### SEPT/OCT 2016 / No. 198

Journal of the National Fire Sprinkler Association

# NFSA MEMBERS AT WORK

# OBSTRUCTION ISSUE Featuring:

- Updates to Obstruction Rules in the 2016 edition of NFPA 13, p.33
- Fire Sprinklers Reduce Fire-Rated Construction, p.17

1-1-1-1

• What To Do With an Obstruction, p.13

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JOANNE GENADIO
DESIGNER JOHN L. SULLIVAN/SULLIVANDesign
SO (ISSN 1050-4958) (IISPS 524-010) is publish

MARKETING & SQ MANAGER

SQ (ISSN 1050-4958) (USPS 524-010) is published six times a year (February–April–June–August–October–December) by the National Fire Sprinkler Association, Inc., 40 Jon Barrett Road, Patterson, NY 12563.

Telephone: (845) 878-4200. Subscription free to all NFSA members and member companies.

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Second-Class postage paid at Mahopac, NY.

POSTMASTER: Send address changes to: NFSA, 514 Progress Drive #A, Linthicum Heights, Maryland 21090

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# training calendar events of interest to NFSA MEMBERS



September 7, 2016 Coordinating NFPA 25 & 72 Inspection, **Testing and Maintenance Requirements** ELMSFORD, NEW YORK

September 9, 2016 Coordinating NFPA 25 & 72 Inspection, **Testing and Maintenance Requirements** WORCESTER, MASSACHUSETTS

September 12, 2016 Understanding, Applying and Enforcing NFPA 25 **BILLERICA, MASSACHUSETTS** 

September 14-15, 2016 Sprinkler Protection of Storage WATERBURY, CONNECTICUT

September 20, 2016 Protecting Palletized and Solid-Piled Class I-IV and Group A ONLINE

September 20, 2016 Seismic Protection for Fire Sprinkler Systems WEYMOUTH, MASSACHUSETTS

October 18, 2016 Protecting Rack Storage for Class I-IV ONLINE

September 27, 2016 NFPA 13, 13R & 13D Update 2016 MODESTO, CALIFORNIA

September 27-28, 2016 ITM: Navigating through the Liability Minefield EAST SYRACUSE, NEW YORK

September 27-28, 2016 Inspection & Testing for the Fire Sprinkler Industry VENTURA, CALIFORNIA

September 27-29, 2016 Sprinkler System Plan Review MODESTO, CALIFORNIA

September 29, 2016 NFPA 13, 13R & 13D Update 2016 VENTURA, CALIFORNIA

**October 4, 2016** Rough & Final Inspections of Fire Sprinkler Systems WESTBURY, NEW YORK

October 12, 2016 Hydraulics for Fire Sprinkler Systems WESTMINSTER, COLORADO

October 13, 2016 Advanced Hydraulics WESTMINSTER, COLORADO

October 14, 2016 **Pumps for Fire Protection** WESTMINSTER, COLORADO

October 17-28, 2016 Two Week Layout Tech Training SEATTLE, WASHINGTON

October 18, 2016 NFPA 13, 13R, 13D & 14 Update 2013 SUFFIELD, CONNECTICUT

October 25, 2016 NFPA 13, 13R & 13D Update 2016 APPLE VALLEY, CALIFORNIA

October 26, 2016 NFPA 13, 13R & 13D Update 2016 AUGUSTA, MAINE

October 26-27, 2016 Inspection & Testing for the Fire Sprinkler industry APPLE VALLEY, CALIFORNIA

November 15, 2016 Fire Service Mains & Their Appurtenances BUFFALO, NEW YORK

November 15, 2016 Protecting Rack Storage of Group A Plastics ONLINE

November 16, 2016 Rough & Final Inspections of Fire Sprinkler Systems BUFFALO, NEW YORK

November 29-30, 2016 Sprinkler Protection of Storage STOW, MASSACHUSETTS

November 29, 2016 NFPA 13, 13R & 13D Update 2016 ROSEVILLE, CALIFORNIA

November 30, 2016 Seismic Protection for Fire Sprinkler Systems ROSEVILLE, CALIFORNIA

December 1, 2016 Standpipe Systems for Fire Protection Systems ROSEVILLE, CALIFORNIA

December 20, 2016 Inspecting Storage Occupancies ONLINE

January 31-February 2, 2017 Advanced Technician Training ROUND ROCK, TEXAS

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# from the **PRESIDENT'S DESK**

# Grassroots/Partnerships -Overcoming Barriers



SO

**Shane Ray** 

s I travel around the country to visit NFSA chapters at meetings and events, it's refreshing to see the grassroots efforts from our committed members and the great coordination by our NFSA personnel. My first pledge as your President was to serve and care, I ended that pledge with a promise to listen and learn. Thank you to our many chapters and members who have welcomed me and NFSA personnel.

Grassroots efforts with national support is key to overcoming barriers that are counter to our mission, which is to "save lives and protect property through the widespread acceptance of the fire sprinkler concept." The NFSA has 17 chapters covering many states and many of our major metropolitan cities. It has been an honor to meet with all of the chapters over the past two years. I would be remiss not to mention my recent visit with officers from our newest chapter, the Boston Chapter. I would also like to mention that our Board of Directors will take up business at their October meeting to acknowledge the formation of the St. Louis Metro Area Chapter. Again, our members and our personnel are making a difference at the local and state levels.

Our many grassroots efforts are just in time. As the political scene seems to turn more unpredictable and unstable, the barriers to achieving our mission become more numerous. The fire sprinkler industry will also face many challenges that we will strive to make opportunities instead of barriers. The new term of "uberization" will be forever present as a technological benefit, but a service and industry challenge. As the political, societal and environmental arenas in which we operate continue to evolve, so will your NFSA in a positive, productive and proactive way.

Speaking of progress, the NFSA opened our future office on July 15, 2016 at 514 Progress Drive in Linthicum Heights, Maryland. We currently have our Patterson, New York office on the market and will spend the remainder of 2016 transitioning all of our Administration and Engineering Departments to Maryland. I cannot thank the Board, NFSA personnel and the members enough for the support through a major transition and relocation. Time and a strong team will ensure organizational improvement and institutional advancement.

Our dedicated personnel, active members and new office location will ensure improved outreach, future partnerships and enhanced service across the country. NFSA Chapters will effectively utilize local, state and national resources to advance codes and overcome negative public policy. Our partnerships with NFPA's Fire Sprinkler Initiative, Common Voices, the Phoenix Society for Burn Survivors, the National Fallen Firefighters Foundation, Society of Fire Protection Engineers, Congressional Fire Services Institute, International Code Council Building Safety Month, Underwriters Laboratory, Factory Mutual, UA, International Association of Fire Chiefs, National Association of State Fire Marshals, as well as future partnerships with APA, The Engineered Wood Association, American Wood Council, Structural Building Components Association, Building Owners & Management Association, Facility Management Organizations, American Red Cross and, perhaps, the American Association of Retired Persons. The possibilities for partnerships are endless and our new office is in closer proximity to the majority of our current and future partners. It is also closer to the BWI airport, which will accommodate NFSA personnel to get to our members on issues we face across the country, as well as allow our members and partner organizations to get to us.

Advancing our mission will be enhanced with our transition and relocation. I believe it is important to showcase the fire sprinkler industry, especially to our non-traditional partners. Our Maryland location positions us to do just that. It will also be great to someday have a place to showcase our appreciation to our members, especially our Hall of Fame members.

Keep up the great work and reach out to me at any time!

Shane Ray, President



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# from the CHAIRMAN'S DESK

# Sometimes it's Tough to "Walk The Walk"



SO

**Larry Thau** 

ere at NFSA we've been increasingly aware that directing more of our energy toward the "Empty Chair" (or those outside of our normal industry discussion) is essential to growth. Fundamentally, we spend most of our time speaking to likeminded people and project our own view of the objectives and purposes of those who "oppose" the use of fire sprinklers. Like many other situations involving opposing points of view, we often take complex situations and simplify them to clarify the fact that we wear the white hats and the other guys wear the black ones. The unfortunate outcome is that both sides eventually gravitate towards using euphemisms for war and armed conflict to describe their respective positions. The story below demonstrates that sometimes the "opposition" or "adversaries" don't understand they're doing anything wrong, let alone recognize they're part of a fighting force on the wrong side.

Yours truly decides to renovate a property on a barrier island. After the initial site survey, the architect made a recommendation that "renovation is more expensive than new construction and you'll get exactly what you want." After a deep swallow, we start developing a set of plans for new construction with one surprising twist... the owner requires a fire sprinkler system. The resulting next steps were revealing.

The first contact on sprinklers was with the local code official. I was startled by his question "What do you want to do that for the code doesn't require it?" I countered by offering that the cost is modest during new construction and the house will frequently be unoccupied and sprinklers have one of the highest reliability factors in construction. The response? "Well, okay. There's nothing stopping it, but I've seen those systems operate and your entire house will get soaked if you have a fire and many insurance companies will raise your rates." Guess where his "experience" comes from? You guessed it - Hollywood. Eventually, he gets me in contact with the fire code official who does know what's going on but also cautions about freeze-ups and water damage.

Back with the Architect. He explains that he has a fiduciary responsibility to his clients and as such wanted to make sure I understood the risks. His concern was special insulation precautions to prevent freeze-ups, potential water damage, selecting a suitable head which wouldn't be vulnerable to physical damage and the likelihood of a requirement for a pump and pump room. He had "Googled" me so he knew of my NFSA affiliation and that my decision for fire sprinklers was inevitable. This turned into a teachable moment as he and some associate partners were enthralled in my explanation of the different types of systems, the number of fires suppressed with two or fewer heads and some new technology. His suggestion was that we get in contact with the AIA (American Institute of Architects) and set up training sessions, as most architects don't understand these concepts.

On to the general contractors. This one is simple, "We'll do whatever you want, but the fire sprinklers will be your responsibility. You only have to tell us your sprinkler contractor's contact info and we'll see they get access when they need to." You'd think I'd said I'm going to heat the house with nuclear energy. The counter here was for him to suggest electric solar panels, with which they had some recent experience. I guess if your customer wants one of those "outer fringe" options, maybe they'd like another one. If not fire sprinklers or solar, maybe a deep space listening device? Eventually, I did find a competent general contractor who had done a few large residences with sprinklers and had good experiences. He didn't see it as an attractive option or safety upgrade, but rather as an insurance company mandate.

So, armed with an architect and general contractor who are open-minded and confident enough to understand they are both under-informed, and a local fire official who finds my project interesting, I call an NFSA member contractor. This finally

# CONTRACTOR'S CUE

# Small Businesses Are the Drivers of Innovation

BY MARK EVANS

On a traditional and maybe not so even playing field, small businesses are not capable of competing with larger, more established industrial players. They do not possess the resources to take the same kind of large-scale actions - bulk purchases, to give a simple example. This is why they are on the losing end of any competition that requires scaling, such as a price war.

Amazon.com is a good example. Look at the way that they manage to undercut traditional bookstores. This is due to their ability to survive on thinner profit margins and optimize their activities, from their shipping processes to the ways that they hold stock at their warehouses.

However, if we think back to the beginning, Amazon started small (more specifically, one-man-in-his-garage small), which is pretty small by anyone's standards. How do such companies manage to grow, and how can the small businesses of today's world hope to emulate their success? I've been thinking about this recently and I've come to some surprising conclusions.

It is my assertion that being a small business enables the innovative approaches that create game-changing economic juggernauts. On the other hand, the realities of being an economic juggernaut make the same type of innovation much less likely.

This is why small businesses are the true drivers of innovation. It's impossible to compete in a traditional manner, so the only way to win is to change the game.

Unlike small businesses, large companies favor orderly changes that are easily contained in an existing industrial or corporatized context. They like controlled processes, where their tight structures and access to resources put them at an advantage. Any hierarchical organization has the same attitude.

Even if there is a mass adoption of new modes of problem solving, this is usually followed by attempts at acquisition on the part of a larger organization. Look at the history of any large technology company after a certain point they stop developing new products and begin buying start-ups and once again fast-tracking their path to new and more innovating technology, all to stay ahead of the pack.

Even when a company is not the creator of a certain type of disruption, many arise to occupy the new ecosystem that it generates. There would be no search engine optimization industry without search engines, after all. In the rise and fall of these niches, it is the least established organizations that benefit from them.

# Why Small Businesses Can Create Disruption

We know why industrial disruptions ben-

efit small businesses, but why are they the ones that are uniquely capable of creating them? There are several reasons for this.

Disruptive innovation is a mass-level, non-institutional change. At its core, it threatens the status quo and is usually born out of small, non-hierarchical groupings. Structural change and disruption take place in large, traumatic upheavals, which uniquely benefit small, looselyorganized groups.

In smaller organizations, where each person is more likely to wear multiple hats, specialization is practically nonexistent due to the need of being the jack of all trades. This leads to a greater flexibility and willingness to change fundamental approaches. A specialized method of solving problems is a recipe for orthodoxy and thinking that any deviation from the norm is impractical.

For exactly the same reasons that larger organizations are better at solving problems at a large scale, they are worse at recognizing necessary deviations from the norm. Compartmentalized, specialized processes stifle novelty and creativity, keeping them less nimble while being necessary for mass support and service.

Furthermore, the ties between those who run small businesses are most often not economic, but predicated on other social ties. Small businesses, including start-ups, are often formed among friends and family, rather than among a group of specialists in a particular field. This al->> CONTINUED ON PAGE 11

>> CONTINUED FROM PAGE 9

### from the CHAIRMAN'S DESK

feels normal! It was sort of like wandering around in a Korean airport and finally finding someone who speaks English! In two weeks, I had a preliminary design based upon actual flow tests and the project was no longer delayed.

- Some thoughts for NFSA:
- We need to "walk a mile in the other guys moccasins". If professional influences only get anecdotal information within their industry or the entertainment industry is their source, they can't serve their clients properly.
- The challenge may appear like war at the national level, but at the local level it may be more about education on a one-by-one basis. A real "grass roots" operation.
- New points of contact like Servicemaster, residential insurers and owners themselves are worth considering. What does the actual data say?

We need to look in the mirror. In an increasingly safety and environmentally conscious market, why is a reliable system which insures protection of lives and safety not a desirable feature for homes and businesses? Maybe ignoring water supply expense, inadequately specified insulation requirements and lack of a suitable informational package explaining how systems actually work needs attention.

One thing is for sure, most of the things inhibiting our growth are known tangible needs which can be defined, prioritized and acted upon.

At your service, Larry Thau, Chairman

# CONTRACTOR'S CUE

lows them to harness the self-motivating forces of loyalty and genuine ownership of the product, giving them that extra drive to overcome any potential hurdles.

There are large companies that have attempted to create these types of structures within a larger corporate environment, but their successes are the exception rather than the rule. They become unwieldy and difficult to control from the center. Industrial hierarchy makes it possible to take less trained workers and get more uniform results from them. Anyone who's ever had a fast food job can attest to this.

Small businesses, when faced with an unusual problem (and when you're developing the next big thing in your garage, there's no such thing as a usual problem) tend to find unusual solutions to it. In larger organizations, each possible new solution has to be passed up the corporate ladder, being distorted and or diluted each time it's passed up or down the chain. This delays and usually weakens any adoption of new ideas. Furthermore, the employees in large organizations often resist new methods of their own accord, preferring habitual but non-optimal solutions.

Mass adoption of new methods of socializing, doing work, or making money are never the results of the types of calculation that are common in the boardroom. Because the motives are so inarticulate and arise spontaneously from wildly varying sectors of society, this process cannot be manipulated, predicted or controlled with any degree of exactitude.

