CODEWORD

July 2023 Issue #2023-02

DOL Welcomes New Commissioner

SARAH WILKINSON is the new commissioner of the Division of Occupational Licensure. Wilkinson has held several senior management positions in the agency over the last five years, including Deputy Commissioner of Public Safety and Operations and Chief of Elevators. Wilkinson, who's worked as a law enforcement officer in three states and as an attorney in her own law office, holds degrees from Suffolk University Law School and Dartmouth College. Her law firm specialized in a number of areas, including commercial and residential real estate, land use, and zoning matters. She has a deep knowledge of DOL and OPSI along with extensive experience in both the private and public sectors. Wilkinson looks forward to leading the agency in fostering the state workforce pipeline and economic development initiatives while playing an active role in public safety.

What are "periodic inspections" and why do we perform those inspections?

By Gordon Bailey, Retired State Building Inspector

First, a bit of history. The Commonwealth of Massachusetts has only had a uniform State-wide building code since 1975. Prior to the implementation of a State-wide uniform code, each city and town could have their own building code, or not have one. Many municipalities had their own home-grown building codes, some of which did not require inspections during construction. Permit applications were often used only to notify assessors for taxation purposes. Massachusetts General Law (MGL) c. 148 §28 (also known as the God Law) authorized the head of the fire department to determine what fire prevention measures were necessary. Without a uniform set of building and fire codes, the question of ***"What do you want in your town"*** became a common refrain for designers, builders, and homeowners trying to understand the process.

Prior to the early 1970's, the 30 plus State Building Inspectors within the Department of Public Safety were charged with inspecting places of assembly, dance halls, theatres, schools and certain medical facilities that were licensed under MGL c. 111 §§ 51 and 71 prior to original or renewal licensure, whether or not owned by the Commonwealth. State Building Inspectors were designated as the authority having jurisdiction because not all communities employed building inspectors to ensure the safety of the public.

The earliest reference concerning a requirement for a "periodic inspection" I could find reflects the legislatures interest in keeping the public safe in places of assembly. In a pre-1972 version of ***MGL c. 143 §36 INSPECTION OF THEATRES, ETC. -*** it was required by law that all theatres, special halls, and public halls be inspected for "all details relating to the condition of the building as regards the safety of life and property". The law continues to state that the inspector (State Building Inspector) shall issue a signed report and have an approval of use posted, "in conspicuous type", near the main entrance of the building. The Law further required the following to be considered and rated prior to approval:

1. *"Compliance with existing laws, non-compliance in any particular to be specified."*
2. *"The following ratings of each building as to the safety of the audience, in the judgment of the inspectors, in the light of improved methods of insuring safety:*
    a. *Structural condition.*
    b. *Facility of escape of the audience.*
    c. *Heating apparatus.*
    d. *Water supply.*
    e. *Lighting apparatus.*
    f. *Condition of fire apparatus.*
    g. *Conditions of sprinklers.*
    h. *Condition of fire resisting curtain.*

i. *Protection against neighborhood hazard.*

j. *General condition of appliances and apparatus.*

k. *General condition of stage."*

MGL Section 35: Responsibility of licensee of theatres and halls - currently states:

Section 35. The licensee shall be responsible, civilly and criminally, for noncompliance with the laws and the state building code applicable to the theatre, special hall or public hall, as defined by this chapter or by the state building code, covered by his license, and for non-compliance with the conditions thereof. (emphasis added)

Prior to their 1972 repeal - ***MGL c. 143 §37*** required the inspector to perform these inspections annually and that the report was a "public record open to review by the public at all times" and ***MGL c. 143 §38*** covered notice to the licensee and penalties for non-compliance to the order of the inspector. These sections were replaced by the enactment of **Chapter 802 of the Acts of 1972.**

While these sections of the General Law have been amended or deleted over the years – you can see the intention of these laws captured in the requirement for maintenance and periodic inspections promulgated and codified in 780 CMR by the State Building Code Commission (now the Board of Building Regulations and Standards - see Chapter 802 of the Acts of 1972 and Chapter 384 of the Acts of 1984).

