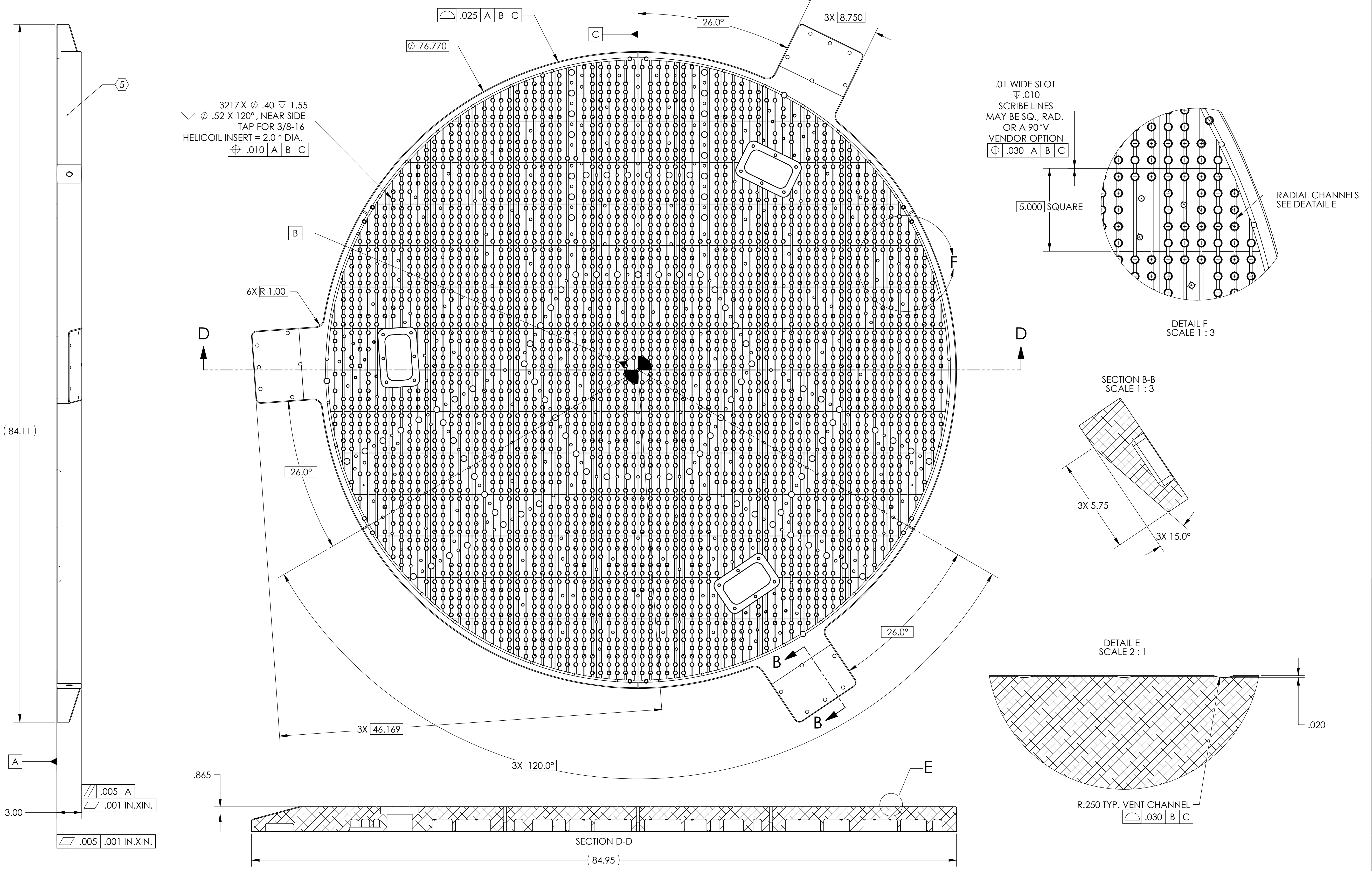


- NOTES CONTINUED:**
5. SCRIBE, ENGRAVE, OR MECHANICALLY STAMP (NO INKS OR DYES) DRAWING PART NUMBER AND REVISION ON NOTED SURFACE FOLLOWED ON THE NEXT LINE BY A THREE DIGIT SERIAL NUMBER. SERIAL NUMBERS START AT 001 FOR THE FIRST ARTICLE AND PROCEED CONSECUTIVELY. USE .07" HIGH CHARACTERS. EXAMPLE: DXXXXXX-VY, S/N 001. A VIBRATORY TOOL MAY BE USED.
  6. THIS PART IS TO BE PRODUCED USING THE CAD MODEL. IF THERE ARE DISCREPANCIES BETWEEN THIS DRAWING AND THE CAD MODEL, THE MODEL WILL TAKE PRECEDENCE.
  7. SURFACES WITH PROFILE CONTROL ARE LOCATED BASIC WITH RESPECT TO REFERENCED DATUMS. A SURFACE PROFILE TOLERANCE OF .025 SHALL APPLY TO THE ENTIRE PART UNLESS SPECIFICALLY TOLERANCED ELSEWHERE ON THE DRAWING.
  8. ALL PARTS SHALL BE MANUFACTURED IN ACCORDANCE WITH LIGO SPECIFICATION E048225.
  9. APPROXIMATE WEIGHT = 860 LBS.
  10. A TRUE POSITION TOLERANCE OF  $\phi .010$  IS ~ THE SAME AS A CONVENTIONAL TOLERANCE OF  $\pm .005$ .
  11. MACHINE ALL SURFACES TO REMOVE OXIDES AND MILL FINISH. ABRASIVE REMOVAL TECHNIQUES ARE NOT ACCEPTABLE.
  12. HELICOILS TO BE APPLIED AT LIGO.

