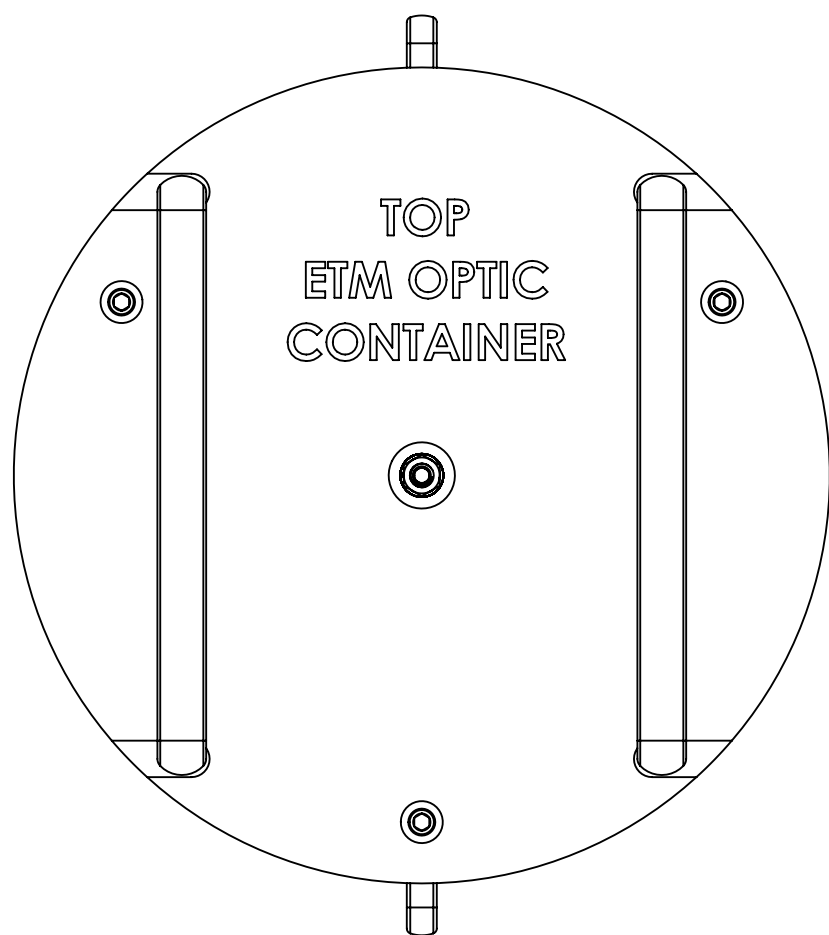
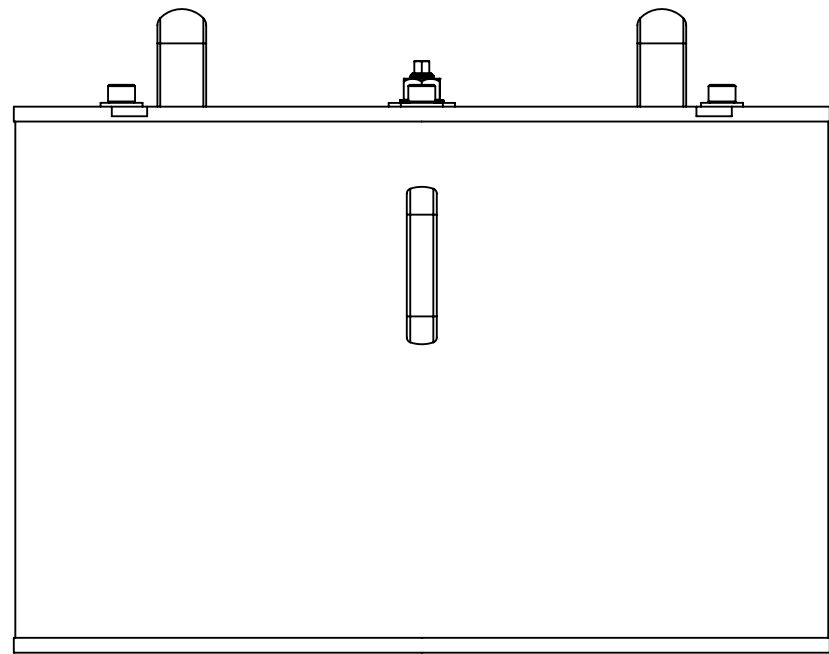


NOTES CONTINUED:

⑤ SCRIBE, ENGRAVE (A VIBRATORY TOOL MAY BE USED), LASER MARK 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. EXAMPLE: DXXXXXX-VY, TYPE-XX, S/N XXX

6. FOR ASSEMBLY PROCEDURES FOR COC OPTIC CONTAINER REFER TO DCC DOCUMENT LIGO-E0900394  
<https://dcc.ligo.org/LIGO-E0900394/public>



REV.	DATE	DCN #	DRAWING TREE #
v1	21 OCT 2009	E0900367	
v5	28 FEB 2020	E2000161-x0	

ALT	ITEM NO.	PART NUMBER	DESCRIPTION	MATERIAL	REQ	SPARE	TOTAL
ALT	D0902523-4		OVERSIZE LOCATING SLEEVE, ETM, COC CONTAINER	PFA440HP	1		1
ALT	D0902523-3		OVERSIZE LOCATING SLEEVE, ETM, COC CONTAINER	PFA440HP	1		1
ALT	D0902523-2		OVERSIZE LOCATING SLEEVE, ETM, COC CONTAINER	PFA440HP	1		1
ALT	D0902523-1		OVERSIZE LOCATING SLEEVE, ETM, COC CONTAINER	PFA440HP	1		1
ALT	D0902495		GUIDE, OPTIC, COC CONTAINER	PFA440HP	3		3
30	AS568A-453 O-RING		ROW INC. O-RING, .275" THICK X 11.975" ID, PFA Encapsulated Viton	VITON	2		2
29	ROW Inc.		O-Ring, Base FM, .188 Thick X 16.375 ID	PFA Encapsulated Viton	2		2
28	D0902536		PULL HANDLE, MODIFIED MC #1897A49	6061-T6 Al	2		2
27	D0902490		COVER, CENTRYCO CC-22-025-0050-013-DAE	301 SSSL	1		1
26	D0902348		Plate, Adjustable, ETM Optic Container	303 SS	2		2
25	D0902331		RETAINER FOR CENTRYCO COVER	304 SSSL	1		1
24	D0902330		PILOT FOR CENTRYCO COVER	304 SSSL	1		1
23	D0902246		TOP PLATE, ETM, COC OPTIC CONTAINER	6061-T6 Al	1		1
22	D0902152		SHIPPING SLEEVE, ETM, COC CONTAINER	6061-T6 Al	3		3
21	D0902151		OUTER SLEEVE, ETM, COC CONTAINER	304 SSSL	1		1
20	D0902150		LOCATING SLEEVE, ETM, COC CONTAINER	PFA440 HP (PRESHRUNK)	3		3
19	D0902149		LOCATING SHAFT, ETM, COC CONTAINER	304 SSSL	3		3
18	D0902148		WEDGE PLATE, ETM, COC OPTIC CONTAINER	6061-T6 Al	1		1
17	D0902147		BASE PLATE, ETM, COC OPTIC CONTAINER	6061-T6 Al	1		1
16	D0902028		THRUST PAD, WEDGE PLATE CLAMP, COC CONTAINER	17-4 PH SS	1		1
15	D0902027		PULL HANDLE, 337LB LOAD RATED	6061-T6 Al	2		2
14	D0902026		CLAMP, WEDGE PLATE, COC CONTAINER	300 SSSL	1		1
13	D0901316		Block, Spring Loaded, Adjustable, ETM Optic Container	PFA 440 HP	2		2
12	C-606-N		SCREW, SHC, 6-32 x 3/8, (UC Comp #C-606-N)	300 SSSL	4		4
11	C-2024-N		Screw, Soc Hd Cap, 1/4-20 x 1.50 (UC Comp #C-2024-N)	18-8 SS	4		4
10	98449A033		WASHER, LOCK, INT TOOTH 1/2", ASME B18.21.1 MC #98449A033	410 SSSL	1		1
9	98019A510		WASHER, FLAT, 1/2, MS15795-819, MC #98019A510	18-8 SSSL	1		1
8	98019A399		WASHER, FLAT, 3/8, MS15795-814, MC #98019A399	18-8 SSSL	3		3
7	92200A682		SCREW, SHC, 3/8-16 x 1 1/4, MS16995-82, MC #92200A682	18-8 SSSL	3		3
6	92200A630		SCREW, SHC, 5/16-18 x 1, MS16995-66, MC #92200A630	18-8 SSSL	4		4
5	92200A340		SCREW, SHC, 10-32 x 3/8, MS16995-9, MC #92200A340	18-8 SSSL	4		4
4	92200A144		SCREW, SHC, 6-32 x 1/4, MS16995-16, MC#92200A144	300 SSSL	4		4
3	90762A139		1/2 HEX NUT, MS51972-5, MC #90762A139	300 SSSL	1		1
2	1986K1		Spring, Compressed, Closed end, 5/32 OD x .016 x 1.00	Stainless Steel	2		2
1	1726A7		PULL HANDLE, MC #1726A7	304 SSSL	2		2

