

SQ

NFSA ANNUAL SEMINAR AND NORTH AMERICAN FIRE SPRINKLER EXPO®

April 29 - May 2, 2015, Hilton Bonnet Creek Resort

NFSA
ANNUAL SEMINAR
AND NORTH AMERICAN
FIRE SPRINKLER
EXPO® PREVIEW
— SEE PAGE 25



2014 MarCom Gold Award Winner



INSIDE THIS ISSUE:

- Educating Building Owners and Managers
- Hydraulic Review for Plans Examiners
- Lightweight Steel Joist Construction
- Shadow Areas: Mystery Solved

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ON THE COVER

This year's Annual Seminar and North American Fire Sprinkler Expo® are being held April 29 - May 2 at Hilton Bonnet Creek Resort in Orlando. A preview of events can be found beginning on page 25.

Correction: In the Jan/Feb issue of SQ, SPP was mistakenly given credit for cover photos that were Peerless/GRUNDFOS.

ADVERTISERS

Anvil	44
Argco	10
CST	52
Darley	12
EKU	59
Engineered Corrosion Solutions	14
Flexhead	50
Florida Fire Sprinkler Association	23
FPPI	53
International Code Council	17
Lubrizol	46
PHD	23
Potter	BC
Powers Fasteners	13
Reliable	IFC
Sprinkflex	41
Tyco	IBC
Viking	2
Zurn	5

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IN THIS ISSUE

FEATURES

- 25** *NFSA Annual Seminar and North American Fire Sprinkler Expo® Preview*
- 45** *The Mystery of Shadow Areas*
by Roland Asp, CET
- 49** *Notes from the Fire Scene*
by Vickie Pritchett

DEPARTMENTS

- 3** **Letter from the Editor** - by David J. Vandeyar
- 4** **Calendar**
- 7** **From the President's Desk** - by Russell P. Fleming, P.E.
Transition
- 9** **Contractor's Cue**
- 11** **Education** - by Jim Lake
NFSA Announces Two New Seminars
- 15** **Technically Speaking** - by Victoria B. Valentine, P.E.
Lightweight Steel Joist Construction
- 19** **Code Corner** - by Jeff Hugo, CBO
Hydraulic Review for Fire Sprinkler Plans Examiners
- 42** **New Members**
- 43** **Membership** - by Joanne Genadio
It's All About the App!
- 51** **ITeM** - by Jason Webb
Educating Building Owners and Managers
- 54** **Regional Roundup**
- 58** **HQ News**
- 59** **Sprinkling of News**
- 60** **Letters**



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As of this writing the Annual Seminar and North American Fire Sprinkler Expo® are only about six weeks out and by the time most of the membership reads this letter, the “early-bird” registration deadline of March 27th will have already passed. That said, I hope you all took advantage of the special discount offered this year by the seminar planning committee. Keep in mind, there is also a Contractor Management Team deeply discounted full conference registration to incentivize members to bring additional staff to the conference.

If you haven't already registered for the conference, take a few minutes right now to review the promotional materials enclosed in this issue beginning on page 25. Then either go to the NFSA Annual Seminar website at NFSA.org, or simply fill out the registration form inside and fax it back to NFSA headquarters. Also, it's a good time for me to mention, if you haven't already made room reservations within the NFSA room block at Hilton Bonnet Creek, do that as well while registering for the conference. While the room reservation deadline is April 7th, due to tremendous interest in this year's conference and expo, there is no guarantee the room block will be available last minute. To avoid being disappointed, make reservations right now.

Across much of the country the winter has been harsh. Worse than usual. This year's Annual Seminar and North American Fire Sprinkler Expo is the perfect opportunity to get revitalized and learn from industry experts in a warm, welcome, relaxed environment. Make plans now to attend! I look forward to seeing you all there. Oh, by the way, don't forget to bring your shades. The program and Floridian sun are that bright. ☀

David J. Vandeyar
David J. Vandeyar, Editor



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March 24, 2015

Coordinating NFPA 25 & 72 Inspection, Testing and Maintenance Requirements
HOUSTON, TEXAS

March 26, 2015

Coordinating NFPA 25 & 72 Inspection, Testing and Maintenance Requirements
BATON ROUGE, LOUISIANA

April 14-15, 2015

Sprinkler System Plan Review
BETTENDORF, IOWA

April 1, 2015

Understanding, Applying & Enforcing NFPA 13D
CLACKAMAS, OREGON

April 1, 2015

Introduction to Sprinklers, Pumps & Standpipes
MADISON, WISCONSIN

April 1, 2015

Rough & Final Inspections of Fire Sprinkler Systems
WILLOUGHBY, OHIO

April 2, 2015

Rough & Final Inspections of Fire Sprinkler Systems
MADISON, WISCONSIN

April 2, 2015

Fire Service Mains & Their Appurtenances
WILLOUGHBY, OHIO

April 14-15, 2015

Sprinkler System Plan Review
BETTENDORF, IOWA

April 14, 2015

Coordinating NFPA 25 & 72 Inspection, Testing and Maintenance Requirements
INDIANAPOLIS, INDIANA

April 15, 2015

Coordinating NFPA 25 & 72 Inspection, Testing and Maintenance Requirements
LOUISVILLE, KENTUCKY

April 16, 2015

Rough & Final Inspections of Fire Sprinkler Systems
BETTENDORF, IOWA

April 21, 2015

Installation of CPVC
ON-LINE

April 21-22, 2015

ITM: Navigating Through the Liability Minefield
OKLAHOMA CITY, OKLAHOMA

April 21, 2015

Sprinkler System Plan Review
WOODLAND, CALIFORNIA

April 23, 2015

Understanding, Applying & Enforcing NFPA 25
OKLAHOMA CITY, OKLAHOMA

April 23, 2015

Understanding, Applying & Enforcing NFPA 25 (California Edition)
WOODLAND, CALIFORNIA

April 29 – May 2, 2015

NFSA Annual Seminar and North American Fire Sprinkler Expo®
ORLANDO, FLORIDA

May 5-6, 2015

Sprinkler System Plan Review
GRAND JUNCTION, COLORADO

May 6, 2015

Rough & Final Inspections of Fire Sprinkler Systems
BROCKTON, MASSACHUSETTS

May 7, 2015

Rough & Final Inspections of Fire Sprinkler Systems
GRAND JUNCTION, COLORADO

May 7, 2015

Rough & Final Inspections of Fire Sprinkler Systems
HOLYOKE, MASSACHUSETTS

May 8, 2015

NFPA 13, 13R, 13D & 14 Update 2013
GRAND JUNCTION, COLORADO

May 14-15, 2015

Sprinkler System Plan Review
CONCORD, NEW HAMPSHIRE

May 19, 2015

Fire Sprinklers in the ICC
ON-LINE

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FIFE, WASHINGTON

June 16, 2015

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August 3-14, 2015

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Patterson, New York

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Two Week Layout Tech Training
Orlando, Florida

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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New York	New York	Dominick G. Kasmauskas, NFSA 1436 Altamont Ave. Suite 147 Rotterdam, New York 12303 (518) 937-6589 FAX (518) 836-0210	
Mid Atlantic	Delaware, Maryland, New Jersey, Pennsylvania, Virginia, Washington, D.C.	Raymond W. Lonabaugh, NFSA P.O. Box 126 Ridley Park, Pennsylvania 19078 (610) 521-4768 FAX (610) 521-2030	Kent Mezaros Quick Response Fire Protection 77 Pension Road, Suite 5 Manalapan, New Jersey 07726 (732) 786-9440 FAX (732) 786-9443
Southeast	Alabama, Georgia, Mississippi, North Carolina, South Carolina	Associate Director of Regional Operations - East Wayne Waggoner, NFSA PO Box 9 Andersonville, Tennessee 37705 (865) 755-2956 FAX (865) 381-0597	Ken Brinkley Music City Fire Sprinkler 238 Molly Walton Drive Hendersonville, TN 37075 (615) 826-7450 FAX (615) 826-9680
Tennessee	Tennessee		
Florida	Florida, Puerto Rico	Lorrell Bush, NFSA 2025 Droylsden Lane, Eustis, Florida 32726 (352) 589-8402 FAX (561) 327-6366 Cell: (954) 275-8487	Alan Wiginton Wiginton Fire Systems 699 Aero Lane Sanford, FL 32771 (407) 585-3205 FAX (407) 585-3282
Great Lakes	Indiana, Michigan, Ohio, West Virginia, Kentucky	Ron Brown, NFSA 1615 Cypress Spring Drive Fort Wayne, Indiana 46814 (845) 661-6534 FAX (260) 625-4478	Richard A. Ackley Dalmatian Fire, Inc. P.O. Box 78068 Indianapolis, Indiana 46278 (317) 299-3889 FAX (317) 299-4078
North Central	Minnesota	Tom Brace, NFSA 1433 Idaho Ave West St. Paul, Minnesota 55108 (651) 644-7800 FAX (651) 603-8827	Gregg Huennekens United States Alliance Fire Protection 28427 North Ballard – Unit H Lake Forest, Illinois 60045 (847) 247-4755 FAX (847) 816-0098
	Wisconsin	Dan Gengler, NFSA P.O. Box 286 Waupaca, Wisconsin 54981 (262) 325-1958	
Illinois	Illinois	Robert Tinucci, NFSA 6401 Richmond Ave Willowbrook, Illinois 60527 (630) 655-1875 FAX: (630) 655-1875	
Central	Iowa, Kansas, Missouri	Chris Gaut, NFSA 207 Van Buren Rd. Branson, MO 65616 (636) 692-8206 FAX (636) 410-7700	Dennis C. Coleman Engineered Fire Protection, Inc. 1615 South Kings Highway St. Louis, Missouri 63110 (314) 771-0033 FAX (314) 664-1619
South Central	Arkansas, Louisiana, Oklahoma, Texas	Cynthia Giedraitis NFSA 2013 Oakwood Trail College Station, Texas 77845 (979) 324-8934	John Kauffman III Kauffman Company 13225 FM529 – Suite A Houston, Texas 77041 (713) 937-4144 FAX (713) 937-4149
Great Plains	Colorado, Nebraska, North Dakota, South Dakota, Utah, Wyoming	Eric Gleason, NFSA P.O. Box 62157 Littleton, Colorado 80162 (720) 470-4894	Harry Nothhaft II L.Nothhaft & Son 2520 West 62nd Court Denver, Colorado 80221 (303) 433-3329 FAX (303) 433-2432
Southwest	Arizona, Nevada, New Mexico,	Associate Director of Regional Operations - West Bruce Lecair, NFSA 25417 West Hyacinth Street Corona, California 92883 (951) 277-3517 FAX (951) 277-3199	Aaron Bennett RCI Systems, Inc. 1220 West Geneva Drive Tempe, Arizona 85282 (480) 894-8711 FAX (480) 894-8740
West	California, Hawaii		Jack Thacker Allan Automatic Sprinkler Corporation 3233 Enterprise St. Brea, California 92821 (714) 993-9500 FAX (714) 993-5708
Northwest	Alaska, Idaho, Montana, Oregon, Washington	Suzanne Mayr, NFSA P.O. Box 7328 Tacoma, WA 98417 (253) 208-8467	James Boulanger Patriot Fire Protection, Inc. 2707 70th Avenue East Tacoma, Washington 98424 (253) 926-2290 FAX (253) 922-6150
		VICE PRESIDENT OF REGIONAL OPERATIONS Buddy Dewar, NFSA 200 West College Avenue Tallahassee, Florida 32301 (850) 222-2070 FAX (850) 222-1752	DIRECTOR AT LARGE Clark Gey Wayne Automatic Fire Sprinkler 222 Capitol Court Ocoee, Florida 34761 (407) 877-5564

Transition

Russell P. Fleming, P.E.



All organizations go through transitions in leadership. The extent to which they are able to do so in a positive way that benefits the organization reflects the quality and success of the organization. As I announced in the January 2015 President's Report electronic newsletter, I will be stepping down from the NFSA presidency at the end of April, making this my last column as president of NFSA. At its October 2014 meeting the NFSA Board of Directors agreed that Executive Vice President Shane Ray will assume the presidency on May 1, 2015. I will continue as a senior advisor for another year or two before I fully retire from NFSA, allowing me to assist Shane Ray in his new role as well as Victoria Valentine in her new role as NFSA's Director of Engineering.

For me, serving the past three years as NFSA President has been the capstone on a 40-year career for which I am extremely grateful. Little did I think when I was hired as the Association's first staff engineer shortly after receiving my master's degree in civil engineering in 1975 that I would have such a varied and interesting opportunity, allowing me to explore interests not only in engineering, but in publications, public speaking, legislation, research, and, of course, codes and standards. The past three years as President have allowed me to pursue what I believe are important steps in preparing the NFSA for the future. The creation of an Audit Committee helps ensure member confidence in the financial workings of the NFSA, improvements to our headquarters building help us serve the membership more efficiently and effectively, and transparency in dues and operations helps clarify what every member is doing to help

support and advance the industry through membership in the Association.

I am confident that Shane Ray will build upon these changes and further improve the efficiency and effectiveness of the organization.

One of my proudest innovations as President is the North American Fire Sprinkler Expo®, the second of which will take place in conjunction with the NFSA Annual Seminar April 29 - May 2, 2015. We will again be joined by our counterpart fire sprinkler associations from Canada and Mexico, offering an opportunity to share ideas from all corners of the continent. I will be handing the baton to Shane Ray during the seminar, and we hope you will be there to share the moment. We will also be acknowledging the contributions of NFSA Vice President of Regional Operations Buddy Dewar with the Golden Sprinkler Award. Buddy will be retiring after a distinguished career of service to the fire sprinkler industry and the cause of fire protection. I am thankful to have had the opportunity to work alongside Buddy and the entire NFSA staff. It has been gratifying to have worked with people, both members and staff, who are so supportive of the mission of NFSA to advance the fire sprinkler concept, and who recognize the unique position of NFSA as the voice of the fire sprinkler industry. ①

Russell P. Fleming, *President*

2015 NFSA ANNUAL SEMINAR AND NORTH AMERICAN FIRE SPRINKLER EXPO® APRIL 29 - MAY 2, 2015 / ORLANDO, FLORIDA

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Dirty Little Secrets of Family Business

Passing Leadership Role To Next Generation Is Tricky If Path Not Carefully Planned

by Henry Hutcheson

After years of hard work, you've built the family business into a great success and you take pride in meeting the challenges that each day brings.

At some point, though, the day arrives when it's time to turn the reins over to the next generation.

That can be an exciting moment or an anxiety-ridden one, depending on what has gone on before to prepare for the momentous occasion.

"Laying the path to a successful family-business transition requires a bit of threading the needle," says Henry Hutcheson, author of the book *"Dirty Little Secrets of Family Business."*

"On the one hand you don't want to paint an overly rosy picture to the next generation. That could create a sense of entitlement and the false perception that running a business is easy and all you need to do is count the money and show up every now and then to check on things."

At the same time, he says, if you put too much emphasis on the difficulties of running a business and the stresses that come with it, your sons and daughters might not clamor to be first in line to take over.

Ideally, it's best to think ahead and start grooming the next generation long in advance, Hutcheson says. Give them summer jobs while they are in high school and college so they can start testing their abilities.

When they join the family business full time, find initiatives for them to work on that involve group dynamics. But also hand them individual projects where they hold sole responsibility for the results.

