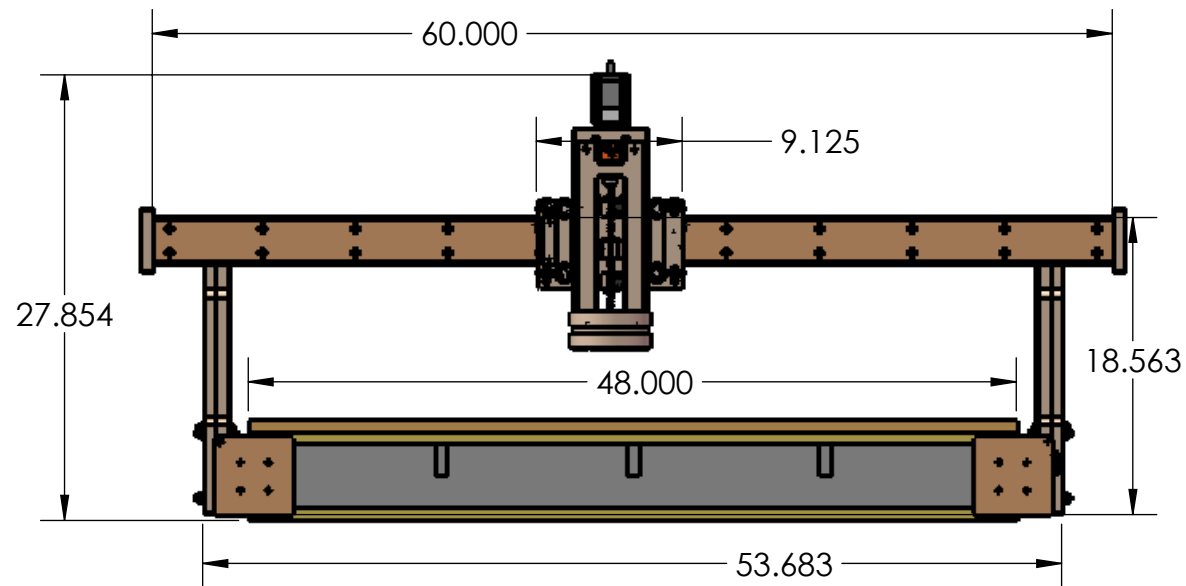
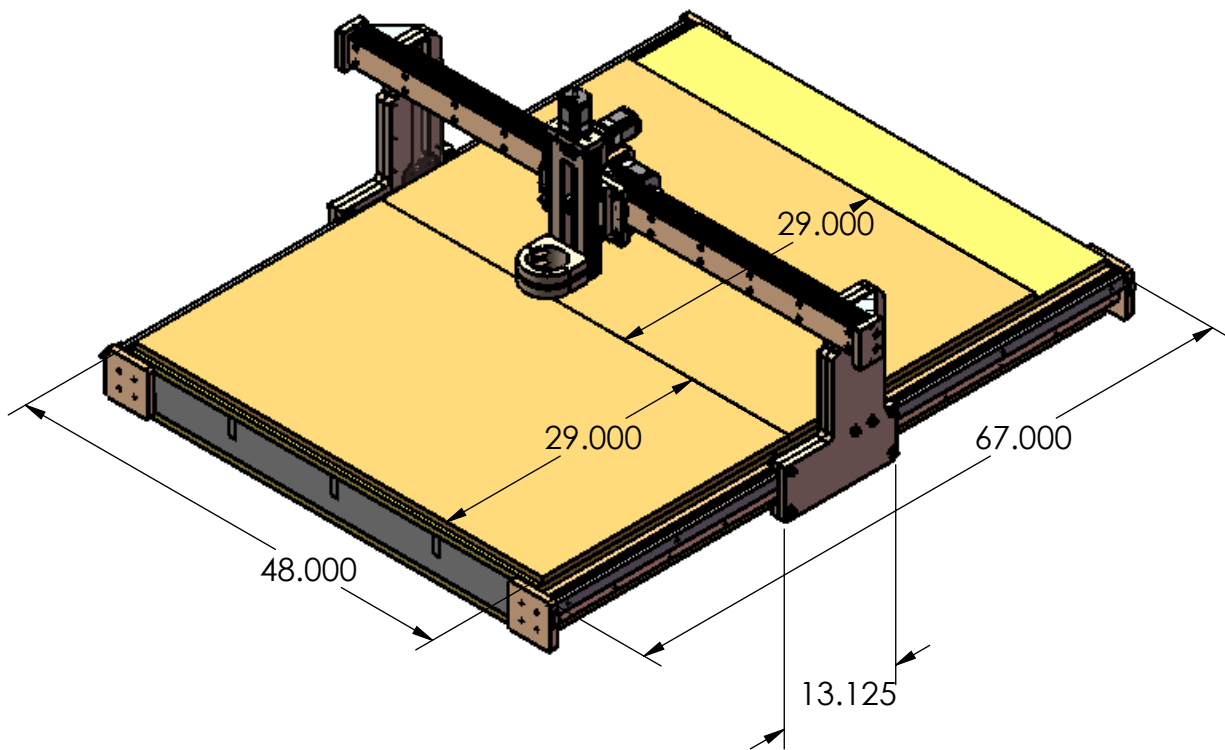


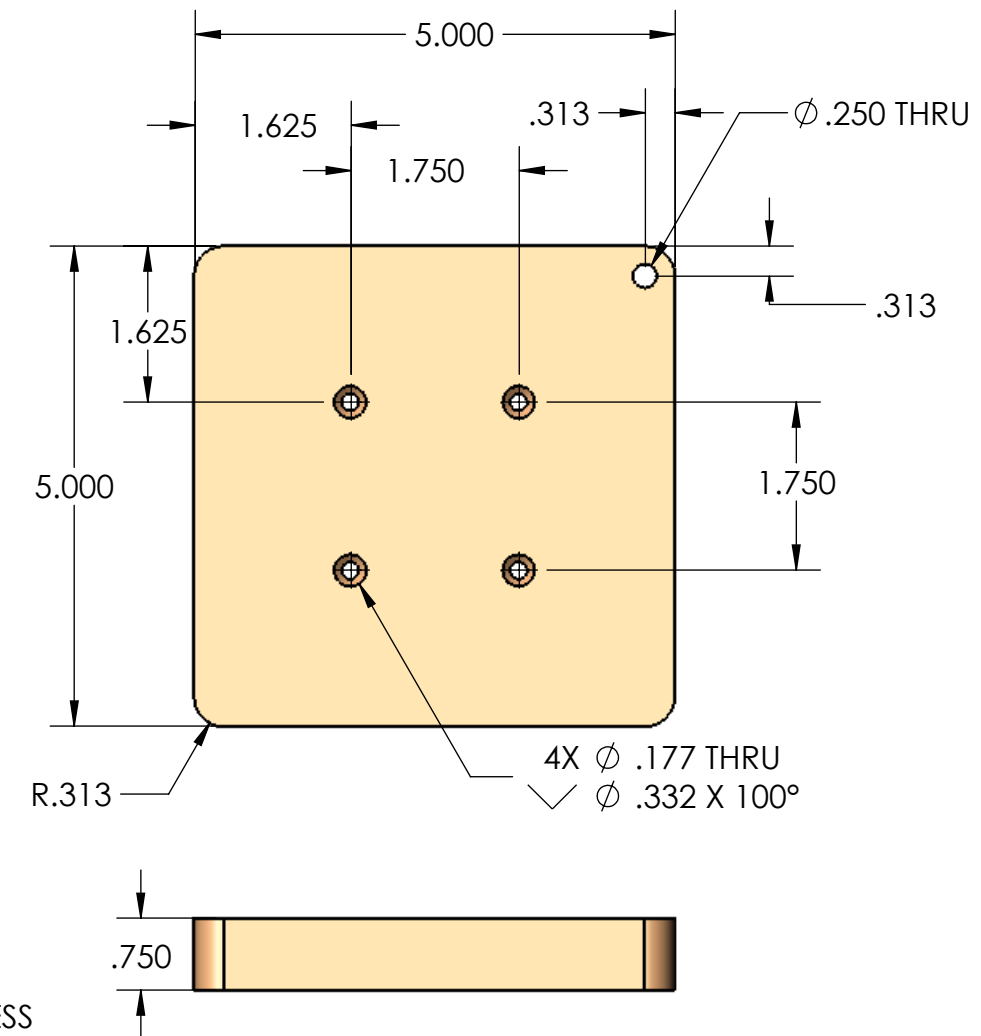
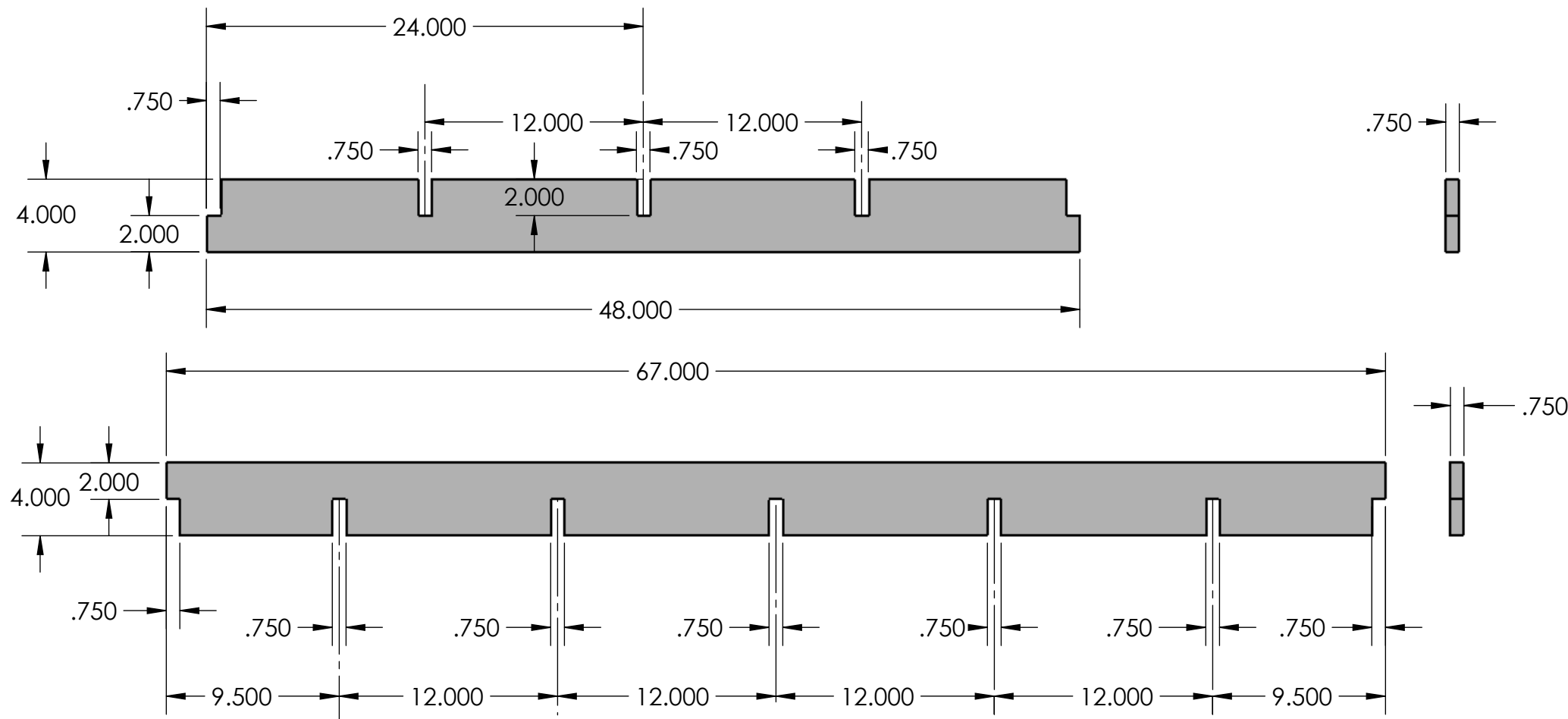
**WE MAY NOT HAVE THE
RIGHT TOOL OR KNOW
HOW TO USE IT BUT
WE GET HER DONE!**



CUTTING AREA 50.875 X 53.875

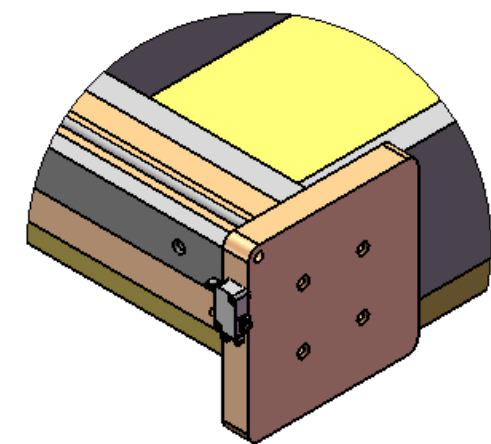
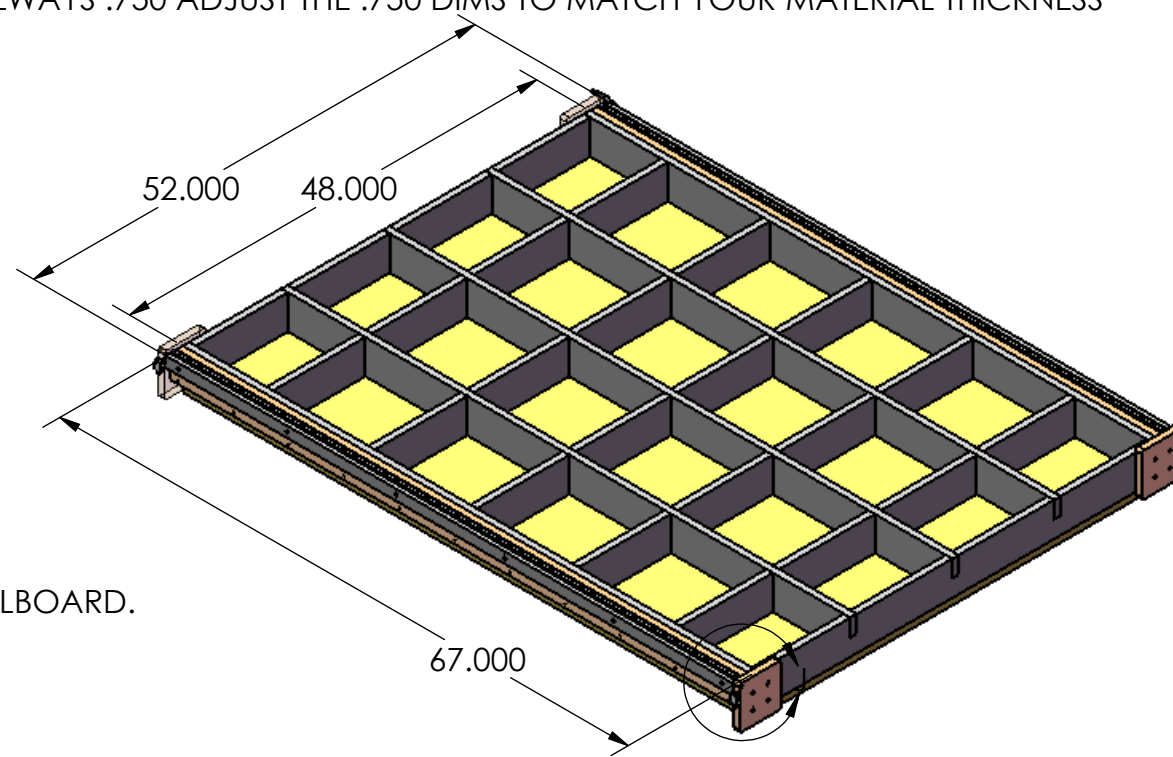


