



## Emergency Escape and Rescue Openings

### Required from Habitable Basements

Effective August 1<sup>st</sup>, 2013, the city adopted the *2009 International Residential Building Code*, per Ordinance No. 5312, as its new building code for one and two-family dwellings.

Residents should be aware of a significant residential building code requirement that requires a code-compliant emergency escape and rescue opening from basements with habitable space. The code defines habitable space as “a space in a building for living, sleeping, eating or cooking. Bathrooms, closets, halls and storage or utility spaces are not considered habitable spaces.” Recreation rooms, offices, exercise rooms, bedrooms, etc. are considered habitable spaces.

Since 1975, the building code has required an emergency escape and rescue opening that opens directly to the outside from every sleeping room, including sleeping rooms in basements. The 2009 IRC still has this same requirement and, in addition, requires basements with habitable space (even if this habitable space is not a sleeping room) to have at least one emergency escape and rescue opening.

Any basement finish project proposed after August 1, 2013, which includes habitable spaces, would have to show either an existing code-compliant emergency escape and rescue opening already serving the basement or include the installation of a new code-compliant emergency escape and rescue opening as part of the proposed basement finish project.

The reason the building code now requires this type of emergency escape and rescue opening from a habitable basement is because the vast majority of residential basements are served by one unprotected, interior stairway as the only way out of the basement. A fire condition in the basement or upstairs could quickly spread and block this one way out with smoke or heat and potentially trap someone in the basement. All other habitable spaces of a home (1<sup>st</sup> and 2<sup>nd</sup> floors) should already have two separate ways out. This code requirement requires a second way out of a habitable basement. Firefighters are concerned that basement stairs will weaken and collapse during firefighting and rescue operations. This emergency escape and rescue opening eliminates that concern.

## Excerpts from the 2009 International Residential Building Code

**R310.1 Emergency escape and rescue required.** Basements with habitable space and every sleeping room must have at least one operable emergency escape and rescue opening. Where basements contain one or more sleeping rooms, emergency egress and rescue openings shall be required in each sleeping room, but are not required in adjoining areas of the basement. Where emergency escape and rescue openings are provided they must have a sill height of not more than 44 inches above the floor. The net clear opening dimensions required by this section must be obtained by the normal operation of the emergency escape and rescue opening from the inside. Emergency escape and rescue openings with a finished sill height below the adjacent ground elevation must be provided with a window well in accordance with Section R310.2.

**R310.1.1 Minimum opening area.** All emergency escape and rescue openings must have a minimum net clear opening of 5.7 square feet. Exception: Grade floor openings must have a minimum net clear opening of 5 square feet.

**R310.1.2 Minimum opening height.** The minimum net clear opening height must be 24 inches.

**R310.1.3 Minimum opening width.** The minimum net clear opening width must be 20 inches.

**R310.1.4 Operational constraints.** Emergency escape and rescue openings must be operational from the inside of the room without the use of keys, tools or special knowledge.

**R310.2 Window wells.** The minimum horizontal area of the window well must be 9 square feet, with a minimum horizontal projection and width of 36 inches. The area of the window well must allow the emergency escape and rescue opening to be fully opened.

**R310.2.1 Ladder and steps.** Window wells with a vertical depth greater than 44 inches must be equipped with a permanently affixed ladder or steps usable with the window in the fully open position. Ladders or rungs must have an inside width of at least 12

inches, must project at least 3 inches from the wall and must be spaced not more than 18 inches on center vertically for the full height of the window well.

### Frequently Asked Questions

**Question** What is the average cost to install an emergency escape and rescue window?

**Answer** Depending on the adjacent ground elevations around the house, the cost could vary from approximately \$3,500 to \$6,500. The installation can usually be completed within 2-3 days.

**Question** I have an existing home that is 25 years old and has an unfinished basement. I want to put a playroom, exercise room, home theater, office or bedroom in my basement. Will I have to cut a hole in my foundation wall to provide this opening?

**Answer** Yes, unless you have an existing opening in the basement wall that already meets the 2009 IRC emergency escape and rescue opening requirements.

**Question** I have an existing home with a finished basement that does not have a bedroom. I want to enlarge my finished basement area to add a playroom, exercise room, home theater or office. Would I have to cut a hole in my foundation wall to provide this opening?

**Answer** Yes, unless you have an existing opening in the basement wall that already meets the 2009 IRC requirements for emergency escape and rescue openings.

**Question** I have an existing home with a basement sleeping room that has a code-compliant emergency escape and rescue opening already in the basement wall. I want to add a playroom, exercise room, home theater or office in the basement. Will I need to cut another hole in my foundation wall to provide another opening?

**Answer** No. The existing code-compliant emergency escape and rescue opening that serves the existing basement bedroom allows you to add additional habitable spaces to your basement without providing another emergency escape and rescue opening.

**Question** Does the required emergency escape and rescue opening need to be installed within the playroom, exercise room, home theater or office that I intend to build in my basement?

**Answer** No. As long as there is a code-compliant emergency escape and rescue opening installed in an area of a basement that can be readily accessed by the occupants it does not need to be installed within the new habitable space. However, if the new habitable space proposed for the basement were to be used as a sleeping room, the emergency escape and rescue opening would need to be installed within the proposed sleeping room.

**Question** Are there many products on the market that meet these code requirements?

**Answer** Yes. An internet search for emergency escape and rescue openings will bring up a list of companies that manufacture prefabricated units that are code-compliant.

If you have any questions regarding this matter, please contact Steve Unser, Chief Building Official, at 872-2513 or at [sunser@ci.creve-coeur.mo.us](mailto:sunser@ci.creve-coeur.mo.us).

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