FALL 2019 QUARTERLY REVIEW

BUILDING PLAN REVIEW | FIRE SAFETY PLAN REVIEW | CONSULTING SERVICES

IN THIS ISSUE

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

PRESIDENT'S MESSAGE

An FSCI update from Keith Frangiamore, FSCI President

FSCI, with the support of PSI, is investing in our future increasing staffing and installing new equipment to continuously improve service to our customers.

Our new cloud-based telephone system is now in full service. The new system has already improved customer service by allowing callers to directly contact the person to whom they want to speak. All staff have extension and direct dial numbers that allow our administrative staff time to help more customers promptly. We are very excited about the new features this system provides particularly the automatic conversion of voice-mails to emails, immediate transfers between our offices, and ability to easily change system parameters to improve efficiency. This system is the first major step toward a seamless office environment. We also look forward to the integration with PSI as they move to new office space later this year.

FSCI held our quarterly field services training meeting with all consultants and associates in attendance. The purpose of our quarterly meetings is to ensure our team is current on all codes, regulations and best practices so we provide great service to our customers.

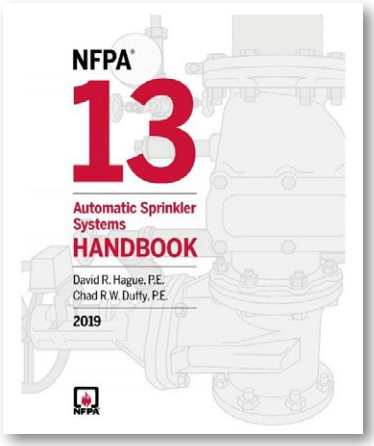
In October, Mike Gross, our newest plan review consultant, completed his initial training in the Illinois office and officially moved to the Michigan office. Mike will be working with our great Michigan office staff, Lisa, Angie and John, providing much needed assistance for our growing Michigan client base.

As we look forward to Fall, FSCI will be presenting many seminars across the country and attending various annual conferences. Seminars and presentations are scheduled in Pennsylvania, Wisconsin (2), Kentucky, Illinois (3), Florida and Michigan. FSCI staff will also be attending various conferences in Michigan, Nevada, Illinois (2), and Wisconsin. FSCI attends these conferences to connect with our clients and meet potential customers around the country.

FIRST LOOK AT THE 2019 EDITION OF NFPA 13: PART I

-Matt Davis, Senior Fire Protection Consultant

After years of rumor, NFPA has updated the Standard for the Installation of Sprinkler Systems (NFPA 13). Although, it will not be referenced by the International Code Council (ICC) until the 2021 editions of the Building and Fire Codes, we now have clients that are updating to the 2018 editions of the IBC and IFC and are including current editions of NFPA code and standards as local amendments. In this article we are going to take a look at some of the changes that have been made from to the 2016 edition which are now found in the 2019 edition of NFPA 13. NFPA 13 has been reorganized in the order of how a project would be designed.



Chapters 1 and 2 are virtually identical between the two editions. This gives the user a comfortable feeling that there won't be too many changes. With two chapters unchanged, take a deep breath and let's move on.

Chapter 3 is still **Definitions**, also the same as the 2016 edition, but in title only. The first thing you read (in the handbook) for this chapter is a "Reorganization Note" stating *"For the 2019 edition, Chapter 3 has changed in structure to alphabetize the list of defined terms, similar to a dictionary. This has resulted in a complete renumbering and a new sequence of terms."* The standard has also relocated the definitions from Chapter 5 for Classifications of Commodities into this chapter. The 2016, and earlier editions, has different sections for sprinklers, construction, water supply, etc. The user could go to a specific section to find what they were looking for. In the 2019 edition, these have all been combined into one large section. Now, the definitions are alphabetical, so for example, Riser is located just above Roll Paper Storage. This is handy if you are looking for a specific term and do not know under what subsection it is located. This chapter, in the handbook, appears to be very detailed with lots of pictures and related examples.

Chapter 4 is also the same in title only, **General Requirements**. This chapter has been expanded to include information from other chapters that really are needed to begin looking at designing a sprinkler system. This chapter *"now includes occupancy classification, as that is the primary step necessary in the layout and detail of a fire sprinkler system. Miscellaneous and low-piled storage have been incorporated into the occupancy classifications so that the user stays in the occupancy requirements for protection, eliminating the confusion with applying design methods and other criteria."* This appears to be a logical move, giving the user a comprehensive first step into what is needed for an automatic sprinkler system. It notes that additional requirements for high-pile storage are located in Chapter 20. This is a good move as not all buildings are warehouses and if they would have tried to move everything into this chapter it would have been very confusing.

Chapter 5 is the first complete change from the preceding edition. **Water Supplies** was located in Chapter 24 of the 2016 edition. This again appears to be a logical move as *"determining the water supply is usually the first step in designing a sprinkler system."* This chapter has really not changed, it has just been relocated.

Chapter 6 continues the one foot in front of the other mentality by moving **Installation of Underground Piping** from Chapter 10. This chapter covers the basic requirements of underground piping and includes information copied directly from NFPA 24. *"The wording in Chapter 6 of NFPA 13 is extracted directly from Chapter 10 of NFPA 24. As such, the two chapters are identical, including the text numbering, tables, and figures. The inclusion of this material in NFPA 13 makes it easier for the reader to find the requirements for fire main piping supplying sprinkler systems, allows for better coordination between the two standards, and ensures uniformity in the requirements for underground piping serving water-based fire protection systems."* This includes piping from the point of connection to the municipal supply to the location 24 inches above the floor in the protected building. This chapter also covers the requirements for piping that leads underground from one building to another in the case of an out-building needing to be protected (e.g. detached lumber storage buildings). Other than being moved in location and being re-numbered, this chapter is essentially unchanged.

