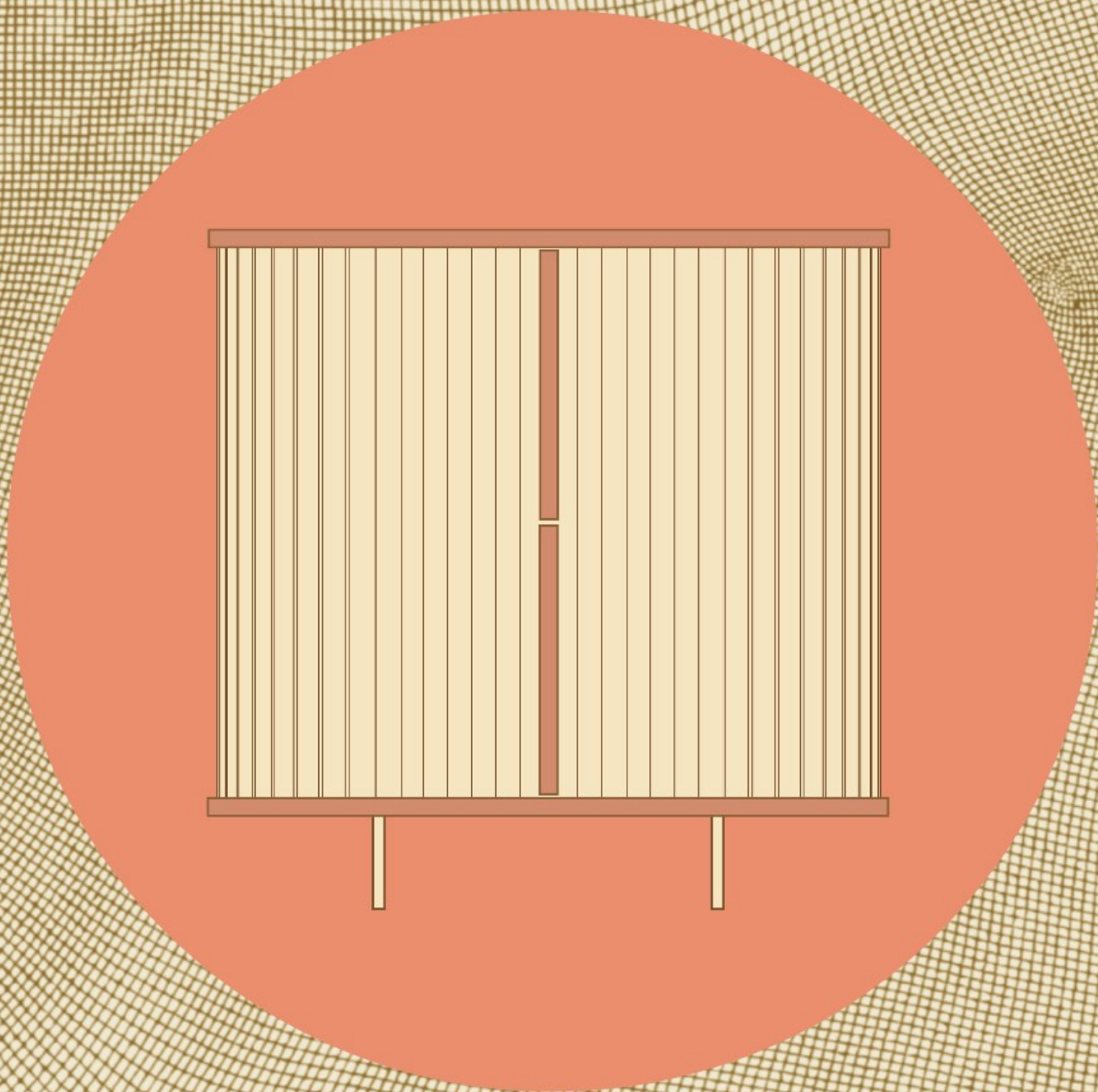




**MAKING THE
CONVERSE
CONSOLÉ**

PROJECT STATEMENT

The Converse Console is more than home storage—it's a centerpiece for connection. Designed to hide clutter while standing as a point of visual interest in a space, its carved surfaces are inspired by sound waves, symbolizing conversation and social energy of a home.

The console is not just a storage solution but a conversation starter, designed to spark interaction and creativity. Its adaptive screen creates a dynamic sense of movement, embodying its vibrant, spirited character. With space for your essentials—whether it's games, barware, or art supplies—the Converse Console encourages gathering, expression, and play in any home.



SUMMARY

Small storage capable console table with a 360 degree pair of carved maple tambour doors.

GENERAL DIMENSIONS

29" H 29" W 18" D

ASSEMBLY REQUIRED

Shipped in UPS Standard Box Size 30"x24"x6"

MATERIALS

Cherry hardwood top, bottom, and handles

Maple hardwood screen slats

Birch plywood with maple veneer

Wood finished with spot repairable hard wax oil

Designed and Built by Lucy L Mauries



PHASES

IDEATION

Defining what I wanted to work on from my basis for inspiration and my intent for the project in general. Defining personal heuristics to work within.

IDEA REFINEMENT

Getting realistic about what is feasible, figuring out what parts I want to focus on, setting goals for what the actual piece will look like.

FORM REFINEMENT

Defining measurements and constrictions of shipping in the box. Modeling options in CAD, deciding on shapes.

