GLLCA
Great Lakes Log Crafters Association
'Promoting Excellence in the Handcrafted Tradition'
www.gllca.org info@gllca.org Fall 2025 Newsletter

In this issue:

Mocking Up Stair Stringers for Rise and Run in Pre-Notched Log Systems

By KC Brockel, WeatherWize, GLLCA Board Member

Anyone who's built or installed stairs in a manufactured log home knows that the stringers can be a different kind of challenge. Unlike conventional framing, where you determine the rise and run by marking and cutting them yourself, many log home packages come with pre-notched log stringers — already milled to accept specific tread thicknesses and spacing. They look great, but they also lock you into the manufacturer's geometry. Once you start cutting, there's no room for "just a little adjustment." Meeting building code requirements for rise and run becomes a precision operation — one that has to be figured out before the first cut.

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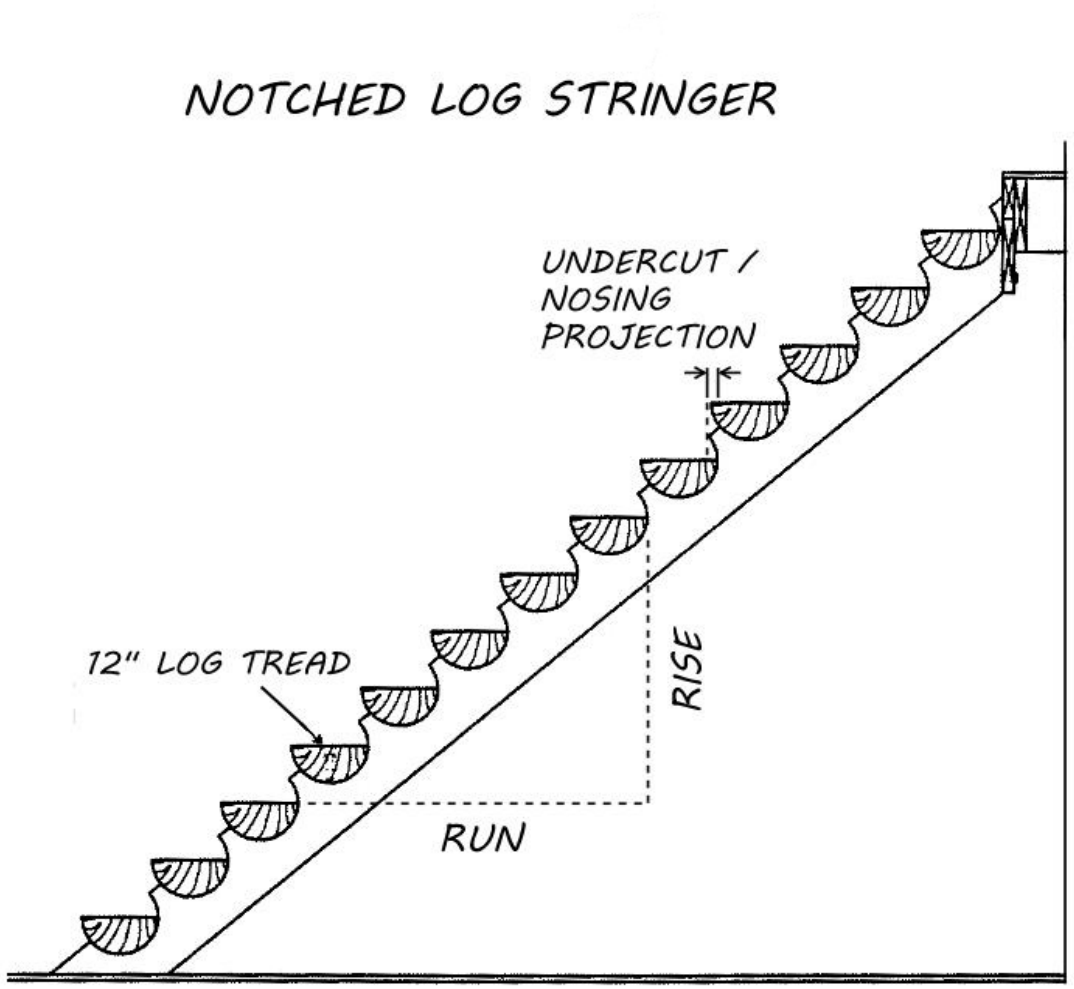

president's corner

A NOTE FROM NATE HEIM, YOUR PRESIDENT:

Happy Fall! Spring broke early this year and our directors and myself have been busy with projects! I think that might be part of the reason why we didn't get a Spring Newsletter out.

