



SCANTLINGS

NEWSLETTER OF THE TIMBER FRAMERS GUILD
NUMBER 217 NOVEMBER 2018



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Newsletter of the Timber Framers Guild
Number 217 November 2018

IN THIS ISSUE

President's message: Our new associate directors	2
Letter from the office: Dear TFG members	3
TFG regional gathering: Building memories	4
Take on the historic frame challenge!	6
Translating retail philosophy to timber framing	8
Craft of Business Summits	9
Visionary Partners	10
Community Building Project: Clearwater Farm	11
Events	15
Notices	15
Member story: Training the next generation	20

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Scantlings, the member magazine of the Timber Framers Guild, is published in February, April, May, July, September, and this year, December. **Next deadline is November 5.**

On the cover

Detail at sunrise of the completed frame at ClearWater Farm (Ontario), a TFG Community Building Project. Photo by Timber Framers Guild, see article page 11.

Centerspread

The completed frame at ClearWater Farm (Ontario), a TFG Community Building Project. Photo by Timber Framers Guild

Back cover

Close-up of dragon beam from the frame created by students in the third year of the teen timber frame project. Photo courtesy Robert Hughes, see article page 20.

PRESIDENT'S MESSAGE

Meet our new associate directors

MICHAEL CUBA

Since this past May, the Guild board has been engaged in reviewing and reassessing the position of executive director. The process was a collaborative effort between the board and staff to evaluate our goals and priorities in the context of staffing needs.



Our ability to pause and take a good look at our current needs was a luxury afforded to us by the stability of operations maintained by our current administrative staff, Megan Starr and Cassandra Davies, along with the efforts of the board. After months of meetings and reflections on the current state of the Guild's needs and affairs, the board has brought the discussion to a conclusion. Early this September, the board voted to offer the title of associate director to both Megan and Cassandra and forego initiating an executive director search at this time.

In the absence of an executive director, Megan and Cassandra have risen to the challenge and kept us on course with meeting the obligations of the Guild to its members. More importantly, they have demonstrated their willingness and intent to help us lead the organization. The elevation of their titles comes with increased latitude for decision making and leadership. The duties of the executive director, as defined in our bylaws, will be retained by the board, and represented by the board president. Ultimately, the duties of the executive director will be shared between the board and staff for the foreseeable future.

This decision allows the Guild greater flexibility in staffing while decreasing our administrative overhead. The past several years have been a period of rebuilding for the Guild with changes in leadership, office locations, domicile, bylaws, and governance structure. We have built a strong infrastructure to support the Guild well into the future. Cassandra and Megan have been instrumental in developing new systems and vision for operations as we move forward. Our expectation is that this arrangement will allow the board the opportunity to explore new initiatives and refine others that have been successful while knowing that member services are being well maintained under the direction of our associate directors.

Congratulations and thank you to Megan and Cassandra!

A LETTER FROM THE OFFICE

Dear TFG members, we are both incredibly honored and excited to have the opportunity to serve the Timber Framers Guild as your associate directors. We want to thank the TFG Board of Directors for their support and assistance in helping us transition into these new roles.

The passion of Guild members, the diversity of Guild initiatives and projects, the opportunity to bring our creativity to the table, and the overall enthusiasm from members for this organization are some of the reasons we love working for the Guild and why we are excited to step into this new leadership role.

This year, 2018, has been a time of transition for the Guild. It has also been a year of growth. So far, we have welcomed 212 new Guild members and we have exceeded our goal of averaging one event per month. As we approach the end of this year, we look forward to working hard to meet the needs of our membership and to increase the vibrancy and relevancy of this organization in the years to come.

With your continued input, participation, and support we can be confident that the Timber Framers Guild has a bright and vibrant future.

Please, reach out to us via phone, email, or by stopping by the Bellingham office. We are always happy to hear from you.

Sincerely,

Cassandra Davies & Megan Starr

Associate Directors, Timber Framers Guild

info@tfguild.org, 360-746-6571

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Megan Starr (left) and Cassandra Davies (right), TFG's new associate directors.

