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Journal of the
National Fire Sprinkler
Association

SQ

RESIDENTIAL SPRINKLERS

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FIELD OPS

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January - February 2014 • no. 182

SQ

ON THE COVER

With residential sprinklers trending in high growth, new construction-start areas around the country, articles in this issue bring focus to the how, why, when, where and what of residential sprinklers.

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FEATURES

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LETTER FROM THE EDITOR

The new year is only a few days old and sitting in my office as I write this letter, looking out over glistening snow covered forested hills and sweeping valleys, I am reminded just how fast the weather can change here in the foothills of the Berkshires this time of year. It was just a few weeks ago we were enjoying warm, sunny Indian summer days as they are called here in the Northeast, that have a way of turning our thoughts away from winter's impending icy grip. These unseasonably warm days are generally short lived, but are always welcome as fall's last hurrah.

Much like the changing seasons that bring unpredictability to the weather, so are the dynamics of the fire sprinkler industry. There are legislative issues impacting the industry that must constantly be monitored and addressed, new and existing codes and standards requirements that must be carefully measured and applied, and of course there are the age old myths about cost, effectiveness and functionality of fire sprinklers that always need dispelling. Enter NFSA's expert staff. Our members know it is through their experience that beneficial industry advancements occur, and that at the forefront of those efforts locally are our Regional Operations team.

Featured in this issue are interviews with two Regional Managers, Dominick Kasmauskas and Wayne Waggoner. In fact, in addition to their regional responsibilities, Dom and Wayne are Associate Directors of Regional Operations, North and South respectively. Dom and Wayne's passion for their work is evident in their interviews. Take a few minutes and read about it in a new department for 2014 called ***"Field Ops."*** Throughout the year, each issue will feature up close and personal interviews with different Regional Managers. Stay tuned! There is a lot going on.

David J. Vandeyar, *Editor*

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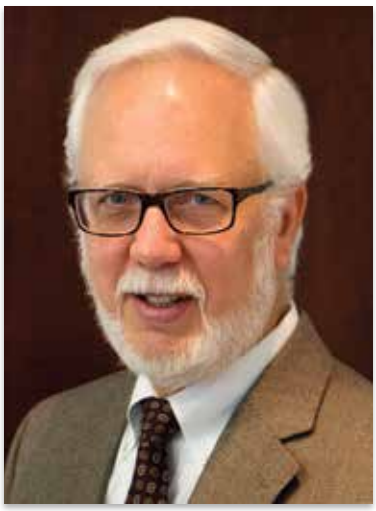
A Brief History of Residential Sprinklers



Russell P. Fleming, P.E.

I've always had a special interest in residential sprinklers since their progress has run parallel to my own career in the fire sprinkler industry. I entered the industry in 1975, when even high-rise residential buildings were not required to be protected with sprinklers. That was the year the first edition of NFPA 13D was published. At the time it was hoped that existing sprinkler technology could be used to advance the residential market, but it soon became obvious that wasn't the case. Tests conducted utilizing standard response sprinklers showed they did not have the thermal sensitivity needed to maintain tenable conditions within small residential compartments, and their water demand could not be met with typical dwelling water supplies.

Today many Americans are skeptical of the ability of the federal government to solve problems, but if it wasn't for the research effort spearheaded by the U. S. Fire Administration, the residential sprinkler may never have become a reality. As the first engineer employed by the Association, I was its representative to the various test programs in the late 1970s that led to the development of a fast response sprinkler with high wall-wetting capabilities, specifically designed as a practical solution to the residential fire problem. The 1980 edition of NFPA 13D called for the use of listed residential sprinklers, and by 1981 the sprinkler manufacturers met the demand.

Getting residential sprinklers into homes to actually solve the nation's main fire problem has been more difficult. Although a few progressive communities like San Clemente, California, Prince Georges County, Maryland, Scottsdale, Arizona and Greenburgh, New York jumped on board in the early 1980s, it has been a slow and gradual effort to crack the single-family dwelling market. Within a few years it became apparent that multi-family residential occupancies were more likely to accept mandates for sprinkler protection, and I had the privilege of serving as part of the group that drafted a hybrid of NFPA 13 and 13D, standard NFPA 13R, first published in 1989.

By the mid-1990s, the model code bodies had taken note of the progress made to address the needs of the marketplace, and requirements for sprinkler protection of multi-family residential occupancies became the norm. By the end of 1998 there were already an estimated 40 million residential sprinklers in place in NFPA 13D and 13R systems across the United States.

Expectations were great in 2009 when the writers of the International Residential Code adopted a requirement for sprinklers in all new dwellings. Many of our members are disappointed that only two states, California and Maryland, have followed through so far with statewide adoptions of the model code with that requirement intact. Still, the country remains on the path to sprinkler protection of all residential occupancies. Since the trough of the economic recession in 2010, while the use of sprinklers in general has increased by about 50 percent, the use of residential sprinklers has more than doubled, a recovery rate significantly better than that of U.S. housing starts, and somewhat surprising since the hotel industry has not been building new properties. In the first nine months of 2013, the rate of increase in residential sprinkler shipments over the same period of 2012 is three times the rate of increase of all other types of sprinklers. Simply put, residential sprinklers are becoming a fact of everyday life.

Russell P. Fleming, *President*

EVENTS OF INTEREST TO NFSA MEMBERS

calendar

January 7, 2014	Centrifugal and Positive Displacement Pumps	*ONLINE*
January 13-14, 2014	Sprinkler Protection of Storage	Brighton, Michigan
January 14, 2014	NFPA 13, 13R & 13D Update 2013	Apple Valley, California
January 15, 2014	NFPA 13, 13R & 13D Update 2010	Brighton, Michigan
January 15, 2014	Fire Service Mains & Their Appurtenances	Apple Valley, California
January 16, 2014	NFPA 13, 13R & 13D Update 2010	Brighton, Michigan
January 21, 2014	Fire Pump Location and Protection	*ONLINE*
January 28, 2014	Understanding, Applying and Enforcing NFPA 25	Windsor Locks, Connecticut
January 28, 2014	Hydraulics for Fire Sprinkler Systems	Grand Chute, Wisconsin
January 29, 2014	Commissioning & Acceptance Testing of Fire Sprinkler Systems	Grand Chute, Wisconsin
February 4, 2014	Sizing Fire Pumps	*ONLINE*
February 18, 2014	Suction Piping and Appurtenances	*ONLINE*
February 25, 2014	Understanding, Applying and Enforcing NFPA 25	Brunswick, Maine
March 11, 2014	Sprinkler System Installation Requirements	Pataskala, Ohio
March 12, 2014	Acceptance Testing and Hydraulics	Pataskala, Ohio
March 13, 2014	Fire Service Mains & Their Appurtenances	Pataskala, Ohio
March 18, 2014	Discharge Piping and Appurtenances	*ONLINE*
March 24-April 4, 2014	Two Week Layout Technician Training	Fife, Washington
April 8, 2014	Diesel Engine Drivers for Fire Pumps	*ONLINE*
April 15, 2014	Fire Sprinklers in the IBC	Willoughby, Ohio
April 16, 2014	Understanding, Applying and Enforcing NFPA 25	Willoughby, Ohio
April 17, 2014	Acceptance Testing & Hydraulics for Plan Reviewers	Willoughby, Ohio
April 22, 2014	Electric Motors for Fire Pumps	*ONLINE*
May 6, 2014	Fire Pump Controllers	*ONLINE*
May 20, 2014	International Building Code and Fire Pumps	*ONLINE*
June 3, 2014	Acceptance Testing of Fire Pumps	*ONLINE*
June 17, 2014	Inspection, Testing and Maintenance of Fire Pumps	*ONLINE*
August 4-15, 2014	Two Week Layout Technician Training	Patterson, New York

These seminars qualify for continuing education as required by NICET. Meet mandatory Continuing Education Requirements for Businesses and Authorities Having Jurisdiction. To register or for more information, contact: Michael Repko at (845) 878-4207, E-Mail: seminars@nfsa.org. Or register ONLINE at www.nfsa.org.

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Contract, Contract, Know Your Contract

by Stuart Zisholtz

Editor's note:
Stuart Zisholtz comments on New York State Law

Every contract should be reviewed carefully so that you know what your rights and obligations are. If you cannot read the contract, ask someone to do it for you.

It becomes especially acute when you are dealing with the City of New York or other governmental agencies. Know the contract and know your time frames.

In one case involving construction work in a playground, the contract called for a very short Statute of Limitations. The contractor had six months after substantial completion to bring a lawsuit against the City of New York for unpaid bills. What is "substantial completion?"

In this particular instance, the court held that a punch list extended a period of time of substantial completion. In other words, the contractor had to complete the punch list. The City of New York challenged that and said that substantial completion occurred before the punch list was issued. The court held for the contractor in that particular case.

It is difficult to fathom a six months Statute of Limitations, but if the contract calls for that and you agreed to it, then you are stuck with it. Under ordinary circumstances, you have 90 days to file a Notice of Claim and one year and three months to start an action against a manufacturer. The contract, however, overrules all of that.

In previous articles it was discussed that change orders must comply with the contract. In one instance, a contractor lost about $900,000 because he bundled up all of his change orders until the end of the job when they should have been submitted within five days after the change order was performed.

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NFSA Leads the Way in ITM Training

By James D. Lake

As anyone will tell you the subject of inspection, testing and maintenance of water-based fire protection systems is a highly charged topic. The best way to describe the dynamics of this subject is to use the story of a group of people trying to describe an elephant while blindfolded. It depends on your perspective. Whether it is a contractor, inspection technician, AHJ, or owner each one brings a different perspective to the discussion.

It is response to these various perspectives that NFSA has developed a variety of seminars that approach the subject from the perspective of the learner. Just look at the variety of seminar options that are available and you will see that we have the subject covered from all angles.

Understanding, Applying and Enforcing NFPA 25

This highly interactive full day seminar describes the requirements for properly maintaining a water based fire protection system in accordance with NFPA 25. The seminar clearly describes the responsibilities for compliance & record keeping. It describes the specific scope of the standard, and identifies the various ways in which information related to changes in the system are handled. It describes the various Tables used in the standard, their specific purposes, and when to use which Tables. It involves the attendees in a significant number of exercises to describe various problems encountered, identify the proper section(s) of the standard that deals with it, and discuss how to deal with issues not covered by the standard that may still be encountered.

Understanding, Applying and Enforcing NFPA 25 – California Edition

Because California publishes its own edition of NFPA 25 this seminar was contains the same learning objectives and content as the standard seminar but has been further tailored to the needs of California attendees to explain the flow of reporting as mandated by Title 19 California Code of Regulations, Chapter 5.

In some states there are state administrative regulations that permit owners to conduct a limited level of testing.

Alabama Limited License Inspection and Testing Seminar

In Alabama there is a state regulation that applies to fire protection sprinkler system owners who employ registered professional fire protection engineers, and skilled workers who regularly and routinely design, install, repair, alter, add to, maintain, and inspect sprinkler systems on and within the premises of their employer, provided such systems are for the owners' use only. This seminar covers material addressed in the Alabama Regulations governing skilled worker exemption for inspection and testing of some components of wet-pipe sprinkler systems, storage tanks and fire pumps.

California Limited License Inspection and Testing Seminar

In California annual testing or maintenance of wet pipe sprinkler systems, standpipe systems or private fire service mains may be performed by a California State Fire Marshal Licensed A (Type L) Concern, in structures or property owned or leased by that public or private entity. In addition, individuals who possess a California State Fire Marshal Weekly Fire Pump Test Certificate in accordance with this section and are employed by a Licensed A (Type L) Concern may perform weekly fire pump tests.

This seminar covers material addressed in the California Regulations governing limited licensure for inspection and testing of some components of wet-pipe sprinkler systems, standpipe systems and fire pumps.

Inspection, Testing and Maintenance for the Building Owner/Manager

The building owner is the single most important individual in the inspection,

>> CONTINUED ON PAGE 12

James D. Lake

Vice President of Training and Communications

>> CONTINUED FROM PAGE 11

testing and maintenance of fire protection systems. NFPA 25 contains numerous and detailed requirements that are the responsibility of the building owner. Yet many building owners are not familiar with these requirements or with the systems in their building. This 1-day seminar provides an introduction to system types, the owners requirements and limits when it comes to inspection, testing and maintenance. Through discussion of the administrative chapters (1-4) and the systems chapters (5-12) of NFPA 25 and activities centering on system documentation this seminar will provide the attendee with guidance on developing and continuing an effective inspection, testing and maintenance program.

Inspection and Testing for the Sprinkler Industry

This 3-day seminar is again highly interactive and has been our most popular seminar in recent years. It is designed for individuals interested in obtaining certification as an inspection and testing technician for water-based fire protection systems but has proven to be an effective tool for increasing the communication because it has been attended by not only contractors and inspection technicians, but contractor sales representatives, designers, building owners and AHJs making for some very productive and informative learning experiences.

At its core it is designed to provide an introduction to the various types of water-based fire protection systems as well as an in-depth exploration of the codes, standards and other documents that are used during the inspection and testing process. It delves deeply into the process and documentation involved in ITM. The seminar is also tailored to specific state or local requirements when necessary.

ITM: Navigating Through the Liability Minefield

New for 2014, NFSA is adding another perspective and one that is sure to be a hot topic, that of liability exposure and how it can be mitigated Working with industry professionals we have developed a seminar that will delve into the challenges faced by contractors and inspection technicians when building an effective ITM program. An effective inspection, testing and maintenance (ITM) program, conducted in accordance with NFPA 25, is critical to ensuring that water-based fire protection systems operate properly when needed. The program also acknowledges the liability exposure of ITM and prioritizes the need for clear communication in order to protect the ITM contractor and technician. Communications with the building owner, the AHJ, and even internally can have a dramatic impact on the success of a contractors ITM program. This highly interactive seminar will walk participants through a process to develop a best practices approach to improve communications and reduce exposure to liability claims associated with an ITM program.

This class is designed for Managers, Salespersons, Water-based Inspectors and Service Technicians.

.....

As you can see your association has been very busy responding to your expressed needs to us in developing a battery of seminars that cover ITM from all angles.

NFSA
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TECHNICAL TUESDAY 2014 ONLINE

March 1, 2014 – June 30, 2014

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FIRE PUMPS

Whether systems are fed from a public water connection or a tank, they often rely on fire pumps to provide the pressure for the fire protection system. This series will review the rules for planning, sizing and installing fire pumps.

MARCH 4, 2014

Hydraulic Calculations with Fire Pumps

INTERMEDIATE

Kenneth E. Isman, P.E.

Fire pumps present interesting challenges for people doing hydraulic calculations. In addition, extra calculations need to be performed when a fire pump is installed to make sure that water will get to the pump from the water supply. This program will discuss the extra calculations that need to be performed and will show how to handle fire pumps as input to the various popular computer hydraulic calculations packages in use.

MARCH 18, 2014

Discharge Piping and Appurtenances

BASIC

James D. Lake

This program guides the participant through requirements for the various components that are associated with the discharge piping of the fire pump package and addresses the requirements for these appurtenances as found in NFPA 20, Standard for the Installation of Stationary Pumps for Fire Protection.

APRIL 8, 2014

Diesel Engine Drivers for Fire Pumps

BASIC/INTERMEDIATE

Roland Asp, C.E.T.

Diesel Engines are extremely dependable drivers for fire pumps, as long as the fuel supply is adequate and the equipment is properly designed, installed and maintained. A number of factors must be considered when choosing a diesel engine to drive a fire pump. Some of the important factors to consider include: the starting method, cooling the engine, ventilation of the pump room, fuel supply and noise isolation. From the starting of the engine to the discharge of the exhaust, the parts necessary for the proper operation of the diesel engine will be discussed. Also, this seminar will address the design and performance requirements for diesel engine drivers.

APRIL 22, 2014

Electric Motors for Fire Pumps

BASIC

Bob Upson

NFPA 20 provides specific requirements for electric drivers for fire pumps. This includes the types of electric motors acceptable for fire pumps, acceptable voltage drop and current limits, along with the normal and stand-by electrical power sources. This seminar will review the relevant parts of the standard and explain some of the practical considerations for meeting them.

MAY 6, 2014

Fire Pump Controllers

BASIC

Kenneth E. Isman, P.E.

Each fire pump and each pressure maintenance (jockey) pump needs its own controller. The controller is the "brains" of the fire pump system, monitoring a number of conditions and deciding when to start the fire pump, and in some conditions, when to stop the fire pump. This seminar will cover the parts, functions, and requirements of controllers for electric motor driven and diesel engine driven fire pumps including the types of signals monitored at the controller and the installation of sensing lines.

MAY 20, 2014

International Building Code and Fire Pumps

INTERMEDIATE

Jeffery M. Hugo, CBO

The IBC has specific requirements for fire pumps, including high rise applications and other details for all types of buildings. The fire pump room will be discussed in detail as there are IBC requirements for access, room size, room separation, as well as fire department communications. This course will also address the standby and emergency power loads that impact electric fire pump installations. Where the IBC and NFPA 20 conflict, the differences will be explained in detail.

JUNE 3, 2014

Acceptance Testing of Fire Pumps

INTERMEDIATE

Bob Upson

NFPA 20 provides specific requirements for acceptance testing of fire pumps including initial system flushing, hydrostatic testing, and flow testing. This seminar will review the relevant parts of the standard and explain some of the practical considerations for compliance. It will also discuss some important safety considerations for acceptance and periodic testing procedures.

JUNE 17, 2014

Inspection, Testing and Maintenance of Fire Pumps

BASIC

Jason Webb

The inspection and testing of fire pumps plays a major role in the overall fire protection strategy for a building. Although NFPA 25 provides guidance on the frequencies of the inspections and tests, the process can get confusing. The type of driver used for the pump, the pump components and even the occupancy all impact fire pump inspection and testing. In this presentation, participants will learn what NFPA 25 requires and how to apply those requirements to their situation. The program will be based on the 2014 edition of NFPA 25 with references to changes from the recent editions.

