

1 **BY AUTHORITY**

2 ORDINANCE NO.  
3 SERIES OF 2009

COUNCIL BILL NO. 630  
COMMITTEE OF REFERENCE:  
4 SAFETY

5 **A BILL**

6 **For an ordinance, amending the Building and Fire Code of the City and County**  
7 **of Denver**

8  
9 **WHEREAS**, The City Council of the City and County of Denver has found that in order to ensure the  
10 public safety, health and welfare of the Citizens of the City and County, it is essential to protect them  
11 from the dangers of carbon monoxide poisoning in residential structures by requiring installation of  
12 carbon monoxide detectors in dwellings and dwelling units as expeditiously as is reasonably  
13 possible.

14 **NOW, THEREFORE, BE IT ENACTED BY THE COUNCIL OF THE CITY AND COUNTY OF**  
15 **DENVER:**

16 **Section 1.** That Section 105.6.148, of the Denver Amendments to the 2006 edition of the  
17 International Fire Code as adopted as a part of the Denver Building and Fire Code is hereby enacted  
18 and added to read and be read as follows:

19 **Section 105.6.148 Carbon monoxide alarms.** A permit is required for the installation, relocation  
20 or removal of carbon monoxide alarms required under provisions of section 908.7. Such permit is  
21 required only when a building permit is required for other work done as specified in Section 908.7.1.

22 **Section 2.** That Section 106.2.11, of the Denver Amendments to the 2006 edition of the  
23 International Fire Code as adopted as a part of the Denver Building and Fire Code is hereby  
24 amended to read and be read as follows:

25 **106.2.11 Townhouses and condominiums.** Portable fire extinguishers shall be mounted on the  
26 exterior at each level stairway(s) or one extinguisher (rated at least 2A 10BC) within each residential  
27 unit. When mounted on the exterior, the property management/homeowner's association (HOA)  
28 shall be responsible for the care, maintenance and recharging, and use of the fire extinguisher,  
29 including inspection. The homeowner shall submit a report to the property management/HOA on an  
30 annual basis. Portable fire extinguishers shall be inspected and maintained in accordance with  
31 NFPA 10. The smoke and carbon monoxide alarm(s) within the residential units shall be tested and  
32 maintained in accordance with NFPA 72 and NFPA 720. The homeowner shall submit a report to  
33 the property management/HOA on an annual basis of each test and battery replacement. The  
34 property management/HOA shall maintain a log of the inspection/test reports submitted to that office  
35 and Denver Fire Department Inspection personnel will review that log prior to conducting the

1 inspection. If this information is not available, an inspection shall be made to determine that this  
2 equipment is in compliance with this code.

3 **Section 3.** That Section 908.7, of the Denver Amendments to the 2006 edition of the  
4 International Fire Code as adopted as a part of the Denver Building and Fire Code is hereby enacted  
5 and added to read and be read as follows:

6 **Section 908.7 Carbon Monoxide detection and alarm systems.** Installation and maintenance of  
7 carbon monoxide (CO) detectors and alarms in existing and proposed residential (R) occupancies  
8 regulated by the International Building Code (IBC), and in those structures regulated by the  
9 International Residential Code (IRC), shall comply with this section and the applicable provisions of  
10 2009 NFPA 720. Wherever CO alarms are specified, combination smoke and CO alarms are  
11 permitted.

12 908.7.1 When required. CO alarms shall be installed in dwelling units in single- and multi-family  
13 buildings with a fuel-burning appliance or attached garage, or both, and to which any one or more  
14 of the following apply:

- 15 1 The building is permitted for construction after July 1, 2009;
- 16 2 An addition containing a sleeping room is being added to the dwelling unit;
- 17 3 The dwelling unit is undergoing an interior remodel for which a permit is required;
- 18 4 The dwelling unit is undergoing the installation of a fuel-burning appliance for which a  
19 building permit is required; or
- 20 5 The dwelling unit is going through a change in ownership or tenant occupancy.