ITEM NO.	QTY.	PART NUMBER	DESCRIPTION	Material
1	1	Y-Z ASSY PLATE		
	1	ITEM 56	X AXIS MAIN PLATE	MAKE FROM TRUEBOND .75 THICK PLYWOOD
	8	RM2-2RS v-groove bearing	V-GROOVE BEARING	VXB.COM \$2.95 EA
	2	92240A624	Steel Hex Head Cap Screw	18-8 sst sfl McMaster-Carr
	1	LEAD SCREW NUT MOUNT	MAKE FROM PLYWOOD	
	1	alternate drive assy		
	1	Item 10	X-AXIS MOOTR MOUNT	MAKE FROM .75 TRUEBOND PLYWOOD
	1	ITEM 11	NEMA 24 Stepping Motor (425 oz-in 1/4" dual shaft)	BUILDYOURCNC \$49.00
	1	273711	9 TOOTH Sprocket #25 Roller Chain	MCMaster-CARR \$5.61
	1	ITEM 13	MOTOR MOUNT SPACER	MAKE FROM TRUEBOND PLYWOOD
	2	6663K110	20 tooth idler sprocket	\$15.95 Build your own cnc
	1	single link assy		
	1	ITEM 15	#25 CHAIN .25 PITCH \$11.18 FOR 10 FEET	E-BAY OR AMAZON
	2	90598A031	Tee Nut Insert 3/8-16	MCMaster-CARR
	2	92949A624	3/8-16 BUTTON HEAD CAP SCREW	MCMaster-CARR
	2	ITEM 18	BEARING FLOATING BLOCK - SHORT	MAKE FROM TRUEBOND .75 PLYWOOD
	1	ITEM 19	LOAD BLOCK	MAKE FROM TRUE BOND PLYWOOD
	4	90835A200	DOWEL NUT 12MM LG CENTER 1/4-20	BUY ON EBAY or 90835A200 mcmaster-carr
	2	92196A542	SHCS 1/4-20 X 1	MCMaster-CARR
	2	92240A632	Hex Head Cap Screw 3/8-16 X 2	MCMaster-CARR \$5.63 10 PACK
	1	ITEM 24	3/8 5 START .2 LEAD SCREW NUT	\$27.95 - BUILDYOURCNC
	2	92198A634	Hex Head Cap Screw 3/8-16 X 2.5	MCMaster-CARR \$5.70 10 PACK
	8	93298A130	Nylon-Insert Hex Locknut 3/8-16	\$8.49 PACK 50
	2	90598A050	Tee Nut Insert 1/4-20 (5/16 DRILL)	MCMaster-CARR
	2	92949A624	3/8-16 BUTTON HEAD CAP SCREW	MCMaster-CARR
	4	D3V-11G6-1C25-K	Mechanical roller proximity swifch.	OMRON
	2	92673A113	Hex Nut 1/4"-20 Screw Size, 7/16" Width, 7/32" Height	ASTM F594 18-8 Stainless Steel
2	1	8020 Y AXIS gantry assy		
	1	ITEM 27	GANTRY ALUM BEAM	8020-1530 LITE X 60 INCHES LG, 8020 INC.
	2	ITEM 28	Y AXIS GANTRY PLATE	MAKE FROM .75 TRUEBOND PLYWOOD
	1	ITEM 11	NEMA 24 Stepping Motor (425 oz-in 1/4" dual shaft)	BUILDYOURCNC \$49.00
	2	ITEM 29	DRIVE SHAFT 24 INCHES	8893K204 MCMaster-CARR
	2	6389K443	BEARING, FLANGED .2500 ID	MCMaster-CARR
	2	273711	9 TOOTH Sprocket #25 Roller Chain	MCMaster-CARR \$5.61
	4	6663K110	20 tooth idler sprocket	\$15.95 Build your own cnc
	8	RM2-2RS v-groove bearing	V-GROOVE BEARING	VXB.COM \$2.95 EA
	8	92510A805	spacer .75 OD x .38 ID x .75 lg	Alum, McMaster-Carr
	2	14105	CORNER BRACKET FROM 8020 INC. EBAY \$11.15	
	24	single link assy		
	1	ITEM 15	#25 CHAIN .25 PITCH \$11.18 FOR 10 FEET	E-BAY OR AMAZON
	2	ITEM 54	Y AXIS PLATE STIFFENER AND CHAIN GUARD	MAKE FROM TRUEBOND PLYWOOD
	2	ITEM 55	CHAIN COVER	1/4 PLYWOOD
	2	ITEM 61	LOWER BEARING SPACER	MAKE FROM TRUEBOND .75 THICK PLYWOOD
	1	ITEM 62	CENTER MOTOR MOUNT	MAKE FROM TRUEBOND .75 THICK PLYWOOD
	1	ITEM 51	CENTER MOTOR MOUNT FLANGE	MAKE FROM TRUEBOND .75 THICK PLYWOOD
	1	Y AXIS RAIL ASSY-60 inches		
	1	ITEM 64	X AXIS RAIL SUPPORT	MAKE FROM TRUEBOND .75 THICK PLYWOOD
	2	ITEM 53	BEARING RAIL 60 INCHES	8893K204 MASTER-CARR
	2	ITEM 55	CHAIN ANCHOR AND GANTRY END STOP	MAKE FROM TRUEBOND .75 THICK PLYWOOD
	8	92949A634	BUTTON HEAD CAP SCREW 3/8-16 X 2.5 LONG	18-8 SST STL
	4	92949A628	3/8-16 BUTTON HEAD CAP SCREW 1.5 LG	MCMaster-CARR
	12	93298A130	Nylon-Insert Hex Locknut 3/8-16	\$8.49 PACK 50
	2	6412K11	Shaft Coupling 1/4 X 1/4	MCMaster-CARR
3	1	TABLE TOP 6 x 8 grid		
	5	ITEM 33	TORSION BOX GRID 67 INCHES LONG	.75 THICK MDF
	7	ITEM 34	TORSION BOX GRID 48 INCHES	.75 MDF
	2	ITEM 35	TORSION BOX TOP AND BOTTOM	48 X 67 X .75 MDF
	2	ITEM 36	SPOIL BOARD - LEFT OVER FROM TORION BOX TOP AND BOTTOM	48 X 29 X .75 MDF
	4	ITEM 37	END STOPS - CHAIN ANCHORS	MAKE FROM TRUEBOND .75 PLYWOOD
	1	-	CHAIN TENSIONER - MAKE FROM 1/4-20 X 2 INCH LG BOLT	
	1	ITEM 38	CHAIN TENSIONER	MAKE FROM 1/4-20 X 2.5 BOLT
	2	91847A029	Hex Thin (Jam) Nut 1/4"-20 Screw Size, 7/16" Width, 5/32" Height	18-8 SST STL
	2	7779K14	Miniature Snap-Acting Switch ROLLER	
	2	X AXIS RAIL ASSY-8 foot		
	1	ITEM 2	Y AXIS RAIL SUPPORT 67 INCHES	MAKE FROM TRUEBOND PLYWOOD
	2	ITEM 2	BEARING RAIL 67 INCHES	8893K204 MCMaster-CARR
	1	ITEM 61	Y AXIS RAIL SPACER	MAKE FROM TRUEBOND .75 PLYWOOD
	2	ITEM 53	CHAIN SUPPORT	MAKE FROM TRUEBOND PLYWOOD
4	1	z-axis frame assy		
	1	ITEM 56	Z AXIS FRAME	MAKE FROM TRUEBOND PLYWOOD
	2	ITEM 47	13 INCH RAIL	8893K204 MCMaster-CARR
	1	ITEM 3	3/8 .2 lead 5 start lead screw	\$2.10 PER INCH 12 INCHES REQ \$25.20
	1	2401K13 MCMaster-CARR	3/8 TO 1/4 SHAFT COUPLING - LOVEJOY	BUILDYOURCNC
	2	94141800	Set Screw Shaft Collar 3/8 ID	\$11.00 BUILD YOUR CNC. COM
	2	6389K624	nylon bushing 3/8 id, .5 od x .75lg	\$7.2 McMaster-Carr
	4	90598A050	Tee Nut Insert 1/4-20 (5/16 DRILL)	\$3.94 PACK OF 5 MCMaster-CARR
	2	90835A200	DOWEL NUT 12MM LG CENTER 1/4-20	MCMaster-CARR
	1	ITEM 1	ROUTER MOUNT	MAKE FROM .75 PUREBOND PLYWOOD
	1	ITEM 2	C-CUP ROUTER MOUNT	MAKE FROM .75 PUREBOND PLYWOOD
	1	ITEM 48	Z AXIS MOTOR MOUNT	MAKE FROM TRUEBOND .75 THICK PLYWOOD
	1	ITEM 11	NEMA 24 Stepping Motor (425 oz-in 1/4" dual shaft)	BUILDYOURCNC \$49.00
	1	ITEM 63	Z-AXIS LIMIT TAB	MAKE FROM 1/4 INCH THICK PLYWOOD

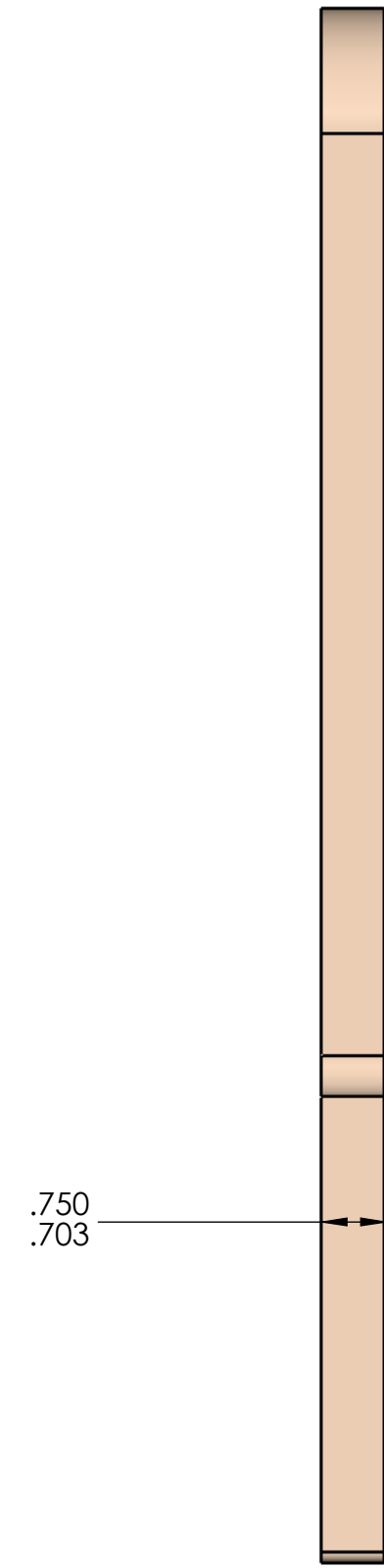
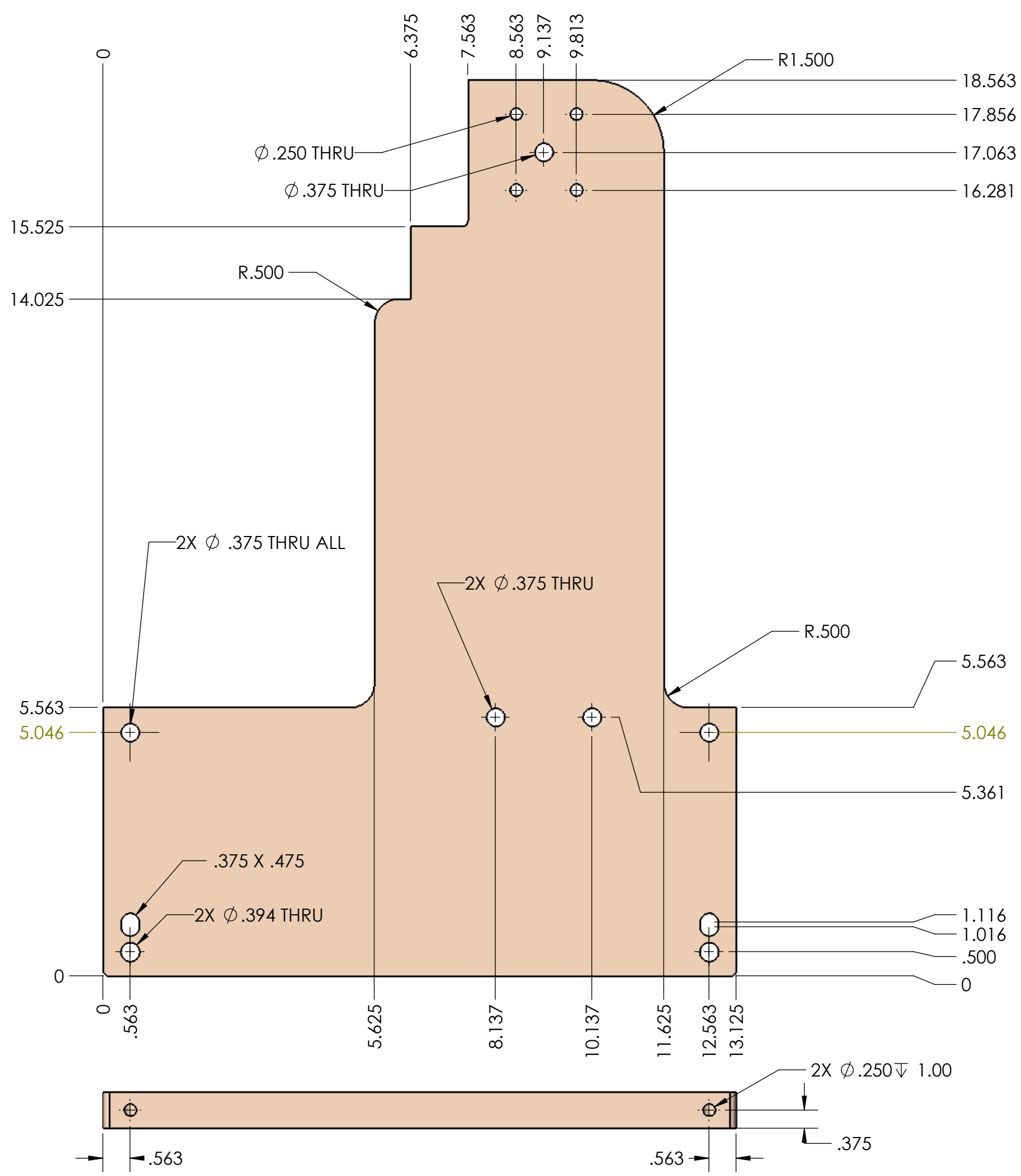


MEASURE YOUR MATERIAL THICKNESS 3/4 IS NOT ALWAYS .750 ADJUST THE .750 DIMS TO MATCH YOUR MATERIAL THICKNESS

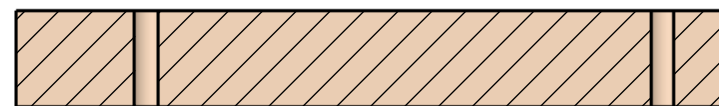
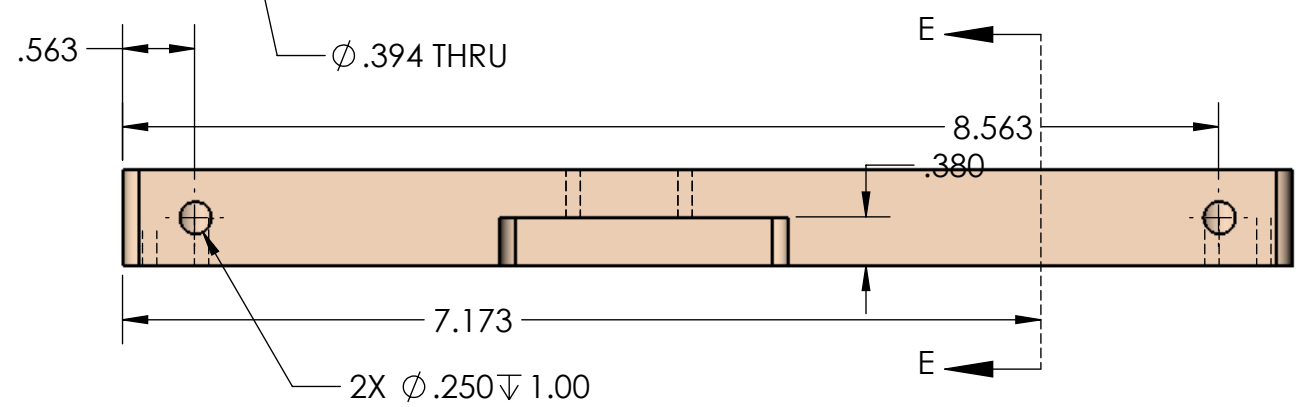
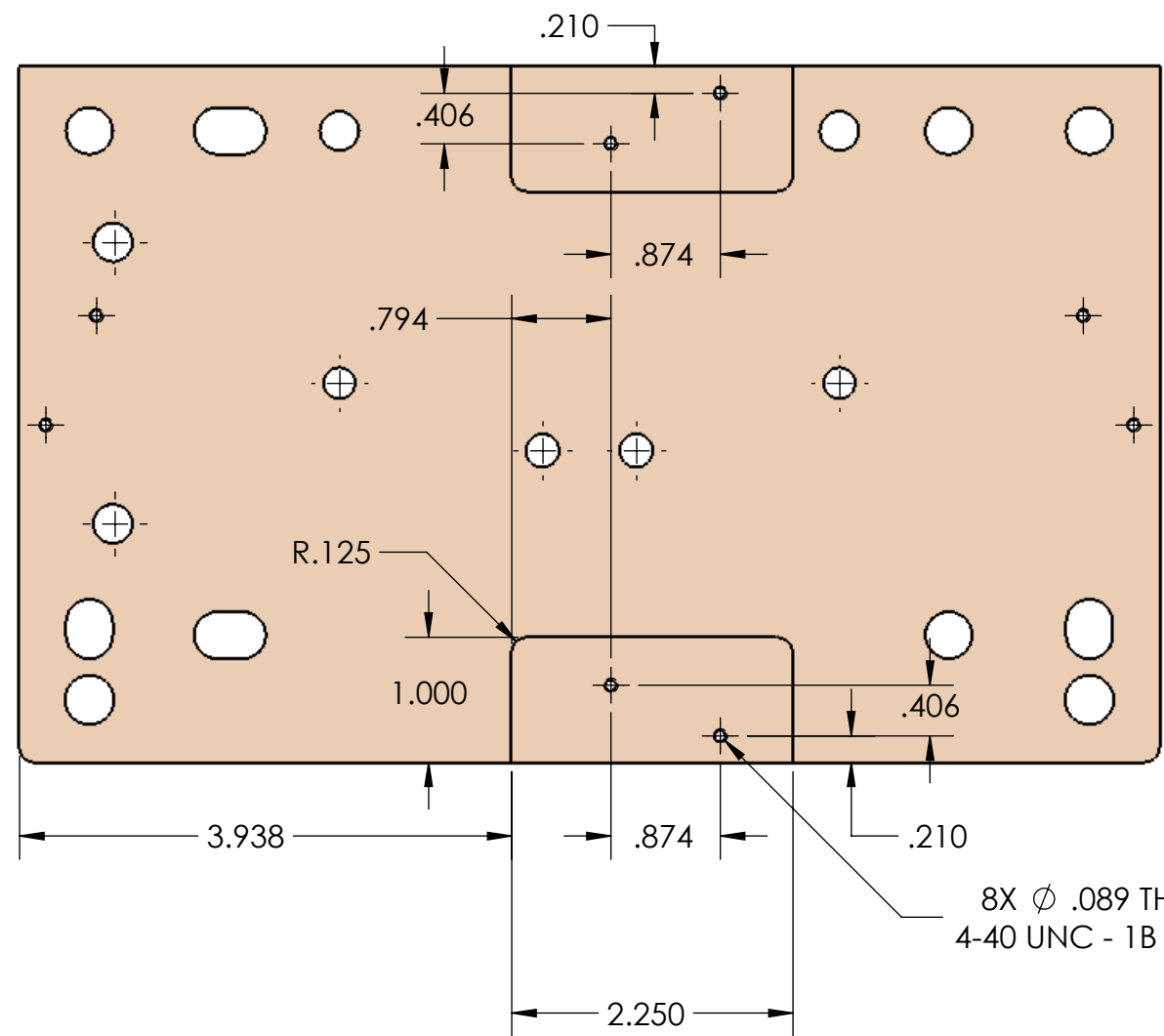
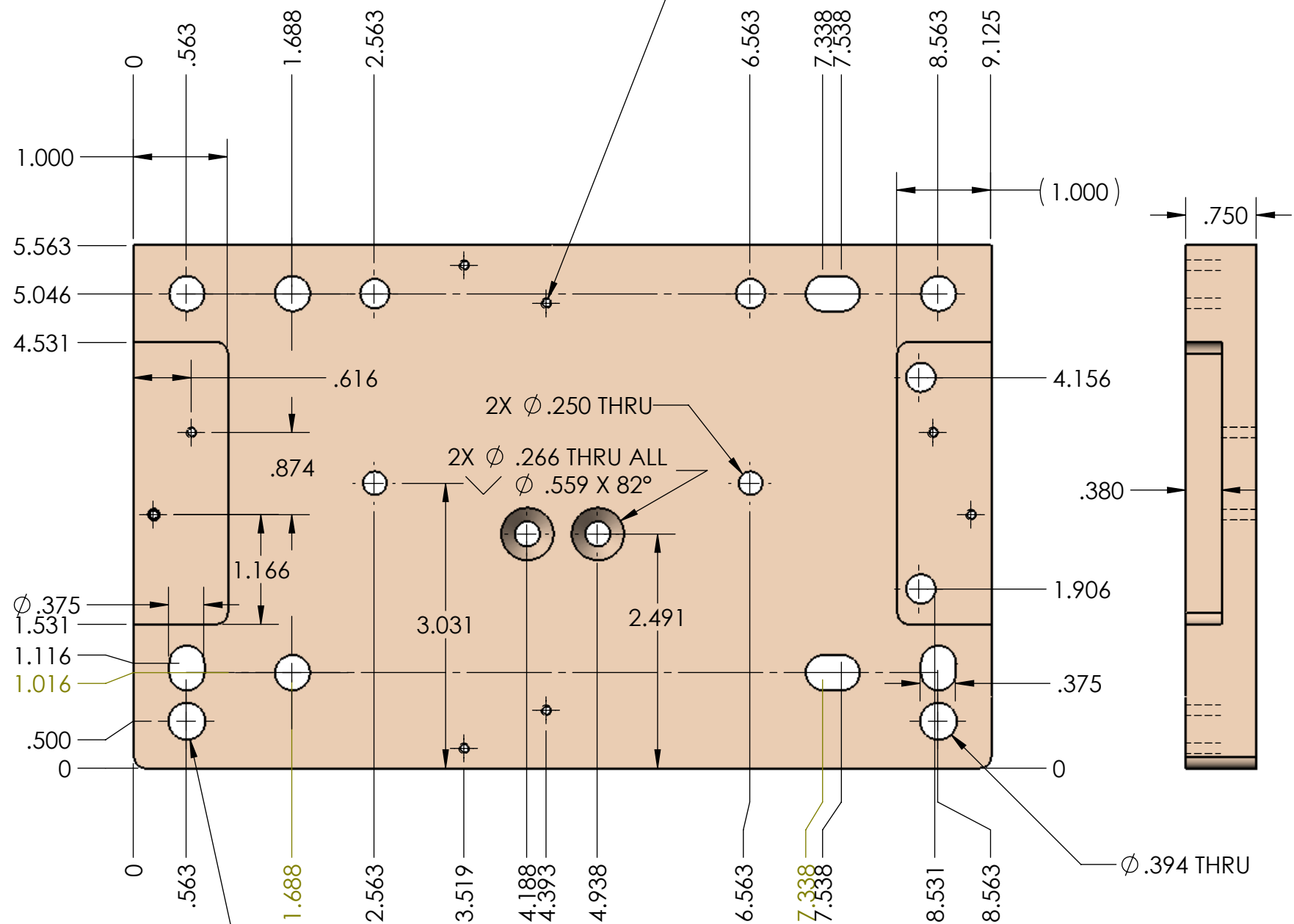
DECK BOTH THE TOP AND BOTTOM CUTTING PANELS TO MATCH THE SUPPORT FRAMES. GLUE AND SCREW ON A LEVEL SURFACE. ANY ERRORS HERE WILL SHOW UP A Z AXIS ERRORS LATER AND CAN ONLY BE CORRECTED BY FLY CUTTING YOUR SPOIL BOARD FLAT. THE REMAINING TWO 29 X 48 BECOME THE SPOILBOARD.



