

# Oregon Office of State Fire Marshal

## Fire & Life Safety Services Branch Codes & Technical Services Unit



### Statewide Alternate Method OFC 12-01

October 2012

### 2010 Oregon Fire Code

**Statewide Alternate Methods** are approved and issued by the State Fire Marshal under the authority of Oregon Revised Statute 476.035. Local fire marshals shall approve the use of any material, design or method of construction addressed in this statewide alternate method. In addition:

- the decision to use a statewide alternate method is at the discretion of the designer
- statewide alternate methods do not limit the authority of the local fire marshal to consider other proposed alternate methods encompassing the same subject matter
- statewide alternate methods do not limit the authority of the local fire marshal to use more stringent local requirements that encompass the same subject matter if they are part of their existing local fire code adoption.

#### Requested by:

Oregon Building Codes Division (BCD)

#### Purpose:

To allow use of the **2012 International Fire Code (IFC)** as an alternate method to the provisions of the **2010 Oregon Fire Code (OFC)**.

#### Background:

The **2014 OFC**, based on the **2012 IFC**, is scheduled to go into effect on April 1, 2014. This alternate method will allow designs to voluntarily comply with the **2012 IFC** prior to the **2014 OFC** implementation date. This alternate method will also correlate with the Building Codes Division's alternate methods for the **2010 Oregon Structural Specialty Code** and the **2010 Oregon Mechanical Specialty Code**.

#### Statewide Alternate Method Ruling:

The Office of State Fire Marshal finds the **2012 International Fire Code** to be a contemporary fire code advancing the public safety and general welfare through a timely evaluation and recognition of the latest

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advancements in life safety and property protection, emerging technologies and science related to hazards of fire, explosion or dangerous conditions in new and existing buildings, structures and premises.

Accordingly, the *2012 International Fire Code* serves as an effective alternative to the *2010 Oregon Fire Code* for the construction of buildings or structures in Oregon subject to the following:

- The use of this alternate method is only for the construction of new buildings or structures and design must comply with the *2012 IFC* in its entirety.
- Designs must also comply with the *2012 International Building Code* (see statewide alternate method No. OSSC 12-01) and the *2012 International Mechanical Code* (see statewide alternate method No. OMSC 12-01). Alternate methods for the respective code are available through [www.oregon.gov/ODP/SFM](http://www.oregon.gov/ODP/SFM)
- Specified existing Oregon amendments as noted below are considered part of this ruling.

The following Oregon amendments are made part of the *2012 IFC Alternate Method Ruling* (*underlined text denotes addition to the 2012 IFC, strikethrough denotes deletion to 2012 IFC*):

### Chapter 1:

#### SUMMARY OF REVISIONS:

Chapter one of the *2012 IFC* is deleted in its entirety and replaced with Chapter one of the *2010 OFC*.

### Chapter 2:

#### SUMMARY OF REVISIONS:

Definitions in Chapter two of the *2012 IFC* are modified in part to add or be replaced by the following definitions from Chapter two of the *2010 OFC*.

#### OREGON REVISIONS:

ASME A17.1. For purposes of the *Oregon Fire Code* shall mean the *Oregon Elevator Specialty Code (OESC)* as adopted by OAR 918-400-0455.

FIRE CHIEF. The State Fire Marshal, Deputy State Fire Marshal, the chief officer of the fire department serving the jurisdiction, or a duly authorized representative.

INTERNATIONAL BUILDING CODE. For the purposes of the *Oregon Fire Code* shall mean the *Oregon Structural Specialty Code (OSSC)* as adopted by OAR 918-460-0010.

INTERNATIONAL FUEL GAS CODE. For the purposes of the *Oregon Fire Code* shall mean the *Oregon Mechanical Specialty Code (OMSC)* as adopted by OAR 918-440-0010.

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**INTERNATIONAL MECHANICAL CODE.** For the purposes of the *Oregon Fire Code* shall mean the *Oregon Mechanical Specialty Code (OMSC)* as adopted by OAR 918-440-0010.

**INTERNATIONAL PLUMBING CODE.** For the purposes of the *Oregon Fire Code* shall mean the *Oregon Plumbing Specialty Code (OPSC)* as adopted by OAR 918-750-0110.

