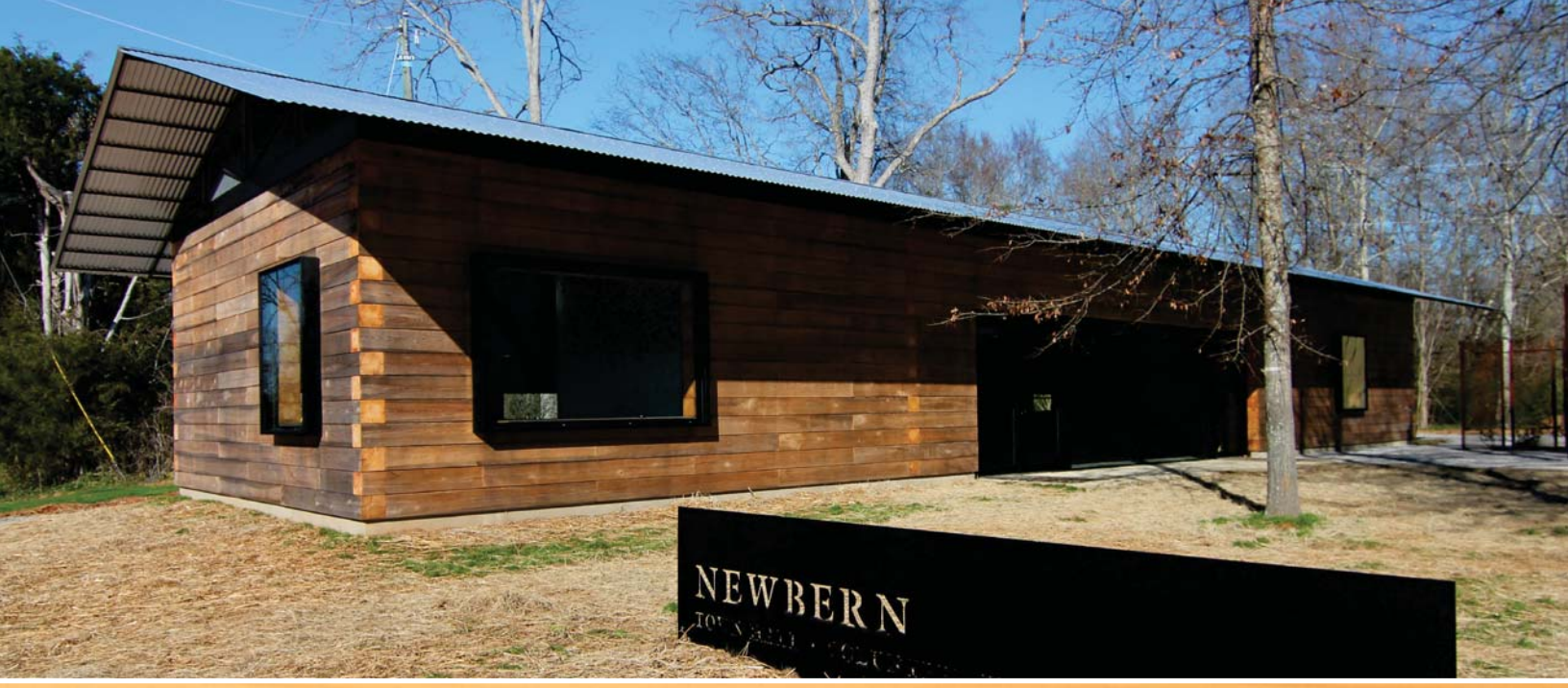

CYPRESS

Timbers are the Building Blocks of Newbern

When rural Newbern, Ala., was in need of a community center, four architectural students teamed up to design what is now the multifunctional Newbern Town Hall. Completed in February 2013, the community's new civic center is reminiscent of the region's heritage as a lumber center and a compelling showcase for cypress, one of its hardiest, most distinctive and historically important native woods.

The project was designed by Brett Bowers, David Frazier, Mallory Garrett, and Zane Morgan, all fifth-year architectural students from Auburn University's Rural Studio, an off-campus design/build program based in Newbern. During the design phase, the team researched building materials that would evoke a sense of timelessness and durability while honoring the Newbern community and its history. Wood was an obvious choice.

"Building with wood has been a common practice throughout the history of Western Alabama," Frazier said. "We wanted to feature wood because it's readily available, cost- and resource-efficient to use, and has a beauty and warmth that can't be replicated by other materials."

"We selected cypress," he added, "because it's a native Southern species. We also liked that, because it is dense and contains a natural preservative oil, cypress is durable and decay-resistant."

To connote the dignity and significance of a civic structure, the team chose to incorporate heavy cypress timbers, rather than a traditional structural frame and cladding. The 1,909-square-foot building's walls were constructed by stacking 16 rows of 8-by-8-inch locally sourced cypress timbers.

"Because we didn't want to use any heavy construction equipment," Frazier said, "we placed each of the 535 timbers by hand." And for the south wall, the team fabricated a glue-laminated beam onsite, which spans a 28-foot opening to accommodate the entry door and expansive windows.

But, according to Frazier, using the cypress timbers presented a significant design obstacle. “Our biggest challenge,” he noted, “was dealing with the inevitable shrinkage of the timbers as they dry over time.”

When the material was ordered, a moisture content of 25 percent or less was specified. To achieve this, the timbers were placed in an air-drying tunnel for two months. The students then spent an additional two months preparing the timbers with routed drip edges and splines for stacking connections.

To prevent failure of the building envelope due to timber shrinkage, components had to be designed to adapt. The team fabricated window and door frames with slotted joint connections and mounted them either on the inside or outside of the walls. “They are hung like a picture frame,” Frazier added. “With this technique, the cypress walls will be able to shrink up to four inches without causing damage to the envelope.”

Mindful of cypress’ natural beauty, the team chose not to apply any paint or stains to Newbern’s new structure. As Frazier noted, “We preferred to let the timbers weather naturally. In a few years, the building will blend into its surroundings.”

Andrew Freear, director of Rural Studio, said, “This team has been an inspiration to us all. The Town Hall is beautiful and extraordinarily rigorous, but above all, it is a mature piece of architecture. Both the town of Newbern and Rural Studio are very proud of its new center of democracy.”

For more information on building with cypress, please visit the Southern Cypress Manufacturers Association at **www.CypressInfo.org**.

SOUTHERN CYPRESS MANUFACTURERS ASSOCIATION

Photos courtesy of Rural Studio