

SQ

**2015 TOP TECH
COMPETITION**
NEW RULES!

SECONDARY GALLERY
140 SEAT **SEE PAGE 5**

NATIONAL FIRE SPRINKLER ASSOCIATION



**2015 NFSA ANNUAL SEMINAR
and North American Fire Sprinkler Expo®**
April 30 – May 2, 2015 / Orlando, Florida

2014 MerCom Gold Award Winner



- INSIDE THIS ISSUE:**
- Economic Update
 - State of the Technology
 - IBC and IFC Major Changes
 - ITM and the Building Owner

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November - December 2014 • no. 187

ON THE COVER

In what has become recognized as a highlight of the NFSA Annual Seminar and North American Fire Sprinkler Expo®, the highly competitive Top Tech Competition will be held in Orlando April 30 - May 1, 2015 at Hilton Bonnet Creek. See *page 5* for rules and new format.



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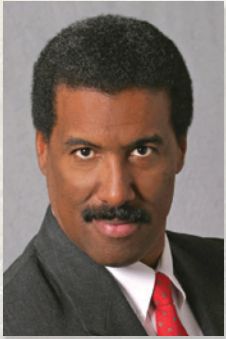
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LETTER FROM THE EDITOR



This being the last issue of SQ for the year, it's a good time for reflection and giving thanks.

New this year, **SQ** included in-depth interviews with our Regional Operations team. These insightful features aptly titled "*Field Ops*," provided members with an inside look into the activities of our Regional Managers and how they are creating a positive impact on the fire sprinkler industry at the local level. They are to be commended for their efforts improving public fire safety.

Articles in the January/February and September/October issues followed the themes "Residential" and "Seismic" respectively. While NFSA's engineering department contributes technical articles to every issue, special thanks goes out to them for coordinating their efforts to make our themed issues a success. In 2015, expanding on the concept, look for themes on "Fire Pumps," "ITM" and "Hazard Classification."

The March/April and July/August issues were dedicated to Annual Seminar preview and summary. This year's event was held at Atlantis. It was the first time in the association's long and storied history that the Annual Seminar had ever been hosted twice at the same location; a testament to how well received the venue was by the membership.

With the May/June issue featuring the Buyer's Guide, it remained a favorite among our SAM, Manufacturer and Professional members, in which they received complimentary listings. The issue received bonus distribution not only at our Annual Seminar, but at NFPA's Annual Conference & Expo, raising value for our advertisers.

Having won a fourth straight MarCom Gold Award for Excellence in 2014, **SQ** was recognized as one of the top publications among Associations; an extraordinary honor for which we are very proud and grateful.

As 2014 comes to a close and we prepare to enter 2015 with the highest of expectations for a happy, healthy and prosperous new year, the NFSA staff would like to thank the advertisers and the entire membership for their ongoing support. Know that it is through our collective efforts we build a fire safe future for everyone. 🕒

David J. Vandeyar
David J. Vandeyar, Editor

THE 2015 NFSA ANNUAL SEMINAR AND NORTH AMERICAN FIRE SPRINKLER EXPO® APRIL 30 — MAY 2, 2015 / ORLANDO, FLORIDA

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2015 TOP TECH RULES



The National Fire Sprinkler Association is looking for the best Fire Sprinkler Design Technicians in the land!

If you know NFPA 13 inside and out, are able to figure out optimal spacing for rooms of unusual dimensions in your head or have memorized what size suction pipe needs to be used with each size of fire pump...then you might have the right stuff for the Top Tech competition!

The 2015 competition will take place **April 30-May 1** at **Hilton Bonnet Creek in Orlando, FL**. Once again, participants from around the country will square off against each other in a game show format. In order to qualify, each participant needs to take an exam. The highest scoring individuals will be invited to partake in the onsite activities to find the 2015 Top Tech, with a chance to win up to \$2,000.00 cash prize.

There are a few changes to the 2015 competition:

■ **INDIVIDUAL COMPETITORS:** In past years, teams were created for the competition. This year will be modified to find the individual Top Tech.

■ **THREE STEP CONTEST:** As in previous competitions, participants begin with an online examination. The second step will be an onsite test to determine the 18 participants for the live rounds during the North American Fire Sprinkler Expo®. The third step will be the elimination tournament in a game show format.

It is suggested you register early to avoid any technical problems. The link to register is now open on-line (*although the test will not be available until noon East Coast Time on January 5th.*) In order to register, participants need a member number. If you do not know yours, contact your employer or NFSA Membership Monday through Friday 9 a.m. to 5 p.m. EST. Once you register, you will receive an email with a link to instructions and the test login.

REGISTER HERE FOR TOP TECH COMPETITION

The exam will be available on-line from **Monday, January 5, 2015 at noon to Monday, January 12, 2015 at noon EST**. The exam may be taken any time during the seven days that it is available. You can take a break between sessions, but once you start a session, the clock is running and you need to finish it. Make sure that you finish your session before the time runs out, or you will not get any credit for any of the answers in that session. The exam can only be taken once by each person.

The exam will be open book and tests your knowledge on the application and use of NFPA 13, NFPA 13R, NFPA 13D and NFPA 20. There will be three portions to the online exam: multiple choice questions on the layout and detail of sprinkler systems and pumps, multiple choice questions on the hydraulic calculation of sprinkler systems and pumps, and layout of a sprinkler system into a portion of a building. The layout portion of the exam will need to be downloaded, completed and returned within a specified period of time in order to get credit. The exam will intentionally be challenging to identify the best technicians.

Please only take the exam if you are available and willing to attend the NFSA Annual Seminar and North American Fire Sprinkler Expo® in Las Vegas on April 30, 2015 to May 1, 2015. The NFSA will provide complimentary registration to the NFSA Annual Seminar and North American Fire Sprinkler Expo® for qualifying participants. A stipend of \$500 will be given to offset some of the travel costs to those technicians that make the live rounds in the exhibit.

At the NFSA Annual Seminar and North American Fire Sprinkler Expo®, the participants will face each other in an elimination tournament in a game show format, earning points for answering correct questions and losing points for incorrect responses. The competition continues until there is only the Top Tech left standing. They will be crowned "Top Tech for 2015" and will win fabulous cash prizes as well as the admiration of peers and recognition at the NFSA Annual Seminar and North American Fire Sprinkler Expo® as the best Fire Sprinkler Technician in the country. •

**SEE THE NFSA WEBSITE
(WWW.NFSA.ORG) FOR THE
OFFICIAL CONTEST RULES. GOOD LUCK!**

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| 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 |
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The Longitude Prize



Russell P. Fleming, P.E.

A non-profit organization known as Nesta, funded by the British Lottery, asked the British public to vote this year to select which of the following six challenges should be given an inducement prize of 10 million British pounds (about \$16 million). Here were the six:

Flight - How can we fly without damaging the environment?

Design and build an aeroplane that is as close to zero carbon as possible and capable of flying from London to Edinburgh

Food - How can we ensure everyone has nutritious sustainable food? *The next big food innovation*

Antibiotics – How can we prevent the rise of resistance to antibiotics? *Create a cost-effective, accurate, easy to use test for bacterial infections*

Paralysis – How can we restore movement to those with paralysis? *Give paralyzed people the freedom of movement most of us enjoy*

Water – How can we ensure everyone has access to safe and clean water? *Create a cheap, environmentally sustainable desalination technology*

Dementia – How can we help people with dementia live independently for longer? *Develop intelligent, affordable technologies to help independence*

The British public selected the antibiotics goal, and Nesta is now starting to accept applications for the award.


The new contest honors the original Longitude Prize offered three hundred years earlier. In 1714 the British government offered a prize to anyone who could solve the greatest scientific challenge of the time - how to pinpoint a ship's location at sea. While latitude (north/south distance from the equator) could be determined by the altitude of the sun at noon, determining longitude (east /west location) was a problem.

The challenge was solved by John Harrison, a watchmaker and carpenter. He designed the chronometer, the first seafaring clock, accurate despite the pitching of a ship. The clock allowed

a comparison of local time to the time at the home port, fixing the longitude. His solution led to safer sea travel, with fewer shipwrecks, and improved global trade.

It is interesting to speculate what would have happened if the British government had decided to offer such a prize every century, with the 1814 challenge being to develop a device that could economically and effectively reduce losses of life and property to fire. It would likely have been won by another British subject with the name of Harrison. Major A. Stewart Harrison of the First London Volunteers is credited with inventing the first automatic sprinkler in 1864. It consisted of a hollow brass sphere, with a diameter of about 3 inches, perforated with countersunk holes. A spindle running through the sphere held a rubber valve in place in the orifice at top, and was itself held in place at the bottom by a cup of fusible metal solder insulated from the brass sphere by a wooden bushing. When the fire melted the solder, the water pressure could push down the valve and spindle, and water could flow through the sphere. Although later considered an excellent design, the sprinkler received very little attention, and was never patented nor put on the market.

Ten years later Henry Parmalee patented his first sprinkler, not as good a sprinkler as Harrison's due to the fact that the solder was in proximity to the heat sink of water in the piping. But through the efforts of Frederick Grinnell and others, this sprinkler led to today's fire sprinkler industry.

If there had been a lot of prize money behind Harrison's sprinkler, the sprinkler industry might be a lot further ahead today, especially in Europe. Both Harrison and Parmalee were motivated not by the thought of prize money, but the simple hope of finding a solution to a dangerous problem. They solved the problem. 

Russell P. Fleming, President



The Voice of the Fire Sprinkler Industry

2015 Buyer's Guide Professional Information Form

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How to Do What You Really Want for a Living (Fast-track to Your Retirement)

Math-Minded Financial Advisor Lays Blueprint for Rethinking Your Earning & Distribution Years

by **Dave Lopez**

What does it take to be comfortable during retirement? Conventional wisdom calls it the 4 percent rule - withdrawing about that amount from your nest egg each year to live comfortably. And, for that, millions of Americans believe they need to stick to a job they don't like during their earning years.

"Unfortunately, the kind of money retirees want to spend each year for a comfortable lifestyle tends to be about \$60,000, which means someone's nest egg would have to be \$1.5 million for that rate of withdrawal to sustain for 25 years," says financial advisor Dave Lopez, a mathematics and computer science major who applies his analytical mind to solving retirement challenges.

"Of course, there are additional sources of income during retirement, such as social security, but the program may not survive the coming decades. And, there are additional costs of retirement, including legacy interests and the likelihood of needing long-term medical care."

The fact is that millions of retirees simply do not have or will not have the kind of income they'd like to have during retirement. Lopez, founder of ILG Financial, LLC (www.theilg.com), discusses an alternative approach to the golden, or distribution years.

- Remember, Social Security is a welfare program. Before President Roosevelt signed the Social Security Act in 1935, seniors worked. America was an agrarian culture, and many who were in their 60s and 70s usually continued duties on the family farm, albeit handling lighter tasks. Social Security is essentially a Socialist idea. A response to the Great Depression, its purpose was to move out older workers in favor of employ-

ing younger Americans, but times have changed.

- You don't have to remain stuck in your "earning" job. "The U.S. government is the biggest employer in the world, and I work with many of its employees," he says. "They usually have high-stress jobs and usually want to retire as early as possible and, while leaning on their pension, start working on their own terms as government contractors."

- Consider retiring early and working the job you've always wanted. The model frequently followed by retired government workers can be replicated by millions of other retirees. You don't need a \$1.5 million nest egg when you combine Social Security with a smaller withdrawal amount and a fun job earning \$20,000 a year. Retirees can be creative in how they earn this "fun money."

"Let's say your passion is water skiing - why not parlay this hobby into a career?" Lopez says. "You'll likely have decades of experience and plenty of contacts. You might work for a ski shop or create a small business giving lessons. Doing something you love is a great way to stay active as an older person."

- No pension? - Create your own. The days of working 30 years for a single company and collecting a sizeable pension are mostly over. This means retirees need to get creative and rely on other sources of income, including IRAs and strategies for annuities - effectively creating their own "pension." Annuities are contracts with insurance companies. The contracts, which can be funded with either a lump sum or through regular payments,

are designed as financial vehicles for retirement purposes. The money used to fund the contract grows tax-deferred. Unlike other tax advantaged retirement programs, there are no contribution limits on annuities.

"Annuities provide plenty of opportunity," he says. "Of course, creative options also yield the risk of complexity. You'll want to be sure to know what you're doing, or at least consult with an accredited professional."

- Consider lifestyle changes. Through the distribution years, you should consider moving to a place where the cost of living is cheaper than major metropolitan areas. Simply put, you'll want your money to go further. Take a play from younger folks who are cutting their cable in favor of only Wi-Fi access. Learn how to cook delicious meals on a budget. For many, learning how to make one's money work better for them, rather than working for their money, is a preferable lifestyle. ☺

About Dave Lopez

Dave Lopez is the founder of ILG Financial, LLC and has been working with individuals and businesses in the Northern Virginia area since 1986. He specializes in strategies that enable his clients to potentially build a retirement nest egg that they can rely on and can never outlive. Lopez has his Bachelors of Science degree from James Madison University with a major in mathematics and computer science. He is an investment advisor representative of AlphaStar Capital Management, LLC, a registered investment advisor.

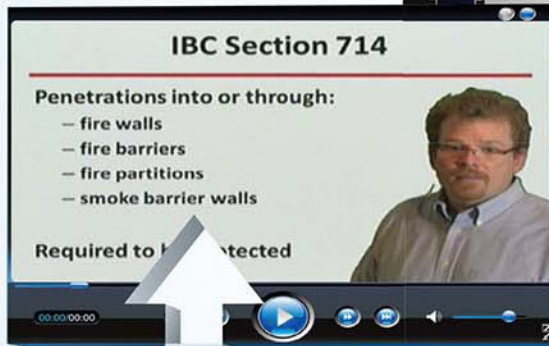
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By James D. Lake

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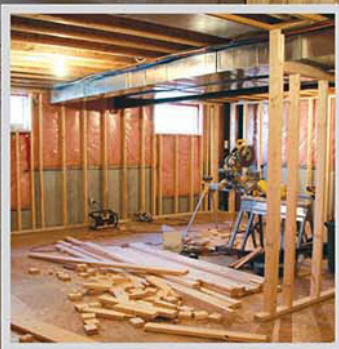


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The State of Sprinkler Technology 2014

By Kenneth E. Isman, P.E.

EDITOR'S NOTE: *The following article is taken from Ken Isman's address during the Annual Seminar in May 2014. Due to the rotation of authors for SQ magazine, this is Ken's first article since that conference. This will also be Ken's last article as a full-time member of the NFSA staff since he has become a Professor at the University of Maryland in their Fire Protection Engineering program.*

The address to the membership was subtitled, "Top Ten Technical Topics," partly because Ken likes the alliteration and partly because the technical concerns for the fire sprinkler industry can be boiled down to these ten broad subject categories. While some people may choose to consider these issues as technical concerns, another way of looking at them might be that they are technical challenges that the industry will need to overcome.

1. OVER 1 BILLION SPRINKLERS SHIPPED SINCE 1980

The National Fire Sprinkler Association has been keeping track of the number of sprinklers shipped from the manufacturers in the United States to the distribution warehouses since 1980. The data has been used internally by the NFSA Board of Directors to gauge the overall health of the fire sprinkler industry. Although the data has been considered "Top Secret" and only has been shared with the Board of Directors, there has been recent agreement that it will be shared with other NFSA members in a usable form in the near future, probably in the form of a dec-

laration of one quarter of a specific year as a baseline and then each subsequent quarter as a percentage rise or decline from that baseline.

