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*Executive Office of Public Safety and Security*  
*Department of Fire Services*



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STEPHEN D. COAN  
STATE FIRE MARSHAL

**MEMORANDUM**

To: Heads of Fire Departments

From: Stephen D. Coan  
State Fire Marshal

Date: August 1, 2012

RE: Multi-hazard Evacuation Plans

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Section 363 of Chapter 159 of the Acts of 2000, by the Massachusetts Legislature, requires all school districts to formulate specific school emergency plans. This Act, cited below, places the responsibility to develop these plans upon the Superintendent of each school district and requires that Superintendent work with local fire and police departments in its development. This advisory is provided to you in order that you are aware that such requests for assistance and collaboration should be forthcoming. The Act reads as follows:

"Notwithstanding any general or special law to the contrary, the superintendent of each school district shall, prior to the beginning of the school year, meet with the fire chief (emphasis added) and police chief of the city, town or district to formulate a school specific "Multi-hazard evacuation plan" for each school under the superintendent's supervision. Said multi-hazard evacuation plan shall encompass, but not be limited to, evacuation for fires, hurricanes and other hazardous storms or disaster in which bodily injury might occur, shootings and other terrorist activities, and bomb threats. Said plan shall be formulated for each school building after a review of each building. Said plan shall include, but not be limited to: (1) establishment of a crisis response team; (2) designation as to who is in charge of said team and designated substitutes; (3) a communications plan; (4) crisis procedures for safe entrance to and exit from the school by students, parents and employees; and (5) policies for enforcing school discipline and maintaining a safe and orderly environment during the crisis. Each district, with the assistance of the local police and fire departments (emphasis added), shall annually review and update as appropriate said plan.

At the beginning of each school year, students at each school shall be instructed as to the plan that is developed."

In the past, each fire department received a copy of the "School Emergencies, Community Pre-Planning Guide," published by the Executive Office of Public Safety and Security. I suggest that this guide may be beneficial in assisting school districts in meeting their planning requirements.

## SCHOOL REGULATIONS

The following regulations from 527 CMR apply to schools:

### 10.09: Schools

~~All schools shall conform to the following fire drill regulations:~~

~~(1) The responsible school official in charge of the school or the school system shall formulate a plan for the protection and evacuation of all persons in the event of fire, and shall include alternate means of egress for all persons involved; such plan shall be presented to and approved by the head of the fire department.~~

~~(2) The headmaster or person in charge of each school shall see that each class instructor or supervisor shall receive proper instructions on the fire drill procedure specified for the room or area in which that person carries out his duties before he assumes such duties.~~

~~(3) Every student in all schools shall be advised of the fire drill procedure or shall take part in a fire drill within three days after entering such school.~~

~~(4) The head of the fire department, or person designated by him, shall visit each school at least four times each year for the purpose of conducting fire drills and questioning the teachers and supervisors. These drills shall be conducted without advance warning to the school personnel other than the person in charge of the school at the time.~~

~~(a) Records. A record of all fire exit drills shall be kept on the premises and persons in charge of such occupancies shall file written reports at least twice a year with the head of the fire department giving the following information:~~

- ~~1. Time of drill.~~
- ~~2. Date of drill.~~
- ~~3. Weather conditions when occupants were evacuated.~~
- ~~4. Number of occupants evacuated.~~
- ~~5. Total time for evacuation.~~
- ~~6. Other information relevant to the drill.~~

~~(b) Evacuation. Fire exit drills shall include complete evacuation of all persons from the building.~~

~~5) Paper materials displayed in Educational Use Occupancies, as defined in 780 CMR: *The Massachusetts State Building Code*, shall be permitted on walls only in accordance with 527 CMR 10.09 (5).~~

~~(a) Classrooms. Paper materials displayed shall not exceed 20% of the total wall area. Paper materials displayed shall be attached directly to the walls and shall not be permitted to cover an egress door or be placed~~

