Building a house of straw

In the Remer's corner, however, was architect David Arkin, AIA, who is one of the founders and current director of the California Straw Building Association. Arkin and his wife, Anni Tilt, are partners of Arkin Tilt Architects in Berkeley.

"Arkin arranged a meeting with the lead planner and engineer with the county to present the project and address any concerns and provide the extra data required by them," Norman said. In all, the research and application process took over six months.

A major obstacle was the design. Space restraints limited the structure to 1,000 square feet, and they wondered how they could design a two-story home to get a living space worth building. They were able to get a square footage calculation allowance on the thickness of the walls. The straw bales require 21 inches of thickness, whereas standard walls are only 6 inches thick. Everything else was treated like a conventional building.

They also anticipated and tried to address potential neighbors' concerns over the two-story structure by limiting the downstairs ceilings to 7.5 feet high and slanting the roof from 6 feet high upstairs.

Their first task was to dig the foundation, but the severe winter rains cost countless delays. In addition, a deluge dislodged a newly installed sump pump and a tractor submerged in a quagmire of mud took an entire day to extract.

Once the walls were erected, one of the most satisfying days was the "bale raising." Similar to the tradition of a barn raising being a community event, the Remers called on family and friends to help. Over 50 people came, including many they didn't even know as a result of calling out to the CASBA organization. Within three and a half hours, the tightly bound bales of hay were loaded into the walls and secured with wire.

Since the school year began, Norman Remer has spent weekends plastering the outside walls. He is using a lime plastering mixture, applied slowly, so it will dry properly into a protective limestone, which allows moisture to escape rather than becoming trapped within the walls. "Water is the enemy of straw-built houses and can lead to mold," he says.

While many people have helped on various parts of the project, Norman credits his childhood friend – local artist Evan Gerardo – for his constant help. "Evan is the reason I'm still alive today," he says. "He helped dig, moved lumber, and, once the plastering started he would show up regularly to give of his time and supportive energy."

At first, the couple had hopes of being able to move in before their baby is born, but Amber realized the stress of completion was getting to be too much: "My nesting urge is definitely kicking in, but I'll still be able to prepare the bedroom. We've accepted that we may not make it in time."

Looking back at the process, Norman says, "As painful and as time consuming as it's been, when I look at any particular piece of the house I can think of the person who helped me with it. I have a personal investment in every square inch of this project."