

**CHAPTER 9**  
**OREGON AMENDMENTS**  
2007 OSSC

**901.1 Scope.** The provisions of this chapter shall specify where fire protection systems are required and shall apply to the design, installation and operation of fire protection systems. **Fire department access, fire-fighting water supply and fire hydrants shall be according to the International Fire Code.**

**[F]903.1.1 Alternative protection.** Alternative automatic fire-extinguishing systems complying with Section 904 shall be permitted in lieu of automatic sprinkler protection where recognized by the applicable standard and approved by the ~~fire code official~~ **building official.**

**[F]903.2.7 Group R.** An automatic sprinkler system installed in accordance with Section 903.3 shall be provided throughout all buildings with a Group R fire area. **For distance requirements to access roads and fire hydrants, see the International Fire Code.**

**903.2.7.1 Alternate fire sprinkler system requirements. The requirements of Section 903.2.7.2 are adopted by the State of Oregon for optional use in municipalities.**

**903.2.7.2 Requirements. Where substantial alterations are made or substantial damage occurs to an existing non-sprinkled Group R building designed and constructed under the provisions of this code, an approved automatic multipurpose sprinkler system complying with NFPA 13D shall be installed only in the substantially altered or damaged dwelling units. When more than 50 percent of the dwelling units within a building are substantially altered or damaged, the entire Group R Occupancy shall be provided with an NFPA 13D sprinkler system or equivalent.**

**Substantial Alteration. Any alterations of the total cost of any alterations (including, but not limited o, electrical, mechanical, plumbing or structural changes) for a building or facility within any 12 month period amounts to 40% or more of the assessed value of the structure before the building alteration occurred. For the purpose of this chapter , standard building maintenance , re-wiring, residing or re-roofing as not considered as alterations.**

**Substantial damage. Any damage of any origin to a structure whereby the cost of restoring the structure to its original condition would be equal to or exceed 40% of the assessed value of the structure before the alteration occurred.**

**[F]903.2.9 Group S-2.** An automatic sprinkler system shall be provided throughout buildings ~~classified as all enclosed parking garages in accordance with Section 406.4 or where located beneath other groups.~~ **where one of the following exists:**

- 1. A Group S-2 enclosed parking garage fire area exceeds 12,000 square feet.**
- 2. The Group S-2 enclosed parking garage is located beneath other groups.**

**Exception:** Enclosed parking garages located beneath Group R-3 occupancies as applicable in Section 101.2.

**[F]903.2.10 Piers or wharves and ~~W~~ windowless stories in all occupancies.**

An automatic sprinkler system shall be installed in the locations set forth in Sections 903.2.10.1 through 903.2.10.1.3.

**Exception:** Group R-3 and Group U.

**903.2.10.4 Piers or wharves. An automatic sprinkler system shall be installed under piers or wharves regulated by Section 419 of this code, which exceed 200 feet (60 960 mm) in length or exceed 5,000 square feet (465 m<sup>2</sup>) in area. Such systems shall comply with NFPA 307, Standard for the Construction and Fire Protection of Marine Terminals, Piers, and Wharves.**

**[F]903.3.1.1.1 Exempt locations.** Automatic sprinklers shall not be required in the following rooms or areas where such rooms or areas are protected with an approved automatic fire detection system in accordance with Section 907.2 that will respond to visible or invisible particles of combustion. Sprinklers shall not be omitted from any room merely because it is damp, of fire-resistance-rated construction or contains electrical equipment.

1. Any room where the application of water, or flame and water, constitutes a serious life or fire hazard.
2. Any room or space where sprinklers are considered undesirable because of the nature of the contents, when approved by the ~~fire code official~~ **building official**.
3. Generator and transformer rooms separated from the remainder of the building by walls and floor/ceiling or roof/ceiling assemblies having a fire-resistance rating of not less than 2 hours.
4. In rooms or areas that are of noncombustible construction with wholly noncombustible contents.

**[F]903.4.1 Signals.** Alarm, supervisory and trouble signals shall be distinctly different and automatically transmitted to an approved central station, remote supervising station or proprietary supervising station as defined in NFPA 72 or, when approved by the ~~fire code official~~ **building official**, shall sound an audible signal at a constantly attended location.

