



Oregon

Kate Brown, Governor

Department of Consumer and Business Services

Building Codes Division

1535 Edgewater Street NW

P.O. Box 14470

Salem, OR 97309-0404

503-378-4133

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bcd.oregon.gov

Residential and Manufactured Structures Board

Rescheduled meeting agenda

Note date and time: **Thursday, December 3, 2015, 1:30 p.m.**

Conference Room A

Board meetings are broadcast live via the Internet at

<http://bcd.oregon.gov/>

Click on "View live meetings"

I. Board business

- A. Call to order
- B. Roll call
- C. Approval of agenda and order of business
- D. Approval of the April 10, 2015, board meeting minutes
- E. Date of the next scheduled meeting: January 6, 2016 (*First Wednesday of every quarter*)
- F. 2016 Board meeting calendar dates

II. Public comment

*This time is available for individuals wanting to address the Board on **non-agenda items only**. The Board will not take action on non-agenda items raised under public comment at this meeting. Testimony on agenda items will be heard when the item is called. (See "Issues to remember when addressing the Board" at the end of this agenda).*

III. Reports

- A. Building Codes Division report
- B. Residential structures program update

IV. Communications

Update on Statewide Code Interpretation No. 15-01; Fire Protection of Floors in Existing Structures

V. Appeals - None

VI. Unfinished business

Board make a recommendation on the removal of underground gas pipe separation requirements in the 2014 Oregon Residential Specialty Code

VII. New business

- A. Board review and provide a recommendation to the Administrator for a code change to discontinue the use of low frequency alarms for single- and multiple-station applications under the low-rise residential provisions as printed in the 2014 Oregon Structural Specialty Code and move to public hearing

- B. Board review and provide a recommendation to the Administrator for adoption of rulemaking for minimum safety standards for recreational vehicles

Additional documents:

- Code adoption matrix
- Committee meeting process

VIII. Announcements - None

IX. Adjournment

Issues to remember when addressing the Board:

- All public participation is subject to the discretion of the Board Chair for order of testimony, length and relevance.
- Speakers are generally limited to five minutes.
- Please register on the attendance registration form and on the public testimony registration form, listing the appropriate agenda item.
- The Board Chair will call you to the front testimony table.
- Please state your name and the organization you represent (if any).
- Always address your comments through the Chair.
- If written material is included, please provide 20 three-hole-punched copies of all information to the boards administrator prior to the start of the meeting and, when possible, staff respectfully requests an electronic copy of materials 24 hours prior to the meeting.

Interpreter services or auxiliary aids for persons with disabilities are available upon advance request. Persons making presentations including the use of video, DVD, PowerPoint, or overhead projection equipment are asked to contact boards coordinator 24 hours prior to the meeting. For assistance, please contact Debi Barnes-Woods at 503-378-6787.

Please do not park vehicles with "E" plates in "customer only" spaces.

Note: For information regarding re-appointments or board vacancies, please visit the Governor's website.



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September 11, 2015

To: Residential and Manufactured Structures Board
Members/Interested parties

From: Jan Lewis
Residential and Manufactured Structures Board Chair

Re: **Rescheduled October 9 Board meeting**

The Residential and Manufactured Structures Board meeting scheduled for October 9, 2015, is rescheduled to *Thursday, December 3, 2015*, in Conference Room A. This Board meeting is *scheduled to begin at 1:30 p.m.*

All board meetings are held at Building Codes Division at 1535 Edgewater St NW, Salem, OR 97304.

Please contact Rex Turner, structural program chief, at 503-373-7755, or Debi Barnes-Woods, boards administrator/coordinator, at 503 378-6787 if you have questions.

For all board information, please visit the Building Codes Division [Website](http://bcd.oregon.gov).

**State of Oregon
Draft**

Agenda Item I.D

**Residential and Manufactured Structures Board
Regular board meeting minutes
April 10, 2015**

Members present: Jan Lewis, Chair, residential structural contractor
Bruce Dobbs, Vice-chair, utility/energy supplier
Richard Bonheimer, seller or distributor of new manufactured dwellings
John Chmelir, multi-family contractor
Kathryn Gray, home designer
Tonya Halog, structural engineer
Emily Kemper, public member
Douglas Lethin, remodeler residential structural contractor
John Mills, residential building trade sub-contractor
Rebai Tamerhoulet, building official

Members absent: Vacant, manufacturer of manufactured dwellings

Staff present: Brett Salmon, manager, Policy and Technical Services
Shane Sumption, manager, Field Services and Statewide Services
Rex Turner, structural program chief, Policy and Technical Services
Todd Smith, policy analyst, Policy and Technical Services
Mark Heizer, P.E., energy and mechanical code specialist, Policy and Technical Services
Richard Baumann, policy analyst, Policy and Technical Services
Debi Barnes-Woods, boards administrator/coordinator, Policy and Technical Services

Guests present: Howard Asch, Oregon Home Builders Association (OHBA)

I. Board business

A. Call to order

Chair Jan Lewis called the Residential and Manufactured Structures Board meeting to order at 9:31 a.m. The meeting was held at the Building Codes Division in Conference Room A, 1535 Edgewater Street NW, Salem, Oregon.

