



NEWSLETTER

July 2022

"The MakerBarn is a member-driven family-friendly makerspace that exists to provide a place for our members to envision, design, and realize creative projects. We are dedicated to building a creative maker community among our membership and the community at large."

Trying New Things, Move is on Target

I don't do many of the tours for prospective new members, the Shop Managers do that. But the other day I did get the chance to show a couple of people around. They were amazed not only with the size and quality of our facility, but even more so about the variety of specialties members could pursue. The most obvious is woodworking, laser crafts, and 3d printing, but there is so much more. You can program an Arduino, but if you wanted to, you could make your own Arduino circuit board. You could make a figure using a 3D printer, but then you could use our casting materials and turn the plastic figure into Brass or even Gold (please bring your own Gold). Or, use the figure to make a silicone mold and cast a whole army using resin. The possibilities are almost endless.

Do we have classes for all the various disciplines? Well, no, that would be difficult to do. But the fact that the tools and materials are there at hand make it possible to explore these numerous areas and do some self-guided exploring. Do some exploring. We have videos on YouTube showing how to do many of these things. The videos were done at The MakerBarn using the equipment we have.



At The MakerBarn you are free to explore and share ideas. If there is something you would like to try, there are probably other members who would like to do the same. Let a Barn Manager, or someone on the executive committee know. We always like to try new things.

We are still on target for moving The Lab to the front of our new building the 1st of August. We already have full access to suite 203 (next door to the woodworking shop). The new machine shop has been completed in suite 203. The woodworking folks have been hard at work building tables for the glue-up and finishing area in suite 203. If you want to help, let CE or a Shop Manager know.

The Fiber Laser is in place and operational in the back room of The Lab. On June 30th, the Light Burn people will be releasing a new version of LightBurn software that will work with Fiber Lasers. This is a welcome event since operation of the Fiber Laser should be so much easier. We will soon start having orientations for the Fiber Laser using LightBurn. It was decided that delaying the until LightBurn was available would help avoid confusion due to two software packages being used for the same machine.



George Carlson
President, MakerBarn



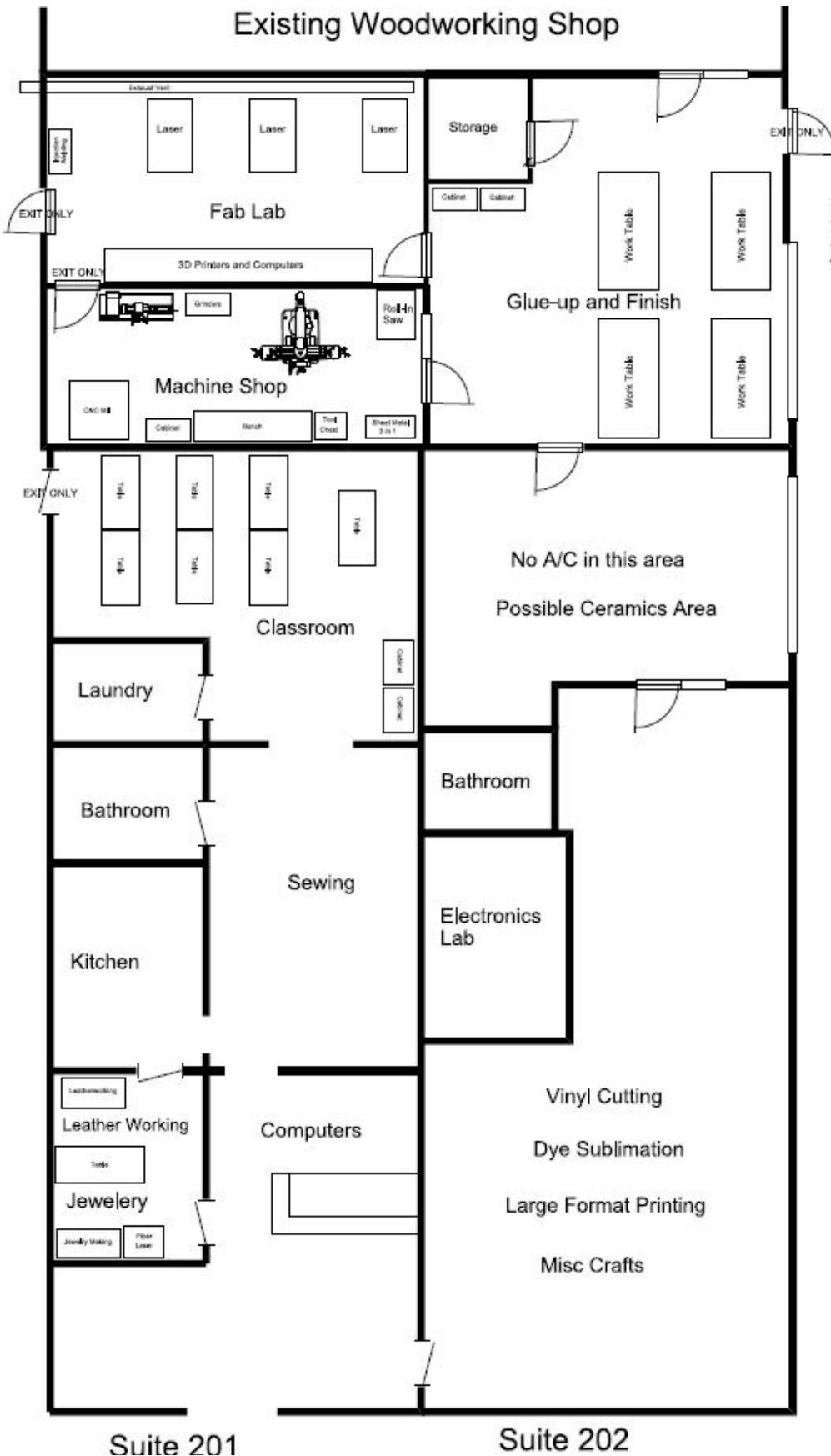
The Importance of August...

