



PREVENTION

Highlights

Essential Code Compliance for School Construction

In This Issue

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Our Mission

The Office of the State Fire Marshal (OSFM) is dedicated to protecting lives and property from the hazards of fire or explosion and will promote prevention, educational and investigative activities to mitigate incidents, promote life safety and deter crimes.

The Fire Prevention Division

The goal of the Fire Prevention Division is to reduce the potential impact of fire and explosion hazards where people live, work and congregate (other than one- or two-family dwellings) through code enforcement, inspections, plans review, licensing, and public education.

Prevention Highlights

Prevention Highlights is published quarterly to provide facility managers and others with information necessary to operate fire-safe facilities.

Brenda McNorton.....Chief of Prevention

Joel Beckner.....Education Consultant

Jill Bronaugh.....Communication Manager

Connect with us!



firemarshal.ks.gov

800 SW Jackson
Suite 104
Topeka, KS 66612

(785) 296-3401

prevention@ks.gov



Edu-Note

by Joel



CONTACT JOEL

Phone: (785) 296-0659

Email: joel.c.beckner@ks.gov

As summer has flown past, it has been a busy few months. An important update to take note of is Senate Bill 128. Governor Laura Kelly signed Senate Bill 128 into law on April 10, 2019, changing the number of safety drills K-12 schools in Kansas must perform each year from sixteen to nine.

As schools across the state of Kansas know, Senate Bill 109 changed the landscape of how K-12 schools conducted school drills. When Senate Bill 109 passed in 2018, schools were required to change the number and type of drills conducted during the school year. The change required schools to conduct nine crisis drills, four fire drills and three tornado drills during the school year, for a total of sixteen drills per school year. The change was positive in bringing about crisis drills to schools, however, the total number of drills proved to be overwhelming for many school districts.

With that in mind, Senate Bill 128 was introduced to change the number of drills required for schools. The bill changed the total number of drills from sixteen to nine. Schools must conduct at least two tornado drills (one in September and one in March), three crisis drills and four fire drills per school year.

Crisis drills should reflect events that have a potential to occur in your school and can include, but are not limited to, things such as a water main break, earthquake, missing student, hazardous spills, intruders, active shooters or medical emergencies.

The new law went into effect, July 1, 2019, and will be in effect for the 2019-2020 school year. On our website, firemarshal.ks.gov, we have the new form reflecting the changes in the drill requirements. If you have any questions about this topic, please contact Joel Beckner, OSFM Prevention Education Consultant, at joel.c.beckner@ks.gov or 785-296-0659.

-Joel Beckner, Education Consultant

New Prevention Team Members...

The Office of the State Fire Marshal is pleased to welcome Craig Thornburg and James Post to our Prevention Division.

Craig, a Fire Prevention Specialist covering Northeast and Central Kansas, comes to OSFM after 29 years with the City of Topeka, where he worked as a Plans Examiner.

Craig lives in Rossville with his wife, Lisa, who is a Medical Technician at St. Francis and her five cats. They have one adult son and one adult daughter. He enjoys woodworking in his spare time.

"I am happy to be getting back into code enforcement and plan review," Craig said. "And it will give my wife the chance to retire."

James, a Fire Prevention Inspector for Territory 13, which covers 10 counties in north central Kansas, comes to OSFM from the Kansas Department of Transportation.

He lives in Stockton with his wife, Kinsey, and has two boys, Tanner and Maverick. They also have a chocolate lab, Bella. James enjoys hunting and fishing.

"I've always had an interest in fire safety," James said. "That's why I took this position."

Welcome, Craig and James!



More New Prevention Team Members...

The Office of the State Fire Marshal added several new inspection/specialist positions across the state and is pleased to welcome Andrew Morgan and Jesse Floyd to the team.

Andrew joined Prevention as a Fire Prevention Enforcement Officer. He comes to OSFM from Dollar General, where he worked for the past 2 ½ years.

Andrew lives in Lyndon. He has a Golden Retriever named Tucker. He enjoys playing video games, listening to music and playing the drums in his spare time.

“Taking this position is a great opportunity for me,” Andrew said. “I’m looking forward to beginning a long career that is focused on preventing fires and mitigating the damage that they cause.”

Jesse joined Prevention as a Fire Prevention Inspector. Jesse comes to OSFM after spending the last two years working as a 911 dispatcher.

Jesse lives in Allen. He enjoys deer hunting, fishing and riding his motorcycle in his spare time.

