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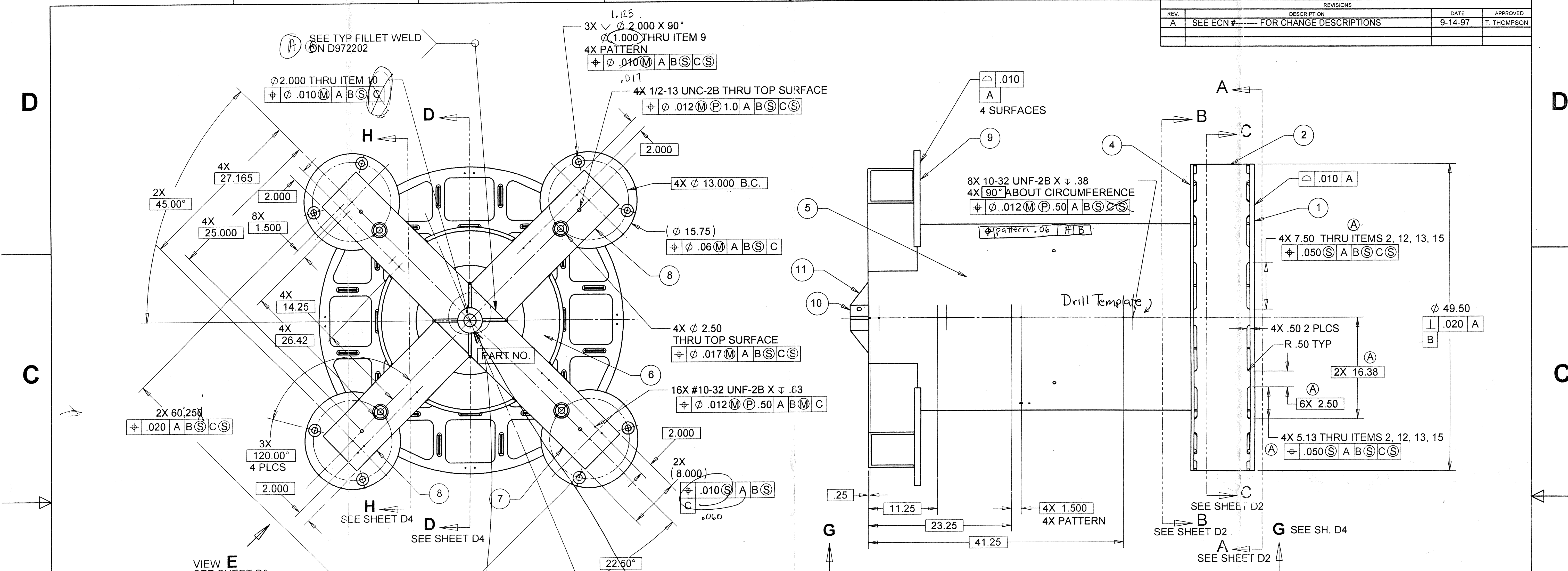
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REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	SEE ECN # FOR CHANGE DESCRIPTIONS	9-14-97	T. THOMPSON



NOTES: UNLESS OTHERWISE SPECIFIED

- ALL DIMENSIONS IN INCHES
- DIMENSIONS AND TOLERANCING PER ASME Y14.5M-1994
- SURFACE TEXTURE PER ANSI/ASME B 46.1-1985
- REMOVE ALL BURRS AND BREAK SHARP EDGES TO A MAXIMUM OF .015
- ALL INSIDE CORNERS TO BE .015 RADIUS MAX
- COUNTERSINK 82 DEGREES ALL TAPPED HOLES TO MAJOR DIAMETER
- COUNTERSINK 82 DEGREES APPROXIMATELY .015 DEEP ALL DRILLED HOLES
- PART NUMBER (DRAWING NO. PLUS DASH NO. PLUS SERIAL NO.) TO BE CLEARLY MARKED ON THE PART ITSELF.
- ALL FABRICATION, CLEANING, AND HANDLING MAINTAINED TO HYTEC SPECIFICATION: LIGO-TS-03 CATEGORY 1.
- ALL ALUM. WELDING DONE BY A GTAW PROCESS USING 2% THORIATED TUNGSTEN WELDING ELECTRODES AND ER4043 WELDING ROD (SPEC. PER AWS A5.10-80).
- NO SULFUR BASED CUTTING FLUIDS ALLOWED. APPROVED MACHINE LUBRICANT: ALUMICUT, MISTIC METAL MOVER, PRINCETON, IL.

