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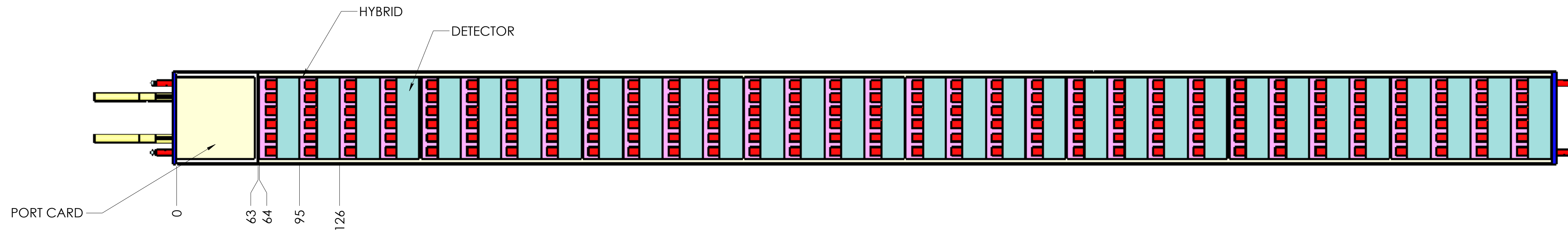
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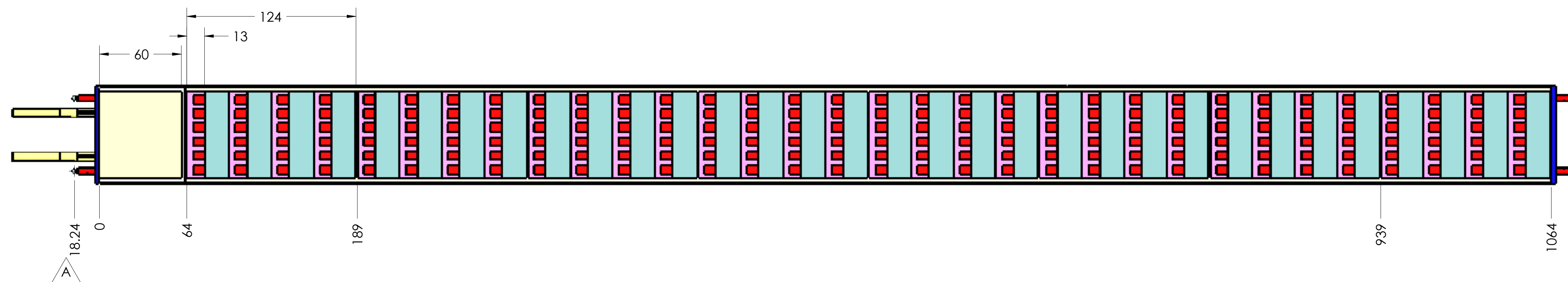
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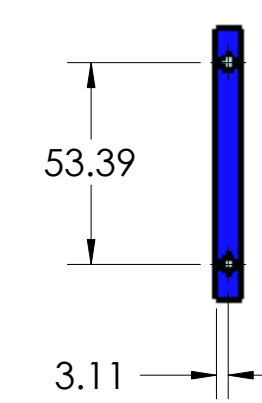
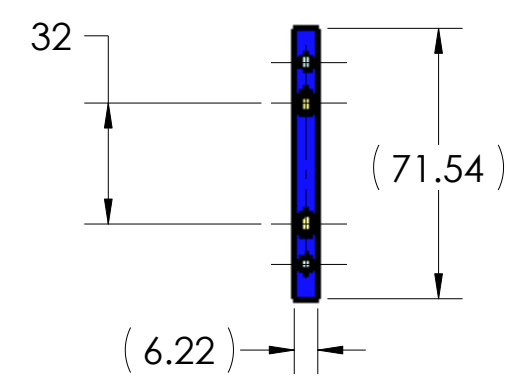
DWG. NO. nnXnnn4	SIZE A	REV. 1	SH. 1
DESCRIPTION		MATERIAL	MAT. LOCATION



BACK SIDE



FRONT SIDE



NOTES:
1. UNITS ARE IN METRIC.

UNLESS OTHERWISE SPECIFIED		SHOP ORDERS		SER. NO. DATE ISSD		ERNEST ORLANDO LAWRENCE BERKELEY NATIONAL LABORATORY UNIVERSITY OF CALIFORNIA - BERKELEY	
TOLERANCES	X.X ± 2.5	FRAC. ± 1/64	ACCT. NO.	NO. REQD.	DATE RECD.	4.72mm FLAT TUBE STAVE ASSEMBLY	
	X.XX ± .25	ANGLES ± 30°	DEL. TO			MICROFILMED: DWG. TYPE ASSY SHOWN ON - SCALE: 1:2 DO NOT SCALE PRINTS	
	X.XXX ± 0.13	FINISH -	SURFACE TREATMENT			SHEET 1 OF 1	
DO NOT SCALE PRINT				IDENT. METHOD TAG		P1AP-11 AP6250 27E301	
THREADS ARE CLASS 2				PROJECT NUMBER	DATE 12/17/06	DWG. NO. 27E301	
CHAMFER ENDS OF ALL SCREW THREADS 30°				PROJECT NAME	DATE 12/17/06	REV. A	
CUT ROUND, 1.5 THREAD RELIEF ON MACHINED THREADS				DWG. W. K. MILLER		P1AP-11 AP6250 27E301	
BREAK EDGES .016 MAX. ON MACHINED WORK				CHK BY W. O. MILLER		P1AP-11 AP6250 27E301	
REMOVE BURRS, WELD SPLATTER & LOOSE SCALE				APR -		P1AP-11 AP6250 27E301	
IN ACCORDANCE WITH ASME Y14.5m & B46.1						P1AP-11 AP6250 27E301	
REV	DWG	CHK	ZONE	DATE	CHANGES		
A				1-8-06	CHANGES REFLECT NEW TOOLING BALL		

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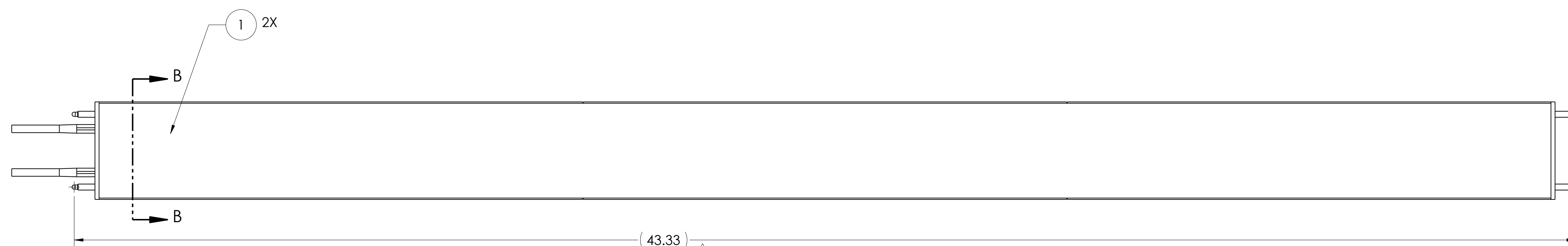
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DWG. NO. nnXnnn4 SIZE A REV. 1 SH. 1

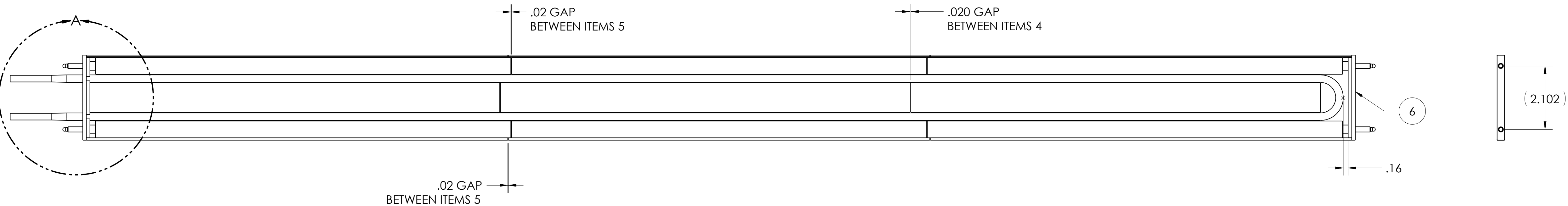
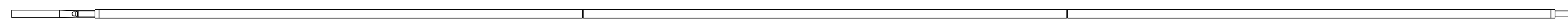
DESCRIPTION

MATERIAL

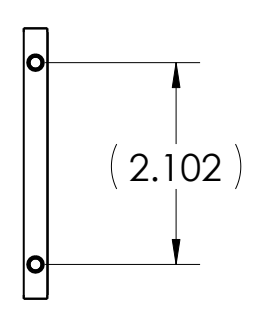
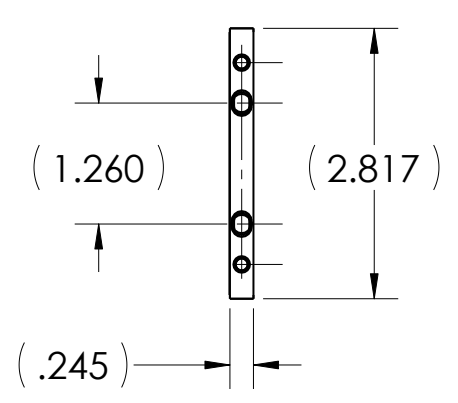
MAT. LOCATION



BACK SIDE



FRONT SIDE (FACESHEET HIDDEN FOR CLARITY)



NOTES:
1. UNITS ARE IN INCHES.

ITEM NO	SHEET LOCATION	ZONE	QTY	PART DOCUMENT NUMBER	DESCRIPTION	REFERENCE DESIGNATION MATERIAL NOTES
6	1	B2	1	27E305-3	END CLOSEOUT SUB-ASSEMBLY 2	
5	2	D4	6	27E309	COMPOSITE SIDE CLOSEOUT	
4	2	D6	3	27E308-1	HONEYCOMB CORE PART #1	
3	2	D6	6	27E308-3	HONEYCOMB CORE PART #2	
2	2	D6	1	27E303	COOLING TUBE WITH END CLOSEOUT #1	
1	1	D6	2	27E310	COMPOSITE FACESHEET	

REV	DWG	CHK	ZONE	DATE	CHANGES	UNLESS OTHERWISE SPECIFIED	SHOP ORDERS	SER. NO.	NO. REQD.	DATE ISSD	DATE RECD.	DESCRIPTION	REFERENCE DESIGNATION MATERIAL NOTES
A				1-8-06	CHANGES REFLECT NEW TOOLING BALL	TOLERANCES X.X ± 0.1 X.XX ± 0.01 X.XXX ± 0.005	ACCT. NO. DEL. TO SURFACE TREATMENT IDEN. METHOD TAG PROJECT NUMBER PROJECT NAME DWG. NO. CHK. BY APR. BY					ERNEST ORLANDO LAWRENCE BERKELEY NATIONAL LABORATORY UNIVERSITY OF CALIFORNIA - BERKELEY	
												4.72mm FLAT TUBE STAVE SUB ASSEMBLY	
												DO NOT SCALE PRINT	
												THREADS ARE CLASS 2	
												CHAMFER ENDS OF ALL SCREW THREADS 30°	
												CUT ROUND, 1.5 THREAD RELIEF ON MACHINED THREADS	
												BREAK EDGES .016 MAX. ON MACHINED WORK	
												REMOVE BURRS, WELD SPLATTER & LOOSE SCALE	
												IN ACCORDANCE WITH ASME Y14.5m & B46.1	
												MICROFILMED:	
												DWG. TYPE: ASSY	
												SHOWN ON: 27E301	
												SCALE: 1:2	
												DO NOT SCALE PRINTS	
												SHEET 1 OF 2	
												PATENT CLEAR:	
												DESIGN ACCT. NO. P1AP-11	
												CATEGORY CODE AP6250	
												DWG. NO. 27E302	
												SIZE: A	
												REV. A	