"It's critical when you are selecting the next leader to realize that it's not all about who will lead," Hutcheson says. "It is also about ensuring that those who are not selected are in support of the decision and can work as a team with the new leader."

Hutcheson says there are four key in-

redients to developing the right person to take over the family business.

■ **Independence.** Next generation leaders must have confidence in themselves, their thoughts and their beliefs. *"Much of this can be developed while working in the family business by constructing and leading significant projects,"* Hutcheson says. But one shortcut to accomplish this is to work for some other company early on. Many multi-generation family businesses like to make that a requirement for family members.

■ **Competence.** This is more than just being able to do the work. It means developing bottom-up experience. Not just being the accountant, but being able to reconcile the accounts and perform the journal entries. Not just being sales and marketing manager, but having been on a quota and worked the trade shows. Experience doing some of the day-to-day grunt work can pay dividends down the line.

■ **People skills.** *"It's not enough to just be smart and confident,"* Hutcheson says. *"You need to be able to work with people."* He notes that in the book *"Emotional Intelligence,"* Daniel Coleman outlines two studies that measured the success of a batch of high school valedictorians and Harvard graduates. Those who were able to perceive the emotional state of others and react to it appropriately proved to be the most successful.

■ **No special privileges.** The person in line to take over the family business needs to be willing to show up to work on time, stay late, take on special projects and be measured by the same metrics as everyone else. *"This will show that you are part of the team and that you want*

to be judged on the merits of your work, not your bloodline," Hutcheson says. It will also help the next generation gain the respect of co-workers. ⑩

ABOUT THE AUTHOR

Henry Hutcheson is president of Family Business USA and specializes in helping family and privately held businesses successfully manage transition, maintain harmony, and improve operations. His newest book is *"Dirty Little Secrets of Family Business: How to Successfully Navigate Family Business Conflict and Transition."* He's also quoted in *"Kids, Wealth, and Consequences"* and *"Sink or Swim: How Lessons from the Titanic Can Save Your Family Business."* Hutcheson grew up working for his family's business, Olan Mills Portrait Studios. He studied psychology and has an MBA from Columbia Business School, and is a popular speaker at professional, university and corporate-sponsored events.

>> CONTINUED ON PAGE 10



FUTURE NFSA ANNUAL SEMINAR SCHEDULE

May 4-8, 2016

NFSA Annual Seminar
Laguna Cliffs Resort & Spa
by Marriott, Dana Point, CA

Spring 2017

NFSA Annual Seminar
and North American Fire
Sprinkler Expo®
Las Vegas, NV

FOR MORE INFORMATION:
WWW.NFSA.ORG

NEVER LET YOUR LIEN TIME RUN OUT!

By Stuart S. Zisholtz

The purpose of this Article is to alert readers to two gimmicks that were outdated and outmoded twenty years ago and are now coming back with a vengeance.

Hold Back

The first gimmick is where the General Contractor holds back from a subcontractor, the last 10 percent of his bill. The General Contractor tells the subcontractor "I am tight on this job. Do me a favor; add it to the next job that I am giving you."

Since the General Contractor is a good customer, and he will be giving you more work, you roll the balance over.

The next job is for \$100,000 and you bill him \$110,000. At the end of that job he again tells you that he was tight and asks you to roll over \$20,000. On the third job you bill him \$120,000 and again he comes with the same story and again, you roll it over.

On the next job, you bill \$130,000 and he turns around and says, how can you me bill me \$130,000 on a \$100,000 job? Worse than that, he goes into bankruptcy and you have to file a Proof of Claim stating your claim is for \$130,000 which is false. If you have to file a Mechanic's Lien for \$130,000, you have willfully exaggerated the lien for that particular project. In addition, you may have perpetuated a fraud by allowing an innocent owner to be billed for work that was not done on this project.

The bottom line is – get paid when the job is finished and let the next job take care of itself, without any rollovers.



Compromise the Bill

The second gimmick is compromising the bill.


Some owners and contractors constantly and repeatedly insist that the prices to them must be discounted 25 percent.

There is a lot of work available and lots of projects, so you fall for it. If it is a \$100,000 job, you let them knock you down to \$75,000. You consider that to be good faith, good will, investing in the future. You use all kinds of excuses to justify losing money on this job and hopefully making it up in the future.

How many times does it take for a subcontractor to realize that this guy is a professional chiseler and you have to boost the price to make a dollar? You might be required to take a \$100,000 job and add \$25,000 to it in order to wind up getting your \$100,000.

These schemes are old, but relevant. Never take a job expecting to make up prior losses. Never accept a job where you are losing money from the get go.

Never Let Your Lien Time Run Out!

Zisholtz & Zisholtz, LLP, Attorneys at Law, 170 Old Country Road, Suite 300, Mineola, New York 11501. Phone: 516.741.2200. 



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NFSA Announces Two New Seminars

NFSA SEMINARS:

By James D. Lake

In response to requests from around the country, NFSA is introducing two new seminars for 2015. The first was announced in the January/February edition of Insider Training.

WHO YOU GONNA CALL? Coordinating NFPA 25 & 72 Inspection, Testing, and Maintenance Requirements

Both NFPA 25 and NFPA 72 require coordination of the testing of the sprinkler systems and the fire alarm systems. That is easier said than done. With a variety of administrative code references, varying task frequencies, differences in scope, and unique definitions used in the codes and standards overseeing fire protection system inspection, testing and maintenance (ITM), coordination of work becomes critical to ensure proper and complete building protection. In this unique seminar the participant will explore the issues and develop strategies to coordinate the work required by these two important standards.

This seminar is a result of collaboration between NFSA and the American Fire Alarm Association (AFAA) and is intended for fire sprinkler system ITM contractors and technicians, alarm system contractors and technicians, authorities having jurisdiction, building owners and facilities managers.

Through the overall goal of identifying the coordination requirements in NFPA 25 and 72, the seminar is designed to enable the participant to identify and discuss the

foundational requirements for ITM in the model building and fire codes and discuss the roles and responsibilities of the sprinkler contractor, the alarm contractor, the authority having jurisdiction, and the building owner in coordinating ITM work.

Seminar attendees will also be able to discuss the impact of NFPA 4 and develop a plan for coordinating system impairments as well as a plan for coordinating recordkeeping.

SEMINAR SCHEDULE:

- Module 1* - Fire and Building Code References
- Module 2* - Purpose of ITM
- Module 3* - Definitions
- Module 4* - Roles, responsibilities of stakeholders
- Module 5* - Technician qualification
- Module 6* - Overview of ITM requirements
- Module 7* - Coordination requirements from NFPA 25 & 72
- Module 8* - Impairment handling
- Module 9* - Report requirements
- Module 10* - Role and impact of NFPA 4

The first two seminars will be held in Houston, TX on March 24 and Baton Rouge, LA on March 26. This seminar will be scheduled throughout the country in 2015. Check in at www.nfsa.org for dates and locations as they come up and to register for this highly informative and interactive new seminar.

The second seminar addresses residential sprinklers and NFPA 13D. It is a revamping of older seminars to address new issues.

UNDERSTANDING, APPLYING AND ENFORCING NFPA 13D

As residential fire sprinkler systems become more widely recognized and adopted by communities it becomes more important than ever to understand the requirements for proper design and installation. NFPA 13D, Standard for the Installation of Fire Sprinkler Systems in One- and Two-Family Dwellings and Manufactured Homes is the primary standard governing layout and installation for residential sprinklers. Understanding the requirements of the standard and how they are applied is the key to a solid enforcement program. This one-day seminar will guide the participant through the requirements of NFPA 13D and identify how the standard is applied as well as the alternative approaches, such as IRC P2904.

At the conclusion of this seminar the

>> CONTINUED ON PAGE 12



Vice President
of Training

James D. Lake

>> CONTINUED FROM PAGE 11

participant will be able to:

1. Discuss the scope and application of sprinkler standards for one- and two-family dwellings and townhomes.
2. Identify the requirements for residential fire sprinkler system installation in accordance with NFPA 13D and IRC P2904.
3. Apply the installation requirements and calculation procedures to various residential layouts.
4. Develop an approach for coordinating installation inspection & testing.

The seminar is broken down into three modules:

MODULE 1:

Understanding NFPA 13D (Chapters 1-4)

At the conclusion of this module the participant will be able to:

1. Discuss the scope and application of NFPA 13D.

2. Discuss the various terms specifically defined for residential sprinklers systems in NFPA 13D.

3. Identify and explain the differences between the requirements for residential sprinkler systems in single-family dwellings in NFPA 13D and NFPA 13

4. Identify and explain the general requirements for all NFPA 13D systems.

MODULE 2:

Applying NFPA 13D (Chapters 5-10)

At the conclusion of this module the participant will be able to:

1. Explain the water supply requirements for NFPA 13D

2. Apply the installation and spacing requirements for residential sprinklers.

3. Calculate the demand of a residential sprinkler system based on various residential layouts and calculation procedures (NFPA 13D & IRC-P2904).

4. Discuss the options for protecting residential sprinkler systems from freezing

MODULE 3:

Enforcing NFPA 13D (Chapters 11&12)

At the conclusion of this module the participant will be able to:

1. Identify and explain the various documents that are involved in governing residential sprinklers.

2. Discuss state and local agencies that have regulations that impact residential sprinkler systems.

3. Describe the process for residential sprinkler system acceptance testing.

4. Develop an approach for informing the owner of responsibilities for inspection & testing.

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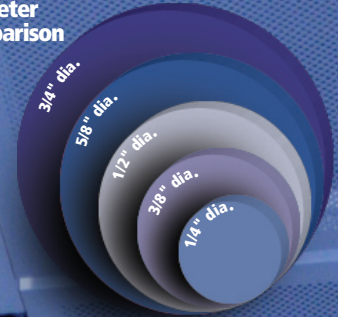
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Lightweight Steel Joist Construction

By Victoria B. Valentine, P.E.

The general trend in the construction industry for the last few decades has been to downsize the materials being used.

From one side this is advantageous as the less material used the less cost there is for the product. It may also reduce the cost of construction as less manpower and machinery may be used to assemble the lighter products. This can even be seen in the fire sprinkler industry with the use of hydraulic calculations reducing the pipe diameters needed to achieve the water demand for the fire sprinkler system. In large part this can be attributed to the mainstream use of computers that have eased calculations for fire sprinkler systems and all other construction trades.

Unfortunately, with all the downsizing done throughout construction, the robustness of materials is not as great as it once was. This has become readily apparent with lightweight steel construction. These steel members have much smaller cross-sections than many years ago. Now, more than ever, there is a need to coordinate the specific loads of a sprinkler system with the structural/project engineer.

NFPA 13, Standard for the Installation of Sprinkler Systems, states "...Sprinkler piping shall be substantially supported from the building structure, which must support the added load of the water-filled pipe plus a minimum of 250 lb (114 kg) applied at the point of hanging..." in Section 9.2.1.3 of the 2013 Edition (similar text is in earlier editions). The requirement is for the dead load of the system, the pipe

material and water that would fill it, plus 250 lb (114 kg) at the point of attachment to be included in the calculations for the structure. This section was discussed in depth by the Technical Committee on Hanging and Bracing for Water-Based Fire Protection Systems a few cycles ago. The conclusion was that the physical load of the system plus the 250 lb (114 kg) safety factor at points of attachment should be communicated to those responsible for the structural design to adequately support the fire sprinkler system.

The history of the 250 lb (114 kg) load comes from the system installation. This safety factor was established to account for someone working on the system installation falling from a ladder or scaffolding. It was intended to represent the average individual who if they were to fall would grab for whatever was within reach including the sprinkler system pipe that was in place at the time of the incident. In current installations, it is more likely to see lifts and other equipment being used. The safety precautions for installers have improved over the decades for all trades. This means the actual physical application of this load to the hangers and thereby the structure occurs less frequently. However, the Committee opted to maintain this historic load as a level of robustness to the system that should be maintained. It is now referred to simply as a safety factor for the system. It should be noted that others, like ceiling cleaners, may also apply loads.

In July of 2012 NUCOR Vulcraft Group issued a whitepaper that discussed "Concentrated Loads at Joist Chords." The paper notes that loads up to 100 lb (45.4 kg) can be supported anywhere along the joist without effecting the performance of the joist. This was concluded based on research conducted by the Steel Joist Institute (SJI). It goes on to note that concentrated loads that are more than 100 lb (45.4 kg) either need to be installed at panel points of the joist (locations where web members intersect with the top or bottom chord) or a reinforcing field installed member brace would have to be added. This can be a major challenge for the sprinkler system installation. This guidance alone is not sufficient to determine whether or not their system can support a sprinkler system.

Of course, the fire sprinkler system could be installed using only panel points as hanger locations, which may be able to carry the loads. Another option would be to install or have installed the field member braces to be able to hang the piping in between the panel points. The manufacturers of these lightweight steel joists,

>> CONTINUED ON PAGE 16



NFSA's Director
of Engineering

Victoria B. Valentine, P.E.

Table 1: Dead Loads for Fire Sprinkler Piping

PIPE MATERIAL	NOMINAL PIPE DIAMETER (IN)	WEIGHT (LB/FT)	MAXIMUM HANGER SPACING (FT)	DEAD LOAD (LB)
Schedule 10 Steel	1	1.81	12	21.72
	1 ¼	2.52		30.24
	1 ½	3.04		45.60
	2	4.22	15	63.30
	2 ½	5.89		88.35
	3	7.94		119.10
	4	11.78		176.70
	6	23.03		345.45
	8	40.08		601.20
Schedule 40 Steel	1	2.05	12	24.60
	1 ¼	2.93		35.16
	1 ½	3.61		54.15
	2	5.13	15	76.95
	2 ½	7.89		118.35
	3	10.82		162.30
	4	16.40		246.00
	6	31.69		475.35
Schedule 30 Steel	8	47.70	15	715.50

>> CONTINUED FROM PAGE 15

such as Vulcraft, also offer the option to have a custom design done for the joist as long as the exact locations of the load points are known. Any of these options could be costly to the owner as additional materials, labor, and coordination will be needed in order to complete the project.

Yet a more detailed understanding of the loads may assist in greater flexibility with points of hanging for the fire sprinkler system. When a structure is planned there are many types of loads that have to be incorporated. There are dead loads, live loads, wind loads, snow loads, seismic loads and more. The weight of the fire sprinkler system would be a dead load for the structural components of the building. According to ASCE/SEI 7-10 a dead load is made up of "the weight of all materials of construction incorporated into the building including, but not limited to, walls, floors, roofs, ceilings, stairways, built-in partitions, finishes, cladding, and other similarly incorporated architectural and

structural items, and fixed service equipment including the weight of cranes," found in Section 3.1.1. Fixed service equipment would include plumbing, HVAC, fire sprinkler systems, and other systems that typically do not change over the life of the building. However, the dead load value would be the actual weight of the system components including the water that would fill the piping. The live load, defined in Section 4.1, is "a load produced by the use and occupancy of the building or other structure that does not include construction or environmental loads, such as wind load, snow load, rain load, earthquake load, flood load, or dead load." Loads related to the use and occupancy of the building are dynamic loads over the lifespan of the building. The 250 lb (114 kg) safety factor would be a live load for the structure as it is not a continuous load applied to the structural members.

