

NOTES CONTINUED:  
 5. BAG OR WRAP AND TAG ASSEMBLY WITH DRAWING NUMBER, REVISION, TYPE, AND SERIAL NUMBER. SERIAL NUMBERS START AT 001 FOR THE FIRST ARTICLE AND PROCEED CONSECUTIVELY.  
 EXAMPLE (TAG): DXXXXXX-VY, TYPE -04, S/N 001

6. APPROXIMATE WEIGHT: 420.018 LB [190.517 KG].

7. BEFORE REMOVING OR DISINGAGING THE NOTED SPRING STOP FOR INSTALLATION OF ITEM 3, BLOCK THE SPRING WITH A STRONG METAL OBJECT FOR ADEQUATE SAFETY.

8. THIS ASSEMBLY HAS 4 CONFIGURATIONS, DESIGNATED AS ASSEMBLIES -01 THRU -04.

9. ASSEMBLY -04 IS FIRST ARTICLE.

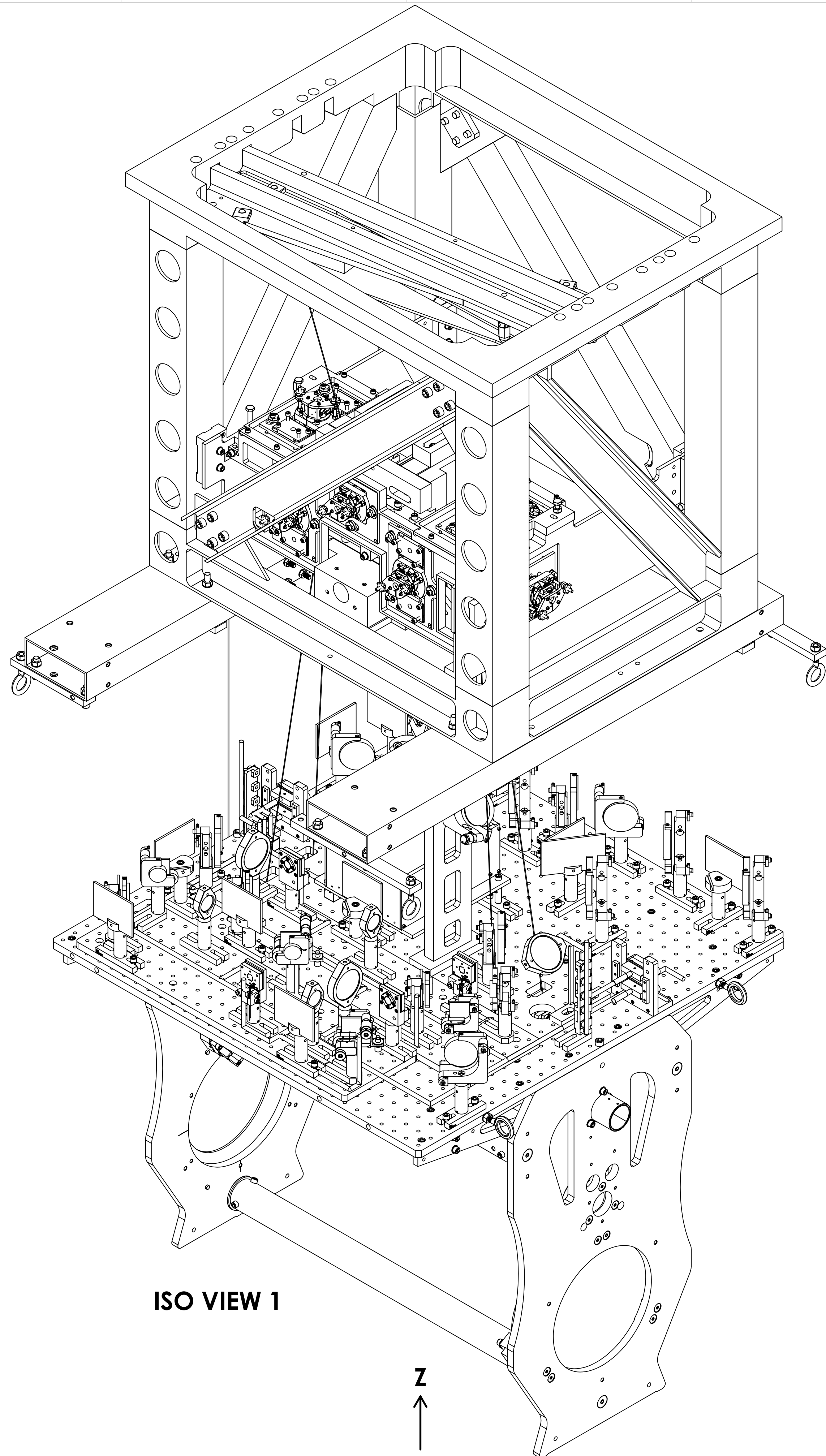
REV	DATE	DCN #	BOM #
v1	11 NOV 2011	E1100351	E1100593-v1
-	-	-	-
-	-	-	-

ITEM NO.	PART NUMBER	REV	DESCRIPTION	MATERIAL	-01 /QTY	-02 /QTY	-03 /QTY	-04 /QTY	SPARE (EACH CONFIG)	-01 /TOTAL	-02 /TOTAL	-03 /TOTAL	-04 /TOTAL
10	D1100827	v1	aLIGO TMS VERTICAL SAFETY WIRE ASSEMBLY	N/A	1	1	1	1	-	1	1	1	1
9	D1101130-02	v1	aLIGO TMS TELESCOPE SAFETY SUPPORT BEAM ASSEMBLY, LEFT	N/A	-	1	1	-	-	-	1	1	-
8	D1101130-01	v1	aLIGO TMS TELESCOPE SAFETY SUPPORT BEAM ASSEMBLY, RIGHT	N/A	1	-	-	1	-	1	-	-	1
7	U-C COMPONENTS C-2016-NA or equiv		SCREW, SOCKET HEAD CAP, 1/4-20 UNC-2A X 1 LONG (PER MS16995-52)	Ag-PLATED 300 SSSL	8	8	8	8	3	11	11	11	11
6	96861A600 (McM-Carr) or equiv		VENTED FLAT WASHER .255 ID, .468 OD, .032 TH	18-8 SSSL	16	16	16	16	6	22	22	22	22
5	D1002460-02	v1	aLIGO TMS TELESCOPE ASSEMBLY, Y-ARM	N/A	-	1	-	1	-	-	1	-	1
4	D1002460-01	v1	aLIGO TMS TELESCOPE ASSEMBLY, X-ARM	N/A	1	-	1	-	-	1	-	1	-
3	D1101163	v1	aLIGO TMS TELESCOPE SUSPENSION WIRE ASSEMBLY	N/A	2	2	2	2	1	3	3	3	3
2	D1000549-02	v1	aLIGO UPPER INTERMEDIATE MASS TOP ASSEMBLY, FA (WBSC6)	N/A	-	-	-	1	-	-	-	-	1
1	D1000549-01	v1	aLIGO UPPER INTERMEDIATE MASS TOP ASSEMBLY	N/A	1	1	1	-	-	1	1	1	-

