



Oregon

Tina Kotek, Governor

Oregon State Fire Marshal
3991 Fairview Industrial Drive SE
Salem, Oregon 97317
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Date: April 23, 2025

Location: 221014AB00111

RE: SPR25-02, Construct new 8,283 sq ft industrial structure

From: Clara Butler, Deputy State Fire Marshal

If there are questions regarding Fire Code issues, please contact Deputy State Fire Marshal Clara Butler at 541-233-9938 or email at clara.butler@osfm.oregon.gov

Findings:

WATER:

- **Water Supply – 2022 OFC Appendix B / Fire Hydrant Spacing – 2022 OFC Section 507 and Appendix C**
 - Type VB construction at 8,283 square feet = 2,500 gpm = minimum of 3 hydrant(s) required with not more than 450 feet spacing between them and not more than 225 feet to a hydrant from any point on the street.
- **Fire Flow Reductions – 2022 OFC B105.3** The total required fire flow may be reduced by the following section, but in no case shall the resulting fire flow be less than 1500 gallons per minute at 20 psi residual.
 - **Sprinkler System – 2022 OFC B Table 105.2** A reduction in required fire flow of up to 75 %, as approved, is allowed when the building is provided with an approved automatic sprinkler system installed in accordance with Section 903.3.1.1 (NFPA 13 2019) or 903.3.1.2 (NFPA 13R) of the OFC.
- **Fire Hydrant – 2022 OFC 507.5.1**
 - Where a portion of the building is more than 400 ft from a hydrant on a fire apparatus access road as measured by an approved route around the exterior of the building, on-site hydrants and mains shall be provided where required.
 - Exception: For buildings equipped throughout with an approved automatic sprinkler system, the distance requirement shall be 600 ft.

- **Area Separation – 2022 OFC B104.2**
 - Portions of buildings which are separated by fire walls without openings constructed in accordance with the International Building Code are allowed to be considered as separate fire flow calculation areas.

- **Obstruction & Protection of Fire Hydrants – 2022 OFC 507.5.4 – 507.5.6**
 - A 3 foot clear space shall be maintained around the circumference of fire hydrant. When exposed to vehicular damage, concrete curbing, sidewalks, or 4 inch concrete filled bollards placed 3 feet from hydrant shall suitably protect fire hydrants.

- **Fire Safety during Construction – 2022 OFC 501.4**
 - Approved fire department access roads, required water supply, fire hydrants, and safety precautions shall be installed and serviceable prior to and during the time of construction. The requirements of NFPA 241 (2019) shall be followed until project is complete.

- **Fire Sprinkler Systems** shall be installed per NFPA 13 (2019) if required:
 - Separate permits will be required for the aboveground sprinkler system and the underground sprinkler supply line(s).
 - If there are greater than 20 sprinkler heads, the system is required to have a fire alarm monitoring system. All fire alarm systems require a FA permit.
 - 2022 OFC 912 Fire Department Connections: The location of fire department connections shall be approved by fire code official. The FDC/PIV shall not be under any combustible projections or overhangs.
 - NFPA 14 (2019)– 6.4.5.4 Fire department connections shall be located not more than 100 ft from the nearest fire hydrant connected to an approved water supply.
 - NOTE – If the building is sprinklered, the sprinkler system will need to be designed to the specific use that will be occurring in the building. If the sprinkler system is not designed appropriately it will limit the types of businesses that can occupy the space. This also includes the height of storage in the building. In order to have high piled storage (greater than 12 ft), the sprinkler system shall be designed accordingly.

- **Note: Before the application can be deemed complete a stamped engineered fire flow analysis will be required.**

ACCESS:

- **Premises Identification – 2022 OFC 505.1**
 - Approved numbers or addresses shall be placed on all new and existing buildings in such a position as to be plainly visible and legible from the street or road fronting the property. Said numbers shall contrast with their background and visible at night. Number/letter shall be a minimum of 4" high and a 0.5" stroke width.
- **Required Access – 2022 OFC 504.1**
 - Exterior doors and openings shall be made readily accessible for emergency access by the fire department. An approved access walkway leading from fire apparatus access roads to exterior openings shall be provided.
- **Fire Apparatus Access Roads – 2022 OFC 503 & Appendix D**
 - Fire apparatus access **roads shall extend to within 150 ft of all portions of the building** as measured by an approved route around the exterior of the building.
 - Fire apparatus access roads shall have an unobstructed width of **not less than 20 feet** and an unobstructed vertical clearance of not less than 13 feet 6 inches.
 - Fire apparatus roads shall be designed and maintained to support the imposed loads of fire apparatus and shall be surfaced so as to provide **all-weather driving** capabilities.
 - The required **turning radius** shall be no less than 18' inside and 38' outside. The **grade** of the fire apparatus access roads shall be within the limits established by the fire code official.
 - The angles of approach and departure for fire apparatus access roads shall be within the limits established by the *fire code official* based on the fire department's apparatus.
 - Traffic calming devices shall be prohibited unless *approved* by the *fire code official*.
- **Authority – 2022 OFC 503.2.2**
 - The fire code official shall have the authority to modify the dimensions specified in 503.2.1.
- **Fire Apparatus Access Roads-2022 OFC 503.1**
 - Fire apparatus access roads shall be provided and maintained at all times during construction.

