



PROPOSED RULE MAKING

CR-102 (June 2004)

(Implements RCW 34.05.320)

Do **NOT** use for expedited rule making

Agency: State Building Code Council

☐ Preproposal Statement of Inquiry was filed as WSR _____; or	☒ Original Notice
☐ Expedited Rule Making--Proposed notice was filed as WSR _____; or	☐ Supplemental Notice to WSR _____
☒ Proposal is exempt under RCW 34.05.310(4).	☐ Continuance of WSR _____

Title of rule and other identifying information: (Describe Subject) Amend WAC 51-50, WAC 51-51, WAC 51-54 to modify rules regarding the requirements for installation of carbon monoxide alarms in residential settings.

Hearing location(s):
Spokane City Council Chambers
W 808 Spokane Falls Blvd.
Spokane, WA

Date: September 9, 2010
Time: 10:00 a.m.

Shoreline City Hall
17500 Midvale Avenue N.
Council Chambers
Shoreline, WA

Date: October 14, 2011
Time: 10:00 a.m.

Submit written comments to:
Name: Kristyn Clayton, Council Chair
Address: PO Box 41011, Olympia, WA 98504-1011

e-mail SBCC@ga.wa.gov
fax (360) 360-586-0493 by (date) September 6, 2011

Assistance for persons with disabilities: Contact
Peggy Bryden by August 25, 2011
TTY (360) 753-7427 or (360) 902-7293

Date of intended adoption: November 18, 2010
(Note: This is **NOT** the **effective** date)

Purpose of the proposal and its anticipated effects, including any changes in existing rules: The purpose of these rules is to replace existing requirements for the installation of carbon monoxide alarms in residential settings. The rule will provide for a later implementation date, and will exempt certain categories of residences.

WAC 51-50-0908
WAC 51-51-0315
WAC 51-54-0900 (Section 908)
WAC 51-54-4600 (Section 4603)

Reasons supporting proposal: SBCC assembled a technical advisory group of experts and interested parties to discuss the permanent rules adopted in November 2009 and propose changes. The proposed rules allow for later implementation and some exemptions, in accordance with statute.

Statutory authority for adoption: 19.27.074

Statute being implemented: 19.27

Is rule necessary because of a:

Federal Law?	☐ Yes	☒ No
Federal Court Decision?	☐ Yes	☒ No
State Court Decision?	☐ Yes	☒ No

If yes, CITATION:

DATE
August 2, 2011

NAME (type or print)
Kristyn Clayton

SIGNATURE

TITLE
State Building Code Council Chair

CODE REVISER USE ONLY

OFFICE OF THE CODE REVISER
STATE OF WASHINGTON
FILED

DATE: August 01, 2011

TIME: 4:28 PM

WSR 11-16-081

Agency comments or recommendations, if any, as to statutory language, implementation, enforcement, and fiscal matters:

Proposed rules will resolve conflict over stakeholder concerns with potential economic impact.

Name of proponent: (person or organization) State Building Code Council

☐ Private
☐ Public
☒ Governmental

Name of agency personnel responsible for:

Name	Office Location	Phone
Drafting..... Joanne McCaughan	PO Box 41011, Olympia, Wa 98504-1011	(360) 902-7295
Implementation....Joanne McCaughan	PO Box 41011, Olympia, Wa 98504-1011	(360) 902-7295
Enforcement..... Local jurisdictions	Statewide city and county building officials	()

Has a small business economic impact statement been prepared under chapter 19.85 RCW?

☒ Yes. Attach copy of small business economic impact statement.

A copy of the statement may be obtained by contacting:

Name: Joanne McCaughan

Address: PO Box 41011, Olympia, WA 98504-1011

phone (360) 902-7295

fax (360) 586-0493

e-mail joanne.mccaughan@ga.wa.gov

☐ No. Explain why no statement was prepared.

Is a cost-benefit analysis required under RCW 34.05.328?

☐ Yes A preliminary cost-benefit analysis may be obtained by contacting:

Name:

Address:

phone ()

fax ()

e-mail

☒ No: Please explain: The State Building Code Council is not listed in this section as one of the agencies required to comply with this statute.