~~within five feet of an egress door. When determining wall areas in accordance with 527 CMR 10.09(5)(a), door and window openings shall be included.~~

~~Exception 1: Paper material displayed in fully enclosed viewing cabinets with glass or polycarbonate viewing panels or covered with glass or polycarbonate sheet material. (Thermoplastic materials such as *Plexiglas*<sup>®</sup> are not acceptable.)~~

~~Exception 2: Flame retardant paper material used for display.~~

~~Exception 3: Paper material displays may cover up to 50% of the total wall area in classrooms that are fully sprinklered in accordance with 780 CMR: *The Massachusetts State Building Code*.~~

~~(b) Exit access passageways, assembly areas and corridors. Paper materials displayed shall not exceed 10% of the surface area of any wall. Such paper material shall be positioned in such manner to avoid concentration of materials to reduce flame spread in the event of a fire. In no event shall any one grouping exceed a maximum horizontal measurement of 12 ft and a maximum vertical measurement of 6 ft. Groups of paper material shall be allowed as long as there is space between each group equal to the horizontal width of the largest adjacent group. Paper material used for display shall be attached directly to the walls and shall not be permitted to cover an egress door or be placed within five feet of an egress door.~~

~~Exception 1: Paper material displayed in fully enclosed viewing cabinets with glass or polycarbonate viewing panels or covered with glass or polycarbonate sheet material. (Thermoplastic materials such as *Plexiglas*<sup>®</sup> are not acceptable.)~~

~~Exception 2: Flame retardant paper material used for display.~~

~~Exception 3: Paper materials displayed shall not exceed 50% of the surface area of any wall in buildings equipped with automatic sprinklers in accordance with 780 CMR: *The Massachusetts State Building Code*. Such paper material shall be positioned in such manner to avoid concentration of materials to reduce flame spread in the event of a fire. In no event shall any one grouping exceed a maximum horizontal measurement of 12 ft and a maximum vertical measurement of 6 ft. Groups of paper material shall be allowed as long as there is space between each group equal to at least ½ the horizontal width of the largest adjacent group. Paper materials displayed shall be attached directly to the walls and shall not be permitted to cover an egress door or be placed within five feet of an egress door.~~

~~(c) Exits and enclosed exit stairs. Displayed paper materials shall not be permitted in exits and enclosed exit stairs.~~

~~(d) **The provisions of 527 CMR 10.09(5) shall not prohibit the posting of exit signage or evacuation plans established in accordance with 527 CMR 10.09(1).**~~

~~(e) The provisions of 527 CMR 10.09(5) shall not be applicable to any election materials required by law to be posted during any local, state or federal election.~~

## 10.17: Places of Assembly

### (1) General.

~~(a) Scope.~~ The decoration, operation or use of places of assembly and education shall comply with the applicable requirements of 527 CMR 10.00 and 21.00 and 780 CMR.

~~(b) Permit required.~~ A place of assembly or one for educational use shall not be maintained, operated or used as such without a Certificate of Inspection from the building code official.

~~(c) Posting of occupant load.~~ Each place of assembly or education shall be posted with an approved legible sign in contrasting colors conspicuously located near the main exit from the room or space stating the number of occupants permitted within such space. The number of occupants permitted shall be determined by 780 CMR. Assembly rooms or spaces which have multiple use capability shall be posted for all such uses. The owner shall be responsible for installing and maintaining such signs.

~~(d) Overcrowding.~~ No person shall permit overcrowding or admittance of any person beyond the established posted occupant load of any place of assembly or education. The head of the fire department, upon finding overcrowded conditions or obstruction in aisles, passageways or other means of egress, or finding any condition which constitutes a hazard to life and safety shall cause the performance, presentation, spectacle or entertainment to be stopped until the area posted occupant load is re-established or the obstruction or hazardous condition is removed.

~~(2) Decorative Material.~~ Decorative materials shall conform to 527 CMR 21.00 and 780 CMR.