“I was looking for a career change,” Jesse said. “And this position was a perfect fit for pursuing my degree in fire science.”

Welcome, Jesse!



The Office of the State Fire Marshal is also pleased to welcome Devon Stwalley to its Prevention Division as a Fire Prevention Inspector for Marion, McPherson and Reno counties. Devon comes to OSFM after serving as a firefighter in Clearwater for the past eight years.

He lives in Wichita with his wife and five dogs. He enjoys golfing, traveling and riding motorcycles.

Devon said he is looking forward to making the transition into the fire prevention division at OSFM, as well as working with the “wonderful people here.”

Welcome, Devon!



Common School Inspection Issues



Many of the Fire Codes that we follow today were created as a result of tragic events of the past, often where people lost their lives. Our Fire Inspectors are tasked with making sure that facilities across the state are as safe as possible, especially those where large groups of people are present, such as schools.

With summer ending and the new school year under way, school inspections are just around the corner. Let's take a moment to look at some of the common problems our inspectors see when conducting school inspections.

- 1. Documentation:** Are you familiar with the phrase "if there is no documentation, it never happened?" Well organized documentation is essential during an inspection. Documentation is required for inspections of emergency lighting, fire extinguishers, and fire alarm and sprinkler systems, to name a few. A good way to keep your documentation organized for review is to have a three-ring binder dedicated to all things Fire Marshal. Keeping a copy of all reports and testing documentation organized in one area, in chronological order makes it easy to review and means you are just keeping track of one binder instead of multiple pieces of paper.
- 2. Electrical Issues:** Our inspectors are looking at several electrical related items during an inspection. One of the most common violations found is the misuse of power strips and extension cords. The most important things to remember are that they can not extend through walls,

ceilings, or floors, under doors or floor coverings, or be subject to environmental or physical damage. Extension cords and power strips can only be plugged into an approved receptacle and extension cords cannot be used for permanent wiring. Combining old buildings and modern technology can make these requirements difficult to follow, but please remember that these requirements are in place because research and experience has shown that not following them can pose a fire risk.

- 3. Construction:** Temporary egress is often overlooked during construction. If a construction project is going to affect an egress pathway, a new one will need to be added. It is very important to make sure that no dead-end corridors are created during construction. Contractors and architects must work together to make sure that if an exit is removed, the architect can make plans for a temporary egress during construction. Any temporary egress plan must be approved by our office. The architect will submit the temporary egress plans, along with the C.2.2 and C.2.2.A forms for approval. These forms can be found on our website on the Forms page.

This is not an all-encompassing list of common violations found in schools but is a good starting point to focus on. As always, if your school is interested in more focused training from our office, please feel free to call or email me (785-296-0659 or joel.c.beckner@ks.gov) and I will be happy to assist.



Long Term Care Facilities Required to have Fully Sprinklered Elevators

Sprinklers in facilities across the nation have been a great addition to building safety requirements over the past years. Sprinklers, without a doubt, save lives each year.

On August 13, 2008, the Centers for Medicare and Medicaid Services (CMS) published a final rule entitled "Medicare and Medicaid Programs: Fire Safety Requirements for Long Term Care Facilities, Automatic Sprinkler Systems." This regulation required all long-term care facilities to be equipped with a supervised automatic sprinkler system by August 13, 2013. This was obviously a great addition to help keep our loved elders safe.

There has recently been a question as to whether that ruling also includes elevators. The ruling that came out on August 13, 2008 required facilities to be fully sprinklered, which includes elevators. The code reference for this requirement may be found in NFPA 13 2010 edition 8.15.5.



- 8.15.5.3 Automatic sprinklers in elevator machine rooms or at the tops of hoistways shall be of ordinary- or intermediate-temperature rating.
- 8.15.5.4 Upright, pendent or sidewall spray sprinklers shall be installed at the top of elevator hoistways.
- 8.15.5.5 The sprinkler required at the top of the elevator hoistway by 8.15.5.4 shall not be required where the hoistway for passenger elevators is noncombustible or limited combustible and the car enclosure materials meet the requirements of ASME A17.1, Safety Code for Elevators and Escalators.
- 18.15.5.6 Sprinklers shall be installed at the top and bottom of elevator hoistways where elevators utilize polyurethane-coated steel belts or other similar combustible belt materials.



