



# FALL 2020 QUARTERLY REVIEW

 BUILDING PLAN REVIEW

 FIRE SAFETY PLAN REVIEW

 CONSULTING SERVICES

## IN THIS ISSUE

**1** PRESIDENT'S MESSAGE

**2** FIRE PROTECTION PLAN REVIEW – GETTING YOUR PLANS APPROVED THE FIRST TIME

**3** LITTLE KNOWN FACTS

**4** SEMINAR INFORMATION

**4** EMPLOYEE SPOTLIGHT

**4** EMPLOYEE SPOTLIGHT NEWS

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

## PRESIDENT'S MESSAGE

*An FSCI update from Keith Frangiamore, FSCI President*

### A Return to a “Near” Normal

As the impact of COVID 19 diminishes we have seen a return to more normal routines, although we still follow very strict safety guidelines including face coverings and daily temperature checks. Having all our team members back in the office at the same time and meeting with our customers in person is great. Our offices have been fully opened since June and thankfully our staff as a whole has remained healthy. The FSCI team is providing all of our key services to clients and customers nationwide. Also, our field services staff returned to most construction sites performing necessary inspections in all areas.

### Balancing Work and A Little Fun

As most of us have experienced the isolation that has been prevalent the last several months, it was really great to do some things that felt almost “normal”. In mid-September we celebrated with some fun and fresh air to balance work with collaborative activities. It finally felt conformable to get everyone together for some outside fun and food in the Illinois office. In the Michigan office we were able to enjoy a delicious meal together with some relaxed conversation. It is the first time since March, that staff members were able to enjoy some time together without the constant encumbrances related to the epidemic. We will continue to build and care for our team as we work to support our clients and customers through this final quarter of 2020.

Please stay safe, protect others, and help us all work toward a healthy future!



# FIRE PROTECTION PLAN REVIEW – GETTING YOUR PLANS APPROVED THE FIRST TIME

- Brent Gooden, Senior Fire Protection Consultant

Fire Safety Consultants Inc. (FSCI) performs fire protection plan review for many municipal and fire district municipalities throughout the country. Fire protection plan review services offered by FSCI include automatic sprinkler and fire alarm systems for commercial and residential occupancies but also include the review of fire pumps, fire protection storage tanks, underground water systems, standpipe systems, kitchen hood wet chemical systems and other alternative extinguishing systems such as clean agent systems. Reviews are based on the codes and standards adopted by the jurisdiction of the project location. Our reviews also include enforcing locally adopted code amendments. The purpose of this article is to provide most of the required plan information to help fire protection plan submitters get their plans approved the first time. This article will include some of the common information and requirements that we see missing on most submittals.

## Strategies for Submitting to FSCI

When submitting plans to FSCI, include the correct number of copies of plans, equipment data sheets and calculations, and a properly filled out FSCI transmittal sheet. If you have questions about submitting plans, contact us at [info@firesafetyfsci.com](mailto:info@firesafetyfsci.com). To avoid delays, be sure all necessary information is submitted with your plan review submittal. The following are some ways to ensure your plans are efficiently reviewed:

- Check with your municipality to see if plans must be first submitted to them or if they may be directly submitted to FSCI.
- Be sure to understand who is responsible to pay for a plan review before submitting the plans.
- Complete all the information within the FSCI transmittal sheet when submitting a review.

## Basic Plan Information needed

All submitted plans need to include basic information such as the contractor's name, address, phone number and license information, the project name and address and the list of codes, standards and editions used in the design of the system. Please check with your local jurisdiction to understand any local codes and standards before submitting your plans. In addition, some states require that plans be stamped and, in other cases, signed by the designer responsible for the project. In Illinois, a state licensed professional engineer, or minimum NICET level III (Water-Based

Systems Layout) technician is required to oversee the design of the system and provide his or her qualifications on the sprinkler system shop plans.

FSCI can effectively review plans when they include the following:

- Plans that are drawn and printed to a reviewable scale and clearly show the areas of work including a detailed description of the scope of work which allow FSCI to measure distances between sprinklers.
- Plans that include a description of usage of all areas and rooms under review, as an example, FSCI can determine the acceptable sprinkler spacing dependent on the hazard classification of the area.
- Details such as sectional views must be included to verify construction type, and sprinkler and sprinkler deflector locations. For example, this information helps determine if sprinkler protection is required in concealed spaces that may not be shown on the plan views (building on horizontal plane). In addition, all ceiling information including, soffits, heights and slope must be provided on the plans.

## Strategies for Submitting for Modifications to Existing Systems

When submitting modifications to an existing system, be sure to include items such as existing sprinkler locations, types, response, K-factor and temperature ratings. FSCI uses this information to verify the new sprinklers to be provided in the same area are appropriate and spaced properly for the system modifications.

Modifications for existing fire alarm systems will require information on the existing fire alarm control panel to determine compatibility with new equipment. This allows FSCI to verify the load on the panel with the addition of fire alarm devices and/or appliances does not exceed the maximum output of the panel. In addition, it may be necessary to submit details on existing notification appliance type and locations on the plans to verify voltage drop and battery calculations.