Small Business Economic Impact Statement for Carbon Monoxide Alarms in Residential Settings

**Prepared by
State Building Code Council
Department of General Administration**

June 17, 2011

Executive Summary

Impact on small business

Permanent rulemaking for CO alarms will result in some cost outlay for small businesses in the lodging and rental housing industries. These costs will be incurred for the purchase of CO alarms and batteries, and in some cases for installation services. In rental housing, tenants are required to maintain the alarms including battery replacement. There could also be installation costs under certain limited circumstances, for example during new construction or remodeling projects, depending on the needs and desires of a particular business.

The enacting legislation and proposed rules are silent on cost recovery, however, it is assumed that rental property owners and lodging establishments could and would charge fees.

Other small businesses would see an increase in revenue; these include hardware stores and home centers that sell alarms and batteries. The overall impact would be positive; the degree of impact would depend on the number of alarms and batteries sold.

The rules are anticipated to be job neutral, although there would be some temporary work for installation jobs for certain trades people such as maintenance personnel or electricians; these would primarily be for short term contracts for installation or maintenance of CO alarms, and would likely be part of larger remodeling or new construction projects. Businesses that install smoke, fire and burglar alarms might experience increased business revenue if they offer installation services for CO alarms. There is not expected to be a disproportionate impact on smaller versus larger businesses.

Section I: Introduction/Compliance with the Rules

Who is required to comply with the Rules?

The proposed rules regarding installation of Carbon Monoxide alarms in residential settings will modify the Building Code, Fire Code and Residential Code, as follows:

- Building Code (WAC 51-50) and Fire Code (WAC 51-54):
 - ❖ Residential occupancies building owners are required to install CO alarms in all new residential construction, regardless of fuel source.
 - ❖ Exceptions are allowed for sleeping or dwelling units in transient residential occupancies (R-1), and permanent residential (R-2) college dorms, hotels, and DSHS

- licensed boarding homes and residential treatment facilities which do not contain fuel sources or an attached garage but are located in a building that contains such sources.
- ❖ Existing Group R-2 occupancies building owners would be required to install CO alarms when a permit is pulled for alterations, repairs or additions, or when one or more sleeping rooms are added or created.
 - ❖ Exceptions are allowed in certain situations related to adjacency to rooms that contain fuel-fired systems, duct work and ventilation shafts; or if a building contains a common area CO alarm system.
 - ❖ For existing buildings, certain work is excluded for existing buildings, e.g., replacement of roofing, siding, windows, doors, additions of porches or decks, or electrical permits; installation/repair of non-combustion plumbing or mechanical systems are also exempt.
- Residential Code (WAC 51-51):
 - ❖ CO alarms are required in all new residential construction.
 - ❖ Alarms would be required in Existing dwellings when a permit is pulled for alterations, repairs or additions, or when one or more sleeping rooms are added or created.
 - ❖ Certain work is excluded, e.g., replacement of roofing, siding, windows, doors, additions of porches or decks, or electrical permits; installation/repair of non-combustion plumbing or mechanical systems are also exempt.
 - ❖ These provisions apply regardless of fuel source.

Required implementation dates are as set in the enacting legislation, i.e., January 1, 2011 for new construction and no later than January 1, 2013 for existing dwellings.

To comply with these rules, property owners will need to:

- ❖ assess how many alarms are needed for each dwelling unit they are renting or leasing to tenants.
- ❖ determine whether installation should be done by the landlord, the tenant, existing maintenance personnel, or if they will contract with a third party for this task.
- ❖ analyze whether any of their units meet the exceptions allowed for in the rules.
- ❖ purchase or order and pay for alarms, keep records, and manage inventory.
- ❖ budget for the purchase, and potentially the installation, of the alarms.
- ❖ educate tenants, e.g., about necessary maintenance of the alarm and batteries.

When are Professional Services Required to Comply with the Rule?

If and when residential property owners obtain a permit for remodeling, they will be required to install CO alarms. During such a remodel, laborers, carpenters, plumbers, electricians and other professional building trades would be on-site to complete the renovations required by the project plan documents. In the event that the property owner decides to install hard-wired alarms or an alarm system throughout the residence, an electrician would do the actual installation of the

alarms or alarm system. The cost of construction is indeterminate because it is driven by the alarm system chosen, the specific project design, and local market construction industry costs. Estimates for the total cost, including burdened wage rate with benefits, and time and materials range from \$150 to \$250 per alarm, according to the Independent Electrical Contractors Association and the National Electrical Contractors Association; estimates do not include taxes or profit margins.

