

**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. APPROXIMATE WEIGHT = 13.09 LB [5.94 kg]

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

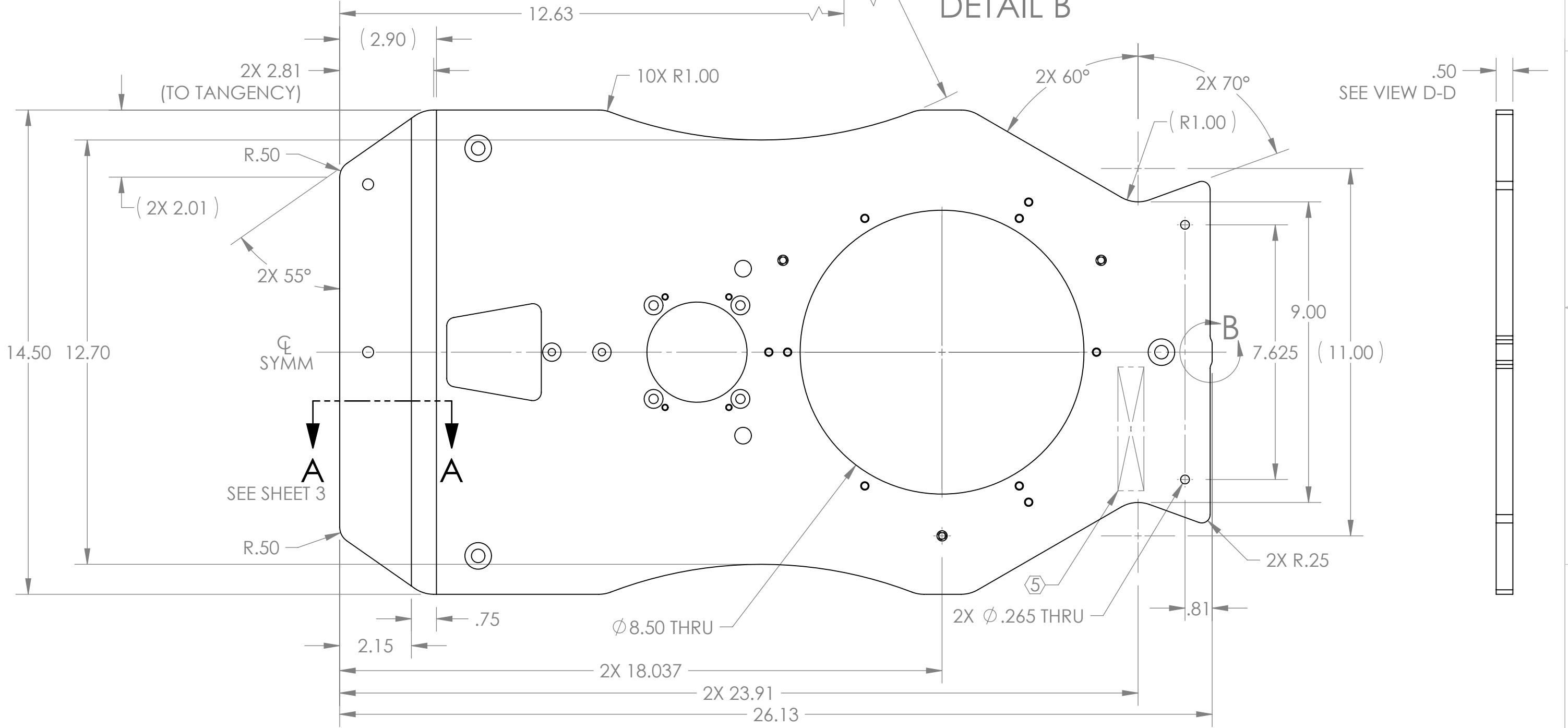
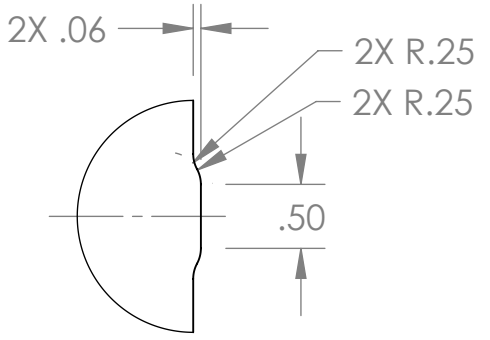
8. ALL PARTS SHALL BE MANUFACTURED IN ACCORDANCE WITH LIGO SPECIFICATION E0900364.

