

## APPENDIX F FIRE DEPARTMENT REGULATIONS

Section A	System Design and Layout
Section B	Fire Alarm System
Section C	System Maintenance
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### Applicability

The Town of Auburn shall require for new commercial construction, repair, renovation, modification, reconstruction, change of use, occupancy class or addition, a complete fire alarm system installed according to current editions to the Life Safety Code NFPA 101, Fire Code NFPA 1, National Fire Alarm Signaling Code NFPA 72 and the State of New Hampshire Fire Code.

### Definitions

**Addition** – An increase in building area, aggregate floor area, building height, or number of stories of a structure.

**AHJ** – Authority Having Jurisdiction

**Change of Use** – A change in the purpose or level of activity within a structure that involves a change in application of the requirements of the New Hampshire State Fire Code.

**Change of Occupancy** – The change in the occupancy classification of a structure or a portion of a structure.

**ICC** – International Code Council

**Modification** – The reconfiguration of any space; the addition or elimination of any door or window; the addition or elimination of load-bearing elements; the reconfiguration or extension of any system; or the installation of any additional equipment.

**New Construction** – Any Newly Constructed Commercial or Residential Building

**NFPA** – National Fire Protection Association

**Reconstruction** – The reconfiguration of a space that affects an exit or a corridor shared by more than one occupant space; or the reconfiguration of a space such that the rehabilitation work area is not permitted to be occupied because existing means of egress and fire protection systems, or equivalent, are not in place or continuously maintained.

**Rehabilitation** – That portion of a building affected by any renovation, modification, or reconstruction work as initially intended by the owner, and indicated as such in the permit.

**Repair** – The patching, restoration, or painting of materials, elements, equipment, or fixtures for the purpose of maintaining such materials, elements, equipment, or fixtures in good or sound condition.

### Documents and Plan Review

- (1) Three (3) sets of Construction documents and shop drawings shall be submitted, reviewed, and approved by the AHJ prior to the start of such work.
- (2) The applicant shall be responsible to ensure that the following conditions are met:
  - (a) The construction documents include all fire protection code requirements and are in accordance with all current applicable codes and standards.
  - (b) The contractor maintains an approved set of construction documents on site.
- (3) It shall be the responsibility of the AHJ to promulgate rules that cover the criteria to meet the New Hampshire State Fire Code and the review of documents and construction documents within established time frames for the purpose of acceptance or providing reasons for non-acceptance.
- (4) Review and approval by the AHJ shall not relieve the applicant of the responsibility of compliance with the New Hampshire State Fire Code.

### Technical Assistance

- (1) The AHJ shall be permitted to require a review by an approved independent third party with expertise in the matter to be reviewed at the submitter's expense.
- (2) The independent reviewer shall provide an evaluation and recommend necessary changes of the proposed design, operation, process, or new technology to the AHJ.
- (3) The AHJ shall be authorized to require the design submittals to bear the stamp of a registered design professional.
- (4) The AHJ shall make the final determination as to whether the provisions of The New Hampshire State Fire Code have been met.

These requirements are not to be construed to be complete, but only as a guide. For all questions regarding fire, the enclosed shall be directed to the Auburn Fire Department and resolved before proceeding with construction.

## **SECTION A**

### **System Design and Layout**

1. All fire alarm systems installed in the Town of Auburn shall have a permit to install a Fire Alarm system from The Auburn Fire Department. A floor plan showing all fire alarm devices, location of radio communicator, panel and annunciators, a one-line wiring diagram, battery calculations and annunciator detail showing zone labeling, will be required to be submitted for approval before The Auburn Fire Department or Town of Auburn Building Department issues a permit for installation.
2. The installer shall complete a certificate certifying that the system has been 100% tested and functions in complete compliance with the system specifications, manufacturers recommendations and the New Hampshire State Fire Code. The certificate shall be signed by the installer, general contractor, and/or the owner. After receipt of the certification, the Fire Chief or his designee will conduct an inspection, the installer shall perform the test and shall provide the necessary tools and personnel to perform the test with a representative of the owner. It shall be the responsibility of the owner to inspect 25% of all alarm devices quarterly. The intent is a 100% inspection of the system annually.
3. Additions and modifications to existing systems will require a new application and submittal.
4. All equipment used shall be of a type approved by the AHJ. All systems shall be installed in accordance with all applicable codes and standards as set forth by the New Hampshire State Fire Code.
5. All Fire Alarm Panels, Annunciators, Firefighter Telephone and Fire Alarm Pull Stations shall have CAT-30 key locks.
6. All Fire Alarm Panels (FIRE ALARM CONTROL PANEL) shall be stand-alone units. No other functions shall be allowed in the panel (e.g. security systems).
7. All systems shall be DC, supervised, battery stand-by Fire Alarm systems.
8. A separate AC circuit disconnect will be provided for the Fire Alarm system with breaker lock and painted RED.
9. The batteries used with the Fire Alarm control panel shall be capable of operating the panel for sixty (60) hours with a five (5) minute ring-down at the end of the sixty (60) hour period. The calculation used to determine battery capacity shall be presented to the Fire Department with the application for Fire Alarm. Stand-by batteries and the charging system shall be supervised.
10. Fire Alarm control panels shall be conspicuously marked with a sign "Fire Alarm Control Panel" of 1" white lettering on a red background.
11. If the Fire Alarm control panel is in a separate or concealed space, a sign shall be provided on the entrance door or near the concealed space. The sign shall be red with white lettering at least one (1) inch in height and shall read: "Fire Alarm Control Panel".

