

**FIRE DEPARTMENT ACCESS
INFORMATION PACKET**

MIRAMAR FIRE RESCUE DEPARTMENT

Office of the Fire Marshal



R. Perez, Fire Marshal

(JUNE 1ST, 2014) Rev2

If you have any questions or comments regarding the information contained within, or if you need assistance interpreting these requirements, please contact:

**Miramar Fire Department
Fire Life Safety Bureau
14801 SW 27th Street
Miramar Florida 33027
Phone: 954 602 4801**



INTRODUCTION

In the interest of protecting life and property, we have developed this packet of codes and standards to advise the public of our specific needs for access to and around proposed buildings being constructed or remodeled, having a change of use, or going through other modifications.

We deal with many different types of emergencies; therefore, we have a variety of vehicles. Some are very large and require much more area to maneuver and operate than most others. For example, ladder trucks are in excess of 46 feet in length and when set up to operate with outriggers deployed can exceed 16 feet in width. Additional room is needed for fire personnel to utilize the equipment stored on the sides of the trucks. Also, the number of vehicles needed on an incident and the room to quickly accommodate multiple apparatus is crucial. Depending on the situation, structure fires require a lot of manpower and equipment. A typical structure fire may require as many as five engine companies, two ladder trucks, Incident Command Center, support vehicles, ambulances, and police cars. Larger incidents would, of course, dictate a larger response.

In the process of producing this packet, the following documents were referenced:

- ✓ Current adopted edition of the Florida Fire Prevention Code
- ✓ City of Miramar Comprehensive Plan
- ✓ City of Miramar Ordinances
- ✓ Broward County Code of Ordinances and Amendments
- ✓ City of Miramar Department of Operational Services- Engineering Division
- ✓ Florida Statutes 633

The Florida Fire Prevention Code authorizes the Fire Chief, Fire Marshal or designee to make interpretations, render judgment and grant administrative relief in situations where the code and standards are in site-specific issues.

The Miramar Fire Department is one of several agencies that make recommendations and requirements to the Planning Department, City Commission and Community development and Engineering Division with regard to site development within our city. We also consult with those interested in pursuing a development project.

The following information is designed to cover the many possible issues and questions that may develop involving fire apparatus and emergency personnel access onto and around property, road design, fire lanes, ladder access, and Fire Department Emergency access requirements.

The requirements identified in this document are minimum standards. These requirements are subject to change therefore any plans for constructions and or renovation should be submitted for review and any questions forwarded to the Fire Life Safety Bureau of the Miramar Fire Department



AUTHORITY:

The Fire Marshal is authorized by: Florida Statutes, the Florida Fire Prevention Code and the City of Miramar Code of Ordinances to designate and enforce regulations for Fire Department Access, Fire Lanes and water supply for Life Safety appliances and operations.

It is not the intention of this Standard to contradict, or set aside, any provision of any other higher level of law or code. If any conflict is discovered, the more restrictive law or code shall prevail.

Compliance with this Standard does not demonstrate compliance, or lack of compliance, with any other law or code pertaining to other topics

ADMINISTRATION AND SCOPE:

This edition of Standard Access shall apply to both new and existing structures and Fire Lanes in the City of Miramar. Fire department access roads must be provided for every community, facility, building, or portion of a building. This standard provides a method of providing for and maintaining adequate and unobstructed emergency access for fire department apparatus and personnel to buildings, structures, hazardous occupancies or other premises, as may be required for mitigation of emergencies.

EXPLANATION

When fire or medical emergencies occur, ready access to the structures involved and to components of their fire suppression systems (such as Fire Department Connections and fire hydrants) are essential for effective fire department operations. Implementation of minimum dimensional requirements as well as design for ingress and egress of emergency vehicles along with designation and uniform marking of "Fire Lanes" helps to ensure this objective is met in the most expeditious manner possible.

The purpose shall be to provide clarification of requirements and guidance to person(s) charged with providing and maintaining required fire department access to premises in compliance with the Florida Fire Code



RESPONSIBILITY

The Office of the Fire Marshal (O.F.M.) for all new construction and renovation projects shall establish required Fire Access and Fire Lanes during the Development Site Review phase.

The Office of the Fire Marshal (O.F.M.) for all new construction and renovation projects shall establish required water supply and hydrant location to the site and or structure to be protected.

Throughout construction the developer/contractor shall ensure that fire lanes are maintained in good condition and remain unobstructed at all times.

It shall be the responsibility of the owner/tenant to maintain fire lanes free of all obstructions at all times, including parked vehicles, dumpsters, construction materials, excessive vegetation, and storage of any type.

Fire lanes shall be established for existing buildings by the Fire Marshal, or his designee, when it is determined that inadequate Fire Department access is provided.



