MUNICIPAL SERVICES, FACILITIES AND INFRASTRUCTURE COMMITTEE
Council Chambers B, Keene City Hall
February 26, 2025
6:00 PM

A. AGENDA ITEMS

1. Presentation - NH Department of Transportation - Reconstruction of Route 101 - Public Works
2. Verbal Update - Accelerated Tree Removal Timeline - Red Pine Scale
3. Unresolved Design Decisions for the Downtown Infrastructure Project - Public Works
4. Continued Discussion - Proposal to Implement a "Protection of Streets" Program - Public Works
5. 2025 Construction Season Update - Public Works
6. Relating to Master Boxes
   Ordinance O-2025-03-A
7. Relating to Installation of a Stop Sign on Gilsum Street
   Ordinance O-2025-06

B. MORE TIME ITEMS

NON PUBLIC SESSION

ADJOURNMENT

CITY OF KEENE
NEW HAMPSHIRE

Meeting Date: February 26, 2025

To: Municipal Services, Facilities and Infrastructure Committee

From: Donald Lussier, Public Works Director

Through: Elizabeth Ferland, City Manager

Subject: **Presentation - NH Department of Transportation - Reconstruction of Route 101 - Public Works**

Recommendation:
Accept as Informational

Attachments:
None

Background:
The New Hampshire Department of Transportation is preparing plans for the reconstruction of NH Rt. 101 from Branch Road to a point near Optical Avenue (NHDOT Project No. 41590). The project will include safety improvements to the Swanzey Factory Road intersection as well as the repair or replacement of the bridge over the Branch River.

Staff from the NHDOT and their design consultant will be on hand to update the Committee on the progress of the design efforts. The Department's proposed design will be discussed and input from the Committee will be solicited.

CITY OF KEENE
NEW HAMPSHIRE

Meeting Date: February 26, 2025

To: Municipal Services, Facilities and Infrastructure Committee

From: Donald Lussier, Public Works Director

Through: Elizabeth Ferland, City Manager

Subject: **Unresolved Design Decisions for the Downtown Infrastructure Project - Public Works**

Recommendation:

Move that the Municipal Services, Facilities, and Infrastructure Committee recommend that the City Manager be authorized to incorporate the following design preferences into the Downtown Infrastructure Project:

1) Railroad Square covered pavilion: _____
2) Central Square Fountain: _____
3) Removable Bollards: _____

Attachments:

None

Background:

The City Council voted to approve the Final Design elements of the Downtown Infrastructure Project on January 2, 2025. The approved final design included an optional multipurpose shade structure for Railroad Square, to be included in the bid documents as an "alternative" bid item. The size, usage and architectural style of that structure were not fully resolved. The design team will present alternatives for the Committee's consideration.

Similarly, the design of a new fountain for Central Square has not been fully resolved, now that a previous option of incorporating a peace pole has been eliminated. Stantec has prepared two alternatives for the committee to consider. Both would reuse the existing engraved granite seating wall. Both would also replace the existing granite fountain with a traditional three-tier cast-iron fountain, reminiscent of the fountain that was located in the square circa 1900.

Another element that remains undecided is the potential use of removable bollards in lieu of temporary concrete barriers (i.e., Jersey Barriers) and dump trucks to provide perimeter security for community events. The design team has identified two alternative systems for meeting this need. These systems would address the concerns of merchants and event planners by opening up visibility to event activities and storefronts. However, the systems would add a significant cost to the project.

Finally, City Staff will provide a verbal update on several project-related topics, including the potential use of trash compactors, and business request for an "over-the-street" banner system.

CITY OF KEENE
NEW HAMPSHIRE

Meeting Date: February 26, 2025

To: Municipal Services, Facilities and Infrastructure Committee

From: Donald Lussier, Public Works Director

Through: Elizabeth Ferland, City Manager

Subject: **Continued Discussion - Proposal to Implement a "Protection of Streets" Program - Public Works**

Recommendation:

Move that the Municipal Services, Facilities & Infrastructure Committee recommend that the City Manager be authorized to draft an ordinance to disincentivize the cutting of newly paved roadways and sidewalks for a period of five years after construction.

Attachments:

None

Background:

At the MSFI meeting held on January 22, 2025, the Public Works Director described a proposal to update City Ordinances in order to minimize the cutting of roadways for a period of time after the City has invested in capital improvements. The Committee had questions around the potential impact on individual property owners. Staff has reviewed the process and procedures used by peer communities to protect their investment in roadway infrastructure. The following table compares permit fee structures in several New Hampshire communities that have implemented such an ordinance (the leftmost column is Keene's current fee structure). The "Potential Cost" shown below is a calculation of the permit fee for a property owner that has to perform a typical sewer service replacement within two years of a repaving project:

	Keene	Concord	Dover	Manchester	Nashua	Portsmouth*
Permit Fee	$75	$255	$225	$200	$0	$250 (+$150)
Street Damage Fee		$5.00/SF	$7.00/SF	$7.00/SF		
Sidewalk Damage Fee		$2.50/SF	$3.50/SF	$2.00/SF		
Life Reduction fee (<2 y/o)		3x damage	3x damage	2x damage	≈ $6,250	4x damage
Life Reduction Fee (2 yr – 5 yr)		2x damage	2x damage	2x damage		3x damage
Security (refundable)	$500		$7/SF			$500
Potential Cost	**$75**	**$1,292.50**	**$1,677.50**	**$1,160.00**	**$6,250**	**$1,000**

* Portsmouth charges 5x damage fee for pavement <1 year old, and 2x damage fee for pavement between 3 and 4 years old.

It's important to emphasize that the intention of this change is not to generate revenue, but rather maximize the longevity of our roads and sidewalks. To that end, two of the New Hampshire communities we evaluated offer an incentive to make needed repairs in advance. Both Concord and Dover waive the damage fee if the road or sidewalk is scheduled to be reconstructed within 1 year of the permit work. The Public Works would recommend extending that waiver to work completed within 2 years of a scheduled repave. The Department would be responsible for notifying residents along streets to be repaved.

If the Council wishes to implement a "Protection of Streets" ordinance, the Department recommends generally following the model of Concord and Manchester. The key elements would include:

- A fixed, flat-rate permit fee, applicable to all excavations.
- A per square foot "Pavement Damage Fee" and "Sidewalk Damage Fee", also applicable to all excavations.
- A Pavement Life Reduction Fee equal to 3 times the damage fee applicable to pavements less than 2 years old.
- A Pavement Life Reduction Fee equal to 2 times the damage fee applicable to pavements between 2 and 5 years old.
- Waiver of damage fees for pavements scheduled to be replaced within 2 years.
- No separate refundable security deposit.
- Fees collected would be deposited in the Road & Sidewalk Infrastructure Capital Reserve.

Another possible method of mitigating the impact of this ordinance on individual property owners would be to offer City financing for replacements conducted prior to re-paving. This would entail the City paying a private contractor to perform the work, and then billing the customer as part of their quarterly utility bill over a period of time. It appears that such a municipal finance program may be permissible under NH RSA 31:95-h, and/or RSA 31:134-149. However, additional legal review is required.

CITY OF KEENE
NEW HAMPSHIRE

Meeting Date: February 26, 2025

To: Municipal Services, Facilities and Infrastructure Committee

From: Donald Lussier, Public Works Director
Bryan Ruoff, City Engineer

Through: Elizabeth Ferland, City Manager

Subject: **2025 Construction Season Update - Public Works**

Recommendation:
Accept as Informational

Attachments:
None

Background:
At the request of the Chair, the City Engineer and Public Works Director will provide an update on several of the upcoming construction projects of particular interest to the Council and community, including:

- Marlboro Street & Cheshire Rail Trail Project
- Island Street Reconstruction Project
- Key Road Drainage Replacement
- Lower Winchester Street Reconstruction Project
- Transportation Heritage Trail - Phase 1
- George Street Bridge Replacement
- 2025 Road Rehab & Preservation Program
- 2025 Sidewalk Replacement Program

ORDINANCE O-2025-03-**A**

CITY OF KEENE

In the Year of Our Lord Two Thousand and Twenty Five

AN ORDINANCE Relating to Master Boxes

Be it ordained by the City Council of the City of Keene, as follows:

That the Ordinances of the City of Keene, as amended, are hereby further amended by removing the stricken text in various sections throughout Division 3 "Fire Alarms" and inserting the bolded text; and deleting in their entirety Section 34-98, "Occupancies Requiring Connection," Section 34-99, "Aerial Connection," Section 34-100 Underground (Direct Burial) Connections," Section 34-101 "Same-Underground (Buried Conduit) Connections," Section 23-102, "Lighting Protection," Section 34-103 "Grounding," Section 34-105 "Responsibility," Section 34-106 "Exceptions," and renumbering of the remaining sections in Division 3 as follows:

Sec. 34-91. Standards.

