



City of Mercer Island Fire Marshals Office

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Fire Lane Standards

Fire lane (fire apparatus access road) shall be designed and installed in accordance with nationally recognized standards and the requirements of the City of Mercer Island:

- Fire Marshals Office
- Engineer's Office
- Building Department
- Planning Department
- Right of Way Inspector

Access is in accordance with Chapter 5 and appendix "D" of the 2018 International Fire Code.

- **The applicant may propose a fire apparatus access road of a more narrow width, however additional approved fire protection features will be implemented if the code alternate is granted.**
- **All applications for a reduction in the fire apparatus access required width shall be in the form of a letter signed and dated by the applicant and property owner. See "Code Alternative Help Sheet"**
- **Steep grades always require a wider road. Grades over 15% shall be "raked concrete".**

Width:

- Commercial fire access roads and lanes shall conform to Appendix "D" of the International Fire Code.
- One and two-family fire access roads and lanes shall be no less than those widths (**20-feet of approved paved surface**) required in Appendix "D" of the 2006 International Fire Code. 26-foot paved roadway width is required at fire hydrants, 20 feet on each side from the center of the hydrant.

Exception: When no more than two one or two-family homes are served by a single fire lane, the width may be reduced if the buildings are protected with

additional fire protection features as required by the Building Official. A reduction of to no less than 16-feet may be approved as a code alternate provided that approved additional fire protection features are added.

- *Fire apparatus access includes private roads, drives, parking areas and driveways. It is not just for fire engines, and includes medic units, police vehicles and other rescue or emergency vehicles.*

Load Capability:

- The roadway, fire lane, driveway or fire apparatus access road shall be capable of bearing the weight of (GVWR) 48,000.
- Where required aerial ladder truck imposed load capacity shall be no less than 78,000 GVRW. Special provisions are required for the placement of “downrigger” and “jack” stabilization pads of the aerial ladder truck.
- Bridges, culverts etc. shall be designed to hold the imposed load of the vehicle most likely to respond to that type of structure. Signs shall be placed at each end of the bridge indicating the load capability.

Turning radius:

- Fire lanes and fire roads shall be designed to allow the inside turning radius of 28 feet and an outside turning radius of no less than 45 feet.
- Fire lanes and roads that will be used by aerial ladder apparatus shall be designed to allow the inside and outside turning radius of that particular three-axle vehicle.

Grades:

- Grades shall conform to the requirements of Appendix “D” of the International Fire Code, most recent edition.
- Currently a 10 % grade is allowed without the addition of fire sprinklers.
- Grades may never exceed 20% without additional fire protection features.
- Fire apparatus access that is greater in grade than 20% must be approved with written and approved Code Alternative request.

Surface:

- The surface shall be of an approved type of pavement. >15% grade raked concrete is required due the traction requirements of the fire apparatus.
- All surfaces shall be “all weather design”.

Gates:

- The installation of security gates across a fire apparatus access road shall first obtain a permit approved by the Fire Marshal.
- 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.
- Submit plans and the specifications of the gate and its mechanism. See "Auto Security/Access Gate" Help Sheet.
- An approved method of Fire Department Access is required (Knox or Click-to-Enter).

Dead ends:

- Dead-end fire apparatus access roads in excess of 150 feet (45 720 mm) in length shall be provided with an approved area for turning around fire apparatus. **Please refer to Appendix “D” of the International Fire Code.**
- A 96-foot cul-de-sac or an approved 60-foot “T” hammerhead is required.
- If an approved emergency vehicle turn around cannot be provided you may apply for a code alternate.

Marking:

- When required by the Fire Marshal, curbs shall be painted with a durable all-weather paint designed for concrete. Safety red is the required color for fire lanes. Safety white 3 ½” block stenciled letters stating “FIRE LANE” are required every 15-feet, on the red curb.
- Signs shall be erected stating “**FIRE LANE NO PARKING**”, as determined by the Fire Marshal.
- Marking shall be as determined by the Appendix “D” section of the IFC and or City standards and requirements.