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Seminars will take place on the Internet on Tuesdays:

10:30AM Eastern/
9:30AM Central/
8:30AM Mountain/
7:30AM Pacific/
2:30PM Greenwich

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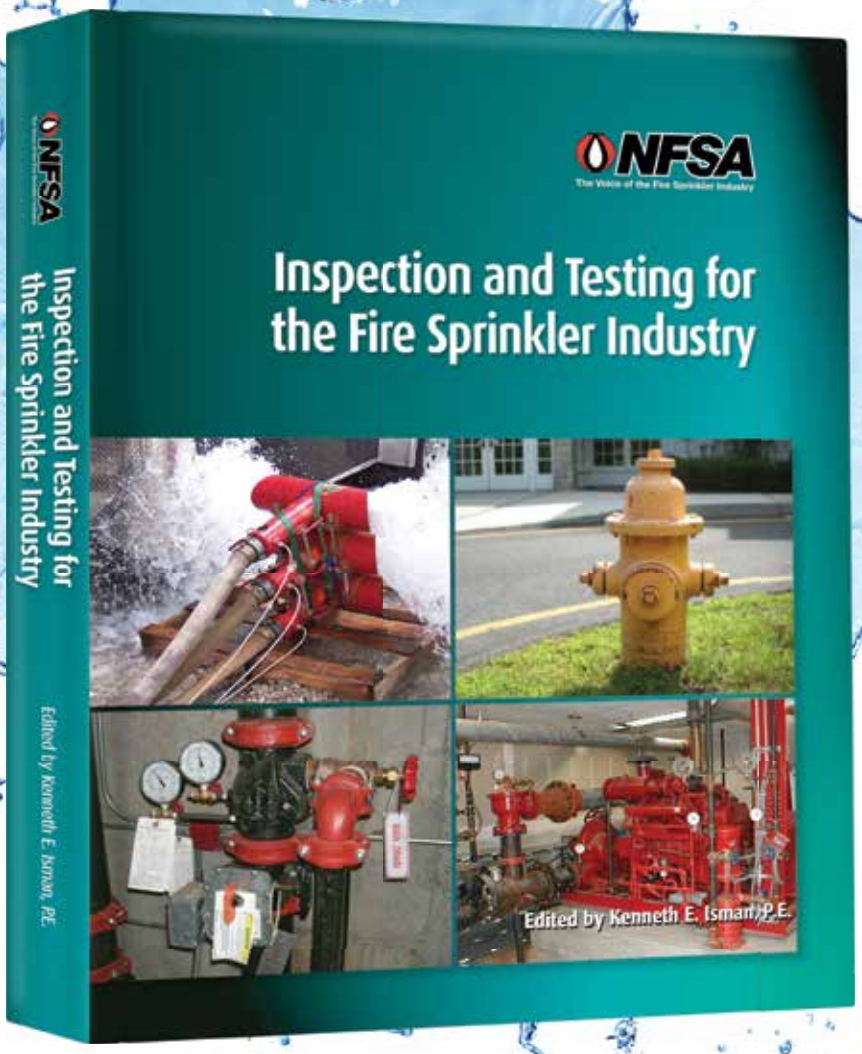

Inspection and Testing for the Fire Sprinkler Industry

This comprehensive text will cover the basic inspection and testing requirements for fire sprinkler and standpipe systems including fire pumps and water tanks that serve as water supplies for these systems. Beginning with a history and development of the rules of inspecting and testing systems and continuing with an explanation of the common terms and basic components, the book includes a complete discussion of the inspection and testing requirements of these fire protection systems. This is an excellent study guide for NICET Level I and Level II certification in the Inspection and Testing of Water-Based Fire Protection Systems.

To pre-order please go to

http://bit.ly/nfsaitm

Calculating Residential Sprinklers in Dwelling Units

By Kenneth E. Isman, P.E.

All three sprinkler standards (NFPA 13, NFPA 13R, and NFPA 13D) encourage the use of residential sprinklers in dwelling units. NFPA 13D comes right out and requires the use of residential sprinklers. NFPA 13R requires the use of residential sprinklers in dwelling units unless the whole dwelling unit is so small that it can be protected by four or fewer sprinklers. NFPA 13 allows the user to decide whether they want to use quick response sprinklers or residential sprinklers, but encourages the use of residential sprinklers by allowing the user to calculate four sprinklers in the design area instead of 900 sq ft or five sprinklers typically required for quick response sprinklers in flat ceilings up to 10 ft above the floor.

Both NFPA 13 and NFPA 13R reference a four-sprinkler design when using residential sprinklers inside a dwelling unit, but they do so in a different way that leads to different results with hydraulic calculations in many instances. This article will explore the differences between these two standards and how to perform the hydraulic calculations.

NFPA 13R

Section 7.1.1.3.1 of the 2013 edition of NFPA 13R (similar sections in all previous editions) states that the design area is, "all of the sprinklers within a compartment, up to a maximum of four sprinklers, that require the greatest hydraulic demand." There are two important parts of this section. First, the section uses the term "compartment" to limit the number of design sprinklers. The user is not required to pick up sprinklers outside the compartment if the most demanding compartment does not have four sprinklers. Second, the section uses the phrase "up to a maximum of four sprinklers." Together with the first statement, this works to allow the design area to be less than four sprinklers if the most demanding compartment has fewer than four sprinklers in it.

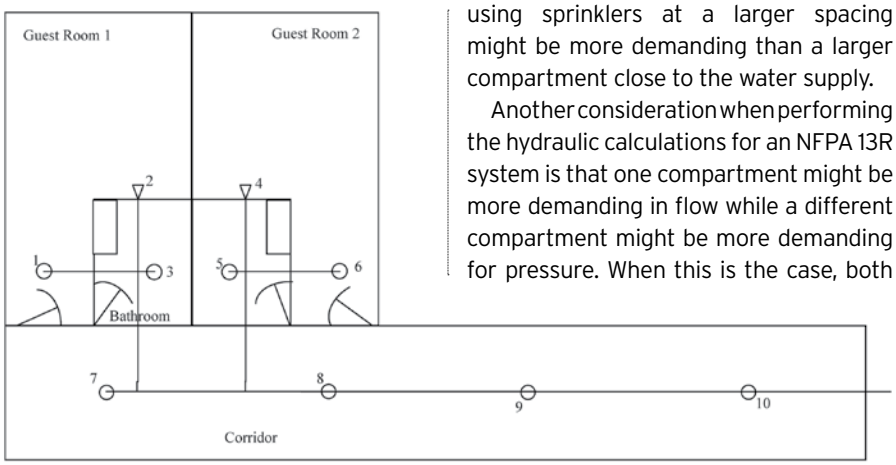

Figure 1 – Hotel Corridor and Guest Room Example

Finding the most demanding compartment can be complicated. Some people believe that it is the largest compartment, but that might not be true. Depending on the location of the water supply relative to the compartment and the area being covered by each sprinkler, it is possible that a smaller compartment using sprinklers at a larger spacing might be more demanding than a larger compartment close to the water supply.

Another consideration when performing the hydraulic calculations for an NFPA 13R system is that one compartment might be more demanding in flow while a different compartment might be more demanding for pressure. When this is the case, both of the compartments become the "most demanding" and the water supply needs to be able to handle both individually (not added together).

For example, consider the hotel corridor leading to guest rooms shown in Figure 1 with residential sprinklers being used in each of the guest rooms and in the corridor itself. The sidewall sprinkler (2) protecting most of the guest room is a k-4.2 sprinkler listed at 16 ft x 20 ft

>> CONTINUED ON PAGE 16

Kenneth E. Isman, P.E.

Vice President, Engineering for NFSA. Ken represents NFSA on the NFPA Technical Committee on Sprinkler System Discharge Criteria

>> CONTINUED FROM PAGE 15

with a flow and pressure of 22 gpm and 27.4 psi. The sprinklers in the entryway and bathroom (1 and 3) within the guest room are k-4.1 sprinklers listed to cover 12 ft x 12 ft areas with 11 gpm at 7.2 psi. The sprinklers in the corridor (7, 8, 9, and 10) are k-4.9 sprinklers listed to cover 16 ft x 16 ft spacing with 13 gpm at 7 psi.

The hydraulic calculations for Guest Room 1 would only need to be for two sprinklers (1 and 2) because these are the only ones in the compartment. Sprinkler 3 is in the bathroom, which is a separate compartment, even if the door between the bathroom and the rest of the guest room is left open. Starting at sprinkler 2 and calculating back to the top of the riser (picking up the flow for sprinkler 1), the demand comes to 43.2 gpm at 33 psi.

The corridor in Figure 1 also needs to be considered a compartment and needs to be calculated. The four sprinklers in the corridor (7, 8, 9, and 10) when calculated to the top of the riser would have a demand of about 52.3 gpm at 9 psi.

In this example, the two sprinklers in the guest room have a higher pressure demand of 33 psi while the four sprinklers in the corridor have a higher flow demand of 52.3 gpm. Therefore, both guest room 1 and the corridor are the "most demanding" compartments and the water supply for an NFPA 13R system needs to be able to handle both the 43.2 gpm at 33 psi demand for the guest room and the 52.3 gpm at 9 psi for the corridor.

NFPA 13

The design area for NFPA 13 systems is different from NFPA 13R. Section 11.3.1.1 of NFPA 13 requires that when residential sprinklers are used, the design area is, "the four adjacent sprinklers that produce the greatest hydraulic demand" (assuming that there are no unsprinklered combustible concealed spaces that would force a larger demand). Note that NFPA 13 does not use the term "compartment" in the discussion of the design area. So, if the most demanding compartment has less than four sprinklers in it, then the user will have to pick up additional sprinklers in adjacent compartments until they have the minimum four sprinklers for the design area. See Figure A.11.3.1.1(a) in NFPA 13 for four examples of situations with a four sprinkler design, some of which are across compartment boundaries.

Finding the four most demanding adjacent sprinklers can be difficult and might require multiple calculations. It is possible (although less likely than with NFPA 13R systems) that one combination of four adjacent sprinklers will be more demanding in flow while a different combination of four adjacent sprinklers will be more demanding in pressure. If that happens, the water supply needs to be capable of handling both demands individually (not added together).

Consider the example shown in Figure 1. If this system is designed to NFPA 13, then the following combinations of sprinklers would need to be investigated to determine which where the most demanding:

- 1, 2, 3, 7
- 1, 2, 3, 4
- 1, 2, 3, 5
- 1, 2, 4, 5
- 1, 2, 4, 6
- 1, 3, 5, 6
- 2, 3, 5, 7
- 7, 8, 9, 10

There are certainly other combinations that could be considered, but these are the most likely to be the most demanding. Note that most of these combinations include sprinkler 2. This is because that sprinkler is the most remote from the water supply and has the largest listed flow demand of any of the three different types of sprinklers used.

Before performing the hydraulic calculations for the example in Figure 1, the required flow for each sprinkler needs to be determined. While each of the sprinklers is listed to cover a specific area, NFPA 13 requires that the flows be increased in some circumstances. Section 11.3.1.3 of NFPA 13 requires that the flow from the sprinkler be at least the listed flow for the sprinkler to cover its area or the flow necessary to achieve a density of 0.1 gpm per sq ft, whichever is greater. To make matters a little more interesting, the method of determining the area of coverage of the sprinkler is permitted to be calculated in two different ways, whichever the user wants to choose:

1. The S x L rule to determine the area of coverage for the sprinkler; or

2. If the room with the residential sprinklers is less than 800 sq ft and has a horizontal unobstructed ceiling, the area of coverage for each sprinkler is permitted to be the area of the room divided by the number of sprinklers in the room (average)

In order to determine the minimum required flow for each sprinkler, some dimensions need to be added to the figure. See Figure 2, which is the same as Figure 1 with dimensions added. Once this has been done, Table 1 can be set up to help figure out what the minimum flow is for each sprinkler. In Table 1, the first column is the sprinkler identified in Figure 2. The second column is the area of the compartment that the sprinkler is in. The third column is the flow that the sprinkler is listed at to cover the area in which it is being used. The fourth column is the area that the sprinkler is covering using the S x L rule.

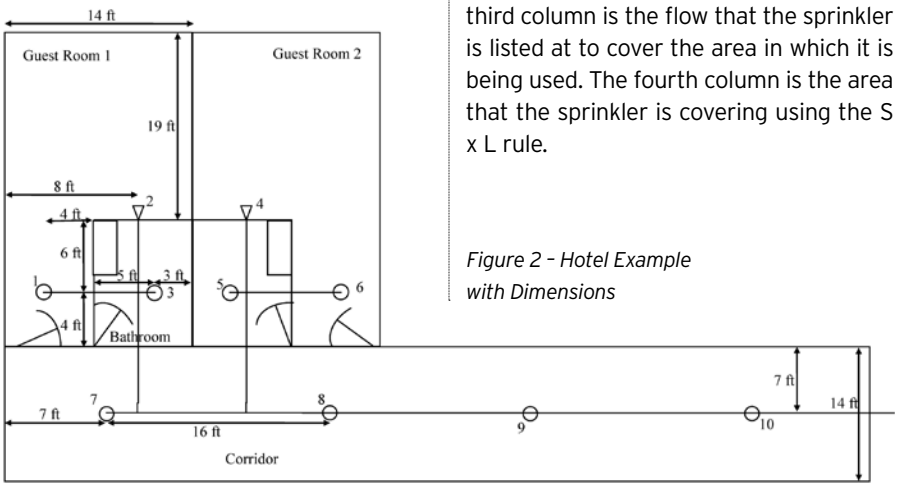

Figure 2 – Hotel Example with Dimensions

Sprinkler	Area of Compartment	Listed Flow	Area (S x L)	Area (Average)	Flow Based on 0.1 Density	Minimum Required Flow
1	326 sq ft	11 gpm	12 x 8 = 96 sq ft	326/2 = 163 sq ft	16.3 gpm	16.3 gpm
2	326 sq ft	22 gpm	19 x 16 = 304 sq ft	326/2 = 163 sq ft	16.3 gpm	22 gpm
3	90 sq ft	11 gpm	10 x 12 = 120 sq ft	80 sq ft	8 gpm	11 gpm
4	326 sq ft	22 gpm	19 x 16 = 304 sq ft	326/2 = 163 sq ft	16.3 gpm	22 gpm
5	90 sq ft	11 gpm	10 x 12 = 120 sq ft	80 sq ft	8 gpm	11 gpm
6	326 sq ft	11 gpm	12 x 8 = 96 sq ft	326/2 = 163 sq ft	16.3 gpm	16.3 gpm
7, 8, 9, 10	63 x 14 = 882 sq ft	13 gpm	16 x 16 = 256 sq ft	Not Applicable, compartment greater than 800 sq ft	25.6 gpm	25.6 gpm

Table 1 – Minimum Flow for Sprinklers in Figure 2

The fifth column in Table 1 is the area that the sprinkler is covering based on an average of the area of the compartment containing the sprinkler divided by the number of sprinklers in the compartment. Note that this is only permitted for sprinklers in compartments under 800 sq ft with unobstructed ceiling construction. The sixth column is the flow that would be required by NFPA 13 with a minimum density of 0.1 gpm per sq ft applied over the area of coverage of the sprinkler. The user is permitted to pick the area of coverage based on either the S x L rule (Column 4) or the average coverage in the compartment (Column 5). Typically, users will pick the lower of these two values.

For example, consider sprinkler 2. This sprinkler covers an area of 304 sq ft (19 x 16) using the S x L rule. But since the compartment is less than 800 sq ft, the user is allowed to consider the average area of 163 sq ft (326 divided by 2), even though this is a sidewall sprinkler (normally, the small room rule does not apply to sidewall sprinklers, but in this case, section 11.3.1.3 does not limit this particular application to pendent sprinklers). Applying the lower of these two areas to the minimum density, the user ends up having to flow 16.3 gpm instead of 30.4 gpm. However, the reader of this article might wonder about the choices for sprinkler 1 in Table 1. If the user is allowed to select between the more advantageous of Column 4 and Column 5, why does Column 6 have 16.3 gpm derived from the area in Column 5 rather than the 9.6 gpm that would be required by Column 4. This is because the user chose the 16.3 gpm from averaging the area for sprinkler 2 (rather than the 30.4 gpm from the S x L rule). Once one sprinkler in a compartment uses the average area to determine the minimum flow, all of the sprinklers in the compartment need to use the average.

The last column in Table 1 (Column 7) compares the flow required by the listing of the sprinkler (Column 3) to the flow required once the minimum 0.1 gpm per sq ft density is applied (Column 6). NFPA 13 requires that the greater of these two flows is calculated to discharge from each of the four sprinklers in the design area (see section 11.3.1.3). Once the minimum flow required for each sprinkler has been determined, the hydraulic calculations can be performed for each of the sets of four sprinklers in the bulleted list near the beginning of the NFPA 13 section of this article. The results are shown in Table 2 for the calculations to the top of the riser, which is down the corridor from sprinkler 10.

Four Continuous Sprinklers	Demand at the Top of the Riser
1, 2, 3, 7	94.8 gpm @ 41.7 psi
1, 2, 3, 4	90.1 gpm @ 40.8 psi
1, 2, 3, 5	89.9 gpm @ 40.8 psi
1, 2, 4, 5	87.5 gpm @ 36.6 psi
1, 2, 4, 6	86.7 gpm @ 36.6 psi
1, 3, 5, 6	66.7 gpm @ 21.6 psi
2, 3, 5, 7	95.1 gpm @ 37.8 psi
7, 8, 9, 10	103.2 gpm @ 32.4 psi

Table 2 – Results of Hydraulic Calculations for Selected Groups of Four Sprinklers

As Table 2 shows, there are two most demanding areas for this sprinkler system. Yes, earlier in this article the statement was made that this is rare, but this is one of the cases where it happens. In this case, the four sprinkler design of 1, 2, 3 and 7 have a higher pressure demand (41.7 psi) than the other options calculated. But the four sprinkler design of 7, 8, 9, and 10 have the higher flow demand (103.2 gpm). This means that the water supply will need to meet both demand points of 94.8 gpm at 41.7 psi and 103.2 gpm at 32.4 psi.

Summary

NFPA 13 and NFPA 13R treat the size of the design area differently. While the design area in each of the standards is sometimes referred to as a "four sprinkler design," the actual design area may or may not be four sprinklers under NFPA 13R depending on the size of the compartment and the location of the compartment relative to the water supply.

As far as NFPA 13 is concerned, the design area will always be four sprinklers when using residential sprinklers (assuming that the unsprinklered combustible concealed space rule does not come into play, which would increase the number of sprinklers), but the flow from these sprinklers may be greater than listed flow for the residential sprinklers depending on the area covered by the individual sprinklers and the flow necessary to get the 0.1 gpm per sq ft density.

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The Fire Sprinkler Guide – 2009 Codes Edition

Produced by NFSA, this second edition of The Fire Sprinkler Guide defines those sections of the three model building codes, the Life Safety Code (NFPA 101) and International Building Code 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. With almost 400 pages of text, this book is a "must have" for anybody that performs hydraulic calculations of fire sprinkler systems or performs plan review and approval of hydraulic calculations.

