

Excerpts from the North Carolina State Residential Code Regarding Smoke Alarms and Carbon Monoxide Detectors

SECTION R314 SMOKE ALARMS

R314.1 Smoke detection and notification. All smoke alarms shall be listed 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 NFPA72.

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 (finished) but not including crawl spaces, uninhabitable (unfinished) attics and 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 level is less than one full *story* below the upper level. When 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 unit.

R314.3.1 Alterations, repairs and additions. When *alterations*, repairs or *additions* requiring a building *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*; the smoke alarms shall be interconnected and hardwired.

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

Exceptions:

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

2. Interconnection and 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. Smoke alarm locations are required per Section R314.2, but may be battery powered and shall be designed to emit a recurring signal when batteries are low and need to be replaced.

SECTION R315 CARBON MONOXIDE ALARMS

R315.1 Carbon monoxide alarms. In new construction, dwelling units shall be provided with an approved carbon monoxide alarm installed outside of each separate sleeping area in the immediate vicinity of the bedroom(s) as directed by the alarm manufacturer.

R315.2 Where required in existing dwellings. In existing dwellings, where interior alterations, repairs, fuel-fired appliance replacements, or additions requiring a permit occurs, or where one or more sleeping rooms are added or created, carbon monoxide alarms shall be provided in accordance with Section 315.1.

R315.3 Alarm requirements. The required carbon monoxide alarms shall be audible in all bedrooms over background noise levels with all intervening doors closed. 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.