

Research Update

January 15, 2006

Seven Research Projects Completed

In the second half of 2005, the Research Team concentrated on bringing seven research projects to completion. Results of this important work are expected to significantly impact design standards and codes, as well as design guides, training curriculum and seminars.

- **Load Bearing Top Track** provided experimentally determined strength and stiffness values for various load bearing top track assemblies, including standard track, track and 2x wood, and deep leg track.
- **Wall Stud End Gap Tolerance** provided experimental backup to validate current language in the AISI General Provisions and provided additional guidance on wall stud end gap serviceability. In addition, an equation for determining the deflection of deflection track was developed.
- **Gable End Walls** created the documentation necessary to enable the expansion of the Standard for Cold-Formed Steel Framing – Prescriptive Method for One and Two Family Dwellings for gable end walls.
- **Clip Angle Bearing Stiffeners** developed a design methodology, based on extensive testing, for the use of clip angle bearing stiffeners in cold-formed steel floor joist assemblies and provisions suitable for COFS standards.
- **Fiberboard Sheathed Shear Walls** generated test data and provided design values for the AISI Lateral Design standard to permit use of fiberboard sheathing on steel-framed shear walls.
- **Key Seismic Parameters** compared requirements for seismic forces used in design and detailing of steel and wood light-frame shear wall buildings as a step towards the identification of differences, reasons for differences, and approaches to achieve parity where appropriate.
- **L-Header Evaluation** compiled available test data, investigated an improved methodology for the uplift capacity, investigated a methodology to estimate vertical deflection under gravity load, and summarized potential research needs for single and double L-headers.

New Research Project Initiated

The Steel Framing Alliance's core value of "maintaining leadership in construction technology through innovation" is the primary driver behind its research initiatives and was strengthened with the initiation of a new research project.

- **Detailing CFS with Residential Concrete Walls** will develop draft connection detailing provisions for standard committee consideration for AISI Standard for Cold-Formed Steel Framing – Prescriptive Method for One and Two Family Dwellings, and PCA Prescriptive Method for Concrete in Residential Construction.

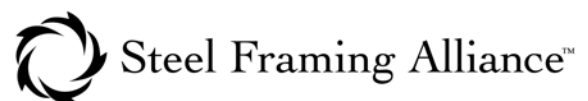
Three Research Projects Continue

- **Reinforcing Holes in Floor Joists** will determine appropriate prescriptive methods for reinforcing holes such that the floor joist member selection tables would apply to holes with diameters up to 70 percent of the web depth.
- **Hip Roof Rafter and Ridge Framing** will provide the design methodology to be used in subsequent work to develop roof rafter spans in the next edition of the Prescriptive Method, and experimentally determine the strength of and establish prescriptive requirements for built-up ridge members.
- **ILZRO ZC-26 Project on Pressure Treated Wood** is working towards establishing reliable life prediction data for galvanized steel products used with currently available pressure treated wood products.

Once completed, the reports from these projects will be available through the Steel Framing Alliance website (www.steel framing alliance.com). 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, please contact the Research Team Leader, Jay Larson, jl Larson@steel.org, 610.691.6334.

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