ITEM NO.	QTY.	DESCRIPTION	MATERIAL
1	1	LOWER PLATE	ALUM. 6061-T651
2	1	OUTER RING, 49.50 OD X .25 WALL X 9.25 WIDE	ALUM. 6061-T651
3	2	INTERNAL GUSSET, 1/4 THK X (48.00 LG.) X 9.25 WIDE	ALUM. 6061-T651
4	1	UPPER PLATE, .50 THK	ALUM. 6061-T651
5	1	DOWNTUBE, 30.00 OD X .625 WALL X (51.628 LG.)	ALUM. 6061-T651
6	2	DOWNTUBE STIFFENER, .75 THK PLT	ALUM. 6061-T651
7	1	LONG BOXBEAM, 8.00 X 8.00 X .50 WALL	ALUM. 6061-T651
8	2	SHORT BOXBEAM, 8.00 X 8.00 X .50 WALL	ALUM. 6061-T651
9	4	LEG PADS, (1.00 THK) X 15.75 DIAM. PLT	ALUM. 6061-T651
10	1	LIFTING CENTER, 4.00 DIAM. X 11.25 LG	ALUM. 6061-T651
11	4	LIFTING CENTER GUSSET, .50 THK PLT	ALUM. 6061-T651
12	12	INTERNAL GUSSET, 1/4 THK X (9.75 LG.) X 9.25 WIDE	ALUM. 6061-T651
13	4	INTERNAL GUSSET, 1/4 THK X (4.30 LG.) X 9.25 WIDE	ALUM. 6061-T651
14	2	INTERNAL GUSSET, 1/4 THK X (38.84 LG.) X 9.25 WIDE	ALUM. 6061-T651
15	4	INTERNAL GUSSET, 1/4 THK X (8.87 LG.) X 9.25 WIDE	ALUM. 6061-T651

PARTS LIST

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES -TOLERANCES-		CAD GENERATED DRAWING, DO NOT MANUALLY UPDATE DO NOT SCALE DRAWING		<p><b>HYTEC, INC</b></p> <p>TITLE <b>LIGO BSC DOWNTUBE WELDMENT</b></p>	
DECIMALS XX = +/- .03 XXX = +/- .010	ANGULAR = +/- .30° SURFACE FINISH = 250				
FINISH ALL MACHINED SURFACES 32-RMS	DESIGNED ROGER L. SMITH 5-28-97	SIGNATURE	DATE	DWG. NO. D972211	SIZE SHEET NO. D 1 of 4
PART NO. D972211-1	CHECKED HARRY SALAZAR 6-6-97	ENGR. T. THOMPSON 7-10-97	APPROVED T. THOMPSON 7-10-97	SCALE 1/8	REVISION A