These changes also lead to the emergence of changed landscapes where the services developed by the establishment may not be relevant. Take the example of the recording industry. The CD manufacturing, distribution and promotion infrastructure were devalued when digital downloads disrupted the industry. Their reluctance to accept it is understandable.

If you already have an established business model that brings in revenue, it is usually foolish to abandon it. Even expanding your core services takes a great deal of resources and vision and the largest, most profitable companies have made themselves that way by introducing disruption within the circumstances where they do their business.

This can be accomplished, but the fundamental tendencies of each type of organization remains the same - small organizations tend to be more agile and to seek unorthodox, innovative answers, while larger ones tend toward standard solutions to standardized problems.

So there you have my view on how small businesses continue to be the drivers of innovation. As every professional was once an amateur and every expert was once a beginner and every successful company was once a small start-up.

Mark Evans is the CEO of Dreamscape Networks. Over the past two decades, he has been creating, running, and pioneering successful businesses across Australia and other parts of the globe. O

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# TECHNICAL TUESDAY ONESA 2016 ONLINE

# **Protection for Storage Occupancies**

Storage of anything can create a challenging fire in a building. Of course, the fire will vary with the amount of storage, the product being stored, and the arrangement of the stor-



age. This series of programs will discuss the requirements for fire sprinkler protection of storage occupancies. Beginning with requirements that apply in a general fashion to storage protection, there will be a review of terminology including commodity classifications, the variety of arrangements discussed in NFPA 13, and other pertinent details. Then lessons will cover additional details relative to the specific storage such as low-piled storage, Class I through Class IV and Group A piled storage, as well as Class I through Class IV and Group A rack storage.

# October 18, 2016

# Protecting Rack Storage for Class I-IV

VICTORIA B. VALENTINE, PE

Rack storage is definitely a high challenge fire scenario. There are many options presented in NFPA 13 for protecting racks. Different ceiling sprinklers, sprinkler inside the racks, variations in configurations including aisle width will all result in different sprinkler locations and demands. This lesson will review the many standardized options available when protecting Class I through Class IV commodities.

# November 15, 2016

# Protecting Rack Storage of Group A Plastics

# ROLAND ASP, CET

The storage of Group A plastic on racks is one of the most challenging fire situations that fire sprinklers can experience. These storage arrangements can promote a severe fire condition which may include a rapid spread of fire with a high rate of heat release. Chapter 17 in NFPA 13 titled "Protection of Rack Storage of Plastic and Rubber Commodities" spells out the acceptable protection options for this extreme fire risk. Chapter 17 gives the layout technician many options including the use of Standard Spray Sprinklers (CMDA), Control Mode Specific Application sprinklers (CMSA), Early Suppression Fast Response sprinklers (ESFR) and in-rack sprinklers.

► This presentation will outline the different acceptable protection criteria and options found in Chapter 17. A thorough understanding of the requirements of this chapter will help the layout technician to choose the most appropriate protection for this challenging storage arrangement.

# December 20, 2016

# Inspecting Storage Occupancies

# JASON WEBB

Storage occupancies have long been segregated from other occupancy hazards for planning their protection scheme. Once a system is in place, it is important that the system is inspected, maintained, and tested over its lifetime. This lesson will review the nuances of inspecting storage occupancies in accordance with NFPA 25.

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# What to Do with an Obstruction?

By Mark Hopkins, P.E.



the structural members are located in a building. However, this is not the case. Obstructions to fire sprinklers come in a variety of shapes and sizes. They can include structural members, ducts, heaters, conveyors, aesthetic features like clouds, and the list continues. There are many rules for locating sprinklers with reference to obstructions in NFPA 13. The criteria begin with general information, but then are divided by the type of sprinkler that is being installed. In addition, the obstructions are typically categorized into those near the sprinkler and those far from the sprinkler.

pacing sprinklers would be easy

if the only concern was where

More guidelines are added with each new edition of NFPA 13 to properly space sprinklers around all of the other components in a building. Yet, every obstruction that may be encountered in the field is not found in the book. Understanding the intent of the rules is needed in order to understand where to locate the sprinklers when the specific situation does not fit exactly into the rules. With the intent and some common sense, solutions for locating the sprinklers when obstructions are present can be reached. Section 8.5.5.2.2 in NFPA 13 states. "Sprinklers shall be positioned in accordance with the minimum distances and special requirements of Section 8.6 through Section 8.12 so that they are located sufficiently away from obstructions such as truss webs and chords, pipes, columns,

and fixtures." This begins to describe the types of obstructions that can be encountered, but the details on distances from obstructions is left to the specific sections for each sprinkler type.

Much of the focus with obstructions is examining the spray pattern of the fire sprinkler. However, it is also important to keep in mind the activation of the fire sprinkler. Can the hot gases from a fire incident get to the sprinkler in a timely fashion? In other words, obstructions need to be minimized to insure the sprinkler operation is not significantly delayed. This may even lead to installation of additional fire sprinklers so that they will operate when expected.

# **Obstructions Near the Sprinkler**

The distance of objects "near" the sprinkler will change with the type of sprinkler being used. Yet, the concept is the same across all types of sprinklers. First, can heat get to the devices? Hot gases can move around many obstructions relatively easily, but sometimes unusual air flow characteristics can be encountered near the obstructions. Small localized areas may have eddies or boundary layers, which require sprinklers to be located away from the obstruction for proper response. This allows for hot gases to reach the sprinklers as intended in most circumstances when the sprinklers are close to the ceiling in accordance with their listings and installation instructions.

When a space has many layers of ob-

structions it becomes more of a challenge for the heat to travel to the sprinkler. An example of this would be a crowded mechanical room or corridor on the basement level of a hospital or hotel. Another example is when the obstruction is large enough to collect the hot gases below it for some time before the hot gases have banked down or moved far enough to flow around the obstruction or rise to the level where sprinklers are installed.

The combustion process of a fire generates heat and the plume carries the hot gases to the ceiling level within a compartment where a ceiling jet is formed and hot gases are transported to the sprinklers above or some finite distance away from the fire. Although a perfectly smooth travel path is not likely to be achieved even in relatively unobstructed spaces, in a congested space, sprinklers should be located so that the blockages to the flow of hot gases from a possible fire incident are reduced as much as possible.

Obstructions close to the sprinkler could interfere with the development of their spray pattern. The sensitivity of

>> CONTINUED ON PAGE 14



Mark Hopkins, P.E. NFSA's V.P. of Engineering

Mark Hopkins

the sprinkler to obstructions varies with the type of sprinkler and its spray pattern. Standard spray sprinklers are the least sensitive to obstructions. Extended coverage spray sprinklers have a flatter spray pattern, since they cover a larger floor area, which means that obstructions close to the sprinkler will have more of an impact on the spray pattern and larger shadow (unprotected floor) areas would result than would be observed in the spray patterns of standard spray sprinklers. Also, the larger the obstruction, the greater the effect on distribution of water within the space. In general, larger obstructions will result in larger shadow areas.

Within the close range of the sprinkler both continuous and noncontinuous obstructions need to be considered. Per Section 8.5.5.2.1 the "close" range is defined as the ceiling to a plane 18 inches below the level of the sprinkler deflector. For sprinklers designed for high challenge fires, such as storage, this is typically modified to be up to 36 inches below the level of the sprinkler deflector. This vertical distance allows the spray pattern to form so that it can reach the coverage area planned.

One type of obstruction that is common for sprinklers is beams, although other obstructions can also follow the "Beam Rule." This rule addresses those obstructions that are tight to the ceiling, which sprinklers will have to spray below in order to reach their full coverage area. The distances needed to clear the beamlike obstruction will change with the type of sprinkler but the intent is to get water below the obstruction to reach the floor area being protected, as opposed to other rules which rely on water throw over or around the obstruction.

Another type of obstruction in the near space is one where water is distributed to two sides of the obstruction. The rule has been paraphrased as the "Three Times Rule" (or "Four Times Rule", as applicable for some sprinklers). When following the Three (or Four) Times Rule, the goal is to get water from the sprinkler to two sides of an obstruction. This could be over and under the obstruction, such as a web member of a truss, or to the left and right of an obstruction, such as the case with a column near a sprinkler.

There is a special exception for standard spray pendent and upright sprinklers. In light and ordinary hazard occupancies, only structural items need to be considered as obstructions when using the Three Time Rule. This means that for nonstructural items, such as lights, ducts, pipes, cable trays and conduits, there is not a specified distance that needs to be maintained. However, this is an item where common sense should be applied. Obviously, more distance from an item will provide better distribution of water. When possible, it is best to keep space for the spray to develop, but it is convenient to have the flexibility of utilizing a specified clear distance.

Cloud ceilings were added into the 2016 Edition of the standard though they are not a new condition in the field. The many variations of cloud ceilings in the field far outnumber those now addressed by NFPA 13. The added requirements were based on results of research where the clouds were all on a single horizontal plane, yet there are often clouds installed at multiple planes and varying shapes and sizes that do not presently have prescriptive guidance. In these situations, the ceiling would be protected and the clouds would be handled as obstructions to those sprinklers. In many cases this will mean that sprinklers will also need to be installed below the cloud level(s).

It is important to recognize that an obstruction will disrupt water from reaching every square inch of floor area in a space. However, the water that would have been in that particular square inch of floor space is still in the room and cooling the atmosphere. Although obstructions will block water spray reducing momentum and changing droplet distribution, runoff from the obstructions will also continue to spread the water within a compartment. This is why the general concept for obstructions is to minimize their impact. The water will still cool the space by absorbing heat. The spray from sprinklers will also interact with the smoke and combustion gases including at the source of the fire affecting the combustion process. In addition, the water cools the fuel when applied to the fuel source and pre-wets adjacent materials so that it is harder to ignite them, which reduces the spread of fire.

If there is a scenario without prescriptive guidance, the user is left to make a judgement on the best placement of sprinklers in the space. Sometimes a small shift in the location of sprinklers may mean that the sprinklers can be located to avoid most of the obstructions while minimizing the number of sprinklers that have to be installed in the space. There are also situations where a couple of extra sprinklers in a compartment may allow for flexibility during installation that can save installation time. The tradeoff of a few sprinklers may be worth the flexibility and may even save labor costs. These decisions get easier with experience.

# **Obstructions Far from the Sprinkler**

Once the line for "close" obstructions has been crossed (either 18 inches or 36 inches depending on the sprinkler being installed), obstructions are treated with different rules. These obstructions that are far from the sprinkler have less criteria to meet. The general concern is when the obstructions are large enough to prevent water from reaching the hazard. This is typically invoked once the obstruction is more than 4 feet wide.

These large obstructions could shield a fire such that it could overwhelm the ceiling sprinklers if they are not intended for a larger fire scenario. Therefore, when obstructions are more than 4 feet wide, sprinklers will need to be installed below the obstruction. These sprinklers are necessary under flat or curved surfaces. The intent of the sprinklers below the obstruction are to handle a fire that ignites directly below the obstruction.

One of the situations that frequently arises in the far zone is the presence of multiple small obstructions essentially forming a large obstruction. This could be a series of pipes, ducts or other obstructions that run near each other and have all small diameters or widths and are not a concern if considered individually, but considered to be of significance when considered as an aggregate. This is another area that NFPA 13 does not discuss (except for a new rule for ESFR sprinklers in the 2016 edition). Following

the literal interpretation of NFPA 13, no additional sprinklers would be required. Yet, there are some scenarios with so many obstructions (even smaller adjacent ones) where a barrier that would collect heat and prevent water sprav is clearly present. Unfortunately, this creates a subjective point rather than being a prescriptive requirement since it is likely that an additional sprinkler would provide better fire protection. A couple of conduit lines running parallel would not create this type of barrier, but if the arrangement appears similar to other single obstructions that would require a sprinkler beneath them, then it would be prudent to add one there too.

# Summary

When the situation does not fit into the box of rules presented in NFPA 13, a more performance based approach is necessary to locate sprinklers appropriately in the space. This means employing a common sense approach to fitting around the items as best as possible. Generally, it will also mean that the authority having jurisdiction will need to be brought into the conversation to make sure that all parties agree how to protect an arrangement that falls into a gray area of the standardized criteria. Both the letter of the standard and the intent behind the requirements need to be considered when handling obstructions. Remember, the goal is to locate the sprinklers within the space so that they can distribute water effectively over their coverage area. Users must minimize the impact of obstructions to the sprinklers, but in the built environment it is impossible to eliminate them.

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Produced by NFSA, the 2012 edition of The Fire Sprinkler Guide defines those sections of the International Building Code (IBC), International Residential Code (IRC), NFPA 101 and NFPA 5000, where fire sprinkler systems are required, including partial requirements and construction incentives. The guide includes comparison tables to clarify many of the code requirements. The guide is a valuable tool for architects and engineers, plan reviewers, fire and building inspectors, as well as sprinkler contractors, and serves well as a workbook for students at the NFSA's Design Advantage Seminar.

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# Fire Sprinklers Reduce Fire-Rated Construction

By Jeff Hugo, CBO



ire sprinkler systems have a large impact on the building codes and modern day construction methods. There are

many benefits of installing a fire sprinkler system throughout a new or existing building, such as increases in height and area. One specific area in building codes today where fire sprinklers have a large impact on building construction is fireratings.

Through time, building and fire codes have used fire sprinklers to reduce fireratings of walls and horizontal assemblies and for fire partitions, fire barriers and fire walls. There is the general idea that fire sprinkler systems will reduce every component or assembly by one-hour, but this is not the case every time. The remainder of this article will point out the major occurrences in the International Building Code (IBC) and reference sections when and where fire sprinklers affect fire ratings of new construction.

