

Honorable Valerie Lewis
Commissioner of Higher Education

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Commissioner of Public Safety
State Fire Marshal



**College Dormitory
Fire Safety Code
Study**

Introduction

During the year 2000 session of the General Assembly, the legislature recognized the need to examine the adequacy of the fire code as it applied to residential facilities in public and private colleges and universities within the State of Connecticut. Legislation, PA-00-187, was approved authorizing such a study.

Section 70 of Public Act Number 00-187 reads as follows:

The State Fire Marshal and the Commissioner of Higher Education shall jointly study the need for a change to the State Fire Safety Code for college dormitories. They shall survey public and independent institutions of higher education to determine the number of dormitories that do not have automatic fire extinguishing systems. The State Fire Marshal and the commissioner shall report, in accordance with section 11-4a of the general statutes, on the study, including any recommendations for changes to the code and an implementation schedule for such changes, to the joint standing committees of the General Assembly having cognizance of matters relating to education and public safety by January 1, 2001.

The intent of this study is to identify the appropriate responses to safeguard Connecticut's collegiate residential community.

Condition Identification

Residential facilities at colleges and universities are commonly known as dormitories. However the Connecticut State Fire Safety Code classifies them into the following four residential occupancies according to risk. They are (1) hotels, motels and dormitories; (2) apartment buildings; (3) lodging and rooming houses and (4) one- and two-family dwellings.

The Connecticut State Fire Safety Code defines a dormitory as a building, or space in a building, in which group-sleeping accommodations are provided. These accommodations are in one room or a series of closely associated rooms under joint occupancy and single management for more than sixteen people who aren't members of the same family. Further, these accommodations are with or without meals, however they may not have individual cooking facilities within the rooms.

A building or portion thereof meeting the above definition, however, containing between sixteen and seven people is considered a lodging and rooming house. The life safety requirements differ significantly from those of dormitories. These life safety requirements address code provisions such as means of escape, vertical openings, interior finishes, corridor wall construction, fire alarms and sprinklers.

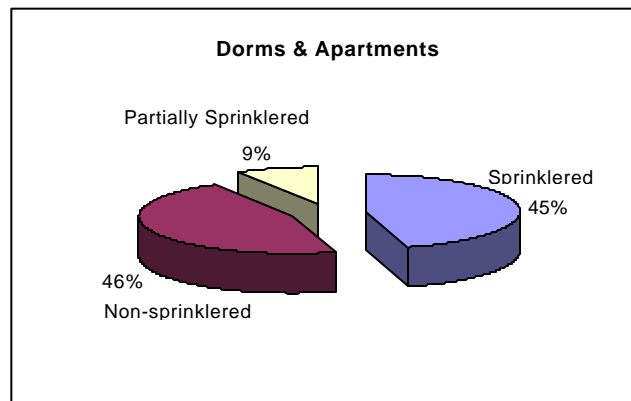
Another classification, Apartment buildings, are defined by the Connecticut State Fire Safety Code as buildings containing three or more dwelling units with independent cooking and bathroom facilities. For the purposes of this study, (1) dormitories and (2) apartment buildings will be analyzed together.

The Connecticut State Fire Safety Code requires new dormitories to be protected by a sprinkler system and new apartment buildings to be protected by a sprinkler system unless they're less than four stories with rooms exiting directly to ground level or other approved exit access. The code provides significant incentives when installing sprinklers. These incentives include increasing exit configuration and a reduction in fire rated separations.

In addition to the requirements of the Connecticut State Fire Safety Code, Connecticut General Statutes, Chapter 541, § 29-315 requires that as of October 1, 1973, all new buildings having more than four stories and used for human occupancy shall have an automatic fire extinguishing system. As a result of several fires, revisions to the statute established more stringent requirements for hotels, motels and residential facilities for the elderly.

There are twenty-three institutions of higher education in Connecticut that provide residential facilities to their students. These dwellings which number just over three hundred, range in size and number of occupants. The majority, sixty-nine percent, are dormitory occupancies as defined by the Connecticut State Fire Safety Code, and apartment buildings comprise another twenty-five percent of all collegiate residential facilities. Approximately forty percent are state owned.

Out of this total, one hundred twenty-eight are fully protected by an automatic fire sprinkler system, twenty-four are partially sprinklered and one hundred twenty nine do not have sprinklers. (See chart) In breaking it down even further, fifty-three percent of the dormitories (one hundred ten) are fully equipped with sprinklers and twenty-four percent of the apartment buildings (eighteen) are sprinklered.



