

2016 PORTLAND FIRE CODE

BASED ON THE 2012 INTERNATIONAL FIRE CODE®
& 2014 OREGON FIRE CODE

EFFECTIVE DATE: JUNE 17, 2016

ADOPTED IN PORTLAND CITY CODE
TITLE 31 – FIRE REGULATIONS

ORDINANCE No. 187748



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PORTLAND FIRE & RESCUE AMENDMENTS TO THE 2014 OREGON FIRE CODE

CHAPTER 1 SCOPE AND ADMINISTRATION

SECTION 101 SCOPE AND GENERAL REQUIREMENTS

101.1 Title. These regulations shall be known as the [Portland Fire Code](#), herein after referred to as “this code.”

101.3 Intent. The purpose of this code is to establish the minimum requirements consistent with nationally recognized good practice for providing a reasonable level of life safety and property protection from the hazards of fire, explosion or dangerous conditions in new and existing buildings, structures and premises as authorized by ORS 476.030 [and the Portland City Code Title 31](#) and to provide safety to fire fighters and emergency responders during emergency operations.

ORS 476.030 and PCC Title 31 are not part of this code but are reproduced or paraphrased here for the reader’s convenience.

ORS 476.030 defines the duties and powers of the State Fire Marshal to adopt a state fire code.

[PCC Title 31](#) defines the fire regulations of the Portland City Code and the authority granted to the Portland Fire Marshal.

SECTION 102 APPLICABILITY

102.8 Subjects not regulated by this code. Where no applicable standards or requirements are set forth in this code, or are contained within other [laws, codes, regulations, ordinances or bylaws, statutes or administrative rules](#) adopted by the jurisdiction, compliance with applicable standards of the National Fire Protection Association or other nationally recognized fire safety standards, as *approved*, shall be deemed as prima facie evidence of compliance with the intent of this code. Nothing herein shall derogate from the authority of the *fire code official* to determine compliance with codes or standards for those activities or installations within the *fire code official’s* jurisdiction or responsibility.

SECTION 103 DEPARTMENT OF FIRE PREVENTION

103.1 (Not adopted. See PCC 31.10) General. *The department of fire prevention is established within the jurisdiction under the direction of the fire code official. The function of the department shall be the implementation, administration and enforcement of the provisions of this code.*

103.2 (Not adopted. See PCC 31.10) Appointment. *The fire code official shall be appointed by the chief appointing authority of the jurisdiction; and the fire code official shall not be removed from office except for cause and after full opportunity to be heard on specific and relevant charges by and before the appointing authority.*

103.3 (Not adopted. See PCC 31.10) Deputies. *In accordance with the prescribed procedures of this jurisdiction and with the concurrence of the appointing authority, the fire code official shall have the authority to appoint a deputy fire code official, other related technical officers, inspectors and other employees.*

[PCC Title 31](#) is not part of this code but is reproduced or paraphrased here for the reader’s convenience.

[PCC 31.10.040](#) details the organizational structure of the Fire Prevention Division.

[PCC 31.10.050](#) details the authority of the Fire Prevention Division.

SECTION 104 GENERAL AUTHORITY AND RESPONSIBILITIES

104.1 General. The *fire code official* is hereby authorized to enforce the provisions of this code as directed in ORS 476.060, OAR Chapter 837, Division 39 [and PCC Title 31](#) and shall have the authority to adopt policies, procedures, rules and regulations in order to clarify the application of its provisions. Modifications to this code shall not be less stringent than the minimum fire code adopted by the State Fire Marshal [unless previously approved by the State Fire Marshal](#). Such policies, procedures, rules and regulations shall be in compliance with the intent and purpose of this code and shall not have the effect of waiving requirements specifically provided for in this code.

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ORS 476.060, OAR Chapter 837, Division 39 and PCC Title 31 are not a part of this code but are reproduced or paraphrased here for the reader's convenience.

ORS 476.060 designates local fire marshals, local fire chiefs and chief of police as assistants to the State Fire Marshal by virtue of office held.

OAR Chapter 837, Division 39 regulates the administration of fire prevention programs.

OAR 837-039-0015(2)(b) allows a governmental subdivision to adopt a code that is consistent with state fire protection statutes and, is equal to or more stringent than, the fire code promulgated by the State Fire Marshal.

[PCC Title 31 defines the fire regulations of the Portland City Code and the authority granted to the Portland Fire Marshal.](#)

104.10 (Not adopted. See PCC 31.10.40) Fire investigations. *The fire code official, the fire department or other responsible authority shall have the authority to investigate the cause, origin and circumstances of any fire, explosion or other hazardous condition. Information that could be related to trade secrets or processes shall not be made part of the public record except as directed by a court of law. Also see ORS 476.030(4) and ORS 476.210(1).*

ORS 476.030(4), ORS 476.210(1) and PCC Title 31.10.40 are not a part of this code but are reproduced or paraphrased here for the reader's convenience.

ORS 476.030(4) gives the State Fire Marshal the authority to investigate or cause an investigation to determine the probable cause, origin and circumstances of any fire.

ORS 476.210(1) requires the municipal fire marshal, fire department chief, constables and other officers referred to in ORS 476.060 to investigate the cause, origin and circumstances of each fire occurring in their respective jurisdictions.