# **Atriums**

Sprinklers permit a glass wall forming a smoke partition, in lieu of a 1-hr fire barrier, where automatic sprinklers are provided along both sides of the separation wall. 404.6

# **Corridor Rating**

Sprinkler systems installed according to NFPA 13 or NFPA 13R delete the corridor fire resistance rating for several occupancies. Without a corridor rating, the remainder of the corridor components, such as rated doors, rated frames, door closers, rated hardware and several other portions of the fire rated corridor are eliminated. Table 1020.1

# **High-Rise Buildings**

Sprinkler systems installed according to NFPA 13 permit fire resistance rating reductions for high-rise buildings that have sprinkler control valves equipped with supervisory initiating devices and water flow initiating devices for each floor. Section 403.2.1

Sprinkler systems installed according to NFPA 13 allow high-rise construction (up to 420 feet) building elements (floors, walls, etc.) to be reduced from Type IA to Type IB. Columns, supporting floors, are not permitted to be reduced. Where the occupancy classification is other than, Group F-1, M, or S-1, the Type IB construction may be further reduced to ratings of Type IIA construction. This reduction counts for significant savings in construction costs. For example, a Group B (business) high-rise of Type IA (according to ICC Building Valuation Data of June 2016) has a price per square feet of \$181.12. A reduction to Type to Type IB saves \$6.69 per square feet (\$174.43 per sq.ft.). A further reduction to Type IIA saves \$12.45 per square foot (\$168.67 per sq.ft.). Section 403.2.1.1 (1)(2)

Sprinkler systems installed according to NFPA 13 permit the required fire resistance rating of the fire barrier walls enclosing vertical shafts, other than exit enclosures and elevator hoistway enclosures to be reduced to 1-hour where sprinklers are installed within the shafts at the top and at alternate floor levels. Section 403.2.1.2

# **Elevator Lobby**

Sprinkler systems installed according to NFPA 13 or NFPA 13R delete the elevator lobby from the level of discharge. 3006.2

Other than occupancies I-1 Condition 2, I-2, I-3, and high rises with sprinkler systems installed according to NFPA 13 or NFPA 13R delete the need for enclosed elevator lobbies. 3006.2

Sprinkler systems installed according to NFPA 13 or NFPA 13R replace the enclosed lobby requirement, with smoke partitions on each floor. 3006.3

# **Fire partitions**

Sprinkler systems installed according to NFPA 13, permit 30-minute fire partitions for dwelling and sleeping units of Type





NFSA's Manager of Codes

Jeff Hugo, CBO

### >> CONTINUED FROM PAGE 17 IIB, IIIB, and VB. Section 708.3

# **Horizontal Assemblies**

Sprinkler systems installed according to NFPA 13, permit 30-minute horizontal assemblies for dwelling and sleeping units of Type IIB, IIIB, and VB. Section 708.3

Sprinkler systems installed according to NFPA 13, generally permit a 1-hr reduction of horizontal assemblies that separate mixed occupancies in Table 508.4. In several cases the 1-hr reduction permits separated occupancies without rated horizontal assemblies. Table 508.4

# **Incidental Uses**

# Furnace Rooms

Fire sprinklers eliminate the 1-hour wall requirement around furnace rooms having equipment with over 400,000 BTU per hour input. Table 509

# **Boiler Rooms**

Fire sprinklers eliminate the 1-hour fire barrier and/or horizontal assembly requirement around boiler rooms having boilers over 15 psi and 10 horsepower. Table 509

# Laundry Rooms over 100 square feet

Fire sprinklers eliminate the 1-hour fire barrier and/or horizontal assembly requirement for laundry rooms over 100 sq. ft. Table 509

# **Refrigerant Machinery**

Fire sprinklers eliminate the 1-hour fire barrier and/or horizontal assembly requirement around refrigerant machinery rooms. Table 509

# **Separation of Occupancies**

Sprinkler systems installed according to NFPA 13 generally permit a 1-hr reduction of fire barriers that separate mixed occupancies in Table 508.4. In several cases the 1-hr reduction permits separated occupancies without rated fire barriers. Table 508.4

# Shaft Enclosure

The bottom of a shaft is not required to be closed off provided it terminates in room protected by fire sprinklers. 713.11

# Vertical Openings for Escalators

Sprinkler systems installed according to NFPA 13 modify enclosure requirements for escalators. 712.1.3

Passive construction has an important role in construction. It is important to note that active protection, such as fire sprinklers, control or extinguish fires when the fire is small, thus justifying the elimination or reduction of passive fire resistance rated construction. Where fire sprinklers are installed, more than 9 out of 10 times, a wet system protecting a light hazard occupancy uses only two sprinklers to control the fire. This is one of many facts of fire sprinkler systems that prove and justify the reduction in passive construction, and, in the end, saves lives, property and money.





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LEADING AND LIVING LIFE SAFETY

# Suppliers' Showcase DEWALT – Engineered by Powers The Best of Both Worlds



he Fire Sprinkler Contractor will become one of the ultimate victors in DEWALT's acquisition of Powers Fasteners. The acquisition allowed for the creation of much more than just innovative anchors and tools. The task at hand, for both DEWALT and Pow-

ers, is to deliver one of the most complete cordless concrete systems, to be paired with new building code approved anchors for pipe hanging, cable trays and any other ceiling components that would be needed for anchoring overhead. The other key component of the solution is the development of a system to keep the most demanding Fire Sprinkler Contractors working throughout the day without electrical cords. Powers has been showing Fire Sprinkler Contractors for years, "it's not the cost of the anchors, but it's the cost of the anchoring that matters." It's DEWALT mission to help the Fire Sprinkler Contractors to reduce their labor cost and ultimately improve the profit margins on their projects.

"The addition of anchors and fasteners to the DEWALT family is part of a continued strategy to deliver a complete, cordless anchoring solution for all concrete and masonry applications, which would directly impact the Fire Sprinkler contractor", says Kirk Reimer, VP of Sales and Marketing.

It's the innovation of the cordless jobsite system that is revolutionary for the Fire Sprinkler Industry. During a recent media event in Baltimore, Maryland, DEWALT announced the FLEX-VOLT<sup>™</sup> System, which features the world's first batteries that automatically change voltage when the user changes tools. Two FLEXVOLT<sup>™</sup> batteries, a 6.0Ah battery (DCB606) available in the fall of 2016 and a 9.0Ah battery (DCB609) available in early 2017, power the lineup of brushless 60V MAX\* and 120V MAX\* FLEXVOLT<sup>™</sup> tools. *SCONTINUED FROM PAGE 21* 



\* - Maximum initial battery voltage (measured without a workload) is 20, 60 and 120 volts. Nominal voltage is 18, 54 and 108. The 120V MAX\* is based on using 2 DEWALT 60V MAX\* li-ion batteries, combined having a maximum initial battery voltage (measured without a workload) of 120 volts and a nominal voltage of 108.

The Suppliers' Showcase feature is available to any NFSA Supplier and/or Manufacturer member in good standing. If you are interested in having your company featured here, please contact Joanne Genadio at genadio@nfsa.org or 845.878.4200 x118. Features will be published on a first come, first serve basis.

# **Suppliers' Showcase**



### >> CONTINUED FROM PAGE 21

Central to the offering is the pairing with DEWALT's range of 20V MAX\* and new FLEXVOLT™ cordless rotary hammers along with a full range of ICC approved anchors, accessories and setting tools. With the addition of the anchors and fasteners line, DEWALT can now offer a full system for the entire project from the design phase through construction.

In the Fall of 2016, DEWALT plans on launching a variety of new overhead anchors for the Fire Sprinkler market. For the contractor that hangs pipe and other components to ceilings, the new Hangermate®+ line of anchors shares the same thread design of the new patented Screw-Bolt+™, delivering a fast and easy method for rod hanging. The broad range includes many different options to cover the various application needs of this trade in the three key base materials: concrete slabs, wood joists and metal components. Options within the range include female & male threads integrated into the anchor ready to receive a threaded rod and also options for special circumstances like heads that swivel giving nearly 90 degrees of rotation for flexible positioning. The Hangermate®+ line is on track to have a full selection of approvals required for the latest building code upon launch.

The new range of DEWALT anchors will launch in the back half of 2016, and the existing Powers range of anchors and fasteners will transition to the DEWALT brand over a period of time. These innovations will save labor costs and offer system flexibility for the Fire Sprinkler Industry.

NFSA's focus on being the fire sprinkler industry's premier resource for training, education and building code approved standards is parallel to DEWALT's product and user marketing focus. DEWALT finds high value with the knowledge and leadership that the NFSA organization brings to the fire sprinkler industry. We hope to both learn and educate the industry with the help of NFSA on our innovative fire sprinkler solutions in tools, accessories, anchors, and engineering.







We are looking for energetic, motivated, dedicated, passionate team members with a strong work ethic!

We hope you'll want to join our team in order to help us fulfill our mission, which is to protect lives and property through the widespread acceptance of the fire sprinker concept. Visit us today at www.nfsa.org

# Wingspread

o say that NFSA President Shane Ray and I were honored to be part of the 50th Anniversary of America's Fire Service Wingspread is indeed an understatement. To be able to present to this esteemed group about the life-saving technology of fire sprinklers provided an awesome opportunity to share our industry's commitment to making America fire safe.

In February 1966, the Johnson Wax Foundation called ten of our nation's fire service leaders to the world famous Wingspread Conference Center in Racine, Wisconsin. The purpose of gathering this notable group of fire service leaders was simple: The Johnson Wax Foundation wanted to produce a useful document entitled "Statement of Critical Issues to The Fire and Emergency Services in the United States." The mission was accomplished during this meeting in southern Wisconsin. In fact, a fire service tradition and legacy was born during this formative event. The fire service delegates reached consensus, identifying 12 emerging issues that were of national significance, with each statement needing further study, research and resources to make impactful changes to the delivery of public safety services.

Along with the 12 statements, the Ad Hoc Committee pointed out that the Wingspread Conference should be held every ten years. If the gathering was annually, the powerful statements would be less effective and repetitive. If the group waited too long, the effect of having a long-range plan to consider would be lost. This conference was the sixth gathering and was a great representation of the 50th anniversary of this process.

# **Background and History**

In the first year, Chief (Ret.) William (Bill) E. Clark, from the Fire Department of New York, was the committee chair. Clark was serving as the superintendent of training for the State of Wisconsin during the time that Wingspread I was held. There were nine others attendees present. The roll call of folks who made fire service history along with Clark included the following:

- Dr. Donald Favreau from the State University of New York.
- Chief David B. Gratz from Silver Spring, Maryland.
- Chief of Department John T. O'Hagan from the Fire Department of New York.
- Supervisor Keith Royer from Iowa State Fire Training.
- Chief Lester Schick from Davenport, lowa.
- Chief Henry Smith from Texas A & M University.
- Chief Fire Marshal Curtis Volkhamer from the Chicago, Illinois Fire Department.
- Director Robert Byrus from Fire Service Training at the University of Maryland.
- Chief Engineer Keith E. Klinger from

the Los Angeles County, California Fire Dept.

The first Wingspread Committee was clear in laying down the charge for the content of the final report from the 1966 meeting. In the section marked "The Responsibility for Wingspread Conference Statements of National Significance to the Fire Problem," the expressed goal was not to move ahead political agendas. nor to focus on the concerns or issues on behalf of any associations and institutions represented. Instead, it was mutually agreed that all discussions would be objective in character, with the focus only on the general welfare of the United States. The report mentions that integrity and dedication to a common purpose prevailed throughout the proceedings and is reflected in the final report. The work effort only enhanced the Wingspread Conference Committee's contributions to our society. This is the lofty goal that is the underlying principle that each new committee tries to achieve.

The First Statements of Significance produced at Wingspread in 1966 included the following:

>> CONTINUED ON PAGE 24



Director of Outreach & Government Relations

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- Unprecedented demands are being imposed on the fire service by rapid social and technological change.
- The public is complacent toward the rising trend of life and property by fire.
- There is a serious lack of communication between the public and the fire service.
- Behavior patterns of the public have a direct influence on the fire problem.
- The insurance interest has exerted a strong influence on the organization of the fire service. This dominance seems to be waning. The fire service must provide the leadership in establishing realistic criteria for determining proper levels of fire protection.
- Professional status begins with education.
- The scope, degree, and depth of the educational requirements for efficient functioning of the fire service must be examined.
- Increased mobility at the executive level of the fire service will be important to the achievement of professional status.
- The career development of the fire executive must be systematic and deliberate.
- Governing bodies and municipal administrators generally do not recognize the need for executive development of the fire officer.
- Fire service labor and management, municipal officers, and administrators must join together if professionalism is to become a reality.
- The traditional concept that fire protection is strictly a responsibility of local government must be reexamined.

# Moving the Clock Ahead

The sixth Wingspread Conference occurred July 18-20, 2016. After a 30-year hiatus, the Committee met back at the historic Johnson Wax Foundation Campus in Racine, Wisconsin. Chief Alan Brunacini served as the modern day chair of this group and was the presiding officer when the opening gavel fell. A total of 40 leaders from all walks of the American fire-rescue service community were summoned to the shores of Lake Michigan to help forecast and shape the issues of "National Significance to Solving the Fire Problem in the United States," much like all of the previous attendees had been called to do.

Each person was asked to attend this program based on the region they are from and the organizations that they represent. However, the spirit of the first gathering was repeated for Wingspread VI. Everyone was asked to set aside political and personal agendas and to solely focus on the good of the American Fire Service. The body of work that the attendees were to produce is to first authenticate or deny the tenants from the report from the last Wingspread Conference (Wingspread V-Atlanta 2006). Next, the conference participants concentrationed on the forecast and projections of the pressing issues for the next decade.

# The Broad Agenda

The topics discussed during our three days together included:

- The Future of the Industry.
- Higher Education, Training, and Operational Simulations.
- Technology. (including fire sprinklers).
- National and World Economy.
- Homeland Security.
- The "Big Six."
- Our members.
- Our customers.
- Emergency operations.
- Facilities.
- Apparatus and equipment.
- Sustainability (environmental protection).

These three days were long and action packed. Just like the previous five Wingspread Conferences, there will be a final written report produced and distributed. The document will be available in both paper and electronic formats. If the tradition is upheld, the next conference will take place on the Foundation's campus in 2026.

Chief Brunacini said, "The eyes of the fire service will be on Racine and our work. Hopefully, the information that is produced will be useful and practical in guiding the way for the fire service over the next decade."

The Wingspread Conference VI – The Golden Anniversary invitees included the following:

- Dr. James Augustine
- Chief Jeff Bowman
- Chief Alan Brunacini
- Chief John Buckman
- Chief Randy Bruegman
- Chief Sal Cassano
- Chief Brian Crandell, PhD
- Chief Charlie Dickinson
- Chief Billy Goldfeder
- Chief Bobby Halton
- Chief Steve Hansen
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- Chief Cliff Jones
- Chief Byron Kennedy, PhD
- Chief Rhoda Mae Kerr
- Mr. Rick Markley
- Dr. Lori Moore-Merrell
- Mr. Kevin O'Conner
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- Chief Dennis Rubin
- Chief Tim Sendelbach
- Chief Ron Siarnicki
- Chief Bruce Varner
- Chief Becki White
- Chief Pat Wilson
- Chief Larry Williams
- Chief William Jenaway, PhD
- Chief Wayne Powell
- Chief Shane Ray
- Chief Larry Schultz
- Troy Markel





After spending time with these fire service leaders, I was reminded of the opportunities and challenges that exist for us and our mission. We are in the lifesafety business and timing for us to make a difference could not be better!

As we prepare for our upcoming Board meeting and our Annual Seminar & North American Fire Sprinkler Expo next May, I am reminded of the work of our good friend Dr. Kevin Freiberg. A recent blog post by he and his wife Jackie made me think and also prompted me to share. Take a minute to read this piece and allow yourself time to reflect and choose accordingly.

*Till next time, stay safe!* Vickie

# From the Freiberg's blog:

Your choices shape your life and your life is in your hands. In our book BOOM! we wrote, "we are designed to choose and we are defined by our choices." Recently, in a blog post, Seth Godin wrote something that aligns with our BOOM! message.

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# NFPA 25 Definitions Part Two in a Series

**By Jason Webb** 

I e M

n the last edition of SQ, we talked about the importance of defining terms correctly and where those definitions are located in NFPA 25, the Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems. The definition of many commonly used terms in the ITM process may seem like common sense at first glance, but even those used to describe the actual work done, like inspection, testing, and maintenance, have very specific meanings within the context that they are used in the standard.

For the process of inspection, testing, and maintenance to be successful, the stakeholders must be on the same page when it comes to expectations. The scope of what's being done ... or not done, can hinge on how terms are used.

One of the best examples is also one of the most basic of terms. The most commonly performed task in ITM is, of course, inspection. Its definition from NFPA 25, "a visual examination of a system or portion thereof to verify that it appears to be in operating condition and is free of physical damage" provides users with a lot of insight into the scope and limits of what's actually being done.

Breaking that definition down into it parts explains a great deal. The first part is "visual examination". This of course, refers to simply looking at something. There's no expectation to touch or manipulate the items being inspected. This definition, combined with the other clarifying statements in the system chap-

ters establishes the scope, and therefore should establish the expectations, for what's being done. For example, when inspecting sprinklers, 5.2.1.1 says that sprinklers shall be "inspected [i.e. looked at] from the floor".