- 8.15.5 Elevator Hoistways and Machine Rooms
- 8.15.5.1 Sidewall spray sprinklers shall be installed at the bottom of each elevator hoistway not more than 2 ft (0.61 m) above the floor of the pit.
- 8.15.5.2 The sprinkler required at the bottom of the elevator hoistway by 8.15.5.1 shall not be required for enclosed, non-combustible elevator shafts that do not contain combustible hydraulic fluids.

This is an issue that may be easily overlooked, but the code is very clear on what is required of the facilities. Hopefully this information is helpful for some facilities. If you need any additional information, please let me know via phone or email at 785-296-0659 or joel.c.beckner@ks.gov.



Fire Safety at Haunted Houses

With Halloween coming upon us, families will soon start visiting haunted houses, ghost walks and other special amusements.

The Kansas State Fire Marshal, Doug Jorgensen, would like to remind everyone that even though these amusements are intended for family Halloween entertainment, these structures present an increased risk with regards to fire and life safety.

Kansas has the 2006 International Fire Code adopted which requires these types of facilities to comply with major components of fire and life safety. History has shown that complying with life safety requirements is vital. The tragic May 11, 1984 fire in the "Haunted Castle" at the Six Flags Great Adventure Park in New Jersey resulted in the deaths of eight visitors due to their inability to immediately exit the amusement structure.

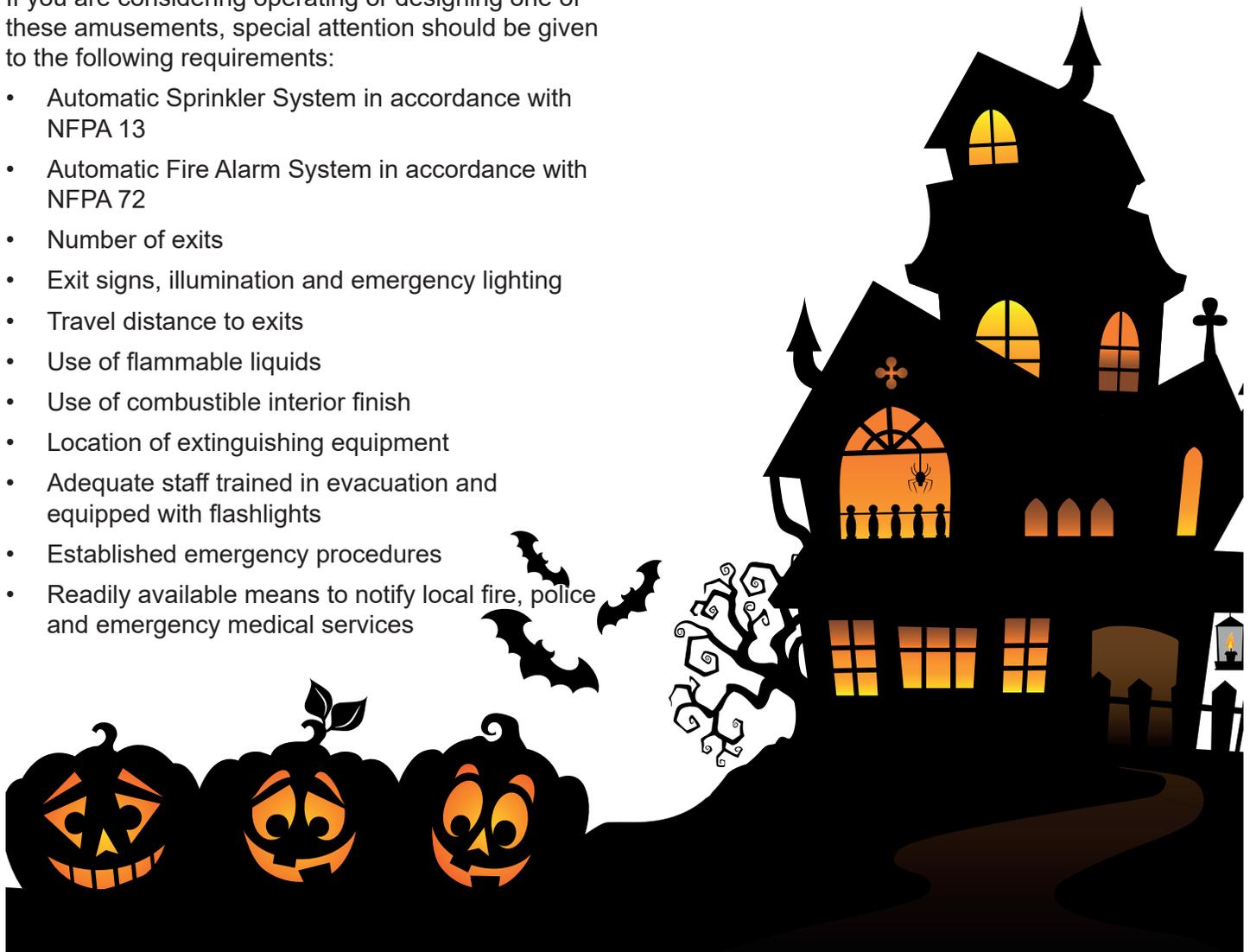
If you are considering operating or designing one of these amusements, special attention should be given to the following requirements:

- Automatic Sprinkler System in accordance with NFPA 13
- Automatic Fire Alarm System in accordance with NFPA 72
- Number of exits
- Exit signs, illumination and emergency lighting
- Travel distance to exits
- Use of flammable liquids
- Use of combustibile interior finish
- Location of extinguishing equipment
- Adequate staff trained in evacuation and equipped with flashlights
- Established emergency procedures
- Readily available means to notify local fire, police and emergency medical services

For added safety, it may be necessary to limit occupant load, add additional emergency exits or establish other special precautions to minimize a potential risk due to some unique circumstance.

In any event, every effort should be made to provide an enjoyable but safe environment as determined by the local fire inspection authority.

The specific requirements may be modified by the state fire marshal to allow alternative measures to obtain an equivalency to the code. K.S.A.31-136 provides procedures for exemptions of these requirements upon written request. The written request must demonstrate that the specific requirement causes unnecessary hardship.



Plan Review and Code Footprints for School Building Construction Projects

There is so much that goes into the building process, that it can be easy to overlook some key components that are essential for schools. The Office of the State Fire Marshal (OSFM) requires any school building construction projects to comply with the 2006 edition of the International Building Code (IBC). This includes new buildings, additions to existing buildings, and renovations and remodeling projects in existing buildings that alter or change the occupancy of a building or alter the exiting, fire resistance, or structural integrity of a building.

When going through a project like this, the OSFM will need a few things to make sure the construction



is in accordance with the IBC. Referencing K.A.R 22-1-7 (4)(D) on what type of facilities need a code footprint says: “any group E educational occupancy, including any day care facility for more than 24 persons.”

In addition to the Code Footprint, our office requires the C.2.2 and C.2.2.A forms prior to the start of any construction, renovation, or remodel. It is important to remember that the C.2.2.A form must be completed by the Architect/Engineer creating the code footprint.

When plans for new construction are reviewed by OSFM, they are typically reviewed within 2 weeks

and are reviewed in the order they are received. The focus of the OSFM is on compliance with the International Building Code with special attention placed on exiting, notification, detection, separation, and suppression. We require written notice from the licensed architect or engineer 30 days prior to the date on which 50 or 100 percent of the construction will be completed.

The Code Footprint, C.2.2 and C.2.2.A are all important to the process of getting the schools construction or renovation approved. Our plan review service has been and will remain free of charge. The only expense to the school is time. However, the additional time spent to ensure the building is/or remains in compliance is a small price to pay for fire safety.



Here is what needs to be included on your code footprint:

- (1) A graphic bar scale;
 - (2) a north directional indicator;
 - (3) a complete building floor plan, with a clear identification of new, remodeled, and existing portions;
 - (4) identification of all permanent partitions taller than six feet;
 - (5) a label with plain text, keynotes, or legends for each room and space;
 - (6) the occupant load of assembly rooms and total occupant load for each floor level;
 - (7) identification of openings and ratings of stair and shaft enclosures;
 - (8) identification of openings and ratings of corridors and openings;
 - (9) identification of occupancy and area separations;
 - (10) identification of all horizontal exit arrangements, exit passageways, and smoke compartments;
 - (11) identification of all required exterior exits and exit capacity;
 - (12) the location of the central fire alarm control panel and any remote annunciator panels;
 - (13) the location of each fire department supply connection;
 - (14) the location of fire department access roads and fire hydrants;
 - (15) the distances to property line and exposures;
 - (16) identification of any special hazards or conditions; and
 - (17) the location of any anticipated future additions.
- (c) The following narrative information shall be required on each code footprint submitted:
- (1) The project construction purpose: new, addition, change in use, renovation, or other;
 - (2) the reason for submittal: new construction, new licensure, certificate of occupancy, or plan of correction for existing code deficiencies;
 - (3) the code or codes used;
 - (4) the street address, city, state, zip code, and county of the building;
 - (5) the name, address, city, state, zip code, phone number, and fax number of the owner;
 - (6) the date developed and any revision dates;
 - (7) the name, address, city, state, zip code, phone number, and fax number of the designer;
 - (8) the designer's seal (RA or PE);
 - (9) the name of the responding fire service;
 - (10) the name of the local building inspection department, if available;
 - (11) each occupancy group and type;
 - (12) the type of construction;
 - (13) the structural code requirements, including the following:
 - (A) The total floor area of each occupancy, both actual and allowable;
 - (B) height and area limitations, both actual and allowable; and
 - (C) structural fire ratings, both actual and allowable;
 - (14) identification of active fire safety features, including the following:
 - (A) The type of automatic suppression systems and locations;
 - (B) the fire alarm signaling system;
 - (C) emergency lighting and power features; and
 - (D) the smoke control system;
 - (15) water supply requirements of the facility for fire suppression; and
 - (16) alternative methods of design or construction, or both. (Authorized by and implementing K.S.A. 31-133; effective July 9, 2004.)



