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DANIEL CHENEY,
MANAGER OF PRODUCT ACCEPTANCE
FOR iLEVEL® BY WEYERHAEUSER

High Wind/Seismic Regions Require Sound Structural Alternatives

Extreme weather and unstable geologic conditions have resulted in more stringent building safety code requirements that are pushing building professionals to seek stronger, more innovative solutions, particularly for handling lateral loads caused by high winds or seismic activity.

iLevel® by Weyerhaeuser, a leading manufacturer of wood products for commercial and residential structures, is addressing the concern head-on with its innovative **iLevel® Shear Brace**. The new design essentially is a prefabricated, wood-based, shear-resisting wall assembly. Ideal for wall bracing applications, this product is designed and constructed to support gravity loads and resist lateral in-plane and out-of-plane wind and seismic loads in wood framed wall construction with greater optimization than more traditional solutions. In effect, it provides the strength of a conventional four-foot structural panel in a single 12" or 18" wide member.

A seeming hazard to the innovative solution that is not weather or earthquake related is the fact that existing building codes and standards do not specifically address innovative products such as the **iLevel® Shear Brace**. Not to worry: when faced with a design question, a code official would evaluate it under the alternative materials provisions of the IBC. These state that a research report from an approved source such as ICC-ES would meet the code requirement that supporting data be provided for approving new and innovative building products.

iLevel® by Weyerhaeuser contacted ICC Evaluation Service, Inc. (ICC-ES), a subsidiary of the International Code Council® (ICC®), to obtain an independent technical evaluation of its latest product development and verify for code officials the product's structural integrity. ICC-ES speeds the introduction of innovative products and aids manufacturers such as Weyerhaeuser by producing reports proving that their products meet code requirements and warrant regulatory approval.

Cheney and his staff worked closely with ICC-ES to provide necessary information about the product, testing results and manufacturing processes.

Addressing the Code

To frame the evaluation process precisely, ICC-ES first looked to develop an appropriate Acceptance Criteria (AC) for prefabricated wood shear panels.

In developing acceptance criteria, ICC-ES seeks input from experts in the building industry through a process of open public hearings conducted by an independent committee (the ICC-ES Evaluation Committee) composed of representatives of governmental jurisdictions that actually enforce building regulations.

Daniel Cheney, Manager of Product Acceptance for **iLevel**® by Weyerhaeuser, says, "The acceptance criteria process allows new product standards to be written in a much quicker fashion so that the building industry can make use of them as quickly as possible. Most other forms of standards development can take up to 2–3 years."

The ICC-ES process of developing Acceptance Criteria with input from interested parties, and then issuing evaluation reports based on those criteria, provides consistency and fairness, transparency and independence. At the same time, the ICC-ES process also makes sure that the best interests of the building official are served.

The ICC-ES Evaluation Committee approved the current edition of AC130 Acceptance Criteria for Prefabricated Wood Shear Panels in October 2007.

Cheney adds, "When we have a new product coming out, we utilize the ICC-ES program to give our potential customers confidence that our new product meets and exceeds the highest building code standards available."

Weyerhaeuser submitted the **iLevel**® **Shear Brace** product for evaluation by ICC-ES per the AC130 criteria. After review, ICC-ES issued an Evaluation Report, ESR-2652, for the **iLevel**® **Shear Brace** product outlining design, installation and special inspection requirements.



Shear Brace Portal Frame

Industry Excitement

Today, the **iLevel**® **Shear Brace** is attracting significant attention throughout the industry. This product is designed to be used in framing areas of the home where high lateral loads must be resisted, such as narrow wall segments around garage doors, and walls with numerous window and door openings. The assembly is designed for multistory applications, allowing for the quick construction of stable, narrow walls in homes.

Particularly useful in narrow wall sections, Weyerhaeuser's new 12-inch or 18-inch wide **iLevel**® **Shear Brace** is strong enough to replace an equivalent four foot-wide, site-built wall bracing panel.

To find out more about this product, view ESR-2652: **iLevel**® **Shear Brace** online at www.ilevel.com/literature/ESR-2652.pdf, which was issued February 1, 2008. All Evaluation Reports can be accessed and downloaded free of charge at www.icc-es.org/evaluation_reports and are readily searchable based on attributes such as product type, manufacturer or report number.



Shear Brace Front View