

TILLAMOOK COUNTY FIRE DEFENSE BOARD

Single, Multi-Family and Residential Development Road Access Guidelines

*See
Oregon Fire Code "OFC" 2019, Chapter 5
&
Appendix D*

Tillamook County Ordinance(s)

*#16 – County Road Acceptance Ordinance
#20 – Road Use Ordinance
#44 – Road Approach Ordinance
#55 – Public Road Improvement Ordinance*

Section 1 General

- 1.1 Scope-** The provisions of the State of Oregon Fire Code Chapter 5 apply unless specifically modified by this document and as approved by the fire code official. This document is intended to provide minimum requirements and alternative guidelines to be considered by the fire code official when determining fire department access for residential developments. Approved alternatives for fire department access should include the needs of the local fire department and the following sections which shall consist of fire lanes, no parking areas, public and private access roadways, or a combination thereof.
- 1.1.1 ORS 368.039** Road standards adopted by local government supersede standards in fire codes: consultation with fire agencies. (3) Before adopting or amending any comprehensive plan, land use regulation or ordinance that establishes specification and standards for roads and streets, a governing body of a county or city shall consult with the municipal fire department or other local firefighting agency concerning the proposed specifications and standards. The county or city governing body shall consider the needs of the fire department or firefighting agency when adopting the final specifications and standards.
- 1.2 Plans-** When required by the fire code official, fire apparatus access road plans shall be provided and shall be stamped by a registered engineer and may require the inclusion of a topographic map and grade profile in conjunction with the roadway plot plan. *Construction documents for proposed fire apparatus access, location of fire lanes, security gates across fire apparatus access and construction documents and hydraulic calculations for fire hydrant systems shall be submitted to the fire department for review and approval prior to construction.*

1.3 Timing- Where fire apparatus access roads or a water supply for fire protection are required to be installed, such protection shall be installed and made serviceable prior to and during the time of construction except where *approved* alternative methods of protection are provided.

Section 2 Definitions

2.1 Definitions- For the purpose of Chapter 5 and Appendix D, the following terms are defined.

Access Control Device. Any means of restricting or limiting public vehicle access to a roadway or designated fire lane such as, electric, or manual gates, chains, cables, and padlocks.

Additional Access. An approved secondary means of fire apparatus access from a fire station to a facility, building or portion thereof. This is a general term inclusive of all other terms such as fire lane, public or private street, and parking lot lane and access roadway.

Construction Documents. The written, graphic, and pictorial documents prepared or assembled for describing the design, location, and physical characteristics of the elements of the project necessary for obtaining a permit.

Development. A residential development, e.g., a subdivision or major land partition, as approved and recorded according to local planning and zoning regulations and includes all residential units and occupancies as classified in the building code.

Dwelling. A building that contains one or two dwelling units used, intended, or designed to be used, rented, leased, let, or hired out to be occupied for living purposes.

Fire Apparatus Access Road. A road that provides fire apparatus access from a fire station to a facility, building or portion thereof. This is a general term inclusive of all other terms such as fire lane, public street, private street, parking lot lane and access roadway.

Fire Code Official. The fire chief or other designated authority charged with the administration and enforcement of the code, or a duly authorized representative.

Fire Lane. A road or other passageway developed to allow the passage of fire apparatus. A fire lane is not necessarily intended for vehicular traffic other than fire apparatus.

Fire Department Master Key. A limited issue key of special or controlled design to be carried by fire department officials in command which will open key boxes on all specified properties.

Key Box. A secure, tamperproof device with a lock operable only by a fire department master key, containing building entry keys and other keys that may be required for access in an emergency.

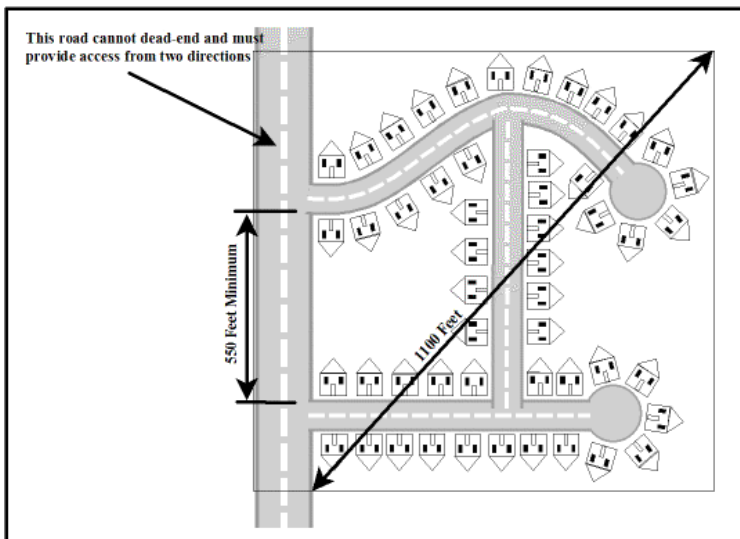
Traffic Calming Devices. Traffic calming devices are design elements of fire apparatus access roads such as street alignment, installation of barriers, and other physical measures intended to reduce traffic and cut-through volumes, and slow vehicle speeds.