A major milestone was reached in March of 2014 when the one billionth sprinkler was shipped since we started keeping records in January of 1980. As of the end of March 2014, more than 1,001,250,000 sprinklers had been shipped to distribution warehouses in the United States. It took the industry 34 years to ship a billion sprinklers. How long will it take for us to ship the next billion?

The answer to the question above might depend on the actions we take in the next few years. See the end of this article for concerns/challenges that are on the horizon that might threaten our long term growth within the sprinkler industry.

2. ANTIFREEZE

The situation remains unchanged since the last time that the NFSA communicated with its members. For new systems, NFPA 13 and NFPA 13R only permit the use of antifreeze if the fluid is listed. To date, there are no new listed fluids. Therefore, there are no legitimate antifreeze solutions that can be designed or installed in new NFPA 13 or NFPA 13R systems. For NFPA 13D systems, certain low percentage concentrations of propylene glycol and glycerine are permitted to be used.

NFPA 25 allows existing antifreeze solutions to continue as long as the concentration is fairly low. It is also important to note that NFPA 25 has established a "sunset clause" that will force all existing

propylene glycol and glycerine antifreeze solutions out of existence by 2022. So, if you have a current antifreeze system, you either need to replace it with a dry-pipe or preaction system or you need to make sure that the space is heated so that you can convert it to a wet system. A third option is to hope that a new antifreeze fluid gets listed that can be used as a drop-in replacement. Considering how long it is taking to develop such a solution, it might not be a good idea to wait to see if this happens in the next eight years.

Underwriters Laboratories has developed an Outline of Investigation, which is the first step in developing a standard to evaluate antifreeze. The Outline of Investigation is UL 2901 Antifreeze for Use in Sprinkler Systems. It is our understanding that several fluids have been considered under this new Outline, but so far, no products have been listed using this outline.

What concerns the NFSA engineering staff the most is that this information has been communicated to our members multiple times recently using many different communication channels including:

>> CONTINUED ON PAGE 16



Former NFSA Vice President of Engineering now consultant

Kenneth E. Isman, P.E.

- TechNotes articles have been sent via e-mail to every member's address that we have
- SQ articles have been written in several issues
- An individual letter was mailed to every main office of every contractor member of the NFSA on October 1, 2012
- Video EOD
- Seminars and conferences have been held on the subject at the national and local level
- Tweeted about it on Twitter

Still, after all of this communication, people continue to ask whether new antifreeze systems are allowed and continue to express surprise at the answer. This brings up the larger question about how we can get information to you as members of the Association. If e-mail, newsletters, magazines, snail mail, videos on the website, seminars, and social media don't work to help you get information from us, what's left? How can we get you the vital information that you need to run your sprinkler business? I'm sure that the NFSA staff would love to hear more from you on how that goal can be accomplished.

3. STORAGE UNDER SLOPED CEILINGS

The NFPA 13 discharge criteria only apply to storage situations where the slope is up to 2 in 12. There are no known criteria for how to deal with higher slopes. The concerns are that a fire near the lower part of the ceiling will send hot gasses to the higher part of the ceiling and open sprinklers remote from the fire that will not actually help control the fire, but will cause the water supply demand to be larger. Just how many of these sprinklers might open is unknown. At the same time, it will take longer for the heat to bank down and open sprinklers directly over the fire, so we do not know what flow of water from the sprinklers (density or pressure) will be necessary to control the fire once the sprinklers over the fire open.

In June of 2013, Victoria Valentine and I proposed a seven-step method by which discharge criteria could be determined. The first step of this process would be to conduct computer modeling of the fire to

determine the answers to the questions:

- How many sprinklers are open in total when the sprinklers over the fire finally open?
- Where are the sprinklers that are open when the sprinklers over the fire finally open?
- What is the heat release rate of the fire when the sprinklers over the fire finally open?

After these three questions were answered from the computer model, the results from known fire testing could be reviewed to determine potential discharge criteria that would work for the size fires that will be encountered. With this proposed discharge criteria, full-scale fire tests could be performed to confirm that the criteria works. If this process is completed for many different fuel packages and arrangements, it is possible that a trend will emerge that makes the prediction of criteria easier.

In April 2014, the NFSA engaged the services of Custom Spray Solutions (a company consisting of Fire Protection Engineers and Professors at the University of Maryland) to do the modeling scenarios for storage of Group A plastics and Class II commodities on racks up to 20 ft in height under roof slopes of 2 in 12, 4 in 12 and 6 in 12.

The preliminary results from the models are encouraging. There does not appear to be a significant delay occurring before sprinklers over the fire open. Also, there does not appear to be too many sprinklers opening remote from the fire. The modeling that has been done to date has been performed in the Fire Dynamic Simulator (FDS), which was developed by NIST. While the modeling is fairly accurate, one concern about FDS is that it does not allow the user to define a triangle as a boundary for a compartment (as you would need to do to simulate a sloped roof). So, instead of making a true slope, you need to make the ceiling a series of small steps to approximate a slope. There is some question as to whether the results from the model are skewed due to this phenomenon.

Representatives at FM Global have agreed to recreate our modeling exercise with their own internal computer model

that does allow a true sloped ceiling. We hope that they perform this modeling soon so that we can move on to the next step of our research. The NFSA will not have any information in place for the 2016 edition of NFPA 13 on this subject, but we hope to have something to submit for the 2019 edition.

4. RACK STORAGE, EXPOSED EXPANDED PLASTICS

For all editions of NFPA 13, up to and including the 2013 edition, the protection of rack storage of exposed expanded plastics has been outside the scope of the standard. The NFPA committee has never seen full-scale fire testing sufficient to convince it that any particular protection criteria is sufficient. While FM has had discharge criteria in their Data Sheet 8-9 that is based on some testing and some equivalencies to other hazards, the data upon which this criteria is based has not been fully shared with the NFPA committee, so the data has not been brought into NFPA 13.

Recognizing that some data was needed, the Fire Protection Research Foundation (FPRF) conducted tests on storage of exposed expanded plastics on racks up to 35 ft high in a 40 ft high building. The results led to development of discharge criteria that will be in the 2016 edition of NFPA 13 for K-25.2 ESFR sprinklers at the ceiling (at 60 psi) and vertical barriers up through the racks (at maximum 16.5 ft intervals) to prevent the spread of fire laterally down the rack.

5. SEISMIC REPORTS

The basic premise of building codes, fire codes and NFPA 13 is that a sprinkler system needs to survive an earthquake so that it is in a position to control a fire after a seismic event. The current rules in NFPA 13 have mostly been written by examining systems after an earthquake and seeing what went wrong. While this is not a bad way to proceed, there are additional ways in which we can learn prior to actually experiencing a loss in an earthquake.

Significant efforts have recently gone into research projects to predict system survivability. There have been several different efforts to look at total building response during an earthquake with

sprinkler systems interacting with other building components. For the most part, sprinkler systems have done well in these tests and it does not look like major changes will need to be made to NFPA 13. We appear to be doing what needs to be done to make sure a sprinkler system survives an earthquake and can control or suppress a fire that follows an earthquake in the protected building.

6. CLOUD CEILINGS

While NFPA 13 does not use the term "Cloud Ceiling," it does cover the subject of how to protect cloud ceiling situations in the following sections: 8.1.1(1), 8.6.4.1.1.1, 8.6.5.3.3, and 8.15.23. Sprinklers are usually required above and below the "clouds" because the space above the clouds is not really a concealed space, therefore, the user of NFPA 13 cannot use any of the portions of section 8.15.1.2 to justify leaving sprinklers out. However, there is a sentence in section 8.15.1.2.1 that says, "The space shall be considered a concealed space even with small openings such as those used as return air for a plenum." This brings up the question as to whether a situation with very large clouds (and very small openings to the space above) can be treated as a concealed space above the clouds with sprinklers omitted from this space.

Recent work by the Fire Protection Research Foundation has allowed the NFPA Committee on Sprinkler System Installation Criteria to develop some criteria base on this situation. All of the work of the committee has not been completed yet, so we cannot say for sure what will be in the 2016 edition of NFPA 13, but it is safe to say that there will be some measurable criteria by which you would be able to leave sprinklers out of the space above a cloud ceiling if the clouds were very large and covered almost the whole ceiling area.

7. WATER MIST

The manufacturers of water mist systems see their systems as equivalent to sprinklers in every way. They have recently been fighting for the same code "trade-ups" in building codes as have been traditionally applied to sprinklers (increase to building height and area, increased

travel distance, shorter remote distance between exits, etc.). The debate occurred during the recent cycle of NFPA 101 and NFPA 5000. Ultimately, the change was not made to NFPA 101 or NFPA 5000 to allow the trade-ups for water mist systems, but the situation will probably come up again next cycle and is likely to also come up in the ICC hearings.

8. SPRINKLER AND PUMP STANDARDS WORK ON 2016 EDITION

NFPA 13, NFPA 13R, NFPA 13D, NFPA 20 and NFPA 24 are all going through a revision cycle right now. The First Draft (showing the changes that the committee wants to make) was published early in 2014 and the documents were open for Public Comments until May 16, 2014. The committees responsible for these documents met in June and October of 2014 to take action on the comments and write comments of their own. These documents will be voted on by NFPA membership in June of 2015 and should be issued by the NFPA Standards Council in September of 2015 as 2016 editions.

The sprinkler industry will only have a few months to work with the documents and will have to prepare proposals to change the documents for the 2019 edition as early as spring of 2016. It is unfortunate that the NFPA pushes the documents back into cycle so quickly. The NFSA will be working with the NFPA to try and put more time between when the document is published and when the document is required to be revised.

9. INSPECTION, TESTING AND MAINTENANCE

The 2014 edition of NFPA 25 is available now from the NFPA. It is important for everyone in the sprinkler industry to understand what is in this standard. It is just as important for everyone in the sprinkler industry to understand what is not in the document. For example, NFPA 25 does not require that the building be inspected to make sure that the sprinkler system is adequate for the hazard. That needs to be addressed in different ways through fire codes.

Sprinkler contractors offering inspection, testing and maintenance services to their clients need to understand their

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>> CONTINUED FROM PAGE 17

liability. The NFSA has developed a new training program that goes into this subject in-depth. Knowledgeable sprinkler contractors can also help their customers comply with NFPA 25.

One of the ideas for fire sprinkler contractors to help their customers is to be able to provide a price for doing more than just the bare minimum of NFPA 25. There are some contractors that offer a price for doing quarterly inspection and tests. When they show up, they perform the requirements of a quarterly inspection such as a main drain test, and a water motor gong test, but they refuse to conduct inspections and tests of monthly or weekly items while they are in the building. So, control valves might be closed and fire pumps might not be run through their churn tests. What we end up with is a customer that thinks they are maintaining their system and a contractor that is providing a low price with a limited contract that is barely within the requirements of NFPA 25.

A better situation is a more informed client and a contractor willing to do more than just the bare minimum. Contractors should be offering clients more than just the bare minimum (recognizing that the offer will be more than just a bare minimum price). They should be showing their clients what NFPA 25 requires to be done on a daily, weekly and monthly basis. While they can make it clear to their clients that they are not going to show up on a daily, weekly or monthly basis, they can perform those tasks when they are present in the building for the quarterly inspections and tests. This should improve system performance and help both clients and contractors make the most out of their inspection and testing practices.

10. CONCERN FOR SUSTAINED GROWTH

As discussed in item 1 of this article, the

fire sprinkler industry enjoyed significant growth in the years from 1980 to 2014. Most of this growth was based on the new construction market that was developed through codes along with some retrofit of high-rise, assembly, and health care occupancies. But are we going to continue to grow at the same rate?

There are some warning signs on the horizon. People outside the fire sprinkler industry are commenting that the sprinkler industry is seen as "arrogant" and "greedy." Their perception is that we keep pushing to sprinkler everything in the most expensive way possible and that we are not willing to consider other options.

At the same time, water damage claims are exceeding the perception of sprinkler saves. This past winter was an extremely cold one with lots of water damage claims to insurance companies for all sorts of plumbing, mechanical and fire protection systems. While sprinkler systems were not alone in this problem, they were certainly written about a great deal in the media. At the same time, there weren't an equivalent number of "sprinkler save" stories in the media where sprinkler systems helped control or suppress a fire. What we end up with is a general public that believes that sprinklers are more of a problem than a solution.

Finally, we face the fact that fire just isn't the problem that it used to be. When I first got involved in the fire protection business in the 1970's the NFPA was estimating that 12,000 people per year were dying from fires in the United States. Today, forty years later, the population of the United States has grown 50% (about 200 million to about 300 million) while the number of fire deaths has gone down to less than 3,000. It's getting harder to prove to the public that we have a fire problem.

Within the sprinkler industry, we know

that a big part of the reduction in fire deaths has come from the growth in the sprinkler industry. Fires causing a serious number of deaths in hotels, high-rise, factory and industrial settings have dropped significantly. Even in the residential market, we've made great strides in protecting multi-family dwellings. In local markets in pockets of the country like California, Maryland, an Illinois, we've even made significant progress in protecting single family dwellings. All this has helped to dramatically reduce America's fire problem. But we can't just sit back and rest on this success. We have to make sure that people understand two things:

1. A great deal of the reduction in fire deaths has come from the application of fire sprinklers and we cannot let up on the amount of sprinkler protection that we provide or the fire death rate is likely to start rising.
2. A loss of 3,000 people per year from fire is still unacceptable. It's better than it used to be, but it is still too many people to have dying each year when an inexpensive solution is available to save them.

SUMMARY

The way that the fire sprinkler industry responds to these challenges will determine the future health of our industry. Opportunities are certainly present for the fire sprinkler industry to continue to grow. The economy is improving. The world still recognizes fire sprinkler systems as a valuable tool. If we design our systems well, keep water-filled pipe out of freezing spaces, and protect and promote our image, there is no reason that we cannot ship the next billion sprinklers in record time. ①

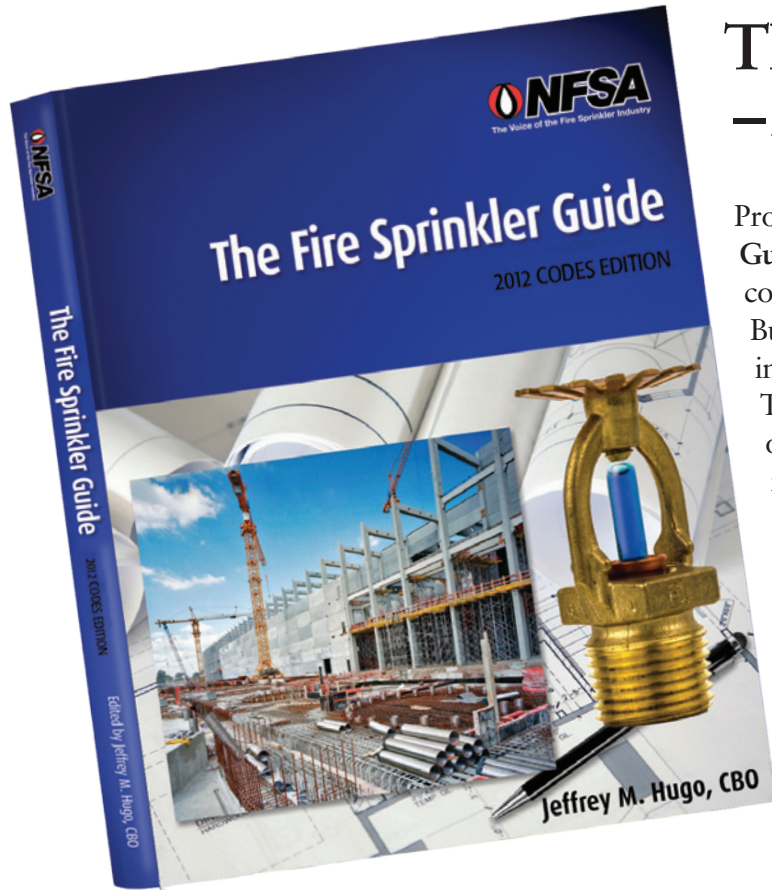
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Major Changes for 2015 IBC and IFC for the Sprinkler Industry

By Jeff Hugo, CBO

The 2015 International Building Code (IBC) and the International Fire Code (IFC) are available and several states are considering adoption. This article will cover the significant changes that affect the fire sprinkler industry. Future articles will outline the remaining ICC documents, such as the IRC, IEBC, and IECC.