I have been busy currently building a true northern MN VRBO on the shores of Upper Red Lake. It has been a good reminder of:

1. What materials and subcontractors cost these days, and
2. How much work it is to build a dream.

I can truly say it will be worth it, as I can see the light at the end of the tunnel. As contractors, we constantly learn new and better practices for log construction and to merrying up stick framing to log. I am excited to present my findings and COST breakdown at the next AGM. I have attached a sneak peak!

I hope you have had a prosperous filled summer, filled with sawdust!

GLLCA President Nathan Heim

Nate Heim
Heim Log Homes
218-766-2699
www.heimloghomes.com

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Great Lakes Log Crafters Association
24355 Esquire Blvd.
Forest Lake, MN 55025
website: www.gllca.org
email: info@gllca.org phone: 612-590-7133

The GLLCA is an organization of professional log builders and others interested in the art of handcrafting log structures. GLLCA exists for "PROMOTING EXCELLENCE IN THE HANDCRAFTED TRADITION."

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Understanding the Geometry

One factor that often goes overlooked is how changing the angle of the stringer — even slightly — affects not only the total stair height but also the individual rise, run, and tread projection of every step.
Because the log stringer's notches are cut into a half-round log cross-section, their depth and spacing are based on a specific intended angle — often something like 37° to 38°, the so-called "perfect stair angle." But as anyone who's built a few sets of stairs knows, real-world conditions rarely allow that perfect geometry.
You're often confined by the total rise (the difference between finished floor elevations) and by the total run — the space available between walls, landings, or doorways. Those as-built dimensions dictate the angle you can use, not necessarily the one the manufacturer modeled. The art lies in adapting the pre-notched stringer to your site without compromising comfort, code, or appearance.
Tilting the stringer to fit the actual rise and run changes how the treads sit within those curved notches, which affects the geometry in three key ways:

1. Rise and run shift together. A steeper stringer shortens the horizontal run and increases the rise; a shallower one does the opposite.
2. Tread level and seating angle change. Because treads must sit level, altering the stringer angle changes how they bear on the notch seat, sometimes requiring slight trimming or shimming.
3. Undercut and nosing projection change. As the stringer angle shifts, so does the visible tread overhang. A steeper stringer increases the nosing projection, while a flatter one diminishes it — subtly changing both the stair's look and feel underfoot. Too much or too little projection doesn't just affect aesthetics; it alters the walking rhythm of the stair. By using mock stringers and test treads, you can identify and correct these small but important differences before committing to any cuts.

The Mock-Up Method

To take the guesswork out of the process, I've developed a method that uses an expendable 2x12 mock stringer and mock treads to test-fit the geometry before ever touching the logs. It's a simple trick that can save a lot of grief.

1. Copy the notch layout. Use the manufacturer's drawing or measure directly from the log stringer. Transfer the notch locations, diameters and depths onto a 2x12 board to replicate the pre-cut pattern.

2. Build mock treads. Using a compass and a scrap piece of 2x12, sketch the curved profile of the half-round log treads and cut them out. These mock treads let you confirm how the riser height and effective tread depth are affected by the change in stringer angle as you fine-tune your mock stringer.

3. Set the mock stringer and test-fit. Temporarily position the 2x12 between your floor and landing. Place the mock treads in the notches, ensuring they sit level. Adjust the angle of the stringer until your rise, run, and tread projection all look and measure right.

4. Fine-tune your landings. Check how the mock stringer meets the upper and lower surfaces. Trim, shim, or shift it slightly to find the perfect alignment before cutting the log.

5. Transfer your cuts. Once everything lines up, use the mock-up to mark your top and bottom cuts directly onto the real log stringer. You'll know with confidence that it fits and meets code.

