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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. MASS: 5.399 KG [11.903 LB].

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

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

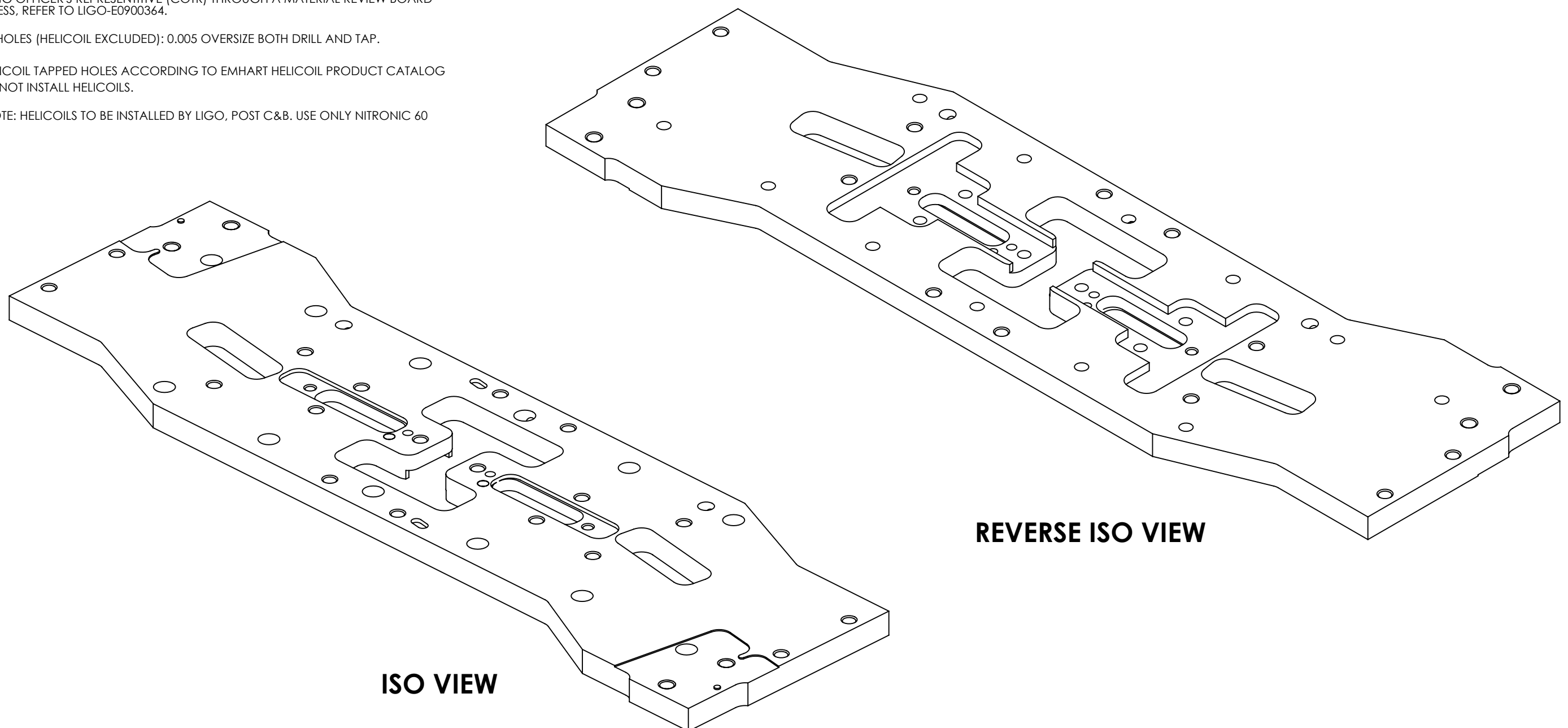
9. NO REPAIRS SHALL BE MADE UNLESS APPROVED IN ADVANCE, AND IN WRITING, BY LIGO LABORATORY. IN GENERAL, WELD REPAIRS AND PRESS FIT INSERT REPAIRS ARE NEVER ACCEPTABLE; THE PART SHOULD BE MADE WITH VIRGIN MATERIAL. SPECIAL CIRCUMSTANCES CAN BE REVIEWED IF / WHEN BROUGHT TO THE ATTENTION OF LIGO CONTRACTING OFFICER'S REPRESENTATIVE (COTR) THROUGH A MATERIAL REVIEW BOARD (MRB) PROCESS. REFER TO LIGO-E0900364.

