Oregon OSHA – Proposed Changes to Division 2/L – Oregon Rules for Firefighters

April 2015

Text proposed to be removed is in [~~brackets with line through~~].

Text proposed to be added is in **bold and underline**.

437-002-0182 Oregon Rules for Fire[~~F~~]**f**ighters.

(1) Scope and Application.

[~~(a)~~] These rules apply to **public and private employers who engage in structural fire service activities, including emergency first response.**[~~all activities, operations and equipment of employers and employees providing fire protection services, emergency first response, and related activities that are subject to the provisions of the Oregon Safe Employment Act. These rules do not apply to the following exempted fire fighting activities:~~

~~(A) Aircraft fire fighting and rescue;~~

~~(B) Forest and uncultivated, wildland fire fighting;~~

~~(C) Private industry fire brigades.~~

~~(D) Marine Fire Fighting and rescue.~~]

Note: Employers subject to 437-002-0182 must comply with provisions of other applicable Oregon OSHA safety and health rules.

[~~EXCEPTION: When a public fire department elects to participate in one or more of the exempted fire fighting activities, that fire department must comply with all of the provisions of OAR 437-002-0182.~~

~~(b) The provisions of OAR 437-002-0182 must be supplemented by the provisions of other applicable safety and health rules of Oregon OSHA.~~]

(2) Exceptions. These rules do not apply to the following firefighting activities:

(a) Private industry fire brigades covered under 1910.156, Division 2/L, Fire Protection.

(b) Forest and uncultivated wildland firefighting covered under Division 7/N, Wildland Fire Suppression and Prescribed Fire.

(c) Marine firefighting and rescue covered under CFR title 33, Navigation and Navigable Waters.

(d) Aircraft firefighting and rescue covered under CFR title 49, Transportation.

Note: Structural fire protection services who engage in activities listed under 437-002-0182(2)(a) through (d), must also comply with the applicable standard for the activity.

([~~2~~]**3**) Definitions.

Aerial device[~~:~~] **–** An aerial ladder, elevating platform, aerial ladder platform, or water tower that is designed to position personnel, handle materials, provide egress and discharge water.

[~~Afterflame: The time a test specimen continues to flame after the flame source has been removed.~~]

ANSI[~~:~~] **–** American National Standards Institute.

Apparatus[~~:~~] **–** A mobile piece of firefighting equipment such as pumper, water tender, etc.

Certified – Attested or confirmed in a formal written statement, or someone or something officially recognized as possessing certain qualifications or meeting certain standards.

Confined space [~~means a~~] **– A** space that **meets all of the following**:

[~~Is l~~]**L**arge enough and so configured that a**n employee** [~~person~~]can **fully**[~~bodily~~] enter **the space** and perform [~~assigned~~]work; and

Has limited or restricted means for entry or exit (for example, tanks, vessels, silos, storage bins, hoppers, vaults, and pits are spaces that may have limited means of entry); and

Is not designed for continuous occupancy.

Designee – A person who has been officially chosen to do or be something.

DOT – Department of Transportation.

DPSST – Department of Public Safety Standards and Training.

Drill tower[~~:~~] **–** A structure, which may or may not be attached to the station**,** that is over two stories high and primarily used for non**-**classroom **firefighter** training [~~of the fire fighters~~]in fire service techniques.

Emergency incident[~~:~~] **–** Any situation where [~~the~~]**a** fire department delivers emergency services, rescue, fire suppression, medical treatment, and other forms of hazard control and mitigation.

Emergency scene[~~:~~] **–** The site where the suppression of a fire or the emergency exists.

Enclosed structure – A structure with a roof or ceiling and at least two walls which may present fire hazards to employees, such as accumulations of smoke, toxic gases and heat, similar to those found in buildings.

[~~Fire chief: An employer representative responsible for managing the fire department's operation.~~]

Firefighter[~~:~~] **–** A person involved in performing fire department duties and responsibilities, including fire suppression**,**[~~. A fire fighter~~] **who** may be a career or volunteer member of a fire department and may occupy any position or rank within the fire department.

Fire ground – An emergency scene or location where firefighting or live fire training activities occur.

[~~Fire retardant: A material to reduce, stop or prevent flame spread.~~]

Fire training[~~:~~] **–** Training received by firefighters to maintain proficiency in performing their assigned duties.

[~~Flame-resistance: The property of materials, or combinations of component materials, to retard ignition and restrict the spread of flame.~~]

Hazardous material incident[~~:~~] **–** The accidental release of hazardous materials from their containers.

Helmet[~~:~~] **–** [~~A head protective device consisting of a rigid shell, energy absorption system, and chin strap intended to protect the~~]**An element of the protective ensemble designed to provide minimum protection to the user's** head against impact, flying or falling objects, electric shock, penetration, heat, and flame.

Hose tower[~~:~~] **–** A vertical structure where a hose is hung to dry.

IFSTA[~~:~~] **–** International Fire Service Training Association.

IMS – Incident Management System. Also referred to as an Incident Command System (ICS).

Immediately dangerous to life or health (IDLH)[~~:~~] **–** [~~Any condition that poses a threat to life, could cause irreversible adverse health effects, or could interfere with an individual's ability to escape unaided from a confined space.~~]**An atmosphere that poses an immediate threat to life, would cause irreversible adverse health effects, or would impair an individual's ability to escape from a dangerous atmosphere.**

Incipient stage fire – A fire which is in the initial or beginning stage and which can be controlled or extinguished by protable fire extinguishers, Class II standpipe or small hose systems without the need for protective clothing or breathing apparatus.

Interior structural firefighting – The physical activity of fire suppression, rescue or both, inside of buildings or enclosed structures which are involved in a fire situation beyond the incipient stage.

[~~Lifeline: The rope that secures employees when in extremely hazardous areas.~~]

Live fire training[~~:~~] **–** Any fire set within a structure, tank, pipe, pan, etc., under controlled conditions to facilitate [~~the~~]**firefighter** training [~~of fire fighters~~]under actual fire conditions.

[~~MSHA: Mine Safety and Health Administration.~~]

NFPA[~~:~~] **–** National Fire Protection Association.

NIOSH – National Institute of Occupational Safety and Health.
[~~Nondestructive testing: A test to determine the characteristics or properties of a material or substance that does not involve its destruction or deterioration.~~]

Private Industry Fire Brigades[~~:~~] **–** A group of employees [~~within an industry~~]who are required to fight interior structural fires at their place of employment.

Protective [~~clothing:~~]**ensemble –** The clothing [~~or~~]**and personal protective** equipment worn to [~~protect the~~]**provide limited protection to the user's** head, body, and extremities from **thermal, physical,** chemical, [~~physical,~~]and health hazards. **Protective ensemble elements include firefighting coats and trousers, helmets, hoods, gloves, footwear, eye and face protection devices, and respirators.**

Qualified – Certified as being trained to perform a particular job or activity.

[~~Rescue saw (Cutoff saw): A powered saw with a large circular cutting blade covered in part by a movable guard used to cut metal, wood, or concrete enclosures.~~]

Respirators[~~:~~] **–**

> Atmosphere-supplying respirator is a respirator that supplies the [~~respirator~~]user with air from a source independent of the ambient atmosphere[~~,~~] and includes supplied-air respirators (SARS) and self-contained breathing apparatus (SCBA) units.
>
> Air-purifying respirator is a respirator with an air-purifying filter, cartridge, or canister that removes specific air contaminants by passing ambient air through the air-purifying element.
>
> Positive pressure demand respirator is a respirator in which the pressure inside the respiratory inlet covering exceeds the ambient air pressure outside the respirator.
>
> Pressure**-**demand respirator is a positive pressure atmosphere-supplying respirator that admits air to the facepiece when the positive pressure is reduced inside the facepiece by inhalation.

Self-Contained Breathing Apparatus SCBA is a self-contained breathing apparatus designed to provide the wearer with a supply of respirable air carried in and generated by the breathing apparatus. This apparatus requires no intake of oxygen from the outside atmosphere[~~,~~] and can be designed to be a demand or pressure-demand type respirator.

Supplied-air respirator (SAR) or airline respirator is an atmosphere-supplying respirator for which the source of breathing air is not designed to be carried by the user.

Respond[~~ing:~~]**er –** [~~Answering an emergency call or other alarm~~]**A certified person who has the responsibility to respond to an emergency incident**.

