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NFPA 1141 Fire Protection in Planned Building Groups 1985

National Fire Protection Association Batterymarch Park, Quincy, MA 02269

NOTICE

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For information on the procedures for requesting Technical Committees to issue Formal Interpretations, proposing Tentative Interim Amendments, proposing amendments for Committee consideration, and appeals on matters relating to the content of the document, write to the Secretary, Standards Council, National Fire Protection Association, Batterymarch Park, Quincy, MA 02269.

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Policy Adopted by NFPA Board of Directors on December 3, 1982

The Board of Directors reaffirms that the National Fire Protection Association recognizes that the toxicity of the products of combustion is an important factor in the loss of life from fire. NFPA has dealt with that subject in its technical committee documents for many years.

There is a concern that the growing use of synthetic materials may produce more or additional toxic products of combustion in a fire environment. The Board has, therefore, asked all NFPA technical committees to review the documents for which they are responsible to be sure that the documents respond to this current concern. To assist the committees in meeting this request, the Board has appointed an advisory committee to provide specific guidance to the technical committees on questions relating to assessing the hazards of the products of combustion.

Statement on NFPA Procedures

This material has been developed under the published procedures of the National Fire Protection Association, which are designed to assure the appointment of technically competent Committees having balanced representation. While these procedures assure the highest degree of care, neither the National Fire Protection Association, its members, nor those participating in its activities accepts any liability resulting from compliance or noncompliance with the provisions given herein, for any restrictions imposed on materials or processes, or for the completeness of the text.

NFPA has no power or authority to police or enforce compliance with the contents of this document and any certification of products stating compliance with requirements of this document is made at the peril of the certifier.

NFPA 1141

Standard for

Fire Protection in Planned Building Groups

1985 Edition

This edition of NFPA 1141, *Standard for Fire Protection in Planned Building Groups*, was prepared by the Technical Committee on Rural Fire Protection, and acted on by the National Fire Protection Association, Inc. at its Fall Meeting held November 12-15, 1984 in San Diego, California. It was issued by the Standards Council on December 7, 1984, with an effective date of December 27, 1984.

The 1985 edition of this standard has been approved by the American National Standards Institute.

Origin and Development of NFPA 1141

Work on this standard was begun in 1972 by the former Technical Committee on Suburban and Rural Fire Prevention and Promotion in response to needs expressed by several members. Several drafts were prepared and a document was adopted by the Correlating Committee on Suburban and Rural Fire Protection and Prevention (predecessor to present committee) for presentation at the 1977 Annual Meeting. Due to technical problems, the standard was withdrawn from the meeting agenda.

Following reorganization of the Committee in 1982, a task group undertook a review and update of the 1977 document which resulted in the 1985 edition prepared by the Committee.

Committee on Rural Fire Protection

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Rep. Intl. Assn. of Fire Chiefs
Alan Saulsbury, Saulsbury Fire Equipment Corp.
James T. Woaters, DeKalb County Fire Services

This list represents the membership at the time the Committee was balloted on the text of this edition. Since that time, changes in the membership may have occurred.

NOTE: Membership on a Committee shall not in and of itself constitute an endorsement of the Association or any document developed by the Committee on which the member serves.

Contents

NFPA 1141

Standard for

Fire Protection in Planned Building Groups

1985 Edition

NOTICE: An asterisk (*) following the number or letter designating a paragraph indicates explanatory material on that paragraph in Appendix A.

Information on referenced publications can be found in Chapter 4 and Appendix B.

Chapter 1 Purpose and Scope

1-1 Purpose. The purpose of this standard is to consolidate into one document the necessary requirements for the prevention or minimizing of loss of lives and property that may result from fire in buildings which are a part of "planned building groups."

1-2 Scope.

1-2.1 This standard is intended to apply to all developments meeting the definition of "planned building groups" and may be used as guidance in other situations where a number of buildings are constructed in an area with limited access, water supply, or other distinguishing features that may be referred to in this standard. This standard is not intended to apply to mobile home or recreation vehicle parks which are provided for in NFPA 501A, *Standard for Firesafety Criteria for Mobile Home Installations, Sites and Communities*, and NFPA 501D, *Standard for Firesafety Criteria for Recreational Vehicle Parks and Campgrounds* respectively, nor to farm properties.