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TFG REGIONAL GATHERING

Building memories: Returning to Strafford

ELIOT LOTHROP

It doesn't get much more Vermont than the regional gathering that was held September 8–9 in Strafford, Vermont, for the second year in a row. The gathering was again based at the Strafford Village Farm, run by Shannon Varley and BJ Miller. They welcomed us once more with open arms to their truly spectacular farm, set in the hills of Strafford. Most attendees chose to camp at the farm, either in the large hay field that offered ample locations by the stream or at the edge of the woods where people could be close to the action or totally secluded. Friday night dinner was provided the folks at Strafford Organic Creamery, who brought over their flatbread oven for pizzas and later made delicious homemade bagels for breakfast the next morning.

Folks rolled out of their tents Saturday and tripped across grass covered in the morning dew of early fall to gather at the food tent. As we enjoyed bagels and coffee, we discussed the plans for the day ahead and welcomed the many attendees who were just arriving. Some of us had arrived the day before with timbers to begin laying out and arranging work areas, but most came on Saturday morning. After a brief discussion of safety, delegation of tasks, and general introductions, we got right to making sawdust.

Unlike last year's event that mixed the cutting of a small cow shed with tours of the Strafford Town House and other local structures, this year was focused on cutting a 16' x 20' pavilion. The pavilion is dedicated to Scott Killian, my company foreman and dear friend, who took his own life back in May. Scotty grew up close to Strafford in the town of Bethel. He was an avid soccer player and the original plan was for a pavilion at the Bethel soccer fields. However, the soccer fields flood regularly, so we settled on the Bethel town pool as the location for the pavilion.



Photos by Timber Framers Guild



Scotty loved the Guild and meeting everyone in it. He had attended last year's gathering in Strafford, arriving early to hew timbers and staying late in the weekend, getting to know BJ and Shannon. There was no question that this year we needed to gather again in Strafford and build something in honor of Scotty—a legacy to his life and passion for craft.

We began a memorial fund at Scott's funeral and raised enough money to pay for the timbers, cut by LSF Forest Products in Fletcher, Vermont, who only charged us for the logs. Miles Jenness of Vermont Heavy Timber provided the six white oak posts at no cost. Miles was my foreman before Scott and had known him well. Evan Taubes, who now runs Scratch Builders, but worked at Building Heritage alongside Scotty, did the frame design. Katie Hill of Sellers Treybal Structural Engineers, who also knew Scott well, reviewed the design. Both the frame design and the review were donated as well.

It was already July by the time that we committed to holding the gathering again this year. We never could have pulled it all off without Shannon's hard work in planning absolutely everything at the farm to make our weekend possible. We were also fortunate to have help from local Guild member Silas Treadway, who organized the event last year but had to split his time this year with his newborn daughter.

With some somber but important recognition of all that Scott gave to the craft and all we wished he could still give, the 45 of us dug into our work. By midday it was clear that we would finish cutting the frame that weekend so it would be ready for raising in the spring. We weren't as organized or efficient as we'd like to have been, since we have not yet attended a rendezvous or Guild project to learn the ropes of this kind of project. That said, we had many new faces and they all got to get their hands into the work. The weather and the morale couldn't have been better, and we worked through the day until BJ, who had been roasting one of his own farm-raised pigs, was done preparing the evening's



feast. The party soon moved from the dinner tent to the bonfire where many a great Vermont double IPAs and other beverages were enjoyed.

Sunday morning we awoke to the most perfect breakfast sandwiches imaginable. Shannon had gone over to Strafford Organic Creamery and made piles of them at 5 a.m. with creamery owner Amy. We kicked back into gear, finishing the last couple of pieces of the frame by mid-morning. Just to make sure that all of the new folks really got the timber frame bug and to have a climactic ending to the weekend, we assembled the roof frame just before lunch. Although it was quickly dismantled and loaded onto the trailer, it was a wonderful small raising.

One of the things that Scotty enjoyed so much about last year's gathering was coming together with Guild friends that we'd known for years from conferences but with whom we'd never had the chance to work. We are fortunate to be able to connect with people because we all share the passion for timber framing. To have the opportunity to work together, to build something that represents someone, and to take part in a weekend of making connections and sharing love is what it's all about. I can't say enough about the regional gatherings, and if it's got you interested, stay tuned—there will be another one in Strafford next September!



Take on the historic frame challenge!

JAN LEWANDOSKI

Jan Lewandoski has been researching the construction of a historic structure in Canada for an article to be published in *Timber Framing* later in the year.