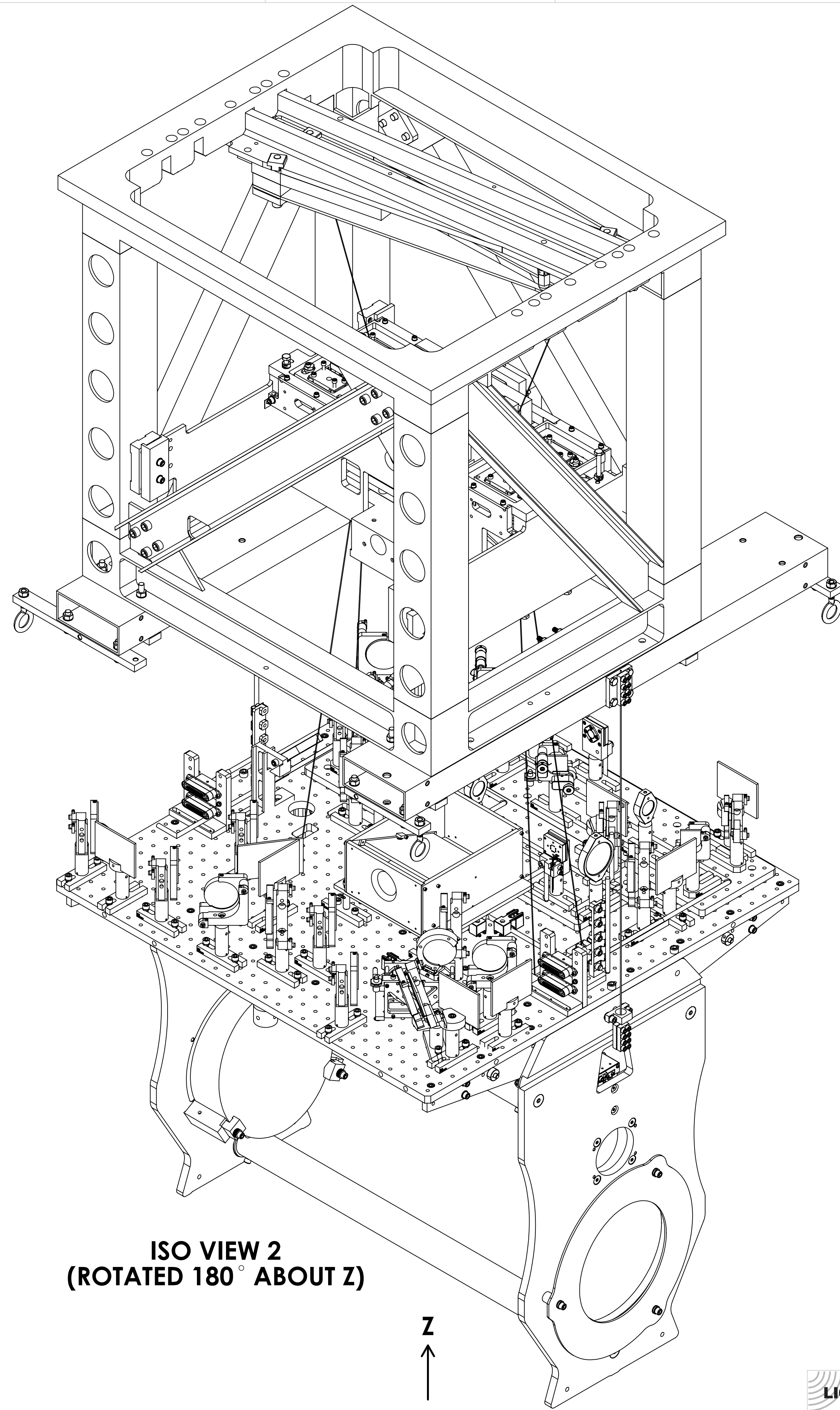
PARTS LIST

DIMENSIONS ARE IN INCHES [MM] 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 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.		 CALIFORNIA INSTITUTE OF TECHNOLOGY MASSACHUSETTS INSTITUTE OF TECHNOLOGY		PART NAME aLIGO AOS TRANSMISSION MONITOR SYSTEM	
MATERIAL N/A		FINISH N/A μinch		SYSTEM ADVANCED LIGO		SUB-SYSTEM AOS	
NEXT ASSY D0900411 D0900419 D0900435 D0900436 D0902163 D0902168		DESIGNER K. MAILAND 19 NOV 2009		SIZE DWG. NO. D D0901880		REV. v1	
CHECKER SEE DCN		APPROVAL SEE DCN		SCALE: NONE PROJECTION:		SHEET 1 OF 11	

D0901880\_AOS\_E1M TELESCOPE UPPER SUSPENSION STRUCTURE ENVELOPE ASSEMBLY, PART FDM REV: X-454, DRAWING FDM REV: X-024




ISO VIEW 1

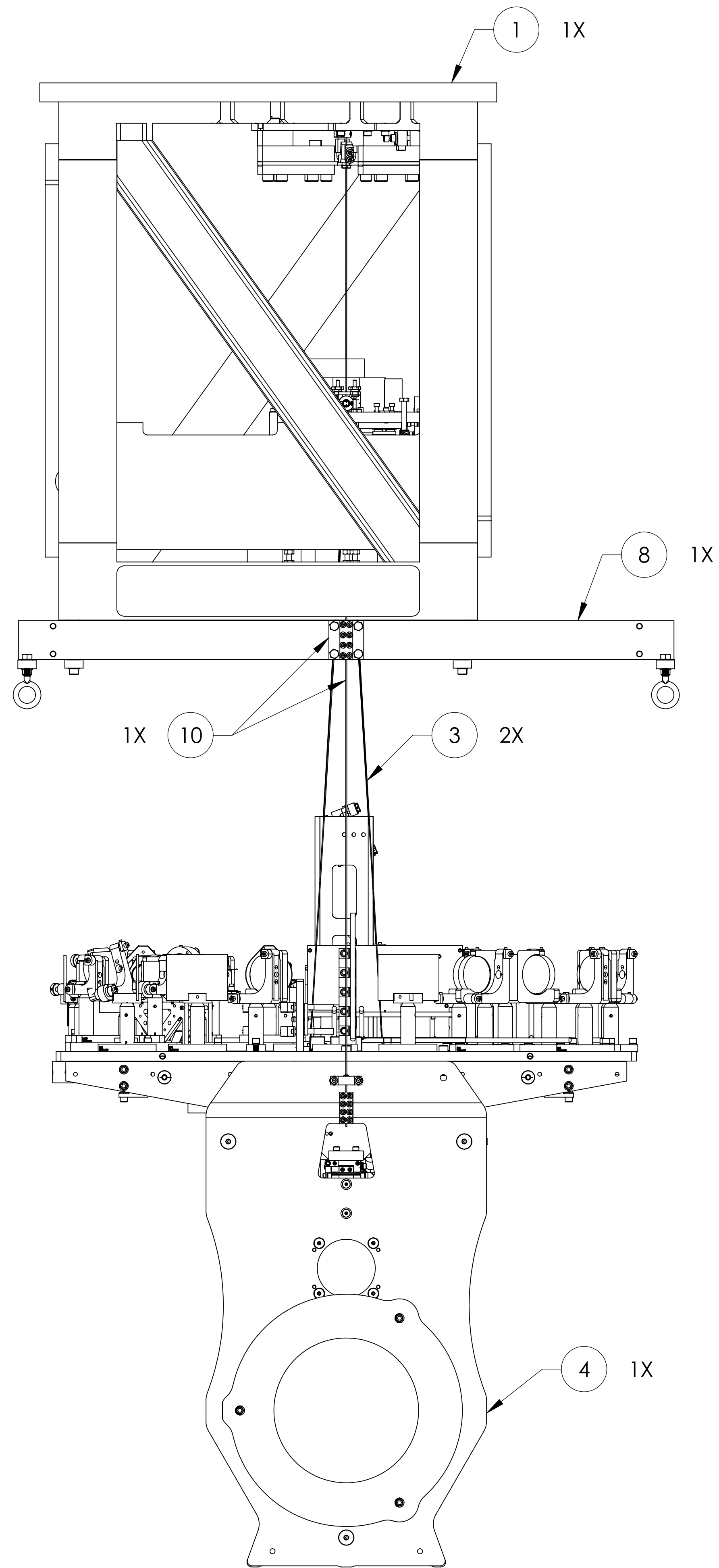


ISO VIEW 2  
(ROTATED 180° ABOUT Z)