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DWG. NO. nnXnnn4 SIZE A REV. 2 SH. 2

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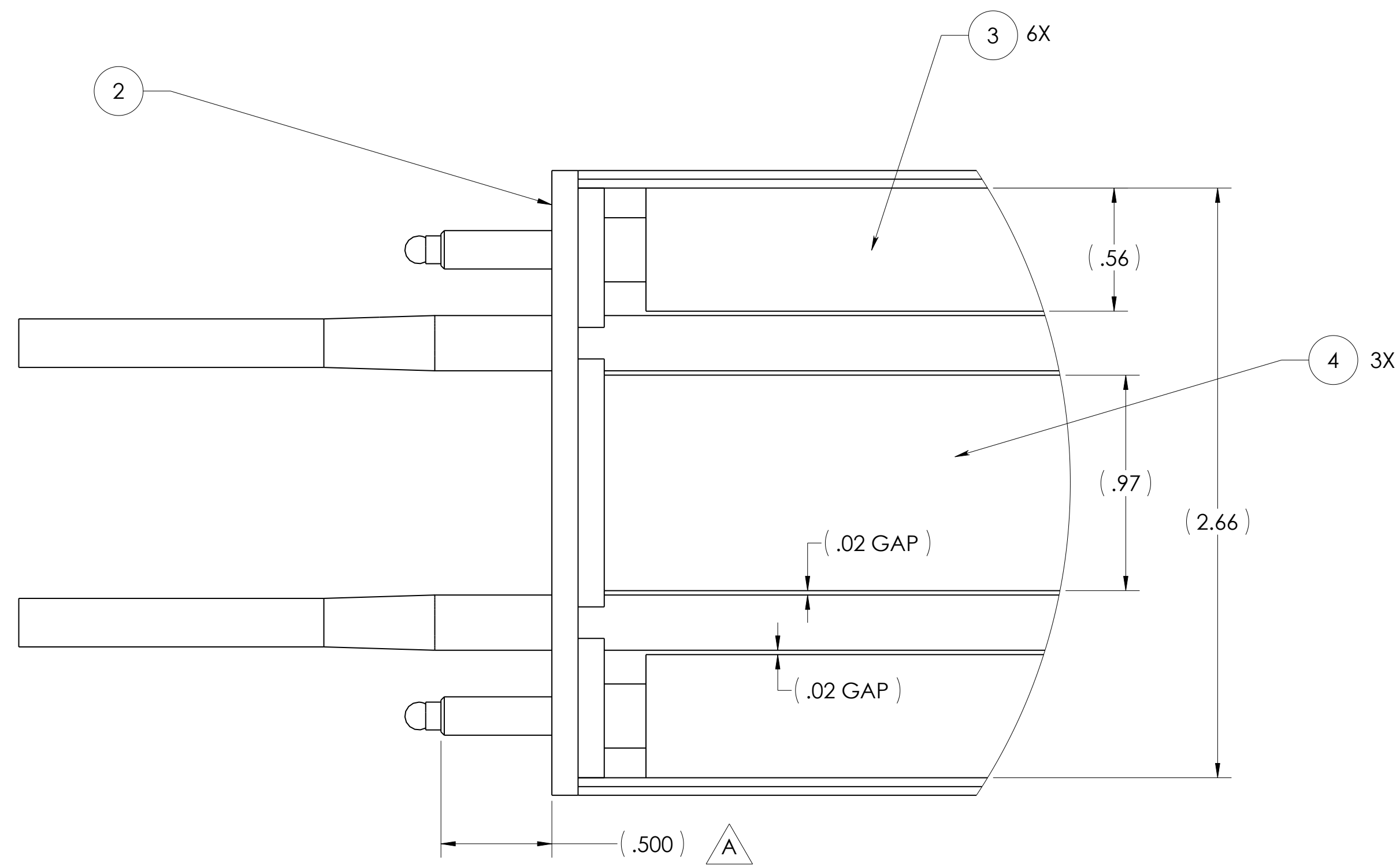
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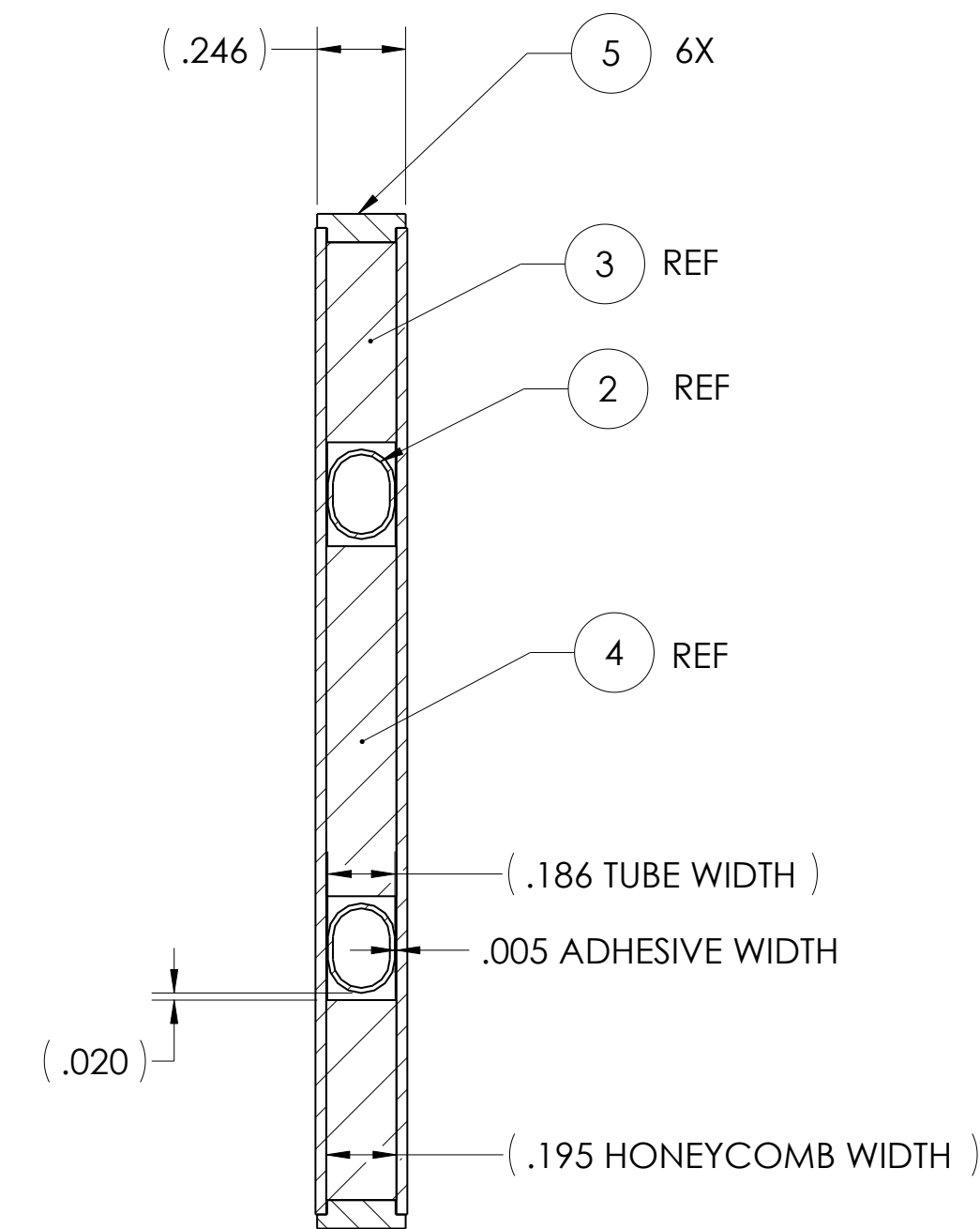
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DETAIL A SCALE 2 : 1



SECTION B-B SCALE 2 : 1

UNLESS OTHERWISE SPECIFIED		SHOP ORDERS		SER. NO.	ERNEST ORLANDO LAWRENCE	
X.X ± 0.1	FRAC. ± 1/64	ACCT. NO.	NO. REQD.	DATE ISSD	BERKELEY NATIONAL LABORATORY	
X.XX ± 0.01	ANGLES ± 30°	DEL. TO	DATE REQD.	DATE REQD.	UNIVERSITY OF CALIFORNIA - BERKELEY	
X.XXX ± 0.005	FINISH -	SURFACE TREATMENT		4.72mm FLAT TUBE STAVE SUB ASSEMBLY		
DO NOT SCALE PRINT		IDEN. METHOD	TAG			
THREADS ARE CLASS 2		PROJECT NUMBER	ATL-IP-ED-XXXX			
CHAMFER ENDS OF ALL SCREW THREADS 30°		PROJECT NAME	US ATLAS SILICON SUBSYSTEM	MICROFILMED:	DWG. TYPE	SHOWN ON
CUT ROUND, 1.5 THREAD RELIEF ON MACHINED THREADS		DWG. BY	W. K. MILLER	DATE 12/17/06	ASSY	27E301
BREAK EDGES .016 MAX. ON MACHINED WORK		CHK. BY	W. O. MILLER	DATE 12/17/06	PATENT CLEAR:	DESIGN ACCT. NO.
REMOVE BURRS, WELD SPLATTER & LOOSE SCALE		APPR. BY		DATE -	P1AP-11	AP6250
IN ACCORDANCE WITH ASME Y14.5m & B46.1				SCALE: 1:2		DO NOT SCALE PRINTS
				SHEET 2 OF 2		
				DWG. NO. 27E302		REV. A

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DWG. NO. nnXnnn4
SIZE -
REV. 1
SH. 1

DESCRIPTION	MATERIAL	MAT. LOCATION
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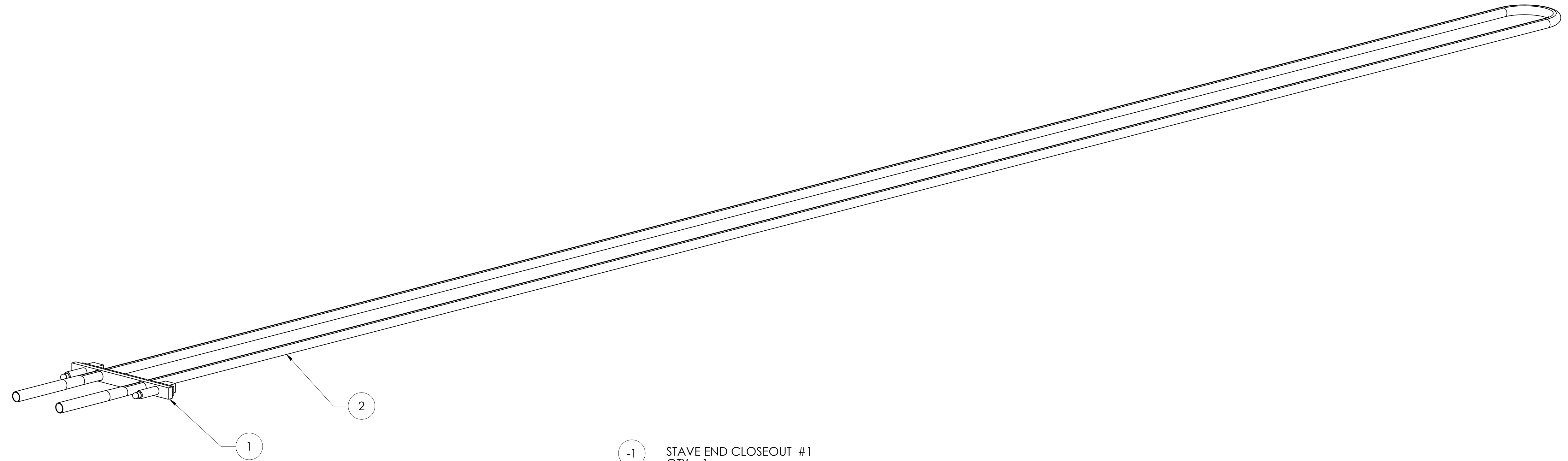
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① STAVE END CLOSEOUT #1
QTY : 1