The second part of the definition is to "verify that it appears to be in operating condition and is free of physical damage." In this case, it's what is not included that is important. And what's not there is an evaluation of extent or ability. Within this definition there is no expectation to measure the distance between sprinklers, or from sprinklers to the wall, for example. Nor is there an expectation to verify the extent of coverage or the ability of the system to control a potential fire based on any particular hazard.

The next most common task is testing. That definition includes words like "procedure" and "determine operational status". Within the context of this term. there is an expectation of touching and manipulation. The definition provides examples of fire pump tests, flow tests and others.

With testing, there sometimes is an assumption that the test results in a pass/ fail. But with many of the tests required by NFPA 25, the result of the test is simply compared with the original acceptance test to determine that operational status referenced in the definition. Depending on the result of that comparison, it may prompt more thorough study. For example, main drain test results by themselves provide some usable information,

but when compared to the results of the main drain test results at commissioning or previous tests, a reduction of more than 10% triggers additional investigation

Of the three most commonly used terms in the process, maintenance is perhaps the simplest and least likely to used out of context. It simply refers to any work that is performed to keep the equipment in operating condition. Examples might include repainting of a fire hydrant or opening auxiliary drains to remove accumulated moisture before freezing weather. Many times maintenance is triggered by an inspection or the results of a test.

As mentioned in the previous installment, the concept of "words matter" is just as true with the terms inspection, testing and maintenance as with any others. Using these terms incorrectly can cause misunderstandings that can lead to costly or even potentially dangerous situations. For more complete information on these terms and others defined by the standard, refer to NFPA 25 chapter 3 and the associated annex guidance.



**Director of Public Fire Protection** 

Jason Webb

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By Joseph Meyer, P.E.

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I genuinely enjoy learning and love fire protection. As a side project, I've started a website and wrote a book (MeyerFire 2016 PE Prep Guide) to help others pass the P.E. Exam: it's all at **www.meyerfire**. com. The site also contains a weekly blog where I share critical learning points about my journey in fire protection.

I have a wife, son and dog and have lived in St. Louis and Kansas City. I am a passionate Kansas Jayhawk and St. Louis Cardinals and Blues fan and enjoy spending time with friends and family.

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# **ECS AUTOMATIC AUX OF CONTINUES OF CONTINU**



ECS: The De Facto Standard in Fire Sprinkler Corrosion Control www.ecsvent.com By Roland Asp, CET

# **Updates to Obstruction Rules** in the 2016 edition of NFPA 13

ealing with obstructions to fire sprinklers is a basic, but often challenging part of the layout technician's job. NFPA 13 contains significant verbiage and rules for dealing with these obstructions. Those in the industry must have an intimate and thorough understanding of these rules. This article will highlight the significant changes to the obstruction rules in the 2016 edition of NFPA 13. In most cases, these changes are not new concepts but are refinements of the existing rules.

The basic premise of the obstruction rules is that sprinklers must be located far enough away from an obstruction to ensure a fire can still be controlled or suppressed. This premise is expressed in section 8.5.5.1 which reads:

### 8.5.5.1\* Performance Objective.

Sprinklers shall be located so as to minimize obstructions to discharge as defined in 8.5.5.2 and 8.5.5.3, or additional sprinklers shall be provided to ensure adequate coverage of the hazard.

There are two basic concerns when dealing with obstructions. The first is to ensure that the sprinkler, where located, will experience the hot gases from the fire and activate in a timely manner. The second is that the spray pattern of the sprinkler must get enough water to the site of the fire. This does not necessarily mean that every square inch of floor area needs to get direct water spray, but rather, the sprinkler needs to get enough water over, under or to the sides of an obstruction to keep the fire from spreading and to keep the structural members at the ceiling level from failing due to excessive heat.

It must be understood that by their very nature, the obstruction rules allow shadow areas (areas behind an obstruction that will not get direct spray from the sprinkler). These areas behind an obstruction are still considered protected, assuming the appropriate obstruction rules are followed. The spread of a fire starting in an apparently dry area behind an obstruction will be limited by the water spray coming around the obstruction or by additional sprinklers on the other side of the obstruction.

The obstruction rules are spread throughout the body of NFPA 13 and are located in different sections specific to the different types of sprinklers. The general rules pertaining to all sprinklers are found in section 8.5.5 and rules specific to types of sprinklers are found in the following sections:

- Standard Spray Pendent and Upright Sprinklers - 8.6.5
- · Standard Spray Sidewall Sprinklers -8.7.5
- Extended Coverage Upright and Pendent Sprinklers - 8.8.5
- Extended Coverage Sidewall Sprinklers - 8.9.5
- Residential Sprinklers 8.10.5, 8.10.6 and 8.10.7
- CMSA Sprinklers 8.11.5
- ESFR Sprinkler 8.12.5

It must be noted that while the above sections contain the majority of the obstruction rules, additional rules may be found in other sections within NFPA 13. such as section 8.4. which outlines situations where a specific sprinkler may be used.

Obstruction rules are separated into two separate zones. Potential obstructions in the zone close to the sprinkler are called "Obstructions to Sprinkler Pattern Development". For standard spray, extended coverage and residential sprinklers, this zone is the area within 18 inches below the sprinkler deflector. For CMSA and ESFR sprinklers, this zone is the area within 36 inches below the sprinkler deflector. This zone is the most sensitive and even small obstructions will adversely affect the sprinkler to develop a complete spray pattern.

Obstructions below this zone have a much less adverse effect on the sprinkler's ability to control or suppress a fire and, as such, the obstruction rules are less restrictive. Obstructions in this zone are called: "Obstructions that Prevent Sprinkler Discharge from Reaching the >> CONTINUED ON PAGE 34



Manager of **Technical Services** 

**Roland Asp, CET** 

Hazard". Once the spray pattern is developed in the first 18 inches (36 inches for CMSA and ESFR), the only concern is if an obstruction is so large that a significant fire could develop under the obstruction and the fire may not be controlled.

This article will concentrate on the significant changes to these rules in the author's opinion. These changes include:

Extended Coverage Sidewall Sprinklers under overhead doors (Section 8.4.3):

Overhead doors are considered obstructions when in the open position. Past editions of NFPA 13 allowed standard spray sidewalls to be installed under these doors to protect the floor area when they are in the open position. The 2016 edition extended this allowance to extended coverage (EC) sidewall sprinklers. EC sidewall sprinklers can now be used to protect under these doors, but a single EC sidewall must be installed under each overhead door. In other words, a single EC sidewall is not permitted to protect under multiple overhead doors even if these doors are within the protection area of the EC sprinkler. If there are multiple overhead doors, each door must be protected with a separate EC sidewall sprinkler.

# Sprinklers under obstructions over 4 feet (ft) in width (Section 8.5.5.3):

Multiple changes have been made to section 8.5.5.3 which deals with sprinklers under fixed obstructions over 4 ft in width. Section 8.5 is the general section that deals with all sprinkler types. These changes include:

• **8.5.5.3.1.1** Sprinklers shall be located below the obstruction and not more than 3 in. (75 mm) from the outside edge of the obstruction.

This new section was added that states the required sprinkler located below obstructions over 4 ft in width must be installed directly below the obstruction and is permitted to be positioned up to 3 inches beyond the outside edge of the obstruction. The committee stated that by having the sprinkler directly below the obstruction, it will activate promptly to a fire below. The committee also stated that a sprinkler installed no more than 3 inches beyond the outside edge will still be in the heat plume of a fire and will still activate in a timely manner.

It must be noted that the wording of this section has led to misinterpretation. It states that the sprinkler must be installed "not more than 3 inches from the outside edge of the obstruction". Some have interpreted this wording to mean that the sprinkler must be installed no more than 3 inches from the inside or the outside of the outer edge of the obstruction. This is not the intent. The sprinkler may be installed anywhere directly under the obstruction and is allowed to be located up to 3 inches beyond the outer edge of the obstruction

• **8.5.5.3.1.2** Where sprinklers are located adjacent to the obstruction, they shall be of the intermediate level rack type.

Sprinklers installed beyond the outside edge of the obstruction, which is permitted by section 8.5.5.3.1.1, would be subject to the discharge of the ceiling sprinkler above. In order to address this concern of cold-soldering, this section was added that requires that the sprinklers installed adjacent to the obstruction must be of the intermediate rack type. The water shield of these sprinklers is intended to prevent cold soldering.

• **8.5.5.3.1.3** The deflector of automatic sprinklers installed under fixed obstructions shall be positioned no more than 12 in. (300 mm) below the bottom of the obstruction

An issue that was not specifically addressed in previous editions of NFPA 13 was the required deflector distance of the sprinkler below the obstruction. The concern is that a sprinkler installed too far below the obstruction will not activate in a timely matter. To provide guidance, this new section was added that would require the sprinkler deflector to be installed within 12 inches from the bottom of the obstruction, similar to the distance between the sprinkler deflector and the ceiling. 8.5.5.3.1.4 Sprinklers shall not be required under noncombustible obstructions over 4 ft (1.2 m) wide where the bottom of the obstruction is 24 in. (600 mm) or less above the floor or deck.

Another long standing issue that has been addressed in the 2016 edition of NFPA 13 is dealing with obstructions that are close to the floor. In past revision cycles, the Installation Committee was asked to address these low obstructions and chose not to put any minimum height in the standard. Regardless of how high (or how low) the obstruction, past editions of NFPA 13 required sprinklers under obstructions more than 4 ft wide. At that time, the Committee stated that you have the option of attaching limited combustible or noncombustible material (like sheet metal or gypsum board) vertically to the side of the obstruction to extend down to the floor, which can create a noncombustible concealed space under the duct. Provided such a concealed space would not allow the accumulation of combustibles or storage, it would not be required to be sprinklered.

During this revision cycle, the Committee chose to address the issue and this new section was added to NFPA 13, stating that sprinklers are not required under obstructions over 4 ft wide that are within 24 inches of the floor as long as the obstruction is noncombustible.

• 8.5.5.3.3 Sprinklers installed under obstructions shall be of the same type (spray, CMSA, ESFR, residential) as installed at the ceiling except as permitted by 8.5.5.3.3.1

Past editions of NFPA 13 were not clear about the type of sprinkler that is required under obstructions. There was nothing in the standard that stated the sprinkler below the obstruction must be the same type that is installed at the ceiling. This new section was added to clarify this issue.

• **8.5.5.3.3.1** Spray sprinklers shall be permitted to be utilized under overhead doors.

This is an exception to section 8.5.5.3.3

that applies to overhead doors. Spray sprinklers are permitted to be installed below overhead doors without consideration to the type of sprinklers at the ceiling. This exception states that even if the overhead system uses ESFR or CMSA type sprinklers, the required sprinkler protecting under the overhead door is permitted to be a sidewall type spray sprinkler (or any spray sprinkler).

# Minimum Distance from an Obstruction in the Vertical Orientation (8.6.5.2.1.3 and others):

When applying the rules of 8.6.5.2.1.3. commonly known as the "three times rule", the maximum clear distance of 24 inches has been eliminated for obstructions in the vertical orientation, such as columns. Work by the NFSA Engineering and Standards (E&S) committee task group on shadow areas and fire testing has shown that there is an issue with the maximum clear distance of 24 inches allowed by the "three times rule". This testing showed that when this maximum clear distance allowance is used to locate sprinklers from large obstructions, the fire may not be controlled. As this testing was limited to vertical columns, the elimination of the maximum clear distance is limited to obstructions in the vertical orientation.

Similar changes were made to this rule ("three times rule" and "four times rule") for other sprinkler types as well. The specific sections that were similarly revised were: 8.7.5.2.1.3 (Standard Spray Sidewalls), 8.8.5.2.1.3 (EC Upright and Pendent), 8.9.5.2.1.3 (EC Sidewall), and 8.10.6.2.1.3 (Residential Upright and Pendent and 8.10.7.2.1.3 (Residential Sidewall).

It is important to note that this revision does not change the base three times rule or four times rule, but will only remove the maximum clear distance to obstructions in the vertical orientation, such as columns. This proposed change would only become applicable when applying this rule to large vertical obstructions in excess of 8 inches (or 9 inches for the four times rule). The three times or four times rule may still be applied to these large columns without utilizing a maximum clear distance allowance of 24 or 36 inches.

Section **8.6.5.2.1.3** as modified reads as follows:

# 8.6.5.2.1.3\* Minimum Distance from Obstructions.

Unless the requirements of 8.6.5.2.1.4 through 8.6.5.2.1.9 are met, sprinklers shall be positioned away from obstructions a minimum distance of three times the maximum dimension of the obstruction (e.g., structural members, pipe, columns, and fixtures) in accordance with Figure 8.6.5.2.1.3(a) and Figure 8.6.5.2.1.3(b).

- (A) The maximum clear distance required shall be 24 in.(600 mm).
- (B) The maximum clear distance shall not be applied to obstructions in the vertical orientation (e.g., columns).

Figure A shows the related figures.

# Round Ducts (8.6.5.3.7 and others)

• **8.6.5.3.7** Sprinklers installed under round ducts shall be of the intermediate level/rack storage type or otherwise shielded from the discharge of overhead sprinklers.

Past editions of NFPA 13 did not include specific requirements for installing sprinklers under wide round ducts that are obstructions. This new section addressed the issue and gives guidance for positioning sprinklers protecting below round ducts over 4 feet in width. These sprinklers must meet the same rules for wide obstruction highlighted earlier in this article with the additional requirement that they must be of the intermediate rack type sprinkler or otherwise shielded, regardless of the sprinklers' location below round ducts. The concern with round ducts is that the overhead sprinklers will discharge water onto the ducts and surface tension will cause the water to cling to the outside of the ducts. The water may flow around the ducts and drop off at the bottom, which could coldsolder the sprinklers below. For this reason, all sprinklers installed below round ducts must have a water shield. It also must be noted that this requirement is only found in section 8.6.5.3.7 (Standard Spray Upright) and Pendants, section 8.8.5.3.6 (Extended Coverage Upright and Pendent Spray Sprinklers) and section 8.10.7.3.6 (Residential Sprinklers). It is not known if this was an oversight, but it would appear prudent to apply this rule to all sprinklers protecting under these round ducts.

# Clear Space above EC and Residential Sidewall Sprinklers (8.9.5.1.3 and 8.10.7.1.3)

When positioning standard spray and residential sidewall sprinklers to avoid obstructions in accordance with sections 8.8.5.1.3 and 8.10.7.1.3, there needs to be some clear space above the sprinkler deflector for the discharge to arc up. The >> CONTINUED ON PAGE 36





figures were modified to indicate that a 4 inch minimum clear space is needed above the sprinkler deflector.

This new figure clarifies two issues with respect to the "beam rule" for EC and residential sidewall sprinklers. The first issue is that when these types of sprinklers need to spray under an obstruction, there needs to be some clear space above the sprinkler deflector to account for the arc that is present in the discharge pattern of these sprinklers. Too many people using NFPA 13 think that the obstructions at the same elevation as the deflector are acceptable (which would be true for pendent and upright sprinklers). EC sidewall and residential sidewall sprinklers need 4 inches of clear space above the deflector as well so that the spray pattern can develop.

The second concern is a clarification of the type of obstruction applicable to this rule. Narrow obstructions such as dome lights that meet the "four-times rule" should not have to worry about water spray only going under the obstruction. In this case, the four-times rule should be sufficient for sprinkler spray patterns to develop. A 4-inch wide light fixture is not going to be any worse than a 4-inch wide column using the four-times rule. See Figure B.