Quick, what happens in Houston in August?? That's right - Heat, Humidity and Hurricanes!

But this August we'll add one more - that is our upcoming move out of the Lab and into the Shop building.

Please make a mental note now to be available for a day or two in August this year as it will take 'all hands on deck' to make this happen - Thanks!





Suite 203

This is a DRAFT version at July 1 2022 of the new MakerBarn space planned for move-in by August 31. Please note that everything is subject to change, but this is our preliminary plan.

Suite 201

Suite 202

New Machine Shop Ready

The new machine shop is ready. For the last 6 years the machine shop has been sharing space with the woodworking shop. The truth is that oil and sawdust do not make a pleasant mix. Woodworkers work to achieve levels of precision around 1/64 of an inch. Machinist typically work to level of precision an order of magnitude smaller, sometimes working in 1/10,000s of an inch. Cleanliness is very important. At long last the machine shop has its own room, away from the sawdust. We have removed the 6 years of accumulated sawdust and now have a bright, clean, and friendly shop!



In our machine shop we an American made Bridgeport milling machine. The machine has a large variety of tooling. We also have a nice 12” metal lathe again, with plenty of high-quality tooling. With care and experience, tolerances of 0.001” can be accomplished.

Other equipment such as a metal cutting bandsaw, bench grinder, belt grinder, and 3in1 sheet metal are used to prepare stock and sharpen tools. Granite Surface plates, height gages, micrometers, and other meteorology instruments help to achieve very fine tolerances. Machining metal is truly a fascinating science and skill. The foundation of our modern civilization.