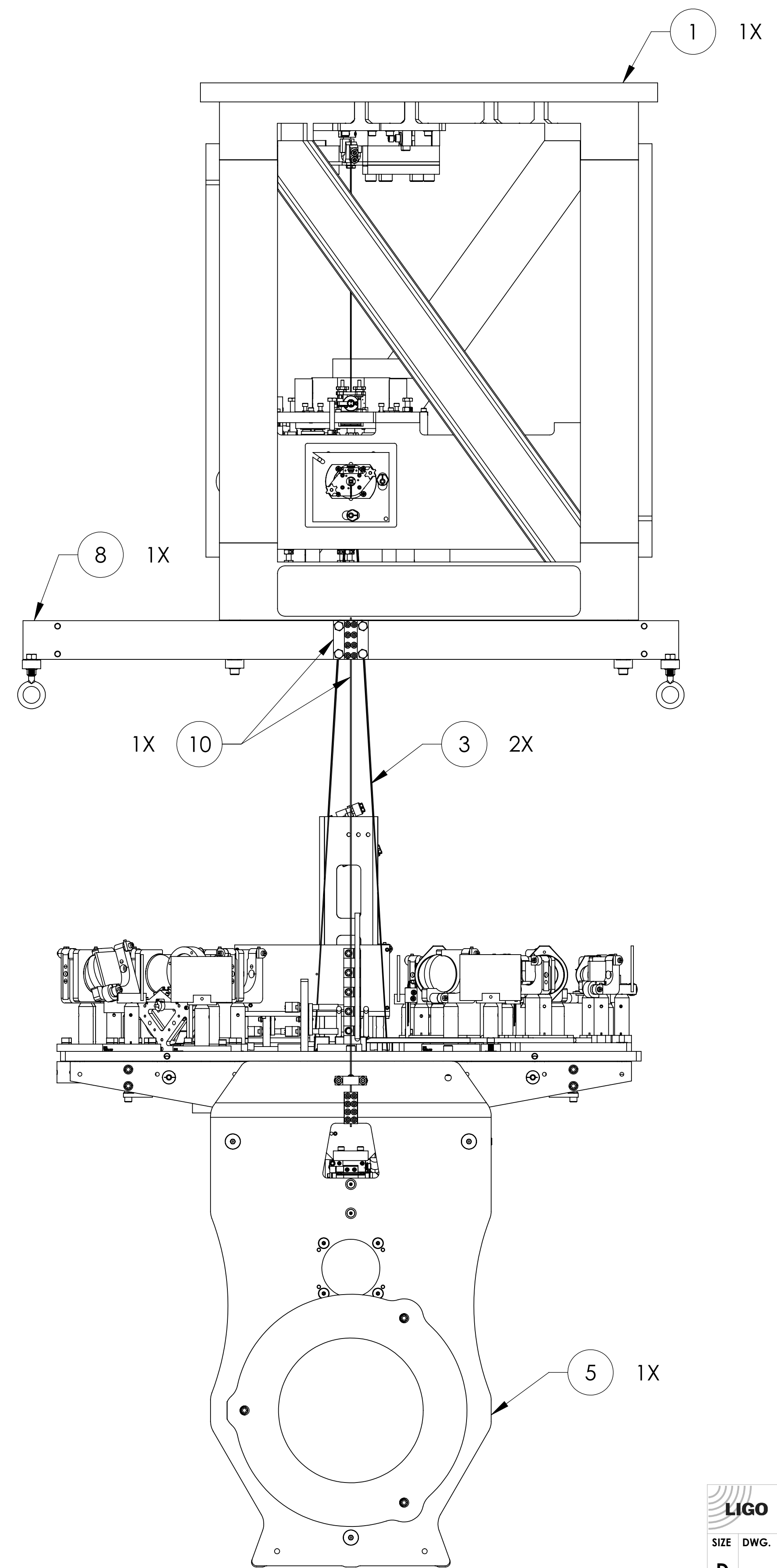
-04 SHOWN  
(FIRST ARTICLE)

 CALIFORNIA INSTITUTE OF TECHNOLOGY MASSACHUSETTS INSTITUTE OF TECHNOLOGY		REV.
SIZE DWG. NO.	D0901880	v1
SCALE: NONE	PROJECTION:	SHEET 2 OF 11

DD901880\_AOS\_EIN\_T TELESCOPE UPPER SUSPENSION STRUCTURE ENVELOPE ASSEMBLY, PART FROM REV. X-454, DRAWING FROM REV. X-024



-01 (WBSC9, LBSC4)

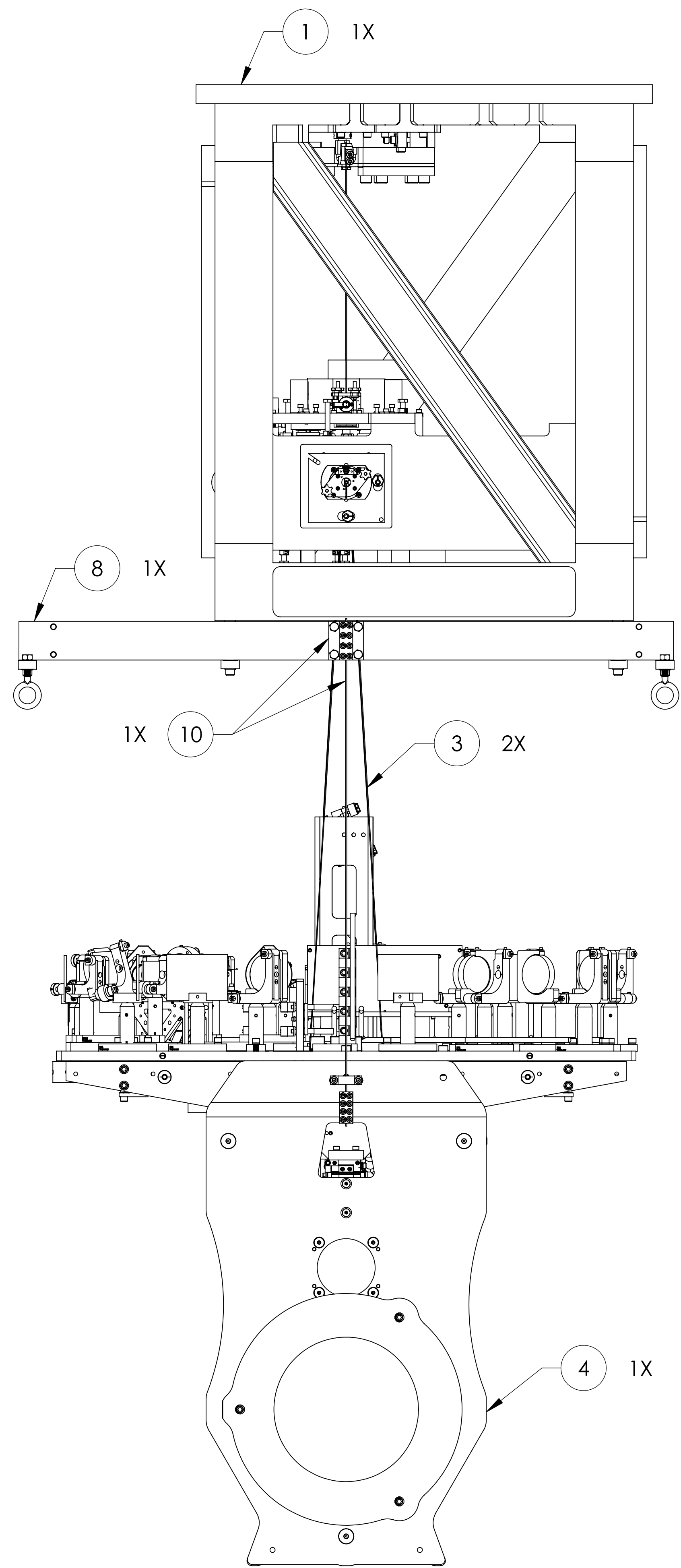


-02 (WBSC10, LBSC5)

