

# Residential Smoke & Carbon Monoxide Detectors

## Code Summary

### Building Inspection Requirements

This document provides summary of the general requirements for the installation of smoke alarms and carbon monoxide (CO) detectors for residential buildings based on the 2019 California Building Code, 2019 California Residential Code, and the 2019 California Fire Code. Under each heading you will find the correlating code language and the reference cited.

### New Construction & Additions

In new construction and additions, required smoke alarms and CO detectors shall receive their primary power from the permanent building electrical power system (and shall be on the lighting circuit connected within the same room as the smoke alarm). Where two or more smoke alarms or CO detectors are required they shall be interconnected in such a manner that actuation of one shall cause actuation of all detectors in the dwelling unit (CBC 907.2.11, CRC R314, CRC R315).

All new electrical outlets (including smoke alarms, CO detectors, receptacles, switches, lighting, etc.) shall be on circuits protected with a combination arc-fault circuit interrupter (2019 CEC 210.12).

### Remodeled Dwelling Units

When a permit is required for any repair, alterations, or addition smoke alarms and CO detectors shall be installed in accordance with the following location and maintenance provisions. In existing dwelling units, smoke alarms and CO detectors may be solely battery operated in the following circumstances (CBC 907.2.11, CRC R314, CRC R315):

- No construction is taking place.
- There is no commercial power source.
- Interior wall or ceiling finishes are not removed.
- Scope of work is limited to the exterior of the residence.

### Rooms/Spaces that Require Smoke Alarms & Carbon Monoxide Detectors

Room/Space	Smoke Alarm Required? (CBC 907.2, CRC 314)	CO Detector Required? (CBC 907.2, CRC 315)
Outside of each separate sleeping area in the immediate vicinity of bedrooms (i.e. hallway)	✓ Yes	✓ Yes
In each sleeping room	✓ Yes	⊘ No
In each story within a dwelling unit, including basements	✓ Yes	✓ Yes
In enclosed common stairwells of apartment complexes and other multiple-dwelling complexes	✓ Yes	⊘ No
In a group R-3.1 (i.e. adult residential facilities), in addition to the above, smoke alarms shall be provided throughout the habitable areas of the dwelling unit except kitchens	✓ Yes	⊘ No



# Residential Smoke & Carbon Monoxide Detectors

## Code Summary (Continued)

### **Smoke Alarm & CO Detector Installation (CBC 907.2.11, CRC 314.3, CRC 315.1)**

Smoke alarms shall be installed per manufacturer's installation instructions in all sleeping rooms, each area/hallway adjacent to sleeping rooms, each story of the building, and in any basement. All battery powered smoke alarms shall have a 10-year battery. Smoke alarms shall be installed on the ceiling or wall between 4" and 12" of the ceiling.

CO detectors shall be installed per manufacturer's installation instructions in each area/hallway adjacent to sleeping rooms, each bedroom containing (or opening to a bathroom containing) a fuel burning appliance, each story of the building, and any basement. CO detectors are not required if there is no fuel-burning appliance or fire place, and the garage is detached from the house. CO detectors shall be installed on the ceiling or wall above the door header.

### **Maintenance**

The owner shall be responsible for testing and maintaining detectors in hotels, motels, lodging houses, and common stairwells of apartment complexes and other multiple dwelling complexes. The smoke alarm shall be operable at the time that the tenant takes possession. The apartment complex tenant shall be responsible for notifying the manager or owner if the tenant becomes aware of an inoperable smoke alarm within his or her unit. The owner or authorized agent shall correct any reported deficiencies in the smoke alarm and shall not be in violation of this section for a deficient smoke alarm when he or she has not received notice of the deficiency (CFC 907.9 and California Health and Safety Code 13113.7).

### **Smoke Alarm Batteries and Replacement**

All newly installed smoke alarms shall have a 10-year battery. Smoke alarms shall be replaced 10 years from the date of manufacture marked on the unit (CBC 907.2.11.2, CRC 314, CRC 315).