# Continuous obstructions on same wall as EC and Residential Sidewall sprinklers (8.9.5.1.4 and 8.10.7.1.4) Past editions of NFPA 13 only gave the

### FIGURE B.

4 in. clear space with no obstructions except as allowed by 8.9.5.2.1.3 B Obstruction Δ

users a single option when dealing with continuous obstructions on the same wall as the EC and residential sidewall sprinklers. The guidance of table and figure 8.9.5.1.4 (or 8.10.7.1.4) was the only option available. For the 2016 edition the four allowances available for EC pendent upright and pendent sprinklers were extended to the EC sidewall and residential sidewall sections. This new language parallels section 8.8.5.1.2 and provides the same four options.

This section reads:

8.9.5.1.4 Continuous obstructions proiecting from the same wall as the one on which the sidewall sprinkler is mounted shall be in accordance with one of the following arrangements:

- 1) Sprinklers shall be installed in accordance with Table 8.9.5.1.4 and Figure 8.9.5.1.4(a).
- 2) Sprinklers shall be permitted to be spaced on opposite sides of obstructions less than 4 ft (1.2 m) in width where the distance from the centerline of the obstruction to the sprinklers does not exceed one-half the allowable distance between sprinklers.
- 3) Obstructions located against the wall and that are not over 30 in. (750 mm) in width shall be permitted to be protected in accordance with Figure 8.9.5.1.4(b).

4) Obstructions located against the wall and that are not over 24 in. (600 mm) in width shall be permitted to be protected in accordance with Figure 8.9.5.1.4(c). The maximum distance between the sprinkler and the wall shall be measured from the sprinkler to the wall behind the obstruction and not to the face of the obstruction.

A new figure (8.9.5.1.4(b)) was also added to the standard to clarify this section.

# Grouped Small Obstructions -ESFR sprinklers (8.12.5.3.3)

 8.12.5.3.3\* For pipes, conduits, or groups of pipes and conduit to be considered individual, they must be separated from the closest adjacent pipe, conduit, cable tray, or similar obstructions by a minimum of three times the width of the adjacent pipe, conduit, cable tray, or similar obstruction.

The 2013 edition of NFPA 13 is silent on when multiple small obstructions grouped together should be treated as a single large obstruction. These small obstructions include pipes and conduits. As ESFR sprinklers are particularly sensitive to obstructions, the following guidance has been added to the standard for ESFR sprinklers. For these small obstructions to be treated as individual obstructions, they must be separated from the closest small obstructions by a minimum of three times the width of the adjacent pipe, conduit, etc. It should be noted that for other sprinkler types, there is still no guidance on how to deal with multiple small obstructions grouped close together. These obstructions must still be dealt with on a case-by-case basis.

# Potential Tentative Interim Amendments (TIAs) Concerning the Obstruction Rules

There are two potential TIAs that must be mentioned when discussing the new obstruction rules of the 2016 edition of NFPA 13. Both these TIAs have passed ballots of the installation and correlating committees, however, as of the time of the writing, NFPA's Standards Council has

not yet met and these TIAs have not been officially issued.

# TIA No. 1225: Open Grate Flooring

During the first revisions dealing with section 8.5.5.3, "Sprinklers under obstructions over 4 feet in width", the reference to provide sprinklers under open grate flooring was inadvertently deleted. This requirement is still in the specific sections such as 8.6 but is not in the general section. Both the Installation Committee and the Correlating Committee were balloted and both committees feel that this deletion was in error and voted in favor of a TIA restoring this language.

# TIA No. 1226: Figures 8.6.5.1.2©, 8.8.5.1.2© and 8.10.6.1.2(c)

During the First Draft meeting, the Installation Committee voted to revise the figures relating to Obstructions against Walls. The 2013 edition indicated an 18inch minimum height for obstructions and the distance from the sprinkler to the wall was indicated as "S", which means the maximum distance between sprinklers. The committee agreed that there was no need to require an 18-inch minimum for obstructions against the wall and the correct distance between the sprinkler and the wall should read <sup>1</sup>/<sub>2</sub> S. The agreed changes to these figures were not published in the 2016 edition.



Both the Installation and the Correlating Committees were balloted and voted in favor of a TIA restoring the modified figure. This figure should be as shown in Figure C.

# Summary

This article highlights some of the major changes to the obstruction rules

contained in the 2016 edition of NFPA 13 and reflects the current thinking of the Installation Committee. Although few of us are actually using this most current edition, as most jurisdictions are enforcing earlier editions, it is still beneficial for the industry to be familiar with the current edition. These new rules may be implemented with the approval of the AHJ.

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# **Trust And The AHJ**

ow is trust impacting your relationship with the Authorities Having Jurisdiction (AHJ) that you deal with on a regular basis?

Have you been involved with the design and construction of new facilities or renovating an existing building, only to discover that the building did not meet the local fire code and the local building inspector or fire marshal suddenly brought the project to a halt? Usually, later on in the process, right? Contractors are usually stuck in the middle in what, at times, is a disconnect between either the building and fire officials or between those entities and company representatives. After designing and installing fire suppression systems in a facility, the AHJ does not approve one of the many systems, the contractor now has to spend a lot of time and money removing and replacing what was, in most cases, properly designed and installed.

### What to do... What to do... .

During my fire service career, there were many instances where the best laid plans went astray for a number of reasons. Unfortunately, there are some fire departments that do not have the luxury of having a truly qualified person reviewing sprinkler plans. There clearly is an unbalance from the start of the review process. This is not to say the fire official isn't competent. He or she probably served in the fire suppression division for many years and recently transferred into the Fire Prevention/Fire Marshal offices for any number of good reasons. Larger urban fire departments and some smaller organizations "might" have national or state certified personnel overseeing the fire prevention divisions, but in many instances across the country, especially in smaller rural towns, it is challenging to keep and retain good qualified people.

These fire departments have been tasked with so many other duties. Responsibilities have morphed them into "all hazards" protection organizations. They are constantly being pulled in other directions. Haz-mat, EMS, technical rescue, terrorism preparedness, active shooter responses, public health threats like the opioid crisis and, yes, sometimes politics. The unbalance is that the contractor has either a qualified fire protection engineer on staff, or under contract, or a NICET level qualified person that is developing the fire protection systems. Regardless of qualifications or lack thereof, the one thing I have learned (the hard way) was that there exists a lack of communication and trust.

There is a book that I came upon somewhat later in my career. I really wished that I had read it earlier. It might have changed a lot of things. Stephen M.R. Covey wrote "The Speed of Trust".

In it he writes; Economics of Trust: "trust always has two outcomes: speed and cost. When trust goes down, speed goes down and costs go up. When trust goes up, speed goes up and costs go down." Think about it. If trust is lacking between you and the AHJ, the project you are working on is going to be a very slow process. The longer it takes, the more it will cost. For instance, "the difference between a high- and low-trust relationship is substantial. In a high-trust relationship, you can say the wrong thing and people will still get your meaning. In a low-trust relationship, you can be very measured, even precise, and they'll still misinterpret you."

On the other hand, if the relationship with the AHJ has been fostered through respectful dialogue, straight talk (not professional jargon), being real, genuine, transparent, with a showing of trust on the contractor's part, there is no doubt, through my experiences, that trust will go up, speed will go up and your costs will come down. In other words, contractors will meet or exceed their deadlines and complete their projects with little or no pitfalls.

Take the time to reach out to your AHJs. Invite them to your facility. Let them look at your work place. They will be impressed to see NFPA standard books open and highlighted along with some of the other tools of your trade. If you have a supply and assortment of sprinkler heads, show them, and if you are able, give them some for props. Invite them to a job site to view risers, valves, piping layouts. Spend some time on explaining. It will pay dividends. Offer to provide short lunch and learn classes to area AHJ Associations. Inspection, testing and maintenance is one of the most misunderstood and inconsistently enforced code required matters that I run into across New England.

These suggestions might be the quickest way for you to gain the trust of your AHJs.

High trust, high results with low costs. Low trust, slow results, high costs. Choose  $\Phi$ 

Dave LaFond is the NFSA New England Regional Manager. Prior to joining the NFSA Team, LaFond spent 31 years with the Holyoke, Massachusetts Fire Department, 15 years as Chief of the Department and Emergency Management Director. After his retirement, Chief LaFond was recruited to lead the Chelsea, Massachusetts Fire Department. He also worked with Tighe and Bond Engineering as a subject matter expert on the development of a fire-based tactical GIS system.

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# **By Joanne Genadio**

# NFSA SOCIAL SCENE

# Advertising with NFSA - How to reach your target market without breaking the bank

By the time this article is published, the 2017 NFSA Media Kit should be available at our website, or, upon request, in printed form. I thought this would be a great time to let our SAM members know of the value they will receive by advertising with NFSA.

Since 2017 is an expo year, we are excited to offer highly valuable sponsorship opportunities for our Annual Conference & North American Fire Sprinkler Expo. From sponsoring the expo app, to having your logo displayed during our now famous and much anticipated Top Tech Competition, we've got something for everybody and every budget. To make sure everyone has an equal chance to be represented as a sponsor at the event, or if you have trouble deciding which sponsorship works best for you, we've made it easy for your company to join in. You don't have to pick a specific sponsorship to show your support for your association and this great industry event, just choose a sponsorship level, viewable when the sponsorships are posted in the NFSA online store.

Our digital advertising opportunities allow you to get your message across to your fellow members with the added bonus of reaching non-members who often visit our website. Marketing is the lifeblood of every business. While there are many ways to get your marketing message across; don't underestimate the value of online display advertising. Sell your product or service through visually appealing text and graphics.

Strategic placement of display ads is critical. Placing them on sites that are already enjoying wide patronage of your target market can make the ads relevant, personalized and timely. No digital advertising opportunity hits the fire sprinkler industry's target market better than www.nfsa.org, www.nfsa.tv and NFSA E-Bulletins and E-Newsletters. Don't miss out on this economical way to reach the audience you are looking for.

SQ magazine is an award-winning members only publication. Associations keep their members. SQ advertisers can consistently reach the same individuals multiple times over multiple years if they advertise regularly. As all savvy marketers know, regularly staying in front of potential customers is important. This consistency is almost guaranteed when you advertise in SQ.

### Target! Target! Target!

Remember, targeting is important in advertising. If you are able to reach an audience that is made up of the type of individual you are trying to reach, there is no smarter way to spend your adver-

fer a free bonus to all advertisers in that issue. We use a third-party independent research firm to conduct an ad study for that issue. The issue allows the advertiser the opportunity to get feedback on advertising creative - right from the target market. SQ's annual Ad Effectiveness Study will be conducted on advertisers' behalf, at no cost. All you have to do to take advantage of this opportunity is advertise, with any size ad, in the Sept/Oct 17 issue. Not only will you have the chance to share your sales story with approximately 3,000 readers in the fire sprinkler industry, but you'll have the chance to hear what they think about your ad and other ads in the issue. You'll learn if readers thought your ad was attention-



tising dollars. It has been shown that companies that consistently advertise and do a good job of getting members to talk about their products or services to the larger community will see word of mouth about their products and service much faster than they might in a B2B environment.

**Need proof?** We are able to offer upto-date metrics on all digital advertising upon request. Want to know how many hits the NFSA website received during a specific time period? Want to know how many people opened the E-newsletter you advertised in? Shoot me an email and I'll provide the statistics.

The Sept/Oct 2017 issue of SQ will of-

getting, believable and informative Now, this opportunity only rolls around once a year, so if you choose not to advertise in the Sept/Oct '17 issue, you'll have to make your ad creative decisions without the benefit of market feedback. Can you afford not to know how your ad is working within the market?

As always, I am here to help. Feel free to contact me regarding your ad buy. Give me your budget and I'll design a custom ad package just for you. It's the perfect year to get your company name out there to your fellow NFSA members! I can be reached at 845.803.6426 or genadio@nfsa.org. *Sign an ad contract before December 31, 2016 and lock in 2016 pricing for 2017*!

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# **HO NEWS**

# Russ Fleming 2016 Recipient of SFPE President's Award

Originally created by the SFPE Board of Directors in 1987 as the President's Award, The John J. Ahern President's Award honors individuals whose conspicuous contributions deserve very special recognition by the Society and its leadership. The Award was renamed in 1993 to honor the Society's first president, John J. Ahern, P.E., who was elected in May 1951.

**Russ** began his career with the National Fire Sprinkler Association in 1975 following receipt of bachelors and masters degrees in civil engineering from Rensselaer Polytechnic Institute, and be-

came active in SFPE shortly thereafter. He rose through the offices of the New York Metropolitan Chapter to become chapter president in 1982, and was honored by the chapter in 1992 as



its "Engineer of the Year." At the level of the international society his earliest involvement included service on the SFPE Qualifications Board, and as chair of a committee to update the Society's Code of Ethics. He taught classes for the SFPE and has been responsible for the chapter on automatic sprinkler systems in all five editions of the SFPE Handbook of Fire Protection Engineering. He was elected a fellow of the Society in 1995. He served on the Board of Directors from 1998 to 2009, and was President in 2008. He was a charter member of both the SFPE technical steering committee and the Editorial Board for SFPE's Fire Protection Engineering magazine, the latter of which he has served on since 1999, and was until recently a member of the Honors Committee. During this same period he was also very active in the NFPA, and is one of only a handful of individuals honored with both of that organization's highest awards, the Paul Lamb Award and the Standards Medal, His career at the NESA

led to his service as President from 2012 to 2015, and while he has since stepped back to an advisory role, he continues to serve as Managing Director of the NFSA's sister organization, the International Fire Sprinkler Association.

# President's Award Presented to Bill Kirkpatrick as reported by Bruce Lecair, NFSA Assistant Director of Regional Operations

Those in attendance at the San Francisco Bay Area NFSA Chapter meeting held on Thursday, July 28th were delighted to witness NFSA President Shane Ray presenting the 2016 NFSA President's Award to William "Bill" Kirkpatrick. William Kirkpatrick, recently retired Engineering Manager for the East Bay Municipal Utility District was a vital member and leader of the OSFM California IRC Phase I and III Advisory Committees as well as the Water Discharge for Water-Based Fire Protection Systems Committee. President Ray stated that he was honored to present this award to Bill for his work in partnering with the fire sprinkler industry on

issues affecting the industry in California.

Regional Manager Bruce Lecair and Area Director Jack Thacker credited Mr. Kirkpatrick with making the IRC state mandate for residential fire sprinklers in all new one- and two-family dwellings and townhomes in California a successful process. He is also credited with helping to save fire sprinkler contractors throughout California untold dollars as a result of fines for discharging water through his work on the Water Discharge for Water-Based Fire Protection Systems Committee.

His leadership and facilitation of open dialog between water purveyors and other stakeholders moved the process along toward saving lives by better maintained fire protection systems and protecting Californians from residential fires.

# Welcome Michael Richey, NFSA's Philadelphia Local Coordinator

**Michael Richey** joined Team NFSA as the Philadelphia Local Coordinator on September 1st, and is working with Dave Kurasz.



(I. to r.) Area Director Jack Thacker, NFSA President Shane Ray, Bill Kirkpatrick, Regional Manager Bruce Lecair, SF Bay Area Chapter President Peter Hulin.

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# For more information, call 800-976-9819 or visit www.viega.us



# PEOPLE

# Viking SupplyNet Announces New Sales Leadership in Southern U.S. Region

Viking SupplyNet announces two sales leadership changes in its south sales region. First, the company is pleased to announce the hiring of **Chris Sharp** as Viking SupplyNet's Regional Sales Manager for the Southeast U.S. region. Second, **Adam Owens**, the previous Sales Manager in the region, has been promoted to Director of Sales for the Southeast and South Central regions.