ITEM NO.	PART NUMBER	DESCRIPTION	MATERIAL	REQ	SPARE	TOTAL
PARTS LIST						

NOTES AND TOLERANCES: (UNLESS OTHERWISE SPECIFIED)

DIMENSIONS ARE IN INCHES  
 TOLERANCES:  
 .XX ± .01  
 .XXX ± .005  
 ANGULAR ± 0.5°

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

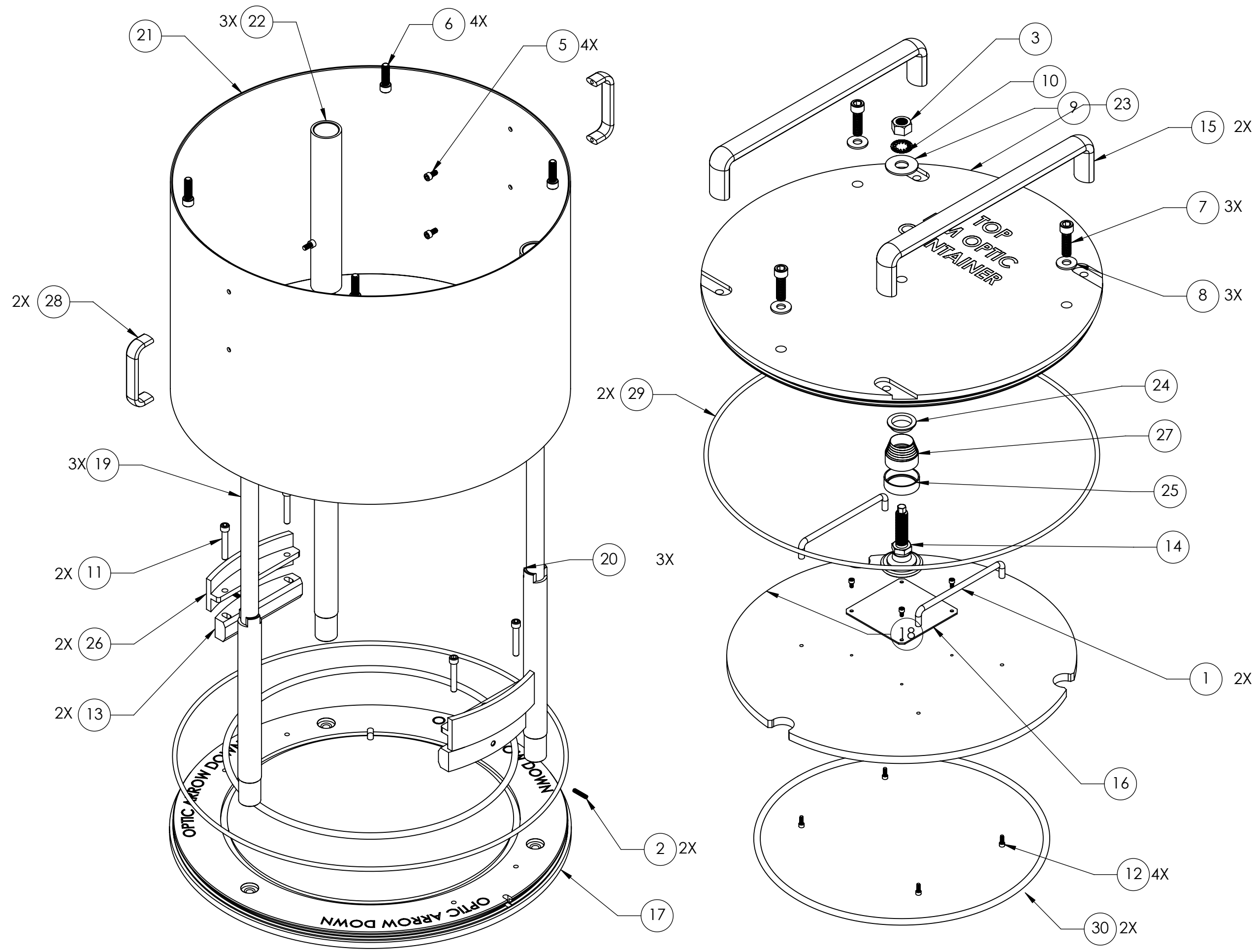
**LIGO** CALIFORNIA INSTITUTE OF TECHNOLOGY  
 MASSACHUSETTS INSTITUTE OF TECHNOLOGY

SYSTEM: **ADVANCED LIGO** SUB-SYSTEM: **COC**

NEXT ASSY:

PART NAME: **ETM, COC CONTAINER ASSEMBLY**

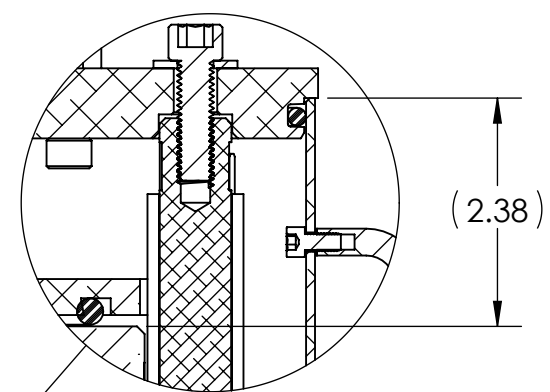
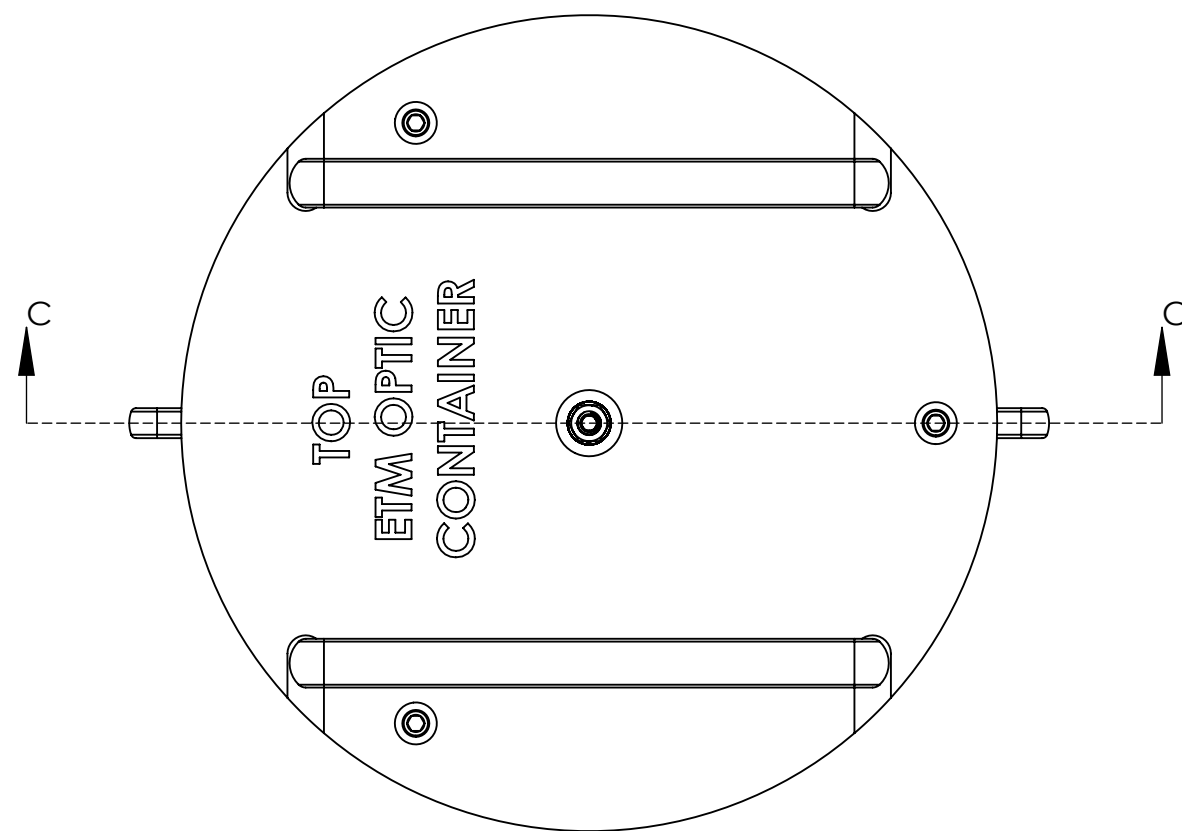
DESIGNER	K. BUCKLAND	23 AUG 2009	SIZE	DWG. NO.	REV.
DRAFTER	K. BUCKLAND	29 SEPT 2009	c	<b>D0902146</b>	v5
CHECKER	K. MAILAND	21 OCT 2009			
APPROVAL	C. TORRIE	21 OCT 2009	SCALE: 1:4	PROJECTION:	SHEET 1 OF 5