In the course of his research, he discovered a complete lumber list for the project. This got us to thinking, what kind of timber frame could be envisioned based on the materials presented? So here is the challenge: based on the following list of materials, what kind of frame can you envision having been designed in the 1820s near Quebec?

Please send along your ideas for how you think the frame may have been designed. The TFG member who presents an idea or design most closely resembling that of the actual frame will be entitled to bragging rights in perpetuity along with much glory and maybe a little something else.

Please submit your ideas to info@tfguild.org

No. of Pieces	Length	Breadth	Thickness	No. feet long measurement	No. feet cubic measurement	Name
231	53	18	16	12243	24486	Strings
99	53	14	12	5248	6119	upper Do
99	51	12	12	5049	5049	Rafters
32	26	18	16	832	1664	Caps for the trestles
33	24	16	14	768	1195	transverse truss timbers
32	50	16	14	1600	2490	Sills
128	18	18	16	2304	4608	Posts
32	24	16	16	768	1366	Fenders
32	24	12	12	768	768	Braces
32	16	16	14	512	797	Studs under fenders
3300	5	4	4	3300	5500	Railings
2000	4	4	4	2000	2666	Studs for railing
12		4	4		160000	Plank
12		1	1		10000	for boarding sides etc.
99	11 1/2	3	3/4	1149 3/4		Iron straps 5 tons in all

48542 cubic feet timbers at 7 Dolls per 100 - is - 3397.94
178166 feet board measure at 7 Dolls per 100 - 1247.16
5 tons of iron at 100 Dolls 500.00

Image courtesy University of Vermont Special Collections

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What kind of timber frame could be envisioned based on the materials presented?

number of pieces	length	breadth	thickness	Number feet long measurement	number of feet cubic measurement	name
231	53	18	16	12,243	24,486	Strings
99	53	14	12	5,248	6,119	upper Do
99	51	12	12	5,049	5,049	Rafters
32	26	18	16	832	1,664	Caps for the trestles
33	24	16	14	768	1,195	transverse truss timbers
32	50	16	14	1,600	2,490	Sills
128	18	18	16	2,304	4,608	Posts
32	24	16	16	768	1,366	Fenders
32	24	12	12	768	768	Braces
32	16	16	14	512	797	Studs under fenders
	3,300	5	4	3,300	5,500	Railings
	2,000	4	4	2,000	2,666	Studs for railing
	12		4		160,000	Plank
	12		1		10,000	for boarding sides etc.
99	11.5	3 or 8?	0.75	1,149.50		Iron straps, 5 tons in all

Coming up in *Scantlings* 2018

On the leading edge: a recap of the TFG Conference in Virginia Beach



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BRENDA BAKER

Zingerman's Delicatessen is a popular well-known "institution" in the Ann Arbor, Michigan, area. They've consistently offered the highest quality food and customer service for over 35 years. It's one of the most original and fun places to visit.

When I signed up for my first Zing Train Customer Service seminar a few years ago, I wasn't totally sure what to expect. How could this unique restaurant/deli/retail food store be able to give me business suggestions that I could apply to a timber framing business? Well, they delivered more than I had ever imagined.

The two-day seminar was conducted by the ZingTrain managing partners, as well as Zingerman's founding partners. They explained to the 30 attendees—who had come from all over the United States and Canada—how training and empowering your employees with skills and knowledge of the business creates a culture that cultivates great service. The principals they shared can easily be applied to timber framing or any business.

We also heard about how going through their own visioning session—which took almost 18 months—at the 10-year business mark allowed them to focus on what they do best and develop a plan for the future. I left there with a new perspective, energized and ready to use the ideas I had learned. It was one of the best, creative, non-traditional business seminars I've ever attended.

I hope you'll join me in expanding your vision and discovering how service industry philosophies can positively impact your business success!



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28-29

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3-4

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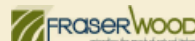
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Texas Timber Frames
Whiteman Lumber Co.**

COMMUNITY BUILDING PROJECT

At ClearWater Farm, new insights on raising day

CASSANDRA DAVIES

For almost two years, I've been waiting to participate in a TFG Community Building Project. The ClearWater Farm Community Building Project was everything I had hoped it would be, a meaningful experience for all of us: the community who supported the project, our Guild volunteers who raised this barn, our instructors who came to share their knowledge, and myself as I finally start to get this whole timber framing thing.