B. Roll call

Bruce Dobbs was connected by teleconference, all other members were present in Conference Room A.

This board has one vacancy: Manufacturer of manufactured dwellings.

C. Approval of agenda and order of business

Chair Lewis **RULED** the agenda approved.

D. Approval of the board meeting minutes of January 9, 2015

Chair Lewis **RULED** the meeting minutes of January 9, 2015, approved as written.

E. Date of the next regularly scheduled meeting

The next meeting date is scheduled for July 10, 2015.

II. Public comment - None

III. Reports

A. Building Codes Division report

Brett Salmon, manager, Policy and Technical Services, reported on two legislative bills:

- [Senate Bill 133](#)
- [House Bill 2843](#)

Manager Salmon also introduced a new employee to Policy and Technical Services:

- Todd Smith, policy analyst

B. Residential program update

Rex Turner, structural program chief, Policy and Technical Services, briefly discussed training, types of customer calls received by the program, and preparations to answer questions on requirements for the new marijuana bill.

C. Manufactured structures program update

Shane Sumption, manager, Field Services, gave the manufactured home update.

IV. Communications

Update on Statewide Alternate Method No. 15-02; Electronic Snow Load Locator

Chief Turner explained that the 2013 map corrects the under-predicted snow load values at mid-elevations from the 2007 map.

V. Appeals – None

VI. Unfinished business – None

VII. New business

A. Board review and recommend to the Administrator proposed amendments to align federal requirements with the minimum SEER standards for residential heat pumps in the 2014 Oregon Residential Specialty Code

Mark Heizer, technical policy analyst, Policy and Technical Services, explained that the proposed amendment brings the 2014 Oregon Residential Specialty Code minimum energy efficiency standards for residential heat pumps into alignment with the current federal manufacturing requirements.

Chair Lewis said that as of January 1, 2015, manufacturers are manufacturing to the new standards. She said that existing stock will remain available for installation until depleted.

Motion by Tonya Halog to approve the proposed amendments to the residential equipment performance requirements for the 2014 ORSC and recommend them to the Administrator for public hearing and subsequent adoption, with the finding that the added cost, if any, is necessary to the health and safety of the occupants or the public or necessary to conserve scarce resources.

Motion carried unanimously

B. Board review and recommend to the Administrator proposed amendments to align the underground residential gas piping requirements in the 2014 Oregon Residential Specialty Code with the 2014 Oregon Mechanical Specialty Code gas burial requirements

Chief Turner explained the Division is proposing to align the underground residential gas piping requirements of the ORSC more closely with the commercial code gas burial requirements.

Board members were concerned that the burial depth of the model code language does not align with the requirements of the gas companies. Chair Lewis said there is no language in this proposal that says the local utilities requirement supersedes this proposal. She asked if the language could be made clearer.

Bruce Dobbs suggested that he facilitate further discussions with the three major gas companies in Oregon at Northwest Natural Gas in Portland with Chief Turner.

Chair Lewis tabled this item to the next scheduled meeting.

VIII. Announcements

IX. Adjournment

The RMSB meeting was adjourned at 10:18 a.m.

Respectfully submitted by Debi Barnes-Woods/Boards Administrator/Coordinator

Board meeting dates 2016

Electrical &

Elevator Board

Meets the fourth Thursday of every other month:

January 28, 2016
March 24, 2016
May 26, 2016
July 28, 2016
September 22, 2016
November 17, 2016 **Holiday schedule**

Mechanical Board

Meets the first Wednesday of The 3rd, 6th, 9th, and 12th months:

March 2, 2016
June 1, 2016
September 14, 2016 **Holiday schedule**
December 7, 2016

Board of Boiler Rules

Meets the first Tuesday of The 3rd, 6th, 9th, and 12th months:

March 1, 2016
June 7, 2016
September 13, 2016 **Holiday schedule**
December 6, 2016

State Plumbing

Board

Meets the third Thursday of every other month:

February 18, 2016
April 21, 2016
June 16, 2016
August 18, 2016
October 20, 2016
December 15, 2016

Building Codes Structures Board

Meets the first Wednesday of the 2nd, 5th, 8th, and 11th months:

February 3, 2016
May 4, 2016
August 3, 2016
November 2, 2016

Residential & Manufactured Structures Board

Meets the first Wednesday of each quarter:

January 6, 2016
April 6, 2016
July 13, 2016 **Holiday schedule**
October 5, 2016

Construction Industry

Energy Board

Meets twice a year:

April 26, 2016
October 25, 2016

Due to the passage of [Senate Bill 440](#) licensing boards are required to meet no less than four times a year and non-licensing boards no less than two times a year [ORS 705.250](#)

Meetings are held in BCD Conference Room A
1535 Edgewater Street NW Salem OR 97304

Meetings begin at 9:30 a.m. Meetings may be canceled or rescheduled.

The calendar adjustments are to accommodate holidays and code adoptions. All board information is posted at the [BCD Web site](#)



No. 15-01
Fire Protection of Floors in Existing Structures

**Agenda
Item
IV.**

Code Edition: 2014 Oregon Residential Specialty Code (ORSC)

Code Section: Sections R501.3 and R315.5

Date: June 26, 2015

Subject: Fire Protection of Floors in Existing Structures

Question:

Is the “Fire protection of floors” requirement (ORSC Section R501.3) triggered in existing structures when a fuel-fired appliance is repaired, replaced or added within a crawl space?