All alarms installed in the City pursuant to this division shall conform to the standards set forth in, NFPA 72 National Fire Alarm Code ~~2016 Edition,~~ NFPA 1 Uniform Fire Code, and NFPA 101 Life Safety Code, as adopted **as part of the State Fire Code in accordance with NHRSA 153:5 and administered** in Chapter 42 of this Code, entitled Fire Prevention and Protection. Additional requirements for the installation of alarm initiating equipment in the City shall be as provided in this division. **Except as defined herein, applicable definitions contained in the referenced codes, statutes, or rules apply.**

Sec. 34-92. General requirements for installation.

(a) Before the installation or expansion of any ~~interior~~ fire alarm system~~, master box, or street boxes for new rights-of-way is begun,~~ the company responsible for the proposed system installation shall submit **a permit application with a** detailed set of plans, ~~blueprints,~~ specifications, **calculations, material cut sheets,** etc., outlining the system and its components **and intended operation** to the **City** fire **department ~~marshal's office~~** for review and approval.
(b) A permit shall be obtained from the **City** fire department for the installation of any **fire alarm system or radio** master box. A fee as set forth in the schedule of fees in appendix B to this Code shall be paid upon application for the permit.

(c) Installation of a knox box (key box) shall be required at all locations where a fire alarm system is being installed or is currently in use. Knox box shall be located next to the main entrance at the discretion of the **City** fire department. Apartment buildings with more than two floors will require a key in the box for each floor and therefore require a larger knox box. Multiple building complexes shall have a knox box on each building in the complex for rapid entry of emergency personnel and **location** shall be approved by the **City** fire **chief, or designee**~~department~~. Applications are available at the **City** fire department.

(~~d~~) ~~All fire alarm equipment shall be new and shall be furnished and installed by the owner of the property protected and/or by the developer of the new right-of-way.~~

(d **e**) If trouble or faults develop in any part of a private system, it shall be the prerogative of the **City** fire department to disconnect any part or all of the private system from the municipal circuits **or radio frequencies**. The owner or agent of the protected **premises**~~property~~ shall be notified of the disconnection.

(e ~~f~~) ~~Any or all parts of existing fire alarm systems in a building undergoing renovation shall conform to the requirements for new installations.~~

(f ~~g~~) All installations shall conform to the requirements of **the state building code and state fire code as applicable, the adopted** NFPA **standards,** the International Municipal Signal Association (IMSA), or any applicable code in effect.

(g ~~h~~) Access to the protected **premises**~~property~~ shall be made available to the **City** fire department.

(h ~~i~~) ~~Code wheel~~ **Box** numbers for all **radio** master boxes shall be **assigned and/or** approved by the **City** fire department.

(i ~~j~~) A service charge per calendar year shall be assessed for each **radio** master box connected to the municipal **system** ~~circuit~~. This shall include existing and new **radio** master boxes. New systems installed shall be charged a pro rata amount per month or part of a month, until ~~June~~ **December** 3**rd** of the installation year, after which the annual fee will take effect on ~~July~~ **January** 1**st**. The charges required in this subsection are as set forth in the schedule of fees in appendix B to this Code.

Sec. 34-93. ~~Supervisory~~ Fire Alarm ~~control~~ Control ~~panel~~ Unit (FACU).

(a) A ~~supervisory control panel~~ **FACU** shall **include visual and audible annunciation** ~~be~~ installed with the fire alarm system for the purpose of identifying location, **acknowledging,** resetting and/or disabling alarms. **Keys for panel** ~~Panel~~ locks, **pull stations or other fire alarm system components** shall be p**rovided for installation in the knox box(s) servicing the location.** ~~eyed for "CAT-60" or "Simplex B" key.~~

(b) The supervisory control panel shall, **at a minimum** feature the following:

(1) Zone/**address** indication **and description**.
(2) Alarm silence switch.
(3) System reset switch.
(4) Trouble buzzer and light.
(5) Trouble silence switch.
(6) ~~Ring back feature.~~ City bypass switch or soft key, when activated, disables transmission of all alarms to the radio box. **Radio box to transmit a supervisory alarm when city bypass is activated indicating off normal upon test.**

(c) All controls shall be secured from use by **unauthorized** occupants of the protected **premises**~~property~~.

(d) **Each installed fire alarm system will service no more than one building unless approved by the City fire chief, or designee~~marshal~~. In no case will a fire alarm system serve more than two buildings unless all buildings served are physically connected.**

(e ~~d~~) ~~In an installation where the fire alarm system is installed in (i) more than one building or (ii) more than one floor, an annunciator panel shall identify the location of all originating signals. Normally, one zone per floor is adequate. The fire department may require more zones depending on building size, occupancy or hazard protected.~~ **Conventional zoned fire alarm systems in buildings greater than 2000 SF aggregate require independent annunciation for each floor. Where floor area exceeds 9999 SF, multiple zones will be required on that floor covering areas no greater than 7500 SF per zone. Sprinkler flow zone annunciation shall be by floor level as a minimum.**

(f) An annunciator shall be required in a multi-zoned property near the main fire department access to the **premises**~~property~~ **as approved by the City fire chief, or designee** ~~department~~**.** This may either be the alarm control panel or a remote annunciator panel with control functions. In an installation where an additional fire alarm system is installed in new building additions and connected to the existing approved system in the original building, an annunciator panel shall be installed on the inside of the new building addition or at a location designated by the **City** fire **chief, or designee**~~department~~.

(g ~~e~~) The ~~supervisory control panel~~ **(FACU)** shall conform to the requirements of **the adopted edition of** NFPA 72 and the following **City** fire department requirements:

(1) Access to the control functions of the alarm system by **City** fire department, ~~and~~ alarm service personnel, **and site management personnel approved by the City fire chief, or designee,~~marshal~~** only.

~~(2) When the panel is indicating zone trouble, activation of a pull station shall initiate the alarm.~~

(2 ~~3~~) Upon activation of a detector or pull station, the panel shall lock on the initiating circuit with audible and visual indication. Silencing the audible shall not cause **the visual notification devices nor the** ~~panel~~ **FACU** to reset.

(3) **All duct smoke detection shall active a non-latching supervisor signal upon activation and cause the affiliated ventilation equipment to be shut down.**

Sec. 34-94. Connection to municipal circuits - master box. (mechanical or electronic)

(a) ~~**Effective with the passage**~~**Upon the effective date of this ordinance, no additional master boxes will be permitted or added to the fire alarm system; provided, however, that master boxes connected to the fire alarm system as of that date shall be required to continue to function and shall be properly maintained until January 7, 2026.** ~~Installations within 2,000 linear feet of the area served by the municipal alarm system but not requiring direct fire department notification under section 34-98 of this Code may be connected to this system by a master fire alarm box if direct fire department notification is desired.~~

~~**(b) Within 30 days of passage, all owners of property with a master box connected will be notified in writing effective January 6, 2026, at 10:00 AM, the city will no longer be maintaining or monitoring the municipal wired fire alarm system. All connected fire alarm systems will be required to be modified to utilize another approved monitoring method indicated in the adopted edition of NFPA 101. Such modification shall require a permit from the city fire marshal and shall be complete and functioning**~~

prior to 5:00 PM on January 2, 2026. The fire alarm master box for connection to municipal circuits shall be by Gamewell, either new or factory reconditioned, as approved by the fire department.

(c) The master box shall be accessible year-round from a walkway or entranceway. (see exceptions)

EXCEPTION 1 - If a master box serves multiple buildings, a system of private roads and drives are required to access the property, a pedestal mounted box with remote annunciator shall be located at the entrance to the property, or, at the first road intersection in the development.