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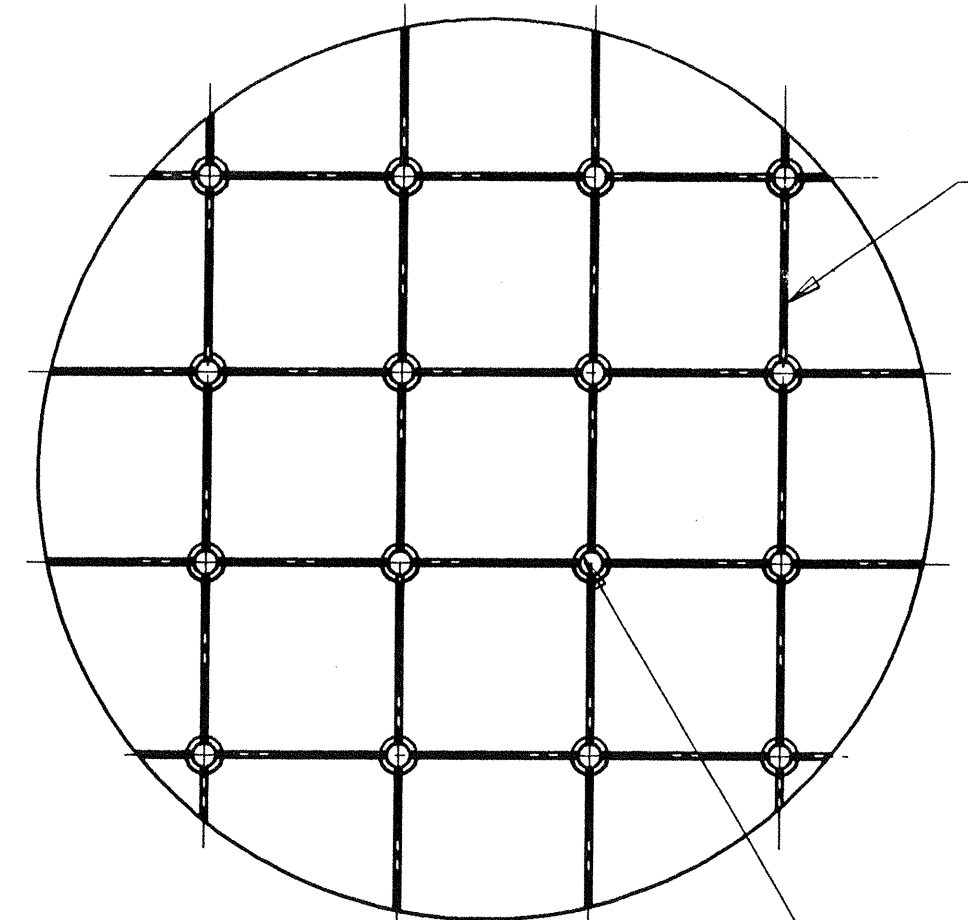
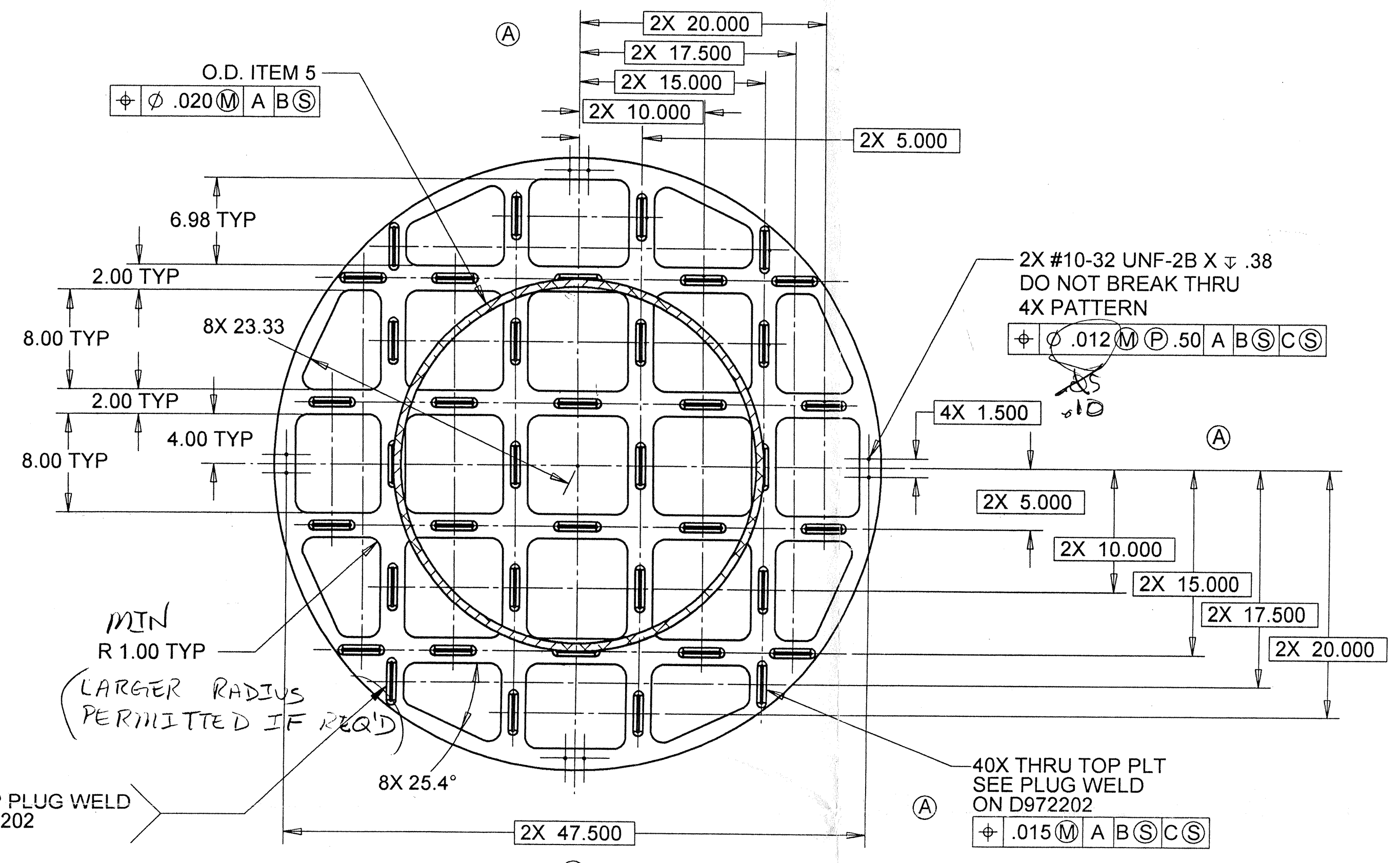
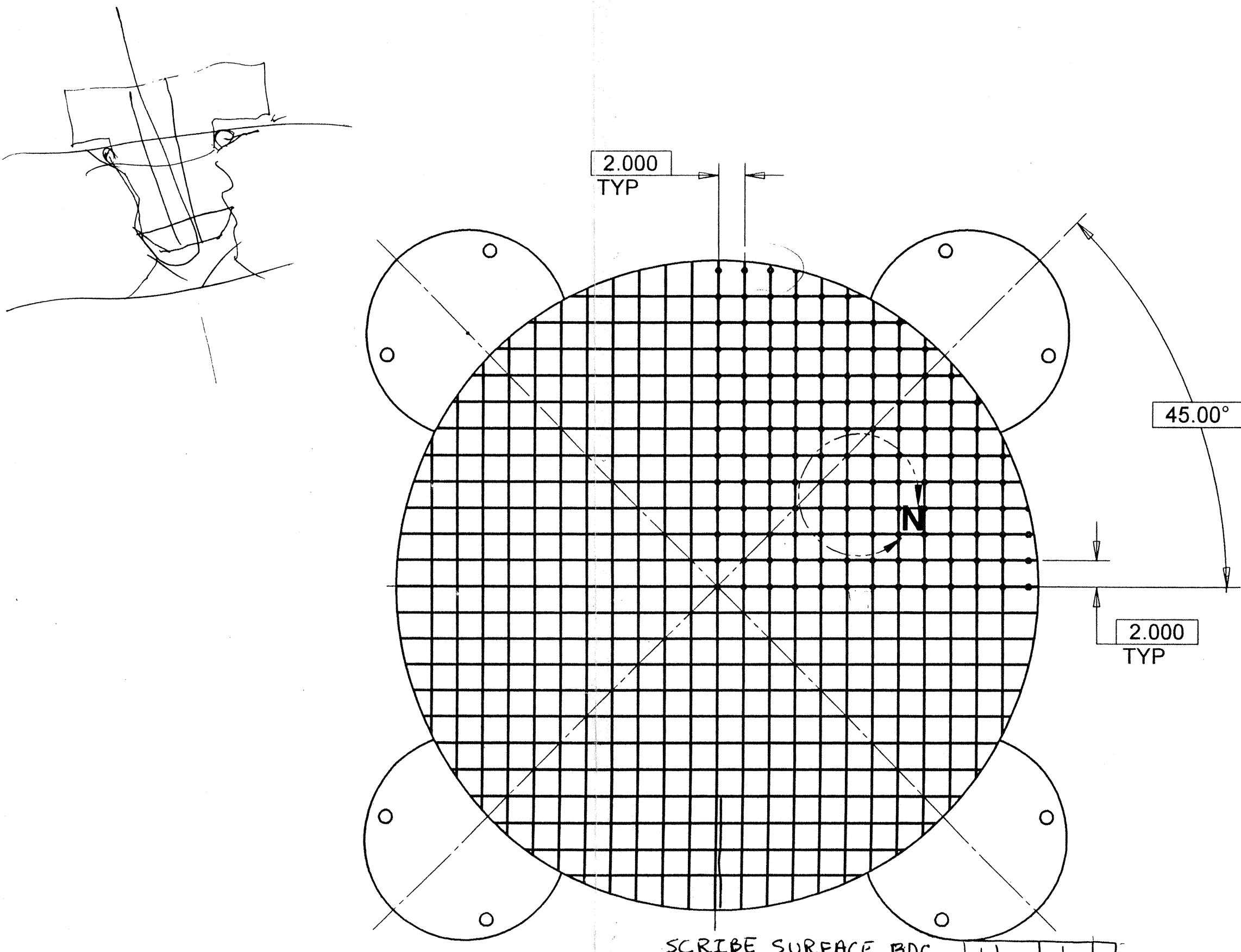
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REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	SEE ECN #----- FOR CHANGE DESCRIPTIONS	9-15-97	T. THOMPSON

