

Where Homework Means Building Affordable Housing

by Deonna Anderson

Each year, beginning in the fall, a group of third-year architecture students from Auburn University take up residence in a small rural Alabama town to begin building a house.

In the winter, when a new semester begins, they are replaced at the Newbern, Alabama, project site by another cohort of 16 students who finish up the job and prepare the house for its new occupants.

The 20K Home Project began 13 years ago as a challenge to architecture students at Auburn to build a \$20,000 house, with \$12,000 in material and \$8,000 for labor.

The idea was to create “the perfect house” for needy families in rural areas where dwellings are often substandard and where affordable building can be a logistical challenge.

To date, the student-led project has designed and built homes for nearly 30 households as part of Auburn’s Rural Studio, an off-campus, hands-on architecture program that has also constructed community centers, a library and other projects around Hale County, where Newbern is located.

Created in 1993, Rural Studio partners with local nonprofits and uses cash and in-kind donations to cover the cost of the homes. It then makes a gift of the finished houses to low-income Newbern residents.

“Affordable housing is a very large challenge, and we’re one small piece,” says Mackenzie Stagg, an Auburn University alum who is now research faculty at the studio.

While the lack of affordable housing has reached crisis levels in many U.S. cities, the problem is often overlooked in rural areas. A 2014 report from the National Rural Housing Commission found that nearly 6 percent of all rural housing is either moderately or severely substandard.

“Homes that are available are often in need of extensive repair or improvements just to meet basic health and safety levels,” the report’s authors write.

David Dangler, director of rural initiatives at NeighborWorks America, a national housing advocate, says the country has a diverse mix of rural communities. But while they all have unique needs, he said, some challenges are universal.

One is the actual cost of construction, Dangler says.

Developers in rural communities don’t have the luxury of building large developments

because there aren't enough people to occupy them, he said. Another is infrastructure—such as water and sewer systems and electrical or cable lines, which in many rural communities need to be built.

"You'll often start with a field," he says. Utilities and other costs can add "30 to 40 percent on top of the typical cost of construction," he said.

Over the years, Rural Studio has developed design criteria for the homes, which are typically one- or two-bedroom single-family dwellings. In Newbern, a community of just under 200 people in the west-central part of Alabama, the median price of a home is about \$65,000, according to census data.

Because the university cannot buy land, low-income residents who apply to the program must either own the land or have permission to build on it.

Stagg said the homes must be durable, weatherproof and secure. And they must foster a sense of community and promote healthier lifestyles for homeowners, through such factors as accessibility, indoor-air quality, and the use of windows for natural light and temperature regulation.

Initially, it really did cost \$20,000 to build one of these homes. But that's no longer the case because labor and material costs have increased over time.

Also, the project has also invested in better and costlier materials up front to lower maintenance costs for homeowners over time. Students help lower costs by tying into septic systems already on a lot where they might be replacing an old home with a new one.

Over the past six years, the program has expanded and developed into the 20K Initiative, a faculty-driven program expansion that includes a partnership between Rural Studio and Fannie Mae that started in January.

Under this new effort, faculty have developed four home models based on research over the years by the students designing and building the homes. Future partners will be able to use those models to build affordable housing in their own communities.

Through the partnership, the studio will continue to research, design and build homes over three years.

Rural Studio said the main goal of the partnership is to develop a scalable, sustainable, and resilient process for building affordable but quality homes in other underserved rural communities. And it will share its findings with other groups and organizations working to address affordable housing needs.

"Auburn's program aims to find solutions in Alabama that can be applied nationwide," Michael Hernandez, vice president at Fannie Mae, said in a statement.

"The support of their research effort goes to the heart of our affordable housing mission and complements our Duty to Serve initiative [a commitment to serve underserved markets], especially when it comes to addressing the shortage of affordable housing in rural America."

Over the next two years, as it adds partner organizations such as faith-based groups and

enterprises, Rural Studio will be assessing ways to further lower the initiative's material costs while addressing the ongoing maintenance costs that go with owning a home.

Stagg said that 13 years ago as a new architecture student at Auburn, she never imagined that she'd be helping to scale an effort to build affordable housing in rural Alabama and other rural communities across the country.

"I think that the work that we did gave clarity to the trajectory the project has [taken] ..." said Stagg, who was in one of the first groups to build a 20K home.

"It's really nice to ... see that your project contributes in a multitude of ways. ..."

Rusty Smith, associate director of the Rural Studio, said that in those early years, no one recognized how complex a problem rural housing was.

"We thought that is was a house problem, that we'd spend a couple years designing a house and then we'd have it done and everything would be great and we'd move on," he said.

"We're really excited to be on the cusp of being able to tackle home affordability in our own little way with these expanding partners out there in the larger field beyond our own area of impact."

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