The dead load for sprinkler system piping can be found in *Table 1*. The maximum

allowable hanger spacing was used to determine approximate dead loads based on Schedule 10 and Schedule 40 steel sprinkler pipe. The size of branch lines and mains will vary depending on the amount of water the hazard will need in a fire incident. The dead loads could range from just over 20 lb (9.1 kg) at the point of attachment to over 700 lb (317.5 kg). NFPA only tells the user that the point of attachments for the hangers needs to be adequate to support the load. In today's buildings, fire sprinklers are commonly installed. Many structural engineers have loads that are used as approximations early on in a project that would include mechanical systems such as the fire sprinkler system. Yet communicating the actual anticipated loads as early as possible will allow for easier accommodation of the true loads.

Depending on the pipe sizes needed to supply the water demand, there may be situations where lightweight steel

construction is not adequate to support the load. However, using the field installed member brace could gain additional load capacity, but the manufacturer would have to provide information on how much additional weight could be supported at that point.

Although the whitepaper acknowledges general load limitations, it is important to confirm any specific limitations based on the actual materials being used for the structure at hand. Other lightweight steel could have greater or lesser capacities. There are options during the design phase of the structure. Most of the manufacturers of lightweight steel have options that would allow for larger concentrated loads to be located between panel points of the joist, which would help to provide flexibility in hanger locations. Also, the 100 lb (45.4 kg) load that is referenced does not indicate the type of load. The assumption based on content of the paper is that it is a dead load. Whether the 250 lb

(114 kg) live load can be supported by the structure will have to be investigated by the structural engineer. One of the most critical points to understand is that the 250 lb (114 kg) live load must be accommodated by any point of attachment to the structure but not simultaneously at all points of attachment. The whitepaper also offers a different joist when there are loads that cannot be easily located ahead of time. Although in many cases, the fire sprinkler contractor is not involved early enough in the project to be involved in this decision.

Summary

The built environment involves tremendous coordination to ensure a building that the owner desired has the strength to support environmental loads as well as dead and live loads for proper function and operation of the property. It is critical to make sure the structure will adequately

carry the weights of structural loads applied from mechanical systems, such as fire sprinkler systems. From the owner or structural engineer's perspective, the cost benefit of lightweight steel joists will have to be weighed since additional enhancements or additional labor and coordination may be needed so that the fire sprinkler system is installed appropriately and adequately for the lifespan of the building. ①

REFERENCES

1. ASCE/SEI 7-10 Minimum Design Loads for Buildings and Other Structures. American Society of Civil Engineers, Reston, VA. 2010.
2. NFPA 13, Standard for the Installation of Sprinkler Systems, 2013 Edition. National Fire Protection Association, Quincy, MA. 2012.
3. "Concentrated Loads at Joist Chords." NUCOR Vulcraft Group. 2012. Web. July 31, 2012.



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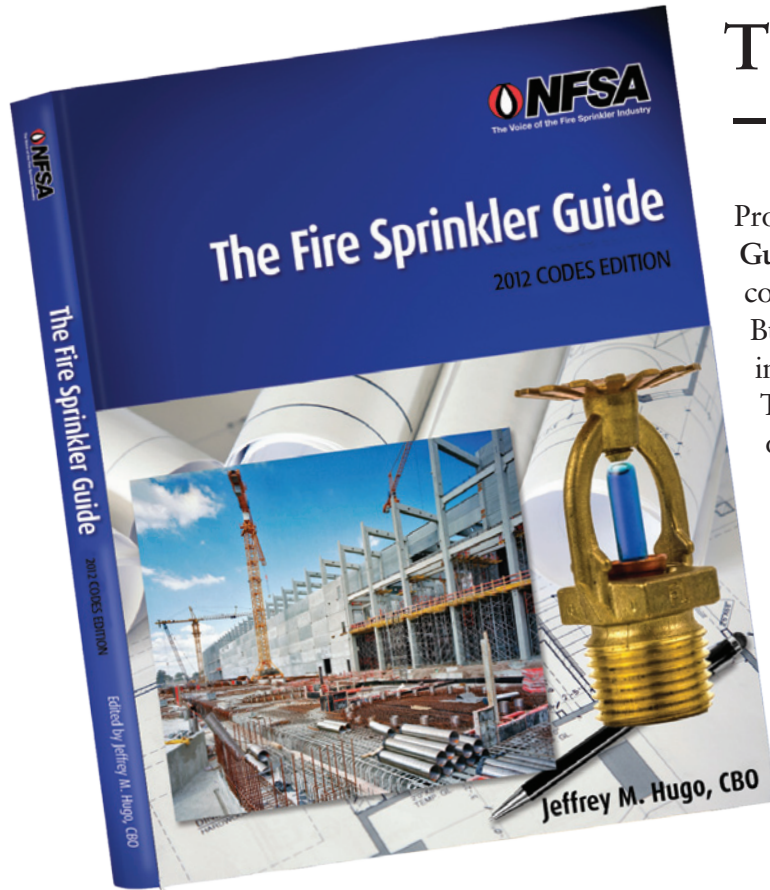
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The Fire Sprinkler Guide –2012 Codes Edition



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. 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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Hydraulic Review for Fire Sprinkler Plans Examiners

By Jeff Hugo, CBO

In this stage of the project review, the fire sprinkler plans examiner reviews the hydraulic calculations of the fire sprinkler system. This portion of the review can be the most intimidating, as it deals with engineering and hydraulic principles that may not be used that often by the plans examiner. This is one of the reasons for a checklist, to be able to recall the necessary information to provide a thorough review. Below is a copy of the checklist that walks the plans examiner through each step of the hydraulic review. For each step in the checklist, there is a corresponding step that contains commentary or direction for the plans examiner in the text of this article. This is to assist and guide the plans examiner to check the appropriate items in that portion of the review.

	Worksheet analysis
	Node tags
	Pressure
	K-factor
	Flow
	Pipe diameters
	Equivalent pipe length for fittings
	Pipe lengths
	Sprig and drop lengths
	C-factor
	Equipment friction losses
	Hose stream and duration
	Calculation path

Hydraulic calculation review starts with

the hydraulically most remote area's end sprinkler and goes all the way back to the water source, examining the hydraulic worksheets submitted by the layout technician. There will be many worksheets to go through, however, this process is quite simple. It is a matter of checking and verifying the fire sprinkler shop drawings, the hydraulic calculation worksheets, and the "cut" sheets, over and over again.

Node Tags

The nodes or node tags are typically the octagonal symbols with letters or numbers printed inside. A node on the hydraulic calculation worksheets will correspond with the node on the shop drawings. At this step verify that the nodes on the worksheets are all on the shop drawings or vice versa. The plans examiner should get familiar with the water path, or flow of water, by tracing the steps from the worksheet onto the shop drawings.

If there are nodes missing, this should be addressed on the checklist. There are times when the worksheet may contain alternate paths and all of the nodes on the shop drawings may not be used in each path.

Pressure

The pressure column has three rows: total pressure (P_t), elevation pressure (P_e) and friction pressure (P_f).

Total pressure (P_t) is the sum of the pressure in the system up to a node. The

elevation pressure (P_e) and the friction pressure (P_f) are added together and increase (*get larger*) as it gets closer to the water supply. The plans examiner will verify that the increases and decreases along the paths are correct. While computer software does the calculations, it is wise to spot check the input in various places to ensure the correct input values were used.

Elevation pressure (P_e) is the pressure change from the elevation difference of the two nodes. When the elevation of the system changes, the pressure in the system changes. It is important to verify that the changes in elevation are accounted for in the pressure column of the worksheet. On the left side of the worksheet is an elevation column. The change in elevation, measured in feet, is multiplied by 0.433 and is entered as either a positive number (*an increase in pressure*) or a negative number (*a decrease in pressure*) in the elevation P_e cell of the pressure column. The plans examiner looks for the elevation changes in the shop drawings and verifies these elevation changes are correctly assigned to the appropriate node.

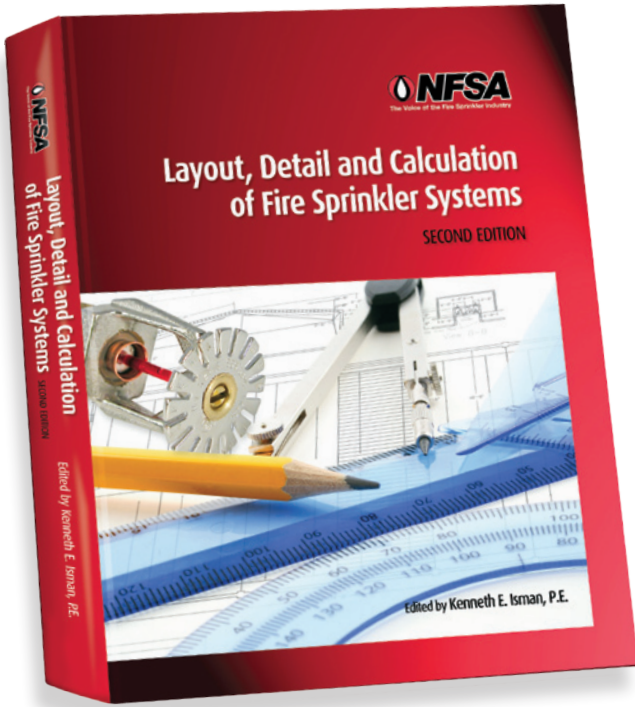
>> CONTINUED ON PAGE 21



NFSA's Manager
of Codes

Jeff Hugo, CBO

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.

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Friction pressure (P_f) is the result of the total pipe length multiplied by the friction loss per foot. The total pipe length is found at the bottom of the equivalent pipe length column of the node row or step. The total pipe length is then multiplied by the friction loss. Friction loss is most commonly determined by the Hazen-Williams formula.

In the column under the C-Factor is a cell for the friction loss per foot. The Hazen-Williams formula is listed in Section 23.4.2.1.1 of NFPA 13. It isn't really necessary for a plans examiner to perform this calculation during a review. However, a brief explanation of the equation is necessary to show that the information in several cells of the worksheet is critical in determining the friction loss. The Hazen-Williams formula uses the flow (Q), the C-factor (*roughness coefficient*) and the inside diameter to determine the friction loss per foot. This number is entered in the cell below the C-factor and is multiplied by the total pipe length (in feet) and finally entered in the P_f cell.

K-factors

The k-factor of the sprinkler is the number that relates the flow that will discharge from the sprinkler to the pressure of the water at the sprinkler. The k-factor of the sprinkler is determined by the manufacturer and will be indicated on the manufacturer information sheet. In the hydraulic review, the k-factor of the sprinkler (or in some cases, the branch line) is indicated on the worksheet in the k-factor column located on the left side. Some worksheets show a blank or shaded cell below the k-factor cell. Only one k-factor is used in a step.

In this step, the plan examiner verifies the sprinkler on the shop drawing correlates with the sprinkler k-factor used in the calculations. Many sprinkler models are available in several k-factors. The hydraulic information (*flow, pressure, k-factor*) from the cut sheet is verified by the plans examiner to be correctly noted on the worksheet. Accuracy is critical as the k-factor determines the flow from the sprinklers.

Flow

This step has two cells to verify in the worksheet. The upper cell is the flow of the sprinkler (or branch line) of that specific step. It is indicated by the lower case letter "q." The flow (q) is determined by the k-factor of the sprinkler multiplied by the square root of the total pressure (P_t). The flow (q) at this step is the flow of the sprinkler (or branch line) in this step.

The lower cell of this step is the total flow of the previous step(s) added to the flow (q) in the cell above. Flow in this cell is indicated by the upper case letter "Q." This is the total flow of the system at this point.

Pipe Diameters

This step has two cells, an upper and lower cell to verify on the worksheet and compare to the fire sprinkler shop drawings. The upper cell is the nominal diameter and is the typical or nominal size of the pipe. In this cell, a 3-inch pipe is entered as 3 inch. It is also important to indicate the schedule of the piping, where applicable. The pipe size entered in this cell is carefully checked with the piping used between the two nodes on the shop drawings.

The lower cell is the actual inside diameter (ID) of the pipe. The actual inside diameter of a pipe varies by the schedule and material of the pipe. The actual inside diameter of a 3-inch pipe is 3.260 inch for Schedule 10, and 3.068 inch for Schedule 40. This is an important step. The inside diameter of the pipe is part of the Hazen-Williams calculation to determine friction loss. The number entered in this cell can be verified by several sources. The annex of NFPA 13 has tables of steel pipe and copper tube dimensions. The manufacturer of the pipe will also list the diameters of their products. NFSA also publishes an extensive list in **The NEW Hydraulics Handbook**.

Equivalent Pipe Length for Fittings

This column is used to list any device, valve, tee or elbow between the two nodes when it needs to be considered for the hydraulic calculations. These items cause friction in the system and it is critical that

they are accounted for in this cell.

The equivalent pipe length is a measurement that equates the device into linear feet. It is the length of the same size of pipe that would create the same amount of friction loss as what occurs in the fitting or device. Each device can be verified by several sources and it is important to check that the correct pipe sizes were used. NFPA 13 has a table for equivalent lengths of steel pipe and copper tube. The manufacturer of the pipe will also list the equivalent length of their products. NFSA also publishes an extensive list in **The NEW Hydraulics Handbook**.

Some tees, valves, and check valves that occur in this step (between the nodes) must be added to account for friction loss. These fittings are then converted into equivalent pipe lengths to be added with the pipe lengths and the sum of the two is used to obtain the total friction loss for this step.

Pipe Length Coordination

In this step the plans examiner compares the pipe length from node to node on the shop drawings with the lengths entered on the worksheet.

The measurements on the shop drawing are typically center to center, and this is the measurement shown on the calculation worksheet. For example, from node to node, the pipe length is measured from the center of the tee to center of tee. The fabrication shop will take off the amount of pipe that the fitting uses, so, an actual piece of pipe will be shorter, but the path of water is the same.

It is important to check each step that each piece of pipe (*along with fittings*) is accounted for. This is one of the more commonly missed areas when examining fire sprinkler shop drawings.

Sprig and Drop Lengths

In this step, the plans examiner should verify that the pipe lengths for sprigs and/or drops are accounted for in the hydraulic calculation worksheet. It is also important to note that if there are sprigs or drops, their elevations are accounted for in the pressure column (P_e).

C-Factor - Roughness Coefficient

The C-factor column has a cell for each step to input the C-factor for the piping in the calculation. The C-factor is part of the Hazen-Williams formula that calculates the friction loss. The table in NFPA 13 lists the C-factors values for several types of pipe. It is important to make sure the C-factor is followed through the entire set of calculations. The layout may change pipe and it is important to verify the C-factor changes accordingly. A common area where the C-factor differs is in the underground and aboveground piping. For example, underground ductile iron has a C-factor of 100 and if the above-ground piping for the sprinkler system uses CPVC, the C-factor will be 150.

Some special listed pipe may have C-factors that are different than the NFPA table. The code official or plans examiner is permitted to accept other C-factors.

Equipment Friction Loss

Water flowing through a straight piece of pipe has very little friction loss. However, when the water flowing through piping makes turns, the drag, or friction loss increases. Some of these losses are accounted for in the equivalent pipe length, but other added equipment must be accounted for in the worksheet.

The equipment is accounted for in the worksheet where the equipment occurs in the system, just as fittings, tees, and valves. Meters, strainers, seismic separation assemblies, backflow assemblies, water softeners, etc. are included in the step (from node to node) where they occur. The friction loss of the devices is found in the manufacturers' specifications that were included in the submittal package. The plans examiner needs to carefully examine the shop drawings and hydraulic calculations to be sure there is accounting for all devices. Many of these devices have huge friction losses and can "make or break" the system calculations if they are left out of the calculations.