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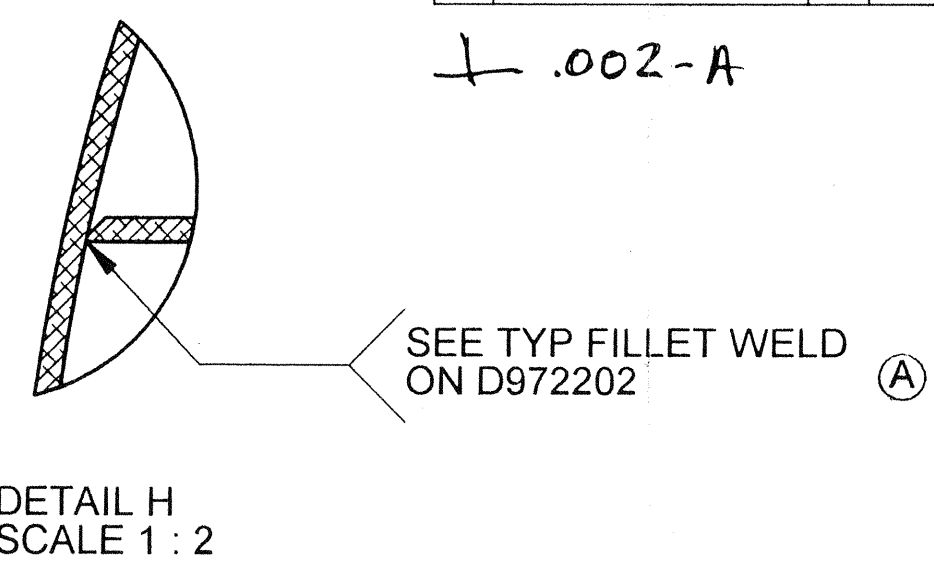
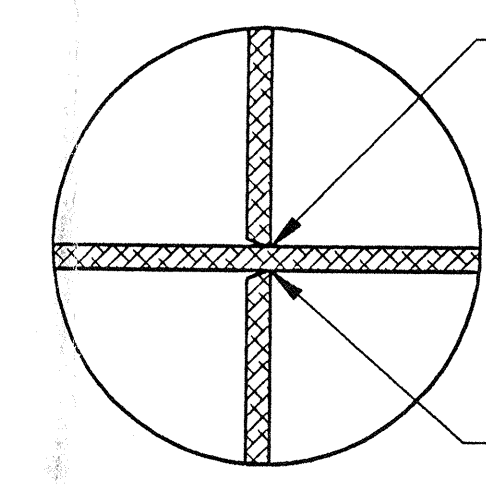
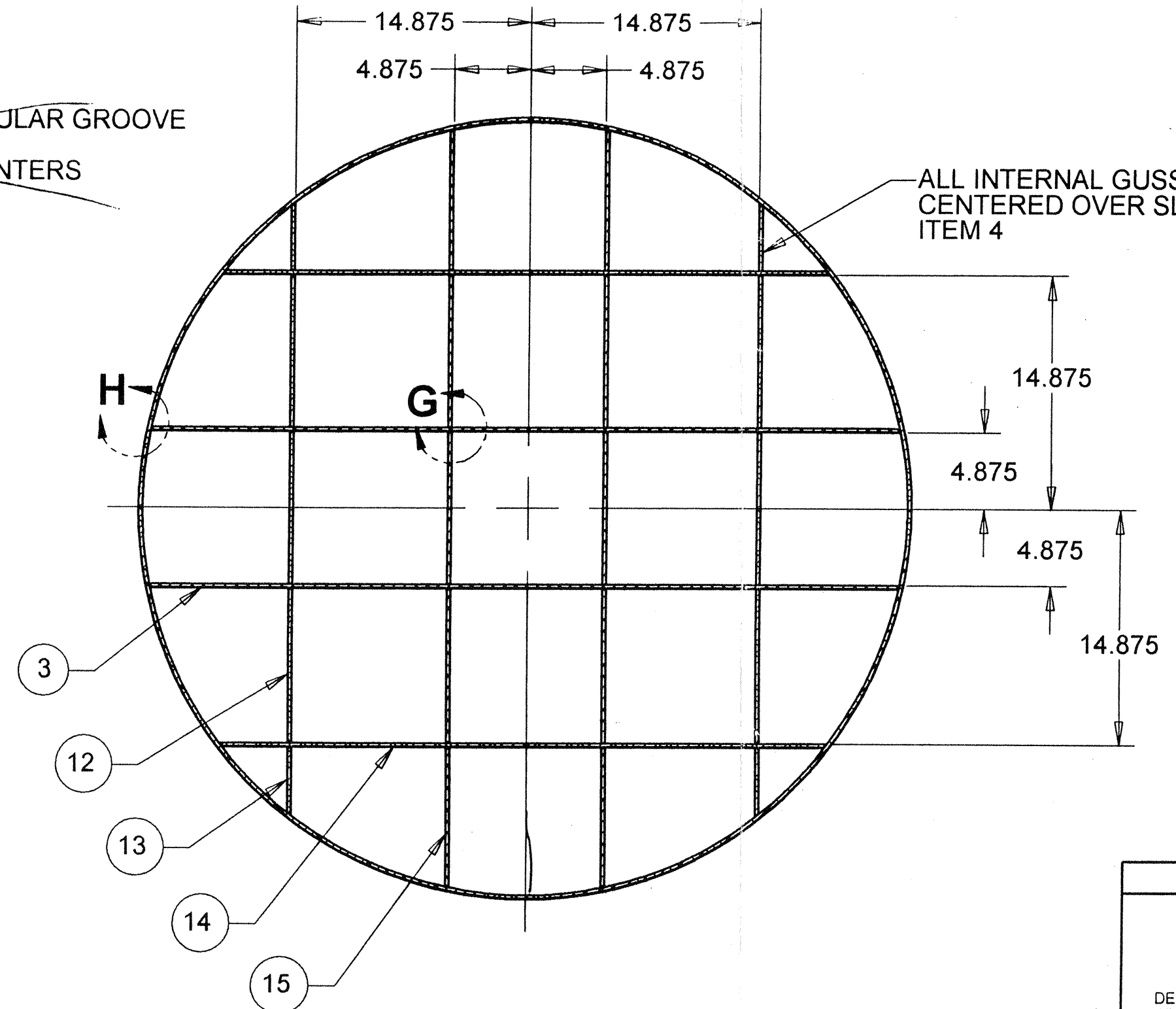


