

## CHAPTER 18

## UNIFORM FIRE CODE

## Authority

N.J.S.A. 52:27D-198, 201 and 219.

## Source and Effective Date

R.1995 d.58, effective January 3, 1995.  
See: 26 N.J.R. 4258(a), 27 N.J.R. 878(b).

## Executive Order No. 66(1978) Expiration Date

Chapter 18, Uniform Fire Code, expires on January 3, 2000.

## Chapter Historical Note

Chapter 18, which formerly contained rules concerning Rentals, was adopted by the New Jersey Housing Finance Agency on July 21, 1970, filed and became effective on July 21, 1970 as R.1970 d.86. See: 2 N.J.R. 47(b), 2 N.J.R. 71(a). The chapter was repealed effective May 30, 1980 as R.1980 d.234. New rules concerning rents were adopted by the Housing Finance Agency at N.J.A.C. 5:80-1. See: 12 N.J.R. 170(c), 12 N.J.R. 388(a). Chapter 18, Uniform Fire Code, was adopted by R.1985 d.66, effective February 19, 1985. See: 16 N.J.R. 3339(b), 17 N.J.R. 394(a). Subchapter 4, Fire Safety Code, was adopted as R.1986 d.214, effective June 16, 1986. See: 17 N.J.R. 1161(a), 18 N.J.R. 1260(b).

Pursuant to Executive Order No. 66(1978), Chapter 18 was readopted as R.1990 d.72, effective January 4, 1990. See: 21 N.J.R. 3344(a), 22 N.J.R. 337(b). Subchapter 3, State Fire Prevention Code, was repealed and an updated Subchapter 3, State Fire Prevention Code, was adopted as R.1992 d.105, effective March 2, 1992. See: 23 N.J.R. 3554(a), 24 N.J.R. 740(a).

Pursuant to Executive Order No. 66(1978), Chapter 18 was readopted as R.1995 d.58. See: Source and Effective Date. See, also, section annotations.

## Cross References

Child care center physical facility requirements, see N.J.A.C. 10:122-5.1 et seq.

Children's group home physical facility requirements, see N.J.A.C. 10:128-4.1 et seq.

Children's shelter physical facility requirements, see N.J.A.C. 10:124-5.1 et seq.

Residential child care physical facility requirements, see N.J.A.C. 10:127-4.1.

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## APPENDIX 3A

## APPENDIX 3B

## SUBCHAPTER 1. GENERAL PROVISIONS

### 5:18-1.1 Title; division into subchapters

(a) The regulations contained in this chapter shall be known as the "New Jersey Uniform Fire Code" and are referred to herein as the Code.

(b) The Code is divided into four subchapters:

1. N.J.A.C. 5:18-1, entitled "General Provisions";
2. N.J.A.C. 5:18-2, entitled "Administration and Enforcement";
3. N.J.A.C. 5:18-3, entitled "State Fire Prevention Code"; and
4. N.J.A.C. 5:18-4, entitled "State Fire Safety Code."

Amended by R.1985 d.611, effective December 2, 1985.

See: 17 N.J.R. 1015(b), 17 N.J.R. 2870(a).

(b)3 substituted "1984" for "latest".

Amended by R.1986 d.214, effective June 16, 1986.

See: 17 N.J.R. 1161(a), 18 N.J.R. 1260(b).

(b)4 deleted "(Reserved)" and added text "is entitled "Fire ... as this subchapter."

Amended by R.1992 d.104, effective March 2, 1992.

See: 23 N.J.R. 3552(a), 24 N.J.R. 739(a).

Text referencing BOCA deleted.

Amended by R.1995 d.58, effective March 6, 1995.

See: 26 N.J.R. 4258(a), 27 N.J.R. 878(b).

### 5:18-1.2 Authority

This Code is promulgated by the Commissioner of the Department of Community Affairs pursuant to authority of the "Uniform Fire Safety Act" (P.L. 1983, c.383, N.J.S.A. 52:27D-192 et seq.).

### 5:18-1.3 Intent and purpose

(a) It is the intent of this Code to prescribe regulations consistent with nationally recognized good practice for the safeguarding to a reasonable degree of life and property from the hazards of fire and explosion arising from the storage, handling and use of hazardous substances, materials and devices, and from conditions hazardous to life or property in the use or occupancy of buildings or premises.

(b) Where no specific standards or requirements are specified in this Code, or contained within other applicable laws (or adopted codes) or ordinances, compliance with the standards of the National Fire Protection Association or other nationally recognized fire-safety standards as are approved by the fire official shall be deemed as prima facie evidence of compliance with the stated intent of this Code.

Amended by R.1985 d.611, effective December 2, 1985.

See: 17 N.J.R. 1015(b), 17 N.J.R. 2870(a).

Substituted "Prevention" for "Protection".

Amended by R.1995 d.58, effective March 6, 1995.

See: 26 N.J.R. 4258(a), 27 N.J.R. 878(b).

### 5:18-1.4 Applicability

(a) The provisions of this Code shall apply to new and existing buildings, uses and conditions, as hereinafter provided.

(b) The provisions contained in this Code shall not be construed as applying to the transportation of any article or substance shipped under the jurisdiction of and in compliance with the regulations prescribed by the military forces of the United States or the transportation of flammable or combustible liquids or hazardous materials or chemicals subject to the regulation and control of the New Jersey Department of Transportation or the United States Department of Transportation or other Federal Agency having jurisdiction.

1. The fire official shall have jurisdiction to order the correction of any dangerous condition created by any transportation conveyance.

2. The right of any local government to adopt ordinances governing the routing of vehicles transporting flammable or combustible liquids or hazardous materials or chemicals shall not be deemed to be limited by anything contained in this section.