In 1972 there was a major re-write of **MGL c.143** as well as **MGL c. 40A** (the Zoning Act). These Laws required every city and town to:

1. Appoint at least one building official.
2. Follow a uniform building code, and
3. unless specifically authorized otherwise, the building official would be the zoning enforcement officer.

Once the first Edition of 780 CMR was promulgated, inspecting larger places of assembly, theatres, and schools in non-Commonwealth owned properties became the municipal building official's responsibility. The separation of inspectional authority is currently found in ***MGL c. 143 §§ 3 and 3A***.

Requirements for review of existing building maintenance, as well as existing building safety features and operational equipment are found in the first edition of the uniform State Building Code and in all subsequent editions. The code also specified that it is the owner's responsibility to maintain the building's service equipment, means of egress, devices and safeguards in good working order. (See addendum for the list of 780 CMR Editions and language)

Most 780 CMR editions provide the following language concerning existing building maintenance:

"All buildings and structures and all parts thereof, both existing and new, and all systems and equipment therein which are regulated by 780 CMR shall be maintained in a safe, operable and

sanitary condition. All service equipment, means of egress, devices and safeguards which are required by 780 CMR in a building or structure, or which were required by a previous statute in a building or structure, when erected, altered or repaired, shall be maintained in good working order."

So – what are the "systems, service equipment, means of egress, devices and safeguards" regulated by 780 CMR?

There have been many lists created in an attempt to capture which "features" are controlled by the code including, but not limited to:

Sprinklers, standpipes, fire and carbon monoxide alarms, fire extinguishers, kitchen hood extinguishing systems, fire doors, fire and smoke dampers, means of egress width and continuity, rated assembly continuity and opening protectives, emergency lighting and exit signs as well as the emergency power for the same, ventilation systems, and exterior stairs or balconies. This listing is not all inclusive but includes most of the safety features required in buildings and structures by 780 CMR to be included in their design and maintenance.

How would a building official know if they are "maintained" to function as they were designed?

The answer is simple – **documentation**.

A building official or building owner cannot be assured a building safety feature is functional just by looking at the feature or pushing a button for 5 seconds. Although sprinkler heads are apparent, an inspector may question:

- Is there water in the system (or available as designed);
- has the piping corroded;
- is the pipe still able to flow the designed water flow;

Also;

- will the emergency lighting give the minimum amount of light at 90 minutes of use;
- does the emergency generator start and transfer the required energy to power the equipment that is required to be "picked up" within 10 seconds (within 60 seconds for "back up" generators);
- does the smoke/fire alarm system function and call out if required?

With regard to means of egress conditions, are:

- the handrails present and sturdy;
- the stair treads in good order;
- the exterior wooden or metal stairs in good shape;

- there are holes in the fire rated ceilings or walls that have not been properly sealed or protected?
- Rated doors being properly maintained, do they latch, do they unlatch and open within specifications?
- Are the "accessible" features of the building required by 521 CMR being maintained?

Fire protection features of a building are designed to meet certain Nation Fire Protection Association (NFPA) standards. Each design standard includes either actual maintenance requirements or designates an additional NFPA standard applicable to that specific feature's maintenance. Like 780 CMR, NFPA standards require both periodic visual (passive inspection) and triggering the activation of appliances or parts there of (active inspections) at specified time frames. All NFPA maintenance standards require **documentation** be supplied to the building owner on a specific timetable. This documentation should be provided to and reviewed by the building official to assure proper maintenance of the provided safety feature prior to determining the building to be safe – **especially the page denoting "deficiencies".** The building official should be making a quick review of the documents and, if a deficiency is noted, request the status of any repair or adjustment. A quick review of the documentation will save time during inspections by answering many questions concerning potential safety system issues observed during the inspection. A list of NFPA design and maintenance standards can be found in the "Reference Standards" chapters of 780 CMR.

