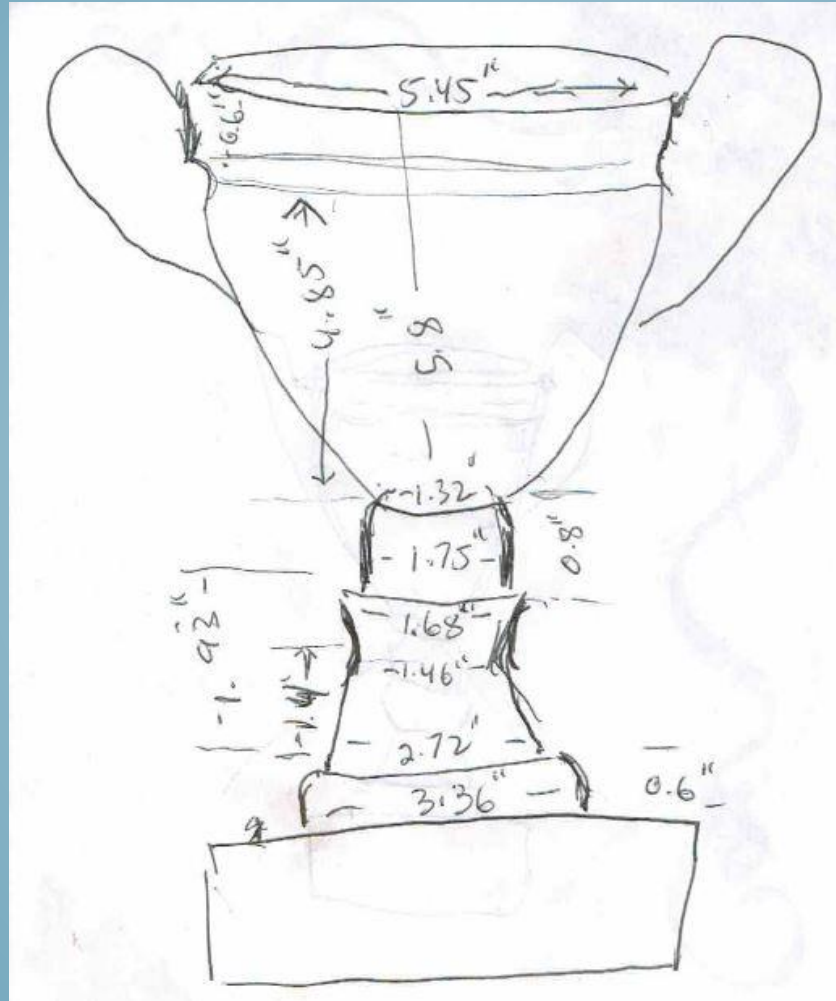


# *Handles*

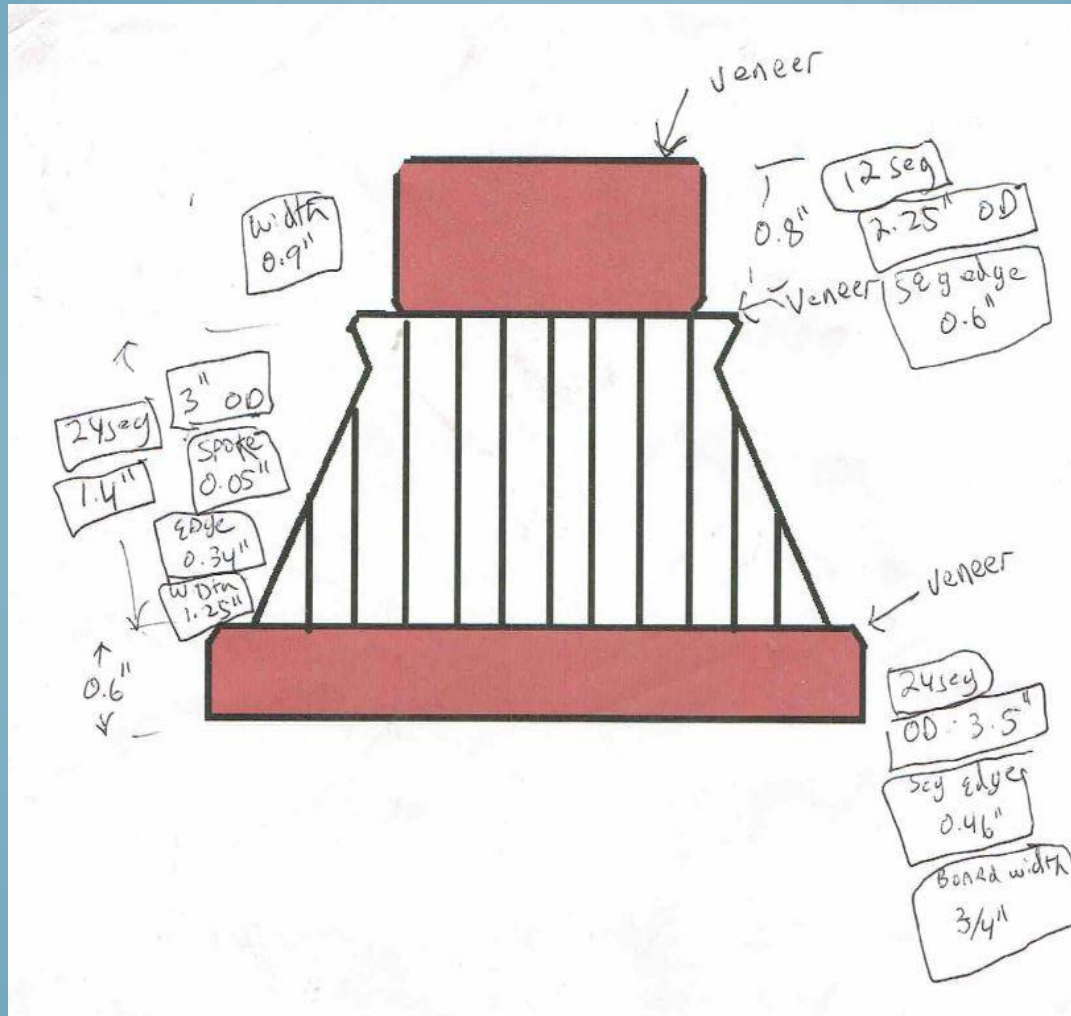


*Tom Lohman*

# Design



# Base Design



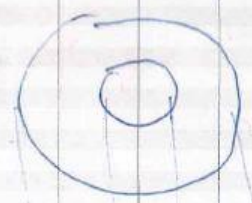
# More Base Design

## Cutting Summary - Trophy\_V2

Row	Row Type & Note	Species (Default)	Segs.	Board Thickness	Outside Diameter	Inside Diameter	Segment Edge Length	Vertical Spacer	Board Width	Economy Board Length	Grain Match	Miter Angle	Blade Tilt	Slope	S1	S2	S3	S4	S5	
6	Veneer Ring	Ebony	4	0.06"	2.25"	0.5"	2.25"		0.95"	6.68"		45°								
5	Flat	Bloodwood	12	0.8"	2.25"	0.5"	0.6"	0.320"	0.98"	6.19"	8.79"	15°				12				
4	Veneer Ring	Ebony	4	0.06"	2.25"	0.25"	2.25"		1.04"	6.41"		45°				4				
3	Wheel	Holly	24	1.4"	3"	0.5"	0.34"	0.05"	1.25"	7.6"	11.39"	7.5°					24			
2	Veneer Ring	Ebony	4	0.06"	3.5"	2.25"	3.5"		0.95"	11.66"		45°				4				
1	Flat	Bloodwood	24	0.6"	3.5"	2.25"	0.46"		0.63"	12.26"	14.18"	7.5°					24			

24

24 seg OD 2.75 ID 3 1/4



3 1/4 ID  
2.75 OD

1.375 - 0.375  
1" thick

S1: Ebony S2: Bloodwood S3: Holly  
 \* : Upper Outside Diameter  
 \*\* : Lower Outside Diameter

$$(2 - 0.03) =$$

24 seg  
5 spacers  
0.103"