(c) Nothing in this Code shall be construed, interpreted or applied to abrogate, nullify or abolish any law, ordinance or code adopted by any local government regulating the repair, removal, demolition, use, location, occupancy or maintenance of buildings and property as specifically provided herein. When any provision of this Code is found to be in conflict with any zoning, safety, health or other applicable law, ordinance or code of the jurisdiction existing on the effective date of this Code or hereafter adopted, the provision which establishes the higher standard for the promotion and protection of the safety and welfare of the public shall prevail.

(d) All regulations, other than this Code, promulgated by any State agency with regard to fire safety in existing buildings, structures and premises subject to this Code shall, to the extent of any inconsistency with this Code, be deemed to have been superseded by this Code.

1. Regulations determined by the Department of Community Affairs to be affected by this subsection include the following:

- i. N.J.A.C. 5:10-25;
- ii. N.J.A.C. 5:27-5;
- iii. N.J.A.C. 5:23-2.23(i)7 and 9;
- iv. N.J.A.C. 8:43-3;
- v. N.J.A.C. 8:43A-15.2(b) and (c);
- vi. N.J.A.C. 8:43B-3.2;
- vii. N.J.A.C. 8:39-41.3 and 41.4;
- viii. N.J.A.C. 8:42A-23.7;
- ix. N.J.A.C. 10:44A-6.1(e) through (w);
- x. N.J.A.C. 10:44B-6.2;
- xi. N.J.A.C. 10A:31-3.1(b)1-3 and 11-13;
- xii. N.J.A.C. 10A:32-4.4 and 4.5;
- xiii. N.J.A.C. 10A:34-2.13;
- xiv. N.J.A.C. 12:100-4.2(a)10 (incorporating Subparts E, L and S of 29 C.F.R. Part 1910);
- xv. N.J.A.C. 12:90; and
- xvi. N.J.A.C. 12-200.

2. The enumeration of certain regulations in (d)1 above shall not be construed as limiting the applicability of this subsection.

(e) The planning, design and construction of new buildings and structures, or the planning, design and alteration or renovation of existing buildings and structures, to provide the necessary egress facilities, fire protection and built-in fire protection equipment shall be controlled by the New Jersey Uniform Construction Code, and any alterations, additions or changes in or to buildings and structures required by the provisions of this Code which are within the scope of the Uniform Construction Code shall be made in accordance therewith, unless specifically provided otherwise by this Code.

(f) When adequate fire protection is not being provided in a building, structure or premises as herein required or where such fire protection is deemed necessary by the fire official due to hazardous or dangerous conditions involving the occupancy of a building or structure, special fire protection equipment shall be installed in accordance with the requirements of the fire official and Uniform Construction Code.

(g) Any requirement in this chapter that is applicable to a building shall also be applicable to the exterior portion of the premises in which the building is located, or to a premises that does not include a building, if the Division or the fire official finds compliance with such requirement in such exterior area or premises to be necessary for the protection of the safety of persons upon the premises, firefighters or the general public.

Amended by R.1985 d.611, effective December 2, 1985.

See: 17 N.J.R. 1015(b), 17 N.J.R. 2870(a).

(b)2 deleted "Nothing in this section shall be deemed to limit the" and added text "shall not be ... in this section."

Amended by R.1986 d.214, effective June 16, 1986.

See: 17 N.J.R. 1161(a), 18 N.J.R. 1260(b).

Added "New Jersey Department of Transportation" to (b).

Amended by R.1989 d.556, effective November 6, 1989.

See: 21 N.J.R. 2431(a), 21 N.J.R. 3453(a).

Added new (d) regarding superseding of rules.

Amended by R.1991 d.570, effective November 18, 1991.

See: 23 N.J.R. 2813(a), 23 N.J.R. 3444(a).

Added new (h).

Amended by R.1993 d.628, effective December 6, 1993.

See: 25 N.J.R. 4363(a), 25 N.J.R. 5466(a).

Amended by R.1995 d.58, effective March 6, 1995.

See: 26 N.J.R. 4258(a), 27 N.J.R. 878(b).

### 5:18-1.5 Definitions

The following terms shall have the meanings indicated except where the context clearly requires otherwise. All definitions found in the Uniform Fire Safety Act, P.L.1983, c. 383, N.J.S.A. 52:27D-192 et seq., shall be applicable to this chapter. Where a term is not defined in this section or in the Uniform Fire Safety Act, then the definition of that term found in the Uniform Construction Code at N.J.A.C. 5:23-1.4 shall govern.

"Act" means the Uniform Fire Safety Act, P.L. 1983, c.383, N.J.S.A. 52:27D-192 et seq., and includes all acts amendatory and supplementary thereto and all regulations adopted pursuant thereto.

"Atrium" means a floor opening or series of floor openings connecting two or more stories that is covered at the top of the series of openings and is used for purposes other than an enclosed stairway; elevator hoistway; escalator opening; or utility shaft used for plumbing, electrical, air conditioning, or communication facilities.

"Bed and breakfast" means a facility providing sleeping or dwelling accommodations to transient guests which:

1. Is comprised of a structure originally constructed as a private residence or a bed and breakfast;
2. Includes individual sleeping accommodations for 50 or fewer guests;
3. Has at least one dwelling unit occupied by the owner of the facility as his place of residence during any time that the facility is being used for the lodging of guests;

4. Has not less than 300 square feet of common area for the exclusive use of the guests, including, but not limited to, parlors, dining rooms, libraries and solariums;

5. Prohibits cooking and smoking in guest rooms;

6. Provides a meal to the guests in the forenoon of each day but does not operate as a restaurant open to the general public;

7. Is not a "rooming house" or "boarding house" as defined in N.J.S.A. 55:13B-3; and

8. Does not allow:

i. More than 15 percent of the guests to remain more than 30 successive days or more than 30 days of any period of 60 successive days or more than 30 days of any period of 60 successive days; or

ii. Any guest to remain more than 60 successive days or more than 60 days of any period of 90 successive days.

