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The building code has been written and expounded upon many times over in an effort, to ensure these devices are installed in all sleeping areas as well as adjoining areas/hallways.

Plainly spoken, the state and local municipalities have made efforts to ensure that homes that didn't originally have smoke detectors, end up with them in all currently required installation locations. It would be difficult to make a case for most any home/dwelling to not have a smoke detector, and now a Carbon Monoxide detector.

Smoke Detector Information – Cited from Code References

Smoke Detectors in Existing Single Family Dwellings Taken from the 2007 California Building Code

Additions, alterations, or repairs to group R-3 occupancies. (Section 907.2.10.5.2) When the valuation of an addition, alteration, or repair to group R-3 occupancy exceeds \$1,000 and a permit is required, or when one or more sleeping rooms are added or created in existing group R occupancies, smoke detectors shall be installed in accordance with the following: Location within dwelling units. (Section 907.2.10.1.2) In dwelling units, a detector shall be installed in each sleeping room and at a point centrally located in the corridor or area giving access to each separate sleeping area.

When the dwelling unit has more than one story and in dwellings with basements, a detector shall be installed on each story and in the basement. In dwelling units where a story or basement is split into two or more levels, the smoke detector shall be installed on the upper level, except that when the lower level contains a sleeping area, a detector shall be installed on each level. When sleeping rooms are on an upper level, the detector shall be placed at the ceiling of the upper level in close proximity to the stairway. In dwelling units where the ceiling height of a room open to the hallway serving the bedrooms exceeds that of the hallway by 24 inches or more, smoke detectors shall be installed in the hallway and in the adjacent room. Detectors shall sound an alarm audible in all sleeping areas of the dwelling unit in which they are located. LOCATIONS:

A. Centrally located in the hallway (if no hallway, the area adjacent to the bedroom door) giving access to the bedrooms.

B. In any room that opens into the hallway that has a ceiling level, at any location, 24 inches higher than the lowest ceiling level of the hallway.

- C. On the ceiling in close proximity to the stairway.
- D. On the lower level ceiling in close proximity to the stairway.
- E. In the sleeping rooms

One story house
Second floor with bedrooms of a two story house A, B, C, E
Second floor without bedroom of a two story house C
First floor with bedrooms of a two story house
First floor without bedrooms of a two story house D
Basement with no bedrooms
NOTE: Hallway (corridor) - A passagoway giving access to rooms, usually onclosed

NOTE: Hallway (corridor) - A passageway giving access to rooms, usually enclosed by walls between 3 feet and 5 feet in width.

AUDIBILITY: All detectors must be audible in the bedrooms. Connecting the detectors in series is not required.

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NOTE: If any area of a bedroom is more than 30 feet from a detector, an additional detector shall be installed in the bedroom.

POWER SOURCE: Smoke detectors may be solely battery operated when installed in the existing building.

All smoke detectors are to be installed in accordance with the approved manufacturer's instructions. The above information is not intended to violate any manufacture's specifications or instructions, but is to be used for interpretation of the Building Code.

Taken from CA Health and Safety Code 13113.8

a) On and after January 1, 1986, every single-family dwelling and factory-built housing, as defined in Section 19971, which is sold shall have an operable smoke detector. The detector shall be approved and listed by the State Fire Marshal and installed in accordance with the State Fire Marshal's regulations. Unless prohibited by local rules, regulations, or ordinances, a battery-operated smoke detector shall be deemed to satisfy the requirements of this section.

(b) On and after January 1, 1986, the transferor of any real property containing a single-family dwelling, as described in subdivision (a), whether the transfer is made by sale, exchange, or real property sales contract, as defined in Section 2985 of the Civil Code, shall deliver to the transferee a written statement indicating that the transferor is in compliance with this section. The disclosure statement shall be either included in the receipt for deposit in a real estate transaction, an addendum attached thereto, or a separate document.

**The actual reference is longer and you should obtain if needed

City of Lancaster, CA's references for CO and Smoke Detecting Devices

Carbon Monoxide Poisoning Prevention Act / SB183

On May 7, 2010, Senate Bill (SB) 183 was enacted into law and is known as the Carbon Monoxide Poisoning Prevention Act (Act). This will require the placement of carbon monoxide devices in all dwelling units; and requires that the presence or absence of these devices must be disclosed when residential real estate is transferred.

This Bill is a result of Senate hearings that dealt with the dangers of carbon monoxide poisoning. According to the American Medical Association, carbon monoxide poisoning is the leading cause of accidental poisoning deaths in the United States. The California Air Resources Board has determined that thirty to forty "avoidable deaths", on average, occur in California each year due to unintentional carbon monoxide poisoning; and "avoidable" emergency room visits and hospitalizations in the State range up into the high one hundreds per year.

This bill applies to existing housing. It covers every "dwelling unit intended for human occupancy"

which means single-family dwelling, factory-built homes, duplex, lodging house, condominiums, motels,

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hotels, dormitories, stock cooperatives, time-share projects and dwelling units in "multiple-unit dwelling unit buildings" (apartment houses). It applies to every dwelling unit that has "a fossil fuel burning heater or appliance, fireplace, or an attached garage". "Fossil fuel" means coal, kerosene, oil, wood, fuel gases, and other petroleum or hydrocarbon products, which emit carbon monoxide as a byproduct of combustion."