VIEW SHOWN IS A COMPLETE VIEW SHOWING ALL FEATURES IN THE MODEL TO IDENTIFY AND TOLERANCE THE VENT CHANNELS AND 3217, 3/8-16 HELICOIL HOLES

REV.	DATE	DCN #	DRAWING TREE #
v1	28 Dec. 2009	E0900496	T0900600



DIMENSIONS ARE IN INCHES  
 TOLERANCES:  
 .XX  $\pm .015$   
 .XXX  $\pm .005$   
 ANGULAR  $\pm .5^\circ$

NOTES AND TOLERANCES: (UNLESS OTHERWISE SPECIFIED)  
 1. INTERPRET DRAWING PER ASME Y14.5-1994.  
 2. BREAK ALL EDGES AND CORNERS  $.030 \times 45^\circ$ .  
 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: 6061-T6 Al  
 FINISH: 63  $\mu$ inch

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SYSTEM: ADVANCED LIGO  
 SUB-SYSTEM: SEI

NEXT ASSY: D0901181

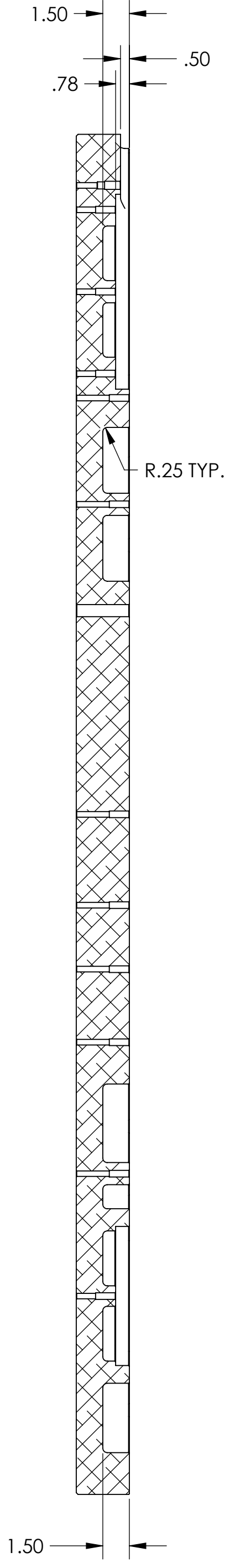
PART NAME: Optical Table, Down-Facing, aLIGO BSC ISI

DESIGNER	A.STEIN	28 Dec. 2009	SIZE	DWG. NO.	REV.
DRAFTER	M.HILLARD	28 Dec. 2009	D	D0901516	v1
CHECKER	F.MATCHARD	28 Dec. 2009			
APPROVAL	K.MASON	28 Dec. 2009	SCALE: 1:6	PROJECTION:	SHEET 1 OF 4

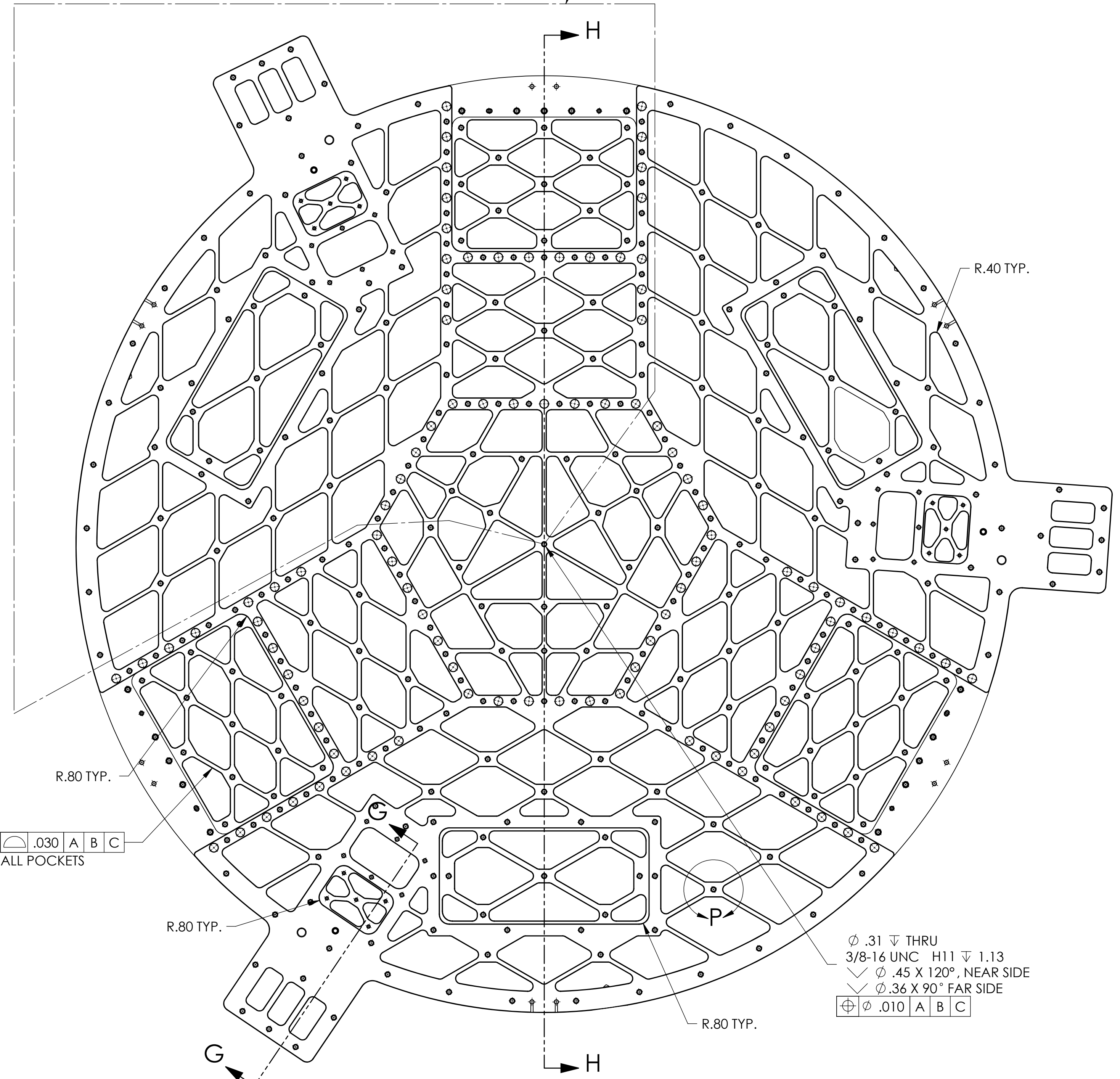
D0901516\_Optical\_Table\_Down-Facing\_BSC\_ISI\_PART\_PDM\_REV\_X-059\_DRAWING\_PDM\_REV\_X-010

