

SMOKE AND CARBON MONOXIDE ALARMS

Building permit information for one- or two-family dwellings and townhomes.

Existing Dwellings

(R314.3.1 & R315.3)

- Smoke alarms must be installed per code in any individual dwelling unit when a permit is issued for alterations, repairs (including installation or replacement of windows or doors), additions, or when one or more sleeping rooms are added or created.
 - **Exceptions:**
 - Work involving the exterior of dwellings such as the replacement of roofing or siding, or the addition of an open porch or deck, or chimney repairs.
 - Installation, alteration, or repairs of plumbing, electrical, or mechanical systems.
- Carbon monoxide alarms must be installed per code in any individual dwelling unit when a permit is issued, and the dwelling unit has an attached garage or a fuel-fired appliance.

Locations

(R314.3 & R315.1)

- Smoke alarms shall be installed in the following locations:
 - In each sleeping room.
 - Outside each separate sleeping area in the immediate vicinity of the bedrooms.
 - On each additional story of the dwelling, including basements and habitable attics but not including crawlspaces 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.
- Carbon Monoxide Alarms shall be installed in the following locations:
 - Outside and not more than 10 feet from each separate sleeping area or bedroom.

Power Source

(R314.3.1)

- Smoke alarms shall receive their primary power from the building wiring (hardwired) and when primary power is interrupted shall receive power from a battery (battery back-up). Wiring shall be permanent and without disconnecting switch other than those required for overcurrent protection.
 - **Exceptions:**
 - Buildings with no commercial power shall be allowed to be battery operated.
 - Hardwiring of smoke alarms is **NOT** required in existing areas where the project does not result in the removal of interior wall or ceiling finishes exposing the structure, **UNLESS** there is an attic, crawlspace, or basement available which could provide access for hard wiring without the removal of interior finishes.

Interconnection

(R314.5)

- Smoke alarms shall be interconnected in such a manner that the activation of one alarm will activate all of the alarms in the individual unit where more than one smoke alarm is required to be installed.
 - Where listed wireless alarms are installed and all alarms sound upon activation physical connection is not required.
 - **Exception:**
 - Interconnection of smoke alarms is **NOT** required in existing areas where the project does not result in the removal of interior wall or ceiling finishes exposing the structure, **UNLESS** there is an attic, crawlspace, or basement available which could provide access for interconnection without the removal of interior finishes.

Installation

- All installation of smoke alarms and carbon monoxide alarms, including but not limited to the placement of the alarm on a wall or ceiling, shall be done according to the alarm manufacturer's installation instructions.

Detection Systems

(R314.2 & R315.2)

- Household fire alarm systems that include smoke alarms, or a combination of smoke detector and audible notification devices are permitted.
 - Household fire alarm system must be installed in accordance with NFPA 72.
 - The household fire alarm system must provide the same level of smoke detection as required by code.
 - The household fire warning system 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.
- Carbon monoxide detection systems that include carbon monoxide detectors and audible notification appliances are permitted.
 - Carbon monoxide detection system must be installed and maintained in accordance with NFPA 720.
 - The carbon monoxide detectors must be listed as complying with UL 2075.
 - The household fire warning system shall become a permanent fixture of the occupancy and owned by the homeowner.
 - The system shall be monitored by an approved supervising station.

The information in this handout is just an overview. See the 2015 Minnesota Residential Code for complete information.