1/4-20 UNC-2B X .50  
DO NOT BREAK THRU HOLES  
✓ Φ .390 X 82°  
2,000 X 2,000 HOLE PATTERN  
FILLS THE ENTIRE SURFACE

HOLES TO BE NO CLOSER THAN 50 TO OUTER SURFACE

Φ .012 M P .50 A B S C S

.002-A



PARTS LIST				
UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES -TOLERANCES-		CAD GENERATED DRAWING, DO NOT MANUALLY UPDATE DO NOT SCALE DRAWING		
DECIMALS	ANGULAR = +/- .30°			
XX = +/- .03	SURFACE FINISH = 250	<b>HYTEC, INC</b> TITLE <b>LIGO BSC DOWNTUBE WELDMENT</b>		
XXX = +/- .010				
FINISH	SIGNATURE			DATE
ALL MACHINED SURFACES b4 32 RMS	ROGER L. SMITH			5-28-97
PART NO. D972211-1	DRAWN	ROGER L. SMITH	5-28-97	
	CHECKED	HARRY SALAZAR	6-6-97	
	ENGR.	T. THOMPSON	7-10-97	
	APPROVED	T. THOMPSON	7-10-97	
SCALE 1/8		DWG. NO. D972211	SIZE SHEET NO. D 2 of 4	
		REVISION A		

