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A New Construction Paradigm

The construction of a new home in Santa Monica, CA, often starts with the demolition of an old preexisting dwelling. A resident in the Santa Monica area told me it usually takes 18 months from the initial demolition of the old house to completion of the new one.

Imagine spending almost a million dollars to purchase a home you intend to demolish for its land. Then for the next two years paying a mortgage on the teardown, construction costs for the new home, along with rent somewhere else until your new house is ready!

A company called LivingHomes has recently introduced a new paradigm for the building of a new home on a teardown lot. This company brings prefabricated parts of the new home to the construction site and fits them together as if they were large Lego blocks. This allows a homeowner to stay in the old dwelling while most of the new home is constructed in a factory. As the modules near completion, preparation of the construction site begins. This greatly reduces the time the homeowner must live in temporary quarters during construction. After completion of the new foundation, much of the erection of the new home can be completed in just one day. The house in the photos was for the most part erected on April 13, 2006.

Prefabricated construction and factory-built homes are not new construction technologies. However, in the past both construction techniques have been associated with cookie-cutter homes, barns, factory structures and the construction of trailer homes. With the right architect and proper planning, these old

construction technologies can be used to build an award-winning structure.

In the photos shown here and on the cover, you see a beautiful house that changed the neighborhood landscape overnight. What you don't see are the construction features that brought this home the coveted platinum rating from the U.S. Green Building Council. A nonprofit organization, the council is dedicated to transforming construction technologies to make them more environmentally



friendly. It developed the LEED benchmark rating system for new construction, under which this new Santa Monica model home received the "Greenest House on the Planet" rating (*Business Week*, September 11, 2006).

The house was designed by Ray Kappe and David Hertz, world famous architects known not only for their designs but also for their use of recycled materials. To earn the greenest house rating, a house's construction and home systems must be very environmentally friendly. The finished house contains 98 percent of the raw materials that

were purchased for the construction. This compares quite favorably with the 30 to 40 percent waste associated with a site-built home.

According to Steve Glenn, chief executive officer of LivingHomes, inside the house "the countertops are made of recycled cellulose and recycled glass or porcelain. . . . [T]he concrete that forms the floor is mixed with fly-ash." The home has radiant solar heating and a good percentage of its electricity is supplied by its own solar panels.

The roof contains a garden that not only provides esthetic beauty



Photos by Alan Pierce

but also insulates the structure to reduce the cost of heating and air-conditioning. The garden and the other greenery around the house are irrigated using recycled water from other parts of the house.

The steel frame of the structure resists insect infestation, and the garage includes an automatic venting system to prevent car fumes from entering the home. The April 13th installation of the home was captured by a web cam using time-lapse photography. You can view it at www.livinghomes.us.

Recalling the Facts

1. Describe how the construction of this house differs from the construction of a site-built custom home.
2. What features make this home environmentally friendly? ☺

Alan Pierce, Ed.D., CSIT, is a technology education consultant. Visit www.technologytoday.us for past columns and teacher resources.