

# Fire and Life Safety in Dormitories and Residence Halls

The tragedy of the Seton Hall Dormitory fire in January 2000, in which three students died and many others were injured, reinforces the need for colleges and universities to take a closer look at the fire prevention efforts within their residence halls.

## Understanding the Campus Fire Problem

Catastrophic events like the Seton Hall fire are not isolated cases; recent fires have taken the lives of students and have caused significant property losses at Providence College, Murray State, The College of William and Mary, Skidmore College, and Massachusetts Institute of Technology, to name just a few. These are the events which get the attention of the media, parents, students, local authorities and legislators, leading them to make dormitories and other residential occupancies safer by retrofitting them with sprinkler systems, by installing other fire protection equipment, or by instituting more effective policies and procedures for fire prevention and life safety.

School administrators and safety professionals need not wait for a disaster like the Seton Hall fire to happen before we assess life safety and fire protection measures in residence halls at our colleges and universities. The Federal Emergency Management Agency (FEMA), through the U.S. Fire Administration (USFA) and the College Parents of America (CPA), reports that approximately 1,700 fires occur at American college campuses annually. Most of these fires are not as severe as the Seton Hall tragedy, but they should impel us to properly assess fire and life safety in dormitories and residence halls; to reinvestigate any dormitory fire to determine its underlying cause; and to communicate this information to the appropriate parties so they can take action to prevent fires, protect property, and save lives. Safety professionals must share this information with school administrators, and should urge school officials to:

- Continue to support and regularly assess fire prevention, life safety, and security policies and procedures for residence halls.
- Train those who supervise residence halls to recognize and correct fire prevention and life safety deficiencies and security hazards themselves when they can, or request the assistance when needed.
- Conduct fire safety inspections of rooms at least once a semester.
- Establish and enforce policies that prevent students from introducing fire hazards.
- Establish and enforce policies that discourage students from disabling or vandalizing fire protection and life safety equipment.
- Establish and enforce policies that control the amount of flammable and combustible materials, and the number and type of ignition sources, in students' rooms.

LOSS CONTROL TIPS

## Policies and Procedures

### Establish and Enforce a Clear Fire Safety Policy

School administrators should issue a statement indicating that the safety of each student is of paramount concern, and students who violate fire safety rules and regulations will be held financially responsible, and may be prosecuted for tampering with fire protection or life safety systems.

School administrators, working with fire safety professionals, should develop detailed fire safety policies and regulations, should provide them to all students living in residence halls, and should review these regulations with students and residential staff on a regular basis. The policies should emphasize that:

- Students are prohibited from using open flames and any devices, decorations, appliances, or furnishings that use flames or intense heat.
- Students are prohibited from installing flammable materials and decorations or furnishings in corridors or stairways.
- Students must maintain areas of egress free of obstructions.
- Students who tamper with or misuse fire safety or life safety equipment may be fined or excluded from the residential facility.
- Students who live in residence halls will be held financially liable for restoration or replacement of items damaged or destroyed as the result of a fire and/or safety violation for which they are responsible.

### Establish and Enforce Clear Fire Safety Regulations

School administrators can develop fire safety regulations for students from the information on Fire Hazards and Controls offered below, and by consulting fire safety professionals and sources such as the United States Fire Administration and the National Fire Protection Association. Students need to know about specific hazards and what steps they must take to keep themselves and their friends alive. Regulations should be specific, such as about what appliances and materials may (such as approved kitchen appliances, etc.) or may not (such as halogen torchière lamps) be brought into their rooms.

### Educate Parents and Students

School administrators, working with fire safety professionals, should develop parent and student guides about fire safety at the school, and distribute them to all parents or guardians and students. Students must be educated about the importance of day-to-day fire safety and prevention measures in residence halls and off-campus housing. Many resources are available,

including free information from the U.S. Fire Administration. USFA offers a free campus fire safety training kit, which includes the video *Get Out and Stay Alive*. This video and its accompanying training kit are designed to educate college students about the importance of day-to-day fire safety and prevention measures in residence halls and off-campus housing. (Order this online from USFA's web site at <http://www.usfa.fema.gov/usfapubs>, or contact USFA Publications Center at (800) 561-3356.)

### Enlist Staff to Keep Dormitories Fire Safe

School administrators should charge residential program staff with inspecting all student rooms to identify and remove fire hazards and to instruct students on fire and life safety. Staff should re-inspect rooms where fire hazards were identified, in order to ensure that unsafe conditions have been corrected and that unsafe practices have been discontinued. In addition, school administrators should train resident advisors and fellowship students in their role in fire safety and prevention, and should teach them how to identify fire hazards or violations in student rooms and throughout the building.