[PCC 31.10.040 establishes the Arson Investigation Unit, describes their duties, and outlines their authority.](#)

SECTION 105 PERMITS

105.1 General. Permits shall be in accordance with Sections 105.1.1 through 105.7.16. [Also see PCC 31.40.](#)

105.1.2 Types of permits. There shall be two types of permits as follows:

1. Operational permit. [\(Referred to as a Temporary permit in PCC Title 31.40.020.\)](#) An operational permit allows the applicant to conduct an operation or a business for which a permit is required by Section 105.6 for either:

[PCC Title 31 is not part of this code but is reproduced or paraphrased here for the reader's convenience.](#)

[PCC 31.40. provides details and requirements for special use permits.](#)

[PCC 31.40.20 details activities requiring temporary permits.](#)

105.6 Required operational permits. An operational permit as authorized by law or regulation shall be obtained from the State Fire Marshal for the operations set forth in Sections 105.6A through 105.6E. When a governmental subdivision has enacted regulations, the local fire code official may issue operational permits for the operations set forth in Sections 105.6A through 105.6.46. [Also see PCC 31.40.](#)

105.6A Fireworks, agricultural. An operational Agricultural Fireworks Permit is required to use or explode fireworks to scare or repel birds or animals under ORS 480.122.

105.6B Fireworks, public display of. An operational Public Display of Fireworks Permit is required to hold a display of fireworks under ORS 480.130. [Also see PCC 31.40.020.](#)

105.6C Fireworks, retail sales. An operational Retail Sales of Fireworks Permit is required to sell fireworks at retail to individual members of the general public as described in ORS 480.127. [Also see PCC 31.40.020.](#)

105.6.1 (Not adopted) Aerosol products. An operational permit is required to manufacture, store or handle an aggregate quantity of Level 2 or Level 3 aerosol products in excess of 500 pounds (227 kg) net weight.

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105.6.2 (Not adopted) Amusement buildings. An operational permit is required to operate a special amusement building.

105.6.3 (Not adopted) Aviation facilities. An operational permit is required to use a Group H or Group S occupancy for aircraft servicing or repair and aircraft fuel-servicing vehicles. Additional permits required by other sections of this code include, but are not limited to, hot work, hazardous materials and flammable or combustible finishes.

105.6.4 (Not adopted) Carnivals and fairs. An operational permit is required to conduct a carnival or fair.

105.6.5 (Not adopted) Cellulose nitrate film. An operational permit is required to store, handle or use cellulose nitrate film in a Group A occupancy.

105.6.6 (Not adopted) Combustible dust-producing operations. An operational permit is required to operate a grain elevator, flour starch mill, feed mill, or a plant pulverizing aluminum, coal, cocoa, magnesium, spices or sugar, or other operations producing *combustible dusts* as defined in Chapter 2.

105.6.7 (Not adopted) Combustible fibers. An operational permit is required for the storage and handling of *combustible fibers* in quantities greater than 100 cubic feet (2.8 m³).

105.6.8 (Not adopted) Compressed gases. An operational permit is required for the storage, use or handling at *normal temperature and pressure* (NTP) of *compressed gases* in excess of the amounts listed in Table 105.6.8.

105.6.9 (Not adopted) Covered mall buildings. An operational permit is required for:

1. The placement of retail fixtures and displays, concession equipment, displays of highly combustible goods and similar items in the mall.
2. The display of liquid- or gas-fired equipment in the mall.
3. The use of open-flame or flame-producing equipment in the mall.

105.6.10 (Not adopted) Cryogenic fluids. An operational permit is required to produce, store, transport on site, use, handle or dispense *cryogenic fluids* in excess of the amounts listed in Table 105.6.10.

105.6.11 (Not adopted. See 105.6.23) Cutting and welding. An operational permit is required to conduct cutting or welding operations within the jurisdiction.

105.6.12 (Not Adopted) Dry cleaning plants. An operational permit is required to engage in the business of dry cleaning or to change to a more hazardous cleaning solvent used in existing dry cleaning equipment.

105.6.13 (Not adopted. See PCC 31.40.020) Exhibits and trade shows. An operational permit is required to operate exhibits and trade shows.

105.6.14 Explosives. An operational permit is required for the manufacture, storage, handling, transportation, sale or use of any quantity of *explosives, explosive materials*, fireworks or pyrotechnic special effects within the scope of Chapter 56. [Also see PCC 31.40.020.](#)

105.6.15 (Not Adopted) Fire hydrants and valves. An operational permit is required to use or operate fire hydrants or valves intended for fire suppression purposes which are installed on water systems and accessible to a fire apparatus access road that is open to or generally used by the public.

105.6.16 (Not Adopted) Flammable and combustible liquids. An operational permit is required:

105.6.17 (Not Adopted) Floor finishing. An operational permit is required for floor finishing or surfacing operations exceeding 350 square feet (33 m²) using Class I or Class II liquids.

105.6.18 (Not Adopted) Fruit and crop ripening. *An operational permit is required to operate a fruit- or crop-ripening facility or conduct a fruit-ripening process using ethylene gas.*

105.6.19 (Not Adopted) Fumigation and thermal insecticidal fogging. An operational permit is required to operate a business of fumigation or thermal insecticidal fogging and to maintain a room, vault or chamber in which a toxic or flammable fumigant is used.

105.6.20 (Not Adopted) Hazardous materials. An operational permit is required to store, transport on site, dispense, use or handle hazardous materials in excess of the amounts listed in Table 105.6.20.

[Note: Table 105.6.20 is applicable when referenced elsewhere in the code.](#)

105.6.21 (Not Adopted) HPM facilities. An operational permit is required to store, handle or use hazardous production materials.

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105.6.22 (Not Adopted) High-piled storage. An operational permit is required to use a building or portion thereof as a *high-piled storage* area exceeding 500 square feet (46 m²).