21 908.7.2 Definitions. The following words, terms and phrases when used in this article, shall  
22 have the meanings ascribed to them in this section, except where the context clearly indicates a  
23 different meaning:

24 BATTERY BACKUP. The alarm device has a battery that powers the device when the power  
25 provided through the building electrical system fails.

26 BATTERY-POWERED. CO alarm, powered solely by a primary battery, where the battery shall  
27 provide power for all power requirements for a period of one year, battery is monitored for end-of-  
28 life by producing an audible trouble signal and performs in accordance with the equipment listing.

29 CENTRAL FUEL-BURNING APPLIANCE ROOM. A room containing a fuel burning appliance  
30 serving multiple dwelling units, such as a boiler, fire place stove, furnace, or similar equipment,  
31 with the potential to distribute CO to multiple dwelling units.

32 CARBON MONOXIDE (CO). A colorless odorless gas that is produced as a result of incomplete  
33 burning of carbon-containing fuels.

34 CARBON MONOXIDE ALARM. A single- or multiple-station alarm responsive to CO, listed as

1 complying with UL 2034.

2 CARBON MONOXIDE DETECTION CONTROL UNIT. A component of the CO detection system,  
3 provided with primary and secondary power sources, which receives signals from initiating  
4 devices or other CO detection control units, and processes these signals to determine part or all  
5 of the required CO detection system output function(s).

6 CARBON MONOXIDE DETECTOR. A device connected to an alarm control unit having a  
7 sensor that responds to CO.

8 COMBINATION SMOKE AND CARBON MONOXIDE ALARM. A single- or multiple- station  
9 alarm responsive to both smoke and CO where both sensing elements are contained within a  
10 common unit as provided in the equipment listing.

11 FUEL-BURNING APPLIANCE. A device that burns solid, liquid, or gaseous fuel, or a  
12 combination thereof.

13 HARD-WIRED. CO alarm installed by wiring directly to the building electrical system, with  
14 battery backup, and not controlled by any disconnecting switch other than as required for over-  
15 current protection.

16 INSTALLED. Fit into position and made ready, as set forth in the manufacturer's guidelines,  
17 listing requirements and applicable standards, to perform the intended functions of detection,  
18 notification, and annunciation.

19 MULTIPLE STATION CARBON MONOXIDE ALARM. A single-station CO alarm capable of  
20 being interconnected to one or more additional alarms so that the actuation of one causes the  
21 appropriate alarm signal to operate in all interconnected alarms.

22 OWNER. The owner of the dwelling, dwelling unit and/or rental unit, a mortgage or vendee in  
23 possession, an assignee of rents, receiver, executor, trustee, or any other person, business, sole  
24 proprietorship, partnership, association, or corporation directly or indirectly in control of a  
25 building, structure or real property or their authorized agent.

26 PLUG-IN. CO alarm installed by plugging into an electrical outlet for its primary power; with  
27 battery backup.

28 SINGLE-FAMILY DWELLING. Any improved real property used or intended to be used as a  
29 residence and that contains one dwelling unit.

30 SINGLE STATION CARBON MONOXIDE ALARM. A detector comprising an assembly that  
31 incorporates a sensor, control components, and an alarm notification appliance in one unit  
32 operated from a power source either located in the unit or obtained at the point of installation.

33 SLEEPING ROOM. A room furnished with a bed and primarily used for sleeping purposes.

34 908.7.3 Installation. When required by 908.7.1, CO alarm and detection devices shall be

1 installed in accordance with 908.7.3.1 through 908.7.3.4.

2 908.7.3.1 CO alarms. CO alarms shall be installed in dwelling units in a central location on  
3 every level, including basements, and exterior to and within 15 ft of every sleeping room door.

4 Exception: CO alarms are not required in attics and crawl spaces of dwelling units.  
5 Every sleeping room that contains a fuel-burning appliance shall also be provided a CO alarm  
6 centrally located within the room. A single device is permitted to serve multiple criteria on a  
7 single level, provided it meets all of the location requirements.