What Installation Methods are used?

Most CO Alarms are designed and manufactured to be user-friendly and intended to be installed by a homeowner or resident. Some CO alarm installations can be accomplished with basic home repair tools such as a drill, a screwdriver, and a hammer; others would require specialized electrical wiring tools and would be installed by a skilled electrician.

- Battery alarms are available that require no installation at all; these can be placed on a table or desk and will operate once the batteries are inserted. Other battery alarms are meant to be attached to a wall/ceiling bracket that comes with the unit. The bracket is screwed to the wall or ceiling with two screws, like a smoke alarm. The alarm is mounted to the bracket by a twisting motion.
- Plug-in with battery back-up alarms require no installation. Once the batteries are inserted, the alarm is fully functional when plugged into a wall outlet.
- Hard-wire with battery back-up models include a battery, a mounting bracket, and a wiring harness. They connect to the house wiring with a three pin connector in the back of the alarm. They are connected with the house wiring using wire nuts. Once the wiring installation is complete, the alarm is mounted to the bracket, as above.

Section II: Compliance Costs for Washington Businesses

Assumptions:

In rental housing, where alarms are required, most if not all landlords and property owners will incur initial costs for the purchase and installation of the alarms; it is assumed that these costs would be passed on to tenants through maintenance fees or rent payments. Hotel and motel owners could also pass the cost on through increased rates. For existing dwellings, where alarms are required, most if not all property owners will choose either battery-powered or plug-in models rather than electrical hard-wired models.

For new construction and potentially for remodeling jobs, many residential designers, housing construction contractors and property owners will choose hard-wired combination smoke alarm/CO alarm models because both smoke and CO alarms are required under the building code. Therefore, no additional installation costs should be incurred beyond what it required for the smoke alarm system installation, unless the combination units are significantly more expensive. It is assumed that any costs incurred for CO alarms in new construction would be passed on to the homebuyer or property owner.

Average Alarm Cost:

Alarm costs range from an average of \$30 to \$51 per alarm, depending on the model and manufacturer chosen, and not including cost of taxes, batteries, or installation. Taking into account the cost of batteries and installation, the cost range shifts to \$38 to \$84 per alarm.

- **EQUIPMENT:** CO Alarms; conduit and wire for hard-wired systems.
- **SUPPLIES:** Batteries (replacement batteries will be furnished by the tenant, per statute).
- **MATERIAL:** Information regarding CO Poisoning and the function of the alarms is contained in the product packaging.
- **LABOR:** Optional expense, depending on the type of alarm system chosen and whether it is installed by a property owner or tenant directly, or will be installed by a professional electrician.
- **PROFESSIONAL SERVICES:** Some property owners may choose to have an alarm company install, monitor and maintain their CO alarm systems.
- **ADMINISTRATIVE COSTS:** Inventory management, dependent on the number of housing units and the type of alarms chosen.

Impact on sales or revenue

There will be a positive impact on home improvement stores and hardware stores as sales of the alarms and batteries will increase.

There will be a positive impact on smoke and fire alarm companies as they will perform more alarm system installations.

Section III: Analysis of Proportionate Impact on Small Businesses

TABLE ONE: Small Businesses Impacted by CO Alarm Rules				
Type of business	NAICS CODE #	# IN STATE (UP TO 49 Employees)	#IN STATE (50 OR MORE Employees)	ANTICIPATED IMPACTS
Hardware stores	#444130	308	9	Positive: due to sales on alarm systems and batteries
Home Centers	#444110	20	2	Positive: due to sales on alarm systems and batteries
Homes for the Elderly (Licensed adult family homes)	# 623312	1103	61	Neutral: depending on the specifics of a given facility, many units in this category of housing will be exempt from the requirements of the rule
Hotels & Motels	#721110	906	71	Negative: costs will be incurred for alarm purchase, installation and maintenance. Some costs may be recovered.
Rental Housing	#531110	1609	46	Neutral: Initial cost of alarms, batteries and installation may be recovered from tenants.
Real Estate Agents and Brokers	#531210	1977	96	Neutral – the rules do not contain requirements for real estate agents. Statute requires seller’s disclosure form.
Alarm Systems – electric/installation	#238210	1992	59	Positive: due to contracts for installation of alarms in new construction or remodels

The impact on small businesses compared to the largest businesses in the state will not be disproportionate.