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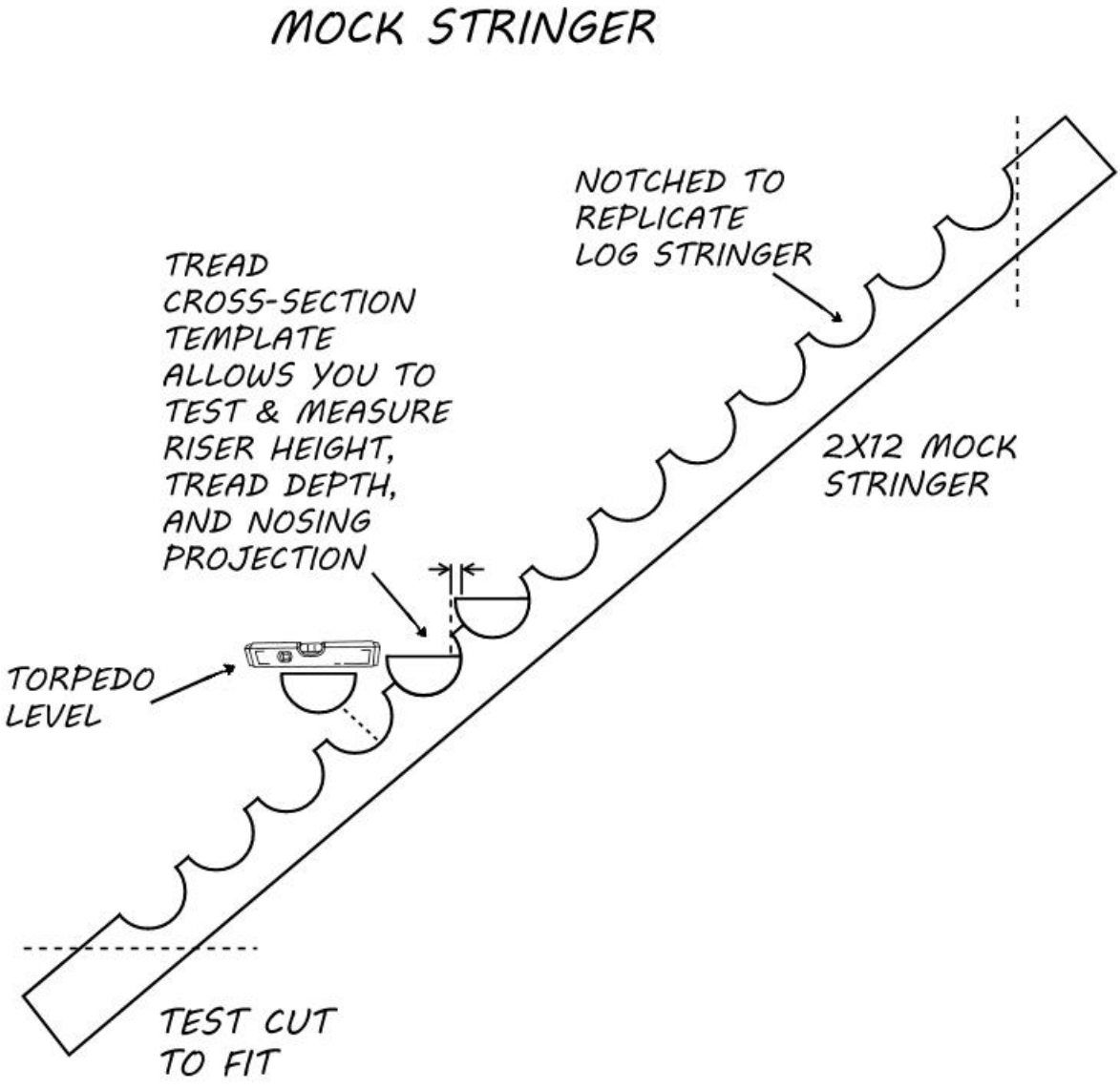
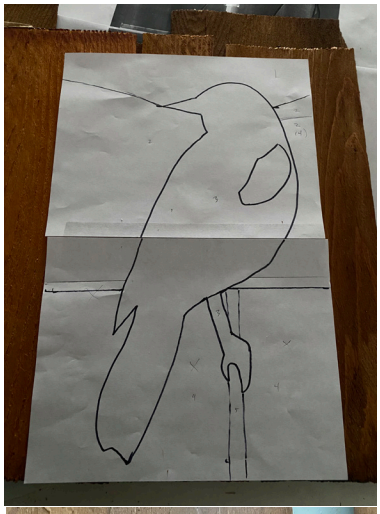
Why It Works

This method gives you a low-cost way to verify geometry and code compliance before committing to cuts on expensive log stock. It's particularly valuable when the "perfect stair angle" can't be achieved in the field — a common reality when working within rise and run constraints in log construction.