$$2.75 \times 7 =$$

$$\text{Ø } 8.6394" / 24 =$$

$$0.359975$$

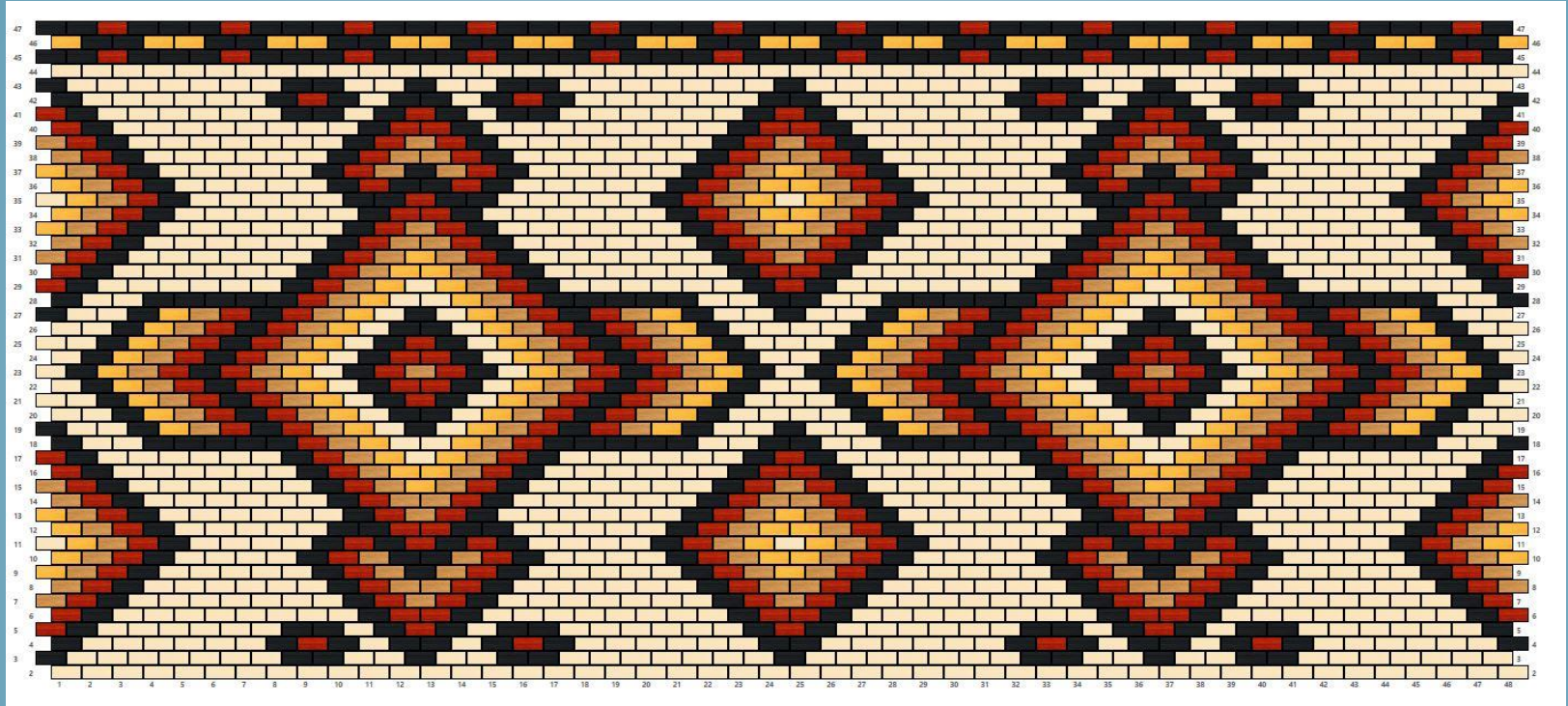
$$0.36" - 0.02 = \text{Ø } 0.34"$$



# Body Design



# Body Piece Layout



# Cut Sheet

		% Open = 15.00					Deg Seg Gap		1.13 deg													
Row #	Dia Diff	OD	Board Width	Board Thickness	Total Pieces	Open Space	Cut Angle Deg's	Segment Edge	Calculated Board Length	Holly	Ebony	Bloodwood	Yellowheart	Chakte Viga	Check Piece Count	Board Length	Holly	Ebony	Bloodwood	Yellowheart	Chakte Viga	
1		2.100	1	0.75	24	0.000	7.50	0.276	10		16				16	10	0.00	9.50	0.00	0.00	0.00	
2	0.00	2.100	1	0.135	48	0.021	3.19	0.117	12	48					48	12	11.56	0.00	0.00	0.00	0.00	
3	0.00	2.100	1	0.135	48	0.021	3.19	0.117	12	36	12				48	12	8.67	2.89	0.00	0.00	0.00	
4	0.10	2.200	1	0.135	48	0.022	3.19	0.123	12	28	16	4			48	12	6.90	3.94	0.99	0.00	0.00	
5	0.20	2.400	1	0.135	48	0.024	3.19	0.134	12	28	16	4			48	12	7.21	4.12	1.03	0.00	0.00	
6	0.20	2.600	1	0.135	48	0.026	3.19	0.145	13	32	8	8			48	13	8.60	2.15	2.15	0.00	0.00	
7	0.20	2.800	1	0.135	48	0.028	3.19	0.156	13	28	8	8		4	48	13	7.83	2.24	2.24	0.00	1.12	
8	0.10	2.900	1	0.135	48	0.029	3.19	0.162	14	24	8	8		8	48	14	6.85	2.28	2.28	0.00	2.28	
9	0.10	3.000	1	0.135	48	0.030	3.19	0.167	14	20	10	8		2	48	14	5.82	0.00	2.33	0.58	2.33	
					384					244	78	40	2	20	400	Total	in Inches	63.43	27.12	11.01	0.58	5.73
																In Feet	5.29	2.26	0.92	0.05	0.48	
10	0.10	3.100	0.75	0.135	48	0.031	3.19	0.173	14	16	12	8	4	8	48	14	4.75	3.56	2.37	1.19	2.37	
11	0.10	3.200	0.75	0.135	48	0.032	3.19	0.178	15	18	12	10	4	4	48	15	5.44	3.63	3.02	1.21	1.21	
12	0.10	3.300	0.75	0.135	48	0.033	3.19	0.184	15	20	12	8	4	4	48	15	6.16	3.69	2.46	1.23	1.23	
13	0.20	3.500	0.75	0.135	48	0.034	3.19	0.195	15	24	8	8	2	6	48	15	7.66	2.55	2.55	0.64	1.91	
14	0.20	3.700	0.75	0.135	48	0.036	3.19	0.206	16	24	8	8		8	48	16	7.92	2.64	2.64	0.00	2.64	
15	0.10	3.800	0.75	0.135	48	0.037	3.19	0.212	16	24	8	8	2	6	48	16	8.06	2.69	2.69	0.67	2.01	
16	0.10	3.900	0.75	0.135	48	0.038	3.19	0.217	16	24	8	8	4	4	48	16	8.19	2.73	2.73	1.37	1.37	
17	0.10	4.000	0.75	0.135	48	0.039	3.19	0.223	17	26	8	6	4	4	48	17	9.02	2.78	2.08	1.39	1.39	
18	0.10	4.100	0.75	0.135	48	0.040	3.19	0.228	17	12	24	4	4	4	48	17	4.23	8.46	1.41	1.41	1.41	
19	0.10	4.200	0.75	0.135	48	0.041	3.19	0.234	17	12	12	8	8	8	48	17	4.30	4.30	2.86	2.86	2.86	
20	0.10	4.300	0.75	0.135	48	0.042	3.19	0.239	17	12	12	8	8	8	48	17	4.36	4.36	2.91	2.91	2.91	
21	0.10	4.400	0.75	0.135	48	0.043	3.19	0.245	18	10	12	10	8	8	48	18	3.69	4.43	3.69	2.95	2.95	
22	0.10	4.500	0.75	0.135	48	0.044	3.19	0.251	18	8	12	12	8	8	48	18	3.00	4.50	4.50	3.00	3.00	
23	0.10	4.600	0.75	0.135	48	0.045	3.19	0.256	18	6	12	12	8	10	48	18	2.28	4.56	4.56	3.04	3.80	
24	0.10	4.700	0.75	0.135	48	0.046	3.19	0.262	19	8	12	12	8	8	48	19	3.09	4.63	4.63	3.09	3.09	
25	0.10	4.800	0.75	0.135	48	0.047	3.19	0.267	19	10	12	10	8	8	48	19	3.91	4.70	3.91	3.13	3.13	
26	0.10	4.900	0.75	0.135	48	0.048	3.19	0.273	19	12	12	8	8	8	48	19	4.76	4.76	3.18	3.18	3.18	
27	0.10	5.000	0.75	0.135	48	0.049	3.19	0.278	19	12	12	8	8	8	48	19	4.83	4.83	3.22	3.22	3.22	
28	0.10	5.100	0.75	0.135	48	0.050	3.19	0.284	20	12	24	4	4	4	48	20	4.90	9.80	1.63	1.63	1.63	
29	0.00	5.100	0.75	0.135	48	0.050	3.19	0.284	20	26	8	6	4	4	48	20	10.61	3.27	2.45	1.63	1.63	
30	0.10	5.200	0.75	0.135	48	0.051	3.19	0.290	20	24	8	8	4	4	48	20	9.93	3.31	3.31	1.65	1.65	
31	0.10	5.300	0.75	0.135	48	0.052	3.19	0.295	20	24	8	8	2	6	48	20	10.06	3.35	3.35	0.84	2.52	
32	0.10	5.400	0.75	0.135	48	0.053	3.19	0.301	20	24	8	8		8	48	20	10.20	3.40	3.40	0.00	3.40	
33	0.00	5.400	0.75	0.135	48	0.053	3.19	0.301	20	24	8	8	2	6	48	20	10.20	3.40	3.40	0.85	2.55	
34	0.10	5.500	0.75	0.135	48	0.054	3.19	0.306	21	24	8	8	4	4	48	21	10.33	3.44	3.44	1.72	1.72	
35	0.10	5.600	0.75	0.135	48	0.055	3.19	0.312	21	22	12	6	4	4	48	21	9.59	5.23	2.62	1.74	1.74	
36	0.00	5.600	0.75	0.135	48	0.055	3.19	0.312	21	20	12	8	4	4	48	21	8.72	5.23	3.49	1.74	1.74	
37	0.10	5.700	0.75	0.135	48	0.056	3.19	0.317	21	20	10	8	2	8	48	21	8.83	4.42	3.53	0.88	3.53	
38	0.00	5.700	0.75	0.135	48	0.056	3.19	0.317	21	24	8	8		8	48	21	10.60	3.53	3.53	0.00	3.53	
39	0.00	5.700	0.75	0.135	48	0.056	3.19	0.317	21	28	8	8		4	48	21	12.36	3.53	3.53	0.00	1.77	
40	0.10	5.800	0.75	0.135	48	0.057	3.19	0.323	21	32	8	8			48	21	14.31	3.58	3.58	0.00	0.00	
41	0.00	5.800	0.75	0.135	48	0.057	3.19	0.323	21	28	16	4			48	21	12.52	7.15	1.79	0.00	0.00	
42	0.00	5.800	0.75	0.135	48	0.057	3.19	0.323	21	28	16	4			48	21	12.52	7.15	1.79	0.00	0.00	
43	0.00	5.800	0.75	0.135	48	0.057	3.19	0.323	21	36	12				48	21	16.10	5.37	0.00	0.00	0.00	
44	0.10	5.900	0.75	0.135	48	0.058	3.19	0.329	22	48					48	22	21.73	0.00	0.00	0.00	0.00	
45	0.00	5.900	0.75	0.135	48	0.058	3.19	0.329	22		36	12			48	22	0.00	16.30	5.43	0.00	0.00	
46	0.00	5.900	0.75	0.135	48	0.058	3.19	0.329	22		24			24	48	22	0.00	10.86	0.00	0.00	10.86	
47	0.00	5.900	0.75	0.135	48	0.058	3.19	0.329	22		36	12			48	22	0.00	16.30	5.43	0.00	0.00	
										722	478	284	130	210	1824	Totals	in Inches	289.16	192.42	111.14	49.18	81.98
															2224	In Feet	24.10	16.04	9.26	4.10	6.83	
										966	556	324	132	230								