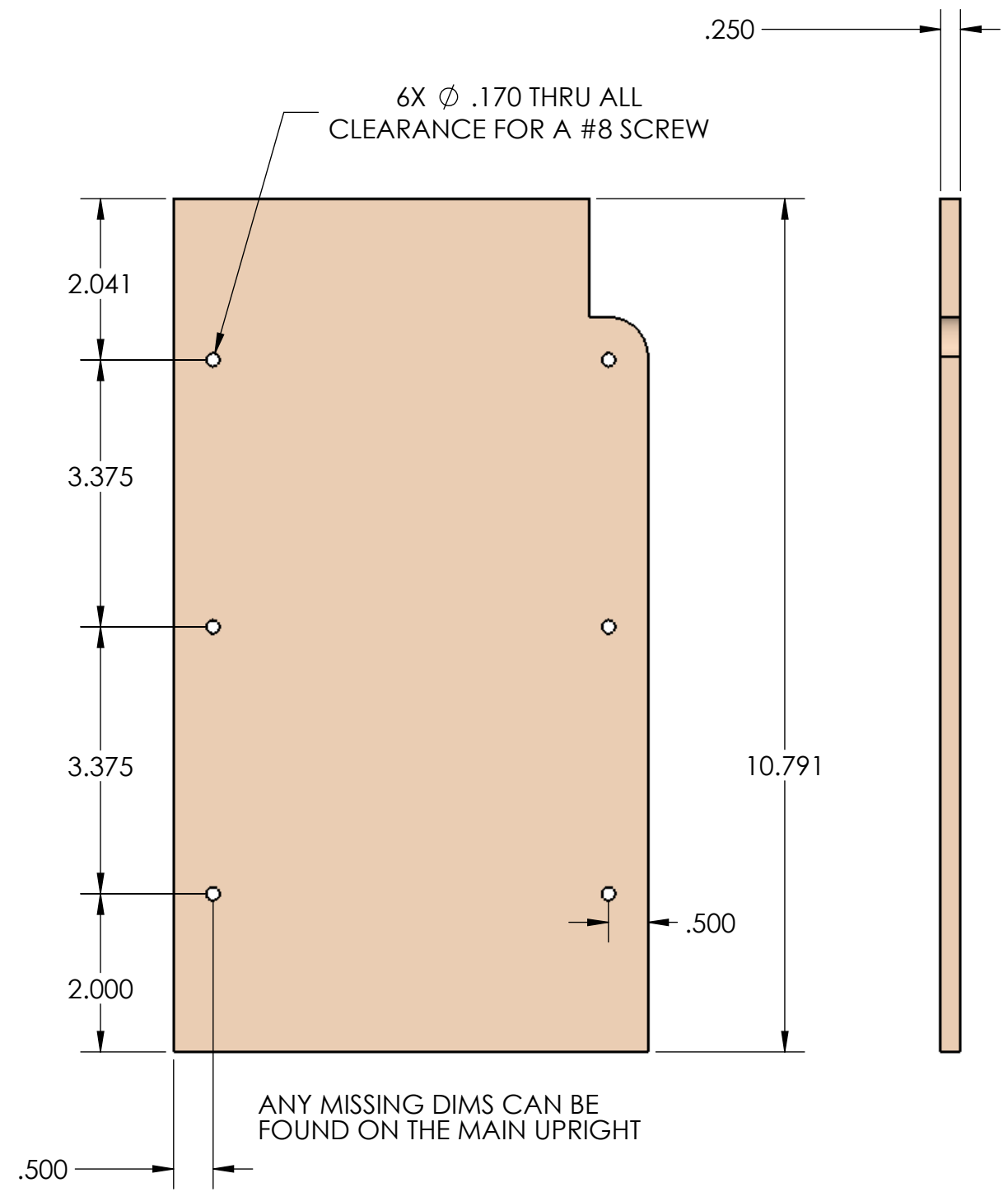
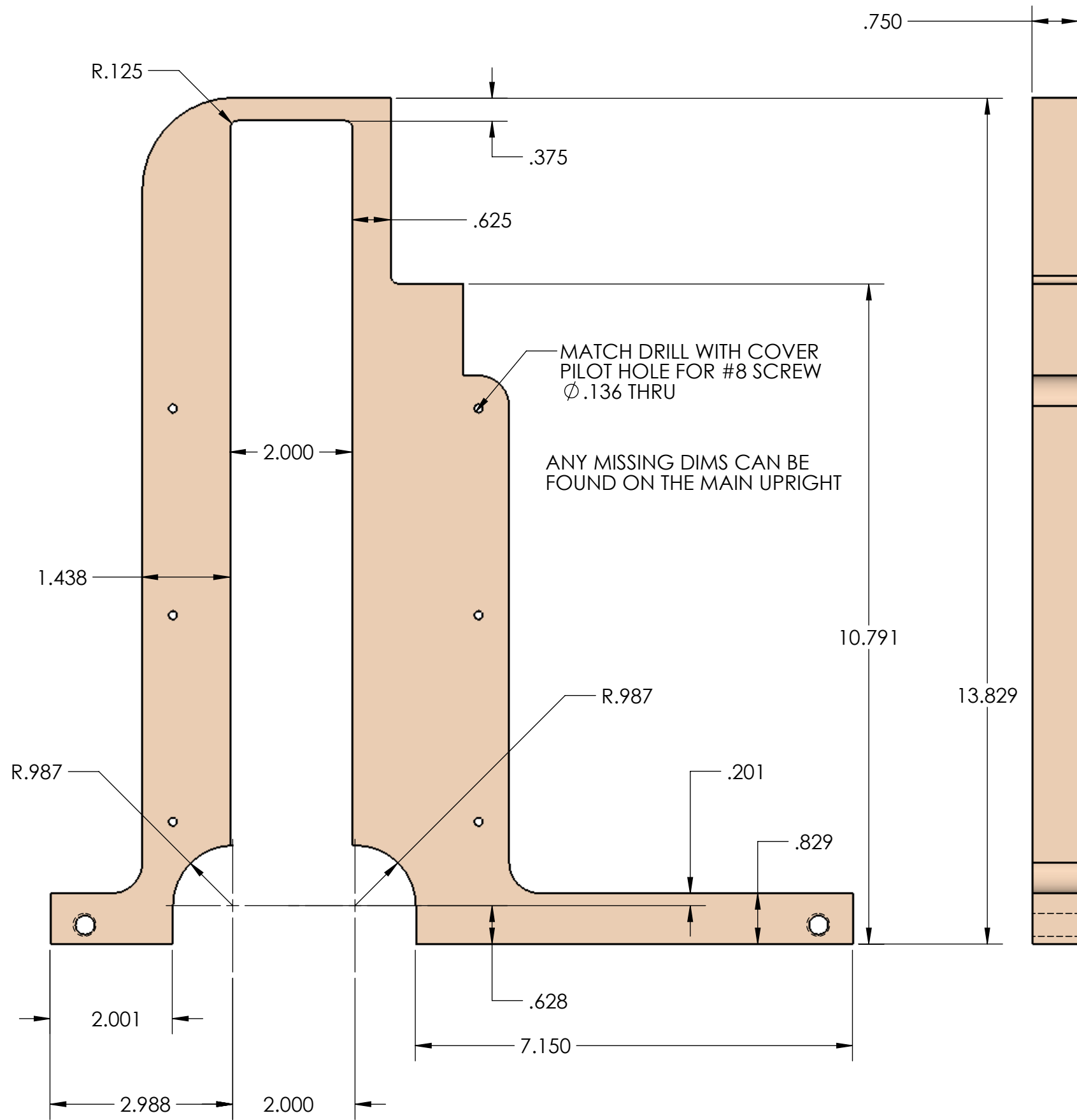
DETAIL J
SCALE 1 : 4