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 MATERIAL 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- USE .005 OVERSIZE BOTH DRILL & TAP.

**MANUFACTURING PROCESS** (DOES NOT PERTAIN TO .0003 T.I.R. COPLANAR REGIONS, SHEET 4):  
 PURCHASE 3/4" ALUM. ALLOY 6061-T651 PLATE.  
 ROUGH BLANCHARD GRIND, EQUAL AMOUNTS FROM STOCK FROM EACH SIDE OF ALUM. PLATES.  
 COLD STABILIZE PLATES.  
 FINISH GRIND BOTH SIDES TO: .535 THICKNESS WITH A FLATNESS OF .002 ACROSS ENTIRE FACE.  
 RE-CLAMP, MACHINE & ENGRAVE BALANCE OF PART IN THE FLAT.  
 ON TOOLROOM VERTICAL MILL MACHINE, CLAMP PART TO ANGLE PLATE. MACHINE HOLES FOR 5/16-18 OVERSIZE THREAD PER 10 ON (1) END OF EACH PART.  
 HAND DEBURR PARTS WITH BURR KNIVES & ROTARY CARBIDE BURRS.  
 HAND TAP ALL REQUIRED HOLES, .005 OVERSIZE PER 10.  
 INSPECT PARTS. ASSURE A FLATNESS OF .003 OR BETTER OVER FACE 'A' (SEE SHEET 4).  
 SEND MATERIAL SETS.

REV.	DATE	DCN #	DRAWING TREE #
v1	08 NOV 2010	E1000365-v1	-
v2	07 DEC 2010	E1000839-v1	-
v3	09 MAR 2011	E1100080-v1	-



D1000071 TRANSMON\_TEL\_END\_PLATE\_ENTRY\_3\_TUBE, PART PDM REV: X-100, DRAWING PDM REV: X-026

**NOTES AND TOLERANCES: (UNLESS OTHERWISE SPECIFIED)**

1. INTERPRET DRAWING PER ASME Y14.5-1994.  
 2. REMOVE ALL SHARP EDGES, R.02 MIN.  
 3. DO NOT SCALE FROM DRAWING.  
 4. ALL MACHINING FLUIDS MUST BE FULLY SYNTHETIC, FULLY WATER SOLUBLE AND FREE OF SULFUR, SILICONE, AND CHLORINE.

