

# R310.1

## Emergency Escape and Rescue Openings

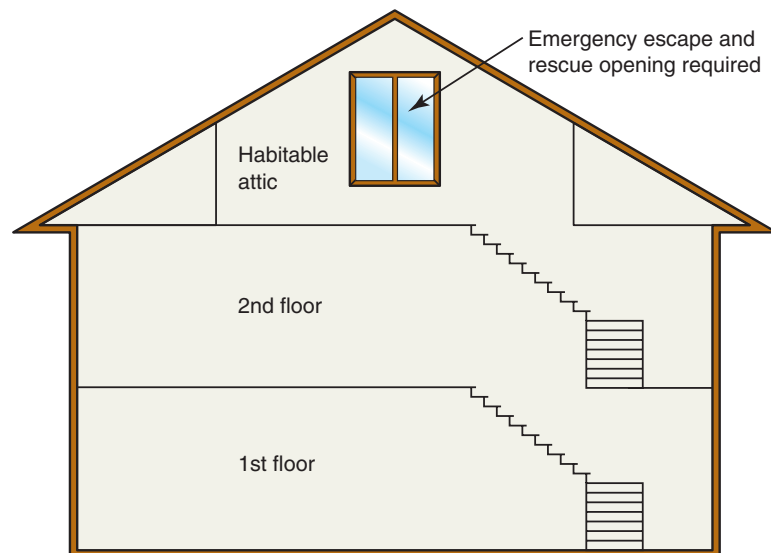
**CHANGE TYPE:** Modification

**CHANGE SUMMARY:** Habitable attics have been added to the locations requiring an emergency escape and rescue opening.

**2009 CODE: R310.1 Emergency Escape and Rescue Required.**

Basements, habitable attics and every sleeping room shall have at least one operable emergency escape and rescue opening. Such opening shall open directly into a public street, public alley, yard or court. Where basements contain one or more sleeping rooms, emergency egress and rescue openings shall be required in each sleeping room. Where emergency escape and rescue openings are provided they shall have a sill height of not more than 44 inches (1118 mm) above the floor. Where a door opening having a threshold below the adjacent ground elevation serves as an emergency escape and rescue opening and is provided with a bulkhead enclosure, the bulkhead enclosure shall comply with Section R310.3. The net clear opening dimensions required by this section shall 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 shall be provided with a window well in accordance with Section R310.2. Emergency escape and rescue openings shall open directly into a public way, or to a yard or court that opens to a public way.

**CHANGE SIGNIFICANCE:** A new defined term in the 2009 IRC, a *habitable attic* is occupiable space between the uppermost floor-ceiling assembly and the roof assembly. The major difference between a habitable attic and other above-ground habitable space is that a habitable attic is not considered a story. For other than basements, the requirement for emergency escape and rescue openings in the 2006 IRC was dependent on the use of the space as a sleeping room. With this change, all habitable attics meeting the definition, whether finished or unfinished and for any use, require an emergency escape and rescue opening.



**Emergency escape and rescue opening for habitable attic**



**CHANGE TYPE:** Addition

# R315

## Carbon Monoxide Alarms

**CHANGE SUMMARY:** The 2009 IRC requires carbon monoxide alarms in new dwellings and in existing dwellings when work requiring a permit takes place. The carbon monoxide alarms must be installed in the immediate vicinity of sleeping areas.

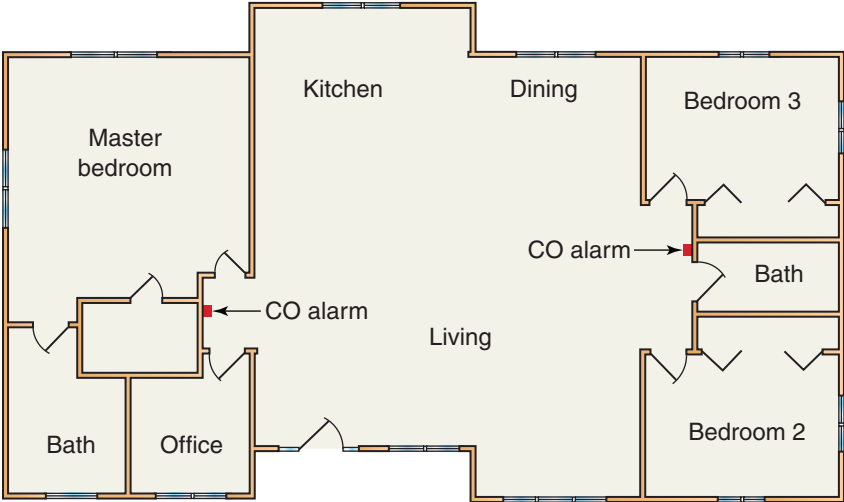
**2009 CODE:** Section R315 Carbon Monoxide Alarms

**R315.1 Carbon Monoxide Alarms.** For new construction, an approved carbon monoxide alarm shall be installed outside of each separate sleeping area in the immediate vicinity of the bedrooms in dwelling units within which fuel-fired appliances are installed and in dwelling units that have attached garages.

**R315.2 Where Required in Existing Dwellings.** Where work requiring a permit occurs in existing dwellings that have attached garages or in existing dwellings within which fuel-fired appliances exist, carbon monoxide alarms shall be provided in accordance with Section R315.1.

**R315.3 Alarm Requirements.** Single station carbon monoxide alarms shall be listed as complying with UL 2034 and shall be installed in accordance with this code and the manufacturer’s installation instructions.

**CHANGE SIGNIFICANCE:** Carbon monoxide alarms are now required in new dwelling units constructed under the 2009 IRC. Because the source of unsafe levels of carbon monoxide in the home is typically from faulty operation of a fuel-fired furnace or water heater, or from the exhaust of an automobile, this new requirement applies only to homes containing fuel-fired appliances or having an attached garage. Carbon



**Carbon monoxide (CO) alarm installed in the immediate vicinity of each sleeping area**

monoxide accumulates in the body over time relative to its concentration in the air. Accordingly, carbon monoxide detectors sound an alarm based on the concentration of carbon monoxide and the amount of time that certain levels are detected, simulating an accumulation of the toxic gas in the body. High levels of carbon monoxide will trigger an alarm within a short time, while lower levels must be present over a longer time period for the alarm to sound. This design prevents false-positive alarms. This change in the code recognizes the improved reliability of carbon monoxide alarms and the referenced standard, UL 2034, *Single and Multiple Station Carbon Monoxide Alarms*, and intends to reduce accidental deaths from carbon monoxide poisoning.

Under the new provisions, carbon monoxide alarms are also required in existing dwelling units. Similar to the smoke alarm provisions, this requirement for installation of carbon monoxide alarms is triggered by construction work on the existing dwelling where such work requires a permit. Unlike the smoke alarm requirements, there is no exception for exterior work or the addition of decks or porches. Roofing, siding, window replacement, and other exterior work requiring a permit will require the installation of carbon monoxide alarms.

Because carbon monoxide poisoning deaths often occur when the occupant is sleeping, the IRC requires carbon monoxide alarms to be located in the areas outside of and adjacent to bedrooms.