- Smaller hardware stores and home centers will experience increased revenues for the sale of alarms and batteries. Larger stores will likely have a larger volume of sales, thus, they may experience greater revenue increases. In addition, larger stores may be able to sell the alarms at a lower price due to economies of scale, and thus would increase their profit margin compared to smaller businesses.
- Licensed Adult Family Homes which do not contain a fuel-source will not be required to install the alarms unless their units are adjacent to units which do contain a fuel source. Residents of these facilities are closely monitored and would be unable to bring in any fuel-burning devices. Thus many will be exempt from the rule requirements, regardless of the size of the business.
- Lodging industry requirements are identical to those in Licensed Adult Family Homes, thus many will be exempt. Small and large lodging businesses and large businesses will all have the same requirements, though larger hotel/motel facilities are more likely than smaller facilities to have on-site full time personnel available for installation and maintenance of the alarm systems. There would be no disproportionate impact as any additional costs could be passed on to lodging customers.
- The impact on the Real Estate industry will be neutral. When homes are sold the seller's disclosure form will be required to specify if a CO alarm has been installed. Realtors are not required to supply homes with the alarms.

Section IV: Small Business Involvement and Impact Reduction Efforts

Actions Taken to Reduce the Impact of the Rule on Small Businesses

The proposed rules are written to allow exceptions under the Building Code and Fire Code which limit the placement of alarms in certain situations. The alarms would not be required in sleeping units or dwelling units in R-1 occupancies, and R-2 college dormitories, hotels, DSHS licensed boarding home and residential treatment facility occupancies that do not themselves contain fuel-burning appliances, or a fuel burning fireplace, or have an attached garage, but that are located in a building which contains such a fuel-source.

Another mitigating factor which reduces the impact of the rules on small businesses is the delay of the implementation date for existing dwellings until January 1, 2013. When the rules were initially drafted and adopted, that implementation date was set for July 1, 2011. In response to concerns from the rental housing community and the lodging industry about potential economic impacts imposed by that short timeframe, the Council adopted emergency rules in December 2010 changing the date to the statutory deadline of January 1, 2013; that change is retained in these proposed permanent rules.

Involvement of Small Business in the Development of the Proposed Rules

A special Technical Advisory Group (TAG) was developed to address permanent rulemaking issues on CO Alarms. Several TAG members represented the interests of small business, as follows:

- Rental Housing Association of Washington (Julie Johnson) NAICS #53111
- Washington Multi-Family Housing Association (Joe Puckett) NAICS #53111
- Washington Lodging Association (Rodney Schauf) NAICS #721110

- Aging Services of Washington (Julie Martin) NAICS #623312
- Washington Realtors Association (Annie Fitzsimmons) NAICS #531210

Other TAG members brought expertise in epidemiology, building design, fire and emergency response, and the alarm industry and other fields, as well as poisoning victims' families. The group met four times to consider a number of proposed changes. Ultimately, after a great deal of debate and collaboration, the group voted to propose permanent rules to the Council that would require the alarms in residential settings, regardless of the fuel-source or presence of an attached garage; their proposal did allow for certain exceptions within Group R occupancies.

Section V: Number of affected businesses in Washington:

- Hardware stores (NAICS Code #444130) = 308 (50 ees or less) or 9 (50+ ees)
- Home Centers (NAICS Code #444110) = 20 (50 ees or less) or 2 (50+ ees)
- Homes for the Elderly (Licensed Adult Family Homes) (NAICS Code # 623312) = 1103 (50 ees or less) or 61 (50+ ees)
- Hotels & Motels (NAICS Code #721110) = 906 (50 ees or less) or 71 (50+ ees)
- Rental Housing (NAICS Code #531110) = Lessors of residential buildings and dwellings – 1609 (50 ees or less) or 46 (50+ ees)
- Real Estate Agents and Brokers (NAICS Code #531210) = 1,977 (50 ees or less) or 96 (50+ ees)
- Alarm Systems, electric, installation only (NAICS Code #238210) = 1992 (50 ees or less) or 59 (50+ ees)

Section VI: Jobs created or lost as a result of these Rules:

These rules are likely to be job neutral overall, i.e., they will not result in any job gains or losses. Initially, some job gains may be anticipated in the short term, but these would be of a temporary nature.