This Act requires dwelling units to have installed a "carbon monoxide device" that is designed to detect carbon monoxide and produce a "distinct, audible alarm"; and requires the State Fire Marshal to certify and approve carbon monoxide devices and their instructions. This Act prohibits the marketing, distribution, or sale of devices unless they and their instructions have been approved and listed by the State Fire Marshal.

The devices must be installed, consistent with new construction standards or according to the approved instructions, in all **existing single-family dwelling units no later than July 1, 2011**. All other dwelling

units (such as apartments) must have proper carbon monoxide detectors installed no later than January 1, 2013.

As noted, there are disclosure requirements with respect to carbon monoxide detectors. Currently, sellers of residential properties in California must provide the buyer with a state-mandated form known as the Real Estate Transfer Disclosure Statement (TDS). The TDS requires the seller to answer a variety of inquiries as to features of the property. SB 183 amends the TDS so that, effective January 1, 2011, the seller will have to say whether or not the property contains one or more carbon monoxide detectors. It is important to note that, even if the answer is "no", that will not invalidate the sale or transfer of the property. A footnote explains that the lack of such a device may fail to meet current safety standards. Nonetheless, a transfer of the property may still take place.

Carbon Monoxide Product Approval and Listing

Carbon Monoxide (CO) alarms and detectors are required to be listed by the Office of the State Fire Marshal (OSFM) – Fire Engineering Division prior to marketing and sale in California. To view the listing database on line please go to our website:

http://osfm.fire.ca.gov/licensinglistings/licenselisting_bml_searchcotest.php

Under "Category", click on the sort by "Number" button, then go to the drop down menu (right down arrow) to select "5276-CARBON MONOXIDE ALARMS" or "5278-CARBON MONOXIDE DETECTORS". Then Click on "*Search*" and it will list all CO alarms or detectors that are currently approved and listed by the OSFM.

Carbon Monoxide Awareness

In an effort to increase awareness as to the potential dangers of CO, the OSFM would like to emphasize the following:

- CO is the leading cause of accidental poisoning deaths in the United States.
- CO is produced by furnaces, common household appliances, unvented kerosene and gas space heaters, automobile exhaust, generators, fireplaces, and other systems that are powered by the burning of fuel that includes, but is not limited to, natural gas, propane, gasoline, oil, and wood.
- CO is a colorless, odorless, and tasteless poison gas that can be fatal when inhaled, and it is known as "the silent killer" because it cannot be seen, smelled, or tasted.

• Public education and awareness about CO poisoning are critical to protecting residents of California from the dangers of this deadly gas and the risk factors in the home.

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• CO alarms and detectors have been determined to be the most effective way to detect carbon monoxide.

Building Codes

The following pages contain the requirements of the latest editions of the California Residential Code for the installation of carbon monoxide and smoke alarms. Please note that combination alarms which detect both carbon monoxide and smoke are available as both wired and battery operated units.

SECTION R314 SMOKE ALARMS

R314.1 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. Systems and components shall be California State Fire Marshal listed and approved in accordance with California Code of Regulations, Title 19, Division 1 for the purpose for which they are installed.

R314.2 Smoke detection systems. 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. Where a household fire warning system is installed using a combination of smoke detector and audible notification device(s), it 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.

Exception: Where smoke alarms are provided meeting the requirements of Section R314.4.

R314.3 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 and habitable attics 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.

R314.3.1 Alterations, repairs and additions. When alterations, repairs or additions requiring a permit occur, or when one or more sleeping rooms are added or created in existing dwellings, the individual dwelling unit shall be equipped with smoke alarms located as required for new dwellings.

Exceptions: See Section R314.6.

R314.4 Power source. Smoke alarms shall receive their primary power from the building wiring provided

that such wiring is served from a commercial source and shall be equipped with a battery backup. Smoke alarms with integral strobes that are not equipped with battery backup shall be connected to an

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emergency electrical system. Smoke alarms shall emit a signal when the batteries are low. Wiring shall be permanent and without a disconnecting switch other than as required for overcurrent protection. **Exceptions:**

1. Smoke alarms are permitted to be solely battery operated in existing buildings where no construction is taking place.

2. Smoke alarms are permitted to be solely battery operated in buildings that are not served from a commercial power source.

3. Smoke alarms are permitted to be solely battery operated in existing areas of buildings undergoing alterations or repairs that do not result in the removal of interior walls or ceiling finishes exposing the structure, unless there is an attic, crawl space or basement available which could provide access for building wiring without the removal of interior finishes.

R314.5 Interconnection. Where more than one smoke alarm is required to be installed within an individual dwelling or sleeping unit, the 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. The alarm shall be clearly audible in all bedrooms over background noise levels with all intervening doors closed.

Exceptions:

1. Interconnection is not required in buildings that are not undergoing alterations, repairs or construction of any kind.