12. Upon activation of any alarm device, the control panel shall sound the evacuation signals, flash the evacuation lights, indicate the zone of activation, and send a signal to a UL approved central station. Elevator recall shall be wired to the State of New Hampshire Elevator Code.
13. All elevators which travel 25 feet or more above the ground level shall be connected to the fire alarm system. Each elevator lobby, at each level and the elevator equipment room shall have a smoke detector with connections to the elevator control system. Smoke detectors activation in an elevator lobby shall prevent the elevator from stopping and/or opening at the lobby. The system shall be wired so that in the event of activation of all lobby smoke detectors, the elevators shall open at a designated level. Elevator recall systems shall reset-set automatically with the resetting-setting of the Fire Alarm Control Panel. All smoke detectors shall be connected to the appropriated zone of the building fire alarm system.
14. All control panels shall have a drill switch to permit fire drills without summoning the Fire department in educational, daycare, nursing homes, group homes, and other occupancies as determined by the Fire Department.
15. City disconnect switches are not allowed on the Fire Alarm control panels.
16. All zones of the control panel shall have red alarm indicating lamps and yellow trouble lamps. Power lamps shall be green.
17. A trouble signal switch shall silence the trouble audible signal while the trouble visual signal remains illuminated. The trouble silence and drill switches shall have a ring back feature to supervise correct switch position. Alarm signals shall have a resound provision. When a system is "silenced" and subsequent alarms from any other zone shall resound-round the evacuation signals. All control panels shall have a signal silence switch and a system reset switch.
18. Fire Alarm Control panels having zone labeling on the outside of the door with zone lamps mounted on an inside panel shall have zone labeling inside the panel also, to indicate zones when door is opened.
19. All systems shall allow the visual indicators of the evacuation signal to stay illuminated after the alarm silence switch is operated and remain illuminated until the system is reset.
20. All places of assembly and all structures housing 24 or more living units shall require a Voice Fire Alarm system with slow whoop evacuation signal and must have a supervised microphone public address system.
21. All dwelling units shall have a UL listed device (mini horn) or speaker connected to the buildings fire alarm system. All evacuation and audible devices shall have the same sound.
22. End of the line devices must be installed electrically last beyond any detection device in an alarm circuit. The location of the end of the line device shall be permanently labeled.
23. Detection devices located in concealed areas shall have remote indicators or their location shall be permanently marked in a manner acceptable to the AHJ
24. A system smoke detector and 212-degree sprinkler head (if sprinkled) shall be installed in all main electrical rooms. Installation of equipment shall be in accordance with modern standards of practice. All wiring shall be in accordance with the New Hampshire State Fire Code.

