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**OUR GOAL IS TO COMPLETE ALL PLAN REVIEWS WITHIN 10 BUSINESS DAYS**

# SPRING 2018 QUARTERLY REVIEW

 BUILDING PLAN REVIEW

 FIRE SAFETY PLAN REVIEW

 CONSULTING SERVICES

## PRESIDENT'S MESSAGE

*An FSCI update from Keith Frangiamore, FSCI President*

### A Fire Safety Consultants, Inc. celebration!

On February 6, 2018, we gathered nearly all FSCI employees at the Chicago Marriott Northwest for an employee celebration to look back at and celebrate 2017 accomplishments. Some of the celebration included welcoming our newest team members, achievements of our existing staff members, the recent FSCI acquisition by PSI, business activity, and a look ahead at 2018.

Larry Robbins, Vice President of PSI, talked about the great fit that FSCI is for PSI primarily because of the family atmosphere of both companies. We also highlighted our eight newest team members including fire protection plan reviewers, field service inspectors and administrative assistants. We celebrated the promotions of Carrie Huber, Office Manager, and Gina Giannone "Arizona" Administrative Assistant. We also presented "Milestone Awards" to six team members recognizing them for 5 to 15 years of service.

As a company, we reviewed many marketing initiatives in 2017; vendor shows in many states, numerous seminars across the world including several presentations in the Middle East and Asia, and quarterly newsletters read by about 8,000 clients and customers.

During 2017, the FSCI team reviewed and processed 5,500 plans for compliance, an average of 460 per month. Our reviews included 228,000 sprinklers, 55,000 fire alarm devices and performed 1,900 inspections. We discussed the many large, complex plan reviews, field services, and consulting projects across North America.

Finally, we looked ahead at some exciting changes coming in 2018. These upcoming changes include the creation of a seamless office environment through a cloud-based telephone system, electronic plan review process, and specialized accounting and client information software.

A special thank you to all our clients and exceptional staff for another great year!



# SCHOOLS AND MANUAL FIRE ALARM BOXES

By Warren E. Olsen, CFPS CBO – Vice President Building and Life Safety FSCI,  
Chair of NFPA 72 Chapter 26 Supervising Station Alarm Systems

With the recent school shooting incident in Florida, much attention is now being given to how the building's fire alarm system aided the shooter in his plan to inflict pain and death on the occupants. The shooter activated a manual fire alarm box (also known as a pull station) which caused the notification appliances within the building to activate. The expected action of the students and faculty occurred. Building evacuation began which is exactly what the shooter was hoping to accomplish.



The shooter activated a manual fire alarm box (also known as a pull station) which caused the notification appliances within the building to activate. The expected action of the students and faculty occurred. Building evacuation began which is exactly what the shooter was hoping to accomplish.

Since the incident there has been an interest, mainly among school officials, in removing manual fire alarm boxes from schools; or, at least to delay the activation of notification appliances if a manual fire alarm box was activated. Obviously, nobody wants a repeat of the Florida incident. Having attended several recent meetings with fire code officials and fire inspectors groups, school officials are looking for guidance in what to do with manual fire alarm boxes in their facilities. Model building and life safety codes allow for the removal of manual fire alarm boxes under certain conditions. Locally adopted codes should be reviewed to see if these devices are permitted to be removed.

If manual fire alarm boxes must be retained within a building, and a box is activated, do codes and standards permit a delay in the operation of notification appliances until the reason for the activation is investigated?

NFPA 72 is referenced by all of the model building, fire, and life safety codes in the United States and many school codes including in Illinois. The purpose of NFPA 72 is to define the means of signal initiation, transmission, notification, and annunciation (72-1.2.1) for fire alarm and signaling systems.

In general, NFPA 72 (2016 edition) includes the following requirements:

72-10.11.1 requires the actuation of alarm notification appliances (horns, bells, strobes), or the EVAC system, within 10 seconds of the activation of an initiating device (smoke or heat detector, manual fire alarm box, water-flow switch, etc.).