- The types of jobs that might be likely to increase temporarily in the short term would be for alarm installation businesses and/or electrical contractors working on new residential construction or on remodeling projects for existing residences to install hard-wired alarm systems. This would not have a significant impact on the industry and would not affect employment rates in the construction industry.
- In terms of sales jobs for hardware stores and home centers, no additional hiring is anticipated as a result of these rules, and no jobs would be lost.
- In terms of the lodging industry and the rental housing industry, it is likely that some businesses would hire contractors on a temporary basis for installation of the battery or plug-in alarms, but that would be on a case by case basis depending on the needs of an individual business.

APPENDIX 1: Estimated Economic Impact for CO Alarms per Dwelling Unit (based on installation method)

Type of alarm and assumptions*	Type of dwelling unit	Time to install	Installation costs (hourly rates)			Total cost per chosen installation method
			Maintenance personnel (if chosen)	Home Owner	Contractor**	
All battery powered:* - Average cost per alarm including batteries is \$31.86 plus tax - May be installed by property owner at no cost, or - If installed by maintenance personnel, assume burdened wage @ \$22.40 per hour**	1 -2 bedroom apartment, one level, adjacent bedrooms	20 minutes	\$7.50	NA	NA	\$ 39.36
	Multi-level townhouse, two bedrooms on two levels	40 minutes	\$15.00	NA	NA	\$78.72
	Single-family home, one level, three bedrooms separated throughout the house	One hour	\$22.40	NA	NA	\$117.98
	Dormitory room, i.e., one sleeping room	20 minutes	\$7.50	NA	NA	\$39.36
Plug-in with battery back-up:* - Average cost per alarm including battery is \$45.18 plus tax - Installed by property owner at no cost, or - If installed by maintenance personnel, assume burdened wage @ \$22.40 per hour**	1 -2 bedroom apartment, one level, adjacent bedrooms	10 minutes	\$3.75	NA	NA	\$48.93
	Multi-level townhouse, two bedrooms on two levels	20 minutes	\$7.50	NA	NA	\$97.86
	Single-family home, one level, three bedrooms separated throughout the house	30 minutes	\$11.20	NA	NA	\$146.74
	Dormitory room, i.e., one sleeping room	10 minutes	\$3.75	NA	NA	\$48.93
Hard-wired with battery back-up:*** - Average cost of installation, including conduit, wire and labor is \$150 - \$250 per unit. **** - May be installed by a property owner or a qualified maintenance employee; for new construction and major remodeling projects, a licensed electrical contractor is required.	1 -2 bedroom apartment, one level, adjacent bedrooms	1 hour	NA	NA	\$150 - \$250	\$150 - \$250
	Multi-level townhouse, two bedrooms on two levels	2 hours	NA	NA	\$300 - \$500	\$300 - \$500
	Single-family home, one level, three bedrooms separated throughout the house	3 hours	NA	NA	\$450 - \$750	\$450 - \$750
	Dormitory room, i.e., one sleeping room	1 hour	NA	NA	\$150 - \$250	\$150 - \$250

*Battery powered and plug-in units can be readily installed with ordinary household tools by home owners, and by building maintenance personnel in rental housing, hotels and motels, etc.

**Fully burdened wage rate for maintenance staff based on estimates from the Aging Services of Washington/Economic Impact Worksheet submitted to SBCC in September 2010.

***Hardwired models may be installed by a property owner or a qualified maintenance employee; installation by a licensed electrical contractor required in new construction and major remodeling contracts. The fully burdened wage for a journeyman Electrical Technician ranges from \$24.15 to \$34.71 per hour according to the National Electrical Contractors' Association.

****Rate estimates based on information from the Puget Sound Chapter of the Independent Electrical Contractors' Association and the National Electrical Contractors' Association including project materials and fully burdened wage rates (profit margin not included).

NEW SECTION

WAC 51-50-0908 Section 908--Emergency alarm systems.

[F] 908.7 Carbon monoxide alarms. Group R occupancies shall be provided with carbon monoxide alarms. The 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.