DIMENSIONS ARE IN INCHES

TOLERANCES:  
 .XX ± .01  
 .XXX ± .005

ANGULAR ± 0.5°

**MATERIAL** 6061-T6 Al

**FINISH** 63 μinch Ra

**SYSTEM** ADVANCED LIGO

**SUB-SYSTEM** AOS

**NEXT ASSY** D1003120

**PART NAME** TRANSMON TELE END PLATE ENTRY 3 TUBE

**DESIGNER** K. MAILAND 21 JUN 2010

**DRAFTER** C. CONLEY 08 NOV 2010

**CHECKER** K. MAILAND 04 MAY 2010

**APPROVAL** K. MAILAND 04 MAY 2010

**SIZE DWG. NO.** B D1000071

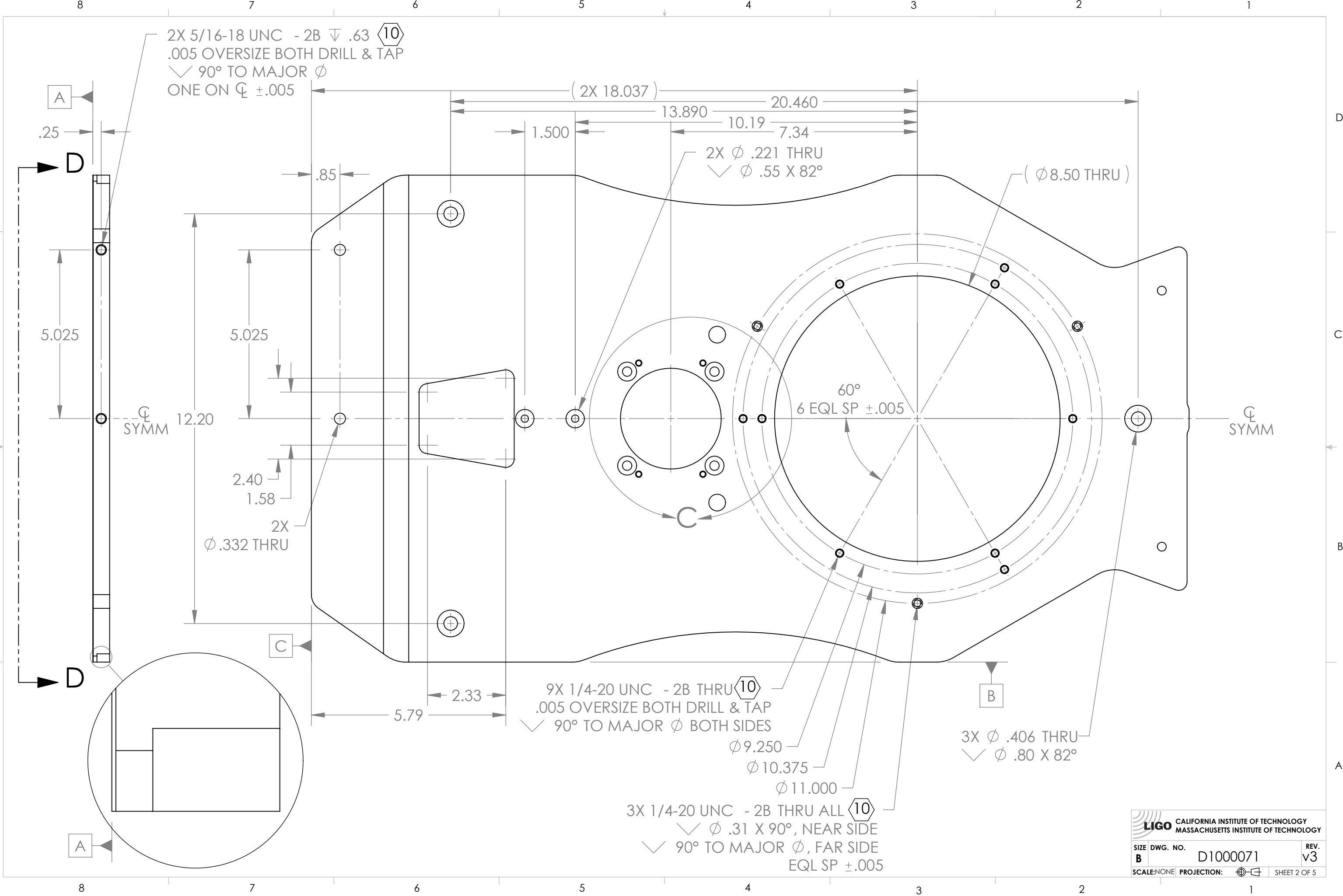
**REV.** v3

**SCALE** NONE

**PROJECTION** 1st Angle

**SHEET 1 OF 5**

D1000071 TRANSMON\_TEL\_END\_PLATE\_ENTRY\_3\_TUBE, PART PDM REV: X-100, DRAWING PDM REV: X-026



2X 5/16-18 UNC - 2B  $\nabla$  .63  $\text{\textcircled{10}}$   
 .005 OVERSIZE BOTH DRILL & TAP  
 $\nabla$  90° TO MAJOR  $\phi$   
 ONE ON  $\phi$  ±.005

2X  $\phi$  .221 THRU  
 $\nabla$   $\phi$  .55 X 82°

( $\phi$  8.50 THRU)