10) ALL TAPPED HOLES (HELICOIL EXCLUDED): 0.005 OVERSIZE BOTH DRILL AND TAP.

11) PREPARE HELICOIL TAPPED HOLES ACCORDING TO EMHART HELICOIL PRODUCT CATALOG HC2000. DO NOT INSTALL HELICOILS.

12) INTERNAL NOTE: HELICOILS TO BE INSTALLED BY LIGO, POST C&B. USE ONLY NITRONIC 60 HELICOILS.

REV.	DATE	DCN #	DRAWING TREE #
v1	25 MAR 2012	E1101214	



ISO VIEW

REVERSE ISO VIEW

D1101512 aLIGO TMS Upper Mass Bottom Plate, PART PDM REV: X-058, DRAWING PDM REV: X-021

NOTES AND TOLERANCES: (UNLESS OTHERWISE SPECIFIED)				LIGO CALIFORNIA INSTITUTE OF TECHNOLOGY MASSACHUSETTS INSTITUTE OF TECHNOLOGY		PART NAME					
DIMENSIONS ARE IN INCHES				1. INTERPRET DRAWING PER ASME Y14.5-1994.		aLIGO TMS UPPER MASS BOTTOM PLATE					
TOLERANCES:				2. REMOVE ALL SHARP EDGES, .005-.015.		SYSTEM		SUB-SYSTEM		DESIGNER	
.XX ± .01				3. DO NOT SCALE FROM DRAWING.		ADVANCED LIGO		AOS		K. MAILAND	
.XXX ± .005				4. ALL MACHINING FLUIDS SHALL BE WATER SOLUBLE AND FREE OF SULFUR, CHLORINE AND SILICONE, SUCH AS CINCINNATI MILACRON'S CIMTECH 410.		NEXT ASSY		D1200469		28 JUL 2011	
ANGULAR ± 0.1°				MATERIAL		304 SSSL		FINISH		63 μinch Ra	
										SIZE DWG. NO.	
										B D1101512	
										REV.	
										v1	
										SCALE: NONE PROJECTION:	
										SHEET 1 OF 6	