EXPERIMENTATION

Building scale models, testing CNC files, trial joint fits, full scale pre-prototype testing and building trial

BUILDING

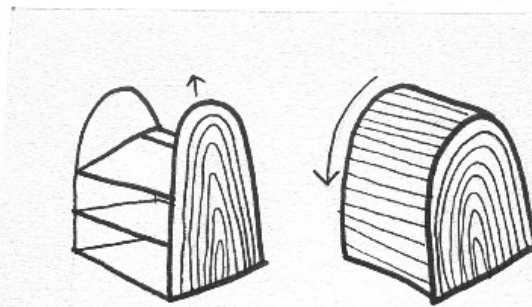
Building the working prototype out of final materials, figuring out processing, mad dash assembly alteration.

BEYOND

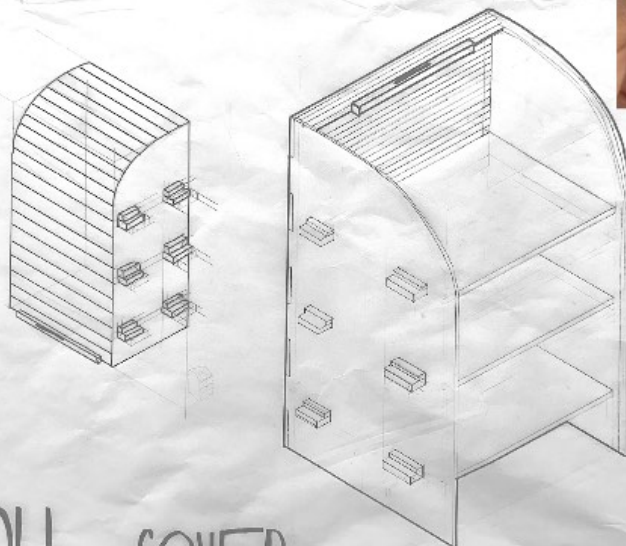
Critique synthesis, alteration, planning, reflection.

IDEATION

I started this project inspired by the idea of hiding clutter with a tambour screen. My parents recently re-homed our beloved vintage secretary desk and I've always loved its roll top. Jumping off from that I wanted to take that idea into different pieces of furniture, how tambour doors could apply to home storage.



SECRETARY TABLE



ROLL COVER

Ideation on that brought me to a list of project goals, identifying what I liked about flatpack furniture and furniture in general and wanting to fill all the boxes.

STATEMENTS :

1. Storage solution that hides clutter
2. something that can be adjusted or changed
3. something with zero hardware
4. something that can be put together in a bunch of different ways
5. something for a utilitarian purpose but specific style.



OBJECTIVES FOR FLATPACKING

1. ZERO hardware
OR as little and as simple as possible!
2. assembly multiple times
repeat assembly
3. With stands time,
meant to own for a while
To have and to hold.
4. Assembly is easy to understand
and detailed. graphics are sleek
and get the point across.
test ease of assembly on Lindsey

I wanted to make a simple design, trying not to overcomplicate furniture that needs to be user assembled but that had a unique look to it, something special with some sort of wow factor.

