

**REPORT OF THE
DEPARTMENT OF HOUSING AND
COMMUNITY DEVELOPMENT ON**

**The Use Of Fire Suppression
Systems (Automatic Sprinkler
Systems) In All Multi-Unit
Residential Structures**

**TO THE GOVERNOR AND
THE GENERAL ASSEMBLY OF VIRGINIA**



HOUSE DOCUMENT NO. 65

**COMMONWEALTH OF VIRGINIA
RICHMOND
1990**



COMMONWEALTH of VIRGINIA
DEPARTMENT OF
HOUSING AND COMMUNITY DEVELOPMENT

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February 13, 1990

TO: The Honorable L. Douglas Wilder and the Honorable Members of the 1990 Virginia General Assembly

The 1989 General Assembly, by House Joint Resolution 374, requested the Board of Housing and Community Development to study the need to require all multi-unit residential structures to install automatic sprinkler systems.

Enclosed for your review and consideration is the report that has been prepared in response to this resolution.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Neal J. Barber".

Neal J. Barber, Director
Department of Housing and
Community Development



**REPORT OF THE BOARD OF HOUSING
AND
COMMUNITY DEVELOPMENT**

**Study to determine the necessity of
requirement for the installation of Fire
Protection Systems, including Automatic
Sprinkler Systems, in all Multi-unit
Residential Structures**

Introduction:

House Joint Resolution 374 of the 1989 General Assembly requested the Board of Housing and Community Development to conduct a study of the necessity of requirements for the installation of fire protection systems, including automatic sprinkler systems, in all multi-unit residential structures, including townhouses and other types of residential structures not covered under the current Virginia Uniform Statewide Building Code.

The Board responded to this resolution by directing staff to conduct public meetings for the purpose of developing a draft of proposed amendments to the current regulations, and formulating an Ad Hoc Committee of interested parties which would be affected by this study. This committee, entitled the Virginia Fire Suppression System Committee, consisted of representatives from the Virginia Fire Services Board, the Virginia Building and Code Officials Association, the National Association of Home Builders, the Virginia Office and Apartment Builders Association and Multifamily Developers.

FINDINGS

Status of Current Regulations

Volume I - New Construction Code of the 1987 Edition of the Virginia Uniform Statewide Building Code (USBC) is a mandatory, statewide uniform regulation which must be complied with in all buildings or additions hereafter constructed, altered, enlarged, repaired, or converted to another use group. Its purpose is to protect the health, safety and welfare of building users, and to provide for energy conservation, water conservation, and accessibility for the physically handicapped and aged. Enforcement by local governments is mandatory. Provision is made for modifications by the building official when alternate means will provide equivalent health and safety. An administrative appeals system is established for resolution of disagreements between the building owner and the building official.

The technical requirements of the USBC are based on the 1987 National Building Code, which is a nationally recognized model building code published by the Building Officials and Code Administrators International (BOCA). The purpose of adopting the BOCA code is to benefit the citizens of Virginia by promoting efficiency in the building industry, many aspects of which are interstate in nature.

The 1987 BOCA Code classifies multi-unit residential structures as either Use Group R-1 (Hotels, Motels) or Use Group R-2 (Apartments, townhouses, dormitories).

The 1987 code requires Use Group R-1 and R-2 buildings to have automatic sprinkler systems installed whenever the building exceeds 12 stories or 150 feet in height. The BOCA membership lowered this sprinkler threshold in June of 1988 to require all Use Group R-1 and R-2 buildings to install sprinklers, exempting only those hotel or motel guest rooms which have direct exits to the exterior of the building.