**INTERNATIONAL RESIDENTIAL CODE.** For the purposes of the *Oregon Fire Code* shall mean the *Oregon Residential Specialty Code* as adopted by OAR 918-480-0005.

**NFPA 70.** For the purposes of the *Oregon Fire Code* shall mean the *Oregon Electrical Specialty Code (OESC)* as adopted by OAR 918-305-0100.

**WINERY.** A facility used for the primary commercial purpose of processing grapes or other fruit products to produce wine or cider having a 16 percent or less alcohol content by volume, including all areas used for the production, storage, distribution and sale of such wine or cider, including crushing, fermenting in wood or steel barrels, blending, aging, bottling, tasting rooms with an occupant load of 299 or less, warehousing, shipping, and retailing of wine, cider, and incidental items related to wine and cider and all associated administrative functions.

### Chapter 5:

#### Section 503

#### SUMMARY OF REVISIONS:

Maintains existing Oregon amendments for fire apparatus access roads.

#### OREGON REVISIONS:

#### SECTION 503 FIRE APPARATUS ACCESS ROADS

**503.1 Where required.** Fire apparatus access roads shall be provided and maintained in accordance with Sections 503.1.1 through 503.1.3. See Appendix D.

**503.1.1 Buildings and facilities.** Approved fire apparatus access roads shall be provided for every facility, building or portion of a building hereafter constructed or moved into or within the jurisdiction. The fire apparatus access road shall comply with the requirements of this section and shall extend to within 150 feet (45 720 mm) of all portions of the facility and all portions of the exterior walls of the first story of the building as measured by an *approved* route around the exterior of the building or facility.

**Exception:** The *fire code official* is authorized to ~~increase the dimension of 150 feet (45 720 mm)~~ where modify Sections 503.1 and 503.2 where any of the following applies:

1. The building is equipped throughout with an *approved automatic sprinkler system* installed in accordance with Section 903.3.1.1, 903.3.1.2 or 903.3.3.

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2. Fire apparatus access roads cannot be installed because of location on property, topography, waterways, nonnegotiable grades or other similar conditions, and an *approved* alternative means of fire protection is provided.
3. There are not more than two Group R-3 or Group U occupancies.

**503.2.2 Authority.** The *fire code official* shall have the authority to ~~require an increase in the minimum access widths where they are inadequate for fire or rescue operations~~ modify the dimension specified in Section 503.2.1.

### Section 507

#### SUMMARY OF REVISIONS:

Maintains existing Oregon amendments for fire protection water supplies.

#### OREGON REVISIONS:

##### SECTION 507 FIRE PROTECTION WATER SUPPLIES

**507.3 Fire Flow.** Fire flow requirements for buildings or portions of buildings and facilities shall be determined by an *approved* method. See Appendix B.

**507.5 Fire hydrant systems.** Fire hydrant systems shall comply with Sections 507.5.1 through 507.5.6. See Appendix C.

### Section 510

#### SUMMARY OF REVISIONS:

Maintains existing Oregon amendments for emergency responder radio coverage.

#### OREGON REVISIONS:

##### SECTION 510 EMERGENCY RESPONDER RADIO COVERAGE

**510.1 Emergency responder radio coverage in new buildings.** All new buildings, as described in Section 510.1.1, shall have *approved* radio coverage for emergency responders within the building based upon the existing coverage levels of the public safety communication systems of the jurisdiction at the exterior of the building. This section shall not require improvements of the existing public safety communication systems.

#### Exceptions:

1. Where *approved* by the building official and the *fire code official*, a wired communication system in accordance with Section 907.2.13.2 shall be permitted to be installed or maintained in lieu of an *approved* radio coverage system.

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2. Where it is determined by the *fire code official* that the radio coverage is not needed.
3. In facilities where emergency responder radio coverage is required and such systems, components or equipment required could have a negative impact on the normal operations of that facility, the *fire code official* shall have the authority to accept an automatically activated emergency responder radio coverage system.