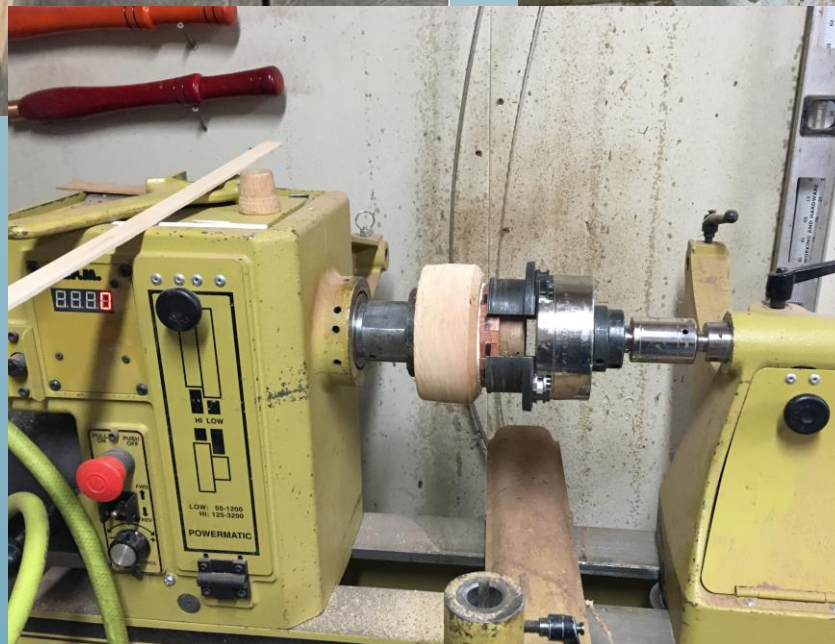


# You Will Need a Jig and Accurate Measuring Device





# Make Base First



# Continue Base Build





# *Begin With Body Build*

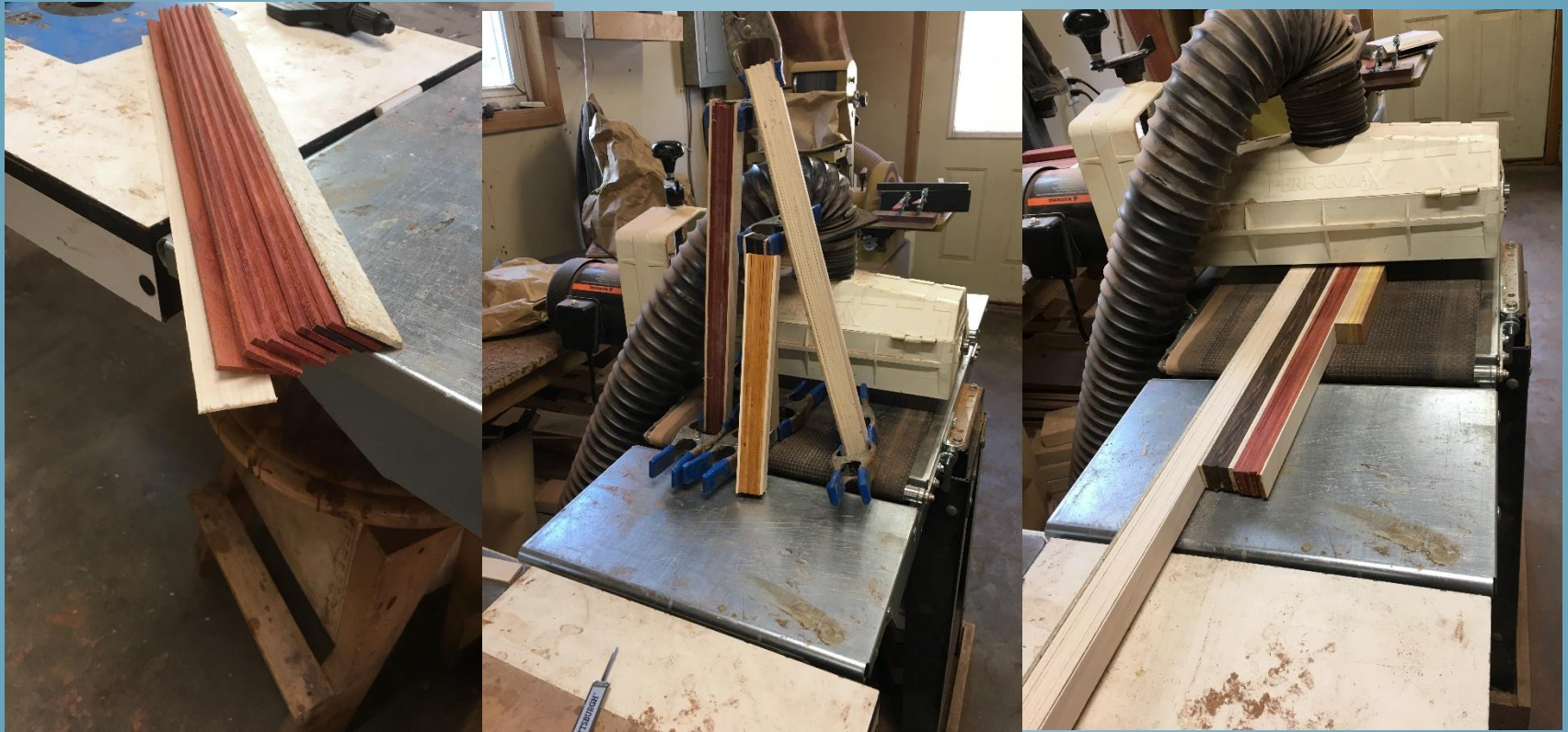


# Cut & Sand Strips





# Prep Stock For Use



# *Add Tape for Clean Cut*





# Cut the Pieces

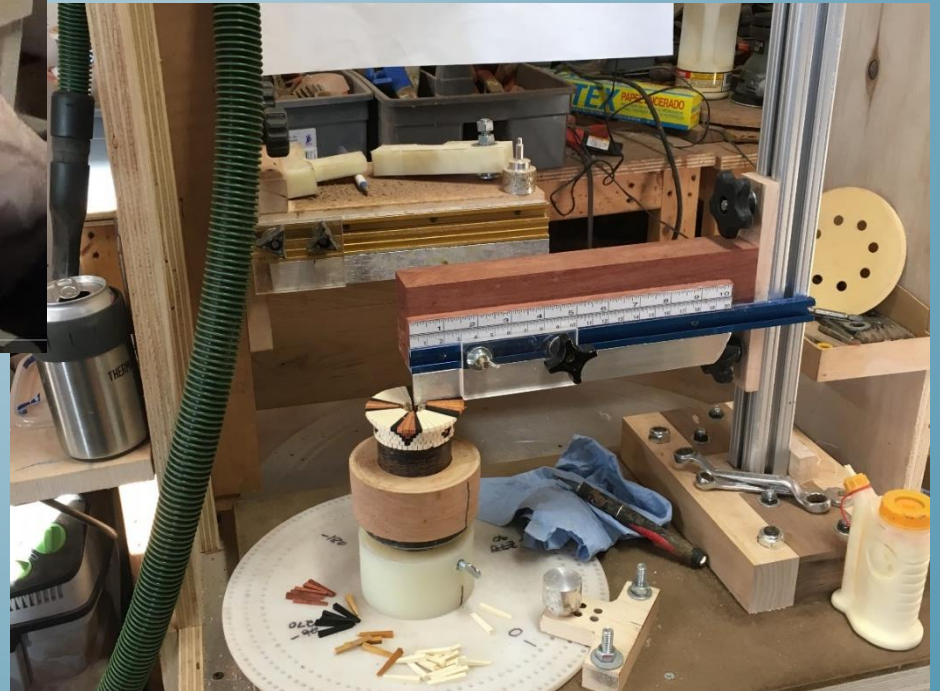
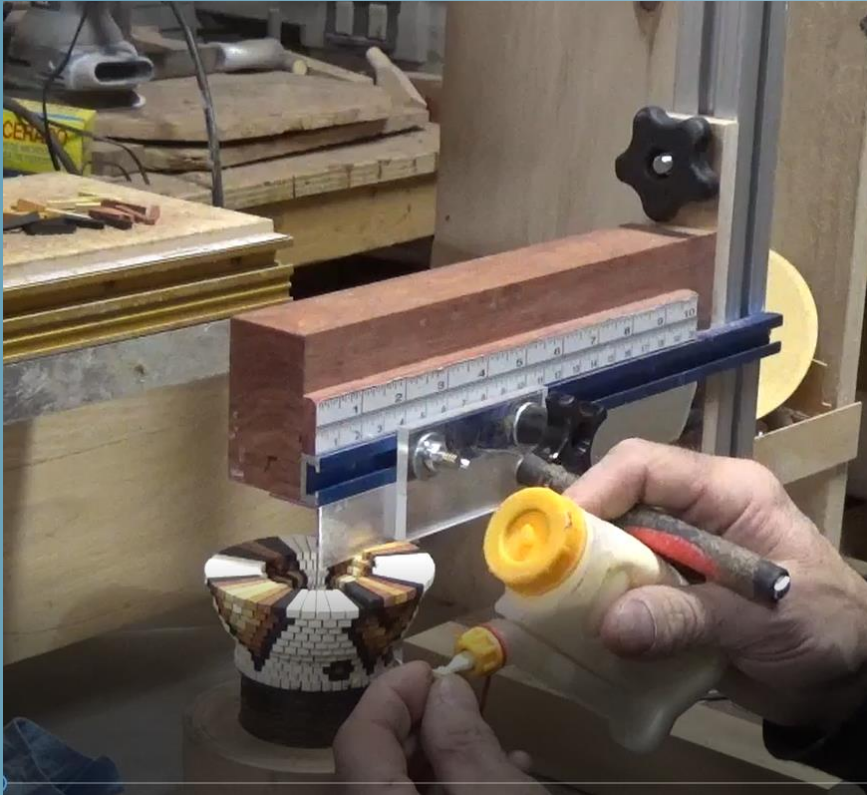