NOTES:

1. ORIGINAL TUBE OUTER DIAMETER IS 7/32 in.

2	1	B7	1	27E304	COOLING TUBE	
1	1	B7	1	27E305-1	END CLOSEOUT SUB-ASSEMBLY	
ITEM NO	SHEET LOCATION	ZONE	QTY	PART DOCUMENT NUMBER	DESCRIPTION	REFERENCE DESIGNATION MATERIAL NOTES
UNLESS OTHERWISE SPECIFIED				SHOP ORDERS		
TOLERANCES		FRAC. ± 1/64		SER. NO. DATE ISSD		
X.X ± 0.1		ANGLES ± 30°		NO. REQD. DATE REQD.		
X.XX ± 0.01		FINISH -		ERNEST ORLANDO LAWRENCE BERKELEY NATIONAL LABORATORY UNIVERSITY OF CALIFORNIA - BERKELEY		
X.XXX ± 0.005		SURFACE TREATMENT		TUBE AND END CLOSEOUT 4.72 mm FLAT TUBE STAVE ASSEMBLY		
DO NOT SCALE PRINT				IDEN. METHOD TAG		
THREADS ARE CLASS 2				PROJECT NAME ATL-IP-ED-XXXX		
CHAMFER ENDS OF ALL SCREW THREADS 30°				PROJECT NUMBER US ATLAS SILICON SUBSYSTEM		
CUT ROUND, 1.5 THREAD RELIEF ON MACHINED THREADS				DWG. W. K. MILLER DATE 12/17/06		
BREAK EDGES .016 MAX. ON MACHINED WORK				CHK. W. O. MILLER DATE 12/17/06		
REMOVE BURRS, WELD SPLATTER & LOOSE SCALE				APR. -		
IN ACCORDANCE WITH ASME Y14.5m & B46.1				MICROFILMED: DWG. TYPE ASSY SHOWN ON 27E302 SCALE: 1:1.25 DO NOT SCALE PRINTS		
CHANGES				PATENT CLEAR: DESIGN ACCT. NO. P1AP-11 CATEGORY CIDE AP6250 DWG. NO. 27E303 SHEET 1 OF 2 SIZE REV. -		

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DWG. NO.	SIZE	REV.	SH.
nnXnnn4	-	2	

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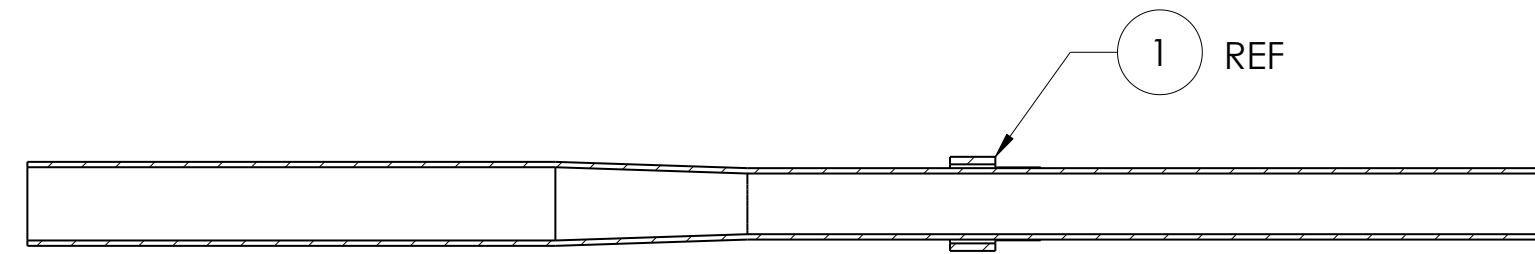
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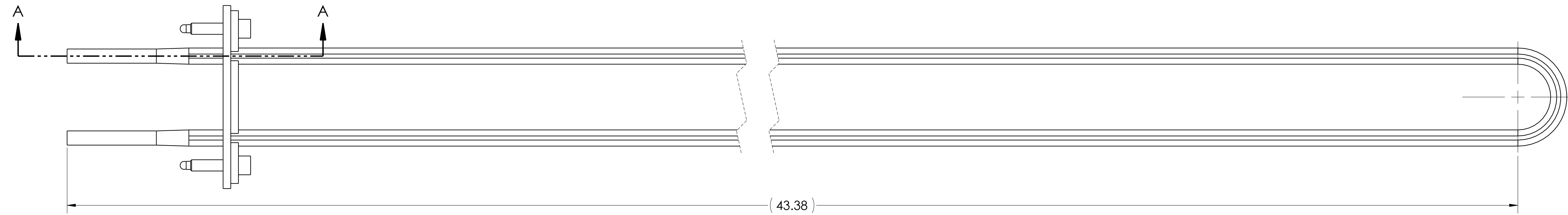
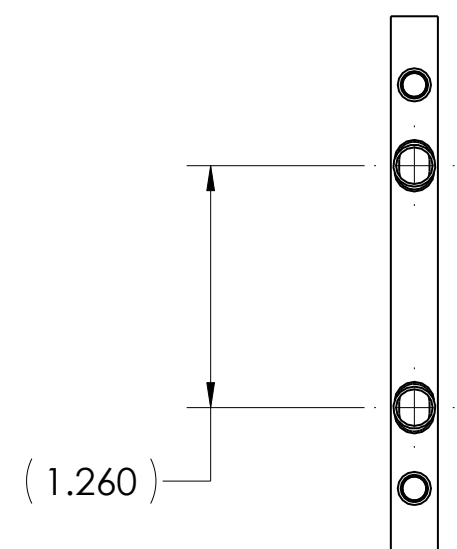
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SECTION A-A
SCALE 2:1



UNLESS OTHERWISE SPECIFIED		SHOP ORDERS		SER. NO.	ERNEST ORLANDO LAWRENCE	
X.X ± 0.1	FRAC. ± 1/64	ACCT. NO.	NO. REQD.	NO.	DATE ISSD	BERKELEY NATIONAL LABORATORY
X.XX ± 0.01	ANGLES ± 30°	DEL. TO	DATE REQD.	DATE REQD.		UNIVERSITY OF CALIFORNIA - BERKELEY
X.XXX ± 0.005	FINISH -	SURFACE TREATMENT		TUBE AND END CLOSEOUT 4.72 mm FLAT TUBE STAVE ASSEMBLY		
DO NOT SCALE PRINT		IDENT. METHOD TAG				
THREADS ARE CLASS 2		PROJECT NAME		SCALE: 1:1		
CHAMFER ENDS OF ALL SCREW THREADS 30°		PROJECT NUMBER		DO NOT SCALE PRINTS		
CUT ROUND, 1.5 THREAD RELIEF ON MACHINED THREADS		PROJECT NAME		MICROFILMED:	DWG. TYPE	SHOWN ON
BREAK EDGES .016 MAX. ON MACHINED WORK		DWG. W. K. MILLER		DATE 12/17/06	ASSY	27E302
REMOVE BURRS, WELD SPLATTER & LOOSE SCALE		CHK BY W. O. MILLER		DATE 12/17/06	PATENT CLEAR:	DESIGN ACCT. NO. P1AP-11
IN ACCORDANCE WITH ASME Y14.5m & B46.1		APR BY		DATE -	CATEGORY CIDE	AP6250
					DWG. NO.	27E303
					SIZE	
					REV.	-

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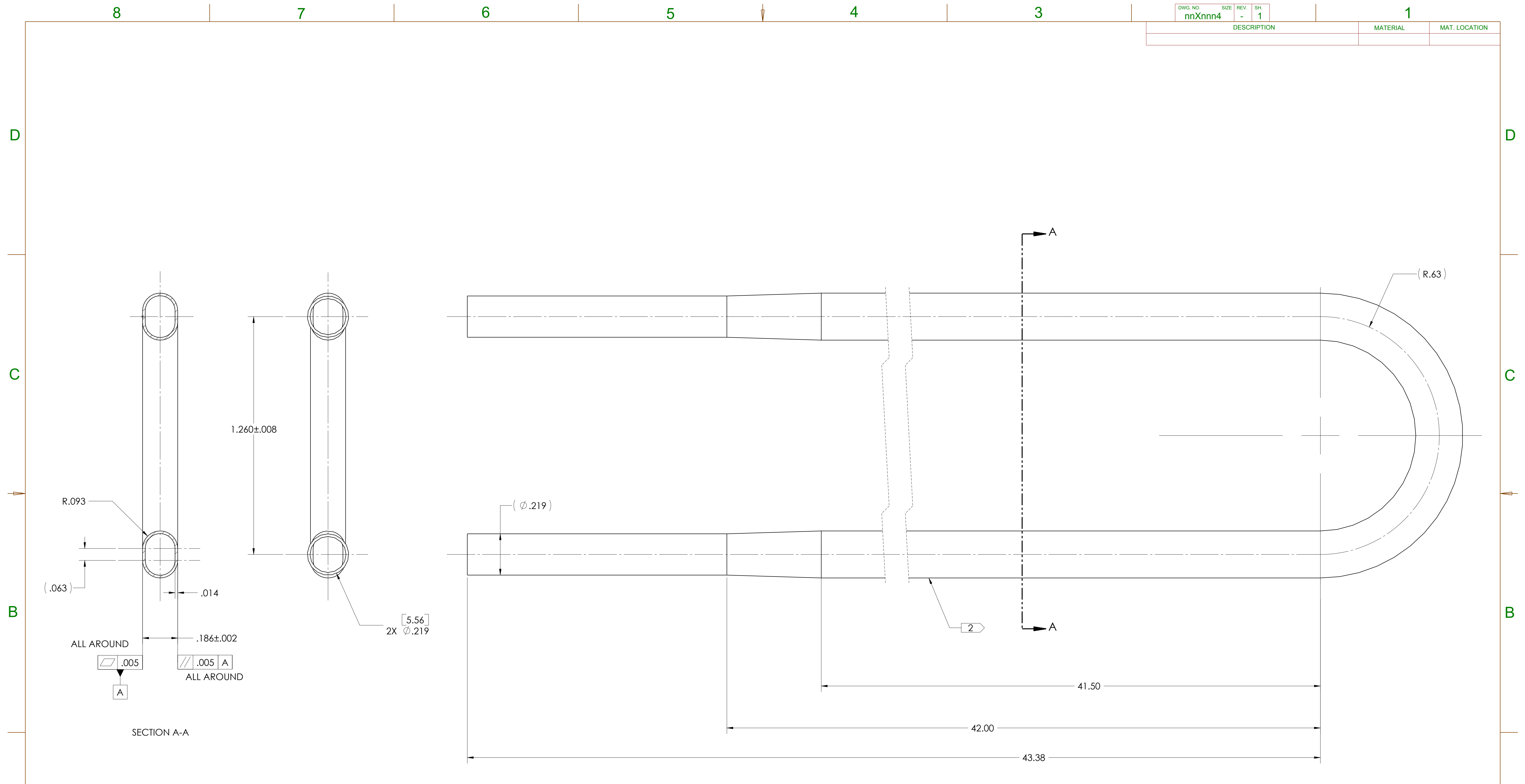
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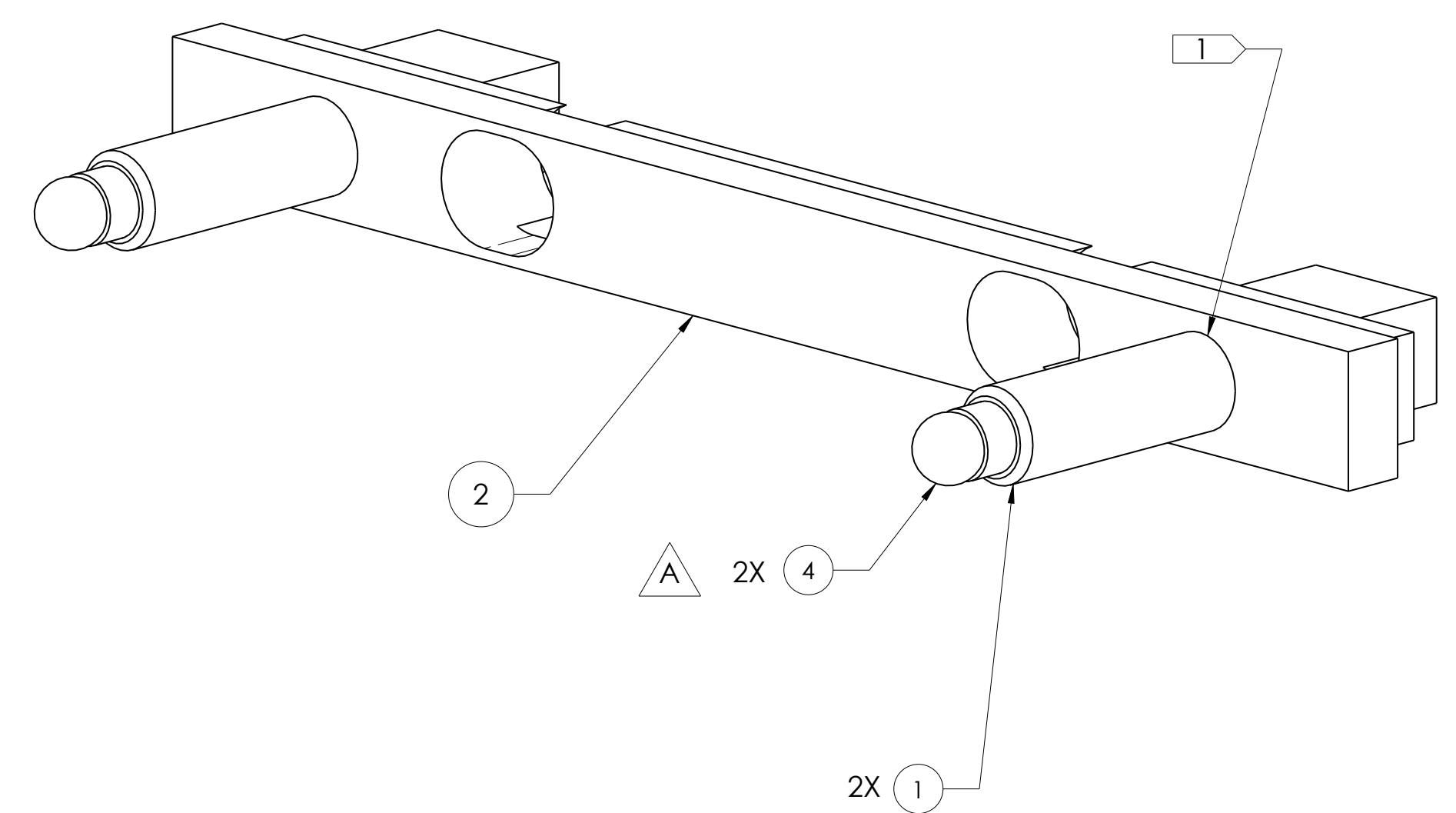
DWG. NO. nnXnnn4	SIZE -	REV. -	SH. 1	1
DESCRIPTION		MATERIAL	MAT. LOCATION	