For the past nine years, Chris Sharp served in a variety of roles at Tyco Fire Protection Products, including business development and distributor sales management. Sharp was also previously employed at Viking SupplyNet for eight years, functioning as the Location Manager for the company's Charlotte, North Carolina distribution center and as Territory Sales Manager for North Carolina, South Carolina, and western Virginia. With his return to Viking SupplyNet, Sharp will be responsible for directing and growing sales in the Southeast U.S. region.

Adam Owens first joined Viking SupplyNet as a Territory Sales Manager in 2005. Owens was later promoted to Regional Sales Manager for the Southeast U.S. Sales Region and has since led the team to achieve significant growth across the nine-state region. In his new assignment as Director of Sales, Owens will be responsible for the total sales effort for both Viking SupplyNet and Viking Fabrication Services in the Southeast and South Central regions.

A full listing of Viking SupplyNet locations and sales team members can be found at www.vikinggroupinc.com/locations.



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# HD Supply Fire Protection announces promotion of Adam Woods

HD Supply Fire Protection has announced the promotion of **Adam Woods** to the newly created role of National Fabrication Manager.

"Adam will be intimately involved in every aspect of our fabrication facilities nationwide including working directly with our fab shops and fabrication managers to determine and evaluate both shops and personnel. He will also work with the



Adam Woods

team in developing processes to increase productivity and set capacity and productivity goals," said Tony Cammiso, regional vice president, HD Supply Fire Protection. "Adam's knowledge, experience, and leadership in the fire protection fabrication industry has, without question, been HD Supply Fire Protection's competitive edge in this market."

Woods has been with HD Supply for 23 years and brings more than 30 years of industry experience to his leadership role. For the past two decades, he has been leading the HD Supply Fire Protection fabrication facility in Lodi, Calif. where he has played an integral role in growing the business in northern California.

Woods is based at the HD Supply Fire Protection branch at 1625 S Stockton St, in Lodi, CA 95240.



This lucky sponsor will have the opportunity to communicate directly with attendees through the use of our highly anticipated event app. Sponsor logo will be displayed on the app. All reference to the app will end with "Sponsored by ...." With the line up of speakers we have, these sponsorships are sure to deliver. Sponsors will be displayed on the big screen behind the speakers before and after their presentations. A great way to play to a packed hall! Be the company that brings us all together! The opening reception is always well-attended as we gather to reconnect, network and anticipate the start of our presentations and the expo!

Don't miss this incredible opportunity to be the sponsor of this standing room only event! The Golden Sprinkler Award, Russell P. Fleming Technical Award, Leadership in Public Safety Award and others will all be presented during our closing banquet.



New this year! All attendees will receive a conference t-shirt with the conference theme and #fastestwater graphics. As t-shirt sponsor, your logo will be featured on the sleeve, with conference graphic on back and NFSA logo on front left chest.



How many times do you pull your room key out of your pocket when attending a conference? If you're like us, many! Have your logo and slogan (space permitting) on every room key given out to every attendee. You can't lose with this one!



You need your stinkin' badges! Your logo will be displayed repetitively along the length of the lanyard, alternating with our now famous #fastestwater hashtag. Get up front and personal with our attendees. No albatrosses here!



Impress the spouse, you'll impress the attendee! Take advantage of our Spouses Breakfast sponsorship and you're sure to make a lasting impression.



Contractors only at one of the most popular segments of our Annual Seminar! You've got a captive audience as contractors gather to discuss business, finance, best practices and more. Don't miss out on this unique and targeted sponsorship opportunity.



Up and at 'em early in the morning and needing some sustenance before our day begins! This sponsor gets us all started with our day by providing a great breakfast to fuel attendees. Your signage will be front and center as we begin our event.



Our workshops are educational and entertaining, but everybody needs a break! Grab one of two available sponsorships and let 'em know who's helping keep their eyelids propped open!

# **CAN'T DECIDE?**

You don't have to pick a specific sponsorship to show your support for your association and this great industry event, just choose

a sponsorship level and purchase online when the sponsorships are posted in the NFSA online store. An E-bulletin and messages on social media will be posted when sponsorships become available.

> Get ready to mark your calendars!

\*Time sensitive sponsorship must have artwork by Jan. 31st for production.

# NEW ENGLAND REGION



DAVE LAFOND Regional Manager

CONNECTICUT, MAINE, MASSACHUSETTS, NEW HAMPSHIRE, RHODE ISLAND, VERMONT

# Sprinkler Save at Senior Apartment Complex in Somers, CT

On July 3, 2016, the Somers, Connecticut Fire Department responded to an early morning apartment fire at Woodcrest Senior Housing.

According to Fire Chief John Roache, firefighters were dispatched to an automatic fire alarm at 1:04 a.m. Upon arrival, units discovered heavy smoke in a second floor apartment. The fire was confined to one room by the automatic fire sprinkler system, and crews were able to quickly put out any remaining fire.

The Somers Fire Marshal's Office is still investigating. Early indications are that the fire may have been electrical in nature, according to Roache.

# Sprinkler Save at Cape Cod Resort

On July 13, 2016 staff evacuated the kitchen at the Wequassett Resort and Golf Club after canisters of fuel ignited beneath the oven, according to Harwich, Massachusetts Fire Captain Joseph Mayo.

Firefighters responded to the resort. to find the fire contained by fire sprinklers in the kitchen. Heat from the oven had ignited canisters of butane stored beneath the oven, causing parts of the oven to burn.

According to Captain Mayo, by the time firefighters arrived, the sprinkler system in the kitchen had extinguished most of the flames. The restaurant was not yet serving food, so only staff evacuated and only the building where the restaurant is housed was affected.

The oven sustained minor damage, and the floor sustained minor water damage, he said. Staff were able to re-enter and begin cleanup. No injuries were reported.

### Dave LaFond

NFSA's Regional Manager / New England email: lafond@nfsa.org 2 Burns Way, Holyoke, MA 01040 phone: 413.244.7653

# **NEW YORK REGION**



DOMINICK KASMAUSKAS Regional Manager

NEW YORK

# Putnam County to Update Plumbing and Mechanical Code and Board

New York Regional Manager Dominick Kasmauskas will be working with Putnam County to aid in the update of the county code regarding all mechanical licenses and the plumbing and mechanical board. The board is very interested in language from the New York State water-based fire protection license bill that NFSA has proposed in the past.

Putnam County may not be in a position to adopt the entire bill as written, but Kasmauskas seeks to obtain a promise of relevant language necessary to ensure trained, competent layout of systems. Kasmauskas will be pressing for RME and NICET language for layout and ITM and insurance minimums.

Kasmauskas asks that those that presently hold Putnam County licenses to forward suggestions or contact him with any thoughts or questions. He has been assured that Putnam will grandfather all entities presently licensed and the new code will be for future licenses once enacted. O

### Dominick Kasmauskas

NFSA's Regional Manager / New York email: kasmauskas@nfsa.org 1436 Altamont Avenue Suite 147 Rotterdam, NY 12303, Phone: 518.937.6589, Fax 518.836.0210



**TBA** Regional Manager

DELAWARE, MARYLAND, NEW JERSEY, PENNSYLVANIA, VIRGINIA, WASHINGTON D.C.

### Seeking Info for Your Area

Due to the lack of a statewide fire protection license in many states, NFSA

# REGIONAL ROUNDUP

Regional Manager Dom Kasmauskas is working on identifying every local entity handling licensure or registration in Pennsylvania. Kasmauskas notes, "I am familiar with some areas. However, there are others that have some sort of registration process under various titles that are not widely known other than to local fire sprinkler contractors that work in some of these areas."

Kasmauskas is also seeking insight into any Public Safety Boards and similar entities where the fire sprinkler industry may be able to interject its message, as well as provide contact information so that these boards will have a resource when "automatic fire protection" is mentioned. Many of these boards govern safety training and operations for fire, law enforcement and emergency medical services, as well as tap into the safety of their citizens in their county or municipality. On that note, some members have expressed interest in attending some of these meetings and search for opportunities to use our proposed state licensure language on the local levels until the statewide license bill is hopefully enacted.

Please forward any info you may have for local, municipal or county websites, boards, contact names and phone numbers to enable the creation of a database that will be used as a resource for all NFSA members.



# SOUTHEAST REGION

WAYNE WAGGONER Southeast Regional Manager

ALABAMA, GEORGIA, MISSISSIPPI, NORTH CAROLINA, SOUTH CAROLINA, TENNESSEE

# Tennessee Woman Melts Bathtub Trying to Make Brisket

Cooking in your bathroom is never a good idea! - Firefighters in Knoxville, Tennessee say a local woman caused a fire after attempting to barbecue a brisket in her bathtub.

Knoxville Fire Department Captain DJ Corcoran that firefighters found a woman

>> CONTINUED ON PAGE 48

# REGIONAL **ROUNDUP**

### CONTINUED FROM PAGE 47

fanning flames from her apartment and said there was a fire in her bathroom. In a misplaced attempt at ingenuity, the woman attempted to cook brisket over an open flame in her bathtub. Corcoran called the incident "a first in our books."

Fire crews reported that the woman lit a wood-burning grill inside her bathtub and placed meat on a wire rack across the rim before the heat melted through the tub's fiberglass exterior, resulting in a total loss of both the tub and the brisket.

Corcoran noted that 50 percent of residential fires occur as a result of cooking related incidents, but added that most of those documented fires occur in the kitchen.

### Wayne Waggoner

NFSA's Associate Director of Regional Operations - East email: w.waggoner@comcast.net PO Box 9, Andersonville, TN 37705 Phone: 865.755.2956, Fax: 865.381.0597

# FLORIDA & PUERTO RICO



### LORRELL BUSH Regional Manager

FLORIDA, PUERTO RICO

# **June Area Interest Meetings** Set Attendance Record

The Florida Fire Sprinkler Association held nine meetings across the state of Florida in the month of June. The meetings, presented by lobbyist Buddy Dewar and John Lake from Wiginton Fire Systems, highlighted the changes in Florida, including the changes in 69A-46 which went into effect on July 19, 2016. Additionally, the meetings worked to clarify some confusion on high-rise retrofit, ALF changes, occupancy changes to restaurants and 3' separation issue.

More than 460 contractors and AHJs from across the state attended the meetings.

If you still have questions regarding the requirements of 69A-46, please reach out to Lorrell Bush at bush@nfsa.org. FFSA is making every effort to get all member

questions answered and clarified.

Due to the number of questions regarding the high-rise retrofit law, FFSA is working to develop a free webinar to help clarify outstanding issues and educate condominium associations. Questions can be asked during the live webinar so please continue to check the FFSA website for more information to ensure you do not miss it! 🛈

# Lorrell Bush NFSA's Regional Manager / Florida & Puerto Rico

email: bush@nfsa.org 2025 Droylsden Lane, Eustis, FL 32726 Phone: 352.589.8402 Cell: 954.275.8487 Fax: 561.327.6366

# GREAT LAKES REGION

# **RON RITCHEY**

INDIANA, MICHIGAN, OHIO, WEST VIRGINIA, KENTUCKY

# Gvm Reopens for Business 13 Hours After Fire Thanks to Fire Sprinkler System

The Planet Fitness in Niles, Ohio was able to reopen for business approximately 13 hours after firefighters were called out for an electrical fire.

According to Lieutenant Ron Freel of the Niles Fire Department, the fire started where several appliances were plugged in in the break room. The fire department could not say if it was the cords or if it was an electrical issue in the building that initiated the fire.

"The sprinkler system did amazing, no equipment was damaged, nothing. If you walked into the facility, nothing would look different than when you walked in yesterday morning," said the gym's Director of Operations Nick Panezich.

Minor smoke and water damage was contained to the employee break room. No one was injured. Freel said the fire caused approximately \$6,000 in damages.

# Ron Ritchey

Regional Manager, Great Lakes Region 3311 Dover Court, Lafayette, IN 47909 Phone: 765.412.6707 email: ritchey@nfsa.org

# ILLINOIS REGION



# BOB TINUCCI

ILLINOIS

# **Illinois Fire Sprinkler Contractor Licensing Act Review**

The Office of the State Fire Marshal (OSFM) has hosted several roundtable discussions in the past few months. Many stakeholders were present including sprinkler contractors, labor representatives and OSFM staff members. There was an exchange of comments and suggestions, but no final outcomes. The scope of the meetings were as follows:

The Office of the State Fire Marshal had recently been approached by various stakeholders in the Fire Sprinkler industry with concerns about the broad scope of Fire Sprinkler Contractor licensing. Specifically, there has been an expressed concern that the scope of the Fire Sprinkler Contractor license includes what are often recognized as separate disciplines including sprinkler piping and installation, pump installation and service, underground fire protection mains, routine inspection, testing and maintenance of these systems, as well as independent design and plan review services.

While an entity may seek a Fire Sprinkler Contractor license to engage in only one of these limited disciplines, the broad scope of the licensure allows the same entity to engage in every other aspect. By the same token, those who wish to engage in a single, limited aspect must meet the same licensing requirements and credentialing as a "full service" Fire Sprinkler Contractor.

There is also some concern regarding technical credentialing for Fire Sprinkler Contractor licensing as some licenses are based on NICET certification and some are "experience" based as per the current "grandfather" clause.

Information regarding Fire Sprinkler Contractor Licensing, including a list of licensees, the Rules and Statute, policy interpretations, etc. may be found at:

http://www.sfm.illinois.gov/Commercial/ Building-Life-Safety-Fire-Protection-Systems/Building-Fire-Sprinkler-Contractor-Information

For information or questions you can contact: **Bob Wetzel** 

Fire Safety Compliance Manager Office of the State Fire Marshal 217.558.0328 Robert.Wetzel@illinois.gov

> Bob Tinucci NFSA's Regional Manager / Illinois email: tinucci@nfsa.org. 6401 Richmond Avenue Willowbrook, IL 60527 phone/fax: 630.655.1875 cell: 630.514.1601

# WISCONSIN REGION



MARTY KING State Coordinator

WISCONSIN

# Wisconsin State Fire Chief Association's Annual Conference

The Wisconsin State Fire Chief Association's 2016 Annual Conference and Trade Show was held June 23 - 25 at the KI Convention Center in Green Bay. This event was attended by over 470 fire chiefs and administrative staff from fire departments across Wisconsin. The trade show was sold out over a month before the conference. NFSA Wisconsin State Coordinator Marty King staffed a booth and discussed the benefits of fire sprinklers to families and the community. NFSA Wisconsin provided Gold sponsorship level to the Association with prominent placement on the event program and signage throughout the conference area.

Many of the fire chiefs that visited discussed the benefits of fire sprinklers and the frustration to get them installed voluntarily. They mention a lack of knowledge by builders and owners on the positive effects of fire sprinklers and that smoke alarms alone do not provide

### residential life safety.

Marty King NFSA's State Coordinator email: king@nfsa.org 3317 South 113th Street, West Allis, WI 53227 Phone: 414.531.9542

# MINNESOTA REGION

TOM BRACE State Coordinator

MINNESOTA

# Training Burn Educates Firefighters, Legislators, Fire Marshal Investigators

Firefighters, legislators and arson investigators all benefited from a training fire conducted by the The Plato, Minnesota Fire Department at an abandoned farm home in order to educate firefighters, legislators and arson investigators about the positive impact residential fire sprinklers can make during a fire. As part of the training, a cameraman from KMSP-TV, a local television station in Minneapolis, was there to film the impact of residential sprinklers on safety and protection of property.