"Bed and breakfast guesthouse" means a bed and breakfast designed to accommodate at least six guests, but not more than 25 guests.

"Bed and breakfast homestay" means a bed and breakfast designed to accommodate five or fewer guests.

"Bed and breakfast inn" means a bed and breakfast designed to accommodate at least 26 guests, but not more than 50 guests.

"Carnival" means a traveling circus or other traveling amusement show having one or more of the following uses:

1. Mobile enclosed structures used for human occupancy;

2. Tents or temporary tension membrane structures requiring a permit in accordance with N.J.A.C. 5:18-2.7(b)3iii;

3. Any use involving open flame or flame producing device(s).

"Commissioner" means the Commissioner of the Department of Community Affairs or his delegate.

"Common Areas", when used with reference to a covered mall building, shall include all areas not included within any retail establishment and shall also include the required means of egress from all retail establishments. When used with reference to buildings of use groups R-1 and R-2 shall mean all areas accessible to, and which may be utilized by, either the building occupants or the general public and shall include, but not be limited to, vestibules, hallways, stairways, landings and occupiable rooms and spaces not part of any dwelling unit; and shall also include any area accessible to the owner or manager or any person employed in the maintenance of the building which area is not part of any dwelling unit.

"Day" means a calendar day, unless otherwise specified.

"Department" means the New Jersey Department of Community Affairs.

"Director" means the Director of the Division of Fire Safety.

"Division" means the Division of Fire Safety of the Department of Community Affairs.

"Fire barrier" means a continuous membrane, either vertical or horizontal, such as a wall or floor assembly, that is designed and constructed with a specified fire resistance rating and located to limit the spread of fire and restrict the movement of smoke. Such barriers may have protected openings when a specific fire resistive rating is indicated by this Code. When a rating is required, existing walls, columns and floor/ceiling assemblies meeting the requirements of Federal Housing and Urban Development Rehabilitation Guidelines #8 or of Sections 1, 2, 3 and 4 of Appendix B of the BOCA Basic/National Existing Structures Code, 1984 Ed., shall be acceptable.

"Fire Inspector" means a person working under the direction of the fire official who is certified by the Commissioner of the Department of Community Affairs and appointed or designated to enforce the Code by the appointing authority of a local enforcing agency.

"Fire Official" means a person certified by the Commissioner of the Department of Community Affairs and appointed or designated to direct the enforcement of the Code by the appointing authority of a local enforcing agency. This term shall also include "Fire Marshal" where the fire official has been appointed pursuant to N.J.A.C. 5:18A-3.2.

"Floor area, gross" means the floor area within the perimeter of the outside walls of the building or use under consideration, without deduction for hallways, stairs, closets, thickness of walls, columns or other features.

"Floor area, net", for purposes of determining occupant load, means the actual occupied floor area and shall not include unoccupied accessory areas or thickness of walls.

"High-rise structure" means any building or structure having floors used for human occupancy located either more than six stories or more than 75 feet above the lowest level accessible to a fire department vehicle.

"Incidental use" means a use supplemental to the main use of a building where the area devoted to such use does not occupy more than 10 percent of the area of any floor.

"Life hazard use" means a building or structure, or part thereof, classified in any of the use groups in the building subcode of the New Jersey Uniform Construction Code and defined as such in subchapter 2 of this chapter. "Life hazard use" shall also mean and include high rise structures as defined in this section.



"Local enforcing agency" means a municipal agency, fire department, fire district or county fire marshal authorized by municipal ordinance to enforce the Act within a specific local jurisdiction or, where such authorization has not been granted by local ordinance, it means the Department of Community Affairs. "Local enforcing agency" shall also mean and include a county fire marshal authorized by ordinance or resolution of the board of chosen freeholders to enforce the Act in county facilities.

"Lumber" means boards, dimension lumber, timber, plywood, pressure treated wood, fencing and fence posts, and other similar wood products.

"Maximum permitted occupancy" means the maximum number of persons which can be permitted in a building or portion thereof as established in accordance with N.J.A.C. 5:18-4.11(e).

"Owner" means a person who owns, purports to own, manages, rents, leases or exercises control over a building, structure, premises, or use, or a portion thereof.

"Owner-occupied" when used in conjunction with "Use Group R-3" means a building serving as the residence of at least one holder of record of title to the property.

"Premises" means a specific locality, area of land or portion thereof, and shall include any buildings, structures or portions of buildings or structures thereon.

"Protective equipment" means any equipment, device, system or apparatus permitted or required by the commissioner to be constructed or installed in or upon a building, structure or premises for the purpose of protecting the occupants or intended occupants thereof, fire fighters or the public generally from fire or products of combustion.

"Smoke barrier" means a continuous membrane, either vertical or horizontal, such as a wall, floor, or ceiling assembly, that is designed and constructed to restrict the movement of smoke. A smoke barrier may or may not have a fire resistance rating. Such barriers may have protected openings. When a fire resistive rating is required, existing walls, columns and floor/ceiling assemblies meeting the requirements of Federal Housing and Urban Development Rehabilitation Guidelines #8, or of Sections 1, 2, 3 and 4 of Appendix B of the BOCA Basic/National Existing Structures Code, 1984 Ed., shall be acceptable.

"Story above grade" means any story having its finished floor surface entirely above grade except that a story which is partly or completely below grade (basement) shall be considered as a story above grade when the distance from grade to the finished surface of the floor above the basement is more than six feet for more than 50 percent of the total perimeter or more than 12 feet at any point.

"Uniform Construction Code" or "Construction Code" means the New Jersey Uniform Construction Code (N.J.A.C. 5:23-1 et seq.).

