Designers and architects have been experimenting more often with prefabrication as a means to deliver well-designed structures that feature clean lines and open floor plans. So what’s the state of prefab in residential, school and commercial spaces today?

BY CLARE CURLEY
ILLUSTRATION BY THE HEADS OF STATE
PREFABRICATED CONSTRUCTION is the building method of choice for many clients looking for a fast turnaround at lower construction costs, whether for a sophisticated retail facility or a stand-alone classroom. And since prefab companies tend to have staffers who oversee their designs inside and out, interior designers should be forming alliances in the prefab sector to expand their own business offerings.

To proponents of prefabricated building, the movement toward factory-built construction is nothing short of a cause — whether to save the environment, create healthier schools, or rescue us all from generic tract housing. As Toby Long, AIA, Principal of tobylongdesign and Clever Homes, LLC, in San Francisco, puts it, “There’s a nobility to this that’s interesting to us.”

In theory, prefab does seem like a logical solution to more than a few construction woes. Whether the buildings come in kits or as large chunks rolling down the highway, they arrive with interior and exterior finishes intact, not to mention plumbing and electrical rough-in, potentially saving clients time and money. Since less material and manpower goes to waste during the construction process, the green argument for using prefab is as embedded as the flooring is.

Some prefab companies take the spirit of recycling a step further. Take Manhattan Beach, Calif.-based Logical Homes, which develops homes from discarded cargo containers. “The containers go through a whole adaptation process to arrive at modern architecture,” says the company’s CEO Michael Sylvester. “In essence, we’re just using them as steel modules.”

To the average client, though, prefab is simply a faster way of building. Almost anything that doesn’t have tall, spanning walls can be built off-site. Everything from the fixtures to the paint color on the walls is determined before construction begins. It’s still a tiny niche within a start up industry; however. And the frozen credit markets have forced many boutique prefab companies into a holding pattern along with much of the construction industry.

“The slowing economy has also resulted in opportunities,” says Sam Tikriti, Vice President of Strategic Markets at ModSpace, a Berwyn, Pa.-based firm that provides modular buildings for commercial, educational and civic spaces.

“Whether they’re charter schools or businesses, the earlier opportunity to move into their facilities can ultimately help them reduce operating costs and increase revenue generation.”

The state of Massachusetts recently expanded its Model School Program, which seeks to identify successful, newly constructed school designs to adapt and reuse in other districts.

To proponents of prefab, since there’s no construction site filled with people, debris and dumpsters. That people are requesting smaller houses than they would have two years ago isn’t necessarily considered a bad thing. “We see that as an incredibly healthy, positive tendency in the market,” Marmol says. “From a sustainable perspective, that’s exactly what we’re dreaming of.”

THE SCHOOL SOLUTION

Across the country, school districts are starting to turn to prefab for various reasons, not the least of which is to save time and money. The state of Massachusetts, for example, recently expanded its Model School Program, which seeks to identify successful, newly constructed school designs to adapt and reuse in other districts. These prefabricated schools can curb the cost that goes into school construction, simplify the design process and reduce project time.

Other areas view prefab as a better-designed, more sustainable alternative to portable classrooms. Sylvester, who also edits and publishes Fabprefab.com, an online resource dedicated to investigating the market for affordable modernist factory-built residential architecture, says, “There’s been an explosion in charter school construction in southern California.” The quality is a “completely different universe” than portable classrooms, he explains, with a higher quality of finishing and materials.

Toby Long has a background in residential prefab, but he recently designed two prefabricated classrooms for the Chartwell School in Seaside, Calif., one of the first LEED

PREFAB FAST FACTS

Amount of construction waste reduced by Method Prefab
Price per square foot to build a CleverHome in California
Number of modular buildings in ModSpace’s fleet
Year Marmol Radziner began incorporating prefab modules into large commercial projects

80 percent
$200 – $300
75,000
1996
Platinum campuses in the country. “[They were] designed to complement the green buildings on campus,” he says, with such sustainable attributes as no-VOC paints and coatings; water-efficient plumbing fixtures; daylight and occupancy sensors for fluorescent lights; and recycled rubber flooring.

Another plus? The classrooms went up in three weeks.

“One of the main reasons [schools] come to us is they want it faster, sooner, they want to move in quicker,” says Tikriti, adding that ModSpace also follows high-efficiency industry standards. Once the units are assembled and welded to the foundation, he says, “It would be very difficult to distinguish between our building and a conventionally-built structure.”

COMMERCIAL SECTOR FINDS MIDDLE GROUND

The Southwest Marine’s administrative building in San Diego, greets visitors with an airy, two-story atrium. It probably wouldn’t occur to most people standing under the atrium’s vaulted glass ceiling that most of the 23,400-square-foot building was hauled to the site in boxes no more than 14 feet tall. The recently completed building is among the variety of offices, medical facilities, laboratories and university dormitories undertaken by ModSpace.

“We’ve noticed that with all the economic pressures, clients are becoming more involved in the design and construction process,” Tikriti says. “They’re becoming more savvy and requiring more from their buildings in terms of sustainability and energy performance.”

Of course, prefab has its drawbacks. Typically, floor plans are selected from a limited pallet of shapes, widths and heights, which in the U.S., are restricted to five stories. But designers who cater to their clients’ requests shrug off any suggestion that prefab buildings are somehow boxy or unimaginative.

“There’s really no limitation to what we offer in terms of materials and finishes,” Tikriti says. People can opt between standard in-stock buildings, or something based on their specifications. The company’s modular approach lends itself to shapes with edges. However, if someone has their heart set on, say, a round entrance, ModSpace would take a hybrid approach — developing the majority of the building off-site, then adding the curved features on-site at the end.

STAYING ENGAGED

To an interior designer, the fact that something was prefabricated should make little difference other than the timeline, as the interior work is often done before the building ever arrives on-site. Still, Sylvester says, “There is a chance that the role of the interior designer could be diminished.” He suggests working with architects during product development to define a menu of pre-configured interior choices that fit with the off-site fabrication process, yet offer more choices to the homebuyer.

As the process requires coordination between many entities early on, interior designers sometimes get lost in the shuffle. The earlier they get involved, the better, recommends Chris Adams, AIA, architect for Bensonwood Homes, a Walpole, N.H.-based prefab company. Once the home design is completed, he says, “We’re at a point where we’re locked in. We’re not changing the spaces and ceiling heights, so we want their input much sooner.”

According to Maryann Thompson, who teaches at the Harvard University Graduate School of Design in Cambridge, Mass., aligning with prefab construction companies is also a way of creating a brand for yourself — particularly in commercial areas such as retail that use a prefab shell and then hire a designer to do the interior after the fact.

The industry still lacks the scale to bring affordable custom prefab to the average homebuyer, says Thompson, who worries about a lack of individuality in some modular construction.

Still, in the future, she says, “What prefab could do is bring really good and interesting design to a larger group of people.” And democratizing decent architecture may just be a cause worth backing.