Hose Stream and Duration

The hose stream allowance represents the water that will be used by the fire department upon arrival. This means wherever in the system they will connect the hose(s) is the point where the flow should be added in the calculation. If the calculation reaches a city water supply connection, the flow is usually added in at that point as city mains are typically large enough that the friction loss from that connection to the hydrant location is negligible. If there are fire hydrants downstream of the fire pump, then they need to be added in at their physical location as the water would have to go through the fire pump

before flowing out of the hydrant.

Buildings in areas without public water supplies are not required to provide water for use by responding fire departments. Therefore, if tanks only supply sprinklers then the hose stream allowances are not required in the calculation of the demand.

When hose stream is being checked on the plan review, it is traditionally the time to verify the water duration. This is not indicated in the hydraulic calculations, but it should be on the cover sheet. The table in NFPA 13 shows the minimum water duration in minutes for each hazard calculation. The lower duration is allowed where remote station or central station water flow alarm service is provided on the assumption that the fire department will respond sooner to support the system if automatically notified of a fire. An alarm panel within the building does not satisfy this requirement unless it is configured to provide the remote or central station service.

Calculation path

The calculation path starts at the most remote sprinkler and continues through to the connection to the water supply. The plans examiner is to verify that all paths are complete and that the shop drawings and hydraulic worksheets correlate with each other. ①

The screenshot shows the NFSA.tv website. At the top, there is a navigation bar with links for "NFSA.tv Log In", "Channels", "Virtual Seminars", "Advertise", "Shopping Cart", and "Search". Below the navigation bar, there are several news snippets. One snippet is titled "NFSA.tv Delivers News" and another is "NFSA.tv's Commitment to the Fire Sprinkler Concept". At the bottom of the screenshot, there is a video player interface with a play button, a progress bar, and a volume icon.

NFSA IS THE LEADING SOURCE FOR NEWS IN THE DYNAMIC FIRE SPRINKLER INDUSTRY. STAY INFORMED BY WATCHING REGULARLY UPDATED NEWSCASTS RELATING THE TOP STORIES FROM NFSA AND THE SPRINKLER INDUSTRY.

VISIT US AT
NFSA.tv
 LIVE AND ON DEMAND VIDEO

The Training and Education component of NFSA.tv will be a totally new and advanced training format – live video training sessions. NFSA world-class NFSA instructors will be delivered to the participant's computer or training room screen. In a "virtual classroom" format where the participant will see the instructor and the material as though they were sitting in the class room. Immediate live interaction will be provided and dynamic visuals will make this a learning experience of the highest quality that the web can deliver.

PHD INTRODUCES NEW PRODUCT

SAVES TIME SAVES MONEY

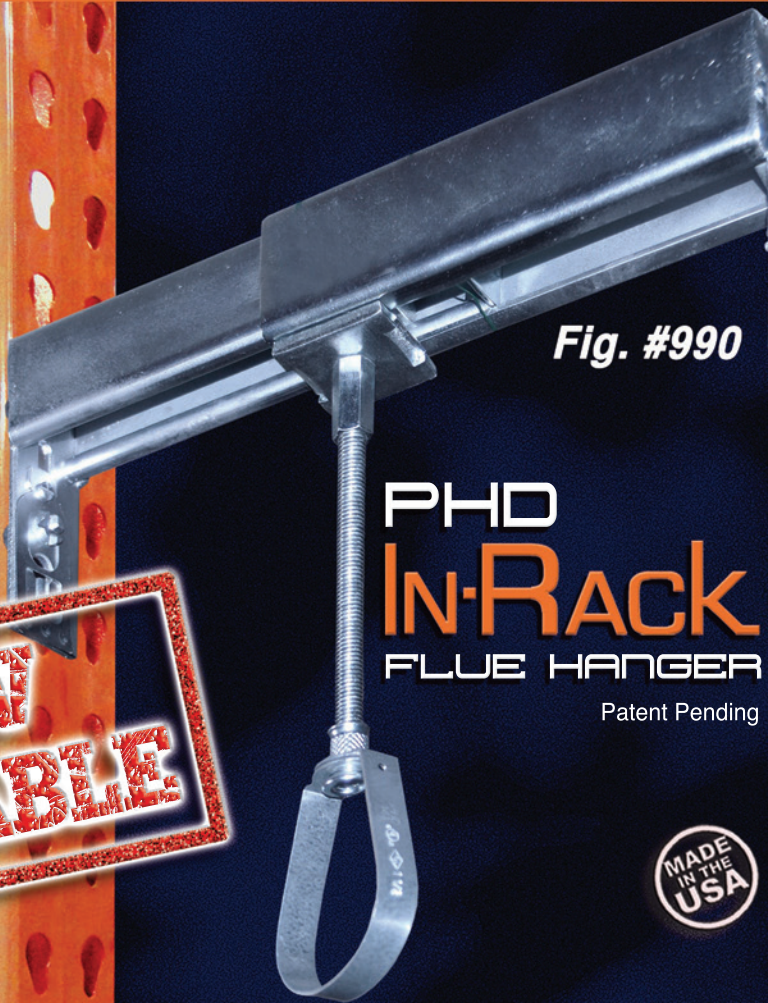
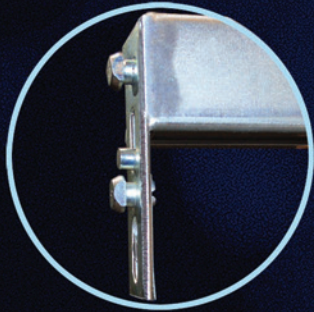


Fig. #990

PHD
In-Rack
FLUE HANGER

Patent Pending

NOW AVAILABLE



Simplifies Warehouse Sprinkler System Installations!

PHD's In-Rack Flue Hanger is designed with productivity in mind. Unlike traditional pipe hanging methods comprised of over 16 separate parts and taking up to 20 minutes to build & install, PHD's fully adjustable In-Rack Flue Hanger is pre-assembled and installs in seconds. In a typical 1,000 unit warehouse installation, you'll save 120 hours in labor costs alone!

- ✓ Fits within typical 8" to 12" wide space
- ✓ Fully adjustable to fit 90% of racking systems including Teardrop and Interlake styles
- ✓ Standard Finish - EG
- ✓ Innovative Design - Made in U.S.A.

Request your *FREE* Sample by calling your PHD Distributor Today!



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(800) 321-2736

www.phd-mfg.com

Rick Persing - (574) 536-3857

E-Mail: rickp@phd-mfg.com

The Florida Fire Sprinkler Association Chapter of the NFSA is proud of Golden Sprinkler Award Winner Buddy Dewar.



Buddy Dewar



Florida Fire Sprinkler Association, Inc.

A Chapter of NFSA

NFSA ANNUAL SEMINAR AND NORTH AMERICAN FIRE SPRINKLER EXPO®

APRIL 29–MAY 2, 2015 | HILTON BONNET CREEK RESORT

*Golden Sprinkler
Award*



Buddy Dewar

*Technical Service
Award*



Russell Fleming

*Leadership in
Public Safety Award*



Gail Minger





Advancing the Fire Sprinkler Concept for 110 Years.

NFSA Annual Seminars and Exhibitions have always been spectacular, but this year's in Orlando should top them all. Having the Canadian and Mexican sprinkler associations join us for the second time in a North American Fire Sprinkler Expo® will be an event for the history books, with a dynamic not seen in the fire sprinkler industry since the 2013 event held in Las Vegas. The opportunities for education, networking, and relationship building are unmatched, and NFSA is extremely proud to be hosting this event. In other parts of the world, North America is viewed as the leader in advancing the development and use of fire sprinkler systems. In Orlando, the North American fire sprinkler industry will be united in sharing the latest developments, viewing the newest technology, and making a renewed commitment to the cause of fire safety through automatic fire suppression. Along with the new opportunities will be the traditional events that make NFSA exhibition years special, like the Top Tech competition. It's an event you don't want to miss, and we look forward to having you join us.

On behalf of our Board of Directors, staff and all our members, CASA is very proud to be part of the second North American Fire Sprinkler Expo® dedicated to fire sprinkler contractors, manufacturers and suppliers. Not only will this allow for the three associations to coordinate programs and initiatives across our three countries, but it will be an excellent opportunity for Sprinkler people to associate and network together. When we are so often divided over issues that confront us across our Nations or on the world stage today, an event that can combine business opportunities while uniting people together is a very worthwhile goal, but even more so when our products and services lead to the safety and peace of mind of our citizens.

I personally look forward to sharing in this event and hope it will be a catalyst to not only promote our industry now, but also help us all better advance the benefits of fire sprinkler installations in the years to come.

It is a great pleasure to represent AMRACI and to participate in the second North American Fire Sprinkler Expo® along with NFSA and CASA. We have a lot to learn, and this forum represents a great opportunity for our members to build new bonds and expand the commerce of the fire protection industries across North America.

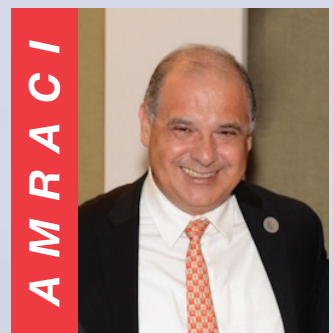
In addition to the educational program, expo, and social events, it's hard to think of a better place than Orlando for all of our families to enjoy, and should provide an exceptional setting to help create a positive experience for everyone.



RUSS FLEMING
President, NFSA



JOHN GALT, CAE
President, CASA



CARLOS MORETT
President, AMRACI

SCHEDULE OF EVENTS

TUESDAY

4/28

8:00 a.m. – 4:00 p.m.
 8:00 a.m. – 4:00 p.m.
 2:00 p.m. – 6:00 p.m.

E&S Committee – Observers welcome by request – contact Nicole at ext. 149
 NFSA Regional Managers Midyear Meeting
 CASA Long Range Planning Meeting

WEDNESDAY

4/29

7:00 a.m. – 5:00 p.m.
 8:00 a.m. – 4:00 p.m.
 8:00 a.m. – 4:00 p.m.
 8:00 a.m. – 4:00 p.m.
 8:00 a.m. – 4:00 p.m.
 8:00 a.m. – 12:00 noon

 1:00 p.m. – 6:30 p.m.
 1:00 p.m. – 4:30 p.m.

 4:30 p.m. – 6:00 p.m.

Registration Desk Open
 E&S Committee – Observers welcome by request – contact Nicole at ext. 149
 NFSA Regional Managers Midyear Meeting
 CASA Board of Directors Meeting
 Tour – Kennedy Space Center
 Pre-conference seminars – complimentary to all full conference registrants
 Navigating the Storage Requirements
 The Two Sides of Plan Review
 CASA Technical Committee Meeting
 Pre-conference seminars – complimentary to all full conference registrants
 Special Installation Topics
 ITM for Building Owners
 Future Leadership Committee Reception/Meet and Greet

THURSDAY

4/30

7:00 a.m. – 7:00 p.m.
 8:00 a.m. – 12:00 noon

 8:00 a.m. – 12:00 noon
 9:00 a.m. – 12:00 noon

 12:00 noon – 2:45 p.m.

 1:00 p.m. – 3:00 p.m.
 1:00 p.m. – 2:45 p.m.
 2:45 p.m. – 3:00 p.m.
 3:00 p.m. – 5:00 p.m.

 5:45 p.m. – 9:00 p.m.

Registration Desk Open
 Pre-conference seminar – complimentary to all full conference registrants
 Preserving Communities
 CASA General Meeting
 Association Leadership Forum (Open to NFSA Board, Council and Committee members and Chapter officers)
 Contractors Forum Lunch
 Combined NFSA/CASA contractors (senior management only)
 CASA AMS Meeting
 Workshop Sessions
 Break
 Opening Session
 Chair's Welcome
 State of the Industry Address
 Hall of Fame Inductions
 Keynote Address
 Golden Sprinkler Award
 Exhibition Grand Opening
 Complimentary Cocktail Reception
 Top Tech Competition Preliminary Rounds

FRIDAY

5/1

7:00 a.m. – 4:00 p.m.

8:00 a.m. – 9:30 a.m.

9:30 a.m. – 9:45 a.m.

9:30 a.m. – 5:30 p.m.

9:45 a.m. – 11:30 a.m.

11:30 a.m. – 12:00 noon

12:00 noon – 4:00 p.m.

Registration Desk Open

Technical Plenary Session

State of the Technology Address

Technical Service Award

Impact of New Jersey Supreme Court Decision on ITM

Break

Spouses Program (breakfast and optional tour)

Workshop Sessions

Exhibitor Luncheon

Exhibition Open

Complimentary Luncheon

Top Tech Competition Final Rounds

Evening Open

SATURDAY

5/2

8:00 a.m. – 12:00 noon

9:00 a.m. – 11:00 a.m.

12:30 p.m.

1:00 p.m. – 5:00 p.m.

7:00 p.m. – 10:00 p.m.

Registration Desk Open

Closing General Session

Economic Report

Leadership in Public Safety Award

Friend of the Industry Award

Retrofit Round Table (NFSA, CASA, AMRACI)

President's remarks – Looking Ahead

Golf Tournament

Waldorf Astoria Golf Club - onsite

Technical Seminar – complimentary to all full conference registrants

Advanced Hydraulics

Closing Banquet

Golf tournament awards



WORKSHOP TOPICS



NFPA 13R 2016

Peter Schwab

This session will detail the important changes to NFPA 13R that occurred between the 2013 and the proposed 2016 edition. In addition, the controversial topics that did not get voted into the document will be discussed as well. If low rise residential is a big part of your business, stay ahead of the curve and your competition and attend this informative session.

New Storage Protection Options: NFPA 13, 2016 edition and Beyond

Steve Wolin

The presentation will discuss sprinkler protection criteria that are proposed for the 2016 edition of NFPA 13, including:

- Design criteria to protect exposed, expanded plastics stored in racks using ESFR sprinklers and vertical barriers.
- In-rack sprinkler protection scheme for dedicated racks of commodity exceeding the overhead sprinkler system design.

In addition, research on extended coverage in-rack sprinkler protection for high-bay storage, exposed expanded plastics, and other high-challenge storage arrangements will be discussed.

Service Agreement Sales

Joe Siderowicz

This session will review the most effective marketing and sales strategies for growing sprinkler system Service Agreement Sales revenue. Subject matter will address the current market environment, best methods for achieving dramatic growth, unique sales skills required, and the impact an effective service sales strategy will have on your overall business.

NASI Benefits Fund Summary

Fred Barall

This program will highlight the current financial status and key issues associated with both the NASI Pension and NASI Health and Welfare Fund. This is designed to update union contractors regarding the key issues which the Fund Trustees are addressing, along with other useful information for the contractors.

NFSA Legal Highlights

Jim Lynch

This program will review selected legal issues and cases which NFSA has been involved with for the past few years, with an emphasis on issues of general interest to NFSA contractors, particularly those operating in a union environment.

Contract Administration for Union Contractors

Carla Gunther

This program will cover several key aspects of day to day contract administration, including issues such as progressive discipline, just cause and grievance handling. The emphasis will be on providing useful, practical advice for the contractors.

NFPA 25 & 72 a Coordination Q&A

Jason Webb, Art Black

Both NFPA 25 and NFPA 72 require coordination of the testing of the sprinkler systems and the fire alarm systems. That is easier said than done. With a variety of administrative code references, varying task frequencies, differences in scope, and unique definitions used in the codes and standards overseeing fire protection system inspection, testing and maintenance (ITM) coordination of work becomes critical to ensure proper and complete building protection. This session will explore the issues and questions that arise when attempting to coordinate the work required by these two important standards.