Answer:

No. However, ORSC Section R315.5 requires carbon monoxide alarms in existing structures when a new carbon monoxide source is introduced (e.g. a fuel-fired appliance)

Analysis:

Section R501.3 was added to the 2011 ORSC to address unprotected floor assemblies of lightweight construction – primarily prefabricated wood I-joists. This code section requires all unrated floor assemblies to be protected on the underside with a membrane of ½-inch gypsum board, 5/8-inch wood structural panels, or equivalent. The section has four exceptions which result in the requirement being applicable primarily to lightweight floor assemblies located over nonsprinklered crawl spaces used for storage, or containing fuel-fired appliances.

When a new fuel-fired appliance is introduced to a crawl space in existing structures, retrofitting fire rated protection to the floor system is often not realistic. Introduction of a modern fuel-fired appliance beneath the floor system presents no greater fire threat than an equivalent electric furnace. Neither of the units presents a significant fire fuel load hazard, and the probability of fire causation is considered similar for either type.

Section R315.5 requires carbon monoxide alarms when a new carbon monoxide source is introduced into existing dwellings. Exchanging an existing fuel-fired appliance for another appliance does not trigger the need for carbon monoxide alarms. However, adding a new carbon monoxide source appliance or changing from electric to gas would trigger R315.5.

Contact:

Tony Rocco
Building Code Specialist
503-373-7529

Anthony.J.Rocco@oregon.gov

Mark Heizer, P.E.
Mechanical Code Specialist
503-373-4530

Mark.R.Heizer@oregon.gov

Rex Turner
Structural Program Chief
503-373-7755

Rex.L.Turner@oregon.gov

In accordance with OAR 918-008-0110, the information contained in this statewide code interpretation is legally binding on any party involved in activities regulated by applicable Oregon law, applicable Oregon regulations or the state building code. If the information contained in this statewide code interpretation is cited as a basis for a civil infraction, a representative of the jurisdiction must cite the interpretation number found in this document.



State of Oregon

Board memo

Building Codes Division

December 3, 2015

To: The Residential and Manufactured Structures Board

From: Mark Heizer, technical policy analyst, Policy and Technical Services

Subject: 2014 Oregon Residential Specialty Code, underground residential gas piping requirements for separation to other services

Action requested:

The Division requests that the Board review and approve amendments to the underground residential gas piping requirements of the 2014 Oregon Residential Specialty Code (ORSC) for public hearing.

Background:

The 2014 Oregon Mechanical Specialty Code (OMSC), based on the 2012 International Mechanical Code, was adopted without modification to the underground piping installation requirements in Section C404.13. This Oregon specific amendment in the prior versions of the OMSC was not re-adopted. The more restrictive separation requirements of the Oregon amendments were found to be obsolete and resulted in additional, unnecessary construction costs.

The proposed amendment aligns the underground residential gas piping requirements of the ORSC more closely with the commercial code gas burial requirements. For over 20 years, model code has had no requirement for separation of gas piping in trenches to other building services.

Discussion:

The proposed amendment aligns the ORSC underground gas piping separation requirements with the OMSC and model code language.

Options:

- Approve the proposed amendment to the residential gas pipe separation requirements in the 2014 ORSC and recommend them to the Administrator for public hearing and subsequent adoption, with the finding that the added cost, if any, is necessary to the health and safety of the occupants or the public or necessary to conserve scarce resources.

- Amend and approve the proposed amendment to the residential gas pipe separation requirements in the 2014 ORSC and recommend them to the Administrator for public hearing and subsequent adoption, with the finding that the added cost, if any, is necessary to the health and safety of the occupants or the public or necessary to conserve scarce resources.
- Disapprove the proposed amendment to the residential gas pipe separation requirements in the 2014 ORSC and continue to use the current 2014 ORSC.

Recommendation:

Approve the proposed amendment to the residential gas pipe separation requirements in the 2014 ORSC and recommend them to the Administrator for public hearing and subsequent adoption, with the finding that the added cost, if any, is necessary to the health and safety of the occupants or the public or necessary to conserve scarce resources.

**Residential and Manufactured Structures Board
December 3, 2015**

Code Change:

Suggested changes (strikeout text denotes deletion, bold/underline denotes addition)

**SECTION 2415
PIPING SYSTEM INSTALLATION**

G2415.11 Trenches. The trench shall be graded so that the *pipe* has a firm, substantially continuous bearing on the bottom of the trench.

~~**G2415.11.1 Underground gas pipe separation.** Underground gas piping shall be separated vertically or horizontally from other underground piping as follows:~~

- ~~1. Sewer pipe not less than 18 inches (457 mm) from any underground sewer line.~~
- ~~2. Water pipe not less than 12 inches (305 mm) from any underground water line.~~
- ~~3. Drainage pipe not less than 12 inches (305 mm) from any underground drainage line.~~

**2014 ORSC Amendments
Residential and Manufactured Structures Board
DRAFT
December 3, 2015**

**918-480-0010
Amendments to the Oregon Residential Specialty Code**

(1) The **Oregon Residential Specialty Code** is amended pursuant to OAR chapter 918, division 8. Amendments adopted for inclusion into the **Oregon Residential Specialty Code** are placed in this rule, showing the section reference and a descriptive caption.