[~~Scabbard: A guard that prevents injury and covers the blade and pick of an axe or other sharp instrument when worn by the fire fighter.~~]

Station (Fire station)[~~:~~] **–** Structure to house the fire service apparatus and personnel.

Tailboard[~~:~~] **–** Standing space at rear of [~~an engine or pumper~~]**a fire** apparatus where firefighters [~~ride~~]**stand to access and reload hose and/or equipment**.

Training[~~:~~] **–** Instruction with hands-on practice in the operation of equipment, including respiratory protection equipment, that is expected to be used and in the performance of assigned duties.

Warning light[~~:~~] **–** A flashing or rotating light.

([~~3~~]**4**) Organizational statement.

(a) The employer must [~~prepare and maintain~~]**develop and implement** a **written** statement or [~~written~~]policy that includes basic organizational structure**,** [~~and~~]**basic** functions of the organization, [~~in addition to the~~]**and** type, amount, and frequency of training to be provided[~~ to fire fighters~~].

(b) This statement must be made available for inspection by [~~the administrator~~]**Oregon OSHA** and by **fire department** employees or their designated representatives.

([~~4~~]**5**) Personnel.

(a) The employer must **annually** review and evaluate [~~the~~]**each employee's** physical capabilit**ies**[~~y of each employee annually to determine their ability to perform duties that may be assigned. The review and evaluation will be accomplished~~] through physical [~~examination, stress~~]**ability** testing, **medical examination,** or [~~satisfactory performance~~]**the employee's** demonstrated [~~during the~~]**ability to** perform[~~ance of~~] their assigned duties.

(b) [~~The employer must not permit an employee with known medical condition that would significantly impair their ability to engage in fire suppression activities at the emergency scene unless a physician's certificate of the employees' fitness to participate in such activities is provided. This will not limit the employer's ability to assign personnel to support activities (versus fire suppression activities).~~]**Employees who do not meet the levels of physical capabilities needed to perform their assigned duties are not permitted to engage in emergency operations.**

[~~(5) Employer's Responsibility.~~

~~(a) Each employer must comply with the provisions of this division to protect the life, safety, and health of employees.~~

~~(b) It is the responsibility of the employer to establish and supervise:~~

~~(A) A safe and healthful working environment, as it applies to nonemergency conditions or to emergency conditions at the scene after the incident has been terminated, as determined by the officer in charge.~~

~~(B) Programs for training employees in the fundamentals of accident prevention.~~

~~(C) A safe and healthful working environment as it applies to live fire training exercises.~~

~~(c) The employer must maintain all equipment in a safe condition.~~

~~(d) The employer must see that employees who participate in exempted fire fighting activities listed in OAR 437-002-0182(1) are properly trained, protected, clothed, and equipped for the known hazards of that particular emergency operation.~~

~~The following note refers to the Respiratory Protection Standard, 1910.134(g)(3) and (4), Procedures for Interior Structural Fire Fighting ("two-in/two-out rule") adopted in Oregon on July 7, 1998.~~

~~NOTE: If, upon arriving at the scene, members find an imminent life threatening situation where immediate action may prevent the loss of life or serious injury, the requirements for personnel in the outside standby mode may be suspended, when notification is given by radio to incoming companies that they must provide necessary support and backup upon their arrival.~~]

[~~(6) Employee's Responsibility.~~

~~(a) Each fire fighter must comply with the sections of OAR 437-002-0182 that are applicable to their own actions and conduct in the course of their employment.~~

~~(b) Fire fighters must notify the appropriate employer or safety committee representative of unsafe practices, equipment, or workplaces.~~

~~(c) All fire fighters, at regularly scheduled times, must attend required training and orientation programs designed to increase their competency in occupational safety and health.~~

~~(d) Fire fighters and other employees must apply the principles of accident prevention in their work. They must use all required safety devices and protective equipment.~~

~~(e) Each fire fighter must take proper care of their protective equipment.~~

~~(f) Fire fighters who are expected to perform fire fighting operations must notify their employer when health conditions arise that will limit their capability of performing those duties.~~]

([~~7~~]**6**) Safety Committee.

(a) Fire departments must have a separate safety committee or hold safety meetings according to the requirements of **Division 1,** [~~OAR~~]437-001-0765**, Safety Committees and Safety Meetings**[~~ in Division 1, General Administrative Rules~~].

(b) When applicable, the representation on the safety committee must include both career and volunteer firefighters.

([~~8~~]**7**) Incident Management. [~~An incident management system that meets the requirements of NFPA standard 1561, on Fire Department Incident Management, must be established with written standard operating procedures, applying to all members involved in emergency operations. All members involved in emergency operations must be familiar with the system.~~]

(a) The employer must develop and implement written procedures for incident management that meets the requirement of NFPA 1561 (2008): Standard on Emergency Services Incident Management System.

(b) These procedures must apply to all employees involved in emergency operations.

(c) Each employee involved in emergency operations must be familiar with these procedures.

([~~9~~]**8**) Accountability.

[~~(a) The fire department must establish written standard operating procedures for a personnel accountability system according to Section 2-6, 1995 of NFPA 1561, standard on Fire Department Incident Management System, that provides for the tracking and inventory of all members operating at an emergency incident.~~
~~(b) It is the responsibility of all members operating at an emergency incident to actively participate in the personnel accountability system.~~]
The employer must develop and implement written procedures for a personnel accountability system that meets the requirement of NFPA 1561 (2008): Standard on Emergency Services Incident Management System.

([~~10~~]**9**) Fire[~~ F~~]**f**ighting Training and Education.

(a) The employer [~~or employer representative~~]must [~~establish~~]**develop** and implement a policy for **appropriately** educating and training [~~throughout the fire fighting~~]**all department firefighting** classifications (ranks)[~~. Such education and training must be provided to fire fighters~~] before they perform assigned duties[~~ on a continuing basis~~].

(b) [~~Before fire fighters participate in structural fire fighting activities, or in live fire training in a structure, they must meet the training levels prescribed by the Department of Public Safety Standards and Training's (DPSST) 'Entry-level Firefighter' or have equivalent training.~~]**Firefighters must meet the training levels prescribed by NFPA 1403 (2012): Standard on Live Fire Training Evolutions, prior to participating in live fire training or in exterior structural firefighting activities.**

(c) [~~When live fire training occurs, it must be conducted under the direction of the fire department training officer, or employer authorized representative. All live fire training must be conducted following the requirements of Appendix C of this standard.~~]**Firefighters must be trained according to NFPA 1001 (2013): Standard for Fire Fighter Professional Qualifications, prior to participating in interior structural firefighting activities.**

(d) [~~During live fire training, fire fighters must wear the protective equipment normally required for that type of fire fighting.~~]**Live fire training must be conducted under the direction of the fire department's training officer or employer authorized representative.**

(e) [~~When rope rescue training occurs, it must be conducted under the direction of the fire department training officer or department-designated authority according to the equipment manufacturers' recommendations. The training officer must keep records of the manufacturers' training requirements, and must comply with all such requirements.~~]**All live fire training must be conducted following the requirements of NFPA 1403 (2012): Standard on Live Fire Training Evolutions, or Mandatory Appendix A (Minimum Requirements for Live Fire Training) of this standard.**

[~~(f) All fire hoses used by fire departments for training and fire combat must meet the service testing requirements noted in Chapter 5 of NFPA 1962, 1993 edition.~~

~~(g) The employer must provide training for the purpose, proper selection, fitting, and limitations of personal protective equipment.~~

~~(h) The employer must ensure that each employee is informed of the procedure of reporting unsafe work conditions or equipment.~~]

(1[~~1~~]**0**) General Requirements for Protective [~~Clothing~~]**Ensembles**.

(a) [~~The employer must provide employees all required protective clothing, except that an employee may opt to supply protective clothing. The employer must provide the protective clothing at no cost to employees. The protective clothing must meet the requirements in OAR 437-002-0182(11) through (16), whether supplied by the employer or employee.~~]**Protective ensembles must protect the user's head, body, and extremities. Protective ensembles consist of the following elements: body protection; head protection; hand protection; foot and leg protection; eye and face protection; and respiratory protection.**

Note: Employees must be protected from noise that exceeds the levels in Division 2/G, 1910.95, Occupational Noise Exposure.