VIEW SHOWN IS SIMPLIFIED EXCLUDING VENT CHANNELS  
AND 3217 3/8-16 HELICOIL HOLE TO SIMPLIFY VIEWS

D VIEW D INDICES THE  
BASE PATTERN  
ARRAYED 3X SEE  
VIEW D SHEET 4 AND  
OPPOSITE SIDE VIEW C  
SHEET 3

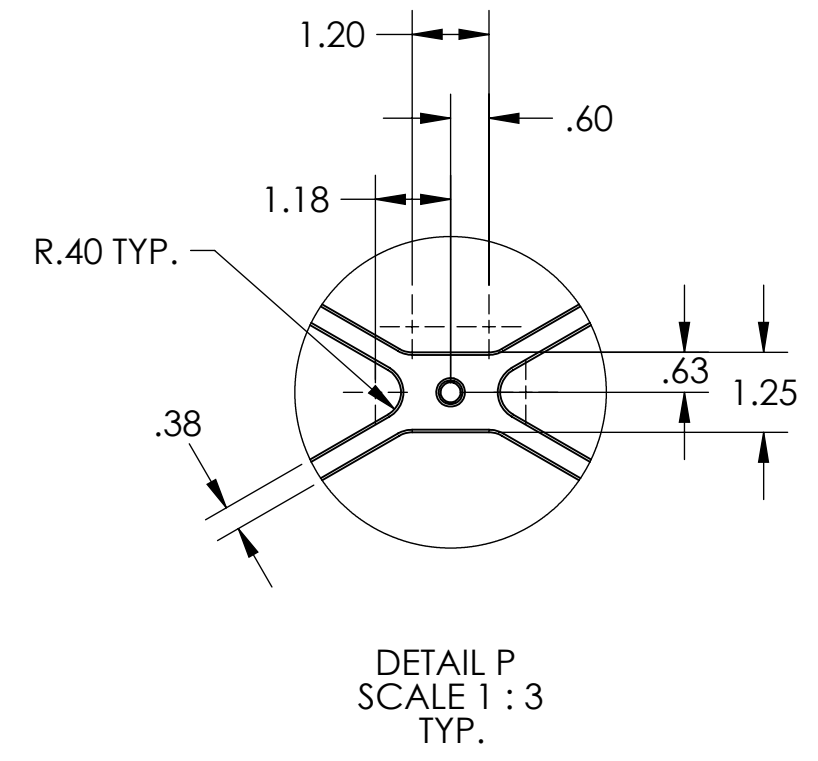
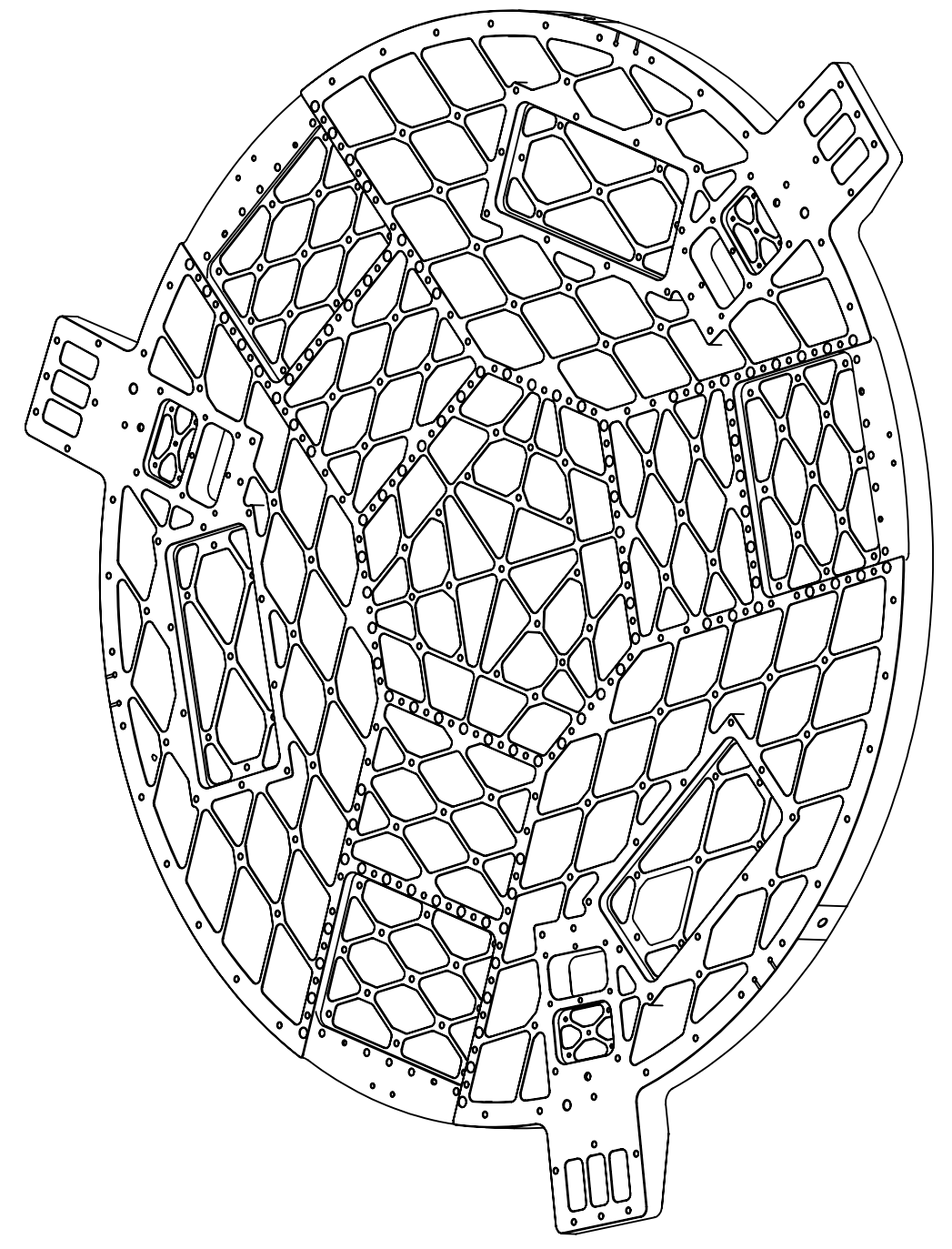