Reference standards listed in the "Reference Standards" chapters are considered part of 780 CMR and their requirements are enforceable by the building official when required by sections of 780 CMR as a basis for the construction, safety, and maintenance of the building. **780 CMR 9th edition states in part:**

101.2 Scope. 780 CMR shall be the building code for all towns, cities, state agencies or authorities in accordance with M.G.L. c. 143, §§ 93 through 100. 780 CMR, and other referenced specialized codes as applicable, shall apply to:

(item #) 3. the standards or requirements for materials to be used in connection therewith,

including but not limited to provisions for safety, ingress and egress, energy conservation and sanitary conditions; and **fire prevention and protection practices**; …

Many building officials already require safety documentation at, or prior to, the time of the periodic inspection. (as well as at initial installation). The following is a partial list of items that have been used and amended from time to time based on the maintenance of existing buildings or additional building safety features required for specialty uses. (such as laboratories, jails, hospitals, other uses found in the base code Chapter 4)

1. Copy of the latest fire extinguisher inspection report (or invoice)

2. Copy of the latest fire sprinkler test report (when applicable)

3. Copy of the latest standpipe test report (when applicable)

4. Copy of the latest fire/CO alarm test report (when applicable)

5. Copy of the latest 90-minute emergency lighting test for emergency lighting and exit signs (if battery powered, see #6 if the power is supplied by an emergency generator)

6. Copy of the latest generator test report (if required for emergency or "back up" power)

7. Copy of the latest "kitchen hood" suppression system test report (if applicable)

8. Copy of the exterior stair/balcony/fire escape 5 year certificate (if applicable)

9. Report showing compliance with NFPA 80, (when applicable)

10. Copy of the maintenance and testing of fire and smoke dampers (when applicable)

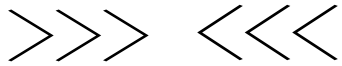
Note: this list reflects many of the items that were inspection requirements in the earlier edition of *MGL c. 143 §36 INSPECTION OF THEATRES, ETC.* - noted above.

A quick general overview of current maintenance requirements for items listed above in the "Reference Standards" chapters are as follows:

1. NFPA 10 – Standard for Portable Fire Extinguishers
2. NFPA 13 - Standard for Installation of Sprinkler Systems, and NFPA 25 – Standard for the Inspection, Testing and Maintenance of Water-based Fire Protection Systems
3. NFPA 25 – Standard for the Inspection, Testing and Maintenance of Water-based Fire Protection Systems
4. NFPA 72 – National Fire Alarm and Signaling Code
5. NFPA 70 - National Electrical Code and NFPA 111 - Standard on Stored Electrical Energy Emergency and Standby Power Systems
6. NFPA 110 – Standard for Emergency and Standby Power Systems
7. NFPA 96 - Standard for Ventilation Control and Fire Protection of Commercial Cooking Operations, NFPA 17 Standard for Dry Chemical Extinguishing Systems, and NFPA 17A Standard for Wet Chemical Extinguishing Systems

8. 780 CMR 10 – MEANS OF EGRESS (five year requirement)
9. NFPA 80 - Standard for Fire Doors and Other Opening Protectives
10. 780 CMR SECTION 717 DUCTS AND AIR TRANSFER OPENINGS – UL 555 and UL555S

Most buildings are unique in their dimensions, uses, materials, and locations on a lot and therefore will have different construction features and life safety requirements. Any general list of required maintenance and testing features in a building or structure is most likely incomplete. Building officials should consider which documentation should be required and reviewed based on the unique features and systems required when the building was constructed or altered.



9th Edition Table 110

Table 110 Schedule for Periodic Inspection of Existing Buildings

(See 780 CMR 3: *Use and Occupancy Classification* and 4: *Special Detailed Requirements Based on Use and Occupancy* for complete descriptions of use groups.)