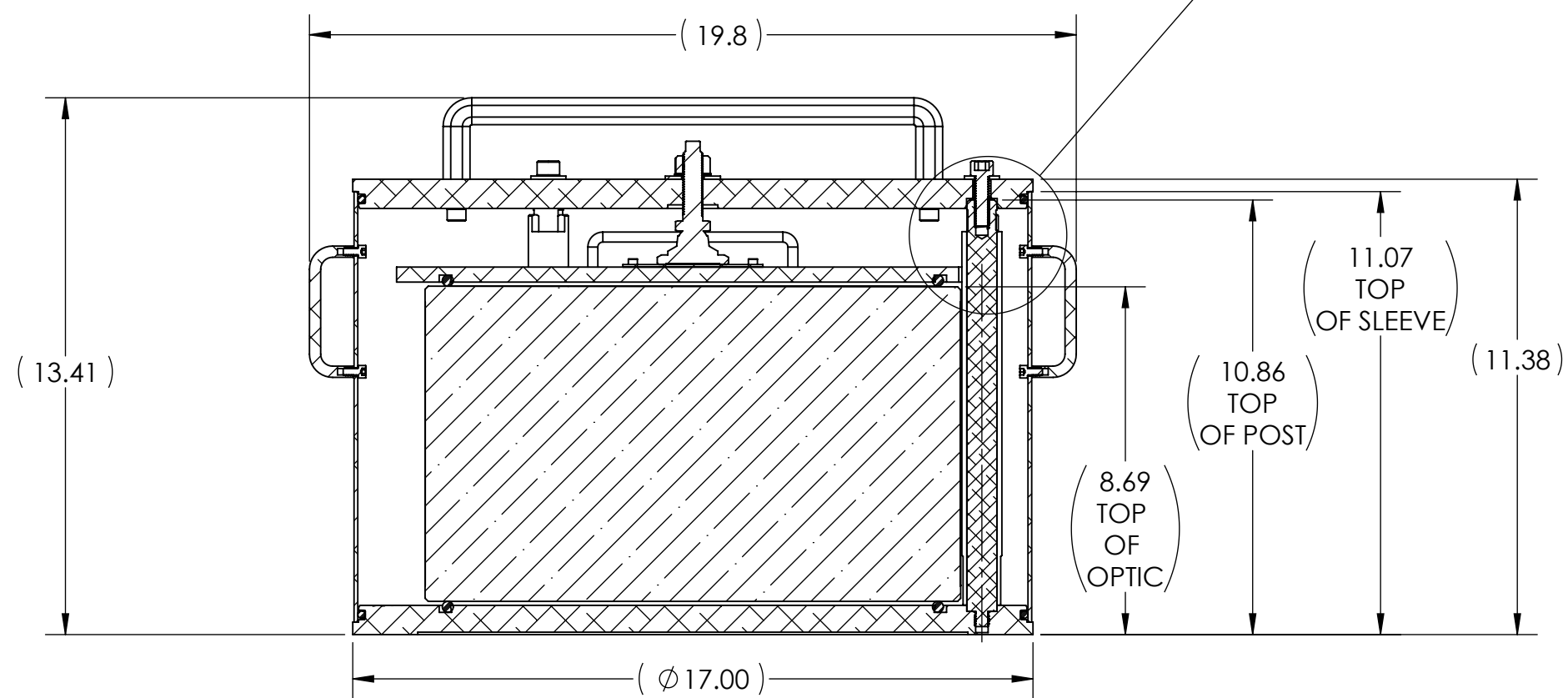

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**MASSACHUSETTS INSTITUTE OF TECHNOLOGY**

