

Town of Williston

# Fire Safety Plan Review Standards

Williston Fire Department  
6/17/2013

## Fire Safety Plan Review Standards Policy

- 1. Introduction:** The intent of this standard is to outline the minimum requirements necessary to gain plan approval from the Town of Williston Fire Department for new construction projects, and for modifications to existing properties. These standards establish a reasonable level of fire safety for Firefighters and building occupants, and property protection for building owners. Requirements set forth by the State of Vermont through NFPA 1, NFPA 101, other Codes enforced by the State of Vermont, and other referenced codes, as well as practical approaches to satisfying fire safety and building occupant protection, are all considered when reviewing plan submittals.
- 2. Department Overview:** The Williston Fire Department is a combination Fire Service Organization staffed by Career and On-Call personnel. Staffing of up to sixty (60) Firefighters and EMT's, including; three (3) Chief Officers, seven (7) Full-time Firefighter/EMT's and Officers, two (2) Administrative positions, and forty-eight (48) On-Call Firefighters and EMT's is maintained at all times.
- 3. Plan Review:** The Career Staff is charged with review of plans and site visits. Most of the Career Staff work rotating schedules, causing breaks in continuity for coverage. As a result, the Williston Fire Department requires a reasonable period of time to review plans. Although it is expected that plans can be reviewed within a two week time frame, applicants should expect a longer turnaround time for more complex projects.

Plans shall be submitted to the Williston Fire Department for the following:

- Subdivision approval
- Site plan approval
- New construction
- Renovations and modifications that alter the occupancy of a building

Each of the above may result in specialized submissions/requirements.

Example #1: Residences/residential developments, off of the hydrant system, may require a pond or other means for a water supply.

Example #2: An existing building undergoing renovation may allow for an opportunity to make changes to systems, such as fire alarm panel location or means of transmitting an alarm, during the renovation.

- 4. Submittals:** Applicants shall submit to the Williston Fire Department a full set of plans including:
  - Plot plan
  - Elevations to include a view of all sides of the building
  - Floor plans to include:
    - Electrical room and services within
    - Mechanical room and services within
  - Alarm System location
  - Lock Box Location

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- Fire sprinkler system location, and the location of the Fire Department Connection
- Utilities locations including the Gas service, when applicable
- Hydrant locations-up to one thousand (1000) feet in ALL directions
- Exterior Liquid Propane storage
- Underground storage tank locations
- Interior Roof Access and Attic Access Hatch locations

These submittals will allow the Fire Department to recommend services as broad as water supply, and as narrow as, how and where to best locate signage for the Gas service, and where to locate Lock Boxes.

- 5. Emergency Access:** The Williston Fire Department currently operates a ninety-five (95) foot Tower Ladder. Due to positioning requirements, the tower has a workable maximum height of eighty-five (85) feet. Therefore, for building design purposes, the Williston Fire Department uses eighty-five (85) feet as the maximum height for reach. This height for reach decreases significantly as the placement distance for the Tower Ladder away from the building increases. For this reason, parking areas and green zones are factored into the distance formula.

For buildings over fifteen thousand (15,000) sq. ft in size, and for multiple home developments, two means of access will be requested.

All access roads in multi-housing areas shall be a minimum of twenty-six (26) feet in width. Minimum width in low density areas shall be at least twenty-four (24) feet. Driveways for individual homes will have a solid base of twelve feet in width. Alternatives for finished width of driveways for individual homes may be considered on a case by case basis by the Fire Chief or his/her designee. Unique and unusual access problems may cause this requirement to be expanded.

Fire apparatus turnarounds shall be provided where the road is a dead end, and is in excess of one hundred and fifty (150) feet in length. A cul-de-sac turnaround must have a minimum centerline radius of fifty (50) feet.

Two separate entry roads will be required for all residential developments of greater than fifty (50) units. An internal loop road will be required for all residential developments of between ten (10) and forty-nine (49) units.

All buildings that have a driveway leading under an overhang (i.e. Hotels, Senior Housing, and Retail) shall meet the height requirements of thirteen and one half (13 1/2) feet per NFPA 1, to allow access for an ambulance and/or apparatus.

- 6. Fire Lanes:** A Fire lane must be provided for all buildings that are set back more than one hundred (100) feet from the public road curb, or that exceed thirty-six (36) feet in height.