Simplifying NFPA 13

Russ Leavitt

The NFPA Automatic Sprinkler Correlation Committee has formed a task group to examine and prepare proposed changes to the 2019 edition of NFPA 13. This seminar reviews the goals, objectives, and progress of this initiative. This effort is in response to the concern that the standard has increased in complexity to the point of rendering it virtually unusable for the non-expert user. Some of the specific areas on which the task group is focused include the reorganization of the standard by locating chapters in a way that mirrors the typical design and installation sequence, the creation of a stand-alone standard addressing hanging and bracing, breaking chapter 8 (installation) into multiple chapters, combining the requirements for design criteria and hydraulic calculations into a single location, and eliminating redundant requirements (particularly those associated with storage).

NFPA 25 Task Group Work

Russ Leavitt

The revision cycle for the 2017 edition of NFPA 25 is in the public comment stage. This seminar reviews and discusses the status (accepted or rejected) of the first draft revisions that were developed by task groups which were formed to address issues that were raised at the Fire Protection Research Foundation 2013 Chicago workshop. These task groups are working major topics such as options for performance based inspection and testing programs, the owner's responsibilities regarding system design evaluations, system tagging requirements, automated testing, the reformatting of individual chapter organization, and new requirements for inspection and test reports. Attendees of this seminar will have the latest information to make public comments regarding the first draft revisions prior to the May 15, 2015 deadline.

Determining Commodity Class for Storage – It could cost you!

James Golinveaux

Changes to the 2016 NFPA 13 and updates to FM 8.1 are clarifying the appropriate methods to determine the correct Commodity Class of material. Incorrect classification can cause large exposure for the engineer/

contractor and cause many protection schemes to be inadequate. This class will walk through the appropriate steps to confidently provide the correct commodity class if it falls within the referenced documents. Additionally laboratory certification will be discussed for those commodities that are not defined by the standards.

The NFSA ITM Committee and How it Influences NFPA 25

Terry Victor

Session Description: NFPA 25 has been widely adopted across the United States as the standard for the inspection, testing and maintenance of water-based fire protection systems. This session will explore how some of the pending changes to the next edition of NFPA 25 (2017) were influenced by the NFSA ITM Committee and proposed by the NFSA Engineering and Standards Committee. In November 2014 249 Public Proposals, 120 First Revisions and 13 Committee Proposals were processed during the NFPA 25 first draft meeting in Los Angeles. Learn how these and other changes proposed by the NFSA were acted on by the NFPA technical committee and the impact these changes could have on the sprinkler service businesses of NFSA members:

- Timelines when correction should be made when impairments or deficiencies are found.
- Changes to chapter 8 that will simplify how fire pumps are tested.
- System tagging recommendations in the annex.
- Standards forms or format?



KEYNOTE SPEAKER

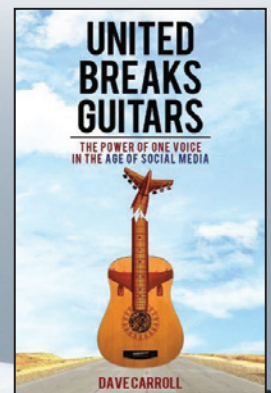


DAVE CARROLL



Dave Carroll is an award winning singer-songwriter, professional speaker, author and social media innovator from Halifax, Canada. With over twenty years experience in the music business, when faced with a difficult customer service issue while flying United Airlines in 2009, Dave used his skills as a master storyteller to share his story with the world. The resulting YouTube music video called "United Breaks Guitars" became an instant viral hit and today over 150 million people have been introduced to his story.

NFSA is very pleased to introduce Dave Carroll as this year's Annual Seminar keynote speaker and look forward to hearing from him about how what he learned can be beneficial to us as we work to share the fire sprinkler story with the world. Indeed, we do have a story to tell. ***Fire sprinklers save lives!***



Spouse's Program

This year's spouses program will begin just after Friday morning's general session. The schedule allows those that wish to sit in on the morning's program including the technical award to do so without missing anything.

At 9:30 a.m. enjoy breakfast while catching up with those you may not have seen in the past year. While you sip your coffee, a Marriott representative will be on hand to provide a detailed presentation about next year's venue and location, Laguna Cliffs Marriott Resort & Spa in Dana Point, CA. Several other topics of interest will be presented and then, should you choose, you're off to Winter Park for the afternoon.



WINTER PARK SCENIC BOAT TOUR AND LUNCH

Optional (registration fee \$75, open to spouse registrants only)

FRIDAY, MAY 1

9:30 a.m. – 5:30 p.m.

While there are many things to do both at the resort and in the Orlando area, we've chosen an optional excursion this year that will keep everyone together for a scenic boat tour, followed by lunch at a local restaurant and some free time after lunch to explore.

Depart Hilton Bonnet Creek at 11:00 a.m. and check in for your relaxing, narrated tour of the canals and homes of Winter Park. The tour takes you 12 miles through the lakes and canals and is truly the best possible way to see the beauty of Winter Park. Multiple pontoon boats will provide a relaxing ride. The one-hour tour will segue into lunch at Chez Vincent to be followed by approximately two hours of free time to explore the shops and avenues at Winter Park. At 4:30 p.m. you'll board the bus to return to Hilton Bonnet Creek around 5:30 pm.

Dress comfortably and be sure to include comfy shoes for the boat and the exploring later.



SCENIC BOAT TOUR



UNIQUE SPRINKLER INSTALLATION TOUR AT KENNEDY SPACE CENTER

(Separate registration required, \$100 per person)*

WEDNESDAY, APRIL 29

10:30 a.m. to 4:00 p.m.

Get a first-hand view of the fire sprinkler system at Kennedy Space Center with an engineering-guided tour. Probable points of interest will be the new fire protection system in the Vehicle Assembly Building (VAB) and the foam system in the hanger, among others.

You'll be transported to the Kennedy Space Center via coach bus (approximately 1 hour ride). Upon arrival you'll go through the badge pick-up process and meet your guide. You should return to Hilton Bonnet Creek by about 4:00 p.m.

Box lunch and drinks will be provided on the bus.

*Approval from NASA pending. Registration for this option closes 3 weeks prior to event, substitutions not allowed due to security requirements.



KENNEDY SPACE CENTER

I would like to attend the following tours:

Tour	Date	Fee	Total
<input type="checkbox"/> WINTER PARK SCENIC BOAT TOUR AND LUNCH	Friday, May 1	\$75/person	_____
<input type="checkbox"/> UNIQUE SPRINKLER INSTALLATION TOUR AT KENNEDY SPACE CENTER AND LUNCH	Wednesday, April 29	\$100/person	_____

SPOUSE'S PROGRAM TOTAL:

A

(transfer total to summary sheet on p.16)

NAME _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

TELEPHONE _____ FAX _____

EMAIL _____

TWITTER _____ LINKEDIN _____

DATE _____

REGISTRATION FORM



NFSA would like you to know that to save both natural resources and funds, no paper brochures will be distributed by NFSA for this event, full registration is available on-line. Registering on-line saves you time and money, and keeps all of your information accurate and secure! Please use this digital document as a resource to assist you in your on-line registration. If you have any questions about the process, please do not hesitate to contact NFSA. We look forward to welcoming you in Las Vegas!

PLEASE CHECK ONE:

- Exhibitor Contractor Supplier Device Manufacturer Architect/Engineer
 Speaker Exhibits Only Guest Contractor Management Team Building/Fire Official

PRINT OR TYPE – THIS FORM MAY BE PHOTOCOPIED FOR ADDITIONAL REGISTRANTS

CHECK ONE:

- Full Conference Registrant** (can attend all functions)
 Exhibition Registrant* (One free full registration and one exhibits only per booth – members only)
 Exhibits Only** (Access to Exhibit Hall only)

REGISTRANT _____

SPOUSE/GUEST _____

CHILDREN (OVER 13 FEE REQUIRED) _____ AGE _____

_____ AGE _____

COMPANY _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

TELEPHONE _____ FAX _____ EMAIL _____

BOOTH NUMBER(S) _____ NAME FOR EXHIBITS-ONLY BADGE** _____

TWITTER _____

LINKEDIN _____

STOP!

In order for Saturday's banquet to be a success, it's imperative that the hotel have an accurate count for food. To that end, please include here how many people will be in your party. Be reminded this event is for full seminar registrants only or those who purchased a separate "Saturday dinner only" ticket. Hilton security will be policing a strict badge policy. As such, all registrants must be wearing their badges. Thank you.

FIRST NAME FOR BADGES:

SEMINAR REGISTRATION FEES:

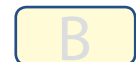
CIRCLE APPROPRIATE AMOUNTS:

	By March 27 EARLY BIRD	Until April 20 REGULAR	After April 20 LATE/ONSITE
MEMBERS (NFSA, CASA, AMRACI)			
Registrant	675	750	800
Additional (same company)	625	700	800
Spouses	400	450	550
Contractor Management Team †	400	450	550
Exhibitor full registration w/booth*	0	0	0
Exhibitor full registration additional	625	750	800
Exhibits only w/booth*	0	0	0
Thursday only	250	300	
Friday only	300	350	
Saturday only (dinner not included)	300	350	
Saturday dinner only	250	300	

	By March 27 EARLY BIRD	Until April 20 REGULAR	After April 20 LATE/ONSITE
CHILDREN			
12 & under	—	FREE	—
13–21	200	250	300
NON-MEMBER			
Registrant	950	1,150	
Spouse	650	750	
Exhibits only w/booth**	0	0	

REGISTRATION FORM TOTAL:

(transfer total to summary sheet on p.16)



* The member exhibitor using the free full registration (one per booth space) should complete this form in full and also list each exhibits only person(s). ONE PER BOOTH SPACE.

** Non-member exhibitors will be allowed one exhibits-only badge that come with the purchase of each booth space. NO EXCEPTIONS PLEASE.

† The Contractor Management Team discounted fee is a full conference registration but does not include Saturday's banquet. It requires at least one registration at full fee and one "additional" fee registration from the same company before Contractor Management Team fee can be applied. Only contractors are eligible for this discounted fee.

Refund policy: 100% until April 20

**FIRE SPRINKLER CONTRACTOR MANAGEMENT
TEAM DISCOUNT REGISTRATION FORM**

REGISTRANT #1 _____

REGISTRANT #2 _____

REGISTRANT #3 _____

COMPANY _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

TELEPHONE _____ FAX _____ EMAIL _____

TWITTER _____ LINKEDIN _____

FIRST NAME FOR BADGES:

WORKSHOP TOPICS:

- NFPA 13R 2016
- New Storage Protection Options: NFPA 13, 2016 edition and Beyond
- Service Agreement Sales
- NASI Benefits Fund Summary
- NFSA Legal Highlights
- Contract Administration for Union Contractors
- NFPA 25 & 72 a Coordination Q&A
- Simplifying NFPA 13
- NFPA 25 Task Group Work
- Determining Commodity Class for Storage – It could cost you!
- The NFSA ITM Committee and How it Influences NFPA 25

Drastically reduced conference registration fee of \$400 if booked by March 27th, \$450 until April 20th.

Enclosed is our check (add \$50 for foreign checks) or money order, in the amount of the Grand Total for NFSA Annual Seminar made payable to National Fire Sprinkler Association, or

By March 27: \$400 x _____ = \$ _____

Until April 20: \$450 x _____ = \$ _____

Charge my:

- VISA MasterCard AMEX Discover

REGISTRATION FORM TOTAL:



(transfer total to summary sheet on p.16)

Please return the registration form with payment to:

**NFSA Annual Seminar
& Exhibition
40 Jon Barrett Road
Patterson, NY 12563**

Credit Card orders fax to:

(845) 878-4215

Questions:

Mike Repko (845) 878-4200, ext. 120

*Requires at least one registration at full fee and one additional fee registration from same company before \$450 rate applies (contractors only). Reduced registration fee includes member meeting, opening session, welcome reception in exhibition hall, lunch in exhibition hall, 2-day exhibition and targeted workshop sessions.

ACCOUNT _____ CVC # _____

EXPIRATION DATE _____

ADDRESS _____

SIGNATURE _____

2015 GOLF TOURNAMENT REGISTRATION FORM

Waldorf Astoria Golf Club

Rees Jones designed

Saturday, May 2, 2015

12:30 p.m. shotgun start

Golf registration: **\$150**

(includes box lunch, beverage carts on the course and prizes)

\$85 club rental



Name: _____
Club rental: Left Right

Name: _____
Club rental: Left Right

Name: _____
Club rental: Left Right

Name: _____
Club rental: Left Right

TOTAL GOLF FEE:

E

(transfer total to summary sheet on p.16)



Hilton

ORLANDO BONNET CREEK

Hilton Bonnet Creek Resort

14100 Bonnet Creek Resort Lane
Orlando, FL 32821

PHONE

Phone: 1.800.HILTONS (reference NFSA)
For suites, please contact somers@nfsa.org

ROOM RATE

\$215 per night plus 12.5% total taxes
(occupancy and state)

RESERVATION DEADLINE

April 7, 2015

HOTEL RESERVATIONS

Hilton Orlando Bonnet Creek is a hip oasis in the middle of Orlando's theme park magic. The resort offers the best of both worlds: a convenient "insider" location accessible from within Walt Disney World property and the peaceful serenity of the surrounding 482-acre nature preserve.

Resort amenities include 1,001 elegantly appointed guest rooms and suites, a 3-acre Florida-style lazy-river and pool, a full fitness center, and access to a Rees Jones-designed championship golf course, a luxe spa, and more than a dozen dining and lounge options, including the award-winning La Luce by Donna Scala.

An adjacent world-class convention center is one of the most popular in Orlando and boasts 150,000 square feet of total flexible function space.

AMENITIES

- An outdoor zero-entry family pool features a lazy river and waterslide, all in a 3-acre Florida-style lagoon pool deck.
- Families have access to the WA Kids children's program, which offers a variety of creative and educational activities.
- Complimentary private direct transportation to Magic Kingdom, Epcot, Hollywood Studios, Animal Kingdom, and Downtown Disney is available during park operating hours (schedule varies seasonally).
- 24-hour Hilton Fitness Center provides a revolutionary approach to working out with superior weights and cardiovascular offerings.



REGISTER ONLINE TODAY

Contact us at www.nfsa.org or call us at 845-878-4200 15

SEMINAR & EXPO INFORMATION AND CHECKLIST

REGISTRATION DESK HOURS:

Wednesday, April 29, 2015 – 7:00 a.m. – 5:00 p.m.

Thursday, April 30, 2015 – 7:00 a.m. – 7:00 p.m.

Friday, May 1, 2015 – 7:00 a.m. – 4:00 p.m.

Saturday, May 2, 2015 – 8:00 a.m. – 12:00 noon

EXHIBITION INFORMATION:

To promote a large turnout for the North American Fire Sprinkler Expo®, NFSA has partnered with the Canadian Automatic Sprinkler Association (CASA) and the Mexican Fire Sprinkler Association (AMRACI). As such, record attendance is expected for this world-class event.

