

U.S. Fire Administration / National Fire Academy

Coffee Break Training

Topic: Part II: Modular Construction

Learning objective: The student shall be able to explain how modular construction components are made

“Modular construction” is a type of construction in which portions of the building are divided into modules or sections that are manufactured in a remote facility and delivered to a site for final assembly into a building. The modules are assembled into a single building using either a crane or trucks. Most often encountered as modular homes, this method of construction is being used increasingly in multifamily dwellings and commercial and institutional occupancies.

Once construction is complete, it is very difficult to tell whether a structure was built using modular construction methods. Modular homes use the same materials for framing, interior finishes, exterior finishes, and the same heating and cooling systems that are used in traditional construction. The appraised value of modular homes typically is identical to that of site-built homes.

Modular home designs are customized to comply with local building and zoning codes. For example, homes built for final assembly in a hurricane- or earthquake-prone area will have additional bracing built in to meet local building codes.

Modular components typically are constructed within a large indoor facility on assembly lines much like Henry Ford originally instituted for automobile assembly. Such facilities use an assembly-line track to move the modules from one workstation to the next. Independent third-party building inspectors are on site to supervise the construction and ensure that all building codes are adhered to during assembly.

For additional information about modular construction materials and techniques, visit

- The Manufactured Housing Institute: <http://www.manufacturedhousing.org>
- The Modular Building Systems Association: <http://www.modularhousing.com/>
- The National Modular Housing Council: <http://www.modularcouncil.org/mc/>
- The Modular Home Book by Andrew Gianino, and *Modular Mansions* by Sheri Koonen



Photo courtesy ModularToday.com.

This modular home has all the appearances of a traditional “stick-framed” dwelling.