60°  
 6 EQL SP ±.005

2X  
 $\phi$  .332 THRU

9X 1/4-20 UNC - 2B THRU  $\text{\textcircled{10}}$   
 .005 OVERSIZE BOTH DRILL & TAP  
 $\nabla$  90° TO MAJOR  $\phi$  BOTH SIDES

$\phi$  9.250  
 $\phi$  10.375  
 $\phi$  11.000

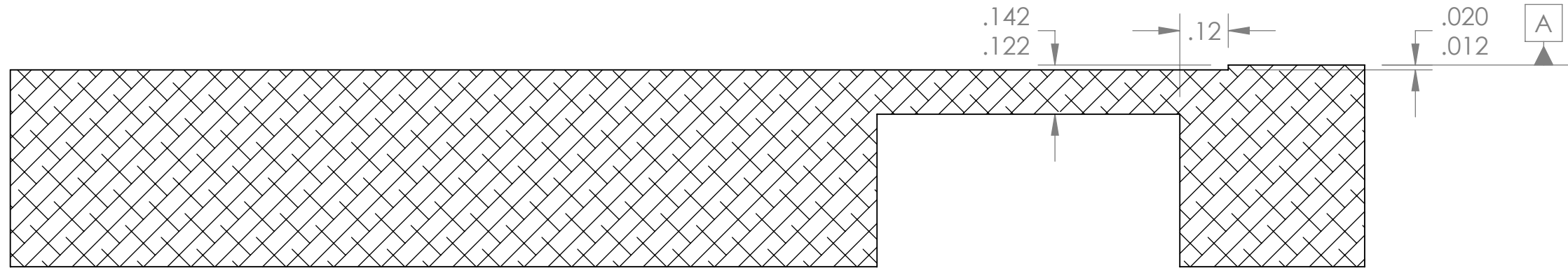
3X  $\phi$  .406 THRU  
 $\nabla$   $\phi$  .80 X 82°

3X 1/4-20 UNC - 2B THRU ALL  $\text{\textcircled{10}}$   
 $\nabla$   $\phi$  .31 X 90°, NEAR SIDE  
 $\nabla$  90° TO MAJOR  $\phi$ , FAR SIDE  
 EQL SP ±.005