Chapter 5 General Building Heights and Areas Rewrite

One of the major changes to the IBC is not technical. It is the layout of Chapter 5. In previous editions of the IBC, Table 503 provided the allowable area, height and stories for each occupancy and type of construction. The user would take the numbers from Table 503, and apply the modifications such as the fire sprinkler increases. In the 2015 IBC, the former Table 503 is replaced with several tables that include all of the possible modifications, with the exception of open perimeter increases. The tables will provide easier application and uniform enforcement. The new layout is similar to NFSA's Fire Sprinkler Guide. The multiple tables may seem to add more text and more work, but in reality, it is a more user-friendly option that removes the potential for error. The three new tables in Chapter 5 are:

- **Table 504.3** - Allowable Building Height in Feet Above Grade Plane
 - This table provides the maximum

building height from grade plane. The table is divided into sprinklered with NFPA 13, sprinklered with NFPA 13R, and nonsprinklered.

- **Table 504.4** - Allowable Number of Stories Above Grade Plane
 - This table provides the maximum number of stories from grade plane. The table is divided into sprinklered with NFPA 13, sprinklered with NFPA 13R, and nonsprinklered.
- **Table 506.2** - Allowable Area Factor in Square Feet
 - This table gives the allowable area for nonsprinklered, sprinklered one story, and sprinklered multiple stories.

Pedestal Buildings

A pedestal building in Section 510.2 has three major parts. The first part is the pedestal, which is essentially a 3-hour horizontal fire wall supported by 3-hour walls. The second part is the building above the pedestal and the third is the building below the pedestal. The building below the pedestal is required to be sprinklered regardless of the occupancy. In the 2015 IBC, the building below the pedestal is no longer limited to one story above grade plane, and it is no longer limited to any occupancy except for Group H. These changes provide more flexibility and options for architects.

Water Mist

Automatic water mist systems are now recognized as an automatic fire extinguishing system in Chapter 9 of both the IBC and IFC. The requirements provide a reference to NFPA 750 for installation, testing, monitoring, control valves and related requirements. It should be noted that all automatic fire-extinguishing systems cannot be considered as alternatives to automatic sprinkler systems from the perspective of allowing reductions or exceptions to other code requirements, such as increases for area and height.

Open Corridors

The 2013 edition of NFPA 13R exempts open corridors from sprinklers. However, in the 2015 IBC, an open-ended corridor, stair or ramp is required to be sprinklered. This is an area where the IBC will overrule NFPA 13R and require open-ended corridors to have fire sprinklers installed. Fire sprinkler contractors and layout technicians will need to take special note of this when bidding or designing NFPA 13R work when the 2015 IBC is used.

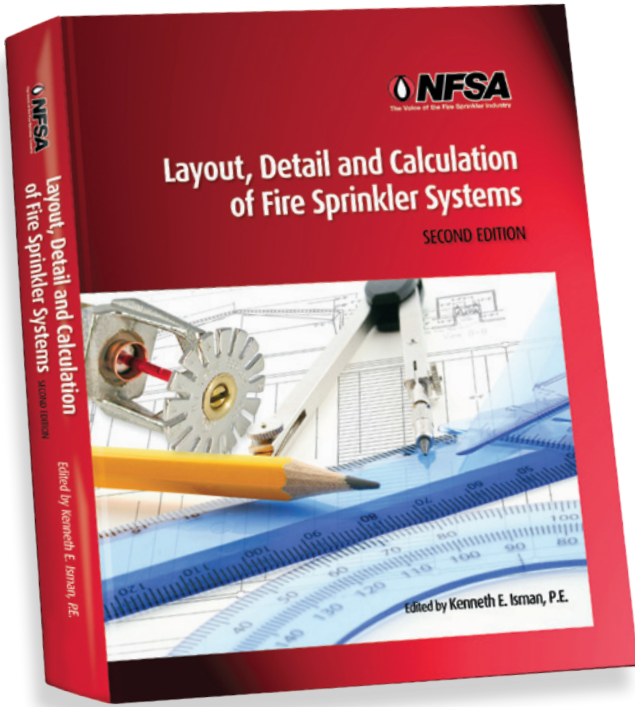
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NFSA's Manager
of Codes

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.

The text retails for \$95 (plus S&H) to members of the NFSA and \$145 for non-members (plus S&H). To get your book, fill out the following form and return it with your payment.

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Assembly Occupancies

An assembly occupancy on a roof that has occupant loads over 100 for A-2 (bars, restaurants, etc.) and over 300 for other Group A occupancies are required to be sprinklered. When there is a sprinklered occupancy on the roof, then the supporting floors down to the level of exit discharge are also required to have fire sprinklers.

Fire sprinklers are also required when there are multiple assembly occupancies that share exits or any part of the exit access components. The requirement activates when the combined occupant load exceeds 300 occupants.

Bathrooms

The 2013 edition of NFPA 13 requires sprinklers in all dwelling unit bathrooms over 55 sq. ft. except the bathrooms in hotels and motels. The 2015 IBC overrules the standard and extends the exception to all bathrooms of Group R occupancies (except R-4) that are over 55 sq. ft.

Residential Systems in the IBC

The 2015 IBC permits NFPA 13D systems installed in R-3 occupancies (boarding houses, care and congregate facilities and lodging house with limited numbers of occupants) and R-4 occupancies (assisted living, group homes, board and care facilities and rehab) that are categorized as Condition 1 (capable of responding and evacuating without assistance).

The R-4 Condition 2 occupancy (occupants need assistance to evacuate) is required to be sprinklered according to NFPA 13R with added attic protection. Attics that have fuel-fired equipment, storage or used for living purposes are required to be sprinklered in these occupancies. Attics that do not have fuel-fired equipment, storage or are used for living purposes have one of three protection options:

1. Provide heat detectors that activate the building fire alarm system.
2. Construct the attic of fire-retardant-treated wood or noncombustible materials.
3. Install fire sprinklers.

Smoke and Heat Removal

Section 910 underwent major revisions. Smoke and heat roof vents or a manually activated mechanical smoke removal system are required to be provided in industrial and storage buildings (in buildings where these provisions are applicable), unless ESFR or control mode special application (CMSA) sprinklers are installed. Draft curtains are no longer required.

Limited Area Sprinklers

The limited area sprinkler requirements are now more restricted in their use and installation. Limited area systems are now limited to six sprinklers per fire area, where in past editions the limit was 19. Limited area systems are restricted to areas of light hazard and ordinary hazard Group I. Hydraulic calculations are required to be provided.

Retrofitting Existing Buildings

Under the existing building requirements of the IFC, I-2 occupancies (hospitals, nursing homes, foster care and detoxification facilities) are required to be retrofitted throughout with fire sprinklers.

Under the IFC and the IEBC (International Existing Building Code), when existing buildings are retrofitted with fire sprinklers, the fire safety requirements have been revised to allow previously fire resistance rated elements, which are no longer required to be rated under the current code, to no longer have to be maintained as rated assemblies.

Adoptable Appendices

Appendix K provides requirements for ambulatory care facilities built prior to the requirements in the 2009 IBC. In Appendix K, the trigger for fire sprinklers are the same as in new construction - four or more recipients incapable of self-preservation or where there is more than one recipient on a floor above or below the level of exit discharge - however, fire sprinklers will only be required for construction type IIB, IIIB and VB.

Appendix M has the requirements for retrofitting high rises with fire sprinklers similar to the phased approval and in-

stallation process in NFPA 101. When the appendix is adopted, it would require high rises as defined in the IBC and IFC to be retrofitted with sprinklers in accordance with a schedule to be determined by the fire code official. The schedule for fire sprinkler installation is not to exceed 12 years from the adoption of the code. ①



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Who Tweets?

By Joanne Genadio

No, I'm not doing bird calls. I'm asking a question. Does your business have a Twitter account? If not, it's high time you jump on the social media bandwagon and get an easy start on FREE publicity for your business. Your only investment will be time... and how much time is up to you.

What is Twitter? Let's start with a quick review of the basics:

- Twitter is a short message communication tool that allows you to send out messages (tweets) up to 140 characters to people who subscribe to you (followers).
- Your tweets can include a link to any web content (news story, website, PDF, etc.) or a photograph or video. Quick hint: Adding an image to a tweet greatly expands what you can share to beyond the 140-character limit.
- People follow (subscribe) to your Twitter account, and you follow other people. This allows you to read, reply to and easily share their tweets with your followers (retweet). Quick hint: The more people you follow, the more that will follow you.

Why Tweet?

Here's what Twitter has to say: "Twitter is a real-time information network where people can discover what's happening in the world right now, share information instantly and connect with people and businesses around the globe. With over 271 million monthly active users and 500

million Tweets sent every day, Twitter offers your business an opportunity to reach potential customers interested in what you have to offer. What's more, 78% of users on Twitter are accessing it via a mobile device. There is a real opportunity for businesses to reach potential customers no matter where they are or what they're doing."

Now, my reasons your business should be actively tweeting (besides the very important fact that it's *FREE*):

1. **Connect with your customer** - There's no better way to keep a constant presence than with Twitter. Reach out to your customers, let them know you are on Twitter and they will follow you. Let them know about new products, services, personnel, branches, whatever news you'd like to share. Remember, using links in your tweets will allow you to direct customers to other web content that will enable your business to put customers where you want them to be!

Also, you can see what your customers are tweeting about. What are their interests? Are they dissatisfied with a particular product? Are they spreading the news about how great your customer service is? Monitoring these tweets will provide you the ability to instantly address your customers' concerns.

2. **Branding** - There it is, the dreaded marketing word. Using Twitter is an easy way to help brand your business the way you want. Get your logo out there! Tweet some photos that will put faces, places and products you want your customers to know about in the forefront! The more you tweet, the more you will grow your follower base. The more followers you have, the more chances that they will retweet what you tweet. The more retweets you get, the more exposure your brand enjoys.
3. **Keep up with the Competition** - Whether we'll admit it or not, and we should because if you're not checking on what "the other guy" is up to, you should, Twitter is a great way to see what your competition is up to. You can read what customers are saying about your com-

>> CONTINUED ON PAGE 26

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NFSA's Marketing
Manager

Joanne Genadio

petition. If your competition is not doing anything with their customers' complaints, the opportunity exists for you to tweet them "hey I heard you have a problem with..."

- 4. **Brand loyalty** - Once you have established your presence on Twitter and have had the opportunity to engage followers and help your customers on twitter. They will be loyal to your brand for a long time.
- 5. **Your Association tweets** - Follow us, we'll follow you. NFSA's Twitter account is extremely active. With almost 2,000 followers, @nfsaorg is a vital communication tool for the Association. The Twitter feed is monitored seven days a week. All you have to do is follow us on Twitter and mention @nfsaorg in your tweets and there is at least a 90% chance that your tweet will be retweeted by us. In turn, many NFSA employees have individual Twitter accounts and your tweet will also be retweeted by some of them...and the snowball grows from there.

If you need help getting started, Twitter will walk you through it. Just go to <https://business.twitter.com/>. If you already have a Twitter account, make sure you let us know so we can follow you! By the way, I'm happy to help too! Just contact me at genadio@nfsa.org or 845.878.4200 ext. 118. 📞

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NFSA is pleased to announce it has further enhanced its member-only offerings to include sprinkler shipment information not available anywhere else. That's right, as an NFSA member you now have access to exclusive fire sprinkler shipment information never before published, and only NFSA members can get it. It's called the **"U.S. Sprinkler Shipment Index"** and it's posted in the members-only section of the NFSA website.

In 2010, shipments of both residential and non-residential fire sprinklers hit a 20-year low. While there's a general sense the fire sprinkler industry has been recovering much the same as the economy, there's very little if any data available to support the hypothesis. That all changed this week when NFSA published the first edition of the exclusive member-only U.S. Sprinkler Shipment Index. The U.S. Sprinkler Shipment Index are tables showing the percentage of change by quarter in shipments of both residential and non-residential sprinklers using the average of 2010 quarterly shipments as a baseline.

Supplier and Manufacturer (SAM) members will find the U.S. Sprinkler Shipment Index extremely valuable in marketing and forecasting. Contractors will be able to compare their company's business position to that of national averages.

Again, the U.S. Sprinkler Shipment Index is only available to NFSA members. Logon today to avail yourself of these most valuable, never before available sprinkler industry-specific metrics.

You will need your username and password to log in to the "members only" section of our website. If you need your login info, please contact our customer service team at (845) 878-4200 and dial "9". •

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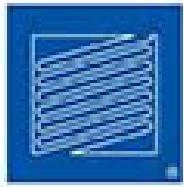


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By Greg Coggiano

Promising Horizon

Building construction continues to grow nicely in 2014. Most fire and life safety contractors with whom I converse are enthusiastic about their growing backlogs. At this point in the year, unless something untoward occurs and the wheels fall off, this suggests that 2015 ought to be better than 2014.

So what is going on? The overall economy is doing much better now than at any time in the last six years and this prosperity is expected to continue. As we all know, the economy has been growing each of the last five years at the anemic rate of 1.9%, but this year it appears to have turned the corner. It is growing at 3% + rate. Non-farm employment grew in September for the 48th consecutive month. Month to month growth surpassed 200,000 in seven of the last eight months. The unemployment rate is now around 5.9%. The industrial production index, although dropping slightly in August compared with July 2014, increased for eleven of the last thirteen months, and forty-nine of the last sixty-two months. Finally the service sector grew, according to the summarized information presented by Insuperity, again for the fifty-sixth month in a row.

Perhaps most auspiciously however, the nation is now self-sufficient in the production of natural gas; and, is the largest producer of natural gas in the world. By 2016, the US is also expected to become the world's largest producer of oil; and, by 2020, it will be energy self-sufficient according to the CEO of ExxonMobil, Rex

Tillerson. This huge boost from energy (in combination with other supporting factors: growth of employment, income, and population migration and growth) lead many economists/business pundits to believe that unless something unexpectedly catastrophic occurs, the US may be able to sustain the 3% + growth for each of the next two to three years.

What has all of this meant for building construction? As you would expect it has reflected very positively. The construction metrics for the nation in 2014 compared with 2013 (which was a good year for most) support the smile that most of you have on your face. Many cities are booming, and the supporting suburban and rural areas are continuing to show signs of life. For those fortunate to be located in the "hot markets" life is very hectic. For some of the other parts of the nation, the growth is more tepid - but still much, much better than remaining flat or going backwards, as was the case for a while. That being said, the parts of the country that do not have employment growth, or are by-and-large aging without young population growth or losing population, are not seeing many fruits of the economic revival. Very much so, this economic revival is split among the regions that "have" growth in income, jobs and population, and, those that do not.