BOCA conducted further study of this issue through an Ad Hoc committee consisting of building code officials, fire code officials, fire service representatives, the sprinkler industry, fire protection engineers, the fire alarm industry, the multifamily development industry and the National Association of Home Builders. This Committee developed alternative thresholds which exempted certain low rise buildings from installing sprinklers. The exceptions were developed in recognition of the economic burden associated with providing a private water supply for the sprinkler systems when the building is located in areas without adequate public water available. The Committee also recommended the use of a new sprinkler system standard which was specifically developed for these structures by the National Fire Protection Association. This standard, designated as NFPA 13R, is based on new advancements in sprinkler head design and sprinkler piping materials. The net effect of this new technology is a reduction in sprinkler system design and installation costs. The BOCA committee also recommended several construction tradeoffs as economic incentives to encourage the installation of these systems. These tradeoffs include:

- a) Increased allowable building area,
- b) Increased allowable building height,
- c) Reduced number of required exits for buildings that are 3 stories in height from 2 to 1,
- d) Elimination of 1 hour fire resistance ratings for corridor walls,
- e) Balconies can be constructed of combustible materials,
- f) Exit access travel distances can be increased from 200 to 250 feet, etc.

The Virginia Fire Suppression Systems Committee endorsed these proposals and suggested that the Board propose these as the draft regulations.

Summary of Public Input and Draft Regulations:

The Department solicited public input at four meetings which were advertised in accordance with the Administrative Process Act. Public input was primarily supportive of the recommendations of the Virginia Fire Suppression Systems Committee, which consisted of representative from . This committee recommended the Board to draft proposed regulations to be consistent with those developed the BOCA's committee.

The Board responded to this request favorably, and proposed draft regulation

consistent with those developed by BOCA.

Action taken by BOCA Membership:

In June of 1989 the BOCA membership evaluated the BOCA Ad Hoc committee proposals for exempting certain buildings from installing sprinklers. The membership rejected the recommended exemptions in favor of the existing mandatory requirement to install the sprinkler system in all buildings.

Summary of Public Hearing:

The Board received public comments on the draft regulations at a public hearing held on August 21, 1989 in House Room C of the General Assembly Building.

The public input essentially requested the Board to consider the BOCA membership's action in their final deliberations. The VA Fire Suppression System Committee reconsidered the draft regulations, based on the BOCA activity, and suggested final adoption of the draft regulations as published.

Governor's Review and Comments:

The Governor recommended approval of the draft regulations based on their intent to help protect and promote the public's health, safety and welfare.

FINAL ACTION

The Board of Housing and Community Development resolved that adoption of these regulations was justified by the improved levels of life safety which would be provided to building occupants, and the consensus reached by the entities affected by the regulations. The Board amended the exemptions to state that buildings located where an adequate public water supply was not available did not need to install sprinkler systems. This amendment was based on documentation which indicates that a significant number of fire deaths nationwide are occurring in buildings which were constructed prior to the development and enforcement of building regulations on a national basis.

1989 SESSION

LD9136404

HOUSE JOINT RESOLUTION NO. 374

Offered January 24, 1989

Requesting the Board of Housing and Community Development to study the use of fire suppression systems (automatic sprinkler systems) in all multi-unit residential structures.

Patrons—Almand, Stambaugh and Marshall; Senators: Holland, E. M. and DuVal

Referred to the Committee on General Laws

WHEREAS, fire protection systems, including automatic sprinkler systems, could save numerous lives and millions of dollars in property damages; and

WHEREAS, automatic sprinkler systems would decrease the costs of treating burn injuries, insurance premiums and payoffs; and

WHEREAS, fires would be extinguished or confined to the area of origin automatically; and

WHEREAS, injuries to fire fighters during fire suppression operations in buildings containing fire protection systems would be reduced; now, therefore, be it

RESOLVED by the House of Delegates, the Senate concurring, That the Board of Housing and Community Development is requested to conduct a study of the necessity of requirements for the installation of fire protection systems, including automatic sprinkler systems, in all multi-unit residential structures, including town houses and other types of residential structures not covered under the current Virginia Uniform Statewide Building Code. The Board shall complete its work in time to submit its findings and recommendations to the Governor and the 1990 Session of the General Assembly as provided in the procedures of the Division of Legislative Automated Systems for processing legislative documents.

Official Use By Clerks

**Agreed to By
The House of Delegates**
without amendment
with amendment
substitute
substitute w/amdt

Agreed to By The Senate
without amendment
with amendment
substitute
substitute w/amdt

Date: _____

Date: _____

Clerk of the House of Delegates

Clerk of the Senate