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Fire lanes shall be twenty (20) feet in width, able to withstand the weight of fully loaded apparatus, and have a minimum of fifteen (15) feet of vertical clearance. At the present time, the Tower Ladder operated by Williston is fifty (50) feet in length, has dual rear wheels, and weighs eighty thousand (80,000) lbs.

Fire lanes shall be marked with free standing curbs, sidewalks, or other traffic surfaces that have the words "FIRE LANE- NO PARKING" painted in contrasting colors, and of adequate size and spacing. Lines and hash markings should be reflective so as to be visible during night-time emergencies. "No Parking" signage shall be placed every fifty (50) feet along the lane.

The Fire Department may require additional Fire Lanes, as needed, in order to allow for apparatus access.

- 7. Distance Requirements:** With few exceptions, structures should not be built less than thirty (30) feet apart. This includes single and multi-family residences, commercial buildings, hotels, and industrial buildings. For larger buildings (greater than four (4) residential units, or commercial structures) this distance may be adjusted by approval of the Fire Chief or his/her designee. The addition of sprinklers, and/or the use of cementitious board on the exterior of the building may allow this distance requirement to be lessened, on a case by case basis, with approval by the Fire Chief or his/her designee.

Dumpsters and containers with an individual capacity of one and one half (1.5) yd<sup>3</sup>, or more, shall not be stored in buildings or placed within ten (10) feet of combustible walls, openings, or combustible roof eave lines.

The only exceptions shall be for refuse dumpsters in temporary use during construction, or a permanently mounted refuse container that utilizes an approved fire extinguishing system.

- 8. Entry:** Lock boxes are required for all commercial and industrial buildings, or occupancies, per NFPA 1. These boxes allow for rapid access into buildings after hours, without having to use forcible entry tactics. Lock boxes are only accessible by the Williston Fire Department.

Location of these boxes is on a case by case basis, although they will most often be located away from the hinged side of the main entry door, between five (5) and six (6) feet off the ground and above a solid concrete or paved surface. Any other location requires approval by the Fire Chief or his/her designee. A reflective border six (6) inches in width shall surround the Lock box. The Lock box is to contain all keys, access cards, and contact information for building representatives.

Larger buildings such as commercial warehouses, large frame box stores, and multi use occupancies may require multiple lock box locations. Commercial buildings with loading docks will be required to have multiple lock boxes.

**9. Roof Access:** All access to the roof via a hatch shall be a release mechanism versus a locking mechanism. All roof access locations shall be noted on the building map (see below).

**10. Elevators:** Elevator installations shall be located near the main entry of a building. Dimensions of the elevator capsule must be able to easily accommodate two (2) EMT's, and an EMS stretcher measuring twenty-four (24) inches wide and eighty-four (84) inches long.

**11. Fire Alarm/Emergency Call Systems:** Alarm systems shall be installed in all buildings where required by the currently recognized applicable State of Vermont building Codes. Main control panels, or annunciators, are to be located in the main lobby area or entrance of buildings, preferably to the left inside of the front entrance. This location is preferred, as opposed to an area which would delay access to the alarm system (i.e. Mechanical rooms, Electrical rooms, Computer rooms). It is expected that all alarm systems will be installed, labeled, tested and maintained in accordance to the applicable Codes.

All alarm systems are required to be an addressable system.

A building map identifying the addressable fire alarm system is required. It should be no smaller than eight and one half (8 ½) inches by eleven (11) inches, and it should be located next to the main alarm panel, or, with the approval of the Fire Chief or his/her designee an alternate location.

All alarm systems will utilize a CAT-30 key.

*Any facility whose purpose is to provide assisted living to the elderly or infirmed, or whose purpose is to provide a commercial area for physical training, and/or water sports, must provide an additional means of summoning the local EMS agency. This means it must be in addition to the telephone system. The system should utilize a "panic button" device that is connected to an automatic dialer system. The dialer system shall place an emergency call to an approved central monitoring station.*

**12. Automatic Sprinkler Systems / Fire Department Connections:** Automatic sprinkler systems are to be installed, and maintained, in full operating condition as specified by NFPA 1, 13, 13R, 25, 72, and 101.

When sprinkler systems are installed, the Fire Department Connections shall be located in the front of the building, to the left of the front door, or at another convenient and accessible location as approved by the Fire Chief or his/her designee.

Fire Department Connections must be four (4) inch "stortz" fittings.

