



City of Long Beach
Department of Development Services
Building and Safety Bureau

**Smoke and Carbon Monoxide Alarms
in R-3 Occupancies**

Information
Bulletin

BU-028

Eff: 01-01-2011
Rev: 04-04-2017

The 2016 California Residential Code (CRC) provides provisions for when the installation of smoke and carbon monoxide (CO) alarms in R-3 occupancies (one- and two-family dwelling; townhouse not more than three stories above grade plane in height) are required to ensure that hazards such as fire, smoke, and CO do not go undetected and to reduce the risk and impact that these hazards have on occupants.

SMOKE ALARMS:

CRC §R314 requires that when (1) a new dwelling unit is added; (2) alterations, repairs or additions occur and a permit is required; or (3) when one or more sleeping rooms are added or created in existing Group R-3 occupancies, the installation of smoke alarms shall be required. All smoke alarms shall be approved and listed by the State Fire Marshal.

Location

- 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 crawl spaces and uninhabitable attics.
- Not less than 3 feet horizontally from the door or opening of a bathroom that contains a bathtub or shower

Power sources

Smoke alarms shall receive their primary power from the building wiring and shall be equipped with a battery backup. Smoke alarms are permitted to be solely battery operated in existing buildings where no construction is taking place or in existing areas of buildings undergoing alterations or repairs without removing interior walls or ceiling finishes exposing the structure if there is no access by means of attic, basement or crawl space.

Interconnection

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.

Exceptions:

- In dwelling units where there is no commercial power supply, the smoke alarm may be solely battery operated.
- In existing dwelling units, a smoke alarm is permitted to be solely battery operated where repairs or alterations do not result in the removal of wall and ceiling finishes if there is no access by means of attic, basement or crawl space.
- In existing dwelling units, a smoke alarm is permitted to be solely battery operated or plug-in with battery back-up where repairs or alterations are limited to the exterior surfaces of dwellings, such

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as the replacement of roofing or siding, or the addition or replacement of windows or doors, or the addition of a porch or deck.

- In existing dwelling units, a CO alarm is permitted to be solely battery operated or plug-in with battery back-up where work is limited to installation, alteration or repair of plumbing or mechanical systems.

CARBON MONOXIDE (CO) ALARMS:

CRC §R315 and Health and Safety Code §17926 require that when (1) new construction of or (2) alteration, repairs or additions to dwellings and sleeping units that have attached garages or fuel-burning appliances, the installation of CO alarms shall be required. All CO alarms shall be approved and listed by the State Fire Marshal.

Location

- Outside each separate dwelling unit sleeping area in the immediate vicinity of the bedroom(s).
- On every level of a dwelling unit including basements.

Power supply

For new construction, required CO alarms shall receive their primary power from the building wiring where such wiring is served from a commercial source (i.e., utility company, etc.) and shall be equipped with a battery back-up. Alarm wiring shall be connected to the permanent building wiring without a disconnecting switch other than as required for overcurrent protection.

Exceptions:

- In dwelling units where there is no commercial power supply, the CO alarm may be solely battery operated.
- In existing dwelling units, a CO alarm is permitted to be solely battery operated where repairs or alterations do not result in the removal of wall and ceiling finishes if there is no access by means of attic, basement or crawl space.
- In existing dwelling units, a CO alarm is permitted to be solely battery operated or plug-in with battery back-up where repairs or alterations are limited to 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.
- In existing dwelling units, a CO alarm is permitted to be solely battery operated or plug-in with battery back-up where work is limited to installation, alteration or repair of plumbing, ~~or~~ mechanical or electrical systems, which do not result in the removal of interior wall or ceiling systems exposing the structure in areas/spaces where carbon monoxide alarms are required..

Interconnection

Where more than one CO alarm is required to be installed within the dwelling unit or sleeping unit, the alarm shall be interconnected in a manner that the actuation of one alarm will activate all of the alarms in the individual unit.

Combined CO alarms and smoke alarms shall comply with CRC §R315, all applicable standards, and be listed and approved by the State Fire Marshal.

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Exceptions:

- Where listed wireless alarms are installed and all alarms sound upon activation of one alarm.
- Interconnection is not required in existing dwelling units where repairs do not result in the removal of wall and ceiling finishes, there is no access by means of attic, basement or crawl space, and no previous method for interconnection existed.
- In existing dwelling units, CO alarms are not required to be interconnected where no construction is taking place.
- In existing dwelling units, CO alarms are not required to be interconnected where repairs or alterations are limited to 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.
- In existing dwelling units, CO alarms not required to be interconnected when work is limited to the installation, alteration or repair of plumbing, mechanical, or electrical systems.