# Start the Gluing Process





# More Gluing

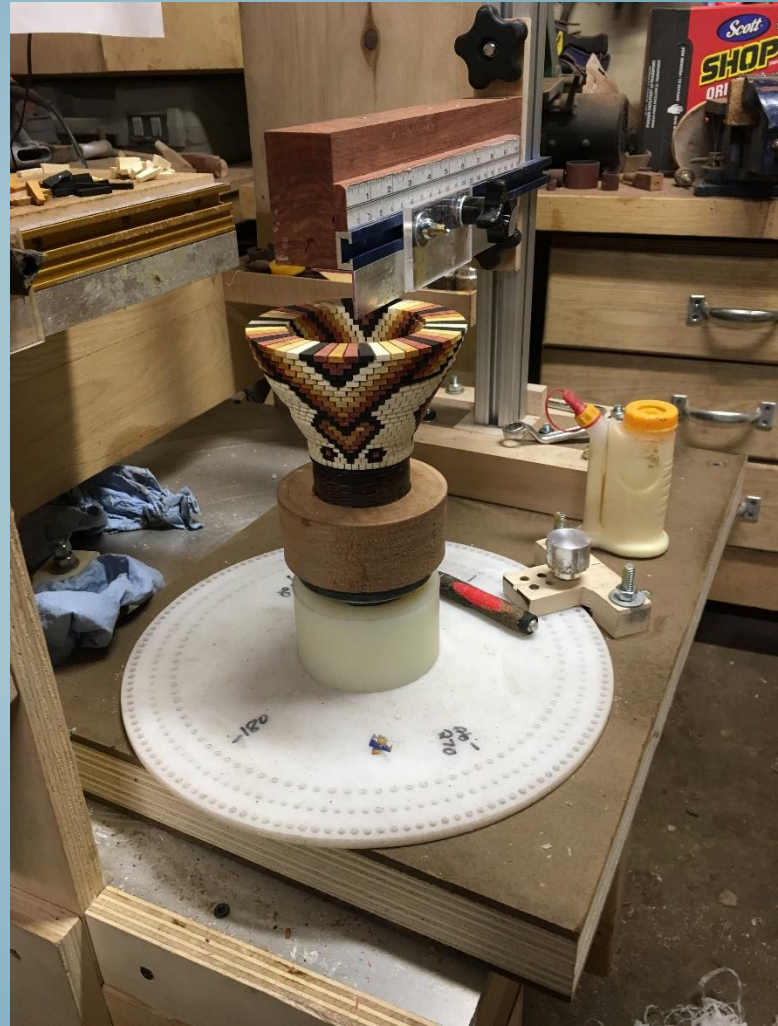


# *Apply Pressure and Then Lathe And Sand*





# Lots of Pieces to Glue!



# *Sand Flat*

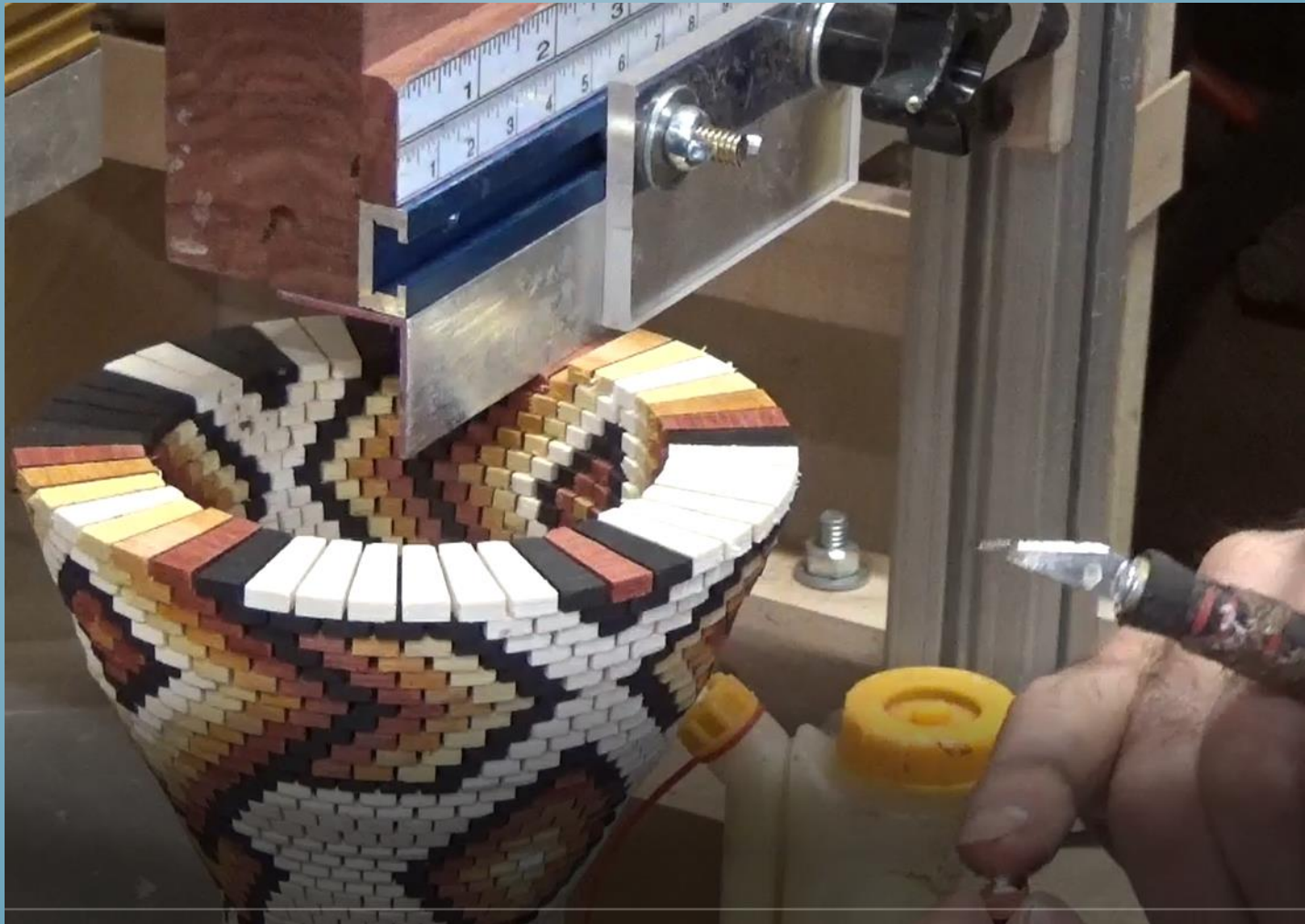




***Make Sure it is Flat***



# *Even More Gluing*





# Almost Done



# *Pressure is On!*





# *Sand Rough Edges*



# Segments Glued





# *Support While Using Tools*

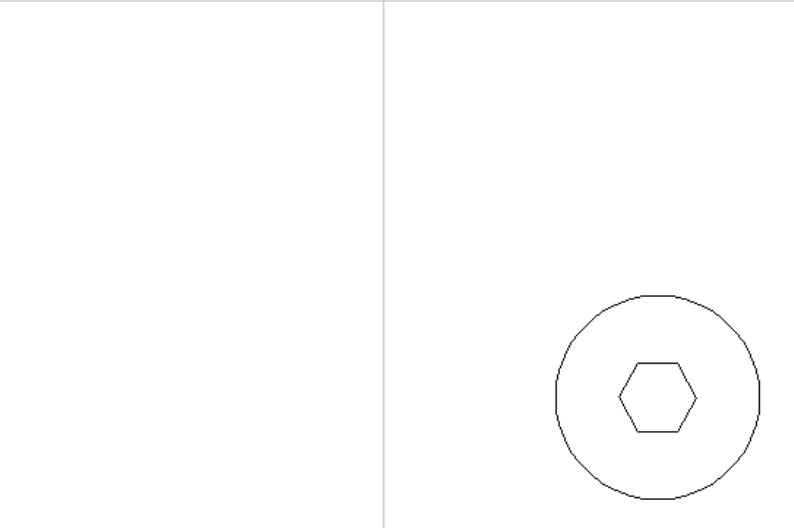
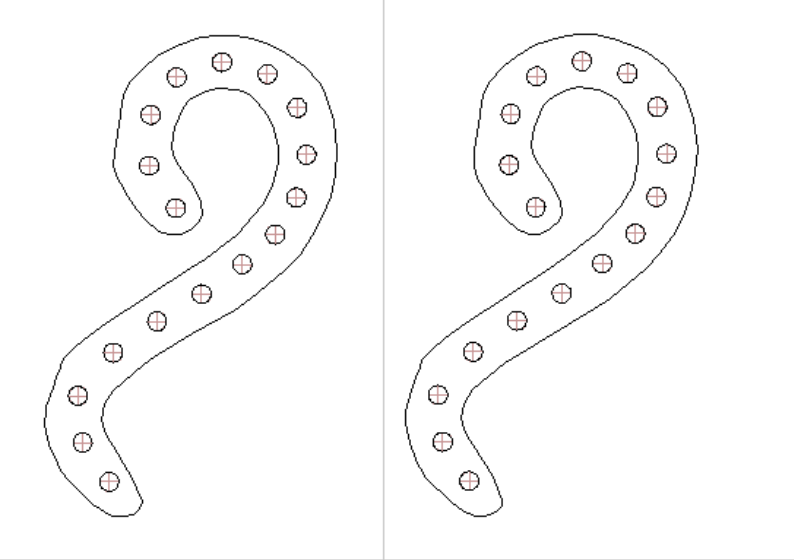


# *Glue Body and Bottom Together*

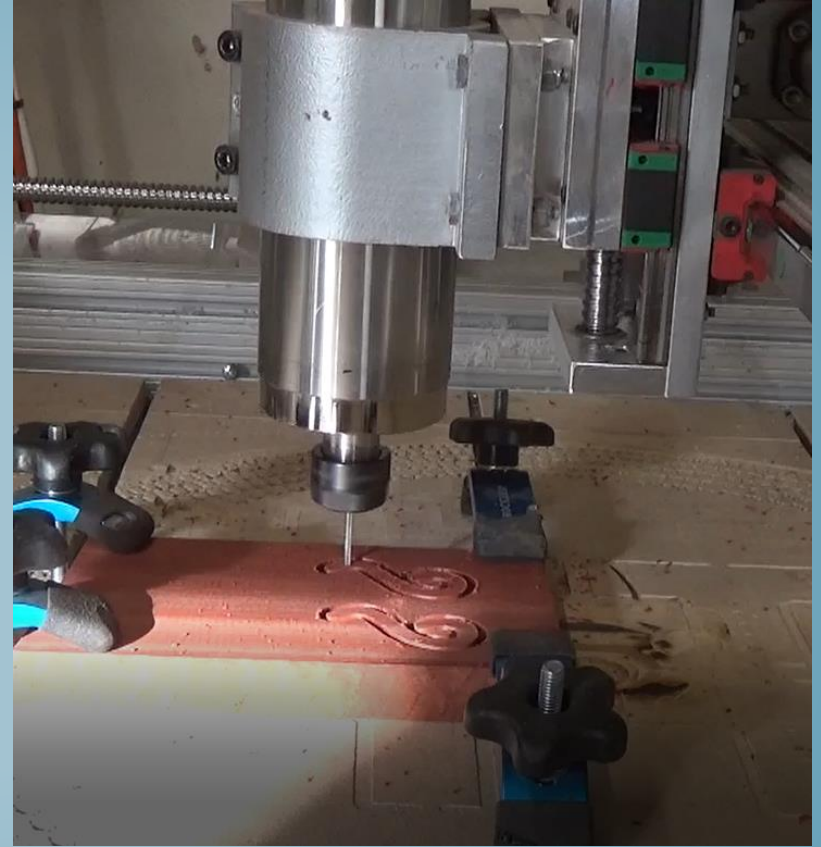
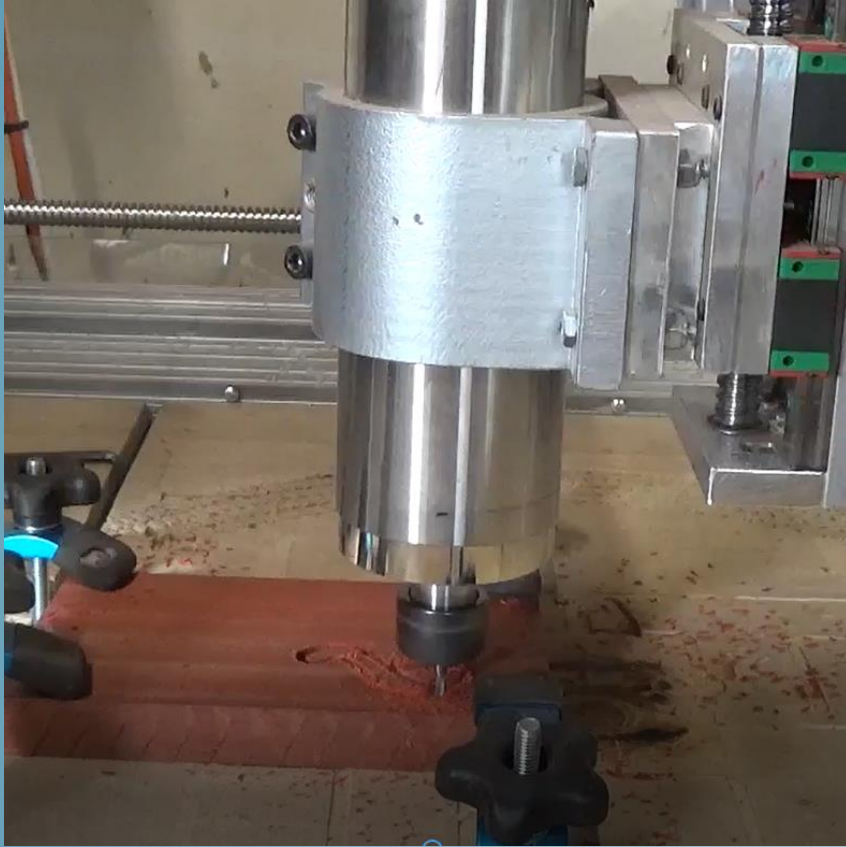