DEFINITIONS:

Access Control Gate or Barrier- Any gate or barrier placed across a fire apparatus access road to restrict other vehicles or use

Approved- Acceptable to the authority having jurisdiction.

Authority having Jurisdiction (A.H.J.)-The individual who is responsible for approving equipment, materials, installation, and procedures relating to fire safety. The A.H.J. for the City of Miramar is herein referred to as the "Fire Marshal".

Building. Any structure used or intended for supporting or sheltering any use or occupancy

Construction Documents- Documents that consist of scaled design drawings and specifications for the purpose of construction of new facilities or modification to existing facilities

Concerned Party – Includes owners, developers, architects, engineers, planners, and the public.

Cul-de-sac- Street with only one outlet that terminates in a vehicular turnaround appropriate for the safe and convenient reversal of traffic movement.

Dead End- Street with only one outlet that terminates without a vehicular turnaround provided

Emergency - A fire, explosion, or hazardous condition that poses an immediate threat to the safety of life or damage to property.

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 Department Connection (F.D.C.) – A connection to the building's sprinkler system and/or standpipe system used to supply water under pressure from a fire engine.

Fire Hydrant- A connection to a water main for the purpose of supplying water to fire hose or other fire protection apparatus.

Fire Lane- The road or other means developed to allow access and operational setup for fire-fighting and rescue apparatus.

Professional Architect- An individual technically and legally qualified to practice the profession of architecture.

Professional Engineer- An individual technically and legally qualified to practice the profession of engineering.



Street- A public thoroughfare that has been dedicated for vehicular use by the public and can be used for access by fire department vehicles.

Structure- That which is built or constructed.

Summarily Abate- To immediately judge a condition to be a hazard to life or property and to order immediate correction of such condition.

FIRE APPARATUS ACCESS DESIGN

1. Public roadways shall be constructed to D.O.T, Broward County, and City of Miramar Street standards.
2. Public alleys proposed for use for fire apparatus access must meet the following:
 - 2.1 Shall be constructed to D.O.T, Broward County and City of Miramar Street standards.
 - 2.2 Minimum 20 –foot unobstructed width.
 - 2.3 Fire lane signs posted per Miramar Fire Department specifications.
 - 2.4 Unobstructed height clearance of 14 feet.
 - 2.5 Bringing the alley to minimum standards and associated expenses are the Applicant/Owner's responsibility.
3. All roadways proposed for fire department access shall be engineered and constructed of an all-weather driving surface of asphalt or concrete able to support the live weight of fire apparatus, a minimum 50 feet centerline turning radii shall be provided for all turns and clearances provided as per The Florida Fire Prevention Code and the City of Miramar Fire Department.
4. Alternative methods such as brick pavers, road base, gravel, etc. may be considered on a case-by-case basis. A State of Florida Certified Civil Engineer must approve the design and installation as meeting the requirements in writing.
5. Access roadways designed to incorporate materials that allow grass to grow through or upon the surface such as Grass Rings, Geoblock, Grasstone, or Grass Crete are **not allowed!** It has been our experience that these types of alternatives are unacceptable surface areas because they tend to disappear with time and its limits are unknown to the driver of fire apparatus, causing it to be useless.



6. Minimum widths for apparatus access shall be as follows. Widths are measured curb face to curb face or, where there are no curbs, edge of pavement to edge of pavement. These areas must be maintained unobstructed.
 - 6.1 Access roadways with a width of 34 feet or more do not require fire lane signs. Parking is allowed on both sides of the roadway.
 - 6.2 Access roadway widths may be reduced to a minimum of 28 feet. Roadways 28 to 34 feet wide shall have fire lane signs posted on one side of the roadway. Parking is allowed on only one side of the street.
 - 6.3 Access roadways in parking lots may be reduced to a minimum of 24 feet where parking spaces are designed back to back. We acknowledge that the Zoning Ordinance allows reductions in aisle width; however, those needed for fire department access shall be maintained at the 24 –foot minimum as required by this standard. Where parking is designed back to curb, a minimum of 28 feet shall be provided without fire lane posting.
 - 6.4 Roadways with features such as landscape islands, traffic calming devices, etc. that cause a one way or reduction in width of roadway shall be a minimum 20 feet in width and no longer than 150 feet in length. Fire lane signs shall be posted on both sides.
 - 6.5 The City of Miramar Fire Department acknowledges the occasional desire to reduce access roadway widths for installation purposes of devices such as gates, keypads, mailboxes, and areas of parking lots where the roadway is not needed for access to a structure. We refer to these as “PINCH POINTS.” The design and construction shall meet the following requirements:
 - 6.5.1 A minimum of 20 feet of unobstructed width shall be maintained including the devices and their mechanisms.
 - 6.5.2 Gates and other devices designed to limit access are in most cases discouraged, but may be allowed and sometimes required. The designs of these devices are approved on a case-by-case basis.
 - 6.5.3 Gates and other approved devices designed to limit access shall be provided with the approved Lock Box Rapid Entry System with a manual override.
 - 6.5.4 Removable bollards designed to slide into the ground within the access ways are not permitted unless the design is approved by the Miramar Fire Department.
7. An unobstructed vertical clearance of 14 feet shall be maintained above all fire department access ways. Obstructions include but are not limited to wires, tree limbs, awnings, etc.