"Use" or "Use Group" means the use to which a building, portion of a building, or premises, is put as follows. It shall also mean and include any place, whether constructed, manufactured or naturally occurring, whether fixed or mobile, that is used for human purpose or occupancy that would subject it to the provisions of this Code if it were a building or premises.

1. "Use Group A-1-A": This Use Group shall include all theaters and other buildings used primarily for theatrical or operatic performances and exhibitions, arranged with a raised stage, proscenium curtain, fixed or portable scenery loft, lights, motion picture booth, mechanical appliances or other theatrical accessories and equipment, and provided with fixed seats.

2. "Use Group A-1-B": This Use Group shall include all theaters without a stage and equipped with fixed seats used for motion picture performances.

3. "Use Group A-2": This Use Group shall include all buildings and places of public assembly, without theatrical stage accessories, designed for use as dance halls, night clubs, and eating and/or drinking establishments, and similar occupancies, in which the established maximum permitted occupant load exceeds the number of seats provided by more than 30 percent, and shall include all rooms, lobbies and other spaces connected thereto with a common means of egress and entrance.

4. "Use Group A-3": This Use Group shall include all buildings with or without an auditorium in which persons assemble for amusement, entertainment or recreation, and incidental motion picture, dramatic or theatrical presentations, lectures or other similar purposes without theatrical stage other than a raised platform; and principally used without permanent seating facilities, including art galleries, exhibition halls, museums, lecture halls, libraries, restaurants other than night clubs, and recreation centers; and buildings designed for other similar assembly purposes including passenger terminals.

5. "Use Group A-4": This Use Group shall include all buildings used as churches and for similar religious purposes.

6. "Use Group A-5": This Use Group shall include grandstands, bleachers, coliseums, stadiums, tents and similar structures for outdoor assembly uses.

7. "Use Group B": All buildings and structures, or parts thereof, shall be classified in Use Group B which are used for the transaction of business, for the rendering of professional services, or for other services that involve stocks of goods, wares or merchandise in limited quantities for use incidental to office uses or sample purposes.

8. "Use Group E": This Use Group shall include all buildings and structures serving 50 or more students from kindergarten through grade 12 and also means and includes any educational building serving 50 or more students in some, but not all, of the grades from kindergarten to grade 12, inclusive.

9. "Use Group F": All buildings and structures, or parts thereof, in which occupants are engaged in performing work or labor in the fabricating, assembling or processing of products or materials shall be classified in Use Group F; including, among others, factories, assembling plants, industrial laboratories and all other industrial and manufacturing uses, except those of Use Group H involving highly combustible, flammable or explosive products and materials.

i. "Use Group F-1": Factory and industrial uses which are not otherwise classified as low-hazard Use Group F-2, shall be classified as a moderate-hazard factory and industrial use, Use Group F-1.

ii. "Use Group F-2": Factory and industrial uses which involve the fabrication or manufacturing of non-combustible materials that, during finishing, packing or processing, do not contribute to a significant fire hazard, shall be classified as Use Group F-2. The following manufacturing processes are indicative of, and shall be classified as, Use Group F-2: beverages, nonalcoholic; brick and masonry; ceramic products; foundries; glass products; gypsum; ice; metal fabrication and assembly; and water pumping plants.

10. "Use Group H": All buildings and structures, or parts thereof, shall be classified in Use Group H which are used for the manufacturing, processing, generation or storage of corrosive, highly toxic, highly combustible, flammable or explosive materials that constitute a high fire or explosion hazard, including loose combustible fibers, dust and unstable materials.

11. "Use Group I-1": This Use Group shall include buildings housing six or more individuals who, because of age, mental instability or other reasons, must live in a supervised environment but who are physically capable of responding to an emergency situation without personal assistance. Included in this group are uses such as facilities for children, aged persons, mentally impaired and convalescents including: convalescent facilities, group homes, boarding houses, homes for the aged, mentally retarded care facilities, nursing homes (ambulatory), orphanages and residential care facilities. Occupancies such as the above with five or less occupants shall be classified as a residential Use Group.

12. "Use Group I-2": This Use Group shall include all buildings used for housing people suffering from physical limitations because of health or age, including, among others, day nurseries, hospitals, sanitariums, infirmaries, orphanages and homes for aged and infirm.

13. "Use Group I-3": This Use Group shall include all buildings designed for the detention of people under restraint, including, among others, jails, prisons, reformatories, insane asylums and similar uses.

14. "Use Group M": All buildings and structures, or parts thereof, shall be classified in Use Group M which are used for display and sales purposes involving stocks of goods, wares or merchandise incidental to such purposes and accessible to the public; including, among others, retail stores, motor fuel service stations, shops and salesrooms and markets.

15. "Use Group R-1": This Use Group shall include all hotels, motels, and similar buildings arranged for shelter and sleeping accommodations and in which the occupants are primarily transient in nature, making use of the facilities for a period of less than 30 days. This definition shall also mean and include bed and breakfast guesthouses and bed and breakfast inns.

16. "Use Group R-2": This Use Group shall include all multiple family dwellings having more than two dwelling units and shall also include all dormitories, rooming houses, group rentals where the occupants are living independently of each other and similar buildings arranged for shelter and sleeping accommodations in which the occupants are primarily not transient in nature. This Use Group shall also include attached one- and two-family dwelling units which do not meet the definition for Use Group R-3.

17. "Use Group R-3": This Use Group shall include all buildings arranged for the use of detached one- and two-family dwelling units, including not more than five lodgers or boarders per family. This Use Group shall also mean and include:

i. Bed and breakfast homestays; and

ii. Attached one- and two-family dwellings constructed in accordance with the Uniform Construction Code requirements for multiple single family dwellings.

18. "Use Group S-1": All buildings and structures, or parts thereof, which are used primarily for the storage of moderate hazard contents which are likely to burn with moderate rapidity, but which do not produce either poisonous gases, fumes or explosives; including, among others, warehouses, storehouses and freight depots.