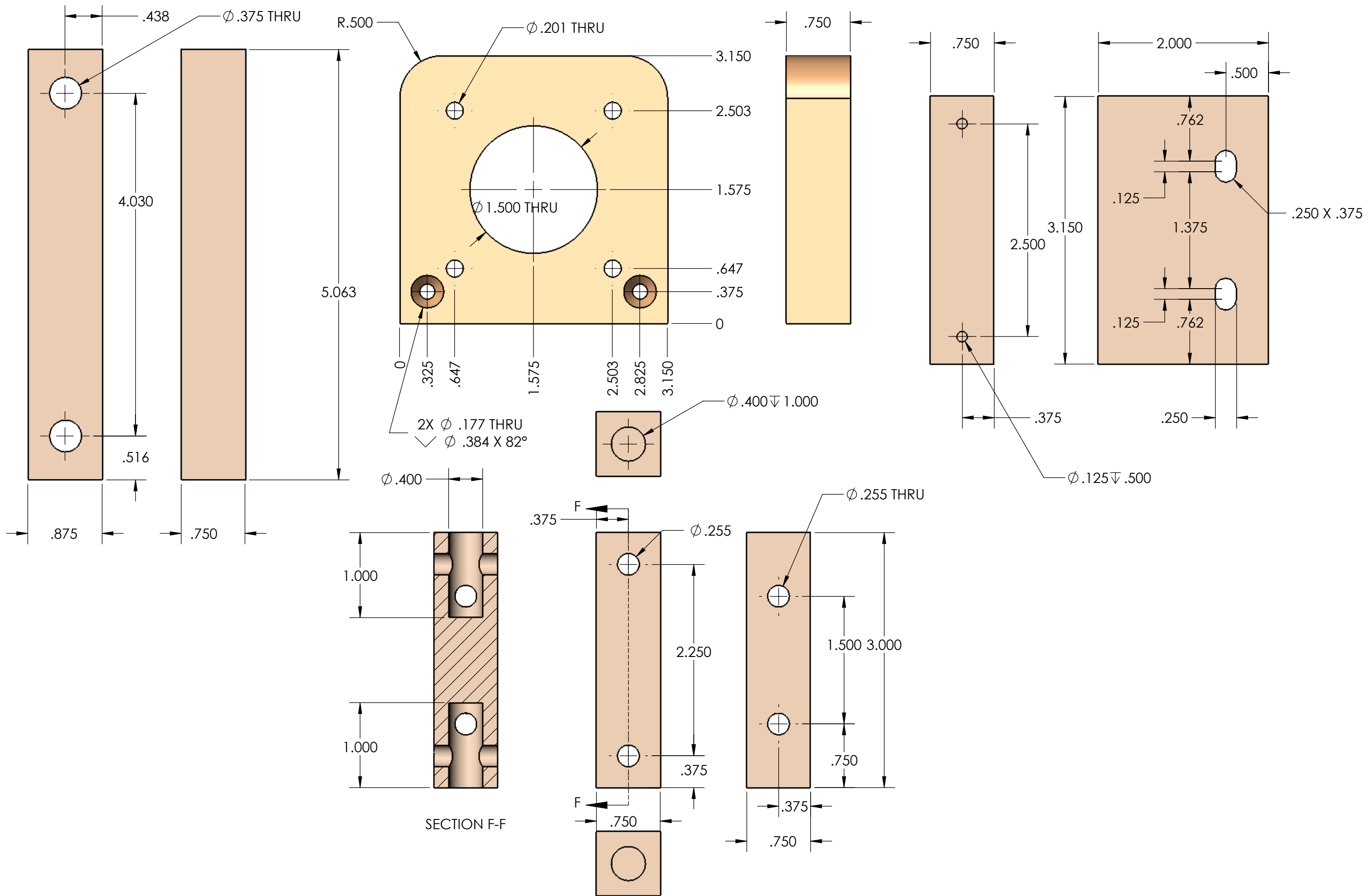


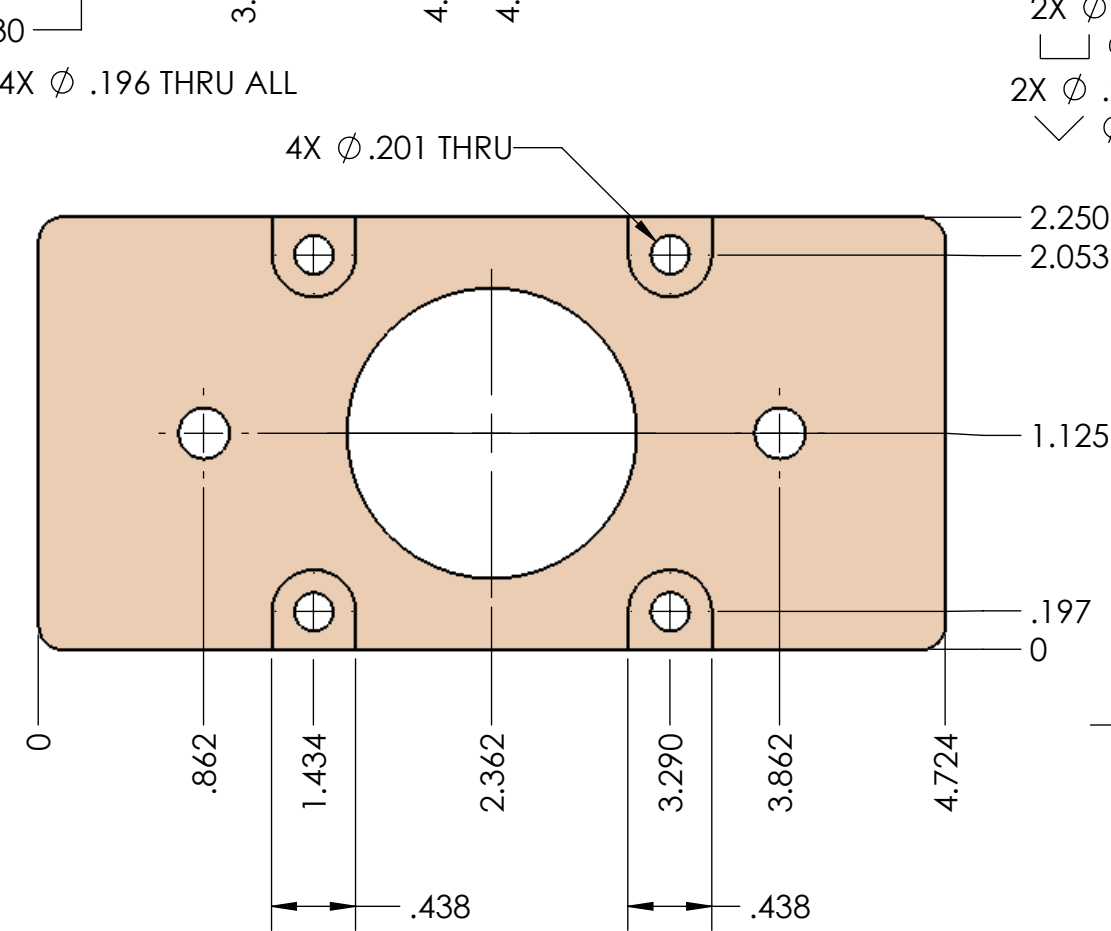
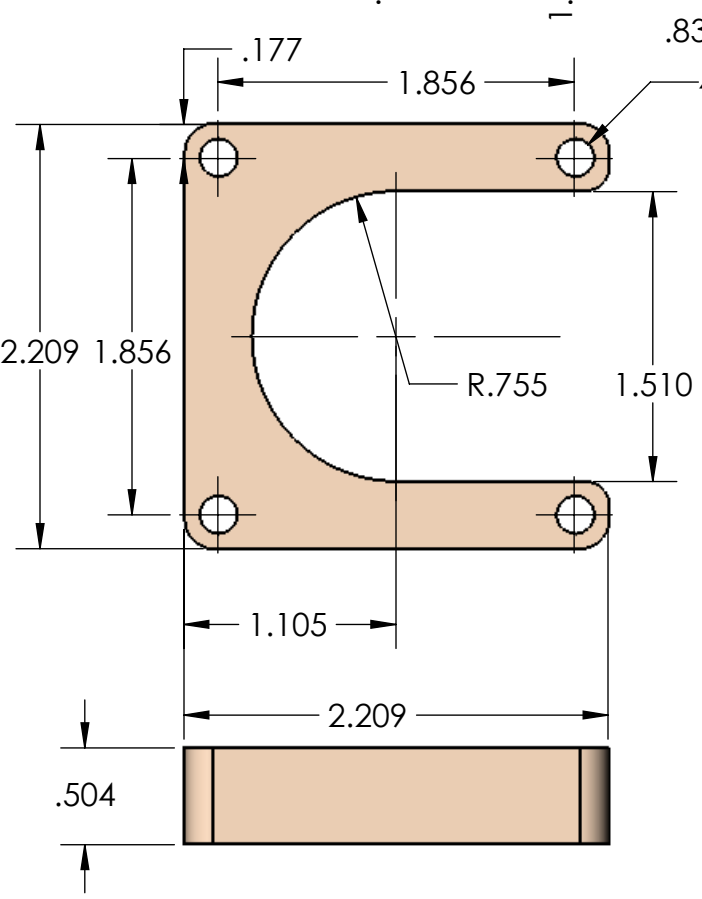
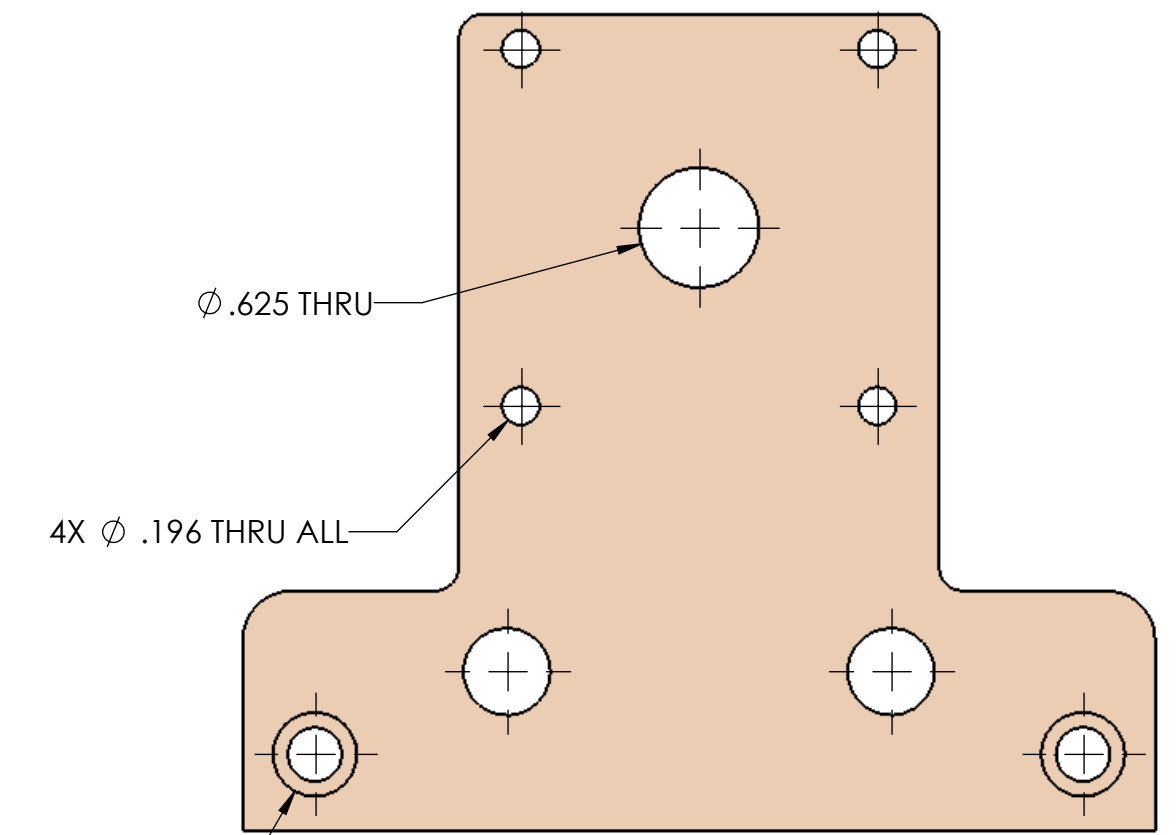
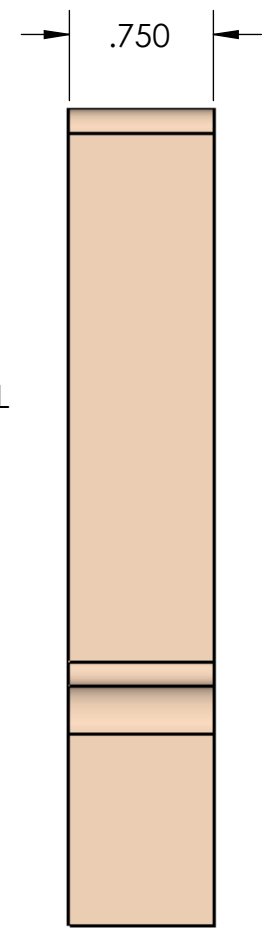
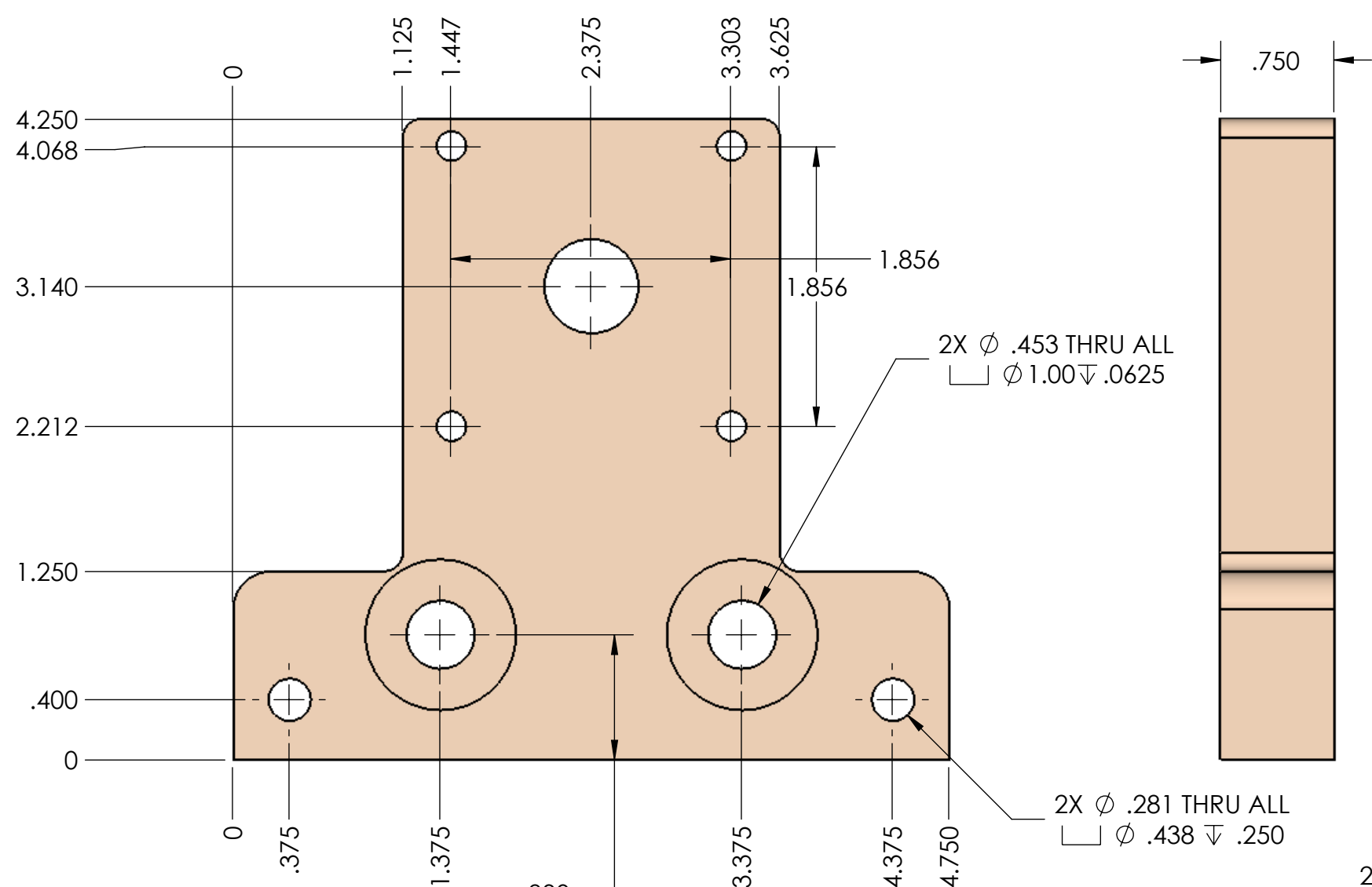
8X ϕ .089 THRU ALL
 4-40 UNC - 1B THRU ALL
 HOLES SHOULD BE ADJUSTED TO MATCH MICRO SWITCHES USED



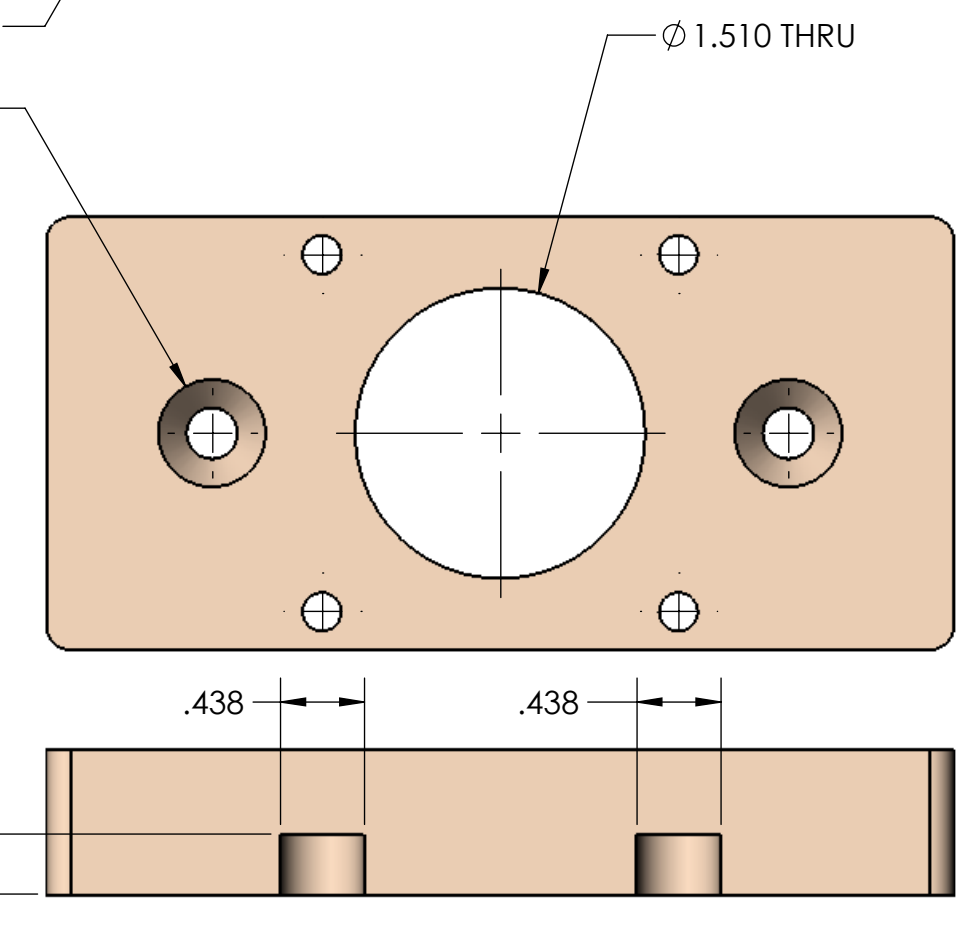
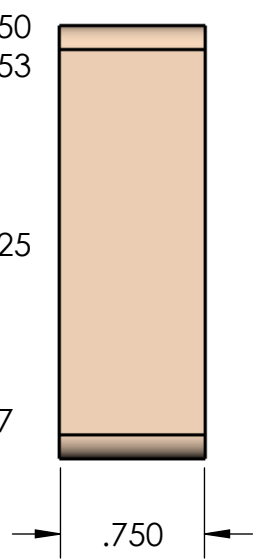
SECTION E-E
 SCALE 1 : 1.5



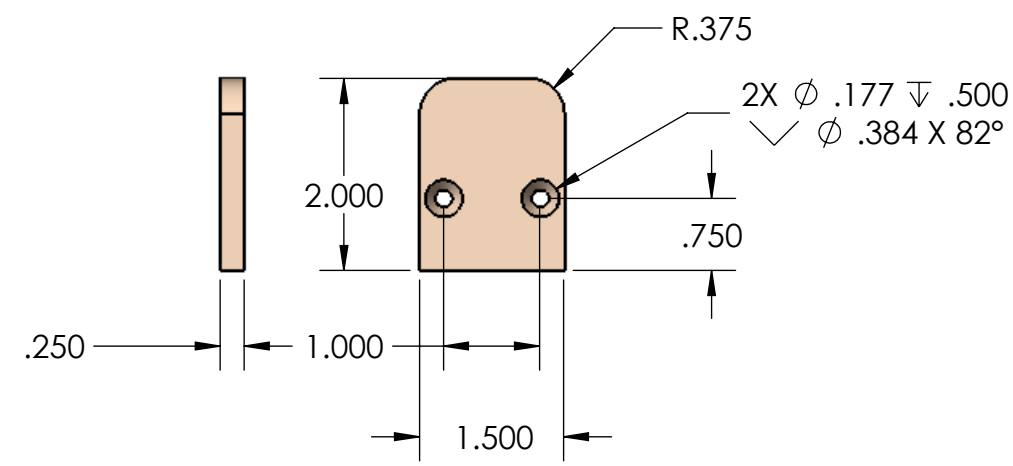
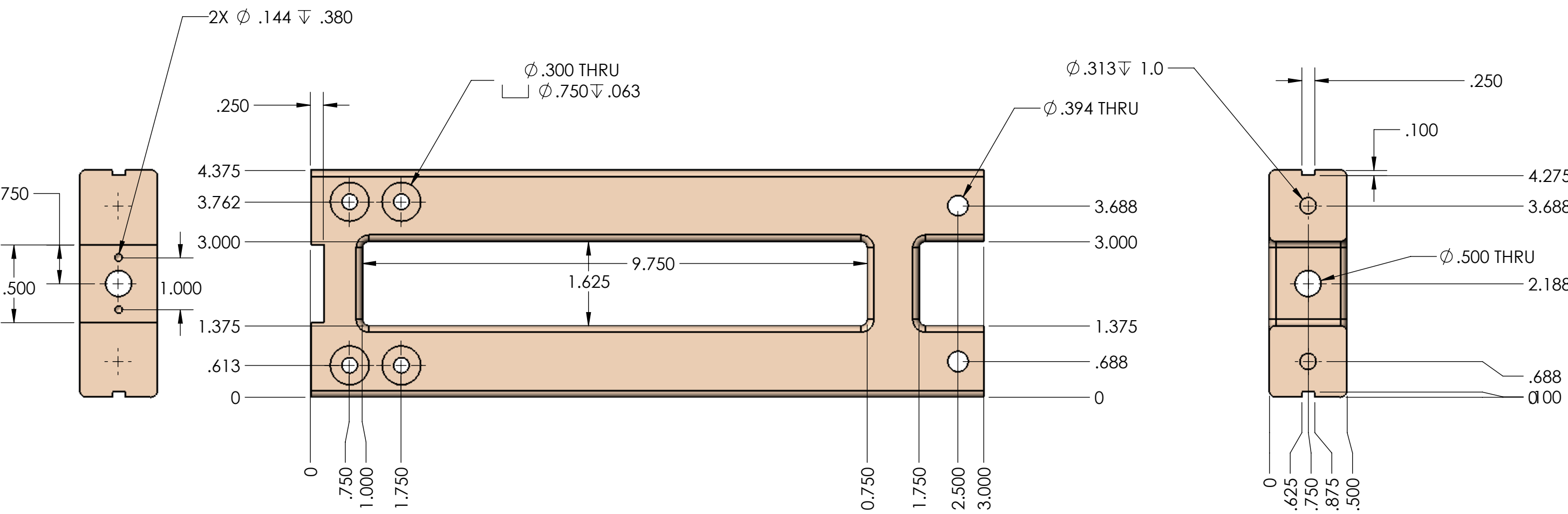
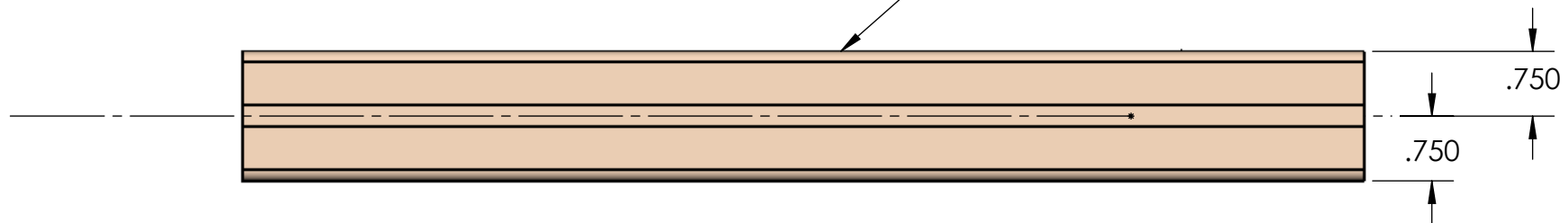