(2) Effective April 1, 2015 the Oregon Residential Specialty Code is amended according to the following:

(a) Amend Section R202 – definition for “Accessory Structure” and Section R325 Detached Group R Accessory Structures (Group U) for allowable area increases to detached Group R accessory structures; and

(b) Amend Section M2301 Solar Energy Systems specifying that residential solar photovoltaic installation requirements are now located in Section 3111 of the Oregon Structural Specialty Code.

(3) Effective February 1, 2016 the Oregon Residential Specialty Code is amended by deleting Section G2415.11 “Underground gas pipe separation.” This amendment aligns the underground residential gas piping burial and separation requirements of the Oregon Residential Specialty Code more closely with the Oregon Mechanical Specialty Code and national model codes.

[Publications: Publications referenced are available for review at the division. See division website for information on where to purchase publications.]

Stat. Auth.: ORS 455.020, 455.110, 455.496, 455.610 & 455.485

Stats. Implemented: ORS 455.610

Hist.: BCA 18-1993, f. 8-24-93, cert. ef. 8-29-93; BCA 28-1993, f. 10-22-93, cert. ef. 1-1-94; BCA 29-1993, f. 11-24-93, cert. ef. 12-1-93; BCD 6-1995, f. 3-31-95, cert. ef. 4-1-95; BCD 3-1996, f. 2-2-96, cert. ef. 4-1-96; BCD 22-1996(Temp), f. 10-1-96, cert. ef. 10-4-96; BCD 5-1997, f. 3-21-97, cert. ef. 4-1-97; Administrative Reformatting 1-19-98; BCD 3-1998, f. 1-29-98, cert. ef. 4-1-98; BCD 19-1998, f. 9-30-98, cert. ef. 10-1-98; BCD 3-2000, f. 1-14-00 cert. ef. 4-1-00; BCD 19-2000(Temp), f. & cert. ef. 8-15-00 thru 2-10-01; BCD 32-2000, f. 12-27-00, cert. ef. 1-1-01; BCD 3-2001, f. 2-9-01, cert. ef. 3-1-01; BCD 2-2002, f. 3-5-02, cert. ef. 4-1-02; BCD 22-2002(Temp), f. 9-13-02 cert. ef. 10-1-02 thru 3-29-03; BCD 30-2002, f. 12-6-02, cert. ef. 1-1-03; BCD 1-2003(Temp), f. & cert. ef. 1-10-03 thru 3-31-03; BCD 33-2002, f. 12-20-02 cert. ef. 4-1-03; BCD 15-2004, f. 9-10-04, cert. ef. 10-1-04; BCD 5-2005, f. & cert. ef. 3-28-05; BCD 9-2006, f. 6-30-06, cert. ef. 7-1-06; BCD 1-2007, f. 2-15-07, cert. ef. 4-1-07; BCD 5-2008, f. 2-22-08, cert. ef. 4-1-08; BCD 13-2008(Temp), f. & cert. ef. 7-3-08 thru 12-30-08; BCD 21-2008, f. 9-30-08, cert. ef. 10-1-08; BCD 24-2008(Temp), f. & cert. ef. 10-6-08 thru 4-1-09; BCD 1-2009, f. 1-30-09, cert. ef. 2-1-09; BCD 8-2009, f. 9-30-09, cert. ef. 10-1-09; BCD 5-2010, f. 5-14-10, cert. ef. 7-1-10; BCD 1-2011, f. 2-15-11, cert. ef. 4-1-11; BCD 10-2011(Temp), f. & cert. ef. 4-15-11 thru 9-30-11; BCD 13-2011, f. 5-13-11, cert. ef. 7-1-11; BCD 9-2014, f. 9-25-14, cert. ef. 10-1-14

State of Oregon

Board memo

Building Codes Division

December 3, 2015

To: The Residential and Manufactured Structures Board

From: Rex Turner, structural program chief, Policy and Technical Services

Subject: Low frequency alarm systems for single- and multiple-station applications under low-rise residential provisions printed in the Oregon Structural Specialty Code

Action requested:

The Division requests that the Board review and approve amendments to the low frequency alarm requirements published in the 2014 Oregon Structural Specialty Code (OSSC), which also are low-rise residential dwelling provisions printed in the Oregon Residential Specialty Code, for public hearing.

Background:

Low-rise residential dwelling code requirements for one and- two-family dwellings, townhouses, and certain small apartments, three stories or less above grade, are under the purview of the Residential and Manufactured Structures Board (RMSB). The Division has chosen to print certain requirements adopted by the RMSB that align best with the OSSC in the OSSC. The Division believes this will reduce confusion. It is important to note that the RMSB will remain the advisory Board for those code items, specifically fire-resistive construction, sprinkler systems, and in this case, low frequency alarm systems for single-and multiple-station applications for apartments meeting the definition of a low-rise residential dwelling.

