



FIRE PROTECTION GUIDE FOR CONSTRUCTION

Fire Apparatus Access Roads (Fire Lanes)

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 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.

When fire apparatus access roads or a water supply for fire protection is required to be installed, such protection shall be installed and made serviceable prior to and during the time of construction except when approved alternative methods of protection are provided.

Fire apparatus access roads shall have an unobstructed width of not less than **26** feet (*unless given other approval from the AHJ*), exclusive of shoulders, except for approved security gates, and an unobstructed vertical clearance of not less than 13 feet 6 inches.

Fire apparatus access 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. **See "Access during Construction Section" for temporary access road requirements during construction.**

The required turning radius of a fire apparatus access road shall be 28 foot inside turning radius. 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.

Marking of the fire access road shall be by one of three approved methods.

1. Painting curbs red with contrasting white letters reading "NO PARKING FIRE LANE."
2. Painting a red stripe on the pavement with contrasting white letters reading "NO PARKING FIRE LANE."
3. With signage at the beginning and end of the designated fire access road and at 25-foot intervals. If curb markings are also used, the interval can be 50 feet.

Access during Construction

Temporary access road utilization instead of permanent access roads during construction shall require an **engineer-designed** access road that meets permanent access road distances. Temporary access roads shall support the imposed loads of up to 78,000 pounds in all weather conditions. Documentation of the road design shall be submitted to Waco Fire Marshal's Office (FMO) prior to construction. The General Contractor shall be responsible for maintaining access roads during construction. Approved access for firefighting shall be provided to construction or demolition sites.

Fire Hydrant Requirements

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, on-site fire hydrants and mains shall be provided. **EXCEPTION:** If the facility or building is fully sprinkled, the distance requirement shall be 600 feet.



FIRE PROTECTION GUIDE FOR CONSTRUCTION

Water Supply for Fire Protection During Construction

Where a water supply for fire protection is 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.

Installation of Fire Mains by Licensed Companies

Permits are required for all underground fire mains. Plans should be submitted with the permit application prior to the beginning of installation. Fire Protection water mains can only be installed by personnel licensed by the State Fire Marshal's Office to perform such work. Licensed plumbers cannot install fire mains.

A copy of the FMO stamped approved set of plans is required to be on-site and immediately available at all times. Permission and written authorization to begin installation prior to plan approval may be requested from the Fire Marshal's Office. If permission is granted, a copy of the written permission letter must be kept on-site at all times in lieu of the approved plans. It is understood that any corrections or deviations from the approved plans must be made in order to obtain final acceptance.

All features of the underground fire main shall be inspected and hydro-tested before being covered. This includes but is not limited to the type and size of piping, pipe depth, type of fill, thrust block location, and size. All pipe joints and thrust blocks are to remain uncovered until hydro-tested unless permission is obtained from the FMO prior to

being hydro-tested. Hydro testing will be according to NFPA 24.

The private fire main begins at the tap to the public City of Waco water main. No domestic water taps are allowed on the fire main.

Test gauges must be connected to the system being tested. All pumps must be completely disconnected from the system being tested.

Gating

The Fire Marshal shall pre-approve the installation of gates across access roadways. Where gates are installed, they shall have an approved means of emergency operation.

Electrically Operated Security Gates

All electrically operated security gates must be equipped with an emergency means of release as well as a Knox key switch.

Fire Protection System Plan Submittals

In order to obtain the most significant insurance savings for a sprinkler system, fire sprinkler plans must first be reviewed and stamped by a third-party reviewer.

Accepted third-party reviewers

Traditions Fire Consulting
Nick Kalina, CFPS
nick@traditionsfire.com
972-979-0631
PO Box 5587
Frisco, TX 75035



FIRE PROTECTION GUIDE FOR CONSTRUCTION

Greentag Engineering LLC

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682-214-4824

2681 MacArthur Blvd Suite 303

Lewisville, TX 75067

MEH Fire Protection

Mark Hasenmyer, P. E.

pe@mehfpe.com

972-874-2662 or 469-235-3154

1311 River Oaks Drive

Flower Mound, TX 75028

Plan submittals to the Fire Marshal's Office must include the third-party reviewer's comments and responses. FMO will keep one set of plans. A copy of the FMO stamped approved plans is required to be on-site and immediately available at all times.

Installation Prior to Approval of Fire Protection Systems

Permission and written authorization to begin installation prior to plan approval may be requested from the Fire Marshal's Office. If permission is granted, a copy of the written permission letter must be kept on-site at all times in lieu of the approved plans. It is understood that any corrections or deviations from the approved plans must be made in order to obtain final acceptance.

Fire Protection System Inspections

All aboveground piping of sprinkler systems shall be inspected and hydro-tested prior to any part being covered or obstructed in any manner unless permission is obtained from the FMO prior to being covered or obstructed. Items inspected include but are not limited to pipe type and sizes, hanger

locations, sprinkler head types and locations, etc. Hydro testing will be according to NFPA 13.

Installations that include multiple systems or levels may be inspected and hydro-tested separately to maintain construction scheduling. Partial visual inspections, covering and/or obstructing systems are not permitted unless special circumstances exist and prior approval from the FMO is given. A special after-hours permit and fee will be required for each approved inspection. The General Contractor requesting a partial inspection would be responsible for obtaining the permit and paying associated fees prior to inspection, not the installing contractor.

Test gauges must be connected to the system being tested. All pumps must be completely disconnected from the system being tested.

A minimum of 24 hours advanced notice is typically required for inspections.

Fire alarm System Plan Submittals

Permits are required for all fire alarm submittals. The FMO will keep one set of plans. A copy of the FMO stamped approved plans is required to be on-site and immediately available at all times.

Installation Prior to Approval of Fire Alarm Systems

Permission and written authorization to begin installation prior to plan approval may be requested from the Fire Marshal's Office. If permission is granted, a copy of the written permission letter must be kept on-site at all times in lieu of the approved plans. It is understood that any corrections or deviations



FIRE PROTECTION GUIDE FOR CONSTRUCTION

from the approved plans must be made in order to obtain final acceptance.

Fire Alarm System Inspections

Fire alarm systems testing will be according to NFPA 72. A minimum of 24 hours advanced notice is typically required for inspections.

Knox Lock Boxes

Knox lock boxes are required on all buildings with monitored fire alarm systems. The lock box can be ordered from Knox Company through the internet at www.knoxbox.com. Specify the City of Waco Fire Department.

Premises Identification

All buildings shall have approved address numbers placed in a position 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 alphabet letters. Numbers shall be a minimum of 4 inches high with a minimum stroke width of 0.5 inches.

Storage Tanks

Permits are required for the installation of storage tanks containing hazardous, combustible, or flammable liquids. Plans should be submitted with the permit application. Inspections are required prior to covering any tank or line from the tank. Testing of installations shall follow the manufacturer's guidelines or be conducted according to the applicable NFPA guidelines.

Note: These guidelines are subject to change without notice based on adopting new Fire Codes.

Waco Fire Marshal's Office

(254) 750-1740 (254) 750-1769 (Fax)

Mailing Address: 1006 N. 25th St.

Waco, TX 76707