Use Group	Use Group	Use Group Description	Minimum Inspections	Maximum Certification Period
A-1	Movie theatres or theatres for performing acts (stage and scenery)	>400 occupant load ≤400 occupant load	Semi- Annual Semi- Annual	One year One year
A-2	Restaurant, Night Clubs or similar uses	>400 occupant load ≤400 occupant load	Semi-annual[1] Annual[1]	One year One year
A-3	Lecture Halls, dance halls, churches and places of religious worship, recreation centers, terminals, etc.	>400 occupant load ≤400 occupant load	Semi Annual Annual	One year One year
A-4	Low density recreational and similar uses.		See note 3.	Five years
A	Special Amusement Buildings or portions thereof.		See note 3.	One year
E	Educational, day care	Educational	See note 3.	One year
I-1	Group home		See note 3.	One year

1-2	Residence incapable of self-preservation: - hospitals, nursing homes, mental hospitals, certain day care facilities.	See note 3.	Two years[2]
1-3	Residents restrained: prisons, jails, detention centers, etc.	See note 3.	Two years
I-4	Adult and/or child day care facilities	See note 3.	One year
R-l	Hotels, motels, boarding houses, etc.	See note 3.	One Year
R-1	Detoxification facilities	See note 3.	Two years
R-2	Multi-family	See note 3.	Five years
R-2	Dormitories and R-2 Congregate living	See note 3.	One year
R-2	Summer camps for children	Annual	One year
R-3	Residential facilities licensed by DDS or DMH	Annual	One year
R-4	Residential care/assisted living facilities (≤16 persons)	Annual	One year
Any	Facilities licensed by the Alcohol Beverage Control Commission where alcoholic beverages are sold and consumed.	Annual[4] as per M.G.L. c. 10, § 74)	One Year as per M.G.L. c. 10, § 74
Any	House museums (as recognized by Massachusetts Historical Commission)	Annual	One year
Any	Fire escapes, etc. per 780 CMR 10.00: *Means of Egress*	Five years	Five years

Notes:

1. When appropriate for A-2 uses, the inspection for the Certificate of Inspection should include and be timed to satisfy the requirements of M.G.L. c. 10, § 74.

2. One year for facilities licensed or operated by the Department of Mental Health (DMH).

3. Prior to issuance of new certificate.

4. Certificates of inspection for establishments intending to sell alcoholic beverages to be consumed on the premises shall be governed by M.G.L. c. 10, § 74 and the inspection schedule in section 110.7. The building official may issue a temporary inspection certificate, once co-signed by the building official and by the head of the fire department, effective to a date certain for the establishment.

5. It is the responsibility of building owner to meet the inspection requirements in this table for continued use and occupancy. The maximum certification period specified in the table is intended to provide administrative flexibility. For uses allowing more than one year maximum certification period, the permit may determine the certificate validity term. For example, an R-2 building could be certified for one, two, three, four or five years.

From the Chief's Desk

What is your response when walking or driving by a four-family home and you see an aluminum ladder screwed to the outside of a window in the gable end of an attic? Maybe you see a rusty metal set of stairs descending to an overgrown alleyway? We have all seen the wooden staircase with rotted railings?

All of these ladders and stairs are means of egress and their maintenance and certification is governed by section 1001.3.1 **Maintenance of Exterior Stairs and Fire Escapes**. "*Exterior stairways and fire escapes shall be kept free of snow and ice and those constructed of materials requiring the application of weather protecting products, shall have these products applied in an approved manner and shall be applied as often as necessary to maintain the stairways and fire escapes in safe condition. Weather resistant structural fasteners and connections shall tie the stairways and fire escapes directly into the building structural system,"*

and section 1001.3.2 **Testing and Certification.** "*All exterior bridges, steel or wooden stairways, fire escapes and egress balconies shall be examined and/or tested and certified for structural adequacy and safety every five years, by a registered design professional, or others qualified and acceptable to the building official; said professional or others shall then submit an affidavit to the building official."*

These two sections of the code make it easy for the Building Official to secure and maintain a safe and reliable means of egress for the occupants and serves to flush out dwelling units without code compliant egress.

Your Fire Department has personnel who inspect multi-family homes under Massachusetts General Law 148A. When they observe an exterior stair or Fire Escape have them send you a picture of the egress. Upon your receipt of a picture and verification of the address and owner, you can use the enforcement letter below to direct the owner to comply with testing and certification for all exterior means of egress.