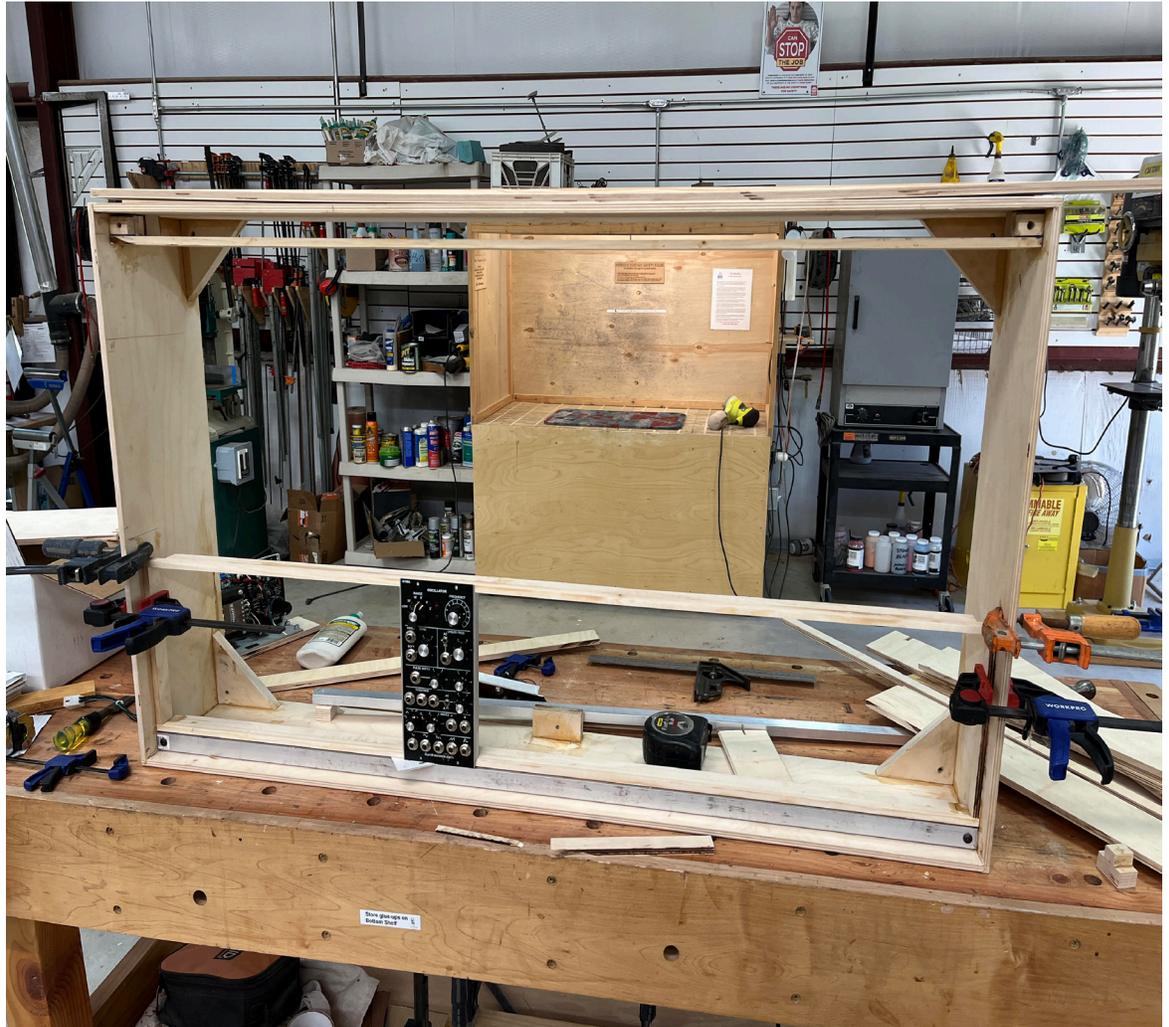
In the photo, you will notice a large empty space on the back wall. In mid-August we hope to fill that spot with a brand-new CNC milling machine - more about that later...

Thanks to all the members who helped build-out the shop, paint, and move machines. Makers helping makers.

The new machine shop is in suite 203, next to the woodworking shop. You are welcome to come in and visit.

MADE AT MAKERBARN!

