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## **Fire Prevention Rules and Regulations Town of Westford**

Construction Projects conducted within the Town of Westford shall follow the Westford Fire Department Fire Prevention Rules and Regulations. The Westford Fire Department Fire Prevention Rules and Regulations are the minimum requirements; Contractors shall be required to meet all applicable codes and/or standards. Whenever there is a conflict between applicable codes and/or standards, the authority having jurisdiction shall prevail.

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## 1.0 Plan Submittal

Contractors shall submit to the Town of Westford Building Department 3 copies of the following: Plans and specifications submitted shall meet all the requirements in accordance with International Building Code and MA Amendments.

- (a) Plans and specifications submitted shall have original/wet registered professional engineers and/or registered architects' seal.
- (b) Submittal of a complete set of architectural plans for the building
- (c) Submittal of fire protective systems with specifications on type of Fire Alarm panel and devices (minimum of 2 sets of drawings)
- (d) Submittal of Sprinkler plans when applicable (minimum of 2 sets of drawings) with specifications of type of sprinkler heads, riser details and components.
- (e) Narrative Report as required shall be submitted. A narrative report is a written summary description of all-applicable fire protection systems and related operational features. The narrative report is to explain the analogy and methodology used by the designers in the design of the systems for the protection of the building occupants and emergency response personnel for all required fire protection systems.

## 1.02 Preliminary Meetings

- (a) Preliminary meeting between the building contractor and fire/sprinkler contractors with the Westford Fire Department is strongly suggested. Scheduled meetings will discuss guidelines for the installation of fire protective systems and other applicable fire department requirements and/or recommendations.

## 2.0 Permits

**Contractors and their subcontractors shall obtain appropriate permits but not limited to the requirements set forth in accordance with the following:**

- a) International Building Code with MA Amendments
  - b) Chapter 148 of the Massachusetts General Laws
  - c) 527 Code of Massachusetts Regulations with MA Amendments Board of Fire Prevention Regulations known as the MA Comprehensive Fire Safety Code NFPA-1
1. Installation, modification, repair or removal of any fire protective systems and components, sprinkler system, water main, fire hydrant, fire alarm system or any device used for fire protection may require a permit from the Westford Fire Department and or the Westford Building Department.

### 3.0 Fire Protective Systems

**Fire Protective Systems shall at a minimum be installed, modified, repaired or removed in accordance with applicable codes and standards; specifically, Chapter 148 of the M.G.L. 527 CMR, and NFPA 72.**

**Fire protective Systems shall include at a minimum the following**

- (a) Devices and equipment to detect fire
- (b) Actuate an alarm or suppress fire or any combination thereof
- (c) All fire alarm wiring shall be installed within **Fire Alarm MC**.

#### 3.01 Plan Submittal for Fire Alarm

- (a) Submittal cut sheets for fire alarm control panel and all other devices included in the signaling system must be submitted for approval prior to acceptance of any plans.
- (b) Fire Alarm systems including associated components and devices shall be Class A wired to a Fire Alarm Control Panel.
- (c) The Fire Alarm Control Panel: pull stations and associated equipment shall be keyed alike and shall use either a Cat 30 or a “B” key lockset.

#### 3.02 Manual Fire Alarm Boxes (pull stations)

- (a) Manual pull stations shall be of the double action type and installed in accordance with IBC 907.4.2 and the American Disabilities Act (ADA).

#### 3.03 Audible / Visual Devices

- a) Combination devices will be used in all building as the primary protective-signaling device to notify the public to evacuate. The sound level of an installed signal should be adequate to perform the intended function and should meet the requirements of IBC 907.5 and the authority having jurisdiction or other applicable standards.
- b) Devices shall be wired with split wired circuitry and installed by ADA requirements. *Modules may be used as an alternative to split wired circuitry upon approval of the authority having jurisdiction.*

- i) Combination Devices require split wired circuitry to allow the Westford Fire Department to **silence the Audible alarm (fire alarm panel) allowing the visual device to signal until reset.**
- c) Out-of-sight smoke or heat detector shall require a high-quality remote indicator specifically designed for use in fire alarm systems. A red LED shall be clearly visible when active to indicate the activation of an out-of-sight smoke or heat detector, location subject to approval of the authority having jurisdiction.
- d) A white strobe light or equivalent shall be installed on the outside of the building near or above the fire department connection wired to indicate water flow.

### **3.04 In-Duct Smoke Detectors**

- (a) Where applicable (NFPA 90A)
- (b) In-Duct smoke detectors will be provided with a keyed remote showing both power and alarm (LED) modes and a key for testing and meeting every controlled unit
- (c) Installation location subject to approval of the authority having jurisdiction.
- (d) Each remote test station will be labeled with the unit numbered and if it is installed in a supply or return plenum.
- (e) Roof Top Units shall be numbered with a corresponding number connected to the In-Duct Smokes. Numbers shall be reflective and at a minimum of 2 inches in height.