As currently printed in the 2014 OSSC, referenced standards for low-rise apartments (Group R-2) include; NFPA 72-13 and 720-12. These standards require low frequency 520 Hz alarms in sleeping areas of apartments as referenced in OSSC 907.2.11.2. Subsequent to adoption, the Division was informed by stakeholders and industry representatives that while devices for central systems are available, low frequency smoke and carbon monoxide alarms for single- and multiple-station applications are not available to meet Sections 907.2.11 and 908.7 of the OSSC.

Based on this feedback and to prevent further confusion, the Building Code Structures Board recently passed a motion to remove the low frequency smoke and carbon monoxide alarm requirements for single- and multiple-station applications from the 2014 OSSC.

Subsequently, the Division is requesting that the RMSB pass a corresponding motion to eliminate low frequency smoke and carbon monoxide alarm requirements for single- and

multiple-station applications in apartments from the low-rise residential provisions printed in the OSSC.

Discussion:

The proposed amendments clarify that NFPA 72-13, Section 29.3.8, and NFPA 720-12, Section 9.4.2.2 are not adopted and are not part of the low-rise residential provisions printed in the OSSC.

Options:

- Approve proposed amendments to the low-rise residential provisions as published in the 2014 OSSC and remove requirements for the use of low frequency alarms for single- and multiple-station applications. Recommend the proposed amendments to the Administrator for public hearing and subsequent adoption, with the finding that the added cost, if any, is necessary to the health and safety of the occupants or the public or necessary to conserve scarce resources.
- Amend and approve the proposed amendments to the low-rise residential provisions as published in the 2014 OSSC and remove requirements for the use of low frequency alarms for single- and multiple-station applications. Recommend the proposed amendments to the Administrator for public hearing and subsequent adoption, with the finding that the added cost, if any, is necessary to the health and safety of the occupants or the public or necessary to conserve scarce resources.
- Disapprove proposed amendments to the low-rise residential provisions as published in the 2014 OSSC to no longer require the use of low frequency alarms for single- and multiple-station applications, and continue to use the current 2014 OSSC requiring the use of low frequency alarms.

Recommendation:

Approve proposed amendments to the low-rise residential provisions as published in the 2014 OSSC and remove requirements for the use of low frequency alarms for single- and multiple-station applications. Recommend the proposed amendments to the Administrator for public hearing and subsequent adoption, with the finding that the added cost, if any, is necessary to the health and safety of the occupants or the public or necessary to conserve scarce resources.

**Residential & Manufactured Structures Board
Low-Rise Residential Provisions of the
2014 Oregon Structural Specialty Code (OSSC)
December 3, 2015**

Code Change:

Suggested changes (~~strikeout text~~ denotes deletion, **bold/underline** denotes addition)

[F] 907.2.11 Single- and multiple-station smoke alarms. *Listed* single- and multiple-station smoke alarms complying with UL 217 shall be installed in accordance with Sections 907.2.11.1 through 907.2.11.4 and NFPA 72. **Section 29.3.8 of NFPA 72 is not adopted.**

908.7 Carbon monoxide alarms. Approved carbon monoxide alarms in new buildings and structures shall be provided in the locations described in Sections 908.7.1 and 908.7.2. **Section 9.4.2.2 of NFPA 720 is not adopted.**

**2014 ORSC Amendments
Residential and Manufactured Structures Board
DRAFT
December 3, 2015**

918-480-0010

Amendments to the Oregon Residential Specialty Code

(1) The **Oregon Residential Specialty Code** is amended pursuant to OAR chapter 918, division 8. Amendments adopted for inclusion into the **Oregon Residential Specialty Code** are placed in this rule, showing the section reference and a descriptive caption.

(2) Effective April 1, 2015 the Oregon Residential Specialty Code is amended according to the following:

(a) Amend Section R202 – definition for “Accessory Structure” and Section R325 Detached Group R Accessory Structures (Group U) for allowable area increases to detached Group R accessory structures; and

(b) Amend Section M2301 Solar Energy Systems specifying that residential solar photovoltaic installation requirements are now located in Section 3111 of the Oregon Structural Specialty Code.

(3) Effective February 1, 2016:

(a) The Oregon Residential Specialty Code is amended by deleting Section G2415.11 “Underground gas pipe separation.” This amendments aligns the underground residential gas piping burial and separation requirements of the Oregon Residential Specialty Code more closely with the Oregon Mechanical Specialty Code and national model codes.

(b) The low-rise residential provisions in the 2014 Oregon Structural Specialty Code, Sections 907.2.11 and 908.7, for low frequency alarm systems for single- and multiple-stations is amended. NFPA 72 Section 29.3.8 and NFPA 720 Section 9.4.2.2 are not adopted.

[Publications: Publications referenced are available for review at the division. See division website for information on where to purchase publications.]