By mocking up both the stringer and a few treads, you can visualize the entire stair system in 3D before making a single permanent cut. That small amount of preparation helps ensure that the finished stair not only meets code but also sits beautifully in the home — solid, true, and ready to impress.

Whether it's handcrafted or milled in a plant, a good set of log stairs always shows the hand of the builder. The care, the layout, and the precision are what make it work — and those are the same qualities that define true log craftsmanship.





A Little Whimsy in the Wood

by John Schroeder

There's a charm of nature already intrinsic to wood structures, but I get an extra smile when there's a little whimsy added with bear carvings added to a log post, an eagle in a ridge pole, or art woven into cedar shakes, as I've seen examples about on Pinterest. When redoing our storefront, there was a bare face under the entry roof that begged for something not boring. With leftover (local white cedar) shakes from the roof, I thought I'd take a risk with some creative liberty and take a stab at shake art. Across the road the cattails are ringing all summer with red-winged blackbirds, and so that was the chosen subject to tie the building into its natural surroundings.

There was a process to designing the layers to overlap and hope to shed water properly, even if it's well protected under roof. In most other cedar shake designs I've seen, the shapes were left in the natural stain color. I opted to risk garish results and embrace the contrast of the blackbird.

In my opinion, there are too many boring buildings in this modern world, (handcrafted log homes are of course an exception), and though there may be flaws in this first attempt at shake design, in the end I'm content with the whimsy it brings to making an entrance.

Log Restoration

By Frank Vanderveur

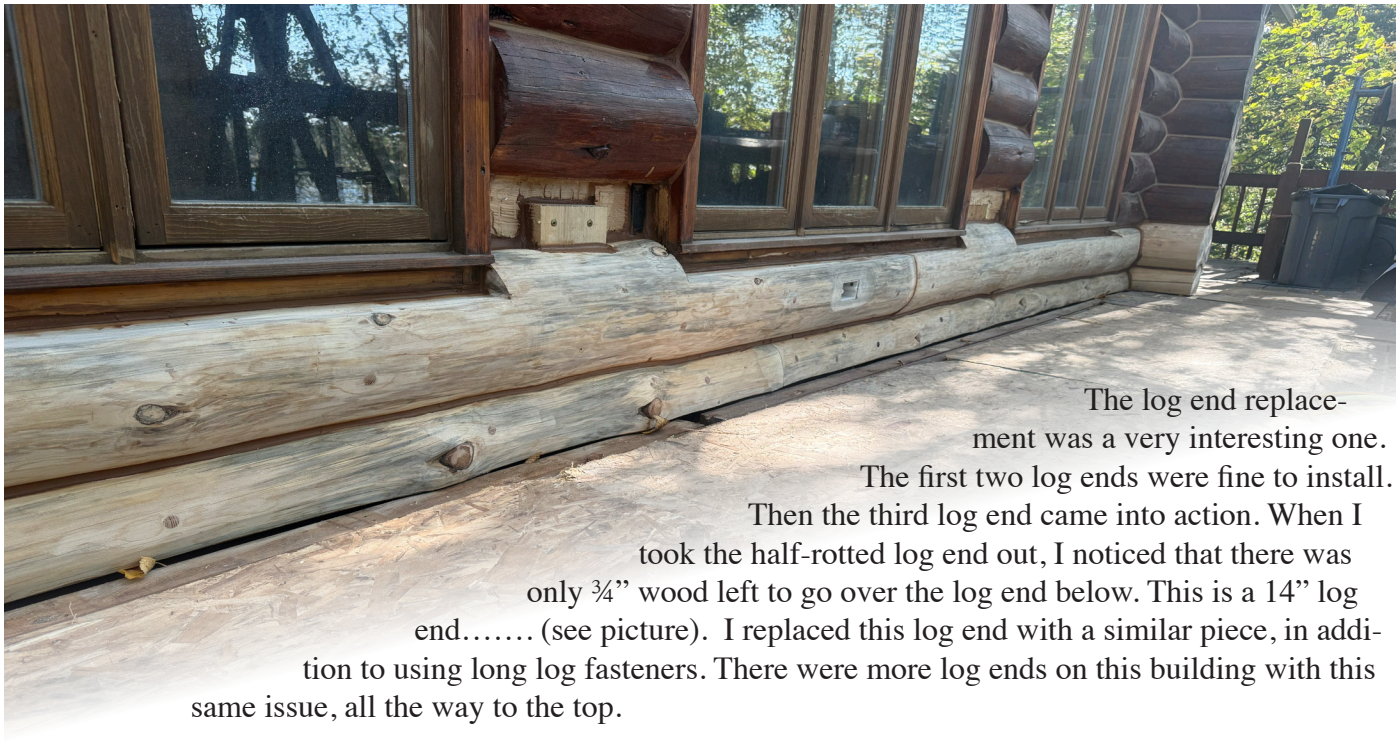
In this article, I will be sharing some experiences in my latest log restoration project.