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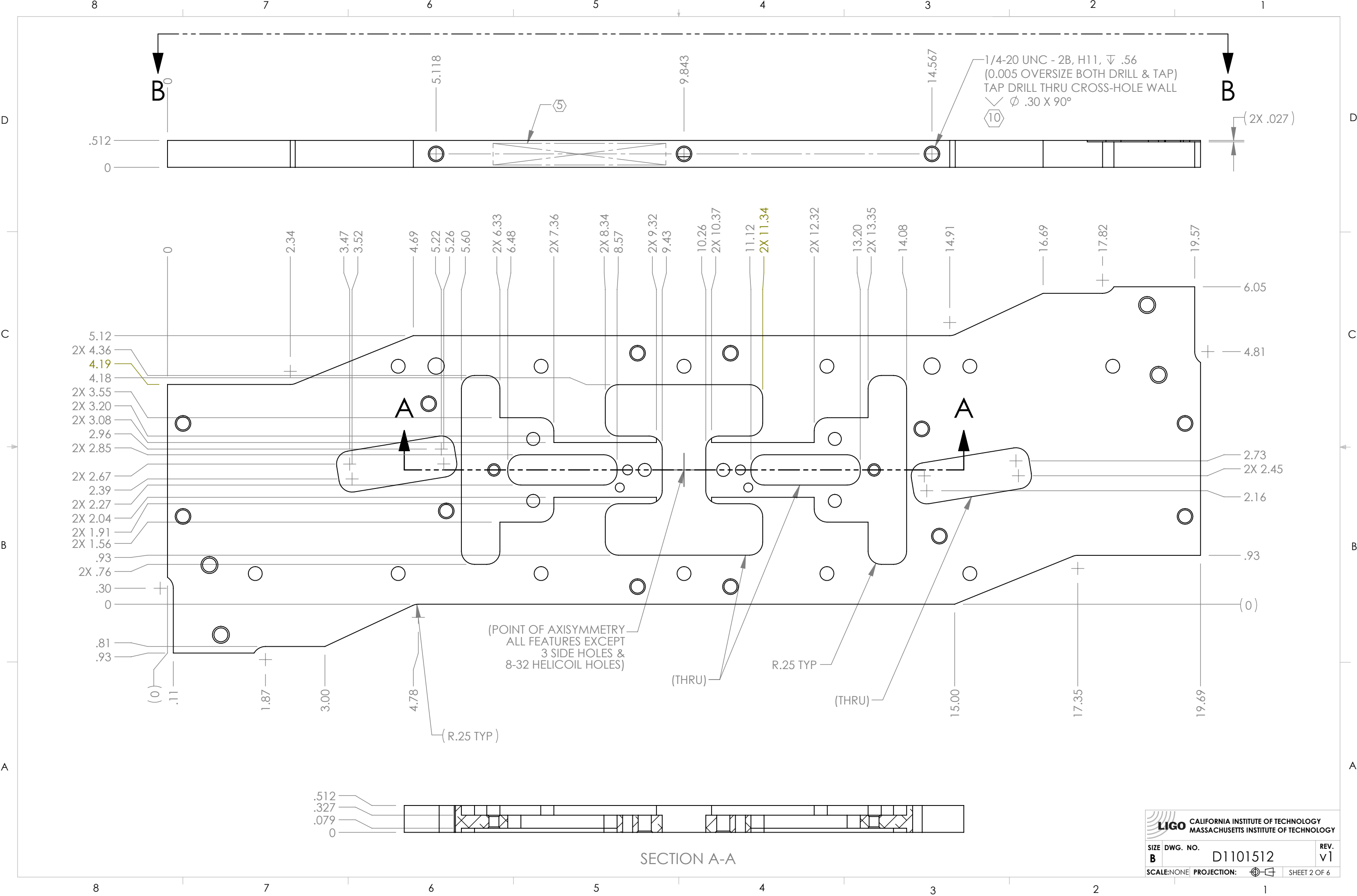
4

3

2

1

D1101512 aLIGO TMS Upper Mass Bottom Plate, PART PDM REV: X-058, DRAWING PDM REV: X-021



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SIZE	DWG. NO.	REV.
B	D1101512	v1
SCALE: NONE	PROJECTION:	SHEET 2 OF 6

D1101512 aLIGO TMS Upper Mass Bottom Plate, PART PDM REV: X-058, DRAWING PDM REV: X-021