(b) [~~The employer must ensure that new protective clothing intended for structural fire fighting that is ordered, used or purchased after the effective date of this division, meets the requirements contained in OAR 437-002-0182(11) through (16). The employer must ensure that fire fighters wear this clothing when performing structural fire fighting.~~]**The employer must provide employees all protective ensemble elements at no cost to employees. The employer must not allow employee-owned protective ensemble elements that do not comply with the requirements under 437-002-0182(11) through (16) to be used for structural fire fighting. (See Non-mandatory Appendix B, General Information and Recommendations, of this standard)**

(c) [~~In situations other than structural fire fighting, the employer must ensure that protective clothing appropriate for the known hazards of that particular emergency operation is worn.~~]**Employees must wear all appropriate protective ensembles elements that meet the requirements under 437-002-0182(11) through (16) when engaged in interior structural firefighting.**

(d) [~~The employer must ensure that appropriate protective clothing protects the head, body, and extremities. It must consist of at least the following components: foot and leg protection, hand protection, body protection, and eye, face, and head protection.~~]**In situations other than interior structural firefighting, employees must wear the appropriate protective ensemble elements for the known hazards of that particular emergency operation.**

(1[~~2~~]**1**) Body Protection. [~~To ensure full body protection for the wearer, coats and trousers used by structural fire fighters shall be at least equivalent to the National Fire Protection Association (NFPA) standard, No. 1971, 1991 edition, entitled "Protective Clothing for Structural Fire Fighting." (See also Appendix A.)~~]**All structural firefighting coats and trousers must be at least equivalent to the requirements of NFPA 1971 (1991): Standard on Protective Clothing for Structural Fire Fighting. Structural firefighting coats and trousers purchased on or after (*adopted effective date of this rule*) must be at least equivalent to the requirements of NFPA 1971 (2013): Standard on Protective Ensemble for Structural Fire Fighting.**

(1[~~3~~]**2**) Head Protection.

(a) [~~Head protection must consist of a protective head device, ear protection, flaps, and chin strap, which meet the requirements of NFPA Standard 1971-2000, Protective Ensemble for Structural Fire Fighting.~~] **All structural firefighting helmets must be at least equivalent to the requirements of NFPA 1971 (2000): Standard on Protective Ensemble for Structural Firefighting. Structural firefighting helmets purchased on or after *(adopted effective date of this rule)* must be at least equivalent to the requirements of NFPA 1971 (2013): Standard on Protective Ensemble for Structural Fire Fighting.**

(b) [~~Use, care, alterations, and maintenance instructions for protective headgear must be supplied for each helmet.~~] **Structural firefighting helmets must consist of a rigid shell; an energy absorbing system; a retention system; florescent and retroreflective trim; ear covers; and either a faceshield, or goggles, or both.**

(c) [~~Care, maintenance, and alteration of helmets must conform to the manufacturer's recommendations.~~] **Use, care, alterations, and maintenance instructions for protective headgear must be supplied for each helmet.**

(d) [~~During structural fire fighting helmet accessories designed to provide or maintain protection from health and safety hazards must be worn in the manufacturer's recommended position. (See also Appendix A.)~~] **Care, maintenance, and alteration of helmets must conform to the manufacturer's recommendations.**

(e) [~~A flame-resistant protective hood that will not adversely affect the seal of a respirator facepiece and meeting the requirements of NFPA Standard 1971, 1996 edition, must be worn during interior structural fire fighting operations to protect the sides of the face and hair.~~] **During structural firefighting, helmet accessories designed to provide or maintain protection from health and safety hazards must be worn in the manufacturer's recommended position. (See Non-mandatory Appendix B, General Information and Recommendations, of this standard)**

(f) All flame-resistant protective hoods must be at least equivalent to the requirements of NFPA 1971 (1997): Standard on Protective Ensembles for Structural Fire Fighting. Flame-resistant protective hoods purchased on or after *(adopted effective date of this rule)* must be at least equivalent to the requirements of NFPA 1971 (2013): Standard on Protective Ensemble for Structural Fire Fighting.

(g) A flame-resistant protective hood that will not adversely affect the seal of a respirator facepiece must be worn during interior structural firefighting operations to protect the sides of the face and hair.

(1[4]**3**) Hand Protection. [~~Hand protection for fire fighting activities must consist of protective gloves or glove system that will provide protection against cut, puncture, and heat penetration. Gloves or glove system must meet the requirements of NFPA Standard 1973, 1988 edition, titled "Gloves for Structural Fire Fighting."~~]

(a) All structural firefighting hand protection must be at least equivalent to the requirements of NFPA 1973 (1988): Standard on Gloves for Structural Fire Fighting. Structural firefighting hand protection purchased on or after *(adopted effective date of this rule)* must be at least equivalent to the requirements of NFPA 1971 (2013): Standard on Protective Ensemble for Structural Fire Fighting.

(b) Hand protection for structural firefighting activities must consist of protective gloves or glove system that will provide protection against cut, puncture, and heat penetration.

(1[~~5~~]**4**) Foot and Leg Protection.

(a) [~~Foot and leg protection must meet the requirements of OAR 437-002-0182(15)(a)(A) and (B) and may be achieved by either of the following methods:~~

~~(A) Fully extended boots, which provide protection for the legs; or~~

~~(B) Protective shoes or boots worn in combination with protective trousers that meet the requirements of OAR 437-002-0182(12).~~]

All structural firefighting protective footwear must be at least equivalent to the requirements of NFPA 1971 (1997): Standard on Protective Ensembles for Structural Fire Fighting. Structural firefighting protective footwear purchased on or after *(adopted effective date of this rule)* must be at least equivalent to the requirements of NFPA 1971 (2013): Standard on Protective Ensembles for Structural Fire Fighting.

(b) [~~Protective footwear must meet the requirements of NAPA Standard 1971, 1996 edition, titled "Protective Ensembles for Structural Fire Fighting and Proximity Fire Fighting."~~] **Resoled firefighting footwear must comply with the applicable NFPA standard under 437-002-0182(14)(a).**

Note: Employees using chain saws for non-firefighting activities must wear chaps or leg protectors in accordance with Division 2/I, 437-002-0134, Personal Protective Equipment.

[~~(c) Fire fighters' boots may be resoled but must meet the requirements of this rule.~~]

(1[~~6~~]**5**) Eye and Face Protection.[~~ Eye and face protection worn by fire fighters at the fire ground must comply with the following regulations:~~]

[~~(a) General requirements. Face protection must be required where there is a reasonable probability of injury that can be prevented by such protection. When such face protection does not protect the eyes from foreign objects, additional eye protection must be provided.~~

~~(b) When self-contained respiratory equipment is being used by fire fighters, additional eye and face protection will not be required. Employers must make conveniently available a type of protection suitable for the work performed, and employees must use such protectors. Protectors must meet the following minimum requirements.~~

~~(A) They must provide adequate protection against the particular hazards for which they are designed.~~

~~(B) They must be reasonably comfortable when worn under the designated conditions.~~

~~(C) They must be durable.~~

~~(D) They must be capable of being disinfected.~~

~~(E) They must be easy to clean.~~

~~(F) Protectors that can be worn over corrective lenses must be available for those who need them, and should be kept clean and in good repair.~~

~~(c) Face shields.~~

~~(A) Face shields must be clear transparent or colored transparent.~~

~~(B) Disinfection. When a person is assigned protective equipment, this equipment must be cleaned and disinfected regularly.~~

~~(C) Face shields must be an integral part of the fire helmet and may be installed in a fixed position or hinged allowing adjustment of the shields.~~

~~(D) In the event a breathing apparatus within a face mask is being used, the face mask will be considered an acceptable face shield.~~

~~(d) Goggles, flexible, or cushioned fitting. Goggles must consist of a fully flexible frame, a lens holder or a rigid frame with integral lens or lenses, and a separate cushioned fitting surface on the full periphery of the facial contact area.~~

~~(A) Materials used must be chemical-resistant, nontoxic, nonirritating and slow-burning.~~

~~(B) There must be support on the face, such as an adjustable headband of suitable material or other appropriate support to hold the frame comfortably and snugly in front of the eyes.~~

~~(e) Design, construction, testing, and use of eye and face protection must be according to ANSI Z87.1, Occupational Eye and Face Protection (1979).~~

~~NOTE: Fire fighters must be protected from noise that exceeds the levels deemed safe in OAR 437, Division 2/G, 1910.95, Occupational Noise Exposure.~~]

(a) Face protection must be used where there is a reasonable probability of injury that can be prevented by such protection. When face protection does not protect the eyes from foreign objects, additional protection for the eyes must be used.

