

# THE SUN



## Modular pads going upscale

From assembly line to dream home takes only days

BY JUNE ARNEY  
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As the rising sun bathed the Chesapeake Bay, a 110-ton crane sat poised over a wheeled chassis holding part of a house. Slowly a 14-by-36-foot module swung into the air, its four oversized French doors glittering in the light. Suspended from four cables, it dangled for a time before being lowered onto the foundation of what would become a luxury waterfront home by day's end.

By 11:15 a.m., the first floor was nearly done. Warily, workers, builders and a small crowd of onlookers eyed thickening clouds on a day that had been forecast to be clear. But the rain held off, and by the time the builders ran out of daylight, all six modules, each shuttled from a staging area, had been hoisted into place. Only the 19-foot cathedral ceiling was missing.

A week earlier this 3,500-square-foot home was just a load of lumber at an assembly line in Liverpool, Pa., near Harrisburg. It was built within a span of days at Excel Homes Inc.'s sprawling manufacturing plant, where dream homes take shape out of plumbing pipe, sheets of drywall, batts of insulation and reels of wire.

First the walls were framed and plumbing put in place. Then the modules traveled through 24 stations where everything from mirrors to stairs to carpeting were installed. Ultimately, the whole thing was shrink-wrapped for the 160-mile road trip to Middle River where it was jockeyed into place, its back door toward the bay.



The top photos (1) show walls and rooms being constructed at the Excel Homes plant near Harrisburg, Pa. The modules travel through 24 stations where everything from mirrors to stairs to carpeting are installed. The photo above (2) shows a partially completed modular home overlooking the Chesapeake Bay in Middle River. The assembled \$1 million home is shown below (3 Next Page). Modular housing typically contains as much as 15 percent more lumber than conventionally built homes but costs 10 percent to 15 percent less.

PHOTOS BY DOUG KAPUSTIN & BARBARA HADDOCK TAYLOR [SUN PHOTOGRAPHER]

By the time the finishing touches were done, it was the latest \$1 million home on the Chesapeake Bay - with a master closet as large as some bedrooms. It will be finished off with a high-end custom kitchen.

Modular homes have gone upscale. No longer restricted by the dimensions of standard boxes, they offer a wide variety of styles and amenities and can be built to customers' specifications. Typically they contain as

much as 15 percent more lumber than conventionally built homes but cost 10 percent to 15 percent less.

"A modular home, in the past, had the mystique of being a double-wide," said Christopher G. Smith Sr., one of the owners of Artisan Fine Homes Ltd., the builder that erected the house. "Today, they're 100 percent custom."

Last year an estimated 43,000 modular homes were produced in the United States, according to Fred Hallahan, a Baltimore consultant and principal of Hallahan Associates, who does market research for the modular-home industry.

In Maryland and Delaware, modular homes represent a small but growing percentage of new homes - roughly 4 of every 100 homes, according to Hallahan.

"The economic and demographic conditions here are such that the market could readily increase by 50 percent," Hallahan said.

Hallahan pointed to southern New England, which like Maryland and Delaware, has about 40,000 housing starts a year. But modular sales are higher there, with an estimated 2,400 homes last year - about 6 out of 100 new homes - compared with about 1,500 in Maryland and Delaware.

In southern New England, builders have promoted modular homes as a way to shave labor and material costs while delivering a high-end product, Hallahan said.

## 'Not as aggressive'

Maryland builders "have not made that step to go after more upscale consumers using modular homes," Hallahan said. "They just haven't seen the potential. They're not as aggressive. "... Builders in New England, and southern New England in particular, have identified a market niche for upscale modular houses to a greater extent than what Maryland modular builders have done."

He said the prevalent modular home in the Northeast is two stories and approaching 3,000 square feet, whereas a modular home in "this area ... tends to be a smaller, one-story rancher."

John R. Haymaker, a professor of civil and environmental engineering at Stanford University, sees nation-



wide growth possibilities for the modular industry.

Having a stable work force that assembles homes in a manufacturing plants is a real advantage, he said.

But for modular housing to really take off will require educating architects and builders, and integrating the supply chain, he said. Consumers would buy into the idea if contractors can demonstrate cost savings and quality, he said.

John E. Kortecamp, executive vice president of the Homebuilders Association of Maryland, said public perception of modular homes is an obstacle.

"They have a legacy problem to overcome," he said. "The product of 20 or 30 years ago is not associated with quality. The reality is in a lot of consumers' minds, it's the same thing. It's hard to get people to fully appreciate the changes."

Sheri Koones, author of the book *Modular Mansions*, said she sees modular homes all around her in Greenwich, Conn.

"Just in the last five to 10 years people have started to realize that modular could be used to build more custom houses," she said.

She counts heart surgeons, airline pilots, astrophysicists and highly successful business people among the modular home owners she has interviewed. One of the homes she studied was a 12,000-square-foot home on Cape Cod overlooking the Atlantic.

"Instead of going with the status quo, they're willing to ask questions and

look into alternatives," she said of modular home owners. "As people begin to see beautiful houses going up in their areas, the stigma gets less and less."