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Sprinkler Standards for Residential Occupancies

By Jeff Hugo, CBO

According to the International Building Code (IBC), residential (R-1 through R-4) occupancies are divided into four different use groups. Fire sprinklers are required to be installed throughout all buildings that contain a residential occupancy and shall be protected by one of three sprinkler standards in Section 903.3. This article will provide brief but clear guidance on which sprinkler system is required for each occupancy.

R-2: a use that contains sleeping units and/or more than two dwelling units and occupants are permanent (over 30 days).

- A boarding house with more than 16 occupants.
- A congregate living facility with more than 16 occupants.
- Apartments, timeshares, condominiums.
- Convents, monasteries
- Dormitories, fraternities, sororities
- Hotels and motels (over 30 days)
- A congregate living facility with 10 or fewer occupants that stay less than 30 days.
- A care facility providing care and with accommodations for five or fewer persons.
- Buildings that do not contain more than two dwelling units.

R-4: A use within a building or portions thereof for more than five but not more than 16 persons

>> CONTINUED ON PAGE 21

	R-1: Up to 4 stories and 60 ft. in height	**R-1**: Over 55 ft. (903.2.11.3)	**R-2**: Up to 4 stories and 60 ft. in height	**R-2**: Over 55 ft. (903.2.11.3)	**R-3**: Up to 4 stories and 60 ft. in height	**R-3**: Over 55 ft. (903.2.11.3)	**R-4**: Up to 4 stories and 60 ft. in height	**R-4**: Over 55 ft. (903.2.11.3)
NFPA 13	x	x	x	x	x	x	x	x
NFPA 13R	x		x		x		x	
NFPA 13D					x[1,2,3]		x[3]	
1. IRC P2904 system is permitted								
2. Care facilities in a dwelling (310.5.1)								
3. Congregate residences with 16 or fewer residents (903.2.8)								

R-1: a use that contains primarily sleeping units and occupants are transient.

- A boarding house with more than 10 occupants, staying less than 30 days.
- A congregate living facility with more than 10 occupants, staying less than 30 days.
- Hotels, staying less than 30 days.
- Motels, staying less than 30 days.

R-3: a use that is not classified as R-1, R-2, R-4 or I, but occupants are permanent.

- A boarding house of 16 or fewer occupants that stay over 30 days.
- A boarding house of 10 or fewer occupants that stay less than 30 days.
- A congregate living facility with 16 or fewer occupants that stay over 30 days.

Jeff Hugo, CBO

NFSA's Manager of Codes

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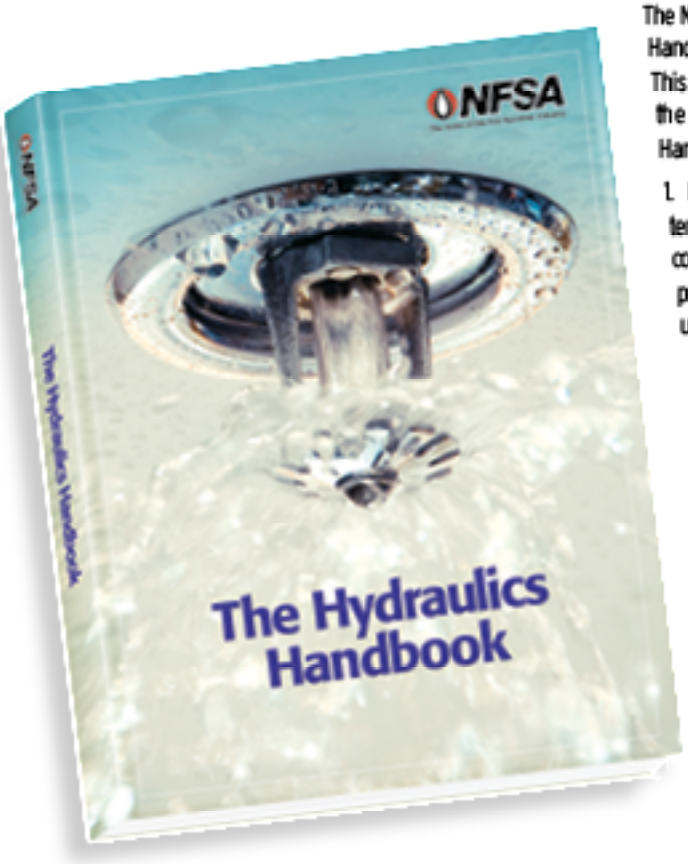
NFSA's Hydraulics Handbook



The National Fire Sprinkler Association is proud to announce the release of The Hydraulics Handbook, an overhaul and update of a publication originally put out in the early 1990's. This new updated edition is a comprehensive discussion of everything having to do with the hydraulic calculation of sprinkler systems. There are three distinct parts to the new Handbook:

1. Excerpts from the NFSA textbook Layout, Detail, and Calculation of Fire Sprinkler Systems that deal with hydraulics. These comprehensive chapters cover the methods and concepts involved with calculating a fire sprinkler system by hand or with a computer program. Each chapter ends with a series of questions to make sure that the user understood the concepts in the chapter.

2. A brief discussion of conducting hydraulic calculations from the perspective of a code enforcement official. This discussion is helpful for the plan review of calculations that have been submitted. A sprinkler technician can also use this information in spot checking the output from a computer program.

3. Friction loss tables. There are many different types of pipe and tube used in sprinkler systems. For each type of pipe, this book has a page with the friction loss per foot of pipe at a variety of different flows. Each page also contains the equivalent length of the fittings (tees, elbows, control valves, and check valves). These pages substitute for performing the Hazen-Williams friction loss calculation on a calculator and save time for people performing hydraulic calculations by hand or for people wanting to spot check calculations performed by a computer.

With almost 400 pages of text, this book is a "must have" for anybody that performs hydraulic calculations of fire sprinkler systems or performs plan review and approval of hydraulic calculations. **Order your copy at www.nfsa.org at the Resource Center or fill out and return the order form below.**

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(excluding the care staff), who are capable of self-preservation, who receive custodial care in a supervised environment on a 24-hour basis.

- Residential board and care facilities
- Social rehabilitation facilities
- Assisted living facilities
- Congregate care facilities
- Convalescent facilities
- Group homes
- Alcohol and drug centers
- Halfway houses

NFPA 13

Section 903.3.1.1 of the IBC requires a NFPA 13 system. The NFPA 13 system can be installed in any residential occupancy as it provides a high degree of property protection. With this scale of property protection comes life safety.

Sprinklers are installed throughout the residential occupancy and building, including; attics, crawlspaces, balconies, decks, porches, concealed spaces, closets and bathrooms. Section 903.3.1.1.1 offers some spaces where sprinklers can be exempted when heat detectors are installed. Sprinkler design for residential can be the density/area method, room design, or the residential sprinkler special design approach. Residential sprinklers are primarily used, but there are exceptions for using a quick response sprinkler in residential occupancies. The minimum water duration is 30 minutes.

NFPA 13R

Section 903.3.1.2 of the IBC requires a NFPA 13R system. The NFPA 13R system can be installed in any residential occupancy up to and including four stories in height in buildings not exceeding 60 feet in height above the grade plane. This system is more focused on life safety versus the property protection of NFPA 13.

Sprinklers are installed primarily in the occupied spaces. Attics, crawlspaces and concealed spaces are exempt from sprinklers. However, the IBC requires that balconies and decks in Type V construction be sprinklered. Sprinkler design is based on the most demanding compartment, up to four sprinklers. Residential sprinklers are primarily used, but quick response sprinklers can be used in small dwelling units that only require up to four sprinklers. The water duration is 30 minutes.

NFPA 13D

Section 903.3.1.3 of the IBC requires a NFPA 13D system. The NFPA 13D system is installed in one- and two-family dwellings, townhouses, Group R-3 and R-4 congregate residences. This system is primarily focused on life safety.

Sprinklers are installed in occupied spaces. Garages, open porches, carports, attics, crawlspaces and other spaces not intended for living are exempt from fire sprinklers. Sprinkler design is based on the most demanding two sprinklers in a compartment. Residential sprinklers are primarily used. However, quick response sprinklers may be used in mechanical closets. The water duration is 10 minutes, but may be reduced to 7 minutes for one story homes that are less than 2,000 square feet in area.

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Future Leadership Committee Update

By James D. Lake

In April of 2013 at the Annual Seminar in Las Vegas, the first meeting of the National Fire Sprinkler Association's Future Leadership Committee was convened. Since the time of its inception, members of the committee have worked diligently to lay the groundwork for a committee that would represent the best interests of both the Association and its younger members.

Since April, the Future Leadership Committee has been collaborating on ideas and laying the foundation for this important initiative. Representatives from the Future Leadership Committee presented its proposed mission, goals and objectives to NFSA's Board of Directors during the October meeting. The Board unanimously decided to recognize the Future Leadership Committee as an official committee of the NFSA and charged them with their first order of business, creating an operating policy and electing a Chair who will be given a non-voting seat on the Board of Directors.

Additionally, the Board of Directors will assign two of its members to serve as mentors to the Committee. Carla Gunther, the NFSA's Labor Relations Manager and Associate Counsel, will serve as the Association staff liaison for the Committee.

With the Board's full support and approval, the Future Leadership Committee is set to move forward and will be electing a Chair and Vice-Chair within the coming weeks and will begin exploring the best ways to recruit and engage with younger members of the Association.

NFSA IN ACTION

(center) Jeff Hugo, NFSA's Manager of Codes.

Cindy Giedraitis, NFSA's South Central Regional Manager

Lorrell Bush, NFSA's Florida Regional Manager

This is a very exciting time to be a young industry professional within the National Fire Sprinkler Association. If you are a young professional who is interested in learning more about the Future Leadership Committee and what opportunities are available within the Committee, or if you know someone who might be interested in being considered as a member of the committee, please have that person contact Carla Gunther at Gunther@nfsa.org with the subject line: Future Leadership Committee Candidate.

James D. Lake
Vice President of Training and Communications

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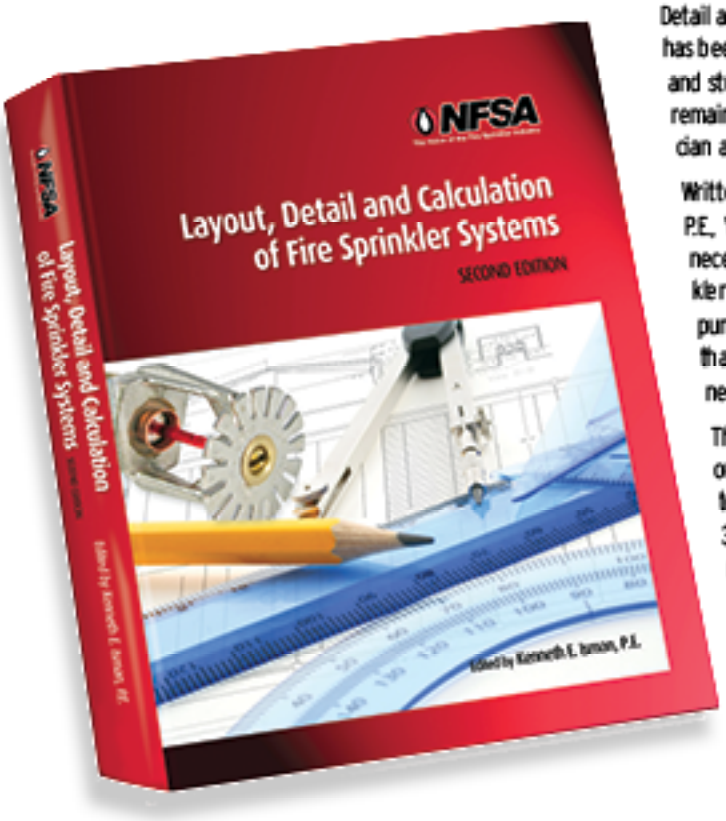
2nd Edition of Layout, Detail and Calculation of Fire Sprinkler Systems



The NFSA announces the publication of the 2nd Edition of its popular textbook, Layout, Detail and Calculation of Fire Sprinkler Systems. This newly revised hardcover textbook has been updated to reference the 2007 and 2010 editions of NFPA 13 with more examples and student exercises and new chapters on contract issues and stocklisting. This text remains the most complete book ever written for the fire sprinkler engineering technician and it's available now!

Written by the NFSA Engineering Department staff and edited by Kenneth E. Isman, P.E., Vice President of Engineering, this text covers every aspect of determining the necessary details for a fire sprinkler system including: hazard classifications, sprinkler spacing, hanger and brace requirements, hydraulic calculations, water supplies, pumps and tanks. The text also contains a review of basic math and physical science that is helpful in understanding the scientific principles behind the requirements that need to be followed.

This text makes an excellent self-study guide for the NICET Automatic Sprinkler Layout and Detail certification program and covers all of the work elements necessary to achieve Level 2 certification and many of the elements needed to achieve Level 3 and Level 4 certification. Even if you are not studying for a NICET exam, this text makes an excellent self-study guide for anyone wanting to know more about fire sprinkler systems.

The text retails for $95 (plus S&H) to members of the NFSA and $145 for non-members (plus S&H). However, as an extra added bonus, to reward the people that purchased the first edition of the book, if you clip Ken Isman's picture out of the 1st Edition back cover flap and send it back to us with your order (mail orders only, no fax orders for this offer), then you can take another $10 off the price of a single book ($70 + S&H for members and $120 for non-members). To get your book, fill out the following form and return it with your payment.

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By Roland Asp

Residential Sprinkler Systems – NFPA 13D

NFPA 13D, *The Standard for the Installation of Sprinkler Systems in One- and Two Family Dwellings and Manufactured Homes* was originally developed in 1975 as part of the effort to respond the residential fire problem. This problem is simply that people are dying in their homes as a result of fires. The 1973 report "America Burning" highlighted that approximately 80 percent of the structural fires in this country occur in residential occupancies along with approximately 80 percent of the fire deaths. NFPA 13D was developed to counter these staggering statistics while allowing these systems to be economical to install.

NFPA 13D has been revised many times since it was first issued but its core principles have not changed. This standard has proven effective in reducing the loss of life in residential homes.

Despite this, many of us in the sprinkler industry look upon NFPA 13D as a watered-down version of NFPA 13. We tend to view NFPA 13D as NFPA 13 - light version and dismiss the challenges of the layout of these types of structures. The fact is that residential homes, based upon their nature and the scope of NFPA 13D, provide unique challenges to the layout technician and the same care and diligence must be given to these life safety systems as we give to large high hazard commercial structures. Running pipe throughout a home is usually more difficult than doing it in an industrial or commercial building.

This article will outline the layout process for a NFPA 13D system and highlight some of the unique challenges of these specific residential occupancies. It is not the intent of this article to discuss all specific rules and requirements but will go over the overall process. By following this process, the specifics of NFPA 13D requirements and the life safety benefits of these systems will be addressed.

Before we get into the specifics and challenges of NFPA 13D layout, it is important for us to take a look at the scope of NFPA 13D and understand how it differs from the more familiar NFPA 13 standard. NFPA 13 is intended to provide a reasonable degree of protection for life and property from fire. In contrast, NFPA 13D is intended to significantly improve the chances of occupants to escape unharmed from a fire. There is no property protection claim in this standard, although in many cases, the NFPA 13D system will control or limit the fire to the room of fire origin. In a fire situation in a one or two family house equipped with a residential sprinkler system, the occupants will be able to escape injury and loss of life. This is the overriding purpose of NFPA 13D sprinkler system.

Another goal of NFPA 13D, although one that is not specifically stated in the standard, is to enable the homeowners to afford to install these life safety sprinkler systems. If these sprinkler systems were such that no one could afford to install them, the entire purpose of NFPA 13D, to save lives, would not be achieved. These cost saving were achieved by allowing the system to work as intended with a much smaller water supply then those found in NFPA 13 and by allowing sprinklers to be omitted in certain areas of the dwelling where deadly fires don't tend to start.

NFPA 13D does not require the submittal of system plans, but they are required by most jurisdictions. Those of you that are familiar with the NFSA publication "Layout, Detail and Calculation of Sprinkler Systems" are aware of the 12 step process for the layout of sprinkler systems. This same process can be used for NFPA 13D systems; however some adjustments will be needed. This 12-steps process, adjusted for NFPA 13D systems, is as follows:

Step 1 - Define the Hazard

This is simple in an NFPA 13D system. By determining that NFPA 13D is the appropriate installation standard, the hazard has been defined. The structure has been determined to be a one or two family home or manufactured home. Unlike

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Technical Services

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NFPA 13, the hazard is not subdivided into distinct hazard classifications with specific installation rules. It should be noted here that NFPA 13D does not include a size limitation to the residence being protected. A lavish 25,000 square foot home is protected by the same minimum requirements as a more modest 1,500 sq. ft. home (although the designer is certainly permitted to upgrade the provisions of the sprinkler system if property protection becomes an additional goal). Townhouses, if constructed such as the building codes recognize them as separate structures, are also within the scope of NFPA 13D.

Step 2 - Analyze the structure

This step is vital to the proper layout of any sprinkler system and in residential structures this step is equally important. The importance of this analysis cannot be overstated. Residential houses contain many design features that directly impact the layout of the sprinkler system and the layout technician must be knowledgeable of residential construction techniques.

One aspect of residential construction that creates challenges to the layout technician is the various ceiling configurations that are popular with today's residential homes. It is becoming increasing rare to find the standard flat ceilings in residences. Sloped ceilings, tray ceilings, beamed ceilings and cathedral ceilings are just some of ceiling types we must contend with. With creative thinking and the installation rules contained in NFPA 13D, these types of ceilings can be adequately protected.

As we seldom have dedicated spaces to run sprinkler pipes in residential homes, we must run our pipes within the partition stud space and ceiling joist channels. Due to this limited space available for piping, sprinklers and other necessary equipment, it is very important that the layout technician be familiar with the specific construction details of the residence. Of particular importance, aside from ceiling configuration, is joist direction and location and type of structural beams. Homeowners seldom want to see the sprinkler piping, so we must find ways to efficiently route our pipes within the confines of the specific construction. We must be able to run the piping in the internal walls and ceiling joist channels. As we are typically limited to running the sprinkler pipe within the joist spaces, the best routing would be parallel to the joist direction; however, residential structures will contain structural beams which pipes may not be able to penetrate. A careful review of the structural plans will allow us to determine efficient pipe routing while avoiding these obstructions.

Since architectural plans for residences are not always as comprehensive as those for commercial occupancies, a greater "feel" for the structure specifics can be found with a site visit. If possible, a site visit is well worth the time and will help to develop a more efficient sprinkler layout. In some existing structures, horizontal sidewall sprinklers with piping run along walls and concealed by soffits may be appropriate.