1-2.2 This standard shall not be construed as prohibiting better construction or planning features which will materially improve fire protection, fire control, or fire prevention.

1-2.3 The provisions of this standard are intended to encourage the use of innovative alternatives which are deemed through inspection, tests, or other substantive means as meeting the intent of this standard by the authority having jurisdiction. These alternatives require monitoring by the authority having jurisdiction to ensure the integrity of the provisions of this standard.

1-2.4 This standard shall not be construed as altering any existing code, law, or regulation which may require fire protection features not covered or alluded to in this standard, nor shall it waive any requirements of any code, law, or regulation. When any conflict exists between this standard and any other applicable code, law, regulation or order, the provisions of the applicable code, law, regulation or order shall prevail.

1-2.5 This standard is not intended to set forth general fire prevention features or procedures which may be covered in other codes or standards, nor shall it prohibit the commonsense use of fire prevention measures. (*See Appendix B.*)

Chapter 2 Definitions

2-1 Definitions. Words defined in this standard are intended for use only with the sections of this standard. Definitions set forth in any document referenced by this standard shall be the acceptable definitions for use of that document only. Words not specifically defined in this standard or other referenced documents shall be interpreted as being the ordinary usage of the word as set forth in *Webster's Third New International Dictionary of the English Language*, Unabridged, as published by the G & C Merriam Company, Springfield, Massachusetts, in 1966.

Alternative. A system, condition, arrangement, material or equipment submitted to the fire marshal as a substitute for a code requirement.

Approved. Acceptable to the "authority having jurisdiction."

NOTE: The National Fire Protection Association does not approve, inspect or certify any installations, procedures, equipment, or materials nor does it approve or evaluate testing laboratories. In determining the acceptability of installations or procedures, equipment or materials, the authority having jurisdiction may base acceptance on compliance with NFPA or other appropriate standards. In the absence of such standards, said authority may require evidence of proper installation, procedure or use. The authority having jurisdiction may also refer to the listings or labeling practices of an organization concerned with product evaluations which is in a position to determine compliance with appropriate standards for the current production of listed items.

Authority Having Jurisdiction. The "authority having jurisdiction" is the organization, office or individual responsible for "approving" equipment, an installation or a procedure.

NOTE: The phrase "authority having jurisdiction" is used in NFPA documents in a broad manner since jurisdictions and "approval" agencies vary as do their responsibilities. Where public safety is primary, the "authority having jurisdiction" may be a federal, state, local or other regional department or individual such as a fire chief, fire marshal, chief of a fire prevention bureau, labor department, health department, building official, electrical inspector, or others having statutory authority. For insurance purposes, an insurance inspection department, rating bureau, or other insurance company representative may be the "authority having jurisdiction." In many circumstances the property owner or his designated agent assumes the role of the "authority having jurisdiction"; at government installations, the commanding officer or departmental official may be the "authority having jurisdiction."

Automatic Fire Extinguishing System. Any system which is designed and installed to detect a fire and subsequently discharge an extinguishing agent without human activation or direction.

Basement. A story with more than 50 percent of its cubic volume below grade.

Curb Cut. Reduced curb height to facilitate vehicle passage over or across a curb. Curb cut can be an abrupt reduction or may be a tapering reduction for the length of the curb on each side of the means of access.

Dwelling. A single unit providing complete and independent living facilities for one or more persons, including permanent provisions for living, sleeping, eating, cooking and sanitation.

Existing Condition. Any situation, circumstance, or physical makeup of any structure, premise or process which was on-going or in effect prior to the adoption of this standard.

Farm Properties. Those properties which are used primarily for agricultural purposes.

Fire Department. The governmental, quasi-governmental or other organization which is responsible for providing fire protection services to an area.

Fire Door. A tested, listed or approved door and door assembly constructed and installed for the purpose of preventing the spread of fire through openings in walls, partitions, or other horizontal or vertical construction. (*See NFPA 80, Standard for Fire Doors and Windows, for classification and types of fire doors.*)

Fire Hazard. Any situation, process, material or condition which, on the basis of applicable data, may cause a fire or explosion or provide a ready fuel supply to augment the spread or intensity of the fire or explosion, and which poses a threat to life or the property of others.

Fire Hydrant. A valved connection on a piped water supply system having one or more outlets and which is used to supply hose and fire department pumpers with water.