8 908.7.3.1.1 Existing buildings. CO alarms may be hard-wired, battery-powered, or plug-  
9 in, and may be single or multiple station.

10 908.7.3.1.2 New buildings. CO alarms shall be multiple-station and hard-wired.

11 908.7.3.2 CO detectors. When required by 908.7.1, item 1, in buildings containing a dwelling  
12 unit, a CO detector monitored by the building fire alarm system shall be installed in central  
13 fuel-burning appliance rooms. Each CO detector shall be installed within 25 feet of the  
14 appliance, be annunciated on its own zone, and when activated, shall initiate an alarm  
15 condition.

16 Exception: One and two family dwellings and townhouses.

17 908.7.3.2.1 Additional CO detectors. CO detectors installed in addition to those required  
18 by section 908.7.1 shall be monitored and shall function as required CO detectors, subject  
19 to approval by the fire code official.

20 Exception: CO detection devices installed solely for the operation of exhaust fans  
21 in parking garages.

22 908.7.3.3 Visual Notification. Visual notification shall be provided for CO alarms in new  
23 dwelling units accessible to persons with disabilities.

24 Exception: Dwelling units where visual notification for smoke alarms is not required.

25 908.7.3.4 Permit required. All CO alarms and detectors shall be maintained in proper  
26 working order. No such device shall be installed, relocated or removed without a permit  
27 issued in accordance with, and as required by, 2008 IFCA Section 105.6.148.

28 Exception:

- 29 1. In single family and duplex dwellings, permits shall only be required for  
30 new construction.

31 908.7.3.5 License required. Denver Fire Department license shall be required per Section  
32 112.2.7 Fire alarm systems, for the design, installation, modification, inspection, and testing  
33 of all CO alarms and detectors.

34 Exceptions:

- 1                   1.     Plug-in and battery-powered CO alarms replaced in existing buildings in  
2                                   accordance with sections 908.7.3.1.1.  
3                   2.     Existing hard-wired single- or multiple-station smoke alarms replaced  
4                                   with combination smoke and carbon monoxide alarms in single family  
5                                   and duplex dwellings.

6       **Section 4.** That Section R325, of the Denver Amendments to the 2006 edition of the  
7 International Residential Code as adopted as a part of the Denver Building and Fire Code is hereby  
8 enacted and added to read and be read as follows:

9       **Section R325 Carbon monoxide alarms.** Carbon monoxide alarms shall be installed per section  
10 908.7 of the International Fire Code (as amended).

11 COMMITTEE APPROVAL DATE: 10/21/2009.

12 MAYOR-COUNCIL DATE: 10/27/2009.

13 PASSED BY THE COUNCIL \_\_\_\_\_ 2009

14 \_\_\_\_\_ - PRESIDENT

15 APPROVED: \_\_\_\_\_ - MAYOR \_\_\_\_\_ 2009

16 ATTEST: \_\_\_\_\_ - CLERK AND RECORDER,  
17 EX-OFFICIO CLERK OF THE  
18 CITY AND COUNTY OF DENVER  
19

20 NOTICE PUBLISHED IN THE DAILY JOURNAL \_\_\_\_\_ 2009; \_\_\_\_\_ 2009

21  
22 PREPARED BY: Kerry A. Buckey \_\_\_\_\_ 6/19/2009  
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24 Pursuant to section 13-12, D.R.M.C., this proposed ordinance has been reviewed by the office of the  
25 City Attorney. We find no irregularity as to form, and have no legal objection to the proposed  
26 ordinance. The proposed ordinance is not submitted to the City Council for approval pursuant to §  
27 3.2.6 of the Charter.  
28

29 David R. Fine, City Attorney

30 BY: \_\_\_\_\_, \_\_\_\_\_ City Attorney Date: \_\_\_\_\_