I was cutting away rotted wood in a sill log and the log above. The log diameter was about 11”-14”. There was one outlet in the center and three windows in this work area. The logs were about 23’ long. This is a full-scribe log cabin out in the middle of nowhere on a lake. The rot of the sill log was not that deep, about 4” in. This was caused by moisture getting trapped between the deck boards and the sill log, which the distance apart was only one-quarter inch. Luckily the floor plywood was still in good shape. The surrounding of the electrical outlet was rotted away due to the upward facing angle it was installed and the failing of the caulk.

I worked with a 10’ and 13’ half log to replace the full sill log. This is for easier handling, especially when you have to slide one of them into a notch at the corner. The other half log was easier to install because I had more room to work. In this corner I had already removed 4 rotted log ends, so it was all open there.

I removed the one deck board under the sill log. Before I installed the sill half logs, I installed a large piece of deck flashing that rested on the ledger of the deck where I was working from. Then I cut another piece of flashing which I slid between the existing sill log and bent it over the deck flashing. In doing this, no moisture can get behind the deck flashing. I applied a bead of caulk before sliding the flashing piece that goes under the sill log. This seals off this area from moisture and it acts like a “glue”.

The second half log was more of a challenge because of all the cuts I had to make where the three windows are located, plus the end that slides into the notch. I had to scribe and cut the log multiple times before it finally fit.



The log end replacement was a very interesting one. The first two log ends were fine to install. Then the third log end came into action. When I took the half-rotted log end out, I noticed that there was only ¾" wood left to go over the log end below. This is a 14" log end……. (see picture). I replaced this log end with a similar piece, in addition to using long log fasteners. There were more log ends on this building with this same issue, all the way to the top.

There are always so many challenges – and solutions - in log restoration work, but I enjoy a challenge!

Frank Vanderveur

INSTALLING METAL GARAGE CEILING

BY DUANE SELLMAN

In a recent project, Scott and I installed a metal ceiling in his two-car garage attached to his log house. Cutting a groove for the side of the tin to go into worked fairly well on the edge of the metal panel. However, a flat piece of flashing was used to close the gap where the metal did not reach the log. A "J" channel did not work on the end of the metal panel where the groove passed through the lateral groove area making it more challenging.

(Picture – Flat flashing)

Rather than cutting the groove, I decided to mount a 2 x 6 on the bottom of the ceiling truss for the metal panel to butt against. There is living space above this garage so the floor trusses are 20" deep to allow for heat ducts as well as the structural need for the 24' span. The problem was there was nothing to mount this 2 x 6 to after scribing it to the log wall since the last floor truss was 6" or 8" away from the log wall.

(Picture – Strong back & filler with the scribe line made with a wood shim scribe.)

I slide several 3' or 4' 2 x 4's on top of the truss bottom chord extending over to the log wall. I screwed them into place. (I will call them strong backs.) Next I screwed a filler piece of 2 x 4 up to the end of this 2 x 4 strong back.

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ceiling

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Now I could temporarily screw a 2 x 6 or 2 x 8 up to the strong back filler for the panel end to butt up to evenly. This trim piece needs to be perpendicular to the floor trusses. Next, this 2 x 6 needs to be side scribed to the log to remove any gaps between the logs and this trim 2 x 6. This was a pain to get a good fit. It took multiple scribes. This unique situation did not allow my normal scribes to work. Neither a Grieb scribe, Sellman scribe or a divider worked. I ended up using a door shim with a point on the thin end and a hole about 2" from the point which held the ballpoint from a Grieb scribe pen. Holding the shim point against the log with the shim flat on the 2 x 6 trim, the ballpoint scribed a line on the 2 x 6 trim. In places, this line had to have a feather thin edge when it fit against the lower half of the wall log. When against the top half of the wall log, the line could be cut square at 90 degrees. This was low tech, but worked great.