Fire Lane. The road or other passageway developed to allow the passage of fire apparatus.

Fire Marshal. The individual designated as the administrative head of the agency, bureau or division responsible for the administration and enforcement of the fire protection laws of the jurisdiction. For purposes of utilizing this standard, this term shall also apply to any person designated as a representative of the fire marshal.

Fire Protection System. Any fire alarm device or system or fire extinguishing device or system, or their combination, which is designed and installed for detecting, controlling, or extinguishing a fire or otherwise alerting occupants, or the fire department, or both, that a fire has occurred.

Grade. The reference plane representing the average elevation of finished ground level adjoining the building at all exterior walls.

Jurisdiction. Any governmental unit or political division or subdivision including, but not limited to: township, village, borough, parish, city, county, state, commonwealth, province, freehold, district or territory over which the governmental unit exercises power and authority.

Means of Access. The method or arrangement by which entry or approach is made to a building area by fire department apparatus.

Planned Building Groups. Two or more structures constructed on a parcel of land which is under the ownership, control, or development by one individual, corporation, partnership, or firm, excluding farms.

Private Building. Any building or that portion of a building which is normally not frequented by nor open to the public.

Private Drive. The same as Private Street.

Private Dwelling. The same as Dwelling.

Private Road. The same as Private Street.

Private Street. Any access way normally intended for vehicular use in the movement between points within a planned building group area or between the planned building group area and a street.

Roadway. Any street, private street or fire lane.

Standpipe. A pipe and attendant hose valves and hose (if provided) used for conveying water to various parts of a building for fire fighting purposes. (*See NFPA 14, Standard for the Installation of Standpipe and Hose Systems.*)

Story. That portion of a building included between the upper surface of the floor and the upper surface of the floor or roof next above.

Street. A public thoroughfare (street, avenue, or boulevard) which has been dedicated for vehicular use by the public and can be used for access by fire department vehicles.

Structure. Any building, monument or other object that is constructed with the ground as its foundation or normal resting place.

Supervised Automatic Fire Extinguishing System. Any automatic fire extinguishing system which is constantly monitored so as to determine its operating condition at all times.

System. Several items of equipment, assembled, grouped or otherwise interconnected, for the accomplishment of a specific purpose or function.

Chapter 3 General Guidelines

3-1* Means of Access for Fire Department Apparatus.

3-1.1 Means of access for fire department apparatus shall consist of fire lanes, private streets, streets, parking lot lanes, or a combination thereof.

3-1.2 Means of access for fire department apparatus shall be provided to all structures in planned building groups in accordance with Section 3-1 and the applicable provisions of Sections 3-2 through 3-8.

3-1.3* Means of access for fire department apparatus shall be constructed of a hard all-weather surface adequately designed to support the heaviest piece of fire apparatus likely to be operated on the fire lane, private street, street, or parking lot lane.

3-1.4 Every dead-end roadway more than 300 ft (91 m) in length shall be provided at the closed end with a turnaround acceptable to the fire department.

3-1.5* Turns in roadways shall maintain the minimum road width and shall be constructed with a minimum radius of 25 ft (7.5 m) at the inside curb line and a radius of 50 ft (15 m) at the outside curb line.

3-1.6* Roadways shall be not less than 24 ft (7 m) wide provided no parking is allowed, not less than 30 ft (9 m) wide if parallel parking is allowed on one side, and not less than 36 ft (10.5 m) wide if parallel parking is allowed on both sides.

3-1.7 Parking in any means of access shall not be permitted within 20 ft (6 m) of a fire hydrant, sprinkler or standpipe connection or in any other manner which will obstruct or interfere with the fire department's use of the hydrant or connection.

3-1.8 "No Parking" signs or other designation indicating that parking is prohibited shall be provided at all normal and emergency access points to structures and within 20 ft (6 m) of each fire hydrant, sprinkler, or standpipe connection.

3-1.9 Where no recognized water supply distribution system exists, appropriate access shall be provided for water supplies in accordance with the provisions of NFPA 1231, *Standard on Water Supplies for Suburban and Rural Fire Fighting*.

3-2 Fire Lanes.

3-2.1 Fire lanes shall be provided as required by the fire department having jurisdiction and in keeping with the following recommendations.

3-2.2 Fire lanes shall be at least 20 ft (6 m) in width with the road edge closest to the structure at least 10 ft (3 m) from the structure.