It is mandatory that these connections be cleared of snow, shrubbery and other obstructions, at all times.

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Sprinkler systems shall be designed for a maximum working pressure of one hundred and seventy-five (175) pounds per square inch.

Water supply must be adequate to meet the fire flow requirements. For commercial and industrial structures, fire rating shall be required, and must gain approval from the State of Vermont Division of Fire Safety.

A copy for the acceptance tests for the sprinkler system shall be submitted to the Williston Fire Department, attention Fire Chief, prior to issuing a Certificate of Occupancy.

- 13. Utilities:** All outside gas shut-off valves will be required to be located in such a location that is easily accessible to the Fire Department.
- 14. Signage:** A sign measuring twelve (12) inches wide by eighteen (18) inches tall shall be mounted on the side of the building, above the Fire Department connection, between eight (8) and ten (10) feet above ground level. In the center will be a ten (10) inch reflective red "S". The Williston Fire Department will provide these signs to owners at cost.

A sign measuring twelve (12) inches wide by eighteen (18) inches tall shall be mounted on the side of the building, above the gas shut off valve, between eight (8) and ten (10) feet above ground level. In the center will be a ten (10) inch reflective green "G". The Williston Fire Department will provide these signs to owners at cost.

When applicable, a triangular sign shall be mounted on the front of all commercial and industrial buildings identifying the presence of wooden roof and/or floor truss construction. This sign will measure eight and one half (8.5) inches across the top two sides of the triangle, and twelve (12) inches across the bottom side with two (2) inch letters in the center of the triangle. Letters will be red in color and reflective. This sign will be mounted above, or in the area of, the lock box. The Williston Fire Department will provide these signs to owners at cost.

Where applicable, all commercial and industrial buildings shall have affixed to them an NFPA 704 M Identification System Plaque. The plaque's location will be determined by the Williston Fire Department.

Any building larger than fifteen thousand (15,000) square feet in size will have all exterior doors (exit, entry, overhead, mechanical, rollup...etc.) marked with a combination letter/numerical sign/sticker. The four sides of the building will be designated a letter starting with A, and proceed around the building clockwise to letter B, then C, then D. The number shall correspond to the number of doors on a given side of a building. Example: A1, A2, B1, B2, B3, etc. (see Exhibit A) The sign/sticker shall have digits that are ten (10) inches high, shall be reflective, and shall contrast the color of the

door itself. Colors may be chosen which are aesthetically pleasing. Both the interior and exterior of the door shall have a sign/sticker.

Signage must be shown on plans prior to approval by the Town of Williston.

- 15. Fire Hydrants:** Fire hydrants shall be spaced no more than five hundred (500) feet apart in residential areas, and no more than three hundred (300) feet apart in commercial and industrial developments. Where site conditions dictate spacing may be required to be reduced.

Water pressure, and flow, must be adequate to meet fire flow requirements. For larger developments, fire rating shall be determined, and is subject to approval from, the Drinking Water and Ground Water protection Division of the Vermont Department of Environmental Conservation or its successor.

All new fire hydrants will be required to be flow tested, with data presented to Williston Fire Department prior to completion of construction. Fire Hydrants will be color coded to meet NFPA 291- 2010. Discharge Caps are to be painted according to NFPA 2010 using Rust-Oleum Hydrant Paint or an approved alternative. All Fire Hydrants shall have a reflective marker attached to the hydrant with alternating reflective white and red tape.

Marking of Hydrants will be as follows:

- Light Blue – Rated Capacity of 1500 gpm
- Green – Rated Capacity of 1000-1499 gpm
- Orange – Rated Capacity of 500-999 gpm
- Red – Rated Capacity of less than 500 gpm

All fire hydrants located on private property will be identified with a sign measuring twelve (12) inches by eighteen (18) inches tall, mounted two feet to the rear of the hydrant, and located six (6) to eight (8) feet above the ground level. The lettering will include a ten (10) inch red “H”, and be reflective.

- 16. Parking:** Although parking spaces must be sufficient in number to meet the building’s needs, they must also be located so as to minimize the potential for interference with Fire Department access.

**17. Building Identification:** State Fire Prevention Code and local Williston ordinance cite that all buildings have their assigned street address numbers placed in a position to be plainly visible from the street or road fronting the property. Numbers shall contrast with their background and be reflective.

Placement of these numbers must be shown on plans prior to approval.

**Adopted by the Williston Selectboard**

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