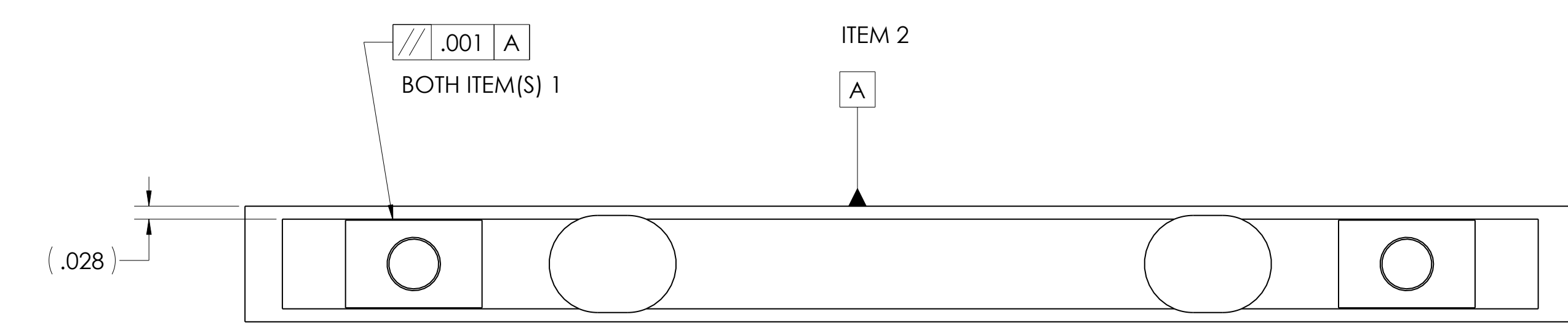
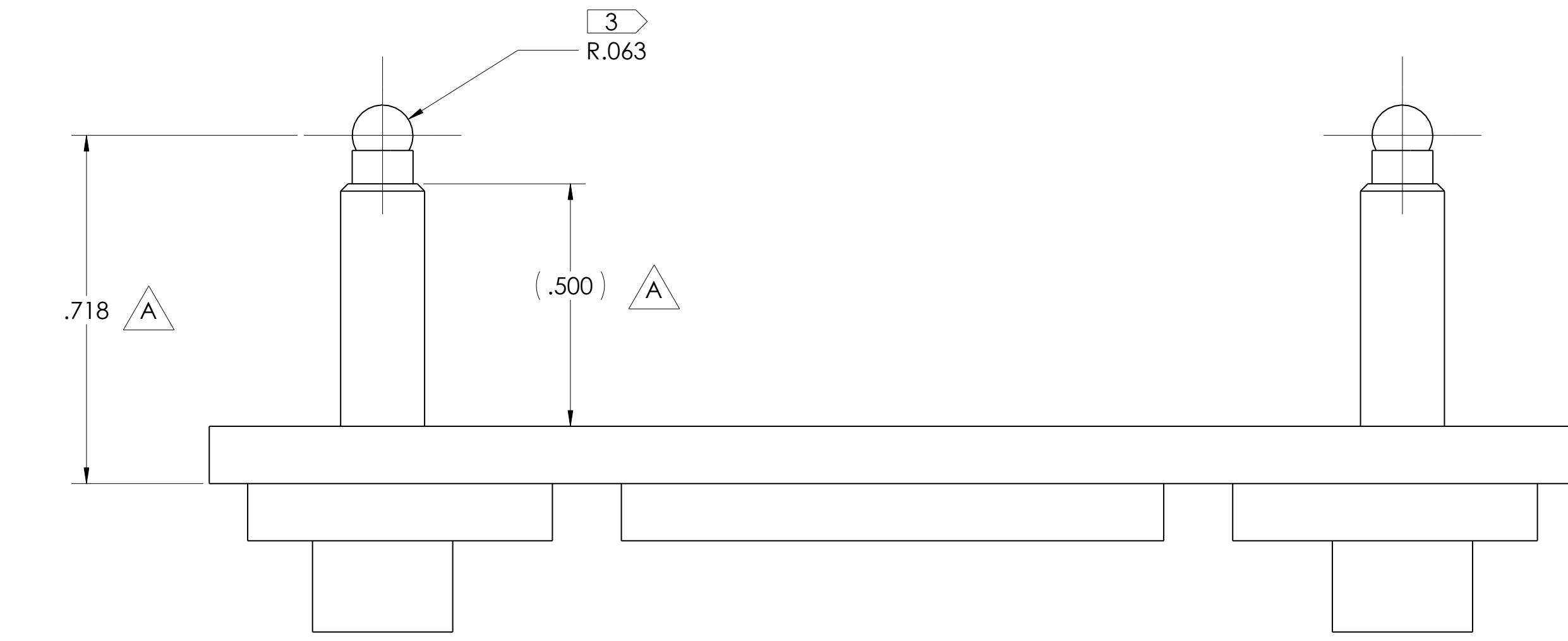
- NOTES:
- ORIGINAL EXTRUDED ALUMINUM TUBING 7/32 OUTER DIA. (.014 WALL THICKNESS).
 - FINISH: GRAY ANODIZE TUBE EXTERNAL SURFACES

REV				CHANGES				UNLESS OTHERWISE SPECIFIED		SHOP ORDERS		SER. NO. DATE ISSD		ERNEST ORLANDO LAWRENCE BERKELEY NATIONAL LABORATORY UNIVERSITY OF CALIFORNIA - BERKELEY			
-	-	-	-	-	-	-	-	X.X ± 0.1	FRAC. ± 1/64	ACCT. NO.	NO. REQD.	NO.	DATE	4.72 mm FLAT COOLING TUBE			
-	-	-	-	-	-	-	-	X.XX ± 0.01	ANGLES ± 30°	DEL. TO	DATE REQD.	DATE	ISSD	SCALE: 4:1			
-	-	-	-	-	-	-	-	X.XXX ± 0.005	FINISH: NOTE 2	SURFACE TREATMENT		DATE	REQD.	SHEET 1 OF 1			
DO NOT SCALE PRINT								PROJECT NUMBER		PROJECT NAME		MICROFILMED:		DWG. TYPE	SHOWN ON	SCALE: 4:1	DO NOT SCALE PRINTS
THREADS ARE CLASS 2								PROJECT NAME		PROJECT NAME		PATENT CLEAR:		PART	27E303	SHEET 1 OF 1	
CHAMFER ENDS OF ALL SCREW THREADS 30°								DWG. NO.		DWG. NO.		DESIGN ACCT. NO.		P1AP-11	AP6250	27E304	
CUT ROUND, 1.5 THREAD RELIEF ON MACHINED THREADS								BY		DATE		CATEGORY CIDE		-	-	-	
BREAK EDGES .016 MAX. ON MACHINED WORK								BY		DATE		APR		-		-	
REMOVE BURRS, WELD SPLATTER & LOOSE SCALE								BY		DATE		-		-		-	
IN ACCORDANCE WITH ASME Y14.5m & B46.1								BY		DATE		-		-		-	

DWG. NO.	SIZE	REV.	SH.	
nnXnnn4	A	1		
DESCRIPTION		MATERIAL	MAT. LOCATION	



(-1) STAVE END CLOSEOUT #1
QTY: 1



REAR VIEW

- NOTES:
- 1 PRESS FIT ITEM(S) 1 INTO ITEM 2. INTERFERENCE SHOULD BE 0.0000/0.0004".
 - 2. DIMENSIONS ARE IN INCHES.
 - 3 TOOLING BALL PART NO. 448-2 , INDUSTRIAL TECTONICS INC. SHANK ϕ .1255+0.0000/-0.0002.

