Each year fire disrupts the lives of many college students who are living away from home for the first time. Unfortunately, many of these fires are fatal. What makes these fires and deaths more tragic is that many of the fires could be prevented if some basic fire safety practices were known and practiced before the fire. More could be prevented if older buildings were retrofit with modern fire protection equipment, such as interconnected smoke alarms, fire alarms and sprinkler systems.

These fires are not limited to off-campus housing. Some of these fires do occur in residence halls, but a large majority occur in the off-campus house, apartment or fraternity house.

Many factors affect a structure during a fire, including the construction type and the age of the building. For the purpose of this article we’ll consider the importance of occupant behavior - before and during the fire, tactical considerations for the fire department and methods to improve the safety of the occupants in these buildings.

**Occupant Behavior - Before and During the Fire:**

Most off-campus fires occur in the early morning hours and many are following a party. The common causes of these fires include carelessly discarded smoking materials, unattended cooking, or candles. Most of these fires occur because someone was careless, or they made a mistake. How many of these fires get out of control because someone didn’t know how to extinguish a grease fire? This is because most students lack the basic awareness of fire safety. In fact, most students last received fire safety training in grade school. When you add the impact of alcohol the risk becomes greater. When the alarms do not sound and the house lacks sprinklers, the chance of survival is significantly reduced.

Many times when an off-campus house fire occurs, the question often asked is “when was the building last inspected by the town or fire department?” One may think that a recently inspected building may be safer than one inspected more than a year ago. However, it seems that there is not much of a correlation between the fire occurring and the last inspection because most fires are started by accident - and this could happen at any time. One of the most basic hazards that can be identified at the time of an inspection is the presence of a functional smoke alarm. But, this too can be easily disabled.
Continued: Off-Campus Housing

The same day as the inspection by the occupant that burns their dinner. If the landlord or property manager does not have a system in place to test smoke alarms regularly this condition could last until the next inspection.

Tactical Considerations for the Fire Department:

The fire department must be prepared to handle fire incidents in off-campus housing. While an off-campus house may look like others on the block from the outside, the inside may be significantly different. Not only will the number of occupants likely be higher, but tenants will have sleeping rooms or recreation rooms in unusual spaces.

Unfinished attics, basements, garages and furnace rooms are just a number of the areas that tenants may go for privacy. Rooms may be subdivided or new rooms constructed in the basements and attics that lack proper egress, electrical supply or fire protection. Temporary wiring and temporary heat are often located in these areas making these spaces more dangerous. Loft beds are also common and allow additional furnishings in a bedroom with a bed located near the ceiling. During a search of the room, the firefighter needs to be aware of this potential condition and try to sweep the bed that is not easily found.

There are many areas of concern for the fire department inspection staff while inspecting off-campus housing. One of the most important is ensuring that all fire protection systems are inspected on a regular basis by qualified persons and in a functioning condition at all times. Another concern during the inspection is the amount of furnishings in a bedroom. The typical student bedroom may also contain one or all of the following: computer, television, DVD player, refrigerator, coffee pot, microwave, toaster oven, video game system, space heater or air conditioner, hair dryer, cell phone chargers, and heat lamps for the iguana/snake or botany project. These not only take up space and generate heat, but utilize a significant amount of electricity – frequently supplied by one or two lightweight extension cords.

In fraternity houses, the sleeping rooms will be much like the one described above. But the risks here are much greater. Some fraternity houses are converted houses that may house up to 15 tenants. Many others are larger structures ranging in size from 10,000 to 25,000 square feet or larger and may house more than 75 tenants. These houses are frequently utilized in a manner similar to a night club, but lack the requirements for egress, fire detection or sprinklers. Fraternities also host theme parties that bring in large amounts of combustible materials such as straw, shredded paper or pine boughs. During a fire these decorations could make escape impossible and place a hundred or more people at risk. There may also be sand or mulch on the floor to further slow the egress effort. Parties may also be held outside with many elaborate decorations and the yard may be enclosed by a temporary fence.

A fire in an off-campus house or fraternity house will be very labor intensive and will require additional resources almost immediately. If you factor in the potential risks created by the occupants and the potential of high occupant loads during parties these fires...
CONTINUED: OFF-CAMPUS HOUSING
become even more dangerous for the firefighter.

Retrofitting Fire Protection Systems:
Building codes regulate the fire protection system features in new construction and include modern smoke alarms, fire alarm systems and sprinkler systems. Existing buildings lack many of the systems available – because the building was previously approved and it is not required to be improved.

Many jurisdictions will require improvements to these buildings after a fire tragedy occurs. Some however have made changes to codes in existing buildings before the fire - before someone has to die.

New technologies allow the installation of fire protection systems easier and cheaper than ever. Work with the manufacturers and the trade associations to provide the technical information you need. If an ordinance is proposed that will require installation of fire protection systems, provide a reasonable time for compliance. Also recognize that it will be unlikely that you will retrofit every building with sprinklers. The Authority Having Jurisdiction (AHJ) can recommend an appropriate level of protection and the appropriate compliance time for the building, depending on the risk. Involve the property owners in the planning stages of the retrofit laws. You might not get them all to agree, but they'll be informed and may be your ally.

The Teachable Moment:
When a fire occurs, use the lessons learned as an opportunity for education and outreach to the community. Some fire departments conduct a neighborhood canvass immediately after a fire to educate the neighbors about what just happened. Offer to test their smoke alarms, provide fresh batteries and if necessary install a new smoke alarm right away. You don’t know when the next fire might occur.

Many media outlets are anxious to help spread your safety message. Use your safety partners, such as the fire department, student affairs staff or student groups that have a focus for off-campus housing issues.

Summary:
To reduce the risk to the occupant and the firefighter, these buildings must be retrofit with modern fire protection systems regardless of when the building was built. Smoke alarms and sprinklers together provide the best protection in the event of a fire.

Educational programs need to be developed that address this specific group of students. Reaching the students before they leave the residence halls might be the best method, but there is high competition for their time.

Remember, no one plans to have a fire. There needs to be a plan in place before the fire occurs.

Tim Knisely is the Senior Fire Inspector for the Centre Region Code Administration in State College, PA. He is also on the Board of Directors and Treasurer for the Center for Campus Fire Safety.