# CNC Handle Design



# *CNC the Handles*





# CNC the Handles



# Questions

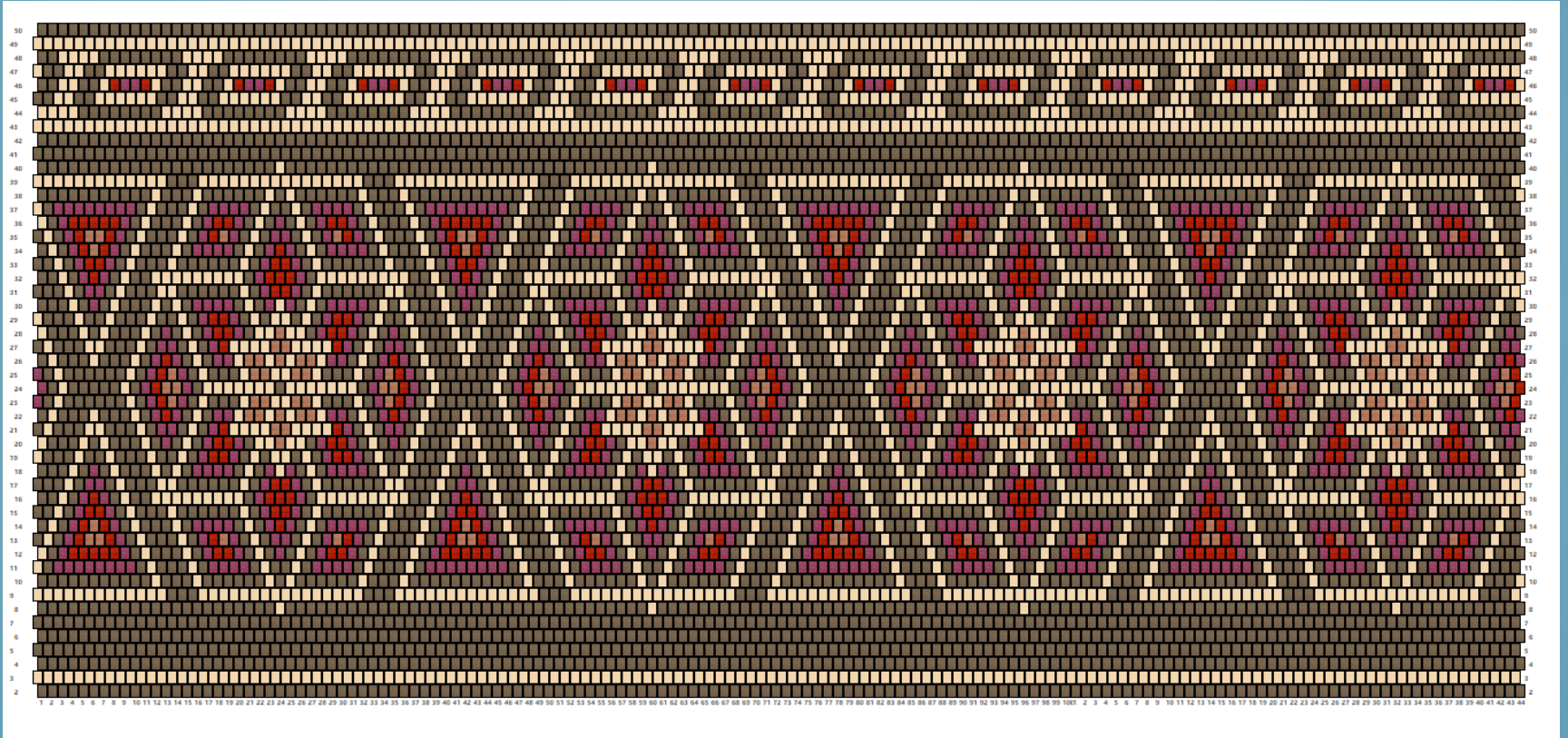




# *Big Star*



# The Plan







# Make Base



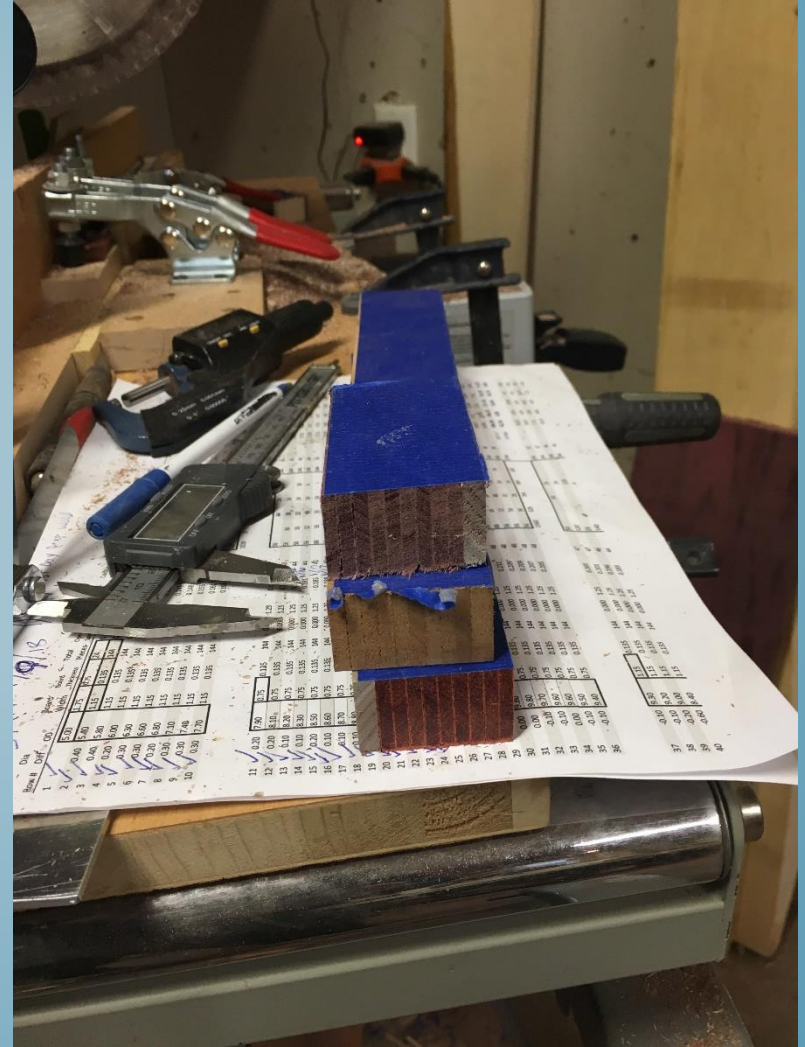


# Glue up Stock





# Sand Down Stock & Tape

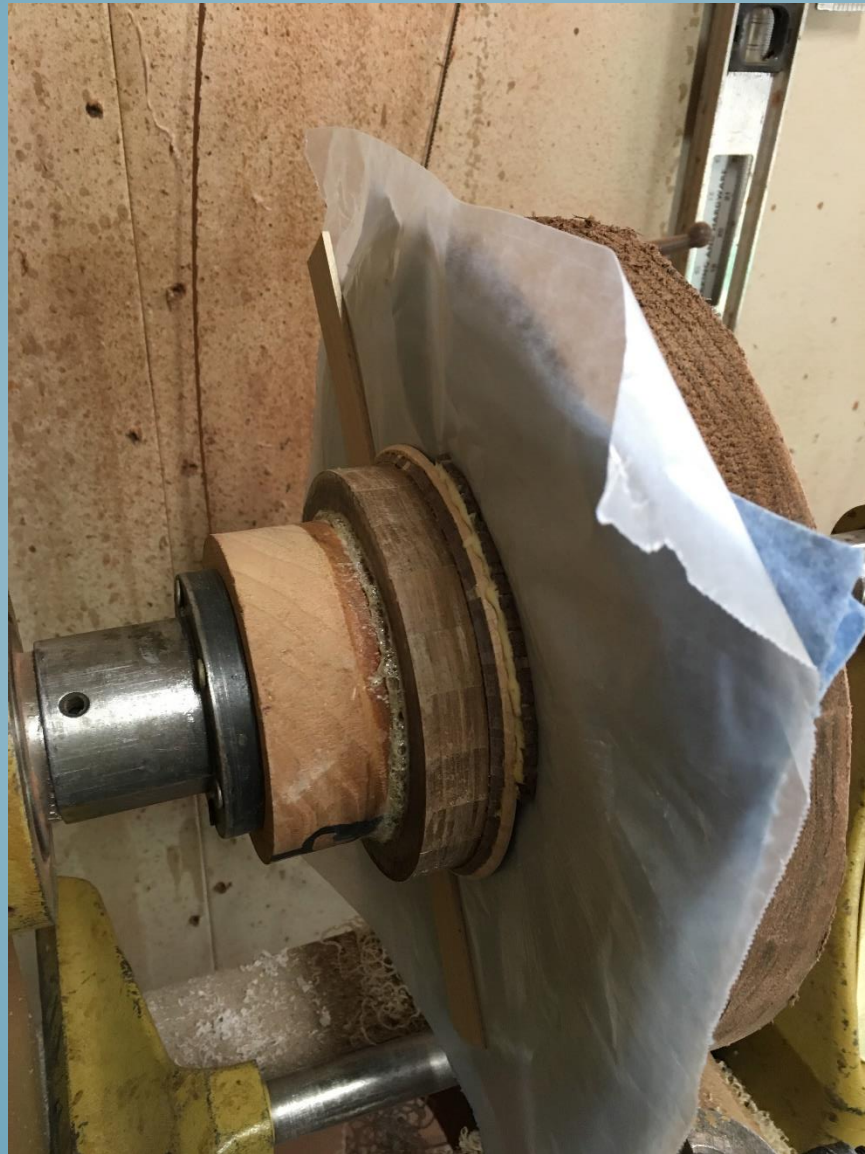




# Glue First Couple Rows



# Clamping Pressure





# More Progress



***Sand Each