- **Fire Lanes – 2022 OFC 503.3 & D103.6**
 - Approved signs or other approved notices shall be provided for fire apparatus access roads to identify such roads or prohibit the obstruction thereof. Such signs or notices shall be kept in legible conditions at all times. The stroke shall be 1 inch with letters 6 inches high and read **“No Parking Fire Lane”**. Spacing for signage shall be every 50 feet.
 - Recommended to also (in addition to Fire lane signs) paint fire lane curbs in bright red paint with white letters.
 - **D103.6.1 Roads 20-26 Ft. Wide:** Shall have Fire Lane signs posted on both sides of a fire lane.
 - **D103.6.2 Roads more than 26-32 Ft. Wide:** Roads 26-32 ft wide shall have a Fire Lane signs posted on one side of the road as a fire lane.
- **Aerial Access Roads – 2022 OFC D105**
 - Where the vertical distance between the grade plane and the highest roof surface exceeds 30 feet in height, for this section the highest roof surface shall be determined by measurement to the eave of a pitched roof, the intersection of the roof to the exterior wall, or the top of the parapet, whichever is greater. Overhead utility and power lines shall not be located within the aerial fire apparatus access roadways. At least one of the required access routes meeting this condition shall be located within a minimum of 15 feet and a maximum of 30 feet from the building, all access roads shall have an unobstructed width of not less than 26 feet and shall be positioned parallel to one entire side of the building and shall be approved by the fire code official.
- **Dead-Ends – 2022 OFC 503.2.5 and D103.4**
 - Dead-end fire apparatus access roads in excess of 150 feet in length shall be provided with an approved area for turning around fire apparatus.
 - OFC Table D103.4 Dead Ends over 750 Feet- *Require special approval*. If approved, there shall be a turn-around no more than every 1000 feet with a bulb of 60 feet across and the width of the road shall be a minimum of 26 ft clear for fire apparatus.
- **Additional Access – 2022 OFC 503.1.2**
 - The fire code official is authorized to require more than one fire apparatus access road based on the potential for impairment of a single road by vehicle congestion, conditions or terrain, climatic conditions or other factors that could limit access.

- **Emergency Access Road Gates – 2022 OFC D103.5**
 - Minimum 20 feet wide.
 - Gates shall be swinging or sliding type.
 - Shall be able to be manually operated by one person.
 - Electric gates shall be equipped with a means of opening by emergency personnel & approved by fire official.
 - Locking devices **may** be padlock.
 - Section 503.3: Install a sign on the gate “No Parking-Fire Lane”

- **Key Boxes – 2022 OFC 506.1**
 - An approved key box **may** be installed on all structures equipped with a fire alarm system and /or sprinkler system.

- **Commercial & Industrial Development – 2022 OFC D104**
 - Buildings exceeding three stories or 30 feet in height shall have at least 2 means of fire apparatus access for each structure.
 - Where 2 access roads are required, they shall be placed not less than $\frac{1}{2}$ the length of the overall diagonal dimension of the property or area to be served, measured in a straight line between accesses.

- **Other fire code requirements to consider when designing-**
 - **2022 OFC 304.3.3 Capacity exceeding 1.5 cubic yards.** Dumpsters and containers with an individual capacity of 1.5 cubic yards [40.5 cubic feet (1.15 m³)] or more shall not be stored in buildings or placed within 5 feet (1524 mm) of combustible walls, openings or combustible roof eave lines.
Exceptions:
 1. Dumpsters or containers that are placed inside buildings in areas protected by an *approved automatic sprinkler system* installed throughout in accordance with Section 903.3.1.1, 903.3.1.2 or 903.3.1.3.
 2. Storage in a structure shall not be prohibited where the structure is of Type I or IIA construction, located not less than 10 feet (3048 mm) from other buildings and used exclusively for dumpster or container storage.
 3. Dumpsters or containers that are located adjacent to buildings where the exterior area is protected by an approved automatic sprinkler system.
 - **2022 OFC 304.3.4 Capacity of 1 cubic yard or more.** Dumpsters with an individual capacity of 1.0 cubic yard [200 gallons (0.76 m³)] or more shall not be stored in buildings or placed within 5 feet (1524 mm) of combustible walls, openings or

combustible roof eave lines unless the dumpsters are constructed of noncombustible materials or of combustible materials with a peak rate of heat release not exceeding 300 kW/m² where tested in accordance with ASTM E1354 at an incident heat flux of 50 kW/m² in the horizontal orientation.

Exceptions:

1. Dumpsters in areas protected by an *approved automatic sprinkler system* installed throughout in accordance with Section 903.3.1.1, 903.3.1.2 or 903.3.1.3.
2. Storage in a structure shall not be prohibited where the structure is of Type I or IIA construction, located not less than 10 feet (3048 mm) from other buildings and used exclusively for dumpster or container storage.

If you have any questions or require clarification on any of these items please let me know.

Clara Butler
Deputy State Fire Marshal
Deschutes County