NFPA 72 has, for many years, allowed for the delay in the activation of notification appliances upon receipt of a

signal from an initiating device. The original purpose of these two available methods was to minimize nuisance fire alarm signals (typically from smoke detectors). The use of these functions was never intended to deal with an active shooter incident.

The two functions are:

- 1) Presignal Feature (72-23.8.1.1)
- 2) Positive Alarm Sequence (72-23.8.1.2)

The use of either method requires the approval of the authority having jurisdiction.

Fire safety professionals familiar with the two methods tended to avoid approving the Presignal Feature as this function normally requires human intervention to activate the general alarm signal. Presignal requires that the following conditions be met:

- 1) The initial fire alarm signals only in department offices, control rooms, fire brigade stations, or constantly attended central locations (By nature this is Private Mode signaling – Author's note)
- 2) Where there is a connection to a remote station, the transmission of the fire alarm signal to the supervising station activates upon the initial alarm signal.
- 3) Subsequent system operation is by either of the following means:
  - (a) Human action that activated the general fire alarm (By nature this is Public Mode signaling – Author's note)
  - (b) A feature that allows the control equipment to delay the general alarm by more than 1 minute after the start of the alarm processing (Author's note: There is no maximum time)

Positive Alarm Sequence tends to be a more favorable method to permit the delay of general fire alarm signals, but is intended to be used to reduce nuisance alarm signals from automatic fire detection devices (smoke and heat detectors), not manual fire alarm boxes. Positive Alarm Sequencing allows a delay in alarm activation for as much as 180 seconds as long as the alarm signal is acknowledged within 15 seconds. This generally works well to



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## EMPLOYEE SPOTLIGHT

*Cory Kellinger*

Cory started with FSCI in September of 2017 as an Administrative Assistant and she has hit the ground running. She jumped right in and has been able to work with different departments to learn every aspect of her job. Cory's responsibilities include logging in the plan reviews, invoicing for plan reviews, collecting payments and typing plan review letters for specific clients.

Cory previously worked as a Human Resource Assistant for a franchise organization and still enjoys working on Human Resource projects as needed. She also loves cooking, exploring new towns, biking and taking walks with her husband Jason and her two boys, Blake & Tyler.



## EMPLOYEE SPOTLIGHT

*Michael Carnduff*

Michael has been with FSCI for about 6 months, working as a Fire Protection Consultant. He is currently reviewing sprinkler and wet chemical systems. Additionally, he is participating in weekly code education and is paired with a senior mentor. Mike has done a great job learning a new field and getting acclimated to all aspects of this new chapter in his career.



Prior to joining FSCI, Michael was a manager at Carquest Auto Parts. As a manager, he was able to put his technical automotive background to great use and further develop his managerial skills while building relationships with his clients. When Michael is not working, he enjoys working on cars, playing different kinds of sports and spending time with his wife and two kids.



## SEMINAR INFORMATION

Stay up to date on the latest Fire, Building and Life Safety code changes and equipment by attending one of our seminars. FSCI is teaching seminars throughout the United States, led by our experienced staff of Matt Davis, Keith Frangiamore, Brent Gooden, George Michehl & Warren Olsen. Whether you are a Contractor, Architect, Technician, Engineer or an Authority Having Jurisdiction, each seminar is full of practical insights and first-hand experiences to help you comply with applicable codes and standards. FSCI can also provide custom seminars at your location. Be sure to check out our schedule of upcoming seminars on our website. Contact us to learn more by emailing [info@firesafetyfsci.com](mailto:info@firesafetyfsci.com) or by calling our office at (847) 697-1300.