Row Flat***





# Cut The Pieces





# Glue The Critical Pieces First





# *Well I glued a Piece Incorrectly*



# *Filling up the Pieces*





# *Filling up the Pieces*

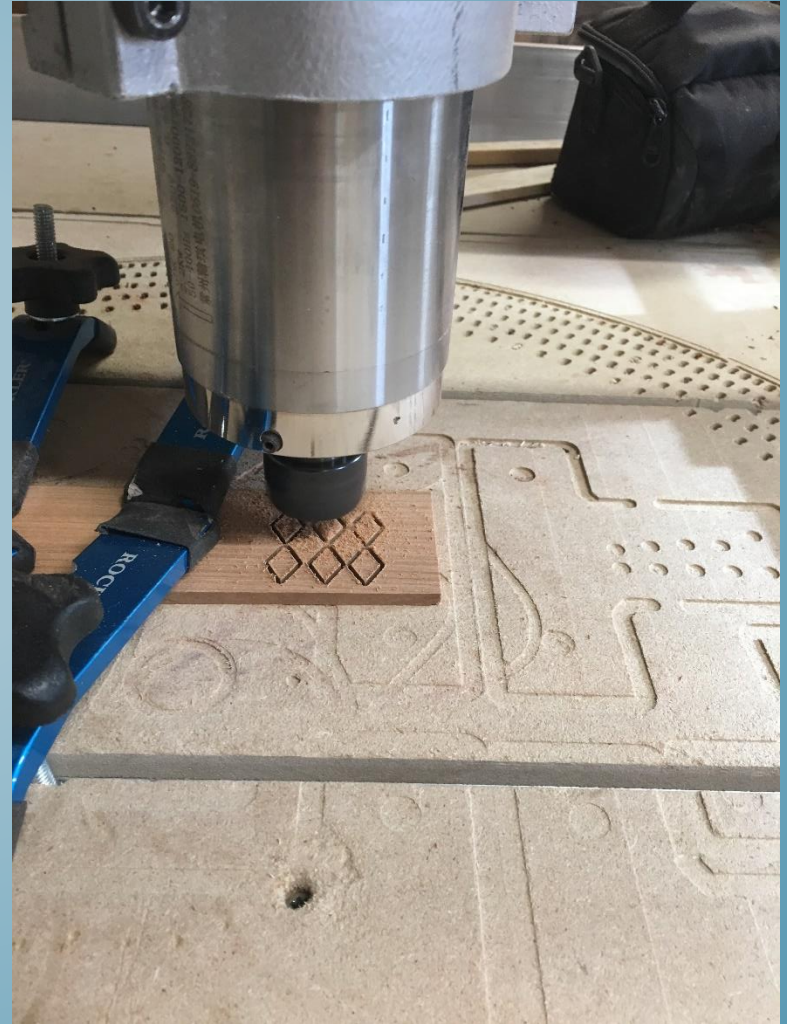
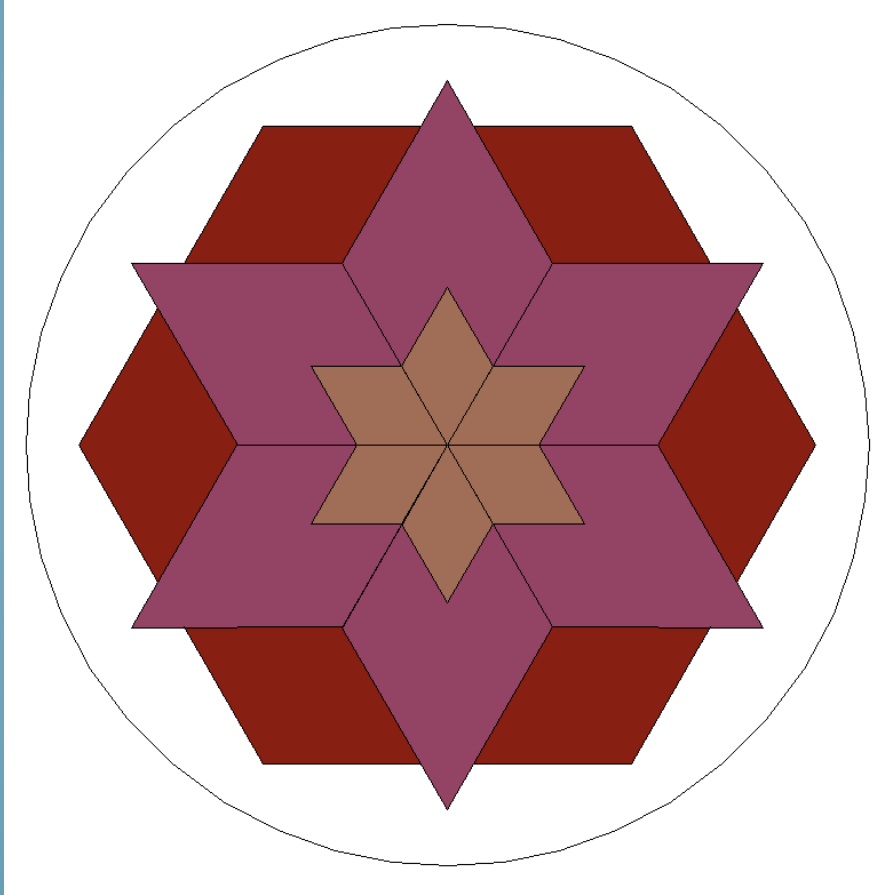


# Filling up the Pieces





# *Make The Center Piece*

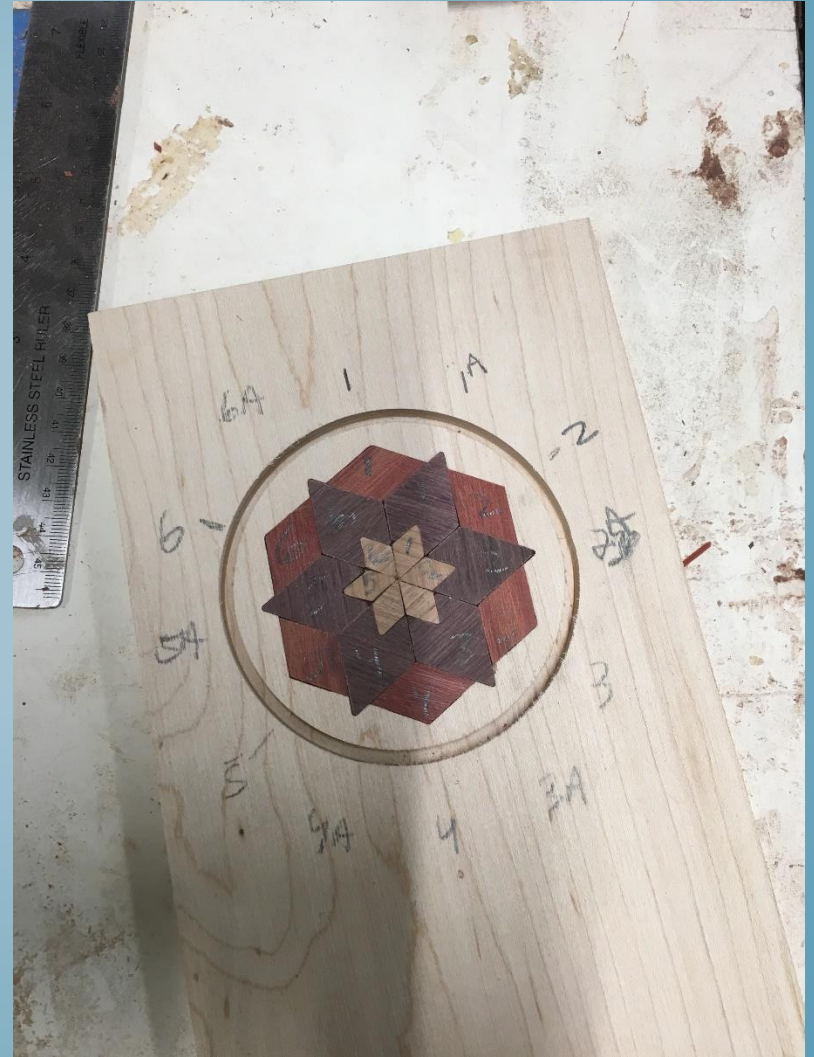
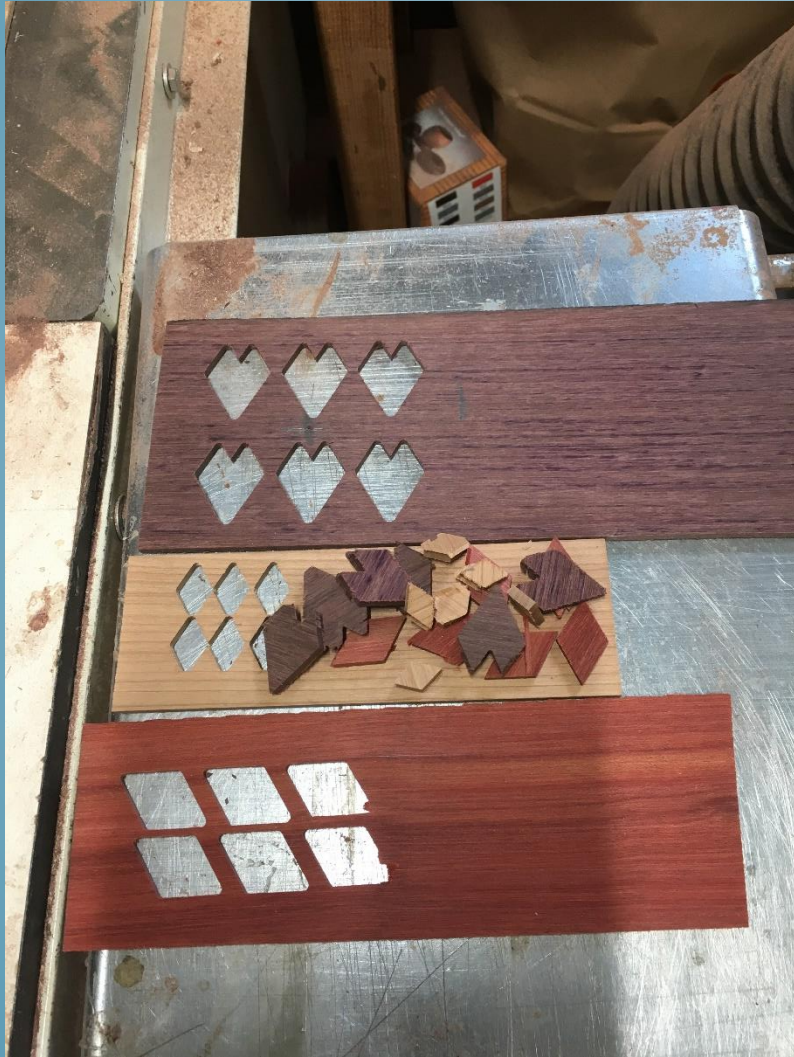