The training was conducted by Jamie Novak, a fire investigator for the St. Paul Fire Department, with assistance from Casey Stotts, an investigator for the Minnesota State Fire Marshal.

Novak and KMSP-TV are working on a piece regarding residential sprinkling systems. As of now, sprinkling systems are not required in Minnesota homes, but fire officials would like to see legislation requiring fire sprinklers in newly constructed homes.

To that end, Plato Fire Chief Jay Wood, also a member of the Minnesota State Fire Chiefs Association, invited local legislators to the training. Both State Sen. Scott Newman and State Rep. Glenn Gruenhagen were on hand.

The training began with a comparison of fire spread in a room that is sprinklered and a room that is not. Both rooms were bedrooms and contained a bed, chair and other typical bedroom furniture. A sprin-

# REGIONAL ROUNDUP

kler head was installed in one bedroom, which was fed water from a Plato fire truck. The mattress on the bed was then set on fire. Once the room temperature reached about 140 degrees, the sprinkler activated, allowing water to flow into the room. When the fire was extinguished by the sprinkler, the only damage was to about a quarter of the mattress, water on the floor and some smoke damage. The event was well-received by all in attendance and drove home the life- and property-saving benefits of residential sprinklers.

### Tom Brace

NFSA's Regional Manager / Minnesota email: brace@nfsa.org 1433 Idaho Ave West, St. Paul, MN 55108, Phone: 651.644.7800

# **CENTRAL REGION**

### **TBA** Regional Manager

IOWA, KANSAS, MISSOURI

# Sprinkler Save at Kansas City, Kansas Apartment

All residents of a Kansas City apartment building were able to evacuate safely when fire broke out on the second floor, due to the building's fire sprinkler system. Firefighters evacuated the apartment building after flames broke out early on July 6th. According to residents, the fire alarm never went off when smoke began to billow out of the apartment building. People living in the apartments said each apartment has a smoke detector, with alarms in the hallway. The Kansas City Fire Department said they heard the alarm when they pulled up to the scene. Because of the fire sprinkler system, they were able to get the fire under control in 30 minutes.

The cause of the fire is still under investigation. No injuries were reported. 0

# REGIONAL ROUNDUP

CONTINUED FROM PAGE 49

# SOUTH CENTRAL REGION



CYNTHIA GIEDRAITIS **Regional Manager** 

ARKANSAS, LOUISIANA, OKLAHOMA, TEXAS

# Legislative Day At Texas A&M Fire School

NFSA joined up with the SFFMA - State Firefighters & Fire Marshals Association of Texas, to host their biennial legislative "Get Ready for 2017", in College Station, on July 27, 2016, at the Brayton Fire Training Field State Fire Marshal Chris Connealy narrated the event: while Assistant Fire Chief Roland Garcia of Pearland and Scott Godbold with NFSA Member, American Fire Systems, Inc. coordinated the construction of the side-by-side fire sprinkler demonstration for the event.



SimplexGrinnell employees who built the sprinkler lab include Ramiro Gomez, Dylan York, Darrell Bundage and David Barrett.

# New Fire Sprinkler Lab Donated by NFSA Member SimplexGrinnell

A brand new fire sprinkler learning lab was opened at the Texas A&M Fire School. SimplexGrinnell, Potter Electric, Victaulic and Steve Rians of SAFE (Standard Automatic Fire Enterprises), generously donated design, equipment and installation of the new fire sprinkler and fire alarm demonstrations to be used for training all Texas Firefighters and Fire Marshals. The Fire Training School trains more Than 81,000 Emergency Responders from All 50 States and 45 Countries.



State Fire Marshal Chris Connealy, Pearland Assistant Fire Chief Roland Garcia, Pearland Fire Marshals William Gerber, Marc Faber, Bryan, Texas Deputy Fire Marshal William Bouse, and Scott Godbold from American Fire Systems take a "selfie" with NFSA Regional Manager Cindy Giedraitis in front of the fire sprinkler side-by-side burn.

# **Texas State Fire Marshal Updates**

NFSA Field Operations & Public Fire Protection departments are coordinating with the Texas State Fire Marshal to provide two discussion round tables in September. This forum will allow the fire sprinkler industry to discuss any concerns with the revised Licensing/Tagging Rules. NFPA 25-2017 Updates will also be discussed.

# September 21, 2016

Fire Marshal Round Table Discussion - Dallas/Fort Worth Airport Training Center - 9:00 a.m.

September 22, 2016 Fire Marshal Round Table Discussion - Pasadena Convention Center - 10:00 a.m.

Please RSVP to cindyg@nfsa.org

# Congratulations

Please congratulate Chief Ernest Mc-Cloud, (formerly Director of Licensing). Chief McCloud has been promoted to Assistant State Fire Marshal and will continue to oversee Fire Sprinkler Licensing.

Cindy Giedraitis

NFSA's Regional Manager / South Central email: giedraitis@nfsa.org PO Box 10403, College Station, Texas 77842. Phone: 979.324.8934



# **GREAT PLAINS REGION**

Colorado, Nebraska, North Dakota, South Dakota, Utah, Wyoming

# Centennial. Colorado Side by Side Burn Demonstration



A joint fire department and City of Centennial effort in their first annual Safety Workshop, Building Chief Shirley Herd hosted a great event with South Metro Fire Rescue, Littleton Fire Rescue and Cunningham Fire Rescue (all of whom cover parts of the City of Centennial). The event ended with a side-by-side burn demonstration made possible by the Home Fire Sprinkler Coalition with assistance from Western States Fire Protection and NFSA.

# Eric Gleason

NFSA's Regional Manager / Great Plains email: gleason@nfsa.org P.O. Box 62157, Littleton, CO, 80162 phone: 720.470.4894

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# REGIONAL ROUNDUP

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# SOUTHWEST REGION



BRUCE LECAIR Associate Director of Regional Operations - WEST

CALIFORNIA, HAWAII, NEW MEXICO, NEVADA, ARIZONA

# Los Angeles NFSA Chapter Meeting

The Los Angeles Area NFSA Chapter Meeting was held on August 18th at the Rio Hondo Golf and Event Center in Downey, California.

Members enjoyed cocktails and conversation before a dinner meeting that featured an NFSA update on news and events within the Association as well as information affecting the industry throughout California from Southwest Regional Manager Bruce Lecair. The meeting also provided the representatives from NFSA Supplier and Manufacturers members to report on new innovations and products during the lively roundtable discussion.

# **New NFSA Southwest Region Members**

During the month of June, the Southwest Region of NFSA welcomed two new members to our Association; Professional Member Travis Steele, Manager from B&S Engineering and Contractor Member Jon Zang, Vice President of Battalion One Fire Protection.

B&S Engineering is located at 6825 E. Latham Street in Scottsdale, Arizona. Phone: 623.694.3663

Contact information for Jon Zang of Battalion One Fire Protection- cell: 510.506.3439 office: 510.653.8075, email: jzang@battaliononefire.com.

We also extend our appreciation to Brent Mone, President of Inspection Services & Fire Protection, Inc. P.O. Box 11457 Santa Rosa, California for renewing his contractor membership. Mr. Mone can be contacted at 707.523.0404 or by e-mail at brent@inspectionservicesandfire.com.

We look forward to seeing you at NFSA Chapter meetings and events! O

Bruce Lecair NFSA's Associate Director of Regional Operations – West email: lecair@nfsa.org 25417 West Hyacinth Street, Corona, CA 92883 Phone: 951.277.3517, Fax: 951.277.3199

# NORTHWEST REGION



SUZANNE MAYR Regional Manager

ALASKA, IDAHO, MONTANA, OREGON, WASHINGTON

# Northwest Region Gets Creative with Training Options

Halfway through the 2016 year, more than a dozen trainings in varying formats have been offered in the Northwest. Aside from the traditional in-class seminars, there are several ways to receive fire sprinkler training. Groups such as the Oregon Fire Marshal Association and Tualatin Valley Fire & Rescue have contracted with NFSA to offer programs specifically for their members.

The Idaho Fire Protection Forum worked with NFSA to bring an updated "blended learning" Advanced Tech Training to those studying for NICET exams. Students spent two days in class, followed up with several on-line sessions and completed one live online session with the instructor.

Other NESA members take full advantage of NFSA's "Technical Tuesday" programs, bringing NFSA's expert instructors right to your office. Based on member feedback, Tech Tuesday registration fees have been reduced to just \$50 per session. "Lunch and Learn" programs have been popular in the Spokane area. Chapter members in the Seattle and Portland areas learn about new trends and technology from speakers at bi-monthly meetings. There's more in store for the rest of 2016! Watch your inbox for Northwest training announcements, and be sure to contact Suzanne Mayr if you would like to set up a training in your area.

# Suzanne Mayr

NFSA's Regional Manager / Northwest email: mayr@nfsa.org P.O. Box 7328, Tacoma, WA 98417 phone: 253.208.8467 Please join our Advocates' Coalition as we work to create Fire Safe Homes



Working together, we can create resources to educate those who make the decisions regarding community fire protection. Our goal is to be a go-to resource for community leaders who need a first-person account of the devastating impact fire can have on a community and a family.

We can prevent future tragedies, and we believe that our stories help everyone understand in a way that makes a difference. Visit our website for additional resources and information.

Order our Media Kit for a complete package of PSAs, media information, talking points, statistics and actual examples of resources used in communities. Your support is greatly appreciated, and as a non-profit 501(c)3 we are now ready to grow our mission and expand our efforts. We hope you will join our team as an Advocate, Supporter or Corporate member.

(details are on our website)

# www.fireadvocates.org *Fire Sprinklers Save Lives*

People who know the facts want to live in a home with fire sprinklers









Fire is fro

According to a Harris Poll, after learning the facts, 74% of U.S. homeowners said they would be more likely to buy a home with fire sprinklers than one without.

Education is the key to make sure more homes are protected. Share this **FREE** information with your fire department and community.

**Living With Sprinklers Kit**: Important information for people living in a sprinklered home.

Selling A Home Protected by Fire Sprinklers DVD: Helps real estate agents market and sell sprinklered homes.

Understanding Water Supply For Home Fire Sprinkler Systems Guide: Information for water purveyors, utilities and local officials.

**Protecting Your Community with Home Fire Sprinklers DVD**: Helps building officials understand why sprinklers are needed to protect occupants and firefighters.

A Quick and Easy Guide to Home Fire Sprinklers DVD: Easy-tounderstand information for consumers.

**Fire and Sprinkler Burn Demonstration Kit**: Everything a fire departments needs to build and conduct a side-by-side demonstration.

All HFSC material is free and can be viewed, downloaded and ordered from the HFSC website:

www.homefiresprinkler.org

or call toll-free: 1.888.635.7222



# Fire Team USA - On the Road Again!

Fire Team USA is back on the road and making a difference! Recent deliveries include Minneapolis, Minnesota and Denver, Colorado.

"The neatest thing about Fire Team USA is its grassroots approach and its ability to motivate action," explains Vickie Pritchett, Director of Outreach & Government Relations and lead on the project. "When you bring stakeholders together and share resources that support fire sprinklers, good things happen. The sideby-side burn demonstrations, along with the media coverage they generate, helps us promote fire sprinklers and encourage community leaders."

Fire Team USA workshops are planned for Florida, Illinois, the New England area, New Jersey and Tennessee. Other states will follow as the team expands the program, working with NFSA Regional Managers and State Coordinators.



Flashover in less than three minutes, underscores NFSA's rallying cry of "Fire Sprinklers Buy Time. Time Buys Life." Pictured is the burn demo in Westminster, Colorado. A special thanks to NFSA member Western States Fire Protection Co. for sponsoring lunch & assisting with side-by-side. Teamwork at its best!

# Tyco's Attic Sprinklers

Designers can now more efficiently protect an attic space while reducing costs.

For more than 20 years, Tyco Fire Protection Products has been leading the way in attic fire protection. Tyco Attic Sprinklers boast extensive fire testing for sloped combustible concealed spaces.

Fire protection in spaces, such as attics, presents unique challenges. The configuration of most attics can cause narrow heat channeling in the event of a fire. In addition, heat traveling up the steeply slope of a ceiling may not activate

### Livingston Fire Protection Named 2016 Subcontractor of the Year

NFSA member Livingston Fire Protection, Inc. of Hyattsville, Maryland has been named 2016 Fire Protection Subcontractor of the Year by members of the Metro Washington and Virginia Chapters of Associated Builders and Contractors (ABC).

Livingston is to be honored at ABC'S annual Excellence in Construction awards dinner on September 14 at the Ritz Carlton, Tysons Corner in McLean Virginia. It is the second time in the past three years that Livingston has received the award. Voting involved more than 100 ABC contractor members.

All of us at NFSA congratulate Livingston Fire Protection on receiving this outstanding honor. Well deserved!

the right sprinklers. Sprinkler systems need to be designed in such a way where these areas are effectively protected with regard to methods and materials of construction. Tyco®'s Specific Application Attic Sprinklers provide such a design.

Tyco<sup>®</sup>'s Specific Application Attic Sprinklers provide superior fire protection and address the challenges that roofline and attic spaces can provide. They have undergone the most extensive fire testing ever performed for sloped attic spaces and are UL Listed with their specific application guidelines for use as special sprinklers as defined by the National Fire Protection Association (NFPA).

In addition, Tyco<sup>®</sup>'s Specific Application Attic Sprinklers provide a significant cost savings by minimizing costs associated with material and installation labor for standard spray sprinklers and allowing for the use of CPVC in attics.

Tyco<sup>®</sup>'s Specific Application Attic Sprinklers are the first sprinklers to be:

- Listed for extended coverage in combustible construction
- Full-scale fire tested in both wet and dry system scenarios
- Full-scale tested for use in wood truss construction
- Listed for specific roof slopes

The Tyco® Model BB (Back to Back), SD (Single Directional), HIP, and AP (Attic Plus) "Specific Application Sprinklers For Protecting Attics" are fire sprinklers for combustible and non-combustible sloped attic spaces. The Model BB, SD, and HIP are Specific Application Attic Sprinklers. The Model AP, however, is a Specific Application Combustible Concealed Space Sprinkler having specific application criteria for its use with the Model BB, SD, and HIP in attic spaces.

# HD Supply Waterworks' Fire Protection Division Expands Operations

HD Supply Waterworks' Fire Protection division has expanded its footprint. The distributor opened a new location in Oklahoma City, and has added fabrication services to an existing HD Supply Fire Protection branch in Dallas, allowing the company to expedite existing customer service and expand its overall customer base.

The new Fire Protection branch in Oklahoma City shares space with the existing Waterworks branch located at 8401 SW 15th Street. The branch offers a full array of fire protection products and services, including jobsite delivery.

The Fire Protection division's Dallas branch also recently relocated to a larger facility, allowing it to add fabrication services. The new address is 9010 Sterling Street, Ste. 110, Irving, TX 75063.

The additional fabrication service in Dallas will allow HD Supply to expedite jobs for customers in the area.



# DEWALT<sup>®</sup> Launches Range of Innovative Anchoring Solutions and Announces Transition of Powers Brand to DEWALT

DEWALT announces a new range of innovative anchoring and fastening solutions designed for performance and productivity. Central to the offering is the pairing with DEWALT's range of 20V MAX\* and new FLEXVOLT™ cordless

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# SPRINKLING OF NEWS

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rotary hammers along with a full range of accessories and setting tools. The addition of FLEXVOLT<sup>™</sup> Rotary Hammers allows for a new leap in DEWALT's pursuit of a fully cordless system solution for concrete and masonry applications. With the addition of the anchors and fasteners line, DEWALT can now offer a full system for the entire project from the design phase through construction and completion.