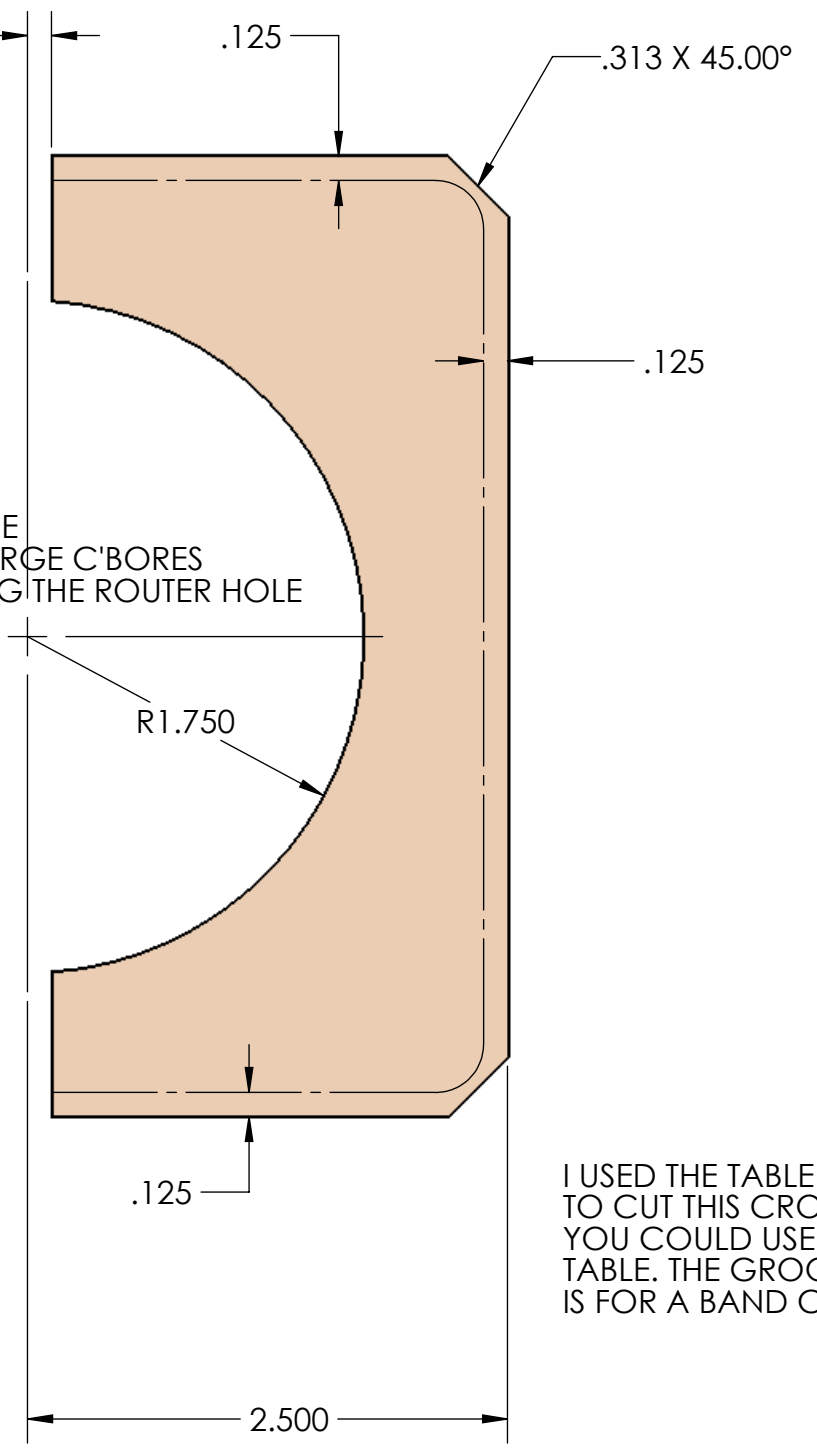
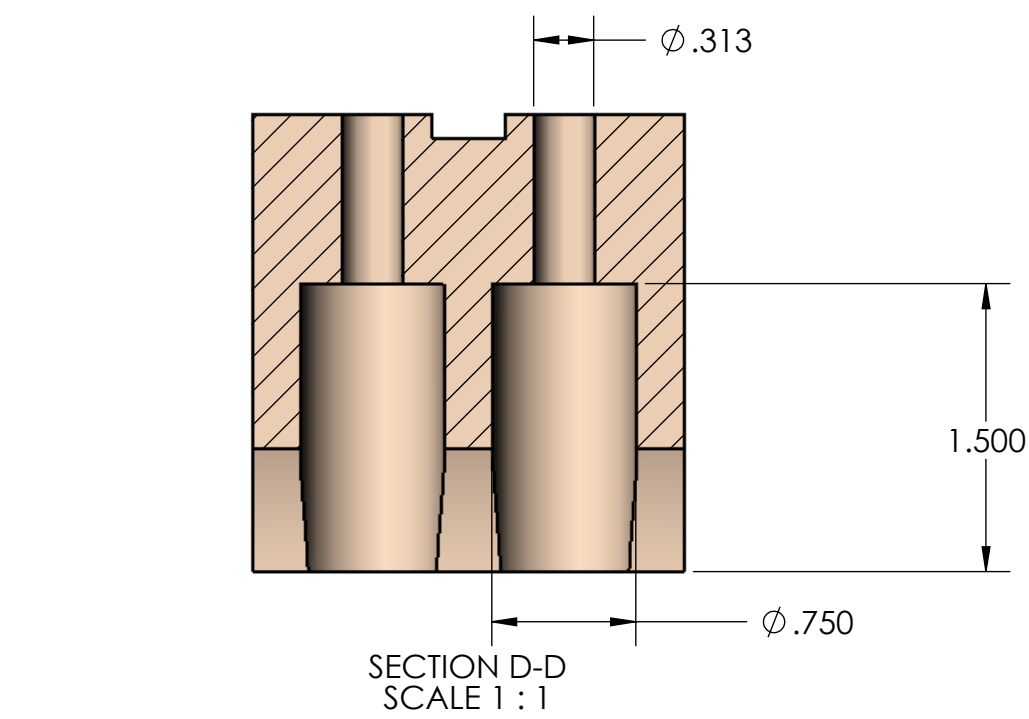
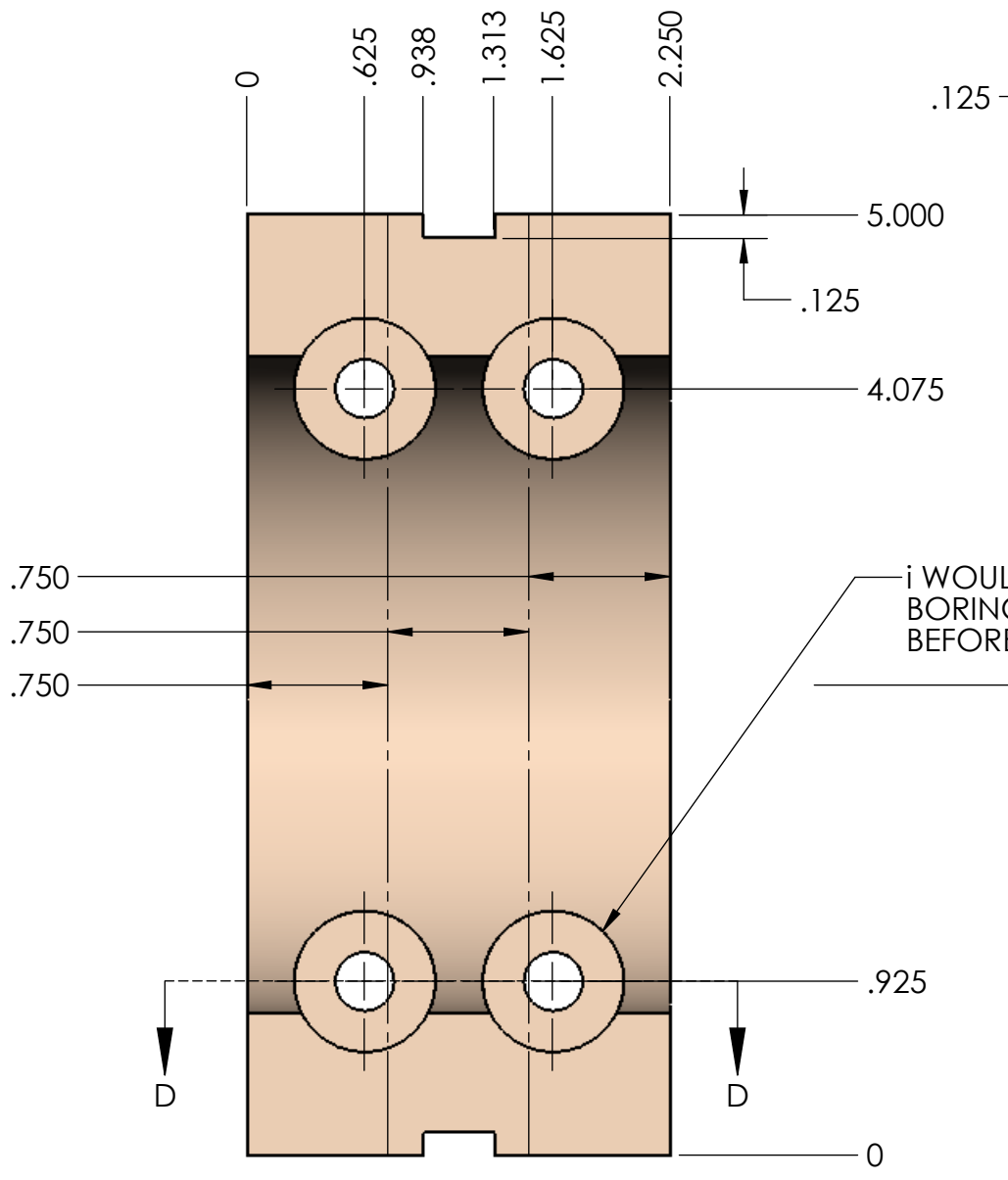


2X ϕ .281 THRU ALL
 \square ϕ .438 ∇ .250
 2X ϕ .266 THRU ALL
 \sphericalangle ϕ .559 X 82°

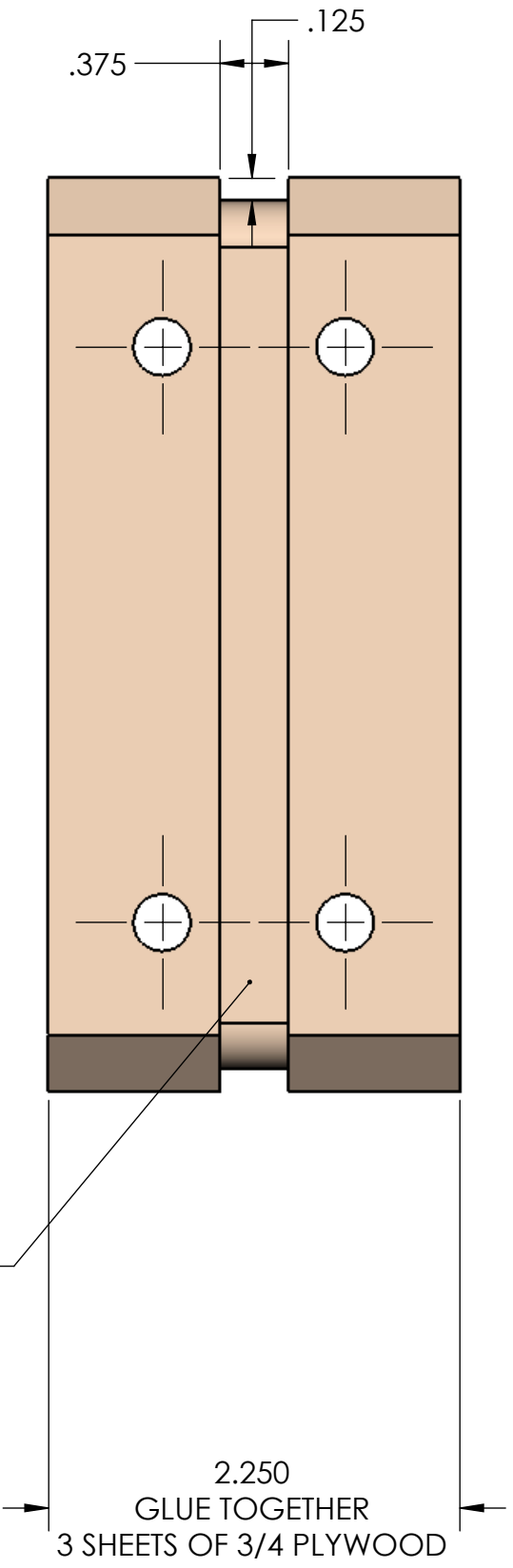


GLUE TWO SHEETS OF 3/4 INCH PLYWOOD TOGETHER THEN FINISH

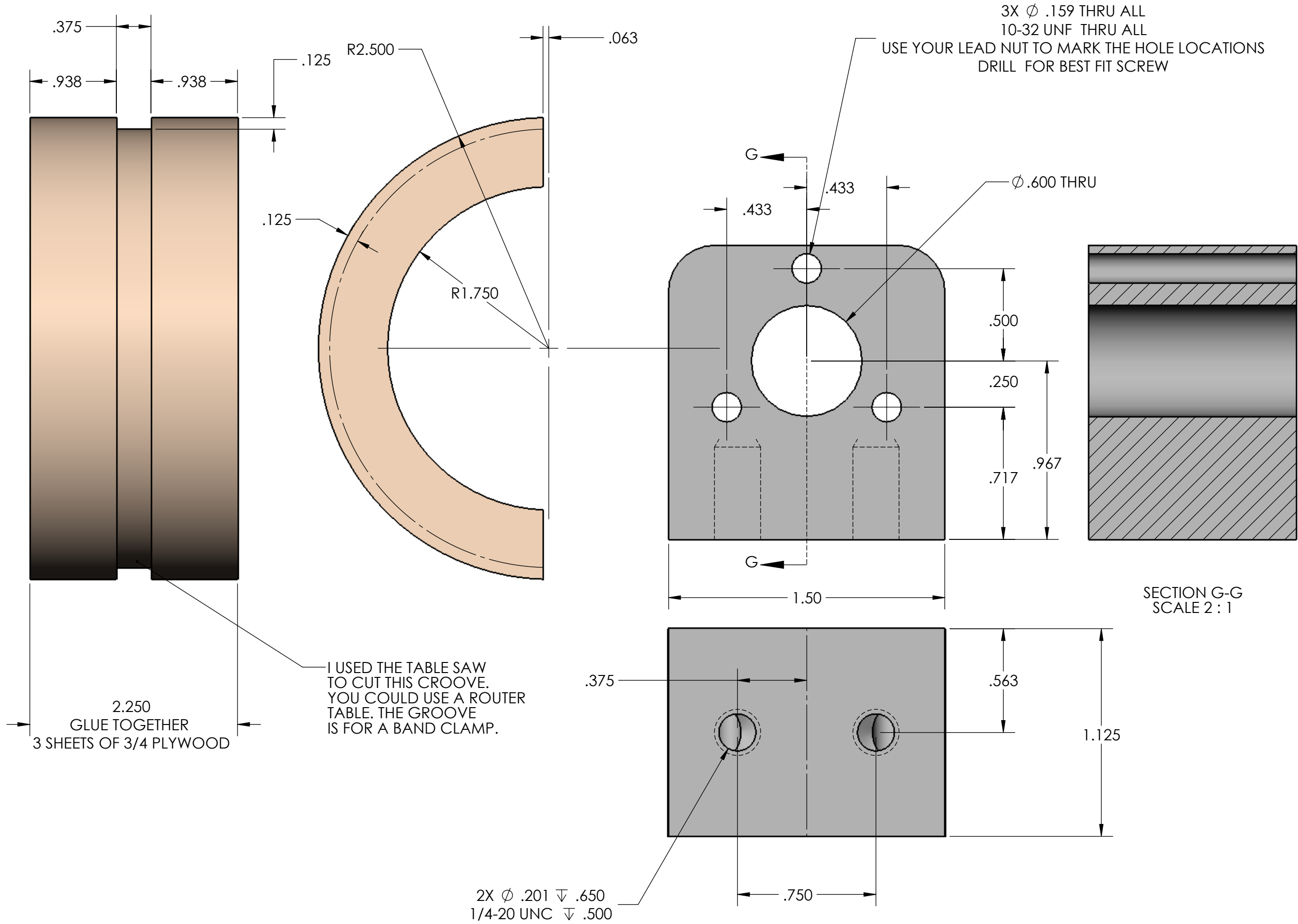




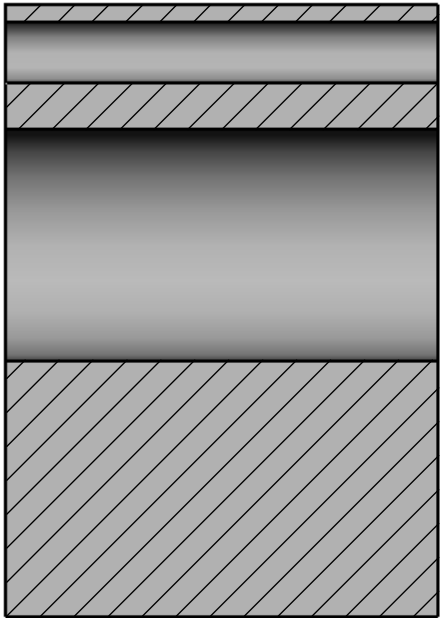
I USED THE TABLE SAW TO CUT THIS CROOVE. YOU COULD USE A ROUTER TABLE. THE GROOVE IS FOR A BAND CLAMP.