IDEA REFINEMENT

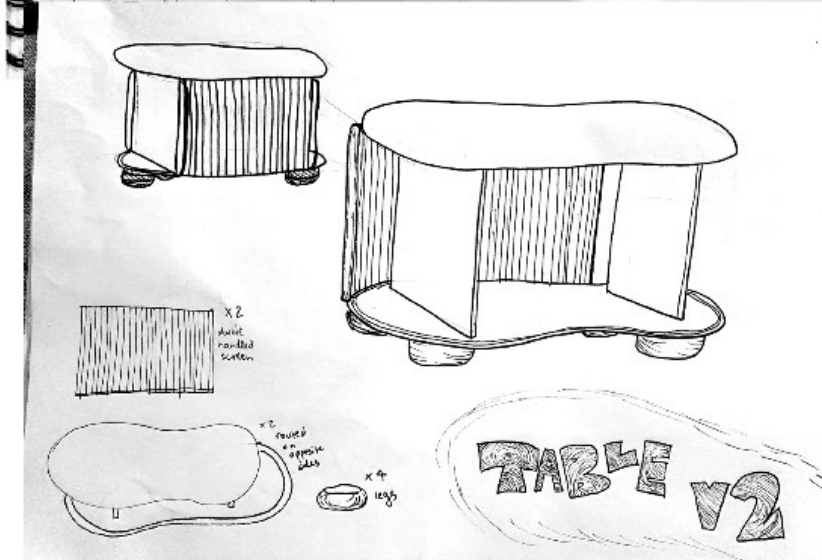
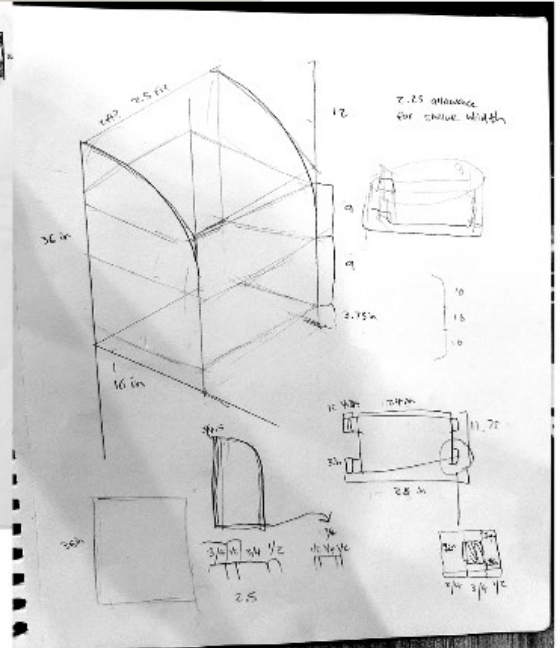
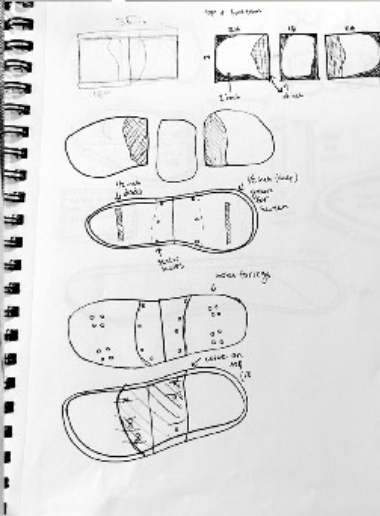
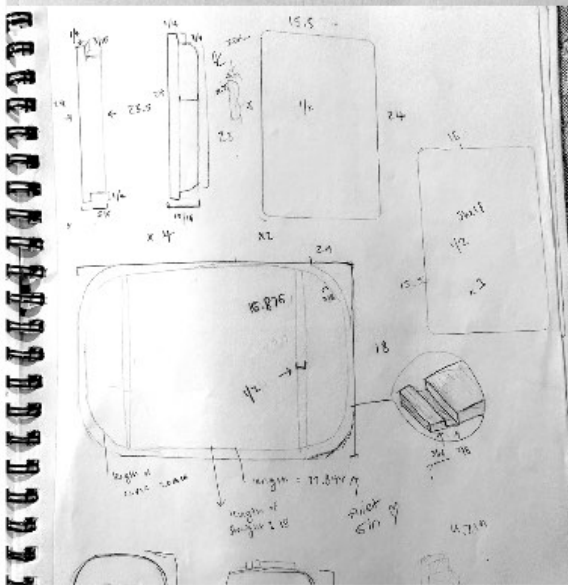
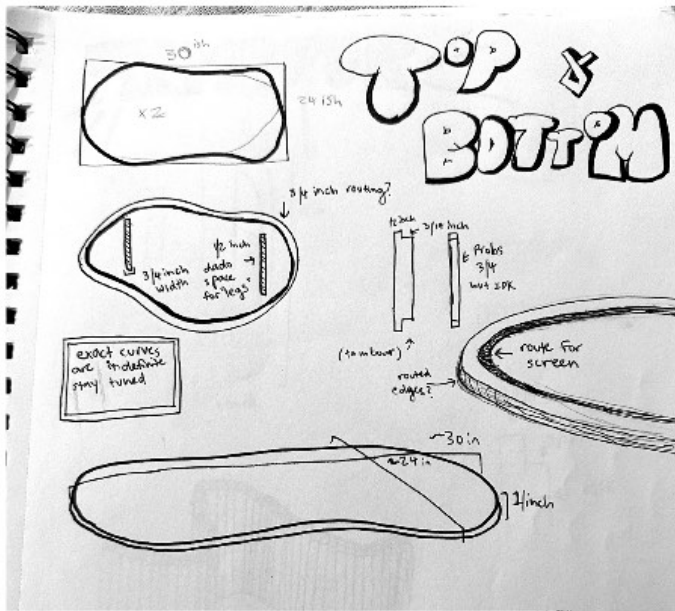


TABLE V2

As I originally ideated I was sketching around shapes that didn't feel quite right. Different shapes of top and bottom I was worried would create too much work for me to figure out for the screen movement. An upright design didn't leave enough room for the screen to hide in and just generally wasn't a fun design in my mind.