105.6.23 Hot work operations. An operational permit is required for hot work ~~including, but not limited to~~ only when cutting or welding is performed in restricted areas, including:

1. Areas where the sprinkler system is impaired.
2. Areas where there exists the potential of an explosive atmosphere, such as locations where flammable gasses, liquids or vapors are present.
3. Areas with readily ignitable materials, such as storage of large quantities of bulk sulfur, baled paper, cotton, lint, dust or loose combustible materials.
4. On board ships at dock or ships under construction or repair.
5. At other locations as specified by the Fire Marshal.

105.6.24 (Not Adopted) Industrial ovens. An operational permit is required for operation of industrial ovens regulated by Chapter 30.

105.6.25 (Not Adopted) Lumber yards and woodworking plants. An operational permit is required for the storage or processing of lumber exceeding 100,000 board feet (8333 ft³) (236 m³).

105.6.26 Liquid- or gas-fueled vehicles or equipment in assembly buildings. An operational permit is required to display four or more motorized vehicles in a building other than an automotive dealership when not associated with a permitted event. ~~operate or demonstrate liquid- or gas-fueled vehicles or equipment in assembly buildings.~~ Also see PCC 31.40.020.

105.6.27 LP-gas. An operational permit is required for:

1. Storage or use of LP-gas in excess of 17 ounces.
Exception: Storage or use of LP-gas as allowed in Section 6103.
2. Storage or use of LP-gas in outdoor market with gatherings of 50 or more people.

~~1. Storage and use of LP-gas.~~

~~**Exception:** A permit is not required for individual containers with a 500-gallon (1893 L) water capacity or less or multiple container systems having an aggregate quantity not exceeding 500 gallons (1893 L), serving occupancies in Group R-3.~~

~~2. Operation of cargo tankers that transport LP-gas.~~

105.6.28 (Not Adopted) Magnesium. An operational permit is required to melt, cast, heat treat or grind more than 10 pounds (4.54 kg) of magnesium.

105.6.29 (Not Adopted) Miscellaneous combustible storage. An operational permit is required to store in any building or upon any premises in excess of 2,500 cubic feet (71 m³) gross volume of combustible empty packing cases, boxes, barrels or similar containers, rubber tires, rubber, cork or similar combustible material.

105.6.30 Open burning. An operational permit is required for the kindling or maintaining of an open fire or a fire on any public street, alley, road, or other public or private ground. Instructions and stipulations of the permit shall be adhered to. Also see PCC 31.40.020.

105.6.31 (Not Adopted) Open flames and torches. An operational permit is required to remove paint with a torch; or to use a torch or open-flame device in a wildfire risk area.

105.6.32 (Not Adopted) Open flames and candles. An operational permit is required to use open flames or candles in connection with assembly areas, dining areas of restaurants or drinking establishments.

105.6.33 (Not Adopted) Organic coatings. An operational permit is required for any organic-coating manufacturing operation producing more than 1 gallon (4 L) of an organic coating in one day.

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105.6.34 Places of assembly. An operational permit is required for to operate a place of assembly the following:

1. Festivals, celebrations and special events of a temporary nature with an Occupant load of 500 or more people, as calculated by the Fire Marshal, in an assembly building without fixed seating.
2. Gatherings of 50 or more people for civic, social, recreational or religious functions in structures not approved for assembly use.
3. Trade shows with six or more vending booths or display tables.
4. Outdoor gatherings of 50 or more people confined by fences, walls, or similar structures.

105.6.35 (Not Adopted) Private fire hydrants. An operational permit is required for the removal from service, use or operation of private fire hydrants.

105.6.36 Pyrotechnic special effects material. An operational permit is required for use and handling of pyrotechnic special effects material. Also see PCC 31.40.020.

105.6.37 (Not Adopted) Pyroxylin plastics. An operational permit is required for storage or handling of more than 25 pounds (11 kg) of cellulose nitrate (pyroxylin) plastics and for the assembly or manufacture of articles involving pyroxylin plastics.

105.6.38 (Not Adopted) Refrigeration equipment. An operational permit is required to operate a mechanical refrigeration unit or system regulated by Chapter 6.

105.6.39 (Not Adopted) Repair garages and motor fuel-dispensing facilities. An operational permit is required for operation of repair garages and automotive, marine and fleet motor fuel-dispensing facilities.

105.6.40 (Not Adopted) Rooftop heliports. An operational permit is required for the operation of a rooftop heliport.

105.6.41 (Not Adopted) Spraying or dipping. An operational permit is required to conduct a spraying or dipping operation utilizing flammable or *combustible liquids* or the application of combustible powders regulated by Chapter 24.

105.6.42 (Not Adopted) Storage of scrap tires and tire byproducts. An operational permit is required to establish, conduct or maintain storage of scrap tires and tire byproducts that exceed 2,500 cubic feet (71 m³) of total volume of scrap tires and for indoor storage of tires and tire byproducts.

105.6.43 Temporary membrane structures and tents. An operational permit is required for a temporary membrane structure or tent if any of the following applies: ~~to operate an air supported temporary membrane structure or a tent having an area in excess of 400 square feet (37 m²).~~

1. Used for the gathering of 50 or more people and are confined by fences, walls, tents with sides or similar structures.
2. Individual membrane structures or tents that are in excess of 700 square feet (65 m²).
3. The aggregate area exceeds 700 square feet (65 m²) of multiple membrane structures or tents that are placed side by side without a fire break clearance of at least 12 feet (3658 mm).

Exceptions:

1. ~~Tents used exclusively for recreational camping purposes.~~
2. ~~Tents open on all sides, which comply with all of the following:~~
 - 2.1. ~~Individual tents having a maximum size of 700 square feet (65 m²).~~
 - 2.2. ~~The aggregate area of multiple tents placed side by side without a fire break clearance of not less than 12 feet (3658 mm) shall not exceed 700 square feet (65 m²) total.~~
 - 2.3. ~~A minimum clearance of 12 feet (3658 mm) to structures and other tents shall be provided.~~

105.6.44 (Not Adopted) Tire-rebuilding plants. An operational permit is required for the operation and maintenance of a tire-rebuilding plant.