The code provides an option under section 1001.3.2 where it states, "or others qualified and acceptable to the building official." This allows you the authority to determine who may be qualified to certify the egress, other than a Registered Design Professional (RDP). Depending on the type of egress or other factors, you could allow a Construction Supervisor (CSL) to certify a wooden set of stairs or a welder to certify a steel fire escape. I found that most CSLs and welders do not have the equipment to measure the railing's ability to withstand 200 pounds of force or if a steel ladder's bolts can support 200 pounds of support. I required an RDP.

X/X/XXXX

Owner of Building
Owner's address
Town, MA zip

RE: Exterior egress or Fire Escape located at (address of exterior staircase)

Dear (Name of owner),

It has come to the attention of the Building Department that you have an exterior egress set of stairs or a fire escape, located at XX Address.

In accordance with sub-section 1001.3.2 of 780 CMR, all exterior egresses and fire escapes are required to be examined and/or tested and certified every five years. I searched the building department records and cannot find a certification within the five-year requirement.

Section 1001.3.2 **Testing and Certification**. All exterior bridges, steel or wooden stairways, fire escapes and egress balconies shall be examined and/or tested and certified for structural adequacy and safety every **five years**, by a registered design professional, or others qualified and acceptable to the building official; said professional or others shall then submit an affidavit to the building official.

You are hereby notified that you are required to provide this office with a certification of the exterior egress or fire escape, by a Registered Design Professional, Architect or Engineer, within thirty (30) days of receipt of this letter.

Failure to respond to this notification within the allotted time will result in fines of $1,000.00 (One Thousand Dollars) per day and possible loss of occupancy for the dwelling unit.

If you are aggrieved by anything in this letter about an interpretation or application of 780 CMR, you have the right to appeal, within forty-five (45) days of receipt of this letter, to the Building Code Appeals Board, pursuant to G. L. c. 143, § 100., under section 780 CMR 113/51.00, 113/R113 of the Massachusetts State Building Code.

Your Name
Building Commissioner
City/Town of xxxx

PROTECT CHILDREN FROM WINDOW FALLS

Never leave your child alone in a room where there are open windows.

Every year many children sustain severe, often permanent injuries due to a fall through an open window. It happens quickly. Even a fall from a first-floor window may cause catastrophic injury to a young child. Traditional window screens are ***insect deterrents*** and ***will not*** prevent a child from falling through an open window.

Prevention

- Open only the top sash of double-hung windows for fresh air; keep the bottom sash closed. Install window stops to limit the opening dimension of the lower sash.
- Furniture that children climb on should not be located near windows.
- Install approved window fall prevention devices (guards) that ***will*** prevent accidental falls. Window guards should be made of rigid metal and securely fastened.
    - Loose or improperly installed guards that moves when you push or pull on it, may not prevent a fall when a child leans or climbs on it. Make sure that guards are rigidly installed.
    - Window guards that are fastened to rotting window frame or window trim are likely to fail. Make sure that fasteners are solidly connected as prescribed by the manufacturer.
    - In July, 2000, the U.S. Consumer Product Safety Commission announced standards for window guards that set safety bar spacing of the window guards at no more than 4" apart.
- Never leave your children unattended to play on fire escapes, roofs, in halls with windows, near elevators or open shafts and near steps and stairs.

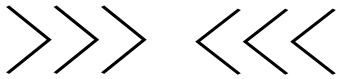
Children fall from windows in one and two-family homes every year. If you own your house, you may wish to consider having guards professionally installed or do it yourself, in compliance with 780 CMR, Section R312.2

If you are a property owner with multiple dwellings and rent to families with children under the age of 10 you should consider having guards professionally installed, in compliance with 780 CMR, Section 1015

There are special fall prevention screens that serve as insect screens but are really designed and constructed to withstand large forces and prevent falls from windows BUT there have been instances where fire departments have not been able to break through or otherwise remove such special fall prevention screens from windows in their efforts to effect rescue in a fire

emergency. Building owners may wish to consult municipal building and fire safety personnel before selecting a safety screen.

Window guard systems, whether screens or bars, need to be properly installed but where such fall prevention screens or window guards are placed on the Building Code-required Emergency Egress Window of each bedroom, such fall protection screens or window guards need to be readily removable without special tools, knowledge or excessive force / where concern exists as to whether the screen or guard product will be appropriate for the singular emergency egress window in each bedroom, consider consulting with your municipal building department for assistance in this regard as well.