19. "Use Group S-2": All buildings and structures, or parts thereof, which are used primarily for the storage of noncombustible materials, and of low hazard wares that do not ordinarily burn rapidly such as products on wood pallets or in paper cartons without significant amounts of combustible wrappings; including, among others, warehouses, storehouses and freight depots. Such products may have a negligible amount of plastic trim such as knobs, handles or film wrapping.

Amended by R.1985 d.611, effective December 2, 1985.

See: 17 N.J.R. 1015(b), 17 N.J.R. 2870(a).

Added definition "Common areas".

Amended by R.1986 d.214, effective June 16, 1986.

See: 17 N.J.R. 1161(a), 18 N.J.R. 1260(b).

Added new definitions.

Amended by R.1989 d.556, effective November 6, 1989.

See: 21 N.J.R. 2431(a), 21 N.J.R. 3453(a).

Added definitions for "guest house" and "K-12 educational building"; added definitions 1.-18. under "Use" or "Use Group".

Amended by R.1991 d.359, effective July 15, 1991.

See: 23 N.J.R. 1235(a), 23 N.J.R. 2122(b).

Uniform Fire Safety Act definitions incorporated by reference; definition of fire inspector added; definition of fire official amended.

Amended by R.1992 d.104, effective March 2, 1992.

See: 23 N.J.R. 3552(a), 24 N.J.R. 739(a).

School dormitories added to definition of use.

Amended by R.1992 d.385, effective October 5, 1992.

See: 24 N.J.R. 2654(a), 24 N.J.R. 3519(a).

Definitions for hardware store, Use Group F-1 and Use Group F-2 added.

Amended by R.1992 d.405, effective October 19, 1992.

See: 24 N.J.R. 1938(a), 24 N.J.R. 3723(b).

Use Group A-2 amended to including eating/drinking establishments where load exceeds seats by 30%.

Amended by R.1993 d.197, effective May 3, 1993.

See: 25 N.J.R. 393(a), 25 N.J.R. 1868(a).

Added definitions of gross and net floor area and lumber.

Amended by R.1993 d.628, effective December 6, 1993.

See: 25 N.J.R. 4363(a), 25 N.J.R. 5466(a).

Amended by R.1995 d.58, effective March 6, 1995.

See: 26 N.J.R. 4258(a), 27 N.J.R. 878(b).

Amended by R.1995 d.59, effective March 6, 1995.

See: 26 N.J.R. 4249(a), 27 N.J.R. 891(a).

#### 5:18-1.6 (Reserved)

Repealed by R.1995 d.58, effective March 6, 1995.

See: 26 N.J.R. 4258(a), 27 N.J.R. 878(b).

Formerly "Operative date".

#### 5:18-1.7 Severability

(a) If any provision of the Code or the application thereof to any person or circumstances is held invalid, the invalidity shall not affect other provisions or applications of the Code which can be given effect and to this end the provisions of the Code are severable.

## SUBCHAPTER 2. ADMINISTRATION AND ENFORCEMENT

### 5:18-2.1 Enforcement authority

(a) It shall be the duty and responsibility of the agency having jurisdiction in accordance with N.J.A.C. 5:18A-2.2 to enforce the provisions of this Code as set forth herein.

1. Where no local enforcing agency has been created the Division shall enforce the provisions of this Code for life hazard uses or whenever conditions which constitute an imminent hazard are found to exist.

(b) The local enforcing agency shall inspect all premises, except owner-occupied detached Use Group R-3 structures used exclusively for dwelling purposes. These inspections

shall be made in accordance with the schedule contained in the Code, when required under any cyclical inspection program and as often as may be necessary for the purpose of ascertaining and causing to be corrected any conditions liable to cause fire, contribute to the spread of fire, interfere with fire operations, endanger life or any conditions constituting violations of the provisions or intent of this Code or a locally adopted amendment. Except in the case of cyclical inspection programs or other good cause, inspections shall not include occupied dwelling units.

(c) Whenever necessary to make an inspection to enforce any of the provisions of this Code, or whenever the fire official or his or her authorized representative has reasonable cause to believe that there exists in any or upon any premises any condition which makes such building or premises unsafe, the fire official or his or her authorized representative may enter such premises, at all reasonable times to inspect the same or to perform any duty imposed upon the fire official by this code, provided that if such premises be occupied, he or she shall first present proper credentials and demand entry; and if such premises be unoccupied, he or she shall first make a reasonable effort to locate the owner or other persons having charge or control of the premises and demand entry.

1. No owner or occupant or any other persons having charge, care or control of any premises shall fail or neglect, after proper request is made as herein provided, to promptly permit entry therein by the fire official or his or her authorized representative for the purpose of inspection and examination pursuant to this Code. If the owner or occupant denies entry, the fire official or his or her authorized representative shall obtain a proper warrant or other remedy provided by law to secure entry.

Amended by R.1993 d.628, effective December 6, 1993.

See: 25 N.J.R. 4363(a), 25 N.J.R. 5466(a).

Amended by R.1995 d.58, effective March 6, 1995.

See: 26 N.J.R. 4258(a), 27 N.J.R. 878(b).

### 5:18-2.2 Responsibility for compliance

(a) The owner shall be responsible for the safe and proper maintenance of the premises at all times.

(b) Owners of premises which are, or which contain, one or more uses subject to this Code, shall have concurrent responsibility with the owners of any such uses for compliance with the Code. No person shall be required to abate any violations which he has no power to abate or to require to be abated. If a violation is served on an owner who cannot comply due to lack of authority, within five days of receipt of the notice of violation, the owner shall either provide notice of the violation to the party with authority or inform the fire official of such party's name and address.