## Equipment data sheets

When submitting a review, include data sheets for all new equipment to be used and sometimes existing equipment. This information is not only necessary to verify the equipment is listed for its intended use, but the data sheets also provide detailed information on

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## LITTLE KNOWN FACTS

### ***NFPA 13D - 2019***

Exposed beams in ceilings can present automatic sprinkler system designers a tricky obstacle for adequate protection. The latest edition of NFPA 13D provides a possible solution for tackling the problem. In the 2019 edition of NFPA 13D, figures 8.2.1.2 (a) and (b), allow for pendants, recessed or flush, to be installed up to 16 inches below the ceiling and either inside the beam or up to 2 inches from the side of the beam. Section 8.2.1.3 allows protection for up to 4-inch beams with concealed sprinklers when installed in the beam. Previous editions recommended that guidelines be followed per the manufacturer's listing or to abide by the continuous obstruction rule shown in figures 8.2.5.3.2 and 8.2.5.3.3(a) and (b) in NFPA 13D 2016. These new permitted design methods may allow designers flexibility to design around beam obstructions.

***-Hetul Chokshi, Fire Protection Consultant***

### ***Minimum Requirements for Submitted Working Plans***

The 2019 edition of NFPA 13 has expanded the minimum submittal requirements for working plans submitted for AHJ approval. In previous editions, minimum submittal requirements existed through a list of items that needed to be shown on the drawings. What was not included were other items that are routinely submitted, and which are necessary to conduct a thorough plan review. Section 27.1.1.1 now states that all working plan submittals must contain the following items: 1) Working plans (drawings) of the system(s) which include the required items to be shown on the drawings in accordance with 27.1.3; 2) Hydraulic calculations when the projected work requires calculations to be completed; 3) Manufacturer data sheets (cut sheets) for all system components when it's required by the authority having jurisdiction (AHJ); and, 4) A signed owner's certificate when it's a new system, there is a new owner,

or when the use of the building is changing. Other changes include the permission to submit working plans electronically with the approval of the AHJ and providing the owner or owner's representative with a copy of the approved plans. As for the list of items that shall be shown on the working plans, it has been revised and clarified from previous editions. Noted changes include having to add the contractor's phone number and to provide all backflow preventer information, including the make, model, type, and size. The means to forward flow test at the system demand must also be followed. Finally, if seismic bracing is included, the zones of influence that are used in the calculations must be illustrated on the plans.

***-Kyle Harding, Fire Protection Consultant***

### ***New Illinois Accessibility Code***

The most-recent edition of the Illinois Accessibility Code took effect on October 23, 2018. Here are some of the changes and clarifications.

In Section 213.3.3, the new IAC requires that if more than one urinal is provided, at least one shall be accessible. Whereas in the old IAC, if a urinal was provided it was to be accessible.

In Section 505.10.3, handrails at the bottom of a stairway run need only extend for the diagonal distance of a single tread depth beyond the last nosing. The requirement that formerly existed stating that the handrail must extend an additional 12-inches horizontally at the bottom of the stairway has been eliminated. The horizontal dimension remains for the top of the stairway run.

In Section 705, detectable warnings at top of stair runs is no longer required.

In Section 206.2.3 (1.1), an accessible route, with some exceptions, is not required to a basement, second story or mezzanine space if the areas are each 1,000-square feet or less in area.

***-Totie L. Leonardo,  
Senior Building & Life Safety 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](mailto:info@firesafetyfsci.com) or by calling our corporate office at (847) 697-1300 x206.



## EMPLOYEE SPOTLIGHT

### ***Raoul Johnston***

Raoul Johnston, Senior Building & Life Safety Consultant, joined Fire Safety Consultants, Inc. back in June of 2019. Currently, Raoul contributes to the BLS plan review process by handling reviews for Building, Accessibility, Electrical, Mechanical, Plumbing, Fire, Energy, Fuel Gas, and Life Safety. He also handles all inspections for all of the prior mentioned codes, with the exception of plumbing.

Before joining Warren's group of consultants, Raoul worked for the City of Elgin for 27 years, as a code enforcement inspector, building and mechanical inspector, plans examiner, and building official. Raoul currently has 18 current certifications from the International Code Council, so his education as well as his vast work experience is what allows him

to be such a skilled and knowledgeable Senior Building & Life Safety Consultant. While being employed full-time, Raoul was also a part-time mechanical code plan reviewer for FSCI for 5 years, prior to being hired on with us in his current full-time role.

Raoul has been married to his wife Christine, for the past 13 years and has 3 daughters and 1 stepdaughter. When time allows, Raoul enjoys to fish, golf and take road trips in his 50th Anniversary model Corvette.



## EMPLOYEE SPOTLIGHT NEWS

We would like to congratulate the following employees on their amazing accomplishments this quarter!

- Michael Carnduff passed his NICET Level 1 exam for Fire Alarm Systems on July 13th, 2020
- Ryan Case passed his NICET Level 2 exam for Fire Alarm Systems on July 24th, 2020
- Kyle Harding passed his NICET Level 2 exam for Water Based Systems on August 5th, 2020



## WE'RE LISTENING!

Tell us what you are interested in learning about!  
Email us at: [info@firesafetyfsci.com](mailto:info@firesafetyfsci.com)