105.6.45 (Not Adopted) Waste handling. An operational permit is required for the operation of wrecking yards, junk yards and waste material-handling facilities.

105.6.46 (Not Adopted) Wood products. An operational permit is required to store chips, hogged material, lumber or plywood in excess of 200 cubic feet (6 m³).

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105.6.47 Theatrical firearms. [Use of blanks associated with a live performance.](#) Also see [PCC 31.40.020](#).

105.7 Required construction permits. The *fire code official* as authorized by law or regulation may issue construction permits for work as set forth in Sections 105.7.1 through 105.7.16. [Any construction permits required for the removal of systems or equipment listed in Sections 105.7.1 through 105.7.16 shall only be issued after first receiving approval from the building official.](#) Also see [PCC 31.30.040](#).

[PCC Title 31 is not part of this code but is reproduced or paraphrased here for the reader's convenience.](#)

[PCC 31.30.040 details activities requiring permits.](#)

105.7.1 Automatic fire-extinguishing systems. A construction permit is required for installation, modification [or removal](#) of an automatic fire-extinguishing system. Maintenance performed in accordance with this code is not considered a modification and does not require a permit.

105.7.6 Fire alarm and detection systems and related equipment. A construction permit is required for installation modification [or removal](#) of fire alarm and detection systems and related equipment. Maintenance performed in accordance with this code is not considered a modification and does not require a permit.

105.7.7 Fire pumps and related equipment. A construction permit is required for installation, modification [or removal](#) of fire pumps and related fuel tanks, jockey pumps, controllers and generators. Maintenance performed in accordance with this code is not considered a modification and does not require a permit.

105.7.10 (Not adopted) Industrial ovens. A construction permit is required for installation of industrial ovens covered by Chapter 30.

105.7.11 [Liquefied natural gas \(LNG\) or compressed natural gas \(CNG\).](#) A construction permit is required for installation, modification [or removal](#) of LNG or CNG of any size that is connected to a system. Also see [PCC 31.30.40](#).

105.7.12 Private fire hydrants. A construction permit is required for the installation, modification [or removal](#) of private fire hydrants.

105.7.14 Spraying or dipping. A construction permit is required to install, modify [or remove](#) a spray room, dip tank or booth.

105.7.16 (Not adopted) Temporary membrane structures and tents. A construction permit is required to erect an air-supported temporary membrane structure or a tent having an area in excess of 400 square feet (37 m²).

SECTION 106 INSPECTIONS

106.1 (Not adopted. See [PCC 31.50.010](#)) Inspection authority. The *Fire Code official* is authorized to enter and examine any building, structure, marine vessel, vehicle or premises in accordance with section 104.3 for the purpose of enforcing this code. Also see [ORS 476.150\(1\)](#).

[ORS 476.150\(1\) and PCC Title 31.50.010 are](#) not a part of this code but [are](#) reproduced or paraphrased here for the reader's convenience.

[ORS 476.150\(1\)](#) grants permission to the State Fire Marshal and deputies, at all reasonable hours, to enter into all buildings and upon all premises, except private residences, for the purpose of inspection to ascertain if fire hazards exist therein or thereon

[PCC 31.50.010 The Fire Marshal or the Fire Marshal's designees may, at all reasonable hours, enter into all buildings and upon all premises, except private residences, to conduct an inspection to determine if fire hazards exist.](#)

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SECTION 108 BOARD OF APPEALS

108.1 (Not adopted. See PCC 31.10.080) Board of appeals established. In order to hear and decide appeals of orders, decisions or determinations made by the *fire code official* relative to the application and interpretation of this code, there shall be and is hereby created a board of appeals. The board of appeals shall be appointed by the governing body and shall hold office at its pleasure. The *fire code official* shall be an ex officio member of said board but shall have no vote on any matter before the board. The board shall adopt rules of procedure for conducting its business, and shall render all decisions and findings in writing to the appellant with a duplicate copy to the *fire code official*.

108.2 (Not adopted. See PCC 31.10.080) Limitations on authority. An application for appeal shall be based on a claim that the intent of this code or the rules legally adopted hereunder have been incorrectly interpreted, the provisions of this code do not fully apply, or an equivalent method of protection or safety is proposed. The board shall have no authority to waive requirements of this code.

108.3 (Not adopted. See PCC 31.10.080) Qualifications. The board of appeals shall consist of members who are qualified by experience and training to pass on matters pertaining to hazards of fire, explosions, hazardous conditions or *fire protection systems* and are not employees of the jurisdiction. At least one member shall be a qualified architect who has practiced the profession for at least two years.

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[PCC 31.10.080 describes appeal process and procedures.](#)

SECTION 109 VIOLATIONS

109.4 (Not adopted. See PCC 31.50) Violation penalties. *Persons who shall violate a provision of this code or shall fail to comply with any of the requirements thereof or who shall erect, install, alter, repair or do work in violation of the approved construction documents or directive of the fire code official, or of a permit or certificate used under provisions of this code, shall be guilty of a [SPECIFY OFFENSE], punishable by a fine of not more than [AMOUNT] dollars or by imprisonment not exceeding [NUMBER OF DAYS], or both such fine and imprisonment. Each day that a violation continues after due notice has been served shall be deemed a separate offense.*

109.4.1 (Not adopted. See PCC 31.50) Violation penalties. Any owner or occupant of any building or premises, who fails to comply with an order to correct any fire safety deficiency or violation of this code not appealed from, shall be punished by a fine as provided by ORS 479.990.