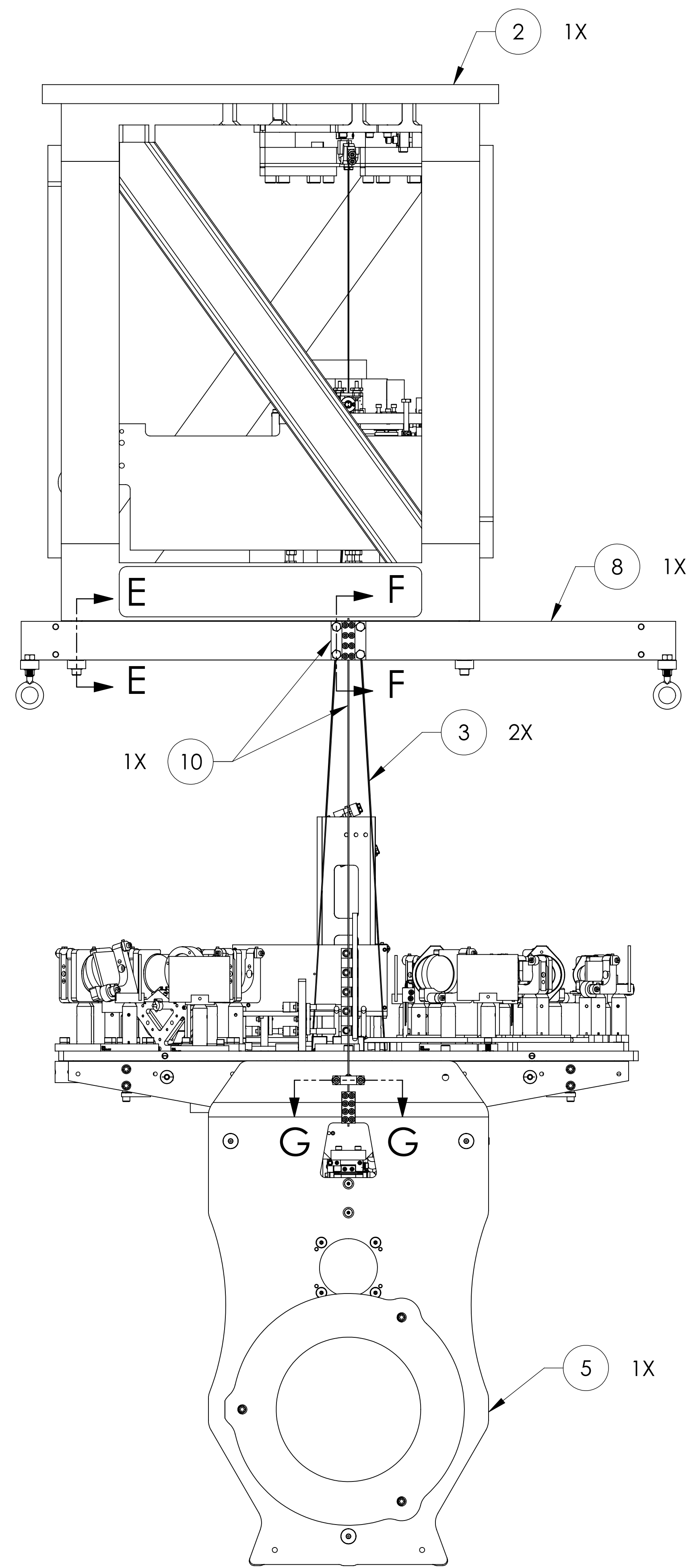
FRONT VIEWS

CALIFORNIA INSTITUTE OF TECHNOLOGY MASSACHUSETTS INSTITUTE OF TECHNOLOGY		REV.
SIZE	DWG. NO.	v1
D	D0901880	
SCALE: NONE	PROJECTION:	SHEET 3 OF 11

DD0901880\_AOS\_EIN TELESCOPE UPPER SUSPENSION STRUCTURE ENVELOPE ASSEMBLY, PART FDM REV: X-454, DRAWING FDM REV: X-024



-03 (WBS C5)



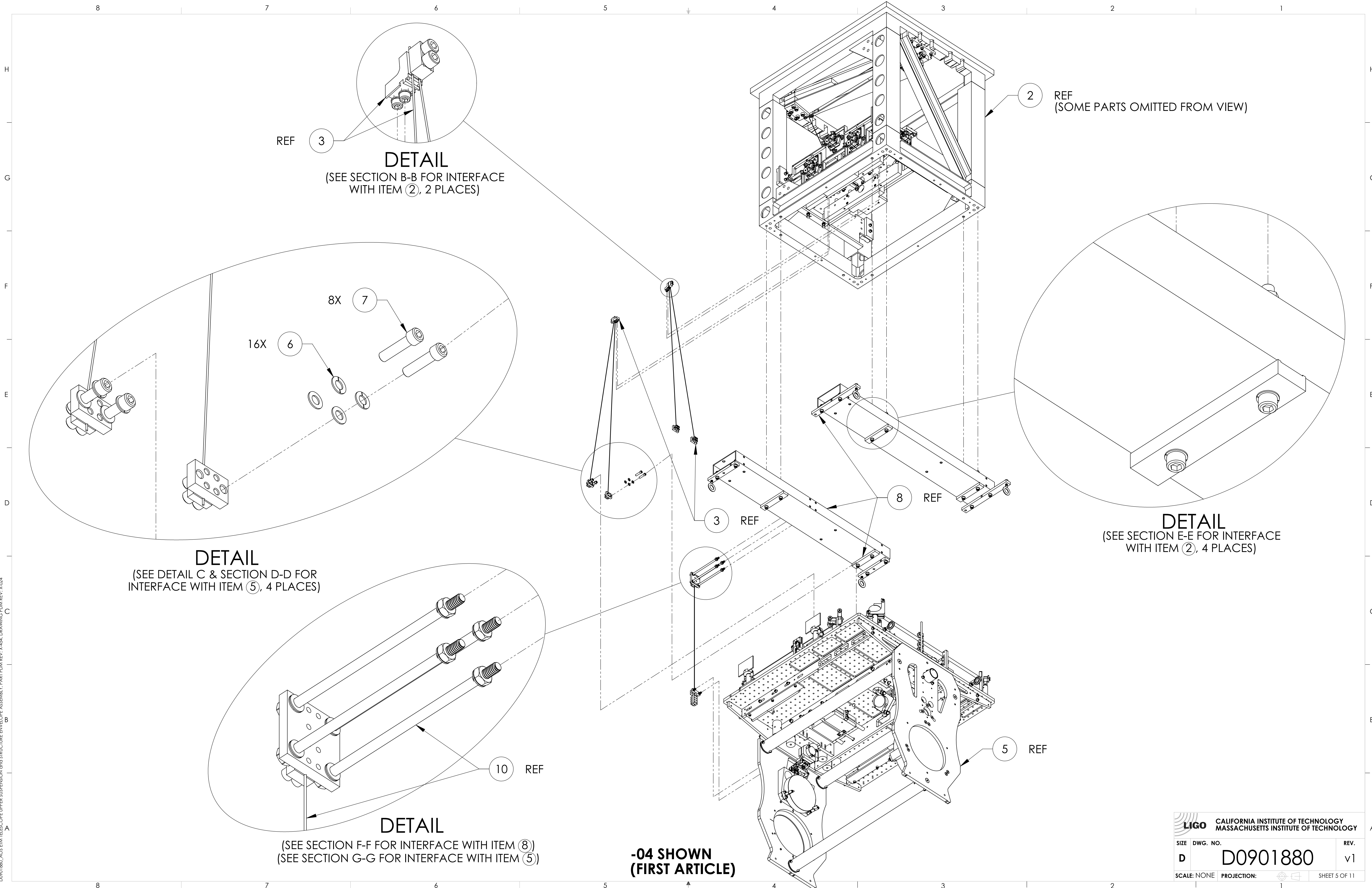
-04 (FIRST ARTICLE, WBS C6)

FRONT VIEWS

CALIFORNIA INSTITUTE OF TECHNOLOGY MASSACHUSETTS INSTITUTE OF TECHNOLOGY		REV.
SIZE DWG. NO.	D0901880	v1
SCALE: NONE	PROJECTION:	SHEET 4 OF 11

DD0901880\_AOS\_EIM\_TELESCOPE\_UPPER\_SUSPENSION\_STRUCTURE\_ENVELOPE\_ASSEMBLY\_PART\_FDM\_REV\_X-454\_DRAWING\_FDM\_REV\_X-024





REF 3  
**DETAIL**  
 (SEE SECTION B-B FOR INTERFACE WITH ITEM ②, 2 PLACES)

