



City of Clarkston Fire Department
Office of the Fire Chief
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FIRE APPARATUS ACCESS AND WATER SUPPLY GUIDELINE

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PURPOSE

This guideline is intended to ensure compliance with City of Clarkston Fire Department requirements for Fire Apparatus Access and Water Supply. The regulations regarding Fire Apparatus Access are found in the 2015 International Fire Code (2015 IFC), Chapter 5 and Appendix D.

The regulations regarding Water Supply are found in the 2015 IFC, Chapter 5.

The City of Clarkston Fire Department will return plans not conforming to the requirements listed herein as incomplete.

SCOPE

This guideline is intended to provide the minimum requirements necessary for review and approval of Fire Apparatus Access and Water Supply features located within the jurisdiction of the City of Clarkston Fire Department. It is intended to be a simplified guide applicable to most projects within the City of Clarkston. It is not intended to replace the adopted fire code in whole, or in part. Your project may have special requirements, not outlined in this document.

BUILDINGS AND FACILITIES

ACCESS: 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. *2015 IFC, Section 503.1.1.* An approved route shall be defined as one in which the buildings are located in proximity to a street or fire apparatus access road which is accessible by firefighting apparatus and from which the furthest part of all buildings may be reached at ground level by a fire hose which is attached to the apparatus and is not in excess of 150 feet.

WATER SUPPLY: Where a portion of the facility or building hereafter constructed or moved into or within the jurisdiction is more than 400 feet from a hydrant on a fire apparatus access road, as measured by an approved route around the exterior of the facility or building, on-site fire hydrants and mains shall be provided. For buildings equipped with an automatic fire sprinkler system, the distance requirement shall be 600 feet. *2015 IFC, Section 507.5.*

ADDITIONAL ACCESS

The Fire Chief is authorized to require more than one fire apparatus access road based on the potential for impairment of a single road by vehicle congestion, condition of terrain, climatic conditions or other factors that could limit access. *2015 IFC, Section 503.1.2.*

The Fire Chief shall have the authority to require an increase in the minimum access widths where they are inadequate for fire or rescue operations. *2015 IFC, Section 503.2.2.*

SPECIFICATIONS

Dimensions. For buildings 30 feet or less in height, fire apparatus access roads shall have an unobstructed width of not less than 20 feet, exclusive of shoulders, and an unobstructed vertical clearance of not less than 13 feet 6 inches. *2015 IFC, Section 503.2.1.*

Where a fire hydrant is located on a fire apparatus access road, the minimum width shall be 26 feet, exclusive of shoulders. *2015 IFC, Section D103.1.*

Aerial Fire Apparatus Access Roads. Aerial fire apparatus access roads shall have a minimum unobstructed width of 26 feet, exclusive of shoulders, in the immediate vicinity of any building or portion of building more than 30 feet in height. At least one of the required access routes meeting this condition shall be located a minimum of 15 feet and a maximum of 30 feet from the building, and shall be positioned parallel to one entire side of the building. *2015 IFC, Section D105.2 and D105.3.*

Commercial and Industrial Developments. Buildings or facilities exceeding 30 feet or three stories in height shall have at least two means of fire apparatus access for each structure. Buildings or facilities having a gross building area of more than 62,000 square feet shall be provided with two separate and approved fire apparatus access roads.

Exception: Projects having a gross building area of up to 124,000 square feet that have a single approved fire apparatus access road when all buildings are equipped throughout with approved automatic sprinkler systems.

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. *2015 IFC, Section D104.*

Multiple-Family Residential Developments. Multiple-family residential projects having more than 100 dwelling units shall be equipped throughout with two separate and approved fire apparatus access roads.

Exception: Projects having up to 200 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.

Multiple-family residential projects having more than 200 dwelling units shall be provided with two separate and approved fire apparatus access roads regardless of whether they are equipped with an approved automatic sprinkler system. *2015 IFC, Section D106.*

One- Or Two-Family Residential Developments. Developments of one- or two-family dwellings where the number of dwelling units exceeds 30 shall be provided with two separate and approved fire apparatus access roads. *2015 IFC, Section D107.1.*

Exceptions: All dwelling units are equipped with fire sprinkler systems or where there are between 31 and 74 dwelling units, a minimum width of 39' back to back of curb, including 3 traffic lanes with a minimum width of 12' each is provided.

Surface. Facilities, buildings or portions of buildings hereafter constructed shall be accessible to fire department apparatus by way of an approved fire apparatus access road with an asphalt, concrete or other approved driving surface capable of supporting the imposed load of fire apparatus weighing at least 75,000 pounds and provide all-weather driving capabilities. *2015 IFC, Section D102 and 503.2.3.*

Grade. Fire apparatus access roads shall not exceed 10 percent in grade. *2015 IFC, Section D103.2.*

Turning Radius. Fire apparatus access roads shall be designed to allow the inside turning radius of 28 feet and an outside turning radius of no less than 45 feet. *2015 IFC, Section D103.3.*

Dead Ends. Dead-end fire apparatus access roads in excess of 150 feet shall be provided with width and turnaround provisions in accordance with Table D103.4. *2015 IFC, Section D103.4.*

Marking. Fire apparatus access roads shall be conspicuously marked and shall have signs posted that read "Fire Lane – No Parking" in four-inch white letters on a red background. The signs shall be located along the curb or, in cases where there is no curb, shall be placed on the side of the building with red letters on a white background, or by other approved methods as determined by the Fire Chief. The signs shall be maintained in good condition so as to be legible at all times. The building owner, or his representative, shall be responsible to place and maintain the signage required by this subsection.