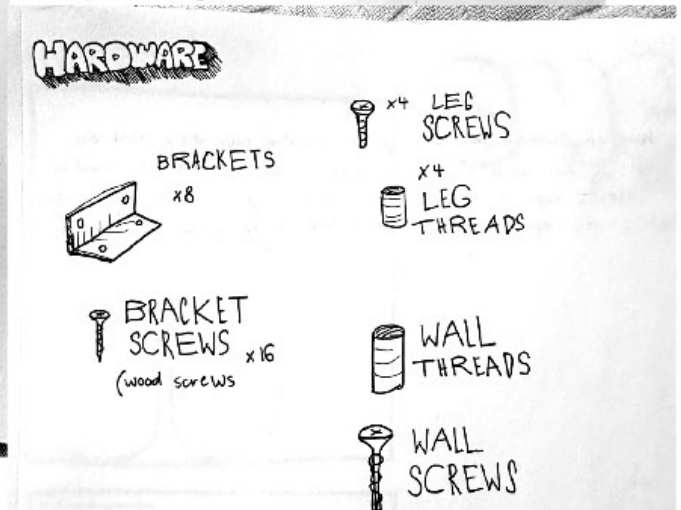
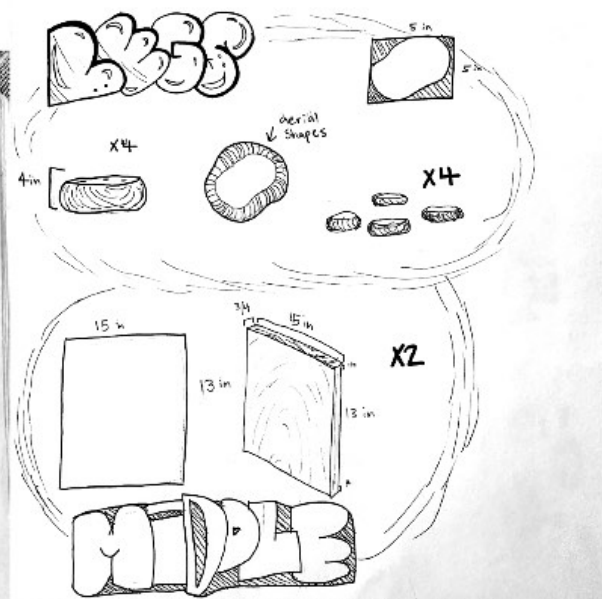
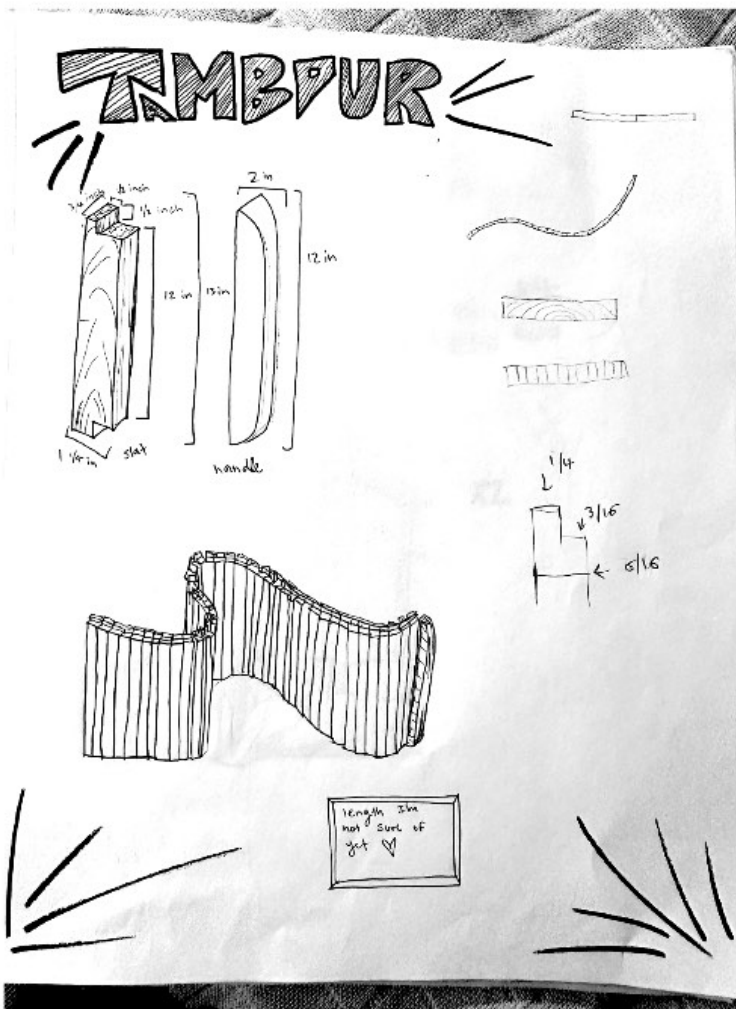