(c) If an occupant of a premises creates conditions in violation of this Code, by virtue of storage, handling and use of substances, materials, devices and appliances, the occu-

pant can be held responsible for the abatement of said hazardous conditions.

(d) A person shall be deemed to have violated or caused to have violated a provision of this Code if an officer, agent or employee under his control and with his knowledge has violated or caused to have violated any of the provisions of this Code.

(e) Subsequent owners or those succeeding to control over the premises shall be responsible for correcting unabated violations and for the payment of outstanding fees and/or penalties whether or not they have requested a certificate of fire code status.

1. Upon request of the owner, contract purchaser, transferee or the authorized agent of any of them, the enforcing agency having jurisdiction over the premises shall issue a certificate either indicating that violations exist or that fees and/or penalties remain outstanding according to its records, or which states that its records indicate that no violations remain unabated and no penalties or fees remain unpaid. Upon request, the agency shall provide copies of the violations list and penalty orders.

2. Fees for the issuance of certificates of fire code status shall be as follows:

i. In any jurisdiction in which the Division of Fire Safety serves as the local enforcing agency, there shall be no charge for the first two certificates requested in any month period by an owner who is current in payment of applicable life hazard or non-life hazard fees. Thereafter, or if an owner has not made such payment, a notation to that effect shall be made on the bill and the requestor shall be charged a fee for the issuance of the certificate in the amount of \$35.00.

ii. The fire official of a local enforcing agency other than the Division of Fire Safety may establish a reasonable fee for the issuance of a certificate of fire code status.

Amended by R.1995 d.58, effective March 6, 1995.  
See: 26 N.J.R. 4258(a), 27 N.J.R. 878(b).

### 5:18-2.3 Certificate of smoke detector compliance

(a) Before any Use Group R-3 structure is sold, leased, or otherwise made subject to a change of occupancy for residential purposes, the owner shall obtain a certificate of smoke detector compliance (CSDC), evidencing compliance with N.J.A.C. 5:18-4.19, from the appropriate enforcing agency.

1. Where a municipality has existing inspection or approval requirements under a property maintenance or other municipal code, the agency responsible for the enforcement of that code shall not issue any certificate of inspection or occupancy or other approval under such municipal code until it has determined, in accordance with (d) below, that the dwelling complies with the requirements of N.J.A.C. 5:18-4.19.

2. Where no municipal inspection or approval requirement exists, the agency responsible for enforcement of the Uniform Fire Safety Act shall be responsible for the issuance of the CSDC.

i. The Department, where it serves as the enforcing agency, may, upon application by a local fire department, delegate to that fire department the responsibility and authority for issuance of the CSDC within the municipality, or portion of a municipality, served by that fire department.

(b) The owner, or the authorized agent of the owner, shall apply for a CSDC on a form provided by the enforcing agency. The application shall be accompanied by the appropriate fee as set forth in N.J.A.C. 5:18-2.8.

(c) A CSDC shall not be transferable. If the change of occupancy specified in the application for a CSDC does not occur within six months, a new application shall be required.

1. The enforcing agency may issue a CSDC for a seasonal rental unit for a period of up to 12 months, regardless of the number or frequency of changes in tenancy.

(d) No CSDC shall be issued until inspection of the structure indicates compliance with N.J.A.C. 5:18-4.19, except as provided in (d)1 below.

1. The enforcing agency, unless it is otherwise required to inspect the structure under a property maintenance or other municipal code, may accept, in lieu of inspection, a certification that one or more smoke detectors, as applicable, have been installed and tested in accordance with N.J.A.C. 5:18-4.19. Such certification shall be upon forms provided by the enforcing agency.

New Rule, R.1992 d.11, effective January 6, 1992.

See: 23 N.J.R. 3064(a), 24 N.J.R. 88(a).

Amended by R.1993 d.197, effective May 3, 1993.

See: 25 N.J.R. 393(a), 25 N.J.R. 1868(a).

Added provision to delegate authority to issue smoke detector compliance certificates.

Recodified from 5:18-2.20 and amended by R.1995 d.58, effective March 6, 1995.

See: 26 N.J.R. 4258(a), 27 N.J.R. 878(b).

Prior text at 5:18-2.3, Variances, recodified as 5:18-2.14.

### 5:18-2.4 Scope and classification of life hazard uses

(a) The premises and uses identified as life hazard uses shall be divided into four basic groups designated as types "A", "B", "C", and "D." The premises and uses included in each of these types are set forth in N.J.A.C. 5:18-2.4A, 2.4B, 2.4C and 2.4D, respectively. This designation is for reference purposes only and shall not be determinative of the degree of hazard associated with them. Within each group, the various uses shall be specifically identified or described and subdivided by the use of lower case letters.

(b) Premises that are incidental or auxiliary to the agricultural use of a farm property shall not be classified as life hazard uses.

(c) Each individual life hazard use shall be registered separately and treated as separate and distinct for the administrative purposes of this Code whether or not there are other life hazard uses at the same premises.

(d) Wherever used in N.J.A.C. 5:18-2.4A, 2.4B, 2.4C and 2.4D, the following words shall have the meanings indicated:

“Day care center” shall include any facility licensed by the Department of Human Services as a day care center, regardless of the ages of the persons in the care of the center.

“Day nursery” shall include any facility licensed by the Department of Human Services as a day nursery.

“Hardware store” shall mean a building or location of less than 12,000 square feet offering for sale a variety of merchandise including, but not restricted to, limited amounts of tools and associated equipment, garden supplies and paints, and also offering limited quantities of building materials including, but not limited to, plumbing, electrical and carpentry supplies. The establishment may also provide services such as glazing, sharpening and repairs.

“K-12 educational building” shall mean an educational building serving 50 or more students from kindergarten through grade 12 and also means and includes any educational building serving 50 or more students in some, but not all, of the grades from kindergarten to grade 12, inclusive.