Robert Swanson is building a cabinet to hold modular synthesizer modules

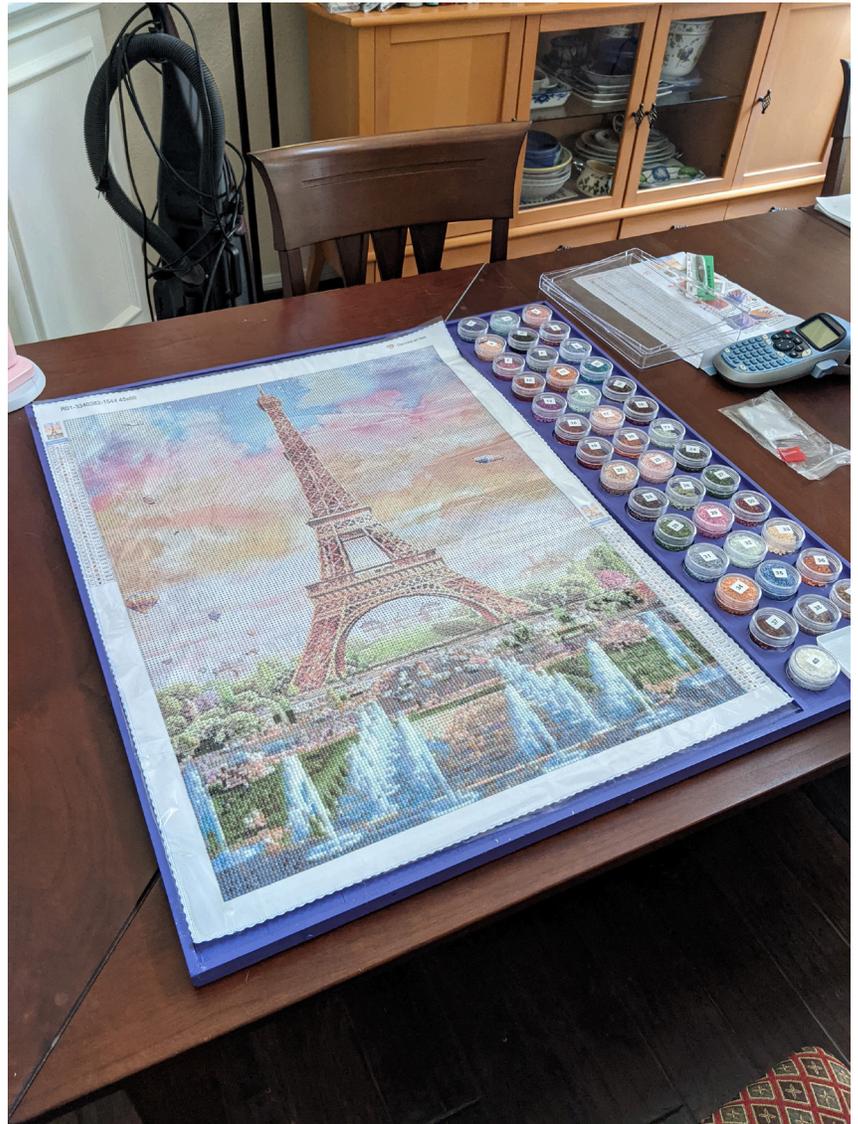


Hamilton Aleandre made a sign

MADE AT MAKERBARN!



John Buckley made a diamond art tray to hold artwork and materials for his wife's birthday using the CNC and table saw.



Are you Manager Material?

The MakerBarn runs on volunteers and you if you have been an active member for two months or more, we would like you to consider becoming a Shop MakerBarn Manager. MB Managers work 3-4 hour shifts during which they supervise the general operation of the Shop keeping a close eye on safety and noting any maintenance issues that arise. They also devote a fair amount of time to general cleaning of the shop floor and emptying the dust collection and trash systems. They give prospective members tours and update MACS access cards as needed for members. **Oh, and they enjoy 24/7 access to the Shop!**

If the Shop manager role sounds interesting to you, contact Jim Barron via Slack. Thanks!

MADE AT MAKERBARN!



Colleen Helz turned out more animals for her growing wood zoo collection using the MakerBarn wood lathe.



MADE AT MAKERBARN!



Someone is lucky enough to be **Colleen Helz's** grandson - she made this beautiful dump truck for him using woodworking tools at the Shop.



