

Santa Fe REAL ESTATE Guide

Artisan/craftsman/**builder**

APRIL 2006 VOLUME 9, ISSUE 1

On wall materials in new construction

by Kurt Faust

Adobe is one of the oldest and most widely used building materials on Earth, going back to Egypt in the time of the pharaohs. The technology was brought to the Southwest by the Spaniards and is the inspiration for the beautiful style that is so unique to our area.

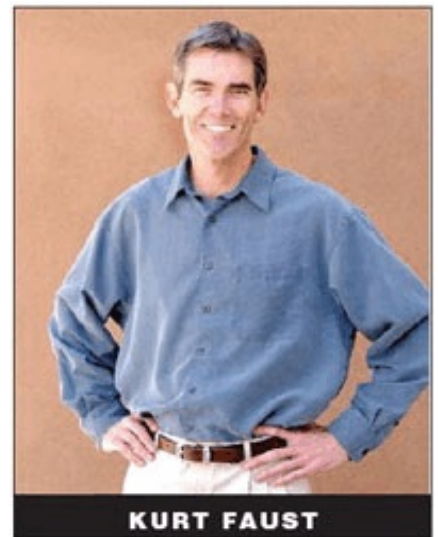
Adobe essentially is a mud brick that has been laid out in the sun to bake. It is made of about 30 percent clay and 70 percent sand and small aggregate with a small amount of straw added to bind the mixture while it dries and shrinks. Adobe makes a very good thermal mass but makes a very poor insulator. Spray foam is often used on the exterior of the building as insulation prior to plastering with stucco.

Another common wall material is the ubiquitous “cinder block” or CMU (concrete masonry unit). It is mostly used in commercial buildings and has a cell structure which is core-filled with steel reinforcing bars and concrete for added strength.

Recently there have been a number of alternative wall materials manufactured that utilize the cell structure of the CMU and are also core-filled with concrete and rebar. Most are larger and are made of materials such as recycled polystyrene and Portland cement cast into large blocks, etc. Many of these are their own insulation, are strong, and also provide thermal mass.

Rammed earth and pumice-crete are two materials built in forms that are erected on the site. The forms are often placed 14 to 24 inches apart which results in very thick walls. Rammed earth, if formed thick enough, may not need to be insulated and is often left exposed instead of being plastered. It can be quite beautiful. Pumice-crete, by the nature of how it is poured, is its own insulation.

Straw bale has the advantage of being a relatively inexpensive material that is entirely recycled as it's a waste product from farming. Unfortunately New Mexico does not allow load-bearing straw bale buildings. Therefore, the roof must be held up by some means of post and beam and the straw bales are placed in between for their thickness and insulative qualities. Care must be used to keep the straw dry during construction.



Kurt Faust is an artist, blacksmith, cabinetmaker, and homebuilder. He owns Tierra Concepts, Inc. and Taos Furniture with his two partners Eric Faust & Keith Gorges.

Frame or “stick” construction is the dominant material used in wall construction due to its cost benefit. It can usually save several weeks on the timeline and is also easy to insulate and simplifies placement of electrical wires and plumbing.

All of the different materials should hold thier value upon resale of the house if they are done right. The decision on which one to use should be based on other factors as well. There can be an acoustic quality to the thick masonry walls that can reduce road noise or attenuate the sound between rooms in the house and the thermal mass of a masonry wall can moderate the temperature swings in the house.

Contact Kurt Faust:

Cell: 505.780.1157

www.tierraconceptssantafe.com