SIZE	DWG. NO.	REV.
<b>C</b>	D0902146	<b>v5</b>
SCALE: 1:2	PROJECTION:	SHEET 2 OF 5

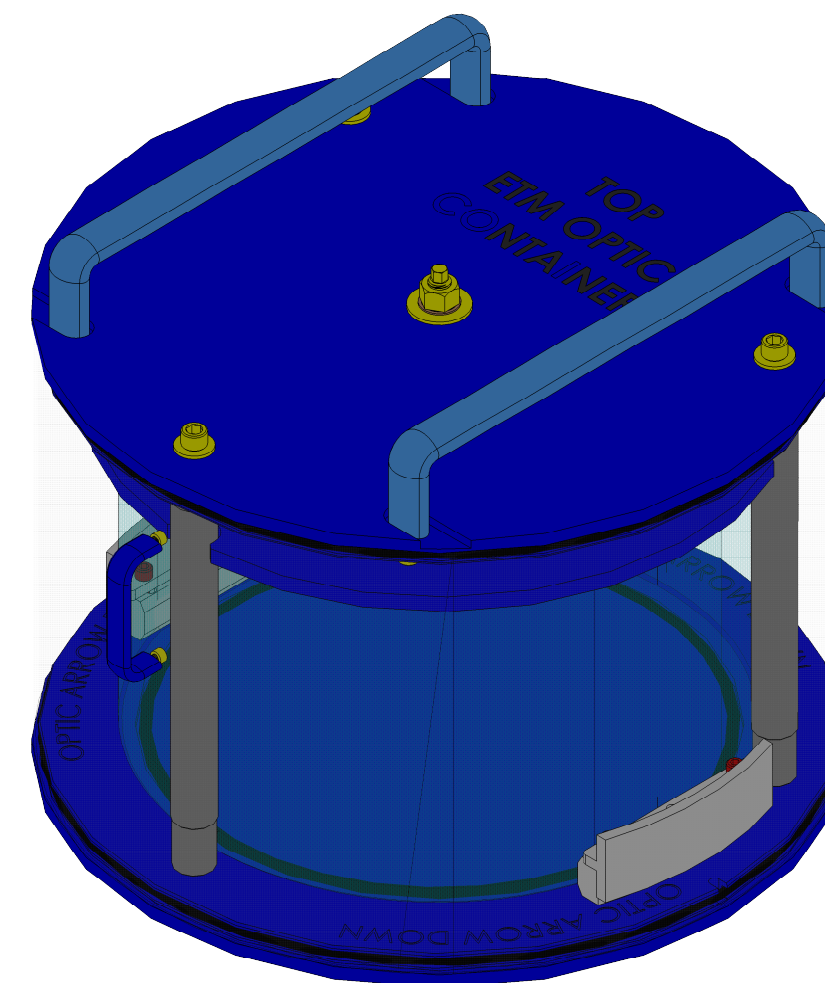
APPROXIMATE WEIGHT: 146.6 LB



DETAIL D  
SCALE 1:2



SECTION C-C

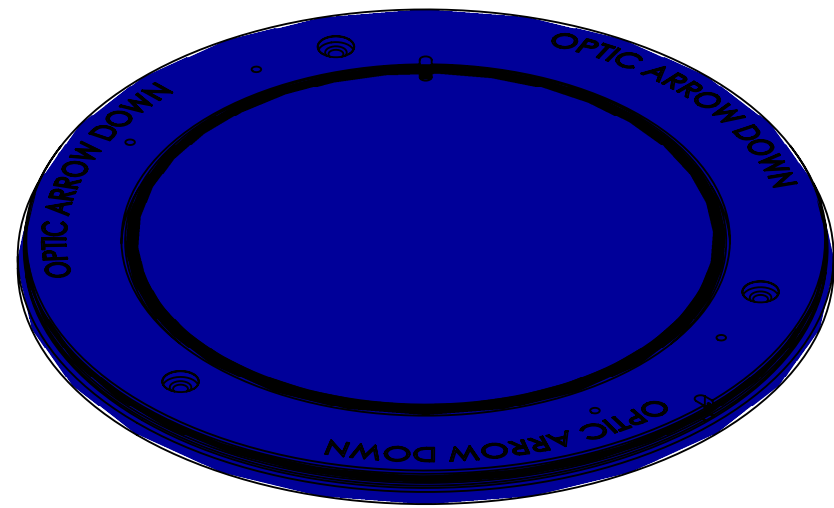


ISOMETRIC VIEW  
OUTER SLEEVE TRANSPARENT

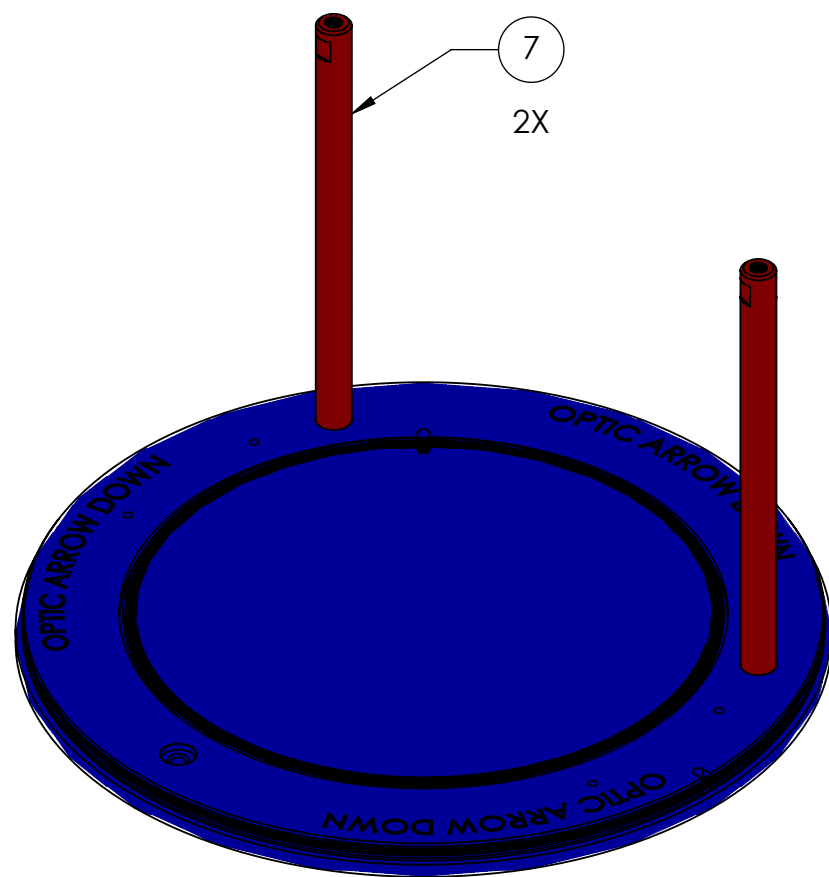
 CALIFORNIA INSTITUTE OF TECHNOLOGY MASSACHUSETTS INSTITUTE OF TECHNOLOGY		
SIZE <b>C</b>	DWG. NO. D0902146	REV. v5
SCALE: 1:4	PROJECTION: 	SHEET 3 OF 5

6. FOR ASSEMBLY PROCEDURES FOR COC OPTIC CONTAINER  
 REFER TO DCC DOCUMENT LIGO-E0900394  
<https://dcc.ligo.org/LIGO-E0900394/public>