SECTION H-H

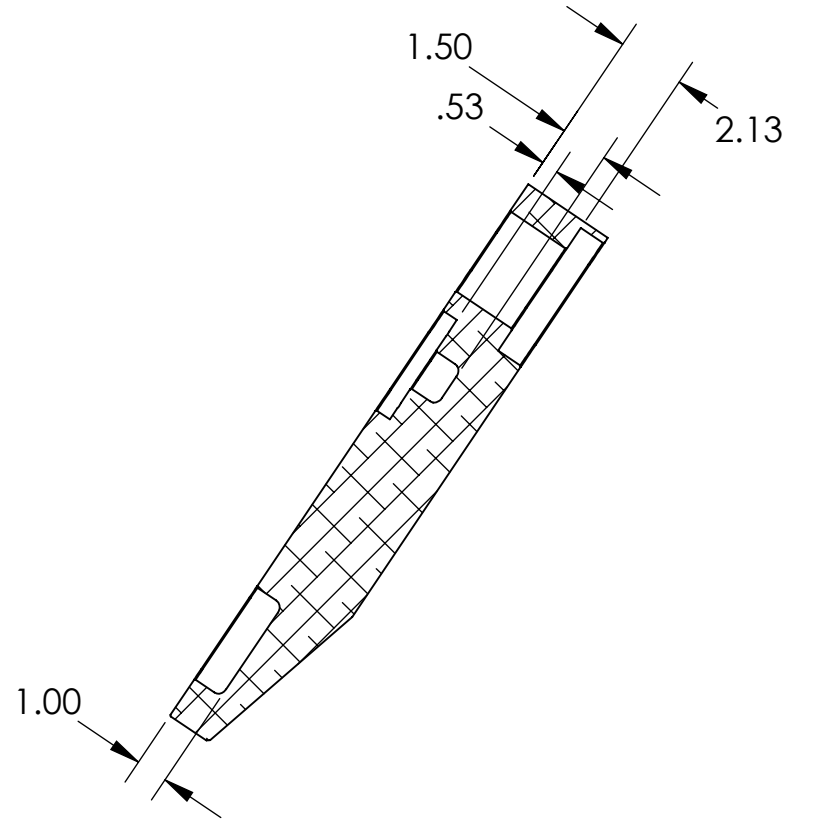


$\nabla$  .030 | A | B | C  
ALL POCKETS

$\nabla$   $\phi$  .31  $\nabla$  THRU  
3/8-16 UNC H11  $\nabla$  1.13  
 $\nabla$   $\phi$  .45 X 120° NEAR SIDE  
 $\nabla$   $\phi$  .36 X 90° FAR SIDE  
 $\oplus$   $\phi$  .010 | A | B | C



DETAIL P  
SCALE 1 : 3  
TYP.