EXCEPTION 2 - If a master box serves multiple buildings and if access to the development is by a single road, the master box with remote annunciator shall be located on the outside of the first building approached providing no roadway intersections have been crossed prior to reaching this annunciator, and the building is not in excess of 35 feet from the curb line.

(d) The master box shall be mounted at a minimum of 42 inches and a maximum of 54 inches, measured vertically, from the finished grade to the activating handle or lever of the box.

(e) The master fire alarm box shall be of the local energy type with the following features:
- (1) Noninterference.
- (2) Quick succession.
- (3) Automatic grounding under open municipal circuit.
- (4) Telegraph key (mechanical).
- (5) Tap bell (mechanical).
- (6) Lock and key (fire department specification).
- (7) Code wheel index (fire department specification).
- (8) Manual actuating level.
- (9) Timing one-half second.
- (10) Shunt type boxes are not approved to be on the City of Keene Fire Alarm Circuits as of the adoption of this section. (Ref. NFPA 72 A.27.6.3.2.2.1(2)

(f) Flush-mounted boxes shall be weatherproof.

(g) A red beacon strobe shall be mounted above the master fire alarm box. This light shall flash upon activation of the interior fire protection system. Installation of these units will be at the discretion of the fire department.

Sec. 34-95. Connections for radio box fire alarm system.

(a) The entire system shall be installed according to the following: manufacturer installation requirements, per NFPA 72 and NFPA 1221.

(b) The radio alarm box shall be SIGCOM DTX, 4 zone or 16 zone radio box or compatible to be received by the SIGCOM Vision 21 Receive Module and approved by the **City** fire **chief, or designee**department. The box shall meet NFPA 72 and be Factory Mutual approved.

(c) The radio alarm box shall be installed in the same location as the fire alarm control panel. If building size prevents the installation of the radio alarm box and **FACU**FACP in the same location, due to radio antenna cable length, the **City** fire **chief, or designee,**department shall **may** approve an alternate location for the radio alarm box.

(d) The fire alarm control **unit (FACU)** panel shall be connected to the radio alarm box **and programmed to activate the radio box transmission in accordance with the submitted**

and approved sequence of operation matrix. ~~in such a way that when a zone is activated only the corresponding zone of the radio alarm box will be activated.~~ **At a minimum transmission shall include alarm, trouble, and supervisory signals.**

(e) Radio alarm box zone assignments ~~will~~ **shall** be reviewed and approved by ~~made in consultation with the fire department~~ **the City fire department~~marshal's office~~**.

(f) The **City** fire **chief, or designee,**~~department~~ will issue the radio alarm box number.

(g) Radio alarm boxes shall be programmed to self-test **at a frequency required for compliance with the adopted edition of NFPA 73** ~~once daily~~. The **City** fire **chief, or designee**~~department~~ shall ~~assign~~ **approve** the time of the daily test**(s).** The test time**(s)** will be listed on a sheet inside the radio box. **Any condition other than normal on the FACU shall cause the radio box to transmit a supervisory alarm indicating it is off normal upon test.**

(h) Relay I/O boards are required for each zone in the radio alarm box.

(i) ~~There shall be no means of disconnecting the fire alarm from the radio alarm box.~~ Any disconnection means preventing the alarm transmission may be approved in limited situations and at the sole discretion of the **City** fire chief, or designee~~marshal~~. Disconnection of the FACU transmission to the radio box will cause a supervisory signal to be displayed on the FACU and transmit a supervisory signal to the radio box.

Sec. 34-96. Radio alarm box antenna requirements.

(a) Antennas for radio alarm boxes shall be installed according to the following: Manufacturer installation requirements.

(b) Antenna location shall be determined during consultation with the **City** fire **chief, or designee**~~department~~.

(c) Antennas must be installed above the roof or flashing.

(d) The antenna shall not be mounted within 20 feet of an air handling unit.

(e) Antenna runs less than 100 feet shall meet or exceed RG213.

(f) If an antenna cable run exceeds 100 feet, the contractor shall contact the distributor for an acceptable alternative solution.

(g) A listed raceway ~~rigid aluminum~~ or galvanized steel conduit shall protect any antenna cable. ~~mounted outside.~~

(h) A service box and weatherhead shall be installed at the antenna mounting location.

Sec. 34-97. Acceptance test.

(a) The **City** fire **chief, or designee,**~~department~~ shall inspect **and witness** test**ing** and commission**ing** of the radio box system once installed.

(b) ~~Once accepted, the radio alarm box shall not be opened by the installer, fire alarm system installer, sprinkler service contractor or by any other person.~~

(b c)The **City** fire department shall be contacted **when no city bypass key or switch is present,** to take the radio box offline when maintenance or repair is required to be performed on the radio box.

~~**Sec. 34-98. Occupancies requiring connection.**~~

~~The following occupancies, if new or being introduced where no such occupancy previously existed, shall have fire alarm systems connected to the fire department via the municipal alarm~~

system if within 2,000 linear feet of the area served by the municipal alarm system or by way of radio alarm box. This requirement may be waived by the fire chief or his designee, if for technical reasons there is insufficient pole space to allow for municipal alarm system connection or the location does not allow for the use of a radio alarm box. If said waiver is granted, the installation shall employ an alternate monitoring system as approved by NFPA 72, as adopted. All waiver requests shall be made in writing to the fire department. All cost associated with a desired or required connection to the municipal fire alarm system shall be the responsibility of the property owner. Any occupancy that requires emergency forced notification shall submit an emergency call list to the Keene Fire Department on an annual basis with addresses and phone numbers where they can be reached 24 hours a day seven days a week.

(1) Assembly occupancies with occupant load of 300.
(2) Educational facilities with more than six students.
(3) Daycare centers with more than 12 clients.
(4) Hospitals, nursing homes, and limited care facilities.
(5) Detention and correctional facilities.
(6) Hotels, motels, and dormitories housing more than 16 persons.
(7) Residential board and care facilities with four or more occupants having a slow evacuation capability.
(8) Class-A mercantile occupancies covered malls and covered mall buildings as defined by NFPA 101 Life Safety Code.
(9) Industrial occupancies with total capacity of 100 or more persons or if more than 25 persons are above or below level of exit discharge.
(10) Underground or windowless structures (excluding one- or two-family), occupied towers and high-rise occupancies as defined by NFPA 101 Life Safety Code.
(11) Any special hazard/extra hazard use or occupancy as determined by the fire chief and/or his designee.
(12) Apartment buildings four or more stories in height or housing 12 or more units.

Sec. 34-99. Aerial connection.

Standards for aerial connections to municipal fire alarm circuits shall be as follows:

(1) Provide a minimum of one-half inch EMT terminated with a weatherhead, located a minimum of 16 feet above the finished grade from the master box.
(2) Provide a utility grade eyebolt or similar approved device next to the weatherhead, properly secured to support the aerial cable.
(3) The maximum allowed span for aerial cable is 200 feet. For distances from the weatherhead to the utility pole exceeding 200 feet, additional poles will be required.
(4) Install two #12 AWG, THWN solid conductors from the master box to the weatherhead. These wires may not be the same color.
(5) The path for the aerial service may not cross over buildings or through trees. Branches shall be cut to provide clear spaces for the aerial cable.

Sec. 34-100. Underground (direct burial) connections.

Standards for underground (direct burial) connections to municipal fire alarm circuits shall be as follows:

(1) The connection shall be four conductor, #12 AWG solid conductor, shielded polyethylene jacket, ISMA certified, direct burial cable, in one unspliced length from the master box to the utility pole or splice box designated by the fire department.

(2) Provide rigid steel conduit from 12 inches below the finished grade to the master box as protection for the cable. A bushing shall be used at the end of the conduit to protect the cable.
(3) Provide a sweep ell of rigid steel and one ten-foot length of rigid steel conduit at the utility pole.
(4) Extend the cable up the pole using schedule 40 PVC electrical grade conduit to a height approximately 18 inches above existing telephone cables. Terminate it using a weatherhead.
(5) Provide a schedule 40 PVC sleeve under all traveled ways, including walkways, parking lots, driveways and patios.
(6) The cable shall be bedded in screened sand completely surrounding the cable, a minimum of six inches on the top, bottom and sides.
(7) The minimum depth of the cable below the finished grade shall be 24 inches.
(8) Provide aerial fire alarm pole splice block.