4	MULT	C7		2	2	448-2	TOOLING BALL (SEE NOTE 3)	
3	2	B5		1		27E306-3	END CLOSEOUT #2	
2	1	C5			1	27E306-1	END CLOSEOUT #1	
1	MULT	MULT		2	2	27E307	CLOSEOUT PIN	
ITEM NO	SHEET LOCATION	ZONE	A3	A2	A1	PART DOCUMENT NUMBER	DESCRIPTION	REFERENCE DESIGNATION MATERIAL NOTES
UNLESS OTHERWISE SPECIFIED			SHOP ORDERS			SER. NO.	ERNEST ORLANDO LAWRENCE	
X.X ± 0.1			FRAC. ± 1/64			NO. REQD.	BERKELEY NATIONAL LABORATORY	
X.XX ± 0.01			ANGLES ± 30°			DATE ISSD	UNIVERSITY OF CALIFORNIA - BERKELEY	
X.XXX ± 0.005			FINISH -			DATE REQD.	END CLOSEOUT SUB ASSEMBLY	
DO NOT SCALE PRINT			SURFACE TREATMENT			4.72 mm FLAT TUBE STAVE ASSEMBLY		
THREADS ARE CLASS 2			IDEN METHOD TAG			SCALE: 4:1		
CHAMFER ENDS OF ALL SCREW THREADS 30°			PROJECT NAME			SHEET 1 OF 2		
CUT ROUND, 1.5 THREAD RELIEF ON MACHINED THREADS			PROJECT NO.			DO NOT SCALE PRINTS		
BREAK EDGES .016 MAX. ON MACHINED WORK			DWG. NO.			P1AP-11		
REMOVE BURRS, WELD SPLATTER & LOOSE SCALE			BY			AP6250		
IN ACCORDANCE WITH ASME Y14.5m & B46.1			CHK BY			27E305		
			APR -			A		

REV	DWG	CHK	ZONE	DATE	CHANGES
A				1-8-06	CHANGES REFLECT NEW TOOLING BALL

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DWG. NO. nnXnnn4 SIZE A SH. 2

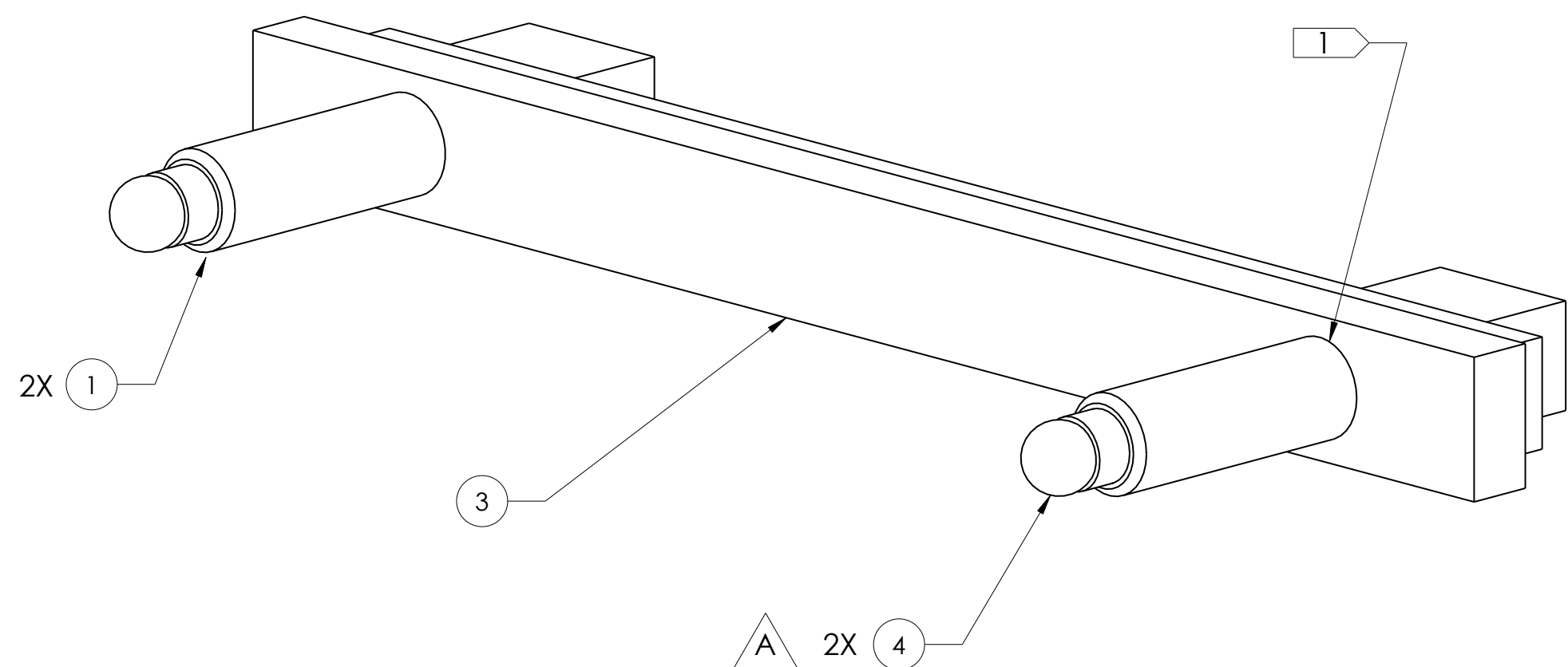
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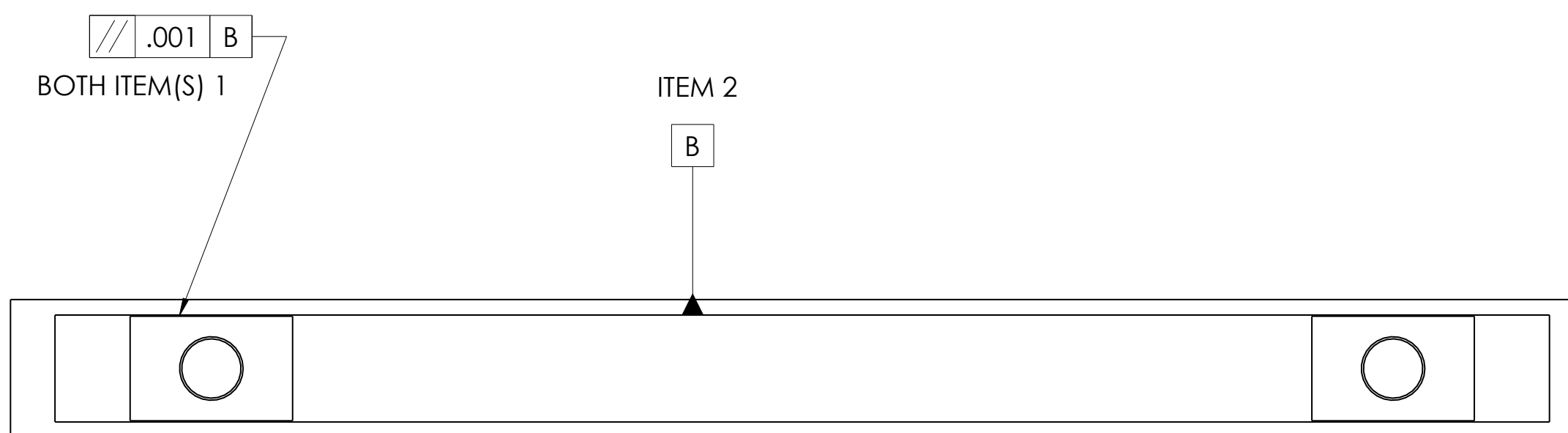
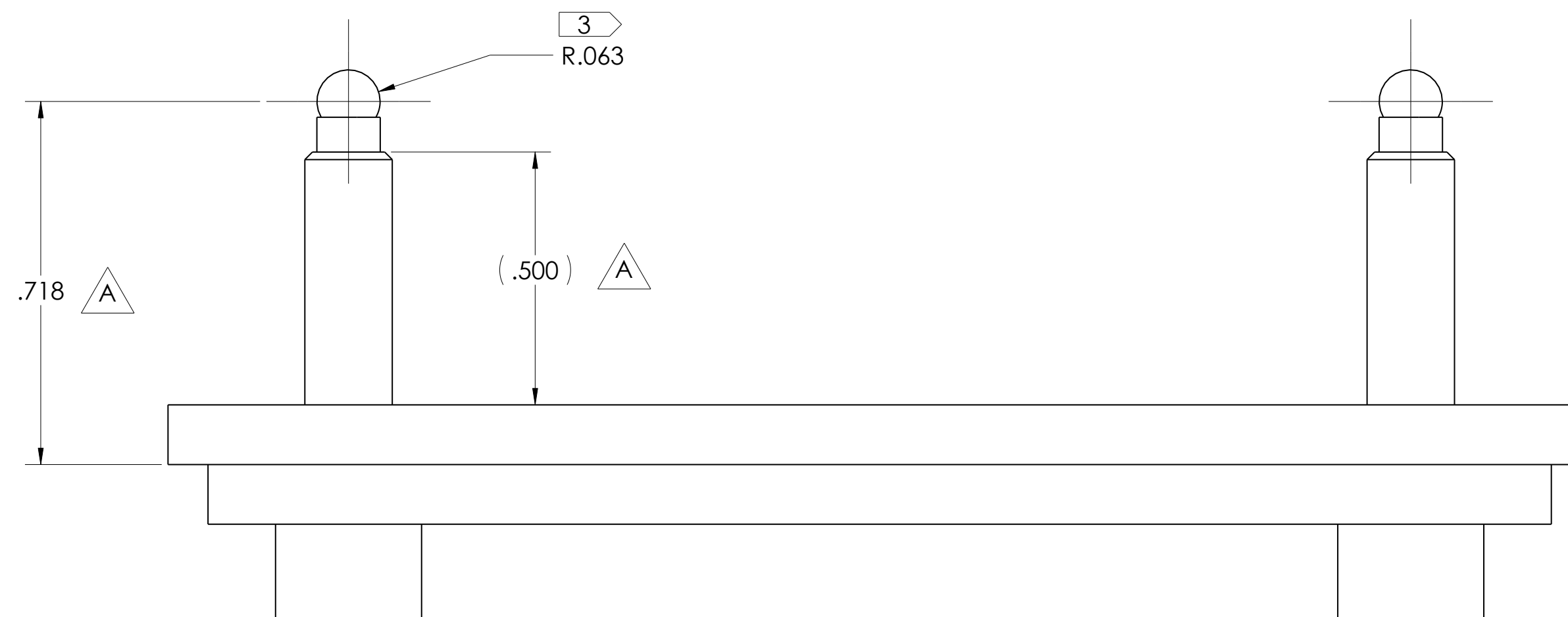
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-3 STAVE END CLOSEOUT #2 QTY: 1



REAR VIEW

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UNLESS OTHERWISE SPECIFIED		SHOP ORDERS		SER. NO.	ERNEST ORLANDO LAWRENCE	
X.X ± 0.1	FRAC. ± 1/64	ACCT. NO.	NO. REQD.	DATE ISSD	BERKELEY NATIONAL LABORATORY	
X.XX ± 0.01	ANGLES ± 30°	DEL. TO	DATE REQD.	DATE REQD.	UNIVERSITY OF CALIFORNIA - BERKELEY	
X.XXX ± 0.005	FINISH -	SURFACE TREATMENT		END CLOSEOUT SUB ASSEMBLY		
DO NOT SCALE PRINT		PROJECT NAME		4.72 mm FLAT TUBE STAVE ASSEMBLY		
THREADS ARE CLASS 2		PROJECT NUMBER		SCALE: 4:1		
CHAMFER ENDS OF ALL SCREW THREADS 30°		PROJECT NAME		DO NOT SCALE PRINTS		
CUT ROUND, 1.5 THREAD RELIEF ON MACHINED THREADS		DWG. BY		DATE	DWG. TYPE	SHOWN ON
BREAK EDGES .016 MAX. ON MACHINED WORK		W. K. MILLER		12/17/2006	ASSY	27E302
REMOVE BURRS, WELD SPLATTER & LOOSE SCALE		CHK BY		DATE	PATENT CLEAR:	DESIGN ACCT. NO.
IN ACCORDANCE WITH ASME Y14.5m & B46.1		W. O. MILLER		12/17/2006		AP6250
		APR -				DWG. NO. 27E305
						SIZE A
						REV. A