(b) The employer must make available eye and face protection devices suitable for the work performed, and employees must use such protection devices as required by 437-002-0182(15)(a).

(c) Protection devices that can be worn over corrective lenses must be available for employees who need them.

(d) Eye and face protection devices worn by firefighters at the fire ground must comply with the following minimum requirements:

(A) They must comply with any of the following consensus standards:

(i) ANSI Z87.1-2003, American National Standard Practice for Occupational and Educational Eye and Face Protection;

(ii) ANSI Z87.1-1989 (R-1998), American National Standard Practice for Occupational and Educational Eye and Face Protection; or

(iii) ANSI Z87.1-1989, American National Standard Practice for Occupational and Educational Eye and Face Protection.

(B) They must be reasonably comfortable when worn under the designated conditions.

(C) They must be durable.

(D) They must be capable of being disinfected.

(E) They must be easy to clean.

(e) Face shields must be an integral part of the firefighting helmet and may be installed in a fixed position or hinged allowing adjustment of the shields. Face shields must accommodate any of the following styles:

(A) Clear transparent

(B) Colored transparent

(f) Goggles must consist of a fully flexible frame, a lens holder or a rigid frame with integral lens or lenses, and a separate cushioned fitting surface on the full periphery of the facial contact area.

(A) Materials used for goggles must be chemical-resistant, nontoxic, nonirritating and slow-burning.

(B) There must be support on the face, such as an adjustable headband of suitable material or other appropriate support to hold the frame comfortably and snugly in front of the eyes.

Note: When NIOSH approved full face respiratory equipment is being used by firefighters, additional eye and face protection is not required.

(1[~~7~~]**6**) [~~Requirements for~~]Respiratory Protection. **The employer must develop and implement a respiratory protection program in accordance with** [~~See OAR 437,~~]Division 2/I, 1910.134, Respiratory Protection.

(1[~~8~~]**7**) Criteria for Approved Self-Contained Breathing Apparatus **(SCBA)**.

[~~(a) All compressed air cylinders used with self-contained breathing apparatus must meet DOT and NIOSH criteria. In emergency and lifesaving situations, approved self-contained compressed-air breathing apparatus may be used with approved cylinders from other approved self-contained compressed-air breathing apparatus provided that such cylinders are of the same capacity and pressure rating. Once the emergency is over, return SCBA's to their original approved condition.~~

~~(b) Self-contained breathing apparatus must be provided with an indicator that automatically sounds an alarm when the remaining air supply of the apparatus is reduced to within a range of 20 to 25 percent of its rated service time.~~]

(a) All compressed air cylinders used with approved SCBAs must meet DOT and NIOSH criteria.

(b) In emergency and lifesaving situations, approved SCBAs may be used with approved cylinders from other approved SCBAs provided that such cylinders are of the same capacity and pressure rating. Once the emergency is over, return SCBAs to their original approved condition.

(c) Approved SCBAs must be provided with at least one indicator that automatically sounds an alarm when the remaining air supply of the SCBA is reduced to within a range of 25 percent of its rated service time.

[~~(19) (Reserved)~~]

([~~20~~]**18**) Personal Alert Safety System (PASS).

(a) Each member involved in rescue, fire suppression, or other hazardous duties, must be provided with and must use a PASS device in the hazardous area when self-contained breathing apparatus is in use.

(b) All PASS devices must [~~meet~~]**be at least equivalent to** the requirements of NFPA 1982[~~,~~] **(1983):** Standard on Personal Alert Safety Systems [~~for Fire Fighters~~]**(PASS)**. [~~Each~~]PASS device**s purchased on or after (adopted effective date of this rule)** must be [~~tested~~]at least **equivalent to the requirements of NFPA 1982 (2013): Standard on Personal Alert Safety Systems (PASS)**[~~monthly and must be maintained according to the manufacturer's instructions~~].

(c) Each PASS device must be tested at least monthly and must be maintained according to the manufacturer's instructions.

[~~(21) (Reserved)~~]

[~~(22) (Reserved)~~]

[~~(23) (Reserved)~~]

([~~24~~]**19**) Breathing Air Compressors and Cylinders.

(a) In addition to the requirements contained in **Division 2/I,** 1910.134(i), **breathing air quality and use,** air samples must be taken every six months from the compressor and analyzed by the employer or an independent laboratory for Grade D breathing air.

(b) Air samples must also be **taken and analyzed**[~~tested~~] when the system is installed or repaired.

(c) Analysis **required by 437-002-0182(19)(a) and (b)** must be conducted according to ANSI/CGA Standard G7.1[~~ 1989 edition,~~] **(2011):** Commodity Specification for Air.

[~~(25) Identification of Hazardous Material Locations.~~

~~(a) A means must be provided for identifying nonresidential premises where hazardous materials are stored, as defined in the Uniform Fire Code, 1991 edition, Articles 4 and 80, and in quantities as set forth in the hazardous material permit required by Article 4 of the Uniform Fire Code.~~

~~(b) Hazardous chemicals required to be identified defined in Article 9, Section 9.110, and Article 80, Section 80.101 of the Uniform Fire Code.~~]

(2[~~6~~]**0**) Hazardous Material Response Plan.

(a) Fire departments that expect or plan to respond to hazardous material incidents must develop **and implement** a written response plan**, and comply with additional requirements of Division 2/H, 1910.120(q), Emergency response to hazardous substance releases**.

(b) The written response plan must contain the policies and procedures [~~on~~]**for**:

(A) Pre-emergency planning and coordination with outside parties,
(B) Personnel roles, lines of authority, training, and communication,
(C) Emergency recognition and prevention,
(D) Safe distances,
(E) Scene security and control,
(F) Evacuation procedures,
(G) Decontamination,
(H) Emergency medical treatment and first aid,
(I) Personnel withdrawal procedures,
(J) Critique of response and follow-up, **and**
(K) Personal protective equipment and emergency equipment and response procedures.

(c) The incident commander must be responsible for:

(A) Identifying of the hazardous substance and condition,
(B) Implementing emergency operations,
(C) Ensuring personal protective equipment is worn,
(D) Limiting access of hot zone to those with a specific mission assignment,
(E) Implementing decontamination procedures,
(F) Designating a safety officer,
(G) Using appropriately trained personnel, **and**
(H) Providing on-scene medical surveillance for emergency responders.

(2[~~7~~]**1**) Fire Apparatus Area.

(a) Walkways around apparatus must be kept free of obstructions.

(b) The station's apparatus floors must be kept free of grease, oil, and tripping hazards.

[~~(c) Class I or II flammable liquids must not be used to remove grease or dirt from apparatus.~~]

([~~d~~]**c**) Exhaust gases from [~~diesel or gasoline~~]apparatus within buildings must be maintained within the limits of [~~OAR 437,~~]Division 2/Z, [~~OAR~~]437-002-0382, Oregon Air Contaminant Rules. **(See Non-mandatory Appendix B, General Information and Recommendations, of this standard)**

(2[~~8~~]**2**) **Fire Apparatus** Design and Construction[~~ of Fire Apparatus~~].

(a) [~~All fire apparatus with the exception of specialized apparatus must conform to OAR 437, Division 2/N, Oregon Rules for Commercial and Industrial Vehicles.~~] **Employers who have acquired used fire apparatus or used military equipment prior to July 1985 are not required to bring them under a more stringent code than the one in force at the time the apparatus was manufactured. The exceptions to 437-002-0182(22)(a) are:**

(A) Seat belts as required by 437-002-0182(23)(e); and

(B) Roll-over protective structures (ROPS) on all open top off-road vehicles as required by 437-002-0182(22)(f).

(b) [~~Employers who have purchased used fire apparatus or used military equipment prior to the effective date of this division are not required to bring them under a more stringent code than the one in force at the time the apparatus was manufactured. The exception to this rule is regarding seat belts and communication systems between the tailboard and driver compartment as required by OAR 437-002-0182(29) (Automotive Fire Apparatus Equipment) and roll bars on all open top off-road vehicles as required by OAR 437-002-0182(28)(f).~~] **There must be steps, ladders or railing to allow safe access to and exit from areas on vehicles that employees access.**

(c) [~~Fire fighters' v~~]**V**ehicle tailboards must not project outboard of the vehicle sides or fenders and must be designed to provide safe footing.