EXCEPTION: Sleeping units or dwelling units in R-1 occupancies and R-2 college dormitories, hotel, and DSHS licensed boarding home and residential treatment facility occupancies which do not themselves contain a fuel-burning appliance, or a fuel-burning fireplace, or have an attached garage, but which are located in a building with a fuel-burning appliance, or a fuel-burning fireplace, or an attached garage, need not be provided with carbon monoxide alarms provided that:

1. The sleeping unit or dwelling unit is not adjacent to any room which contains a fuel-burning appliance, a fuel-burning fireplace, or an attached garage; and
2. The sleeping unit or dwelling unit is not connected by duct work or ventilation shafts with a supply or return register in the same room to any room containing a fuel-burning appliance, a fuel-burning fireplace, or to an attached garage; and
3. The building is provided with a common area carbon monoxide alarm system.
4. An open parking garage, as defined in the *International Building Code*, or enclosed parking garage ventilated in accordance with Section 404 of the *International Mechanical Code* shall not be deemed to be an attached garage.

908.7.1 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.

AMENDATORY SECTION (Amending WSR 10-03-098, filed 1/20/10, effective 7/1/10)

WAC 51-51-0315 Section R315--Carbon monoxide alarms.

R315.1 Carbon Monoxide Alarms. For new construction, an approved carbon monoxide alarm shall be installed (~~((by January 1, 2011,))~~) outside of each separate sleeping area in the immediate vicinity of the bedrooms in dwelling units(~~((In a building where a tenancy exists, the tenant shall maintain the CO alarm as specified by the manufacturer including replacement of the batteries))~~) and on each level of the dwelling and in accordance with the manufacturer's recommendations.

R315.2 Existing Dwellings. Existing dwellings shall be equipped with carbon monoxide alarms (~~((by July 1, 2011))~~) when alterations, repairs or additions requiring a permit occur, or when one or more sleeping rooms are added or created.

EXCEPTIONS: (~~Owner-occupied detached one-family dwellings legally occupied prior to July 1, 2010.~~) 1. Work involving 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, or electrical permits, are exempt from the requirements of this section.
2. Installation, alteration or repairs of noncombustion plumbing or mechanical systems are exempt from the requirements of this section.

R315.3 Alarm Requirements. Single station carbon monoxide alarms shall be listed as complying with UL 2034 and shall be installed in accordance with this code and the manufacturer's installation instructions.

AMENDATORY SECTION (Amending WSR 10-24-059, filed 11/29/10, effective 7/1/11)

WAC 51-54-0900 Chapter 9--Fire protection systems.

SECTION 907--FIRE ALARM AND DETECTION SYSTEMS

~~[F] 907.2.8 Group R-1. Fire alarm systems((,)) and smoke alarm((s and carbon monoxide alarms)) systems shall be installed in Group R-1 occupancies as required in ((this section and)) Sections ((907.2.8.4)) 907.2.8.1 through 907.2.8.3.~~

~~(([F] 907.2.8.4. Carbon monoxide alarms. For new construction, an approved carbon monoxide alarm shall be installed by January 1, 2011, outside of each separate sleeping area in the immediate vicinity of the bedroom in sleeping units. In a building where a tenancy exists, the tenant shall maintain the CO alarm as specified by the manufacturer including replacement of the batteries.~~

~~[F] 907.2.8.4.1 Existing sleeping units. Existing sleeping units shall be equipped with carbon monoxide alarms by July 1, 2011.~~

~~[F] 907.2.8.4.2 Alarm requirements. Single station carbon monoxide alarms shall be listed as complying with UL 2034 and shall be installed in accordance with this code and the manufacturer's installation instructions.))~~

~~[F] 907.2.9 Group R-2. Fire alarm systems((,)) and smoke alarms ((and carbon monoxide alarms)) shall be installed in Group R-2 occupancies as required in Sections 907.2.9.1 ((through 907.2.9.3)) and 907.2.9.2.~~

[F] 907.2.9.1.1 Group R-2 boarding homes. A manual fire alarm system shall be installed in Group R-2 occupancies where the building contains a boarding home licensed by the state of Washington.

EXCEPTION:

In boarding homes licensed by the state of Washington, manual fire alarm boxes in resident sleeping areas shall not be required at exits if located at all constantly attended staff locations, provided such staff locations are visible, continuously accessible, located on each floor, and positioned so no portion of the story exceeds a horizontal travel distance of 200 feet to a manual fire alarm box.