Total Combined Residential Building and Specialty Trades Construction employment for the first nine months of 2014 registered approximately 1,374,000 compared with approximately 1,294,000

in 2013. Employment grew by 6% – up 60,000 people – over the period.

Residential building employment, combined with that of specialty trades like fire & life safety, continues to grow. This supports the notion that building activity continues to be strong. While gains paused a bit in 2012, year over year, residential combined building and specialty employment has gained momentum every year since the bottom was reached at the end of 2010.

The main reason for this sustained growth in residential building construction employment is the steep growth trajectory for multifamily housing. (see [Table 1 next page.](#))

As one can appreciate, the year to year gains are widening. In almost every case, the later months of each gain more momentum than the earlier. In [Table 2 \(see Table 2 next page\)](#), the greater separation in the lines toward the end of 2012-2014 evidences employment momentum growth.

Turning to employment for non-residential building and specialty trade construction shows a similar experience.

>> CONTINUED ON PAGE 30



Managing Director,
CB Partners LLC

Greg Coggiano

Table 1: Annual employment Δ in first 9 mos of each year for Combined Residential Building and Specialty Trades Construction
(thousands) US Bureau of Labor Statistics

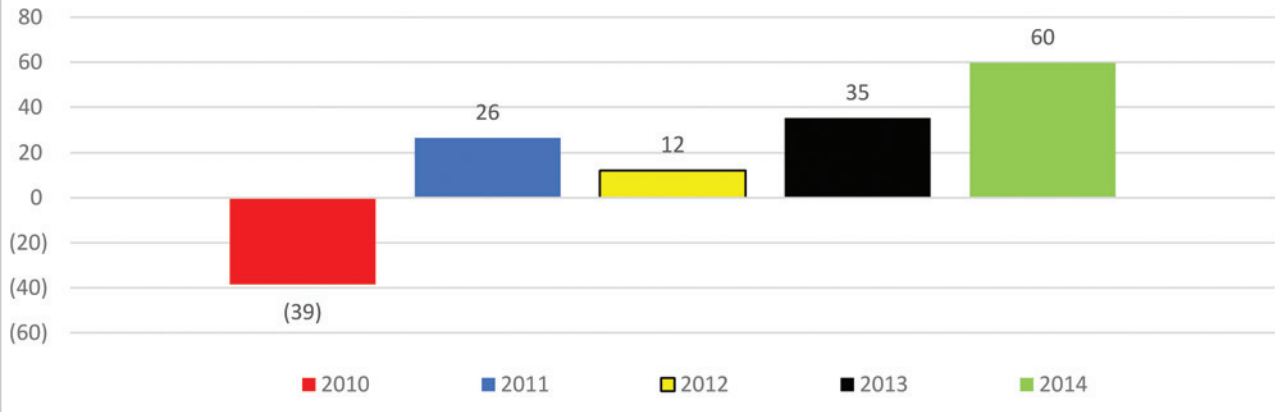
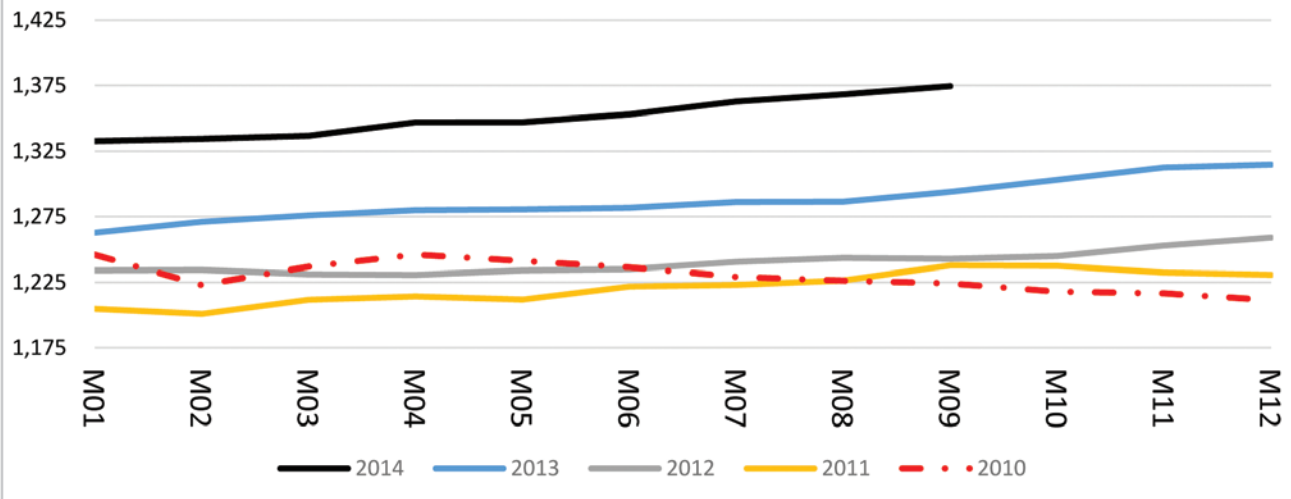


Table 2: Combined Residential Building and Specialty Trades Construction Employment (thousands) US Bureau of Labor Statistics



As evidenced in earlier years, 2014 appears to be separating from 2013 in the later months as opposed to the earlier. (See [Tables 3 and 4](#) on page 31.)

Most would believe that growth in non-residential building construction employment would lead to growth in building construction. Not to disappoint, that is exactly what is going on according to the national statistics produced by the US Census bureau.

So where is the construction? Table 5 (see [Table 5](#) on page 32) details the 2013 US dollar volume of non-residential con-

struction in which sprinklers and other fire and life safety apparatuses are widely required to be installed.

Multifamily had an annual construction put in place volume in 2013 of \$38 billion nationally. As one can appreciate from the year to year comparisons in Table 6 (see [Table 6](#) on page 32), multifamily continues to be the highest growth segment of building construction. The segment grew 28% over the same period last year. Month to month in 2014 showed lumpy growth which is characteristic of the recovery following the Great Reces-

sion. JLL and others believe that there is at least two more years of construction growth ahead for this segment. The principal drivers for this growth are demand and GSA financing. The determinants of where the construction occurs are: growth in employment concentrations in cities and regions with growing technology and energy industries, population growth of cities in general as millennials move to cities from other less desirable geographies, and downsizing/retirement housing and first household formation by the millennials. Expect multifamily with

>> CONTINUED FROM PAGE 30

private ownership to lead the way - it is now in its fourth straight year of growth. Government owned multifamily construction put in place declined for each of the last four years.

While power represents a large and growing construction, the status and growth dynamics of it will not be discussed in this article. I hope to present something concerning this segment at a later date.

Like multifamily, utility and resort lodging with annual construction put in place in 2013 of \$13 billion, is another structure

with wall to wall sprinkler installations. At 19% it is the structure with the third highest put in place growth rate in 2014. More than that, however, it has had three solid years of consistently increasing year to year growth for the first eight months of each calendar year. A major driver of this segment is demand (resulting from job and business growth), but this growth, unlike multifamily, is limited by available financing and by high construction costs. Areas where construction and development of mostly utility lodging are expected to continue are San Francisco, Boston, New York and generally across the nation

as employment grows and business visitation occurs.

Resort construction is in demand but lack of financing and high costs of development seem to be impeding the development of more projects. JLL holds that the largest resort area in the US is Florida with its center in the greater Orlando area. There are about ten other smaller locations in the US that are resort destinations. In spite of demand, as a result of the financing and cost bottlenecks mentioned earlier, there are fewer than ten sizeable projects in the pipeline in the US.

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Table 3: Annual employment Δ in first 9 mos of each year for Combined Non-Residential Building and Specialty Trades Construction

(thousands) US Bureau of Labor Statistics

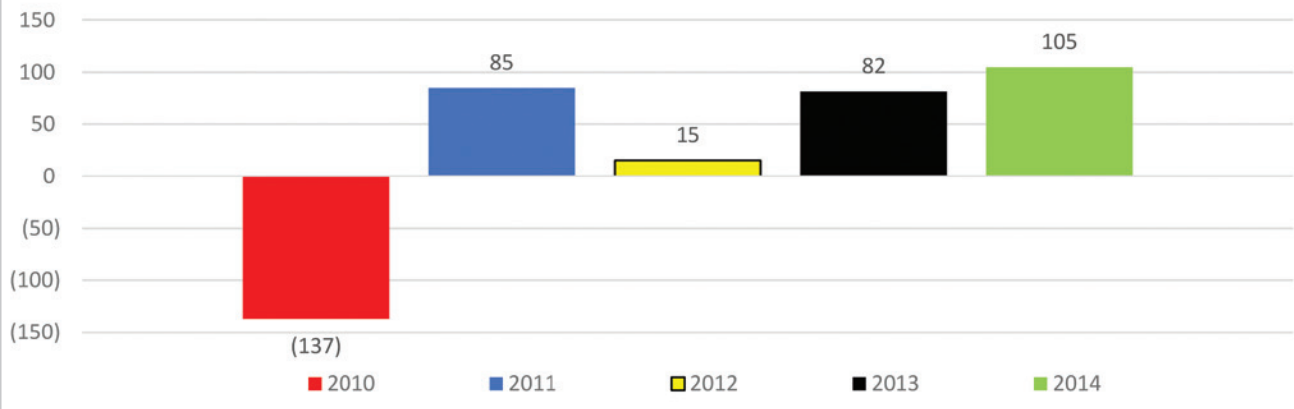


Table 4: Combined Non-Residential Building and Specialty Trades Construction Employment (thousands) Us Bureau of Labor Statistics

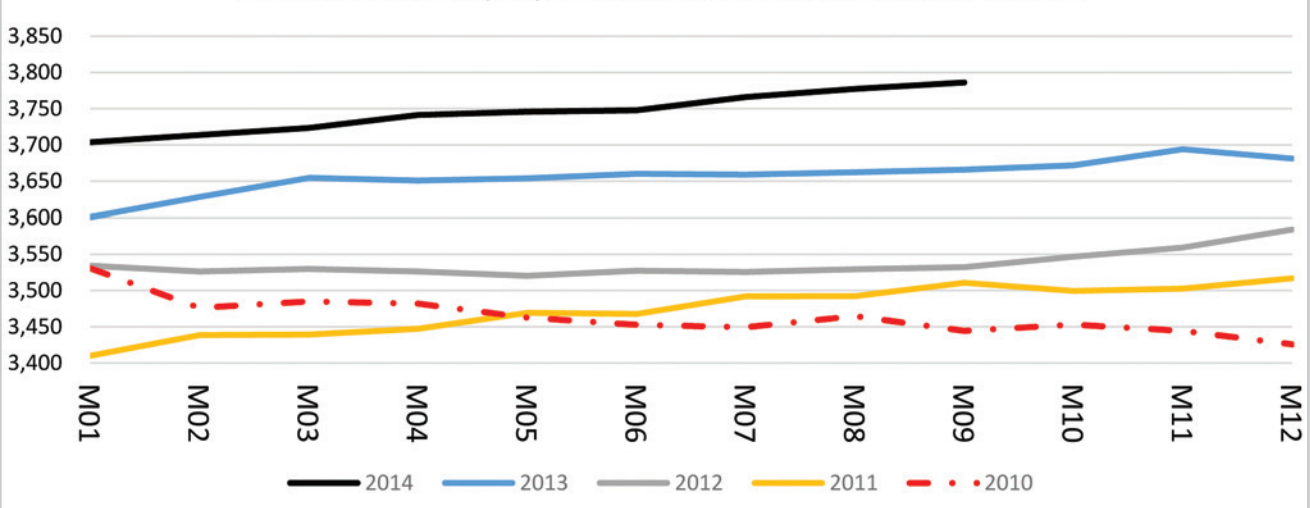


Table 5: Put in Place Volume of Annual Construction by Structure Type Ranked in order of \$ Size

| 2013, \$ Millions | Private | Public | Total |
|---------------------------------|-----------|-----------|-----------|
| Total | \$335,908 | \$147,077 | \$482,985 |
| Power | \$78,550 | \$12,091 | \$90,641 |
| Educational | \$16,737 | \$61,262 | \$77,999 |
| Commercial | \$48,743 | \$2,250 | \$50,993 |
| Manufacturing | \$47,226 | | \$47,226 |
| Health Care | \$30,347 | \$11,138 | \$41,485 |
| Transportation | \$11,046 | \$28,687 | \$39,733 |
| Multi Family | \$32,330 | \$5,995 | \$38,325 |
| Office | \$29,787 | \$7,835 | \$37,622 |
| Communication | \$17,131 | | \$17,131 |
| Amusement and recreation | \$7,224 | \$8,289 | \$15,513 |
| Lodging | \$13,133 | | \$13,133 |
| Public safety | | \$9,530 | \$9,530 |
| Religious | \$3,654 | | \$3,654 |

What is growing and what should we expect moving forward?

Table 6: % of Cumulative growth in Construction put in place from period to period for the First 8 Calendar Months of Each Year*

| | 2010 to 2011 | 2011 to 2012 | 2012 to 2013 | 2013 to 2014 |
|-----------------------|--------------|--------------|--------------|--------------|
| Multifamily | -6% | 17% | 35% | 28% |
| Power | -3% | 39% | -12% | 21% |
| Lodging | -28% | 19% | 23% | 19% |
| Office | -9% | 7% | -4% | 19% |
| Manufacturing | -15% | 25% | 1% | 11% |
| Commercial | 4% | 11% | 6% | 10% |
| Transportation | -9% | 5% | 8% | 4% |
| Amusement | -11% | 4% | -10% | -4% |
| Educational | -7% | 2% | -8% | -5% |
| Public Safety | -11% | 4% | -10% | -4% |
| Communication | 1% | -8% | 5% | -5% |

>> CONTINUED FROM PAGE 32

As the economy develops, look for continued growth of the lodging segment in areas of increasing job growth, population growth and vacation destinations. According to most of the articles I read, bank lending is gradually yet slowly loosening, but increasing construction costs are becoming more and more of an issue. Cities where development may have peaked according to JLL are Phoenix, Orlando, Dallas and Houston (lack of new ground breaks for lodging construction in Houston may be due to high construction costs says JLL). Rural areas that are expected to taper over time exist in Pennsylvania, Ohio, New York, West Virginia and other pockets where construction occurred to support industry specific needs such as shale gas but in general are not of general appeal to millennials, retiring Americans and other growing industry.

Office construction put in place constitutes about \$38 billion. Its composition in

terms of private and public ownership is 80%/20% respectively. From a building type perspective, this is another sprinkler-intensive structure. For the first 8 months of 2014, put in place construction grew by 19%. Its growth is apparent in many cities and suburban areas around the country. The constraints to growth on this segment are similar to those mentioned for lodging. That being said, lending is backing this segment with greater support than lodging because of the large number of build to suit, the historically high percentage of pre-leased square feet to total square feet under construction, percentage of square feet under construction to total inventory, occupancy terms of leases, and the now recognized healthy economy. Cities and suburbs with tech and energy employment heavy populations are still leading the pack. (see [Table 7](#) below.)

Not only is build to suit occurring in major tech and energy employment heavy population centers, but according to JLL, a majority of the new development

has shifted in the last nine months from build to suit to speculative construction in some locations.