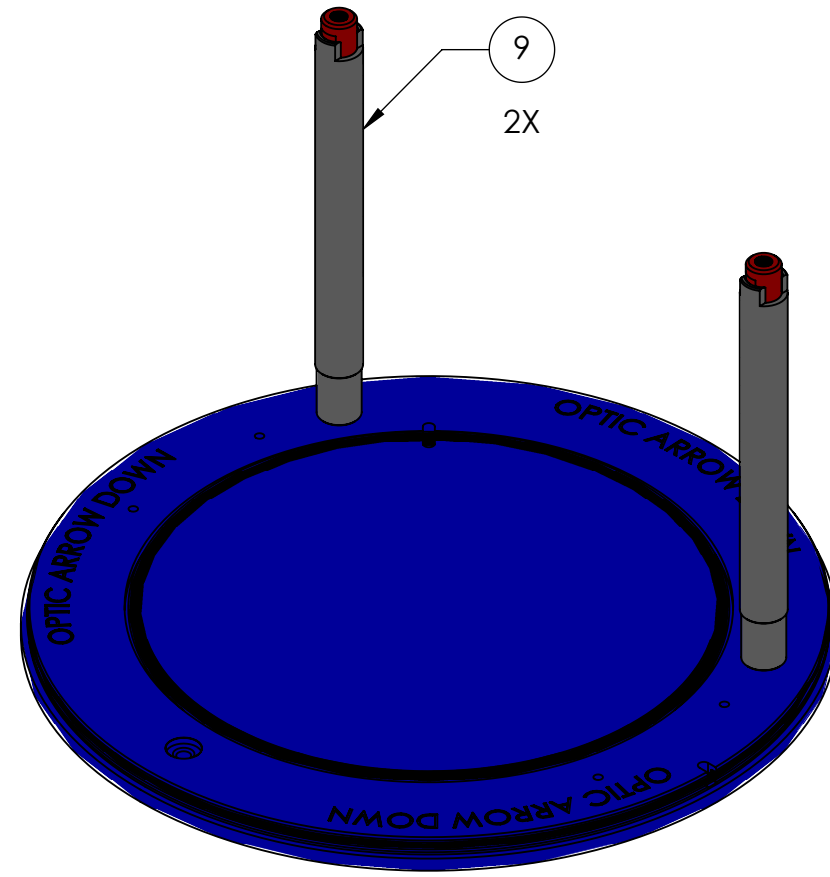
ETM OPTIC  
 FOR REFERENCE ONLY



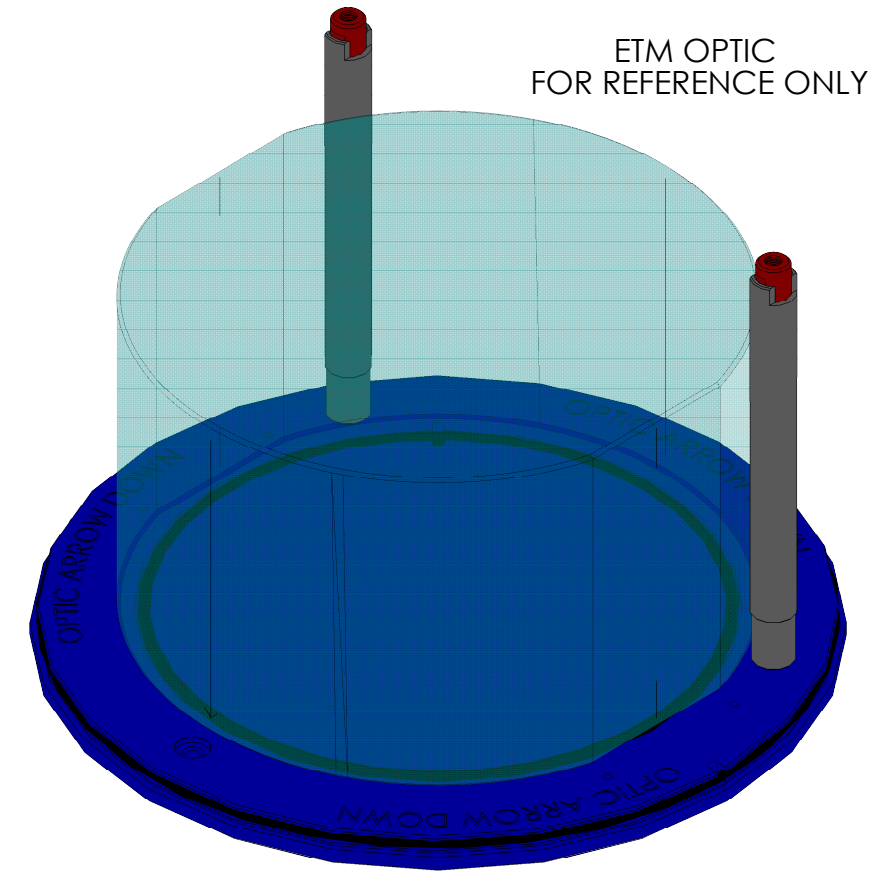
ASSY STEP 01



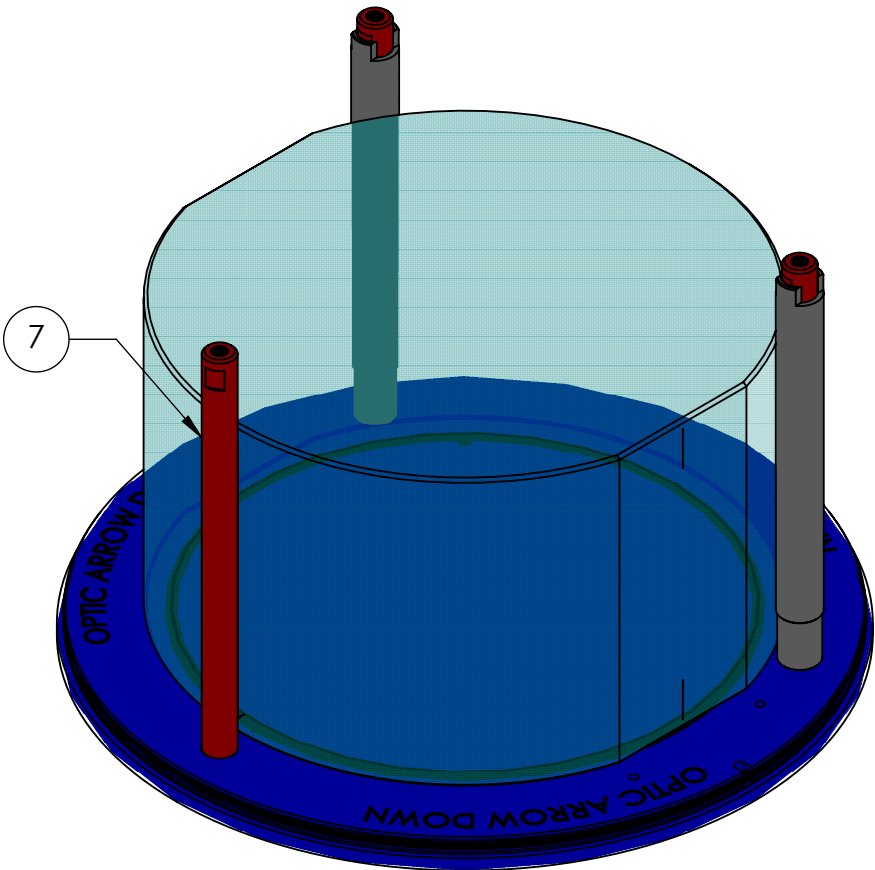
ASSY STEP 02



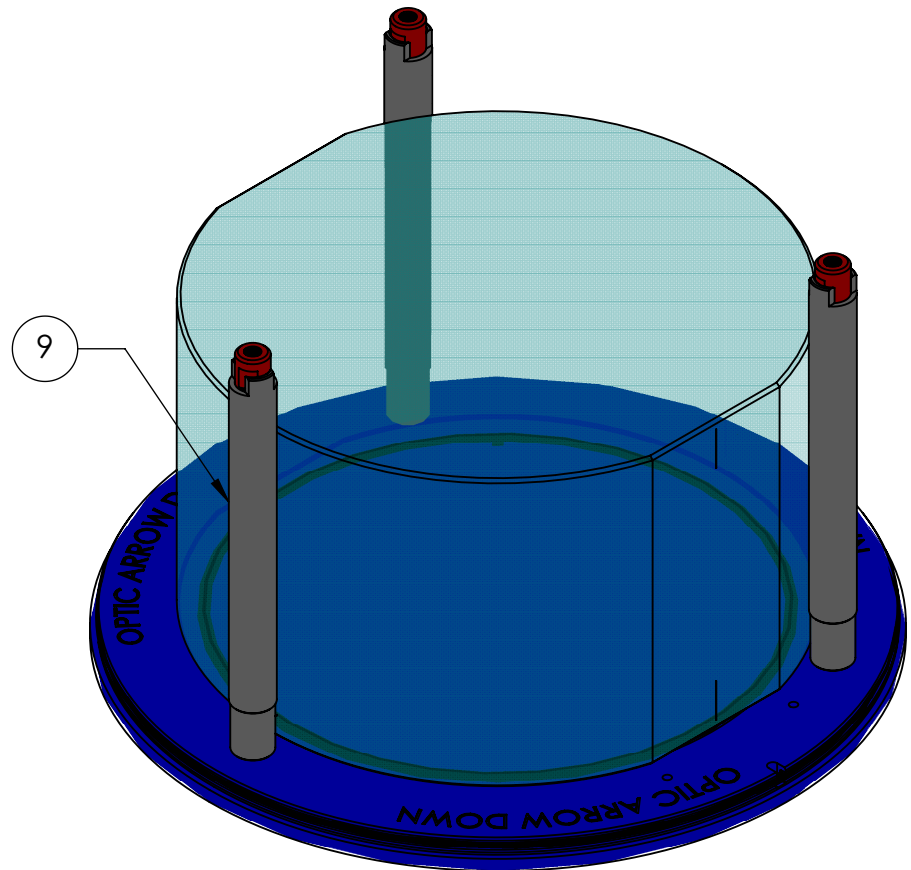
ASSY STEP 03



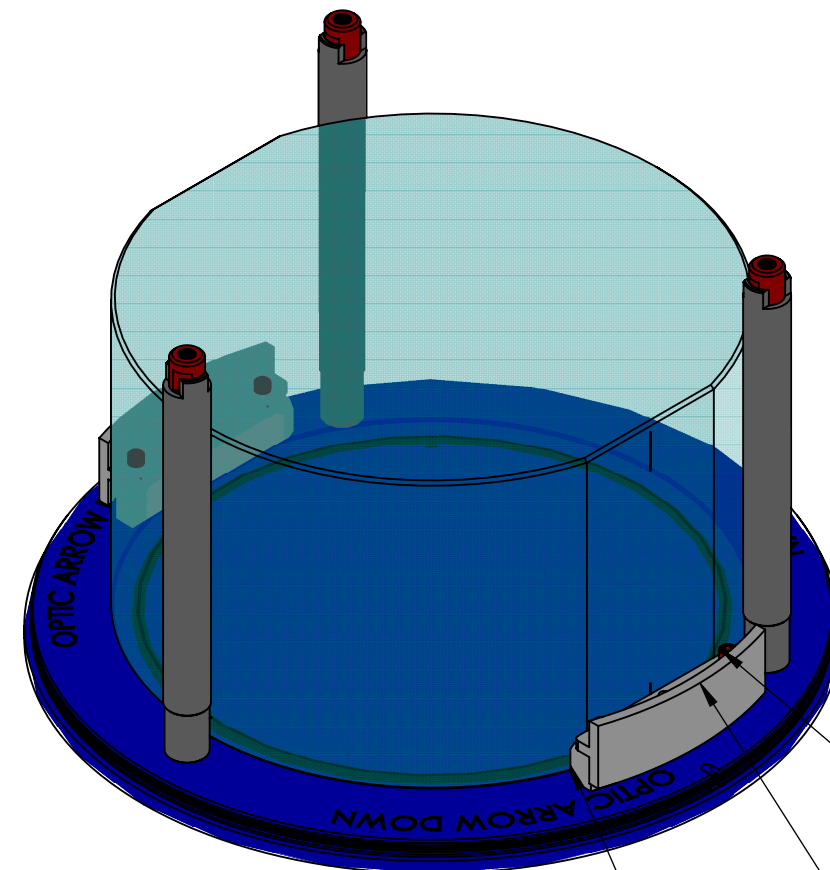
ASSY STEP 05



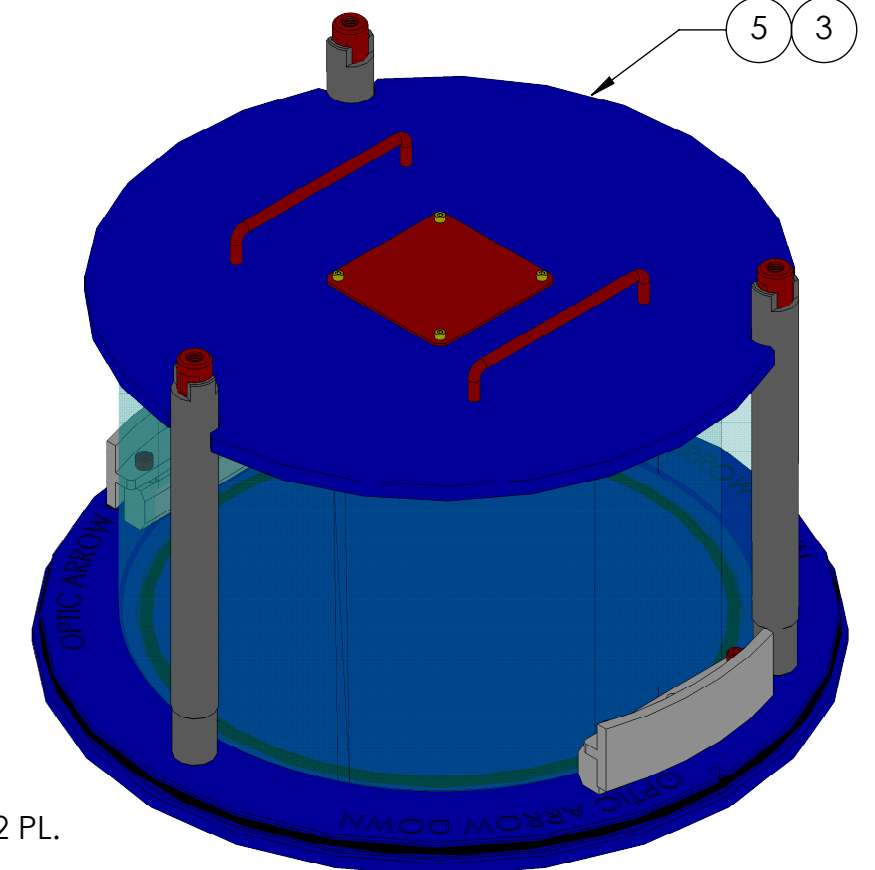