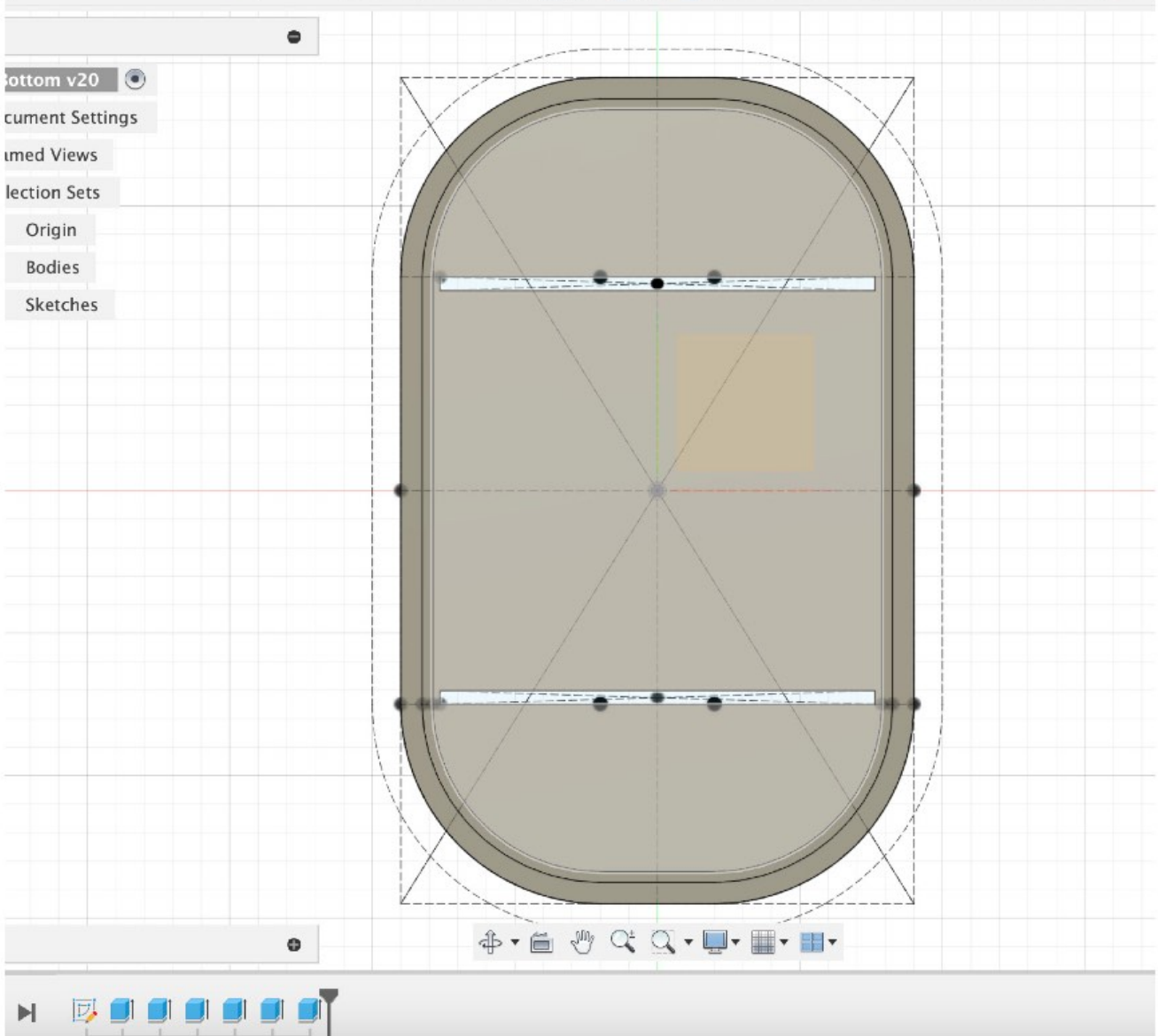
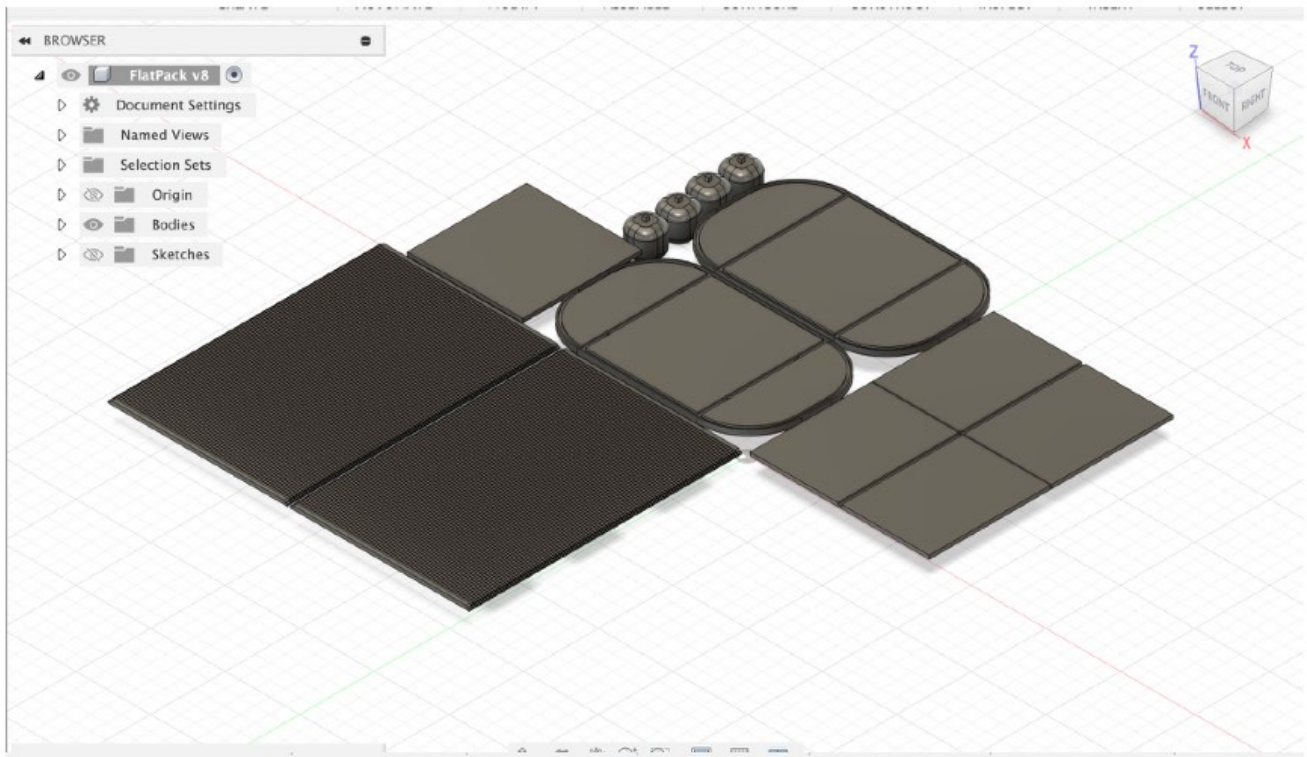
FORM REFINEMENT

Defining measurements and constrictions of shipping in the box. Modeling options in CAD, deciding on shapes.

Honestly a lot if not most of the form choices were made with the box in mind. Playing around with furniture and box sizes is hard because there needs to be room for width and height of flat parts but the largest dimension in standard UPS sizing is 30x24x6 inches, leaving the largest possible surface as 30x24. Thinking this through I was experimenting with the idea of doing a tabletop in multiple parts. I quickly abandoned that for its issues with stability.