# *Make The Center Piece*





# Make The Center Piece



# *The Center Piece*





# *Big Star Complete*



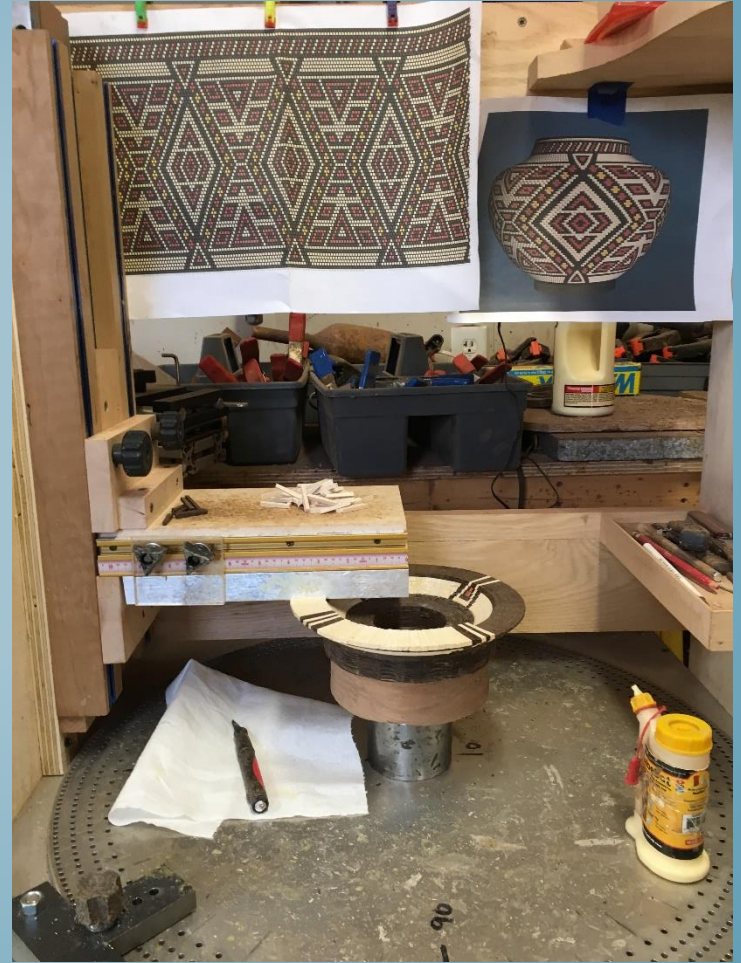


# Big Red





# Big Red





# Big Red





# Big Red





# Big Red





# Big Red



# *Small Bowl*





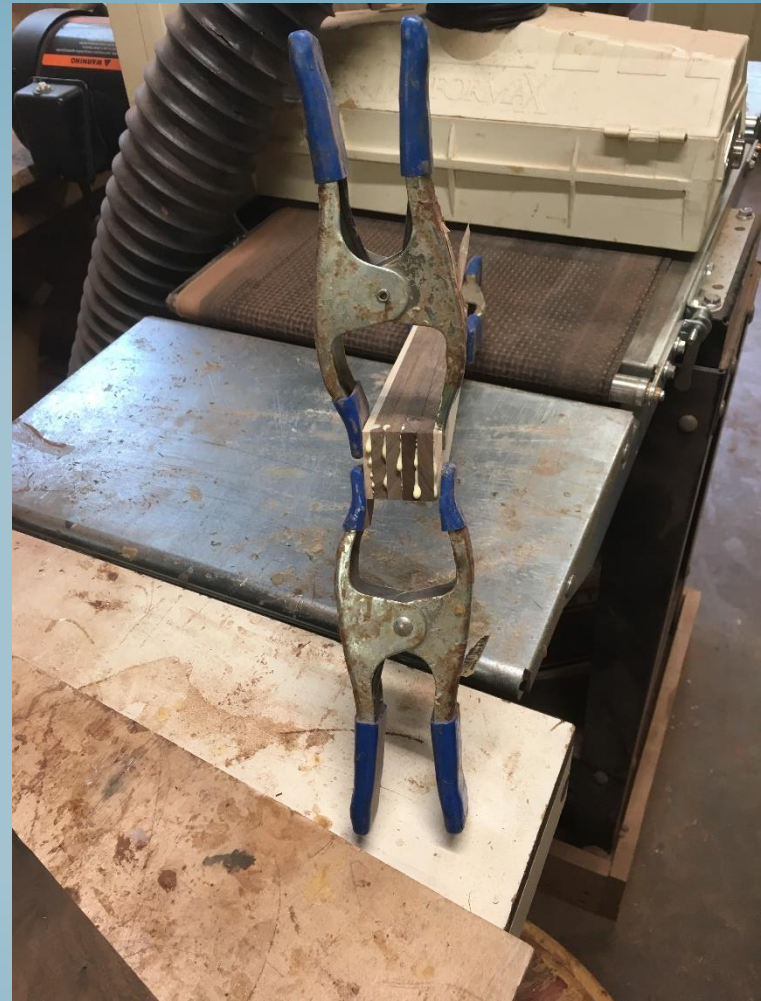
										<b>% Open = 0.00</b>											
Row #	Dia Diff	OD	Board Width	Board Thickness	Total Pieces	Open Space	Cut Angle Deg's	Segment Edge	Calculated Board Length	Maple	Walnut	Bloodwood	Yellowheart	Check Piece Count	Board Length		Maple	Walnut	Bloodwood	Yellowheart	
1		5.400	1.25	0.75	16	0.000	11.25	1.074	19		16			16	19		0.00	18.94	0.00	0.00	
2	0.50	5.900	1.1	0.25	48	0.000	3.75	0.387	24	42	6			48	24		21.43	3.06	0.00	0.00	
3	0.70	6.600	1.1	0.25	48	0.000	3.75	0.433	27	36	12			48	27		20.02	6.67	0.00	0.00	
4	0.50	7.100	1.1	0.25	48	0.000	3.75	0.465	28	30	12	6		48	28		17.67	7.07	3.53	0.00	
					144					108	30	6	0	160	Total	in Inches	<b>59.11</b>	<b>35.74</b>	<b>3.53</b>	<b>0.00</b>	
																In Feet	<b>4.93</b>	<b>2.98</b>	<b>0.29</b>	<b>0.00</b>	
5	0.40	7.500	0.75	0.25	48	0.000	3.75	0.492	30	24	12	12		48	30		14.77	7.39	7.39	0.00	
6	0.40	7.900	0.75	0.25	48	0.000	3.75	0.518	31	18	12	12	6	48	31		11.55	7.70	7.70	3.85	
7	0.20	8.100	0.75	0.25	48	0.000	3.75	0.531	31	12	12	12	12	48	31		7.86	7.86	7.86	7.86	
8	0.20	8.300	0.75	0.25	48	0.000	3.75	0.544	32	6	18	24		48	32		4.01	12.02	16.03	0.00	
9	0.10	8.400	0.75	0.25	48	0.000	3.75	0.551	32		24	24		48	32		0.00	16.19	16.19	0.00	
10	0.00	8.400	0.75	0.25	48	0.000	3.75	0.551	32	24	24			48	32		16.19	16.19	0.00	0.00	
11	0.00	8.400	0.75	0.25	48	0.000	3.75	0.551	32		48			48	32		0.00	32.38	0.00	0.00	
										84	150	84	18	336		Totals					
																in Inches	<b>54.38</b>	<b>99.73</b>	<b>55.17</b>	<b>11.71</b>	
																In Feet	<b>4.53</b>	<b>8.31</b>	<b>4.60</b>	<b>0.98</b>	
										192	180	90	18	496							