~~(3) Motion Picture Screens.~~ In places of assembly or education, a motion picture screen or screen masking shall not be used which will ignite and allow flame to spread over the surface when exposed to the test method test described in 527 CMR 21.00.

### (4) Means of Egress.

~~(a) General.~~ The operator or the person in charge of operation or use of any place of assembly or education shall check egress facilities before such building is occupied for any use, to determine compliance with the provisions of 527 CMR 10.17. If such inspection reveals that any element of the required means of egress is obstructed, inaccessible, locked, fastened or otherwise unsuited for immediate use, admittance to the building shall not be permitted until necessary corrective action has been completed.

~~(b) Doors. An egress door shall not be locked, bolted or otherwise fastened or obstructed by any means, so that the door cannot be opened from the inside by the use of the ordinary door latch or knob or by pressure on the door or on a panic release device except as provided in 780 CMR.~~

~~(c) Aisles. In each room where chairs, or tables and chairs, are used the arrangement shall be such as to provide for ready access by aisles to each egress door. Aisles leading directly to an egress door shall have not less than 44" clear width. When serving an occupant load of 50 or less, such required clear width shall not be less than 36". Aisles shall not be obstructed by chairs, tables or other objects.~~

~~(d) Obstructions. A part of a stairway, whether interior or exterior, or of a hallway, corridor, vestibule, balcony or bridge leading to a stairway or exit shall not be used in any way that will obstruct or restrict its use as a means of egress or that will present a hazardous condition.~~

~~(e) Signs and lighting. The signs and lighting of means of egress required for places of assembly or education shall be maintained in proper operating condition and be installed in accordance with 780 CMR.~~

~~(5) Projection Rooms.~~

~~(a) Refer to 780 CMR.~~

~~(b) Miscellaneous equipment: A maximum of four flammable liquid containers that do not have a capacity greater than 16 ounces and are of a nonbreakable type shall be permitted in each projection room.~~

**10.2 : Fire Extinguishers**

~~(1) Any building or other premises, which, due to its location, construction, character or occupancy, or the manner of conducting business therein or thereupon is such that it is considered necessary by the head of the fire department, shall be provided with portable fire extinguishers installed and maintained in accordance with NFPA 10.~~

~~(2) Every school, college and university laboratory newly constructed or renovated, or any room used for similar purposes wherein corrosives or flammable liquids are handled or where open flame devices are used, shall be equipped with one or more Emergency Wash Systems. Emergency Wash Systems shall include Drench/Deluge Showers, Hand Held Body/Face Washers and Deck Mounted Drench Hoses. The permanently mounted showers shall be located as close to the main door of the laboratory as possible (to provide an escape route), but should not be located greater than 50' from an experimental area. The permanently mounted showers shall be capable of discharging a continuous spray at a rate of 30 gallons per minute. Emergency Wash Systems shall be tempered to between 70° and 90°F. Cold~~

~~potable water shall be permitted in those locations where tempered water is not accessible or as permitted by the head of the fire department.~~

~~The Drench/Deluge Showers, Hand Held Body/Face Washers and Deck Mounted Drench Hoses shall be installed in accordance with ANSI Z-358.1 and 248 CMR.~~

~~Each existing laboratory not equipped with an Emergency Wash System shall be equipped with at least one approved Fire Blanket, and a sign that reads:~~

~~"In Case of Clothing Fire  
STOP, DROP and ROLL"~~

~~The location of the Emergency Wash System Stations, and Fire Blankets shall be clearly indicated by signs of contrasting color, either RED and WHITE or GREEN and WHITE. The signs shall be at least 70 square inches in area bearing the words "EMERGENCY WASH STATION", or "SAFETY SHOWER" or "FIRE BLANKET".~~

~~Every wash station shall be tested by the owner of the building or his designee twice annually (every six months) for proper flow and operation. The owner shall upon request, provide the fire department with the test result, (including but not limited to): date of test, station operation, system malfunctions, and the name of the person performing the test.~~