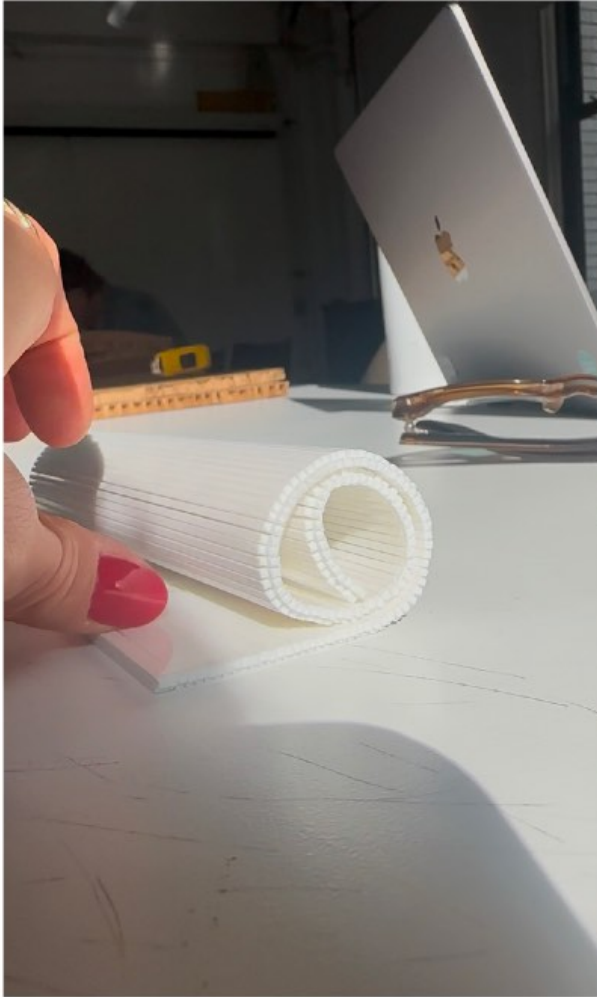
I settled on a small cabinet (as big as I could make it and make it fit in the box) and then have the screen run the entire perimeter.





EXPERIMENTATION

After settling on the form and design language for the piece and then making sure it would fit in the box I decided the next best course of action would be 3D printing a scale prototype. This also let me arrange things in a fake box in Fusion and make sure the pieces would fit.



This model clarified the size of the tambour slats for me and then how it could move and the room it needed to fully rotate around the track.



Once the measurements had been finalized and re-finalized I downloaded them to take to the CNC lab. I cut MDF prototypes of all the CNC parts and then made a mockup version of the screens on the table saw. The screens worked great, they slid relatively well and the glue held them great.

When those parts came out of the CNC I assembled them to see how it all worked, I had to readjust the size of the inner parts and recut and remeasure. I also had to account for the fact that despite being half inch thick plywood, it is not a half inch thick.

BUILDING



For the **cherry top and bottom** I did 5/4 boards planed down to be all the same and cut into 1-inch strips.

Glued together and clamped and then planed down to .75 inches

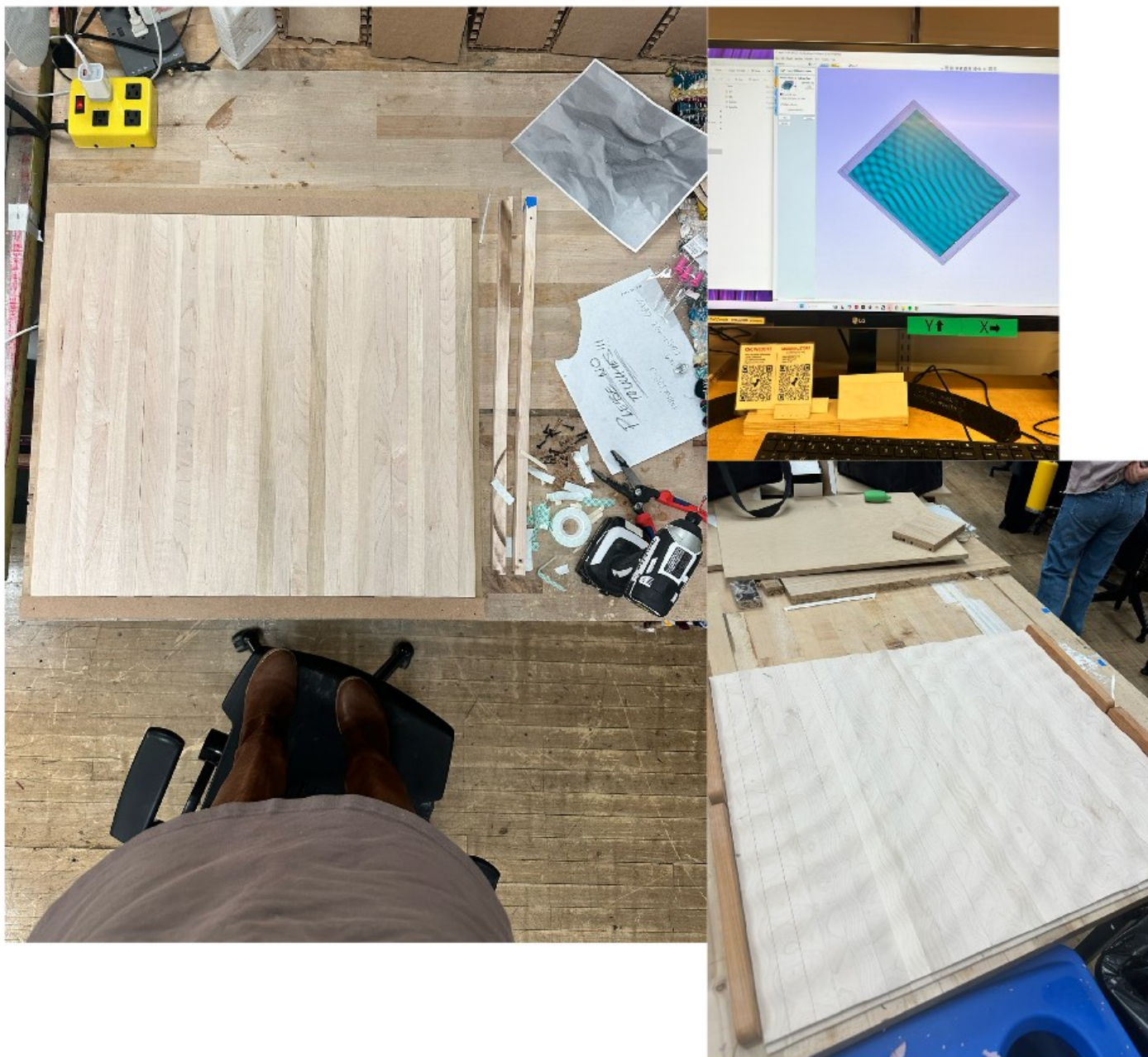
I needed a little extra room for the stability of the CNC and so I double sticky taped an MDF strip to the top of it.