Step 3 - Determine the Water Supply:

Although NFPA 13D requires a much smaller water supply then a traditional sprinkler system, the available water supplies for these homes are also limited by their residential nature. The water supply may be a connection to the municipal water main, a tank with a pump, a pressure tank or even a well pump.

Regardless of the type of water supply chosen, it must be able to provide sufficient flow to the design sprinklers (usually 2). For stored water sources the minimum duration of the water supply must be ten minutes. This duration may be reduced to seven minutes for certain small one story homes. The challenge in choosing a water supply for NFPA 13D is cost and availability. The technicians must weigh all associated costs of the chosen supply. For example, a connection to the city main, where available, must include the costs associated with a larger water line, larger water meter and the possible addition of a backflow prevention device.

In contrast if a tank with a pump is chosen, one must account for cost of the equipment itself (tank, pump and associated appurtances). Also, although the required tanks capacity may only be 300 gallon to 400 gallons, adequate space in the residence must be available. Consideration must be given to physically fitting the tank unit through doorways to the allotted location.

Step 4 - Select System Type:

There are two basic types of sprinklers systems commonly used in NFPA 13D systems. Stand-Alone Systems and Multipurpose Piping Systems. Each type has variations and benefits. The technician needs to determine which type of system would be best suited for a particular project.

Stand alone system are systems where the aboveground piping system only serves the fire sprinklers while multipurpose system piping is intended to serve both domestic and fire sprinkler needs. A potential useful variation on the standalone system is the passive purge sprinkler system. This is system that serves a single toilet in addition to the sprinkler system. The possible advantages of this system is that the toilet will purge excess pressure from the system and the rating of the pipe can be reduced to 130 psi and it may be possible to eliminate a backflow preventer on the system.

Step 5 - Determine Freeze Protection

Protecting piping from freezing is huge issue in NFPA 13D, but is one that can be simply dealt with. In light of the antifreeze solution concerns of recent years, the use of antifreeze to provide freeze protection is not as attractive as it once was. Fortunately, a thoughtful layout of the system can provide a simple and cost effective means of protecting the water filled pipe from freezing. The best solutions to most problems are usually the simplest and this is the case with freeze protection in residential homes; simply run the piping within the insulated envelope of the building. This may include using sidewall sprinklers on the upper floors with the piping run within interior walls or the use of tented insulation over piping above the ceiling. The use of tented insulation has been proven an effective means of protecting piping from freezing but some thought must be given to its installation. It may prudent to figure in the cost of box-

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ing in the insulation to ensure the freeze protection capabilities of the insulation is not disturbed.

If sprinklers and piping must be run in spaces that are expected to freeze there are many options: Listed dry pipe system, antifreeze solution installed in compliance with NFPA 13D, dry sprinklers and even listed heat tracing.

It is the responsibility of the layout technician to choose the best method for a specific situation while taking into consideration, cost, complexity and maintenance of the various methods.

Step 6 - Determine Sprinkler Types.

NFPA 13D makes the decision relatively easy. The sprinklers, except in limited situations must be listed residential sprinklers. The exception is that quick response sprinklers are permitted to be used for certain spaces such as mechanical rooms, saunas and steam rooms. Additionally quick response dry sprinklers may be used when extended into unheated areas not intended for living purposes.

The more difficult decision is which residential sprinkler to use. The various manufactures offer a wide variety of residential sprinklers and the choice will depend on cost, availability, discharge characteristics and aesthetics. In residential homes aesthetics play an important role and the architect and homeowner should be consulted prior to deciding.

Step 7 - Determine Materials and System Attachments.

NFPA 13D regards a wide variety of piping as acceptable. Piping and tubing which may be considered is steel pipe, copper tube, CPVC and PEX tubing. Each of these materials has their advantages and limitations and the layout technician must carefully review the available materials to determine the best piping for a specific job. Steel piping has the advantage of being a familiar material to the installers but it may be difficult to run this pipe with it larger outside dimensions in the limited space available in 2x4 interior walls and due to its c-factor larger piping may need to be utilized. CPVC has the advantages of a favorable c-factor and reduced installation costs but care must be taken with exposure to non compatible materials. Copper is costly and PEX is limited due to its 130 psi rating.

In NFPA 13D systems, very few of the components are required to be listed, only sprinklers and special pipe. Hangers only need to be acceptable to the local plumbing code unless the special listing for the pipe used requires specific hanger types. Other types of equipment such as tanks, expansion tanks, pumps, waterflow devices and valves are not required to be listed.

Step 8 - Determine which spaces require sprinklers

NFPA 13D does not require sprinklers to be installed everywhere in the building. This results in a tremendous cost saving while maintaining the life safety provisions of the standard. NFPA 13D permits sprinklers to be omitted from the following locations:

- Bathrooms less the 55 sq ft
- Clothes closets, linen closets and pantries that meet all of the following:
  - Less than 24 sq ft
  - Least dimensions is 3 ft
  - Walls and ceiling finishes of noncombustible or limited combustible
- Garages, open attached porches, carports and similar structures
- Attics, machine rooms crawlspaces and concealed spaces that do not contain fuel fired equipment
- Covered, unheated projections at entrances and exits, as long as there is another means of exit.
- Small ceiling pockets. It should be noted that ceiling pocket rules of NFPA 13D are more restrictive than those of NFPA 13 and the volume of these unsprinklered pockets are restricted to 100 cu ft

Step 9 – Determine Local Requirements

Although NFPA 13D has well established and proven effective minimum criteria for sprinkler systems, many local jurisdictions have additional requirements that must be met.

It is common to require backflow prevention on the sprinkler system. As this is determined by the local water purveyor, the requirements for backflow prevention vary by jurisdiction. Generally, a water only standalone sprinkler system will require a double check valve assembly while a system that includes antifreeze solutions will require the more expensive Reduced Pressure Zone Assemblies. Multipurpose and passive purge type systems may not require backflow prevention because the water in these systems does not stay sitting in the pipe, which makes them more akin to domestic water systems.

Another requirement of many water purveyors is for a water meter to be installed on the sprinkler system when the water supply is the city main. While the preferred arrangement shown in NFPA 13D does not include a water meter, it is recognized that many water purveyors will require the addition of a water meter and this is acceptable in NFPA 13D. If a water meter is required, the meter must be sized to handle the flow of the sprinkler system and the friction loss taken into consideration.

Another common local requirement is the addition of waterflow alarms. NFPA 13D does not require waterflow alarms as long as the home is equipped with smoke detectors in conformance with NFPA 72 but many jurisdictions have adopted requirements for a waterflow alarm over and beyond the requirements of NFPA 13D. Many homes today are equipped with a security/fire alarm system and the sprinkler waterflow detector can be interconnected with the alarm panel.

One additional requirement may be to install sprinklers in locations not required by NFPA 13D. There are jurisdictions that require sprinklers to be located in bathrooms, closets, garages and attics regardless of what NFPA 13D says about these spaces. These requirements must be known to the layout technician. Obviously these additional areas will require more sprinklers but they may also require different freeze protection criteria. Unheated garages may be sprinklered with quick response dry sprinklers but sprinklering an unheated attic space is a significant challenge which may require the use of a listed dry system.

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Step 10 – Perform System Layout

We are now ready to layout the sprinkler system. We have reviewed the construction of the house, determined the water supply and system type, chosen the sprinkler type and material to use, chosen a method to protect our piping from freezing, determined which spaces require sprinklers and have researched local requirement for the system. The preparation has been completed and the sprinkler locations, spacing and pipe routing can be determined.

It is at this stage that the thorough analysis of the structure as outlined in step 2 pays dividends. The building plans and site visit will help the layout technician to properly space and locate the sprinklers and to determine the best pipe routing. Remember that it is easy to run piping on paper (or on CAD plans) but the installers must actually run the piping as per the layout. If the layout indicates the piping to run perpendicular to joist direction, the installer will need to drill holes in all the joists. Or if the plans show the piping penetrating a structural beam, the architect/engineer may need to be consulted.

One situation which is quite common in residential layouts is to run the piping within interior walls and feeding sidewall sprinklers. This layout on the top floor of homes allows all piping to be within the insulated envelope of the building and to avoid freezing conditions. However if this piping is run over door openings and the opening includes a solid header, it is not possible to run the pipe in this manner. These types of situations are better avoided in the layout process then during installation.

It is the responsibility of the layout technician to provide a system layout that results in the most efficient and cost effective layout while adhering to the installation rules of NFPA 13D and site specific conditions.

As stated earlier, NFPA 13D does not require the development, submittal or approval of sprinkler plans. However, most jurisdictions that adopts requirements for single family homes to be sprinklered, also add the requirement for sprinkler plans to be submitted and approved prior to installation.

Just like working plans for an NFPA 13 system, these plans must be clear and unambiguous and be sufficient for the plan reviewer to ensure that all applicable requirements are adhered with. There must also be sufficient detail that those in the field can install the system as designed.

Step 11 – Size Pipe and Confirm Discharge.

Once the system has been laid out, the adequacy of the water supply to provide sufficient flow and pressure must be determined. NFPA 13D allows this to be determined by hydraulic calculations such as those used in NPA 13 or by two simple estimation techniques: one is the prescriptive pipe sizing method and the other is a simple pressure loss method as outlined in NFPA 13D.

Based upon one of these calculation methods, the piping is sized and determined to be adequate to provide sufficient flow and pressure to the design sprinklers. Although the sprinkler demand for NFPA 13D is quite low compared to an NFPA 13 system, the pipe sizes are much smaller and friction loss must be carefully calculated. Water meters and backflow preventers in particular lead to significant pressure loss which must be incorporated into the calculations. The pressure loss due to elevation of the highest sprinklers must be included.

Step 12 – Add Notes and Details.

The layout plan for the NFPA 13D sprinkler system is in effect a communication tool. These plans must clearly impart the intent of the layout to the AHJ, the homeowner, the architect or design professional and most importantly the installer in the field. The plan must have sufficient details so that the AHJ can confirm that the system will meet the requirements of NFPA 13D and applicable local requirements and also provide adequate information to permit installation in the field.

Details that should be included with the plans/submittal package are:

- Water supply/Riser schematic
- Freeze protection methods
- Sprinkler data sheets including make and model, deflector distance from ceiling and maximum spacing / coverage area and mounting details
- Pipe material and sizes
- Hanger spacing and type
- Required equipment and specifications (backflow preventer, drains, etc)
- Calculation or water demand estimation

As outlined in this article it is clear that the layout of an NFPA 13D sprinkler system is a complex endeavor and one which must be approached with sufficient preparation, diligence and knowledge. NFPA 13D states in Chapter 4 that "The layout, calculation, and installation of sprinkler systems installed in accordance with this standard shall only be performed by people knowledgeable and trained in such systems". As the standard uses the word "shall" this is a requirement and one that should not be taken lightly. As NFPA 13D is primarily a life safety standard, the stakes are high. It is certainly the responsibly of all who perform layout and installation of NFPA 13D sprinkler systems to approach these projects with the same amount of preparation, knowledge and care that one would approach a NFPA 13 compliant system.

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The NFSA has developed a variety of training resources aimed at NFPA 13D systems. In addition to the NFSA publication "Layout, Detail and Calculation of Sprinkler Systems", we have developed a series of Tech Tuesday online seminars which directly address the NFPA 13D system requirements. These online seminars may be accessed through our websites: www.nfsa.org and www.nfsa.tv.

FIELD OPS

BIOGRAPHY:

Dominick is the New York Regional Manager and an Associate Director of Regional Operations for the National Fire Sprinkler Association and has been with the NFSA since 2001. As a Regional Manager, his passion lies in educating the public, government officials, and fire protection professionals about the facts and benefits of the fire sprinkler concept. Dominick works closely on legislative issues both at state and local levels and as an Associate Director, across the northern half of the United States working with six other Regional Managers on their key issues as well.

Dominick began with the fire service in 1974 in suburban northern New Jersey achieving several years in the officers' ranks and obtaining certifications in Firefighter I, II, and III, Fire Inspector I and II in NJ as well as National Fire Academy Fire Officer II. He also certification as a NJ Fire Instructor I and II and NJ State Police Hazardous Materials Instructor while employed at the Bergen County (NJ) Fire Academy as a primary fire instructor. He gained experience in legislative matters as a volunteer advocate with the Pennsylvania Fire & Emergency Services Institute by promoting not only firefighter issues, but also adoption of the first statewide Pennsylvania building code.

Dominick is a NFPA Certified Fire Protection Specialist®, a NY State Certified Code Enforcement Official, and serves on the NFPA 1031 "Inspector and Plans Examiner" Committee and the NFPA 101 & 5000 sub-committee for "Educational and Day Care Occupancies", and a former member of the Board of Directors for the NFPA Fire Service Section. Dominick is also a contract instructor for fire code programs with the International Codes Council, a member of the American Water Works Association (AWWA) serving on the Fire Protection Committee as well as a member of the United States Green Building Council. The NFSA Board of Directors recently developed a Green Committee of which Dominick is the Secretary.

Aside from daily duties in membership retention and recruitment, scheduling seminars across NY, and working with contractors, professionals, and code officials in understanding the NY State and NY City codes, Dominick has several focus areas he is tasked with for the NFSA with most concentration on Green Construction, Water Purveyor Issues, and Tort Reform.

Dominick has been awarded commendations in both the fire service and the military as he had also spent four years active service with the U.S. Army. •

NAME: **DOMINICK KASMAUSKAS**

TITLE: **ASSOCIATE DIRECTOR OF REGIONAL OPERATIONS - NORTH**

REGION: **NEW YORK**

SQ – Dominick, tell SQ readers what key issues you as NFSA's Associate Director of Regional Operations – North and New York Regional Manager are working on right now?

Dominick – The last few years I have been a strong proponent of NFSA needing a full-time marketing department with focus on two issues: What are we missing and what are we not advertising enough to get those fire sprinkler contractors who are not members yet to join and to support their own industry and see the benefits of NFSA membership? I do not hesitate in letting it be known that if NFSA were not here or downsized, preparations should be made for a dwindling market. Fire sprinkler contractors need to fully comprehend the connection between the work of NFSA staff and the flourishing sprinkler markets in which all fire sprinkler contractors compete. That without NFSA there would be no sprinkler markets; no residential, no retrofit, no ITM, nothing, period.

Secondly, marketing of the fire sprinkler concept to the public. The "public" being not only building owners of commercial buildings (high rise or strip mall), but also homebuyers/homeowners to understand that it is not only allowable to install fire sprinkler systems in homes (because many people do not know they are "allowed" to install fire sprinklers in houses), but it should be encouraged. Somehow, small business owners (under 12,000 sq ft) and new homebuyers need to be made to want fire sprinkler systems as much as they want carpeting or the best windows or granite counter tops. The latter is more of a Home Fire Sprinkler Coalition issue, but I think something is missing and we need to find out what that "something" is.

- NY State references NFPA 25 statewide under the Fire Code of NY State and in NYC through the Fire Code of NYC, but enforcement is not nearly statewide. Some areas are lacking a program or willingness to look at a building's inspection reports and to follow up on deficiencies. I personally have done dozens of programs for code officials and have many more scheduled, but I think we need some teeth through legislation to get building owners more encouraged to have deficiencies corrected readily.

- As Associate Director, I work with 7 other NFSA regions to see what their needs are as well as collaborate on future direction and perceived needs. I also interface with all Regional Managers on several issues and committees within Regional Ops. Most recently, due to a mutual program we needed, the South

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Central Regional Manager and I have hammered out a two hour program that works for both firefighters as well as code officials regarding fire department operations with standpipes and fire sprinkler systems. This program not only covers why "fire sprinklered buildings burn," but also the importance of NFPA 25 enforcement and how systems need to be checked and put back into service after an activation. And that is only one small example of many projects we work on to address regional needs.

- As of this writing, the fire sprinkler issue for new homes is still not settled for the 2014 Residential Code of New York State. I am working closely with other associations affiliated with firefighters and code officials to continue to impress upon the State Codes Council that this section must not be deleted when adopted.

- One of my pets has been working with the media to address every negative fire sprinkler story that arises in my Region. I keep track of "sprinkler" and "fire sprinkler" items in the news by using Google Media Alerts. Often these news items are about water damage or costs and with assistance from our Communications Department and PR firm, I am able to address these items in a timely manner. On occasion we get a "win" and are published and sometimes we are invited on camera. At least the journalists, after 9+ years of dealing with me, are getting one heck of an education on fire sprinklers and they know they can turn to the NFSA as a resource when reporting on fire related incidences.

- One major item I have been planning regionally are Area Interest Meetings (AIM). I hope to get AIMs up and running quarterly to work together on legislative issues and local issues as well as provide quality speakers on technical as well as business issues. I am also looking at venues to start a Regional Conference & Expo during the NFSA non-expo years as we once were.

SQ – Dom, one of the areas of interest you mention you are working on right now are forming AIMs. What are they and why are they important to the NFSA?

Dominick – AIMs give fire sprinkler contractors a chance to gather together (after checking their guns at the door) and work on common issues to advance everyone's businesses. AIMs provide opportunities to bring in HR and insurance specialists, retirement planners and NFSA technical staff. A huge issue is the lack of fire sprinkler contractor licensure and a discussion needs to be made regarding how to proceed. Too much business is lost to "fly-by-nights" and other trades dabbling in fire sprinkler installation. The scary part is the number of fire sprinkler systems that may be out there that were installed by those who aren't competent. In many areas there are no competency requirements to install fire sprinkler systems and contractors aren't held to any insurance coverage minimums or continuing education requirements.

SQ – Dom, I understand you have strong interest in Green construction. What is the relationship at present between Green construction and the fire sprinkler industry?

Dominick – The best way to show this is using the FM Global data garnered from live burns performed with the Home Fire Sprinkler Coalition in 2009. Two living rooms were set up in the FM Global test facility in Rhode Island, one with fire sprinklers and one without that benefit. These Living Room tests showed over 90% reduction in release of toxic gases (many of them known greenhouse gases and many more are carcinogens), over 90% less water used to control the fire, and 90% less material to be dumped in our landfills. This translates to commercial as well as residential. Then we can get into discussions about less fuels being wasted by fire apparatus, the less medical waste because burn injuries are reduced, and the gfriends aren't here to enjoy it?

SQ – What has New York state been doing to address residential fire sprinkler issues in the IRC?