(d) Exhaust systems must be installed and properly maintained**,** and must be designed [~~as~~] to minimize the exposure of exhaust gases by [~~the fire fighter~~]**employees**.

(e) The loaded gross weight and empty height of the vehicle must be posted in the vehicle such that it can be clearly read by the driver.

(f) [~~Roll bars must be in place on all open top off-road vehicles for rollover protection.~~] **Roll-over protective structures (ROPS) must be provided, installed and maintained on all open top off-road vehicles.**

(g) Vehicles with an obstructed view to the rear of the vehicle when backing must be equipped with:

(A) An automatic back-up alarm that must sound when backing and can be heard over the surrounding noise; or

(B) A video camera that provides the driver a full and clear view of the path of travel behind the vehicle.

Note: A spotter who is visible in the driver side mirror and stands to the rear of the vehicle to guide the driver while backing is an acceptable alternative to the requirements of 437-002-0182(22)(g)(A) and (B).

(2[~~9~~]**3**) [~~Automotive~~]Fire Apparatus [~~Equipment~~]**Operation**.

[~~(a) All equipment on a vehicle must be adequately secured when the vehicle is in motion.~~
~~(b) Workers being transported by fire department vehicles must ride only in designated secure positions. Safety restraints must be provided for fire fighters riding the tailboard. (See also OAR 437, Division 2/N, Oregon Rules for Commercial and Industrial Vehicles.)~~
~~(c) Vehicles with obstructed view to the rear of the vehicle when backing, must be equipped with:~~
~~(A) An automatic back-up alarm that must sound when backing; or~~
~~(B) A fire fighter, who is visible in the driver's left-side mirror, must stand to the rear of the truck to guide the driver while backing.~~
~~(d) Fire fighting vehicles must come to a full stop before workers disembark.~~
~~(e) If workers are required to ride the tailboard, an electrical signal system or voice communication system must be installed between the tailboard and the driver's compartment. A code of signals must be used for controlling the movement of the vehicle.~~
~~(f) When traffic flow is inhibited, vehicles equipped with emergency warning lights must be used to control traffic at emergency scenes. The use of traffic cones, fire department personnel, police, or other traffic control measures must be used as soon as practical.~~]
(a) Employees must be trained in the safe operation of each type of vehicle they are authorized to drive.

(b) The employer must not allow an employee to drive a vehicle on a public highway or road unless they have a valid driver's license.

(c) Any item found that may affect the safe operation of a vehicle must be reported immediately to the officer in charge or other appropriate person.

(d) Employees must not drive or ride in any vehicle known to be unsafe.

(e) Employees being transported by fire department vehicles must ride in designated seat-belted or safety-harnessed positions.

(f) The employer must not allow employees to ride on tailboards, tail steps or running boards.

(g) Vehicles must come to a full stop before employees disembark.

(h) All equipment on a vehicle must be adequately secured when the vehicle is in motion.

(i) When traffic flow is inhibited, vehicles equipped with emergency warning lights must be used to control traffic at emergency scenes. The use of traffic cones, fire department personnel, police, or other traffic control measures must be used as soon as practical.

([~~30~~]**24**) [~~Automotive~~]**Fire** Apparatus Maintenance and Repair. Each employer must establish written records and procedures whereby apparatus has:

(a) A**t a minimum, a** scheduled monthly maintenance check; or

(b) A maintenance check each time the apparatus is returned to the station following an emergency response, drill, or test drive.

([~~31~~]**25**) Tires. [~~Tires that are excessively worn, cracked, deteriorated or damaged in any way must not be used. All tires must have a minimum tread depth of 2/32-inch.~~]

(a) No motor vehicle must be operated on any tire that:

(A) Has body ply or belt material exposed through the tread or sidewall;

(B) Has any tread or sidewall separation;

(C)Is flat or has an audible leak; or

(D) Has a cut to the extent that the ply or belt material is exposed.

(b) Any tire on the front wheels of a bus, truck, or truck tractor must have a tread groove pattern depth of at least 4/32 of an inch when measured at any point on a major tread groove. The measurements must not be made where tie bars, humps, or fillets are located.

(c) Except as provided in 437-002-0182(25)(b), tires must have a tread groove pattern depth of at least 2/32 of an inch when measured in a major tread groove. The measurement must not be made where tie bars, humps or fillets are located.

([~~32~~]**26**) Aerial Devices.

(a) Aerial devices used for firefighting must be **annually** inspected and tested by a person [~~competent~~]**qualified** in performing such **inspections and** tests[~~ and inspections~~] according to [~~the recommendations of NFPA Standard 1914, 1991 edition, at least annually~~]**NFPA 1911 (2007): Standard for the Inspection, Maintenance, Testing, and Retirement of In-service Automotive Fire Apparatus**.

(b) Where **structural** defects are found in critical components of an aerial device, the repairs must be tested and certified according to NFPA **1911 (2007): Standard for the Inspection, Maintenance, Testing, and Retirement of In-service Automotive Fire Apparatus, by a registered professional engineer, the manufacturer of the apparatus,** [~~Standard 1914, 1991 edition, by a registered professional engineer or manufacturer of the apparatus~~] or an American Welding Society (AWS) Certified Welding Inspector.

(c) A permanent record of [~~such~~]tests and repairs **under 437-002-0182(26)(b) must**[~~shall~~] be maintained for each [~~unit~~]**aerial device**.

([~~33~~]**27**) Hose Drying Towers.

(a) Floor openings on hose tower platforms must be equipped with a guardrail meeting the requirements of [~~OAR 437,~~]Division 2/D, 1910.23, Guarding Floor and Wall Openings and Holes.

[~~(b)~~]**Note:** The toeboard requirements for elevated work platforms in **Division 2/D, 1910.23, do**[~~hose drying towers must~~] not apply **to hose drying towers** unless hand tools or objects other than hoses are carried onto the platforms.

([~~c~~]**b**) [~~The requirements for~~]**Fixed** ladders must meet the requirements of[~~ OAR 437,~~] Division 2/D, 437-002-0027, Fixed Ladders.

([~~d~~]**c**) Ropes used to hoist hose in the hose towers must have a [~~breaking strength to~~]safe [~~load strength (rated~~]working load[~~)~~]**limit that maintains a minimum safety factor**[~~ ratio~~] of 3[~~ to~~]**:**1.

([~~34~~]**28**) Drill Towers. Permanent fixed ladders on the outside of drill towers and drill buildings are exempt from [~~the requirements of~~]offset platform landings and ladder cage guards **requirements of Division 2/D, 437-002-0027, Fixed Ladders**.

([~~35~~]**29**) Testing, Maintenance and Inspection of Fire Service Equipment.

(a) The employer must **inspect and** maintain [~~and inspect~~]fire service equipment at least annually and perform [~~any~~]**all** tests recommended by the manufacturer[~~s~~] at the date of manufacture[~~, or the recommendations of NFPA or IFSTA~~].

(b) When the manufacturer's recommendations required under 437-002-0182(29)(a) are not available from the manufacturer, the employer must identify and follow the recommendations of an applicable consensus standard or curriculum that is nationally recognized and generally accepted by the fire service industry.

Note: Examples of a consensus standard or curriculum under 437-002-0182(29)(b) include, but are not limited to, NFPA standards and IFSTA manuals.

(3[~~6~~]**0**) Confined space**s**[~~ rescue~~].

(a) Employers [~~subject to this section~~]must comply with **Division 2/J,** 437-002-0146**, Confined Spaces,** for their own confined spaces.

(b) Employers [~~subject to this section~~]must comply with **Division 2/J,**437-002-0146**, Confined Spaces,** when they agree to serve as a designated rescue service provider.

(c) Employers [~~subject to this section~~]that will respond to emergency calls for rescue from confined spaces must:

(A) Train responders to recognize inherent confined space hazards before assigning or attempting any related duties in confined space rescues.

(i) Provide responders with understanding, knowledge, and skills necessary for safe performance of confined space rescues.

(ii) Practice a confined space rescue operation at least once every year from a real or simulated confined space.