**Exceptions:**

1. Underground key or hub valves in roadway boxes provided by the municipality or public utility are not required to be monitored.
2. Backflow prevention device test valves, located in limited area sprinkler system supply piping, shall be locked in the open position. In occupancies required to be equipped with a fire alarm system, the backflow preventer valves shall be electrically supervised by a tamper switch installed in accordance with NFPA 72 and separately annunciated.

**[F]904.2 Where required.** Automatic fire-extinguishing systems installed as an alternative to the required automatic sprinkler systems of Section 903 shall be approved by the ~~fire code official~~ **building official**. Automatic fire-extinguishing systems shall not be considered

alternatives for the purposes of exceptions or reductions permitted by other requirements of this code.

**[F]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 floor level landing between floors, unless otherwise approved by the building official.

2. On each side of the wall adjacent to the exit opening of a horizontal exit.

**Exception:** Where floor areas adjacent to a horizontal exit are reachable from exit stairway hose connections by a 30-foot (9144 mm) hose stream from a nozzle attached to 100 feet (30480 mm) of hose, a hose connection shall not be required at the horizontal exit.

3. In every exit passageway at the entrance from the exit passageway to other areas of a building.

4. In covered mall buildings, adjacent to each exterior public entrance to the mall and adjacent to each entrance from an exit passageway or exit corridor to the mall.

5. Where the roof has a slope less than four units vertical in 12 units horizontal (33.3-percent slope), each standpipe shall be provided with a hose connection located either on the roof or at the highest landing of stairways with stair access to the roof. An additional hose connection shall be provided at the top of the most hydraulically remote standpipe for testing purposes.

6. Where the most remote portion of a nonsprinklered floor or story is more than 150 feet (45 720 mm) from a hose connection or the most remote portion of a sprinklered floor or story is more than 200 feet (60 960 mm) from a hose connection, the ~~fire code~~ **building** official is authorized to require that additional hose connections be provided in approved locations.

**905.5.1.1 Group A occupancies with an occupant load exceeding 1,000. In Group A occupancies with an occupant load exceeding 1,000, Class II standpipe hose connections shall be provided where process or conditions exist which would nullify the effectiveness of the automatic sprinkler system.**

**905.5.1.2 Groups I, H, B, S, M, F, Division 1 occupancies less than four stories in height, but greater than 20,000 square feet per floor. In Groups I, H, B, S, M, F, Division 1 occupancies less than four stories in height, but greater than 20,000 square feet per floor Class II standpipe hose connections shall be provided where process or conditions exist which would nullify the effectiveness of the automatic sprinkler system.**

**[F]905.5.3 Class II system 1-inch hose.** A minimum 1-inch (25 mm) hose shall be permitted to be used for hose stations in light-hazard occupancies where investigated and listed for this service and where approved by the ~~fire code official~~ **building official**.

**[F]907.2.6 Group I.** A manual **and automatic** fire alarm system ~~and an automatic fire detection system~~ shall be installed in Group I occupancies. ~~An electrically supervised, automatic smoke detection system shall be provided in accordance with Sections 907.2.6.1 and 907.2.6.2.~~

**Exception:** Manual fire alarm boxes in resident or patient sleeping areas of Group I-1 and I-2 occupancies shall not be required at exits if located at all nurses' control stations or other constantly attended staff locations, provided such stations are visible and continuously accessible and that travel distances required in Section 907.3.1 are not exceeded.

**[F]907.2.6.2 Group I-2. Supervised smoke detectors that comply with UL 268 shall be provided in** corridors, ~~in nursing homes (both intermediate care and skilled nursing facilities), detoxification facilities~~ **sleeping rooms** and spaces open to the corridors shall be equipped with an automatic fire detection system. Hospitals shall be equipped with smoke detection as required in Section 407.2.