2.250
GLUE TOGETHER
3 SHEETS OF 3/4 PLYWOOD



3X Ø .159 THRU ALL
 10-32 UNF THRU ALL
 USE YOUR LEAD NUT TO MARK THE HOLE LOCATIONS
 DRILL FOR BEST FIT SCREW



SECTION G-G
 SCALE 2 : 1

I USED THE TABLE SAW
 TO CUT THIS GROOVE.
 YOU COULD USE A ROUTER
 TABLE. THE GROOVE
 IS FOR A BAND CLAMP.

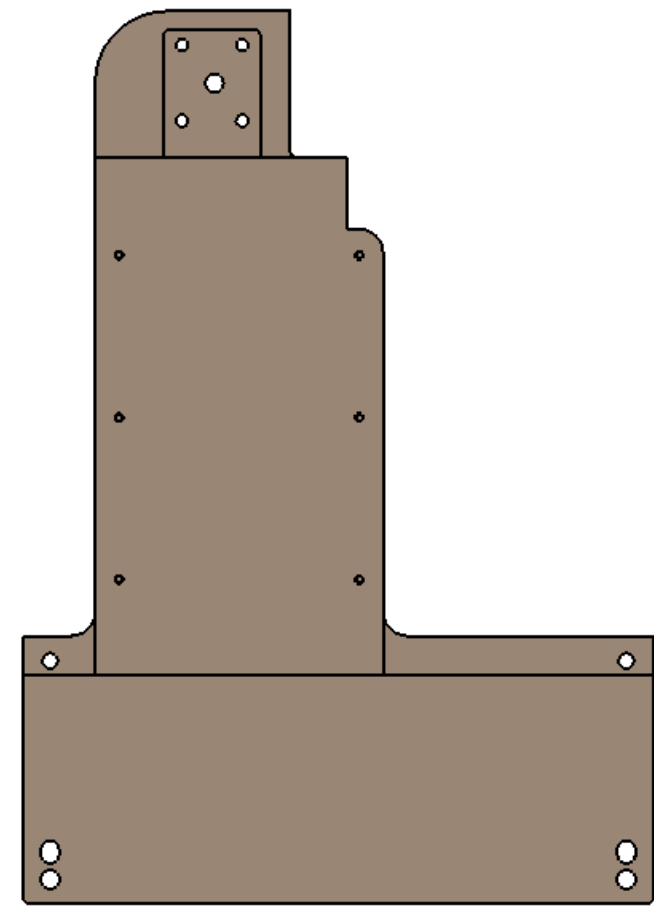
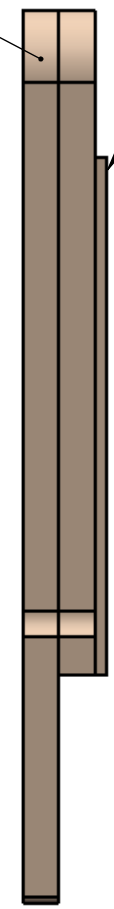
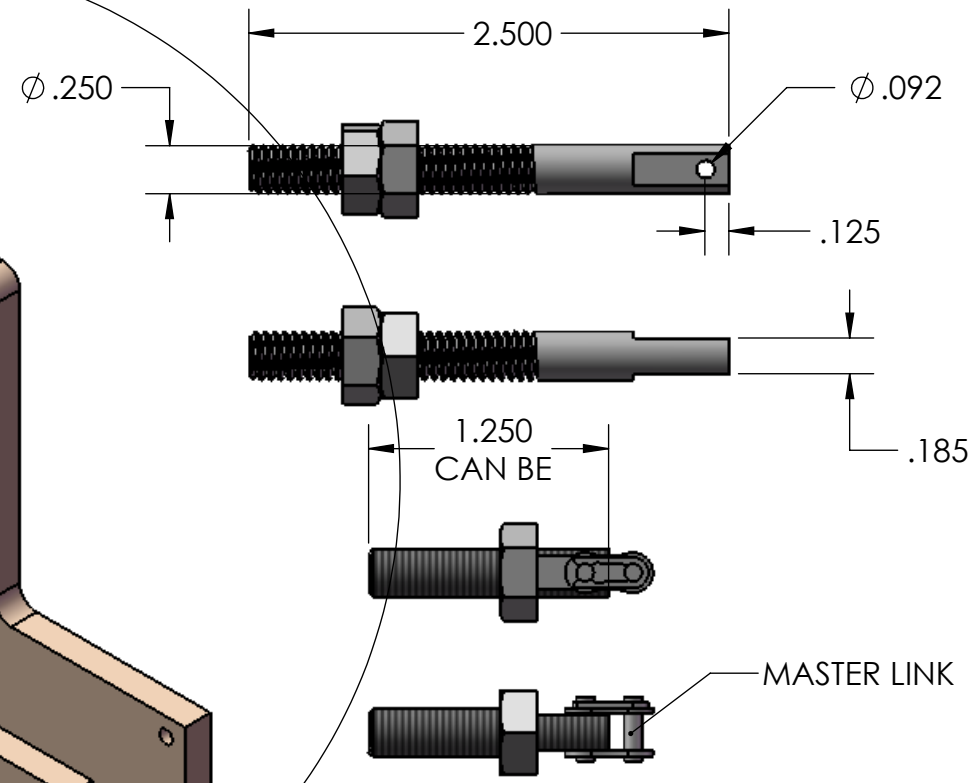
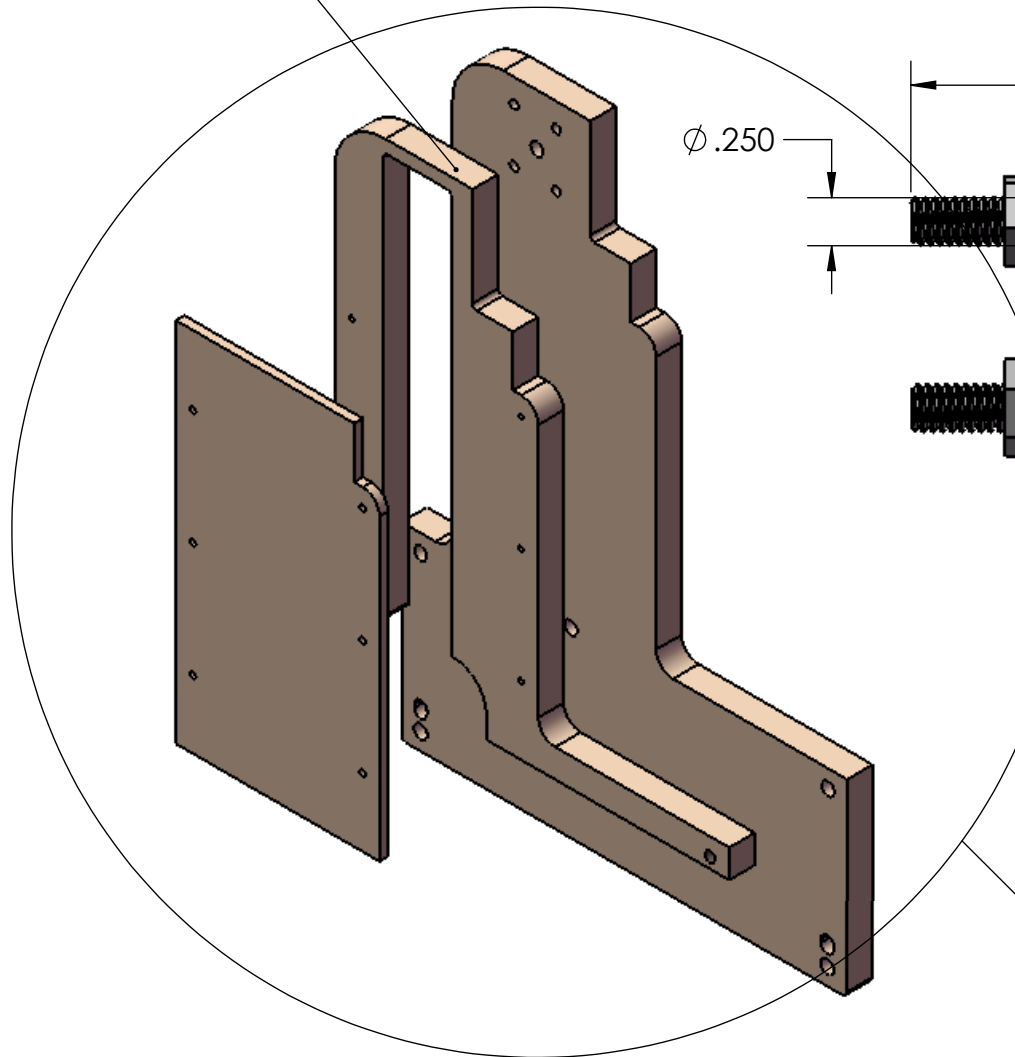
2.250
 GLUE TOGETHER
 3 SHEETS OF 3/4 PLYWOOD

2X Ø .201 ∇ .650
 1/4-20 UNC ∇ .500

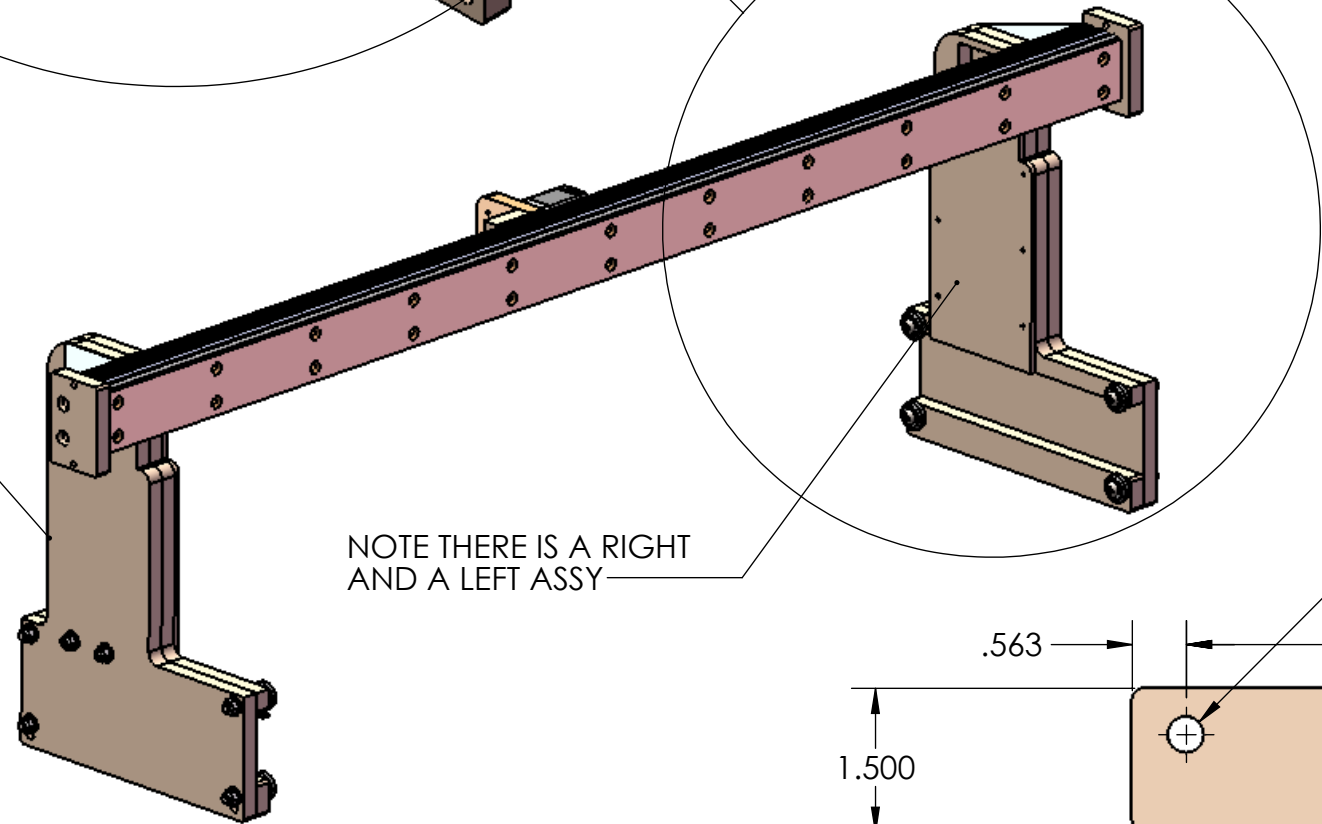
NOTE THERE IS A RIGHT AND A LEFT ASSY

GLUE THE TWO 3/4 PLYWOOD PARTS TOGETHER

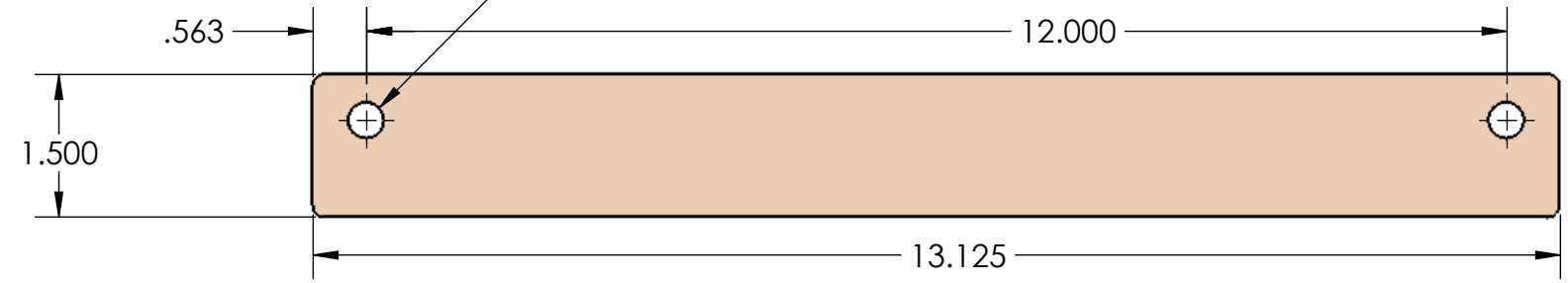
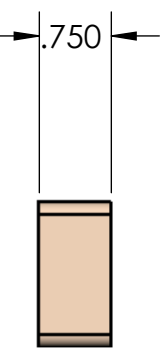
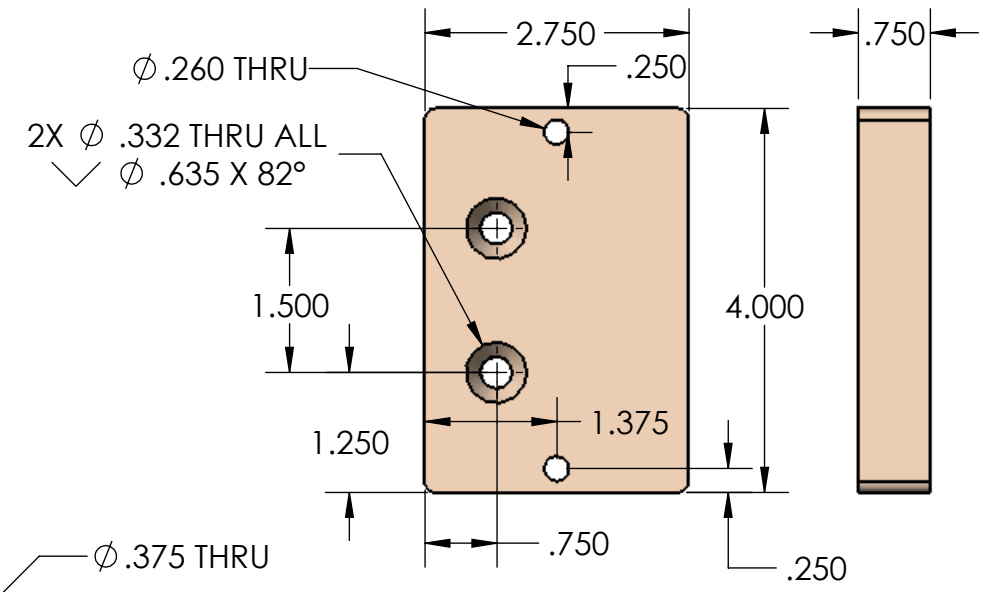
THE CHAIN COVER SHOULD ONLY BE SCREWED