(B) [~~Certify r~~]**R**esponders **must be certified** in writing to Department of Public Safety Standards and Training (DPSST) Fire[~~ F~~]**f**ighter 1 [~~levels~~]or equivalent.

(C) Use the Incident Management System **(IMS)** during confined space rescue incidents that meet the requirements of[~~ the~~] NFPA[~~ Standard~~] 1561[~~, Fire Department Incident Management~~]**(2008): Standard on Emergency Services Incident Management System**.

(D) Assess the situation and determine if it qualifies as a confined space incident.

(i) Classify the operation as a rescue or body recovery.

(ii) Assess and [~~secure~~]**control** physical hazards related to the incident or rescue.

(iii) Assess atmospheric hazards.

(I) Use calibrated direct-reading instruments to test the atmosphere in confined spaces for oxygen content, flammable gases and vapors, and toxic air contaminates.

(II) When calibrated direct-reading instruments are not available, the Incident Commander must assume the situation is [~~immediately dangerous to life and health (~~]IDLH[~~)~~] and [~~as~~]**en**sure that responders who enter are equipped with appropriate respiratory protective equipment **that comply with Division 2/I, 1910.134, Respiratory Protection**.

(iv) Determine if the space should be ventilated.

(v) Determine the precautions and procedures to follow for safe entry into the space.

(E) Provide the appropriate rescue, emergency, and personal protective equipment for safe entry into and rescue from confined spaces.

(F) Provide necessary equipment to facilitate non-entry retrieval for responders, unless the retrieval equipment would increase the overall risk or would not contribute to the rescue operations.

Note: For the reader's convenience, the following paragraphs are provided from Division 2/I, 1910.134 (g)(3) and (g)(4), Respiratory Protection:

(g)(3) Procedures for IDLH atmospheres.
For all IDLH atmospheres, the employer shall ensure that:

(i) One employee or, when needed, more than one employee is located outside the IDLH atmosphere;

(ii) Visual, voice, or signal line communication is maintained between the employee(s) in the IDLH atmosphere and the employee(s) located outside the IDLH atmosphere;

(iii) The employee(s) located outside the IDLH atmosphere are trained and equipped to provide effective emergency rescue;

(iv) The employer or designee is notified before the employee(s) located outside the IDLH atmosphere enter the IDLH atmosphere to provide emergency rescue;

(v) The employer or designee authorized to do so by the employer, once notified, provides necessary assistance appropriate to the situation;

(vi) Employee(s) located outside the IDLH atmospheres are equipped with:

(A) Pressure demand or other positive pressure SCBAs, or a pressure demand or other positive pressure supplied-air respirator with auxiliary SCBA; and either

(B) Appropriate retrieval equipment for removing the employee(s) who enter(s) these hazardous atmospheres where retrieval equipment would contribute to the rescue of the employee(s) and would not increase the overall risk resulting from entry; or

(C) Equivalent means for rescue where retrieval equipment is not required under paragraph (g)(3)(vi)(B).

(g)(4)Procedures for interior structural firefighting.
In addition to the requirements set forth under paragraph (g)(3), in interior structural fires, the employer shall ensure that:

(i) At least two employees enter the IDLH atmosphere and remain in visual or voice contact with one another at all times;

(ii) At least two employees are located outside the IDLH atmosphere; and

(iii) All employees engaged in interior structural firefighting use SCBAs.

Note 1 to paragraph (g): One of the two individuals located outside the IDLH atmosphere may be assigned to an additional role, such as incident commander in charge of the emergency or safety officer, so long as this individual is able to

perform assistance or rescue activities without jeopardizing the safety or health of any firefighter working at the incident.

Note 2 to paragraph (g): Nothing in this section is meant to preclude firefighters from performing emergency rescue activities before an entire team has assembled.

Stat. Auth.: ORS 654.025(2) and 656.726(4).
Stats. Implemented: ORS 654.001 through 654.295.
Hist: OR-OSHA Admin. Order 14-1993, f. 8/27/93, ef. 11/1/93.
OR-OSHA Admin. Order 2-1998, f. 3/11/98, ef. 3/11/98.
OR-OSHA Admin. Order 2-2000, f. 1/28/00, ef. 1/28/00.
OR-OSHA Admin. Order 12-2001, f. 10/26/01, ef. 10/26/01.
OR-OSHA Admin. Order 3-2005, f. 6/10/05, ef. 6/10/05.
OR-OSHA Admin. Order 9-2008, f. 9/19/08, ef. 1/1/09.
OR-OSHA Admin. Order 8-2009, f. 7/9/09, ef. 10/1/09.
OR-OSHA Admin. Order 6-2012, f. 9/28/12, ef. 4/1/13.
OR-OSHA Admin. Order X-2015, f. X/XX/15, ef. X/XX/XX.

[~~Appendix A — Protective Apparel and Respirators (Nonmandatory)~~

~~This appendix is for the code user's information; it is not mandatory.~~
~~1. Protective clothing.~~
~~OAR 437-002-0182(11) does not require all fire fighters to wear protective clothing. It is not the intention of these rules to require employers to provide a full ensemble of protective clothing for every fire fighter without considering the types of hazardous environments where the fire fighter might be exposed. These rules are intended to require adequate protection for those fire fighters who might be exposed to smoke, toxic gases, high temperatures, and fires in an advanced state. Therefore, the protective clothing requirements only apply to those fire fighters who perform structural fire fighting operation.~~

~~2. Additionally, the protective clothing requirements do not apply to the protective clothing worn during outside fire fighting operations (brush and forest fires, crash crew operations) or other special fire fighting activities. It is important that the protective clothing worn during these types of fire fighting operations reflect the hazards that are expected to be encountered by fire fighters.~~

~~3. Head protective devices are required to be provided with ear flaps so that the ear flaps will be available if need. It is recommended that ear protection always be used while fighting interior structural fires.~~

~~4. Many head protective devices are equipped with face shields to protect the eyes and face. These face shields meet the eye and face protection requirements of this rule as long as such face shields meet the requirements of OAR 437, Division 2/I, Personal Protective Equipment and ANSI Z87.1-1968, Eye and Face Protection.~~

~~5. Additionally, full facepieces, helmets, or hoods of approved breathing apparatus that meet the requirements of OAR 437, Division 2/I, 1910.134, Respiratory Protection, and 437-002-0182 (11), (12), and (16), also meet the eye and face protection requirements.~~

~~6. It is recommended that protective clothing be thoroughly cleaned or washed every six months or as needed, following the recommendations of the clothing manufacturer and the cleaning requirements of NFPA Standard 1500 and 1571, 1996 editions.~~

~~7. Respiratory protective devices. See OAR 437, Division 2/I, 1910.134, Respiratory Protection.~~]

Stat. Auth.: ORS 654.025(2) and 656.726(4).
Stats. Implemented: ORS 654.001 through 654.295.
Hist: OR-OSHA Admin. Order 14-1993, f. 8/27/93, ef. 11/1/93.
OR-OSHA Admin. Order 2-1998, f. 3/11/98, ef. 3/11/98.
OR-OSHA Admin. Order 2-2000, f. 1/28/00, ef. 1/28/00.
OR-OSHA Admin. Order 8-2009, f. 7/9/09, ef. 10/1/09.

[~~Appendix B — Apparatus Operation Signal Communication (Nonmandatory)~~

~~This is not a mandatory appendix. The signal system described here is only an example.~~

~~The following set of signals could be used for communication between the driver and a tiller or between the driver and fire fighters riding the tailboard:~~
~~(a) One long buzz means "Stop."~~
~~(b) Two buzzes means "Forward."~~
~~(c) Three buzzes means "Reverse."~~

~~Before any of the above functions are undertaken, with the exception of stopping, the same appropriate signal must be received from the tailboard. Example: If driver is responding to an alarm before starting out, two beeps is responding to an alarm before starting out, two beeps on the horn will be sounded. Driver will not advance, however, until the same signal is sounded from the tailboard or tiller.~~]

Stat. Auth.: ORS 654.025(2) and 656.726(4).
Stats. Implemented: ORS 654.001 through 654.295.
Hist: WCD Admin. Order, Safety 11-1985, f. 7/10/85, ef. 10/1/85.
OR-OSHA Admin. Order 14-1993, f. 8/27/93, ef. 11/1/93.