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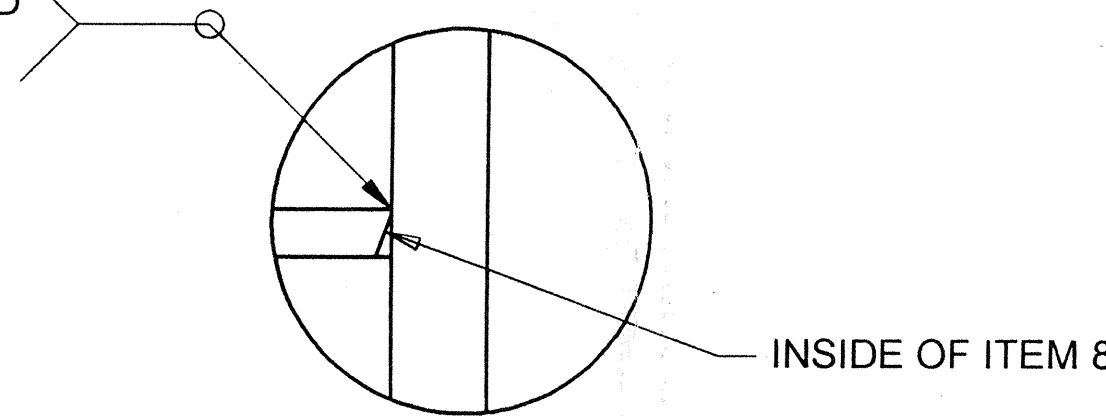
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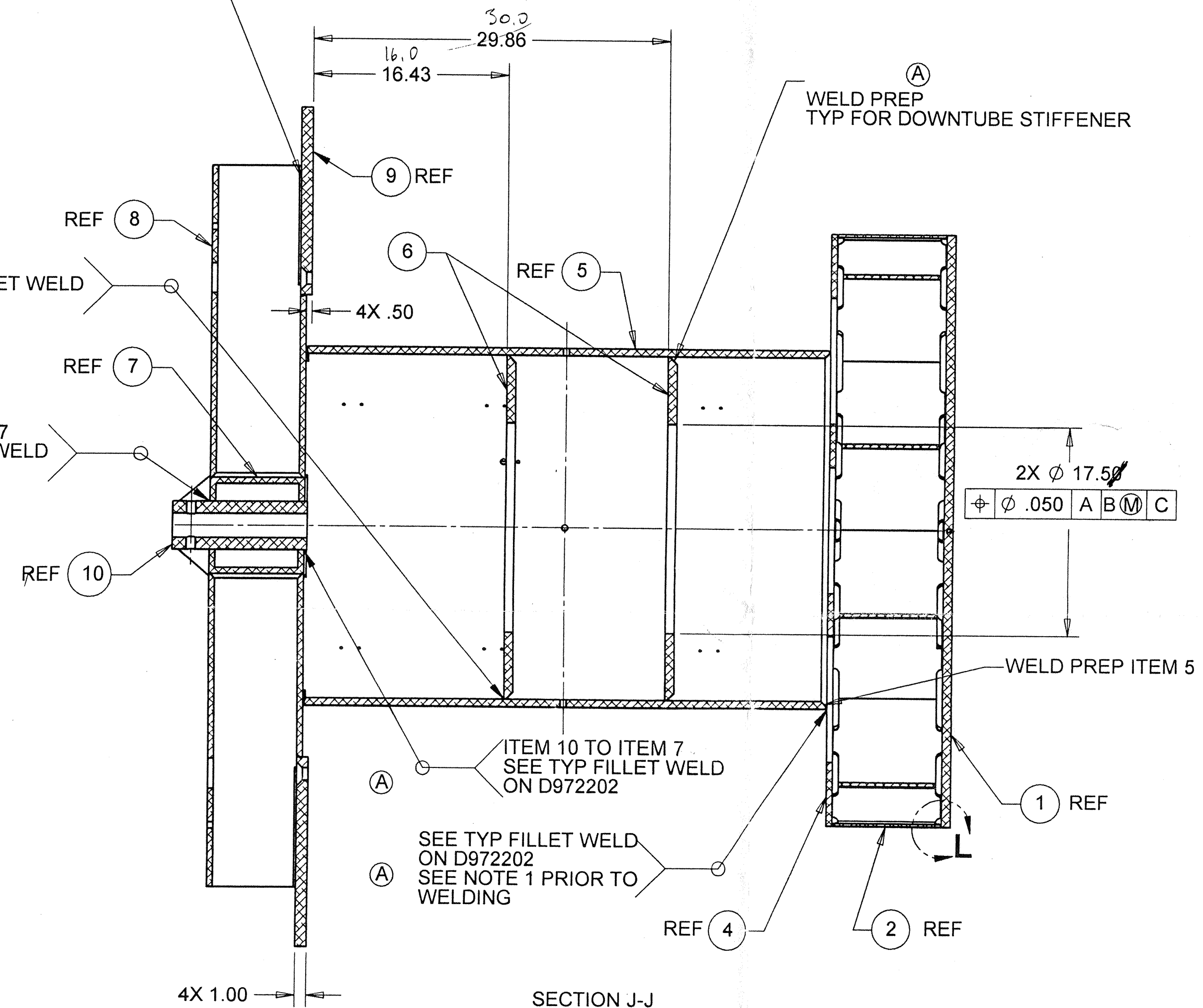
REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	SEE ECN #----- FOR CHANGE DESCRIPTIONS	9-15-97	T. THOMPSON