8. Private driveways for one-and two-family dwellings shall be provided with fire department access to within 50 feet of all first story exterior portions of the structures upon the property.
 - 8.1 Driveways shall be provided and maintained with a minimum of 20 feet of unobstructed width.
 - 8.2 Grades shall not exceed 4%.
 - 8.3 A minimum 50 feet centerline turning radii shall be provided and changes in elevation shall meet Miramar Fire Department specifications.
 - 8.4 Dead-end driveways that are required for fire department access and exceed 150 feet shall be provided with an approved turnaround.

9.0 Turnarounds and Maneuvering

- 9.1 Dead-end fire department access roadways in excess of 150 feet shall be provided with an approved turnaround. An approved turn-around shall be by the following means:
 - 9.1.1 A cul-de-sac with a minimum of 50 feet centerline turning radius consisting of a surface as approved by the AHJ.
 - 9.1.2 A T-Turn or Y-Turn with an extension of the "T or Y" to be a minimum of 60 feet from the edge of each side of the roadway (not the center of the roadway) which must be a suitable surface as described below and approved by the AHJ.

10.0 Cul de sac bulbs shall be constructed to the following widths

- 10.1 Dead-ends exceeding 500 feet require a minimum 100 foot bulb.
- 10.2 Cul de sacs ,dead-ends access roads exceeding 600 feet shall be provided with intermediate turnarounds as deemed necessary by the Miramar Fire Department.
- 10.3 In cases where a single point of access exceeds 600 feet in length, intermediate turnaround areas are required. The width of the access road must be at least 28 feet in the area of the turnaround. These areas allow emergency vehicles to turn around without having to drive to the end of a long road. The intermediate turnarounds must be provided at a maximum interval of every 500 feet.
- 10.4 Turning radius shall be a minimum of 50 feet centerline.

11.0 Turnarounds, Cul de sacs, and intersections of streets shall not exceed a grade of 4%.

12.0 Fire lanes, posting, and painting, where required, shall comply with Miramar Fire Department Standards.

13.0 Emergency vehicle support capability



- 13.1 Fire department access roads shall be designed and maintained to support a minimum of 32 tons and shall be provided with a surface suitable for all-weather driving capabilities.
 - 13.2 Fire Department access roads permitted to traverse through non-paved areas via other approved means shall be clearly delineated with signs complying with NFPA 1 Florida Edition (18.2.3.5.1), (18.2.3.5.3). The edges of non-paved Fire Department access roads shall also be delineated in a manner that will make the access road apparent under all conditions.
- 14.0 Aerial apparatus set-up sites
- 14.1 Sites shall be provided at the corner of each building over three stories in height and at the approximate center of buildings in excess of 125 feet in length for firefighting operations.
 - 14.2 Sites shall be no closer than 10 feet and no further than 30 feet from any building. Each site shall be a minimum 24 feet wide and 36 feet long with a cross slope no greater than 4 percent.
 - 14.3 Sites shall comply with the requirements of the emergency vehicle support capabilities and also capable of withstanding any point forces resulting from outriggers
- 15.0 Fire hydrants, sprinkler systems, and other fire related devices
- 15.1 Clearance from landscaping, parking, or other obstructions around fire hydrants and fire department connections to sprinkler systems shall be a minimum of seven and one-half feet in front of and to the sides of each appliance NFPA 1 (18.3.4.1), (18, 3.4.2)
 - 15.2 Any required fire sprinkler post indicator valve and/or fire department connection shall be located not less than 40 feet from the protected building
 - 15.3 The fire department connection shall be within 150 feet drivable distance of the closest fire hydrant.



ACCESS TO BUILDINGS UNDER CONSTRUCTION OR MODIFICATIONS

- ✓ Required street and on-site fire hydrants/water mains shall be installed, operable tested, inspected, and approved by The Miramar Fire and Water Department prior to starting construction.
- ✓ Fire department access roads shall be established, engineered, and maintained serviceable for fire protection and emergency purposes in accordance with the approved development plan, and Florida Fire Prevention Fire Code.
- ✓ Access roads shall be kept clear of all obstructions such as but not limited to low hanging wires, construction materials, construction equipment, contractor trailers, and contractors' vehicles.
- ✓ Where required, fire lanes shall be posted when the access road is established.
- ✓ Street name identification and building addresses shall be installed at the time the access road is established.