Dominick – As noted earlier, the 2014 Residential Code of New York State is now being finalized and it will probably be on the agenda for the State Codes Council's upcoming meeting. I was appointed a member of the Residential Fire Sprinkler Work Group a few years ago to publish a report for the State Codes Council and again this past spring to update the report we published. The report portrayed the debate evenly, which unfortunately did not necessarily promote fire sprinklers as they should have been. The past two years I have been a resource to other organizations that are pushing the agenda; mainly fire service organizations as well as the New York State Building Officials Conference.

SQ – What do think is one of the most valuable benefits of NFSA membership?

Dominick – Definitely the visibility of the Regional Manager. Whether in the news or in a contractor's office, NFSA Regional Managers are the "ground pounders" representing fire sprinkler contractor interests throughout entire regions of the country. We can't be everywhere at once, but we have our dogs in most fights in our respective regions.

SQ – Any highlights our readers can look forward to in the near future?

Dominick – I look forward to bringing increased value to those who are members and supporters of the NFSA. Increased by more involvement in state issues such as Variance Boards (of which New York State has seven), local issues in helping develop local ordinances, known as "More Restrictive Local Standards" in New York, which may be above the state code requirements, and finally, but not less importantly, developing and scheduling AIMs and regional conferences and symposiums to help our members in their business growth.

SQ – Thanks, Dom.

FIELD OPS

BIOGRAPHY:

In addition to his responsibilities as Associate Director of Regional Operations – South for NFSA, Wayne Waggoner also serves the membership as Southeast Regional Manager. His area includes the states of Tennessee, Mississippi, Georgia, Alabama and North and South Carolina where he works to promote the NFSA mission "To create a market for the widespread acceptance of competently installed automatic fire sprinkler systems in both new and existing construction from homes to high-rise." Among his many activities in the southeast region, Wayne is currently the Executive Director of the Tennessee Fire Sprinkler Contractors Association – a chapter of NFSA, one of NFSA's most active and supportive chapters.

A 40-year fire service veteran, Wayne got his start in 1974 as a volunteer firefighter in Felton, Delaware while serving in the United States Air Force. Before serving as Knox County as the Fire Chief for three years with Rural/Metro Fire Department, he was the first Fire Marshal in Knox County, Tennessee, a position that he held for over 14 years.

In recognition of his exemplary work for the cause of fire safety, in 1989 the Eveready Battery Company named him "National Fire Preventer of the Year." Also in 1989, Operation Life Safety presented Wayne with its annual Commitment to Life Safety Award. In June 2002, Wayne received the prestigious H.D. Crossnine award given to him by the Southeastern Association of Fire Chiefs.•

NAME: **WAYNE WAGGONER**

TITLE: **ASSOCIATE DIRECTOR OF REGIONAL OPERATIONS - SOUTH**

REGION: TENNESSEE, MISSISSIPPI, GEORGIA, ALABAMA AND NORTH AND SOUTH CAROLINA

SQ – Wayne, what do you think the vision of Regional Operations is for NFSA?

Wayne – Regional Operations is the grassroots portion of the NFSA, with all of the great programs and departments that NFSA has, Regional Operations is the one group of folks that interacts with our contractor members, fire and building officials, architects, engineers and suppliers and manufactures almost on a daily basis. In a manner of speaking, Regional Op's is the lifeline to our membership.

SQ – As the Executive Director of the Tennessee Fire Sprinkler Contractors Association – a Chapter of NFSA, what are your responsibilities?

Wayne – As the Executive Director of the Tennessee Fire Sprinkler Contractors Association (TFSCA), I am responsible for arranging our bi-monthly meetings, producing meeting agendas and coordinating the work of our Education, Legacy, Strategic Planning and Membership Committees. I also work closely with our State Legislature to move sprinkler industry-friendly legislation through the legislative process. But, one of my most important roles is bringing NFSA services to the members of the Tennessee Fire Sprinkler Contractors Association.

SQ – It sounds like the chapter in Tennessee is very active. How often do they meet?

Wayne – We meet every other month during the year. We start in January and continue meeting through March, May, July, September and November. Three of the meetings every year are rather unique. The first one is in March where we have an all day training class that is offered to members and AHJ's at no charge. That meeting is arranged by our Education Committee. The May meeting is dedicated to hosting our Annual Associate Members Appreciation Cookout. It's held in Nashville every year and those in attendance will tell you the catfish fry and BBQ are the best anywhere. The last special event of the year is held in September when we have our Annual Fall Fling.

SQ – Earlier you mentioned the Tennessee chapter's Annual Fall Fling. It sounds like great fun. What's it all about?

Wayne – The Annual Fall Fling is usually held in Pigeon Forge, Tennessee, located at the foot of the Great Smoky Mountains in the East Tennessee region. It's a three-day event that is centered on our members bringing their families so that they can enjoy the mountains of East Tennessee. During the "Fling" we have a full day of training, a general business meeting, a meet and greet and a banquet. During the banquet we review the year's events and what has happened within the fire sprinkler industry. A highlight of the event is the presentation of the Pat Meyer Award, which is the TFSCA equivalent to the Golden Sprinkler Award.

SQ – One final question, Wayne. What are the key issues affecting the fire sprinkler industry in Tennessee and the South?

Wayne – The single most important issues that consume the majority of my time are residential fire sprinkler related. As most would know, the home building industry spends a lot of time and money on having the fire sprinkler code requirement removed from the Model Building Codes, which in turn means that Regional Operations spend a lot of time trying to keep the fire sprinkler code requirement in the Model Building Code. Protecting our industry is one of the major parts of a Regional Manager's job. And in today's political climate, with folks not wanting

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government to mandate anything, this is getting harder and harder to do. One of the most difficult points to make with home builders and government officials while discussing sprinkler requirements, is that they are not a mandate, but rather a minimum life safety code requirement. That if you take something as important to life safety as residential fire sprinklers are out of the building code, you are laying the foundation for substandard housing. It is very important that Regional Operations continue to operate like they do today so that we can continue to Promote, Protect and Strengthen the Fire Sprinkler Industry.

SQ – Thank you, Wayne.

Part III of IV

The Role of the Authority Having Jurisdiction

By Jason Webb

Of all the primary stakeholders in the ITM process, the role of the authority having jurisdiction, or "AHJ", is perhaps the most misunderstood. In the last ITeM installment, we discussed the responsibilities of the owner and how they are clearly spelled out in NFPA 25. Likewise, the role of the contractor is fairly well known, which we will detail in the next edition. But the role and responsibilities of the AHJ aren't as clearly spelled out and their level of involvement in the ITM process can vary widely from jurisdiction to jurisdiction.

Before we can discuss the role of the AHJ though, it is important to understand who we are talking about. With the other stakeholders, it's relatively simple. After all, the owner is the owner and the contractor is, well... the contractor. But when we are talking about the AHJ, it may not be so straightforward. NFPA 25 (and other NFPA documents) defines AHJ as "an organization, office, or individual responsible for enforcing the requirements of a code of standard, or for approving equipment, materials, an installation, or a procedure."

The AHJ may be one person, like a fire marshal, or an organization, like an insurance company. There may also be multiple AHJ's for a single facility. It is important that the owner and contractor fully understand who the AHJ or AHJ's may be. In almost all cases, the role of the AHJ is not one of performing a service like flowing water or even inspecting a system component for compliance with NFPA 25. Their role is one of consultation and approval of what others have done. For the owner or contractor, failing to obtain the proper approval from the right people can sometimes lead to serious problems.

Another important definition involving the AHJ is the term "approved". Approved simply means "acceptable to the authority having jurisdiction". Like other standards, NFPA 25 requires approval from the AHJ for many things including using a risk analysis to alter testing frequencies or for a performance-based program.

"...NFPA 25 (and other NFPA documents) defines AHJ as 'an organization, office, or individual responsible for enforcing the requirements of a code of standard, or for approving equipment, materials, an installation, or a procedure.'"

Reviewing ITM records, following up with owners to ensure proper action was taken when deficiencies were identified, and approving plans for system updates following a change are all typical roles of the AHJ. While having an understanding of system components and how they work is important, it may not be as crucial with NFPA 25 as with other standards. As long as the AHJ knows what water-based fire protection systems a facility has, and what components those systems contain, he or she can perform their function in the process just by having a copy of the standard to reference.

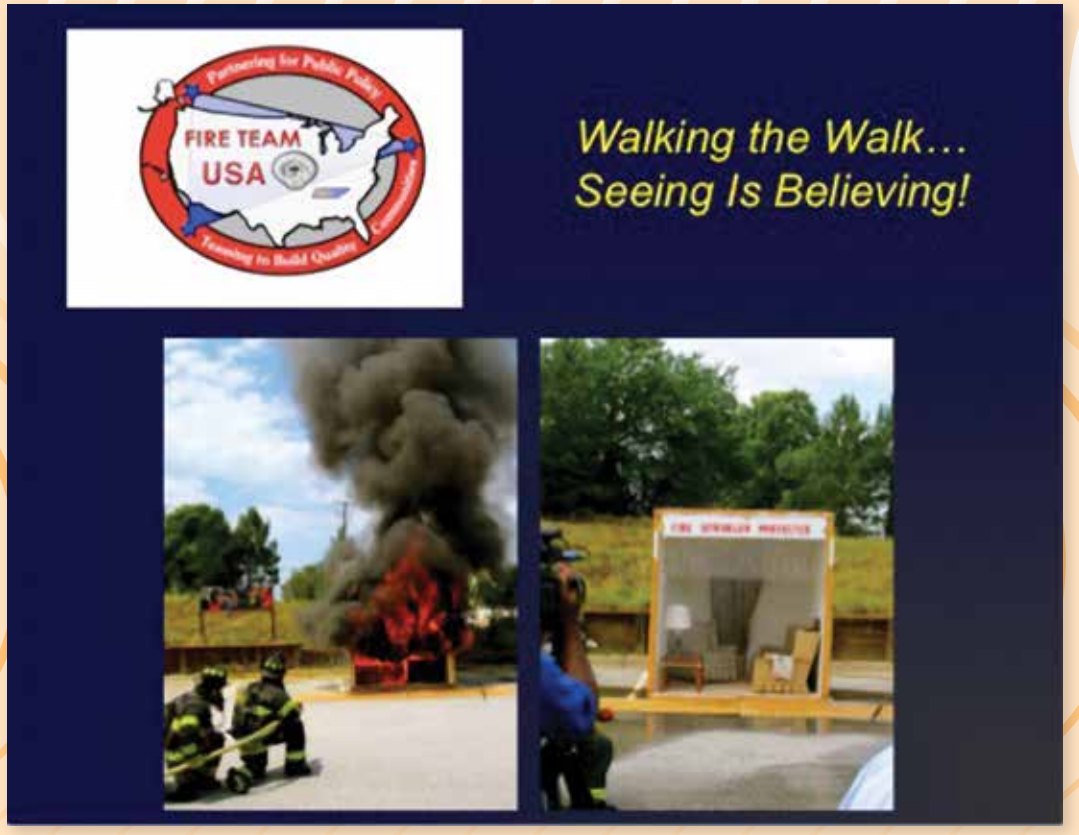
It could be said that much of what the AHJ is responsible for in the ITM process can be done from the office. But that certainly doesn't diminish the importance the AHJ taking an active role in the process. Their role is no less critical than any of the other stakeholders. In fact, they can be the driving force behind the successful implementation of the NFPA 25 ITM program.

In these tough economic times, many AHJ's find themselves having to try to do more and more with fewer and fewer resources. Because of the unique way that the standard is written and the ITM process is designed to flow, an NFPA 25 enforcement program can help alleviate those tough realities, not make them worse. Where NFPA 25 is actively enforced, there are often stories of AHJ's seeing fewer deficiencies year after year actually reducing their workload while helping to keep communities safe.

Director of
Inspection, Testing
& Maintenance

Jason Webb

Pictured is NFSA Director of Public Fire Protection Vickie Pritchett with Kitchen Table panelists; Chief Ron Siarnicki, Executive Director of the National Fallen Firefighters Foundation, Chief John Buckman, former IAFC President; Chief Fred Windisch, VCOS Board member and Chief of Ponderosa Fire Department; Chief Shane Ray, South Carolina State Fire Marshal; and Dan Madrzykoski of NIST.



Here you see a comparison at one of our Fire Team USA workshop deliveries. We are grateful to the Home Fire Sprinkler Coalition for helping with the Side-by-Side demonstrations, especially their Built for Life Fire Department grant programs that allows fire departments to create the events on their own. For more information, visit www.homefiresprinkler.org.

By Vickie Pritchett

Notes from the Fire Scene

It's a new year with new opportunities for us to expand our work and make an even bigger difference! I hope everyone enjoyed a wonderful holiday season and we're all ready to embrace 2014 with a can-do spirit. The opportunities that await us excite me because we are in a position to help build fire-safe communities with our work. It simply doesn't get any better than that.

The theme of this issue of SQ hits home because of our work through outreach and partnerships with national fire service organizations. We know where people are dying... in their home. A focus on residential offers us a great opportunity to save lives and make the differences that matter most. Installing fire sprinklers in new homes has a great, positive impact on our national fire problem. It's our job to share the information that supports that. Lives will be saved as a result of our work – firefighters and citizens alike.

From a strategic standpoint, I realize that residential is a relatively new market for many contractors. However, I would like to ask each of you to evaluate how residential might fit into your future and approach the topic with an open mind. The fact is, we need more residential contractors as more states and local communities adopt codes requiring the installation of fire sprinklers. Local fire service officials are turning to us for more information in helping local homebuilders find qualified installers and also in educating policy makers.

We have a strong history in our outreach for this with both Fire Team USA and Common Voices. Grassroots outreach has proven to work best as we focus on education and sharing the facts that we know. Let's take a look at the three key messages that Common Voices advocates use to frame the fire problem and solution:

1. Fire sprinklers save lives, prevent injuries, and protect property – so we support the installation of home fire sprinklers in all new one- and two-family homes.
2. Fire sprinklers are a critical part of a fire protection package, which includes working smoke alarms, a family escape plan, and the installation of home fire sprinklers.
3. We have first-hand experience with the effects of fire, understand the devastating impact of fire on our lives and communities, and know our efforts will prevent future injuries and deaths.

These three points are supportive of the United States Fire Administration's Fire Is Everyone's FightTM program and also of the National Fallen Firefighters' Foundation 16 Firefighter Life Safety Initiatives (with Initiative #15 specifically stating the importance of code enforcement and the installation of fire sprinklers and one and two family dwellings.) I was recently honored to facilitate a "kitchen table" discussion at the Volunteer & Combination Officers Section annual Symposium, which included the NFFF Initiatives, along with the latest research on fire dynamics. The simple truth is fire today is different – the contents of our homes are greater and fire is moving faster and burning hotter than ever!

One of the most compelling cases is built when we create the side-by-side burn demonstrations and show what happens in a room with fire sprinklers and one without. The flashover that occurs, typically in less than 3 minutes, in the non-sprinklered room brings home the message of how fast fire moves and how little time you have to get out. In the sprinklered room, you see the room and contents preserved with the activation of one fire sprinkler head. Those are the kind of "seeing is believing" moments we all need to be a part of! If you are interested in bringing a one-day Fire Team USA workshop to your area (and you should be), please give me a call at 615.533.0305 or 615.446.9011, I would love to talk to you about potential opportunities to expand our outreach with this valuable workshop.

To say that I am excited about our opportunities ahead is an understatement! I hope that the new year brings you all much happiness, healthy families, and most of all... fire safe homes! Working together, we are the trailblazers who know it can be done. As a member of the NFSA team, it's an honor to be a part of this work that matters!

Stay Safe, Vickie

Vickie Pritchett
Director, Public Fire Protection

Home Fire Sprinklers Save Lives and Water

YOUR LOCAL WATER OFFICIALS NEED THIS FREE GUIDE

Of course home fire sprinklers save lives and property. They also save water and reduce pollution. Those are vital improvements to your community. But your local water officials may not realize these benefits. If not, they'll charge too much for sprinkler connections. You can help them learn the facts.

Fire sprinklers control home fires using 90% less water than fire departments use, with fewer persistent pollutants in wastewater. No other home fire protection feature can do the same.

- Home sprinkler systems discharge an average 341 liters per fire* – not a significant demand on municipal water.
- A ¾"meter will accommodate most 1- and 2-family houses.
- Many communities are now offering water supply incentives to reward homeowners for protecting their homes with sprinklers.

Order your FREE Guide today by visiting HomeFireSprinkler.org/water.

Brush up on home fire sprinkler systems by taking a FREE accredited course offered by Hanley Wood at HanleyWoodUniversity.com - search for HFSC.

* Visit HomeFireSprinkler.org for sources.

WHAT YOU NEED TO KNOW

Help water officials in your community learn the facts about home fire sprinkler installations and water usage. HFSC's Guide for Water Officials contains the information they need right now. Order your free kit at HomeFireSprinkler.org/water.

Home Fire Sprinkler COALITION
Protect What You Value Most®

HomeFireSprinkler.org

By Peg Paul

Home Fire Sprinkler Coalition Reaches Target Markets with Target Messages

When it comes to responding to naysayers, there's nothing quite as powerful as a high-profile fire sprinkler save. But don't discount the quieter, day-to-day work of the nonprofit Home Fire Sprinkler Coalition (HFSC), which is effectively overturning negativity and stressing the need for home fire sprinkler installations.

Since it was founded by NFSA, NFPA and AFSA in 1996, HFSC has made targeted outreach its defining quality. Working directly with members of the fire service to determine the problems, concerns and needs they experience locally, HFSC has developed a wide range of free sprinkler materials and activities that replace misinformation with facts. HFSC also leads very effective national educational campaigns to reach influential audiences with needed information. These include local officials, homebuilders, real estate professionals and most recently water suppliers. This targeted outreach increases knowledge and achieves outspoken home fire sprinkler advocates.

HFSC's work has resulted in improved awareness of the danger of home fires and an increased interest in fire sprinkler protection. And while HFSC has kept its focus exclusively on education, fire and other officials routinely and effectively use HFSC's varied materials to help achieve local home fire sprinkler code requirements.

"We've come a long way since HFSC began with sprinkler outreach in a single state," says HFSC's communications manager Peg Paul. "Today, HFSC works nationwide and in Canada, with diverse partners from the private sector and government agencies. We identify what the communication challenges are and we develop materials and activities that expressly address them. Because we are a non-profit educational organization, we have established credibility with the media and other organizations. By providing factual and tailored information to key parties that influence home fire sprinkler interest, we improve knowledge and pave the way for installations."