The Excel plant that built the luxury home in Middle River has crafted homes that, once erected, are worth as much as \$8 million, said Doug Stimpson, vice president and general manager for the manufacturer, which operates three plants and says it has about \$100 million in annual sales.

An \$8 million price tag is largely driven by location - for instance a waterfront site in Connecticut or the Hamptons on Long Island, N.Y.

Such homes often involve a dozen modules to create a space of 6,000 to 9,000 square feet, Stimpson said. Marble or Italian tile, or walnut flooring, French doors and Palladian windows are the kinds of amenities that could bump up the price.

Excel might sell a house of that size to the builder for about \$350,000, who would then add on his costs and labor, Stimpson said.

Typically, the Liverpool plant produces eight to 10 modules a day - the equivalent of three homes - or about 700 a year. Many of those originate as rough sketches on paper napkins, mailed in by couples doodling over a bottle of wine at a restaurant, he said.

## 85%-95% complete

By the time houses leave the Liverpool plant, they are 85 to 90 per-



A crane lifts a modular section over power lines as a crew assembles a waterfront home in Middle River at the end of January. The 3,500-square-foot home was raw lumber the previous week.

cent complete, Stimpson said.

"There's 15 percent more lumber in a modular home," Stimpson said. "We have to build it so it can go 55 miles per hour down the road."

Most modular builders are small operators completing about 20 houses a year, according to Hallahan and other experts.

Ryland Homes marketed modular homes until about 1990, according to

Earl Robinson, vice president of sales and marketing for the company's Baltimore division, which covers Maryland and Delaware.

Despite selling thousands of modular homes in Maryland and neighboring states, the company got out of the business after deciding it was not profitable, he said.

"They're just not well perceived by the public," he said. "People see them

as being boxy, as not having flair. The bottom line is it wasn't profitable. We needed to focus on what we do best, which is design, develop and build communities."

Ryland builds about 1,000 homes a year in Maryland and Delaware but has no plans to get back into modular housing, Robinson said.

However, from the construction standpoint, Robinson does not dispute that eliminating weather factors, along with other quality controls in modular manufacturing, give the houses a clear advantage.

### 'Quality is better'

"I would say that the quality is better, but the perception is that it is not," he said.

Last year, Smith and his brother, Edward M. Smith, of Artisan Fine Homes, put up about 30 homes in the Bowleys Quarters area of Middle River alone - a busy year for them as homeowners rebuilt homes wrecked by Tropical Storm Isabel in 2003.

Among their clients were Roy Wetzberger and his wife, Janet, who chose an Excel home after Isabel filled their former house with 3 feet of water and a layer of mold.

"We love it," said Roy Wetzberger, 56 of Middle River. "It was quicker. It wasn't built out in the weather. It was built in a factory."

The Wetzbergers' year-old chalet-style home, near the site of their demolished home, is just under 2,000 square feet and cost \$225,000, Wetzberger said.

The house overlooks the shallow bay where Wetzberger wades out and scoops up cherry-stone clams. Wetzbergers installed a sunken hot tub in the deck, overlooking the water.

Kermit Baker, the director of the Remodeling Futures Program for the Joint Center for Housing Studies at Harvard University, said he was surprised during a visit to a New Hampshire modular plant that company officials were reluctant to promote the cost savings, perhaps out of fear of reinforcing perceptions that less expensive meant inferior.

"We were talking to them about cost savings, and curiously they wanted to



A crew positions a module on supporting columns while standing in basement of Middle River house. The home's modules included a high-end kitchen and a master closet as large as some bedrooms.

talk about the improved quality perspective," he said.

Still, virtually all the large home-builders are doing as much pre-assembly as they can, including roof trusses and floor support structures, because it saves money and time and allows for better quality control, he said.

"I think they're going to blur," he said. "I don't get the sense that they're moving to a modular approach, but they're doing as much as they can off-site."

Given labor costs and building restrictions in Maryland and elsewhere, Baker said off-site construction seems to make complete sense - with modular homes the ultimate example of that.

"These areas are prime for this, but it isn't happening," he said. "If it sounds

great on paper, why haven't more of the big builders gone modular?"

Scott M. Adashek, owner of Portrait Homes LLC in Olney, started building modular homes in 1980 when he worked for Ryan Homes, and they were "selling like hotcakes in Germantown," he said. Typically, those homes of 1,600 to 2,600 square feet were created from four modules, he said.

Today, custom modular homes make up about 20 percent of his business, or about three of the 15 houses he builds a year, Adashek said.

Adashek has his own theories about why big builders abandoned modular homes. For one thing, modular construction doesn't adjust quickly to changes in taste, he said.

"In the late '80s when everybody went to 9-foot first-floor ceilings, modular homes couldn't do that - they were five years late," he said. "If you can't react quickly ... you want to go to stick-built so you don't lose your market share."

But as the number of building lots shrinks and contractors are forced to build more densely, he predicts the efficiencies that modular construction offers may become more compelling.

"I can easily believe that we can increase from 4 to 6 percent," Adashek said. "But Maryland has always had a reluctance. I don't know why that is."

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