Sec. 34-101. Same - Underground (buried conduit) connections.

Standards for underground (buried conduit) connections to municipal fire alarm circuits shall be as follows:
(1) Provide an IMSA certified four conductor #12 AWG solid conductor polyethylene jacket duct cable installed in one-inch minimum schedule 40 PVC.
(2) Conduit shall be cemented at all joints.
(3) Conduit shall be buried to a depth of 18 inches minimum below the finished grade.
(4) Termination of the conduit at the master box shall comply with section 34-105(b).
(5) Provide a sweep ell of schedule 40 PVC and one ten-foot length of rigid steel conduit at the utility pole.
(6) Extend conduit up the pole and terminate it per section 34-105(d).

Sec. 34-102. Lightning protection.

(a) Lightning protection for connections to the municipal fire alarm service shall be provided by the contractor consisting of a TII Model 317A located inside the master box.
(b) The fire department will install Additional protection at the utility pole as required.

Sec. 34-103. Grounding.

(a) The fire alarm box and the lightning arrestor for connections to municipal circuits shall be grounded as follows:
    (1) A common ground for both devices is acceptable.
    (2) Ground wire shall not be run in the same conduit as fire alarm wire.
    (3) An unenclosed no. 8 copper wire or equivalent shall be used to connect the ground terminal of the master box and/or street box to the suitable ground in order to provide mechanical strength.
    (4) If enclosed in metal pipe, a no. 12 wire may be used.
(b) Suitable grounds are as follows:
    (1) Underground metallic water piping system.
    (2) Ground rod not less than one-half inch in diameter and eight feet long driven into permanently wet soil.
(c) The resistance of a ground connection shall not exceed 250 ohms.

~~(d) Power company neutral conductors are not acceptable grounds.~~

Sec. 34-~~10~~498. Testing.

(a) The fire alarm system and its components shall be tested, in its entirety, by the person responsible for the installation. This test shall be conducted in the presence of **the City fire chief, or designee,**~~a member of the fire department~~ prior to the connection of the **radio** master box. ~~to the municipal circuit.~~

(b) It shall be the responsibility of the owner of the protected **premises**~~property~~ to completely test the fire alarm system once a year. This test shall be reported in writing to the **City** fire **chief, or designee**~~department~~.

(c) The owner/developer of any protected **premises**~~property~~ connected to the municipal system by a **radio** master fire alarm box shall notify the **City** fire **chief, or designee,**~~department~~ for disconnection prior to testing of the system.

~~(d) All master boxes and street boxes shall be tested for operation no less than required by NFPA 72 by the fire department during regularly scheduled work shifts.~~

(d e) If an owner**, lessee,** or occupant of a protected **premises**~~property~~ requests assistance from the **City**~~Keene~~ Fire Department in conducting fire drills after normal business hours a fee will be charged as set forth in the schedule of fees in Appendix B.

~~**Sec. 34-105. Responsibility.**~~

~~(a) It is understood that the owner/developer of the property shall be responsible for all fire alarm line construction, whether aerial, underground, or Radio alarm box, from the fire alarm box to a fire alarm circuit designated by the fire department. This is to include all appropriate pole hardware and connection devices.~~

~~(b) All costs of equipment and installation, including extension of the municipal service, shall be the responsibility of the owner/developer at the time of installation and connection to the municipal system.~~

~~(c) Aerial extensions of the municipal service shall be installed by the fire department and shall be charged to the owner/developer on a time-and-material basis.~~

~~(d) Underground extensions of the municipal service shall be installed in accordance with the specifications of the fire department by the owner/developer.~~

~~(e) Upon completion of a satisfactory test of the fire alarm system by the fire department, the system shall be tied into the municipal fire alarm. No one shall make these tie-ins but the fire department.~~

~~(f) After the tie-in is made, the new line then becomes the property and responsibility of the fire department.~~

~~**Sec. 34-106. Exceptions.**~~

~~It is intended that the requirements in this division provide a basis for providing a reliable, cost effective means of meeting the protection goals of the city. It is expected that requests for clarification and for specific variances to this division may be made from time to time. Requests for clarifications and/or variances should be made in writing to the fire department. Every effort will be made by the fire department to provide solutions to individual problems. The fire department welcomes any input which may improve the system's reliability or provide an equal system at reduced cost. Such adjustments as may be made to this division will be made at the discretion of the fire chief.~~

Sec. 34-~~107~~99. Liability.

The city or any of its employees shall not, under any circumstances, be held liable for the failure of any of the **private fire alarm system** equipment to operate during the transmission of a fire alarm to the fire department console. ~~It is understood that the~~ **City** ~~fire department will do all that is possible to render trouble free, reliable service.~~

~~**Sec. 34-108. Disconnection.**~~

~~(a) *Fire alarm master boxes.* It shall be unlawful for any person to disable or alter the mode of operation of any fire alarm box connected with the municipal fire alarm system. If it becomes necessary for any user of the municipal fire alarm services to access any fire alarm box connected to the municipal fire alarm system in order to alter the mode of operation or disable any so-connected fire alarm box, application shall be made to the fire department.~~

~~(b) *Penalties.* For penalties, see section 1-15 et seq. pertaining to penalties and citations for violations of this Code.~~

Sec. 34-~~108~~100. False fire alarms.

(a) *Definitions.* The following words, terms and phrases, when used in this section, shall have the meanings ascribed to them in this subsection, except where the context clearly indicates a different meaning:

Accidental alarm means any activation of an alarm system to which the **City** fire department responds which is the result of an unintentional occurrence or mishap. This includes burned food, steam from showers, and good-faith assumptions of ~~a fire~~ fire condition.

False alarm means any activation of an alarm system to which the **City** fire department responds which is not the result of a fire, emergency call for assistance, or accidental alarm. This includes alarms improperly or maliciously sounded or alarms that turn out to be groundless or system malfunctions.

(b) *Prevention, payment of costs.* Any owner or lessee or person in control of property having an alarm system on the premises and any user of alarm services or equipment designed and installed with the intent of eliciting an emergency response shall pay to the city a service charge of $100.00 for each and every false alarm to which the **City** fire department responds after the initial response within a ~~10~~ 30-day period. It shall be the responsibility of the property owner to correct any and all ~~issues~~ **problems** resulting in the activation of false alarms. If the **City** fire **chief, or designee,**~~department~~ finds it necessary to disconnect an alarm device or system due to repeated activations, a fire watch may be ordered posted on the premises **at the expense of the owner,** until such time that the protection provided by the system or device can be restored.

(c) *Appeals.* Any alarm user, owner, or lessee may appeal false alarm service charges in writing to the **City** fire **chief, or designee,**~~chief~~ **marshal** within ten days after receipt of the notice of the service charge. The fire chief may waive assessment of the service charge when, in their ~~his~~ judgment, reasonable attempts are being taken to discover and eliminate the cause of the false alarms.

(d) *Liability.* ~~The fire department shall take every reasonable precaution to ensure that alarms received are given appropriate attention and are acted upon with dispatch. Nevertheless,~~ ~~t~~**T**he **City** fire department shall not be liable for any defects in the operation of alarm devices, for any failure or neglect to respond appropriately upon receipt of an alarm from such a source, nor for the failure or neglect of any person in connection with the installation and operation of alarms and systems.

Sec. 34-~~110~~101. System maintenance and testing.

(a) ~~No one will be allowed access into an active master box except fire department personnel.~~ **Fire alarm Ssystems** shall be properly maintained in good working order. Systems shall be tested in accordance with frequency and methods as described in NFPA 72, as adopted. ~~The fire department shall be informed of the test prior to its performance.~~ Written documentation regarding test results shall be kept on file on the **protected** premises and forwarded to the **City** fire **chief, or designee,**~~department~~ **when any deficiencies are noted**. Competent and trained individuals shall complete testing and maintenance.

(b) Any person wishing to test the fire alarm or sprinkler system that is monitored by a master box must notify the **City**fire department at least 24 hours before any test is conducted provided that the master box cannot be disabled at the fire alarm control panel. The master boxes must be plugged out by **the City** fire department at its convenience. The **City** fire department may refuse to allow tests if busy with emergency calls.