3-2.3* "No Parking — Tow-Away Zone" signs shall be posted in accordance with the instructions of the fire department having jurisdiction and a method of enforcing such provisions shall be provided.

3-2.4 Fire lanes connecting to public streets, roadways, or private streets shall be provided with curb cuts extending at least 2 ft (0.6096 m) beyond each edge of the fire lane.

3-2.5* Chains or other barriers may be provided at the entrance to fire lanes or private streets, provided that they are installed according to the requirements of the fire department having jurisdiction.

3-2.6 The designation and maintenance of fire lanes on private property shall be accomplished as specified by the fire department having jurisdiction.

3-3 Parking Lot Lanes.

3-3.1 Parking lot lanes shall have a minimum of 25 ft (7.5 m) clear width between rows of parked vehicles for vehicular access and movement.

3-4 Location of Structures.

3-4.1 At least three perimeter walls of structures and all exterior doors into structures constructed as a part of a planned building group shall be within 200 ft (61 m) of an approved fire lane or street.

3-4.2 Structures exceeding 30 ft (9 m) in height shall not be set back more than 50 ft (15 m) from a street, fire lane, or private street.

Exception: When any combination of private fire protection facilities, including, but not limited to, fire-resistive roofs, fire separation walls, space separation and automatic fire extinguishing systems, is provided and approved by the fire marshal as an acceptable alternative, 3-4.2 shall not apply.

3-4.3 All structures exceeding three stories in height and 3,000 sq ft (279 sq m) in ground floor area and containing nonrated openings in exterior walls facing other structures shall be separated from other structures by at least 20 ft (6 m) of clear space between structures, and 10 ft (3 m) from a common property line. (*See 1-2.4.*)

3-4.4* At least two means of access for fire apparatus shall be provided for each structure exceeding 30 ft (9 m) or three stories in height, not less than one of which shall be a fire lane, or street.

3-4.5* At least 14 ft (4 m) of nominal clearance shall be provided over the full width of streets, private streets, fire lanes, and other means of vehicular access.

3-4.6* Landscaping or other obstructions shall not be placed around structures in a manner so as to impair or impede accessibility for fire fighting and rescue operations.

3-4.7* The location of structures and access to each structure shall be approved by the fire marshal before permits for construction are issued.

3-5 Fire Protection.

3-5.1 All structures more than three stories in height or over 50 ft (15 m) in height above grade and containing intermediate stories or balconies shall be equipped with a standpipe system in accordance with the provisions of NFPA 14, *Standard for the Installation of Standpipe and Hose Systems* (*see 1-2.4*). Fire department standpipe connections shall be located within 50 ft (15 m) of a fire hydrant.

Exception: This section shall not apply to industrial process structures where life or property of others is not imperiled by fire or explosion.

3-5.2 Automatic fire extinguishing systems shall be required as set forth in the applicable NFPA code or standard for the intended occupancy of the structures or as may be otherwise required by the authority having jurisdiction. Fire department connections for sprinkler systems shall be located within 50 ft (15 m) of a fire hydrant. All such systems shall be installed in accordance with the applicable NFPA standard or code for the type of fire extinguishing system installed. (*See Appendix B.*)

3-5.3* A portable fire extinguisher having a minimum rating of 2-A, 10-BC shall be provided for each dwelling unit. (*See Appendix B.*)

3-5.4* An approved automatic detection system shall be installed in each dwelling unit in accordance with NFPA 74, *Standard for the Installation, Maintenance, and Use of Household Fire Warning Equipment*. The automatic detection system shall include at least one smoke detector in each dwelling unit. (*See Appendix B.*)

3-5.5 For other than dwelling units, a fire warning or alarm system shall be provided in accordance with the applicable NFPA code or standard for the intended occupancy of the structure. Such systems shall be installed in accordance with the applicable NFPA code or standard for the type of system installed and shall be designed to alert occupants under emergency conditions and to retransmit to ensure notification of the fire department. Alarms or warning systems shall be tested and maintained in accordance with the applicable NFPA code or standard or as may be required by the authority having jurisdiction. (*See Appendix B.*)

3-6 Water Supply. (*See Appendix B.*)

3-6.1 Water supply systems not publicly owned and installed shall meet the minimum requirements of NFPA 24, *Standard for the Installation of Private Fire Service Mains and Their Appurtenances*, or NFPA 1231, *Standard on Water Supplies for Suburban and Rural Fire Fighting*, where no recognized water supply distribution exists.

