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Technical Bulletin (TB-IJ-6)

Subject: Fire Considerations for Residential Wood I-Joist Floors

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This technical bulletin is intended for use with International Beams Inc. products and offers general guidelines for topics that may not be covered in our literature. Appropriateness of details for a specific project should be evaluated by a qualified designer. This technical bulletin may be periodically updated. Check internationalbeams.com to ensure that you have the most recent version.

Typically, residential building codes do not require one-and-two family dwellings to be fire-rated¹. However, there are several recent building code developments that are intended to increase the fire resistance of houses or provide early warning to occupants.

Smoke Detectors

2009 and 2012 International Building Code (IBC), section 907.2.11
2009 and 2012 International Residential Code (IRC), section R314.2
2005 National Building Code of Canada (NBC), sections 3.2.4.20 and 3.10.19

Sprinklers

2009 and 2012 International Building Code (IBC), section 903.2.8
2009 and 2012 International Residential Code (IRC), section R313.2

Membrane Protection

2012 International Residential Code (IRC), section R501.3.
Section R302.13 in IRC 2015 edition.
Not all states have adopted 2012 IRC or IRC 2015. To check on status of state adoptions, [click here](#).

For background and history of the development of the IRC fire protection requirements, [click here](#).

For more information on membrane protections requirements, [click here](#).

These building code sections apply to other residential floor assemblies in addition to wood I-joists: including floor trusses, light-gauge steel framing, and dimensional sawn or structural composite lumber. Not all local jurisdictions have adopted the building code editions indicated above. There may also be local jurisdictions that have chosen to adopt special provisions even though the edition of the referenced building code has not yet been adopted. Consult your local building department if you have questions about which building code edition and provisions are currently being used in your area.

Firefighter Safety

For a statistical overview of firefighter safety in residential wood construction, [click here](#).

¹ Exceptions: townhouses, which may require fire-rated walls between units, and over/under construction where floors may be required to be fire-rated between floor levels for different occupants. These are not one-and-two family dwellings, but are building types that are included in the residential building codes.