(1) It shall be the responsibility of the party holding the fire alarm access permit to notify the City fire chief, or designee, ~~department~~ before any service is done on alarm/sprinkler systems. It shall also be the party's responsibility to notify the City fire chief, or designee,~~department~~ when work is completed.

(2) Any false alarms received without prior knowledge of the **City** fire department are subject to fines per subsection 34-109(b) of this division and subject to permit suspension per subsection 34-111(b).

~~**Sec. 34-111. Fire alarm access permit required.**~~

~~(a) Access to work on, disable or restore fire alarm systems connected to emergency force notification, excluding one and two family house whole warning fire alarm systems, shall be limited to authorized personnel who have acquired an alarm access permit. Said permits shall only be issued by the fire chief or his designee after an applicant has received and acknowledged that they have read and understand this fire alarm ordinance, have completed an alarm access permit application and have paid the annual permit fee as outlined in appendix B.~~

~~(b) Unless renewed, all alarm access permits shall expire on December 31 of current year.~~

~~In addition, alarm access permits may be revoked by the fire chief or his designee without refund of the permit fee, if in the opinion of the fire chief or his designee the permit holder has placed protected property at risk, caused three or more false alarms in one calendar year, or violated any other provision of this chapter.~~

Sec. 34-~~112~~102. Two-way radio enhancement systems.

(a) All new buildings shall be tested for adequate radio coverage for emergency responders within the building. Radio coverage is defined as the ability to transmit and receive from the interior of the building to the command vehicle and the dispatch center. Radio coverage must also be capable of transmitting and receiving from portable to portable radios while operating inside the facility to all areas of the building including elevators, elevator lobbies, emergency and standby power rooms, fire pump rooms, areas of refuge, mechanical rooms, boiler rooms and inside enclosed exit stairways. The system installation and components shall also comply with all applicable Federal Regulations, including but not limited to, Federal Communications Rules (47 CFR 90.219), as specified in the NFPA Two-Way Radio Enhancement Systems. These communications have to reach a voter site.

(b) An application and permit is required for installation of or modification to two-way radio enhancement systems and related equipment. A fee as set forth in the schedule of fees Appendix B to this Code shall be paid upon application for the permit.

(c) Emergency radio coverage shall include emergency services dispatch frequency and three tactical operations frequencies for the **City**~~Keene~~ f~~F~~ire d~~D~~epartment, emergency medical services and one dispatch and one tactical frequency for law enforcement. All equipment shall allow communication in analog, digital and encrypted mode.

(1) The emergency frequencies that will be approved to use are as follows:

Channel Name	Personality Type	Receive Freq.	Receive PL Freq.	Receive PL Code
WQCV921	Cnv	159.450	136.5	4Z
TAC 1	Cnv	154.38500	136.5	4Z
TAC 2	Cnv	154.28000	136.5	4Z
TAC 3	Cnv	153.83000	136.5	4Z
KPD				
Main		155.2500		4Z
Tactical		153.9500		4Z

(d) Buildings and structures which cannot support the required level of radio coverage shall be equipped with a radiating cable system, a distributed antenna system with FCC certified signal boosters, or other system approved by the fire chief**,** or ~~his~~ designee**,** in order to achieve the required adequate radio coverage.

(e) The system shall be inspected and tested per NFPA 72 Two-Way Radio Enhancement Systems.

(f) The building owner shall notify or expand the two-way radio enhancement system at their expense in the event frequency changes are required by the FCC or additional frequencies are made available by the FCC. Prior approval of a two-way radio enhancement system on previous frequencies does not exempt this section.

(g) **City fire department**~~Agency~~ personnel shall have the right to enter onto the **protected premises**~~property~~ at any reasonable time to conduct field-testing to verify the required level of radio coverage.

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Jay V. Kahn, Mayor

ORDINANCE O-2025-03-A

CITY OF KEENE

In the Year of Our Lord Two Thousand and Twenty Five

AN ORDINANCE Relating to Master Boxes

Be it ordained by the City Council of the City of Keene, as follows:

That the Ordinances of the City of Keene, as amended, are hereby further amended by removing the stricken text in various sections throughout Division 3 "Fire Alarms" and inserting the bolded text; and deleting in their entirety Section 34-98, "Occupancies Requiring Connection," Section 34-99, "Aerial Connection," Section 34-100 Underground (Direct Burial) Connections," Section 34-101 "Same-Underground (Buried Conduit) Connections," Section 23-102, "Lighting Protection," Section 34-103 "Grounding," Section 34-105 "Responsibility," Section 34-106 "Exceptions," and renumbering of the remaining sections in Division 3 as follows:

Sec. 34-91. Standards.

All alarms installed in the City pursuant to this division shall conform to the standards set forth in, NFPA 72 National Fire Alarm Code ~~2016 Edition,~~ NFPA 1 Uniform Fire Code, and NFPA 101 Life Safety Code, as adopted **as part of the State Fire Code in accordance with NHRSA 153:5 and administered** in Chapter 42 of this Code, entitled Fire Prevention and Protection. Additional requirements for the installation of alarm initiating equipment in the City shall be as provided in this division. Except as defined herein, applicable definitions contained in the referenced codes, statutes, or rules shall apply

Sec. 34-92. General requirements for installation.

(a) Before the installation or expansion of any ~~interior~~ fire alarm system~~, master box, or street boxes for new rights-of-way is begun,~~ the company responsible for the proposed system installation shall submit **a permit application with a** detailed set of plans, ~~blueprints,~~ specifications, **calculations, material cut sheets,** etc., outlining the system and its components **and intended operation** to the City fire department ~~department~~ ~~**marshal's office**~~ for review and approval.

(b) A permit shall be obtained from the City fire department for the installation of any **fire alarm system or radio** master box. A fee as set forth in the schedule of fees in appendix B to this Code shall be paid upon application for the permit.

(c) Installation of a knox box (key box) shall be required at all locations where a fire alarm system is being installed or is currently in use. Knox box shall be located next to the main entrance at the discretion of the City fire department. Apartment buildings with more than two floors will require a key in the box for each floor and therefore require a larger knox box. Multiple building complexes shall have a knox box on each building in the complex for rapid entry of emergency personnel and **location** shall be approved by the City fire chief, or designee~~department~~. Applications are available at the City fire department.

(~~d~~) ~~All fire alarm equipment shall be new and shall be furnished and installed by the owner of the property protected and/or by the developer of the new right-of-way.~~

(d **e**) If trouble or faults develop in any part of a private system, it shall be the prerogative of the City fire department to disconnect any part or all of the private system from the municipal circuits **or radio frequencies**. The owner or agent of the protected premises~~property~~ shall be notified of the disconnection.

(e ~~f~~) ~~Any or all parts of existing fire alarm systems in a building undergoing renovation shall conform to the requirements for new installations.~~

(f ~~g~~) All installations shall conform to the requirements of **the state building code and state fire code as applicable, the adopted** NFPA **standards,** the International Municipal Signal Association (IMSA), or any applicable code in effect.

(g ~~h~~) Access to the protected premises~~property~~ shall be made available to the City fire department.

(h ~~i~~) ~~Code wheel~~ **Box** numbers for all **radio** master boxes shall be **assigned and/or** approved by the City fire department.

(i ~~j~~) A service charge per calendar year shall be assessed for each **radio** master box connected to the municipal **system** ~~circuit~~. This shall include existing and new **radio** master boxes. New systems installed shall be charged a pro rata amount per month or part of a month, until ~~June~~ **December** 3rd of the installation year, after which the annual fee will take effect on ~~July~~ **January** 1st. The charges required in this subsection are as set forth in the schedule of fees in appendix B to this Code.

Sec. 34-93. ~~Supervisory~~ Fire Alarm ~~control~~ Control ~~panel~~ Unit (FACU).

(a) A ~~supervisory control panel~~ **FACU** shall **include visual and audible annunciation** ~~be~~ installed with the fire alarm system for the purpose of identifying location, **acknowledging,** resetting and/or disabling alarms. **Keys for panel** ~~Panel~~ locks, **pull stations or other fire alarm system components** shall be p**rovided for installation in the knox box(s) servicing the location.** ~~eyed for "CAT-60" or "Simplex B" key.~~

(b) The supervisory control panel shall, **at a minimum** feature the following:

(1) Zone/**address** indication **and description**.
(2) Alarm silence switch.
(3) System reset switch.
(4) Trouble buzzer and light.
(5) Trouble silence switch.
(6) ~~Ring back feature.~~ City bypass switch or soft key, when activated, disables transmission of all alarms to the radio box. **Radio box to transmit a supervisory alarm when city bypass is activated indicating off normal upon test.**

(c) All controls shall be secured from use by **unauthorized** occupants of the protected premises~~property~~.