# The Plan

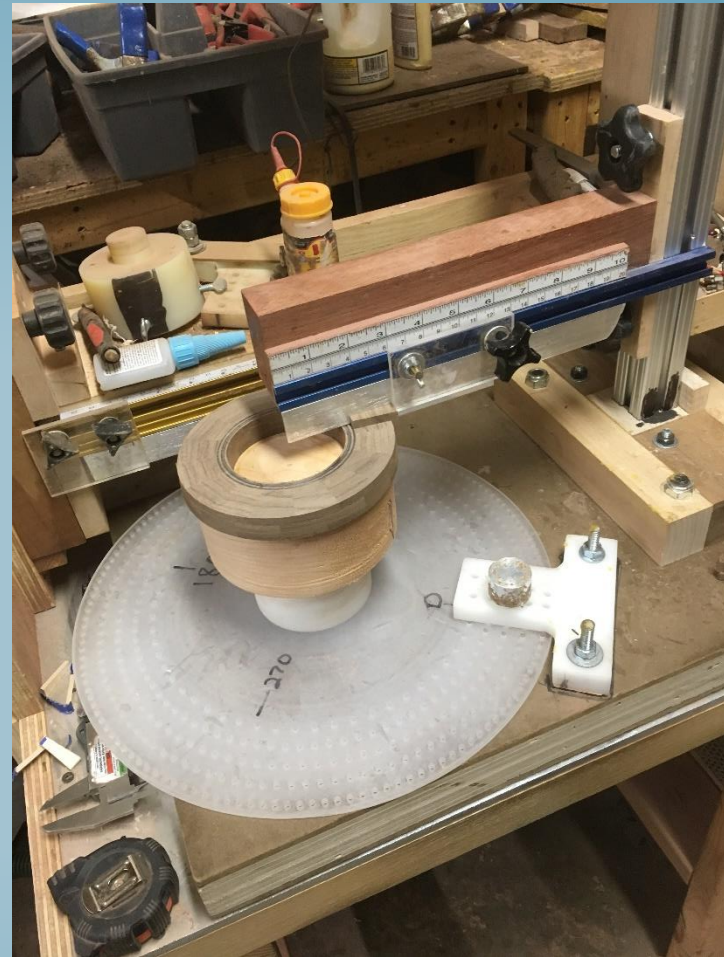


***Set Up Cut for Base Row***





**Prep Stock, Glue One End**

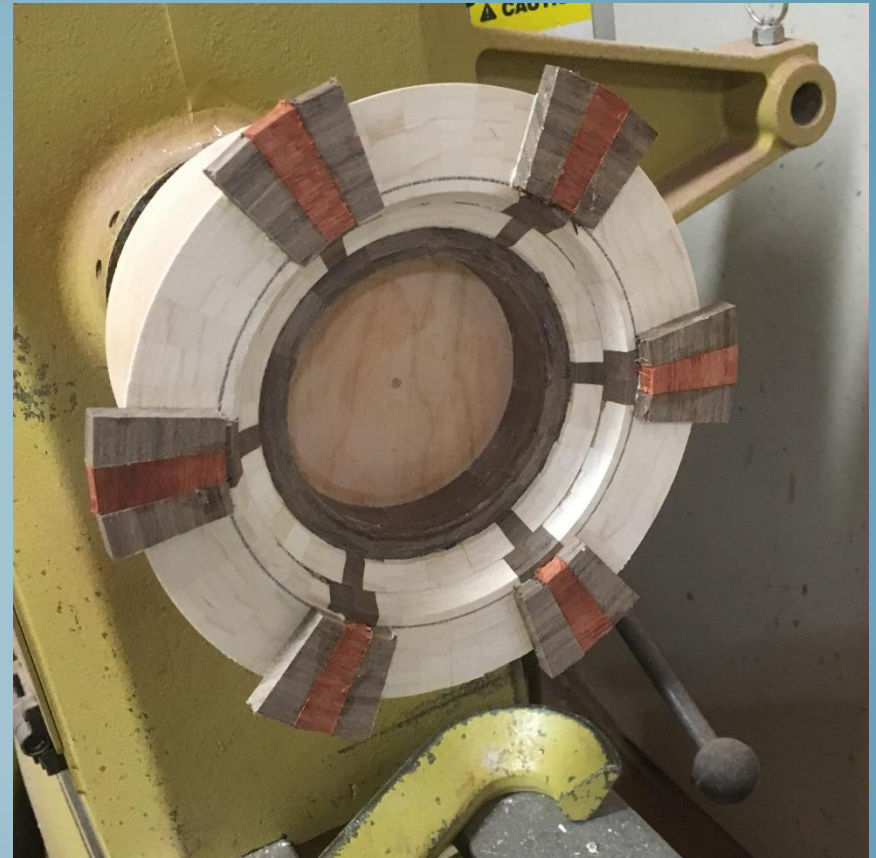


***Glue the Base Row to Waste Block,  
Glue Down First Piece***





**Glue Every Forth Piece,  
Fill in Rest of Row and Clamp**



**Start Forth Row,  
Clamp Forth Row**



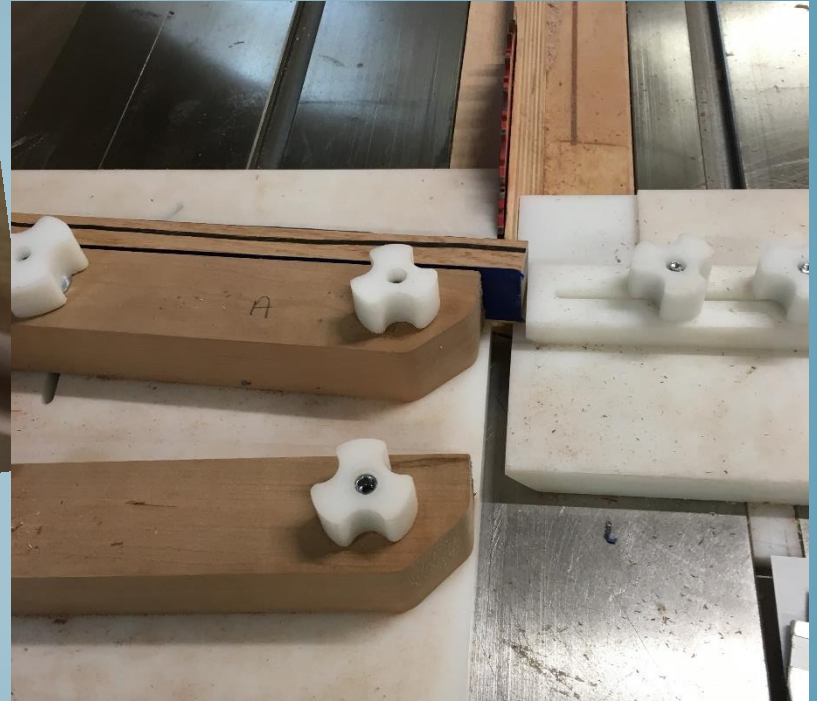


**Fill In Forth Row,  
Sand Forth Row**



**Mark 5<sup>th</sup> Row, Then Sand**  
**Sand Flat 5<sup>th</sup> Row**





8<sup>th</sup> Row

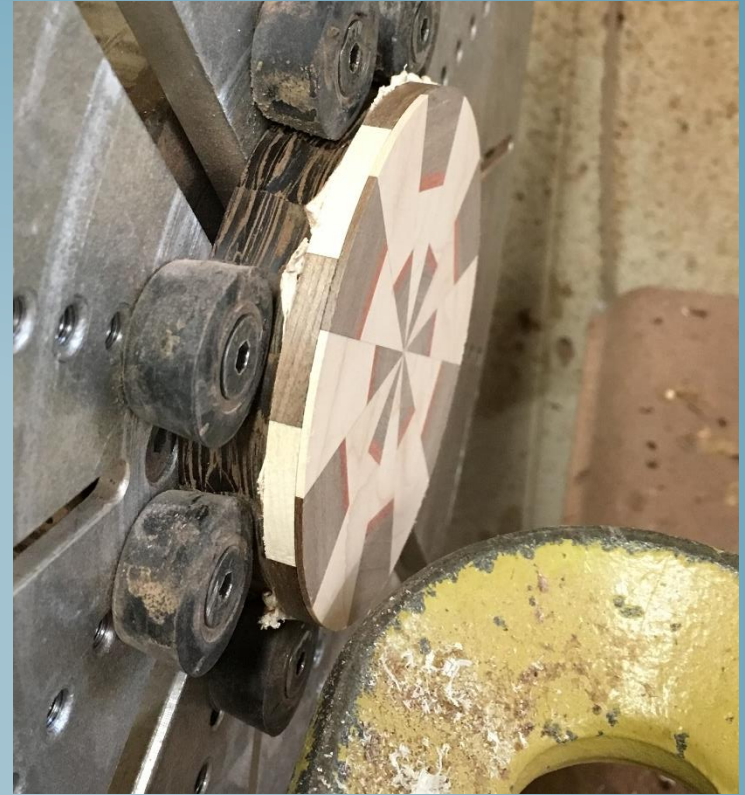
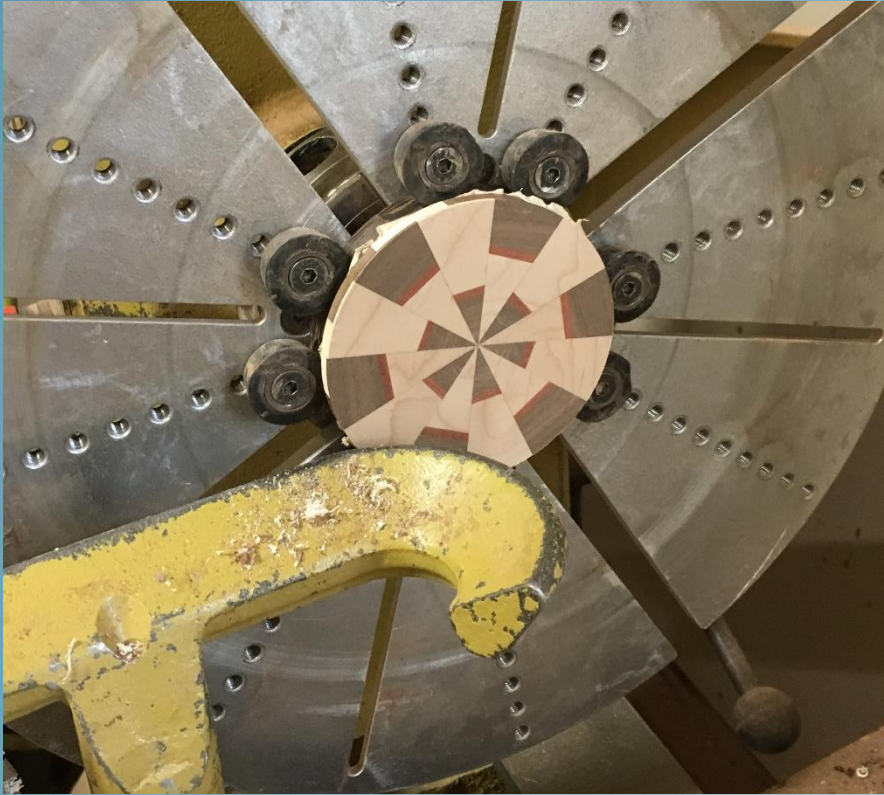


**Cut Down to The End**  
**10<sup>th</sup> Row**





**Glue, Sand and Cut Stock for  
Center Piece**



**Lathe Center Piece**





**Complete**

*Questions*



*Tom Lohman*  
*segmentedturning.org*