## Fire Hazards and Controls

According to the USFA, cooking is the leading cause of fire injuries on college campuses, closely followed by careless smoking and arson. Fires are also started by burning candles igniting draperies; improper disposal of smoking materials (such as dumping smoking materials in waste receptacles which contained combustible trash), drying clothing or other combustible items on heating units; worn electrical cords igniting combustible items; and failure of electrical equipment (such as when a window curtain becomes tangled in a window fan, causing the unit to bind, overheat, and ignite). The USFA also indicates that in more than 50% of adult fire fatalities on college campuses, victims were under the influence of alcohol at the time of the fire.

When assessing fire hazards and controls in residence halls, consider the following:



### Smoke Detectors

Smoke detectors are an essential component of an effective fire prevention program. Take steps to ensure that smoke detectors are installed and maintained properly:

- Install smoke detectors in each student room.

- Choose smoke detectors that are UL-listed AC direct wire, with DC battery backup.
- Battery-operated smoke detectors may still be found in some student rooms. If battery-operated units are used, inspect them regularly to ensure that they are still in place and that the batteries have not been removed.
- Change batteries at least once per semester, and instruct students that they should request fresh batteries if they hear the detectors beep.
- Test smoke detectors regularly to ensure that each unit operates properly.
- If the equipment has been vandalized, protect it with detector damage stoppers (see photograph).

### Fire Doors

Doors which separate student rooms from corridors should have a minimum 20-minute fire protection rating, should have self-closing hinges or closures, and should be self-latching. This is a *very important* consideration. In studies of dormitory fires, the National Fire Prevention Association has found that a fire often spreads beyond the room of origin because occupants leave doors open as they escape. If these doors are equipped to close and latch automatically, smoke or fire are less likely to spread down the corridor to endanger other students.

### Electrical Safety

To reduce the risk of fire, take steps to ensure that electrical appliances and cords are installed and maintained properly:

- Ensure that student rooms contain enough electrical outlets to prevent students from having to install plug adapters to accommodate extra electrical appliances, or from having to use non-UL listed extension cords.
- Instruct students that, when they must use extension cords, they use only UL-listed heavy-duty cords or power-strips.
- Prohibit students from running electrical extension cords under rugs.
- Prohibit students from installing decorative or seasonal lights (especially near combustible or flammable materials, such as on the underside of a top bunk bed).
- Ensure that students do not alter lights or electrical fixtures in the room (e.g., installing 250-watt bulbs in lamps designed to accommodate 100-watt bulbs).
- Instruct students to look for and report worn or faulty electrical equipment or cords.

### Hazardous Areas

Hazardous areas (such as boiler room and fuel fired heater rooms, trash rooms, laundry areas, etc) need special attention. Ensure that these areas have the appropriate level of protection (such as automatic sprinklers), or ensure that the area is separated with walls and self closing doors that resist the passage of smoke and heat.

### Automatic Sprinkler Systems

Ensure that automatic sprinkler system protection is provided throughout the building, and especially within student rooms. Make sure that the system is inspected and maintained properly, to ensure that it will operate properly in the event of a fire.

### Fire Protection Equipment

Ensure that fire protection equipment (smoke detectors, fire doors, extinguishers, alarms, etc.) has not been tampered with or made inoperative in any way. For example, the photo below shows how students covered the smoke detectors in their room with hanging tapestries. (Note, too, the holiday lights strung under *and against* the fabric.)



Rugs placed near doorways can prevent the self-closing doors between the student rooms and interior corridor to close and latch automatically, as they are designed to do in a fire.

Hanging items in rooms or in corridors, constructing lofts, and relocating or stacking furniture can impede the distribution of water from sprinkler heads, and should be prohibited.

### Other Fire Hazards

- Instruct students on the very real hazards of cooking and smoking in their rooms.
- Prohibit students from disposing of smoking materials in waste receptacles which contain combustible trash.
- Prohibit students from using open flames (such as candles) in their rooms.
- Prohibit students from using space heaters, halogen torchiere lamps, or other sources of intense heat.
- Prohibit students from using hot plates, toaster ovens, and similar cooking appliances in their rooms.
- Prohibit students from drying clothing or other combustible items on heating units.

