SIPA
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SIP IRC Acceptance Frequently Asked Questions

On May 22, 2007 the International Code Council (ICC) voted to incorporate structural insulated panels into the International Residential Code (IRC). The acceptance of SIPs into Section R614 of the IRC has been a long anticipated goal of SIPA and will undoubtedly bring about significant change in the SIP industry. The questions and answers below address many of the common concerns regarding the recent code acceptance and its implications for manufacturers of structural insulated panels.

What applications are covered by the code change?
Structural insulated panel walls are included in the IRC for buildings that are no greater than 60-ft in length, 40-ft in width and two stories high. Wall panels included are 4.5-in. and 6.5-in. thick and up to 10-ft. tall. In addition, the building site must be limited to a maximum design wind speed of 130 mph Exposure A, B or C; a maximum roof snow/live load of 70 psf; and Seismic Zones A, B and C.

What are the benefits of having SIPs in the IRC?
For applications falling within the parameters of the IRC Section R614, the stamp of a licensed engineer will not be required for code approval in jurisdictions that have adopted the International Residential Code. The acceptance of SIPs into the IRC recognizes structural insulated panels as equal to other building systems in the Residential Code. The added credibility gained by the code acceptance will have an expansive impact for SIPs in the construction and code enforcement community.

Will manufacturers be able to produce code-approved SIPs without an ICC-ES evaluation report?
Manufacturers will not be required to have a registered ICC-ES evaluation report to produce SIPs for applications within the parameters of Section R614. This change has fostered concern that SIP manufacturing operations would possibly start producing poor quality products that could potentially damage the integrity of the industry. Although an evaluation report is not required, Section R614 requires that all structural insulated panels be manufactured under a quality control program approved by a third-party quality assurance agency that is accredited by the International Accreditation Service, a subsidiary of the International Code Council. Each panel must bear a certificate of inspection or stamp of the approved quality assurance agency as outlined is R614.4.1.

All SIPA members are still required to publish load charts validated by a registered P.E. in accordance with the SIPA bylaws. The load charts will state the code safety factor and test method from which the data has been compiled. SIPA member manufacturers will also have a current and continuing contract with a recognized model code-listed quality assurance agency, or international equivalent, which will validate the manufacturer's ability to consistently manufacture quality panels.

How will this affect me as a SIP manufacturer? Will my product meet the specifications in the IRC?
The product specifications included in R614 were based on a minimum standard encompassing all SIPA member manufacturers. However, for a manufacturer's product to be covered by R614, all materials used in SIP production must meet or exceed the criteria in the code.

OSB properties are listed in Table R614.3.2 of the code change. It should be noted that these properties exceed DOC PS-2 and supplementary information for qualification and ongoing quality assurance will need to be added to a manufacturer's quality control manual and/or evaluation report to meet this requirement. The supplier of such OSB will be required to submit documentation to verify that their product is qualified and meets these enhanced properties on a continuing basis.

The SIPs provisions now in the IRC also provide for minimum foam plastic densities as well as specific standards that adhesives must meet prior to use in manufacturing structural insulated panels. Verification of such minimum requirements has to be incorporated into the manufacturer's quality control manual and audited by the approved agency. Foam plastic specifications are defined in Section R614.3.1 and adhesives are defined in R614.3.3.

How should we inform code officials of the change?
The SIPA sponsored code change proposal has been adopted into the 2007 Supplement to the 2006 IRC. If a code official is unaware SIPs inclusion in the IRC, please direct the code official to Section R614 of the 2007 Supplement.