Stat. Auth.: ORS 455.020, 455.110, 455.496, 455.610 & 455.485

Stats. Implemented: ORS 455.610

Hist.: BCA 18-1993, f. 8-24-93, cert. ef. 8-29-93; BCA 28-1993, f. 10-22-93, cert. ef. 1-1-94; BCA 29-1993, f. 11-24-93, cert. ef. 12-1-93; BCD 6-1995, f. 3-31-95, cert. ef. 4-1-95; BCD 3-1996, f. 2-2-96, cert. ef. 4-1-96; BCD 22-1996(Temp), f. 10-1-96, cert. ef. 10-4-96; BCD 5-1997, f. 3-21-97, cert. ef. 4-1-97; Administrative Reformatting 1-19-98; BCD 3-1998, f. 1-29-98, cert. ef. 4-1-98; BCD 19-1998, f. 9-30-98, cert. ef. 10-1-98; BCD 3-2000, f. 1-14-00 cert. ef. 4-1-00; BCD 19-2000(Temp), f.& cert. ef. 8-15-00 thru 2-10-01; BCD 32-2000, f. 12-27-00, cert. ef. 1-1-01; BCD 3-2001, f. 2-9-01, cert. ef. 3-1-01; BCD 2-2002, f. 3-5-02, cert. ef. 4-1-02; BCD 22-2002(Temp), f. 9-13-02 cert. ef. 10-1-02 thru 3-29-03; BCD 30-2002, f. 12-6-02, cert. ef. 1-1-03; BCD 1-2003(Temp), f. & cert. ef. 1-10-03 thru 3-31-03; BCD 33-2002, f. 12-20-02 cert. ef. 4-1-03; BCD 15-2004, f. 9-10-04, cert. ef. 10-1-04; BCD 5-2005, f. & cert. ef. 3-28-05; BCD 9-2006, f. 6-30-06, cert. ef. 7-1-06; BCD 1-2007, f. 2-15-07, cert. ef. 4-1-07; BCD 5-2008, f. 2-22-08, cert. ef. 4-1-08; BCD 13-2008(Temp), f. & cert. ef. 7-3-08 thru 12-30-08; BCD 21-2008, f. 9-30-08, cert. ef. 10-1-08; BCD 24-2008(Temp), f. & cert. ef. 10-6-08 thru 4-1-09; BCD 1-2009, f. 1-

30-09, cert. ef. 2-1-09; BCD 8-2009, f. 9-30-09, cert. ef. 10-1-09; BCD 5-2010, f. 5-14-10, cert. ef. 7-1-10; BCD 1-2011, f. 2-15-11, cert. ef. 4-1-11; BCD 10-2011(Temp), f. & cert. ef. 4-15-11 thru 9-30-11; BCD 13-2011, f. 5-13-11, cert.ef. 7-1-11; BCD 9-2014, f. 9-25-14, cert. ef. 10-1-14

DRAFT

State of Oregon

Board memo

Building Codes Division

December 3, 2015

To: Residential and Manufactured Structures Board

From: Richard J. Baumann
Policy Analyst

Subject: Minimum safety standards for recreational vehicles.

Action requested:

The Division requests that the Board review and approve the proposed minimum safety standards for recreational vehicles for public hearing and subsequent adoption.

Background:

The Building Codes Division opened the code change process to receive code amendments on September 10, 2015 and received no public code change proposals. Division staff recommended retention of three existing Oregon amendments and deleting others that were incorporated into model code or that no longer applied. The Recreational Vehicle Code Review Committee was appointed by the Division in October and met once on October 27, 2015. This memo includes a code adoption matrix that shows the proposed nationally recognized recreational vehicle codes and standards, certain model code changes, Oregon amendments and the code committee's recommendations.

Discussion:

Under [ORS 446.185](#), [455.030](#) and 455.110, the Division, with the approval of the Board, promulgates the minimum safety standards for recreational vehicles in this state. These minimum safety standards must conform, insofar as it is practical, to codes generally accepted and in use throughout the United States.

During the code adoption process, the board reviews the recommendations made by the code review committee and then makes a recommendation to the Division regarding the adoption and amendment of minimum safety standards for recreational vehicles. The Division then obtains additional input at a public hearing and makes a final decision on the adoption and amendment of these minimum safety standards.

At the October 27, 2015, Recreational Vehicle Code Change Committee, the committee reviewed proposed recreational vehicle construction standards and three Division-proposed amendments. Two of the Division-proposed amendments relating to solid-fuel burning appliances (wood-burning stoves, wood-burning fireplaces, and pellet fired appliances) were

withdrawn (Items 1.2 and 2.3 on the matrix). The Division determined that the model code adequately addressed manufacturer requirements regarding solid-fuel burning appliances.

Options:

- Approve the committee’s recommendations and recommend the Administrator move the proposed minimum safety standards for recreational vehicles for public hearing and subsequent adoption, with the finding that the added cost, if any, is necessary to the health and safety of the occupants or the public or necessary to conserve scarce resources.
- Amend and approve the committee’s recommendations and recommend the Administrator move the proposed minimum safety standards for recreational vehicles for public hearing and subsequent adoption, with the finding that the added cost, if any, is necessary to the health and safety of the occupants or the public or necessary to conserve scarce resources.
- Disapprove the committee’s recommendations for the proposed minimum safety standards for recreational vehicles and continue to use currently adopted minimum safety standards for recreational vehicles.

Recommendation:

Approve the committee’s recommendations and recommend the Administrator move the proposed minimum safety standards for recreational vehicles for public hearing and subsequent adoption, with the finding that the added cost, if any, is necessary to the health and safety of the occupants or the public or necessary to conserve scarce resources.