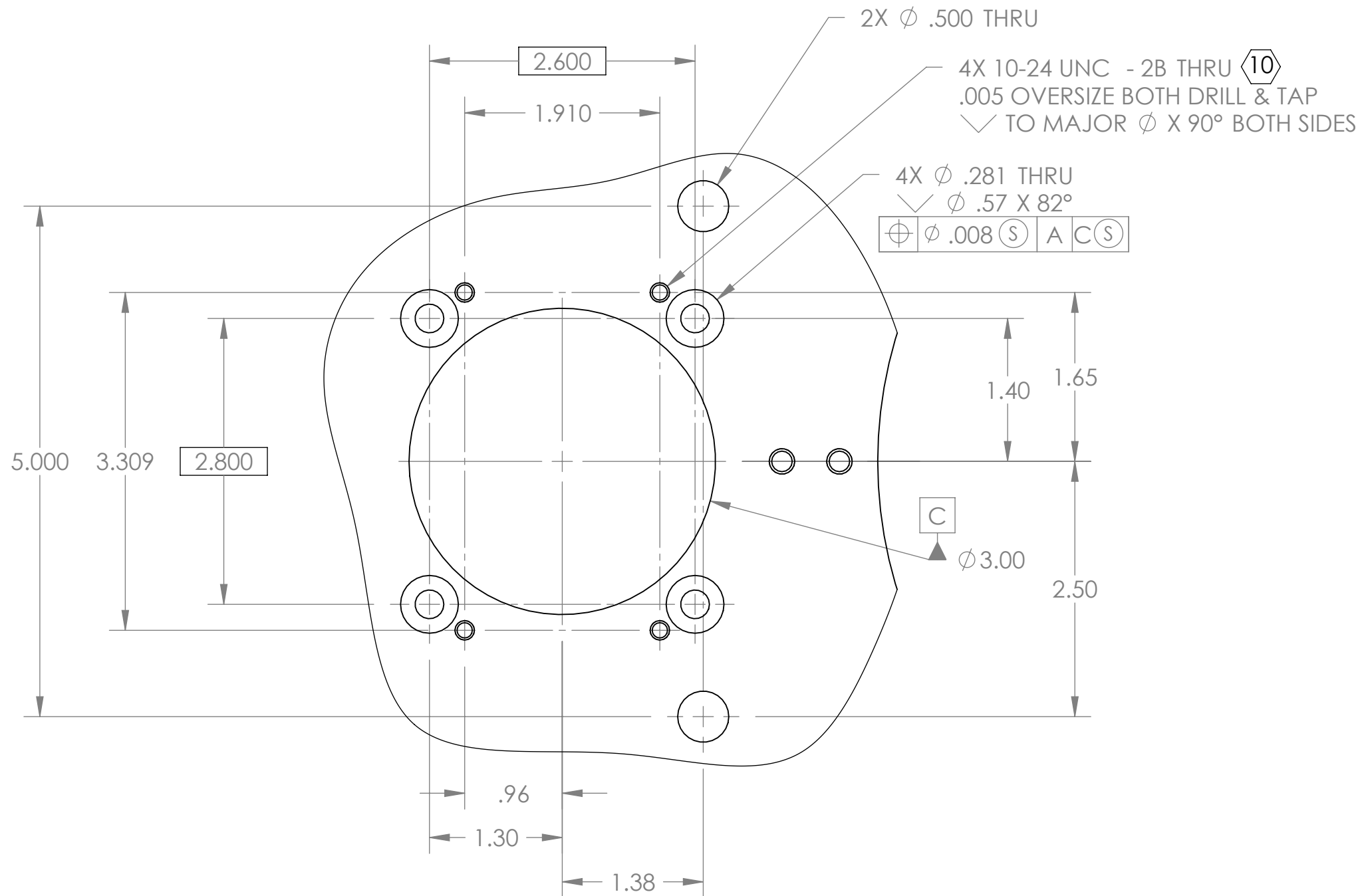
**LIGO** CALIFORNIA INSTITUTE OF TECHNOLOGY  
 MASSACHUSETTS INSTITUTE OF TECHNOLOGY

