

READY FOR DISASTER

Alpine homes take more stress so owners don't have to

By Caron Golden

ALPINE — Residents moving into the still-developing Crown Hills community, which will include 333 homes when completed, are on the cutting edge of housing technology. And this technology may make the homes safer in an earthquake.

These homeowners are the first in the United States to live in a private tract-home development framed with stress-skin panels instead of the traditional two-by-fours. "Stress skin" refers to the fact that the wall and roof panels carry all the load themselves. They need no additional framing or other structural support.

Picture the panels as ice-cream sandwiches. Although the pieces come in an assortment of sizes and shapes, they all have a white, foam core sandwiched between two composite-wood boards.

The pressure-treated panels, made primarily of wood chips held together with adhesive, are billed not only as energy-efficient and bug- and fire-resistant, but also earthquake-resistant.

In fact, manufacturers claim that the stress-skin panels are 60 percent stronger than conventional wood framing.

The product has been around for decades, said John Hensler, president of Phoenix-based RJT Builders, the developer of Crown Hills. But until now, he said, residential



builders in the United States used these panels only for custom housing. The federal government has incorporated them into some of its housing in Alaska, particularly because of the material's energy efficiency, he said.

The panels are popular in Northern Europe and Japan, Hensler said. In the 7.2-magnitude quake in Kobe, Japan, in January 1995, many of the houses built with these panels were among the structures left standing, he said.

Picture this

The panels are connected to each other with an extra strip of wood affixed with nails and adhesive. The tight seals keep out wind, moisture and sound, according to Hensler.

The panels are then connected to the foundation with nails and adhesive. The panels themselves include pre-cut holes for windows and doors and spaces for electrical plugs, switches and electrical wiring.

Like traditional two-by-fours, the stress-skin serves only as framing. Interior and exterior walls are added later. At Crown Hills, home exteriors are stucco.

Asked why the panels are not more popular, Hensler said, "It's real tough in the building industry to get anything new started. People are afraid of new things. Plus, if they aren't familiar and it costs more, they're reluctant to try it." Hensler estimated that the cost

room for mistakes, total costs actually may end up being lower, he said.

Three- and four-bedroom homes at Crown Hills are priced between \$170,000 and \$212,000.

While Hensler has had experience in heavy construction, such as highways and dams, and manages a real estate mortgage company, Crown Hills is his first residential development project.

He formed RJT Builders especially for the project, which he bought in 1993 from the original developer, who bailed out in the early stages, according to Hensler. Because only 14 of 333 planned homes had been built when he took over, Hensler essentially rede-

signed the project. Working at a pace of about 10 houses a month, he has completed 200 homes.

"We came into this with a fresh outlook and weren't tainted with past projects," he said.

His "fresh outlook" has earned him one of three "Building Innovation and Affordability Awards" from the Department of Housing and Urban Development. The first-time awards were presented in Houston in January at the National Association of Homebuilders convention.

"We're real proud of that award," he said. "We're proud of the whole thing."

■ CARON GOLDEN is a free-lance writer.

Retrofitting older homes

Homes built prior to 1935 may not have properly reinforced cripple walls or foundation bolting. During an earthquake, these homes can be shaken off their foundations.