HFSC's Board of Directors ensures that all coalition activities are targeted and outcome-driven. To stay on track, HFSC evaluates interest, reach, impact and results. One sure sign of success is when HFSC's target audiences reach out independently to request development of new materials. An example of this was when a major homebuilder who was building in an area where fire sprinklers were required asked HFSC if they had information for homebuyers purchasing sprinklered homes. HFSC was later awarded a grant to develop the "Living With Sprinklers" kit with a short video, brochure and hang tag for the riser. Later HFSC received grant funding from Tyco to produce the "Living with Sprinklers in California" video narrated by CA State Fire Marshal Tonya Hoover after builders and sprinkler contractors recognized the need for education that addressed questions specifically for homes built in California. Since 2010, more than 22,000 kits have been distributed to fire departments, builders and real estate professionals to give to people living in sprinklered homes.

"That kind of spontaneous request signals great trust in the quality of HFSC output," says Vickie Pritchett, NFSA Director of Public Fire Protection and an officer on HFSC's Board. "Obviously, documented use of materials is always a good sign. But when the target audience comes to HFSC to request new materials to deal with a specific home fire sprinkler issue, that underscores how important HFSC's noncommercial teaching materials are."

The fire service has always been HFSC's most active partner and a valuable medium for grassroots outreach. One of HFSC's most effective methods for improving home fire sprinkler awareness locally is the BUILT FOR LIFE Fire Department Program. More than 2,500 member fire departments have committed to making home fire sprinkler education a focus of their safety outreach. The BFLFD Program popularized the use of side-by-side flashover and sprinkler demonstrations as an

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Peg Paul

Peg Paul is the Communications Manager of the Home Fire Sprinkler Coalition

Pictured at a recent HFSC Board meeting at NFPA headquarters are (l. to r.) Peg Paul, Communications Manager of HFSC; Jenna Pritchett of the South Carolina State Fire Marshal's office Community Risk Reduction; and Lorraine Carli, Vice President of Communications at NFPA and Chairman of the HFSC Board.

>> CONTINUED FROM PAGE 39

easy and powerful way to underscore the need for fire sprinklers. Thousands of fire departments now use these educational events in their communities, improving awareness and achieving stronger fire code requirements.

HFSC has spun off this tried and true method in new ways in order to reach more people with meaningful sprinkler education. A recent HFSC program helped fire departments partner with vocational schools to teach future homebuilders about sprinklers. "Fire departments worked with local schools to build side-by-side demonstration units, carry out public educational events and teach students about fire sprinkler technology," Paul says. "It was a perfect partnership and many of the departments did burn demonstrations multiple times, attracting large audiences and earning high-profile media coverage."

To learn more about HFSC's unique brand of home fire sprinkler education, visit the website at www.HomeFireSprinkler.org. Also, follow HFSC on Facebook (www.facebook.com/HFSCorg), Twitter (www.twitter.com/HFSCorg), and Pinterest www.pinterest.com/hfsc).

By Trevor Wilson

Why Business Leaders with a Higher Purpose Have More Engaged Employees

H.R. Strategist Shares 3 Tips for Firing up Your Workplace

How many employees roll their eyes during meetings to discuss new initiatives?

How often do they scramble to complete a task not because they love it, but because they're afraid of the consequences if they don't?

How many mutter *"not in my job description"* when asked to assume a new responsibility?

"These are examples of people whose work is providing them with nothing more than a paycheck," says Trevor Wilson, human resources strategist, CEO of TWI Inc., and author of *"The Human Equity Advantage,"* (www.twiinc.com).

"And even though that's ostensibly why we go to work, it's not what gets us excited and enthusiastic about what we do."

The solution, he says starts with business leaders and managers. If their work is not fulfilling any higher purpose for them than making money, they're lacking one of the essential qualities necessary for helping their employees become engaged – and for keeping engaged employees enthusiastic.

"You need to step back and assess your own situation," Wilson says. "Are you driven more by your fears – of not being able to pay your bills, of losing your job, of failing? Or are you driven by the knowledge that you, like every one of us, have the capacity to do amazing things?"

Business leaders who are striving to create something that will leave the world a better place are not only more engaged themselves, they're more likely to do the things that help their employees engage, Wilson says.

"Our search for happiness is our search for our purpose, and we achieve both by bringing all of our skills and talents – our human equity – to the job," he says.

He offers these tips for fostering a culture in which employees are actively engaged:

Use performance evaluations to learn more about your employees' strengths, interests and goals. Each employee has strengths and talents that often go unrecognized – and untapped – in the workplace. Helping them to identify these and use them at work contributes to their feeling that their work has purpose and results in more engaged, productive employees. "People want to bring all their talents to what they're doing – we're happiest when we're doing what we're good at it," Wilson says. "In order to know what those skills, talents, even personality traits are, managers must get to know their individual employees."

Do not treat all employees equally. All employees are not equal and treating them as if they were leaves engaged, enthusiastic employees feeling short-changed and disengaged employees feeling entitled, Wilson says. "Acknowledge and reward employees who are going the extra mile and point out the ways they're contributing that may not be quantifiable or part of their 'job description.' The successful salesman who routinely coaches less successful colleagues is displaying a strength that won't show up on his sales sheet but is, nonetheless, a valuable contribution to the company."

Recognize and reward employees' demonstration of strong values. Values are part of the human equity that all of us bring to work in varying degrees. Honesty, integrity, compassion, work ethic – our best employees usually have these and other strong, positive values. Business leaders may unconsciously recognize them, for instance, by giving a very honest employee their trust, but they should make a point of acknowledging them publicly as well. "Our values are the foundation of our purpose and an expression of our true selves," Wilson says. "Employees who are both able to demonstrate their values at work, and rewarded for doing so, having a greater sense of purpose."

About Trevor Wilson

Trevor Wilson is the CEO of TWI Inc. and creator of the human equity management model. He is the global diversity, inclusion and human equity strategist who regularly speaks at corporate functions. TWI's clients include some of the most progressive global employers in the world, including Coca-Cola, Ernst & Young, BNP Paribas and Home Depot. TWI's trademarked human equity approach was instrumental in catapulting Coca-Cola's South Africa division to the top performing division worldwide.

Trevor Wilson is the CEO of TWI, Inc.

Trevor Wilson

PEOPLE

Elkhart Brass Expands Sales Team

Elkhart Brass expands its domestic sales team with the addition of **Ron Sartin**. As the OEM account manager for the Midwest region, Sartin will focus on enhancing relationships and building partnerships directly with fire apparatus manufacturers in the Midwest Region, which includes the states of Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota, and Wisconsin.

A United States Air Force Veteran who served in Operation Red Flag, an aerial combat training exercise at Nellis Air Force Base in Nevada, Sartin brings over 25 years of experience to the team with expertise in Engineering, Service, Support and Sales of Scientific and Industrial Instrumentation in the United States, England, Japan and China.

Contact Information:

Ron Sartin
OEM Account Manager – Midwest
402-490-7296
rsartin@elkhartbrass.com

EBL's Robert H. Stratemeyer, PE Receives Life Membership Award by the Building Congress & Exchange of Metropolitan Baltimore

EBL Engineers of Baltimore, Maryland, announces **Robert H. Stratemeyer**, P.E. has received the *Life Membership Award* by the Building Congress & Exchange of Metropolitan Baltimore.

The Building Congress & Exchange Life Membership Award is given to a member who has been actively involved in the Building Congress and whose efforts have exemplified outstanding service to the organization.

After serving his 3-year term as a Board of Director which began in 2003, Mr. Stratemeyer began his tour of duty on the Executive Committee, eventually working his way up to President. And on November 6, 2009, when his term as President was over, he thought his work was done. The next year when the current President could not finish the job and the President-Elect was being relocated, the Executive Committee turned to Bob. They needed a strong, respected leader – someone to provide on-the-job-training. Bob's dedication and experience was invaluable, especially at a time when the Building Congress was weathering the stormy economic conditions. He continued on as President through 2011. Bob Stratemeyer epitomizes the type of person who deserves to be a Life Member. Bob is the only 3-term President of the Building Congress & Exchange.

For more information about the Building Congress & Exchange, please visit www.bcebaltimore.org.

The Tennessee Fire Sprinkler Contractors Association elects New Officers for 2013–2015

OFFICERS:

President:
Ken Brinkley, Music City Fire Sprinklers, L.L.C.

Vice-President:
Bill Jones, Tenn-Ky Automatic Sprinkler Co., Inc.

Secretary:
Robby Cornwell, S.C.C. Sprinklers, Inc.

Treasurer:
Paul Satterwhite,
John Bouchard Company

BOARD OF DIRECTORS:

Glenn Cherry, TKO Fire Protection, Inc

Eric Briley, Cumberland Fire Protection, LLC

Richard Smith, Superior Fire Protection, Inc.

Ilke Handloser, I & S Engineering

Jimmy Key, Key Fire Protection

Jim Dunlap – Past President, Fire Protection Systems, Inc.

David Moody – Associate American Pipe Company

NEW ENGLAND REGION

DOMINICK KASMAUSKAS
Associate Director of Regional Operations - North

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

NFSA Attends Connecticut Plumbers Board Meeting

On September 12, 2013 the Connecticut Plumbers Board met. Along with regularly attending associated personnel, were representatives from NFSA, Local 669 and members of the Connecticut Fire Sprinklers Examining Board.

The issue of recent actions of submitting a regulatory and legislative change into the Commissioner of Consumer Protection and into the Legislature that would have allowed plumbers to install residential sprinkler systems up to and including 13R systems came up for discussion. The Plumbing Board apparently knew nothing about this but requested information from some of the attending members.

It was made abundantly clear what the existing statutory requirements are to install a life safety system such as a residential sprinkler system.

The provisions of the statute restrict the installation of fire protection systems to those qualified through training and experience which is 8000 hours of on the job training and 576 hours of related instruction to obtain the F-1 or F-2 fire protection system installer license. It is obvious that the master plumber has not received this training nor does the master plumber have the pre-requisite experience to install the life safety fire protection system.

This issue is not over and bears watching. The Plumbing Board expressed an interest in meeting with the Sprinkler Examining Board and further suggestion was made to reestablish a Task Force to make recommendations.

Dominick Kasmauskas is the NFSA's Associate Director of Regional Operations-North. He can be reached at Kasmauskas@nfsa.org or 1436 Altamont Ave. Suite 147 Rotterdam, New York 12303, Phone 518.937.6589, Fax 518.836.0210.

NEW YORK REGION

DOMINICK KASMAUSKAS
Associate Director of Regional Operations - North

NEW YORK

Kasmauskas Appointed to NY Senator's Council

New York Regional Manager Dominick Kasmauskas, a former fire captain, fire inspector, fire instructor, and NJ State Police HazMat instructor has been asked to serve on NY Senator Ball's Fire Advisory Council. Dom will be working closely with other building, fire, and life safety notables to address top priority Bills to ensure more safety to NY State's citizens and visitors. The Council's first objective is Bill #S5041A to address illegal SROs and other non-permitted or non-code alterations to buildings. The Council will address new legislation during the "off season" too.

Dominick Kasmauskas is the NFSA's Associate Director of Regional Operations-North and Regional Manager for the New York Region. He can be reached at Kasmauskas@nfsa.org or 1436 Altamont Ave. Suite 147 Rotterdam, New York 12303, Phone 518.937.6589, Fax 518.836.0210.

MID-ATLANTIC REGION

RAYMOND W. LONABAUGH
Regional Manager

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

Side-by-Side Burn for the University of Pennsylvania Safety Awareness Day

On September 27th, 2013, NFSA's PenJerDel Chapter sponsored a side-by-side sprinkler burn for the University of Pennsylvania as part of the University's Campus Fire Safety and Emergency Preparedness Day.

Mid-Atlantic Regional Manager Ray Lonabaugh set up the side-by-side demonstration with labor provided by apprentices and trainers from Sprinkler Fitters Local 692. Engine 5 from the Philadelphia Fire Department provided the water supply to the sprinkler and provided the manual fire suppression force for the unsprinklered side. Standing by on the street was Engine 44 and Ladder 6. Fire Commissioner Lloyd Ayers addressed the audience as other top officers of the Philadelphia Fire Department looked on. The Philadelphia Fire Department is a strong fire sprinkler supporter. John Waters, Upper Merion Township Fire Marshal and Pennsylvania Residential Fire Sprinkler Coalition Co-Chair, was the narrator for the side-by-side burn. Dave Kurasz, Executive Director for the New Jersey Fire Sprinkler Advisory Board, was also on hand with the NFSA New Jersey Chapter's Fire Sprinkler Demonstration Trailer.

Shortly after the side-by-side burn demonstration, the top officers of the fire department, including the Fire Commissioner, had to leave in a hurry to respond to a fire in center city. The fire turned out to be in one of their own stations, Ladder 2 located at 4th and Arch Streets. Ladder 2 was out on a training assignment; however, a Medic Unit/Ambulance that shares the station caught fire. The two medics attempted to extinguish the fire with fire extinguishers without success. Ladder 2's Station housed Engine 8 up until four years ago when Engine 8 was disbanded due to budget cuts. Engine 8 was the oldest active fire company in the U.S., its roots date back to the first volunteer fire company in the U.S. organized by Benjamin Franklin. The fire at Ladder 2 shows that no one, not even fire departments are spared from the ravages of fire!

Raymond W. Lonabaugh is the NFSA Regional Manager for the Mid Atlantic Region. He can be reached at: lonabaugh@nfsa.org or P.O. Box 126, Ridley Park, Pennsylvania, 19078. Phone: 610.521.4768

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REGIONAL ROUNDUP

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SOUTHEAST REGION

WAYNE WAGGONER
Associate Director of Regional Operations - South

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

Sprinkler Rules Take Hold in Rutherford County, Tennessee

Starting in October 2013, developers now have to install sprinklers in some new subdivisions with three or more homes in order to meet revised fire code regulations.

Under the new regulations, subdivisions with three or more houses must have sprinklers if there is not a fire hydrant within 1,000 feet. Prior to the revisions being approved, sprinklers were required in subdivisions of four or more lots under a waiver.

The revised rules went into effect only a few weeks after the Rutherford County Commission approved the amended regulations following months of heated debate.

"The (Rutherford County) Planning Commission has heard many, many comments on the proposed sprinkler system (regulations) over the last eight to nine months, and public hearings were held ... just to make sure that everything was heard and fully discussed," Commissioner Jeff Phillips said, as he introduced the proposal during a September12 regularly scheduled meeting in downtown Murfreesboro.

"Much of the opposition has been a result of "misconceptions" that these regulations are mandating the installation of fire-safety sprinklers in all new developments," Phillips said.

"About four years ago... this body talked about areas of the county that were prime for development but (were unable to) support fire safety because of the lack of fire hydrants," Phillips said. "There was a lot of discussion at this body over several months."

"As a result, the Planning Commission put together an alternative to development in those areas where the water lines were so weak that they would not support fire hydrants. So, as an alternative to allow development in those areas that would not support a fire hydrant, there was this policy, and this program put together."

"If the Planning Commission had just called this a revision of existing subdivision regulations an "update" instead of a "redo," Phillips said, "The regulations would not have been so heavily debated."

He said that without adequate fire protection, some of that land is not developable.

Under existing regulations, developers are required to provide fire hydrants in all subdivisions within 1,000 feet of homes where the water lines produce enough pressure for one to be feasible.

During an August 12 public hearing on the regulations, Bill Dunnill, the general manager of the Consolidated Utility District, pointed out the crux of the issue: Fire hydrants are not available in several of new, larger developments because of water pressure and volume issues.

He said water volume and pressure are determined by the size of the water lines in a location, which are determined by the level of local water usage. If those lines are not used, the water quality diminishes over time.

"Water that has sat for three or four months could experience chlorine decay, which produces carcinogens, affecting the drinkability of the water," Dunnill said.

"Additionally, adding a new hydrant to a water line could reduce the pressure below required levels," he said

If there is an inadequate amount of water supply to support fire hydrants, developers can receive a waiver. However, a developer may be granted a waiver only if fire-safety sprinklers are installed in accordance with National Fire Protection Association requirements and come with an audio alarm. These requirements do not apply to existing residential structures, according to the legislation.

The County Commission approved the sprinkler option for fire hydrant waivers by a vote of 17-3.

Wayne Waggoner is the NFSA Associate Director of Regional Operations–South. He can be reached at Waggoner@nfsa.org or PO Box 9, Andersonville, Tennessee 27705, Phone 865.755.2956, Fax 865.381.0597.

FLORIDA & PUERTO RICO

LORELL BUSH
Regional Manager

FLORIDA, PUERTO RICO

Florida Fire Sprinkler Association The Year in Review

The year 2013 has been a very active and successful year for the Florida Fire Sprinkler Association! Below are just a few of the highlights from 2013:

The Numbers

- More than 430 Contractors, AHJ's and Industry Professionals participated in the 13 technical training classes offered throughout the state!
- The Hawks Cay Annual Conference was a huge success with over 80 participants!
- The Buddy Dewar Golf Classic made FFSA history with over 225 golfers providing the opportunity to offer FREE training to over 200 AHJ's!
- Nearly 300 individuals participated in the Area Interest Meetings each quarter.
- 30 different Area Interest Meetings were offered across the state with new and engaging topics.
- Over 15 Side by Side Sprinkler Demonstrations were held throughout the state, educating the public.
- FFSA has added 12 new contractor members and over 10 new professional,
- FFSA launched the Online Training Program with over 35 participants in the pilot class. The post class survey showed over a 90% satisfaction rate and 100% of surveyed participants stated they would take another online class through FFSA!

Legislation and Industry Issues

- One major legislative success includes minimizing the rate increase for Workers Compensation.

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- Another legislative success changed requirements from the Frye Doctrine to the Daubert Doctrine which requires expert witnesses to be qualified "true" experts.
- FFSA represented industry interests and provided substantial support and education during the Cape Coral Residential hearings.
- FFSA staff and Board of Director Members represented the sprinkler industry during the Residential Forum held in Jacksonville, FL in August.

Regional Manager Action

- Participated as a committee member on the NFPA 101 Committee.
- Organized and participated in the four Board of Director meetings, three of which were joint meetings with AFSA.
- Organized and participated in meetings with the seven different Board of Director Committee meetings.

It has been a record year for FFSA and we can't wait to make 2014 even better!

Lorrell Bush is the NFSA Regional Manager for the Florida Region. She can be reached at bush@nfsa.org or 2025 Droylsden Lane, Eustis, FL 32726. Phone: 352.589.8402 Cell: 954.275.8487 Fax: 561.327.6366.

