

# IRC R314 from FCAC

---

## CODE CHANGE PROPOSAL FORM

(See instructions on page 2)

### Code: IRC–12/13 Sections R314

Proponent: Charles S. Bajnai, Chesterfield County, VA, ICC Building Code Action Committee

Delete and Replace IRC Section R314 as follows:

#### SECTION R314 SMOKE ALARMS

~~**R314.1 Smoke detection and notification.** All smoke alarms shall be listed and labeled in accordance with UL 217 and installed in accordance with the provisions of this code and the household fire warning equipment provisions of NFPA 72.~~

~~**R314.2 Smoke detection systems.** Household fire alarm systems installed in accordance with NFPA 72 that include smoke alarms, or a combination of smoke detector and audible notification device installed as required by this section for smoke alarms, shall be permitted. The household fire alarm system shall provide the same level of smoke detection and alarm as required by this section for smoke alarms. Where a household fire warning system is installed using a combination of smoke detector and audible notification device(s), it shall become a permanent fixture of the occupancy and owned by the homeowner. The system shall be monitored by an approved supervising station and be maintained in accordance with NFPA 72.~~

~~**Exception:** Where smoke alarms are provided meeting the requirements of Section R314.4.~~

~~**R314.3 Location.** Smoke alarms shall be installed in the following locations:~~

- ~~1. In each sleeping room.~~
- ~~2. Outside each separate sleeping area in the immediate vicinity of the bedrooms.~~
- ~~3. On each additional story of the dwelling, including basements and habitable attics but not including crawl spaces and uninhabitable attics. In dwellings or dwelling units with split levels and without an intervening door between the adjacent levels, a smoke alarm installed on the upper level shall suffice for the adjacent lower level provided that the lower level is less than one full story below the upper level.~~

~~**R314.3.1 Alterations, repairs and additions.** When alterations, repairs or additions requiring a permit occur, or when one or more sleeping rooms are added or created in existing dwellings, the individual dwelling unit shall be equipped with smoke alarms located as required for new dwellings.~~

~~**Exceptions:**~~

- ~~1. Work involving the exterior surfaces of dwellings, such as the replacement of roofing or siding, or the addition or replacement of windows or doors, or the addition of a porch or deck, are exempt from the requirements of this section.~~
- ~~2. Installation, alteration or repairs of plumbing or mechanical systems are exempt from the requirements of this section.~~

~~**R314.4 Power source.** Smoke alarms shall receive their primary power from the building wiring when such wiring is served from a commercial source, and when primary power is interrupted, shall receive~~

# IRC R314 from FCAC

---

power from a battery. Wiring shall be permanent and without a disconnecting switch other than those required for overcurrent protection.

## **Exceptions:**

1. Smoke alarms shall be permitted to be battery operated when installed in buildings without commercial power.
2. Hard wiring of smoke alarms in existing areas shall not be required where the *alterations* or repairs do not result in the removal of interior wall or ceiling finishes exposing the structure, unless there is an *attic*, crawl space or *basement* available which could provide access for hard wiring without the removal of interior finishes.

**R314.5 Interconnection.** Where more than one smoke alarm is required to be installed within an individual dwelling unit in accordance with Section R314.3, the alarm devices shall be interconnected in such a manner that the actuation of one alarm will activate all of the alarms in the individual unit. Physical interconnection of smoke alarms shall not be required where listed wireless alarms are installed and all alarms sound upon activation of one alarm.

**Exception:** Interconnection of smoke alarms in existing areas shall not be required where alterations or repairs do not result in removal of interior wall or ceiling finishes exposing the structure, unless there is an attic, crawl space or basement available which could provide access for interconnection without the removal of interior finishes.

**R314.1 General.** Smoke alarms shall comply with Sections R314.

**R314.1.1 Listings.** Smoke alarms shall be listed in accordance with UL 2034. Combination smoke/carbon monoxide alarms shall be listed in accordance with UL 217 and UL 2034.

## **R314.2 Where required**

**R314.2.1 New construction.** Smoke alarms shall be provided in dwelling units.

**R314.2.2 Alterations, repairs and additions.** When alterations, repairs or additions requiring a permit occur, or when one or more sleeping rooms are added or created in existing dwellings, the individual dwelling unit shall be equipped with smoke alarms located as required for new dwellings.

### Exceptions:

1. Work involving the exterior surfaces of dwellings, such as the replacement of roofing or siding, or the addition or replacement of windows or doors, or the addition of a porch or deck, are exempt from the requirements of this section.
2. Installation, alteration or repairs of plumbing or mechanical systems are exempt from the requirements of this section.

**R314.3 Location.** Smoke alarms shall be installed in the following locations:

1. In each sleeping room.
2. Outside each separate sleeping area in the immediate vicinity of the bedrooms.
3. On each additional story of the dwelling, including basements and habitable attics but not including crawl spaces and uninhabitable attics. In dwellings or dwelling units with split levels and without an intervening door between the adjacent levels, a smoke alarm installed on the upper level shall suffice for the adjacent lower level provided that the lower level is less than one full story below the upper level.