ASSY STEP 06



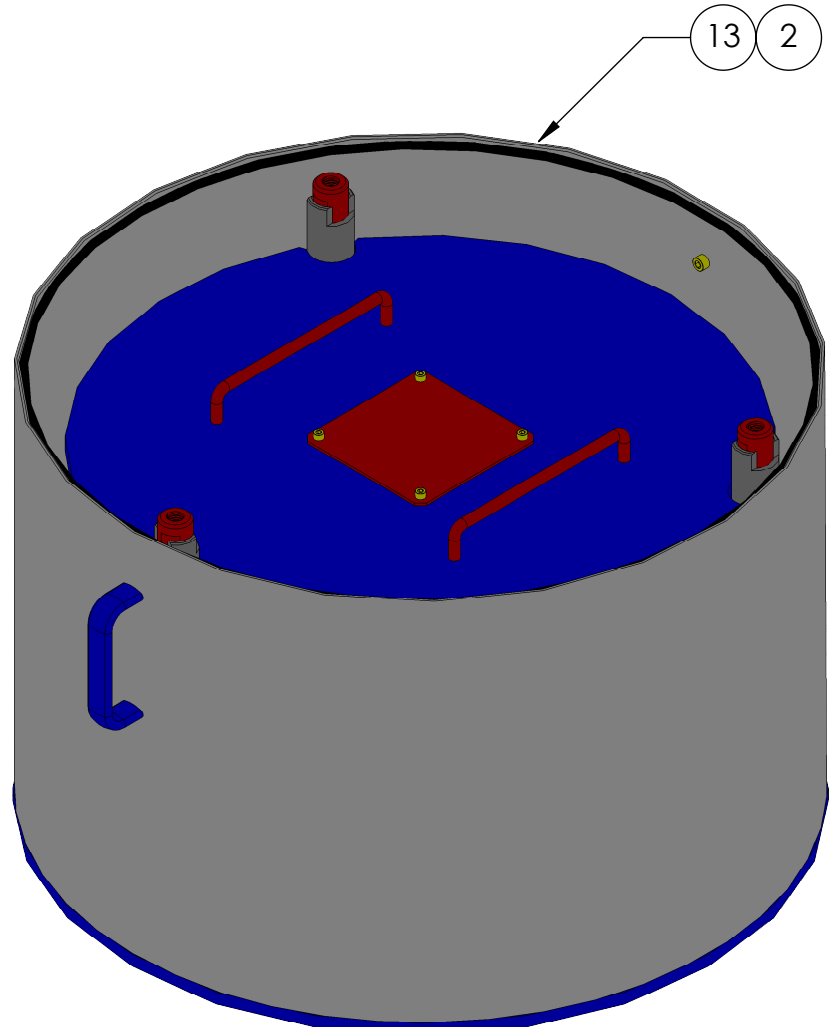
ASSY STEP 07



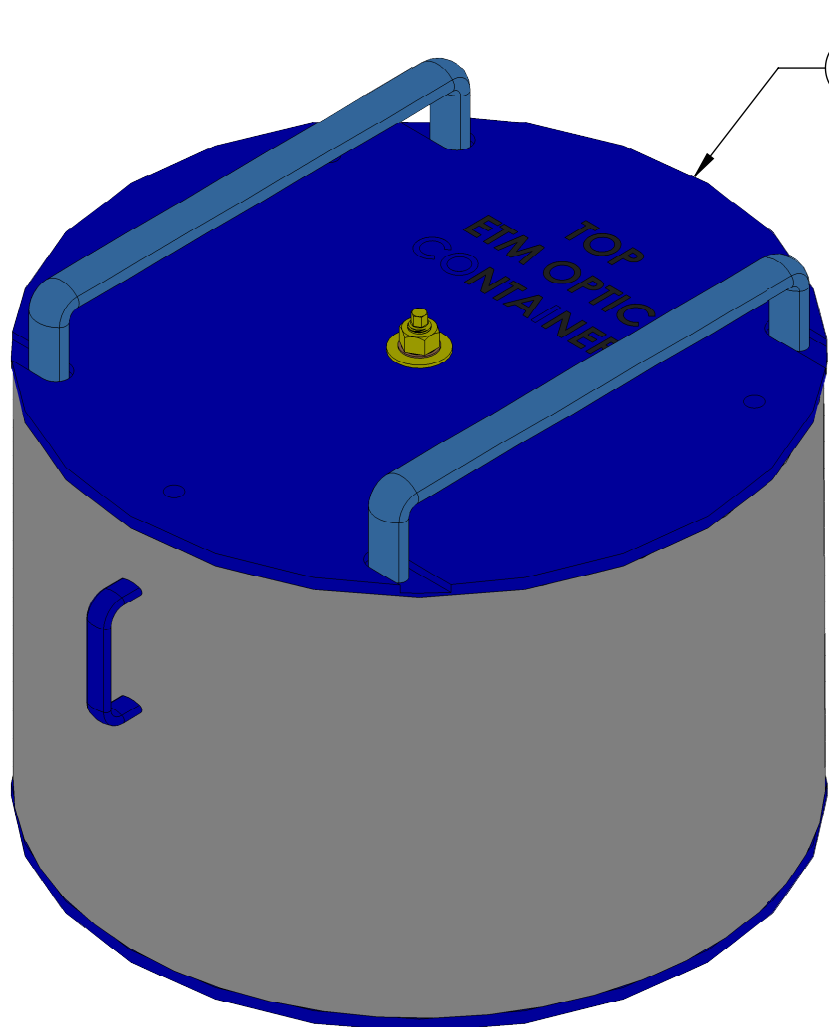
ASSY STEP 09



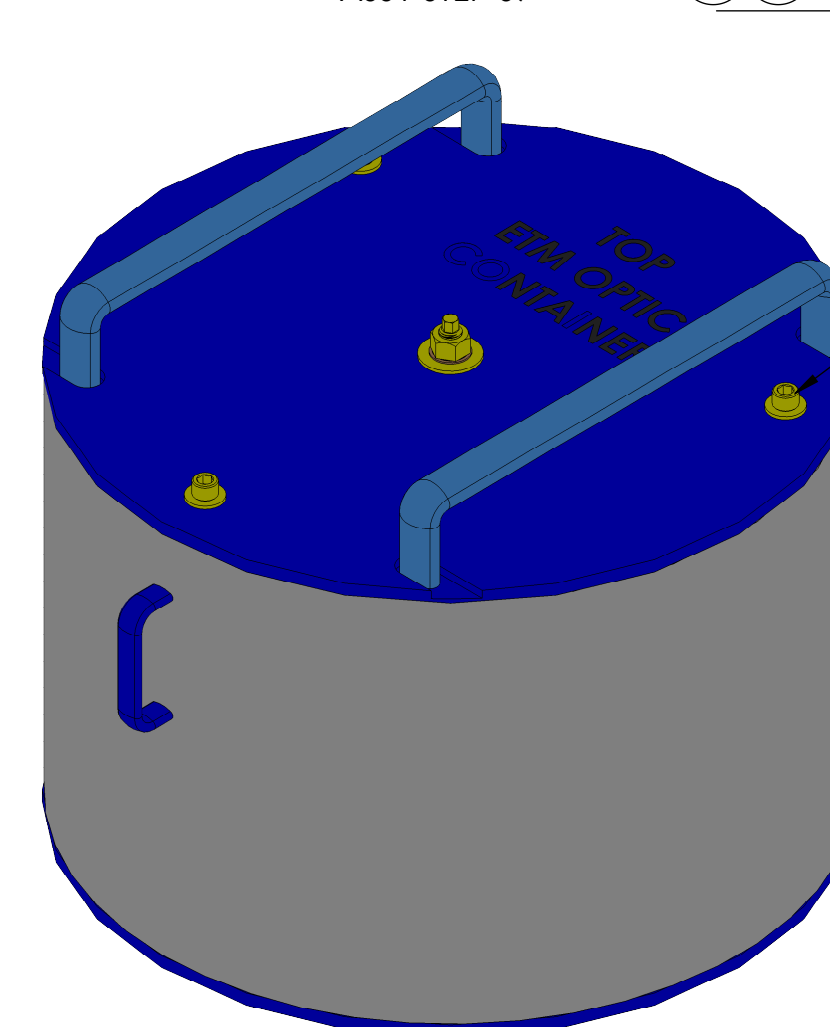
ASSY STEP 11



ASSY STEP 12



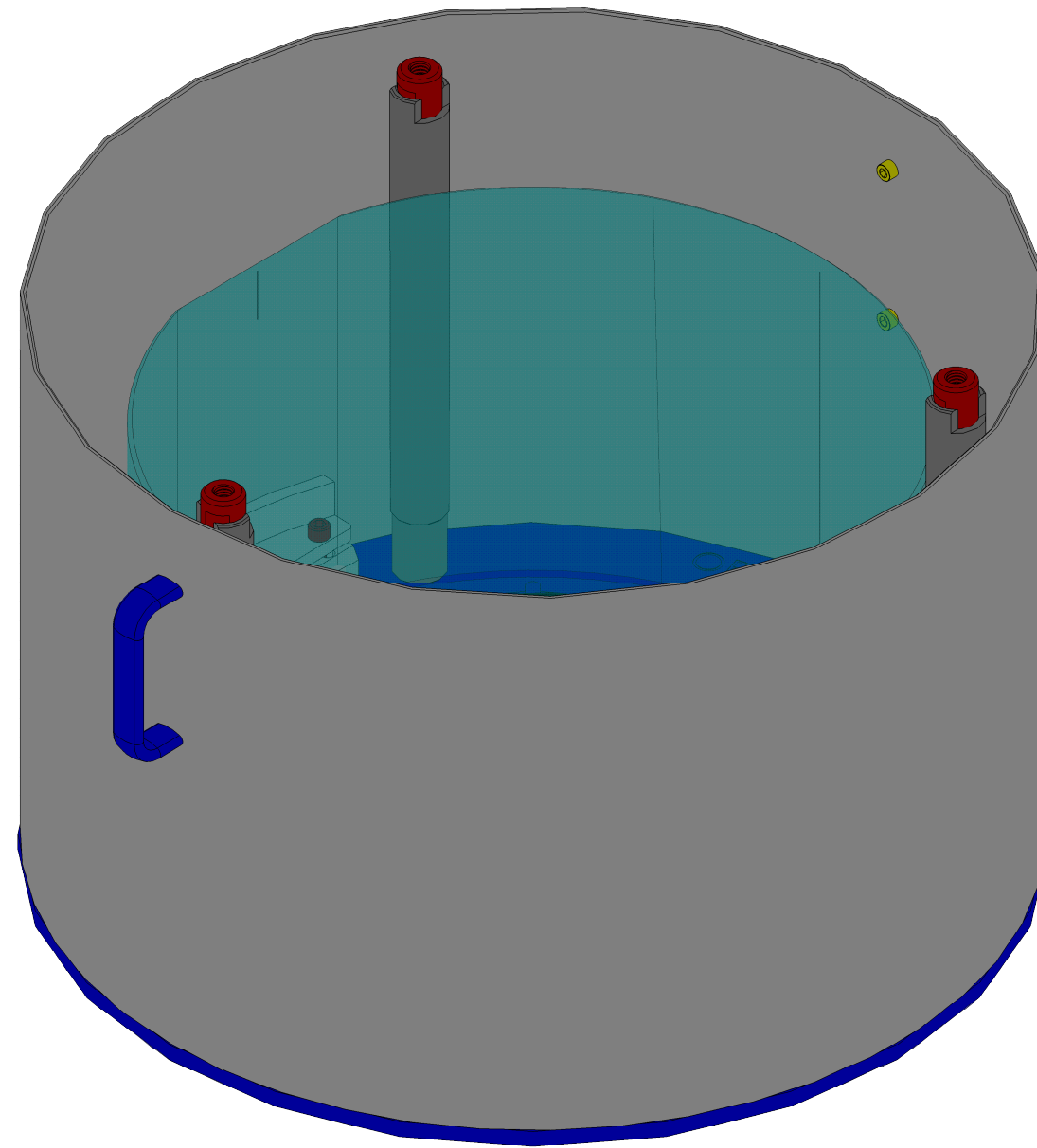
ASSY STEP 13



ASSY STEP 14

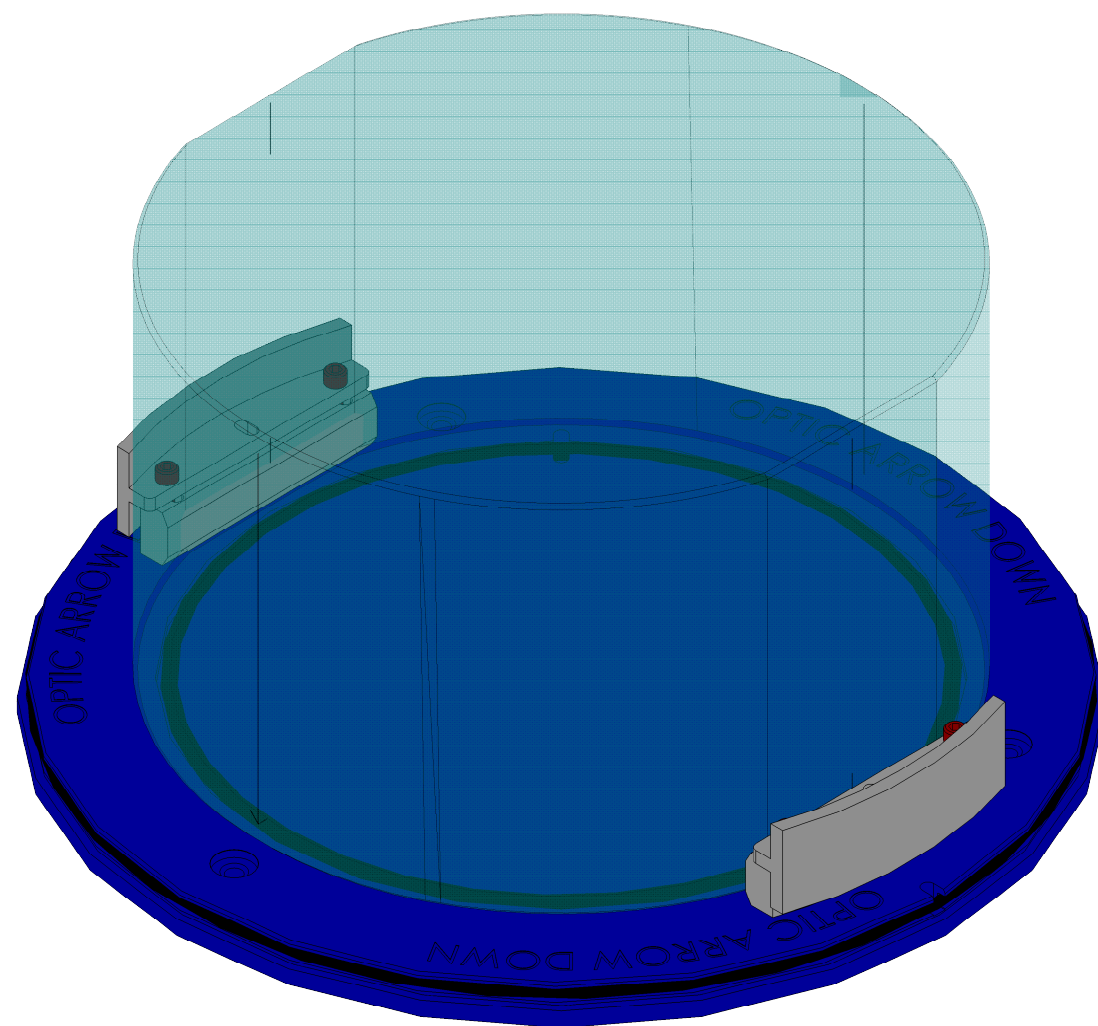