SEE TYP FILLET WELD ON D972202



DETAIL K  
SCALE 1 : 2  
WELD PREP TYP 4X  
ALL AROUND LEG PADS

LOWER WALL OF ITEM 8 REMOVED TO MATCH  
CONTOUR OF ITEM 9 FOR ITEM 9 INSERTION  
WELD PREP CHAMFER ALL AROUND CUTOUT ON ITEM 8



SECTION J-J

SEE TYP FILLET WELD ON D972202 PREP ON ITEM 5

$\phi$  .750 THRU  
 $\phi$  .012 M A B M C  
.030

4X 90° ABOUT CIRCUMFERENCE  
1/2-13 UNC-2B THRU  
 $\phi$  .012 M A B M C  
.50

2X SEE TYP FILLET WELD ON D972202

ITEM 10 TO ITEM 7  
SEE TYP FILLET WELD ON D972202

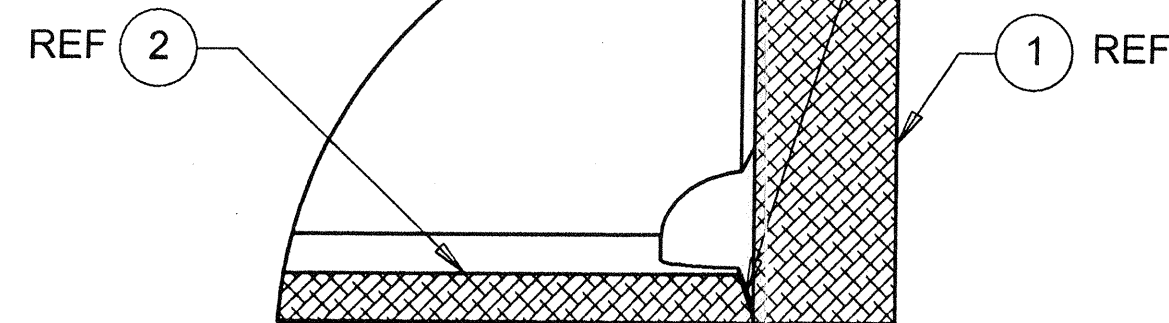
ITEM 10 TO ITEM 7  
SEE TYP FILLET WELD ON D972202

SEE TYP FILLET WELD ON D972202  
SEE NOTE 1 PRIOR TO WELDING

*Roll & Weld skip - Typical Fillet Weld Reg'd  
weld the outside of 30" 33% Skip weld*

VIEW E FROM SHEET D1

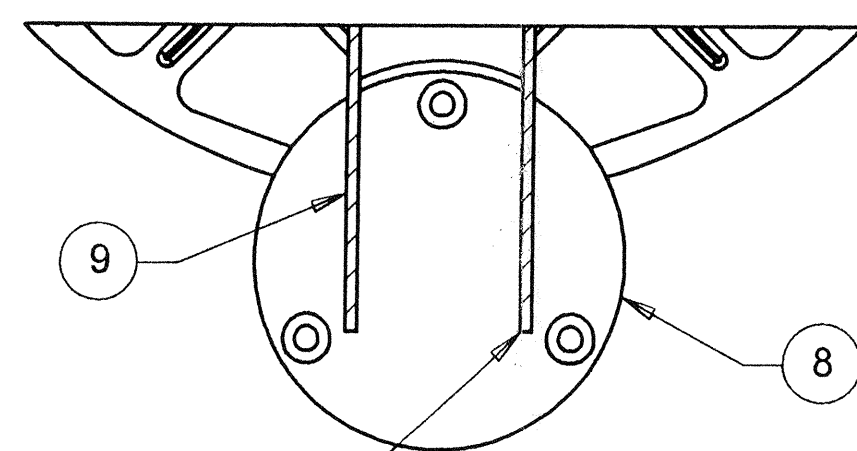
WELD PREP ON ITEM 2



DETAIL L  
SCALE 1 : 1  
TYP FOR JUNCTURE OF  
ITEMS 1 TO 2 AND 2 TO 4

NOTE 1  
PRIOR TO WELDING, BSC SUPPORT TABLE WELDMENT D972212-1  
MUST BE INSTALLED. SEE D972210-1 FOR ASSEMBLY.