(d) **Each installed fire alarm system will service no more than one building unless approved by the City fire chief, or designee~~marshal~~. In no case will a fire alarm system serve more than two buildings unless all buildings served are physically connected.**

(e ~~d~~) ~~In an installation where the fire alarm system is installed in (i) more than one building or (ii) more than one floor, an annunciator panel shall identify the location of all originating signals. Normally, one zone per floor is adequate. The fire department may require more zones depending on building size, occupancy or hazard protected.~~ **Conventional zoned fire alarm systems in buildings greater than 2000 SF aggregate require independent annunciation for each floor. Where floor area exceeds 9999 SF, multiple zones will be required on that floor covering areas no greater than 7500 SF per zone. Sprinkler flow zone annunciation shall be by floor level as a minimum.**

(f) An annunciator shall be required in a multi-zoned property near the main fire department access to the premises~~property~~ **as approved by the City fire chief, or designee~~department~~.** This may either be the alarm control panel or a remote annunciator panel with control functions. In an installation where an additional fire alarm system is installed in new building additions and connected to the existing approved system in the original building, an annunciator panel shall be installed on the inside of the new building addition or at a location designated by the City fire chief, or designee~~department~~.

(g ~~e~~) The ~~supervisory control panel~~ ~~(~~**FACU**~~)~~ shall conform to the requirements of **the adopted edition of** NFPA 72 and the following City fire department requirements:

(1) Access to the control functions of the alarm system by City fire department, ~~and~~ alarm service personnel, **and site management personnel approved by the C~~c~~ity fire chief, or designee~~marshal~~** only.

~~(2) When the panel is indicating zone trouble, activation of a pull station shall initiate the alarm.~~

(2 ~~3~~) Upon activation of a detector or pull station, the panel shall lock on the initiating circuit with audible and visual indication. Silencing the audible shall not cause **the visual notification devices nor the** ~~panel~~ **FACU** to reset.

(3) **All duct smoke detection shall active a non-latching supervisor signal upon activation and cause the affiliated ventilation equipment to be shut down.**

Sec. 34-94. Connection to municipal circuits - master box. (mechanical or electronic)

(a) **Upon the effective date~~Effective with the passage~~ of this ordinance, no additional master boxes will be permitted or added to the fire alarm system; provided, however, that master boxes connected to the fire alarm system as of that date shall be required to continue to function and shall be properly maintained until January 7, 2026.** ~~Installations within 2,000 linear feet of the area served by the municipal alarm system but not requiring direct fire department notification under section 34-98 of this Code may be connected to this system by a master fire alarm box if direct fire department notification is desired.~~

~~**(b) Within 30 days of passage, all owners of property with a master box connected will be notified in writing effective January 6, 2026, at 10:00 AM, the city will no longer be maintaining or monitoring the municipal wired fire alarm system. All connected fire alarm systems will be required to be modified to utilize another approved monitoring method indicated in the adopted edition of NFPA 101. Such modification shall require a permit from the city fire marshal and shall be complete and functioning**~~

~~**prior to 5:00 PM on January 2, 2026**. The fire alarm master box for connection to municipal circuits shall be by Gamewell, either new or factory reconditioned, as approved by the fire department.~~

~~(c) The master box shall be accessible year-round from a walkway or entranceway. (see exceptions)~~

~~EXCEPTION 1 - If a master box serves multiple buildings, a system of private roads and drives are required to access the property, a pedestal mounted box with remote annunciator shall be located at the entrance to the property, or, at the first road intersection in the development.~~

~~EXCEPTION 2 - If a master box serves multiple buildings and if access to the development is by a single road, the master box with remote annunciator shall be located on the outside of the first building approached providing no roadway intersections have been crossed prior to reaching this annunciator, and the building is not in excess of 35 feet from the curb line.~~

~~(d) The master box shall be mounted at a minimum of 42 inches and a maximum of 54 inches, measured vertically, from the finished grade to the activating handle or lever of the box.~~

~~(e) The master fire alarm box shall be of the local energy type with the following features:~~

~~(1) Noninterference.~~
~~(2) Quick succession.~~
~~(3) Automatic grounding under open municipal circuit.~~
~~(4) Telegraph key (mechanical).~~
~~(5) Tap bell (mechanical).~~
~~(6) Lock and key (fire department specification).~~
~~(7) Code wheel index (fire department specification).~~
~~(8) Manual actuating level.~~
~~(9) Timing one-half second.~~
~~(10) Shunt type boxes are not approved to be on the City of Keene Fire Alarm Circuits as of the adoption of this section. (Ref. NFPA 72 A.27.6.3.2.2.1(2)~~

~~(f) Flush-mounted boxes shall be weatherproof.~~

~~(g) A red beacon strobe shall be mounted above the master fire alarm box. This light shall flash upon activation of the interior fire protection system. Installation of these units will be at the discretion of the fire department.~~

Sec. 34-95. Connections for radio box fire alarm system.

(a) The entire system shall be installed according to the following: manufacturer installation requirements, per NFPA 72 and NFPA 1221.

(b) The radio alarm box shall be SIGCOM DTX, 4 zone or 16 zone radio box or compatible to be received by the SIGCOM Vision 21 Receive Module and approved by the City fire chief, or designee~~department~~. The box shall meet NFPA 72 and be Factory Mutual approved.

(c) The radio alarm box shall be installed in the same location as the fire alarm control panel. If building size prevents the installation of the radio alarm box and FACU~~FACP~~ in the same location, due to radio antenna cable length, the City fire chief, or designee,~~department shall~~ **may** approve an alternate location for the radio alarm box.

(d) The fire alarm control **unit (FACU)** ~~panel~~ shall be connected to the radio alarm box **and programmed to activate the radio box transmission in accordance with the submitted and approved sequence of operation matrix.** ~~in such a way that when a zone is activated~~

~~only the corresponding zone of the radio alarm box will be activated.~~ **At a minimum transmission shall include alarm, trouble, and supervisory signals.**

(e) Radio alarm box zone assignments ~~will~~ **shall** be reviewed and approved by ~~made in consultation with the fire department~~ **the Cc~~ity fire department~~marshal's office**.

(f) The City fire chief, or designee,~~department~~ will issue the radio alarm box number.

(g) Radio alarm boxes shall be programmed to self-test **at a frequency required for compliance with the adopted edition of NFPA 73** ~~once daily~~. The City fire chief, or designee,~~department~~ shall ~~assign~~ **approve** the time of the daily test**(s).** The test time**(s)** will be listed on a sheet inside the radio box. **Any condition other than normal on the FACU shall cause the radio box to transmit a supervisory alarm indicating it is off normal upon test.**

(h) Relay I/O boards are required for each zone in the radio alarm box.

(i) ~~There shall be no means of disconnecting the fire alarm from the radio alarm box.~~ Any disconnection means preventing the alarm transmission may be approved in limited situations and at the sole discretion of the Cc~~~~ity fire chief, or designee~~marsha~~l. Disconnection of the FACU transmission to the radio box will cause a supervisory signal to be displayed on the FACU and transmit a supervisory signal to the radio box.

Sec. 34-96. Radio alarm box antenna requirements.

(a) Antennas for radio alarm boxes shall be installed according to the following: Manufacturer installation requirements.

(b) Antenna location shall be determined during consultation with the City fire chief, or designee~~department~~.

(c) Antennas must be installed above the roof or flashing.

(d) The antenna shall not be mounted within 20 feet of an air handling unit.

(e) Antenna runs less than 100 feet shall meet or exceed RG213.

(f) If an antenna cable run exceeds 100 feet, the contractor shall contact the distributor for an acceptable alternative solution.

(g) A listed raceway ~~rigid aluminum~~ or galvanized steel conduit shall protect any antenna cable. ~~mounted outside.~~

(h) A service box and weatherhead shall be installed at the antenna mounting location.

Sec. 34-97. Acceptance test.