2015 Oregon Recreational Vehicle Construction Code Review Matrix

Item #	Code Source	Description & Review Committee Discussion	Fiscal Impact	Committee Action	Board Action
1 2015 NFPA 1192, Standard on Recreational Vehicles					
Each individual change does not require a vote unless a new Oregon amendment is proposed.					
1.1	Model Code Change Summary	<ul style="list-style-type: none"> • Requirements are harmonized with the Canadian Standard, CSA Z240, Recreational Vehicles. • All labels have been revised to conform to ANSI Z535 Series for standardization within the industry (Section 4.3, Chapter 5, 6, and 7). • The bubble-type leak detector is no longer permitted to be used for the final propane piping system test (Section 5.3.20). • New Chapter 8: Vehicle Requirements improves usability (Previously Chapter 6, Section 6.6). • Added the use of fuel cell technology (Section 5.11) and other industry changes, new definitions have been added for Protruding Equipment (Section 3.3.48), Fuel Cell Device (Section 3.3.26), and Fuel Cell System (Section 3.3.27). • Minimum Means of Escape has been revised for greater clarity on Primary and Secondary Means of Escape (Section 6.2). 			
Motion:		Recommendation to adopt the 2015 NFPA 1192, Standard on Recreational Vehicles.	None	Approved	10/27/2015
2 2015 ANSI A119.5, Park Model Recreational Vehicle Standard					
Each individual change does not require a vote unless a new Oregon amendment is proposed.					
2.1	Model Code Change Summary	<ul style="list-style-type: none"> • Added Prohibited Installations regarding gasoline and diesel fuel systems, internal combustion engine generators, and the storage of internal combustion engine vehicles (Section 1-6). • Labeling provisions have been added to align with the other standards (Section 1-4.1). • Water distribution lines, tubes, and piping shall be secured and supported at intervals of not more than 4 ft. (1.2m) (Section 4-6.2.3). 			

2015 Oregon Recreational Vehicle Construction Code Review Matrix

Item #	Code Source	Description & Review Committee Discussion	Fiscal Impact	Committee Action	Board Action
2.2	2011 OR Amendment	<p>After Section 1-5, Electrical Requirements:</p> <p><u>(A) Each loft area shall have a minimum of one electrical light fixture and a convenience receptacle.</u></p> <p><u>(B) Each enclosed stairway shall have a light fixture that is controlled by switches from both the top and the bottom of the stairway. The light fixture in subparagraph (A) of this rule may be used to serve this purpose.</u></p>	None	Approved to Carry Amendment 10/27/2015	
	Motion:	Adopt the 2015 ANSI A119.5, Park Model Rec. Vehicle Standard with Oregon Amendment (Item #2.2).	None	Approved 10/27/2015	
<hr/>					
3 2014 ANSI/RVIA Standard for LV Systems in Con. And Rec. Vehicles					
<hr/>					
3.1	Model Code Change Summary	<p>Each individual change does not require a vote unless a new Oregon amendment is proposed.</p> <ul style="list-style-type: none"> • ANSI designation from “12V” to “LV” in order to match the title of Low Voltage (LV) Systems (Definitions). • Conductor routing of 12V and 120V in parallel now permitted (Section 5-2). • New section addressing light fixture criteria when installed above a mattress (Section 7-3). • RV definition revised and RV entity definitions moved to Appendix 3. 			
	Motion:	Adopt the 2014 ANSI/RVIA Standard for Low Voltage Systems in Conversion and Recreational Vehicles	None	Approved 10/27/2015	

2015 Oregon Recreational Vehicle Construction Code Review Matrix

Item #	Code Source	Description & Review Committee Discussion	Fiscal Impact	Committee Action	Board Action
<hr/>					
4	2014 NFPA 70, NEC Article 551 and 552				
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4.1	Model Code Change Summary	<p>Each individual change does not require a vote unless a new Oregon amendment is proposed.</p> <ul style="list-style-type: none"> • “Distribution Panelboard” changed to “panelboard.” • Article 541.41(B)(4) Receptacle Location. Rooftop decks accessible from inside the RV must have at least one receptacle and the receptacle must be listed for wet location. • Article 551.45(B) Panelboard Location. A panelboard is only permitted behind a door within 2” of the aisle or within 1” of the back of the door. • Article 551.47(I) Cable Supports. 120V conductors must be “secured and supported” not just “supported.” 			
4.2	The following code change removes the need for the Oregon Amendment.				
	2011 OR Amendment	<p>Article 551.42(C) Branch Circuits</p> <p><i>Exception No 2: A sixth circuit, without employing an energy management system, shall be permitted to serve only the power converter provided the combined load of all six circuits does not exceed the allowable load permitted by a five-circuit system.</i></p>	None		
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	Motion:	Adopt the 2015 NFPA 70, NEC, Article 551 and 552	None	Approved	10/27/2015

* Note: This document will be updated throughout the code review process.

**2015 Minimum Safety Standards
for Recreational Vehicles
December 3, 2015
Residential and Manufactured Structures Board**

918-525-0040

Adopted Minimum Safety Standards

(1) The minimum safety standards for recreational vehicles are adopted pursuant to OAR chapter 918, division 8.