SPOT the violations

A



B



C



D



A spiral-bound notebook with a white page and a red margin line. The page contains the letters A, B, C, and D, each with a large, bold, black outline and a white drop shadow, arranged vertically from top to bottom.

Answers on Page 11



Code Consultation Forms

When it comes to fire code questions, the answers within the fire codes can be very difficult to find and hard to follow and understand. There are many codes to reference including the National Fire Protection Association (NFPA) Codes, International Fire Codes (IFC), and International Building Codes (IBC).

In order to keep the questions organized for our office, we created the **Code Consultation Form**.

This form will be submitted to our Fire Protection Specialists (FPS) through our general email at prevention@ks.gov. Our staff will respond to the form requests in the order received.

Facilities will need to provide code footprints, plans, photos or any other documentation required for us to provide accurate answers to your questions.

Please keep this form in mind if you have any questions regarding new construction, renovations, or questions about general fire code requirements. Our FPS experts will be able to give you the answers in a timely fashion to help you in your efforts.

You can find this form located on our website, firemarshal.ks.gov, by clicking the Forms button. It is listed as the Code Consultation Form.

If you have any questions or have trouble locating the form, please contact me at 785-296-0659 or joel.c.beckner@ks.gov.

Answers to Spot the Violations (page 10)

A. Bread carts blocking the hood suppression pull stations; B. Egress doors being blocked from use; C. Unapproved hold open devices; D. Unsecured O2 cylinder.



Candle Safety

Candles may be pretty to look at but they are a cause of home fires — and home fire deaths. Remember, a candle is an open flame, which means that it can easily ignite anything that can burn.

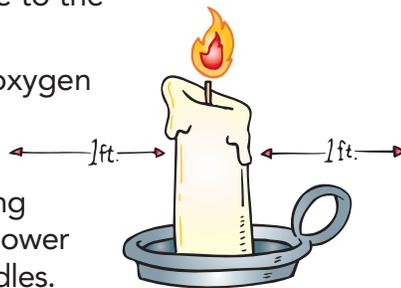
"CANDLE WITH CARE"

- Blow out all candles when you leave the room or go to bed. Avoid the use of candles in the bedroom and other areas where people may fall asleep.
- Keep candles at least 1 foot (30 centimetres) away from anything that can burn.

Think about using flameless candles in your home. They look and smell like real candles.

IF YOU DO BURN CANDLES, make sure that you...

- Use candle holders that are sturdy, and won't tip over easily.
- Put candle holders on a sturdy, uncluttered surface.
- Light candles carefully. Keep your hair and any loose clothing away from the flame.
- Don't burn a candle all the way down — put it out before it gets too close to the holder or container.
- Never use a candle if oxygen is used in the home.
- Have flashlights and battery-powered lighting ready to use during a power outage. Never use candles.



Candles and Kids

Never leave a child alone in a room with a burning candle. Keep matches and lighters up high and out of children's reach, in a locked cabinet.



FACTS

- ! **December** is the peak time of year for home candle fires.
- ! More than **one-third** of home candle fires started in the bedroom.
- ! **Two of every five** candle fires start when things that can burn are too close to the candle.



NATIONAL FIRE PROTECTION ASSOCIATION
The leading information and knowledge resource on fire, electrical and related hazards