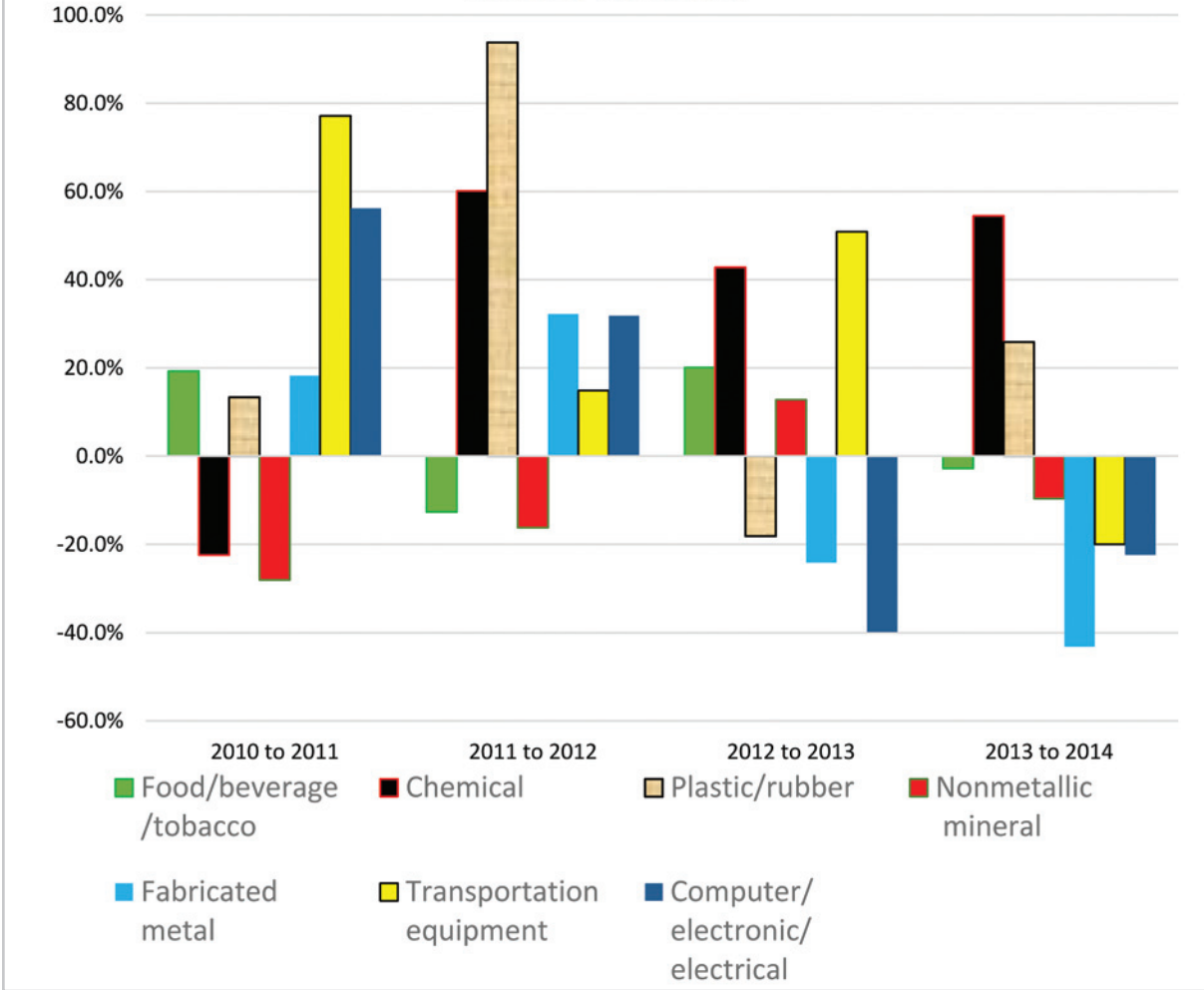
Based on the fundamentals referenced above and moreover the seemingly broader strength of the overall economy, unless there is a major unexpected bump that besets the US economy, experts predict that this segment will continue its growth into at least 2017.

Manufacturing, which represents about \$47 billion in annual construction put in place, is 100% private ownership. Put in place construction's growth, other than the last four years, is similar to the economy in that it is lumpy. But, on average it has grown tremendously for its size. The most recent period exhibits an 11% growth rate for the first eight months of the year. While that rate is not as great as that of office and lodging, it is impressive. In two of the last three years, its growth far exceeded the underlying growth of the economy.

>> CONTINUED ON PAGE 34

| Table 7: City and Suburban Geographic Location Source: JLL | Estimated Square Feet of Office Space under construction at end of Calendar Q3 2014 | Estimated % preleased | Estimated Total Vacancy | Estimated % Current Construction will add to Total Existing Inventory |
|---|--|------------------------------|--------------------------------|--|
| Houston | 15,635,602 | 58% | 14.6% | 10.1% |
| New York City | 5,424,890 | 58% | 25.1% | 3.4% |
| Dallas | 4,679,044 | 63% | 19.1% | 3.0% |
| Washington D.C. | 4,619,612 | 57% | 17.2% | 1.4% |
| Silicon Valley | 4,135,920 | 51% | 14.1% | 6.5% |
| San Francisco | 3,477,201 | 63% | 10.4% | 4.6% |
| Seattle | 3,045,570 | 43% | 11.1% | 3.5% |
| Austin | 2,875,800 | 49% | 11.6% | 6.3% |
| Chicago | 2,785,000 | 45% | 17.8% | 1.2% |
| Phoenix | 2,410,184 | 70% | 22.9% | 3.0% |
| Philadelphia | 2,049,050 | 89% | 15.5% | 1.6% |
| Boston | 1,866,000 | 76% | 14.9% | 1.2% |
| Los Angeles | 1,640,803 | 40% | 16.6% | 0.8% |
| Denver | 1,539,784 | 38% | 14.1% | 1.5% |
| Milwaukee | 1,458,000 | 87% | 19.3% | 5.9% |
| Raleigh/Durham | 1,450,048 | 53% | 12.8% | 3.3% |
| Cincinnati | 1,389,000 | 28% | 20.3% | 4.0% |
| Pittsburgh | 1,344,000 | 75% | 15.0% | 2.8% |
| New Jersey | 1,322,500 | 75% | 9.7% | 0.3% |

Table 8: Annual Δ in Construction Put In Place by MFG Industry
Source: US Census



>> CONTINUED FROM PAGE 33

Within manufacturing in Table 8 (above) one can appreciate that chemicals, rubber and plastics, and transportation equipment have exhibited the most growth over the last three years. Looking forward, the three segments leading the way plus others should do well over the next several years. The factors that should contribute to this are:

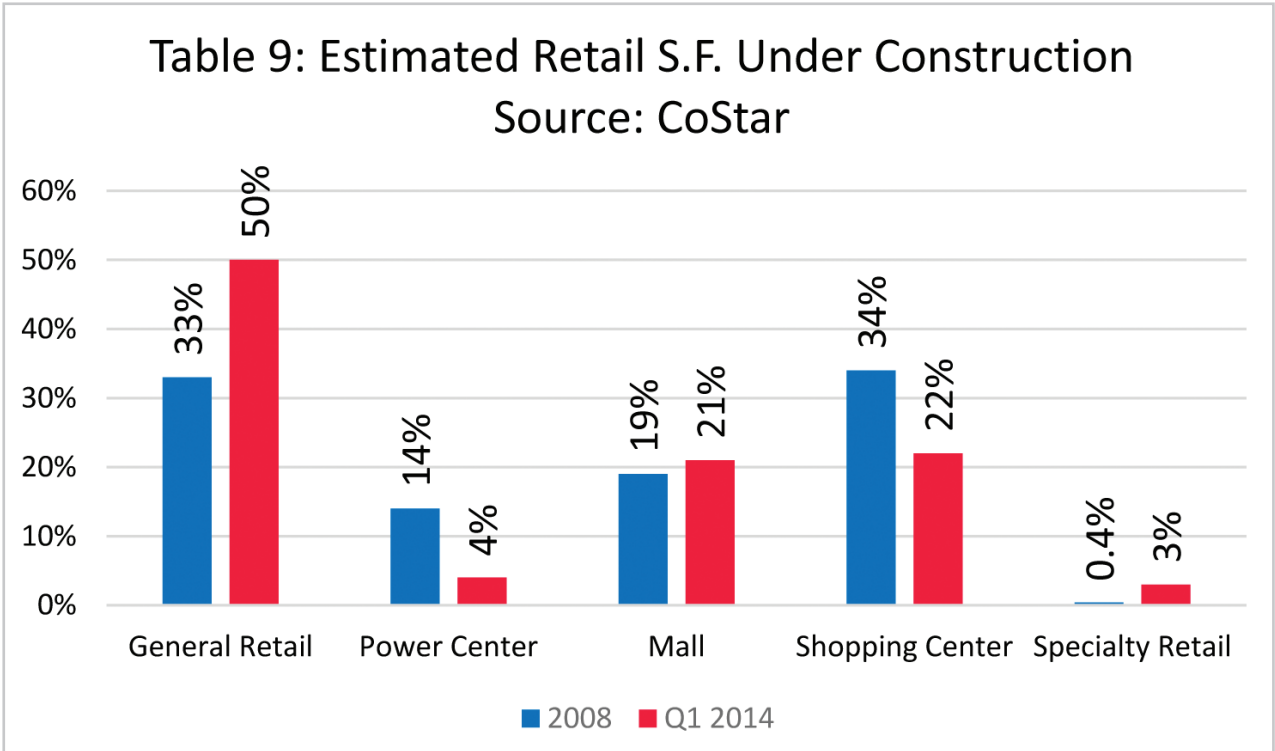
- available low cost domestic (petroleum) feed stock for the chemical industry,
- low energy costs,
- a tendency to make use of plastics and rubber in substitute for heavier metals to promote lighter more weight efficient products,

- selectively competitive manufacturing costs in USA,
- a healthy US economy
- and according to JLL
 - the lowest vacancy rate, 7.4%, in the last two economic cycles,
 - a 50-year low in construction deliveries in square feet from 2010 to 2013,
 - a largely build to suit market with speculative construction now just beginning

The last segment of growth for construction is commercial. At the end of 2013, it represented roughly \$50 billion in annual construction put in place. For each of the last four years ending August 31, 2014, it had positive growth for the first eight months of the year compared

with the same period of the year previous. Leading this segment is rapidly growing new big box warehousing and distribution space. This segment has shown solid growth for each of the last four years finishing with 40% more put in place in 2014 compared with the same period in 2013. Surprisingly however, in spite of the strong growth in e-commerce and their accompanying big boxes, e-commerce combined with mail-order represented only 6% of total retail sales as of the second quarter of 2014, according to the US Census Bureau. And, while many believe that e-commerce is killing brick and mortar (perhaps because of its rapid ascent and its prominent awareness), according to JLL, the US Census Bureau and others, this view is far from the truth. Traditional

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retail is changing, not dying. According to a recent article published by JLL, 73% of millennials that research a product through their phone buy in a brick & mortar location.

Lagging the economy due to employment and income issues, more traditional retail construction continued to show strength, growing for 4 years in a row with 10% growth in 2014 over the same period last year. Some salient characteristics of it are similar to what was found in other construction structures. Where there is the strongest employment, income, and population growth, retail is under construction. In areas where the demographics are not supportive, strip malls are not being reconstituted, land lays fallow and in general, there is little new retail construction. (In spite of being one of the centers of shale gas and oil where utility hotels are now under construction, Canton, Ohio where I live, is one of those places where the only new retail construction that exists, is the occasional new casual dining or fast food establishment. There are countless locations around the country with the same circumstances as Canton, Ohio.)

Where retail is being constructed, be it as part of e-commerce or the more traditional, the shift from appealing to the baby boomers to the millennials is rapidly changing retail's face. Not only are the millennials being recognized through the use of changing retail marketing and attractiveness techniques, sub-segmenting is occurring with increased precision to address cultural uniqueness and preferences of large racial and ethnic group preferences like African Americans, Hispanics and Asians.

In square footage, Table 9 (above) shows how the construction structure type has changed since 2008 to address the changing retail environment.

Look for retail and big box construction to continue its growth where employment, income and population is increasing.

The other categories that are not presently showing growth total \$164 billion in annual construction put in place. This includes:

- transportation, which is showing a positive change of 4% but less than 5%, and therefore might be flat due to the coefficient of variation,
- education with \$78 billion, and

- healthcare with \$41 billion.

Because of government cutbacks, with the exception of healthcare and communication, each of these are shrinking as a category. Healthcare is shrinking because government owned construction is shrinking, and, because the private sector is not building as many hospitals as it did in the past. Its focus is on the construction of medical buildings. Hospital construction is the largest percentage of total private healthcare construction in terms of cost.

In summary, looking forward to 2015, I believe that construction put in place will continue its upward climb, will remain lumpy, but show higher growth rates in many of the same categories that increased in 2014. Labor will get tighter and margins should increase. Barring any unexpected negative event that impacts the US economy, the reasons behind the growth expectation include continued employment and income growth, population migration and immigration, the ascent of the millennials as an economic contributor to the US economy, and the overall economic recovery. Keep smiling as those backlogs build, the horizon looks promising! ☺



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Obstructions: Balancing the Letter and the Intent of the Standard

There are many opportunities within the prescriptive requirements of NFPA 13 where a layout technician can exercise good subjective judgment about applying the rules to provide a system that is both compliant with the letter of the standard as well as the intent. It is also possible to meet the letter of the standard while falling short of the intent. One of the places where this can happen is dealing with obstructions.

For the purposes of this article, we will be focusing on some, for want of a better term, “incidental obstructions” as opposed to the sort of systematic structural features associated with “obstructed construction”. In particular, we will look at two fundamental obstruction rules that place a great deal of judgment into the layout technician’s hands where following the intent of the standard is concerned.

The fundamental goal governing obstructions is simple. To paraphrase NFPA 13 (2013) 8.5.5.1, “sprinklers shall be located to minimize obstructions to discharge or additional sprinklers shall be provided to ensure adequate coverage of the hazard”. That general statement pretty well captures the intent of the whole general section on obstructions and all the subsequent sprinkler type-specific sections that follow.

The next key distinction is based on how sprinklers work. The standard distinguishes between obstructions that keep water from spreading out horizontally from the sprinkler and obstructions that keep that water from getting to the floor

unimpeded. It generalizes the discharge pattern from all sprinklers and assumes that most of a sprinkler’s characteristic spray pattern forms within 18 inches vertically below the deflector.

For obstructions present in that critical 18 inches, the layout technician’s main consideration is to satisfy the requirements of the “Beam Rule” and the “Three Times Rule” (or “Four Times Rule”, depending on the sprinkler type). Below that level, the “Beam Rule” still applies as well as the “Wide Obstruction Rule”. There are some exceptions and rules specific to certain sprinkler types, but some variation of the “Beam Rule”, “Three Times Rule”, and “Wide Obstruction Rule” apply to virtually every sprinkler type.

One place where the layout technician’s good judgment comes into play is in a common layout situation involving standard spray sprinklers, upright or pendent, in light and ordinary hazard occupancies.

For standard spray sprinklers, the “Three Times Rule” appears as 8.6.2.1.3* which requires that obstructions within 18 inches vertically from the sprinkler deflector must be at least three times their widest dimension, to a maximum of 24 inches, away from the sprinkler. The catch is that the next section, 8.6.2.1.4*, exempts nonstructural obstructions from this rule in all light and ordinary hazard occupancies. This language has existed in the standard since the 2002 edition along with an Annex A comment that emphasizes, in part, that “the other obstruction rules, including the ‘Beam Rule’ (see

8.6.5.1.2) and the ‘Wide Obstruction Rule’ (see 8.6.5.3.3), still apply”.