Section 3 Fire Apparatus Access Roads

3.1 Where required- Fire apparatus access roads shall be provided and maintained in accordance with Section 503 and Appendix D of the Oregon Fire Code 2019 Edition.

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

3.3 Additional Access- The fire code official shall require two means of access in accordance with Appendix D for a residential development having thirty or more sites for dwelling units, including multi-family residential occupancies of two or more dwelling units, and single-family residences, or residential building sites. Two means of access shall also be required when a multiple-family residential development project is to have more than one hundred dwelling units (apartments). Where two access roads are required, they shall be placed a distance apart equal to not less than one half of the length of the maximum overall diagonal dimension of the property or area to be served, measured in a straight line between accesses.



Exceptions:

- a. Where there are more than 30 dwelling units on a single public or private access way and all dwelling units are protected by approved residential sprinkler systems, access from two directions shall not be required.
- b. Projects having up to 200 multiple-family dwelling units may have a single approved fire apparatus access road when all buildings, including nonresidential occupancies, are equipped throughout with approved automatic sprinkler systems installed in accordance with Section 903.3.1.1 or 903.3.1.2.
- c. The number of dwelling units on a single fire apparatus access road shall not be increased unless fire apparatus access roads will connect with future development, as determined by the code official.
- d. When two means of access cannot be provided due to location on property: topography, waterways, non-negotiable grades or other similar conditions, the fire chief is authorized to require additional protection.

3.4 Access in Urban-Wildland Interface Areas- For egress and access concerns in urban-wildland locations, the fire chief may be guided by the *Urban-Wildland Interface Code*, or other related codes as approved by the State of Oregon.

3.5 Road Widths- Access roadways for streets in a development shall comply with the provisions of Chapter 5, Section 503.2.1 through 503.2.8, Appendix D and Tillamook County Road Standards. Fire apparatus access roads shall have an unobstructed width of not less than 20 feet.

1. 12 feet wide travel surface with 4 feet shoulders when serving 1 or 2 single family dwellings.
2. 16 feet wide travel surface with 2 feet shoulders when serving 3 or more single family dwellings.
3. 20 feet wide when parking is not allowed on either side of the roadway and when the county deems the road as a public access.
4. 26 feet wide when a hydrant is located on the fire access road. The road width is also required for buildings over 30 feet in height above the lowest level of fire department vehicle access for fire department aerial apparatus.

5. 28 feet wide when parking is only allowed on one side of the roadway and not on the other.
6. 32 feet wide when parking is not restricted to either side.

Exceptions: The provisions of Section 3.5 may be modified by the fire code official when:

- a. When all buildings in a development are completely protected with an approved automatic fire sprinkler system.
- b. When provisions are made for the emergency use of sidewalks by such means as rolled, or mountable curbs capable of supporting the fire department's apparatus.
- c. When streets or roadways in a development are identified for one-way circulating flow of traffic or pullouts are provided every 150 feet on streets or roadways identified for two-way traffic.
- d. When a grid system for traffic flow is provided in a development and streets or roadways in the grid do not exceed 300 feet in length but are accessible at each end from approved access roadways or streets.

3.6 Vertical Clearance- Fire apparatus access roads shall have an unobstructed vertical clearance of not less than 13 feet 6 inches for the entire width and length of the access road.

3.7 Road Surface- Fire apparatus access roads shall be designed and maintained to support the imposed loads of fire apparatus and shall be surfaced to provide all-weather driving capabilities. Appendix D of the 2019 OFC requires access roads to be capable of supporting 75,000 GVW. All roadbeds with a load limit of less than 75,000 GVW must be posted and fire department vehicles over the posted weight limit are not permitted to use the road.