3-6.2 Fire hydrants shall be provided in a ratio of at least one fire hydrant for every 90,000 sq ft (8370 sq m) of ground area or portion thereof involved in the development.

Exception: This requirement shall not apply to land planned or left for other than structural development.

3-6.2.1 The fire flow requirements shall be not less than that established by the fire department having jurisdiction. In cases where a water supply system consisting of mains and hydrants does not exist, the provisions of NFPA 1231, *Standard on Water Supplies for Suburban and Rural Fire Fighting*, shall apply.

3-6.2.2 Water supplies shall be capable of supplying the required fire flow for at least one hour for fire flows of 1500 gpm (6750 L/min) at 20 psi (1.38 bars) or less or for two hours for fire flow greater than 1500 gpm (6750 L/min) at 20 psi (1.38 bars).

Exception: In those situations where the provisions of NFPA 1231, Standard on Water Supplies for Suburban and Rural Fire Fighting, are utilized, 3-6.2.2 shall not apply.

3-6.2.3* The contractor or installer of water supply systems in planned building groups shall demonstrate by actual test that the capacity of the water supply system will meet fire protection design requirements. Fire flow performance tests shall be witnessed by the fire department and other authorities having jurisdiction who desire to do so.

3-6.3 Distances between installed fire hydrants shall not exceed 300 ft (91 m) unless fire department operations or technology would otherwise dictate increased spacing. For buildings exceeding 20,000 sq ft (1860 sq m) in ground floor area, a fire hydrant shall be installed within 300 ft (91 m) of any portion of the building. Actual location of fire hydrants shall be as required by the fire department prior to installation.

3-6.4 Fire hydrants shall be marked in accordance with NFPA 291, *Recommended Practice for Fire Flow Testing and Marking of Hydrants*.

3-6.5 Fire hydrants located in parking areas shall be protected by barriers that will prevent physical damage from vehicles.

3-6.6 Fire hydrants shall be located within 3 ft (0.9144 m) of the curb line of fire lanes, streets, or private streets, when installed along such access ways.

3-6.7 Fire hydrants shall be installed in accordance with the standards of the American Water Works Association. (*See Appendix B.*)

3-6.8 Threads on fire hydrant outlets shall be American National Fire Hose Connection Screw Threads and shall be equipped with thread adapters when the local fire department thread is different. (*See NFPA 1963, Standard for Screw Threads and Gaskets for Fire Hose Connections.*)

3-6.9 Fire hydrants shall be supplied by not less than a 6-in. (15-cm) diameter main installed on a looped system, or not less than an 8-in. (20-cm) diameter main if the system is not looped or the fire hydrant is installed on a dead-end main exceeding 300 ft (91 m) in length.

3-6.10 Dead-end mains shall not exceed 600 ft (182.5 m) in length for main sizes under 10 in. (25 cm) in diameter.

3-7 Construction of Structures.

3-7.1 Construction of each structure shall be equal to the requirements of the building code of the jurisdiction. In areas not governed by a building code, NFPA codes or standards as they apply for the intended occupancy of the structure shall be considered the minimum requirements. (*See Appendix B.*)

3-7.2 Common walls between tenants or dwelling units shall have a fire resistance rating of not less than 1 hour.

3-8 Fire Protection During Construction. (*See Appendix B.*)

3-8.1 Protection shall be not less than that required by the fire department having jurisdiction.

3-8.2 Fire department vehicular access to all structures under construction shall be provided at all times. In areas where ground surfaces are soft or likely to become soft, hard all-weather surface access roads shall be provided. (*See 3-1.3.*)

3-8.3 The fire protection water supply system, including fire hydrants, shall be installed and in service prior to placing combustible building materials for structures, or combustible pretested fabricated building assemblies on the project site or utilizing them in the construction of building structures. If phased construction is planned, coordinated installation of the fire protection water system is permitted. (*See 3-6.2.3.*)

3-8.4 Trash and debris shall be removed from the construction site as often as necessary to maintain a firesafe construction site.