A table illustrating the residential breakdown of each college and university is attached to this report.

Recommendation

Connecticut's institutions for higher education are diligent in protecting the lives of students entrusted in their care. Recent fires in collegiate residential facilities have raised the awareness of the public. This in turn has elevated the expectation that the institutions for higher education are providing a minimal level of risk. According to some parents, this level of safety afforded to the students has become one of the factors they evaluate when selecting a college or university.

The most recent example illustrating the effectiveness of a sprinkler system occurred at the same dormitory that heightened the nation's awareness for fire safety. On January 19, 2000 a fire occurred in Boland Hall which is on the Seton Hall University campus in Orange, New Jersey. Three students died in that fire. In addition to other fire code violations, the building did not have an automatic fire extinguishing system. A fire sprinkler system has since been installed. On December 8, 2000, a small fire occurred in a trash can in Boland Hall. Six hundred people occupied the building at the time. One sprinkler head activated and extinguished the fire without any reported injuries.

The second fire in Boland Hall further justifies the need for an engineering safeguard, such as sprinklers, and not simply an educational program. One would expect that students in any dormitory where others were killed by a fire the previous semester should be more conscientious of fire prevention, yet, a fire occurs in a trash can. This cavalier attitude of the occupants is summed up by a statement made by Francis Brannigan in a May 2000 Firehouse Magazine article about dormitory fires. He wrote, "Automatic sprinklers give academic freedom to do stupid things."

It has been established that due to the attitudes and activities of the occupants, a higher degree of danger exists in collegiate residential facilities. Therefore, additional requirements have been engineered to improve safety. These safeguards make new dormitories inherently safer.

Logic would dictate that the nature of existing residential facilities would warrant protection equal to that of new. Therefore a sound approach to achieving this goal would be the installation of an automatic extinguishing system.

This report recommends changes be made to Connecticut General Statute § 29-315 and the Connecticut State Fire Safety Code, Section 7-7.1.5 authorizing the following:

Every public and private institution of higher education responsible for the housing of its students shall develop and implement a plan for the installation of an automatic extinguishing system in those residential facilities. Not later than October 1, 2003 each institution shall submit to the Commissioner of Higher Education and the State Fire Marshal such plan for their approval. The Commissioner of Higher Education and the State Fire Marshal will review them based on each institution's schedule for the overall campus plan of development, including alterations, additions, renovations and modernization of the facilities. Upon approval, each institution's plan becomes the requirement for compliance with the Connecticut State Fire Safety Code for that facility.

This recommendation takes into consideration that the overall costs associated with providing fire safety and protection, and the expected losses from the effects of fire should both be minimized. It's intent is to provide that acceptable level of fire safety. It is further recommended that funding for these projects be of the highest priority.

College and University Dormitory Survey

KEY: **S**=Sprinklered **N**=Non-Sprinklered **P**=Partially Sprinklered

Name of Institution	Dormitory			Apartment			Lodging/Rooming			Other Type of Structure	S	N	P
	S	N	P	S	N	P	S	N	P				
University of Connecticut	18	23	5	3	29		7						
Eastern Connecticut State University	3	1		4	1	5							
Central Connecticut State University	6	1		1									
Southern Connecticut State University			5	1		6							
Western Connecticut State University	4			1									
Albertus Magnus College	1	2*											
Briarwood College					1								
Connecticut College	14	9											
Fairfield University	7	2*											
Holy Apostles College and Seminary		1					1	1					
International College of Hospitality Management		4											
Mitchell College	4	3											
Quinnipiac University	4			6	13								
Sacred Heart University	6			2									
St. Basil College		1											
St. Joseph College		5											
Teikyo Post University		5			1								
Trinity College	14	11											
University of Bridgeport	2	2											
University of Hartford	9	7*											
University of New Haven	2	3*											
Wesleyan University	2	18	3					4		Town Houses		7	
Yale University	14	2											

Notes:

- 1.) Three attached dormitories at Wesleyan University are presently provided with approximately 80 % sprinkler protection.
- 2.) Partial sprinkler protection in buildings at the University of Connecticut and at Southern Connecticut State University is provided primarily in mechanical spaces and storage rooms.
 - * Albertus Magnus College - Sprinkler installation in progress in 2 dormitories.
 - * Fairfield University - Sprinkler installation in progress in 2 dormitories.
 - * University of Hartford - Sprinkler installation in progress in 2 dormitories.
 - * University of New Haven - Sprinkler installation in progress in 1 dormitory.
- 3.) All existing dormitories required to be provided with sprinkler protection are in compliance.