8 7 6 5 4 3 2 1

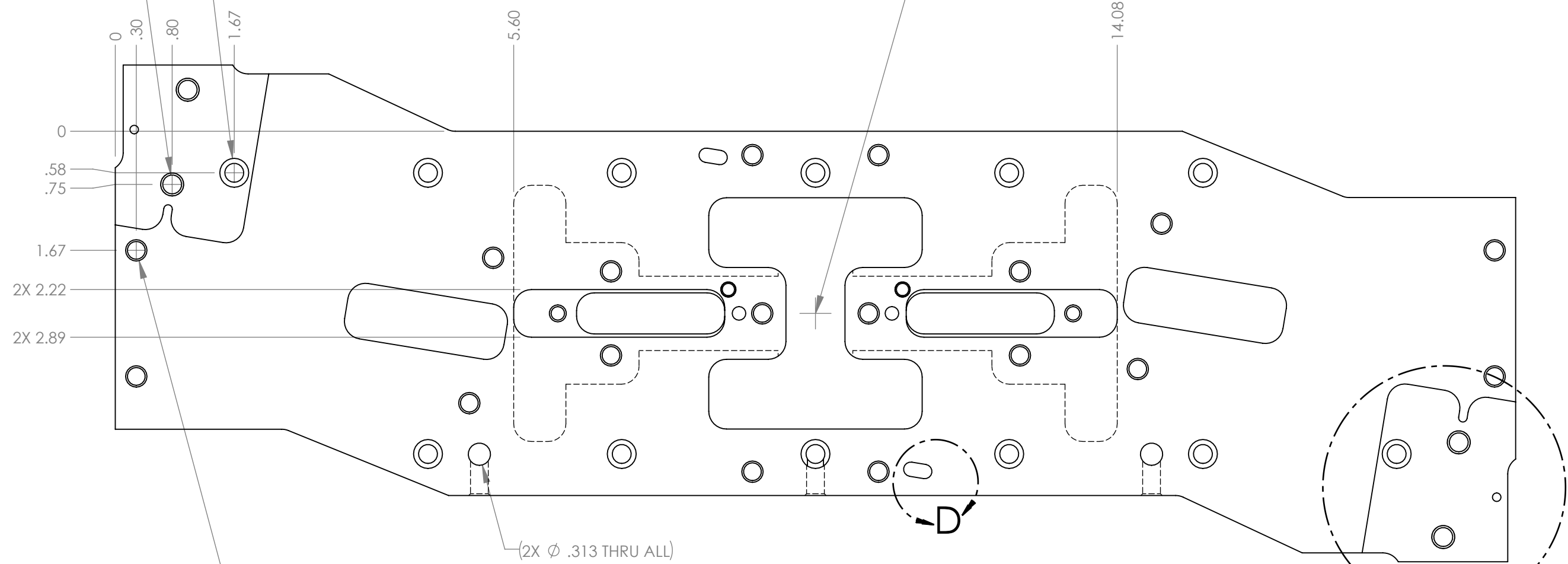
D
C
B
A

D
C
B
A

(4X ϕ .266 THRU ALL
 \sphericalangle ϕ .33 X 120°, NEAR SIDE
TAP FOR 1/4-20 HELICOIL INSERT = 1.5 * DIA.
 \sphericalangle ϕ .33 X 120°, FAR SIDE


(12X ϕ .266^{+.003}/_{-.001} THRU ALL
 \sphericalangle ϕ .406 ∇ .31

(POINT OF AXISYMMETRY
ALL FEATURES EXCEPT
3 SIDE HOLES &
8-32 HELICOIL HOLES)