Over my two years at the Guild, I've come to know your deep passion for this craft. I know you spend your vacation days coming to conferences. I know you drive nine hours to go to a regional. I know you take two days out of the office to come to the Craft of Business summits. I know you buy things at the conference auction that you don't need, just to support the Guild. I know you have decades-long friendships with competitors and with folks you only see once or twice a year. I see, feel, and understand the Guild community, and your enthusiasm is contagious.

But the timber framing part? I've not gotten my hands dirty, held a mallet, or handled a chain mortiser, so the passion for the craft itself has never been clear. My week in Ontario changed all that. While I don't want to give up my job in the Guild office to join the Apprenticeship Training Program. However, I do love that frame in Georgina—enough that I have more pictures on my phone of that project than of my kids (almost).

The project had all the necessary ingredients for a fantastic Guild event. The location was amazing: we worked on a picturesque farm with more butterflies than I've ever seen in my life and a clean, clear lake just across the road. What better way to wrap up a day's work than



All photos by Timber Framers Guild

Above: The Community Building Project crew with their completed frame. Below: Etching the project name into the frame. Handbuilt Guild sawhorses, ready to go to work.

a swim in the lake before (and sometimes after) dinner? The community fed us so well and so often that it was hard to go back to regular life where we all have to cook and clean up for ourselves. We had meals delivered to the work site by volunteers and we had several dinners out in the community. We were hosted by friends of the farm, board members, a church, and even a curling club. Guild magic can be hard to articulate sometimes but it's easy to see. When a group of 50 passionate Guild volunteers and instructors get together to raise a beautiful structure, that's the magic. When phone numbers are exchanged, jobs offered, cars loaned, and tears shed at goodbye, you know something special has happened. I saw it and I know the community saw it too. And now, ClearWater Farm will use this barn to further its educational mission, just as the project itself furthered the Guild's mission. By this time next year, they expect to have a completed building to use as an educational space for children that will also house a kitchen to process the food produced at the farm.

Some of us came with little to no timber framing experience, some are professional timber framers who









want to learn from other professionals. And learn we did. I learned about the basics of layout, hand cutting, tool use, safety (so much about safety), teamwork, rigging, forklifts, manlifts, and so much more. Working with my hands, on a project, has shown me why this is all so special. To go from a yard full of huge timbers to a perfectly fitted frame was awe inspiring.

I found timber framing to be a full-body experience of hands-on and mental work, with the added element of trust in your compatriots as one group of volunteers cut a mortise on one side of the yard while another group cut a tenon on the other side. And the miracle on raising day: they fit together just right. I'm so grateful that I was able to attend this project as I now have new

insights to inform my work and deepen my connection to the Guild.

My contribution to the project was modest. I was the most novice volunteer on site, but I know which queen post is mine, where it is in the building and how beautiful it is. I like to think about it as mine, but really it was many months in the making and was the result of dozens of people's efforts. And just like my small contribution, that queen post would be worthless on its own—it takes every stick in that frame to make a solid building that will stand for generations to come and it took every volunteer, instructor, and community partner to make the ClearWater project a success.



EVENTS



Guild events

2TFG Craft of Business Summit November 13–14.
Shepherdstown, WV.

TFG Craft of Business Summit November 27–28. Brattleboro, VT.

TFG Craft of Business Summit November 28–29. Portland, OR.

TFG Craft of Business Summit December 3–4. Ann Arbor, MI.

For Guild events above, visit tfguild.org/tfg-events-workshops, contact info@tfguild.org, 360-746-6571.

related events

Island School of Building Arts

Timber Frame Hammer Bents 4-Week Course October 30–November 23

Now registering for spring 2019 courses! Gabriola Island, BC. For more information or to register, visit isba.ca, or contact Patricia Rokosh at info@isba.ca, 250-247-8922.

For more information, visit tfguild.org/events/related

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Email the Guild at info@tfguild.org for more information; or better yet, log onto the members section of the website and post your notice.

NOTICES



help wanted

Project manager/estimator wanted—Illinois.