[~~Appendix C — Minimum Requirements for Live Fire Training~~
~~This is a mandatory appendix as required by OAR 437-002-0182(10)(c).~~

~~The following requirements must be met prior to live fire training:~~

~~Training:~~
___ ~~All personnel are trained to the requirements of DPSST Entry level firefighter or the educational requirements of the assigned position;~~
~~or~~
___ ~~Participants who have received training from another department or jurisdiction has provided written documentation that they meet the requirements of DPSST.~~
___ ~~Instructors are adequately trained to appropriately perform their tasks.~~

~~Pre-Burn planning for acquired structure:~~
~~A written plan:~~
___ ~~Is prepared by the Chief or their designee.~~
___ ~~Will be maintained and available for review by Oregon OSHA until the next live-fire training exercise.~~

___ ~~A pre-burn briefing has been conducted with all personnel involved in the exercise including:~~
___ ~~A walk through of the structure, with an emphasis on exits.~~
___ ~~A discussion of the evacuation plan, including any signals for evacuation.~~
___ ~~Methods of communication e.g., radio channels.~~
___ ~~Location for medical treatment, rehabilitation, and the safety officer or Incident Command (IC).~~
___ ~~Limitations of the exercise or hazards that cannot be removed, but are protected.~~
___ ~~Personal protective equipment that is required.~~
___ ~~Personal protective equipment that is available (must include all required PPE).~~
___ ~~Adequate first aid treatment is available for injuries.~~
___ ~~No personnel will be allowed to simulate a victim in live fire exercises.~~
___ ~~No fire will be set that will intentionally block an exit.~~
___ ~~Adequate food and fluids are available, as well as protection from extreme weather conditions.~~

~~Acquired Structures:~~
___ ~~Remove or contain all hazardous materials.~~
___ ~~Remove combustible material not intended for use in the training.~~
___ ~~Remove oil tanks or similar containers, or protect them from exploding or becoming over-pressurized.~~
___ ~~Only one fire is allowed inside a structure at a time.~~
___ ~~Remove or repair hazardous structural conditions to prevent a hazard to personnel.~~
___ ~~Disconnect all utilities to the training structure.~~
___ ~~Remove or protect utilities adjacent to the training structure prior to live fire training.~~
___ ~~Remove extraordinary weight overhead and debris in the training area that poses a hazard to personnel.~~
___ ~~Protect or remove adjacent buildings and property.~~
___ ~~All forms of asbestos have been addressed according to Division 2, Subdivision Z, OAR 1910.1001.~~

~~____ Remove all environmental hazards, such as toxic weeds, insects, or vermin that could be a hazard to personnel.~~
~~____ Remove vegetation that is a threat.~~
~~____ Personnel exposed to on-road vehicle traffic will wear highly visible upper body garments that comply with OAR 437-002-0134(7).~~
~~____ An inspection has been made by the Chief or their designee prior to the live fire exercise to ensure the provisions of this and all applicable standards are met.~~

~~Permanent Burn Structures:~~
~~____ Buildings used for training burns have been visually inspected by a qualified person prior to training activities.~~
~~____ Any damage that is a hazard has been corrected.~~
~~____ All equipment used in live fire training buildings has been inspected, and repaired if necessary, prior to use.~~
~~____ All equipment is operated by a qualified person.~~
~~____ A designated parking area is established for apparatus not used in the training.~~
~~____ Follow traffic control requirements of OAR 437-002-0224(12) if personnel are exposed to on-road vehicle traffic.~~
~~____ Keep persons not directly involved with the training behind designated fire lines.~~

~~Exterior Props:~~
~~____ Areas around props are free of obstructions or vegetation that are a hazard.~~
~~____ Props have been visually inspected by the Chief or their designee prior to the live fire exercise.~~
~~____ Defects have been repaired prior to use.~~
~~Vehicles used for live fire training:~~
~~____ All containers on or in the vehicle that contain flammables, oxidizers, or other gases are emptied or ventilated to prevent explosion or unexpected burning.~~
~~____ All batteries are removed.~~
~~____ Equipment and material is secured to prevent unexpected movement.~~
~~____ All split rims have been removed prior to ignition.~~

~~Water Supply:~~
~~____ The Chief or their designee has documented the minimum water supply necessary based on the criteria identified in NFPA 1142 Standard on Water Supplies, 2001 edition.~~
~~____ A reserve of 50 percent of the documented fire flow is available to protect surrounding structures.~~
~~____ Separate sources of water will be maintained for attack lines and backup lines.~~
~~____ Hydrants that will supply backup lines are identified and gated.~~
~~____ Areas around the structure will be maintained clear of non essential equipment or personnel to allow for ease of deployment of hose lines.~~

~~Fuels:~~
~~____ Use only fuels with known burning characteristics that are readily identifiable.~~
~~____ Maintain fuel load at a level that is controllable and readily predictable.~~
~~____ Do not use flammable or combustible liquids unless the structure has been specifically designed to use those liquids as fuel.~~
~~____ The Chief or their designee has certified the fuel load and any factors that would affect growth, development, or spread of fire in each room of the structure being burned prior to live fire evolutions.~~
~~____ Immediately halt training if any hazard is noted.~~

~~Ignition Sources:~~
~~___ Use a match, fusee, or drip torch to ignite an acquired structure.~~
~~___ Use a match, fusee, drip torch, or flammable gas to ignite a permanent burn structure.~~
~~___ Other ignition/fuel sources (with known characteristics) are used only for arson investigation and fire-cause determination training when:~~
~~___ The attack and back-up plans take into consideration the ignition/fuel source in providing for continued safety of all personnel.~~
~~___ Live fire training activities are limited to back-up, control, and extinguishing the fire.~~

~~Incident Command Station (ICS):~~
~~___ Establish and maintain an ICS in accordance with OAR 437-002-0182(8).~~
~~___ Establish and maintain accountability according to OAR 437-002-0182(9).~~
~~___ Establish and maintain a safety officer, independent from the IC (and not given other assignments) until the training is concluded.~~
~~___ Authorize the safety officer to halt the exercise at any time and for any reason.~~
~~___ Investigate all injuries by the Chief or their designee.~~
~~___ Halt training in cases of extreme weather.~~
~~___ Adequately train the safety officer for the position.~~
~~___ The safety officer may assign additional personnel in and around the structure to ensure the safety of personnel.~~
~~___ Only one ignition officer is designated who reports directly to the safety officer.~~
~~___ The ignition officer has a charged hose line when igniting the structure.~~
~~___ Ignition takes place under the direct supervision of the safety officer.~~
~~_____~~
~~Personal Protective Equipment:~~
~~___ Appropriate PPE, according to OAR 437-002-0182, is worn by all participants, including instructors.~~
~~___ Inspect all PPE for proper fit and maintenance prior to entering the structure.~~
~~___ Wear SCBA according to OAR Division 2, Subdivision I, 1910.134.~~
~~___ Use hearing protection according to OAR Division 2, Subdivision G, 1910.95.~~]

Stat. Auth.: ORS 654.025(2) and 656.726(4).
Stats. Implemented: ORS 654.001 through 654.295.
Hist: OR-OSHA Admin. Order 3-2005, f. 6/10/05, ef. 6/10/05.
OR-OSHA Admin. Order 8-2009, f. 7/9/09, ef. 10/1/09.
OR-OSHA Admin. Order 1-2012, f. 4/10/12, ef. 4/10/12.

Mandatory Appendix A
Minimum Requirements for Live Fire Training

This is a mandatory appendix as required by 437-002-0182(9)(e). Also see Student Prerequisites in NFPA 1403 (2012): Standard on Live Fire Training Evolutions. The following requirements must be met prior to live fire training:

Training:

Prior to participating in live fire training, trainees must receive training to meet the job performance requirements for Firefighter I in NFPA 1001 (2013): Standard for Fire Fighter Professional Qualifications, related to the following subjects:

- **Safety**
- **Fire behavior**
- **Portable extinguishers**
- **Personal protective equipment**
- **Ladders**
- **Fire hose, appliances, and streams**
- **Overhaul**
- **Water supply**
- **Ventilation**
- **Forcible entry**
- **Building Construction**

Note: Participants trained by another department or jurisdiction must provide written certification that they meet Oregon OSHA's requirements for live fire training.

