



# off-campus

by tim knisely (CCFS)

## Fraternities and Sprinklers: Lessons Learned

### Part 2 of a 2 Part series:

Last month we discussed the development of a sprinkler retrofit ordinance in State College, PA. This month we will discuss the lessons learned, challenges encountered as well as some unanticipated benefits that were achieved during the installation project.



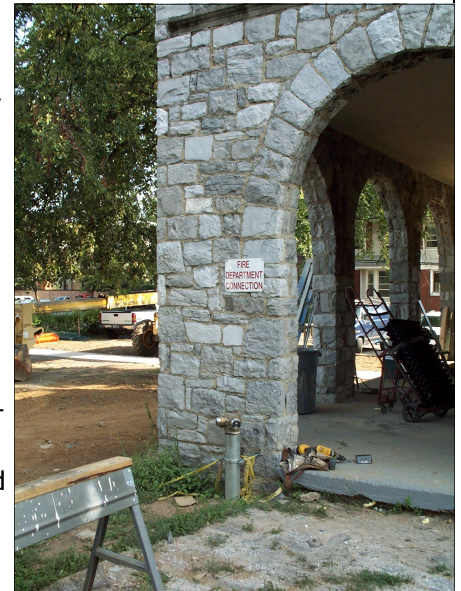
Today, every fraternity house in State College, PA is protected with an automatic sprinkler system, installed in accordance with NFPA-13 or NFPA-13R. A huge step in protecting lives and saving property in buildings that have had disastrous fires in the past, fortunately without the loss of life. In the past five years the staff of the Centre Region Code Administration (CRCA) met with dozens of owners, contractors and student leaders to minimize the impact of this ordinance to everyone involved. There were misconceptions about how sprinklers work, water supply options and the cost. The time and effort put into these meetings has paid off as the owners were able to make well informed decisions.

### Improvements Beyond Sprinklers:

**Alarms** - Not only are all houses protected with sprinklers, there have been improvements to many of the buildings' fire alarm systems. In accordance with the adopted building code, the installation of a sprinkler system required the connection to the building fire alarm as well as being electronically monitored. Now, with a few exceptions, the sprinkler flow and tamper switches are connected to the building's fire alarm system and monitored by a Central Station. The remaining few houses were those that waited until the last possible moment to proceed with the sprinkler installation. As long as the sprinkler was functional by September 1st, the houses were offered an extension to complete the alarm connections. Some houses that had older alarm systems had to update the control panel or chose to replace the entire system. However, connecting the alarm to the Central Station has resulted in an increase of automatic alarm responses for the all-volunteer fire department. Many of the alarm responses are a result of a pull station maliciously activated - quite common during the late night hours.

**Fire Department** - Some other improvements for the fire department included the installation of the fire department's key box at

the front door and locking caps on the fire department connection (FDC). The plan review process helped to identify the location of both the FDC and the lock box prior to construction. Building pre-plans will be updated to reflect the new systems.



**Insurance Benefits** - Owners are reporting that insurance companies that specialize in protecting fraternity houses are offering a 50% reduction in fire insurance for the first few years, and a 30% reduction for each year thereafter.

**Financing Options** - In anticipation of the owners waiting until the last minute to schedule installation the local fraternity purchasing co-op secured a design, installation and financing plan with a national contractor. The contractor offered a lease plan that was affordable and more importantly, guaranteed that the installation would be completed in time.

Several house owners chose to include the sprinkler installation as part of a major renovation and held fund drives to cover these additional costs. Others were able to borrow money from their national housing corporations at low or no interest.

### Challenges:

**Water Authority** - The local water authority requires the installation of a dedicated water line for a sprinkler system. This required every house except one to install a new water line from the street to the house. One house owner chose to install a tank and pump system to avoid the costs of the water



line. Discussions were held in hopes of allowing the use of the domestic line to supply the sprinkler. Unfortunately, since most of the houses were quite old the domestic line was not large enough to support a sprinkler system. The separate water line allows the water authority to shut off the domestic line for non-payment and continue to provide protection for the sprinkler.

**Contractor Availability** - From the very beginning, owners were advised to plan ahead and not wait until the fifth year to begin the process. As expected, 15 houses were under construction during the final summer and most were scheduling inspections a few days before the deadline. Many contractors were stretched to their limit but managed to complete each job in time.

**System Maintenance** - Now that the systems are installed the challenge of maintaining the systems begins. A focus of the semi-annual fire inspection of the buildings is the required maintenance of all fire protection systems in the house.

### Our Work Isn't Finished:

Even though all houses are now protected - our work isn't finished. Due to the annual turnover of students there is a need for the continued fire prevention education. Reminding students to check their smoke alarms, properly discard smoking materials and to make fire-safe decisions now and in the future is the benefit of this education. Since most of the houses also operate as pseudo night clubs, one of the biggest hazards is the large number of occupants in the house. Inspections and education efforts will focus on hosting safe parties, occupancy limits and post-party inspections.

This project and the successful completion was a result of great cooperation between elected officials, property owners, students and staff. Everyone involved knew that the best fire protection in a fraternity house is the combination of sprinklers and alarms. We can all sleep a little better knowing that these houses are protected and the occupants are much safer than they were five years ago.

Tim Knisely is the Senior Fire Inspector for the Centre Region Code Administration in State College, PA. He manages the Existing Structures Division that is responsible for the property maintenance and fire inspection of 16,000 off-campus properties and 1,600 commercial occupancies. The Division coordinates the life safety education for the community. *Write about your off-campus housing experiences.* Send your article to Tim Knisely. [TKnisely@campusfiresafety.org](mailto:TKnisely@campusfiresafety.org)