“Motor vehicle” shall include all motor-powered means of transportation, including, without limitation, boats and airplanes.

Amended by R.1985 d.611, effective December 2, 1985.  
See: 17 N.J.R. 1015(b), 17 N.J.R. 2870(a).

Added text (c)4 “and intermediate-care facilities.”  
Amended by R.1987 d.508, effective December 7, 1987.  
See: 19 N.J.R. 1680(a), 19 N.J.R. 2266(a).

(b)-(e) is now in section 2.4A.  
Amended by R.1993 d.197, effective May 3, 1993.  
See: 25 N.J.R. 393(a), 25 N.J.R. 1868(a).

References to life hazard uses added.  
Amended by R.1995 d.58, effective March 6, 1995.  
See: 26 N.J.R. 4258(a), 27 N.J.R. 878(b).

#### 5:18-2.4A Type Aa through Aj life hazard uses

(a) Type Aa life hazard uses are as follows:

1. Day nurseries with a maximum permitted occupancy of six or more but fewer than 50 persons;
2. Day care centers with a maximum permitted occupancy of six or more but fewer than 50 persons;
3. Camps where children of school age stay overnight with a maximum permitted occupancy of fewer than 50 persons.

(b) Type Ab life hazard uses are as follows:

1. Day nurseries with a maximum permitted occupancy of 50 or more but fewer than 100 persons;
2. Day care centers with a maximum permitted occupancy of 50 or more but fewer than 100 persons;
3. Camps where children of school age stay overnight with a maximum permitted occupancy of 50 or more but fewer than 100 persons.

(c) Type Ac life hazard uses are as follows:

1. Hotels or motels of two or three stories and under 25 rooms, with any interior exit-ways;
2. Rooming and boarding homes of one story;
3. Eating and/or drinking establishments with a maximum permitted occupancy of fewer than 50 persons in which alcoholic beverages may be consumed.
4. School dormitories of Use Group R-2 of one story;
5. Guest houses, as defined in N.J.A.C. 5:18-1.5, regardless of number of stories.

(d) Type Ad life hazard uses are as follows:

1. All buildings or structures used for the service of motor vehicles including marine motor craft;
2. All buildings or locations where flammable and/or combustible fuels are stored and dispensed to motor vehicles, including marine motor craft;
3. Halfway houses, group homes, community residences, residential child care facilities and residential health care facilities, alcohol and drug treatment centers, youth hostels, homeless shelters and other similar facilities with a maximum permitted occupancy of fewer than 50 persons;

4. Buildings used for dry cleaning purposes using non-flammable cleaning solvents.

5. Camps where children of school age stay overnight with a maximum permitted occupancy of fewer than 50 persons with dining and/or assembly facilities.

(e) Type Ae life hazard uses are as follows:

1. Day nurseries with a maximum permitted occupancy of 100 persons or more;
2. Day care centers with a maximum permitted occupancy of 100 persons or more;
3. Camps where children of school age stay overnight with a maximum permitted occupancy of 100 persons or more;
4. Public and private K-12 educational buildings with a maximum permitted occupancy greater than 50 persons.

(f) Type Af life hazard uses are as follows:



1. All buildings or locations where flammable and/or combustible fuels are stored and dispensed to motor vehicles, and used for the service of motor vehicles including marine motor craft;

2. Hotels or motels of two or three stories and 25 or more but fewer than 50 rooms, with any interior exit-ways;

3. Halfway houses, group homes, community residences, residential child care facilities and residential health care facilities, alcohol and drug treatment centers, youth hostels, homeless shelters and other similar facilities with a maximum permitted occupancy of 50 or more but fewer than 100 persons;

4. Rooming and boarding homes of two or three stories.

5. School dormitories of Use Group R-2 of two or three stories.

6. Camps where children of school age stay overnight with a maximum permitted occupancy of 50 or more but fewer than 100 persons with dining and/or assembly facilities.

(g) Type Ag life hazard uses are as follows:

1. Eating and/or drinking establishments with a maximum permitted occupancy of 50 or more but fewer than 100 persons in which alcoholic beverages may be consumed but which are primarily eating establishments;

2. Hotels or motels of two or three stories and 50 or more but fewer than 100 rooms, with any interior exit-ways;

3. Above ground aggregate storage of more than 660 gallons but less than 5,000 gallons of Class II or IIIA combustible liquids (except for heating purposes).

4. Camps where children of school age stay overnight with a maximum permitted occupancy of 100 or more but fewer than 200 persons with dining and/or assembly facilities.

(h) Type Ah life hazard uses are as follows:

1. Rooming and boarding homes of four or more stories;

2. Halfway houses, group homes, community residences, residential child care facilities and residential health care facilities, alcohol and drug treatment centers, youth hostels, homeless shelters and other similar facilities with a maximum permitted occupancy of 100 persons or more.

3. School dormitories of Use Group R-2 of four or more stories.

(i) Type Ai life hazard uses are as follows:

1. Hotels or motels of two or three stories and 100 rooms or more, with any interior exit-ways;

2. Hardware stores and home improvement centers of 3,000 or more but less than 12,000 square feet of gross floor area.

(j) Type Aj life hazard uses are as follows:

1. (Reserved)

2. Above ground aggregate storage of 5,000 gallons or more, but less than 50,000 gallons, of Class II or IIIA combustible liquids, or above ground aggregate storage of more than 660 gallons but less than 10,000 gallons of Class I flammable liquids.

3. Camps where children of school age stay overnight with a maximum permitted occupancy of 200 or more persons with dining and/or assembly facilities.

New Rule, R.1987 d.508, effective December 7, 1987.

See: 19 N.J.R. 1680(a), 19 N.J.R. 2266(a).

Subsection (b)-(e) from old section 2.4.

Amended by R.1989 d.556, effective November 6, 1989.