SIZE	DWG. NO.	REV.
B	D1000071	v3
SCALE: NONE	PROJECTION:	SHEET 2 OF 5

D1000071 TRANSMON\_TLE\_END\_PLATE\_ENTRY\_3\_TUBE, PART PDM REV: X-100, DRAWING PDM REV: X-026



SECTION A-A



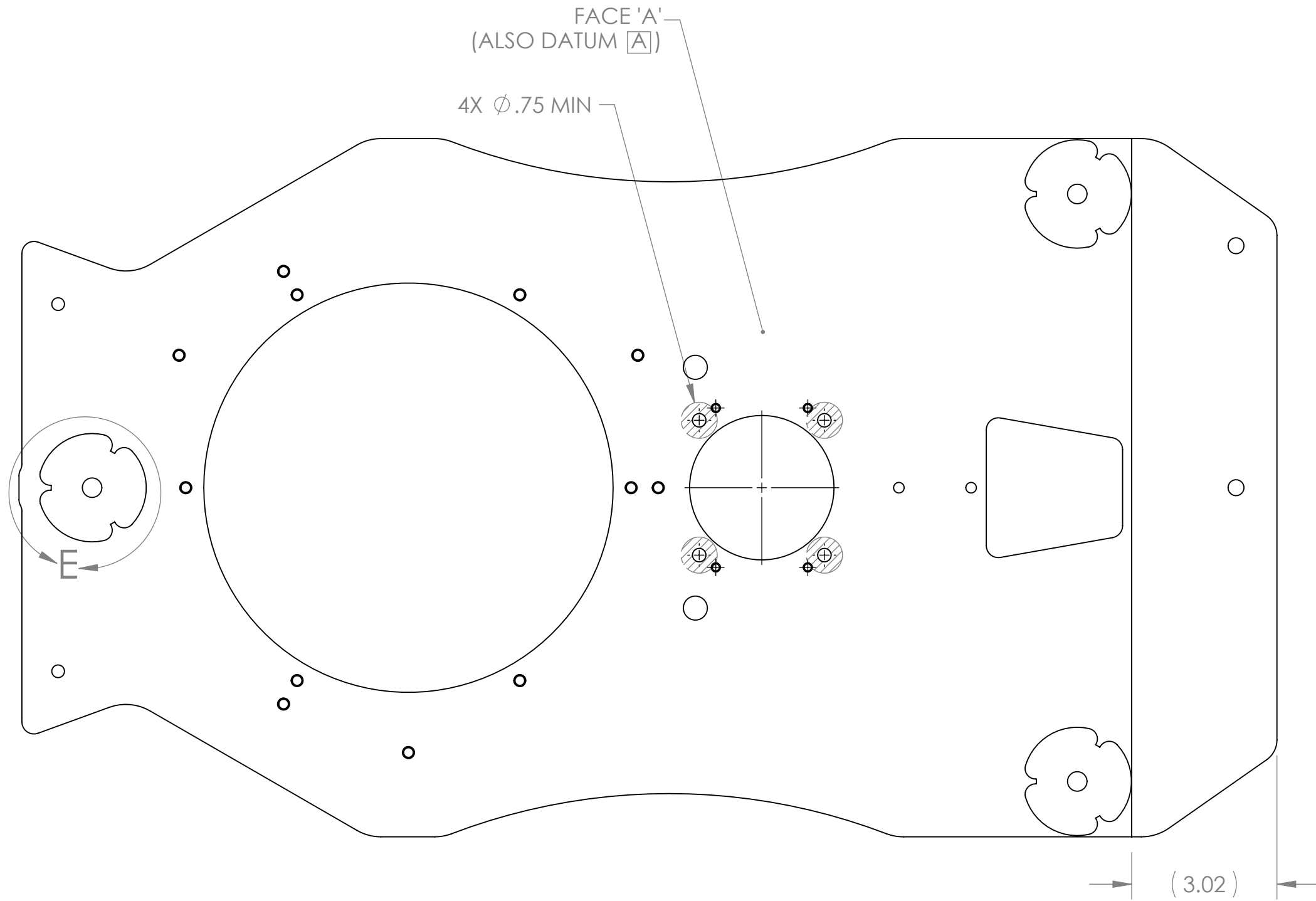
DETAIL C

CALIFORNIA INSTITUTE OF TECHNOLOGY MASSACHUSETTS INSTITUTE OF TECHNOLOGY		
SIZE <b>B</b>	DWG. NO. D1000071	REV. v3
SCALE: NONE	PROJECTION:	SHEET 3 OF 5