SECTION 111 STOP WORK ORDERS

111.1 (Not adopted. See 31.30.040) Order. Whenever the *fire code official* finds any work regulated by this code being performed in a manner contrary to the provisions of this code or in a dangerous or unsafe manner, the *fire code official* is authorized to issue a stop work order.

CHAPTER 2 DEFINITIONS

SECTION 202 GENERAL DEFINITIONS

CERTIFICATE OF FITNESS. A written statement issued by the Fire Marshal certifying that the person to whom the certificate is issued has passed an examination as to his or her qualifications to perform the specifically identified work and that he or she has authority to perform such work during the term specified.

NIGHTCLUB. For the purpose of Section 903.2.1.6, Nightclub means an A-2 occupancy use which has areas for dancing or viewing performers and serves food or drink. Nightclub does not include houses of worship, theaters with fixed seating, banquet halls, or lodge halls.

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SECTION 308 OPEN FLAMES

308.2 (Not adopted) Permits required. Permits shall be obtained from the *fire code official* in accordance with Section 105.6 prior to engaging in the following activities involving open flame, fire and burning:

SECTION 311 VACANT PREMISES

311.5 (Not Adopted. See FIR Policy 1.11) Placards. Any vacant or abandoned buildings or structures determined to be unsafe pursuant to Section 110 of this code relating to structural or interior hazards shall be marked as required by Sections 311.5.1 through 311.5.5.

SECTION 315 GENERAL STORAGE

315.2 (Not Adopted) Permit required. A permit for miscellaneous combustible storage shall be required as set forth in Section 105.6.

CHAPTER 4 EMERGENCY PLANNING AND PREPAREDNESS

SECTION 403 PUBLIC ASSEMBLY AND EVENTS

403.1 (See PCC 31.20.060) Fire watch personnel. When, in the opinion of the *fire code official*, it is essential for public safety in a place of assembly or any other place where people congregate, because of the number of *persons*, or the nature of the performance, exhibition, display, contest or activity, the *owner*, agent or lessee shall provide one or more fire watch personnel, as required and *approved*, to remain on duty during the times such places are open to the public, or when such activity is being conducted.

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[PCC 31.20.060 describes temporary fire watch procedures.](#)

CHAPTER 5 FIRE SERVICE FEATURES

SECTION 501 GENERAL

501.1 Scope. 501.1 Fire service features for buildings, structures and premises shall comply with this chapter and [the Portland Fire & Life Safety Requirements for Fire Department Access and Water Supplies Design Guide \(See FIR Policy 2.01\)](#). See also Oregon Revised Statutes (ORS) 92.044, 203, 221, 195.065, 368.039, 478.920 and Oregon Administrative Rule (OAR) 918-480-0100.

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SECTION 506 KEY BOXES

506.1 [\(See PCC 31.20.90\)](#) **Where required.** Where access to or within a structure or an area is restricted because of secured openings or where immediate access is necessary for life-saving or fire-fighting purposes, the *fire code official* is authorized to require a key box to be installed in an *approved* location. The key box shall be of an *approved* type listed in accordance with UL 1037, and shall contain keys to gain necessary access as required by the *fire code official*.

[PCC Title 31 is not part of this code but is reproduced or paraphrased here for the reader's convenience.](#)

[PCC 31.20.090 Authority to require key boxes.](#)

SECTION 507 FIRE PROTECTION WATER SUPPLIES

507.5.7 Control valve. [To facilitate maintenance and repair, each newly installed hydrant shall be equipped with a separate control valve. The control valve shall be installed within 10 feet of the hydrant. Control valve access shall be by an approved assembly mounted in a permanent hard surface such as concrete or asphalt.](#)

Exception: [Alternatives may be approved where the distance or surface requirements are impractical.](#)

SECTION 508 FIRE COMMAND CENTERS

508.1.5 Required features. The *fire command center* shall comply with NFPA 72 and shall contain the following features:

19. [On-site fire protection water tank fill valve control switch, tank level indicators, tank low level alarm, and tank fill signals.](#)

CHAPTER 6 BUILDING SERVICES AND SYSTEMS

SECTION 604 EMERGENCY AND STANDBY POWER SYSTEMS

604.2.20 Refrigeration systems. [If continuous ventilation, or alarm detection is required for refrigeration systems, such systems shall be provided with a standby source of power to supply electrical power in the event of loss from the primary source.](#)

SECTION 606 MECHANICAL REFRIGERATION

606.8 Refrigerant ~~detector~~ detection system. Machinery rooms shall contain a refrigerant ~~detector~~ [detection system](#) with an audible and visual alarm. The detector, or a sampling tube that draws air to the detector, shall be located in an area where refrigerant from a leak will concentrate. The alarm shall be actuated at a value not greater than the corresponding TLV-TWA values shown in the *International Mechanical Code* for the refrigerant classification. Detectors and alarms shall be placed in *approved* locations. The detector shall transmit a signal to an *approved* location.

606.17 Standby power. [Where continuous ventilation or alarm detection is required, such systems shall be provided with standby power.](#)

SECTION 609 COMMERCIAL KITCHEN HOODS

609.3.5 Certifications. [Individuals, who service, inspect, test or maintain hoods, grease-removal devices, fans, ducts and other appurtenances shall obtain the proper certificate of fitness from the fire code official in accordance with PCC 31.20.120.](#)

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[PCC 31.20.120 defines activities that require a certificate of fitness.](#)

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CHAPTER 9 FIRE PROTECTION SYSTEMS

SECTION 901 GENERAL

901.4.7 Tracer wire for underground piping. All non-conductive fire mains shall have a tracer wire, minimum 18 gauge copper, installed in the trench for locating the pipe. The tracer wire shall run the full length of the installed pipe, with ends terminating at the sprinkler riser, in the valve box, or an 18 inch tail terminating above grade at other locations such as at the FDC or a fire hydrant.