In the Fusion file I exported the sketches as DXFs to pathfind and delete construction lines.

I sent it into CNC and got it back and out of its skeleton with a tiny Japanese saw. I sanded off the tabs and rounded the edges with sandpaper.

I ended up having to use a plunge router to reroute the spaces in the middle to fit the inner walls after I ended up veneering them.

The handles were cut out of one board of cherry that I planed flat and then after the CNC routing I cut them with the Japanese saw and sanded them.



The maple boards I planed down to $\frac{3}{4}$ and then cut to the length of the **tambour screen**.

I did the rabbet cuts on each side of the boards and then cut 1 inch strips.

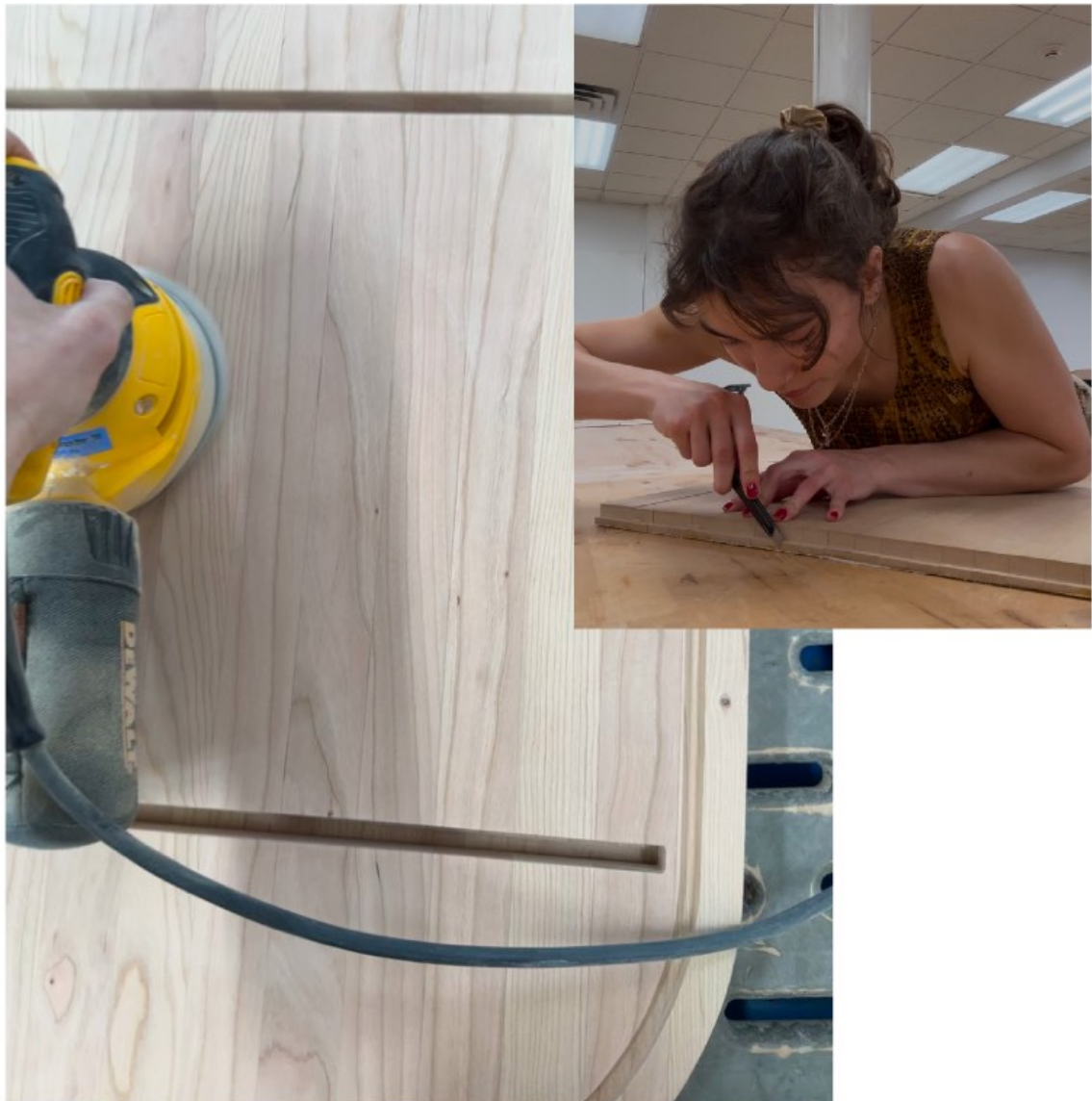
I cut MDF guides for a jig and then lined all the slats up and tightened them into the jig to glue on the fabric.