- Instruct students to keep clothing, draperies, and bedclothes away from lamps and other sources of heat or electricity.
- Block off fireplaces so that no type of burning can be done within them. (Fireplaces are sometimes found in older homes or other buildings which have been converted to residence halls.)
- Those charged with conducting fire safety inspections should be instructed to look for indications of fire safety violations, such as candles with burned wicks, use of non-UL listed extension cords, etc.

### Fuel Loads

It is important to control the amount of flammable and combustible materials present in the dormitory, both to prevent fires, and to ensure that the building's fire protection and life safety features remain effective.

- Ensure that students don't unwittingly increase the fuel load within their rooms, such as by constructing wooden lofts or combustible spaces (raised floors) or using plastic milk cartons for storage. At one school, for example, students laid plywood panels on the floor so that they wouldn't have to walk on a cold floor first thing in the morning.
- Establish control over the amount of flyers, notices, posters, and other decorations within the dormitory's common corridors. Cautions about fire safety are often

issued around Christmas time, addressing trees, lights, etc., but what about Valentine's Day, Halloween, decoration competitions, birthdays, or other special events or achievements? Students want to recognize these occasions by decorating walls, staircases, doors of their rooms, etc. (See photographs.) However, these decorations provide a continuous fuel source for the entire length of the corridor, thus



diminishing the reliability of the exit access corridor, and blocking visibility of emergency lights and exit signs.

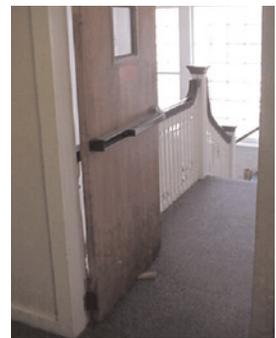
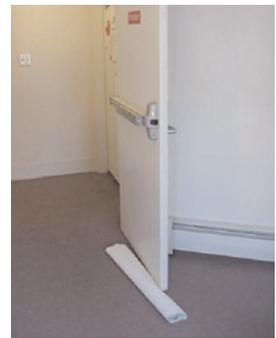
### Life Safety

The experience gained through effectively run fire drills is essential in preserving the lives of students should a dormitory fire occur. Ensure that:

- Fire drills are performed on a regular, scheduled basis.
- An adequate numbers of drills is performed during each semester (especially at the beginning of the semester).
- Post secondary fire drill reports are completed.
- The Fire Department is in attendance when drills are performed.
- Drills incorporate situations where students need to use alternative means of egress, rather than relying only on one favorite way out of the building.
- Those conducting the drills track the number of students who were present when the drill was performed, determine the number of students who left the building, determine if evacuees heard the alarm loud and clear, time the evacuation, etc.
- Records from the alarm division, Office of Residential Life, campus safety, or risk management departments are reviewed to determine if any dormitory(s) experience a high frequency of false alarms. From this information, develop recommendations or proposed solutions to significantly reduce these type of events from occurring in the future.

Other life safety factors to consider:

- Prohibit students and staff from holding or wedging open the fire doors that protect the openings to enclosed stairwells or student rooms. (See photographs.)
- Maintain and regularly test emergency lighting provided within the building.
- Install in each student room a laminated sheet which has a floor diagram and fire safety information specific to that room. The floor diagram should reflect the actual floor arrangement, and should be oriented



with the actual direction to the exits. The fire safety information should be adequate to help students decide whether to evacuate to the outside, to evacuate to an area of refuge, to remain in the room, or any combination of the three. The person who has been assigned to develop this information should consider the following factors: construction type of building, suppression systems in place, alarm and detection systems in place, building layout, building's HVAC systems, etc.

- If a residential facility has been converted to a residence hall, or if students are housed in a leased facility, take steps to ensure that the life safety/fire protection features specified NFPA 101 *Life Safety Code* are incorporated into these structures as well.

At the conclusion of a fire safety assessment of a dormitory, ask yourself this important question: “*Would I sleep at night if my daughter or son were living in this dorm?*” If you can't answer *yes* to this question, then take appropriate steps to reduce the potential for tragedy.

## Security Is Essential to Fire Safety

The United States Fire Administration reports that arson is a leading cause of fire on campus. Take steps to control unauthorized visitors within residence halls:

- Require key card access for entrance to the residence hall.
- Prohibit students or staff from propping open rear entranceways or secondary means of egress; install U.L.-listed delayed egress locks on doors associated with secondary means of egress which are interconnected through the building's approved supervised fire detection or automatic sprinkler system. (Once the fire detection or protection system is activated, it releases the panic hardware latching device.)
- Install security screens on windows which open at grade level.
- Post a security officer within the lobby or at the main desk of the dormitory. Train officers to be familiar with fire and life safety equipment, emergency telephone numbers, etc.
- Require students to notify their resident assistant when they have overnight guests in the dormitory, and require the guest to provide the resident assistant with current identification (student ID, etc.).