Trillium Dell Timberworks is looking for a project manager/estimator to manage people, resources, schedule, and budget to deliver successful projects. The project manager/estimator is responsible for defining the scope, schedule, and budget for multiple projects concurrently, while successfully facilitating the relationships with all project stakeholders based on trust and high value, resulting in strong referral clients. Responsibilities include, but are not limited to: reviewing bid documents and RFPs; estimating hours required to perform each project component; procuring and comparing quotes from subcontractors and vendors; developing and maintaining awareness of construction costs; communicating clearly all aspects of projects to stakeholders; preparing contract documents; ensuring quality assurance and control systems are in place and audited for all projects; serving as the primary point of contact for clients; coordinating and meeting regularly with Trillium Dell team. Requirements include but are not limited to: college degree, five years' experience in similar position, proficiency in the use of office and project management software, ability to read and understand architectural plans/blueprints. Contact nancy@trilliumdell.com for more information; trilliumdell.com

Full-time timber framer wanted—Massachusetts.

Hardwick Post & Beam is looking to bring on a full-time timber framer, or two, to join our team. The ideal candidate has 5+ years of experience as a timber framer. We operate in Hardwick, Massachusetts, as a custom timber frame shop that works year-round creating structures with hand tools and power hand tools. No CNC here. We offer consistent pay, vacation time, holidays, and health insurance. And sometimes donuts. If this is of interest, contact Christian Gudmund at christian@hardwickpostandbeam.com; 413-477-6430. hardwickpostandbeam.com

Experienced carpenter/timber framer wanted—New Jersey.

Restoration Technologies of New Jersey is looking to fill one full-time position for a carpenter with experience restoring pre-1900 structures, especially timber frame barns. We're a small business that restores barns, other farm buildings, and older homes. We relocate and restore timber frames, and modify them to accommodate new uses. Our excellent reputation has been built over more than two decades. The right candidate will have the capacity to function as lead carpenter managing projects, building high quality to specifications following blueprints, while managing and tracking materials and labor. This position reports directly to the owner, who is a skilled timber framer. The candidate will possess a full set of the necessary tools. Salary will be commensurate with experience and qualifications. Applicants should contact Adam: adam@restotechnj.com; 908-812-1003; restotechnj.com

Buildings and grounds director wanted—North Carolina.

The John C. Campbell Folk School is looking for a new Buildings & Grounds Director to continue care of this unique facility and oversee a long list of upcoming building projects. This facility management job includes care of about 45 buildings and 300 acres. Building experience is a big plus, as well as other maintenance skills and miscellaneous knowledge. Over the next few years, the Folk School intends to construct a new woodworking shop, glass studio, visitor center, and more. Find out more by visiting folkschool.org/documents/Job_Description_Buildings%20and%20Grounds%20Director.pdf. Resumes can be submitted to Director Jerry Jackson at jerry@folkschool.org.

Experienced timber framer and a CADworks designer wanted—North Carolina.

Cabin Creek Timber Frames is looking for an experienced (3+ years) timber framer and a CADworks designer to work in radiant floor heated beamery, where a happy, friendly group of framers cut by hand our entire output, trial assemble it, and then raise it, mostly from Louisiana to Florida to New England. Home base is Franklin, North Carolina, near the Great Smoky Mountains, with good fishing, kayaking, and music. We are two hours from Atlanta and Asheville, have good schools, and a cool summer climate. Pay dependent upon experience and productivity. Contact Joe Bell at joeoscarbell@gmail.com; 828-369-5899. cabincreektimberframes.com

Wood lover and customer service specialist needed—Utah (but work from anywhere!).

Heritage Natural Finishes manufactures natural oil finishes for the timber frame, log home, and fine woodworking communities and serves the coolest sorts of people. We are looking to fill up to four full- to part-time positions, from wherever you live, to help us take care of and support our growing customer base. The job includes working with a variety of customers, from the homeowner doing a small DIY project to the large timber frame company building a home, so flexibility, professionalism, and integrity are a must. You

will help people problem-solve, decide what finish to use (and where), process orders, do a bit of sales, and generally help folks get the most out of their Heritage Natural Finishes product. We would like to have specialists in the Pacific Northwest, New England, Southeast, and Midwest. We are looking for team players who are educated, self-motivated, and professional, with some knowledge of construction and woodworking—we will train you on our products, business, and industry. Solid phone, computer, and communications skills are a must! Contact Autumn Peterson at autumn@heritagenaturalfinishes.com; 503-929-2724. heritagenaturalfinishes.com

Experienced timber framer crew leader wanted—Wisconsin.