<b>LIGO</b> CALIFORNIA INSTITUTE OF TECHNOLOGY MASSACHUSETTS INSTITUTE OF TECHNOLOGY		REV. v5
SIZE C	DWG. NO. D0902146	
SCALE: 1:4	PROJECTION:	SHEET 4 OF 5

# FIXTURING OPTIONS FOR MICROSCOPY, ABSORPTION SCANNING, AND OTHER OPERATIONS REQUIRING ACCESS TO S1



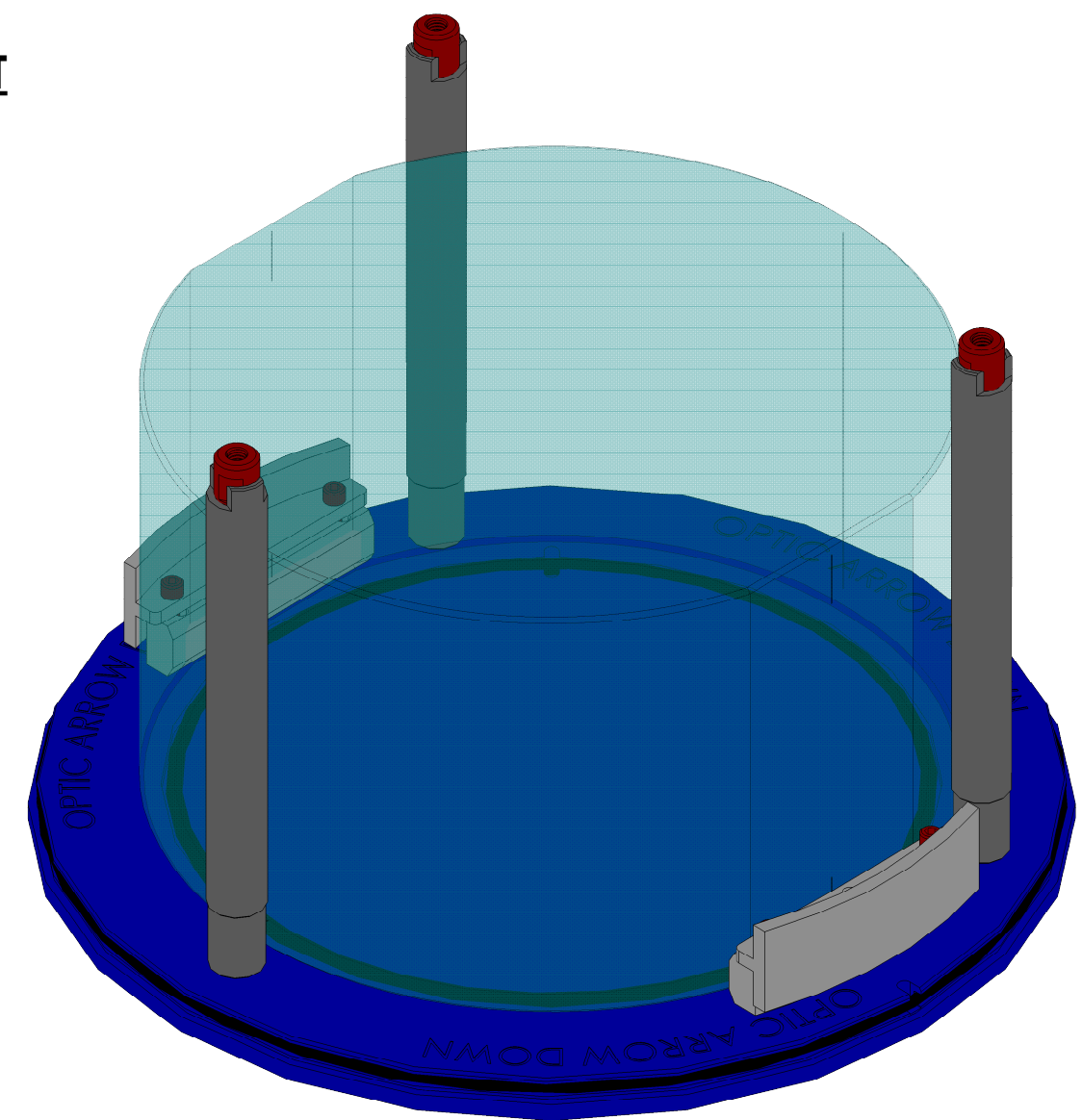
**OUTER SLEEVE ON, STANDOFFS AND BLOCKS PRESENT**

APPROXIMATE WEIGHT  
AT  
SHOWN STAGE:  
122.16 LB



**BLOCKS ONLY**

APPROXIMATE WEIGHT  
AT  
SHOWN STAGE:  
102.42 LB



**STANDOFFS AND BLOCKS PRESENT**

APPROXIMATE WEIGHT  
AT  
SHOWN STAGE:  
106.74 LB

		CALIFORNIA INSTITUTE OF TECHNOLOGY MASSACHUSETTS INSTITUTE OF TECHNOLOGY	
SIZE	DWG. NO.	REV.	
C	D0902146	v5	
SCALE:	1:3	PROJECTION:	
			SHEET 5 OF 5