

LIGO CALIFORNIA INSTITUTE OF TECHNOLOGY MASSACHUSETTS INSTITUTE OF TECHNOLOGY		REV.
SIZE	DWG. NO.	REV.
D	D1101846	v1
SCALE: 1:24	PROJECTION:	SHEET 4 OF 4

D:\101846_LIGO\TCS\HWS\OPTICS\ASSY\IN VAC_L1_HAM4_PRT.PDM REV: X-082_DRAWING.PDM REV: X-043