901.4.8 Certifications. Individuals, who install, inspect, test or maintain fire protection systems or portable fire extinguishers shall obtain the proper *certificate of fitness* from the *fire code official* in accordance with PCC 31.20.120.

TABLE 901.6.1
FIRE PROTECTION SYSTEM MAINTENANCE STANDARDS

Portable fire extinguishers	NFPA 10
Carbon dioxide fire-extinguishing system	NFPA 12 ⁽¹⁾
Halon 1301 fire-extinguishing systems	NFPA 12A ⁽¹⁾
Dry-chemical extinguishing systems	NFPA 12A, 17 ⁽¹⁾
Wet-chemical extinguishing systems	NFPA 17A ⁽¹⁾
Water-based fire protection systems	NFPA 25 ⁽²⁾⁽³⁾
Fire alarm systems	NFPA 72
Water-mist systems	NFPA 750 ⁽¹⁾
Clean-agent extinguishing systems	NFPA 2001

(1) Inspections and tests shall be performed by an individual with an appropriate certificate of fitness from the Portland Fire Marshal's office.

(2) At least once every 5 years all inspection and tests shall be performed by an individual with a certificate of fitness for Automatic Fire Sprinkler Systems. An individual designated by the owner or their representative may perform all other inspections and tests, except as noted in item (3) below.

(3) Annual tests of drypipe valves, pre-action valves, and antifreeze systems shall be performed by an individual with a certificate of fitness for Automatic Fire Sprinkler Systems.

901.7 Systems out of service. Where a required *fire protection system* is out of service, the fire department and the *fire code official* shall be notified immediately and, where required by the *fire code official*, the building shall either be evacuated or an *approved* fire watch shall be provided for all occupants left unprotected by the shutdown until the *fire protection system* has been returned to service. Where utilized, fire watches shall be provided with at least one *approved* means for notification of the fire department and their only duty shall be to perform constant patrols of the protected premises and keep watch for fires. Also see PCC 31.20.060.

SECTION 902 DEFINITIONS

902.1 Definitions. The following terms are defined in Chapter 2:

NIGHTCLUB

CERTIFICATE OF FITNESS

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SECTION 903 AUTOMATIC SPRINKLER SYSTEMS

903.2.1.6 Nightclub. An automatic sprinkler system shall be provided throughout a Group A-2 nightclubs as defined in this code.

903.3.5.1.2 Residential-combination Combined fire/domestic services. A single combination water supply shall be allowed for all types of sprinkler systems provided that the domestic demand is added to the sprinkler demand as required by NFPA 13R, or a fire service listed automatic shut-off valve that shuts off the domestic side upon fire sprinkler activation is provided.

903.3.3 Obstructed locations. Automatic sprinklers shall be installed ~~with due regard to obstructions that will delay activation or obstruct the water distribution pattern~~ in accordance with NFPA 13 obstruction criteria and the listing requirements of the sprinkler head.

903.3.5.2 Secondary water supply. An automatic secondary on-site water supply having a capacity not less than the most demanding hydraulically calculated sprinkler demand, including the hose stream requirement, shall be provided for high-rise buildings in Seismic Design Category C, D, E or F as determined by the *International Building Code*. An additional fire pump shall not be required for the secondary water supply unless needed to provide the minimum design intake pressure at the suction side of the pump supplying the *automatic sprinkler system*. The secondary water supply shall have a duration of not less than 30 minutes as determined by the occupancy hazard classification in accordance with NFPA 13.

903.3.7 Nightclubs in Existing Buildings. Existing nightclubs with an occupant load greater than 100 shall be protected by an approved automatic fire sprinkler system designed and installed in accordance with Section 903.3.1.1 and 903.4 as follows:

1. Throughout the story containing the nightclub; and
2. Throughout all stories below the story containing the nightclub; and
3. In the case of a nightclub located below the level of exit discharge, throughout all stories intervening between that story and the level of exit discharge including the level of exit discharge.

SECTION 905 STANDPIPE SYSTEMS

905.4 Location of Class I standpipe hose connections. Class I standpipe hose connections shall be provided in all of the following locations:

1. In every required *stairway*, a hose connection shall be provided for each floor level above or below grade. Hose connections shall be located at ~~an intermediate~~ the main floor level landing between floors and must be consistent throughout the building, unless otherwise *approved* by the *fire code official*.

SECTION 907 FIRE ALARM AND DETECTION SYSTEMS

907.3.1 Duct smoke detectors. Smoke detectors installed in ducts shall be *listed* for the air velocity, temperature and humidity present in the duct. Duct smoke detectors shall be connected to the building's fire alarm control unit when a fire alarm system is required by Section 907.2. Activation of a duct smoke detector shall initiate a visible and audible supervisory signal at a constantly attended location and shall perform the intended fire safety function in accordance with this code and the *International Mechanical Code*. Duct smoke detectors shall not be used as a substitute for required open area detection and shall not activate the occupant notification system.

904.11.6.2 Extinguishing system service. Automatic fire-extinguishing systems shall be serviced at least every 6 months and after activation of the system. Inspection shall be by qualified individuals. ~~and a certificate of inspection shall be forwarded to the fire code official upon completion.~~

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SECTION 909 SMOKE CONTROL SYSTEMS

909.12 Detection and control systems. Fire detection systems providing control input or output signals to mechanical smoke control systems or elements thereof shall comply with the requirements of Section 907. Such systems shall be equipped with a control unit complying with UL 864 and *listed* as smoke control equipment.