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## LITTLE KNOWN FACTS

### ***NFPA 13 – 2016 Edition-Section 8.3.3.5 Thermal Sensitivity***

Thermal sensitivity for sprinklers is not a new term in NFPA 13. The difference between a Standard Response sprinkler and Quick Response sprinkler has been defined for a number of code editions. Quick Response sprinklers are required in light hazard areas by the IBC and NFPA. Some problems have occurred when remodeled areas have been submitted for review and the contractor has not clearly identified the type of adjacent, existing sprinklers. Often field inspectors will identify and address the mixing of sprinkler types. To further complicate this issue, sprinkler manufacturers have sprinklers that are listed as Quick Response which can cover up to 18' x 18'. But, when the same sprinkler is spaced at 20' x 20' the listing changes to be Standard Response. The 2016 edition of NFPA 13 has addressed this issue. Section 8.3.3.5 states, "Where a sprinkler carries a listing for both standard-response protection and quick-response protection at different coverage areas, that sprinkler shall be permitted to be installed within a compartment at the spacing for both the quick-response and standard-response listings without any separation between the areas so covered."

***Matt Davis, Senior Fire Protection Consultant***

### ***NFPA 13 –Edition 2016- Section 11.1.7 High Volume, Low Speed Fans***

Summer is coming. Along with the warm weather comes the challenges of efficiently and effectively cooling large open areas. Many designers use packaged HVAC units which have large, associated costs beginning with the initial purchase and continuing with the daily energy expenses to operate the unit. Alternatively, designers are now looking at a more cost effective option utilizing fans.

These are not just any ordinary fans. High Volume Low Speed (HVLS) fans have become more popular in recent years. While originally designed for agricultural purposes, their uses have evolved. They are now predominantly found in large open area buildings such as assembly and storage occupancies.

The fans are designed to distribute large volumes of air at low speeds. They first appeared in the 2010 edition of NFPA 13 as a reserved section (11.1.7) since at that time there was insufficient

data available related to how these fans would affect fire suppression systems. In 2011, a series of sprinkler tests were performed which included HVLS fans. The results allowed the NFPA 13 technical committee to establish rules to be followed when a sprinklered building included HVLS fans. The rules were first found in the 2013 edition of NFPA 13. No changes appeared in the 2016 edition. The requirements are as follows: 1) A 24 foot maximum fan diameter; 2) The fan shall be centered approximately between four sprinklers; 3) A minimum vertical clearance of 3 foot from sprinkler deflector to the fan blade; and, 4) The fan shall be interlocked to shut down upon receiving a signal from the fire alarm control unit, through an emergency control function interface device, upon activation of any waterflow device. The 2019 edition of NFPA 72 will include the interface of HVLS fans with the fire alarm in its Chapter 21.

***Scott McBride – Fire Protection Consultant***

### ***NFPA 72 – 2016 Edition – Section 1.5, Equivalency***

A common requirement in the Administrative chapter of most NFPA codes and standards deals with the issue of equivalency. Section 1.5.1 of NFPA 72 states, "Nothing in this Code shall prevent the use of systems, methods, devices, or appliances of equivalent or superior quality, strength, fire resistance, effectiveness, durability, and safety over those prescribed by this code." Section 1.5.2 states that technical documentation must be submitted to the authority having jurisdiction (AHJ) which demonstrates the equivalency of the alternative allowed in Section 1.5.1; and, Section 1.5.3 states that systems, methods, devices, or appliances that are found to be equivalent shall be approved. There are two important parts found within the text of Section 1.5. First, the individual(s) desiring to use the equivalency provision bares the responsibility to provide proof to the AHJ that what is being proposed is actually equivalent to the prescribed rules found in NFPA 72 or any other code or standard from NFPA that includes the equivalency provision. This proof might include a product approval from a nationally recognized testing lab, a performance-based design, or the fact that a more recent edition of the same NFPA code or standard has already embraced the proposed equivalent system, method, device or appliance. The second important part is the AHJ who must be open to the proposed equivalent system, method, device or appliance as they are required, by the code, to approve that which is proven to be equivalent.

***Warren E. Olsen, Vice President Building and Life Safety and Chair of NFPA 72, Chapter 26***



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Tell us what you are interested in learning about!

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