To promote a large turnout at the exhibition, NFSA is:

- Partnering with Canadian and Mexican fire sprinkler associations
- Providing complimentary passes to the exhibition on Friday, May 1
- Hosting a cocktail reception inside the exhibition hall on Thursday evening
- Hosting lunch inside the exhibition on Friday afternoon
- Hosting a Design Advantage seminar for the local chapter of the American Institute of Architects
- Offering significantly reduced Contractor Management Team registration for second and third tier management
- Offering a wide range of targeted workshop sessions
- Conducting the Top Technician Competition inside the exhibition hall
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By Joanne Genadio

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The Mystery of Shadow Areas

The NFPA sprinkler system installation standards, which include NFPA 13, NFPA 13R and NFPA 13D, do not require water to physically spray on every square foot of floor area of the building. Obstructions, such as columns, wing walls and partitions, may create small areas within the sprinkler's coverage area where water may not directly fall. This is recognized in the standards and, under certain conditions, is permitted by the installation standards. What is a permitted "shadow area" and what is not, is a common cause of different interpretations between AHJs and sprinkler technicians and contractors. Although the technical committees who write the standards have spent considerable time in recent editions clarifying this concept, confusion on this issue is still common. This continues to be one of the more frequent questions submitted to the NFSA's Expert of the Day (EOD) service. In fact, it is not uncommon to get multiple EODs on the same issue, one from the contractor and one from the AHJ or plans examiner.

This article will discuss the allowances and limitations regarding these dry areas in NFPA 13, NFPA 13R and NFPA 13D. For the purposes of this article, I will be concentrating on the 2013, 2010, and in the case of NFPA 13R, the 2007 edition. I will also highlight how the standards have been evolving over the years in attempt to shed some light on the divisive issue of shadow areas. This article will identify acceptable shadow areas in the various installation standards, apply shadow

area allowances to system layout and will discuss the objectives of the installation standards in regards to the spray patterns and obstructions that may form shadow areas.

Shadow Areas:

Before continuing this discussion, it is necessary to understand just what constitutes a shadow area. A shadow area could be defined as: The apparently dry space, within the areas of coverage of a sprinkler that is behind an obstruction, where water might not directly spray from a sprinkler onto the floor. There are two important parts to this definition:

1. The area in question must be within the protection area of a sprinkler. The shadow area allowances are not intended to allow space in the building that is beyond the protection area of a sprinkler. If the obstruction is removed, a legitimate "shadow area" would disappear and the space in question would obviously get direct water spray from the sprinkler.
2. The area on the other side of the obstruction from the sprinkler is apparently dry and water might not get to the space from the sprinkler. The uses of the terms "apparently dry" and "might" is intentional because of the complex turbulence of the air currents in a room during a fire situation. Water does not just travel in a straight line from a sprin-

kler and it is entirely possible that water will be entrained within the air going to a fire and will be drawn into the fire even if the straight line between the fire and the sprinkler contains an obstruction.

See Figure 1 for an example of a shadow area created by two walls in an unusually shaped room protected by a pendent sprinkler.

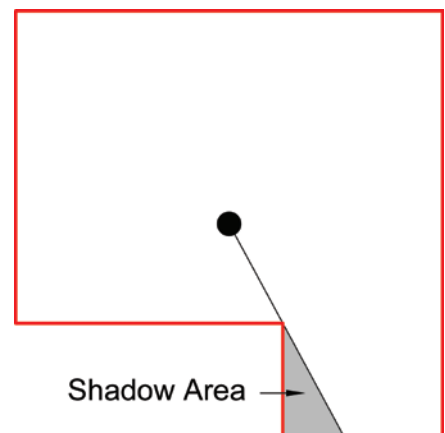


FIGURE 1 - Shadow Area Example

>> CONTINUED ON PAGE 46



NFSA's Manager
of Technical
Services

Roland Asp, CET

As long as the far wall of the alcove in figure 1 is within the coverage area of the sprinkler, this area would meet the definition of a shadow area. If, however, the far wall of the alcove was further away from the sprinkler it would not be a legitimate shadow area and additional sprinkler coverage would be required.

NFPA 13, NFPA 13R and NFPA 13D are different in scope and intent and were written by different technical committees. These committees differed in their approach in clarifying the standard's intent when dealing with these apparently dry areas. Yet shadow areas do exist as a result of the requirements in each of the documents.

Shadow Areas and NFPA 13:

NFPA 13 does not directly use the term "shadow area" but the concept is permitted by applying the obstruction rules of the standard. As the body of NFPA 13 does not include a definitive statement that shadow areas are permitted, the layout technician may have justified the existence of these dry areas within a sprinklered building. For these examples of shadow areas in NFPA 13, I will be concentrating on standard spray sprinklers, but these concepts can be applied to the other types of sprinklers as well. These shadowed areas are permitted by applying a combination of a couple of sections of the standard. Section 8.5.3.2

and 8.6.5.2.1.3 for starters, will plan out this shadow area for standard spray sprinklers.

Section 8.5.3.2 of the 2013 edition of NFPA 13 indicates that the maximum distance a sprinkler is permitted from a wall is one-half the maximum allowable distance between sprinklers. The sprinkler may be closer to the wall but may never be more than 1/2 the allowable distance. As an example, for light and ordinary hazard occupancies, standard spray sprinklers are permitted to be up to 15 ft apart. This means that the sprinkler is allowed to be up to 7 1/2 feet from a wall (measured at a right angle to the wall). The sprinkler may be closer than 7 1/2 ft as section 8.5.3.2 is specifying maximum distance from a wall. The minimum distance from a wall for standard spray sprinklers would be 4 inches.

The other section of the standard that would apply is 8.6.5.2.1.3. The "three times rule" allows obstructions and the shadow area behind the obstruction as long as the distance between the sprinkler and the obstruction is at least three times the maximum dimension of the obstruction.

Although the situation illustrated in Figure 1 is not specifically addressed in NFPA 13, the shadowed area in the alcove is permitted by utilizing a combination of these two sections.

In order to do this we must start with determining what is permitted by applying the existing obstructions rules and apply this as a baseline for acceptable dry spaces in other situations by applying the equivalency clauses of NFPA 13 (section 1.5 and 1.6).

The following steps will indicate the process of justifying an acceptable shadowed area when applying NFPA 13 and may be useful in convincing an AHJ of the validity of this concept.

The first step would be to determine the baseline of an acceptable shadow area by applying the obstruction rules of the standard. For example, when using standard spray sprinklers and applying the "three times" rule of section 8.6.5.2.1.3, we can easily justify an allowable shadow area of 15 sq. ft. Figure 2 below, illustrates the 15 sq. ft base line for dry areas when using standard spray sprinklers and the "three times rule."



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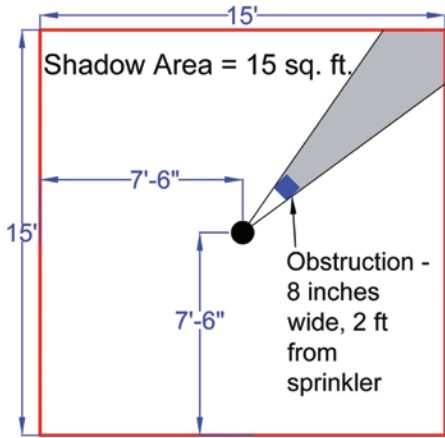


FIGURE 2 - Allowable Dry Area - Standard Spray Sprinkler

It is important to note that this 15 sq. ft. baseline is a conservative number and would not be the same in ordinary hazard occupancy with the sprinklers spaced closer together and also would not be the same in a room using extended coverage or residential sprinklers at a larger spacing. Figure 3 below indicates that a shadow area of up to 21 sq. ft. may be permissible when using extended coverage or residential sprinklers and the “four times” rule. It is important to keep in mind that shadow areas will be impacted differently for different types of sprinklers.

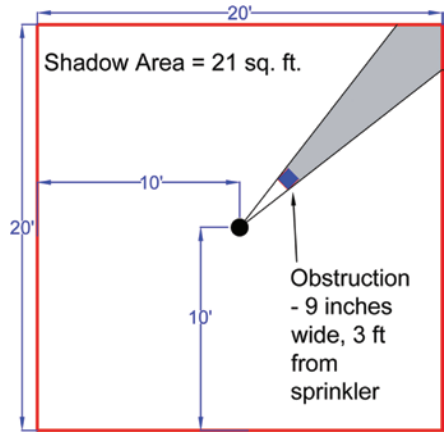


FIGURE 3 - Allowable Dry Area - EC Sprinkler

These dry spaces (or shadow areas) are clearly acceptable under the obstruction rules of NFPA 13. These permitted shadowed areas establish a minimum baseline of acceptable dry spaces that can now be applied to other situations using the equivalency clauses of NFPA 13.

Now that we understand the concept, we will apply this concept to a real world

situation. For this example we will be using the situation as shown in figure 4 below. This room is a light hazard compartment protected with standard spray sprinklers. There is an alcove with an area that is not directly within the spray pattern of the sprinkler.

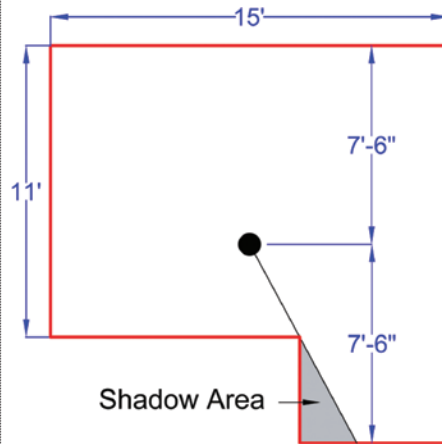


FIGURE 4 - Shadow Area Example

The following steps will indicate the process of justifying this illustrated shadowed area when applying NFPA 13 and may be useful in demonstrating to an AHJ the acceptability of a particular shadow area.

Step 1: Apply Section 8.5.3.2:

Section 8.5.3.2 states that the maximum distance from a sprinkler to a wall is one-half the maximum allowable distance but may be closer. As we have stated that this is a light hazard occupancy, the maximum permitted distance between sprinklers is 15 ft. Therefore the far wall may be up to 7 1/2 ft from the sprinkler. Figure 4 indicates that the far wall of the alcove is 7 1/2 feet from the sprinkler and this situation meets the requirements of this section.

Step 2: Apply Section 8.6.5.2.1.3:

The next step would be to apply the three times rule and determine the allowable dry area. This is accomplished by inserting an imaginary column at the corner of the alcove as shown in Figure 5. Assuming the requirements of the three times rule are applied, the shaded area would be the allowed dry area behind the obstruction.

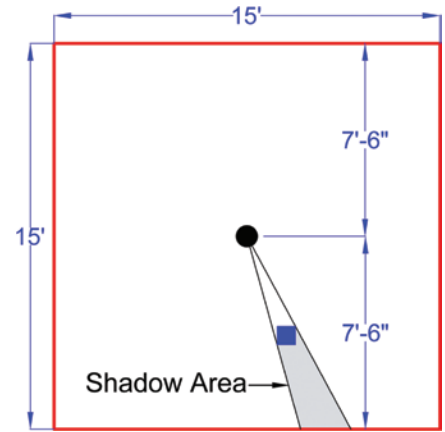


FIGURE 5 - Shadow Area Example with “Three Times Rule”

As shown in Figure 6, when you insert the walls of our example room into the plan, the resulting shadow area does not include a different or larger space than was permitted by applying the “three times rule” and our original room configuration (figure 4) is permitted by NFPA 13 by applying the equivalency clause of the standard.

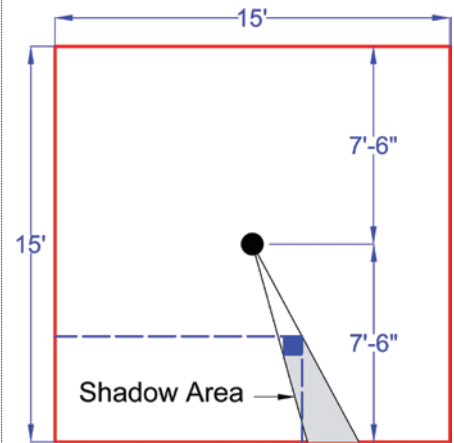


FIGURE 6 - Shadow Area Example with Walls Added

During the revisions of NFPA 13 for the 2013 edition, shadow areas were a major focus. The committee assigned a task group to the subject that tried to come up with specific language for the standard, but every variation that the committee developed could have been abused in some way. For example, if the committee had just come out with a specific statement that shadow areas of 15 sq ft area are allowed in light hazard occupancies, the committee was concerned that people would use this as a way to ignore the three times rule and put sprinklers closer

to obstructions than they really should be.

In the end, the rules in the body of NFPA 13 were not changed, but an annex note and associated figures were added to the standard to clarify that shadowed areas are expected and allowed, as long as the obstruction rules of the standard are met. These annex sections are found in Section A.8.1.1 and will help clarify the intent of the committee when dealing with these apparently dry areas. The annex note clears up the common misconception that every area must be in the direct path of the water spray from a sprinkler. A.8.1.1(3) clearly states: *“Notwithstanding the obstruction rules provided in Chapter 8, it is not intended or expected that water will fall on the entire floor space of the occupancy...”*

Shadow Areas and NFPA 13R:

NFPA 13R has dealt with these shadowed areas since at least the 2007 edition. As described earlier in this article, NFPA 13 does allow shadow areas, but since the term “shadow area” does not appear in NFPA 13, and since the connection between NFPA 13 to NFPA 13R is not always clear on this subject of handling obstructions, the committee believed that something needed to be said directly in the NFPA 13R standard to eliminate the different interpretations that were occurring between contractors and AHJ’s

In 2007, section 6.7.7.1.5.7 was added. This section carried over to the 2010 edition as section 6.2.3.5.4.

These sections permit “partially blocked or shadowed floor areas” in rooms up to 800 sq ft in size as long as:

- Individual shadowed areas do not exceed 3 sq ft
- Total shadowed areas in a compartment do not exceed 12 sq ft
- Total shadowed areas in entire dwelling unit does not exceed 30 sq ft

At the time the information was put in the standard there were no fire tests or water distribution tests available, so the allowable areas agreed to by the committee were extremely small. It should also be pointed out that the intent of the committee responsible for NFPA 13R is not to make it more stringent than NFPA 13. The

intent was to allow the position of sprinklers in accordance with the same spacing rules as NFPA 13, but to use the specific guidance of section 6.2.3.5.4 (in the 2010 edition) to settle disputes with AHJ’s over small areas without having to get into a legal debate about the rules of NFPA 13 and how they are referenced by NFPA 13R.

There is another section from NFPA 13R (2010) that is frequently quoted when looking at shadow areas. Section 6.2.3.5.2 indicates that areas such as bay windows and planter box windows and other similar architectural features are permitted without additional sprinkler protection. These areas are allowed to be as large as 18 sq ft with limitations on certain dimensions. While these are similar to the shadow area concept, these are technically not shadow areas as we have defined them, because the intent of this section is not to count these areas as within the protection area of the sprinkler.

The 2013 edition of NFPA 13R discarded the conservative shadow area allowances cited above and replaced it with a single simple rule. This rule is found in section 6.4.6.3.3.1 and states that shadow areas are allowed as long as the cumulative dry areas do not exceed 15 sq. ft. per sprinkler. Also the 2013 edition of NFPA 13R, for the first time, included a definition of shadow areas which is: “The dry floor area within the protection area of a sprinkler created by the portion of sprinkler discharge that is blocked by a wall or partition.”