Structures must be prepared for live fire training evolutions by:

- **Removing or neutralizing all hazardous storage conditions that would present a safety problem during the live fire training evolution.**
- **Removing closed containers and highly combustible materials from the structure.**
- **Venting oil tanks and similar closed vessels that cannot be removed.**
- **Rendering inert, any hazardous or combustible atmosphere within any tank or vessel.**
- **Removing or repairing any structural conditions that could present a safety problem during the live fire training evolution.**
- **Covering all floor openings.**
- **Repairing or replacing missing treads and rails.**
- **Removing any dangerous portion of chimneys.**
- **Repairing or patching holes in walls and ceilings.**
- **Removing low-density combustible fiberboard and other unconventional combustible interior finished.**
- **Removing extraordinary weight above the training area.**
- **Removing debris that creates or contributes to an unsafe condition.**
- **Disconnecting all utilities.**

- **Protecting or removing utility services adjacent to the live burn site.**
- **Removing any toxic weeds, insect hives, or vermin that could present a potential hazard.**
- **Having a qualified asbestos removal contractor remove all forms of asbestos.**
- **Removing trees, brush and surrounding vegetation that creates a hazard to participants.**

Qualified Safety Officer must:

- **Be appointed for all live fire training evolutions and have no other duties that would interfere with safety responsibilities.**
- **Have the authority to intervene and control any aspect of the operation when a potential or actual danger, accident or unsafe condition exists.**
- **Be responsible for the prevention of unsafe acts and the elimination of unsafe conditions.**
- **Provide for safety of all persons on the scene to include students, instructors, visitors and spectators.**
- **Inspect all participants' protective equipment prior to entry into the live fire evolution.**
- **Post and use control measures such as ropes, signs and fire line markings to indicate the perimeter of the live fire operations area.**
- **Directly supervise the ignition of each live training fire.**
- **The safety officer may assign additional personnel in and around the structure to ensure the safety of personnel.**

Training Officer or employer authorized representative must:

- **Be qualified to deliver the live fire training.**
- **Allow the participating student-to-instructor ratio not to be greater than 5:1.**
- **Coordinate all fire ground activities to ensure correct levels of safety.**
- **Prior to each specific evolution, determine the number of training attack lines and backup lines that are necessary.**
- **Ensure that each hose line is capable of delivering at minimum 95 gpm.**
- **Provide backup lines to ensure protection for personnel on training attack lines.**
- **Determine the rate and duration of water flow necessary for each evolution to include extinguishing the training fire, backup lines to protect personnel and any water necessary to protect exposed property.**
- **Meet the criteria for minimum water supply and delivery for live fire training evolutions identified in NFPA 1142 (2012): Standard on Water Supplies for Suburban and Rural Fire Fighting.**
- **Have separate sources of water supply for attack lines and backup lines to preclude the loss of both sources at the same time.**
- **Assign, one instructor to each functional crew, one instructor to each backup line, additional personnel to backup lines for mobility and one additional instructor for each additional functional assignment.**
- **Assess the selected fire room environment for factors that can affect the growth, development and spread of the fire.**

- **Stop the training exercise immediately when a qualified individual, the safety officer or him/herself determines through an ongoing assessment that the combustible nature of the environment represents a potential hazard.**
- **Allow a stopped exercise to continue only when actions have been taken to mitigate the hazard.**
- **Establish a method for fire ground communication among incident command, interior and exterior Divisions or Groups, the safety officer and external request for assistance.**
- **Designate one qualified person, not a student, to ignite materials so as to control those materials being burned.**
- **Require the qualified designated ignition person wear necessary protective clothing to include SCBA when igniting any fire.**
- **Require a charged hose line to accompany the qualified ignition person when igniting any fire.**
- **Coordinate with the safety officer the decision to ignite each training fire.**

The employer or an authorized/designated representative must:

- **Be responsible for full compliance with this standard.**
- **Prepare a preburn plan to be used during the preburn briefing session.**
- **Have a preburn briefing session with all participants discussing all facets of each evolution, prior to the actual live fire training evolution.**
- **Conduct a walk-through with all participants, in order to provide knowledge and familiarity with the layout of the structure and to facilitate any necessary evacuation of the structure.**
- **Identify and evaluate exits from the structure prior to each training burn.**
- **Make participants aware of exits from the structure prior to each training burn.**
- **Establish a building evacuation plan to include an evacuation signal that is demonstrated to all participants of the interior live fire training evolutions.**
- **Designate an area for staging, operations and parking of fire apparatus being used in the evolution and those not being used in the evolution.**
- **Designate, identify and monitor ingress and egress routes to ensure there availability in the event of an emergency during the evolution.**
- **Restrict all spectators to a restricted area outside the operation perimeter**
- **Remove from the operations area all possible sources of ignition, other than those that are under the direct supervision of the person responsible for the start of the training fire.**
- **Not use pressure-treated wood, rubber, plastic, straw or pesticide treated hay or harmful chemicals.**
- **Use fuels that have known burning characteristics that are as controllable as possible**
- **Use only the amount of fuel materials necessary to create the desired fire size**
- **Limit the fuel load to avoid conditions that could cause an uncontrolled flashover or backdraft.**
- **Have emergency medical services on site.**
- **Conduct a search of the space to ensure no unauthorized individuals or objects are present just prior to ignition.**
- **Permit only one fire within the structure at a time per evolution.**
- **Allow no fire in any designated exit route or path.**

- **Allow no person to play the role of a victim inside a structure.**
- **Cancel or postpone the training session in cases of extreme weather that could cause illness or injury.**
- **Equip all participants and require the use of all protective equipment necessary for the live fire training evolution.**
- **Require all personal protective equipment used during the live fire training evolution to meet the requirements of this section.**
- **Provide for rest and rehabilitation of participants at the scene to include necessary medical evaluations and treatment, food and fluid replenishment and relief from climate conditions.**
- **Ensure that all equipment is operated by a qualified person.**
- **Establish and maintain an incident management system (IMS) in accordance with 437-002-0182(7).**
- **Establish and maintain a personnel accountability system in accordance with 437-002-0182(8).**

Non-mandatory Appendix B
General Information and Recommendations

This non-mandatory appendix is for the reader's information only.

Protective Ensembles:

- **437-002-0182(10) does not require all firefighters to wear protective ensemble. It is not the intention of these rules to require employers to provide a full ensemble of protective clothing for every firefighter without considering the types of hazardous environments where the firefighter might be exposed. These rules are intended to require adequate protection for those firefighters who might be exposed to smoke, toxic gases, high temperatures, and fires in an advanced state. Therefore, the protective ensemble requirements under 437-002-0182(10) only apply to firefighters who perform structural firefighting activities.**

- **The protective ensemble requirements do not apply to the protective clothing worn during outside firefighting operations (e.g., brush and forest fires, crash crew operations) or other special firefighting activities. It is important that the protective clothing worn during these types of firefighting operations reflect the hazards that are expected to be encountered by firefighters.**

- **Many head protective devices are equipped with face shields to protect the eyes and face. These face shields meet the eye and face protection requirements of this rule as long as they meet the requirements of Division 2/I, Personal Protective Equipment and ANSI Z87.1-2003, Occupational Eye and Face Protection.**

- **It is recommended that protective clothing be thoroughly cleaned or washed every six months or as needed, following the recommendations of the clothing manufacturer and the cleaning requirements of NFPA 1971 (2000): Standard on Protective Ensemble for Structural Firefighting.**

- **The following recommendations are for fire departments who choose to use protective body armor:**

  - **The fire department should develop and implement written guidelines for the care, use and maintenance of the protective body armor in conjunction with the manufacturer's recommendations.**

  - **Protective body armor should meet or exceed National Institute of Justice NIF 0101.06, Threat Level II requirements, July 2008 edition.**

  - **Body armor should be correctly fitted following the manufacturer's recommendations and should not be used beyond the manufacturer's warranty.**

Exhaust gases from Apparatus:

Recommended practices to reduce exposure to apparatus gasoline and diesel exhaust gases:

- **For vehicles with particularly high emissions that remain in service, locate them where their emissions are best controlled using natural or local exhaust ventilation.**

- **Minimize the engine idle time inside the fire station as much as possible, and perform regular shift engine run-ups outside the station.**

- **Position vehicles or redirect their exhaust emissions to prevent exhaust from blowing towards interior doorways and stairways.**