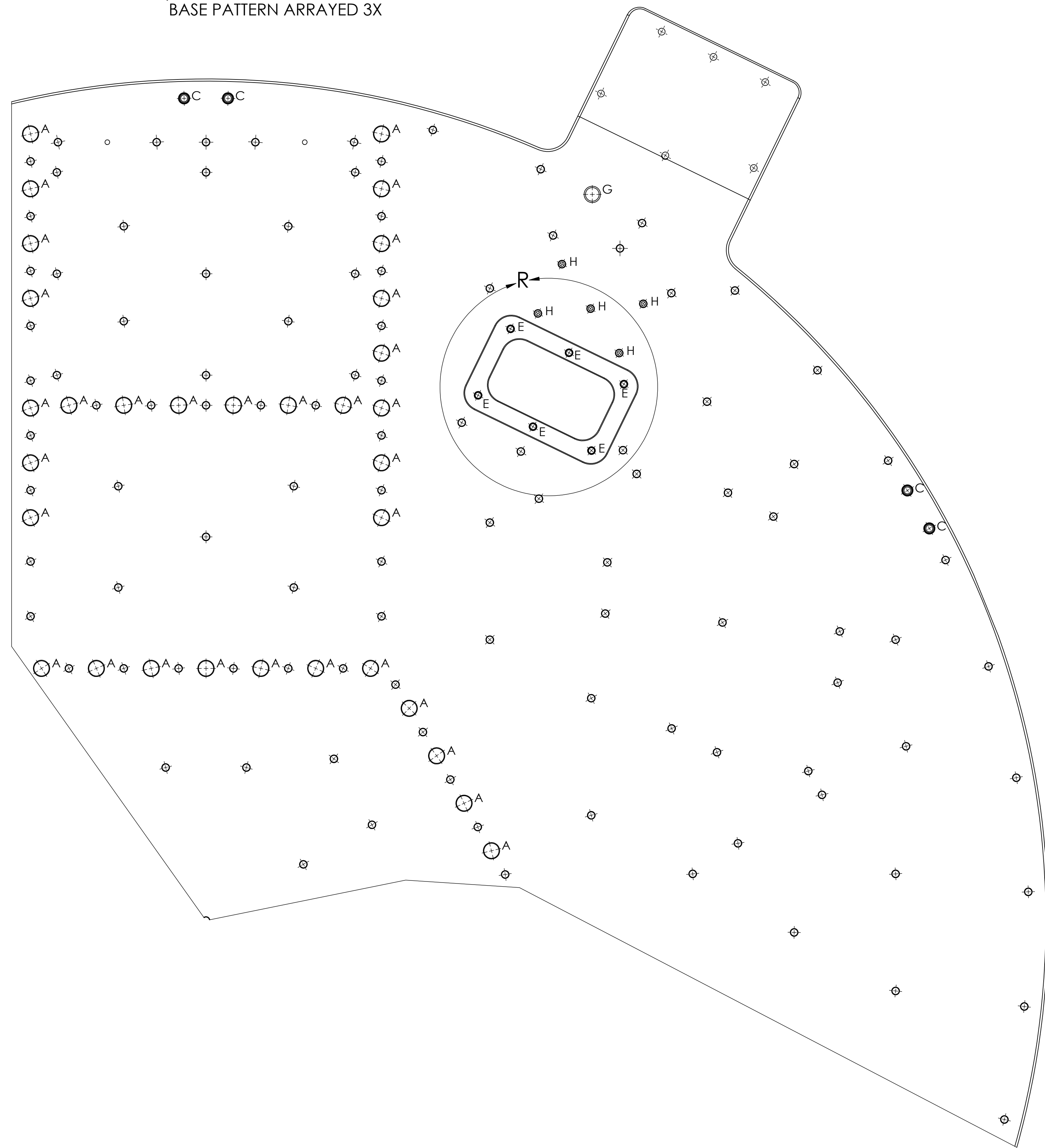


SECTION G-G

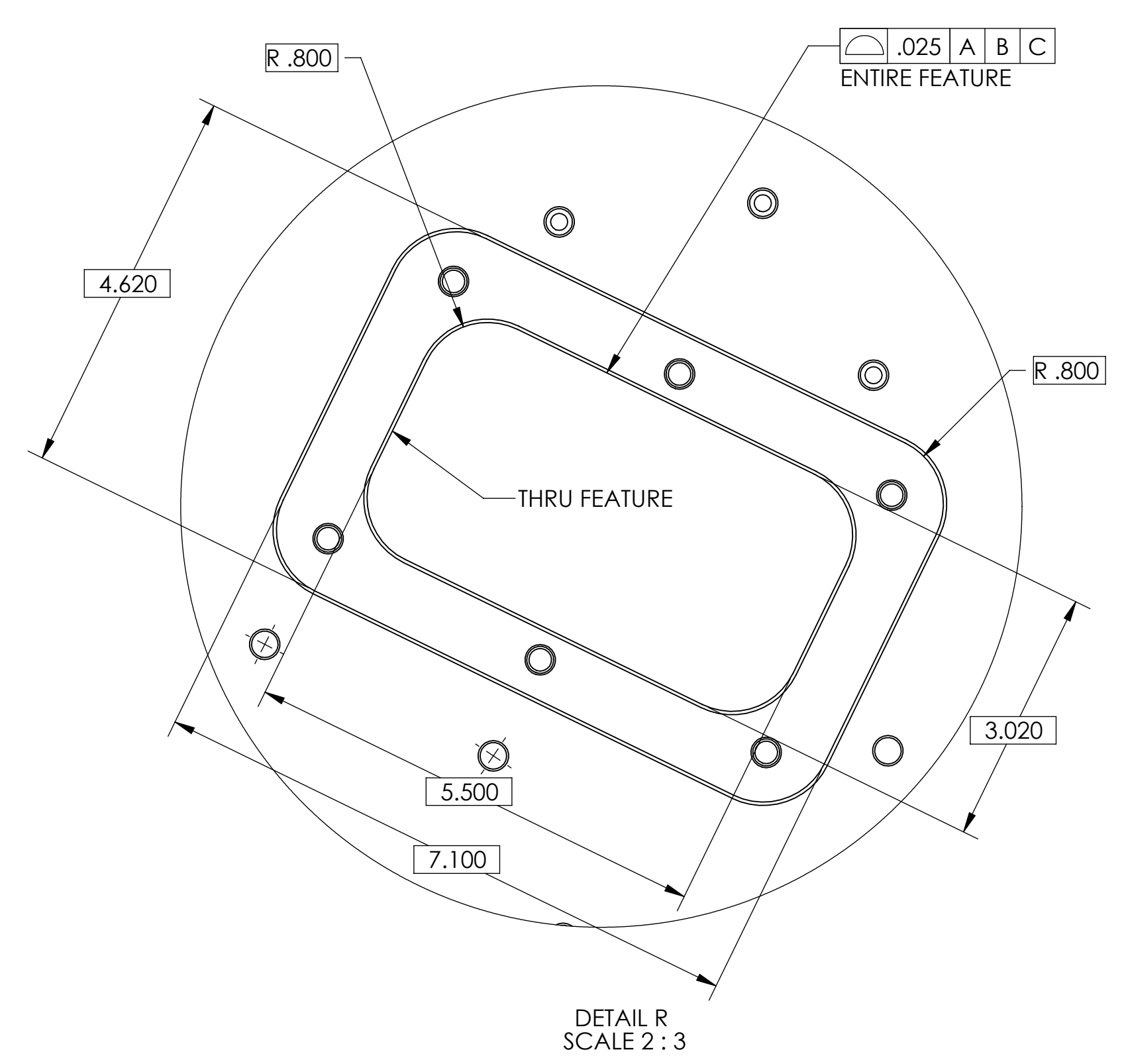
<b>LIGO</b> CALIFORNIA INSTITUTE OF TECHNOLOGY MASSACHUSETTS INSTITUTE OF TECHNOLOGY	
SIZE DWG. NO.	REV.
<b>D</b> D0901516	v1
SCALE: 1:6	PROJECTION:
SHEET 2 OF 4	