D1000071 TRANSMON\_TLE\_END\_PLATE\_ENTRY\_3\_TUBE, PART PDM REV: X-100, DRAWING PDM REV: X-026

8 7 6 5 4 3 2 1

D  
C  
B  
A

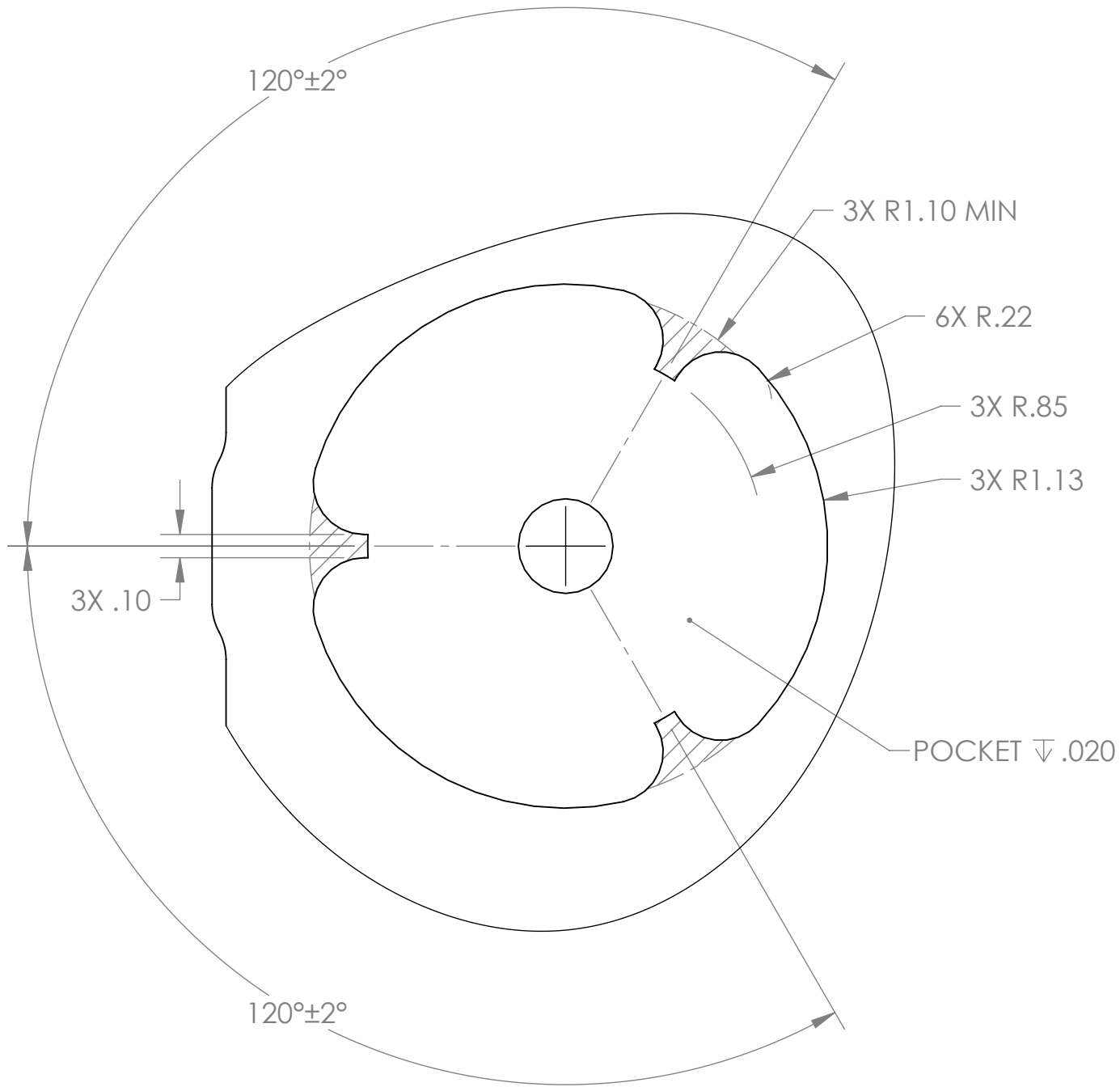


**VIEW D-D**  
 ALL HATCHED AREAS .0003 T.I.R. COPLANAR  
 INCLUDING 9 AREAS ON FEATURES DETAIL E, SEE SHEET 5

CALIFORNIA INSTITUTE OF TECHNOLOGY MASSACHUSETTS INSTITUTE OF TECHNOLOGY		
SIZE <b>B</b>	DWG. NO. D1000071	REV. v3
SCALE: NONE	PROJECTION:	SHEET 4 OF 5

8 7 6 5 4 3 2 1

D1000071 TRANSMON\_TELE\_END\_PLATE\_ENTRY\_3\_TUBE, PART PDM REV: X-100, DRAWING PDM REV: X-026



**DETAIL E**  
 3 PLACES  
 9 HATCHED AREAS .0003 T.I.R. COPLANAR  
 WITH HATCHED AREAS ON PARENT VIEW

 CALIFORNIA INSTITUTE OF TECHNOLOGY MASSACHUSETTS INSTITUTE OF TECHNOLOGY	
SIZE <b>B</b>	DWG. NO. D1000071
SCALE: NONE	PROJECTION:  SHEET 5 OF 5
REV. v3	