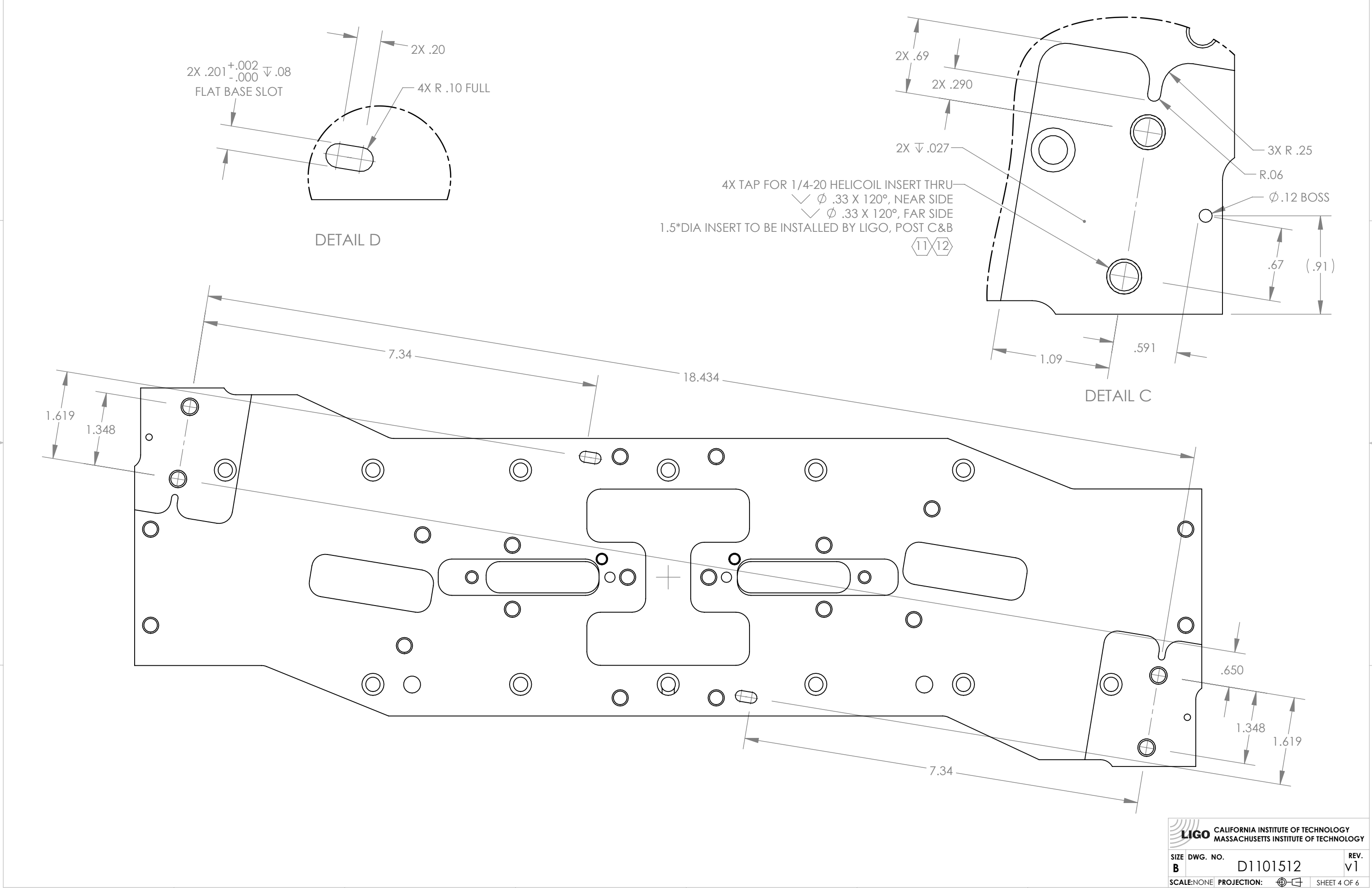
(18X 1/4-20 UNC - 2B, H11, THRU ALL
(0.005 OVERSIZE BOTH DRILL & TAP)
 \sphericalangle ϕ .30 X 90°, NEAR SIDE
 \sphericalangle ϕ .30 X 90°, FAR SIDE

VIEW B-B

 CALIFORNIA INSTITUTE OF TECHNOLOGY MASSACHUSETTS INSTITUTE OF TECHNOLOGY	
SIZE B	DWG. NO. D1101512
SCALE: NONE	PROJECTION: 
REV. v1	SHEET 3 OF 6