GREAT LAKES REGION

RON BROWN
Regional Manager

INDIANA, MICHIGAN, OHIO,
WEST VIRGINIA, KENTUCKY

Letter to the Editor

Following is a letter to the editor written by Great Lakes Regional Manager Ron Brown regarding a fire at a local mall in Fort Wayne, Indiana. The letter was sent to all print media in Northern Indiana:

"On Saturday, September 28th, at around 3:45 p.m. an employee of Champs Sports at the Glenbrook Square Mall in Fort Wayne, Indiana noticed black smoke pouring out of a storage room in the back. As customers and employees were evacuating, the store's fire sprinkler system was automatically activated by the heat of the blaze.

The Fort Wayne Fire Department responded to the scene within five minutes and was able to safely enter the store and extinguish the blaze that was contained to the backroom of the store thanks to the fire sprinkler system. Once the mall was deemed safe, customers and mall workers were able to reenter the mall and continue to work and shop.

Glenbrook Square Mall is one of the largest malls in Northern Indiana and losing such an essential hub of commerce so close to the holiday season could have been devastating to residents and business owners. The capability of a properly installed and maintained fire sprinkler system to contain the spread of fire and in many cases extinguish the blaze before first responders even arrive on the scene is the reason that so many important structures have these life and property saving systems.

Places of commerce like the Glenbrook Square Mall are not the only types of structures that can and do benefit from these systems. Places of worship, places of business, and most importantly the places that you call home can all be protected by a fire sprinkler system. I encourage you all to learn how to protect yourself, your loved ones and your community from the ravages of fire. "

Sincerely,
Ron Brown
Great Lakes Regional Manager
National Fire Sprinkler Association

Ron Brown is the NFSA Regional Manager for the Great Lakes Region. He can be reached at Brown@nfsa.org or 1615 Cypress Spring Drive, Fort Wayne, Indiana 46814, Phone 845.661.6534; Fax 260.625.4478.

ILLINOIS REGION

TOM LIA
Regional Manager

ILLINOIS

NFSA Illinois Chapter Meeting –January 23, 2014

3:00 PM Signatory Contractors Meeting
5:00 PM Social
6:00 PM Dinner Meeting
Gibsons Steakhouse
Rosemont, IL

For more information, contact Illinois Regional Manager Bob Tinucci.

Recent activities throughout the State of Illinois

- Illinois now has a total of 92 communities that have adopted Residential 13D Fire Sprinkler Ordinances for new single family homes.
- Eastern Illinois University in Charleston was recently recognized by the Illinois Fire Inspectors Association for having been the first state university to achieve 100% compliance of the Illinois Fire Sprinkler Dormitory Act.
- Enacted in 2005, this act requires all on-campus housing at post-secondary institutions to have fire sprinklers installed by 2013.
- Several counties/municipalities/fire districts are in the process of updating their codes on their respective code cycles. Updated model codes requiring the installation of residential fire sprinklers in one and two family dwellings has been a subject of debate. This debate has been tainted by the erroneous facts and installation costs quoted by the opposition within the state.

Points to consider...

1. All model codes now require residential

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REGIONAL ROUNDUP

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fire sprinklers for one and two family dwellings.

2. These model codes are considered to be engineered in whole. Removing components of the model code requires further restrictions and review in other areas (light weight construction, fire separations, etc)
3. Failure to adopt new model codes in whole will impact a community's Insurance Service Office (ISO) Public Grading or Building Code Effectiveness Grading Schedule (BCEGS). This will result in higher insurance premiums to be imposed. Simply stated, errosion of the model code is considered to be a higher risk!

Bob Tinucci is the regional manager for the North Central Region. Bob may be reached at 6401 Richmond Avenue, Willowbrook, Illinois 60527, phone/fax: 630.655.1875, cell: 630.514.1601, email: tinucci@nfsa.org.

NORTH CENTRAL REGION

DOMINICK KASMAUSKAS
Associate Director of Regional Operations - North

MINNESOTA, WISCONSIN, NORTH DAKOTA, SOUTH DAKOTA

Minnesota Fire Marshal Credits Smoke Alarms and Fire Sprinkler Systems for Decline in Fire Deaths

New state fire statistics show that 50 people in Minnesota were killed by fires in 2012. That's six fewer deaths than the previous year. The decline in deaths happened during a period when the overall number of fires in the state increased 12 percent. "Widespread use of smoke alarms and sprinkler systems have helped cut fire deaths in Minnesota by more than half since the 1970s," State Fire Marshal Jerry Rosendahl said. But fire officials say residents can do even more to lessen their chances of dying in a fire. Rosendahl said careless behaviors continue to cause nearly half of Minnesota's building fires. He said caution is particularly called for in kitchens, because cooking remains the number one cause of building fires in the state."Make sure that the pan handles are turned away, so we don't have somebody bumping in to them and spilling grease or whatever all over the place," Rosendahl said. "We have to make sure that you don't turn on the oven and then just go take a nap."That is just such a preventable fire," he said. "We need to be more careful in the kitchen, and pay attention, and we can reduce those tragic fires." Rosendahl said woodstoves and other heating devices also cause a lot of building fires, along with candles and careless smoking.

Dominick Kasmauskas is the NFSA's Associate Director of Regional Operations-North and Regional. He can be reached at Kasmauskas@nfsa.org or1436 Altamont Ave. Suite 147 Rotterdam, New York 12303, Phone 518.937.6589, Fax 518.836.0210.

CENTRAL REGION

CHRIS GAUT
Regional Manager

IOWA, KANSAS, MISSOUIRI

Structure Fire in Dubuque, Iowa Raises Awareness About Sprinkler Systems

In October, 2013, a structure in Dubuque County, Iowa caught fire, but it was with the fire department's blessing.

To raise awareness about the benefits of home sprinkler systems, the city of Dubuque set two nearly identical model rooms on fire.

The one without a sprinkler system went up in major flames in a matter of three minutes. In the other room, the sprinkler system kicked in after about 25 seconds and held the flames at bay.

Jeff Zasada is a building inspector for Dubuque's Building Services Department and led the demonstration. He was also on the Dubuque Fire Department for 18 years.

"I've seen the devastation for loss of family members and also the loss of personal belongings due to fires," Zasada said. "Personally, I'd like to see sprinklers in every home that's built."

Zasada said the modest cost to install sprinklers is worthwhile to save lives and property damage in the event of a fire, which, as demonstrated, spreads very quickly and dangerously.

Chris Gaut is the NFSA Regional Manager for the Central Region. He can be reached at gaut@nfsa.org or NFSA Central Region Office, 207 Van Buren Rd. Branson, MO 65616, Phone 845.803.6426, Fax 636.410.7700.

SOUTH CENTRAL REGION

CYNTHIA GIEDRAITIS
Regional Manager

ARKANSAS, LOUISIANA, OKLAHOMA, TEXAS

News from the Texas State Fire Marshal's Office

The U.S. Senate Committee on Environment and Public Works held a hearing on June 27, 2013 in Washington, D.C. and created recommendations to prevent fire from reaching bulk storage of ammonium nitrate. These recommendations included:

- Storage of ammonium nitrate in non-combustible storage facilities or at least have a one-hour fire barrier separating a storage bin of ammonium nitrate from other adjacent products
- Fire sprinklers suitable for a corrosive atmosphere
- Third party inspection of these facilities should be in place (i.e. insurance companies insuring these facilities, safety institutes, etc.)

As a result of a West Texas fertilizer plant fire and explosion, Representative Joe Pickett (D-El Paso), Chair of the Texas Homeland Security and Public Safety Committee, tasked the State Fire Marshal's Office (SFMO) with identifying all facilities storing more than 10,000 pounds of ammonium nitrate (AN). After

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identifying all the AN facilities, SFMO staff inspected 134 facilities. Of those, SFMO inspectors found 110 facilities storing Ammonium Nitrate. No serious violations were noted during any inspection.

The SFMO was also asked to create a web application so the public can find out if there are any AN facilities within their zip code. The SFMO has created the "Ammonium Nitrate in Texas" web application based on information received from public information sources provided by statewide organizations. Citizens will be able to enter their zip code into the web application and discover whether there is a facility or facilities storing more than 10,000 pounds of AN within their zip code. If you have any questions regarding the website or information contained within the website, please feel free to contact the State Fire Marshal's Office at fire.marshal@tdi.texas.gov or 512.305.7900.

Cindy Giedraitis is the NFSA Regional Manager for the South Central Region. She can be contacted at giedraitis@nfsa.org or PO Box 10403, College Station, Texas 77842. Phone: 979.324.8934.

GREAT PLAINS REGION

ERIC GLEASON
Regional Manager

Colorado, Nebraska, Utah, Wyoming

Sprinkler Save at Beatrice, Nebraska College Campus

A fire was reported shortly after 9:30 p.m. on October 22, 2013 at Southeast Community College in Beatrice, Nebraska.

Investigators say a resident of a housing apartment had begun heating some cooking oil but then left the apartment to visit another student. The oil caught fire. Flames spread to cabinets and a vent above the stove. A single sprinkler activated and controlled the fire until firefighters arrived.

No injuries were reported.

Eric Gleason is the NFSA Regional Manager for the Great Plains Region. He can be contacted at gleason@nfsa.org or P.O. Box 62157, Littleton, CO. 80162. Tel: 720.470.4894

SOUTHWEST REGION

BRUCE LECAIR
Regional Manager

ARIZONA, NEVADA, NEW MEXICO, CALIFORNIA, HAWAII

2013 NFPA 25 Update Presented by NFSA at Local 709 a Great Success

NFSA and the Industry Promotion Contractors at Sprinkler Fitters Local 709 presented two 8- hour NFPA 25 California update classes on October 16+17 in Whittier, California.

The classes, instructed by NFSA Director of Inspection, Testing and Maintenance Jason Webb and Southwest Regional Manager Bruce Lecair, were completely full. The classes were highly interactive due to the attendance and instructional participation by Area Director Jack Thacker from Allan Automatic Sprinkler of Southern California and Supervising Deputy State Fire Marshal James Parsegian. Keeping things lively were students representing both industry and local government agencies from San Diego to Santa Barbara.

The classes described the requirements for properly maintaining a water-based fire protection systems in accordance with NFPA 25 and Title 19 California Code of Regulations, Chapter 5. Webb and Lecair involved attendees in a significant number of exercises using the new California forms and revisions to the National Standard to describe various problems frequently encountered, gave students an opportunity to identify the proper section(s) of the standard that dealt with the problems and followed up with discussions on how to deal with additional issues not covered by the standard that may still be encountered.

The classes were the first 8-hour classes of this type to be offered in advance of the anticipated California NFPA 25 adoption, which is expected in late January or early February. Additional classes sponsored by the San Francisco Bay Area Chapter are still in the planning stages for late January. For additional information, contact Bruce Lecair at lecair@nfsa.org.

Bruce Lecair is the NFSA Regional Manager for the Southwest Region. He can be reached at lecair@nfsa.org or Phone: 951.277.3517, Fax: 951.277.3199.

NORTHWEST REGION

SUZANNE MAYR
Regional Manager

ALASKA, IDAHO, MONTANA, OREGON, WASHINGTON

Washington State Proposal to Limit Lodging House Sprinkler Requirements

Earlier this summer, the State Building Code Council considered implementing an emergency rule to allow lodging houses to follow the same fire sprinkler rules as residences. This would mean that only lodging houses in jurisdictions that have passed a residential sprinkler requirement would need to have fire sprinklers installed.

At a June 28th special meeting, the SBCC voted not to include this as an emergency measure, and to instead allow this measure to follow the regular public comment process. In the intervening months, NFSA, the Puget Sound Fire Sprinkler Advisory Board, the Washington State Association of Fire Marshals and the Washington State Fire Chiefs Association all stated their opposition to this proposed rule.

Historically, owner-occupied lodging houses were covered under the International Building Code and as such would be required to be protected by fire sprinklers. During the 2009 IBC code cycle, owner-occupied lodging houses for five or fewer guestrooms was moved to the less stringent International Residential Code. This

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REGIONAL ROUNDUP

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allowed the building owners to enjoy cost savings with relaxed requirements for accessibility, energy standards, and other requirements. However, when it came to fire protection, there was an important stipulation: that such lodging houses would be "equipped throughout with an automatic sprinkler system in accordance with Section P2904 of the International Residential Code."

During its 2009 and the 2012 code adoption process, the Washington State Building Code Council removed the requirement for automatic fire sprinkler systems in new construction of one- and-two family homes, leaving the adoption of a sprinkler requirement up to local jurisdictions. The language was unclear what rules lodging houses would follow. When the proposal to eliminate the sprinkler requirement for lodging houses failed to gain support at the Nov. 8th SBCC meeting, it resulted in keeping the original fire sprinkler protections in place for all lodging houses in all jurisdictions.

Interestingly, no one representing lodging houses made any written or verbal comments supporting the measure.

Suzanne Mayr is the NFSA Regional Manager for the Northwest Region. She can be contacted at mayr@nfsa.org or P.O. Box 7328, Tacoma, WA 98417, phone: 253.208.8467.

NFPA NEWS

Comments sought on TIAs

The following Technical Committees are seeking comments on Tentative Interim Amendments (TIAs) to their documents: NFPA 13, Standard for the Installation of Sprinkler Systems; NFPA 25, Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems.

Tentative Interim Amendments (TIAs) are amendments to an NFPA document processed in accordance with Section 5 of the Regulations Governing the Development of NFPA Standards.

They have not gone through the entire standards development process of being published in a First Draft Report and Second Draft Report for review and comment. TIAs are effective only between editions of the document. A TIA automatically becomes a public input for the next edition of the document, as such is then subject to all of the procedures of the standards development process. TIAs are published in NFPA News, NFCSS, and any further distribution of the document after being issued by the Standards Council.

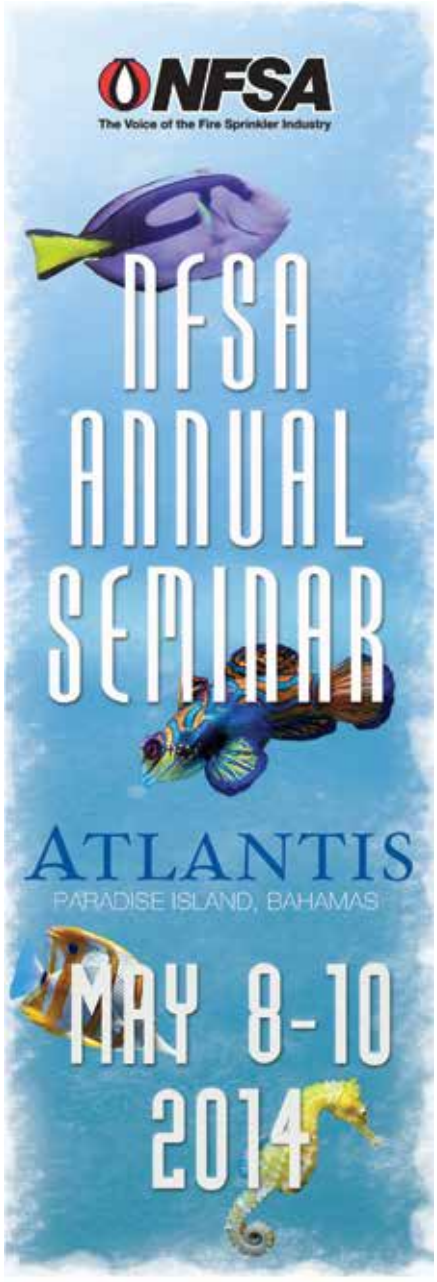
Requests for TIAs shall be clearly worded to provide the recommended revision and the reason as to why it is of an emergency nature requiring prompt action. Submissions shall be addressed to the Secretary, Standards Council, NFPA, 1 Batterymarch Park, Quincy, MA 02169-7471. The submitter must also provide the appropriate endorsements in writing of two members of the applicable technical committee or correlating committee. For further information, please contact Codes and Standards Administration.

NFPA makes important safety codes and standards available for free online

As part of its commitment to enhancing public safety, NFPA makes its codes and standards available online to the public for free. Online access to NFPA's consensus documents conveniently places important safety information on the desktops of traditional users as well as others who have a keen interest. NFPA is committed to serving the public's increasing interest in technical information, and online access to these key codes is a valuable resource.

To review codes and standards online:

- Go to: **http://www.nfpa.org/codes-and-standards/document-information-pages**
- Select the document you want to review.
- Select the edition of the document you want to review.
- Click the *"Free access"* link (under the document title)
- You will be asked to "sign-in" or create a profile to access the document in read-only format.



NFPA Symposium Scheduled

Suppression, Detection and Signaling Research and Applications Symposium (SupDet 2014)

March 4 – 7, 2014
University of Central Florida
Orlando, Florida
Contact epeterson@nfpa.org

PHD Manufacturing Introduces Three New Products

PHD Manufacturing announces the addition of three new products to its Fire Protection and Pipe Hangers product offering. The SureLok 3/8" Steel Top Beam Clamp (#345) is UL Listed and FM approved. It's lightweight, electro-galvanized, and is made in America at import pricing. The 3/8" Swivel Adapter (Fig. #020) is UL Listed and is used to keep rods "vertical" on roof pitch applications and as a restraint in seismic applications. The 3/8" Steel Ceiling Plate (Fig. #945) is UL Listed and is also American made at import pricing. These three products have increased PHD's presence in the sprinkler industry and are a great addition to PHD's full line of products for the pipe hanger industry.

For more information, contact Rick Persing at 574.536.3857 or visit www.phdmfg.com, or call 800.321.2736.

Potter Announces Release of Analog Addressable Duct Detector

Potter Electric Signal Company, LLC announces the release of the DDA Analog Addressable Duct Detector. This device provides early detection of smoke and products of combustion present in air moving through HVAC ducts in commercial, industrial and residential applications. The DDA is compatible with the PFC-6000 series addressable fire alarm control panels, the Potter Plus panels and any panel compatible with the Potter/Nohmi addressable protocol.

The DDA Analog Addressable Duct Detector uses state-of-the-art addressable sensors and control modules, utilizing the robust Potter/Nomi digital protocol to provide the flexibility needed to tackle demanding applications. With a listed air velocity of 100 to 4,000 ft/minute, this device is built to withstand and function within a wide array of conditions and duct systems.

For more information, visit www.pottersignal.com.

Reliable Automatic Sprinkler New Product Announcements

For lower required starting pressures, Reliable Automatic Sprinkler Co, Inc. announces the addition of its new Model G5-80 (K-Factor of 8.0) to its G5 line of Concealed and "Sealing" Concealed Sprinklers.