D0901516\_Optical\_Table-Down-Facing-BSC\_USI\_PART\_PDM\_REV\_X-059\_DRAWING\_PDM\_REV\_X-010

VIEW C  
 VIEW SHOWN IS SIMPLIFIED EXCLUDING VENT CHANNELS  
 AND 3217 3/8-16 HELICOIL HOLE TO SIMPLIFY VIEWS  
 BASE PATTERN ARRAYED 3X



TAG	SIZE	QUANTITY	GD&T
A	$\checkmark \phi .69$ THRU ALL $\checkmark \phi .75 \times 90^\circ$ , NEAR SIDE $\checkmark \phi .75 \times 90^\circ$ , FAR SIDE	32	$\oplus \phi .030$ A B C
C	$\checkmark \phi .40 \downarrow 1.30$ $\checkmark \phi .52 \times 120^\circ$ , NEAR SIDE TAP FOR 3/8-16 HELICOIL INSERT = 2.0 * DIA. $\phi .31$ THRU	4	$\oplus \phi .010$ A B C
E	$\checkmark \phi .27 \downarrow .95$ $\checkmark \phi .36 \times 120^\circ$ , NEAR SIDE TAP FOR 1/4-20 HELICOIL INSERT = 2.0 * DIA.	6	$\oplus \phi .010$ A B C
G	$\phi .53$ THRU ALL 5/8-11 UNC THRU ALL $\checkmark \phi .75 \times 120^\circ$ , NEAR SIDE $\checkmark \phi .75 \times 120^\circ$ , FAR SIDE	1	$\oplus \phi .010$ A B C
H	$\checkmark \phi .31 \downarrow 1.43$ $\phi .36 \times 90^\circ$ , NEAR SIDE	5	$\oplus \phi .010$ A B C