**R314.4 Interconnection.** Where more than one smoke alarm is required to be installed within an individual dwelling unit in accordance with Section R314.3, the alarm devices shall be interconnected in such a manner that the actuation of one alarm will activate all of the alarms in the individual unit. Physical

# IRC R314 from FCAC

---

interconnection of smoke alarms shall not be required where listed wireless alarms are installed and all alarms sound upon activation of one alarm.

**Exception:** Interconnection of smoke alarms in existing areas shall not be required where alterations or repairs do not result in removal of interior wall or ceiling finishes exposing the structure, unless there is an attic, crawl space or basement available which could provide access for interconnection without the removal of interior finishes.

**R314.5 Combination alarms.** Combination smoke/carbon monoxide alarms shall be permitted to be used in lieu of smoke alarms.

**R314.6 Power source.** Smoke alarms shall receive their primary power from the building wiring when such wiring is served from a commercial source, and when primary power is interrupted, shall receive power from a battery. Wiring shall be permanent and without a disconnecting switch other than those required for overcurrent protection.

Exceptions:

1. Smoke alarms shall be permitted to be battery operated when installed in buildings without commercial power.

2. Smoke alarms installed in accordance with Section R314.2.2 shall be permitted to be battery powered.

**R314.7 Fire alarm systems.** Fire alarm systems shall be permitted to be used in lieu of smoke alarms and shall comply with Sections R314.7.1 through R315.7.4.

**R314.7.1 General.** Fire alarm systems shall comply with the provisions of this code and the household fire warning *equipment* provisions of NFPA 72. Smoke detectors shall be listed in accordance with UL 268.

**R314.7.2 Location.** Smoke detectors shall be installed in the locations specified in Section R314.3.

**R314.7.3 Permanent fixture.** Where a household Fire alarm system is installed, it shall become a permanent fixture of the occupancy, owned by the homeowner and shall be monitored by an approved supervising station.

**R314.7.4 Combination detectors.** Combination smoke/carbon monoxide detectors shall be permitted to be installed in fire alarm systems in lieu of smoke detectors, provided they are listed in accordance with UL 268 and UL 2075.

**Reason:** This proposal is submitted by the ICC Building Code Action Committee (BCAC) and the ICC Fire Code Action Committee (FCAC). These ICC committees were established by the ICC Board of Directors to pursue opportunities to improve and enhance an assigned International Codes or portion thereof. This includes both the technical aspects of the codes as well as the code content in terms of scope and application of referenced standards. Since its inception in July, 2011, these committees have held 6 open meetings and numerous workgroup meetings which included members of the committees as well as any interested party to discuss and debate the proposed changes. Related documentation and reports are posted on the CAC website at: <http://www.iccsafe.org/cs/CAC/Pages/default.aspx>.

This proposal reformats the Section R314 smoke alarm requirements in a more logical order. It is not the intent of this proposal to increase or lessen the overall smoke alarm requirements. The format for this section is similar to one used on a companion proposal to the Section R315 carbon monoxide alarm requirements. Comments on the origin of specific requirements in this proposal are as follows:

1. R314.1 is a new simplified charging paragraph for the section. The UL 217 Listing requirement was moved to R314.1.1. The reference to NFPA 72 was moved to R314.7.1.
2. R314.1.1 includes new requirements for combination smoke/carbon monoxide alarms, if they are provided, to be listed in accordance with UL 217 and UL 2034.
3. R314.2 includes requirements for new construction and alterations and repairs. The section includes editorial revisions, but no substantive changes to existing requirements. R314.2.1 requirements are identical to existing R314.3.1 requirements.
4. The R314.3 location requirements are unchanged.
5. R314.4 requirements for interconnection are identical to the existing requirements in R314.5.

## IRC R314 from FCAC

---

6. R314.5 allows listed combination smoke/carbon monoxide alarms to be used in lieu of smoke alarms. A companion change to allow these units to be used in lieu of carbon monoxide alarms is also being proposed for Section R315. If both of these proposals are accepted, a single combination unit can be installed outside of each separate sleeping area in the immediate vicinity of the bedrooms and comply with R314 and R315 requirements.
7. R314.6 includes power supply requirements that are equivalent to the current power supply requirements in R314.4. There should be no changes for the applications under which permanently connected or battery operated smoke alarms are required.
8. R314.7 includes revised requirements for smoke detection systems. Sections R314.7.1 through R314.7.3 include requirements that are equivalent to existing R314.2 requirements.
9. R314.7.4 includes new requirements that allow the option to use combination smoke/carbon monoxide detectors.

**Cost Impact:** These revisions have the potential to reduce the cost of construction.