**Exceptions:**

- ~~1. Corridor smoke detection is not required in smoke compartments that contain patient sleeping rooms where patient sleeping units are provided with smoke detectors that comply with UL 268. Such detectors shall provide a visual display on the corridor side of each patient sleeping unit and an audible and visual alarm at the nursing station attending each unit.~~
2. Corridor smoke detection is not required in smoke compartments that contain patient sleeping rooms where patient sleeping unit doors are equipped with automatic door-closing devices with integral smoke detectors ~~on the unit sides~~ installed in accordance with their listing, provided that the integral detectors **shall be supervised and** perform the required alerting function **in an approved manner**.

**[F]907.2.6.2.2 Annunciation. Smoke detectors in patient sleeping rooms of I-2 occupancies shall provide a visual display on the corridor side of each patient sleeping unit and an audible and visual alarm at the nursing station attending each unit.**

**[F]907.9.1.3 Groups I-1, ~~and R-1~~ and R-4.** Groups I-1, ~~and R-1~~ **and R-4** sleeping units ~~in accordance with Table 907.9.1.3~~ shall be provided with a visible alarm notification appliance, activated by both the in-room smoke alarm and the building fire alarm system **in accordance with Chapter 11 and NFPA 72**.

**[F]907.9.1.4 Group R-2.** In Group R-2 occupancies required by Section 907 to have a fire alarm system, ~~all dwelling units and sleeping units shall be provided with the capability to support visible alarm notification appliances in accordance with ICC A117.1.~~ **visual alarms shall be provided within common and public areas, but are not required within individual dwelling units.**

**[F] TABLE 907.9.1.3  
VISIBLE AND AUDIBLE ALARMS  
(DELETE TABLE)**

**909.5.1 Leakage area.** The total leakage area of the barrier is the product of the smoke barrier gross area monitored by the allowable leakage area ratio, plus the area of other openings such as gaps and operable windows. Compliance shall be determined by achieving the minimum air pressure difference across the barrier with the system in the smoke control mode for mechanical smoke control systems. Passive smoke control systems tested using other approved means such as door fan testing shall be as approved by the fire code **building** official.

**909.7 Air flow design method.** When approved by the ~~fire code~~ **building** official, smoke migration through openings fixed in a permanently open position, which are located between smoke control zones by the use of the airflow method, shall be permitted. The design airflow shall be in accordance with this section. Airflow shall be directed to limit smoke migration from the fire zone. The geometry of openings shall be considered to prevent flow reversal from turbulent effects.

**909.8 Exhaust method.** When approved by the ~~fire code~~ **building** official, mechanical smoke control for large enclosed volumes, such as in atriums or malls, shall be permitted to utilize the exhaust method. Smoke control systems using the exhaust method shall be designed in accordance with NFPA 92B.

**909.9 Design fire.** The design fire shall be based on a rational analysis performed by the registered design professional and approved by the ~~fire code~~ **building** official. The design fire shall be based on the analysis in accordance with Section 909.4 and this section.

**909.10 Equipment.** Equipment such as, but not limited to, fans, ducts, automatic dampers and balance dampers, shall be suitable for its intended use, suitable for the probable exposure temperatures that the rational analysis indicates, and as approved by the ~~fire code~~ **building** official.

**[F]909.15 Control diagrams.** Identical control diagrams showing all devices in the system and identifying their location and function shall be maintained current and kept on file with the ~~fire code~~ **building** official, the fire department and in the fire command center in format and manner approved by the fire chief.

**[F]909.18.8.3.1 Report filing.** A copy of the final report shall be filed with the ~~fire code~~ **building** official and an identical copy shall be maintained in an approved location at the building.

**[F]909.19 System acceptance.** Buildings, or portions thereof, required by this code to comply with this section shall not be issued a certificate of occupancy until such time that the ~~fire code~~ **building** official determines that the provisions of this section have been fully complied with, and that the fire department has received satisfactory instruction on the operation, both automatic and manual, of the system.

**Exception:** In buildings of phased construction, a temporary certificate of occupancy, as approved by the building official, shall be permitted provided that those portions of the building to be occupied meet the requirements of this section and that the remainder does not pose a significant hazard to the safety of the proposed occupants or adjacent buildings.

**[F]910.4 Mechanical smoke exhaust.** Where approved by the ~~fire code~~ **building** official, engineered mechanical smoke exhaust shall be an acceptable alternate to smoke and heat vents.