What does this mean in practical terms? By the letter of the standard, a four-foot wide duct, light fixture, or decorative horizontal panel of unlimited length would be permitted even directly below the sprinkler. Clearly, this is not the intent of the standard set out in 8.5.5.1 and repeated in 8.6.5.1. The Sprinkler System Installation Committee’s concern with this possibility is evident in the latter part of the Annex comment, A.8.6.2.1.4*:

“It is not the intent of this section to permit the use of fixtures and architectural features or treatments to conceal, obscure, or otherwise obstruct sprinkler discharge. The requirement should be applied in accordance with the performance objectives in 8.6.5.1.”

This statement should be taken seriously but it must be remembered, nonetheless, that the Annex represents unenforceable editorial commentary on the enforceable standard: “Annex A is not a part of the requirements of this NFPA document but is included for informational purposes only.” It is up to the layout

>> CONTINUED ON PAGE 38



NFSA Manager
of Installation
Standards

Bob Upson, MSFPE

technician to apply the wide latitude provided by the letter of this section judiciously.

In a response to a recent "Expert of the Day" question touching on this issue, Ken Isman related this bit of history about the origin of 8.6.5.1.2 and its Annex A comment. At the time the 2002 edition was drafted, Ken was Secretary of the Sprinkler System Installation Committee:

"In the 1999 edition of NFPA 13, the three-times rule was a new rule, and it existed without exception. Sprinkler contractors were forced to keep their sprinklers away from lights, small ducts, exit signs, process piping, security cameras, TV's, and all kinds of non-structural objects near the ceiling. The situation was impossible and was costing contractors a serious amount of money. A Task Group was assigned ... to deal with the subject in the 2002 edition..."

During the Task Group deliberations on the subject, we considered fire incident reports from both fire departments and insurance companies. We could not find any evidence of any fire in any sprinklered occupancy where fire control was lost due to an obstruction from a non-structural element. It is even difficult to find evidence of a fire where sprinkler control was lost due to obstruction from a structural element, but the Task Group decided that the structural elements are fixed in place prior to the sprinkler system, so it is fairly easy to predict where these elements will be and space the sprinklers accordingly. Section 8.6.5.2.1.4 and its annex note were born of this discussion."

As is so often the case, the committee's concern that the nonstructural obstruction exception, as well justified as it was, might be abused was quickly borne out by the real world:

"The portion of the annex note regarding the 'use of fixtures and architectural features or treatments to conceal, obscure, or otherwise obstruct sprinkler discharge' ... was written by the Task Group as an afterthought. It was written when ... the NFPA staff liaison for the committee ... brought the committee an advertisement for a ceiling panel that had been invented by an architect for the express purpose of hiding the sprinklers. This architect had

developed a panel that was 47 inches by 47 inches square and had a 1-inch opening around the perimeter. Since this was less than 4 ft wide, this architect was advocating that this panel was permitted to be installed under sprinklers, even though they were only 4% open. We did not want this architect, or anyone like him, trying to use the new section 8.6.5.2.1.4 to advocate a position where it was okay to install something that is 96% obstructed directly beneath a sprinkler."

The exception for nonstructural obstructions in light and ordinary hazard occupancies is limited to standard spray upright and pendent sprinklers. There's another obstruction situation that applies to almost all types of sprinklers; the "Wide Obstruction Rule". With the exception of the CMSA and ESFR obstruction rules, which are very particular about obstructions between the sprinkler and the floor, every other type permits obstructions of unlimited length up to four feet wide as long as they are vertically at least 18 inches below the deflector level. There are seven sprinkler types with some variation of the obstruction rule, "Sprinklers shall be installed under fixed obstructions over 4 ft (1.2 m) wide..." but in no case do the requirements limit the number of obstructions four feet or less that is permissible without requiring additional sprinklers. Once again, by the letter of the standard, there could be multiple obstructions up to four feet wide under any given sprinkler of one of those seven types with no sprinkler required underneath.

A single four-foot wide duct passing the long way through a 10 foot by 13 foot sprinkler operating area obstructs 40 percent of the floor area. Intersecting four-foot ducts obstruct almost 60 percent. The same problem can occur with exceptionally large decorative light fixtures, multiple small ducts, wire trays, or decorative panels. At some point the amount of obstruction, even if permissible under the letter of the standard, violates the intent of the standard as expressed by 8.5.5.1 and either sprinklers ought to be placed below the obstructions or the design density increased to compensate for the obstruction. (An alternative to adding sprinklers below obstructions that is sometimes suggested when they are

severe is to consider providing Extra Hazard Group 2 design densities at the ceiling keeping in mind that part of the EH2 definition is "occupancies where shielding of combustibles is extensive.") The art is in determining just how much obstruction is not only permissible under the standard but acceptable as good practice.

Even if a nonstructural obstruction is exempted from the "Three Times Rule", consideration should be given to whether it creates more or less of a shadow area than other more tightly defined permissible obstructions. If the shadow area created is equal or less to other acceptable obstructions, despite not meeting the "Three Times Rule", it's probably a good application of the exemption. If the shadow area created is greater than other acceptable obstructions, it is likely to be a bad application and should probably be avoided.

If there is some combination of small obstructions that exceed the total obstruction created by a single four-foot duct or duct intersection, consider whether or not a sprinkler should be located under the obstruction even if it is not required by the "Wide Obstruction Rule". About the maximum amount of obstruction permitted anywhere in the standard is 70 percent in connection with sprinklers above gridded ceilings. That exception also takes into consideration sprinkler spacing and how far below the deflector the grid is located. Using those rules as a guide can be helpful at determining when the cumulative effect of multiple small obstructions become too much for a good design - even if they're permitted by the letter of the standard.

No prescriptive standard can possibly take into account every possible combination of circumstances. It's inevitable that there will occasionally be good layout solutions that are not permitted by the letter of the code but that can be approved by an AHJ if they demonstrably meet its intent. By the same token, there are going to be times when there are bad layout solutions that are permitted by the standard. The task of a good layout technician is to recognize both of those situations and avoid settling for bad designs just because they meet the letter of the standard. ①

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Communicating Inspection and Test Findings with the Owner

By Jason Webb

One of the most important conversations that can take place during the ITM process is the one between the contractor and the owner (or property manager) after inspections and tests are completed. The owner expects that the contractor will give them a thorough picture of the condition of their fire protection system, and the contractor expects that owner will be receptive enough and address any problems identified. And in most cases, this is what happens. But sometimes that line of communication breaks down, or doesn't happen at all.

Building owners and property managers have a lot to worry about. And sprinkler systems are one of the things that they may not have wanted to have to deal with in the first place but someone made them. Now they have to pay someone to help make sure it will work when the time comes. As a matter of course, that process involves reports that are mandated by NFPA 25. But unless someone takes the time to explain the report and the findings, too often the information gets filed away never to be seen again. Taking time to explain not only what you found on an inspection, but what those findings mean is worth the extra effort.

In order for it to be effective, part of that conversation involves explaining exactly what the findings on the ITM report indicate and why making the corrections

or repairs is important. One of the most common complaints heard from building owners and property managers is that nobody explained the ITM report to them. It was just handed over to whoever would take it.


Explaining the report is as much a part of the process as performing the inspections and tests in the first place. Let's face it, most owners/property managers don't know the first thing about sprinklers. That's why they hire a contractor.

History tells us what the most common causes of sprinkler system failure are, and NFPA 25 is written to address those common causes. But we also know that there are a lot of things important to good fire protection that are outside the scope of NFPA 25, but get noticed during inspections and tests. In the sprinkler industry, those are commonly called observations. Is it important for the owner to be made aware of these things as well? Absolutely. But just like with the deficiencies that are reported on the ITM report itself, it doesn't do any good to point them out if nobody on the receiving end understands what you are talking about.

This part of the process doesn't have to take long or be overly complicated. In fact, the simpler the better. For example, you don't have to explain the inner-workings of an alarm check valve to let the owner know that you discovered enough foreign material inside it to be of concern. You

should, though, make sure the owner knows that this is a sign of more serious (and costly) problem and that if a fire breaks out, the system may not respond as effectively.

Avoid getting too technical or using industry slang. Use terms that owners and property managers understand like "risk" and "compliance" and "downtime." They may not know about corrosion and water-delivery times, but they do understand what it means for a business to be closed for months following a fire that could have been controlled quickly by a properly functioning sprinkler system.

The most important thing is just to open these critical lines of communication. The more clearly the inspection and test findings are explained, the more informed the owner is. An informed owner/property manager is more likely to maintain their sprinkler system. When that happens, everyone wins. 



Jason Webb

Director of
Inspection, Testing
& Maintenance

REGIONAL ROUNDUP

NEW ENGLAND REGION



DAVE LAFOND
Regional Manager

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

NFSA Forms New Connecticut Chapter

The newly formed Connecticut Chapter of NFSA is now well on its way. At the September 16, 2014 early evening meeting, which was held at the Crown Plaza in Cromwell, CT., nominations and elections were held for key leadership positions.



The following Executive and Board members were selected:

President - John Abbate, Fire Protection Testing, Cheshire, CT

Vice President - Janet Blumberg, M.J. Daly LLC, Waterbury, CT

Treasurer - Kevin Olivieri, SRI Fire Sprinkler Corp., Naugatuck, CT

Secretary - Dan Gackowski, Davis-Ulmer, Glastonbury, CT

BOARD OF DIRECTORS:

Paul Evon - M.J. Daly, LLC, Waterbury, CT

Brian Kaplan - Ferguson Fire & Fabrication, Westfield, MA

David Ponbriand - SimplexGrinnell, Hartford, CT

Dan Gackowski - Davis-Ulmer, Glastonbury, CT

Jim Brake - Brake Fire Protection, Stratford, CT

NFSA thanks all the members who came to the meeting and participated in the elections. A meeting between the Executive Board and Board of Directors will be held in the near future to establish goals and objectives for the upcoming year.

Dave LaFond is NFSA's New England Regional Manager. He can be reached at Lafond@nfsa.org or at 2 Burns Way, Holyoke, Massachusetts 01040, Phone: 413.244.7653. ☎

NEW YORK REGION



DOMINICK KASMAUSKAS
Regional Manager

NEW YORK

NFSA Brings Fire Sprinkler Training to New York Officials

NFSA New York Regional Manager Dominick Kasmauskas delivered two presentations to local code enforcement officials at the 2014 Local Government Conference in Potsdam, NY. The first was a 1-hour presentation on "General Components of ITM" and the second a 2-hour FM Global program, "Fighting Fires in (Fire) Sprinklered Buildings."

Dom also delivered a well received 2-hour presentation on "ITM for the Code Official" during the annual Capital District NYSBOC training seminars in Albany, NY. This event is one of the largest of its kind and draws over 400 code enforcement officials from all over New York State.

The NFSA booth had heavy traffic with many good comments heard in support of fire sprinkler efforts. Through the efforts of New York code enforcement officials, New York is becoming more and more fire safe.

Dominick Kasmauskas is NFSA's New York Regional Manager. He can be reached at Kasmauskas@nfsa.org or 1436 Altamont Ave. Suite 147 Rotterdam, New York 12303, Phone 518.937.6589, Fax 518.836.0210. ☎

MID-ATLANTIC REGION



RAYMOND W. LONABAUGH
Regional Manager

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

Philly Fire Muster Side by Side Burn

For Fire Prevention Week NFSA's Pen/Jer/Del Chapter performed a side by side burn for the Annual Firemen's Hall Museum Fire Muster at the Philadelphia Fire Academy. This was the third year the Chapter has conducted a burn at this event and each time it is the highlight of the Muster. Apprentices of Local 692 performed the labor in setting up the side by side rooms and John Waters Upper Merion Township Fire Marshal narrated the burns. John narrates the burns in fire service uniform and uses information from NFPA 1710 and 1720, which are the fire department career and volunteer standards that provide fire department response times. John also uses information on fire department response and set up times from time and motion studies he performed as part of his National Fire Academy Executive Fire Officers Program. Philadelphia Engine 38 extinguished the non-sprinklered side.

Philadelphia based Channel 6, WPVI, taped the muster and a short segment on the side by side burn pointing to the difference in the non-sprinklered versus sprinklered side. In addition they interviewed a spectator who provided the "right" answers.

To view the segment type;
<http://6abc.com/news/expo-promotes-fire-safety-in-northeast-philadelphia/357065/>

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

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SOUTHEAST REGION



WAYNE WAGGONER
Associate Director of Regional
Operations - East

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

City Considers Helping Healthcare Facility Sprinkler

The town of Ashland City, Tennessee is weighing its options to help Hillcrest Healthcare Center improve the water pressure to the facility as the business prepares to install a new fire sprinkler system.

The City Council met with city attorney Jennifer Noe during a meeting to determine what direction the city needs to take.

Mayor Rick Johnson said Noe will be looking into the issue and report back to the council.

"It's a top priority that we get this resolved... we know time is of the essence, and we realize that," the mayor said.

Johnson said the council may have to hold a special-called meeting if a vote is needed before the next official meeting.

Representatives from the nursing home attended a recent council workshop and the last meeting to address the issue.

When Hillcrest was built, the business constructed a water tank that supported the water flow and water pressure requirements for the nursing home.

According to Hillcrest, the business donated the water tank/tower to the city to use in conjunction with the city's water system with the promise that the city would maintain the required water flow and pressure required by the facility's water and fire system needs.

The city replaced the old water tank/tower in 2004 with a new one. In doing so, the city relocated the new tower/tank to a level approximately 150 feet lower than the old one, according to Hillcrest representatives.

While the city has maintained the volume requirements needed by Hillcrest, officials say the water pressure has been substantially reduced and is not

adequate for the nursing home's fire protection system.

Hillcrest is in the process of replacing its existing fire sprinkler system.

Representatives believe the only way to proceed with renovating the existing system to assure adequate pressure is to add a fire pump.

Based on Hillcrest's donation of the former water tower and the city's promise to maintain adequate water volume and pressure to the building, Hillcrest is asking the city to help bear the costs of at least the construction of the fire pump.

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

FLORIDA & PUERTO RICO



LORELL BUSH
Regional Manager

FLORIDA, PUERTO RICO

NFSA Florida Chapter Election Results

The results are in for this year's Florida Fire Sprinkler Association – a chapter of NFSA Board of Directors elections and it was one of the closest in the chapter's history. The results are as follows:

CONTRACTOR MEMBERS:

Mike Brown, Advanced Fire Protection Services, Fort Walton Beach

Sean Guthrie, Commercial Fire & Communications, Largo

Joey Hatfield, Naples Fire Protection, Bonita Springs

Brad Kinsell, Gator Fire Equipment, Gainesville*

Armando Lendian, Simplex Grinnell, Fort Myers

Fred Lupo, Freedom Fire Protection, Sanford

Mark Peters, Grunau Company, Orlando

Alan Wiginton, Wiginton Corporation, Sanford

SAM MEMBERS:

Clint Decuir, Tyco Fire Protection (SAM)

George Nicola, Reliable Automatic Sprinkler Company (SAM)*

* indicates this is a new member of our board.

They join the existing members:

Clark Gey, Wayne Automatic, Ocoee

Dave Haney, Simplex Grinnell, Miami

Lenny Hollis, Southern Fire Protection, Sanford

Jerry Huff, J & J Fire Protection, Inc., Miami

Joe Johnson, Piper Fire Protection, Inc.