8 7 6 5 4 3 2 1

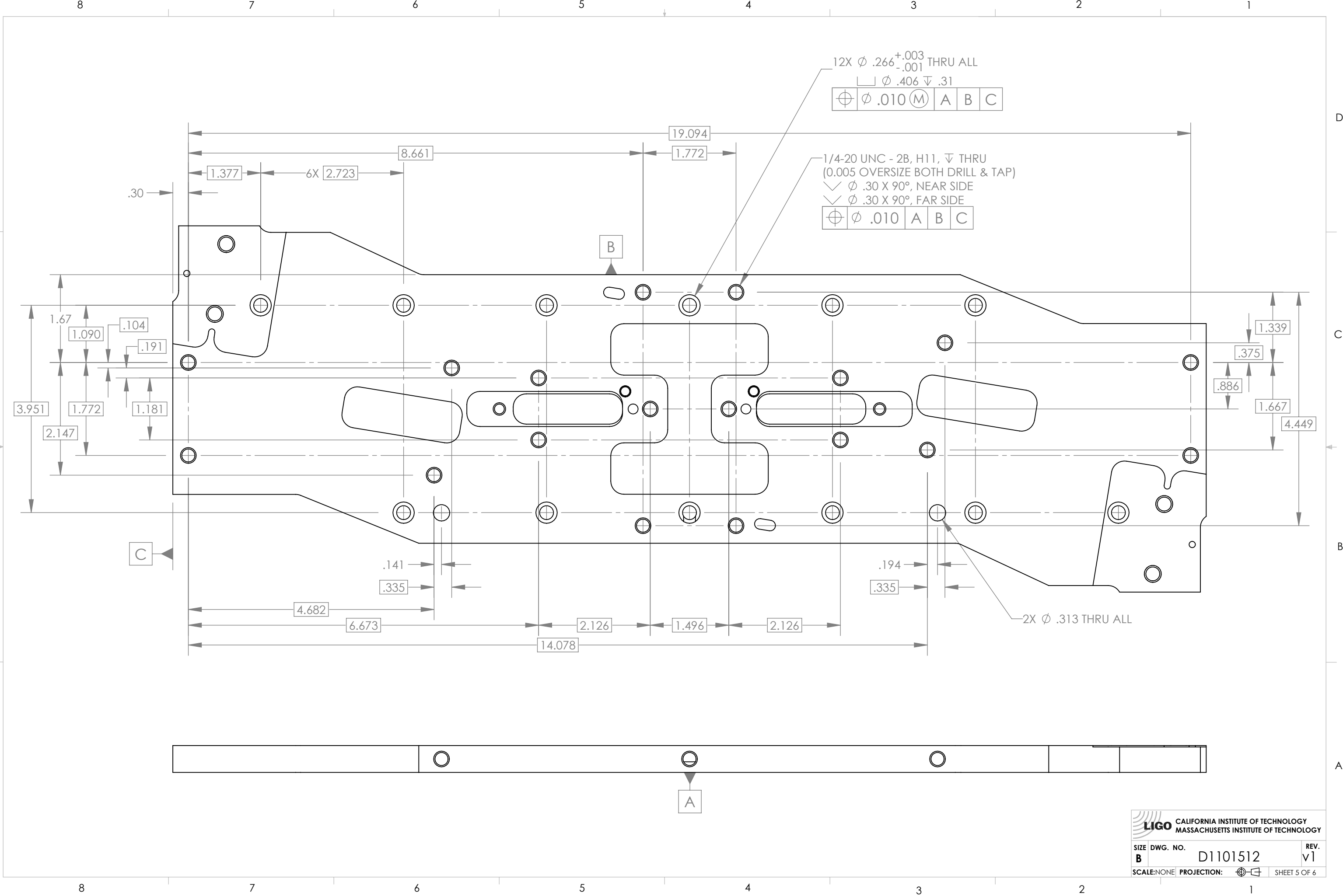
D1101512 aLIGO TMS Upper Mass Bottom Plate, PART PDM REV: X-058, DRAWING PDM REV: X-021



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SIZE	DWG. NO.	REV.
B	D1101512	v1
SCALE: NONE	PROJECTION:	SHEET 4 OF 6