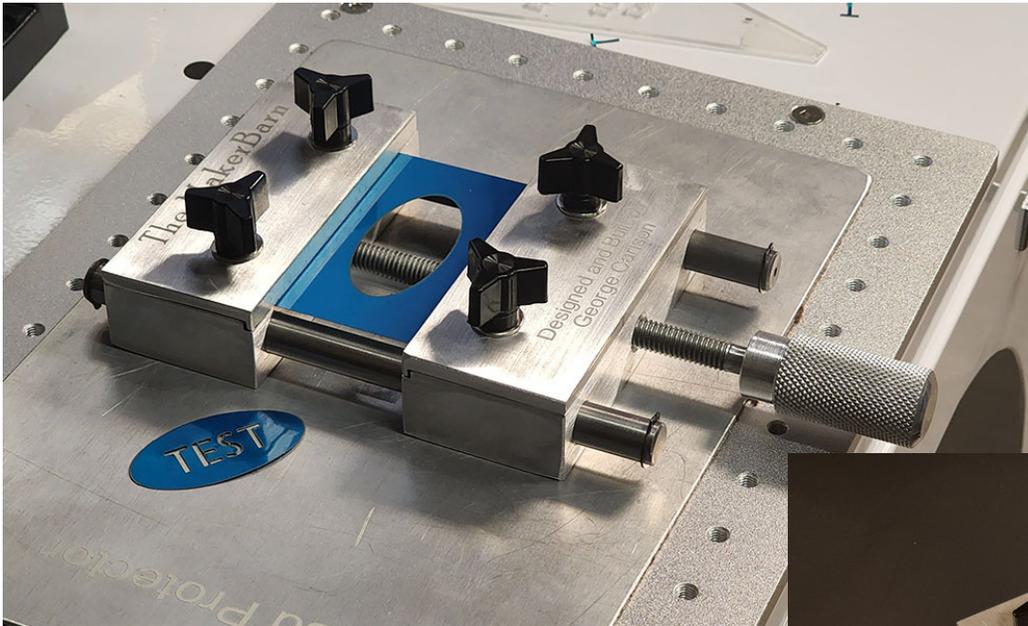
MADE AT MAKERBARN!



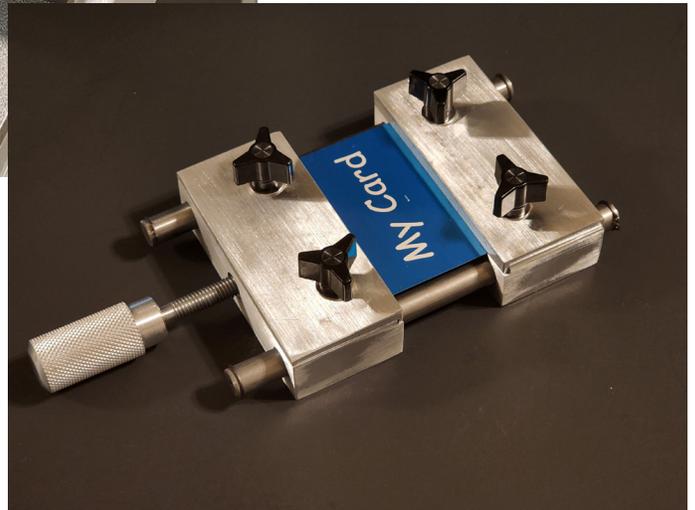
CE Raum built a portable workbench from a design found on the 3x3Custom YouTube channel. He used woodworking tools at the MakerBarn. **Ed Franini** and **Colleen Helz** liked it so much they used CE's design to make their own!



MADE AT MAKERBARN!



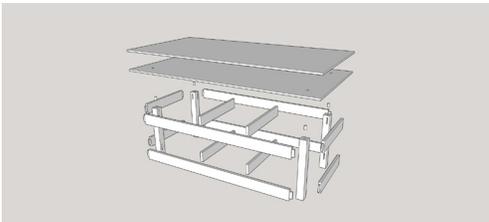
George M Carlson made a clamp for holding thin metal in the fiber laser. The clamp holds the metal piece under tension so it does not warp while being cut.



Robert and Pam Brayton made a teak coffee table designed and finished to match a teak mid-century bureau we used for their home entertainment center.