Steve Kowkabany, Neptune Fire, Jacksonville

Top Myers, RelMark Group

Zarko Ognjenovic, MJ Wood Fire Protection, Jacksonville

Burt West, Regional Fire Protection, Tallahassee

The members above will begin their term in January 2015. The chapter is preparing for challenges in the industry both on state and local levels in 2015. The Board of Directors will be active in protecting the fire sprinkler industry and NFSA members. ALL members are encouraged to attend any of the meetings of the board and see firsthand what the Florida Fire Sprinkler Association Board is doing and how they are working hard to protect the industry and educate the public. Florida is a leader in the fire sprinkler industry because of the active involvement of NFSA members.

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

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GREAT LAKES REGION



RON BROWN
Regional Manager

INDIANA, MICHIGAN, OHIO,
WEST VIRGINIA, KENTUCKY

West Virginia Appoints Carrico as Fire Marshal

Anthony Carrico was formerly the agency's chief of staff before taking over as acting state fire marshal. Fire Marshal Anthony Carrico is an advocate and supporter of residential sprinkler systems. A demonstration he saw at a Fire Team USA event a few years back of a residential sprinkler system convinced him in 15 seconds that it was worthwhile. He said he knew of no other method or means that could save more lives than fire sprinklers.

Included among the newly appointed WV State Fire Marshal, Anthony Carrico's plans, is state wide educational efforts and the encouragement of residential fire sprinkler installations. Marshal Carrico has attended many NFSA events conducted in the State of West Virginia including a Fire Team USA two-day educational event coupled with a side-by-side fire sprinkler demonstration hosted by the Charleston West Virginia Fire Department. Congratulations! Marshal Carrico. NFSA looks forward to working with you.

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

ILLINOIS REGION



BOB TINUCCI
Regional Manager

ILLINOIS

Fire Prevention Week in Godfrey, Illinois

The Godfrey Fire Department held an open house for local residents to get an

inside look at the operations of the fire department. The highlight event of the open house was a live burn trailer demonstration conducted by NFSA. The open house was organized by Lt. Tom Wills who hoped to give local residents more information about the fire department's services to the community. "We want to let people know we are here, what we do and how we do it and to give thanks for the community support," Wills said. Wills hoped to have close to 300 people at the firehouse over the course of the day. The event ran from 9 a.m. until 3 p.m. Activities for the day included a showing of the Arch Memorial Hospital helicopter, a fashion show, the trailer burn demonstration, a car cut-up, a room burn and a question and answer session with Fire Chief Erik Kambarian. Wills said the department would build a room on the property and fill it with furniture before burning the structure down.

Jim Eppel of Eppel's Pantry donated the equipment to make the food for the event. Wills said each supporter brings a different message to residents. The live burn trailer demonstration garnered huge attention at the event, as Wills had hoped.



Bob Tinucci is the Regional Manager for the state of Illinois. Bob may be reached at 6401 Richmond Avenue, Willowbrook, Illinois 60527, phone/fax: 630.655.1875, cell: 630.514.1601, email: tinucci@nfsa.org.

WISCONSIN REGION



DAN GENGLER
Regional Manager

WISCONSIN

NFSA at WSFIA Conference

Wisconsin NFSA Regional Manager Dan Gengler attended the Wisconsin Fire Inspectors Conference this past October 29-30 in Green Bay. More than 200 inspectors from all over the state were in attendance at the four-day event that was themed "Bridging the Gap." The agenda included topics on fire inspections, building & fire codes, public education and Juvenile Firesetter Intervention. There was exposure to fire sprinklers through several workshops.



Exhibit space was taken by the NFSA Wisconsin Chapter and several member contractors and vendors. It was felt the conference was excellent exposure for the industry. At the annual WSFIA Business Meeting, presentations by the NFPA and Regional Manager Dan Gengler highlighted the fire sprinkler movement in the country, much less the state.

Gengler mentioned the value of informing the media after a fire incident that fire sprinklers were either present or not and the positive difference the sprinkler may have meant to life safety and property preservation.

Gengler also mentioned the NFSA was working with the Madison Fire Department (MFD) on a Power Point presentation to be delivered to building owners to help them prepare their fire sprinkler systems for the winter. The MFD is to present a program to the area facilities managers

>> CONTINUED ON PAGE 46

REGIONAL ROUNDUP

>> CONTINUED FROM PAGE 45

of the local Building Owners Management Association the first week of November. It is strongly felt this program will help improve the image of the fire industry by providing guidance to building owners on how to prevent catastrophic freeze ups from occurring.

Dan Gengler is NFSA's Regional Manager for the state of Wisconsin. He can be reached at Gengler@nfsa.org or P.O. Box 286, Waupaca, Wisconsin 54981, Phone: 262.325.1958.

MINNESOTA REGION



TOM BRACE
Regional Manager

MINNESOTA

On December 3, 2014 the Minnesota Chapter will be offering the course Rough & Final Inspections of Fire Sprinkler Systems. The course will be taught by NFSA's Manager of Codes **Jeff Hugo**. This one-day course will be held at the Firefighters Hall and Museum located in Minneapolis. In addition to getting excellent training, breaks and lunch will give the students an opportunity to visit some of the museum's exhibits.

Governor Mark Dayton was reelected to a second term. The Governor, along with several of his Commissioners, have been very supportive of residential sprinklers in new construction. His support has never wavered and he was recently honored by the Minnesota State Fire Chiefs Association meeting in Conference.

Tom Brace is NFSA's Regional Manager for the state of Minnesota. He can be reached at Brace@nfsa.org or 1433 Idaho Ave West, St. Paul, Minnesota 55108, Phone: 651.644.7800.

CENTRAL REGION



CHRIS GAUT
Regional Manager

IOWA, KANSAS, MISSOURI

St. Louis Fire Sprinkler Alliance Hosts NFSA Seminars

Special thanks goes out to the St. Louis Fire Sprinkler Alliance for hosting NFSA Seminars in St. Louis November 4 - 5, 2014. Over 80 students participated in Rough and Final Fire Sprinkler Inspections and NFPA 13 Updates for the 2 days. Classes were offered free to local AHJs and Contractors around the area. Also, through sponsorship by NFSA SAM members Potter Electric Signal Company and Ferguson Supply, lunches were provided each day to all of the participants.



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

SOUTH CENTRAL REGION



CYNTHIA GIEDRAITIS
Regional Manager

ARKANSAS, LOUISIANA,
OKLAHOMA, TEXAS

Oklahoma Fire Sprinkler Association Awards Scholarship

Four Oklahoma State University Fire Protection students competed for the Oklahoma Fire Sprinkler Association (OFSA) Annual Scholarship. OFSA representative

Kenny Stark presented the scholarship to this year's recipient Troy Dobbins of South Carolina on October 23, 2014. Troy has been working in the fire sprinkler industry to help pay his way through college. He wants to learn fire sprinkler design and eventually hopes to own his own fire sprinkler company.



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

GREAT PLAINS REGION



ERIC GLEASON
Regional Manager

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

Shane Ray Addresses Fire Chiefs Conference

During the annual Colorado State Fire Chiefs conference held October 20 - 24 this year at Keystone Resort, NFSA's newly appointed Executive Vice President Shane Ray delivered what was described as a dynamic keynote address.



>> CONTINUED FROM PAGE 46

Great News for NFSA Members

NFSA Great Plains Regional Manager Eric Gleason has been appointed to serve on the 2018 International Energy Conservation Code Council and NFPA 101.

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

SOUTHWEST REGION



BRUCE LECAIR
Associate Director of Regional Operations - WEST

CALIFORNIA, HAWAII, NEW MEXICO, NEVADA, ARIZONA

It's Official!

The Executive Board of Directors for the Arizona State National Fire Sprinkler Association (NFSA) officially announced that on October 21st they have signed a Memorandum of Understanding with the parent Association and are now chartered as an official chapter representing NFSA's membership in the State of Arizona.



Pictured in the photograph receiving the Official Chapter Charter from left to right are **Mark Solomon**, Ferguson Fire

& Fabrication, Chapter Vice President; **Bruce Lecair**, NFSA Regional Manager; **Aaron Bennett**, RCI Fire Protection, NFSA Area Director and member of NFSA's Board of Directors, **Fred Graves**, RCI Fire Protection, Chapter President; **Russell Fleming**, NFSA President and **John Allen**, Simplex-Grinnell, Chapter Secretary-Treasurer. Not pictured but in attendance was newly appointed NFSA Executive Vice President **Shane Ray**.

The process of forming the Arizona State NFSA Chapter began 3-years ago with Area Interest Meetings and training and educational opportunities. The intent of forming the Chapter was to provide Arizona with a formal association consisting of members who are contractors, suppliers and manufacturers, fire sprinkler professional designers and Authorities Having Jurisdiction who can meet regularly to discuss and address issues and common concerns affecting fire sprinklers in the State of Arizona.

Bruce Lecair is NFSA's Associate Director of Regional Operations - West. He can be reached at lecair@nfsa.org or Phone: 951.277.3517, Fax: 951.277.3199. ☎

NORTHWEST REGION



SUZANNE MAYR
Regional Manager

ALASKA, IDAHO, MONTANA, OREGON, WASHINGTON

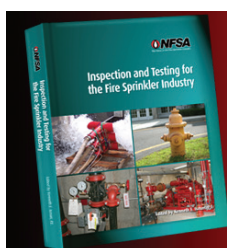
Northwest Residential Fire Sprinkler Summit a Hit

With the theme "Get Connected," the first

Northwest Residential Fire Sprinkler Summit connected over 130 attendees with the latest in outreach, technology and politics. Helping make the event a success, NFSA Regional Manager Suzanne Mayr worked tirelessly with a coalition of stakeholders to put together a program consisting of an all-star team of guest speakers and tabletop display at which vendors and sponsors provided product and service information to attendees. Special thanks go out to Clackamas Fire District #1 and Vancouver Fire for providing a side-by-side burn demonstration unit. The burn demonstration received media coverage from the Vancouver Columbian.



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



COMING SOON FROM NFSA...

INSPECTION AND TESTING FOR THE FIRE SPRINKLER INDUSTRY

NFSA Announces 2015 Award Recipients and Hall of Fame Inductees

NFSA's Awards Committee has announced award recipients and Fire Sprinkler Hall of Fame inductees for 2015.



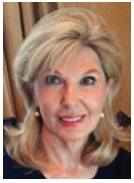
GOLDEN SPRINKLER AWARD

Each year NFSA reaches out to its membership to identify a leader, one whose lifetime contributions to the fire sprinkler industry warrant special recognition. That recognition comes with the presentation of the Golden Sprinkler Award, the Association's highest honor. The 2015 recipient is **Dennis "Buddy" Dewar**, Vice President of Regional Operations, National Fire Sprinkler Association.



TECHNICAL SERVICE AWARD

Presented in recognition of significant contributions to the engineering, standards, codes, research and other technical activities of NFSA that enhance the reputation of the Association and serve to benefit the entire fire sprinkler industry. The 2015 recipient is **Russell P. Fleming**, President, National Fire Sprinkler Association.



LEADERSHIP IN PUBLIC SAFETY AWARD

In recognition of staunch support of public fire safety through fire sprinkler advocacy, the 2015 recipient is Gail Minger, President, Michael H. Minger Foundation.

FIRE SPRINKLER HALL OF FAME

- | | |
|--|---|
| Wayne Ault - Automatic' Sprinkler Company | Joe Lukes - Grinnell Company |
| Harold "Leo" Corley - Georgia Sprinkler | Arthur Hewines - Bennett and Wright |
| Burton Harms - Williams Automatic Sprinkler | Jack Priest - Vipond |
| Linwood "Lin" McCool - Century Fire Sprinklers | Joe Petite - Viking Fire Protection Limited |

Formal award presentation ceremonies and inductions into the Hall of Fame will take place during the opening session of the 2015 NFSA Annual Seminar and North American Fire Sprinkler Expo® being held April 30 - May 2 at Hilton Bonnet Creek Resort in Orlando, Florida. •

IN MEMORIAM

Paul H. Walencewicz

Paul H. Walencewicz from Willimantic, Connecticut, who was an active member of NFSA and Connecticut Chapter with P&J Sprinkler Company starting in the 1970s, passed away October 16, 2014. He was 82 years old.

Working in the Road Local, Paul started in the fire sprinkler industry in 1951 with Grinnell in Providence, Rhode Island and in 1968 started P&J Sprinkler Company Inc. in Willimantic, Connecticut. He semi-retired in 2001 but continued dabbling in the fire sprinkler industry until his late 70's.

Paul was a man of character, honesty, and integrity. His word was as good if not better than any contract ever written by any attorney. He believed in and dedicated his life to the fire sprinkler industry and knew the trust of the public was in his hands when it came to making sure fire protection systems were installed, tested, inspected, and properly maintained. Doing things the right way was always more important to him than the money. A true inspiration to any person who every met him and carried on in the fire protection industry. He will be missed. •

Johnson Honored by NFSA

In appreciation for his many contributions to NFSA over the years, Gary Johnson, who is retiring later this year from long-time SAM member company Lubrizol, was honored by NFSA's Board of Directors during its recent meeting in St. Louis.

Gary's contributions to NFSA and the fire sprinkler industry include serving as a member of the SAM Council 1995 - 2014, SAM Council Chair 2000 - 2004 and Member of the International Fire Sprinkler Association's Board of Governors 2000 - 2014.

Gary was presented with a plaque by NFSA SAM Council Chair Bruce LaRue. •



Protecting Your Community with Home Fire Sprinklers

New homes have many advantages. But they also present unique fire hazards that result from lightweight construction, popular open-design concepts and certain energy-efficiency features. Combine these with typical modern contents, such as electronics and synthetic furnishings, and you have the makings of fast and deadly flashover fires.



Visit our website to view the video and request a free copy: **HomeFireSprinkler.org**.

The Home Fire Sprinkler Coalition has a new free video to help building officials understand the important role fire sprinklers play in new construction. The video includes interviews with experts from the National Institute of Standards and Technology (NIST) and Underwriters Laboratories (UL). They've conducted fire tests and research showing why fires in new single-family homes are more dangerous and how fire sprinklers protect occupants and firefighters.



Home Fire Sprinkler

COALITION
Protect What You Value Most

HomeFireSprinkler.org



Fire Prevention and Safety Grants
Funding provided through DHS/FEMA's Grant Program Directorate
Assistance to Firefighters Grant Program

©2014, Home Fire Sprinkler Coalition

FREE RESOURCES To Help You Protect Your Community

The nonprofit Home Fire Sprinkler Coalition (HFSC) is the leading resource for independent information about home fire sprinklers. HFSC develops a wide range of fire safety educational materials that are provided at no charge and can be downloaded or ordered on HFSC's website, **HomeFireSprinkler.org**.

Announcements from Reliable Automatic Sprinkler Company

Michael Castellano

has been promoted to the position of Rocky Mountain Regional Sales Manager reporting to Mark Connor, Director of Sales – Territory 3. Mike is responsible for the Denver Distribution Center and sales in Colorado, Utah, New Mexico, Wyoming, Eastern Montana and Western South Dakota. Mike joined Reliable in 1998 as a Material Handler in our Dallas, Texas location. He relocated to our Denver location in 2000 as Section Leader, Warehouse and was subsequently promoted to insides sales and then Operations Supervisor in 2005. In 2013 Mike was promoted to Sales Representative.



Damon Cook

is the new Sales Representative working out of the Seattle and Portland offices reporting to Mike Collett, Regional Sales Manager. Damon is responsible for maintaining and developing relationships and continued sales growth throughout the Northwest. His area of responsibility includes: Oregon, Idaho, Eastern Washington, and Western Montana. Damon joined Reliable in 2013.