(a) The City fire chief, or designee, ~~department~~ shall inspect **and witness** test**ing** and commission**ing** of the radio box system once installed.

(b) ~~Once accepted, the radio alarm box shall not be opened by the installer, fire alarm system installer, sprinkler service contractor or by any other person.~~

(b c)The City fire department shall be contacted **when no city bypass key or switch is present,** to take the radio box offline when maintenance or repair is required to be performed on the radio box.

~~**Sec. 34-98. Occupancies requiring connection.**~~

The following occupancies, if new or being introduced where no such occupancy previously existed, shall have fire alarm systems connected to the fire department via the municipal alarm system if within 2,000 linear feet of the area served by the municipal alarm system or by way of radio alarm box. This requirement may be waived by the fire chief or his designee, if for technical reasons there is insufficient pole space to allow for municipal alarm system connection or the location does not allow for the use of a radio alarm box. If said waiver is granted, the installation shall employ an alternate monitoring system as approved by NFPA 72, as adopted. All waiver requests shall be made in writing to the fire department. All cost associated with a desired or required connection to the municipal fire alarm system shall be the responsibility of the property owner. Any occupancy that requires emergency forced notification shall submit an emergency call list to the Keene Fire Department on an annual basis with addresses and phone numbers where they can be reached 24 hours a day seven days a week.

(1) Assembly occupancies with occupant load of 300.
(2) Educational facilities with more than six students.
(3) Daycare centers with more than 12 clients.
(4) Hospitals, nursing homes, and limited care facilities.
(5) Detention and correctional facilities.
(6) Hotels, motels, and dormitories housing more than 16 persons.
(7) Residential board and care facilities with four or more occupants having a slow evacuation capability.
(8) Class-A mercantile occupancies covered malls and covered mall buildings as defined by NFPA 101 Life Safety Code.
(9) Industrial occupancies with total capacity of 100 or more persons or if more than 25 persons are above or below level of exit discharge.
(10) Underground or windowless structures (excluding one- or two-family), occupied towers and high-rise occupancies as defined by NFPA 101 Life Safety Code.
(11) Any special hazard/extra hazard use or occupancy as determined by the fire chief and/or his designee.
(12) Apartment buildings four or more stories in height or housing 12 or more units.

Sec. 34-99. Aerial connection.

Standards for aerial connections to municipal fire alarm circuits shall be as follows:

(1) Provide a minimum of one-half inch EMT terminated with a weatherhead, located a minimum of 16 feet above the finished grade from the master box.
(2) Provide a utility grade eyebolt or similar approved device next to the weatherhead, properly secured to support the aerial cable.
(3) The maximum allowed span for aerial cable is 200 feet. For distances from the weatherhead to the utility pole exceeding 200 feet, additional poles will be required.
(4) Install two #12 AWG, THWN solid conductors from the master box to the weatherhead. These wires may not be the same color.
(5) The path for the aerial service may not cross over buildings or through trees. Branches shall be cut to provide clear spaces for the aerial cable.

Sec. 34-100. Underground (direct burial) connections.

Standards for underground (direct burial) connections to municipal fire alarm circuits shall be as follows:

(1) The connection shall be four conductor, #12 AWG solid conductor, shielded polyethylene jacket, ISMA certified, direct burial cable, in one unspliced length from the master box to the utility pole or splice box designated by the fire department.
(2) Provide rigid steel conduit from 12 inches below the finished grade to the master box as protection for the cable. A bushing shall be used at the end of the conduit to protect the cable.
(3) Provide a sweep ell of rigid steel and one ten-foot length of rigid steel conduit at the utility pole.
(4) Extend the cable up the pole using schedule 40 PVC electrical grade conduit to a height approximately 18 inches above existing telephone cables. Terminate it using a weatherhead.
(5) Provide a schedule 40 PVC sleeve under all traveled ways, including walkways, parking lots, driveways and patios.
(6) The cable shall be bedded in screened sand completely surrounding the cable, a minimum of six inches on the top, bottom and sides.
(7) The minimum depth of the cable below the finished grade shall be 24 inches.
(8) Provide aerial fire alarm pole splice block.

Sec. 34-101. Same - Underground (buried conduit) connections.

Standards for underground (buried conduit) connections to municipal fire alarm circuits shall be as follows:
(1) Provide an IMSA certified four conductor #12 AWG solid conductor polyethylene jacket duct cable installed in one-inch minimum schedule 40 PVC.
(2) Conduit shall be cemented at all joints.
(3) Conduit shall be buried to a depth of 18 inches minimum below the finished grade.
(4) Termination of the conduit at the master box shall comply with section 34-105(b).
(5) Provide a sweep ell of schedule 40 PVC and one ten-foot length of rigid steel conduit at the utility pole.
(6) Extend conduit up the pole and terminate it per section 34-105(d).

Sec. 34-102. Lightning protection.

(a) Lightning protection for connections to the municipal fire alarm service shall be provided by the contractor consisting of a TII Model 317A located inside the master box.
(b) The fire department will install Additional protection at the utility pole as required.

Sec. 34-103. Grounding.

(a) The fire alarm box and the lightning arrestor for connections to municipal circuits shall be grounded as follows:
    (1) A common ground for both devices is acceptable.
    (2) Ground wire shall not be run in the same conduit as fire alarm wire.
    (3) An unenclosed no. 8 copper wire or equivalent shall be used to connect the ground terminal of the master box and/or street box to the suitable ground in order to provide mechanical strength.
    (4) If enclosed in metal pipe, a no. 12 wire may be used.
(b) Suitable grounds are as follows:
    (1) Underground metallic water piping system.

(2) Ground rod not less than one-half inch in diameter and eight feet long driven into permanently wet soil.

(c) The resistance of a ground connection shall not exceed 250 ohms.

(d) Power company neutral conductors are not acceptable grounds.

Sec. 34-10498. Testing.

(a) The fire alarm system and its components shall be tested, in its entirety, by the person responsible for the installation. This test shall be conducted in the presence of the City fire chief, or designee,a member of the fire department prior to the connection of the **radio** master box. to the municipal circuit.

(b) It shall be the responsibility of the owner of the protected premisesproperty to completely test the fire alarm system once a year. This test shall be reported in writing to the City fire chief, or designeedepartment.

(c) The owner/developer of any protected premisesproperty connected to the municipal system by a **radio** master fire alarm box shall notify the City fire chief, or designee, department for disconnection prior to testing of the system.

(d) All master boxes and street boxes shall be tested for operation no less than required by NFPA 72 by the fire department during regularly scheduled work shifts.

(d e) If an owner, lessee, or occupant of a protected premisesproperty requests assistance from the CityKeene Fire Department in conducting fire drills after normal business hours a fee will be charged as set forth in the schedule of fees in Appendix B.

Sec. 34-105. Responsibility.

(a) It is understood that the owner/developer of the property shall be responsible for all fire alarm line construction, whether aerial, underground, or Radio alarm box, from the fire alarm box to a fire alarm circuit designated by the fire department. This is to include all appropriate pole hardware and connection devices.

(b) All costs of equipment and installation, including extension of the municipal service, shall be the responsibility of the owner/developer at the time of installation and connection to the municipal system.

(c) Aerial extensions of the municipal service shall be installed by the fire department and shall be charged to the owner/developer on a time-and-material basis.

(d) Underground extensions of the municipal service shall be installed in accordance with the specifications of the fire department by the owner/developer.

(e) Upon completion of a satisfactory test of the fire alarm system by the fire department, the system shall be tied into the municipal fire alarm. No one shall make these tie-ins but the fire department.

(f) After the tie-in is made, the new line then becomes the property and responsibility of the fire department.

Sec. 34-106. Exceptions.

It is intended that the requirements in this division provide a basis for providing a reliable, cost effective means of meeting the protection goals of the city. It is expected that requests for clarification and for specific variances to this division may be made from time to time. Requests for clarifications and/or variances should be made in writing to the fire department. Every effort will be made by the fire department to provide solutions to individual problems. The fire

~~department welcomes any input which may improve the system's reliability or provide an equal system at reduced cost. Such adjustments as may be made to this division will be made at the discretion of the fire chief.~~

Sec. 34-~~10~~799. Liability.