2 REF  
 (SOME PARTS OMITTED FROM VIEW)

**DETAIL**  
 (SEE DETAIL C & SECTION D-D FOR INTERFACE WITH ITEM ⑤, 4 PLACES)

**DETAIL**  
 (SEE SECTION E-E FOR INTERFACE WITH ITEM ②, 4 PLACES)

**DETAIL**  
 (SEE SECTION F-F FOR INTERFACE WITH ITEM ⑧)  
 (SEE SECTION G-G FOR INTERFACE WITH ITEM ⑤)

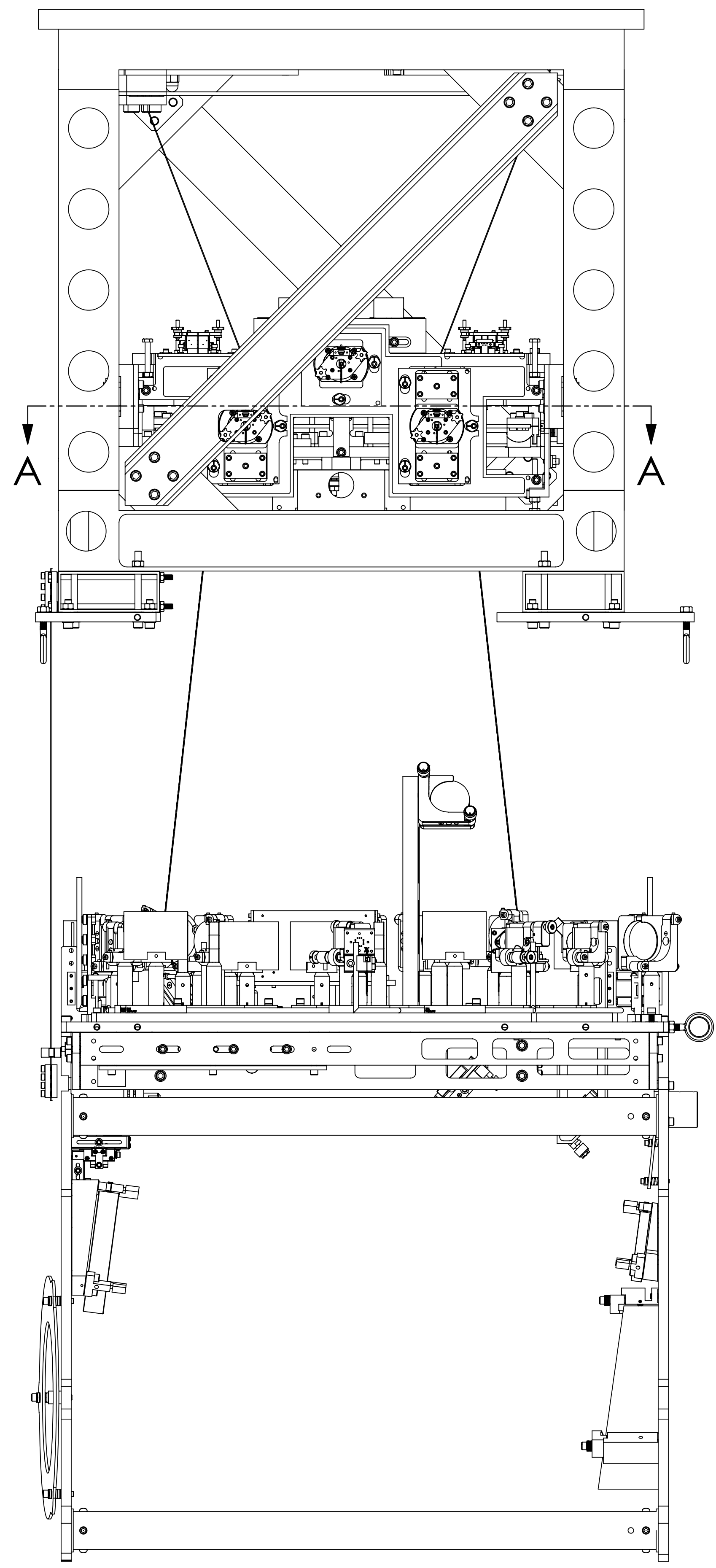
**-04 SHOWN**  
**(FIRST ARTICLE)**

<b>LIGO</b> CALIFORNIA INSTITUTE OF TECHNOLOGY MASSACHUSETTS INSTITUTE OF TECHNOLOGY	
SIZE DWG. NO.	REV.
<b>D</b> <b>D0901880</b>	<b>v1</b>
SCALE: NONE PROJECTION:	SHEET 5 OF 11

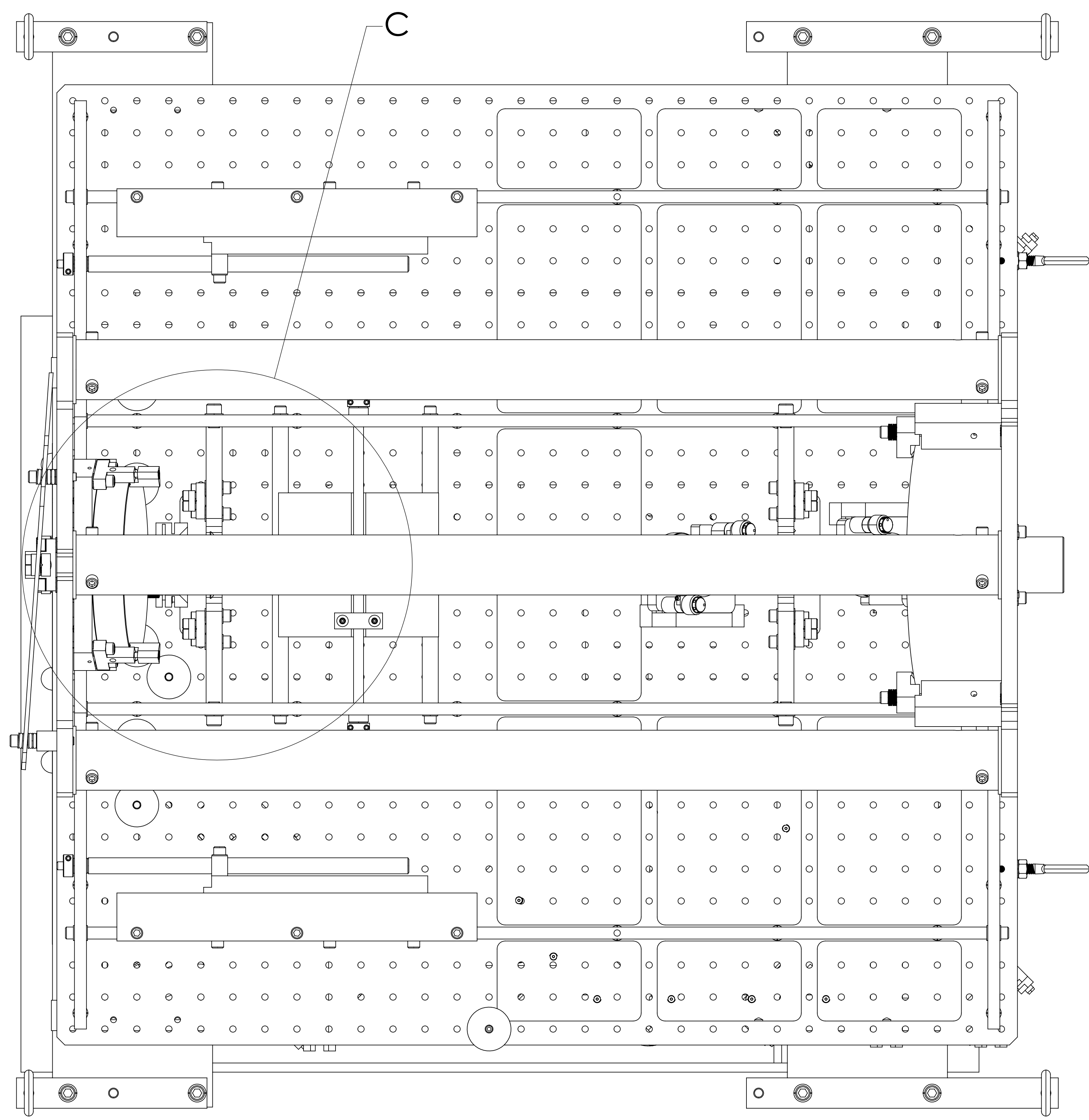
DD901880\_AOS\_EIM TELESCOPE UPPER SUSPENSION STRUCTURE ENVELOPE ASSEMBLY PART FDM REV. X-454 DRAWING FDM REV. X-024

8 7 6 5 4 3 2 1

H G F E D C B A



**SIDE VIEW**



**BOTTOM VIEW**

**-04 SHOWN  
(FIRST ARTICLE)**

<b>LIGO</b> CALIFORNIA INSTITUTE OF TECHNOLOGY MASSACHUSETTS INSTITUTE OF TECHNOLOGY	
SIZE DWG. NO.	REV.
<b>D</b> <b>D0901880</b>	<b>v1</b>
SCALE: NONE	PROJECTION:

DD901880\_AOS\_EIN TELESCOPE UPPER SUSPENSION STRUCTURE ENVELOPE ASSEMBLY, PART FDM REV. X-454, DRAWING FDM REV. X-024

8 7 6 5 4 3 2 1

8

7

6

5

4

3

2

1

H

H

G

G

F

F

E

E

D

D

C

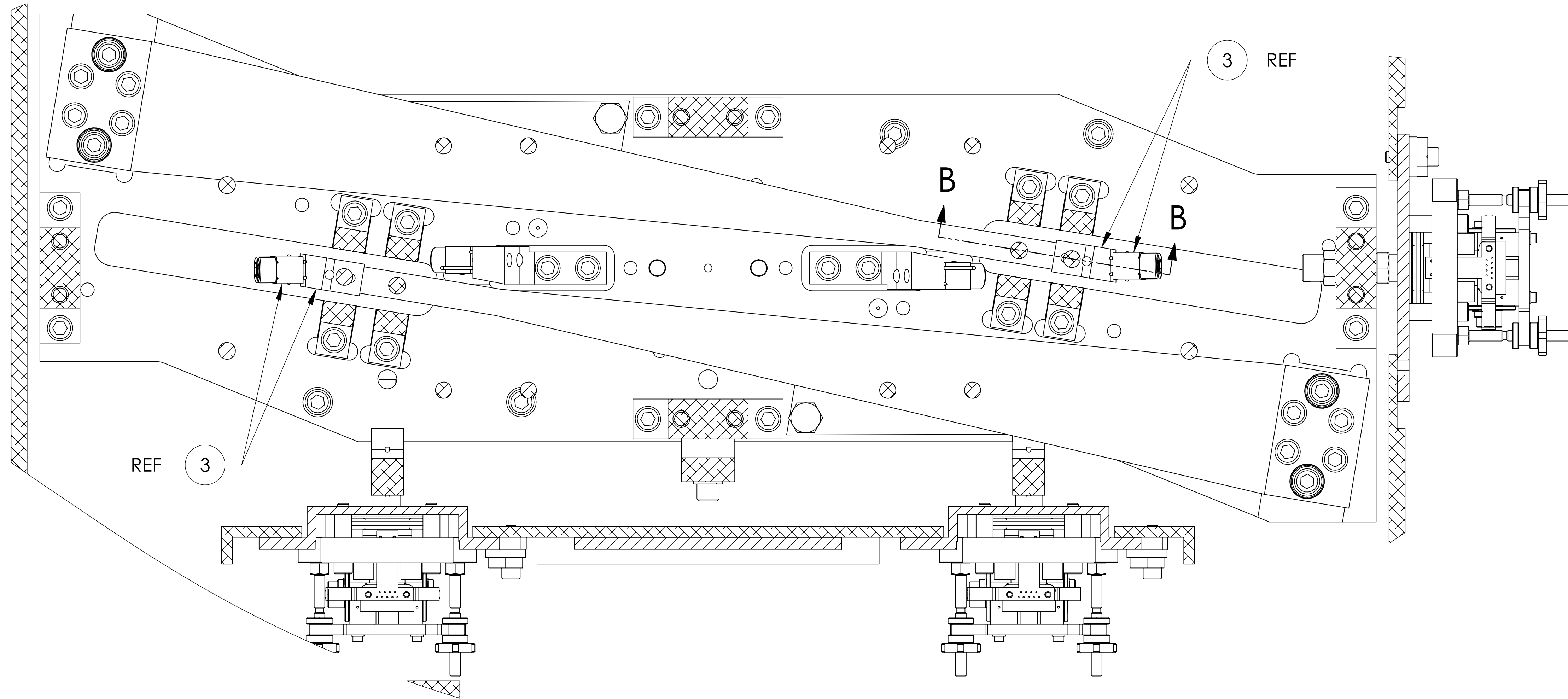
C

B

B

A

A



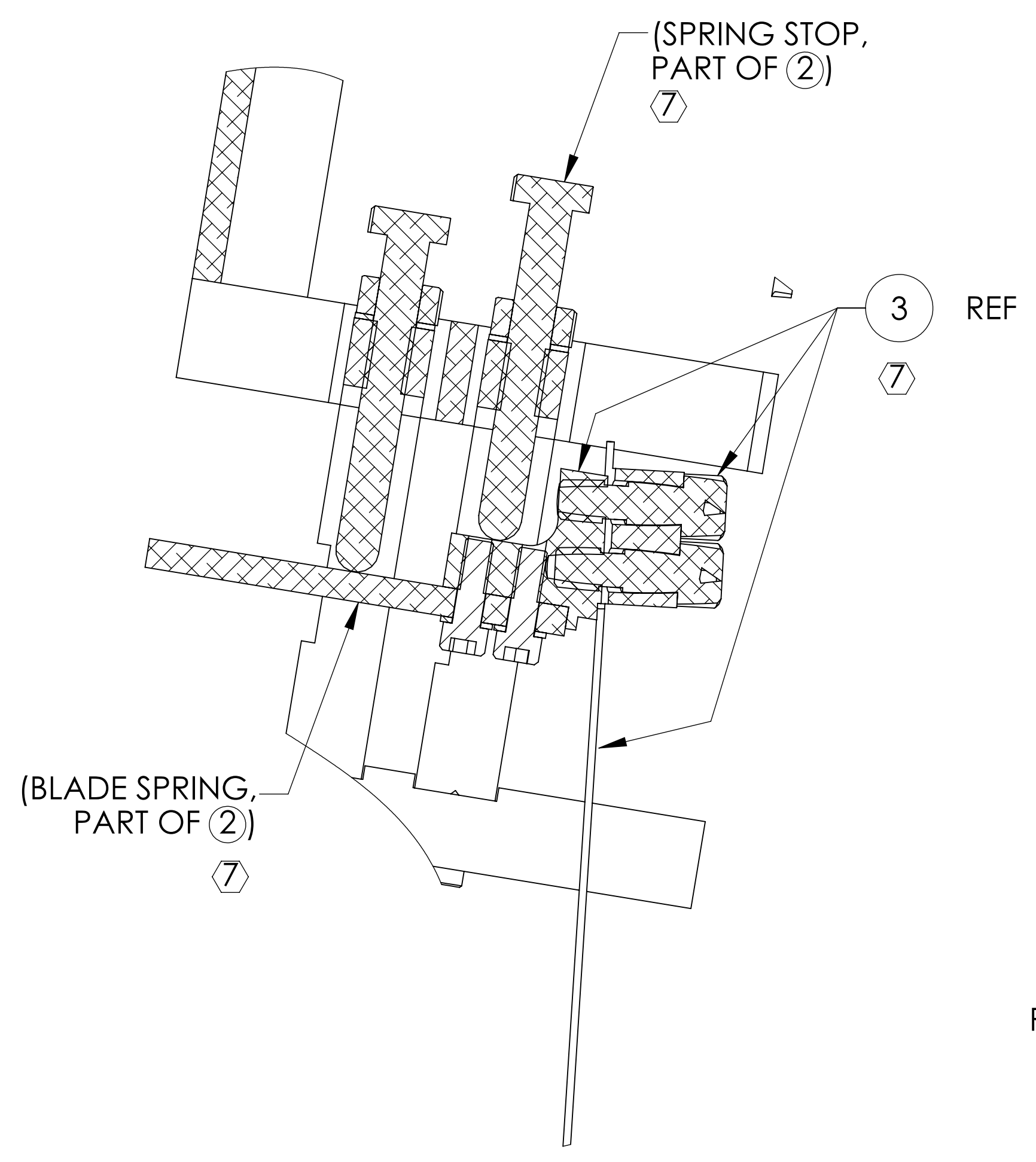
SECTION A-A

		CALIFORNIA INSTITUTE OF TECHNOLOGY MASSACHUSETTS INSTITUTE OF TECHNOLOGY	
SIZE	DWG. NO.	REV.	
D	D0901880	v1	
SCALE: NONE		PROJECTION:	SHEET 7 OF 11

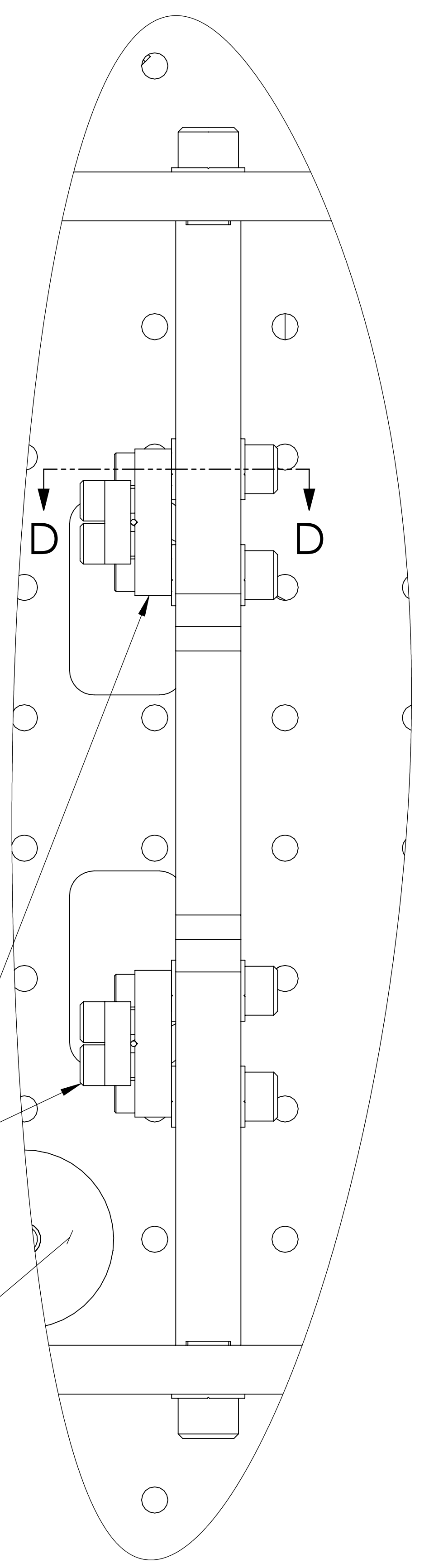
D0901880\_AOS\_EIN TELESCOPE UPPER SUSPENSION STRUCTURE ENVELOPE ASSEMBLY, PART PDM REV: X-454, DRAWING PDM REV: X-024