~~Each student shall be advised of the location and proper use of the above emergency safety equipment by the teacher, instructor, or person in charge of the class before the first experiment is conducted.~~

~~Each student shall also be instructed in the proper procedure for the extinguishment of clothing fires at least twice during the course, as directed by the head of the fire department. The installation and operation of each safety device noted above shall be in order before the commencement of any class conducting laboratory experiments.~~

### **10.07: Smoking**

~~(3) Smoking shall be prohibited in schools, colleges, universities, public buildings and institutions except that smoking shall be permitted in designated areas. Such areas shall be approved by the head of the fire department. Such room or area shall be of a size suitable to accommodate the number of smokers requiring such facility.~~

### **10.03: General Provisions**

#### **(10) Fire Lanes.**

~~(a) Designation. The head of the fire department shall require and designate public or private fire lanes as deemed necessary for the efficient and effective use of fire apparatus. Fire lanes shall have a minimum width of 18'.~~

~~(b) Obstructions. Designated fire lanes shall be maintained free of obstructions and vehicles and marked in an approved manner.~~

~~(b) Maintenance. All designated fire lane signs or markings shall be maintained in a clean and legible condition at all times and replaced when necessary to insure adequate visibility.~~

~~(13) Hazards to Means of Egress.~~

~~(a) Obstructions. No person shall at any time place an encumbrance of any kind before or upon any fire escape, balcony or ladder intended as a means of escape from fire. The means of egress from each part of the building, including stairways, egress doors, and any panic hardware installed thereon, aisles, corridors, passageways and similar elements of the means of egress, shall at all times be maintained in a safe condition and shall be available for immediate use and free of all obstructions.~~

~~527 CMR 21.00: DECORATIONS, CURTAINS, DRAPERIES, BLINDS AND OTHER WINDOW TREATMENTS~~

~~21.2 : General Requirements~~

~~(1) Materials regulated by 527 CMR 21.00 shall not be purchased, leased or rented for use in a particular occupancy unless the intended user has been provided with certification from an approved fire test laboratory that the regulated material conforms with the applicable provisions of 527 CMR 21.00.~~

~~527 CMR 29.00: UPHOLSTERED FURNITURE, MOLDED SEATING AND RE-UPHOLSTERED FURNITURE~~

~~29.02: General Requirements~~

~~2) Regulated seating shall not be purchased, leased or rented for use in a particular occupancy unless the intended user is provided with written notice from the manufacturer, supplier, vendor, distributor or an approved testing agency that the regulated seating conforms to 527 CMR 29.00.~~



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## School Wall Decorations (Uses of Paper Materials)

527 CMR 1.00, s. 20.2.4.4.3

Regulates how, where and how much paper decorations may safely be displayed on walls in sprinklered and unsprinklered buildings.

When building new schools, consider this regulation and include bulletin board design to safely display paper materials.

## Fire Lanes

527 CMR 1.00, c. 18

Regulations on designation, maintenance and preventing obstruction of fire lanes.

Keep clear at all times.

## Fire Extinguishers

527 CMR 1.00, s. 13.6

## Emergency Wash Stations

527 CMR 1.00, s. 10.24

Says where, how many and what kind of fire extinguishers and emergency wash stations schools need.

Has testing and inspection requirements.

Labs are required to have emergency wash systems (showers) or fire blankets and signage.

## Fire Protection Systems

527 CMR 1.00, c. 13

Requires schools to inspect, test and maintain fire alarm, fire sprinkler and kitchen suppression systems.

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## Chemistry Labs

527 CMR 1.00, c. 26

Permits and special storage arrangements may be required based on the type and quantity of chemicals stored.

Don't store chemicals alphabetically.

Think about the life cycle and hazardous waste disposal when purchasing and storing chemicals.

See 527 CMR 1.00, s. 10.24 for emergency wash stations, fire blankets and signage.