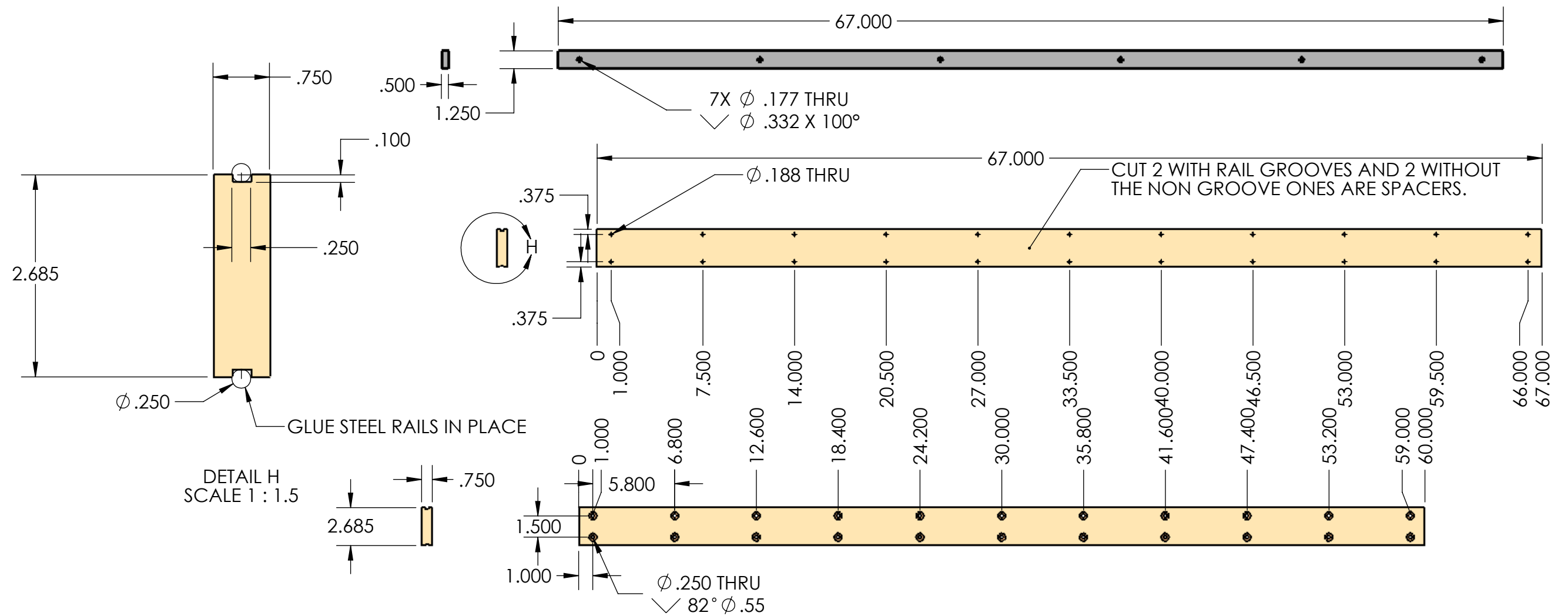
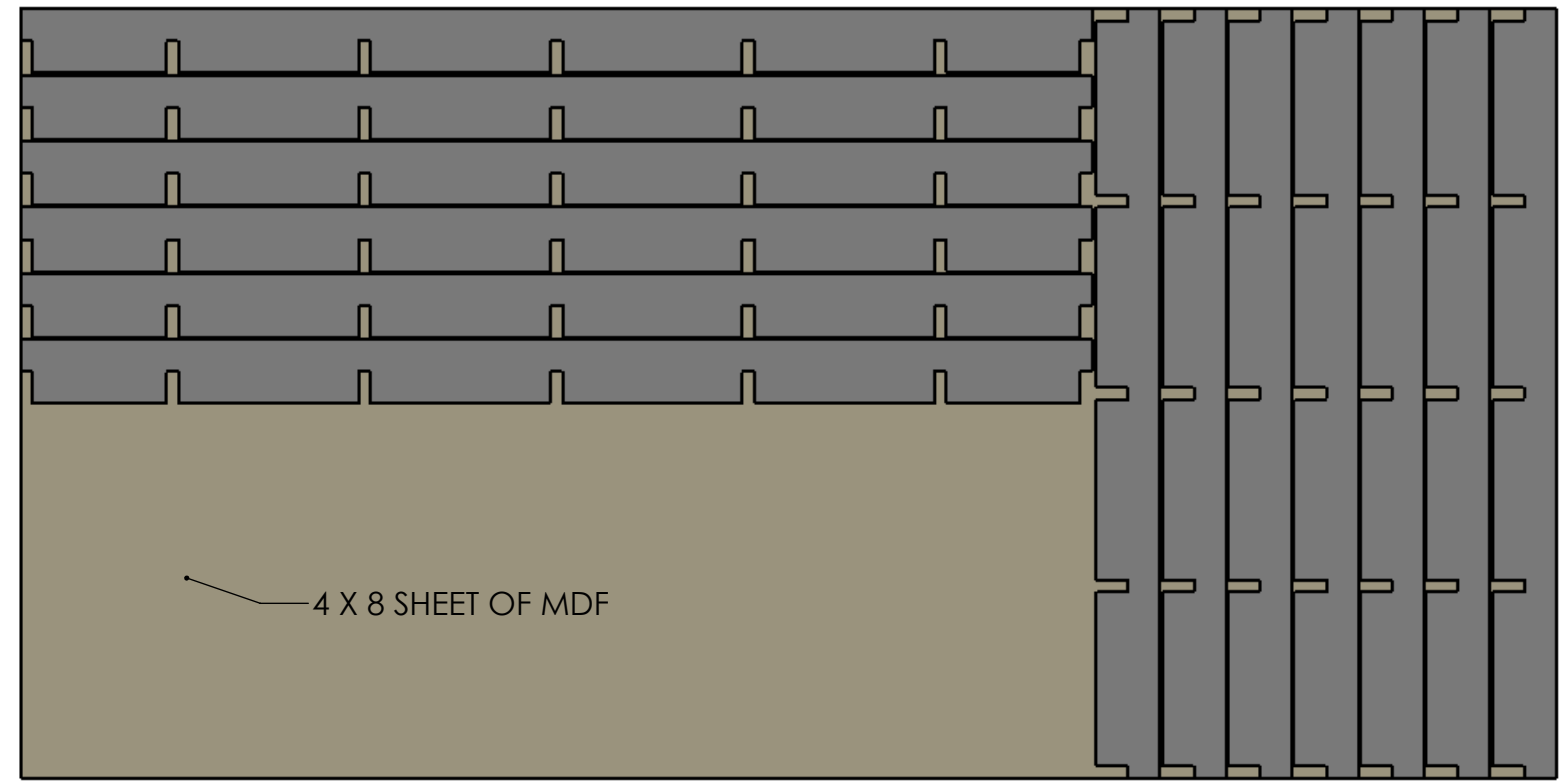
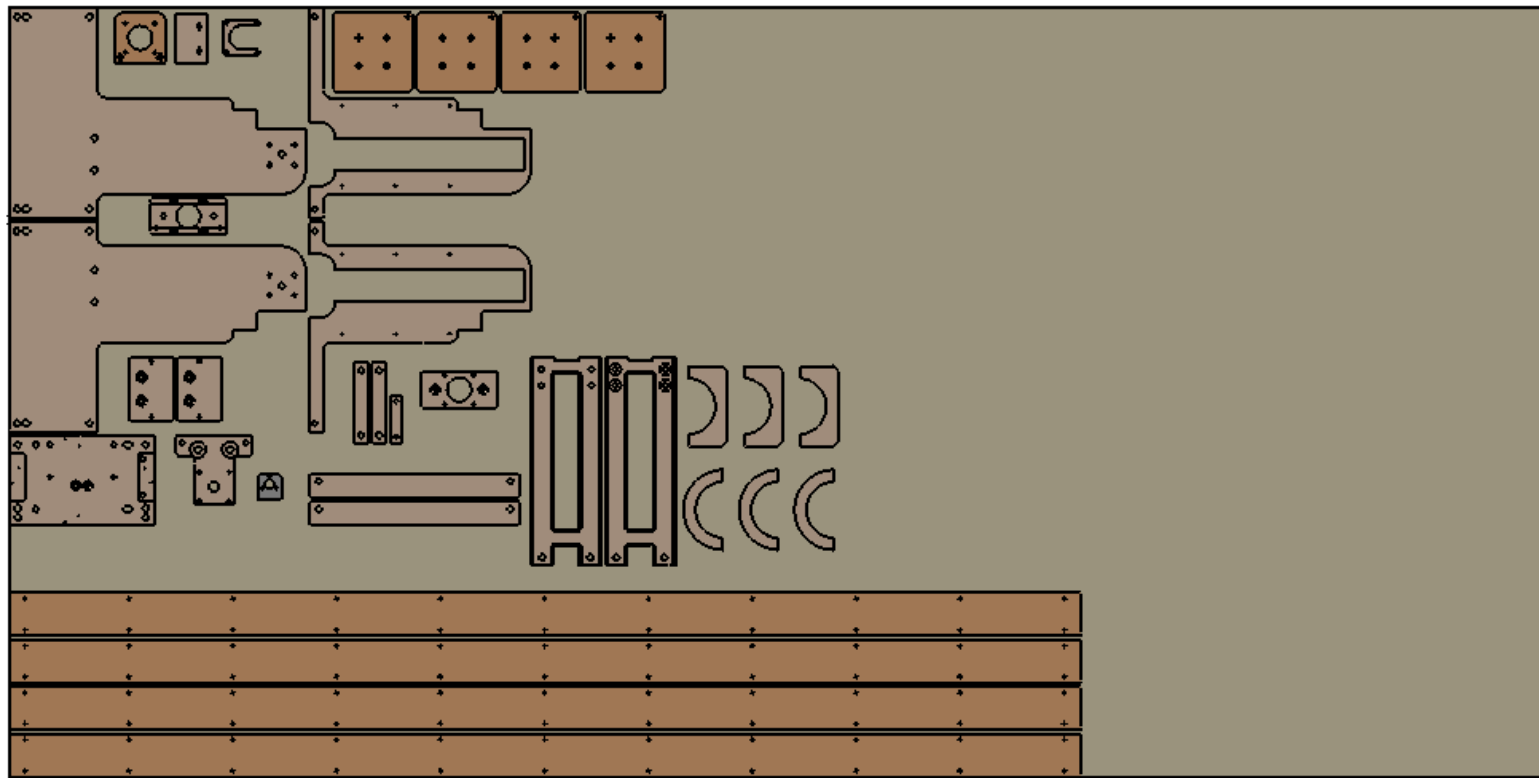


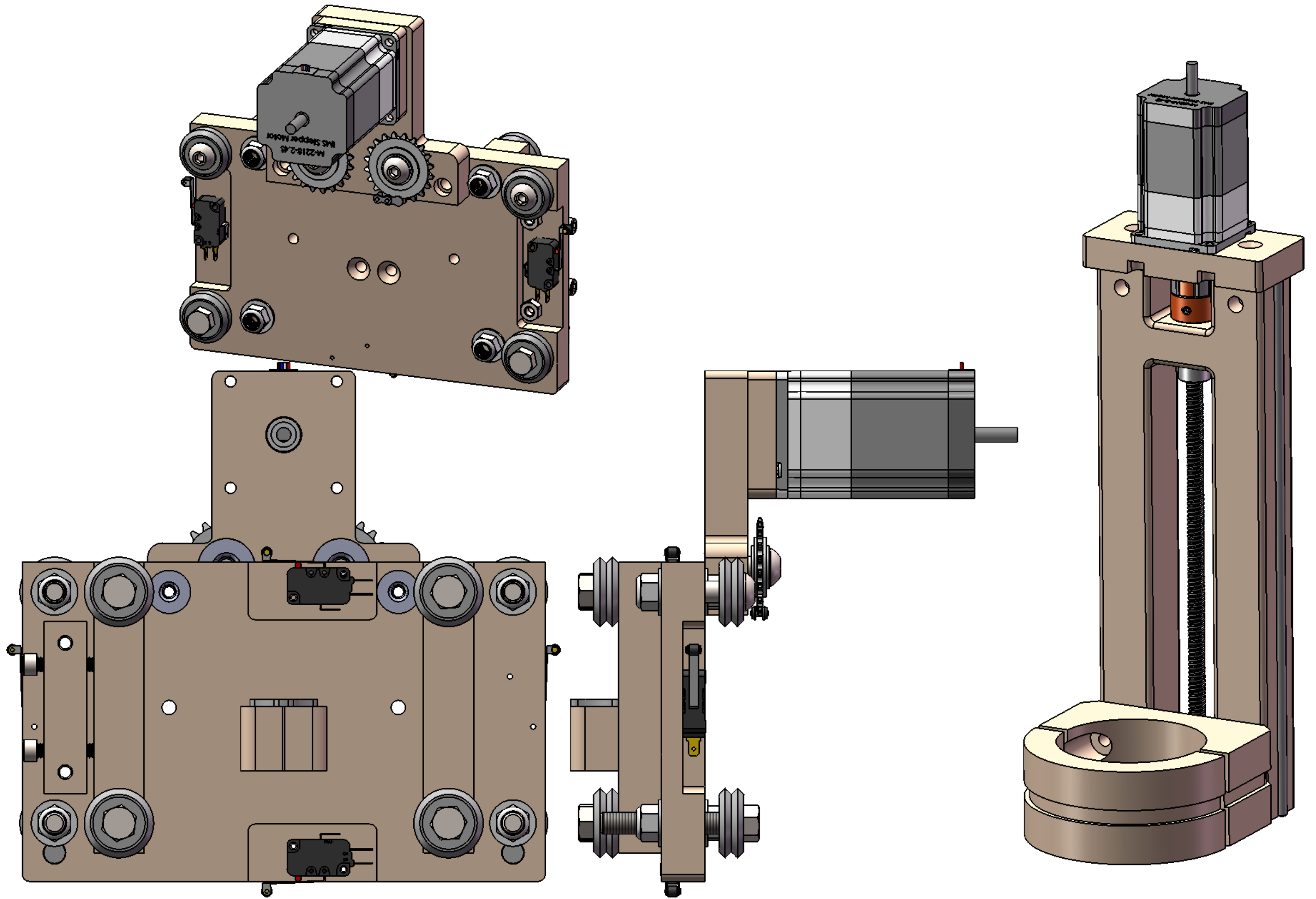
NOTE THERE IS A RIGHT AND A LEFT ASSY

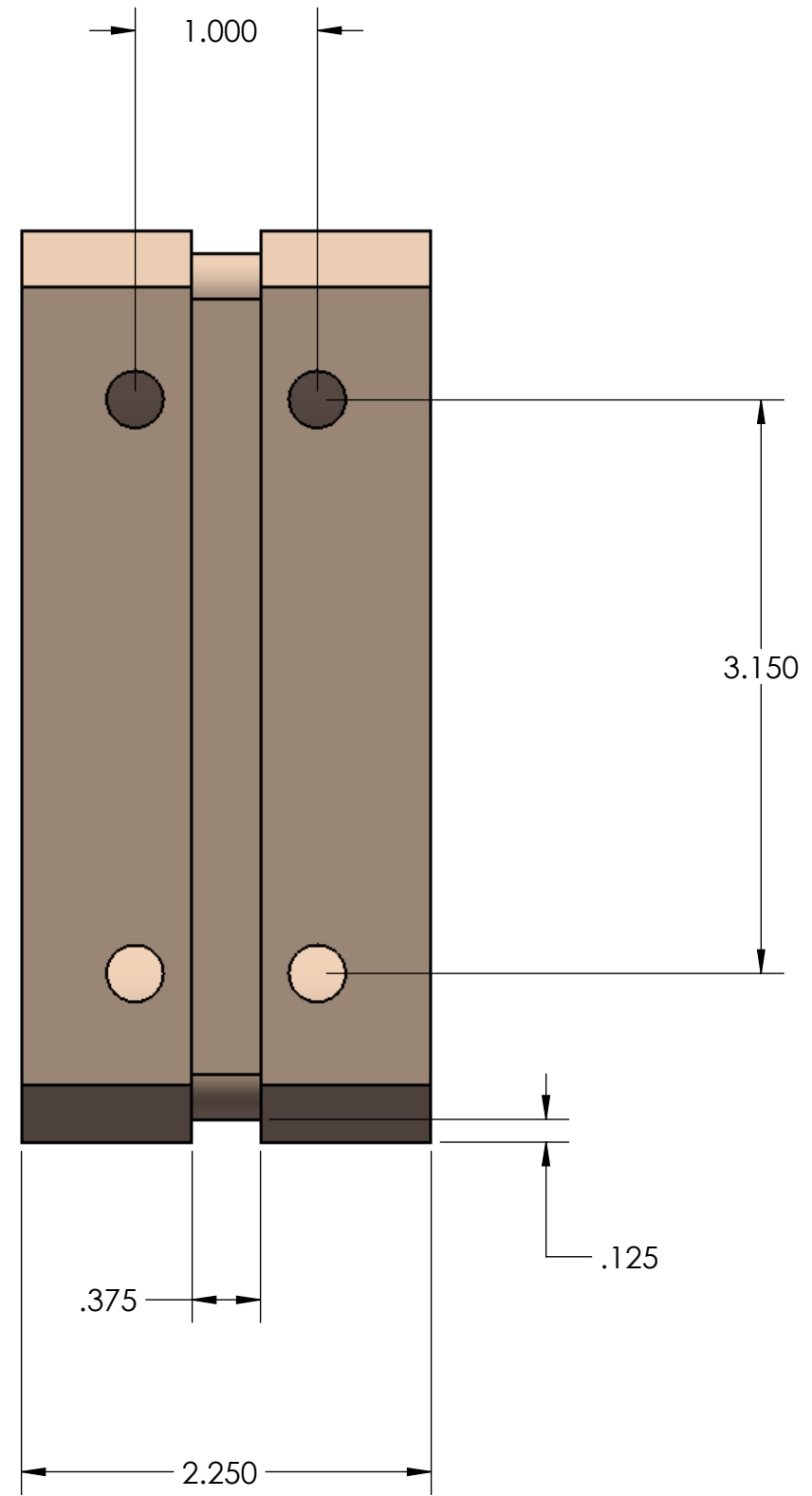
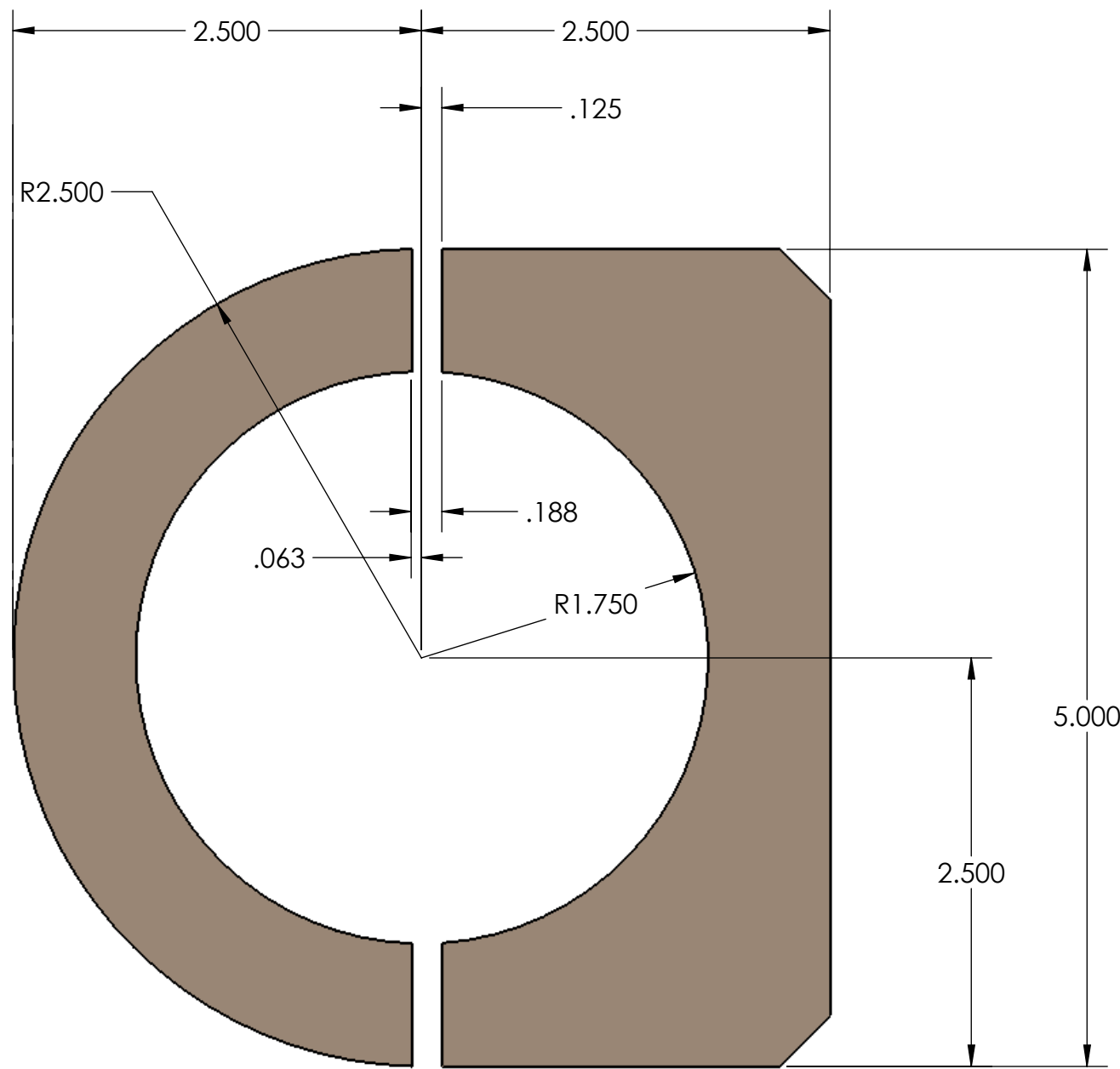