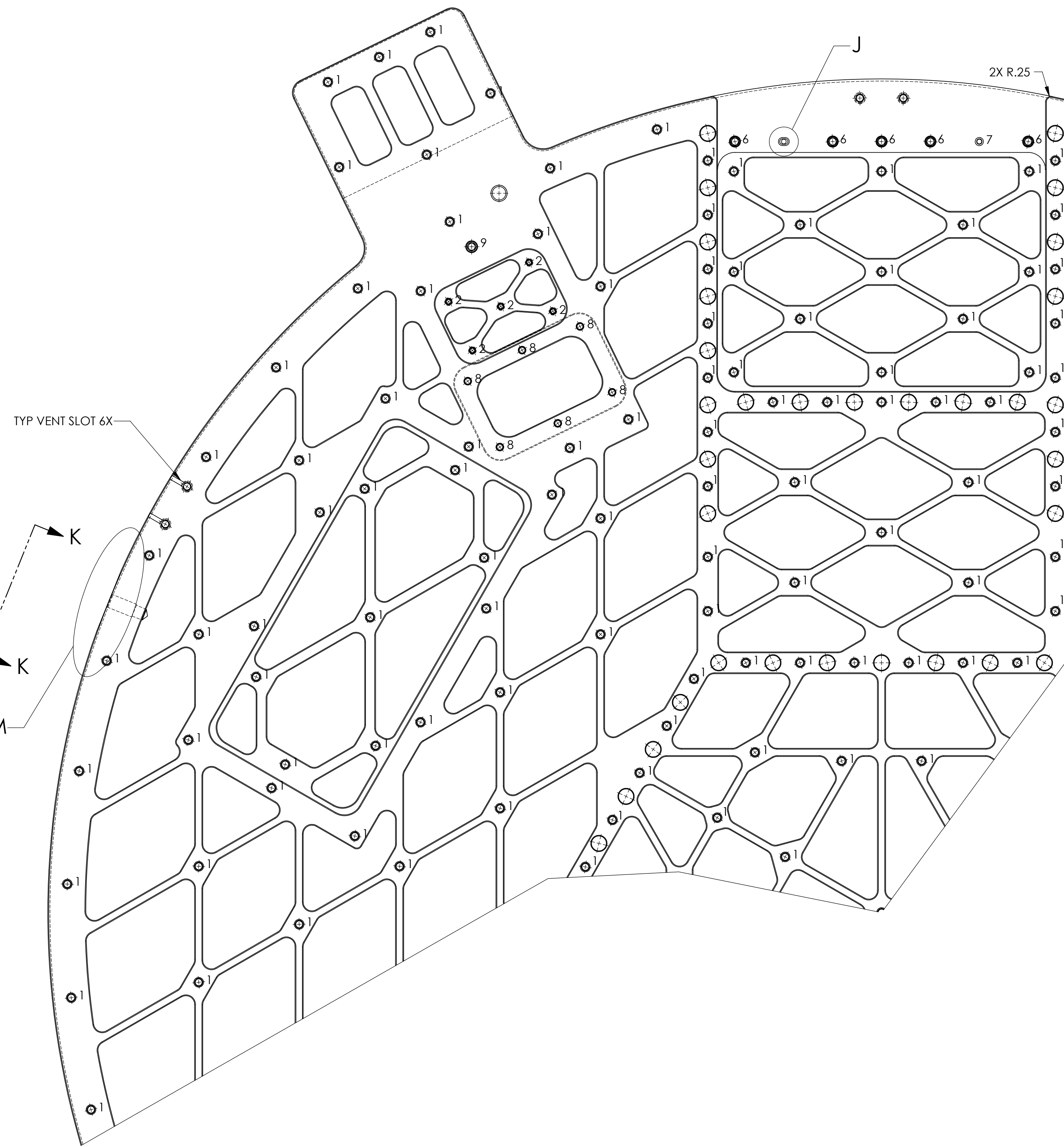
**LIGO** CALIFORNIA INSTITUTE OF TECHNOLOGY  
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SIZE	DWG. NO.	REV.
D	D0901516	v1
SCALE: 1:3	PROJECTION:	SHEET 3 OF 4

D0901516\_Optical\_Table-Down-Facing-BSC\_USI\_PART\_PDM\_REV\_X:059\_DRAWING\_PDM\_REV\_X:010

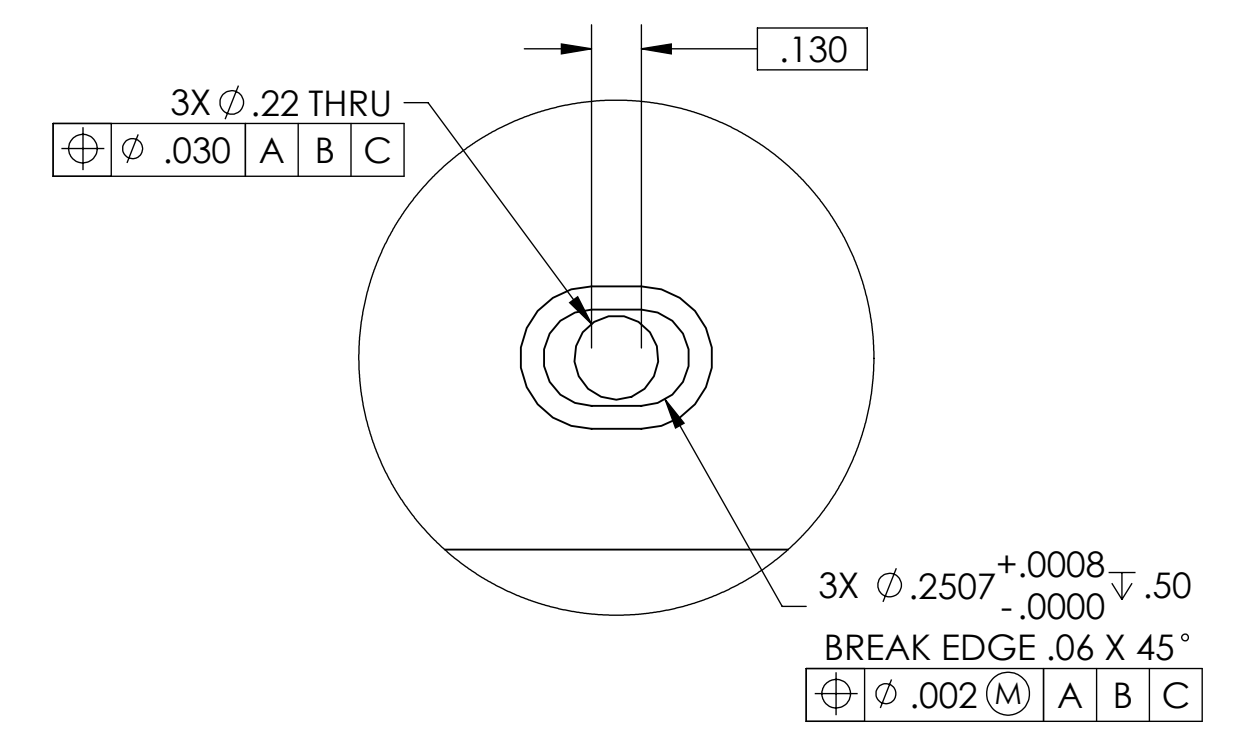
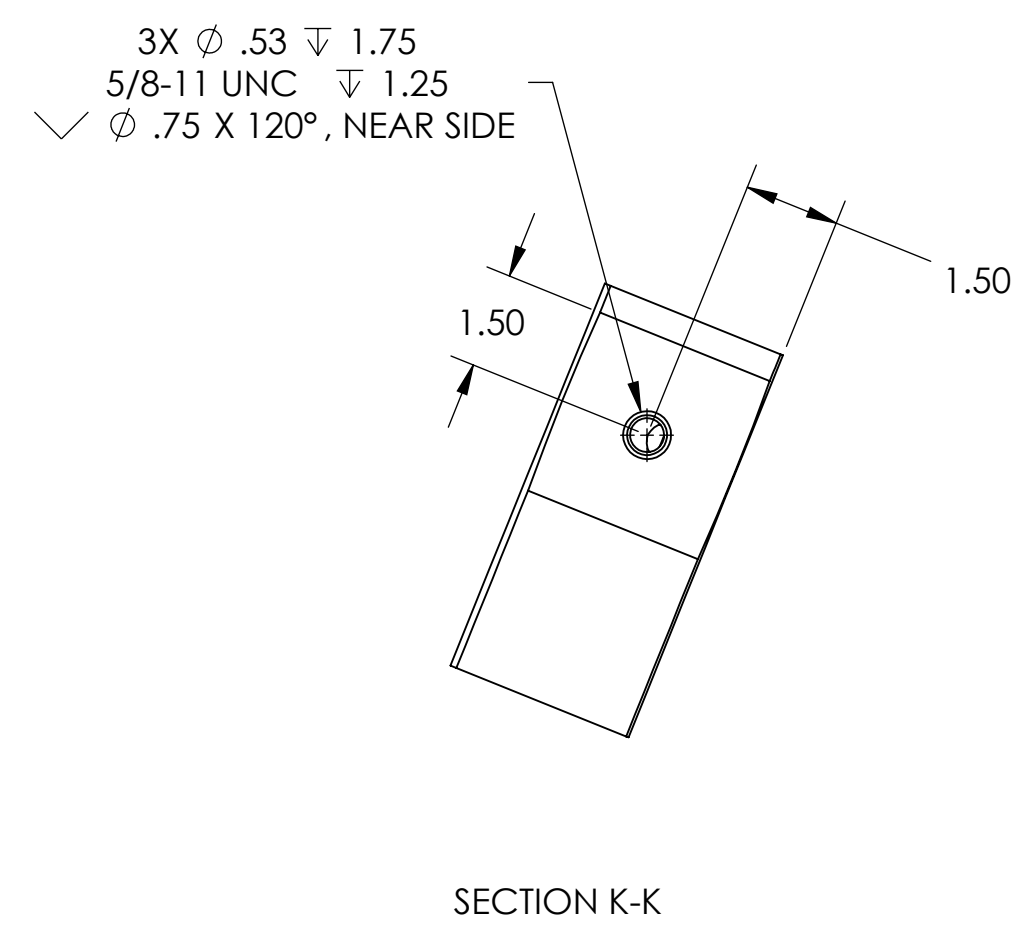
DETAIL M  
SCALE 1 : 1  
.029 FLAT

