

2018 N.C. CODE REQUIREMENTS FOR RESIDENTIAL SMOKE ALARM and CARBON MONOXIDE ALARMS FOR ALTERATIONS, REPAIRS AND ADDITIONS

SMOKE DETECTORS:

Section 314 of the 2018 NC Residential Building Code reflects new requirements for smoke detectors which will potentially affect portions of the existing house whenever additions, alterations or repairs to a single family house or duplex take place. **Please read the following carefully in order to be aware of how this will affect this particular permit.**

For alterations, repairs, and additions, section 314.2.2 Where alterations, repairs and additions requiring a building permit occur, or where 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, 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.

Location: Section 314.3 requires smoke detectors in the following locations in single family and duplex homes:

- 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 (finished) but not including crawl spaces, uninhabitable (unfinished) attic- stories. 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 is less than one full story below the upper level.
- 4) **Smoke alarms shall be installed not less than 3 feet horizontally from the door or opening of a bathroom that contains a bathtub or shower unless this would prevent placement of a smoke alarm required by Section R314.3**

R314.3.1 Installation near cooking appliances. Smoke alarms shall not be installed in the following location unless this would prevent placement of a smoke alarm in a location required by Section R314.3.

- 1) **Ionization smoke alarms shall not be installed less than 20 feet horizontally from a permanently installed cooking appliance.**
- 2) **Ionization smoke alarms with an alarm-silencing switch shall not be installed less than 10 horizontally from a permanently installed cooking appliance.**
- 3) **Photoelectric smoke alarms shall not be installed less than 6 feet horizontally from a permanently installed cooking appliance.**

R314.4 Interconnection. Where more than one smoke alarm is required to be installed within an individual dwelling unit, 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 dwelling 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 the removal of interior wall or ceiling finishes exposing the structure.

R314.5 Combination smoke and 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 where such wiring is served from a commercial source and, where primary power is interrupted, shall receive power from a battery. Wiring shall be permanent and without a disconnecting switch other than those required for over current protection.

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 R314.7.4

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.

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

CARBON MONOXIDE ALARMS

315.2.2 Where alterations, repairs and additions requiring a building permit occur, or where one or more sleeping rooms are added or created in existing dwelling, or where fuel fired appliances or fireplaces are added or replaced, the individual dwelling unit shall be equipped with carbon monoxide alarms located **as required for new dwellings**.

R315.3 Location. Carbon monoxide alarms in dwelling units shall be installed outside of each separate sleeping area in the immediate vicinity of the bedrooms. **Where a fuel-burning appliance is located within a bedroom or its attached bathroom, a carbon monoxide alarm shall be installed within the bedroom.**

R315.4 Combination carbon monoxide and smoke detectors may be used in lieu of carbon monoxide alarms.

R315.5 Power source. Carbon monoxide alarms shall receive their primary power from the building wiring where such wiring is served from a commercial source and, where primary power is interrupted, shall receive power from a battery. Wiring shall be permanent and without a disconnecting switch other than those required for over current protection.

R314.6 Carbon monoxide detection systems shall be permitted to be used in lieu of carbon monoxide alarms and shall comply with sections R315.6.1 through R315.6.4

I HAVE READ AND UNDERSTAND THAT SMOKE DETECTORS AND CARBON MONOXIDE ALARMS WILL BE REQUIRED TO BE INSTALLED IN CONJUNCTION WITH THIS RESIDENTIAL PROJECT AS SPECIFIED ABOVE.

NAME (PRINTED): _____

SIGNATURE: _____

DATE: _____

ADDRESS FOR THE WORK SITE: _____

*Red font has been used to separate sections and to highlight changes in the code or other information of import.