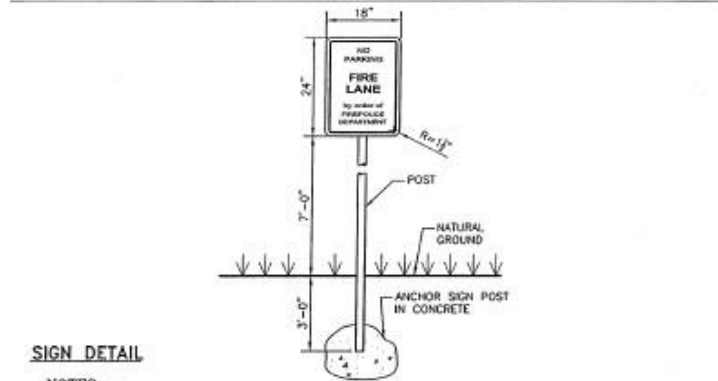
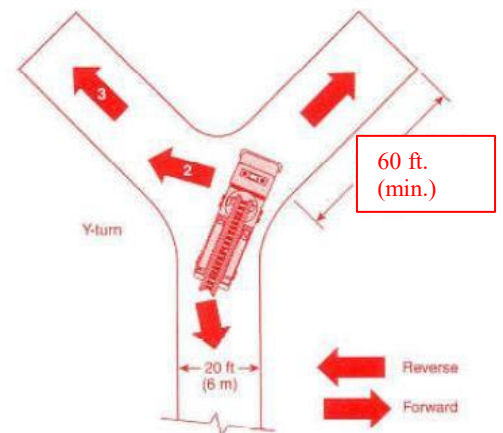
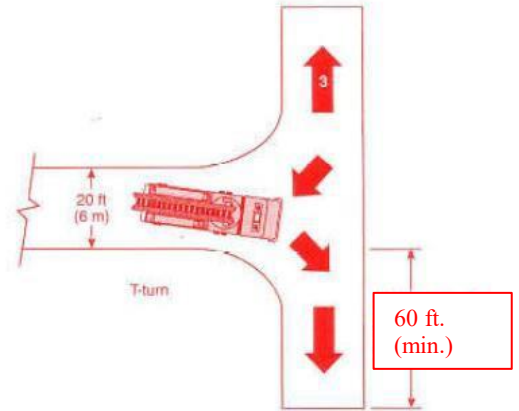
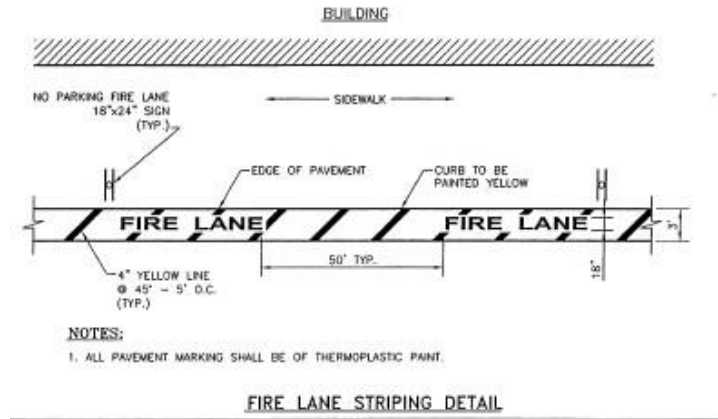
TRAFFIC CALMING DEVICES

Plans for these devices must be submitted for the Department's review and approval. We support the design of safe streets and the need for devices intended to slow traffic, i.e., islands, roundabouts, and bump outs; however, we discourage the use of speed bumps. In most cases, these devices can be designed within our minimum requirements. Plans for these devices must be submitted for our review and approval.



FIGURES, TEMPLATES AND EXAMPLES

The following figures, Templates, and examples have been added to help illustrate the text of this packet.



- NOTES:**
- "NO PARKING FIRE LANE BY ORDER OF FIRE/POLICE DEPARTMENT" SIGN AT MAX 75" O.C. SIGN TO BE 15"x24" W/ RED LETTERS ON WHITE BACKGROUND.
 - SIGN TO BE POSTED 7' ABOVE FINISHED GRADE. ON B.C.T.E.D. STANDARD POST.

CITY OF MIRAMAR OFFICE OF OPERATIONAL SERVICES ENGINEERING SERVICES DEPARTMENT	
FIRE LANE DETAIL	
Detail Added By Fire Department	M.M.

20 ft. access width is a minimum for use only with an exclusive fire department emergency access way. For roadways or public streets, these access widths must be increased.