Control systems for mechanical smoke control systems shall include provisions for verification. Verification shall include positive confirmation of actuation, testing, manual override, the presence of power downstream of all disconnects and, through a preprogrammed weekly test sequence, report abnormal conditions audibly, visually and by printed report.

[Exception: In lieu of weekly testing for stairway and hoistway pressurization systems, monthly testing will be approved. This approval may be revoked at the discretion of the Fire Marshal for reasons of non-compliance.](#)

909.16 Fire-fighter's smoke control panel. A fire-fighter's smoke control panel for fire department emergency response purposes only shall be provided and shall include manual control or override of automatic control for mechanical smoke control systems. The panel shall be located in a *fire command center* complying with Section 508 in high-rise buildings or buildings with smoke-protected assembly seating. In all other buildings, the fire-fighter's smoke control panel shall be installed in an *approved* location adjacent to the fire alarm control panel. The fire-fighter's smoke control panel shall comply with Sections 909.16.1 through 909.16.3.

[The smoke control panel for high-rise buildings shall include a visual depiction of the building showing typical floor plan\(s\) with locations of exit enclosures and elevator shafts. The panel shall also include section views of the building to show the extent of travel for each exit enclosure and elevator. Exit enclosures and elevator shafts shall be labeled on the plan section views to match the labeling used in the building itself.](#)

SECTION 912 FIRE DEPARTMENT CONNECTIONS

912.4 Signs. A metal sign with raised letters at least 1 inch (25 mm) in size shall be mounted on all fire department connections serving automatic sprinklers, standpipes or fire pump connections. Such signs shall read: AUTOMATIC SPRINKLERS or STANDPIPES or TEST CONNECTION or a combination thereof as applicable. [Where the building is protected by a fire pump, signage shall also indicate the design pressure of the fire pump and the levels served.](#) Where the fire department connection does not serve the entire building, a sign shall be provided indicating the portions of the building served.

CHAPTER 11 FIRE AND LIFE SAFETY REQUIREMENTS FOR EXISTING BUILDINGS

SECTION 1103 FIRE SAFETY REQUIREMENTS FOR EXISTING BUILDINGS

1103.5.3 Nightclubs in Existing Buildings. [Existing nightclubs with an occupant load greater than 100 shall be protected by an approved automatic fire sprinkler system designed and installed in accordance with Section 903.3.1.1 and 903.4 as follows:](#)

- [1. Throughout the story containing the *nightclub*; and](#)
- [2. Throughout all stories below the story containing the *nightclub*; and](#)
- [3. In the case of a nightclub located below the level of exit discharge, throughout all stories intervening between that story and the level of exit discharge including the level of exit discharge.](#)

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SECTION 1104 MEANS OF EGRESS FOR EXISTING BUILDINGS

1104.24 Egress path markings. Existing high-rise buildings of Groups A, B, E, I, M and R-1 occupancies shall be provided with luminous *egress* path markings in accordance with Section 1024.

Exceptions:

1. Open, unenclosed stairwells in historic buildings designated as historic under a state or local historic preservation program.
2. [Buildings equipped with an automatic sprinkler system designed and installed in accordance with Section 903.3.1.1.](#)
3. [Buildings equipped with egress illumination in interior exit stairways, interior exit ramps and exit passageways and that are connected to emergency power system.](#)

CHAPTER 20 AVIATION FACILITIES

SECTION 2001 GENERAL

2001.3 (Not Adopted) Permits. For permits to operate aircraft-refueling vehicles, application of flammable or combustible finishes and hotwork, see Section 105.6.

CHAPTER 22 COMBUSTIBLE DUST-PRODUCING OPERATIONS

SECTION 2201 GENERAL

2201.2 (Not Adopted) Permits. Permits shall be required for combustible dust-producing operations as set forth in Section 105.6.

CHAPTER 23 MOTOR FUEL-DISPENSING FACILITIES AND REPAIR GARAGES

SECTION 2310 MARINE MOTOR FUEL-DISPENSING FACILITIES

2310.1 General. The construction of marine motor fuel-dispensing facilities shall be in accordance with the *International Building Code*, [PCC Titles 19, 28](#) and NFPA 30A. The storage of Class I, II or III liquids at marine motor fuel-dispensing facilities shall be in accordance with this chapter and Chapter 57.

[PCC Titles 19 and 28](#) are not part of this code but are reproduced or paraphrased here for the reader's convenience. [Title 19, 19.16.135 A through E](#) (Harbor Code) provides details on fueling at other than marine motor fuel dispensing facilities. [Title 28, 28.06.050 E](#) (Floating Structures Code), provides details on standpipes systems for moorages.

2310.6.1 Moorage Standpipes. Standpipes shall be installed, maintained, and tested annually as required by [PCC Title 28, Floating Structure Code](#).

2310.6.1 Standpipe hose stations. Piers, wharves and floats at marine motor vehicle fuel dispensing stations with any portion in excess of 250 feet (76 200 mm) from fire apparatus access shall be equipped with an approved wet standpipe system installed in accordance with Chapter 9.

Exception: Waterlines shall normally be dry where subject to freezing temperatures.

Fire hose, where provided, shall be enclosed within a cabinet, and hose stations shall be labeled: FIRE HOSE — EMERGENCY USE ONLY.

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CHAPTER 27 SEMICONDUCTOR FABRICATION FACILITIES

SECTION 2701 GENERAL

2701.5 (Not Adopted) Permits. Permits shall be required as set forth in Section 105.6.