**510.1.1 Scope.** Emergency responder radio coverage must be provided in the following buildings and locations:

1. Any building with one or more basement or below grade building level.
2. Any underground building.
3. Any building more than five stories in height.
4. Any building 50,000 square feet (4645 m<sup>2</sup>) in size or larger.
5. Any building that, through performance testing, does not meet the requirements of Section 510.

**510.2.2 Minimum signal strength out of the building.** A minimum signal strength of -95 -100 dBm at the agency's antenna port shall be received by the agency's radio system when transmitting from within the building.

## Chapter 6

### Section 604

#### SUMMARY OF REVISIONS:

Maintains existing Oregon amendments for emergency and standby power systems for Group I-2 health care facilities.

#### OREGON REVISIONS:

#### SECTION 604 EMERGENCY STANDBY POWER SYSTEMS

**604.2.16 Group I-2 health care facilities.** Automatic emergency and/or standby power supplies shall be provided for all health care facilities, as defined in NFPA 99. The approved alternative power supply shall maintain operating energy to the facility for a period of not less than 90 minutes. Emergency and standby power supplies shall be installed as required in the *Oregon Electrical Specialty Code* and in accordance with NFPA 99.

(NOTE: The above Oregon amendment does not replace Section 604.2.16 in the 2012 IFC. It is in addition to and sections will be renumbered when new code is adopted).

## Chapter 9

### Section 902

#### SUMMARY OF REVISIONS:

Maintains existing Oregon amendments for definitions in Chapter 9.

#### OREGON REVISIONS:

##### SECTION 902 DEFINITIONS

**902.1 Definitions.** The following words or terms shall, for the purposes of this chapter and as used elsewhere in this code, have the meanings shown herein.

**SUBSTANTIAL ALTERATION.** For the purpose of Section 903.2.8.1 is any alteration where the total cost of all alterations (including but not limited to electrical, mechanical, plumbing and structural changes) for a building or facility within any 12-month period amounts to 25 percent or more of the assessed value of the structure before the alterations occurred. For the purpose of Section 903.2.8.1, standard building maintenance, rewiring, re-siding or re-roofing are not considered as alterations.

**SUBSTANTIAL DAMAGE.** For the purpose of Section 903.2.8.1 is any damage of any origin to a structure whereby the cost of restoring the structure to its original condition would be equal to or exceed 25 percent of the assessed value of the structure before the damage occurred.

### Section 903

#### SUMMARY OF REVISIONS:

Maintains existing Oregon amendments requiring sprinkler systems in existing apartments where substantial alterations or damage occur and requires balconies and decks to have sprinklers installed even if there is no roof or deck above.

#### OREGON REVISIONS:

##### SECTION 903 AUTOMATIC SPRINKLER SYSTEMS

**903.2.8.1 Requirement.** Where substantial alterations are made or substantial damage occurs to an existing non-sprinklered Group R-2 apartment house, design and constructed under the provisions of the *Oregon Structural Specialty Code*, an approved automatic sprinkler system complying with NFPA 13R shall be installed only in the substantially altered or damaged dwelling units. When more than 50 percent of the dwelling units within a building are substantially altered or damaged, the entire apartment house occupancy shall be provided with an NFPA 13R sprinkler system or equivalent.

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For the purpose of this section when NFPA 13R sprinkler system is installed, a fire department connection shall not be required.

**NOTE:** (The above Oregon amendment does not replace Section 903.2.8.1 in the 2012 IFC. It is in addition to and sections will be renumbered when new code is adopted).

**903.3.1.2.1 Balconies and decks.** Sprinkler protection shall be provided for exterior balconies, decks and ground floor patios of *dwelling units* where the buildings is of type V construction, ~~provided there is a roof or deck above.~~ Sidewall sprinklers that are used to protect such areas shall be permitted to be located such that their deflectors are within 1 inch (25 mm) to 6 inches (152 mm) below the structural members and a maximum distance of 14 inches (356 mm) below the deck of the exterior balconies and decks that are constructed of open wood joist construction.

**Sections 903.1.1, 903.3.1.1.1, 903.4.1, 904.2, 905.4, 905.5.3, 907.1.1, 909.5.1, 909.7, 909.8, 909.9, 909.10, 909.15, 909.18.8.3.1, 909.19, and 910.4.**

### **SUMMARY OF REVISIONS:**

Maintains existing Oregon amendment changing fire code official to building code official.

