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A cut above

School teaches traditional timber arts

Photos by Stephanie Zollshan / Berkshire Eagle Staff / photos.berkshireeagle.com

Visiting instructor Don Pendergast, of the Northeastern Lumber Manufacturers Association, right, teaches architects and builders from all over the country during a three-day course on grading structural timber for new buildings and historic structures at the Heartwood School of Timber Framing in Washington.

By Tony Dobrowolski
Berkshire Eagle Staff

WASHINGTON — Up on a hill located off a steep dirt road, a small group of architects, engineers and builders are standing around a recently cut plank of timber.

In the middle of the group, a man uses a tape measure to gauge the size of a knot in the wood. Two people consult pocket-sized guidebooks. A few others take notes.

They're participating in a three-day timber grading training course at the Heartwood School, seeking to learn more about timber-frame construction, a method of building originally brought to America by the British shipwrights who constructed the wooden vessels that transported early colonists to New England.

In the Berkshires, this style is most prevalent in historic structures located in places like Hancock Shaker Village in Pittsfield, Jacob's

TIMBER, continued on A4

Pendergast, right and below, teaches the class about timber grading. Timber-frame construction, which died out in the late 1800s, is making a comeback, especially in New England, as the region's forests mature.

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Traditional timber-frame construction making a comeback

TIMBER from A1

Pillow Dance Festival in Becket, or the First Congregational Church in Lee, where the interiors contain large columns of wood that support huge beams of timber. The church in Lee features the highest timber-frame steeple in New England.

This style died out in the 19th century — the mass production of nails was one reason — but it's beginning to make a comeback, especially in New England, as the region's forests mature. Native lumber produced by local saw mills has become a growing resource for both the builders of new homes, and those involved in historic structures that are undergoing structural assessments.

"It's a more traditional look," said Will Beemer, the director of the Heartwood School, which hosted last week's sessions. The level of training provided by the course is recognized by the Timber Frame Engineering Council of the Timber Farmers' Guild, which is headquartered in Becket.

This is the first time this type of course has ever taken place, Beemer said. The 20 students came from as close as Windsor and as far away as Ontario. The instructors hailed from Colorado, Wisconsin and Maine.

"Most of the students are structural engineers who specialize in heavy timber construction," Beemer said. "Normally, when you build a house you have to use lumber that's certified by the building inspector."

Graded timber comes with a stamp that allows building inspectors to determine the strength and structural integrity of the piece based on the size of the knots or similar markings in the wood.

Stephanie Zollshan / Berkshire Eagle Staff / photos.berkshireeagle.com

Architects and builders from all over the country gather for a three-day course on grading structural timber for new buildings and historic structures at the Heartwood School of Timber Framing in Washington.

"The freer of defects the stronger it is," Beemer said.

But ungraded timber does not contain those stamps, and Beemer said building inspectors often are reluctant to let contractors use it unless they display some expertise in the field.

The Heartwood School training provides the students with that level of expertise, Beemer said.

"Most of the engineers and architects want to have some sort of — it's not a certification — but a qualification from this timber-frame engineering council, which says they've gone through a three-day training that says they know what they're talking about," Beemer said.

"There's probably 50 to 100 timber engineers in the country who specialize in this work," Beemer said, "and 20 of them are (here)."

One of the participants, Windsor architect/builder/native wood producer Jack Sobon, has been working with timber-frame construction techniques since 1976.

"You need to be able to take a look at a piece of wood and determine how strong it's going to be in its final use," Sobon said. "We're learning these technical ways of doing that."

Phil Pierce, of Albany, N.Y., specializes in analyzing the timber that was used to construct covered bridges. Current methods of analyzing timber almost always show that the bridges should have fallen down soon after they were built, he said.

"I'm here to try and improve my abilities to demonstrate to the owners and the public that these structures really are sounder than we give them credit for," Pierce said.

The topics included a brief history of timber testing, an overview of the development of standards and rules for timber, and an overview of timber grading by two instructors from the Northeastern Lumber Manufacturers Association, which includes the session on measuring the size of the knots in planks of wood.

One of those instructors, Matt Pomeroy, said knots in a cross-section of wood are viewed as a "critical defect" because they indicate structural deficiencies in a plank's strength.

"We've had many big discussions" about knots, Pomeroy said.

Beemer smiled when asked about the classroom arguments the participants were having over the size of knots.

"These are engineers," he said, "so they're pretty geeky."

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