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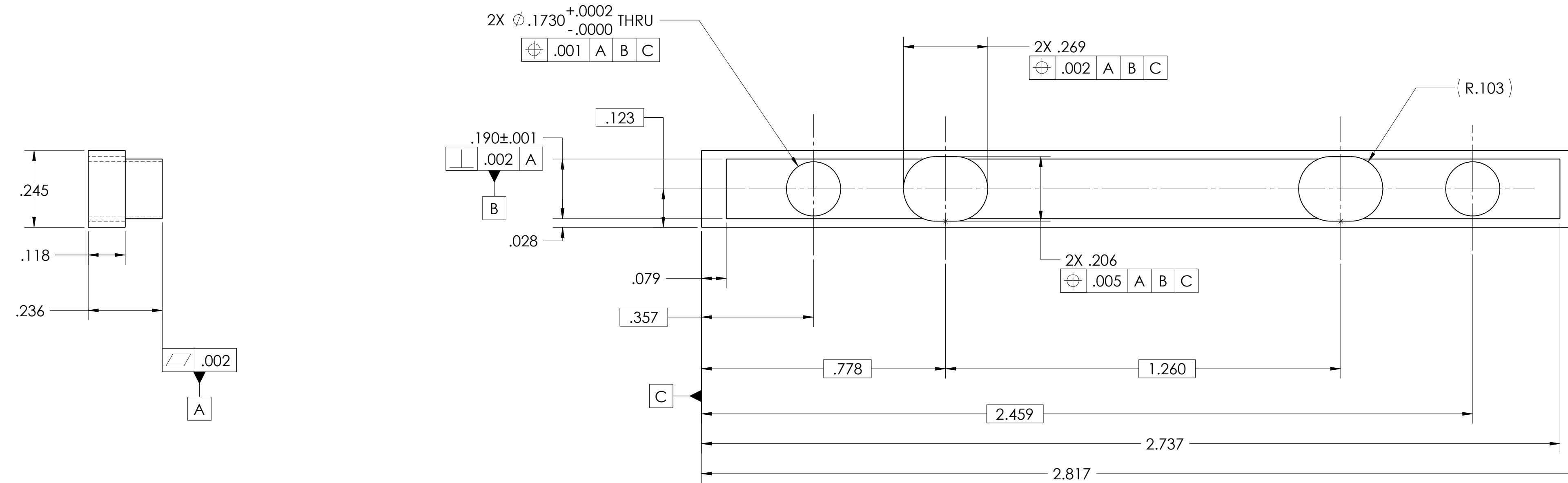
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DWG. NO. nnXnnn4	SIZE -	REV. -	SH. 1
DESCRIPTION		MATERIAL	MAT. LOCATION



-1 STAVE END CLOSEOUT PART #1
 QTY: 1
 MATERIAL: 6061-T6 ALUMINUM

NOTES:

1 FINISH: GRAY ANODIZE PART

UNLESS OTHERWISE SPECIFIED				SHOP ORDERS		SER. NO.	ERNEST ORLANDO LAWRENCE	
TOLERANCES		X.X ± 0.1		FRAC. ± 1/64		NO.	BERKELEY NATIONAL LABORATORY	
X.XX ± 0.01		ANGLES ± 30°		SURFACE TREATMENT		DATE ISSD	UNIVERSITY OF CALIFORNIA - BERKELEY	
X.XXX ± 0.005		FINISH -		DO NOT SCALE PRINT		DATE REQD	END CLOSEOUT	
THREADS ARE CLASS 2				PROJECT NAME		4.72 mm FLAT TUBE STAVE ASSEMBLY		SCALE: 4:1
CHAMFER ENDS OF ALL SCREW THREADS 30°				PROJECT NO.		US ATLAS SILICON SUBSYSTEM		DO NOT SCALE PRINTS
CUT ROUND, 1.5 THREAD RELIEF ON MACHINED THREADS				DWG. NO.		PART		27E305
BREAK EDGES .016 MAX. ON MACHINED WORK				BY		DATE		12/17/2006
REMOVE BURRS, WELD SPLATTER & LOOSE SCALE				CHK		DATE		12/17/2006
IN ACCORDANCE WITH ASME Y14.5m & B46.1				APR		DATE		-
REV	DWG	CHK	ZONE	DATE	CHANGES			

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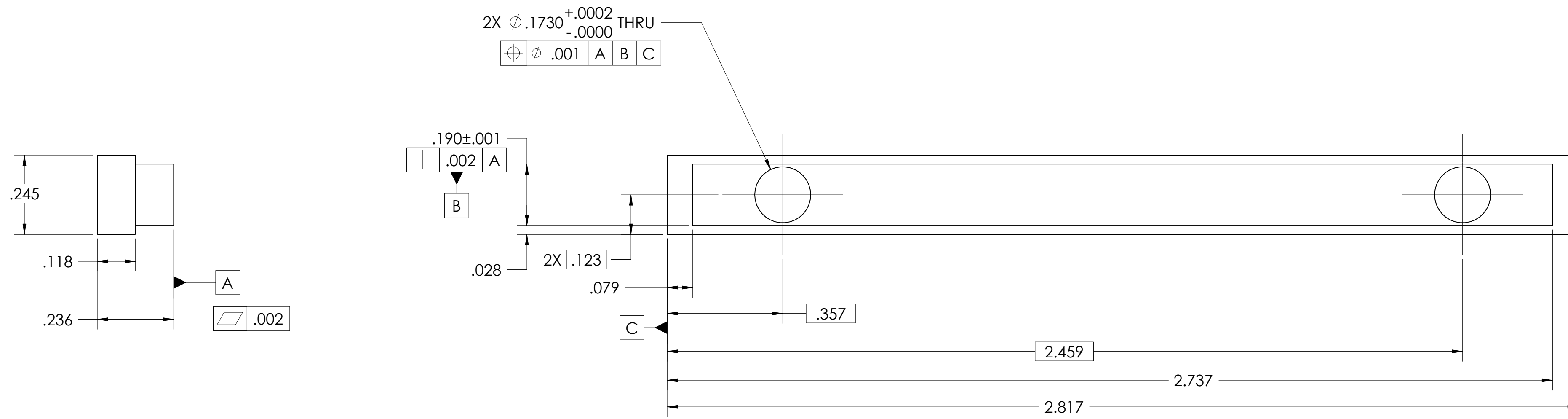
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-3 STAVE END CLOSEOUT PART #2
 QTY: 1
 MATERIAL: 6061-T6 ALUMINUM

UNLESS OTHERWISE SPECIFIED		SHOP ORDERS		SER. NO.	ERNEST ORLANDO LAWRENCE	
X.X ± 0.1	FRAC. ± 1/64	ACCT. NO.	NO. REQD.	DATE ISSD	BERKELEY NATIONAL LABORATORY	
X.XX ± 0.01	ANGLES ± 30°	DEL. TO	DATE REQD.	DATE REQD.	UNIVERSITY OF CALIFORNIA - BERKELEY	
X.XXX ± 0.005	FINISH -	SURFACE TREATMENT		END CLOSEOUT 4.72 mm FLAT TUBE STAVE ASSEMBLY		
DO NOT SCALE PRINT		IDEN. METHOD TAG				
THREADS ARE CLASS 2		PROJECT NAME		SCALE: 4:1		
CHAMFER ENDS OF ALL SCREW THREADS 30°		PROJECT NUMBER		DO NOT SCALE PRINTS		
CUT ROUND, 1.5 THREAD RELIEF ON MACHINED THREADS		PROJECT NAME		MICROFILMED:		
BREAK EDGES .016 MAX. ON MACHINED WORK		DWG. NO.		DWG. TYPE		
REMOVE BURRS, WELD SPLATTER & LOOSE SCALE		BY		PART		
IN ACCORDANCE WITH ASME Y14.5m & B46.1		CHK		SHOWN ON		
		BY		SCALE: 4:1		
		DATE		SHEET 2 OF 2		
		DATE		CATEGORY CIDE		
		DATE		DWG. NO.		
		DATE		SIZE		
		DATE		REV.		
		DATE		-		

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DWG. NO. nnXnnn4	SIZE A	REV. 1	SHEET 1
DESCRIPTION		MATERIAL	MAT. LOCATION

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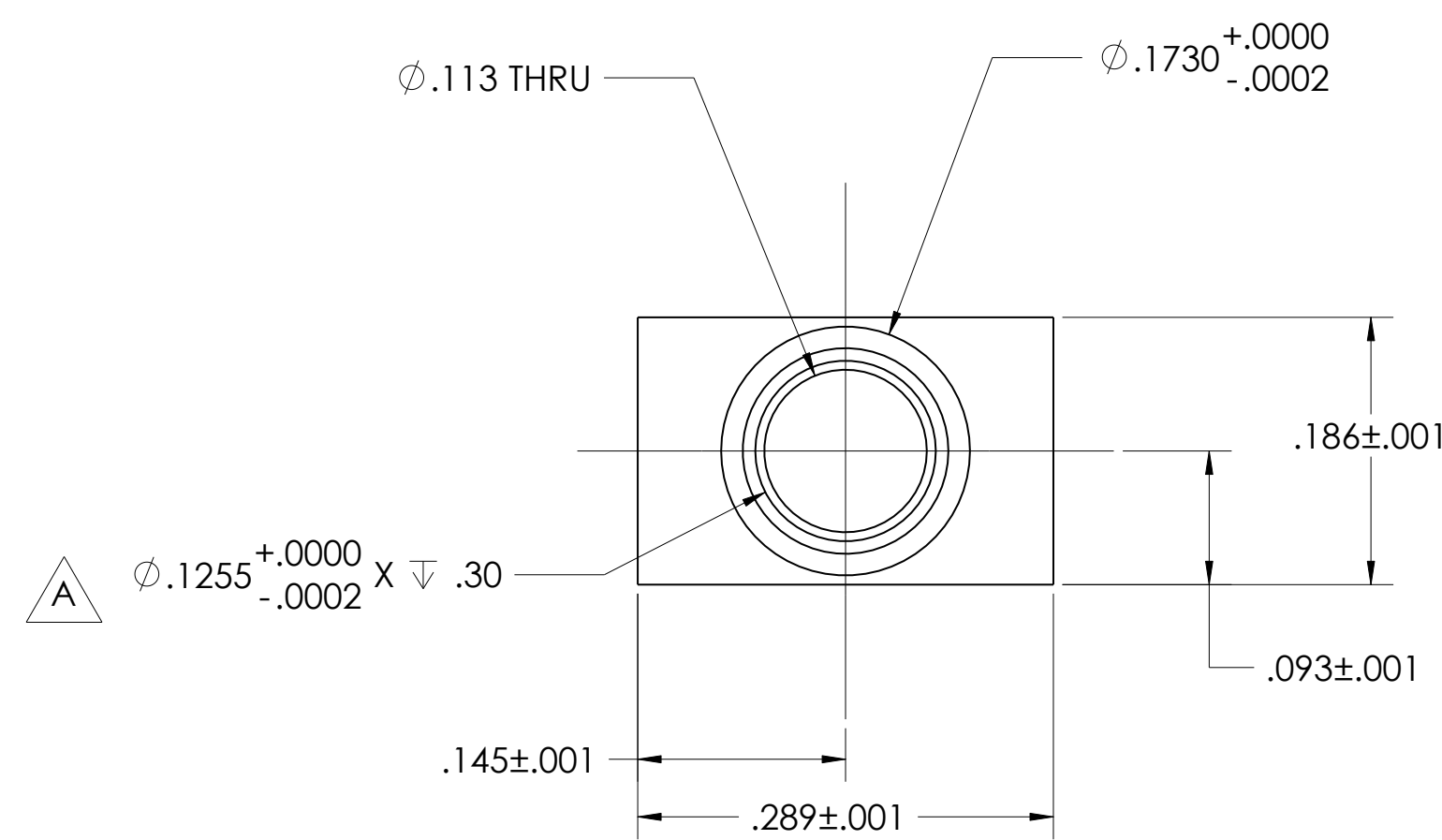
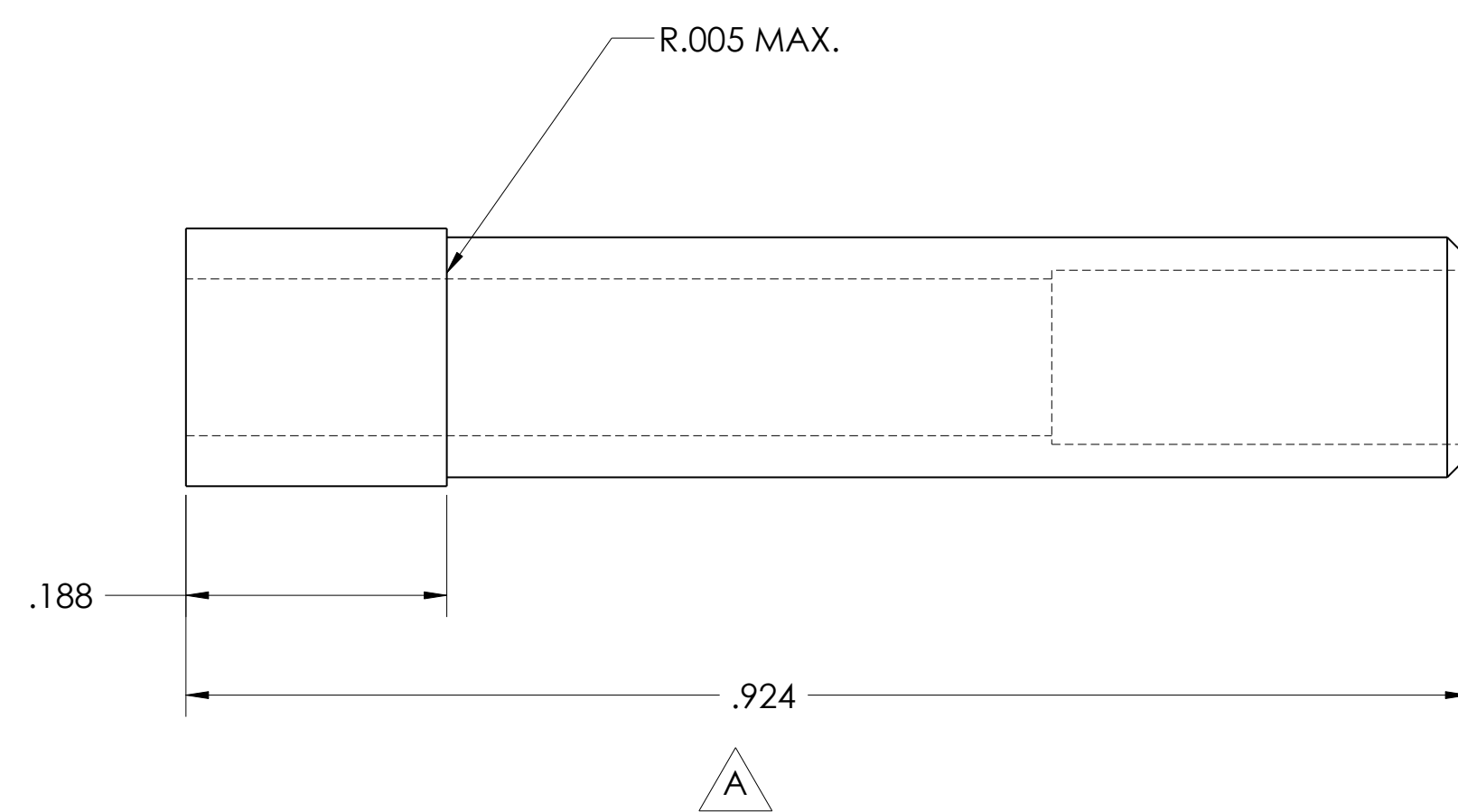
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NOTES:

- 1. MATERIAL: 303 STAINLESS STEEL

				UNLESS OTHERWISE SPECIFIED		SHOP ORDERS		SER. NO. DATE ISSD		ERNEST ORLANDO LAWRENCE BERKELEY NATIONAL LABORATORY		
				X.X ± 0.1 FRAC. ± 1/64		ACCT. NO. NO. REQD.		DATE ISSD		UNIVERSITY OF CALIFORNIA - BERKELEY		
				X.XX ± 0.01 ANGLES ± 30°		DEL. TO		DATE REQD.				
				X.XXX ± 0.005 FINISH -		SURFACE TREATMENT				CLOSEOUT PIN 4.72 mm TUBE STAVE ASSEMBLY		
				DO NOT SCALE PRINT		IDEN. METHOD TAG				MICROFILMED: DWG. TYPE SHOWN ON SCALE: 8:1 DO NOT SCALE PRINTS		
				THREADS ARE CLASS 2		PROJECT NUMBER				PART 27E305 SHEET 1 OF 1		
				CHAMFER ENDS OF ALL SCREW THREADS 30°		PROJECT NAME				CATEGORY CIDE DWG. NO. SIZE REV.		
				CUT ROUND, 1.5 THREAD RELIEF ON MACHINED THREADS		DWG. W. K. MILLER		DATE 12/17/2006		P1AP-11 AP6250 27E307 A		
				BREAK EDGES .016 MAX. ON MACHINED WORK		CHK BY W. O. MILLER		DATE 12/17/2006		PATENT CLEAR:		
				REMOVE BURRS, WELD SPLATTER & LOOSE SCALE		APR -		DATE -				
				IN ACCORDANCE WITH ASME Y14.5m & B46.1								
REV	DWG	CHK	ZONE	DATE	CHANGES							

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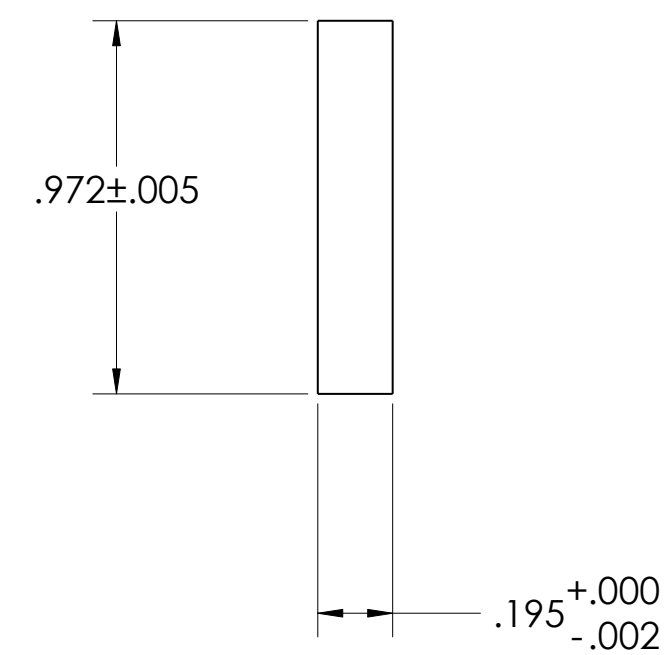
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DWG. NO.	SIZE	REV.	SH.
nnXnnn4	-	-	1

DESCRIPTION	MATERIAL	MAT. LOCATION



-1 HONEYCOMB PART #1
 QTY: 1
 MATERIAL: ULTRACORE UCF-119-3/16 -3.5
 GRAPHITE FIBER HONEYCOMB WITH
 RS-3 CYANATE ESTER RESIN

NOTES:
 1. UNITS ARE IN INCHES.

UNLESS OTHERWISE SPECIFIED		SHOP ORDERS		SER. NO.	ERNEST ORLANDO LAWRENCE	
TOLERANCES	X.X ± 0.1	FRAC. ± 1/64	ACCT. NO.	NO. REQD.	DATE ISSD	BERKELEY NATIONAL LABORATORY
	X.XX ± 0.01	ANGLES ± 30°	DEL. TO	DATE REQD.		UNIVERSITY OF CALIFORNIA - BERKELEY
	X.XXX ± 0.005	FINISH -	SURFACE TREATMENT			HONEYCOMB CORE MATERIAL
DO NOT SCALE PRINT			IDEN METHOD TAG			4.72 mm FLAT TUBE STAVE ASSEMBLY
THREADS ARE CLASS 2			PROJECT NUMBER			
CHAMFER ENDS OF ALL SCREW THREADS 30°			PROJECT NAME			
CUT ROUND, 1.5 THREAD RELIEF ON MACHINED THREADS			DWG. BY	DATE		
BREAK EDGES .016 MAX. ON MACHINED WORK			W. K. MILLER	12/17/2006		
REMOVE BURRS, WELD SPLATTER & LOOSE SCALE			CHK BY	DATE		
IN ACCORDANCE WITH ASME Y14.5m & B46.1			W. O. MILLER	12/17/2006		
			APR BY	DATE		

REV	DWG	CHK	ZONE	DATE	CHANGES

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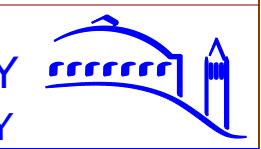
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MICROFILMED:	DWG. TYPE	SHOWN ON	SCALE:	DO NOT SCALE PRINTS
	PART	27E302	2:1	
PATENT CLEAR:	DESIGN ACCT. NO.	CATEGORY CODE	DWG. NO.	SIZE
	P1AP-11	AP6250	27E308	
				REV.
				-



HONEYCOMB CORE MATERIAL
 4.72 mm FLAT TUBE STAVE ASSEMBLY

SHEET 1 OF 2

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DWG. NO.	SIZE	REV.	SH.
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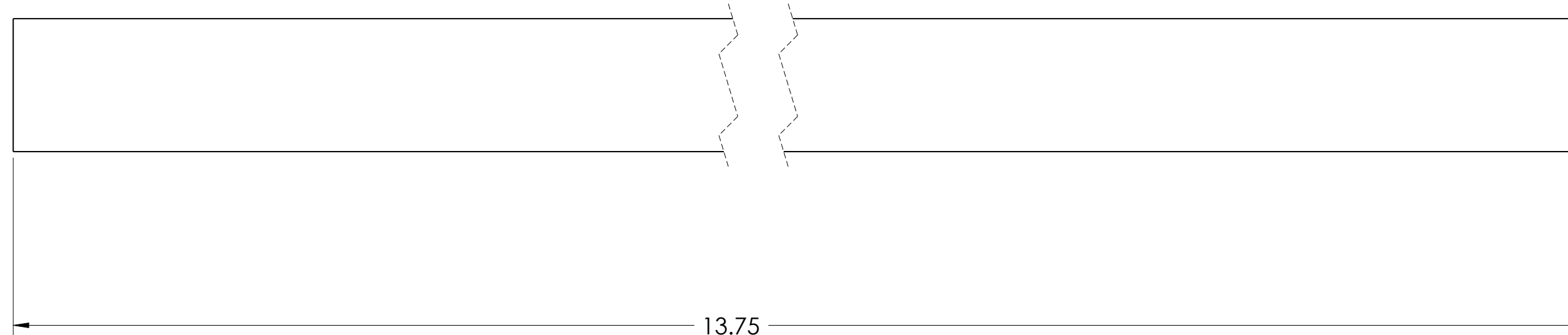
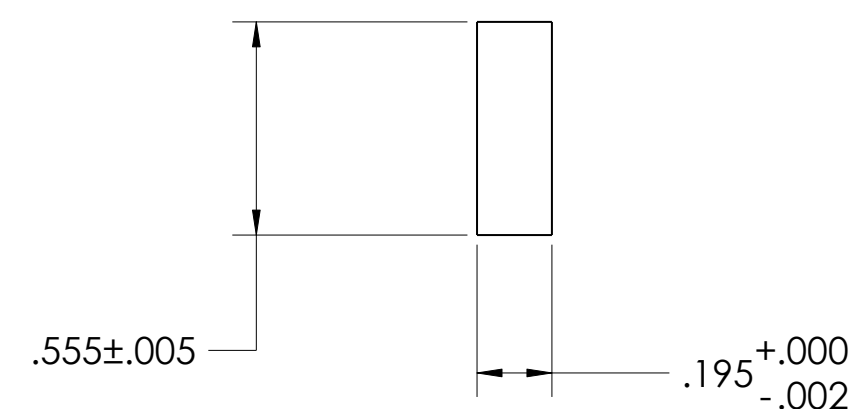
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①-3 HONEYCOMB PART #2
 QTY : 2
 MATERIAL: ULTRACORE UCF-119-3/16 -3.5
 GRAPHITE FIBER HONEYCOMB WITH
 RS-3 CYANATE ESTER RESIN