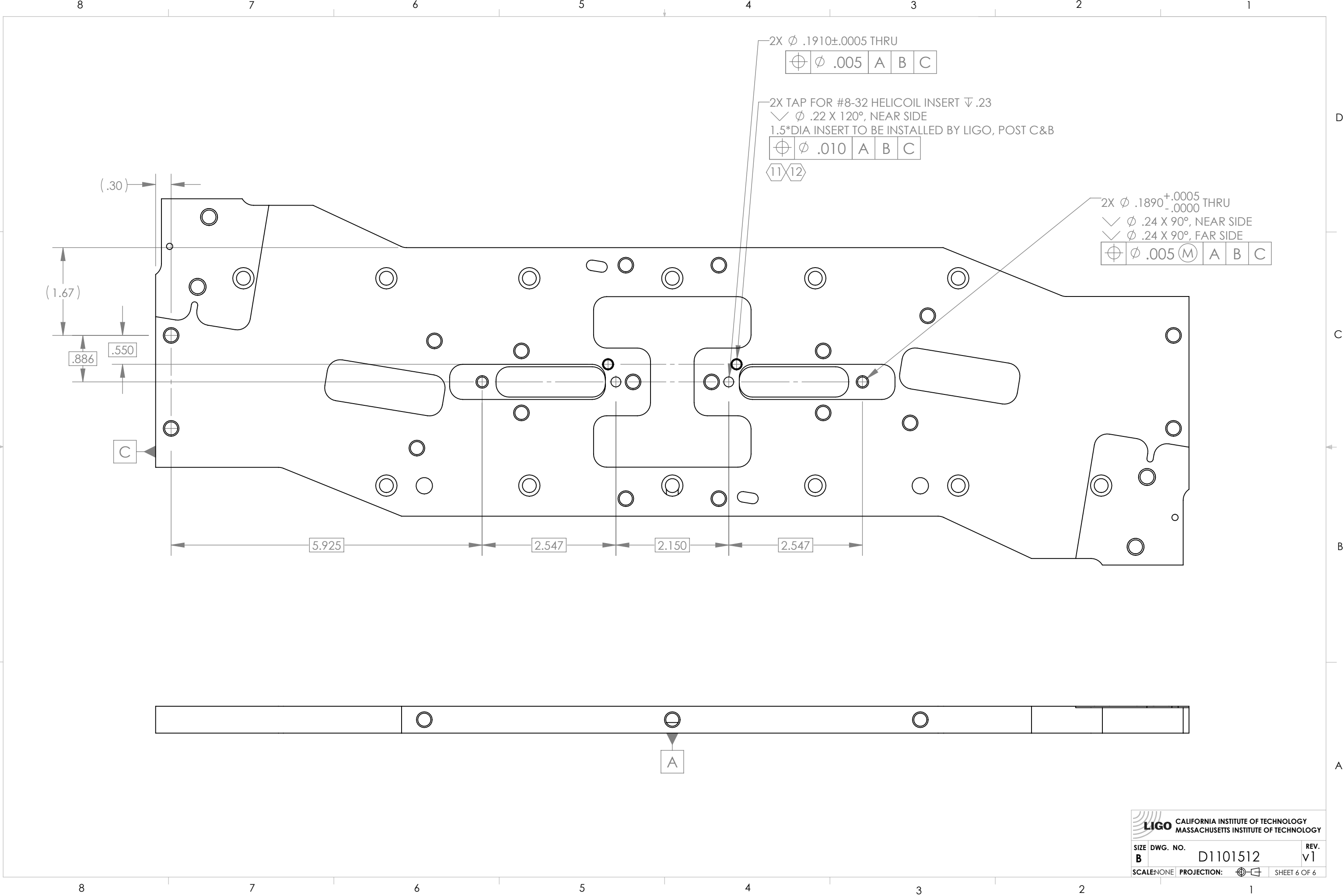
D1101512 LIGO TMS Upper Mass Bottom Plate, PART PDM REV: X-058, DRAWING PDM REV: X-021



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MASSACHUSETTS INSTITUTE OF TECHNOLOGY

SIZE	DWG. NO.	REV.
B	D1101512	v1
SCALE: NONE	PROJECTION:	SHEET 5 OF 6

D1101512 TMS Upper Mass Bottom Plate, PART PDM REV: X-058, DRAWING PDM REV: X-021



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SIZE	DWG. NO.	REV.
B	D1101512	v1
SCALE: NONE	PROJECTION:	SHEET 6 OF 6