## School Fire Reporting Law

M.G.L. c. 148, s. 2A

Requires schools to report all fires to the local fire department.

Requires fire departments to report all school fires to the Mass. Fire Incident Reporting System (MFIRS).

## No Smoking in Schools

Federal Law; M.G.L. c. 270, s. 22

## Fire and Life Safety Education

M.G.L. c. 71, s. 1

DESE Health Curriculum Frameworks

The Student Awareness of Fire Education (S.A.F.E.) program has trained firefighter-educators who work with classroom teachers.

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# Fire Prevention in Schools

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A school is one of the most important resources in a community. School fires destroy costly bricks and mortar, and also the heart of a community.

This pamphlet summarizes fire prevention regulations affecting schools. It also explains where to find more detailed information about regulations.

Fire prevention laws can be found in M.G.L. Chapter 148. Most fire prevention regulations affecting schools can be found in 527 Code of Massachusetts Regulations (CMR) 1.00. The Department of Fire Services' website has these and many helpful Fire Safety Division Advisories. Visit [www.mass.gov/dfs](http://www.mass.gov/dfs) and search for *FSD Advisories*.

## School Fire Drills

527 CMR 1.00, s. 20.2.4.2.1.4

Fire departments are required to conduct fire drills in schools four times a year. Within three days of the start, students must be familiarized with the exit plan or participate in a drill.

## Multi-Hazard & MERP Plans

Section 363 of Chapter 159 of the Acts of 2000, M.G.L. c. 69, s. 8A

School superintendents are required to meet with the local police and fire chiefs to develop a multi-hazard evacuation plan and in addition must have developed a Medical Emergency Response Plan (MERP) by fall 2012, and resubmit every 3 years.

DFS has a *School Bomb Threat Response Guide* pamphlet to help with all hazard planning.

## Place of Assembly (Theatres, Auditorium, Gym, Cafeteria)

527 CMR 1.00, s. 20.1.5.10.3.1

Schools need a certificate of inspection from the building official which will set the occupancy limit.

Severe penalties for violating occupancy limits and blocked egress, passed in the aftermath of the fire at The Station nightclub.

See *School Wall Decoration* regulations for proms, dances, etc.

See regulations on drapery and curtains.

## Crowd Manager Requirements

527 CMR 1.00, s. 20.1.5.6

A crowd manager is needed in facilities that feature entertainment by live band or recorded music generating above normal sound levels and which have a specific area designated for dancing. Schools might need a trained crowd manager on-duty when holding school dances. To be sure, discuss this with your local fire department early in the school year. For more information on crowd manager requirements or to take the online training program, please go to [www.mass.gov/dfs](http://www.mass.gov/dfs).

## Upholstered Furniture, Molded Chairs and Re-Upholstered Furniture

527 CMR 1.00, s. 12.6.3

Requirements are different for sprinklered and unsprinklered buildings.

Flammability testing requirements for furniture.

Furniture should be resistant to fire. It can produce volumes of toxic smoke.

## Decorations, Curtains, Draperies and Window Treatments

527 CMR 1.00, s. 12.6.2

Requires certification that these products meet flammability standards.

## Theatrical Special Effects

527 CMR 1.00, c. 65

OSFM Advisory 1/5/2007 & 8/1/2014

Schools need a permit from the local fire department to use special effects and pyrotechnics (including flash powder and flash paper).

Special effects and pyrotechnics must be conducted by licensed individuals. Failure to do so constitutes a violation of M.G.L. c. 148, s. 34A with a \$5,000 fine and/or 2 1/2 years in prison. The law was passed in the aftermath of the Station nightclub fire.

## General Housekeeping

Store cleaning chemicals in a safe and secure area (not next to heat sources.)

Shut off the appliances in the teacher/staff lounge each day.

Teach kitchen fire safety to cafeteria staff and include them in fire drills. Kitchen fires are one of the leading causes of fires in schools.

Do not wedge fire doors open (527 CMR 1.00, s. 12.4.6.18.3).