Work Tables for the New Assembly Room

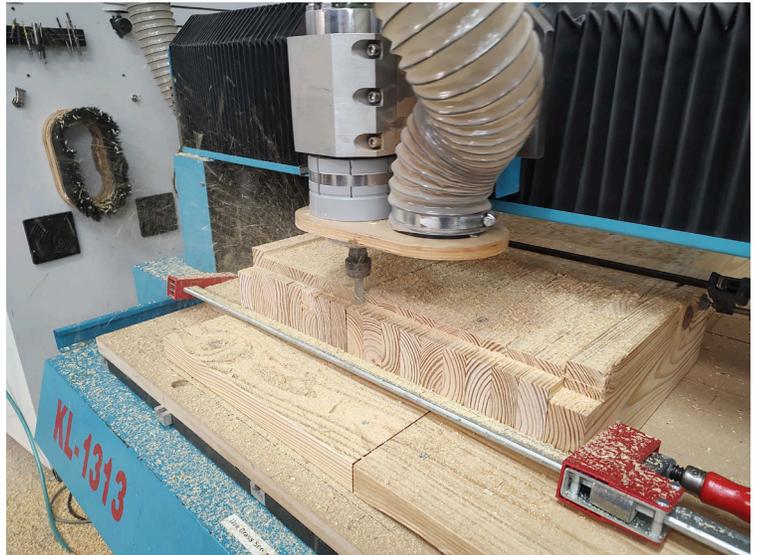
The first stage of the move and expansion of the MakerBarn has begun in earnest with the finishing of a new assembly area next to the current shop. The place is tidy and the floors sealed to create a dust free area to assemble your projects both big and small. To give us plenty of room for our creative tasks we are making four large work tables. The tables were designed by George and include mortise and tenon joints for strength and stability, and boy-o-boy are they ever solid! Many members have helped with the construction and over the holiday weekend we should be able to finish and install the sealed tops and put them to good use.



To stay organized we started with a Sketchup model of the tables, this allowed us to create a cut list as we moved through the multiple stages of these large tables.

We used the mortising machine to its fullest and all 64 mortises were created with only one blister.

The tenons for the shorter stretchers were created the more traditional way with Mike and Fred working into the evening on the dado saw. The long stretchers were more of a challenge as it would be difficult and potentially unsafe to maneuver the 79" lengths through the SawStop. So - CNC to the rescue! We created a clamping jig on the CNC by securing 2x material then cutting an exact square guide with the CNC itself. This gave us enough support to clamp up to 16 pieces at a time and cut exact tenons into all of them. Flip and repeat.

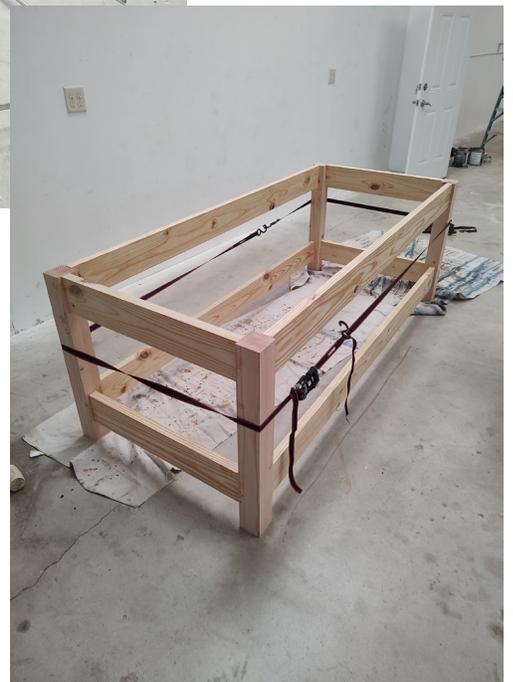
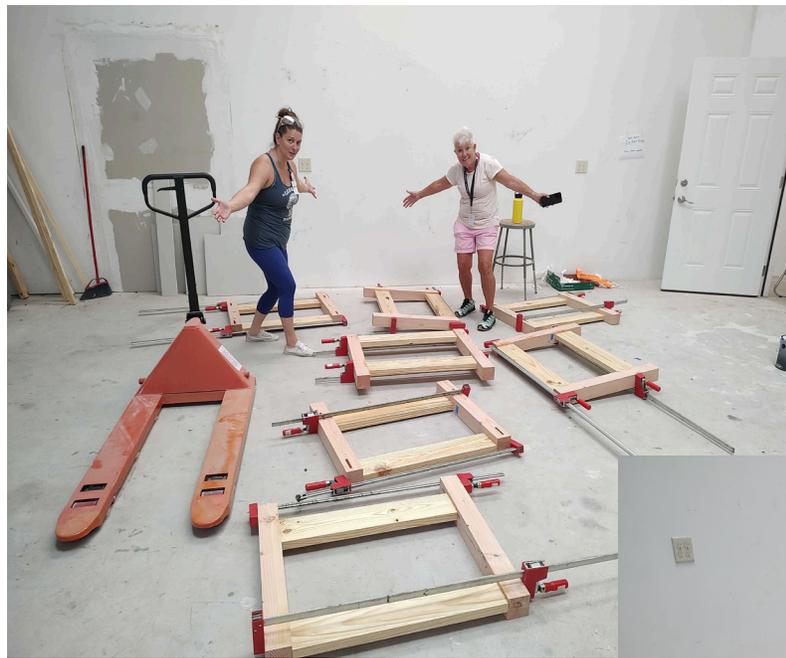