(2) Effective ~~October 1, 2014~~ **February 1, 2016** the following standards are adopted by reference as the standards for the manufacture, ~~conversion, alteration, or repair~~ of recreational vehicles, recreational park trailers, accessory buildings, and accessory structures:

(1)(a) The ~~2011~~ **2015** Edition of **NFPA 1192, Standard on Recreational Vehicles**, as published by the National Fire Protection Association, and further amended by the Division.

(2)(b) The ~~2009~~ **2015** Edition of **ANSI A119.5, Standard for Recreational Park Trailers Park Model Recreational Vehicle Standard**, as published by the American National Standards Institute, and further amended by the Division.

(3)(c) The ~~2011~~ **2014** Edition of **NFPA 70, National Electrical Code**, specifically but not limited to, Article 551 pertaining to Recreational Vehicles and Article 552 Park Trailers, as published by the National Fire Protection Association, ~~and further amended by the Division.~~

(4)(d) The ~~2011~~ **2014** Edition of **ANSI/RVIA Standard for Low Voltage Systems in Conversion and Recreational Vehicles**, as published by the Recreational Vehicle Industry Association.

(5)(e) The **Oregon Residential Specialty Code**, as adopted in OAR chapter 918, division 480, and those standards referenced within are adopted as the Division's standards for the construction, manufacture, alteration, repair, and conversion of accessory buildings and accessory structures used in conjunction with recreational vehicles and recreational park trailers.

[Publications referenced are available for review from the agency.]

Stat. Auth.: ORS 183.325 - 183.410 & 446.003 - 446.285

Stats. Implemented: ORS 446.185

Hist.: BCA 1-1990, f. & cert. ef. 1-2-90; BCA 22-1990(Temp), f. & cert. ef. 9-4-90; BCA 27-1990, f. 11-28-90, cert. ef. 11-30-90; BCA 16-1993, f. 8-12-93, cert. ef. 9-1-93; BCA 30-1993, f. 12-1-93, cert. ef. 1-1-94; BCD 16-1996, f. 8-6-96, cert. ef. 9-1-96; BCD 25-1996, f. 11-8-96,

cert. ef. 1-1-97; BCD 11-1997, f. 7-23-97, cert. ef. 1-1-98; BCD 22-1998, f. 11-9-98, cert. ef. 1-1-99; BCD 9-1999, f. 7-14-99, cert. ef. 9-1-99; BCD 10-2000(Temp), f. 6-21-00, cert. ef. 6-23-00 thru 12-19-00; BCD 29-2000, f. & cert. ef. 12-19-00; BCD 25-2008, f. 10-31-08, cert. ef. 11-1-08; BCD 26-2011, f. 9-30-11, cert. ef. 10-1-11

918-525-0042

Amendments to the Adopted Minimum Safety Standards

(1) The minimum safety standards for recreational vehicles are adopted in OAR 918-525-0040 and are amended pursuant to OAR chapter 918, division 8. Amendments adopted to the minimum safety standards for recreational vehicles are placed in this rule, showing the section reference and code language.

(1) Amend ~~NFPA 1192, Section 5.4 Fuel-Burning Appliances~~ by adding the following language after Section 5.4.1. “Solid fuel-burning appliances shall not be installed in recreational vehicles, except where specifically permitted in these rules.”

(2) **Effective February 1, 2016**, amend ANSI ~~A119.5~~ as follows **Chapter 1 by adding the following language after Section 1-5:**

(a) Amend Chapter 1 by inserting the following language after Section 1-5.

(A)~~(a)~~ Each loft area shall have a minimum of one electrical light fixture and a convenience receptacle.

~~(B)~~~~(b)~~ Each enclosed stairway shall have a light fixture that is controlled by switches from both the top and the bottom of the stairway. The light fixture in subparagraph (A) of this rule may be used to serve this purpose.

~~(b)~~ Amend Section ~~2-6 Fuel-Burning Appliances~~ by inserting the following language after Section 2-6.1. “Wood-burning stoves, wood-burning fireplaces and pellet fired appliances may be installed if they are approved and listed for recreational vehicle use or for manufactured home use and installed according to the manufacturer’s installation instructions.”

(3) Effective April 9, 2012, amend ~~NFPA 70, Article 551.42(C)~~ by adding a new exception. “Exception 2: A sixth circuit, without employing an energy management system, shall be permitted to serve only the power converter provided the combined load of all six circuits does not exceed the allowable load permitted by a five circuit system.”

[Publications referenced are available for review from the agency.]

Stat. Auth.: ORS 183.325 - 183.410 & 446.003 - 446.285

Stats. Implemented: ORS 446.185

Hist.: BCD 25-2008, f. 10-31-08, cert. ef. 11-1-08; BCD 1-2010, f. 3-15-10, cert. ef. 4-1-10;
BCD 26-2011, f. 9-30-11, cert. ef. 10-1-11; BCD 3-2012(Temp), f. 4-6-12, cert. ef. 4-9-12; BCD
6-2012, f. 6-27-12, cert. ef. 7-1-12

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