An additional section dealing with shadow areas was added to the 2013 edition of NFPA 13R in section 6.4.6.3.3.2. This section deals with sidewall sprinklers protecting corridors and allows a shadow area in an alcove up to 2 ft. in depth and 9 ft in length behind and between the sidewall sprinklers. This configuration is common in hotels and motels and it is interesting as the shadow area in question is behind the sidewall sprinkler and not technically a shadow area as referred to in the definition since it is not within the protection area of the sprinkler. (See Figure 6.4.6.3.3.2).

Shadow Areas and NFPA 13D:

Prior to the 2013 edition of NFPA 13D, the concept of shadow areas was not directly

addressed by the standard. However, the 2013 edition of NFPA 13D is very much like the 2013 edition of NFPA 13R with one simple rule regarding shadow areas. Section 8.2.5.7 states that shadow areas are permitted as long as the cumulative dry areas do not exceed 15 sq. ft. per sprinkler.

These changes to the 2013 edition of NFPA 13R and NFPA 13D go a long way in clarifying that certain shadow areas are in fact permissible in the standard and should also clear up a longstanding issue of contention between sprinkler contractors and AHJ’s.

Conclusion:

As highlighted in this article, it is not the intent of any of the NFPA 13 installation standards that water is required to fall on every square inch of floor space in a sprinklered building. Apparently dry spaces or shadow areas are allowed and the new language in the standards, including the annex of NFPA 13 and the actual requirements in NFPA 13R and NFPA 13D should make this concept clear. Hopefully, the clarifications noted in this article will make the intent of the standards clear to all users. ☺

IN SHORT, SHADOW AREAS ARE PERMITTED AS FOLLOWS:

- **NFPA 13** – By applying the obstruction rules
- **NFPA 13R** – 15 sq. ft. of dry area per sprinkler
- **NFPA 13D** – 15 sq. ft. of dry area per sprinkler

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Notes from the Fire Scene

Recent tragedies have provided us the opportunity to work with local, state and national organizations - and individuals alike - in helping all understand the role that fire sprinklers play as part of the solution following a major fire.

As a point person within our NFSA Media Outreach Team, I feel blessed to have opportunities to not only get first-person accounts of the story, but to help those covering the event understand fire sprinklers, work with those within our industry who make sure they are installed properly, and serve as a resource to the fire service leaders who always find themselves right in the middle of the debate.

History has provided us example after example of tragic fires. We have large loss of life fires and small fires with single fire deaths, with coverage following each that sometimes mentions fire sprinklers and sometimes totally misses the opportunity. Recent activity highlights for us that having a team ready to respond with resources and information helps those reporting the news get the "story behind the story" or a "new angle" and raises awareness regarding the life safety issues at hand. With every connection we can make, therein lies the chance to save a life or lives in the future.

Let's take a look at a couple of recent fires that we have been able to make a dif-



ference with our concerted outreach and ability to create learning opportunities to showcase how fire sprinklers work and also the role they play in a fire-safe future.

Following a fire at a senior living facility in Dallas, a local news reporter reached out to an NFSA contractor member for additional information on fire sprinklers. With one phone call, this began a journey that evolved into a powerful investigative report from Bill Spencer of KPRC 2 news. This report included a segment on Justina Page, one of our Common Voices advocates. The ability for Justina to share

the heartbreak that occurs when you lose a child to fire was a key one in this news report. And, that was just the beginning. A few weeks later, another fire occurred in Texas. This one happened in Castle Hills, a suburb of San Antonio at the Wedgwood Senior Living Apartment Homes. Six senior citizens died in this fire with over 20 injured. Again, we quickly issued a press release and the results are still occurring. The San Antonio Express News did a front page feature on this fire, and really helped to share the information with citizens and firefighters alike.

73 days following the Wedgwood fire, Representative Rick Galindo filed High-Rise Retrofit legislation (Texas HB 3089). We worked with Rep. Galindo throughout the process - sharing resources, statistics, and providing assistance when requested. These examples help us understand the important role that we can play in bringing stakeholders together, sharing information, and fighting for those who may not be able to fight for themselves. ①

*Until next time, Stay Safe,
Vickie*



Director of Public
Fire Protection

Vickie Pritchett

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Educating Building Owners & Managers

By Jason Webb

In the November/December 2013 issue of **SQ**, we discussed the role of the owner in the ITM process as outlined in NFPA 25.

Although we provided a brief overview of owner responsibilities in that article, there's still much more education that has to take place. Often the ITM contractor, or sometimes even the authority having jurisdiction (AHJ), finds themselves in a position to offer this information but may not have it readily available.

With that in mind, this article is written as a guide that can be shared with building owners and property managers to help better educate them about their critical role in keeping the sprinkler system in good working order.

Owner Responsibilities

The responsibilities assigned to the owner by NFPA 25 are pretty straightforward. And, with only a couple of exceptions, are all located in one section of the standard, section 4.1. That section is aptly titled "Responsibility of the Property Owner or Designated Representative." Within section 4.1 are the basic requirements of the owner including:

- Properly maintaining the system in accordance with NFPA 25 and manufacturer's instructions.
- Protecting the system against freezing.
- Providing access to system components.
- Notifying other stakeholders when the

system is shut-down.

- Correcting and repairing deficiencies or impairments as they become apparent.
- Having the system evaluated if changes to the hazard or water supply are planned or identified.
- Identifying certain features such as valves and auxiliary systems.
- Dealing with impairments in accordance with chapter 15.

Failure to address any of these can have expensive and lingering effects. First, the most obvious is simply violating the requirements of the fire code, which in itself can result in fines or other sanctions. Secondly, losses that might occur from not performing the function, like protecting the system against freezing for example, can result in costly damage as well as downtime for the business.

Not only should the owner be aware of each of these requirements, but also understand exactly what steps must be taken in order to address each one. The sprinkler contractor is an excellent resource for this detailed information.

Who Can Perform ITM

The question of who can do the work is in important one. NFPA 25 only requires that those who perform inspection, testing and maintenance be "qualified," and that is determined by the AHJ. NFPA 25 is written with the assumption that many

of the minor, more frequent tasks will be done by a trained person, such as a building maintenance professional. Other more involved tasks will typically require the use of a contractor specially trained in inspection, testing and maintenance.

Some states and local jurisdictions require that ITM contractors and/or technicians hold certifications or licenses as part of the qualification process. These rules vary greatly between jurisdictions so it is important that the owner know what rules exist in their area. More about what is required in each state can be found at www.nfsa.org/itm.

Understanding ITM Reports

The role ITM records serve is an important, but often overlooked step in the ITM educational process. Although not listed above in the requirements of section 4.1, NFPA 25 also places the responsibility of maintaining ITM records on the owner (in section 4.3).

Inspection records serve several purposes. One is to document that critical conditions are addressed, such as wheth-

>>CONTINUED ON PAGE 52



Jason Webb

Director of
Inspection, Testing
& Maintenance

er or not control valves remain open, or to establish trends like repeated damage to a particular area of the system. Both of those situations could trigger the need for additional attention or maintenance. Proper ITM records will establish a track record of compliance with the standard for review by AHJs.

Test records provide a means of comparison with previous tests to determine

if a potential problem exists. For example, a main drain test by itself tells the owner little about the condition of the water supply for the system. But when compared with the original test results from when the system was first commissioned, a clearer picture can become apparent. NFPA 25 requires that the owner maintain the original acceptance records to facilitate this comparison in addition to

the current and previous cycle's record.

The key is that the owner understands what the information on the report means. If there are concerns with the system, they should be identified on a report that gets passed on to the owner for their review. Once that happens, however, it's up to them to take the necessary steps to correct them. No matter how minor a problem may seem, all deficiencies have the potential to lead to costly corrections or more immediate risk. One of the most important responsibilities the owner has is to correct or repair deficiencies and impairments.

Summary

Fires can happen anytime to anyone. According to the National Fire Protection Association, in the United States in 2012 there were nearly 100,000 non-residential building fires causing direct losses of \$2.6 billion. 65 people died in those fires and over 1,500 were injured. What makes the difference is when the property is protected with a properly designed, installed, and maintained automatic fire sprinkler system. Compliance with NFPA 25 helps ensure that the system will function when the time comes.

As the most important person in the ITM process, the owner must have a thorough knowledge of what NFPA 25 requires from them. An owner who gets the most out of an ITM program is one who is engaged, knows their role in the process, and corrects or repairs the problems pointed out during inspections and tests. 🔧



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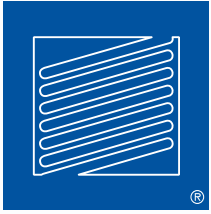
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REGIONAL ROUNDUP

NEW ENGLAND REGION



DAVE LAFOND
Regional Manager

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

On February 5, 2015 the Committee on Public Safety and Security met in the Connecticut State House, Legislator Office Building. During this meeting, the Committee unanimously motioned to take up language related to the installation of residential sprinklers in newly constructed one- and two-family homes. This was great news. The language that was submitted will now be created into a raised bill and have an actual bill number assigned to it.

On February 19, 2015 the Public Safety and Security Committee convened a public hearing on several bills. The public hearing was taken out of the State House setting and was held in the West Hartford, Connecticut City Hall Legislative conference room. Needless to say the room was at full capacity. The sprinkler industry was well represented as was the fire service. Along with these groups, West Hartford Mayor Scott Slifka and City Council leadership spoke in favor of our HB 6777, "An Act requiring the installation of automatic fire extinguishing systems in new residential buildings". All in all, our collective efforts saw an unprecedented 18 individual verbal and written testimony submittals in favor of this life saving piece of legislation. In addition to the fire sprinkler, fire service, professional safety advocates, and sprinkler union officials, it bears noting that House Chair, Representative Dargan said in the meeting's opening statements that he was in support of the bill.

Representative Dargan attended a side by side burn demonstration which provided a strong visual. Representative Dargan stated that the time for this (sprinkler) requirement is now.

Senate Co Chair Tim Larson stated similar sentiments and said he was "95% there." In addition, several other Committee members were in obvious support.

The CEO of the Connecticut Homebuild-

ers Association provided the usual myths and misconceptions related to costs and effectiveness of home sprinklers. He stated that people aren't dying in newly built homes but older homes. A highlight of the public hearing was when a Connecticut real estate representative provided prepared remarks and spoke on the additional costs that home sprinklers would add. Representative Joe Verrengia, who is the Vice Chair of the Committee, asked the real estate representative what the commission is on the sale of a \$200,000 home. The response was, I don't think we are here to talk about that? To which Representative Verrengia said, "you are the one who brought up the issue of costs, so I think it's a fair question." ☎

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NEW YORK REGION



DOMINICK KASMAUSKAS
Regional Manager

NEW YORK

New York Regional Manager Dominick Kasmauskas recently presented the FM Global program "Fires in (Fire) Sprinklered Buildings," which was very timely, being just days before a fire destroyed a Brooklyn warehouse. The program specifically addresses the fact that water supplies need to be inspected to ensure they are on and that they remain on during a fire until total extinguishment.

Having delivered a two-hour program on Plan Review overview at the Association of Towns annual conference, Dom continued to assist New York code enforcement officials in their understanding of fire sprinklers and the appropriate standards and code sections.

Dom has scheduled many more educational programs throughout New York for

the balance of the year. ☎

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MID-ATLANTIC REGION



RAYMOND W. LONABAUGH
Regional Manager

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

On January 21, 2015, fire caused a major loss at a large four-story residential building in New Jersey constructed of light-weight construction with engineered lumber. The building construction complied with the building codes that were in effect at the time of construction. The building contained a NFPA 13R compliant residential fire sprinkler system that allowed the residents to exit the building safely even though there was a significant delay in notifying the fire department. In addition, many residents said they failed to exit the building immediately because they believed the building fire alarms were in response to another false alarm. Those who failed to exit immediately said it wasn't until they opened their apartment door and saw smoke in the halls that they realized the alarms were in response to an actual fire.

The origin of the fire was traced and determined to be from maintenance activities where a worker was performing a plumbing repair with a torch in a first floor bathroom. The torch had ignited materials in the wall allowing the fire to spread unchecked in the walls and eventually reaching the attic area of the building. Although the 13R sprinkler system performed as designed by allowing residents to evacuate safely, it was not designed to protect the building and therefore no fire sprinklers were in the attic area.

The fire department chief cited the build-

>> CONTINUED ON PAGE 55

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ing's light-weight construction and the delay in the notification of the fire as the reason the fire was allowed to spread quickly and destroy the entire building. Numerous fire departments responded to the blaze through mutual aid. Light-weight construction has been a concern to all fire departments in the United States. As a result of the Edgewater, New Jersey fire the news media has become aware of the concern with light-weight construction and has made several media reports on the topic. In addition, it was noted during the recent Senate Bill 2316 hearing on February 9th, the New Jersey legislature has also become aware of the concerns as well. Currently, there are similar buildings planned for construction in Princeton, New Jersey and the Mayor is attempting to halt the construction for fear of the potential fire burden that can be brought to the borough. ①

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SOUTHEAST REGION



WAYNE WAGGONER
Associate Director of Regional Operations - East

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

At the January bi-monthly meeting of the Tennessee Fire Sprinkler Contractors Association (TFSCA), Buddy Dewar was presented the Fred Davis Award from the Board of Directors and TFSCA membership. Buddy was a catalyst for the formation of the NFSA Chapter in Tennessee and will be retiring at the end of June this year.

The Fred Davis Award was established by the Tennessee Fire Sprinkler Contractors Association to recognize those jurisdictions that have shown their support to the fire sprinkler industry. That support

could be from passing an ordinance, adopting codes or developing a way for the fire sprinkler industry to do business.

Fred Davis was the Fire Chief in Nashville, Tennessee from 1980 to 1987. Fred was also the first TFSCA Executive Director. Chief Davis was a perfect example of one of those individuals that went above and beyond the call of duty when it came to promoting fire sprinkler systems.

It should be noted that all Fred Davis Award recipients have gone beyond the call of duty to protect lives and property from fire through the wide-spread acceptance of the fire sprinkler concept, and also in promoting a fire safe community by making sure that fire sprinklers are installed and maintained in homes to high rise buildings. ①

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FLORIDA & PUERTO RICO



LORELL BUSH
Regional Manager

FLORIDA, PUERTO RICO

The 21st Annual Buddy Dewar Golf Classic is scheduled for March 23, 2015 at Mystic Dunes Golf Course located at 7600 Mystic Dunes Lane, Celebration, Florida 34747. This year's tournament sold out in record time! There are still sponsorship opportunities and non-golfer packages available for lunch, raffles, and networking with industry professionals.

Through the proceeds raised at the Buddy Dewar Golf Classic, Florida Fire Sprinkler Association (FFSA) – a chapter of NFSA, trained over 300 AHJs in 2014 and already over 120 AHJs this year. This year FFSA will be offering the opportunity for AHJs to attend NFSA's Annual Seminar and North American Fire Sprinkler Expo®

being held in Orlando, Florida in April 29 - May 2 free of charge! Those who have not participated in the past are encouraged to do so. FFSA is making a difference. ①

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GREAT LAKES REGION



RON BROWN
Regional Manager

INDIANA, MICHIGAN, OHIO,
 WEST VIRGINIA, KENTUCKY

This year's Ohio Fire Safety Coalition Burn Invitational to benefit Akron Children's Hospital Burn Center will be held July 30th at Glenmoor Country Club in Canton, Ohio. Since its founding in 2005, the coalition has donated over \$200,000 to the Paul and Carol David Foundation Burn Institute at the hospital.

The Ohio Fire Safety Coalition continues to educate the public on fire safety issues and the life saving benefits of residential fire sprinklers.