CHAPTER 31 TENTS AND OTHER MEMBRANE STRUCTURES

SECTION 3103 TEMPORARY TENTS AND MEMBRANE STRUCTURES

3103.4 Permits. Permits shall be required as set forth in Sections 105.6, 105.7. [Also see PCC 31.40.020.](#)

[PCC Title 31 is not part of this code but is reproduced or paraphrased here for the reader's convenience.](#)
[PCC 31.40.020 describes activities requiring temporary permits.](#)

CHAPTER 33 FIRE SAFETY DURING CONSTRUCTION AND DEMOLITION

SECTION 3304 PRECAUTIONS AGAINST FIRE

3304.5 Fire watch (Also see PCC 31.20.060). When required by the *fire code official* for building demolition, or building construction during working hours that is hazardous in nature, qualified personnel shall be provided to serve as an on-site fire watch. Fire watch personnel shall be provided with at least one approved means for notification of the fire department and their sole duty shall be to perform constant patrols and watch for the occurrence of fire.

SECTION 3308 OWNER'S RESPONSIBILITY FOR FIRE PROTECTION

3308.2.1 Prefire plans for construction of 4 – and 5-story woodframe structures. Prior to combustible construction of 4- and 5-story woodframe structures the fire prevention program superintendent shall schedule a pre-construction meeting with the *fire code official* to review the approved prefire plan. The intent of the prefire plan is to specify measures and practices to be incorporated to minimize the potential for the occurrence and spread of fires, and to facilitate firefighting efforts during building construction. The prefire plan shall include, but not be limited to, a plan that addresses the following issues:

1. On-site perimeter fencing.
2. On-site after hours security.
3. What actions will be taken to minimize the size of fire compartments during construction and control radiant heat that could threaten buildings in close proximity.
4. What actions will be taken to control sources of ignition and provide for early detection including times when workers are not present.
5. What actions will be taken to control both horizontal and vertical fire spread.
6. How structural stability will be maintained during a fire to prevent early structural collapse.

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CHAPTER 35 WELDING AND OTHER HOT WORK

SECTION 3504 FIRE SAFETY REQUIREMENTS

3504.2 Fire watch ([Also see PCC 31.20.060](#)). Fire watches shall be established and conducted in accordance with Sections 3504.2.1 through 3504.2.6.

CHAPTER 55 CRYOGENIC FLUIDS

SECTION 5501 GENERAL

5501.2 (Not Adopted) Permits. *Permits shall be required as set forth in Section 105.6.*

CHAPTER 56 EXPLOSIVES AND FIREWORKS

SECTION 5601 GENERAL

5601.2 Permits required. Permits shall be required as set forth in Section 105.6 through 105.6D, 105.6.14 and 105.6.36 ([Also see PCC 31.40](#))

[PCC Title 31 is not part of this code but is reproduced or paraphrased here for the reader's convenience.](#)
[PCC 31.40.020 describes activities requiring temporary permits.](#)
[PCC 31.40.060 General Requirements for Explosives, Pyrotechnics, Blasting Agents and Fireworks.](#)
[PCC 31.40.070 Additional Requirements for Sale, Use and Possession of Fireworks and Pyrotechnics.](#)
[PCC 31.40.080 Additional Requirements for Blasting Activities.](#)

CHAPTER 57 FLAMMABLE AND COMBUSTIBLE LIQUIDS

SECTION 5701 GENERAL

5701.6. (Not Adopted) Construction documents. Two sets of construction documents shall be submitted with each application for a plan review to store more than 1,000 gallons (3785 L) of flammable or combustible liquids outside of buildings in drums or tanks. Applications for such plan review shall be submitted to the State Fire Marshal on a form provided by the State Fire Marshal. The plans shall consist of a plot plan showing the location of any buildings, structures or tanks with relationship to the premises and the pertinent distances, piping and valves, tank capacities, diking, details of the design and construction, and fire protection. The plans shall also indicate the method of storage, quantities to be stored, distances from buildings and property lines, access ways, fire protection, and provisions for spill control, drainage control and secondary containment, along with any other information requested by the State Fire Marshal. In the event an installation includes buildings and related equipment in addition to tanks, separate construction plans, specifications, etc., shall be submitted to the building department having jurisdiction.

CHAPTER 61 LIQUEFIED PETROLEUM GASES

SECTION 6103 INSTALLATION OF EQUIPMENT

6101.3 Construction documents. Where a single LP-gas container is more than 2,000 gallons (7570 L) in water capacity or the aggregate water capacity of LP-gas containers is more than 4,000 gallons (15 140 L), the installer shall submit *construction documents* for such installation. The State Fire Marshal may collect a plan review fee as required by Oregon Administrative Rule, Chapter 837, Division 30. [Also see PCC 31.30.40.](#)

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APPENDIX B FIRE-FLOW REQUIREMENTS FOR BUILDINGS

SECTION B101 GENERAL

B101.1 Scope. The procedure for determining fire-flow requirements for buildings or portions of buildings hereafter constructed shall be in accordance with this appendix and [the Portland Fire & Life Safety Requirements for Fire Department Access and Water Supplies Design Guide \(See FIR Policy 2.01\)](#), ~~as required by the *fire code official*.~~ This appendix does not apply to structures other than buildings.

APPENDIX K

SECTION K103

K103.1 Requirements. [Haunted houses and similar temporary installations shall comply with all the following:](#)

- [11. If required by the *fire code official*, staff guides shall be provided with two-way communications that have been demonstrated to be capable of being heard throughout the entire facility. A central public address system or a portable system can be used in place of the two-way communications provided that it has the ability to be controlled in a central location. Communications shall be used for the purpose of giving directions during emergency situations.](#)