Fire Protection System Access. A fire lane shall be required for access to fire department connections to automatic sprinkler systems and standpipe systems.

SECURITY GATES

Gates securing the fire apparatus access roads shall comply with all of the following criteria:

1. The minimum gate width shall be 20 feet.
2. Gates shall be of the swinging or sliding type.
3. Construction of gates shall be of materials that allow manual operation by one person.
4. Gate components shall be maintained in an operative condition at all times and replaced or repaired when defective.
5. Electric gates shall be equipped with a means of opening the gate by fire department personnel for emergency access. Emergency opening devices shall be approved by the Fire Chief.
6. Manual opening gates shall not be locked with a padlock or chain unless they are capable of being opened by means of forcible entry tools or when a Knox Box containing the key(s) to the lock is installed at the gate location.
7. Locking device specifications shall be submitted for approval by the Fire Chief.
8. Electric gate operators, where provided, shall be listed in accordance with UL 325.
9. Gates intended for automatic operation shall be designed, constructed and installed to comply with the requirements of ASTM F 2200. *2015 IFC, Section D103.5.*

The City of Clarkston requires all new gate installations to utilize the Knox key system. The following options may be utilized:

- **Option #1 (All new installations) – Install Knox 3501 or 3502 Key Switch**
 - Install a Knox key switch at or near the gate access keypad
 - Activation of the key switch operates the gate as required
- **Option #2 – Lock Box with padlock – Existing only with prior approval**
 - An existing box with padlock capability may employ a Knox padlock.
 - The color of the box shall be red with “FIRE DEPT” OR “911” painted on the door.
 - The entry gate is to remain open while the lock box door is open.
 - The lock box must be located on the gate in such a manner that it is easily located but protected from vehicular damage.

For further information on the Knox key system, or to request an authorization form, contact the City of Clarkston Fire Department at (509) 758-8681.

Illustration #1

Not To Scale

PROPER STRIPING OF FIRE LANES

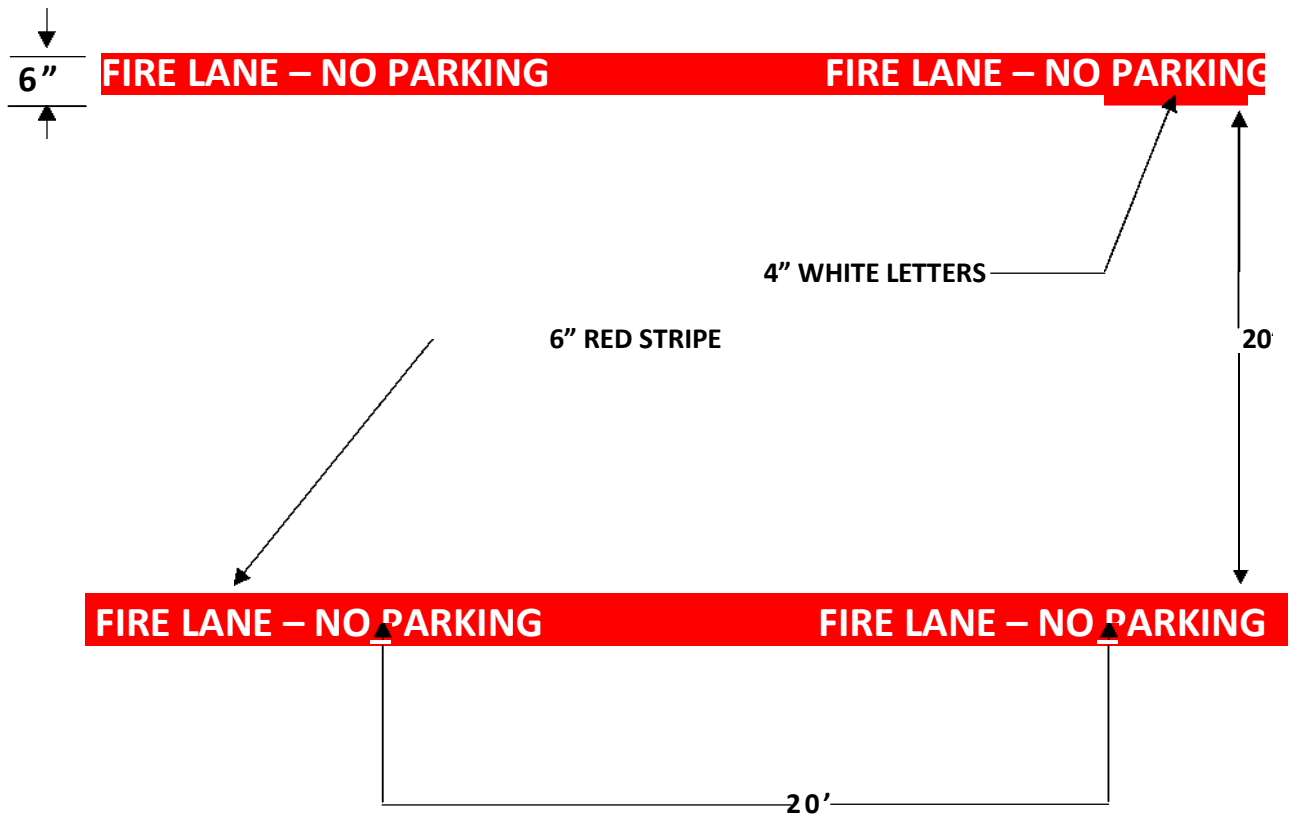


Illustration #2

Not To Scale

APPROVED FIRE LANE TURNAROUNDS