For more information about this year's fundraiser, contact:

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>> CONTINUED ON PAGE 56

REGIONAL ROUNDUP

>> CONTINUED FROM PAGE 55

ILLINOIS REGION



BOB TINUCCI
Regional Manager

ILLINOIS

Mark your calendar for meeting and training dates for NFSA's Illinois Chapter.

Upcoming Chapter meeting dates:

May 14 Maggiano's Schaumburg
September 10. Morton's Rosemont
November 12 Maggiano's Oak Brook

Upcoming Training events and dates:

March 17 . . . Alarms and Initiating Devices
April 21. Installation of CPVC
May 19 Fire Sprinklers in the ICC
June 16 Planning the System for Its Lifespan

Bob Tinucci

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WISCONSIN REGION



DAN GENGLER
Regional Manager

WISCONSIN

The Wisconsin Residential Fire Sprinkler Coalition has commenced meeting to schedule its fourth Summit this coming September in the Wisconsin Dells area. Although the date has yet to be set, planning is in earnest to ensure people and organizations of interest are being recruited for the residential fire sprinkler concept.

Leading the way for this committee is the state's fire chiefs and inspectors being reinforced by advisors from the National Fire Protection Association and National

Fire Sprinkler Association. The group has presented three previous programs in Waukesha, Madison and Green Bay. The focus is to bring residential dwelling stakeholders together to better understand the value and life-saving realities of fire sprinklers. ①

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MINNESOTA REGION



TOM BRACE
Regional Manager

MINNESOTA

On August 11, Sean Flaherty, President of the NFSA Minnesota Chapter, will be offering a 90-minute presentation on residential sprinklers to the AIA Minnesota Chapter followed by 30 minutes of Q & A.

Residential sprinklers is a topic that many AIA members are not familiar with and their Minnesota Chapter believes there will be a lot of interest in this presentation among their membership. ①

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CENTRAL REGION



CHRIS GAUT
Regional Manager

IOWA, KANSAS, MISSOURI

On March 10th the Missouri Fire Sprinkler Coalition hosted its inaugural Summit. It was held at the Holiday Inn East in Co-

lumbia, Missouri. The daylong program was beneficial to everyone having a stake in fire sprinklers issues in Missouri, especially fire service personnel who received valuable training. A few of the highlights were as follows:

- Overview of the Missouri Fire Sprinkler Coalition
- Overview of fire sprinkler standards: Compare/contrast NFPA 13, 13D, and 13R
- The homebuilders' perspective on residential fire sprinklers
- Building partnerships and coalitions to promote residential fire sprinklers
- Education and advocacy to promote home fire sprinklers
- Overview of three, key fires in Missouri
- Firefighter tactics, firefighter safety, and residential fire sprinklers
- Side-by-side live burn/sprinkler demonstration
- Stakeholders panel discussion

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SOUTH CENTRAL REGION



CYNTHIA GIEDRAITIS
Regional Manager

ARKANSAS, LOUISIANA,
OKLAHOMA, TEXAS

Texas Legislative Bills of Interest: Fitter Licensing – HB 1641

The Fire Sprinkler Contractors Association of Texas has submitted House Bill 1641 sponsored by Representative Farias. Contact Art Hartman at Hartman Fire Protection, 972.437.9054,

arthartman@yahoo.com with any questions or suggestions regarding this bill.

Ammonium Nitrate – SB 528 /HB 417

Several legislators are trying to prevent another West, Texas tragedy.

>> CONTINUED ON PAGE 57

>> CONTINUED FROM PAGE 56

Fireworks – HB 1150
Texas Windstorm Insurance & Building Codes – HB 1244
Certificate of Merit – HB 1353
County Fire Code – HB 684/ HB 924/SB 327

Oklahoma Legislative Bills of Interest:
Real Estate Owners Rights – SB 379

Arkansas Legislative Bills of Interest:
Fire Sprinklers in Child Care Facilities – HB 1554
Licensing for all trades – HB 1158, HB 1158 Amendment 1, HB 1158 Amendment 2
Plumbing Regulations – HB 1055

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GREAT PLAINS REGION



ERIC GLEASON
 Regional Manager

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

Justin Smith of Casper Fire EMS and Jeff Hudson from NFPA are championing the Wyoming Fire Sprinkler Coalition (WFSC). The WFSC is leading the way for the State, fire departments and contractors to address public fire safety concerns and involve the fire service, insurance companies and the public in an effort to improve fire and life safety through fire sprinkler education in the state. ①

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SOUTHWEST REGION



BRUCE LECAIR
 Associate Director of Regional
 Operations - WEST

CALIFORNIA, HAWAII, NEW MEXICO, NEVADA,
 ARIZONA

The San Francisco Bay Area NFSA Chapter met on January 22nd at Scott's Seafood and Grill in Jack London Square for their first meeting of the year. The Chapter welcomed NFSA President Russ Fleming who provided a short update on new developments at the NFSA. In his presentation he also announced to the Chapter his upcoming retirement as President and his new role as advisor. He then introduced the Association's new Executive Vice President Shane Ray. Shane gave everyone a short bio as well as his vision for his new position as President of NFSA, which will become effective at the association's annual seminar in Orlando, Florida in May.

The Arizona NFSA Chapter Board members met earlier the same week on January 20th for a planning session to map out the calendar for 2015 as well as to discuss priorities for the Arizona Fire Sprinkler Industry members. The Chapter is also pleased to announce that David Fabook, Fire Inspector II from Gilbert Fire and Rescue has accepted the position of Secretary – Treasurer for the Arizona NFSA Chapter.

The Los Angeles Area NFSA Chapter will be meeting in Downey, California on March 22th at the Rio Hondo Golf and Event Center for a very special dinner meeting with updates and news from the Area Director Jack Thacker and Regional Manager Bruce Lecair. ①

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NORTHWEST REGION



SUZANNE MAYR
 Regional Manager

ALASKA, IDAHO, MONTANA, OREGON,
 WASHINGTON

Fire sprinkler makes quick work of blaze at Corvallis, OR Holiday Inn Express

Early morning on February 2, a mechanical failure of a bathroom fan caused a fire in the Corvallis Holiday Inn Express, according to a release from the Corvallis Fire Department. The fire spread from a room on the second floor into third floor and then into the attic, activating the attic's fire sprinkler system. Firefighters then extinguished the fire. The hotel was evacuated and there was damage to four rooms and the south side of the building, according to the release. There were no reported injuries.

Sprinkler system keeps fire from spreading at Bend, OR welding shop

A fire in a Bend industrial park February 26 caused \$30,000 damage to a welding shop, but likely would have been far more severe and spread to adjoining businesses in the industrial complex if a sprinkler system and fire alarm hadn't kicked in, officials said. The sprinkler activation triggered an alarm, prompting a quick response from fire crews. They arrived to find the fire "held the fire in check." "Without a doubt, working fire sprinkler systems and fire alarm systems saved this business," fire officials said. ①

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NFSA's Future Leadership Committee Meets at UL

Having met at Underwriters Laboratories in Northbrook, IL, NFSA's Future Leadership Committee (FLC) had the opportunity to witness fires with and without fire sprinklers in a full-size house. The results were as expected, with fire sprinklers, the fire in the house was kept to a minimum and the conditions were tenable. Without fire sprinklers, there was no survivable space within five minutes. The FLC and experts were also able to see and capture on video the magnitude of fire using new

furniture and materials inside the home. The results, fire is fast and smoke is a killer.

Special thanks go out to UL® and the UL® Firefighter Safety Research Institute for allowing FLC to utilize the houses that were part of other testing. This would not have been possible without the support of the NFSA Board of Directors and NFSA's Sprinkler Manufacturers Council. We would also like to thank those who sponsored lunch and dinner to include Common Voices, Victaulic, AGF Manufacturing,

Viking Group, Wayne Automatic Sprinkler and Globe FP.

The NFSA Twitter #fastestwater is our marketing and promotion of UL® and NIST research for firefighters and how they apply water to house fires. Firefighters are vital and their modern training programs encourage them to not delay getting water on the fire, which they called #fastwater. Well, we have the fastest water application to a fire, the fire sprinkler system. 🚒



Front row starting from the left: Sean Flaherty, Peg Paul, Carla Gunther, Kevin Fee Jr., Shane Ray, Melisa Rodriguez, Jeff Norton, Vickie Pritchett, Karl Wiegand, Daniel Wake

Back row starting from the left: John Haight, Randy Lane, Jim McHugh, Ed Wiseman, Tyler Mobley, Ben Stewart, Glenn Painter, Jeff Little, Shawn Hoyer, Bobby Dewar



■ Potter Announces Release of Intelligent Nitrogen Purge Valve

Potter Electric Signal Company, LLC of St. Louis, Missouri USA, announces the release of the newest innovation in corrosion protection, the IntelliPurge® Nitrogen Purge Valve (INS-PV). The INS-PV works in conjunction with Potter's Nitrogen Generators to monitor the level of Nitrogen in fire sprinkler systems. This helps rid both dry and pre-action pipe systems of corrosion by removing Oxygen and displacing it with Nitrogen. The INS-PV can be used as a standalone device, or with an IntelliPurge® INS-RA Remote Annunciator.

The INS-PV is installed on the pipe system itself, and allows for accurate readings of Nitrogen purity levels within the system. This provides insurance that the system is maintaining a 98% Nitrogen purity level, creating an environment where it is nearly impossible for corrosion to propagate. One INS-RA is capable of programming and monitoring up to 27 INS-PV devices. However, the INS-PV can be programmed using the dials located on the device itself.

■ Honeywell Introduces Uvex Entity™ Safety Goggle

Honeywell has announced introduction of the Uvex Entity™ Safety Goggle, designed to protect workers from impact, dust and chemical splash hazards while delivering a secure, gap-free fit. The new style features a flexible, lightweight PVC body that easily conforms to the face and a compact design that accommodates other forms of PPE for comfortable combination wear. The goggle's toric-shaped lens affords workers a wide field of unobstructed peripheral vision, and Uvextra® anti-fog lens coating coupled with an indirect ventilation system minimize fogging to ensure a clear view. A unique temple clip allows the adjustable, latex-free, neoprene headband to swivel 360 degrees for maximum around-the-head comfort.

The Uvex Entity Safety Goggle is available in Translucent Blue with a Clear lens for multi-purpose use or Matte Black with Shade 3.0 and Shade 5.0 lens options for welding applications. The style meets both ANSI Z87.1-2010 and CSA Z94.3

standards.

Uvex Entity goggles are available now through major safety equipment distributors in the Americas. Contact the Honeywell Safety Products customer care department at 800-430-5490 for more information about where Uvex Entity goggles may be purchased. Uvex brand safety eyewear is offered for sale by Honeywell Safety Products exclusively in the Americas. More information about the complete family of Uvex safety eyewear is available at www.uvex.us.

■ Three National Organizations Join Together to Commend

Connecticut Fire Sprinkler Coalition

Three national fire service organizations are joining together to applaud the Connecticut Fire Sprinkler Coalition for its proactive leadership dedicated to saving lives. The National Fallen Firefighters Foundation (NFFF), Phoenix Society for Burn Survivors, and Common Voices always stand in support of state efforts that take action to include fire sprinklers in the construction of new homes.

The Connecticut Fire Sprinkler Coalition has been instrumental with the introduction of Bill No. 6777, which would require residential fire sprinkler systems in new homes. This legislation, if passed, is a significant advancement toward reducing property damage and preventing injuries and deaths to citizens and firefighters.

In the large majority of fires that start inside a

home, it takes the operation of only one sprinkler for extinguishment, preventing toxic smoke and heat from hurting or killing the residents. Fire sprinklers also keep our nation's firefighters out of harm's way.

In addition, the water from a fire sprinkler system will cause significantly less damage than a firefighter's hose. When a fire starts, only the closest sprinkler is activated, using approximately 13 gallons of water per minute compared to more than 10 times that amount from a fire hose. Installing fire sprinklers is a simple measure that can further protect homes and cherished possessions.

The National Fire Protection Association's (NFPA) statistics confirm the life-saving aspects of home fire sprinklers; for instance, a person's risk of dying from a house fire decreases by about 80 percent when sprinklers are present. Yet, despite the effectiveness of these systems in reducing fire-initiated tragedies, sprinkler

>>CONTINUED ON PAGE 60

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>> CONTINUED FROM PAGE 59

opponents nationwide continue to aggressively combat the necessity of these systems.

For information on home fire sprinklers and how they work, visit the Home Fire Sprinkler Coalition at www.homefiresprinkler.org.

For information on the importance of home fire sprinklers and free advocacy tools, templates, and materials, visit NFPA's Fire Sprinkler Initiative website at www.firesprinklerinitiative.org.

■ Peg Paul & Associates Celebrates 15 Years With Emphasis on Fire and Life Safety Education & Awareness

This March, the Chicago-area marketing communications agency Peg Paul & Associates (PPA) marks its 15th year of serving clients with local, regional and national projects and campaigns.

PPA's focus is on public safety campaigns, having established a niche in advocacy and education promotion. The agency is retained by some of the leading fire and life safety education and advocacy groups, trade associations and industries.

PPA's talented agency roster reflects decades of experience in creative, video, design, event planning, fund-



Fire Safety Consortium Supports Help the Good Guys

NFSA Director of Public Fire Protection Vickie Pritchett (center) at FirehouseWorld in San Diego with Country Music star Aaron Tippin, Amy Acton of the Phoenix Society for Burn Survivors, Tim Sendelbach, Editor in Chief of Firehouse, and Chief Ron Siarnicki of the National Fallen Firefighters Foundation. These groups united to support Help the Good Guys (Mickey Milom) and raise awareness about the role #fastestwater (fire sprinklers) plays for firefighters.

raising and grant writing. The agency conceives, develops and implements multi-integrated programs that include public and media relations, advertising, educational outreach, video production, digital media, interactive websites, convention exhibit design and activities, and other targeted outreach.

PPA's fire safety clients include the Home Fire Sprinkler Coalition, National Fire Protection Association, Vision 20/20, Northern Illinois Fire Sprinkler Advisory Board, Illinois Fire Safety Alliance, Common Voices and the International Society of Fire Service Instructors. ☯

LETTERS

TO: Eric Gleason

First of all I want to thank you and your organization for your continued proactive advocacy for the installation and maintenance of fire sprinklers in North America.

Secondly, I want to thank you for rolling out the NFPA Update Seminars across the nation. My assistant and I are desperately looking for classes to attend and really like the subject matter and content of the seminars being offered here in Colorado. Our department had funding issues in

past years, but now has the funding and backing to bring our office and our practices to the level necessary to make our community safer. We adopted the 2012 IFC last year, along with the NFPA 13, 13R, and 13D standards.

We have joined the NFSA recently and are looking forward to attending your seminar offerings. My assistant and I are considering attending the Grand Junction offerings in May of this year, but were wondering if there might be another offering of the same courses scheduled in the Front Range Denver area in the relatively near future? Our cost of travelling and lodging expense in attending at either Grand Junction or the recent

Bayfield, Colorado locations, more than doubles what it would cost us to attend at any of the potential Front Range Denver communities.

Thanks again for all that you and your organization do in the name of fire safety. I look forward to hearing back from you and especially look forward to attending the seminars.

Yours truly,
Neil Rosenberger, CFO, MIFireE
Division Chief, Fire Marshal
Fairmount Fire Protection District
Golden, Colorado 80403

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