SWIMMING POOLS

Swimming pools can provide a place for enjoyment and exercise, but they can also pose a serious danger if precautions are not taken when they are left unattended or unsecured. Each year the news relates stories about swimming pool drownings and injuries. This article may help to lessen the number of those stories.

The state building code defines a **Swimming Pool** as:

"Any structure intended for swimming or recreational bathing that contains water over 24 inches in depth. This includes in-ground, above ground and on-ground swimming pools, hot tubs and spas".

All swimming pools require the issuance of a building permit prior to installation, construction and\or use.

Some building code safety requirements for swimming pools are identified below. Massachusetts now uses a modified version of the 2015 International Swimming Pool & Spa Code (ISPSC) to establish swimming pool design and construction requirements. 780 CMR, Section R326 and Chapter 42 also references requirements for single and two family buildings. Please be sure to reference these code requirements as well as Massachusetts General Law that establishes additional requirements for public and semi-public swimming pools for all specific swimming pools safety requirements.

Barrier heights and clearances shall be in accordance with all of the following:

The top of the barrier shall be not less than 48 inches (1219 mm) above grade where measured on the side of the barrier that faces away from the pool or spa. Such height shall exist around the entire perimeter of the barrier and for a distance of 3 feet (914 mm) measured horizontally from the outside of the required barrier.

The vertical clearance between grade and the bottom of the barrier shall not exceed 2 inches (51 mm) for grade surfaces that are not solid, such as grass or gravel, where measured on the side of the barrier that faces away from the pool or spa.

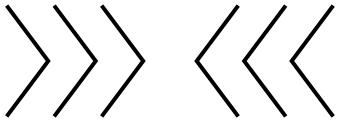
The vertical clearance between a surface below the barrier to a solid surface, such as concrete, and the bottom of the required barrier shall not exceed 4 inches (102 mm) where measured on the side of the required barrier that faces away from the pool or spa.

Where the top of the pool or spa structure is above grade, the barrier shall be installed on grade or shall be mounted on top of the pool or spa structure. Where the barrier is mounted on the top of the pool or spa, the vertical clearance between the top of the pool or spa and the bottom of the barrier shall not exceed 4 inches (102 mm).

Reduce the risk of electrical shock.

- Electrical work is required to conform to the MA Electrical Code (527 CMR 12.00).
- As a safety rule of thumb, do not run extension cords to provide power for filtration and lighting in or around the swimming pool.

It is a good practice to post swimming pool use safety rules in and around the pool area; be sure that your family and guests are aware of the rules and enforce the rigorously. Always be cautious when young children have access to a pool. Make certain that children understand the dangers and the rules that have been developed to help keep them safe. Never let young children use a pool without adult supervision and be sure to follow all code safety requirements when installing\constructing a swimming pool.



TO SEE PAST ISSUES OF CODEWORD CLICK HERE

[Codeword Newsletter Recent Editions | Mass.gov]

Do you have a topic you would like to see covered? Questions? Comments? Please send your ideas and comments to your District State Building Inspector. District Maps and contacts can be found here.
download (mass.gov)
or
You can email us here, at our email address,
BBRS-MA@mass.gov

Other email addresses for you!

The Building Code Appeals Board, BCAB-MA@mass.gov

The Building Official Certification Committee, BOCC-MA@mass.gov

HELPFUL LINKS

Questions about the HIC program?

https://www.mass.gov/home-improvement-contractor-registration-and-renewal

Or email questions to Ormont, Estee (SCA) estee.ormont@mass.gov

Questions about a building official's statutory authority, click below,

https://malegislature.gov/Laws/GeneralLaws/PartI/TitleXX/Chapter143

Building Official's Associations

Massachusetts Building Commissioners & Inspectors Association (mbcia.org)

New England Building Officials Education Association (neboea.org)

Building Official - Mass. Federation of Building Officials (mfbo.org)

SEMBOA

Building Officials of Western Massachusetts - Home (wildapricot.org)