## Making Decisions About Fire Prevention Equipment

A television news report about dormitory fire safety after the Seton Hall fire offered many generalizations about the frequent lack of fire protection equipment in dormitories, including the absence of fire hoses or portable fire extinguishers. A recurring problem in installing fire protection equipment in common areas is the high rate of vandalism and theft. In addition, logistical factors sometimes make provision of fire protection equipment in dormitories impractical.

In the case of fire hoses, many fire departments prefer to use their own fire hoses, since they can't ensure the reliability of hoses stored in the building's cabinets. In addition, it would be dangerous for untrained people, such as students or resident staff, to try to extinguish a fire with this equipment. Consider, too, that should students or staff attempt to extinguish a fire, they might well delay reporting the fire to the fire department, in which case the fire could spread and grow uncontrollably. The school should request a variance from local fire officials to remove the hoses; this would eliminate the problems cited above, reduce vandalism and theft, and allow the school to better use its funds to address other fire protection issues instead of maintaining hoses.

Regarding portable fire extinguishers, practices vary widely; some schools provide an extinguisher in each student room, while some do not provide any extinguishers, even on the floors. The school should request a variance from local fire officials to remove the extinguishers, for the same reasons noted for eliminating fire hoses. If local fire officials feel that there is a need to maintain portable fire extinguishers on the dormitory floors, and if they are kept within common corridors of the halls, then the equipment should be fitted with fire extinguisher theft stoppers. A theft stopper allows the extinguisher to be used to fight a fire at any time, but it will sound a local alarm when the extinguisher is removed from its normal position. The school should establish and enforce a policy indicating that students living on the floor or within the dormitory will be assessed a charge every time an extinguisher is discharged, stolen, or replaced.

Colleges and universities are beginning to realize that fire tragedies like those at Seton Hall and Providence College cast dark shadows over the institutions for years to come. Schools may lose existing students who fear that the school isn't concerned about their safety or who feel unsafe after a fire or other incident. Local fire or building code officials

will look more closely at other buildings on campus, and may require the school to update fire protection/life safety features across campus; and, parents of prospective students will scrutinize fire safety and security issues more closely when choosing a college for their child. Thus, schools and universities are paying more attention to life safety and fire protection features within their residence halls.

## For More Information

National Fire Protection Association ([www.nfpa.org](http://www.nfpa.org))

*Life Safety Code Handbook*. (NFPA 101) National Fire Protection Association, 1997.

United States Fire Administration (USFA), Fire Safety & Education division ([www.usfa.fema.gov/safety/101.htm](http://www.usfa.fema.gov/safety/101.htm)).

College Parents of America ([www.collegeparents.org](http://www.collegeparents.org)).

Statistics were obtained from the National Fire Incident Reporting System (NFIRS) of the National Fire Data Center in the U.S. Administration (USFA).

For more information, contact your local Hartford agent or your Hartford Loss Control Consultant. Visit The Hartford's Loss Control web site at <http://www.thehartford.com/corporate/losscontrol/>

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# Protect Yourself and Your Friends: Fire Safety Tips for College Students

You may have heard about tragic dormitory fires in which students have been killed and injured. Here is information to help you prevent fires in your dormitory, and to help you know what to do if a fire starts in your dorm. Fire prevention is the shared responsibility of school administrators, staff, and students. Learn what your responsibilities are, act responsibly, and encourage your friends to do the same.

## Keep Your Room and Dorm Fire Safe

First, do what you can to *reduce the risk of fire* in your room and in your dorm. Conduct your own fire safety inspection. Ask for help from your resident assistant or other school officials. As you furnish and decorate your room, think about fire safety. For example, don't increase the potential fuel in your room by constructing a wooden loft or using plastic milk crates for storage. Never install decorative or seasonal lights, especially near combustible or flammable materials, such as bedding, curtains, or wall hangings. These lights are an extreme fire hazard. Clean up immediately after parties, and take all trash outside.

*If you smoke, do it safely.* If you are allowed to smoke in your room, be sure you have a safe place in which to extinguish your cigarettes. Never leave smoking materials in wastebaskets or in other places where they might start a fire. Never smoke in bed, and don't smoke while you are tired or impaired.