WholeTrees is a Wisconsin-based company that prefabricates structural systems made from round lumber. The company currently seeks a detail-oriented leader with broad experience in crew leadership, timber framing, and light construction to join our crew in Westby, Wisconsin, and train into a floor foreman. This is a full-time position which will be overseen and train with the production manager and an experienced WholeTrees foreman, with travel on an as-needed basis to lead installation crews. Future responsibilities include, but are not limited to, working with crew leaders to focus on production, quality, and profitability in all aspects of production; preparing forest inventory for projects; assisting in on-site timber framing joinery and install

“A lasting architecture has to have roots.”

—I. M. Pei



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WholeTrees components and structures at project sites; assist drafters and project managers in preparing shop drawings for national clientele. Required: minimum 5 years' experience with timber frame or other forms of high-detail construction or finish work; minimum 3 years leading timber frame or other high-detail construction teams; process-oriented personality; ability to interpret architectural drawings and translate them into an efficient process. Compensation based on experience with opportunity for advancement; benefits and paid time off began after three months. To apply, please send cover letter and resume to: info@wholetrees.com (subject line: "Timber Frame Foreman Position"). wholetrees.com

work wanted

Hoping to learn through hands-on experience — New Hampshire.

I have recently become very interested in timber framing and have been buying books and researching on my own as often as I can. However, I have not been able to actually work on a project; I would just really love to have an opportunity to learn and have hands-on experience. I am currently a project engineer for a commercial contractor working in the pharmaceutical industry, which leaves my main availability to the weekends, or any PTO days I take. I am not afraid to work. I realize many contractors are limited by their insurance, but I am hoping someone could take me on as an "intern." I live in Pelham, New Hampshire. Thank you! Contact Michael Morrissey morrissey.p.michael@gmail.com, 857-243-0562.

Looking for experience, willing to move—Vermont.

I am a woodworker with experience in cabinetry, furniture making, educating folks of all ages and at all levels about fine woodworking. I've also worked in fabrication and install of museums on the west coast and east coast, and participated in five Timber Framers Guild Community Building Projects. I work closely with Mitch Ryerson building intricate log playgrounds out of black locust, a readily-available, fast-growing invasive tree that is super-dense and rot-resistant. I'm looking to move out of the Boston area and into more full-time timber work, and would relish an opportunity in a somewhat rural area



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with lots of nature to explore in my free time. My website is full of past work documentation and freelance custom furniture and shop projects of my own: heartsparkarts.com. Contact Blake Johnson at runeshai@gmail.com, 802-258-1987.

for sale

Grinder and super surface machine for sale—California.

The boards are fed into the front end of the machine and an electric light reads the end of the board, then the wood is returned to you. Before it is fed back, another head with a knife slides into place and shaves off the face of the board a second time before returning to the operator again. In other words, it cuts both ways. Both machines are heavy duty and in pristine condition. We have all the tooling that originally came with the machine. We are asking \$15,000 for both. Contact Gene Agress, CEO, Berkeley Mills at gagress@berkeleymills.com, 510-543-4432.

Standing dead Douglas fir south timbers for sale—Colorado.

We have an abundance of standing dead, dry (8–12% at center) Douglas fir south logs. More than our small company could ever use. It is the most amazing wood I have ever put on my sawmill in 15 years of sawing frames. Mostly #1 with some #2 and structural select. Bandsawn on select sawmill 6" double cut mill, boxed heart, square, and flat. \$3.75-\$4.50 a board foot. Contact Phil if you would like to have a frame package cut for you at hclt@mac.com, 970-376-0991.

Stump available—Massachusetts.

12 foot plus beech stump available for the taking. Its diameter is 5 feet at the top, circumference at the top is 15 feet plus, and 12 feet down it's 17 feet plus. Located 10 miles north of Boston. If interested or if you have questions, please contact Allan Peoples at allan_peoples@msn.com, 415-810-4965.

Wemple Dutch barn for sale—New York.

Wemple Dutch barn, ideal for use by an architect/builder. It was featured on the cover of *Timber Framing*, Issue 89 (September 2008). For sale with Georgian home, both fully restored on 21 private and pastoral acres in Rotterdam, New York, convenient to major travel routes. An additional 40 contiguous acres suitable for building are also available. Learn more at selectsothebysrealty.com/eng/sales/detail/327-1-853-szb5er/historic-restored-upstate-farm-rotterdam-ny-12306.

Timber frame layout square—South Carolina.

