

Anna Fire Department Fire Marshal's Office



Pre-Con Commercial Site Development Guidelines (Civil Plans)

This guide is intended as a resource for the civil construction plan submittal requirements for commercial and multi-family projects. Please refer to the 2015 International Codes as adopted and amended by City of Anna for all requirements. To expedite the Fire Marshal's civil plan review process, please ensure the following list of items are incorporated into the proposed civil construction plans. The information provided in this document shall be considered guidelines and policy statements and is not intended to address all requirements.

Site Plan

- The site plan submitted in the civil construction drawings shall be the site plan approved by City Council.

Fire Access and Fire Lane Coverage

- Fire lanes must be installed and identified per requirements prior to vertical construction.
- Two (2) points of access shall be provided for each site plan.
- Remoteness Requirement - Emergency entrances shall be placed a distance apart equal to not less than one-half of the length of the maximum overall diagonal dimension of the lot or area to be served, measured in a straight line between accesses.

Exception:

- *The Fire Marshal may approve alternative layouts for multi-family residential projects.*
- 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 a fire hose lay (using a serpentine curved measurement; not a straight line) from a single, stationary fire apparatus around the exterior of the building or facility. The following formula accounts for the serpentine nature of ground hose and shall be used to determine all hose lay distances:
 - **Two independent measurements (in feet) from a single point located in the center of the fire lane plus 5 feet for every 25 feet of total linear distance. {EXAMPLES: 50 feet of linear distance = 60 feet of total distance; 100 feet of linear distance = 120 feet of total distance; 150 feet of linear distance = 180 feet of total distance}**

Exceptions:

- *The hose lay distance may be increased to 250 feet by the fire code official if the building is equipped throughout with an approved automatic fire sprinkler system installed per applicable codes including but not limited to NFPA 13, 13R, or 13D.*
- *The fire code official may increase the distance where fire apparatus access roads cannot be installed because of location on property, topography, waterways, nonnegotiable grades or other similar conditions, and an approved alternative means of fire protection is provided.*
- All fire lanes shall be concrete and installed in accordance with City of Anna requirements. Roads shall be capable of supporting apparatus weighing up to 90,000 lbs. with a compressive strength of 3,600 psi.
- All exterior walls shall be within 150 feet of a fire lane or street measured to the center of the nearest lane. The distance may be increased to 250 feet if the structure is equipped with a full fire sprinkler system.
- Minimum unobstructed width of 24 feet; **Servicing greater than two-story structures a minimum of 26 feet is required.**
- Fire lanes shall not exceed 10% in grade change within the entire site plan or development, 5% cross slope, and angles of approach and departure shall not exceed 6% without written approval from the Fire Marshal.
- A 10-foot unobstructed path shall be maintained around the structure.

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- A 5-foot unobstructed path shall be maintained between cars or through gates.
- Required Radii
 - Fire Lane Width 24' – Radii 30'
 - Fire Lane Width 26' – Radii 30'
 - Fire Lane Width 30' – Radii 10'
- 14 feet of height clearance shall exist above all fire lanes.
- Dead end fire lanes in excess of 150 feet shall be provided with an approved turnaround. Size, type, and location of turnarounds must be approved by the Fire Marshal.
- Temporary fire lanes shall be constructed using all-weather material (typically “Flex Base” meeting TxDOT Item #247 specifications) capable of supporting fire apparatus weighing up to 90,000 lbs. Fire lanes shall be serviceable and continuously maintained.

Fire Hydrants

- Fire hydrants (existing and proposed) shall be indicated on the plan submittal.
- Existing Fire Hydrants Considered for Use - Existing fire hydrants on adjacent properties shall not be considered available unless fire apparatus access roads extend between properties and easements are established to prevent obstruction of such roads. Existing fire hydrants on public streets are allowed to be considered as available where streets are not provided with median dividers which cannot be crossed by fire fighters pulling hose lines.
- A hydrant shall be located within 100 feet of the Fire Department Connection (FDC).
- Fire hydrants shall be painted to city standards.
- Approved fire hydrant manufacturers are *Mueller “Centurion”, Clow, Waterous (American Flow Control), East Jordan, or approved equal.*
- All hydrants shall be installed with permanent (sexless) 5-inch “Storz” quick connect adapters on the outlet.
- Hydrant spacing shall not exceed 300 feet.
- A minimum of 2 hydrants must be present for each site plan.
- All hydrants must be installed 3 feet behind the curb.
- A minimum of 3 feet of clearance must be maintained around all fire hydrants.
- An 8-inch diameter water main is required for up to 2 hydrants.
- An 8-inch diameter looped water main is required for 2 hydrants or more.