8 7 6 5 4 3 2 1

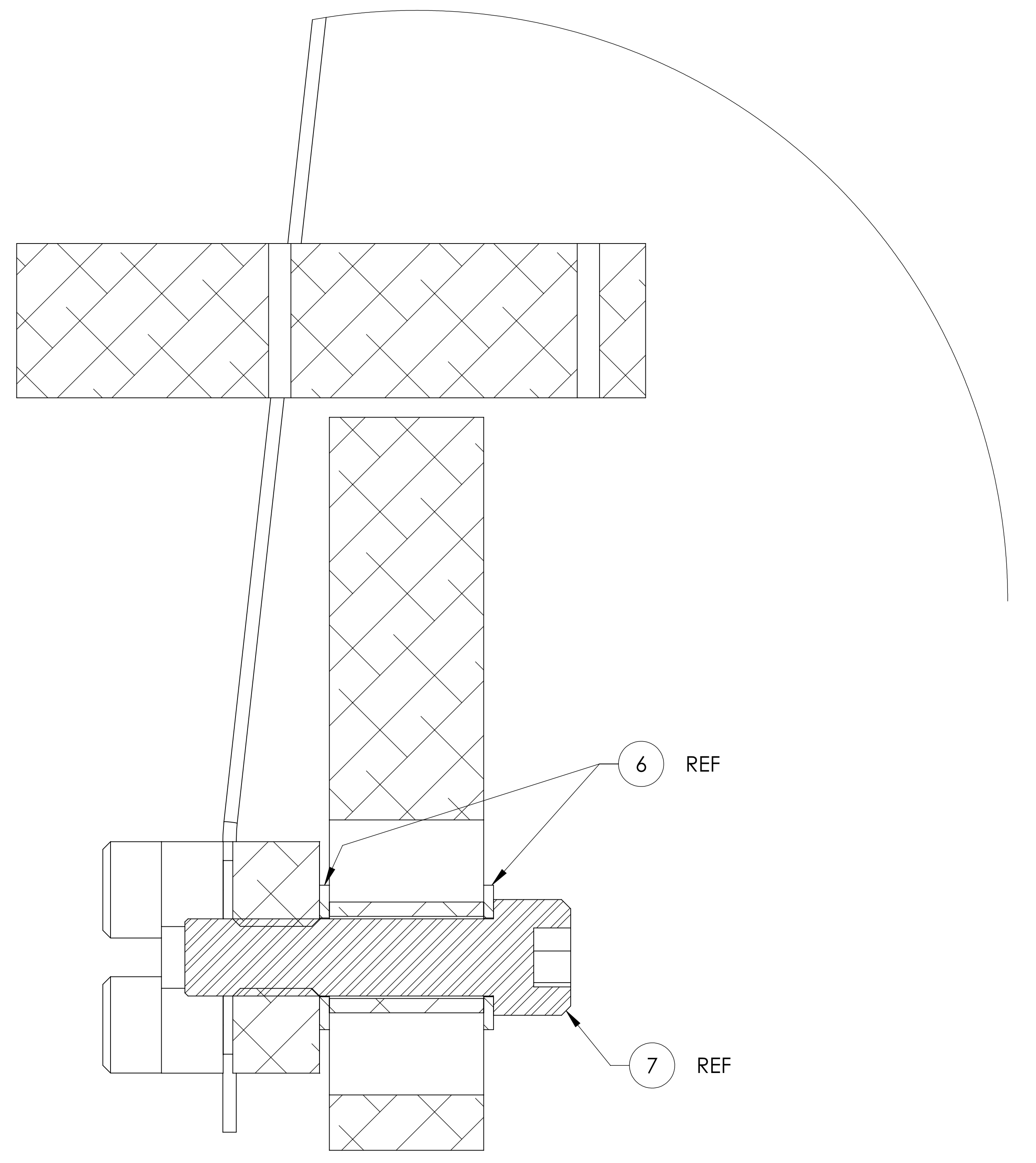
H G F E D C B A



**SECTION B-B**  
-01 THRU -04  
2 PLACES EACH ASSEMBLY



**DETAIL C**  
-01 THRU -04  
2 PLACES EACH ASSEMBLY  
(SOME OBJECTS OMITTED FROM VIEW)



**SECTION D-D**

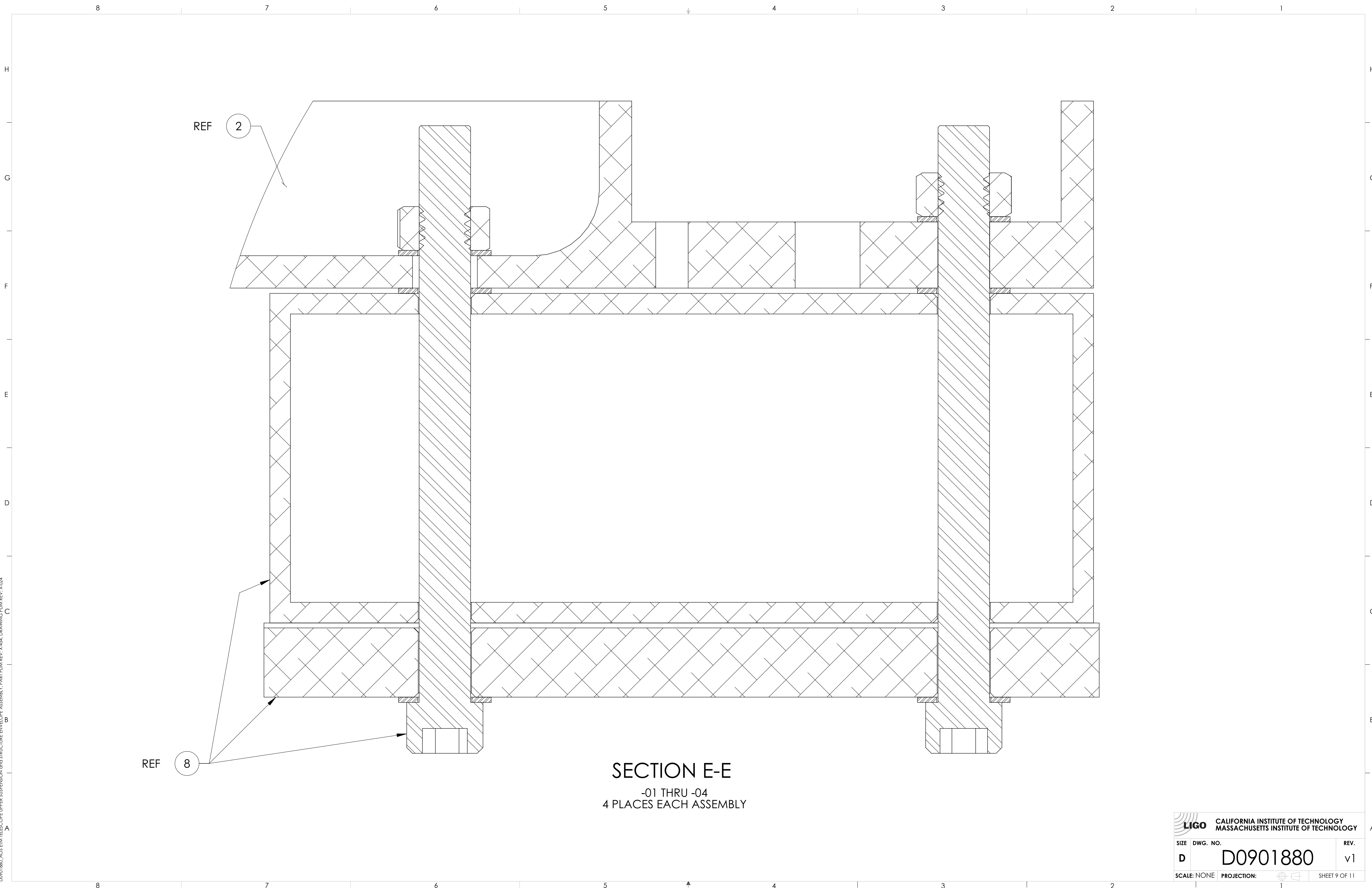
<b>LIGO</b> CALIFORNIA INSTITUTE OF TECHNOLOGY MASSACHUSETTS INSTITUTE OF TECHNOLOGY		REV.
SIZE DWG. NO.	D0901880	v1
SCALE: NONE	PROJECTION:	SHEET 8 OF 11

