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**Building Division**  
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## RESIDENTIAL SMOKE AND CARBON MONOXIDE ALARMS

Following is a listing of the general requirements for the installation of smoke alarms and carbon monoxide alarms for residential buildings based on the 2010 California Building Code, 2010 California Residential Code and the 2010 California Fire Code. For additional information contact the Building Division (510) 675-5313.

### **Smoke Alarm and Carbon Monoxide Alarm Installation in New Construction and Additions:**

In new construction and additions required smoke alarms and carbon monoxide alarms shall receive their primary power from the permanent building electrical power system (and shall be in the lighting circuit connected within the same room as the smoke alarm). In dwellings where there are two or more smoke alarms or carbon monoxide alarms 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 electrical outlets (including smoke alarms, carbon monoxide alarms, receptacles, switches, lighting, etc.) shall be on circuits protected with a combination arc-fault circuit interrupter. (2010 CEC 210.12)

### **Smoke Alarm and Carbon Monoxide Alarm Installation in Remodeled Dwelling Units:**

Where a permit is required for alterations, repair or additions exceeding *one thousand dollars (\$1,000.00)*, existing dwelling units that have attached garages or fuel-burning appliances shall be provided with a Smoke Alarm and Carbon Monoxide Alarm in accordance with the following locations. In existing dwelling units, smoke alarms and carbon monoxide alarms may be battery operated.

### **Smoke Alarms and Carbon Monoxide Alarms shall be installed in the following locations:**

LOCATION	SMOKE ALARM REQUIRED? (CBC 907.2 and CRC 314)	CARBON MONOXIDE ALARM REQUIRED? (CBC 907.2 and CRC 315)
In the adjoining hallway(s) of the bedrooms	<b>Yes</b>	<b>Yes</b>
In each sleeping room	<b>Yes</b>	<b>No</b>
On every level of a dwelling unit including basement	<b>Yes</b>	<b>Yes</b>

Homeowners should remember not to install carbon monoxide detectors directly above or beside fuel-burning appliances, as appliances may emit a small amount of carbon monoxide upon start-up. A detector should not be placed within fifteen feet of heating or cooking appliances or in or near very humid areas such as bathrooms.

Installation locations vary by manufacturer. Manufacturers' recommendations differ to a certain degree based on research conducted with each one's specific detector. Therefore, make sure to read the provided installation manual for each detector before installing.

CO detectors do not serve as smoke detectors and vice versa. However, dual smoke/CO detectors are also sold. Smoke detectors detect the smoke generated by flaming or smoldering fires, whereas CO detectors can alarm people about faulty fuel burning devices to prevent carbon monoxide poisoning. Carbon monoxide is produced from incomplete combustion of fossil fuels. In the home CO can be formed, for example, by open flames, space heaters, water heaters, blocked chimneys or running a car inside a garage.