

Research Update

July 15, 2004

Residential Steel Framing Builder's Guide to Fire and Acoustic Details Completed

Work is complete on a significant project by the NAHB Research Center to review current knowledge and develop a comprehensive guide for builders that includes a summary of steel rated assemblies that are commonly used in the residential market. The 95-page document is available through the Steel Framing Alliance and the U.S. Department of Housing and Urban Development, co-sponsors of the project. The fire and acoustic performance of cold-formed steel floor and wall assemblies are important considerations when designing residential and light commercial structures. The available information on fire, sound transmission class (STC), and impact insulation class (IIC) ratings of cold-formed steel assemblies is dispersed and not readily accessible to end users. This comprehensive guide provides a listing of fire and sound rated steel assemblies in the residential and light commercial markets. It relies on tested assemblies that were either gathered from listings in other publications or are the results of tested assemblies that were conducted as part of this program. The intent of this guide is to provide the end users a comprehensive document that presents all available fire and sound rated cold-formed steel wall and floor assemblies.

Project on Corrosion of Galvanized Fasteners Nears Completion

Work is nearly complete on a study of the Corrosion of Galvanized Fasteners at the University of Hawaii. This is another project co-sponsored by the Steel Framing Alliance and the U.S. Department of Housing and Urban Development. The intent of this project was to study the effects of corrosion of galvanized fasteners on cold-formed steel-framing connections. The project, initiated in September 2000, includes a research effort to study the effects of corrosion of galvanized fasteners on connection behavior, followed by a final report and development of a Practice Guide for use by industry. This research program investigated the potential for corrosion of galvanized fasteners used in cold-formed steel framing by exposing test samples to a variety of environmental conditions frequently found in Hawaii. The results of this research will aid in the evaluation of galvanized fasteners in various exposure conditions. The project had a two-year duration with various scheduled deliverables, but was extended by an additional year to allow for delays in establishment of the field monitoring sites. Preliminary recommendations, presented at the Pacific Rim Steel Framing Conference in April 2004, tended to confirm standard industry practices and concerns regarding severe coastal applications. A final report with specific recommendations should be available in the near future.

Work also continues on completing a number of research and development projects, including:

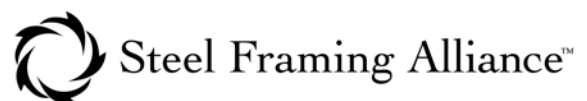
- **Fire and Acoustic (Commercial)** – To test steel floor assemblies to establish needed fire and sound ratings.
- **Load Bearing Top Track** – To provide alternatives to the in-line framing requirement by adding details and span-load tables for new load bearing top track options to the AISI Prescriptive Method standard.
- **Wall Stud End Gap Tolerance** – To experimentally study the influence of the wall stud end gap on strength and serviceability and propose an acceptable tolerance for design.
- **Gable End Walls** – To create the documentation necessary to include provisions for gable end wall framing in the AISI Prescriptive Method standard.

The Steel Framing Alliance's core value of "maintaining leadership in construction technology through innovation" is the primary driver behind these research initiatives. The ideas and involvement of builders, contractors, designers and suppliers in this process is essential to its success.

The Research Team serves the Steel Framing Alliance as a technical advisory group, facilitating the timely technical review of research and the dissemination of its findings. For more information, contact the Research Team Leader, Jay Larson, jl Larson@steel.org, 610.691.6334.

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