The C~~c~~ity or any of its employees shall not, under any circumstances, be held liable for the failure of any of the private fire alarm system equipment to operate during the transmission of a fire alarm to the City fire department console. ~~It is understood that the fire department will do all that is possible to render trouble free, reliable service.~~

~~**Sec. 34-108. Disconnection.**~~

~~(a) *Fire alarm master boxes.* It shall be unlawful for any person to disable or alter the mode of operation of any fire alarm box connected with the municipal fire alarm system. If it becomes necessary for any user of the municipal fire alarm services to access any fire alarm box connected to the municipal fire alarm system in order to alter the mode of operation or disable any so-connected fire alarm box, application shall be made to the fire department.~~

~~(b) *Penalties.* For penalties, see section 1-15 et seq. pertaining to penalties and citations for violations of this Code.~~

Sec. 34-~~109~~100. False fire alarms.

(a) *Definitions.* The following words, terms and phrases, when used in this section, shall have the meanings ascribed to them in this subsection, except where the context clearly indicates a different meaning:

Accidental alarm means any activation of an alarm system to which the City fire department responds, which is the result of an unintentional occurrence or mishap. This includes burned food, steam from showers, and good-faith assumptions of ~~a fire~~ fire condition.

False alarm means any activation of an alarm system to which the City fire department responds which is not the result of a fire, emergency call for assistance, or accidental alarm. This includes alarms improperly or maliciously sounded or alarms that turn out to be groundless or system malfunctions.

(b) *Prevention, payment of costs.* Any owner or lessee or person in control of property having an alarm system on the premises and any user of alarm services or equipment designed and installed with the intent of eliciting an emergency response shall pay to the city a service charge of $100.00 for each and every false alarm to which the City fire department responds after the initial response within a ~~10~~ 30-day period. It shall be the responsibility of the property owner to correct any and all ~~issues~~ **problems** resulting in the activation of false alarms. If the City fire chief, or designee, ~~department~~ finds it necessary to disconnect an alarm device or system due to repeated activations, a fire watch may be ordered posted on the premises at the expense of the owner until such time that the protection provided by the system or device can be restored.

(c) *Appeals.* Any alarm user, owner, or lessee may appeal false alarm service charges in writing to the City fire chief, or designee,~~chief **marshal**~~ within ten days after receipt of the notice of the service charge. The fire chief may waive assessment of the service charge when, in their

~~his~~ judgment, reasonable attempts are being taken to discover and eliminate the cause of the false alarms.

(d) *Liability.* ~~The fire department shall take every reasonable precaution to ensure that alarms received are given appropriate attention and are acted upon with dispatch. Nevertheless,~~ ~~T~~the City fire department shall not be liable for any defects in the operation of alarm devices, for any failure or neglect to respond appropriately upon receipt of an alarm from such a source, nor for the failure or neglect of any person in connection with the installation and operation of alarms and systems.

Sec. 34-~~110~~101. System maintenance and testing.

(a) ~~No one will be allowed access into an active master box except fire department personnel.~~ Fire alarm s~~S~~ystems shall be properly maintained in good working order. Systems shall be tested in accordance with frequency and methods as described in NFPA 72, as adopted. ~~The fire department shall be informed of the test prior to its performance.~~ Written documentation regarding test results shall be kept on file on the protected premises and forwarded to the City fire chief, or designee, ~~department~~ **when any deficiencies are noted**. Competent and trained individuals shall complete testing and maintenance.

(b) Any person wishing to test the fire alarm or sprinkler system that is monitored by a master box must notify the City fire department at least 24 hours before any test is conducted provided that the master box cannot be disabled at the fire alarm control panel. The master boxes must be plugged out by the City fire department at its convenience. The City fire department may refuse to allow tests if busy with emergency calls.

(1) It shall be the responsibility of the party holding the fire alarm access permit to notify City fire department before any service is done on alarm/sprinkler systems. It shall also be the party's responsibility to notify the City fire department when work is completed.

(2) Any false alarms received without prior knowledge of the City fire department are subject to fines per subsection 34-109(b) of this division and subject to permit suspension per subsection 34-111(b).

~~**Sec. 34-111. Fire alarm access permit required.**~~

(a) ~~Access to work on, disable or restore fire alarm systems connected to emergency force notification, excluding one and two family house whole warning fire alarm systems, shall be limited to authorized personnel who have acquired an alarm access permit. Said permits shall only be issued by the fire chief or his designee after an applicant has received and acknowledged that they have read and understand this fire alarm ordinance, have completed an alarm access permit application and have paid the annual permit fee as outlined in appendix B.~~

~~(b) Unless renewed, all alarm access permits shall expire on December 31 of current year.~~

~~In addition, alarm access permits may be revoked by the fire chief or his designee without refund of the permit fee, if in the opinion of the fire chief or his designee the permit holder~~

~~has placed protected property at risk, caused three or more false alarms in one calendar year, or violated any other provision of this chapter.~~

Sec. 34-~~112~~102. Two-way radio enhancement systems.

(a) All new buildings shall be tested for adequate radio coverage for emergency responders within the building. Radio coverage is defined as the ability to transmit and receive from the interior of the building to the command vehicle and the dispatch center. Radio coverage must also be capable of transmitting and receiving from portable to portable radios while operating inside the facility to all areas of the building including elevators, elevator lobbies, emergency and standby power rooms, fire pump rooms, areas of refuge, mechanical rooms, boiler rooms and inside enclosed exit stairways. The system installation and components shall also comply with all applicable Federal Regulations, including but not limited to, Federal Communications Rules (47 CFR 90.219), as specified in the NFPA Two-Way Radio Enhancement Systems. These communications have to reach a voter site.

(b) An application and permit is required for installation of or modification to two-way radio enhancement systems and related equipment. A fee as set forth in the schedule of fees Appendix B to this Code shall be paid upon application for the permit.

(c) Emergency radio coverage shall include emergency services dispatch frequency and three tactical operations frequencies for the City~~Keene~~ f~~F~~ire d~~D~~epartment, emergency medical services and one dispatch and one tactical frequency for law enforcement. All equipment shall allow communication in analog, digital and encrypted mode.

(1) The emergency frequencies that will be approved to use are as follows:

Channel Name	Personality Type	Receive Freq.	Receive PL Freq.	Receive PL Code
WQCV921	Cnv	159.450	136.5	4Z
TAC 1	Cnv	154.38500	136.5	4Z
TAC 2	Cnv	154.28000	136.5	4Z
TAC 3	Cnv	153.83000	136.5	4Z
KPD				
Main		155.2500		4Z
Tactical		153.9500		4Z

(d) Buildings and structures which cannot support the required level of radio coverage shall be equipped with a radiating cable system, a distributed antenna system with FCC certified signal boosters, or other system approved by the City fire chief, or ~~his~~ designee, in order to achieve the required adequate radio coverage.

(e) The system shall be inspected and tested per NFPA 72 Two-Way Radio Enhancement Systems.

(f) The building owner shall notify or expand the two-way radio enhancement system at their expense in the event frequency changes are required by the FCC or additional frequencies are made available by the FCC. Prior approval of a two-way radio enhancement system on previous frequencies does not exempt this section.

(g) City fire department~~Agency~~ personnel shall have the right to enter onto the protected premises~~property~~ at any reasonable time to conduct field-testing to verify the required level of radio coverage.

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Jay V. Kahn, Mayor

ORDINANCE O-2025-06

CITY OF KEENE

In the Year of Our Lord Two Thousand and Twenty-Five

AN ORDINANCE Relating to the installation of a Stop Sign on Gilsum Street

Be it ordained by the City Council of the City of Keene, as follows:

That the City Code of the City of Keene, New Hampshire, as amended, is hereby further amended by adding the bolded underlined text to the provisions of Section 94-321, "Stop Signs" in Division 5, "Specific Street Regulations", and deleting the stricken text from the provisions of Section 94-346, "Yield Signs" in Division 6, "Specific Street Regulations" in Article IV of Chapter 94, entitled "TRAFFIC, PARKING AND PUBLIC WAYS" as follows.

Sec. 94-321. - Stop signs.

Gilsum Street for South bound traffic at the intersection with Washington St.

Sec. 94-346. - Yield signs.

~~**Gilsum Street and Washington Street for southbound traffic on Gilsum Street**~~

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Jay V. Kahn, Mayor