

# Metal Home Digest

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## Looking Up

Utilizing  
cold-formed steel  
in multifamily  
construction

The Railroad House Renovation  
A Corrosion Caution for Homes





Each piece of cold-formed steel was ordered cut to length, including the 6-inch wall studs, by MarinoWARE, South Plainfield, N.J.

## Utilizing cold-formed steel in multifamily construction

**It seems as if the construction market is finally turning the corner and beginning to move forward once again.** Projects across the country are coming off the drawing boards, being financed and going into production. Like all construction materials, cold-formed steel has had its challenges during the economic downturn. However, all across the United States, projects incorporating cold-formed steel are beginning to take shape from the ground up.

During the economic downturn, the cold-formed steel framing industry was hard at work developing useful tools for every segment of the construction marketplace. These tools include Thermal Design and Code Compliance for Cold-Formed Steel Walls and an update of the Code of Standard Practice for Cold-Formed Steel Structural Framing (available as free downloads at [www.steel framing.org](http://www.steel framing.org)), as well as new Technical Notes on specialized topics. Additionally, the industry played

a vital role in ensuring that the inherent environmental attributes of steel are properly recognized in newly developed green building standards and codes. All of these initiatives were undertaken to provide construction professionals with valuable aids to choose cold-formed steel framing as a viable option for every project.

These tools will be of particular interest to construction professionals involved in multifamily construction, including everything from affordable apartment complexes and military housing to luxury condominiums. This is a market segment that lends itself very well to cold-formed steel framing due to the repetitive nature of the projects themselves and the need for safe, durable and cost-effective structures.

### **Cold-Formed Steel Plays a Key Role in Yonkers Revitalization**

Situated in the city of Yonkers, N.Y., a shining example of neighborhood revitalization

is called Croton Heights, a new multibuilding development of mixed-income housing units. The project, funded by public and private resources, is built at the site of the historic Mulford Gardens Public Housing Complex, one of the country's oldest public housing developments. Croton Heights includes Park Terrace, a 49-unit senior rental facility, and Grant Park, a \$45.5 million residential apartment community. The first section of this planned 240-unit community includes a complex of four multifamily buildings that are each four stories high. These buildings contain 100 affordable units and a community clubhouse outfitted with a community room, computer room and fitness center.

According to Lou Sulla, president and owner of Precision Carpentry of West Chester, N.Y., and the framing contractor for the project, "It takes a great team and great coordination to bring a project like this to completion." A wood framer by trade, Sulla has been work-

Photos courtesy of MarinoWARE



Precision Carpentry, Westchester, N.Y., incorporated the JoistRite floor joist system from MarinoWARE.

ing with cold-formed steel framing for more than 22 years, with a portfolio of projects ranging from affordable housing to luxury condominiums.

He says that the Grant Park project in particular was unique on several fronts. Each piece of cold-formed steel was ordered cut to length, from the 6-inch wall studs and floor joist system down to the cripple studs by South Plainfield, N.J.-based MarinoWARE. The material was supplied through Empire Wallboard of Elmsford, N.Y. Originally drawn with wood roof trusses, the project was converted to cold-formed steel trusses fabricated by Timplex of Wantage, N.J. Ron Falls, Precision Carpentry's estimator and coordinator of the construction from beginning to end, commented on the need to involve all parties so that the installation of the cold-formed steel framing would be a smooth process.

The entire project below the roof line was stick built on-site, quite a task for a

project of this size. This gave Precision Carpentry total control of workmanship and quality control and enhanced the on-site coordination, avoiding any unnecessary delays. The walls were a value-engineered system where the thickness of the steel was reduced as additional floors were added, employing the most economical thickness for the application.

To achieve the required stability for wind, the project included a complex array of shear walls and threaded rod connections with shoe anchors tying the floors together. The project incorporated the JoistRite floor joist system (steel joists engineered with large holes for mechanicals). According to Ron Falls, "We needed to make sure that the JoistRite joists were fabricated and cut to very specific lengths to allow for the efficient installation of the plumbing runs."

With construction now completed, the lucky residents of Yonkers have a new complex of beautiful energy-

efficient apartments to enjoy for years to come, and Yonkers has taken a significant step forward in the city's rebirth. The Precision Carpentry team is looking forward to the second phase of this project, which includes two additional four-story buildings. [mhd](#)

**Maribeth Rizzuto** is the director of education and sustainable construction for the Steel Framing Alliance, Washington, D.C., and managing director for the Cold-Formed Steel Engineers Institute, Washington, D.C. For more about this project, as well as information on how cold-formed steel framing can be used to increase a project's return-on-investment in other multifamily, mid-rise and hospital-ity load-bearing applications nationwide, contact Rizzuto at [msrizzuto@aol.com](mailto:msrizzuto@aol.com). Visit [www.steel framing.org](http://www.steel framing.org) for more valuable information on design standards, how-to guides and solutions for your next project using cold-formed steel framing.