Chapter 7 in the 2019 edition, **Requirements for System Components and Hardware** has been moved from its prior location in Chapter 6 in the 2016 edition. This chapter is shorter since some sections have been removed, such as installation requirements. Those sections have been relocated to Chapter 16 to avoid confusion and maintain consistency with the basis of this chapter. This chapter identifies the parts of a sprinkler system that are listed and acceptable from pipe and tubing to sprinklers and sprinkler coatings. Chapter 7 also identifies what components are required to be listed and the listing requirements.

In the winter 2020 Edition of the Fire Safety Consultants Newsletter, we will continue our review of the changes to the 2019 edition of NFPA 13 beginning with the brand new Chapter 8.

LITTLE KNOWN FACTS

NFPA 13, 7.6.2, Anti-Freeze Systems

Since it was introduced between the 2010 and the 2013 editions of NFPA, there has been a requirement for all new anti-freeze systems to use a listed anti-freeze solution. Until this year there has not been an anti-freeze solution listed for sprinkler systems. All existing systems were allowed to be maintained, but for new systems contractors were at a standstill.

There is now a new listed anti-freeze solution on the market that has many contractors and designers excited to have anti-freeze as an option for sprinkler systems again. The only catch to this is that the new listing is only to a freezing point of -10°F which isn't suitable for the more northern regions where the Lowest One-Day Mean Temperature can fall well below -10°F. This is a great start to bringing more options to sprinkler protection and hopefully in the future we will also have an option for protection in the northern states as well.

-Hannah Rodriquez, Fire Protection Consultant

NFPA 13D, Stored Water Supply

The 2019 edition of NFPA 13D has clarified an issue regarding the sprinkler demand for a small dwelling unit that is using stored water as its only water supply. The new material in 6.1.3, now permits the minimum quantity of stored water to be equal to the rate of at least one sprinkler with the highest calculated demand multiplied by seven minutes. Unlike the 2016 edition, which required that the capacity of stored water be based on the largest water demand from at least two sprinklers, the 2019 requirement recognizes that the demand from a single sprinkler may be the highest calculated and most demanding of the system.

This is good news for today's designers. FSCI now sees, as a common practice, dwelling units containing compartments (e.g. bedrooms, offices, and other smaller rooms) that are protected using single sprinkler spacing designed for a coverage of 400 ft.², flowing at least 20 gpm, which will result in a greater demand than a compartment on the same system that is designed for multiple sprinklers at 144 ft.², with less flow.

The dwelling unit, itself, must follow the same criteria as in the 2016 edition. The building cannot be taller than one story and the square footage must not exceed 2000 ft.².

-Kyle Harding, Fire Protection Consultant

NFPA 72, Inspection, Testing and Maintenance

There is still plenty of work to do after the installation and initial acceptance testing of your new fire alarm system. We turn to Chapter 14 from the 2019 edition of NFPA 72 to determine everything that we will need to know to ensure that a fire alarm system remains operating in accordance with the manufacturer's specifications and the system's design. The first question that will arise is, who is responsible for the new fire alarm system? The answer is the property/building owner or the owner of the fire alarm system, or the owner's designated representative shall be responsible for inspection, testing, and maintenance of the system and for alterations or additions to the system. We will take a look at two of the areas that are found in Chapter 14, visual inspections and fire alarm testing.

A visual inspection will need to take place at the frequency indicated in Table 14.3.1, based on the equipment type. It is important to ensure there are no changes that affect equipment performance. It is also important to inspect for any building modifications, occupancy changes, and changes in environmental conditions, device location, physical obstructions, device orientation, physical damage, and the degree of cleanliness. During the installation period, what seemed to be a correct detector or appliance location does not always end up that way when a tenant space becomes rented out and the use of the space differs from the planned use when the fire alarm system was originally approved.

A critical aspect of the fire alarm system is making sure that the functionality of system components is verified, through testing, at a frequency as required in Table 14.4.3.2. It is imperative to verify correct receipt of alarm, supervisory, and trouble signals. Testing also incorporates the operation of evacuation signals during the required testing. A reminder is to test all system functions and features in accordance with the equipment manufacturer's published instructions for correct operation. Remember, all records shall be retained until the next test and then for 1 year thereafter.

-Ryan Case, Fire Protection Consultant

SEMINAR INFORMATION

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

EMPLOYEE SPOTLIGHT

Brent Gooden

Brent Gooden has been with Fire Safety Consultants, Inc. for more than 11 years. Brent works in our Corporate Office in Elgin as a Fire Protection Consultant, which includes being involved in many aspects of the plan review process, including inspections as well as supervising our Field Services department. Brent is also an active member of our Seminar and Marketing Committees and he also develops and teaches many seminars for us throughout the year.

Some of you may recognize Brent's name, as you know that if you ever have a question or if there is an issue that comes up, that Brent will work to get it resolved in the best way possible.

Brent holds a Bachelor's Degree in Business Management, NICET certifications in water-based layout and fire alarms, and is ICC certified as a fire plans examiner. In his spare time, Brent enjoys going on bike rides, swimming and watching movies with his wife and 3 boys, ages 2, 4 & 9.

WE'RE LISTENING!

Tell us what you are interested in learning about!
Email us at: info@firesafetyfsci.com