Assembling the tables was pretty straightforward, but there were lots of pieces. Colleen and Elizabeth filled the downdraft table with stacks and got to work prepping them all.



Then they grabbed the glue and mallets and got down to the serious stuff. A little time with the rasp and chisel and LOTS of clamps later we started to make real progress.

Once the ends were finished the long stretchers could be dry fitted then strapped together for final assembly.



Wow - that was a lot of fun! We hope you enjoy these tables and can't wait to see what you make with them.

Editor Note - Many thanks to CE Raum, Colleen Hellz, Ed Franini, Mike Schoonmaker, Fred Morales and Kathy Barberi for making these tables.

Meet The Area Managers

	<p><u>WOODWORKING & CNC</u></p> <p>Jim Barron has lots of experience with woodworking and CNC. He holds occasional CNC classes that demonstrate the Vectric VCarve Pro software we use. Jim can check you out on woodworking and CNC tools at the Barn. Contact him via SLACK.</p>
	<p><u>LASER PRINTING</u></p> <p>Greg Radliff is an artist and expert at using Laser Cutter and Engravers. Greg can show you the LightBurn software we use and can check you out for use of the Laser printers in the Lab. Contact him via SLACK</p>
	<p><u>3D PRINTING</u></p> <p>Jody Cochran is a graphic artist with deep experience in 3D printing and other graphics tools. Jody can show you slicer and other software used with the 3D printers. Contact him via SLACK.</p>
	<p><u>METALWORKING</u></p> <p>Bryan Manka is area manager for metalworking which includes the metal mill and the metal lathe at the Barn. He can check you out for use of either of these machines. Contact him via SLACK.</p>
	<p><u>ELECTRONICS</u></p> <p>Raul Garcia is area manager for electronics. More of a fixer than designer, but willing to help and learn together. See Raul for anything related to microcontrollers, electronic devices or other electronics related projects. Contact him via SLACK.</p>
<p>Daniel Claybaugh</p>	<p><u>WELDING</u></p> <p>Daniel Claybaugh is area manager for welding</p>

For New Members

WELCOME to the wonderful world of making!! We know you'll come to love this place as much as we do. First and foremost, this place is about the people. We would like to encourage you to see yourself as more than just a member. We are a community. Because we don't have any employees, we rely heavily on our community to keep things running. So please join in, pitch in, and get involved. Ask lots of questions. We are a really friendly group and love to help one another. The MakerBarn is a fantastic community of makers and we are glad you are here!



Maker Barn: The Shop
28030 FM 2978, Suite 204 77354
Phone: 832-663-6377



MakerBarn: The Lab
28030 FM 2978 Suite 101 77354
Phone: 832-663-6377

MakerBarn Directors:

George Carlson, Director and President
Jeanie James, Director
Greg Radliff, Director

Executive Committee:

Kathy Barbieri - Procurement and Acquisitions
Jody Cochran - Secretary
Raul Garcia - Member at Large
Jim Barron - Membership
Matt Folsom - IT
Daniel Cielecy - Treasurer
Doug Green - Web Site
Ashley Dickson - Member at Large
John Buckley - Newsletter Editor

Area Managers: (Guru or Custodian)

Woodworking - Jim Baron
Lasers - Greg Radliff
3D Printing - Jody Cochran
Metalworking - Bryan Manka
Electronics - Raul Garcia
Welding - Daniel Claybaugh

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*MakerBarn Lab
28030 FM 2978 Suite 101
Magnolia, TX 77354*

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