3-8.5 Flammable or combustible liquids shall be stored, handled, or used on the construction site in accordance with the applicable provisions of NFPA 30, *Flammable and Combustible Liquids Code*; NFPA 58, *Standard for the Storage and Handling of Liquefied Petroleum Gases*; and NFPA 395, *Standard for the Storage of Flammable and Combustible Liquids on Farms and Isolated Construction Projects.*

3-8.6 At least one portable fire extinguisher having a rating of at least 4-A, 30-BC shall be within a travel distance of 75 ft (22.5 m) or less to any point of a structure under construction. Personnel normally on the construction site shall be instructed in the use of the fire extinguishers provided. (*See Appendix B.*)

3-8.7* A method of security shall be provided on the construction site during the hours when construction workers are not present on the site.

3-9 Plans.

3-9.1 All plans for planned building groups shall be submitted to the authority having jurisdiction for approval before the issuance of the construction permit. This approval procedure shall include the fire department having jurisdiction.

3-9.2 In addition to the requirements of 3-9.1, a small-scale drawing of the site's surrounding area showing streets, access points, water supply sources, and other items of fire suppression interest shall be submitted to the local fire department before the start of any construction. (*See 1-2.4.*)

3-9.3 Drawings showing building floor plans, fire protection systems, and items of fire suppression interest shall be submitted to the fire department having jurisdiction, as requested, upon completion of the project.

Chapter 4 Referenced Publications

4-1 The following documents or portions thereof are referenced within this standard and shall be considered part of the requirements of this document. The edition indicated for each reference is current as of the date of the NFPA issuance of this document. These references are listed separately to facilitate updating to the latest edition by the user.

4-1.1 NFPA Publications. National Fire Protection Association, Batterymarch Park, Quincy, MA 02269.

NFPA 14-1983, *Standard for the Installation of Standpipe and Hose Systems*

NFPA 24-1984, *Standard for the Installation of Private Fire Service Mains and Their Appurtenances*

NFPA 30-1984, *Flammable and Combustible Liquids Code*

NFPA 58-1983, *Standard for the Storage and Handling of Liquefied Petroleum Gases*

NFPA 74-1984, *Standard for the Installation, Maintenance, and Use of Household Fire Warning Equipment*

NFPA 291-1983, *Recommended Practice for Fire Flow Testing and Marking of Hydrants*

NFPA 395-1984, *Standard for the Storage of Flammable and Combustible Liquids on Farms and Isolated Construction Projects*

NFPA 501A-1982, *Standard for Firesafety Criteria for Mobile Home Installations, Sites and Communities*

NFPA 501D-1983, *Standard for Firesafety Criteria for Recreational Vehicle Parks and Campgrounds*

NFPA 1231-1984, *Standard on Water Supplies for Suburban and Rural Fire Fighting*

NFPA 1963-1979, *Standard for Screw Threads and Gaskets for Fire Hose Connections.*

Appendix A

This Appendix is not a part of the requirements of this NFPA document, but is included for information purposes only.

A-3-1 This section is intended to apply to roads constructed within the confines of private property whether they be dedicated or not.

A-3-1.3 A fire lane may be subsurface construction of a hard material adequately designed to support the heaviest piece of fire apparatus likely to be driven upon it and then covered with no more than 3 in. (7.6 cm) of soil, sod, or both. When a subsurface fire lane is constructed it shall be identified in a manner acceptable to the fire department.

A-3-1.5 Turns in roads of this width must be designed and constructed as indicated or fire apparatus will have to ride up on the curb. Sharper turns may prohibit or seriously detain apparatus response.

A-3-1.6 Road width must be sufficient for travel, passing other vehicles, and operating from apparatus in the vicinity of the fire scene.

A-3-2.3 The local law enforcement officers must be given written legal authority to enforce parking regulations or property management must be prepared to enforce these regulations with their own personnel, including the towing of vehicles as may be necessary.

A-3-2.5 Break-away locks may be used on chains.

A-3-4.4 For taller buildings it may be necessary that provision be made to position apparatus on two or more sides of the building for effective fire fighting and rescue operations. Ground ladders can be effectively used on the shorter buildings. Taller buildings normally require the use of aerial ladders. Preferably, access should be provided in the front and rear of the structure.

A-3-4.5 Clearances of less than 14 ft (4 m) may prohibit or severely slow the response of certain types or makes of fire apparatus.