(Picture – Door shim scribe)

The 2 x 6 was thick enough for the 1" ribs on the metal panel to be closed off against the trim 2 x 6. In retrospect, we should have put a "J" channel up against the 2 x 6 trim to give us some allowance at this butt joint. Our 23' length was covered with a 12' panel lapped over the first 12' panel. With numerous light boxes and electrical receptacles, it was a slow process. In the end, it all looked GREAT!

(Picture – Completed metal ceiling with custom brackets)

Scott made up custom brackets to hang the garage door track. He did not like the holey angle iron everyone uses. Once we had the metal panel above the temporarily supported track, he could design the hanger bracket with a notch to fit over the rib where needed. After spray painting white, they did look much better than the bare metal holey angle iron.

DOVETAIL CABIN FUNDRAISER OF 2023 UPDATE

BY DUANE SELLMAN

It has been two years since members of the Great Lakes Log Crafters gathered together to build the 16'x24' dovetail cabin at Nate Heim's yard in Kelliher, Minnesota. The cabin has finally been re-assembled after the first winter stored in Nate's pole barn and a year and a half on a flatbed trailer covered with a tarp.

In the spring of 2025, Anna Rajala decided to get the building re-assembled. She had several phone calls with me to answer her questions on just how to do the re-assembly.

Finally in September 2025, she had her permit and subcontractors lined up. I think it was at this point, she remarked to me "Boy, buying the log shell was the cheap part of this deal." When the logs were unloaded from the trailer on September 22nd, it was discovered some of the numbers on the duct tape had faded away. This made me a little nervous reminding me of a jigsaw puzzle. I made the 4 hour drive to her site just north of Deer River to position the sill logs on the slab to mark exactly where the mason should lay the 2 courses of 8" block. At this time, we studied the log tags. Apparently, the tags that were hit by the sun faded but not those in the center of the load, so all the logs had numbers on one end.

My preferred numbering system is with a different color tag for each corner. Then the half log is #1 and the ¾ log is number 2. On this project, I used duct tape with a staple to be sure it stayed on. Felt tip markers are fine for a short time but I never considered it would be 2 years before the re-assembly. Maybe a paint stick would have been better.

On October 2nd, Mark Webber and I started the re-assembly by anchoring green treated 2x10's with sillseal to the anchor bolts. We held them flush with the block on the inside and a 1-1/2" overhang to the outside. I thought this overhang would be useful when covering the exterior block with insulation. We positioned the 1/2 log sills and then the ¾ log sills. After the diagonal measurements were the same, the sills were screwed to the 2x10's.

Anna's 3 sons, in their 20's, were on our assembly crew. After stapling fiberglass in the laterals, Jacque used the John Deere articulating loader with forks to move the logs to the wall.

Once we got to the loft joist, Jacque used a Komatsu machine with a boom similar to an excavator backhoe on wheels. Unfortunately, it did not have a clam so we had to use straps. This machine is normally used in Jacque's junk yard and gets flat tires so they basically run it on flat tires. What can I say --- it worked.

With the logs on the trailer so long, there was some log distortion. One had enough bow (1″ to the outside) that we cut it at the kitchen sink window and pushed it in 1″ for better alignment. Several logs twisted enough so the dovetail notch could not be tight on both ends at once. We tried to split the difference as each dovetail was screwed to anchor the log. There will be some caulking required.

I was very pleased to see the loft joist came out level and all "in plane." With the 2 courses of cement blocks, there is 101″ below the log joist.

We ended the day with a complete re-assembly except for the ridge pole, which we left lying on the gable end plate logs as our machine could not lift high enough to put it in place. (NOTE: A text message today (October 7th, 2025) from Anna, it sounds like the septic installer has a boom which may reach.)

The next morning, I cut the 2 door openings to 42″. Then I cut the spline groove for the 2″x3″x3/16″ angle iron spline. About this time, Jacque and his father, Dean, stopped by to see the cabin. This gave me a chance to explain to them how to install the doors and windows with a settling space above them. Hopefully, they can get those in without me, but I half expect being hired to install those. We also talked about various roof systems. Hopefully, they will get it shedding water soon.