UNLESS OTHERWISE SPECIFIED		SHOP ORDERS		SER. NO.	ERNEST ORLANDO LAWRENCE	
X.X ± 0.1	FRAC. ± 1/64	ACCT. NO.	NO. REQD.	DATE ISSD	BERKELEY NATIONAL LABORATORY	
X.XX ± 0.01	ANGLES ± 30°	DEL. TO	DATE REQD.	DATE REQD.	UNIVERSITY OF CALIFORNIA - BERKELEY	
X.XXX ± 0.005	FINISH -	SURFACE TREATMENT		HONEYCOMB CORE MATERIAL		
DO NOT SCALE PRINT		IDEN. METHOD	TAG	4.72 mm FLAT TUBE STAVE ASSEMBLY		
THREADS ARE CLASS 2		PROJECT NUMBER	ATL-IP-ED-XXXX	SCALE: 2:1		
CHAMFER ENDS OF ALL SCREW THREADS 30°		PROJECT NAME	US ATLAS SILICON SUBSYSTEM	MICROFILMED:	DWG. TYPE	SHOWN ON
CUT ROUND, 1.5 THREAD RELIEF ON MACHINED THREADS		DWG. BY	W. K. MILLER	DATE	PART	27E302
BREAK EDGES .016 MAX. ON MACHINED WORK		CHK. BY	W. O. MILLER	DATE	DATE	12/17/06
REMOVE BURRS, WELD SPLATTER & LOOSE SCALE		APR. BY		DATE	PATENT CLEAR:	
IN ACCORDANCE WITH ASME Y14.5m & B46.1					DESIGN ACCT. NO.	CATEGORY CIDE
					P1AP-11	AP6250
					DWG. NO.	27E308
					SCALE:	2:1
					DO NOT SCALE PRINTS	
					SHEET 2 OF 2	
					SIZE	
					REV.	-

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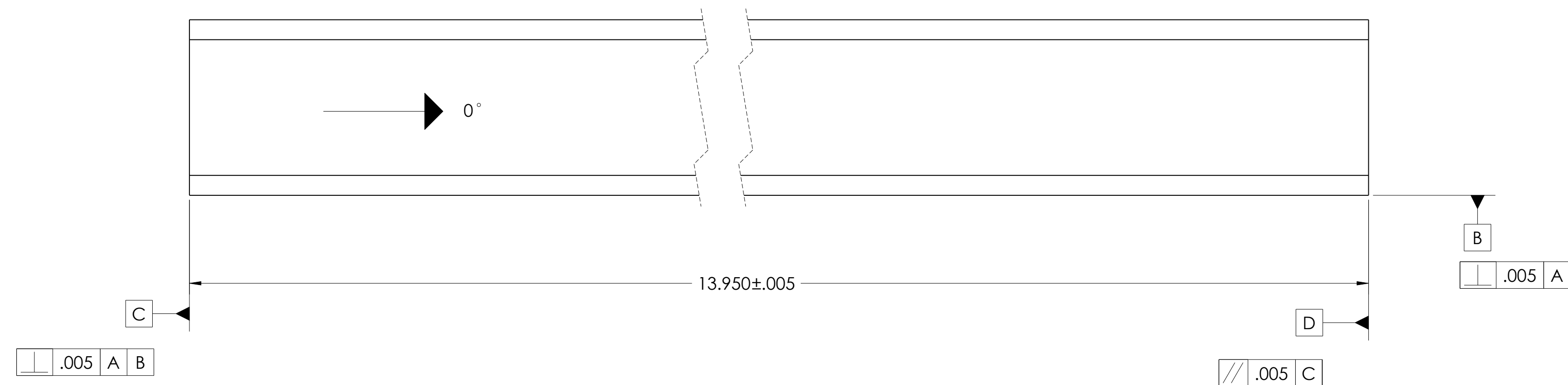
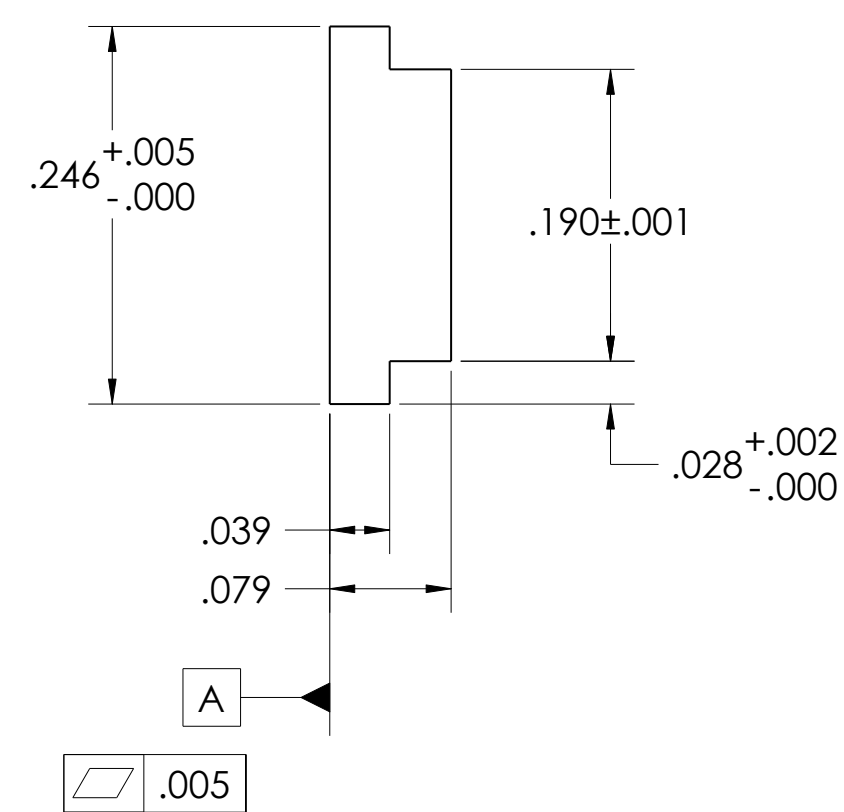
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DWG. NO.	SIZE	REV.	SH.
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DESCRIPTION	MATERIAL	MAT. LOCATION



NOTES:

1. K13D2U 90fsm FIBER AREAL WEIGH T/EX 1515 CYANATE ESER RESIN (250 °F CURE) 34% RESIN CONTENT. 6" UNITAPE WIDTH (BRYTE TECHNOLOGY).
2. FIBER ORIENTATION: (90,0,0,0,0/S).
3. FIBER VOLUME FRACTION 60%.
4. UNITS ARE IN INCHES.

UNLESS OTHERWISE SPECIFIED		SHOP ORDERS		SER. NO.	ERNEST ORLANDO LAWRENCE	
TOLERANCES	X.X ± 0.1	FRAC. ± 1/64	ACCT. NO.	NO. REQD.	DATE ISSD	BERKELEY NATIONAL LABORATORY
	X.XX ± 0.01	ANGLES ± 30°	DEL. TO	DATE REQD.	DATE REQD.	UNIVERSITY OF CALIFORNIA - BERKELEY
	X.XXX ± 0.005	FINISH -	SURFACE TREATMENT	SIDE COMPOSITE CLOSEOUT		
DO NOT SCALE PRINT			IDEN. METHOD	4.72 mm STAVE ASSEMBLY		
THREADS ARE CLASS 2			PROJECT NUMBER	MICROFILMED:		
CHAMFER ENDS OF ALL SCREW THREADS 30°			PROJECT NAME	DWG. TYPE	SHOWN ON	SCALE: 8:1
CUT ROUND, 1.5 THREAD RELIEF ON MACHINED THREADS			DWG. W. K. MILLER	PART	27E302	DO NOT SCALE PRINTS
BREAK EDGES .016 MAX. ON MACHINED WORK			DATE 12/17/2006	DATE 12/17/2006	DATE 12/17/2006	SHEET 1 OF 1
REMOVE BURRS, WELD SPLATTER & LOOSE SCALE			CHK BY W. O. MILLER	DATE 12/17/2006	PATENT CLEAR:	DESIGN ACCT. NO. P1AP-11
IN ACCORDANCE WITH ASME Y14.5m & B46.1			APR -	DATE -	CATEGORY CIDE	DWG. NO. 27E309
REV	DWG	CHK	ZONE	DATE	CHANGES	

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DWG. NO. nnXnnn4	SIZE -	REV. -	SH. 1
DESCRIPTION		MATERIAL	MAT. LOCATION

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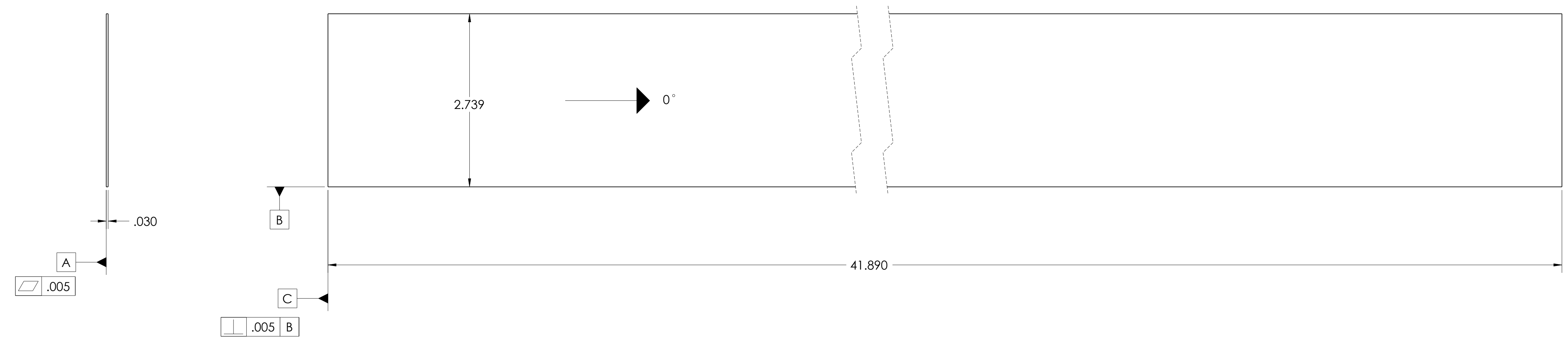
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NOTES:

1. K13D2U 90fsm FIBER AREAL WEIGHT/EX 1515 CYANATE ESER RESIN (250 °F CURE) 34% RESIN CONTENT. 6" UNITAPE WIDTH (BRYTE TECHNOLOGY).
2. FIBER ORIENTATION: (90,0,0,0/S).
3. FIBER VOLUME FRACTION 60%.
4. DIMENSIONS ARE IN INCHES.

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UNLESS OTHERWISE SPECIFIED		SHOP ORDERS		SER. NO.	ERNEST ORLANDO LAWRENCE	
TOLERANCES	X.X ± 0.1	FRAC. ± 1/64	ACCT. NO.	NO. REQD.	DATE ISSD	BERKELEY NATIONAL LABORATORY
	X.XX ± 0.01	ANGLES ± 30°	DEL. TO	DATE REQD.		UNIVERSITY OF CALIFORNIA - BERKELEY
	X.XXX ± 0.005	FINISH -	SURFACE TREATMENT			COMPOSITE FACESHEET
DO NOT SCALE PRINT			IDEN. METHOD	TAG	4.72 mm TUBE STAVE ASSEMBLY	
THREADS ARE CLASS 2			PROJECT NUMBER	ATL-IP-ED-XXXX	SCALE: 1:1	
CHAMFER ENDS OF ALL SCREW THREADS 30°			PROJECT NAME	US ATLAS SILICON SUBSYSTEM	DO NOT SCALE PRINTS	
CUT ROUND, 1.5 THREAD RELIEF ON MACHINED THREADS			DWG. BY	W. K. MILLER	DATE	12/17/2006
BREAK EDGES .016 MAX. ON MACHINED WORK			CHK. BY	W. O. MILLER	DATE	12/17/2006
REMOVE BURRS, WELD SPLATTER & LOOSE SCALE			APR. BY	-	DATE	-
IN ACCORDANCE WITH ASME Y14.5m & B46.1						
REV	DWG	CHK	ZONE	DATE	CHANGES	

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MICROFILMED:	DWG. TYPE	SHOWN ON	SCALE:	DO NOT SCALE PRINTS
PATENT CLEAR:	PART	27E302	1:1	
DESIGN ACCT. NO.	CATEGORY CODE	DWG. NO.	SIZE	REV.
P1AP-11	AP6250	27E310		-



COMPOSITE FACESHEET
4.72 mm TUBE STAVE ASSEMBLY

SHEET 1 OF 1