

Future shock? 'Flexible' homes

AP — Architect Walter Kroner thinks houses should be like toy Erector Sets, so easy to assemble that two unskilled adults can build them with hammer, screwdrivers and other basic tools.

The houses also have to be flexible. If homeowners need to add a room, they can expand up or out and simply reuse the same roofing. And when the kids are gone, if the house is too big, the owner simply takes a room or two off.

"It is very, very simple," said Kroner, a professor at Rensselaer Polytechnic Institute in Troy, N.Y., and director of its Center for Architectural Research.

"With a few pictures and descriptions you can take all the components — because they are light enough and small enough and simple enough and foolproof enough — and put them together to make a variety of housing designs and housing types," Kroner said.

Kroner's housing concept doesn't stop there. His houses also have to cost up to 30 percent less than conventional housing, be energy efficient, adaptable to any climate and be environmentally friendly.

A major goal is to provide housing alternatives for people who otherwise might never be able to afford a home of their own, especially young families who were unable to buy homes in the 1980s.

The house's construction utilizes a post-and-beam method with 12-foot-square structural modules. The building rests on piers with no basement, so there's no need for backhoes, cranes and forklifts. By renting an auger, two people can bore holes for piers. The surrounding environment and water table are not disturbed.

The plumbing and electrical systems are so simple that they are installed by connecting hoses and plugging in cables.

But if it's "flexible," is it secure? "It meets code, better than the code that New York state requires," Kroner said. "It's already a higher quality than quality manufactured housing."

Students with no previous construction experience are building a 1 1/2-story prototype of Kroner's house at a site in a technology park about five miles from RPI. So far, 300 hours of work have gone into the panelized structure; the interior work remains. "The gable-style house has wooden siding, but Kroner says his homes can be sided with any materials and their styles modified.

Flexi-House

Some features of the flexible house advocated by Walter Kroner, a professor at Rensselaer Polytechnic Institute and director of its Center for Architectural Research:

- Two unskilled adults can build it with hammers, screwdrivers and other basic tools.
- Rooms can be added or removed as the household's needs change.
- Planning and electrical systems can be installed by connecting hoses and plugging in cables.
- Variety of materials and styles can be used; some basic features, such as siding, could be upgraded if desired.
- Efficient use of materials and labor can reduce building costs sharply.

Using standard materials, the 1,350-square-foot house with three bedrooms and 1 1/4 baths would cost \$27 a square foot for materials, or \$37,500, he said. The house costs \$27 a square foot because of some upgrades, such as oak flooring.

Census figures indicate that the median cost of new home construction in the United States in 1991 was \$49 a square foot and the median home size was 1,900 square feet.

Money is saved because of the efficient use of materials and labor, which typically account for up to 50 percent of the cost of a home, Kroner said.

Land price, though, is another story. In the Albany suburb of North Greenbush, N.C., where Kroner's prototype is being built, a half-acre costs at least \$30,000.

It's unlikely that Kroner's homes would start cropping up all over North Greenbush, according to Richard French, director of the town building department. It's not that the building itself wouldn't meet standards, but required lot sizes in the town would probably be too costly for someone building one of Kroner's affordable models.

French, who has inspected the prototype house, says it falls somewhere between upscale and low-income housing.

"The young blue-collar couple, in their early 20s, married with no college education ... a lot of those kind of people wind up scrambling the rest of their lives for their next apartment," French said.

Kroner's homes could change that, he said.

Though the prototype won't be finished until July, Kroner said he already has received hundreds of letters requesting information about the homes.

Kroner's project has its critics, however.

CALENDAR

Building Seminar

Local builder Jim Nawrot will conduct a home building seminar from 12 to 3 p.m. Sunday, May 23, at the Holiday Inn in Livonia (6 Mile east of I-275). The cost is \$10 per person, \$15 per couple.

Nawrot offers a hands-on workshop that will answer all of your questions and show you the best ways to construct your new home. Call 462-0944 to make reservations.

BASM Meeting

Home builders can learn to increase new home sales at the general membership meeting of the Builders Association of Southeastern Michigan, from 8 to 11 a.m. Thursday, June 3, at the Northfield Hilton, 5500 Crooks Road (at I-76) in Troy.

Tom Richey of Houston-based Richey Resources Company will present "Five critical areas of concern." Richey is a nationally recognized lecturer, author and pioneer in residential home builder marketing concepts.

Fee, including breakfast, is \$30 for BASM members and \$60 for non-members. Call 737-4477.

Homearama 1993

The Builders Association of Southeastern Michigan's 11th annual Homearama, featuring the latest ideas in home design and building techniques, commences Thursday May 27 and runs through Sunday, June 13 in the Silver Bell Village Subdivision in Orion Township (Silver Bell Road at Bald Mountain, one mile north of The Palace of Auburn Hills). Admission is \$6 per person.

Costly housing? Try to buy in Japan

AP — Complaining about the price of building a home? Check this out:

Prospective homeowners in Japan pay three times as much as Americans do to build a house, according to a Japanese research institute.

Excluding the cost of the land, the average housing construction cost is about \$5,450 per 35.7 square feet in Japan compared with about \$1,820 in the U.S., the Japan Research Institute Ltd. said.

Manshuru Sakuta, general manager of the technical advisory department at the institute, said the report, carried in the institute's monthly report, urged simplification of the construction materials distribution system and the complicated contractual system for housing construction.

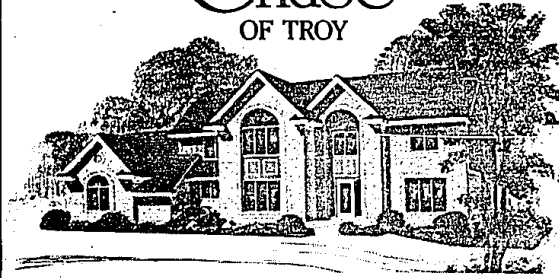
But Sakuta said in the report that Japan should not ease current earthquake and fire safety regulations to make the Japanese market more accessible to foreign builders.

U.S. officials have pointed out that the regulations create a major barrier for foreign construction firms.

The report said Japan needs its regulations, relatively strict by international standards, because of its exceptional crowding, soft foundation soil and frequent earthquakes.

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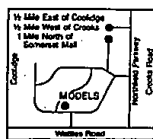
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