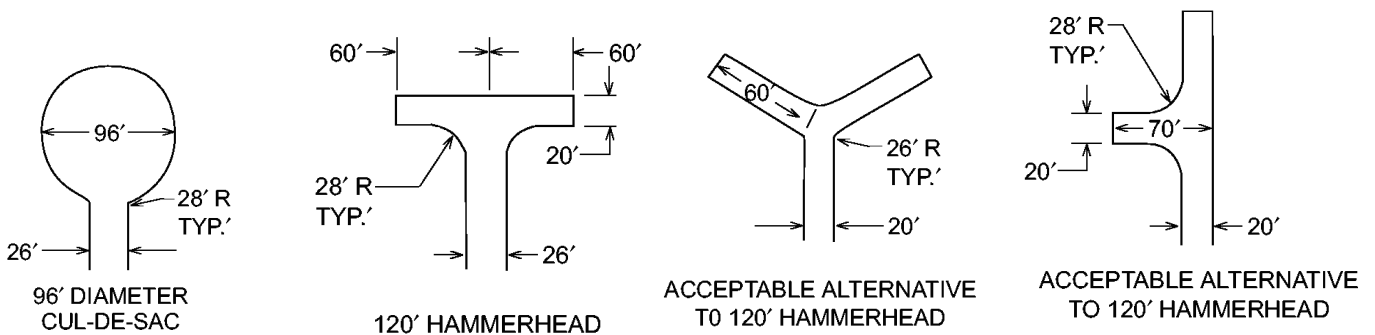
Exceptions:

1. Proposed alternate design criteria for an "all weather surface" fire department access road or street, bearing the stamp of a professional licensed engineer shall be subject to the approval of the fire code official.
2. The minimum weight specified in Section D102.1 may be increased by the fire code official based upon the actual weight of fire apparatus vehicles serving the jurisdiction that provides structural fire protection services to the location including fire apparatus vehicles that respond under automatic and mutual aid agreements.

3.8 Angles of Approach- The angles of approach and departure for any means of access shall not be less than the design limitations of the fire apparatus of the fire department, subject to the approval of the fire code official.

3.9 Turning Radius- The required turning radius of a fire apparatus access road shall not be less than 50 feet on the outside radius and the minimum inside turning radius shall not be less than 30 feet, unless otherwise approved by the fire code official. The actual turning radius required may depend upon the local fire department’s apparatus’ needs.

3.10 Dead Ends- Dead end fire department access roadways shall be in accordance with OFC Section 503.2.5, such that when dead-end access roads in excess of 150 feet in length shall be provided with an approved area for turning around fire apparatus. There are options to consider for provisions relating to the turning around of fire apparatus, such as, bulb or cul-de-sacs, hammerheads, “Y” heads, or other methods which address the need of the local fire department, based on the capabilities of the fire apparatus in the jurisdiction, and as approved by the fire code official.



3.10.1 Cul-de-sacs- Cul-de-sacs shall have a clear and unobstructed turning radius that is consistent with the capabilities of the fire apparatus of the local fire department and not less than 96 feet in diameter, subject to approval by the fire code official.

Exception: When alternate methods and means relating to the turning around of fire apparatus are provided, the provisions of Section 6.2 may be modified by the fire code official.

3.11 Grades- The gradient for fire department access roadways or streets shall be in accordance with OFC Section 503.2.7 and Appendix D 103.2. Grades in excess of 10% not to exceed 15% may be approved by the fire code official with an approved exception:

Exceptions:

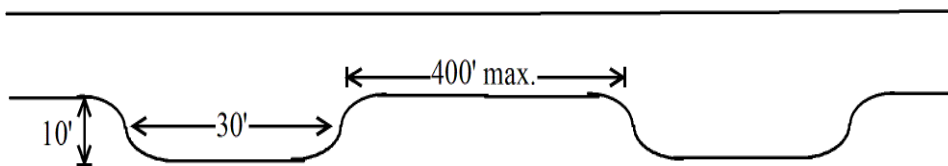
- a. The fire code official is authorized to allow increased steepness of grade, depending on the apparatus requirements of the fire department, when every building in the development is provided with an approved automatic fire sprinkler system.

- b. The fire code official may allow an increase of the maximum grade that does not exceed 200 feet and 15%, when other approved fire protection measures are provided, including a requirement for the installation of non-combustible roofing materials.