*Never use open flames or other sources of intense heat* (such as candles or incense), and don't have hot plates, toaster ovens, space heaters, halogen torchiere lamps in your room. Never dry clothing or other combustible items on heating units or other hot areas. Keep clothing, draperies, and bedclothes away from lamps and other sources of heat or electricity. Turn off the lights and other appliances when you leave the room, even for a short while.

*Keep the corridor clear;* it may be your only means of escape during a fire. Do not hang flyers, notices, posters, or other decorations in the corridors. In addition to providing extra fuel for fires, these items can cover exit signs and lights, making it impossible for you to find your way out in an emergency. Keep the floors, doors, and stairs clear so you can get *out* quickly, and so emergency workers can get *in* quickly to help you or your friends.

To reduce the risk of fire, *use electrical equipment safely.* Don't overload circuits. If you must use extension cords, use only UL-listed heavy-duty cords or power-strips. Never run electrical extension cords under rugs; they can overheat and ignite very easily. Don't alter lights or electrical fixtures, such as installing a 250-watt bulb in a lamp designed to use a 100-watt bulb. Look for and report worn or faulty electrical equipment or cords.

LOSS CONTROL TIPS

## Fire Protection Equipment Keeps Everyone Safe

The *smoke detectors* in your room and throughout your dorm can save your life by alerting you to a fire or smoke situation. Never tamper with, cover, paint, or remove the batteries from your smoke detector. Most smoke detectors are hard-wired to the building's alarm system, but some use batteries. If yours is battery-powered, the school should provide fresh batteries regularly; if not, request that they do so. If you hear the detector beep, that means the batteries are low; install fresh batteries immediately or request that the school do so.

*Fire alarms* are installed so that you can quickly alert safety officials about a fire. Find out where the fire alarm pull stations are, and find out who is notified when they are activated. Never tamper with, cover, or paint fire alarms.

*Fire sprinklers* can save your life and protect your property. Never tamper with, cover, paint, or remove any component of the sprinkler heads in your room or elsewhere in the dorm. Do not hang things in your room, construct lofts, or stack furniture or other items that could get in the way of water flowing from the sprinkler heads, and should be prohibited. In areas where water pipes are exposed, never hang anything from the pipes, as this could prevent the system from working.

*Fire extinguishers* may be installed in your room or on your floor. Never tamper with, discharge, or remove any component of the fire extinguishers in your room or elsewhere in the dorm. Find out who is assigned to use the extinguishers.

Your room and dorm may have special *fire doors* which are designed to close and latch automatically in the event of a fire, to prevent fire or smoke from spreading. To protect yourself, never prop doors open, and don't place rugs or other things near these doors which might prevent them from closing properly.

## Know How To Get Out Safely

*Participate in every fire evacuation drill* performed at your dorm, and encourage your friends to do so, too. Take time to learn about escape routes, fire and life safety equipment,

emergency telephone numbers, fire alarms, and what to do in the event of a fire or other emergency. Find out about all possible exits from your room and from the building. *Make a fire escape plan* that includes two routes, and practice this plan so that you can become familiar with it. Share information with your room mate(s) and dorm mates. Your life, and that of your friends, may depend on it!

*Never ignore a fire alarm*, even if you think it may be a prank. Do not wait to see or smell fire or smoke.

In the event of a fire, *know how to get out safely*. First, feel the door handle. If it's hot, don't open it; go to a window and call for help. Hang a sheet from the window to attract attention. Stay low; there will be less smoke and toxic gas near the floor. If the handle is *not* hot, open the door cautiously and check for smoke or fire before going out. Get out fast; don't take time to phone before leaving, just get out and then find a phone. Close the door behind you to keep the fire from spreading; this also may protect the things in your room. On your way out, pull the fire alarm, bang on doors, and yell "Fire!" but don't hesitate or stray from your escape route. Crawl low to the floor; thick smoke may reduce visibility and may be toxic.

## Understand Your School's Fire Safety Policies

Your school has policies and guidelines to keep you safe from fire. For example, you may be prohibited from using open flames or appliances that use intense heat, or from having unsafe decorations or furnishings in your dorm. If you tamper with or misuse fire safety equipment, you may be fined or excluded from the dorm, and you may be held financially responsible for restoration or replacement of items damaged or destroyed as the result of a fire and/or safety violation for which you are responsible. In some instances, tampering with fire protection equipment is a criminal offense.

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