25. Fire Alarm zones shall protect a maximum of 10,000 square feet.
26. Structures having multiple-tenant outside access shall be zoned by tenant space. (E.g. strip malls shall be zoned by address of each store.)
27. All wiring shall be run in EMT or UL/FM/NEC approved conduit. No wiring shall be exposed. 105-degree centigrade wire may be run without conduit provided it is not exposed, is below ten (10) feet from the floor level and is stapled or supported every eighteen (18) inches. 105-degree centigrade wire must be labeled 'FPL', 'FPLR' if the cable runs vertically between floors and "FPLR" if the cable is in a plenum. All initiating and audio/visual devices shall be mounted on back of boxes. All wire must be solid. All pull box covers shall be red.
28. All Alarm initiating devices other than smoke devices shall be wired electrically first before smoke detectors in a class "B" system. All smoke detectors shall be wired electrically grouped together in a class "A" system.
29. If a local alarm system is present, a RED label with White lettering shall be present over the pull stations and is to read: "LOCAL ALARM ONLY. DIAL "911"
30. A remote annunciator shall always be located at the main entrance of the building and strategically mounted to allow unimpaired access and view. The color shall be predominantly red. All zone labeling shall be in plain English indicating the location of the alarm. Zone indicators WILL NOT be allowed on the annunciator. Units located on the outside of the building shall be back-lit type with sufficient brilliance to be seen in normal direct sunlight. No LED lamps are allowed. Acceptable annunciator labeling will include: Back lit painted window letters or engraved plastic white on red. NOTE: "Dymo" labels will not be allowed.
31. Graphic annunciators shall be required on all buildings of unusual design or with a floor space more than 20,000 square feet and all multi-building systems.
32. The building graphic shall show the building in phase with the viewer and shall indicate in red to the viewer "You Are Here".
33. Building outlines shall be "triple thick" black. Within the building's rooms, corridor, etc. shall be shown "double thick". Other lines of lesser significance such as door swings and windows shall be shown "single thickness". Extraneous building details shall be eliminated to provide a clear and concise plan of the layout depicting only relevant details.
34. Graphics having significant detail should have stairways highlighted or shaded in blue and elevators in yellow to bring attention to these areas. All main corridors and point of egress shall also be clearly indicated.
35. All Fire Alarm and Fire Department control devices and locations shall be shown with red symbols and identification.
36. Zone boundaries shall be shown using a red dashed line when applicable.
37. Permanent "HAZARDOUS MATERIALS" storage locations should be so noted in red.
38. Annunciator panel detail plan and drawing shall be submitted to the Fire Chief for approval before installation.
39. All exterior exit ways and each exit from each floor shall have a pull station within four (4) feet of exit way.

40. All pull stations and horn/light units shall be predominantly red and be labeled "Fire". Any alarm or signal devices located in the building which are not part of the fire alarm system shall be painted a color other than red. If key pull stations are used, a CAT-30 key shall be used.
41. Signal levels shall have a sound level at least 15 dB above the average ambient sound level or 5 dB above the maximum sound level having a duration of at least 60 seconds, whichever is greater, measured 5 ft (1.5 m) above the floor in the area required to be served by the system using the A-weighted scale (dBA).
42. The Town of Auburn assumes no responsibility for the correct operation of the fire alarm systems.
43. The Auburn Fire Department maintains a "Knox Box" key depository system. All commercial, industrial, non-residential, and multi-family buildings are required to install "Knox Box" systems. See section C of these regulations for additional information and requirements.
44. Wireless Fire Alarm System shall be approved by the AHJ.
45. Commercial and Industrial occupancies with cooking appliances shall have an approved fire suppression system as per the AHJ.

## **SECTION B**

### **Fire Alarm System**

1. Single family and two (2) family homes shall be equipped with 110-volt hard wire smoke detectors, with a minimum of one per floor and is to include the attic. All smoke detector circuits will be tied into a common light circuit.
2. Multi-family dwellings shall meet all the provisions as specified in NFPA 72 and The New Hampshire State Fire Code.
3. All commercial and industrial buildings containing a complete fire alarm system shall be monitored by a UL approved monitoring company.
4. All smoke detectors shall be UL approved and not less than three (3) percent activation.

## **SECTION C**

### **System Maintenance**

1. The property owner is responsible to maintain the fire alarm system and all devices attached thereto including the fire sprinkler system, in proper working order at all times.
2. All maintenance of fire alarm systems and the sprinkler system shall be done by competent Certificate of Fitness holders who are knowledgeable in the systems.
3. The property owner is responsible to have 100% of the system tested and inspected annually.



4. The property owner shall maintain written reports of each annual test/inspection and copies of shall be provided to the AHJ upon completion of the test/inspection.

#### **SECTION D**

##### **Knox Box**

1. All commercial, Industrial, and non-residential occupancies shall provide a "Knox Box" key lock system at the discretion of the AHJ.
2. Knox Box shall be mounted within 10 feet of main entrance.
3. Applications can be obtained online, from the Building Inspector or the AHJ.

#### **SECTION E**

##### **Fire Sprinkler Systems**

1. All buildings with required fire sprinkler systems must be installed and maintained per NFPA 13, 13D, 13R or NFPA 25. Residential sprinklers shall a maintained in the same fashion.
2. Full hydraulic calculations are required on all system designs.
3. All water flow and tamper switches must be monitored by the fire alarm system.

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