### **2010 OFC Chapter 13 (2012 IFC Chapter 22)**

#### **Section 1305 (2205)**

### **SUMMARY OF REVISIONS:**

Maintains existing Oregon amendments for the number of portable dust collectors that can be installed.

### **OREGON REVISIONS:**

#### **SECTION 1305 (2205) DUST COLLECTION**

**1305.1 (2205.1) Dust collection.** Dust collection systems shall be designed and installed in accordance with Section 510 of the *International Mechanical Code*. Electrical ventilation fan motor shall be interlocked in accordance with Section 503.1 of the *International Mechanical Code*.

Note: The **2010 Oregon Mechanical Specialty Code**, Section 511.1.1, Exception 2, limits the number of independent collectors (portable collectors) to not more than three collectors, serving not more than five dust-producing appliances.

### **2010 OFC Chapter 30 (2012 IFC Chapter 53)**

#### **Section 3006 (5306)**

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## SUMMARY OF REVISIONS:

Maintains existing Oregon amendments that require medical gas systems to comply with the verification requirements as specified in NFPA 99 and provide written documentation.

## OREGON REVISIONS:

### SECTION 3006 (5306) MEDICAL GAS SYSTEMS

3006.4.1 (5306.4.1) Medical gas system verification. In addition to the requirements of this section, facilities with piped gas and piped vacuum systems shall be required to comply with the verification requirements as specified in NFPA 99. Written documents shall be required for verification testing as specified in NFPA 99.

## 2010 OFC Chapter 40 (2012 IFC Chapter 63)

### Section 4001 (6301)

## SUMMARY OF REVISIONS:

Maintains existing Oregon amendments regulating liquid oxygen in home health care for Group I-1, I-4, R and SR occupancies.

## OREGON REVISIONS:

### SECTION 4001 (6301) GENERAL

**4001.1 (6301) Scope.** The storage and use of oxidizing materials shall be in accordance with this chapter and Chapter 27 (50). Oxidizing gases shall also comply with Chapter 30 (53). Oxidizing *cryogenic fluids* shall also comply with Chapter 32 (55).

#### Exceptions:

1. Display and storage in Group M and storage in Group S occupancies complying with Section 2703.11 (5003.11).
2. Bulk oxygen systems at industrial and institutional consumer sites shall be in accordance with NFPA 55.
3. Liquid oxygen stored or used in Group I-1, I-4, ~~and R~~ and SR occupancies in accordance with Section 4006 (6306).

### Section 4006 (6306)

## SUMMARY OF REVISIONS:

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Maintains existing Oregon amendments regulating liquid oxygen in home health care for Group I-1, I-4, R and SR occupancies.

### OREGON REVISIONS:

#### SECTION 4006 (6306) LIQUID OXYGEN IN HOME HEALTH CARE

**4006.1 (6306.1) General.** The storage and use of liquid oxygen (LOX) in home health care in Group I-1, I-4, ~~and R~~ and SR occupancies shall comply with Sections 4006.2 (6306.2) through 4006.6 (6306.6), or shall be stored and used in accordance with Chapter 27 (50).

### 2010 OFC Chapter 45 (2012 IFC Chapter 36)

#### Section 4504 (3604)

### SUMMARY OF REVISIONS:

Maintains existing Oregon amendments adding sprinkler protection for piers and wharves.

### OREGON REVISIONS:

#### SECTION 4504 (3604) FIRE PROTECTION EQUIPMENT

**4504.2 (3604.2) Piers and wharves.** An automatic sprinkler system shall be installed under piers or wharves regulated by Section 424 (425) of the *Oregon Structural Specialty Code*, which exceed 200 feet (60 960 mm) in length or exceed 5,000 square feet (465 m<sup>2</sup>) in area. Such systems shall comply with NFPA 307, *Standard for the Construction and Fire Protection of Marine terminals, Piers and Wharves..*



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Mark Wallace, State Fire Marshal

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10/08/12

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Date