~~(([F] 907.2.9.3 Carbon monoxide alarms. For new construction, an approved carbon monoxide alarm shall be installed by January 1, 2011, outside of each separate sleeping area in the immediate vicinity of the bedroom in dwelling units. In a building where a tenancy exists, the tenant shall maintain the CO alarm as specified by the manufacturer including replacement of the batteries.~~

~~[F] 907.2.9.3.1 Existing dwelling units.~~ Existing dwelling units shall be equipped with carbon monoxide alarms by July 1, 2011.

~~[F] 907.2.10 Group R-3.~~ Carbon monoxide alarms shall be installed in Group R-3 occupancies as required in Sections 907.2.10.1 through 907.2.10.3.

~~[F] 907.2.10.1 Carbon monoxide alarms.~~ For new construction, an approved carbon monoxide alarm shall be installed by January 1, 2011, outside of each separate sleeping area in the immediate vicinity of the bedroom in dwelling units. In a building where a tenancy exists, the tenant shall maintain the CO alarm as specified by the manufacturer including replacement of the batteries.

~~[F] 907.2.10.2 Existing dwelling units.~~ Existing dwelling units shall be equipped with carbon monoxide alarms by July 1, 2011.

EXCEPTION: Owner-occupied Group R-3 residences legally occupied prior to July 1, 2010.

~~[F] 907.2.10.3 Alarm requirements.~~ Single station carbon monoxide alarms shall be listed as complying with UL 2034 and shall be installed in accordance with this code and the manufacturer's installation instructions.))

SECTION 908--EMERGENCY ALARM SYSTEMS

908.7 Carbon monoxide alarms. Group R occupancies shall be provided with carbon monoxide alarms. The 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.

EXCEPTION:

Sleeping units or dwelling units in R-1 occupancies and R-2 college dormitories, hotel, and DSHS licensed boarding home and residential treatment facility occupancies which do not themselves contain a fuel-burning appliance, or a fuel-burning fireplace, or have an attached garage, but which are located in a building with a fuel-burning appliance, or a fuel-burning fireplace, or an attached garage, need not be provided with carbon monoxide alarms provided that:

1. The sleeping unit or dwelling unit is not adjacent to any room which contains a fuel-burning appliance, a fuel-burning fireplace, or an attached garage; and
2. The sleeping unit or dwelling unit is not connected by duct work or ventilation shafts with a supply or return register in the same room to any room containing a fuel-burning appliance, a fuel-burning fireplace, or to an attached garage; and
3. The building is provided with a common area carbon monoxide alarm system.
4. An open parking garage, as defined in the *International Building Code*, or enclosed parking garage ventilated in accordance with Section 404 of the *International Mechanical Code* shall not be deemed to be an attached garage.

908.7.1 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.

AMENDATORY SECTION (Amending WSR 10-24-059, filed 11/29/10, effective 7/1/11)

4603.8 Carbon monoxide alarms. Existing Group R occupancies shall be provided with carbon monoxide alarms. R-2 occupancies not already equipped with a carbon monoxide alarm system shall be provided with a carbon monoxide alarm system when alterations, repairs or additions requiring a permit occur, or when one or more sleeping rooms are added or created. The 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.

EXCEPTIONS:

1. Work involving 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, or electrical permits.
2. Installation, alteration or repairs of noncombustion plumbing or mechanical systems.
3. Sleeping units or dwelling units in R-1 occupancies and R-2 college dormitories, hotel, and DSHS licensed boarding home and residential treatment facility occupancies which do not themselves contain a fuel-burning appliance, a fuel-burning fireplace, or have an attached garage, but which are located in a building with a fuel-burning appliance, a fuel-burning fireplace, or an attached garage, need not be provided with carbon monoxide alarms provided that:
 - a. The sleeping units or dwelling unit is not adjacent to any room which contains a fuel-burning appliance, a fuel-burning fireplace, or an attached garage; and
 - b. The sleeping units or dwelling unit is not connected by duct work or ventilation shafts with a supply or return register in the same room to any room containing a fuel-burning appliance, a fuel-burning fireplace, or to an attached garage; and
 - c. The building is provided with a common area carbon monoxide alarm system.
 - d. An open parking garage, as defined in the International Building Code, or enclosed parking garage ventilated in accordance with Section 404 of the International Mechanical Code shall not be deemed to be an attached garage.