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reassembly

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I was very pleased that the crew of Jacque, Deano, and their younger brother worked hard and learned a little. After all, this was an "educational fundraiser" project. As always, Mark Webber was a huge help on the project. He is always willing to help the GLLCA.

Anna plans to use the cabin as a rental property. A big draw will be that the property is near Lake Winnibigosh.

Have a great day.

Duane Sellman

YOGA FOR EVERYONE!

BY FRANK VANDERVEUR

The phone rang, a seasoned log builder called to let me know that the yoga exercises are really paying off.

Having been performing yoga for many years, starting out just once a week and now every morning before breakfast and going to work, I have found it has made a big difference in my mobility and flexibility during my daily work in log restoration.

Working on my knees replacing sill logs and the logs above has done a number on my knees and legs. Of course, I wear gel-filled knee pads and a 2" foam cushion underneath. Every morning I practice yoga for just 20 minutes, during the weekend even longer, in addition to going bike riding, which helps to keep the blood flowing and the muscles stretched.

Yoga is great for stretching, blood flow, strength, body tone, breathing and balance. It is definitely recommended for people of any age, and very helpful for the "seasoned" log builders, especially if we want to stay active in our physical work and outdoor activity. I know of a couple (Duane and Kay) who are over retirement age and still able to cut, split, and stack seven cords of firewood in one day, with the help of another couple. That is impressive!

There are yoga exercise downloads on the internet. Some of them are free. You can pick and choose according to your own level of ability.

Good luck and stay in shape!

Namaste,

Frank Vanderveur

MARK YOUR CALEDARS FOR 2026 GREAT LAKES LOG CRAFTERS ASSOCIATION ANNUAL GENERAL MEETING AND CONFERENCE

KAY SELLMAN, GLLCA BUSINESS MANAGER

I would like all of you to mark your calendars right now for Friday, April 24th and Saturday, April 25th, 2026 for the GLLCA Annual General Meeting so you wouldn't schedule anything else for these dates.

You wouldn't want to miss this conference. Mary, Dan and Cameron Wait hosted our 2025 AGM and Conference and it was such a great success, they have graciously agreed to host our 2026 AGM and conference again. I want to really thank Mary Wait for all of her hard work on putting together the 2025 AGM and Conference.

Mary, Dan, Cameron Wait and I think Matt Delgado had a hand in providing a very interesting conference. We had presentations on Kerry Rabenold, Emeritus Professor of Biological Sciences, Purdue University talking about "Net Zero Log Home," Danny Deetz from Stihl) and Dan Finke (Nelson's Ace Hardware) gave a demo on chainsaws, Jesse Woods of Jesse Woods Lake Country Log and Cedar gave a talk on Boodge Wood Treat, Jeff Simons of H-Window Company, gave a presentation on "H-Windows," Greg Baas of Baas Inspection Agency gave a talk on "Building Codes," Greg Harant

of Composite Panel Systems, LLC, gave a presentation on “Epitomie Composite Foundation Panels,” Perry Camodeca, Sr. and Perry Camodeca, Jr. of Midwest Certified Insurance Company gave a talk on “Current Insurance issues impacting construction and manufacturing sectors,” and Michael Koeppel of Milwaukee Tools Designer, Chainsaw carver gave a demonstration on “Milwaukee Tool/Chainsaw carving,” and the best attraction at the 2025 conference was the presentation on “Robotic Solutions, Inc.” put on by Nick Bently CCO of Robotic Solutions, Inc. and Todd Rathcamp of RSI – Software for wood manufacturing and the “ABB Robot Demo: Design to log Panels” done by Cameron Wait and Matt Delgado of Frontier Builders, Inc.

If you missed that conference, you really missed a lot of good information. Everyone talked about it for the whole conference.

So this should tell you that our 2026 AGM and conference will be even better. I am sure Cameron and Matt will come up with even more exciting things about Robotic Designs and usage.

So, again, I ask you to mark your calendars for Friday, April 24th, and Saturday, April 25th, 2026 and don’t miss out on what the future will be for log home builders.

GLLCA

Great Lakes Log Crafters Association

GLLCA 2025 Timber Sawhorse -One of the many unique items seen at the annual fundraiser auction.

Mark your calendars for Friday, April 24th, and Saturday, April 25th, 2026