Fire Sprinklers

- Sprinklers are required for structures that are 6,000 sq. ft. in size or greater OR have an occupant load of 300 persons or more in the following occupancies: Group A-1, Group A-3, Group A-4
- Sprinklers are required in private clubs that are 5,000 sq. ft. in size or greater OR have an occupant load of 100 persons or more in the following occupancy: Group A-2 (this includes banquet halls, night clubs, restaurants, taverns, and bars)
- Sprinklers are required in all mini-warehouse and self-service storage facilities.
- Sprinklers are required in multi-story structures where the highest accessible floor level extends 35 feet or more above the fire lane.
- High-rise structures must also be equipped with a temporary standpipe while under construction.
- Size and location of the underground water line servicing the fire sprinkler system shall be indicated on the plans.
- The proposed location of the Fire Department Connection (FDC) shall be indicated on the plans. The FDC is required to be within 50 feet of the fire lane and within 100 feet of a fire hydrant as the hose lays.

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- Riser rooms shall be separated from the rest of the building and used only for the purposes of fire suppression and/or fire alarm and control systems. The following are examples of prohibited equipment and/or facilities in a riser room: water heaters/boilers, mop sinks, roof access, electrical, and storage. Dimensional requirements for riser rooms are as follows: Rooms serving a single riser must be 20 sq. ft. in size with a minimum 4' wide dimension; rooms serving multiple risers may require additional square footage. All riser rooms shall be directly accessible from the exterior of the structure and the door shall be equipped with signage in accordance with the written policy statements of the Fire Department.
- Exterior vaults containing double-check valves and/or backflow prevention assemblies for underground fire water lines are not permitted. Double-check valves shall be installed in the riser room, the main sprinkler control valve room, or as directed by the Fire Marshal.
- Location of Backflow prevention device on the fire sprinkler water supply line shall be indicated on the plans.
- All Fire Departments Connections (FDC's) must be installed remotely and outside of a structure's collapse zone.
- Fire Department Connections must be located within 50 feet of fire lanes and within 100 feet of fire hydrants. *Knox* Company FDC locking caps are required on each FDC.
- Sprinklers are required in all residential *duplexes* and *townhomes*.
- NFPA 13D Systems:
 - Automatic sprinkler systems installed in one- and two-family dwellings; Group R-3; Group R-4 Condition 1, duplexes, and townhouses shall be installed throughout in accordance with NFPA 13D and permitted in accordance with city ordinance and state law.
 - A dedicated riser shall be provided for each duplex or townhome unit.
 - Garage sprinkler coverage shall utilize dry sidewall heads installed on the heated wall of the area.
 - For water supply requirements (i.e., underground fire mains) refer to the City of Anna detail.
 - Underground fire main control valves shall not be installed beneath driveways.
- A Texas Department of Insurance licensed fire sprinkler contractor must install the fire sprinkler underground piping system from the point the water line exits the circulating water system and is dedicated to fire protection use to a point 5-feet inside the building and 1-foot above the finish floor.
- Plans must be submitted to an approved 3rd party vendor for review. Prior to installation, the Fire Marshal's Office must issue a permit based on the reviewed plans.
- **Plans are not reviewed or approved by the Fire Marshal's Office for fire protection system installation.**

Underground Storage Tanks (UST)

- UST's shall not be installed beneath the fire lane.
- A separate permit is required through the Fire Marshal's Office.

Above Ground Storage Tanks (AST)

- AST's are allowed in Light Industrial Districts only.
- The maximum amount of storage shall be 30,000 gallons per site.
- Distance to property lines, buildings, and public ways must meet all applicable state and city laws/ordinances.
- AST's shall not be installed in the fire lane.
- Equivalencies must be approved by the Fire Marshal in other than Light Industrial Zoning.
- A separate permit is required through the Fire Marshal's Office.

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Gates, Fences, and Access Control

- Fire department access points are required where gates cross over fire lanes or where approved access control systems are present.
- Gates across fire lanes must provide full fire lane width and meet all access requirements.
- Gates through fences must be located to maintain 150 feet of fire lane coverage and be a minimum of 5 feet wide.
- The City of Anna utilizes the *Knox* Company emergency access and entry system.
- A Fire Department Gate Access System permit is required through the Fire Marshal's Office.