8 7 6 5 4 3 2 1


H G F E D C B A

DD901880\_AOS\_EIN\_TELESCOPE\_UPPER\_SUSPENSION\_STRUCTURAL\_ASSEMBLY\_PART\_FDM\_REV\_X-454\_DRAWING\_FDM\_REV\_X-024





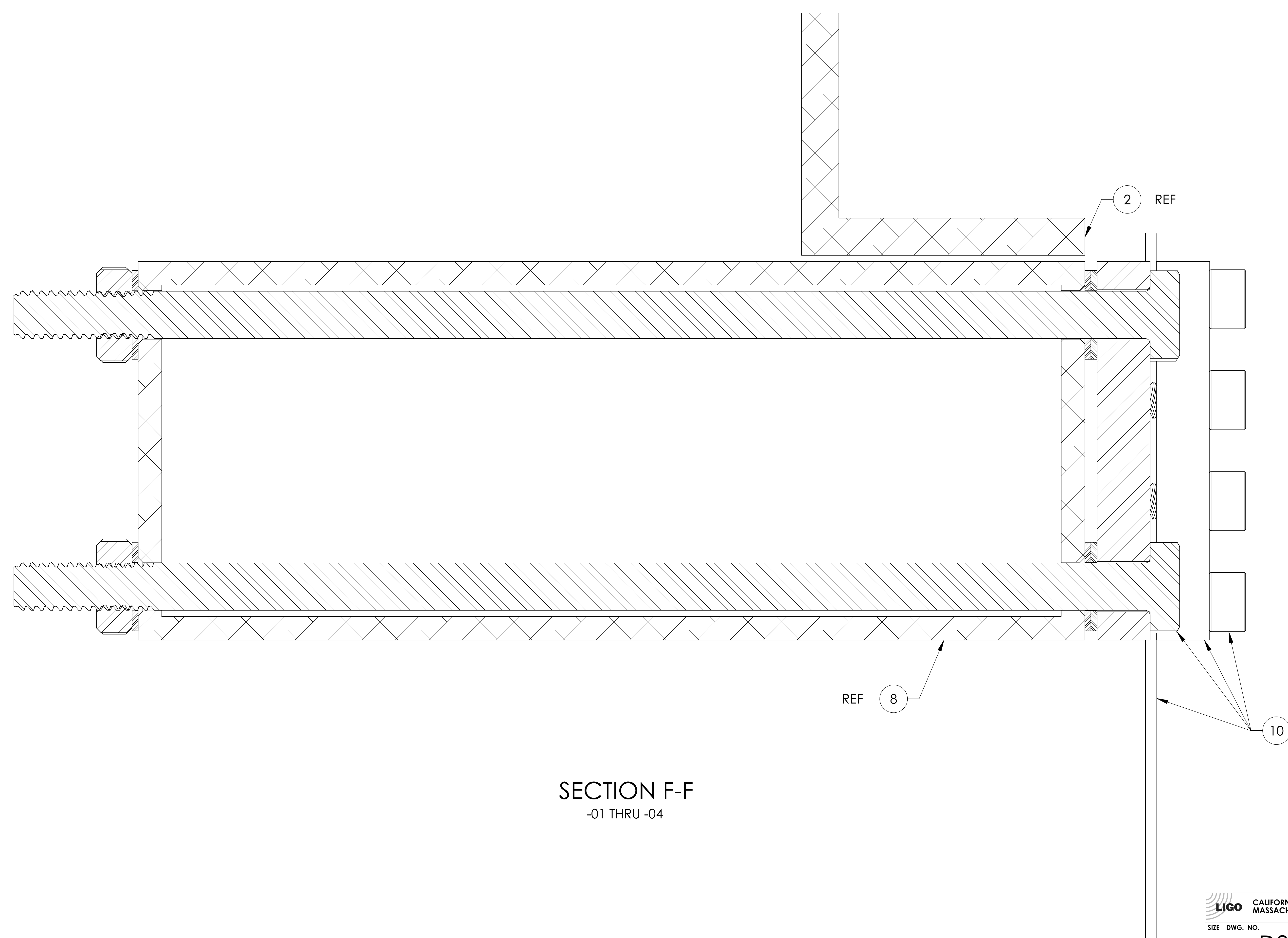
SECTION E-E  
 -01 THRU -04  
 4 PLACES EACH ASSEMBLY

 <b>CALIFORNIA INSTITUTE OF TECHNOLOGY</b> <b>MASSACHUSETTS INSTITUTE OF TECHNOLOGY</b>		REV.
SIZE	DWG. NO.	REV.
D	D0901880	v1
SCALE: NONE	PROJECTION:	SHEET 9 OF 11

DD0901880\_AOS\_EFM\_TELESCOPE\_UPPER\_SUSPENSION\_STRUCTURAL\_ASSEMBLY\_PART\_FDM\_REV\_X-454\_DRAWING\_FDM\_REV\_X-024

8 7 6 5 4 3 2 1

H  
G  
F  
E  
D  
C  
B  
A



SECTION F-F  
-01 THRU -04

REF 2 REF  
REF 8 REF  
REF 10 REF

CALIFORNIA INSTITUTE OF TECHNOLOGY MASSACHUSETTS INSTITUTE OF TECHNOLOGY		
SIZE	DWG. NO.	REV.
D	D0901880	v1
SCALE: NONE	PROJECTION:	SHEET 10 OF 11

D0901880\_AOS\_EFM\_TELESCOPE\_UPPER\_SUSPENSION\_STRUCTURAL\_ENVELOPE\_ASSEMBLY\_PART\_FDM\_REV\_X-454\_DRAWING\_FDM\_REV\_X-024

8

7

6

5

4

3

2

1

H

G

F

E

D

C

B

A

H

G

F

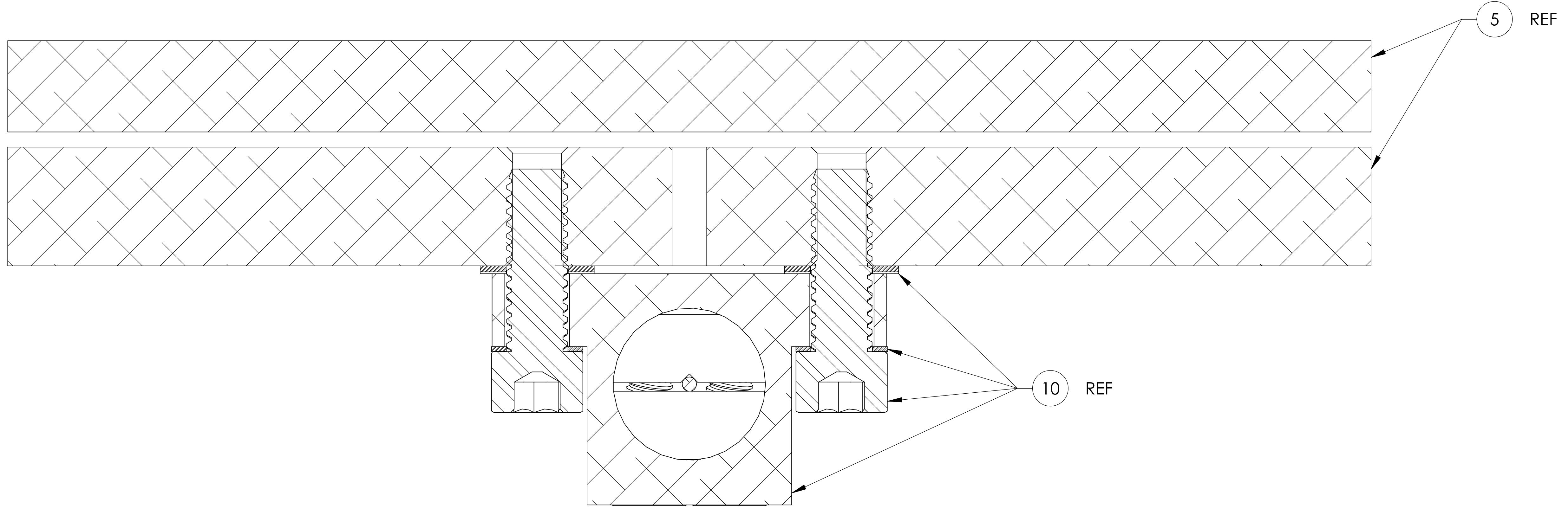
E

D

C

B

A



SECTION G-G  
-01 THRU -04

<b>LIGO</b> CALIFORNIA INSTITUTE OF TECHNOLOGY MASSACHUSETTS INSTITUTE OF TECHNOLOGY	
SIZE DWG. NO.	REV.
D D0901880	v1
SCALE: NONE	PROJECTION:
SHEET 11 OF 11	

D0901880\_AOS\_EIN\_TELESCOPE\_UPPER\_SUSPENSION\_STRUCTURAL\_ASSEMBLY\_PART\_FDM\_REV\_X-454\_DRAWING\_FDM\_REV\_X-024