### **3.05 Protective Signaling System Connection (Fire alarm system)**

- (a) Fire Alarms shall be transmitted to an approved supervised proprietary alarm-receiving facility such as the Westford Fire Department or a central station in accordance with applicable laws, rules, standards and or regulations.
- (b) Fire alarm systems shall be capable of transmitting Alarms, trouble alarms and supervisory signals.
  - (1) Trouble and or Supervisory signals shall be self-restoring.
- (c) Fire Alarms connected to the Westford Fire Department shall be connected via a Digitize Radio Box ® Intellitize AES or equivalent. Size of the radio box will be determined by the authority having jurisdiction.

- 1.1 An application shall be completed and submitted to the Westford Fire Prevention Office for approval prior to purchasing a Radio-Box.
  - 1.2 An external antenna as specified by Digitize shall be installed for all Radio Boxes that do not send an appropriate signal to Westford Fire Alarm, verification with the AHJ required.
  - 1.3 Fire Alarm Contractor shall be responsible to schedule with R.B. Allen to tie-in the Radio Box to the Westford Fire Department. Fire Alarm Contractor shall be responsible to assure the Radio Box has been installed in accordance with manufactures and R.B. Allen requirements, failure shall result in the Radio Box not being accepted and will not be put into service.
  - 1.4 The annual monitoring charge is One Hundred and Eighty Dollars (\$180). The annual charge is due every July 1 and will be prorated, all payments payable to the Westford Fire Department, Fire Alarm Account.
- (d) Any building or facility undergoing renovation or new construction currently connected to the WFD using reversed polarity (dedicated telephone line) shall convert the Fire Alarm signaling system as set forth by these rules and regulations section 3.05 paragraph (a).
- (e) Fire Alarm Test Report shall be submitted to the Westford Fire Department and Building Department prior to final acceptance of the system(s) and related equipment.

### **3.06 Secured Key Access (Knox Box)**

- (a) Required by the authority having jurisdiction the contractor will be responsible to install a Knox Box at the front entryway or as approved by the Westford Fire Department.
  - (i) Knox Box Size will depend upon building use
  - (ii) Either a 4100 or 4400 Series will be used
- (b) The Knox Box shall have a tamper switch to be wired to the protective signaling system as a trouble mode and shall be wired to reset upon securing the cover.
- (c) The Knox Box shall contain keys to the structure served by the fire alarm system and other keys necessary to operate fire protective systems and allow for building access.

#### 4.0 Annunciator Panel

- (a) All buildings shall have a remote annunciator panel indicator at or near the main entrance or at another location acceptable to the authority having jurisdiction. It shall be provided to show the location by building and floor of the operation of all alarm signal initiating devices (NFPA 72) including fire pumps and pressure tanks.

#### 5.0 Sprinkler Protection

**Sprinkler systems shall be installed in every building or addition containing 7,500 square feet of floor space (including basements) as defined in the Massachusetts General Laws chapter 148, section 26G. *The Town of Westford adopted this section at their annual town meeting in 1984 article 33.***

- (a) The sprinkler system shall be designed in accordance with NFPA standards and the Massachusetts Building Code.
- (b) Plans shall contain all of the information required in NFPA working plans Hydraulic calculation forms.
- (c) Three (3) copies of the design plans and hydraulic calculations, all with original/wet stamp Registered Fire Protection engineers seal shall be submitted to the Westford Building Department.
- (d) A water main flow test shall be deemed valid if it has been conducted within six months of the date of submittal of the sprinkler system plans to the Westford Fire Department. Arrangements for a flow test shall be made with the Westford Water Department.
- (e) When a fire pump is required, the Westford Fire Department shall be notified one week prior to the test date and time. Field acceptance test shall be in accordance with 527 CMR 1.00 and NFPA 20.
- (f) Sprinkler Test Certificates shall be submitted to the Westford Fire Department and Building Department prior to final acceptance of the system(s) and related equipment.
- (g) A Four Inch Storz connection is required for the fire department connection. A white strobe light or equivalent shall be installed on the outside of the building near the fire department connection wired to indicate water flow.

