

SECTION R313 SMOKE ALARMS, CARBON MONOXIDE ALARMS AND AUTOMATIC SPRINKLER SYSTEMS

R313.1 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.

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 in the event the fire alarm panel is removed or the system is not connected to a central station.

R313.1.1 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 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.

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.

Exception: Interconnection is not required where smoke alarms are permitted to be battery operated in accordance with Section R313.1.2. R313.1.2 Power source. In new construction, the required smoke alarms shall receive their primary power from the building wiring when such wiring is served from a commercial source or an on-site electrical power system, 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 permitted to be battery operated when installed in buildings without commercial power or an on-site electrical power system or in buildings that undergo repair, alteration, change of occupancy, addition or relocation in accordance with Appendix J. R313.2 Smoke alarms and carbon monoxide alarms in existing dwellings. Existing dwellings undergoing repair, alteration, change of occupancy, addition or relocation shall be provided with smoke alarms and carbon monoxide alarms as required by Appendix J.

R313.3 Combination smoke and carbon monoxide alarms. Combination smoke and carbon monoxide alarms are permitted, provided the alarm is listed for such use. Combination smoke and carbon monoxide alarms shall have distinctly different alarm signals for smoke or carbon monoxide alarm activation.

R313.4 Carbon monoxide alarms. This section covers the application, installation and performance of carbon monoxide alarms and carbon monoxide detectors, and their components, in one- and two-family dwellings and multiple single-family dwellings (townhouses).

R313.4.1 General. Carbon monoxide alarms (or, where permitted, carbon monoxide detectors) shall be installed, operated and maintained in accordance with the provisions of this section, or in accordance with the provisions of NFPA 720.

Exception: Carbon monoxide alarms and/or carbon monoxide detectors shall not be required in a building or structure that contains no carbon monoxide source.R313.4.2

Required locations. Carbon monoxide alarms shall be provided in the following locations:1. Within each dwelling unit on each story containing a sleeping area, within 15 feet of the sleeping area. More than one carbon monoxide alarm shall be provided where necessary to assure that no sleeping area on a story is more than 15 feet away from a carbon monoxide alarm.2. On any story of a dwelling unit that contains a carbon monoxide source.

Exceptions:1. Where coverage at a location is required by more than one provision of this section, providing one carbon monoxide alarm at such location shall be deemed to satisfy all such provisions.2. In lieu of a carbon monoxide alarm, a carbon monoxide detector may be provided at any location where coverage is required, provided that such carbon monoxide detector is part of a system that causes an alarm to sound at such location when carbon monoxide is detected at such location.R313.4.3 Power source. Carbon monoxide alarms, carbon monoxide detectors, and the alarm control units to which carbon monoxide detectors are connected shall receive their primary power from the building wiring, and shall be equipped with a battery backup system that automatically provides power from one or more batteries when primary power is interrupted. Wiring shall be permanent and without a disconnecting switch other than those required for over current protection.

Exceptions:1. Carbon monoxide alarms and carbon monoxide detectors installed in a building or structure without an electrical power source shall be battery operated.2. In buildings that undergo repair, alteration, change of occupancy, addition or relocation in accordance with Appendix J, carbon monoxide alarms and carbon monoxide detectors may be battery operated, cord-type or direct plug.R313.4.4 Equipment. Carbon monoxide alarms shall be listed and labeled as complying with UL 2034 or CSA 6.19. Carbon monoxide detectors shall be listed and labeled as complying with UL 2075 and shall meet the sensitivity testing and alarm thresholds of UL 2034 or CSA 6.19. Carbon monoxide alarms, carbon monoxide detectors and alarm control units shall be installed in accordance with this section and the manufacturer's installation instructions.R313.4.4.1 Maintenance and testing. Carbon monoxide alarms, carbon monoxide detectors, and alarm control units shall be maintained in an operative condition at all times. Carbon monoxide alarms, carbon monoxide detectors, and alarm control units shall be periodically tested in accordance with the manufacturer's instructions. The battery or batteries used as the primary or backup power source shall be replaced when low or when

otherwise required by the manufacturer's instructions. Carbon monoxide alarms, carbon monoxide detectors, and alarm control units shall be replaced or repaired where defective, and shall be replaced when they cease to operate as intended.R313.4.4.2
Disabling of alarms. No carbon monoxide alarm, carbon monoxide detector, or alarm control unit shall be removed or disabled, except for service, repair or replacement purposes.R313.4.5 Interconnection of carbon monoxide alarms and detectors. When more than one carbon monoxide alarm or carbon monoxide detector is required to be installed within an individual dwelling unit or sleeping area, all carbon monoxide alarms and all carbon monoxide detectors in such dwelling unit, sleeping unit or sleeping area shall be interconnected.

Exception: Interconnection is not required where battery operated, cord-type or direct plug carbon monoxide alarms and carbon monoxide detectors are permitted.R313.5
Automatic sprinkler systems. Buildings having a height of three stories above grade shall be equipped throughout with an automatic sprinkler system installed in accordance with NFPA 13D.

SECTION J403 FIRE AND LIFE-SAFETY PROTECTION

J403.1 General. Repairs shall be done in a manner that maintains the level of fire protection provided.

J403.2 Smoke alarms. When repairs requiring a permit occur, the individual dwelling unit shall be provided with smoke alarms located as required for new dwellings; the smoke alarms shall be interconnected and hard wired.

Exceptions:

1. Repairs to the exterior surfaces of dwellings are exempt from the requirements of this section. 2. Except for bed and breakfast dwellings, smoke alarms in existing areas shall not be required to be interconnected and hard wired where interior wall or ceiling finishes are not removed to expose the structure. J403.2.1 Power source. Smoke alarms shall be permitted to be battery operated when installed in buildings without commercial power or an on-site electrical power system, or in buildings where existing interior wall or ceiling finishes are not removed to expose the structure. J403.2.2 Interconnection. Smoke alarms shall not be required to be interconnected where battery operated alarms are permitted. J403.3 Carbon monoxide alarms. When repairs to a carbon monoxide source occur, the individual dwelling unit shall be provided with carbon monoxide alarms as required for new dwellings.

Exception: In other than bed and breakfast dwellings, carbon monoxide alarms and carbon monoxide detectors may be battery operated, cord-type or direct plug when installed in buildings without an electrical power source, or in buildings where existing interior wall or ceiling finishes are not removed to expose the structure.