VIEW D  
VIEW SHOWN IS SIMPLIFIED EXCLUDING VENT CHANNELS  
AND 3217 3/8-16 HELICOIL HOLE TO SIMPLIFY VIEWS  
BASE PATTERN ARRAYED 3X



TAG	SIZE	QUANTITY	GD&T
1	$\phi .31 \downarrow 1.50$ $3/8-16 \text{ UNC } \downarrow 1.13$ $\checkmark \phi .45 \times 120^\circ, \text{ NEAR SIDE}$ $\phi .31 \text{ THRU}$	107	$\oplus \phi .010 \text{ A B C}$ A THREAD PITCH DIAMETER LIMIT OF H11 APPLIES
2	$\phi .20 \downarrow 1.05$ $1/4-20 \text{ UNC } \downarrow .75$ $\checkmark \phi .30 \times 120^\circ, \text{ NEAR SIDE}$	5	$\oplus \phi .010 \text{ A B C}$ A THREAD PITCH DIAMETER LIMIT OF H11 APPLIES
6	$\phi .40 \downarrow 1.30$ $\checkmark \phi .52 \times 120^\circ, \text{ NEAR SIDE}$ TAP FOR 3/8-16 HELICOIL INSERT = 2.0 * DIA. $\phi .31 \text{ THRU}$	5	$\oplus \phi .010 \text{ A B C}$
7	$\phi .2507^{+.0008} \downarrow .50$ $-.0000$ $\checkmark \phi .38 \times 90^\circ, \text{ NEAR SIDE}$ $\phi .22 \text{ THRU}$	1	$\oplus \phi .002 \text{ (M) A B C}$
8	$\phi .31 \downarrow 1.18$ $\checkmark \phi .36 \times 90^\circ, \text{ NEAR SIDE}$	6	$\oplus \phi .030 \text{ A B C}$
9	$\phi .5000^{+.0000} \downarrow .75$ $-.0006$ $\perp \phi .502^{+.001} \downarrow .15$ $-.000$ $\checkmark \phi .55 \times 90^\circ, \text{ NEAR SIDE}$ $\phi .41 \text{ THRU}$	1	$\oplus \phi .002 \text{ (M) A B C}$

HOLE PATTERN ARRAYED 3X



DETAIL J  
SCALE 2 : 1

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SIZE	DWG. NO.	REV.
D	D0901516	v1
SCALE: 1:3	PROJECTION:	SHEET 4 OF 4

D0901516\_Optical\_Table-Down-Facing-BSC\_USI\_PART\_PDM\_REV\_X:059\_DRAWING\_PDM\_REV\_X:010