This timber frame layout square incorporates the features of a framing square, try square, and protractor in one. The square has 1/16-in. scale with laser-etched markings for easy reading. The offset base aids in reference edge layout with graduation slots every 1/2-inch with notches on edges to mark every 1/4-inch. Contact info@timberframehq.com, 888-552-9379. timberframehq.com

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MEMBER STORY

Training the next generation

ROBERT HUGHES

As a self-taught, middle-aged timber framer, I sometimes lament all those wasted years prior to finding my life's passion. How nice it would be to know what I know now, yet still be a curious, bulletproof twenty-something. Then again, there is something to be said for experience and wisdom, and you can't have it both ways—or can you?

If you're in the trade you are likely working hard to pay your crew and keep the shop lights on. Maybe you can sneak away for a weekend to a Guild conference now and then, but most of the time you are focused on safely crafting the best frames possible while developing the best team you can.

While there is great satisfaction in reflecting on the frames you've raised, you could discover that the greatest reward comes from sharing the craft with others and knowing that your role as a teacher of the next generation of framers could be your greatest legacy. This can be done as an active Guild member, working with an apprentice, or even teaching workshops, but the silent challenge we face now as an industry is that we are running out of disciples and it is increasingly difficult to bring young people into the trade.

This is not a new dilemma (Tim and Wynter Chauvin raised the alarm in their article "The First Step's The Hardest" a generation ago in the Summer 1992 issue of *Joiners Quarterly*), yet still there exist few opportunities to mentor and work closely with folks in their late teens and early twenties. That may be changing with some recent Guild conference programs for children that have been wildly successful, and the handful of community colleges that have begun to develop courses of study focused on timber framing. In addition to these great programs, there is a unique class being taught at a rural high school in upstate New York that has the potential to become a model for other high school trade programs.

Raising frames, training students

Five years ago, Jim MacLaughlin and I, high school teachers at Wayland-Cohocton School District, collaborated to develop a holistic, STEAM (Science, Technology, Engineering, Art, and Math) program. Given our background, we naturally chose timber framing as the medium to tie everything together. Rob teaches mostly science and runs Big Beams Timber Frames during the summer months; Jim teaches Technology and crafts wabi-sabi-influenced wooden boxes during his free time. We raised our first timber frame together in 2004 and haven't slowed down yet. Their long friendship and diverse skill sets seemed like



Photos courtesy Robert Hughes

Above: Student drilling peg holes on raising day.
Below: Learning compound angle layout and putting it into practice.



a perfect blend for a creative approach to a meaningful course of study for high school juniors and seniors.


Our class, limited to just 15 students, meets for one 40-minute period per day, five days per week, over our 40-week school year. Although that totals out at 133 hours, when you factor in snow days, fire drills, assemblies, and so on, we actually have about 110 hours together. In that time, students learn the history of timber framing, basic frame engineering, design elements, shop safety, several layout methods, how to properly use professional grade tools, all necessary joinery, and how to safely raise a frame. We seek out community service organizations in need of a structure, meet with them to determine the footprint, dripline, and purpose of the structure, then the students develop a sound design using SketchUp and go through an approval process with the host organization. Once approved, students create shop drawings and generate a materials lists and work schedule that will allow us to raise the frame in mid-May. Our first year, students even helped mill the logs, although we have since ordered timbers from a local mill in the interest of efficiency.

.....
Your role as a teacher of the next generation of framers could be your greatest legacy.
.....

Students are deeply involved in the process from start to finish and all students learn all skills. In a truly win-win situation: the organizations we partner with cover materials costs and the students do the rest and learn the myriad skills necessary to understand timber framing.


Our instructional approach follows the “E.D.G.E.” principle: The instructors Explain a technique, Demonstrate that technique, Guide students as they practice the technique, and Empower students to work independently. We differentiate between techniques and skills and emphasize that the path to craftsmanship takes practice and patience. Just as you can’t coach effort, we can’t teach skills. It is up to the students to internalize the process and develop techniques into true skill. Although we want our students to take pride in their work, the ultimate goal is to develop confidence (without hubris) in our students. This becomes evident during our public raisings, where students are encouraged to field questions from interested spectators, and they always provide eloquent answers that illustrate a deep understanding of the craft. During our raisings, we thoroughly cover all safety aspects, but it is up to the students to develop a sequence plan for assembly. There always comes a very rewarding part of the day when the students find their groove and direct the raising process. We can then step aside and allow the students to make things happen.