A-3-4.6 This would include obstructions obscuring or interfering with fire department connections to sprinkler and/or standpipe systems.

A-3-4.7 Plan review and cooperative solutions to problems in the planning stage tend to eliminate many major difficulties, economic waste, and misunderstandings. For example, an identification system for all buildings and roadways can aid in fire department response.

A-3-5.3 This requirement may be met by providing one multipurpose dry chemical fire extinguisher or one Class A and one Class BC fire extinguisher. The recommendation for providing these extinguishers in the dwelling unit is basically for security.

A-3-5.4 For the purposes of this section, a series of noninterconnected single station detectors may be classified as a system.

A-3-6.2.3 It is recommended that the fire department consider the required fire flow as established by the insurance rating authority for the area.

A-3-8.7 The method of security is to be as agreed upon by the contractor and local officials and should be commensurate with the item(s) or area needing security. It may involve a fence with padlocked gate, hiring guards or providing a patrol security system.

Appendix B Referenced Publications

B-1 The following documents or portions thereof are referenced within this standard for informational purposes only and thus should not be considered part of the requirements of this document. The edition indicated for each reference is current as of the date of the NFPA issuance of this document. These references are listed separately to facilitate updating to the latest edition by the user.

B-1.1 NFPA Codes, Standards and Recommended Practices. National Fire Protection Association, Batterymarch Park, Quincy, MA 02269.

NFPA 1-1982, *Fire Prevention Code*

NFPA 10-1984, *Standard for Portable Fire Extinguishers*

NFPA 13-1985, *Standard for the Installation of Sprinkler Systems*

NFPA 13A-1981, *Recommended Practice for the Inspection, Testing, and Maintenance of Sprinkler Systems*

NFPA 13D-1984, *Standard for the Installation of Sprinkler Systems in One- and Two-Family Dwellings and Mobile Homes*

NFPA 20-1983, *Standard for the Installation of Centrifugal Fire Pumps*

NFPA 22-1984, *Standard for Water Tanks for Private Fire Protection*

NFPA 27-1981, *Recommendations for Organization, Training and Equipment of Private Fire Brigades*

NFPA 31-1983, *Standard for the Installation of Oil Burning Equipment*

NFPA 54-1984, *National Fuel Gas Code*

NFPA 70-1984, *National Electrical Code®*

NFPA 71-1982, *Standard for the Installation, Maintenance, and Use of Central Station Signaling Systems*

NFPA 72A-1985, *Standard for the Installation, Maintenance, and Use of Local Protective Signaling Systems for Guard's Tour, Fire Alarm and Supervisory Service*

NFPA 72B-1979, *Standard for the Installation, Maintenance, and Use of Auxiliary Protective Signaling Systems for Fire Alarm Service*

NFPA 72D-1979, *Standard for the Installation, Maintenance, and Use of Proprietary Protective Signaling Systems*

NFPA 72E-1984, *Standard on Automatic Fire Detectors*

NFPA 78-1983, *Lightning Protection Code*

NFPA 80-1983, *Standard for Fire Doors and Windows*

NFPA 80A-1980, *Recommended Practice for Protection of Buildings from Exterior Exposure Fires*

NFPA 82-1983, *Standard on Incinerators, Waste and Linen Handling Systems and Equipment*

NFPA 90A-1985, *Standard for the Installation of Air Conditioning and Ventilating Systems*

NFPA 90B-1984, *Standard for the Installation of Warm Air Heating and Air Conditioning Systems*

NFPA *101®*-1985, *Life Safety Code*

NFPA 203M-1980, *Manual on Roof Coverings and Roof Deck Constructions*

NFPA 206M-1976, *Guide on Building Areas and Heights*

NFPA 211-1984, *Standard for Chimneys, Fireplaces, Vents and Solid Fuel Burning Appliances*

NFPA 220-1979, *Standard on Types of Building Construction*

NFPA 224-1985, *Standard for Homes and Camps in Forest Areas*

NFPA 241-1980, *Standard for Safeguarding Building Construction and Demolition Operations*

NFPA 291-1983, *Recommended Practice for Fire Flow Testing and Marking of Hydrants*

NFPA 601-1981, *Standard for Guard Service in Fire Loss Prevention*

NFPA 601A-1981, *Standard for Guard Operations in Fire Loss Prevention*

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