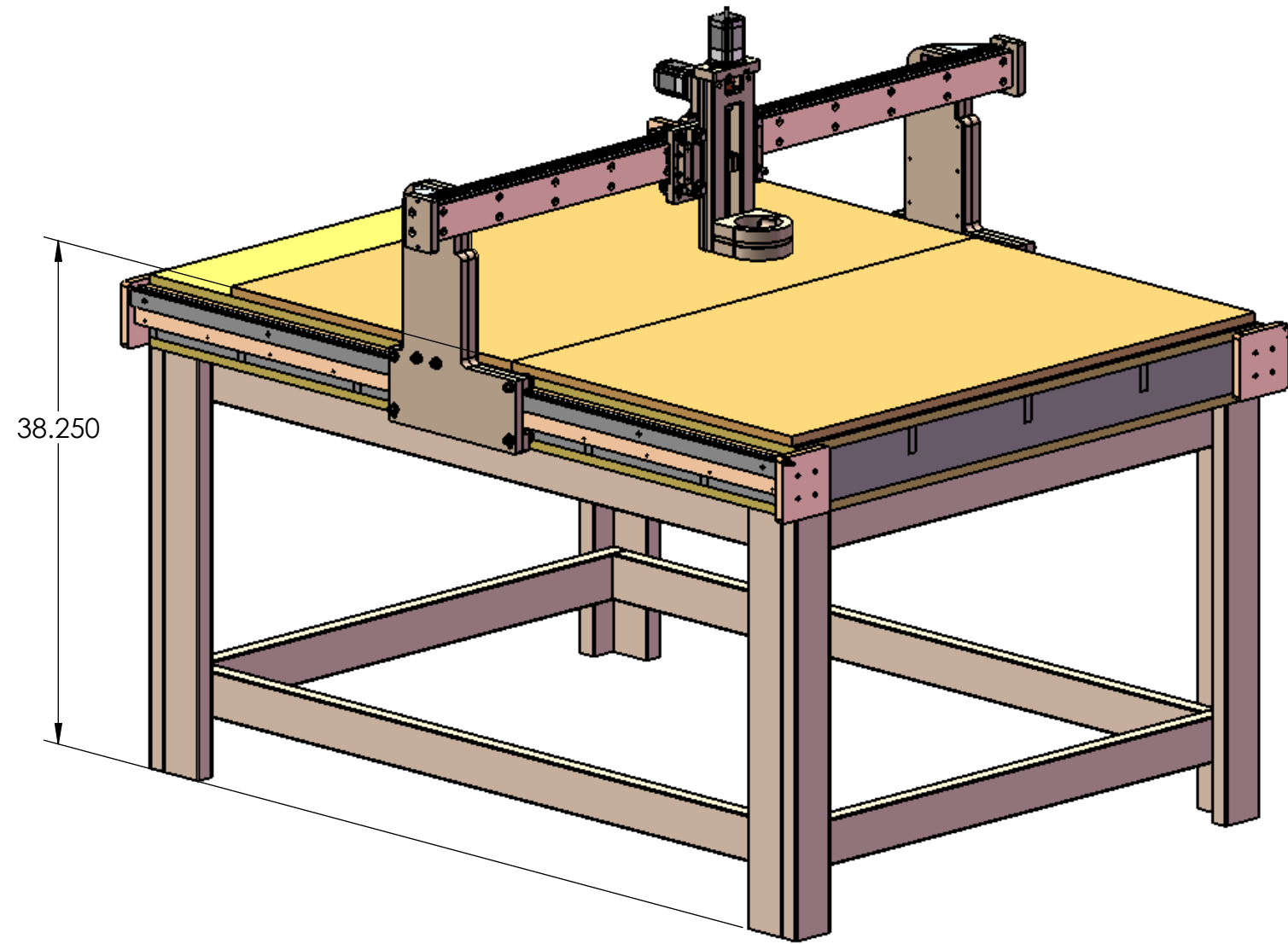
NOTE THERE IS A RIGHT AND A LEFT ASSY



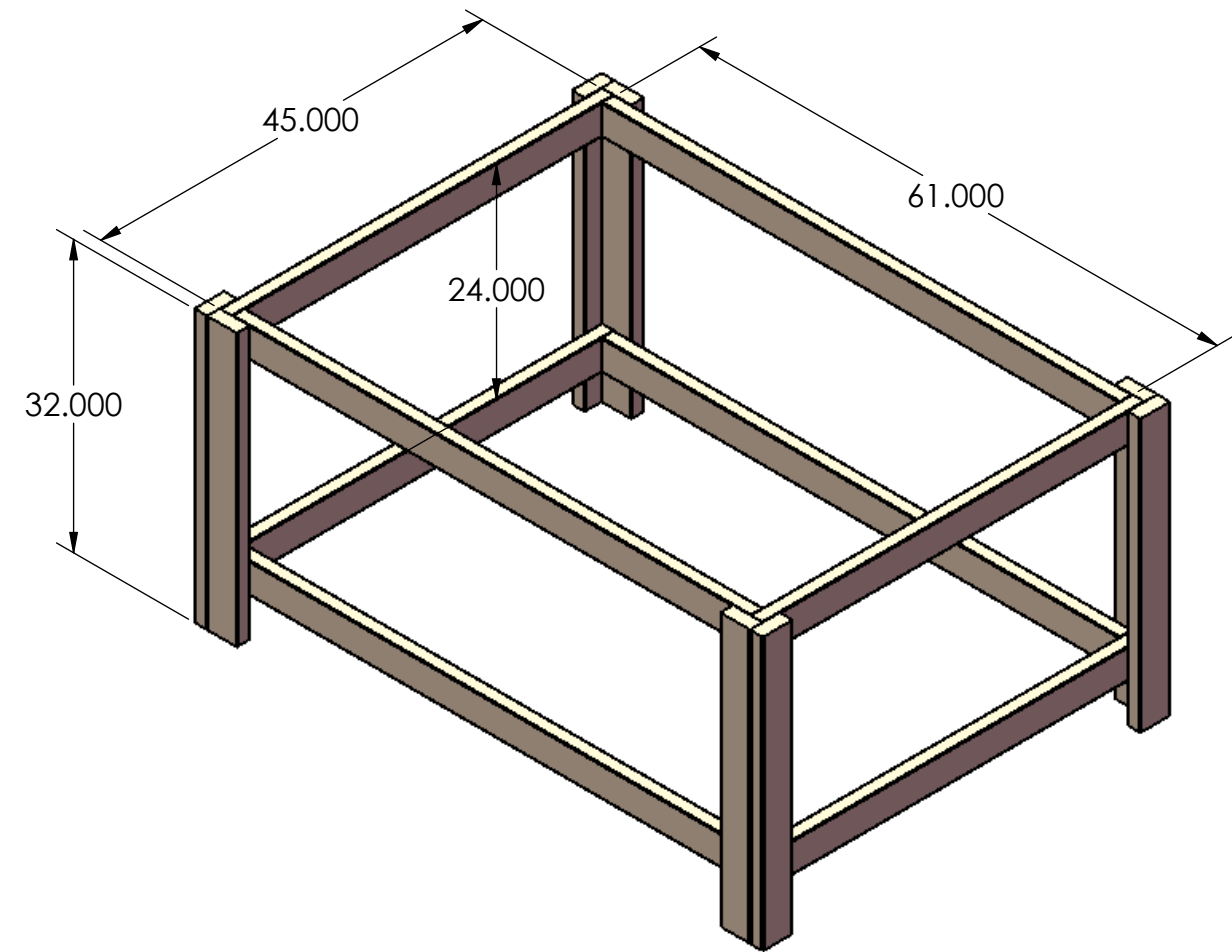








EIGHT 2 X 4 X 8 FOOT CUT THE FOLLOWING
FOUR 2X4X96 = FOUR 61INCH RAIL AND FOUR 32 INCH LEG
FOUR 2X4X96 = FOUR 45INCH RAIL AND FOUR 32 INCH LEG



ITEM NO.

ITEM NO.	QTY.	PART NUMBER	DESCRIPTION	Material	Cost
1					
46	1	ITEM 56	Z AXIS FRAME	MAKE FROM TRUEBOND PLYWOOD	INC
6	8	RM2-2RS v-groove bearing	V-GROOVE BEARING	VXB.COM \$2.95 EA	\$47.20
8	2	92240A624	Steel Hex Head Cap Screw	18-8 sst stl McMaster-Carr	\$5.55
9	1	LEAD SCREW NUT MOUNT	MAKE FROM PLYWOOD		INC
10	1	Item 10	X-AXIS MOOTR MOUNT	MAKE FROM .75 TRUEBOND PLYWOOD	INC
11	3	ITEM 11	NEMA 24 Stepping Motor (425 oz-in 1/4" dual shaft)	BUILDYOURCNC \$49.00	\$390.00
12	1	273711	9 TOOTH Sprocket #25 Roller Chain	MCMaster-CARR \$5.61	\$5.61
13	1	ITEM 13	MOTOR MOUNT SPACER	MAKE FROM TRUBOND PLYWOOD	INC
14	6	6663K110	20 tooth idler sprocket	\$15.95 Build your own cnc	\$95.70
15	Three 10 ft	ITEM 15	#25 CHAIN .25 PITCH \$11.18 FOR 10 FEET	E-BAY OR AMAZON	\$33.54
16	2	90598A031	Tee Nut Insert 3/8-16	MCMaster-CARR	\$9.05
17	2	92949A624	3/8-16 BUTTON HEAD CAP SCREW	MCMaster-CARR	\$1.00
18	2	ITEM 18	BEARING FLOATING BLOCK - SHORT	MAKE FROM TRUEBOND .75 PLYWOOD	INC
19	1	ITEM 19	LOAD BLOCK	MAKE FROM TRUE BOND PLYWOOD	INC
20	6	90835A200	DOWEL NUT 12MM LG CENTER 1/4-20	BUY ON EBAY or 90835A200 mcmaster-carr	\$5.83
22	2	92196A542	SHCS 1/4-20 X 1	McMASTER-CARR	\$0.42
23	2	92240A632	Hex Head Cap Screw 3/8-16 X 2	MCMaster-CARR \$5.63 10 PACK	\$11.13
24	1	ITEM 24	3/8 5 START .2 LEAD SCREW NUT	\$27.95 - BUILDYOURCNC	\$27.95
25	2	92198A634	Hex Head Cap Screw 3/8-16 X 2.5	MCMaster-CARR \$5.70 10 PACK	\$11.14
26	20	93298A130	Nylon-Insert Hex Locknut 3/8-16	\$8.49 PACK 50	\$8.49
21	6	90598A050	Tee Nut Insert 1/4-20 (5/16 DRILL)	McMASTER-CARR	\$10.46
4	2	6389K624	nylon bushing 3/8 id., 5 od x .75lg	\$3.94 PACK OF 5 McMASTER-CARR	\$3.94
57	4	D3V-11G6-1C25-K	Mechanical roller proximity switch.	OMRON	\$6.00
58	12	92673A113	Hex Nut 1/4"-20	ASTM F594 18-8 Stainless Steel	\$0.79
2					
27	1	ITEM 27	GANTRY ALUM BEAM	8020-1530 LITE X 60 INCHES LG. 8020 INC.	\$90.00
28	2	ITEM 28	Y AXIS GANTRY PLATE	MAKE FROM .75 TRUEBOND PLYWOOD	INC
29	2	ITEM 29	DRIVE SHAFT 24 INCHES	8893K204 MCMaster CARR	\$6.93
30	2	6389K443	BEARING, FLANGED .2500 ID	MCMaster-CARR	\$2.24
31	2	273711	9 TOOTH Sprocket #25 Roller Chain	MCMaster-CARR \$5.61	\$11.22
	4	6663K110	20 tooth idler sprocket	\$15.95 Build your own cnc	
6	8	RM2-2RS v-groove bearing	V-GROOVE BEARING	VXB.COM \$2.95 EA	\$47.20
7	8	92510A805	spacer .75 OD x .38 ID x .75 lg	Alum, McMaster-Carr	\$22.00
32	2	14105	CORNER BRACKET FROM 8020 INC. EBAY \$11.15		\$22.30
44	2	ITEM 54	Y AXIS PLATE STIFFENER AND CHAIN GUARD	MAKE FROM TRUEBOND PLYWOOD	INC
45	2	ITEM 55	CHAIN COVER	1/4 PLYWOOD	
49	2	ITEM 61	LOWER BEARING SPACER	MAKE FROM TRUEBOND .75 THICK PLYWOOD	INC
50	1	ITEM 62	CENTER MOTOR MOUNT	MAKE FROM TRUEBOND .75 THICK PLYWOOD	INC
51	1	ITEM 51	CENTER MOTOR MOUNT FLANGE	MAKE FROM TRUEBOND .75 THICK PLYWOOD	INC
52	1	ITEM 64	X AXIS RAIL SUPPORT	MAKE FROM TRUEBOND .75 THICK PLYWOOD	INC
53	2	ITEM 53	BEARING RAIL 60 INCHES	8893K204 MASTER-CARR	\$13.86
55	2	ITEM 55	CHAIN ANCHOR AND GANTRY END STOP	MAKE FROM TRUEBOND .75 THICK PLYWOOD	INC
60	8	92949A634	BUTTON HEAD CAP SCREW 3/8-16 X 2.5 LONG	18-8 SST STL	\$9.09
59	4	92949A628	3/8-16 BUTTON HEAD CAP SCREW 1.5 LG	MCMaster-CARR	\$6.25
	12	93298A130	Nylon-Insert Hex Locknut 3/8-16	\$8.49 PACK 50	8.49
62	2	6412K11	Shaft Coupling 1/4 X 1/4	MCMaster-CARR	\$14.20
3					
33	5	ITEM 33	TORSION BOX GRID 67 INCHES LONG	.75 THICK MDF	\$60.00
34	7	ITEM 34	TORSION BOX GRID 48 INCHES	.75 MDF	INC
35	2	ITEM 35	TORSION BOX TOP AND BOTTOM	48 X 67 X .75 MDF	INC
36	2	ITEM 36	SPOIL BOARD - LEFT OVER TORION BOX TOP AND BOTTOM	48 X 29 X .75 MDF	INC
37	4	ITEM 37	END STOPS - CHAIN ANCHORS	MAKE FROM TRUEBOND .75 PLYWOOD	INC
38	1	ITEM 38	CHAIN TENSIONER	MAKE FROM 1/4-20 X 2.5 BOLT	\$2.00
39	2	91847A029	(Jam) Nut 1/4"-20	18-8 SST STL	
40	2	7779K14	Miniature Snap-Acting Switch ROLLER		\$3.00
41	2	ITEM 7	Y AXIS RAIL SUPPORT 67 INCHES	MAKE FROM TRUEBOND PLYWOOD	INC
42	4	ITEM 7	BEARING RAIL 67 INCHES	8893K204 MCMaster-CARR	\$27.72
61	2	ITEM 61	Y AXIS RAIL SPACER	MAKE FROM TRUEBOND .75 PLYWOOD	INC
43	2	ITEM 53	CHAIN SUPPORT	MAKE FROM TRUEBOND PLYWOOD	INC
4					
56	1	ITEM 56	X AXIS MAIN PLATE	MAKE FROM TRUEBOND .75 THICK PLYWOOD	INC
47	2	ITEM 47	13 INCH RAIL	8893K204 MCMaster-CARR	INC
3	1	ITEM 3	3/8 .2 lead 5 start lead screw	\$2.10 PER INCH 12 INCHES REQ \$25.20 BUILDYOURCNC	\$25.20
	1	2401K13 MCMaster-CARR	3/8 TO 1/4 SHAFT COUPLING - LOVEJOY	\$11.00 BUILD YOUR CNC.COM	\$11.00
5	2	9414T800	Set Screw Shaft Collar 3/8 ID	\$.72 McMaster-Carr	\$1.44
	2	6389K624	nylon bushing 3/8 id., 5 od x .75lg	\$3.94 PACK OF 5 McMASTER-CARR	3.94
1	1	ITEM 1	ROUTER MOUNT	MAKE FROM .75 PUREBOND PLYWOOD	\$50.00
2	1	ITEM 2	C-CUP ROUTER MOUNT	MAKE FROM .75 PUREBOND PLYWOOD	INC
48	1	ITEM 48	Z AXIS MOTOR MOUNT	MAKE FROM TRUEBOND .75 THICK PLYWOOD	INC
54	1	ITEM 63	Z-AXIS LIMIT TAB	MAKE FROM 1/4 INCH THICK PLYWOOD	

\$1,086.88