3.12 Bridges and Culverts- When a bridge or culvert is required to be used as part of a fire apparatus access road it shall be constructed and maintained in accordance with OFC Section 503.2.6 and AASHTO *Standard Specifications for Highway Bridges*. Bridges and elevated surfaces shall be designed for a live load sufficient to carry the imposed loads of fire apparatus. Vehicle load limits (ratings) shall be posted at both entrances to bridges when required by the fire code official. Where elevated surfaces designed for emergency vehicle use are adjacent to surfaces which are not designed for such use, approved barriers, approved signs, or both shall be installed and maintained when required by the fire code official.

1. Bridges are required to be designed to carry the minimum imposed load of 75,000 GVW with a Tillamook County recommended minimum of 80,000 GVW.
2. All bridges are to be stamped by a professional licensed engineer in the State of Oregon.
3. The FWHA *Federal Highway Administration* recommends all private bridges be inspected every 24 months in accordance with the NBIS *National Bridge Inspection Standards*.

3.13 Turnouts- When any fire apparatus access road exceeds 400 feet in length, turnouts 10 feet wide and 30 feet long shall be provided in addition to the required road width and shall be placed no more than 400 feet apart, unless otherwise approved by the fire code official. These distances may be adjusted based on visibility and sight distances.



3.14 Aerial Fire Apparatus Road Width- Buildings more than 30 feet in height shall have fire apparatus access roads constructed for use by aerial apparatus with an unobstructed driving surface width of not less than 26 feet.

Section 4 Parking & Identification

4.1 Parking- When motor vehicle parking is allowed on access roadways in a development, such parking shall not encroach in the fire department access roadway. When this provision is compromised, or restricted, the fire code official may require signage to indicate parking restriction in accordance with Section 4.2.

4.2 No Parking Signage- When parking is restricted due to motor vehicle encroachment into fire department access roadways, “NO PARKING” shall be painted on the curbs, or signs shall be installed, in accordance with Section 4.2.

4.2.1 Curbs- “NO PARKING” areas may be identified by curbs that are painted red, or in accordance with State or local requirements, and as approved by the fire code official, which identify the area where “NO PARKING” is required. When appropriate, lettering on the painted curb may be required by the fire code official or local road department.

4.2.2 Signs- Vertical signs shall be mounted no lower than 4 feet and no higher than 8 feet, or as approved by the fire code official. Spacing of signs and the type of sign used needs to be consistent with the standards of the local road department and as approved by the fire code official.

4.3 Marking- Marking of fire apparatus access roads, addresses and fire protection equipment shall be in accordance with OFC 503.3. Approved signs or other approved notices shall be provided for fire apparatus access roads to identify such roads or prohibit the obstruction thereof. The means by which fire lanes are designated shall be maintained in a clean and legible condition at all times and be replaced or repaired when necessary, to provide adequate visibility.

4.4 Premise Identification- Premise identification shall be in accordance with OFC 505.1. Building numbers or approved identification shall be placed in a position that is plainly legible and visible from the street or road fronting the property. These numbers shall contrast with their background. Address numbers shall be Arabic numerals or alphabetical letters at a minimum of 4 inches high with a minimum brush stroke width of not less than .5 inches. Where required by the fire code official, address identification shall be provided in additional approved locations to facilitate emergency response.

Section 5 Access Control & Key Boxes

5.1 Access-Control Devices- When required fire department access to a development is restricted by the installation of access-control devices, such devices shall provide an adequate clear width of not less than 20 feet with a minimum 30-foot setback from the street accessing the roadway for fire department apparatus, be maintained operable at all times, and shall be approved by the fire code official.

5.2 Security Gates- The installation of security gates across a fire apparatus access road shall be approved by the fire code official. Where security gates are installed, they shall

have an approved means of emergency operation. The security gates and the emergency operation shall be maintained operational at all times. Electric gate operators, where provided, shall be listed in accordance with UL 325. Gates intended for automatic operation shall be designed, constructed, and installed to comply with the requirements of ASTM F 2200. Fire apparatus access road gates shall comply with Appendix D103.5 of the 2019 Oregon Fire Code.

5.3 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 firefighting purposes, the fire code official shall require a key box to be installed in an approved location. The key box shall be of an approved type and shall contain keys to gain necessary access as required by the fire code official.

5.3.1 Locks- An approved lock shall be installed on gates or similar barriers when required by the fire code official.

5.4 Key Box Maintenance- The operator of the building shall immediately notify the fire code official and provide the new key when a lock is changed or re-keyed. The key to such lock shall be secured in the key box.