Chris Earll

has joined Reliable as the Midwestern Regional Sales Representative focusing on the Chicago and Ohio markets. Chris will report directly to Dave Rosso, Regional Sales Manager. Chris began his career in the fire sprinkler industry in 2002 as a Fire Protection Specialist for a global manufacturer and was recently selling sprinkler fabrication for a national distributor.



Ed LaCoste

is the new West Coast Regional Sales Manager reporting to Mark Connor, Director of Sales - Territory 3. Ed is responsible for the Los Angeles Distribution Center and sales in California, Arizona, and Nevada. Ed joined Reliable as a Sales Representative in the Midwest in 2013 after 30 years on the contractor side of the fire sprinkler industry in California.



Jesus Lopez

has been promoted to Sales Representative covering Mexico, Central America, Columbia, Venezuela and Ecuador, reporting to Dan Merritt, Regional Sales Manager. Jesus was born and raised in Argentina, and moved to Dallas in 2001. He has been working for Reliable for 6 years, started as an Inside Sales Representative, and quickly became the lead for the Latin American sales department. Jesus has earned his Associates Degree in Communications with a multi-cultural focus, and is in the process of completing his BA in the same.



Mike Munoz

has assumed the role of Sales Representative in Northern California reporting to Ed LaCoste, Regional Sales Manager. Mike was born and raised in the San Francisco Bay Area and has been in the Fire Protection industry for 10 years. In 2010 Mike came on board with Reliable and quickly rose from Material Handler to Fabrication Project Coordinator to Inside Sales Representative to his most recent position as the Operations Manager for both our Seattle and Portland facilities.



Marcelo Nieves

is now the Sales Representative responsible for our customers in Puerto Rico, the Caribbean, and most of South America. Marcelo moved to the United States from Puerto Rico in 1989. He came to Reliable in 2003 where he spent a short time as a warehouse person and was quickly promoted to warehouse lead. In 2005 Marcelo was promoted to Inside Sales Representative, responsible primarily for customers in the Caribbean and Miami.



Anthony "AJ" Renteria

has been promoted to the position of Regional Sales Manager for Reliable's Atlanta Distribution Center reporting to Bobby Eagle, Director of Sales - Territory 2. In 2010 AJ was promoted to Sales Representative for the region. •



Houghton Joins Viking Marketing Team

Nancy Houghton has joined Viking's marketing department. Nancy recently relocated to the West Michigan area from Chicago, where she was the Director of External Affairs for the Pritzker Military Museum and Library. In her new role as Marketing Specialist at Viking, Nancy will lead Viking's overall marketing communications efforts, including new product launches, trade shows, advertising, and the development of promotional materials. Nancy is based in Viking's Grand Rapids, Michigan office and can be reached directly at (269) 945-8314 or nhoughton@vikingcorp.com.

General Air Products Restructures Sales and Marketing Team

General Air Products, Inc. manufacturers of fire protection air compressors and NFPA 13D pumping systems, has restructured its sales and marketing team in order to better serve its growing national and international fire protection customers.

Richard West –
Vice President of Sales and Marketing
EMAIL: rwest@generalairproducts.com

Ray DeCecco –
Customer Service Manager / International & National Accounts Manager
EMAIL: rdececco@generalairproducts.com

Ray Fremont Jr. –
Marketing Manager
Duties now include on-site and online customer training & events - contact for details.
EMAIL: rmfjr@generalairproducts.com

Mike DeCecco –
Western Territory Sales Representative
States: Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada,

New Mexico, Oregon, Utah, Washington, Wyoming
EMAIL: mdececco@generalairproducts.com

Alex Fremont –
Southern Territory Sales Representative
States: Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas
EMAIL: afremont@generalairproducts.com

Dave Fremont –
Midwest Territory Sales Representative
States: Illinois, Indiana, Iowa, Kansas, Kentucky, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, Wisconsin
EMAIL: dfremont@generalairproducts.com

Northeast Territory Sales Representative – Responsibilities for this territory are shared among the entire Sales and Marketing team.

For more information, contact General Air Products at 800-345-8207. •



Richard West



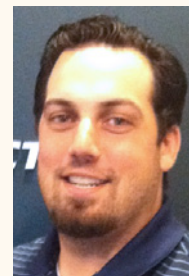
Ray DeCecco



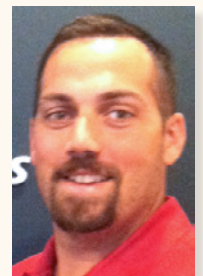
Ray Fremont Jr.



Mike DeCecco



Alex Fremont



Dave Fremont

Globe Appoints Three Western US/Canada Regional Sales Managers

Globe Fire Sprinkler Corporation recently announced the appointment of three Regional Sales Managers covering the Western United States. Each position is responsible for managing all aspects of sales, sales promotion, and distributor relations in the Western US and Canada.

CALIFORNIA REGION:

Chris Bohon joins Globe with over 14 years of experience in the fire protection industry. His background includes extensive experience in Sales, Marketing, Customer Service, and Distribution Operations. Chris is also active in nonprofit work helping impoverished children through the building of



schools, hospitals and basic services. Mr. Bohon is pursuing a Bachelor's degree in Theology from Calvary Chapel Bible College.

NORTHWEST REGION:

Michael Fragione has been active in fire protection contracting since 2007. Michael's background includes experience in Field Management, Sales and Sales Management, and Project Management. In his role as Globe's Northwest Regional Manager he will be serving clients in U.S. States of Washington, Oregon, Idaho, Alaska, and the Canadian Provinces of British Columbia, Alberta, and Saskatch-



ewan. Mr. Fragione has studied at Washington State University. In his spare time, he enjoys riding his Harley, hiking, golfing, and cooking.

WESTERN REGION:

Steven Cherokee joins Globe with nearly 20 years experience in Sales, Sales Engineering, and Engineering Specification serving the Fire Protection and Mechanical construction industry. Mr. Cherokee will be supporting Globe customers in Nevada, Arizona, Utah, and Colorado. Steve holds a Master of Business Administration degree from Arizona State University, and a Bachelor of Arts from Eastern Washington University. Ⓞ



■ Globe Introduces 5.6K Extended Coverage Light Hazard (ECLH) Sprinklers

Globe Fire Sprinkler Corporation recently announced the addition of GL Series 5.6K Extended Coverage Light Hazard (ECLH) sprinklers to its current line of 8.1K and 11.2K Extended Coverage Sprinklers.

Compared to maximum coverage area of 225 sq ft (20,6 sq m) provided by standard coverage sprinklers, Globe GL 5.6K ECLH pendent sprinklers protect areas up to 400 sq ft (37,2 sq m). Use of ECLH sprinklers can significantly lower the cost of a sprinkler system by reducing the number of branch lines, sprinklers, and installation hours. Globe GL ECLH sprinklers are the ideal choice for Light Hazard applications such as schools, offices, theaters, and hospitals in accordance with NFPA 13.

Globe GL ECLH sprinklers feature a nominal discharge coefficient of 5.6K (80 metric) and are cULus Listed for Quick Response with spacing of 12' x 12' (3,7m x 3,7m), 14' x 14' (4,3m x 4,9m), 16' x 16' (4,9m x 4,9m), 18' x 18' (5,5 m x 5,5 m) and 20' x 20' (6,1m x 6,1m). Activation temperatures are 135°F (57°C), 155°F (68°C) and 175°F (79°C).

■ BlazeMaster® UL Listing Update

BlazeMaster® Fire Sprinkler Systems' listing for use in exposed basement application has been revised, offering enhanced design flexibility and greater convenience.

BlazeMaster's UL Listing has been updated so that the requirements for solid wood match the requirements of the composite listing for unfinished base-

ments. The critical changes for solid wood are the following:

- Increased maximum sprinkler spacing along the joists from 12 to 16 feet
- Increased maximum sprinkler spacing across the joists from 12 to 14 feet
- Increased joist spacing from 16 to 24 inches
- Increased maximum ceiling height from 8 to 10 feet

All of these changes enable additional design flexibility for installers, boosting the overall efficiency and cost-effectiveness of a BlazeMaster system installation—all without sacrificing performance.

■ SOLBERG® Expands Product Certifications on Foam Concentrates

The Solberg Company has announced the company has achieved Underwriters' Laboratories of Canada (ULC) Listing Certification on the company's RE-HEALING™ fluorine-free and ARCTIC™ AFFF / AR-AFFF (ATC™) foam concentrate product lines.

In addition to its outstanding fire performance and long drain times to provide superior vapor suppression, RE-HEALING Foam concentrates from Solberg are an innovative environmentally sustainable fluorosurfactant and fluoropolymer-free firefighting foam used to effectively extinguish Class B hydrocarbon fuel fires with no environmental concerns for persistence, bioaccumulation or toxic breakdown.

RE-HEALING Foam can be used with fresh, sea or brackish water and possess excellent fire extinguishment and superior burn back resistance due to its flow and rapid sealing characteristics. The product

takes its name from the foams physical "resealing" characteristics. The ULC Certification for RE-HEALING Foam includes RF3, 3% and RF6, 6% concentrate types.

The expanded ULC Listing certification for RE-HEALING foam includes bladder tanks, proportioners, foam chambers, foam makers and fire sprinklers.

Further to the ULC Certification on RE-HEALING Foam, Solberg also obtained ULC Certification on ARCTIC 1% AFFF, 3% AFFF, 1x3% ATC and 3x3% ATC foam concentrates. ARCTIC foam concentrates are 2015 compliant to the U.S. EPA Stewardship Program on C6 fluorine chemistry.

■ Hill/Ahern Fire Protection Joins Forces with Superior Mechanical Group

Hill/Ahern Fire Protection has announced that Hodgkins, IL-based Superior Mechanical Systems (SMS) will be joining the Hill/Ahern team. The resulting group will bring decades of fire protection expertise together to serve customers throughout the Chicago area.

Hill/Ahern also announces the promotion of Shannon Coomes from General Manager, to the position of President of Hill/Ahern.

SMS co-owner Timothy M. Gavlin will serve as Vice President of Operations at Hill/Ahern, bringing over thirty-two years of industry experience to the team.

SMS founder, Patrick E. Sullivan will assume the role of Vice President of The Hill Group.

Effective immediately, all SMS employees will be reporting to the Hill/Ahern offices in Franklin Park, IL. 📍



CORRECTION:

In the Sep/Oct issue of SQ, Figure 3 in Roland Asp's article entitled, "Seismic Protection of Fire Sprinkler Systems: A Primer," was labeled incorrectly. We apologize for any inconvenience this may have caused.

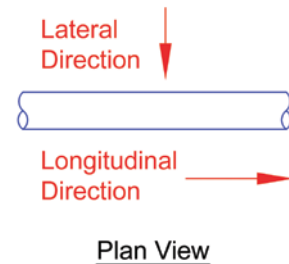
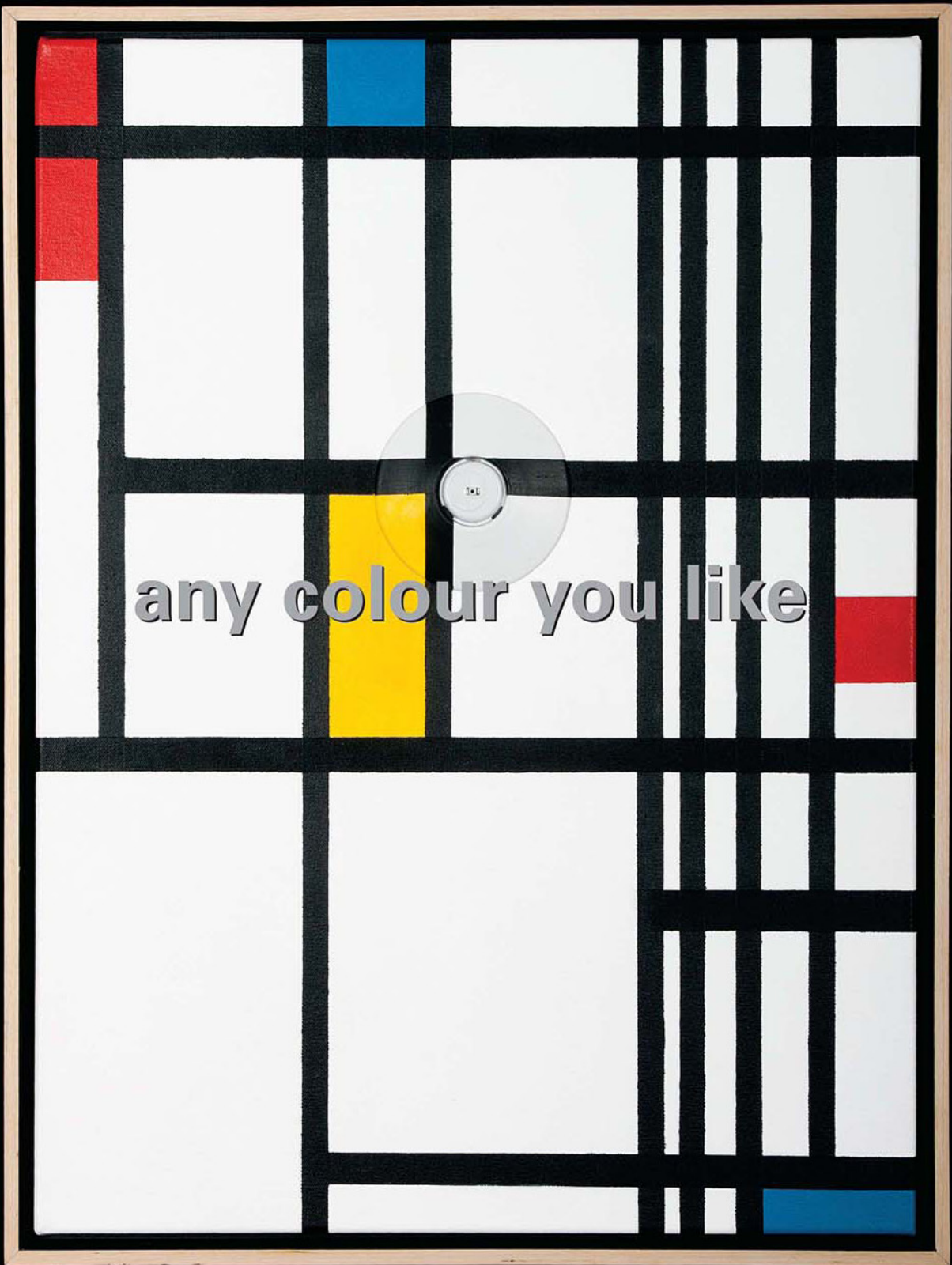


Figure 3 - Lateral vs Longitudinal



Introducing the RAVEN Studio sprinkler; a uniquely discreet solution by Tyco Fire Protection Products. The revolutionary paint-in-place, removable escutcheon allows for superior fire protection without compromising building design aesthetics. The straight thread adapter allows for precise, final adjustment by hand for a perfect, flush fit. Available Fall 2014. Call 800-558-5236 to contact your local Tyco representative to request additional product information.

SOLID products

installed by

SOLID contractors



Fire sprinkler contractors and their fitters take pride in doing it right the first time, every time. That's why we make the most dependable flow, tamper, and pressure devices on the market. Potter values your commitment to protecting lives and property and we continue to match that commitment with products you can trust.

www.PotterSignal.com



P POTTER
The Symbol of Protection