The G5-80 sprinkler is UL listed for Quick Response and Standard Coverage. This sprinkler has a smooth, flat aesthetic ceiling profile and uses the same Thread-on cover plate attachment as Reliable's G4 Models with 3/4" (19mm) vertical assembly adjustment. A plastic protective cap is provided to protect the sprinkler and drop-down sprinkler deflector from damage which could occur during construction before the ceiling and cover plate are installed. The plastic cap is factory installed inside the sprinkler cup. An optional perforated cover plate is available. For ease of installation, the G5-80 uses the FC sprinkler wrench.

For dust free environments, Reliable offers the G5-80 "Sealing" Concealed versions in either Standard Response or Quick Response with a gasketed cover plate.

Reliable also announces the EX Low Pressure Dry Pipe Valve.

The lightweight EX Low Pressure Dry Pipe Valve is a pneumatic/hydraulic operated, differential latching clapper-type valve designed for use as a primary control valve for dry pipe fire sprinkler systems. The trim sets used with the EX Low Pressure Dry Pipe Valve allows the system's air or nitrogen pressure requirement to be considerably less than traditional dry pipe valves. Lower system air or nitrogen pressure equates to smaller more economical air compressors or nitrogen supplies. The EX valves' trim sets may be equipped with the optional Reliable Model B1 Accelerator, which acts as an exhauster to hasten the operation of the valve and minimize the water delivery time for the entire system. The external reset feature is convenient and safe; no priming water above the clapper is required. This latching-type valve is less susceptible to false trips caused by water supply pressure surges.

The EX Low Pressure Dry Pipe Valve sizes include: 2" (50mm), 2-1/2" (65mm), 3" (80mm), 76mm, 4" (100mm), 6" (150mm), 165mm, and 8" (200mm). The valve is available in Grooved/Grooved, Flange/Grooved, and Flange/Flange versions with pressure ratings of 250 psi (17.2 bar) or 300 psi (20.7 bar) for 4", 6" and 165mm only.

For more information go to www.reliablesprinkler.com.

Viking Introduces New K17 Dry ESFR Sprinkler

Viking Corporation has added a new dry ESFR pendent to its leading line of storage sprinklers. The new Model VK504, which has a K factor of 16.8 (242), is offered in addition to Viking's existing UL Listed and FM Approved K14 dry ESFR (Model VK502).

The new VK504 is intended for freezers and cold storage facilities where a wet-pipe sprinkler system is installed in a conditioned space above the insulated ceiling, often referred to as "box-in-box" construction. In these applications, Viking's dry ESFR sprinklers enable ceiling-only protection, without the use of in-rack sprinklers and pre-action systems. By eliminating the need for in-rack sprinklers, the new VK504 allows for greater racking flexibility, better protection from potential damage, and reduced ongoing service and maintenance costs resulting in a significantly more cost-effective fire protection system overall.

The new VK504 now extends Viking's product line to include a 16.8 K factor product option. The larger K Factor enables lower pressures, which may allow for a lower installed cost by reducing the size of system piping, fire pumps, and other components.

The VK504 sprinkler is listed to protect the same commodities and storage arrangements as Viking's standard K17 ESFR pendent sprinkler (Model VK503). The new sprinkler is offered in a standard

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SPRINKLING OF NEWS

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length of 37-1/2 inches (953 mm) and has a 165ºF (74ºC) temperature rating. Additionally, the VK504 is available with either a 1-1/2 inch grooved or threaded connection.

For more information please visit www.vikinggroupinc.com or call 800-968-9501.

Tyco Fire Protection Products Model ESFR-17 Dry Type Pendent Sprinkler

Tyco Fire Protection Products (TYCO) received FM Approval for the TYCO Model ESFR-17 Dry Type Early Suppression Fast Response (ESFR) Pendent Sprinkler. The FM Approval for the 165 ºF (74 ºC) Model ESFR-17 Dry Type Sprinkler is in addition to the existing UL Listing for the sprinkler.

The Model ESFR-17 Dry Type Sprinkler is UL Listed and FM Approved for use in wet pipe systems protecting cold storage facilities where the system piping is installed in a heated space above the freezer area. In these applications, the sprinkler can reduce the installed cost of a fire sprinkler system by providing ceiling-only protection, without the costs and maintenance associated with a dry or pre-action system or the risk of sprinkler head damage associated with in-rack sprinklers.

In addition to the FM Approval, the Model ESFR-17 Dry Type Sprinkler is now offered in two new lengths: 30 inches (762 mm) and 23 inches (584 mm).These shorter lengths provide the flexibility for installations where the heated space above the freezer is too shallow for the installation of the original 36-inch (914 mm) sprinkler or for installations where the wet system branch lines are along a pitched roof requiring installation of shorter lengths to prevent the sprinkler from exceeding the maximum installation length inside the freezer. The FM Approved, UL Listed 36-inch version of the Model ESFR-17 Dry Type Sprinkler is available for shipment immediately; the 30-inch (762 mm) and 23-inch (584 mm) lengths will be available for shipment in the fourth quarter of 2013.

The Model ESFR-17 Dry Type Sprinkler has a 16.8 (240) K factor. It is UL Listed and FM Approved to protect the same commodities and storage arrangements as a standard ESFR pendent sprinkler with a 16.8 (240) K factor. It is the only dry type ESFR sprinkler with both a grooved and threaded inlet on every sprinkler, providing substantial installation flexibility. Information for the Model ESFR-17 Dry Type Pendent Sprinkler can be found in technical datasheet TFP320, available at www.tyco-fire.com. For more information, contact your local TYCO representative.

HQ NEWS

SQ Named MarCom Gold Award for Excellence Winner Third Consecutive Year

SQ Magazine, the flagship publication of the National Fire Sprinkler Association was named a MarCom Gold Award Winner by the Association of Marketing and Communication Professionals.

MarCom Awards is a creative competition for any individual or company involved in the concept, writing and design of print, visual, audio and web materials and programs. Entries come from corporate marketing and communication departments, advertising agencies, PR firms, design shops, production companies and freelancers.

The Gold Award is presented to those entries judged to exceed the high standards of the industry.

NFSA would like to thank all who contribute, edit, proofread, design, print and advertise in SQ. Without the support of our members, employees and contractors, this award would not have been possible.

Area Director Elections

The following contractor members were re-elected as Area Directors as a result of a no-contest election. Each Director involved as been notified.

NEW ENGLAND/NEW YORK

Donald DeLuca, *SRI Fire Sprinkler Corporation*
(Connecticut, Maine, Massachusetts, New Hampshire, New York, Rhode Island, Vermont

MID-ATLANTIC

Kent Mezaros, *Quick Response Fire Protection*
(Delaware, Maryland, New Jersey, Pennsylvania, Virginia, Washington D.C.

FLORIDA

Alan Wiginton, *Wiginton Fire Systems*
(Florida and Puerto Rico)

NORTH CENTRAL/ILLINOIS

Gregg Huennekens, *United States Alliance Fire Protection*
(Illinois, Minnesota, Wisconsin, South Dakota, North Dakota)

GREAT PLAINS

Harry Nothhaft, *L. Nothhaft & Sons*
(Colorado, Nebraska, Utah, Wyoming)

SOUTHWEST

Aaron Bennett, *RCI Systems*
(Arizona, Nevada, New Mexico)

Ready to Take Your NICET Level II & III Certification to the Next Level?

Don't have time to travel to a class? I've got the solution!

Hi, I'm Ken Isman, NFSA's Vice President of Engineering. I'd like to invite you to get in on NFSA's groundbreaking Advanced Technician Training. I will be delivering the class in our exclusive Distance Learning Format.

- 90 minute lecture is broadcast live each week for 15 weeks.
- Participants have ability to watch live and interact with me
- Ask questions and get answers in real time

Topics include:

- Spacing and Location of Storage Sprinklers
- Hydraulic Calculations
- Fire Pump Sizing
- A variety of other advanced installation issues

To read full course description and register go to http://bit.ly/NFSAATT now. Space is limited and filling up fast!

NFSA
The Voice of the Fire Sprinkler Industry

40 Jon Barrett Road
Patterson, New York 12563
tel: 845.878.4200
www.nfsa.org

LETTERS

To **Geoff Redick**
Albany News, Albany New York

Geoff–

Thank you for covering yesterday's event. It was truly a pleasure to meet you and I appreciate the questions and the programs you developed which aired. I was also glad that you also spoke with the opposition as this is how this all becomes an "educational moment".

Just to note, I have included the PR firms for both FASNY and my organization in the CC.

I'd like to follow up with your coverage and some "fire science" to address the NYSBA's misstatements; First, a little about me. I was a firefighter/fire captain for 32 years. I was a Fire Instructor at a very busy fire academy in Bergen County, NJ for many years. I have been in the fire protection business now for 12 years, mostly revolving around automatic water-based fire protection systems.

Second, the outdoor demo with three sides walled and one side open as noted by NYSBA has ZERO effect on making the fire grow faster. Many months of the year homes have windows wide open, but that is still not an issue even if the home has no air movement and the house is totally closed up. The super heated gases and the 1,200-2,000 deg F temperatures will still occur and still kill. If smoke alarms are the "fix all" that NYSBA implies, why does the U.S. still have 2,600 fire deaths in residences EACH year? And 150-170 annually in NY State alone? Yes, smoke alarms are necessary and they took a chunk out of the 4 or 5 or 6,000 fire deaths we once had annually.

Many people each year die in homes with working smoke alarms, children and elderly do NOT respond to Smoke Alarms, plus how is an infant going to self evacuate? The NYSBA comments are just proof of how little they have investigated the facts of fire. Their comments seem to be based on what Hollywood shows the public on TV; that everyone has time to gather their family and get out. The thought that smoke alarms get everyone out is dispelled by the fact that 2,600 times each year someone does NOT get out. That is someone proving the NYSBA comments incorrect about every 3 hours of every day.

FYI- California will be going into their fourth year requiring fire sprinklers in all new homes and the housing starts in May 2013 California Homebuilders' report were higher than expected. Housing prices have not gone up $20,000 because of home fire sprinkler systems.

As I noted to you yesterday, I also urge you to please follow up with your viewers to visit www.HomeFireSprinkler.org . The Home Fire Sprinkler Coalition is strictly an educational organization and not a political or trade organization. The truth lies there in their website.

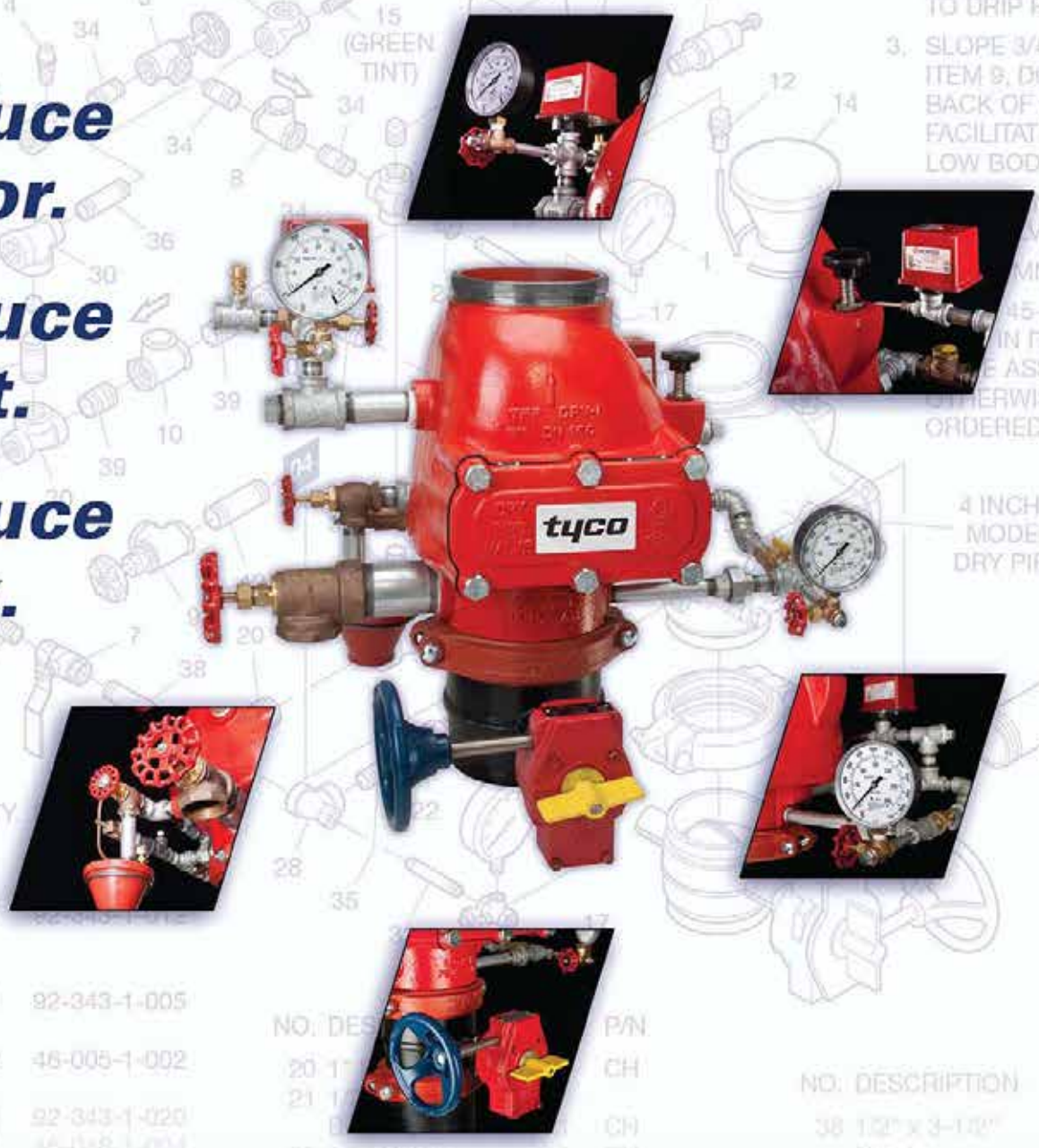
Please call with any follow up at any time. I'd be glad to discuss the issues with YNN and an NYSBA representative any time on any day.

Sincerely,
Dominick G. Kasmauskas CFPS
NFSA
Associate Director – Northern Regional Operations

Reduce Labor.

Reduce Cost.

Reduce Risk.

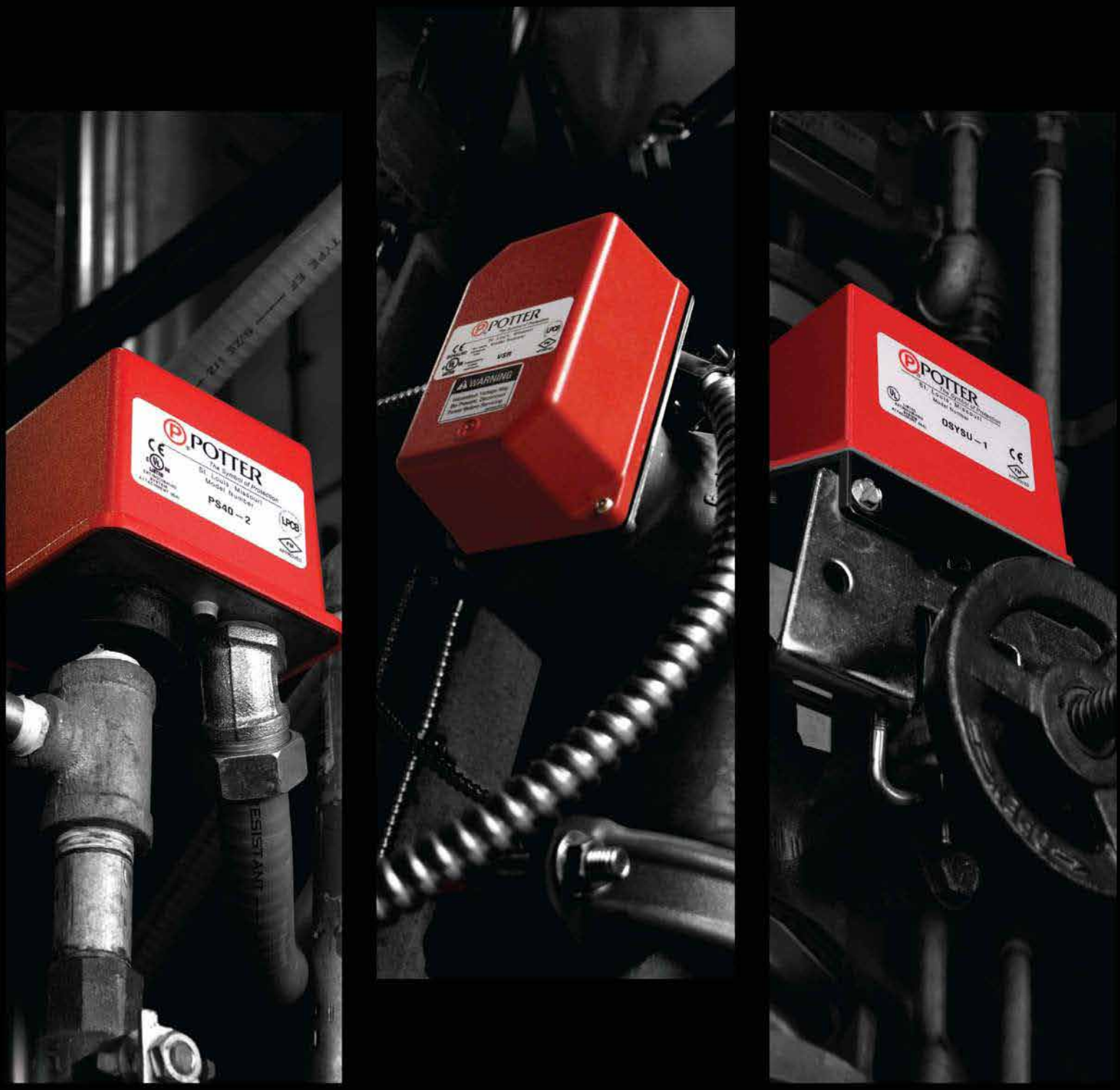


Introducing the newly re-designed Pre-trimmed Model DPV-1 Dry Pipe Valve from Tyco

The Model DPV-1 Pre-trimmed Dry Pipe Valve offers contractors a complete valve assembly, ready for installation directly out of the box. These units now feature a butterfly valve, pressure switches, and the option to add accelerators to customize your valve package. Pre-tested to minimize job site labor and risk, the Model DPV-1 Pre-trimmed Dry Pipe Valve — another cost-effective solution from the Tyco family of fire protection products.

www.tyco-fire.com
800-558-5236

tyco



Industry Standards.

POTTER
The Symbol of Protection

www.pottersignal.com