WELD PREP CHAMFER ON BOXBEAM SHOWN



SECTION M-M  
SCALE 1 : 8  
VIEW TYP 4X FOR ITEM 8

PARTS LIST

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES TOLERANCES-		CAD GENERATED DRAWING, DO NOT MANUALLY UPDATE DO NOT SCALE DRAWING		<b>HYTEC, INC</b>	
DECIMALS XX = +/- .03 XXX = +/- .010	ANGULAR = +/- .30° SURFACE FINISH = 250	SIGNATURE		TITLE LIGO BSC DOWNTUBE WELDMENT	
FINISH ALL MACHINED SURFACES 64 -32-RMS	DESIGNED ROGER L. SMITH 5-28-97	DATE		DWG. NO. D972211	
PART NO. D972211-1	DRAWN ROGER L. SMITH 5-28-97	CHECKED HARRY SALAZAR 6-6-97		SIZE D 3 of 4	
	ENGR. T. THOMPSON 7-10-97	APPROVED T. THOMPSON 7-10-97		REVISION A	

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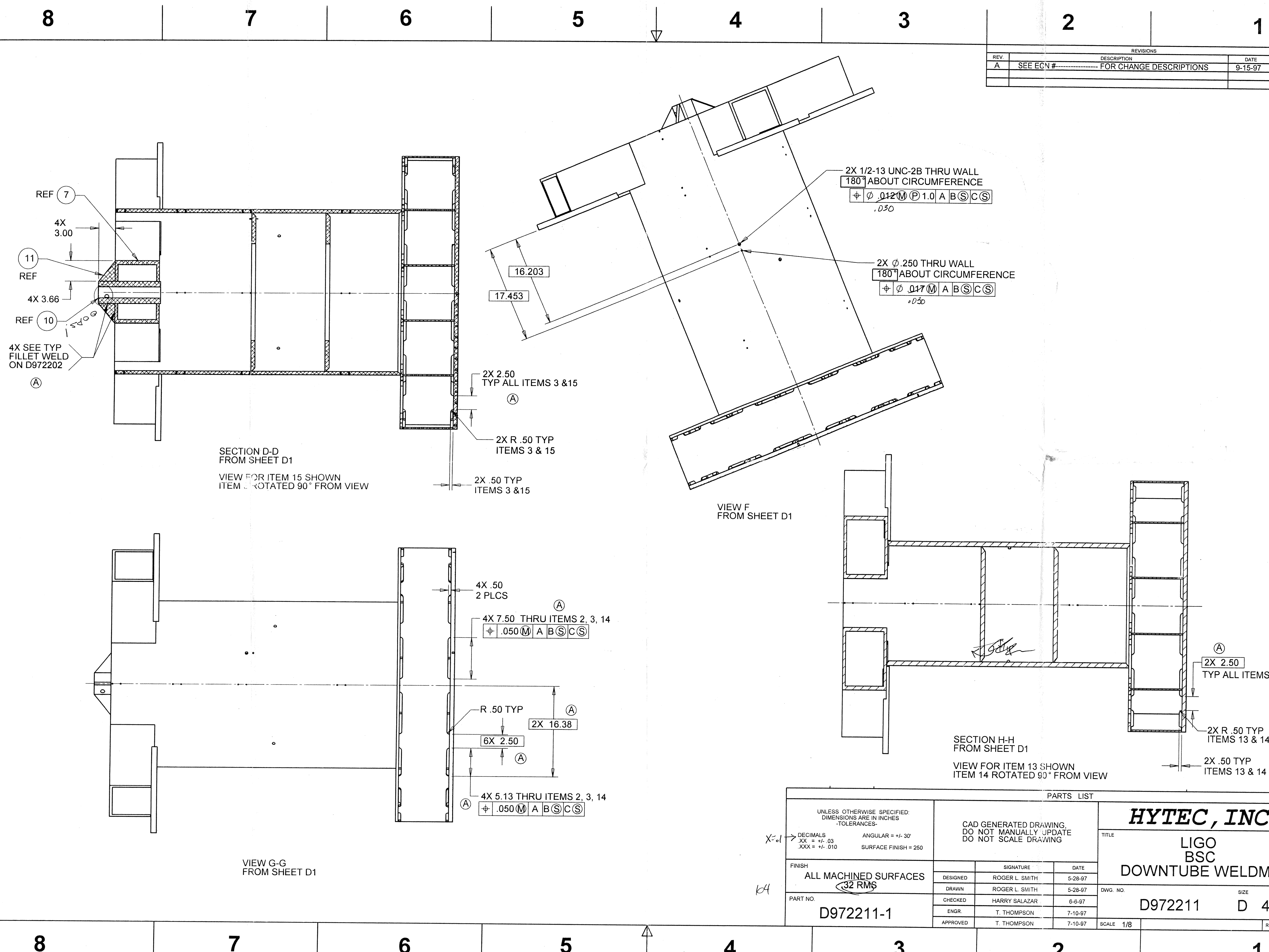
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REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	SEE ECN #----- FOR CHANGE DESCRIPTIONS	9-15-97	T. THOMPSON



PARTS LIST			
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FINISH ALL MACHINED SURFACES 32 RMS	DESIGNED ROGER L. SMITH 5-28-97	SIGNATURE ROGER L. SMITH	DATE 5-28-97
PART NO. D972211-1	CHECKED HARRY SALAZAR 6-6-97	ENGR. T. THOMPSON 7-10-97	APPROVED T. THOMPSON 7-10-97
	DWG. NO. D972211	SCALE 1/8	SIZE SHEET NO. D 4 of 4 REVISION A