### **5.01 Water Flow Devices**

- (a) All water flow devices shall be wired to the protective signaling system as alarm mode and shall be on each zone, floor, fire pumps and pressure tanks for fire protection (where required) for the protected building.
- (b) Post Indicator Valve's (P.I.V.) shall be wired to the protective signaling system in the open position.
- (c) A Water Gong or equivalent shall be used to indicate water flow
- (d) All Tamper Switches shall be wired to the protective signaling system as a trouble alarm. Trouble or Supervisory signals shall be self-restoring.
- (e) Standpipes when applicable shall have 2 ½ connection with National Standard Threads, and 1½ connection shall have National Pipe Threads.
- (f) Condominiums / Town Houses or similar residences requiring sprinkler systems shall have separate control valve for each unit. Flow switches shall be connected to a fire alarm control panel with unit indicator devices.

### **6.0 Elevators**

- (a) Elevators installed within a building are required to meet the following requirements and the authority having jurisdiction.
- (b) MA Elevator code and NFPA 72.
- (c) Contractor will be required to provide the Westford Fire Department with a 5203-elevator key for the Knox Box.
- (d) Emergency Telephone shall be connected to the Westford Fire Department via dialing 978-692-6374.

### **7.0 Commercial Cooking Operations**

Commercial cooking operations shall meet at a minimum the requirements set forth in 527 CMR 50 and by reference NFPA 96 to provide fire safety requirements related to the design, installation, operation, inspection, and maintenance of all public and private cooking operations.

## 8.0 Inspections

The Westford Fire Department may conduct periodic inspections during the construction stage. Contractors are encouraged to schedule periodic walkthroughs during the rough stage.

- a) Scheduling for Final Inspection
  - 1) Contractors are encouraged to schedule final inspection five business days in advance. *Scheduled inspections are subject to change without advance notice from the Westford Fire Department due to but not limited to fire department emergencies.*
  - 2) Facility Fire Alarm tied in with Westford Fire Department via a Radio Box shall be tested prior to inspection. *Review section 3.05.*
  - 3) Responsible parties or contractors for Fire Alarm and Sprinkler Systems shall be on site at the time of inspection and shall provide necessary documents e.g. Fire Alarm test reports, Sprinkler certificate. Affidavits shall be submitted to the Westford Building Department with copies sent to the Westford Fire Department.
  - 4) Acceptance of systems will be determined at the time of Final Test and Inspection.

## 9.0 Site Access

Fire Apparatus Access Plans shall be submitted to the fire department for review and approval prior to construction in accordance with 527 CMR 1.00.

- a) Fire apparatus access road plans must include an analysis and evaluation of fire apparatus maneuvers throughout the access roads created by swept path analysis and turn simulation software. Analysis shall use Westford Tower Ladder Turn radius template.
- b) Fire department access roads shall consist of roadways, fire lanes, parking lot lanes, or a combination thereof.
- c) T or Y turn arounds shall be able to accommodate the Westford Tower Ladder, using the Westford Tower Ladder Turn radius template.
- d) Westford Fire requests that they be notified when the roadway layout is ready for pavement so that they can make certain that the layout physically works with their equipment.



- e) Final approval of any Fire Department access roadway and/or turn around will be at the time of construction complete including the installation of light poles, fences, trees and other possible obstructions.

## **10.0 Fire Lanes**

The establishment of fire lanes shall be at the sole discretion of the Fire Chief in accordance with The Town of Westford By-Laws (11-25-89).

- a) Said fire lane is to be not less than eighteen (18) feet wide for all building in any shopping center, nursing home, office building or other public building.
- b) Pavement shall be marked using yellow lines no less than four (4) inches wide at a diagonal to the curb, sidewalk or building of origination. The legend “Fire Lane” shall be included within the printed area.
- c) Signs with the legend “No Parking – Fire Lane – Tow Zone shall be erected no less than twenty-five (25) feet apart along the entire length of the Fire Lane. Signs shall be a minimum of twelve (12) inches wide and sixteen (16) inches high. Signs shall be permanently mounted and be visible from the pavement markings.

## **11.0 Emergency Responder Radio Coverage**

Emergency responder radio coverage shall be provided in all new buildings in accordance with IBC MA front end amendments and section 24.5 of NFPA 72: Two-way, in-building Emergency Communications Systems.

- a) A construction permit for the installation of or modification to emergency responder radio coverage systems and related equipment is required to be submitted to the Westford Building Department. Permit application shall include plans for systems, components and equipment required to provide the emergency responder radio coverage system.
  - 1. Two entire sets of plans and specifications shall be submitted: one for the Building Official and one for the Fire Official.
- b) Where an emergency responder radio coverage system is required, and upon completion of installation, the building owner shall have the radio system tested with the Westford Fire and Police Departments to verify that two-way coverage on each floor of the building is not less than 90%. Acceptance of the system will be determined at the time of final test and inspection.

## 12.0 Town of Westford Fire Department Fire Prevention Bureau

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