The new range of DEWALT anchors will launch in the back half of 2016, and the existing Powers range of anchors and fasteners will transition to the DEWALT brand over a period of time.

In 2012, Powers Fasteners became part of the DEWALT family, part of the key mission to own the entire project, from the design phase and through the construction phase. Since then, the hard work of bringing the two companies together has been underway. Engineers from both companies began working together, collaborating to design anchors and tools alongside one another to deliver a complete system focused on performance and productivity.

# **DEWALT Cast-In-Place Anchors**

Part of the DEWALT Anchors launch is an updated and extended range of castin-place anchors. Meant to be used in construction projects where the anchors are placed prior to the concrete being poured, a growing trend for construction sites in the U.S., these new DEWALT anchors are designed to deliver fast and reliable installations leveraging the trend toward BIM (Building Information Modeling).

# DEWALT Woodknocker®II+

For use in wood concrete form applications, this cast-in-place insert anchor is designed to be more stable than previous designs. Improvements include a much wider base that reduces the likelihood of accidental kick over after installation. Also, the nails are raised and now sit inside the base, removing the sharp points of the nails when handling prior to installation. A new membrane design has been added to the underside of the base to reduce the likelihood of concrete seeping into the threads during the concrete pour. Additionally, a multi-thread option has been added to the range, allowing for the installer to have the option for 3/8" or 1/2" rod hanging, a useful flexibility if the job requirements change after the concrete is poured. Upon launch the parts are expected to have approvals to meet the latest in building code standards.

# DEWALT Bang-It®+

For use in metal deck applications, this cast-in-place insert is used. The existing range is updated to include a multi-thread option for 3/8" or 1/2" rods. All Parts are on track to have FM, UL, and ICC approvals upon launch.

# DEWALT Deck Insert+<sup>™</sup> (DDI+<sup>™</sup>)

Metal deck forms are corrugated and the placement of the anchors must be exact according to the design of the project. The new DDI<sup>™</sup> insert solves this common issue and allows a cast-in-place insert to be placed on any surface of the deck including the incline where traditional metal deck inserts cannot be installed. The long, steel brace allows for installation in any position needed and delivers a rod beneath the surface of the deck at the same height since the part is always installed in the top of the deck flute. Pre-mounted screws allow for fast installation. A shoulder feature on the bolt insures the proper embedment depth. All diameters are planned to have the approvals required for the latest building code standards.

# **DEWALT Post-Installation Anchors**

While the increased productivity benefit of the cast-in-place method causes it to be the growing trend, the majority of construction projects continue to utilize the conventional post-installation method of anchoring. Like with cast-in-place anchors, quick installation is the top request from contractors.

# Screw-Bolt+™

The new Screw-Bolt+<sup>™</sup> allows for faster installation compared to a conventional anchor\*\*. Special geometry of the threads and dust relief grooves in the core allow for fast installation. This new system removes the need for a manual torgue wrench for proper installation. A DEWALT Impact Wrench can be matched with the size of anchor and used for fast installation. The installation method of this new anchor is performed much like installing a screw into wood. The design of the anchor allows it to have this fast installation method yet still has the high holding performance needed. The Screw-Bolt+™ will replace the Innovative Powers Wedge-Bolt®. The new design can be installed with a standard ANSI drill bit and is designed to install in dense aggregate and high compressive strength concrete. The new design is on track to launch with a full array of approvals designed to meet the latest building codes.

# Hangermate®+

For Contractors hanging pipe, cable trays and other components to ceilings, this new line of anchors shares the same thread and shank design of concrete Screw-Bolt+<sup>™</sup> and is a fast and easy method for rod hanging. The broad range includes many different options to cover the various application needs of these trades in the three key application materials: concrete slabs, wood joists, and metal structural components. Options within the range include female & male threads integrated into the anchor ready to receive a hanger and also options for special circumstances like heads that swivel giving nearly 90 degrees of rotation for flexible positioning. The Hangermate®+ line is on track to have a full selection of approvals required for the latest building code upon launch.

# Adhesive Anchoring Solutions

Also a post-installation method of anchoring, the adhesive anchoring process is used to bond rebar or threaded rod into drilled holes in concrete and masonry. The post install rebar application is one that has very specific requirements to be completed correctly. To be approved for use, a matched system must be developed and tested together to insure the stringent approval requirements are met. On track to launch with these approvals

# **SPRINKLING OF NEWS**

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for a front half 2017 launch is a matched system including a FLEXVOLT<sup>™</sup> SDS Max Rotary Hammer with the performance to drill the deep holes required, a hollow drill bit range to clean the holes while drilling, and both acrylic and epoxy adhesives powered by a 20V MAX\* dispenser. Additionally, a hollow drill bit range will be available to be used with our powerful Perform & Protect<sup>™</sup> dust extractors and when used with the DEWALT FLEXVOLT™ portable power station, it allows the application to be completed on battery power only.

For more information, visit www.dewalt. com follow DEWALT on Facebook and Twitter.

For more information for Powers products, please visit www.powers.com.

20V MAX\* - Maximum initial battery voltage (measured without a workload) is 20 volts. Nominal voltage is 18.

\*\*5/8" Screw-Bolt+™ compared to 5/8" SD1 using the allowed impact wrench for the Screw-Bolt+™ and the required manual torque wrench for the SD1.

# Viking Earns UL Listing for Freedom<sup>®</sup> Residential Concealed Pendent Sprinkler

The Viking Corporation announces that it has successfully completed all UL testing for its new Freedom® residential flat plate concealed pendent sprinkler (Model VK494). The new 4.9 K-factor sprinkler, which will be available this fall, represents a significant advancement in residential fire protection.



The new VK494 is UL Listed at the minimum flow rates for 16 x 16', 18 x 18', and 20 x 20' coverage areas in all three of its available temperature ratings; 155°F, 175°F, and 200°F. It is the first residential concealed sprinkler with the same listed flow rates for both ordinary and intermediate temperature- ratings. As a result, residential sprinkler installers can now standardize on an intermediate temperature-rated sprinkler, without having to sacrifice either performance or aesthetics.

While ordinary temperature-rated sprinklers, with an operating range between 135°F and 170°F, can only be used when ambient temperatures are below 101°F, intermediate temperature-rated sprinklers (175-225°F) can be installed in environments up to 150°F. Standardizing on intermediate temperature sprinklers offers several benefits including greater installation flexibility around potential heat sources such as fireplaces, heat diffusers, skylights, and ovens, as well as reduced inventory complexity and less confusion at the job site.

The new Model VK494 sprinkler is available with three cover plate styles (standard diameter, large diameter, and square), each offered in nine standard finishes and a nearly unlimited array of custom colors. The cover plates, as well as installation wrenches, are the same as used on Viking's current line of residential concealed pendent sprinklers.

For more information on Viking's complete line of fire protection products and services, please visit www.vikinggroupinc. com or call 800-968-9501.



### Potter Announces Low Frequency UI **Approval for Evax Products**

Potter Electric Signal Company, LLC of St. Louis, Missouri USA, announces the approval of eight EVAX Voice Evacuation panels. The EVAX-100, EVAX-100M, EVAX-200, EVAX-200M, HMX-DP100, HMXDPS100, HMX-DP100/P and HMX-DPS100/P are approved to provide 520 Hz, low frequency signaling as required by NFPA in sleeping rooms. They are listed as compatible with the following speakers:

- Potter Electric: FASPKR, SPKSTR-24CLP series & SPKSTR-24WLP series
- Gentex Series: SSPKCLP & SSPK-• 24WI P
- System Sensor Series: SPCW, SPCR, SPR & SPW

For more information, contact Potter at 800.325-.3936, sales@pottersignal.com, www.pottersignal.com

### New from FPPI: OS&Y Valves

With the introduction of OS&Y Fire Main Gate Valves, Fire Protection Products. Inc. (FPPI) continues to extend its offering of brass trim products.

The new valves are UL listed, FM approved and available in 1", 1-1/4", 1-1/2" and 2" sizes exclusively from local FPPI distributors. Manufactured to meet the highest quality standards in material and performance, they seamlessly fit into the existing portfolio and meet the de-



mand for long lasting, reliable fire system valves.

The outside stem construction of OS&Y valves allows fire sprinkler system professionals to immediately see whether a system is active or shut off: When the valve is opened, the stem rises above the hand wheel. In the closed position, the stem is concealed inside of the valves.

External tamper switches can be added for central station or panel monitoring.

For more information on FPPI OS&Y Valves, measurements and the complete product line, please go to www.fppi.com.

# Bull Moose Tube Acquires Sprinkler **Pipe Assets**

Bull Moose Tube, a subsidiary of North American manufacturing group Bull Moose Industries, today announced it has purchased additional sprinkler pipe assets.

Bull Moose also announced that the newly purchased mills will be incorporated into sprinkler-pipe manufacturing >> CONTINUED ON PAGE 56

www.nfsa.org

# SPRINKLING OF NEWS

### >> CONTINUED FROM PAGE 55

operations at two of its existing locations: The first of these mills is scheduled to be added to Bull Moose's Trenton, Ga., operations later this year, representing the company's first sprinkler manufacturing mill in the Southeast. The second mill tentatively scheduled to be added to the company's existing operations in Casa Grande, Az., after the Trenton, Ga., mill is completed - would enhance that location's current production capacity and support Bull Moose's growing business on the West Coast.

The asset purchase comes on the heels of the company's announcement in October 2015 regarding its increased commitment to, and investment in, its sprinkler-pipe operations amid growing demand in the marketplace. The recent purchase represents a continuation of that commitment, as well as a critical step in continuing to meet customer demand in the sprinkler-pipe marketplace - particularly given the recent departure of a competing manufacturer.

With addition of these two mills, coupled with the investments made in the fall of 2015, Bull Moose will effectively double its sprinkler output capabilities. According to Bull Moose Industries CEO Michael Blatz, this latest move was important to meet customers' growth objectives while maintaining a high level of customer service.

Once all operations are up and running, Bull Moose will have sprinkler-pipe mills in the eastern U.S. (Masury, Ohio), western U.S. (Casa Grande, Az.), central U.S. (Gerald, Mo.) and southeastern U.S. (Trenton, Ga.).

For more information, visit www.bullmooseindustries.com.

# TYCO Announces New Listing for ESFR-25 Pendent Sprinklers for Warehouse and Storage Applications

Tyco Fire Protection Products (TYCO) announces the TYCO Model ESFR-25 Early Suppression Fast Response (ESFR) Pendent Sprinkler (TY9226) with a K-Factor of 25.2 for warehouse and other storage applications. The sprinkler is UL Listed and FM approved and provides an industry first 48 feet ceiling height protection with a minimum five-foot aisle width.

The new listing for the ESFR sprinkler provides more installation flexibility, as no other sprinkler can match the performance at that height with such a narrow aisle width. The Model ESFR-25 Pendent Sprinkler is listed and approved for a wide range of storage arrangements and commodity classing, including the most common storage materials, encapsulated and non-encapsulated class I-IV commodities and expanded and unexpanded plastics.



The new Model ESFR-25 sprinkler is UL and C-UL Listed for ceilings up to 48 feet (14,6 m) high and storage heights up to 43 feet (13,1 m) and fully complies with UL 1767 new Section 30A - high clearance fire test and is FM approved for ceilings up to 48 feet (14.6 m). The sprinkler is available with either NPT or ISO threads and with ordinary and intermediate temperature ratings of 165°F (74°C) and 212°F (101°C) respectively.

Contact Tyco Technical Services for the latest approval information. For additional information on the new Model ESFR-25 sprinkler, see datasheet TFP312, at www.tyco-fire.com

# ■ Eaton B-Line<sup>®</sup> series TOLCO<sup>™</sup> Branch Line Restraint System

The new Eaton B-Line<sup>®</sup> series TOLCO<sup>™</sup> fig. 76 and 77 branch line restraint is designed and Underwriters Laboratories (UL) listed for both metallic and nonmetallic pipes. The Eaton B-Line series system is engineered to work seamlessly with CPVC piping systems such as Blaze-Master<sup>®</sup> Fire Sprinkler Systems.

The product has several features that are ideal for use with CPVC piping and help achieve an overall lower installed cost. This seismic bracing system covers branch lines, working with BlazeMaster pipes one to two inches in diameter. Both the structural attachment and pipe attachment accept either  ${}^{3}/{}_{8}$ -inch or  ${}^{1}/{}_{2}$ -inch all-thread rod as a brace member, which gives flexibility in design and installation as field conditions change. The system has no sharp edges to come in contact with the pipe and has flared edges at the point of contact to protect the pipe from scratching or scoring during installation.

The system works for both lateral and longitudinal restraint. Its unique design puts no compressive loading on the pipe during installation or during the life of the system. The braces are sturdy enough to hold a heavy load, but simple enough to be installed with one hand. Additionally, they can be completely preassembled, helping save time on the job site.

Eaton pioneered visual verification with its TOLCO<sup>™</sup> seismic bracing products and the Eaton B-Line series system lets installers know when it's been installed correctly. The bolt breaks off when it reaches the appropriate torque force, making visual verification easy for installers and inspectors and helping eliminate the need to use a torque wrench during inspection. This helps expedite inspections and helps take the liability off the contractor.

The branch line restraint can be easily removed and repositioned if necessary and helps save time and labor.

Another time saving feature is that all of the rods can be precut. The attachments can be preinstalled and shipped to the job site, requiring less work on-site as well as accelerating installation.

The Eaton B-Line series TOLCO branch line restraint system finally provides a clear solution for BlazeMaster piping, helping save time and labor while helping to increase safety measures.

# ERRATA

In the July/August issue of SQ were several errors that we'd like to correct:

p.41 - Tom Multer's name was misspelled

p.42 – **Bobby Engle**'s last name was left off. Bobby works for Automatic Sprinkler.

p.43 – Dan Kyle, not Robert Row, is the Executive Director of SoCal, Mountain States FP in Denver.

# **Greater Challenges. Smarter Solutions.**

**Storage and distribution facilities are evolving.** So are the challenges you face when protecting them. That's why Tyco is leading the way with solutions designed to help optimize protection for sites with narrower aisles, greater heights, and a changing array of commodities and packaging. Tyco solutions include the highest ceiling-only protection with ESFR sprinklers, low install cost with EC sprinklers, and industry leading valves, all with pure performance.

To find out how we can help future-proof your storage protection, contact your Tyco representative or visit www.tyco-fire.com/Storage.



Safer. Smarter. Tyco. Copyright © 2016 Tyco Fire Products LP. All rights reserved





# For the best in quality, performance & longevity.

# New from FPPI: OS&Y (Outside Stem & Yoke) Valves.

The outside stem construction makes OS&Y valves the perfect solution to fire sprinkler system monitoring: It allows for immediate identification whether a system is active or shut off. When the valve is opened, the stem rises above the hand wheel. In the closed position, the stem is concealed inside of the valves. External tamper switches can be added for central station or panel monitoring.

FPPI OS&Y Valves feature a bronze body, cast iron hand wheel, and additional steel, stainless steel, and brass components for extended service life.

# **OS&Y** Valves

Available Sizes: 1", 11/4", 11/2" & 2"



Available Exclusively Through Your Local FPPI Distributor

.....





Scan for measurements & complete information on OS&Y Valves. **FPPI.COM | +1 (800) 344-1822**