2. Smoke alarms in existing areas are not required to be interconnected where alterations or repairs do not result in the removal of interior wall or ceiling finishes exposing the structure, unless there is an attic, crawl space or basement available which could provide access for interconnection without the removal of interior finishes.

R314.6 Existing Group R-3 occupancies.

R314.6.1 Existing buildings housing Group R-3 occupancies established prior to the effective date of these regulations may have their use continued if they conform or are made to conform to provisions of these regulations to the extent that reasonable and adequate life safety against the hazards of fire, panic and explosion is substantially provided. Additional means of egress, the installation of automatic sprinkler systems, automatic fire alarm system or other life safety measures may be required to provide reasonable and adequate safety.

Note: It is the intent of this section that every existing occupancy need not mandatorily conform with the requirements for new construction. Reasonable judgment in the application of requirements must be exercised by the enforcing agency.

SECTION R315 CARBON MONOXIDE ALARMS

R315.1 Carbon monoxide alarms. For new construction, an approved carbon monoxide alarm shall be

installed in dwelling units and in sleeping units within which fuel-burning appliances are installed and in dwelling units that have attached garages. Carbon monoxide alarms shall be listed as complying with UL 2034 and be installed and maintained in accordance with NFPA 720 and the manufacturer's instructions.

R315.1.1 Carbon monoxide detection systems. Carbon monoxide detection systems, that include carbon monoxide detectors and audible notification appliances, installed and maintained in accordance with this section for carbon monoxide alarms and NFPA 720 shall be permitted. The carbon monoxide detectors shall be listed as complying with UL 2075.

R315.1.2 Power supply. For new construction required carbon monoxide alarms shall receive

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their primary power from the building wiring where such wiring is served from a commercial source and shall be equipped with a battery back-up. Alarm wiring shall be directly connected to the permanent building wiring without a disconnecting switch other than as required for overcurrent protection.

Exceptions:

1. In dwelling units where there is no commercial power supply the carbon monoxide alarm may be solely battery operated.

2. In existing dwelling units a carbon monoxide alarm is permitted to be solely battery operated where repairs or alterations do not result in the removal of wall and ceiling finishes or there is no access by means of attic, basement or crawl space.

3. In existing dwelling units, a carbon monoxide 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.

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

R315.1.3 Interconnection. Where more than one carbon monoxide alarm is required to be installed within the dwelling unit or within a sleeping unit the alarm shall be interconnected in a manner that activation of one alarm shall activate all of the alarms in the individual unit. **Exceptions:**

1. 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.

2. In existing dwelling units, carbon monoxide alarms are not required to be interconnected where no construction is taking place.

3. In existing dwelling units, carbon monoxide 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.

4. In existing dwelling units, carbon monoxide alarms are not required to be interconnected when work is limited to the installation, alteration or repair of plumbing or mechanical systems.

R315.2 When required in existing dwellings. Prior to July 1, 2011, when a permit is required for alterations, repairs or additions with a total cost or calculated valuation exceeding one thousand dollars (\$1,000), existing dwellings or sleeping units that have attached garages or fuel-burning appliances shall be provided with a carbon monoxide alarm in accordance with Section R315.1. Carbon monoxide alarms shall only be required in the specific dwelling unit or sleeping unit for which the permit was obtained.

R315.2.1 Carbon monoxide alarms on or after July 1, 2011. All existing detached single-family dwelling units intended for human occupancy, shall have a carbon monoxide alarm, approved and listed by the State Fire Marshal installed on or before July 1, 2011. See Health and Safety Code Sections 17926, 17926.1 and 17926.2. Carbon monoxide alarms are permitted to be solely battery operated or plug-in with battery back-up in existing buildings where no construction is

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taking place. When a permit is required for alterations, repairs or additions, existing dwellings or sleeping units that have attached garages or fuel-burning appliances shall be provided with a carbon monoxide alarm in accordance with Section 315.1.

R315.2.2 Carbon monoxide alarms on or after January 1, 2013. All other existing dwelling units

intended for human occupancy as defined in Health and Safety Code Section 13262 (b) shall have a carbon monoxide alarm approved by the State Fire Marshal installed on or before January 1, 2013. See Health and Safety Code Sections 17926, 17926.1 and 17926.2. Carbon monoxide alarms are permitted to be solely battery operated or plug-in with battery back-up in existing buildings where no construction is taking place. When a permit is required for alterations, repairs or additions, existing dwelling units that have attached garages or fuelburning appliances shall be provided with a carbon monoxide alarm in accordance with Section 315.1.

R315.3 Alarm requirements. No person shall install, market, distribute, offer for sale, or sell any carbon

monoxide device in the State of California unless the device and instructions have been approved and listed by the State Fire Marshal.

Carbon monoxide alarms required by Sections R315.1 and R315.2 shall be installed in the following locations:

1. Outside of each separate dwelling unit sleeping area in the immediate vicinity of the bedroom(s).

2. On every level of a dwelling unit including basements.

NOTE: Authority Cited: Health and Safety Code Sections 17000 through 17062.5, 17910 through 17995.5, 18200 through 18700, 18860 through 18874 and 19960 through 19997; and Government Code Sections 12955.1 and 12955.1.1.