I folded and ironed the edges of the fabric and laminated it onto the wood with TitebondIII (although next time I would do one layer without it and then the folded one on top with a different glue so the wood glue doesn't soak through).

After that dried I flipped the jig and fastened it with just a few pieces of double stick foam tape and the guides screwed in over the rabbets. Then it was delivered to CNC and returned (just under the wire). I had to hand sand out the machine markings (I still have to do more of that).



The inner structure was planned to be plywood edge-banded with maple I cut really thin. However, I cut the plywood out of the CNC tabs with the jigsaw and splintered and tore out a bunch of spots. With no time to cut another one I bought maple veneer and glued it up in the vacuum bag. This meant that the spaces I carefully measured to fit together had to be redone. Some of them I shaved down with a card scraper, some of them I chiseled, (the top and bottom I did both and then routed them.) After veneering I cut down the edges and sanded them.



The many woodworking tutorials advised I apply **finish** in the following sequence and that is what I did:

- Sand surface to 180, water pop the surface with a damp cloth and sand again (180)
- Wipe dust off with a shop rag
- Wipe with mineral spirits (although I personally didn't notice a big enough difference for me to warrant using it again.
- Mix the finish with the accelerator at a 3:1 ratio.
- Drizzle the finish over the wood and then wwbuff it into the wood with a white scotch-brite pad
- Buff extra finish out with clean shop rags
- Wait 24 hours before messing with it and the full cure period is 7 days.

TRIBULATIONS

My math skills are not fantastic, never have been, so even after double, triple, and quadruple checking my measurements, my MDF prototype still had measurement errors, which is why I made it, but still disappointing.

Like my math skills, **my lack of CAD ability** continues to be a difficulty. I learned Fusion for this project (learned being a very light term). I attempted Rhino and I tried out Grasshopper. While I can say I learned a lot I did spend a lot of my time figuring out elementary parts of Fusion.

CNC appointment timing was a serious hardship as well. Mostly because of the panic it created two days before our assembly trial. The original plan was to carve my two tambour screens and cut new inner walls to fix the splintering issue I had had with my first plywood cut. Instead I spent a day veneering the original cuts and then had very little time to sand the carvings on the screen. This was partially my own time management and partially the demand of the CNC this semester.

All of this paled in comparison to my fatal flaw. I somehow went the entire semester without trying out the hardware. **I neglected to test the hardware system** as part of the assembly. I do not know what possessed me to think it would just magically work out when I put it together the night before. The holes were not aligning, the brackets were shifting, the top was not aligning. It was a holy disaster. The screws I bought were 1/2 an inch. So was the plywood. I could not tell you what I was thinking.



The prototype at work as a makeshift desk.



BEYOND

After critique I went back into the shop to make edits. Rama suggested adding hardwood stripes onto the sides of the legs to make the piece stable. He was totally right of course, and so I went back in and made four pieces of re-sawn maple to glue onto the bottom legs. This also addressed the feedback I got about trying a thicker leg to match the rest of the wood. In the future I would love to do the same to the top piece to add some stability there.

I also need to sit down for a few days and hand sand the screen carving, the machining marks are still there a bit and it is only sanded to 80 grit.

My own personal ideas of edits are; some way to stabilize or smooth out the track, and a larger size to make it more stable (working in a larger box size).

My critique feedback I'm thinking about:

- Making the colors of the veneer match the colors of the screen (it didn't have finish on it at the assembly trial)
- Add a really nice thick edge-band and thick veneer (like a hardwood siding) to the plywood pieces
- Make the bottom leg parts thicker to match the rest of the wood. (done)
- Make the whole piece taller to fit an LP (12.5 square)
- Add a hole in bottom for cable management
- In a production setting, mill down 1/4 inch cherry and glue it up as its own plywood, keeping grain direction but stabilizing the track.
- The name of the piece is too long
- Play around with hardware that can expand and contract with the wood, some way to stabilize or smooth out the track

MATERIALS



5/4 Cherry Hardwood

5/4 Maple Hardwood (could be less depending on warping, some of my boards didn't need a full 5/4)

4x8 Sheet of Maple Veneer

4x4 Sheet of Furniture Grade Birch Plywood

TitebondIII Wood Glue

Natura One Coat Clear Hard Wax Oil Finish

Everbilt 3/4 in. Zinc Plated Steel Corner Braces

Matte White 3D Printed PLA washers

1 1/2 Inch Countersink Screws (from E4 hardware cabinet)

REFERENCES

Like any major project, this took a village. I want to give credit and thanks to the major influences and help I had.

The core of this project, the carved tambour screen design, was adapted from a design by Jonny Lambert. His carved tambour screen let me jump off from a point and know how to manufacture it and his choice of wavy carving helped me know how my water ripples would visually read.

The water ripples are modeled in Rhino with a grasshopper code file built by Sim Pern Chong and heavily edited by Mark Bechtel. I had very little hand in building this file aside from choosing what it would look like. I could not have done that without Mark's help.

Stefano Pagani, who designed, modeled, and printed the washers for the screws in my final hour and helped me troubleshoot both my hardware issues and my panic about them.

Our critique for both midterms and finals was huge for me in deciding on my final structure. Huge thanks to the advice of Rama Chorpash, who continuously thinks about my project despite having no obligation to my success, many critical design choices were because of him.