Proud students with their hammer beam.



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Above: Raising day, year three!
 Below: The year three frame, a pavilion for the local volunteer fire department.



Concentrating on pendant detail.

Problem-solving and cross-disciplinary training

The hallmark of our course is problem-solving. Whenever possible, students are asked to find efficient solutions and you'd be surprised to see what they come up with. In a process we refer to as "Imagineering," students are encouraged to find new approaches that allow us to create the best frame possible. This occasionally means designing a router (or table saw) jig, but has also involved designing a timber cart, and the invention of a tool we call a peg pounder to seat pegs without mushrooming the head. Additionally, the students make all of our pegs which are octagonal with decorative heads, often using locust, red oak, white oak, and occasionally black walnut.

We have also developed a network of assistant teachers from all disciplines who sometimes join our class to lend their expertise. English teachers come in to guide students with press releases and newsletters; math teachers lend their help with geometry and trigonometry; history teachers discuss historical topics such as North American colonization and the Pine Tree Riot; art teachers are heavily involved during the design phase; our physics teacher delivers lessons on centripetal force as it relates to spinning circular saws, orbital sanders, and resistance in a wire for background knowledge on appropriate cord sizes and lengths; physical education teachers provide instruction on proper lifting techniques; our business teacher instructs on the soft-skills employers are looking for and helps students create resumes; our French teacher is called upon to help translate the occasional French reference or term; and our culinary arts chef discusses the importance of sharp knives in his kitchen, which we follow with sharpening lessons in our beamery. Big picture thinking is the key to our course and we take every opportunity to show students that all things are connected and instill the significant value of synergy.

The frames our students design and build are remarkably challenging, particularly for teenagers, many of whom have never even built a birdhouse. We set the bar very high and are always trying to maximize our

level of sophistication. The project in our first year was a dining pavilion on campus that included kingpost trusses with walnut splines, ships knee braces, hammer beams, prow gable ends, dovetail purlins, and a splendid center arch truss. For year two, we partnered with a local Lions Club to build a vented-roof grill pavilion with scissor end trusses patterned after an existing adjacent structure. In year three, we built a grill pavilion for a local volunteer fire department: a two-tiered hipped-roof frame with dragon beams, rotated posts with compound brace joinery, and a ridge hipped-roof cupola. This year our students will be completing an 18-ft diameter octagon shelter for the Finger Lakes Museum that will provide a nice challenge. The only limit we put on our designs is that they must be able to be raised in a single day. Beyond that, the sky truly is the limit.

Community support powers the course

Our school district has been remarkably supportive in funding the necessary equipment, largely through grant money we receive as compensation from a local wind farm as well as donations from several vendors. We use a variety of hand and power tools and have many of the tools you would expect to find in a professional beamery.

Our program would not have been possible without the generous support of our Guild friends and others in the timber framing community. Steve and Tait Chappell, Collin Beggs, Peter Gron, Clark Bremer, John Booker, Leon Buckwalter, Autumn Peterson, and David Powell at Timberwolf Tools have all been positive forces and have helped guide the direction of our program. We have yet to be turned down by any Guild member we have asked for advice, and there are others in the trade who will likely hear from us in the coming years as we seek to expand our program and tackle new challenges.

We are currently developing a partnership with the Alfred State Building Trades program with a goal that our students will receive college credit for taking our course and we have a vision of providing support and direction to our graduates if they wish to pursue a timber framing career. Ideally, we hope to provide a solid understanding of the craft so that our students can easily transition to an apprenticeship at a professional shop.

Although we are uniquely blessed in our breadth and depth of resources, we believe our program could serve as a model for other districts to follow. We hope that folks from other communities will reach out to us to develop similar programs across the country and we welcome any input from the Guild community, particularly anyone looking to take on an apprentice. For more information, email Rob at rhughes@wccsk12.org. Extensive photos and videos of student work can be seen at facebook.com/bigbeams.

Perhaps Tim Chauvin said it best in his article so many years ago... "As craftspeople we have a responsibility to seek out youth to whom we can pass on our skills..." We can only hope that wherever Tim may be, we are answering the call.



Above: The year two frame, Lions Club grill pavilion.



Above: The year one frame, a dining pavilion at the high school campus. Below: The tools of our trade.





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