See: 21 N.J.R. 2431(a), 21 N.J.R. 3453(a).

Added 4. under (e); K-12 educational buildings.

Amended by R.1991 d.50, effective October 7, 1991.

See: 23 N.J.R. 2234(a), 23 N.J.R. 2999(a).

Text at (j)1 deleted.

Amended by R.1992 d.104, effective March 2, 1992.

See: 23 N.J.R. 3552(a), 24 N.J.R. 739(a).

Text on school dormitories and guest houses added.

Administrative Correction.

See: N.J.R. April 20, 1992.

Amended by R.1992 d.385, effective October 5, 1992.

See: 24 N.J.R. 2654(a), 24 N.J.R. 3519(a).

Hardware store added at (i)2.

Amended by R.1995 d.57, effective March 6, 1995.

See: 26 N.J.R. 4254(a), 27 N.J.R. 878(a).

#### Case Notes

Church school could properly have imposed against it life hazard registration fee. *New Life Gospel Church v. State*, Dept. of Community Affairs, Div. of Housing Bureau of Fire Safety, 257 N.J.Super. 241, 608 A.2d 397 (A.D.1992) certification denied 133 N.J. 429, 627 A.2d 1136.

#### 5:18-2.4B Type Ba through Bo life hazard uses

(a) Type Ba life hazard uses are as follows:

1. Welding or cutting operations on a regular basis not using flammable gases in buildings or structures under 10,000 square feet.

(b) Type Bb life hazard uses are as follows:

1. (Reserved)

2. Recreation centers, multipurpose rooms, lecture halls without fixed seating and similar uses where persons assemble other than for religious services with a maximum permitted occupancy of 100 or more but fewer than 200 persons;

3. Welding or cutting operations on a regular basis not using flammable gases in buildings or structures of 10,000 or more but less than 50,000 square feet.



4. Transfer from one container to another of liquefied petroleum gas or liquefied natural gas at any location, other than motor vehicle or marine motor craft service stations, not registered for storage and use.

5. Spraying or dipping operations, as regulated by N.J.A.C. 5:18-3.7(a), in all approved areas of less than 100 square feet, as defined in N.J.A.C. 5:18-3.7(c)1 or 3.7(d)1.

(c) Type Bc life hazard uses are as follows:

1. Recreation centers, multipurpose rooms, lecture halls without fixed seating and similar uses where persons assemble other than for religious services with a maximum permitted occupancy of 200 persons or more.

(d) Type Bd life hazard uses are as follows:

1. Motion picture theaters, or theaters incorporating a legitimate, regular or thrust stage without any scenery or prop storage areas behind a proscenium arch, with a maximum permitted occupancy of fewer than 100 persons;

2. The manufacture, processing or blending of less than 1,000 gallons of Class I flammable liquid, or less than 10,000 gallons of Class II or IIIA combustible liquids, in any one working day. Blending must be in a vessel, not in piping at or near the point of delivery;

3. Welding or cutting operations on a regular basis not using flammable gases in buildings or structures of 50,000 square feet or more;

4. Storage of fireworks, explosives or blasting agents in a type 4 magazine;

i. Type 2 and 3 magazines are portable and intended only for the temporary storage of explosives and blasting agents, and as such, must be covered by a permit.

5. Eating and/or drinking establishments with a maximum permitted occupancy of 100 or more but fewer than 200 persons;

6. (Reserved)

7. Spraying or dipping operations, as regulated by N.J.A.C. 5:18-3.7(a), in all approved areas of 100 or more but less than 250 square feet, as defined in N.J.A.C. 5:18-3.7(c)1 or 3.7(d)1.

(e) Type Be life hazard uses are as follows:

1. (Reserved)

(f) Type Bf life hazard uses are as follows:

1. Prisons and other facilities of six or more but fewer than 50 beds where residents, occupants, or inmates are kept under restraint;

2. Motion picture theaters, or theaters incorporating a legitimate, regular or thrust stage without any scenery or

prop storage area behind a proscenium arch, with a maximum permitted occupancy of 100 or more but fewer than 200 persons;

3. Retail stores and other mercantile uses of more than 12,000 square feet but less than 24,000 square feet in gross floor area;

4. Hotels or motels which exceed three stories, and have under 50 rooms, with any interior exit-ways;

5. Buildings with a maximum permitted occupancy of 100 or more but fewer than 200 persons in which persons assemble for entertainment or amusement not otherwise classified herein, such as, but not limited to, art galleries, exhibition halls and museums;

6. (Reserved)

7. Equipment, processes, and operations involving dust which, if mixed with air, becomes explosive, including, but not limited to, grain bleachers or elevators; flour, starch or feed mills; malt houses, wood flour manufacturing plants; or plants that pulverize aluminum, coal, cocoa, magnesium, spices, or sugar in all buildings or structures under 50,000 square feet;

8. Crop ripening or coloring processes in all buildings or structures under 50,000 square feet;

9. Lumber yards and/or woodworking plants in which more than 100,000 but less than 250,000 board feet of lumber is to be stored;

10. Tire recapping or rebuilding plants in buildings or structures under 50,000 square feet;

11. Manufacturing of articles of cellulose nitrate plastics including the use of cellulose nitrate plastics in the manufacture or assembly of other articles in all buildings or structures under 50,000 square feet;

12. The manufacture of matches in all buildings or structures under 50,000 square feet;

13. The manufacture of fireworks, explosives or blasting agents in all buildings or structures under 50,000 square feet;

14. The manufacture, processing or blending of more than 1,000 but less than 10,000 gallons of Class I flammable liquids in any one working day. Blending must be in a vessel, not in piping at or near the point of delivery;

15. Welding or cutting operations using flammable gases on a regular basis in buildings or structures under 10,000 square feet;

16. Storage of more than 2,500 but less than 5,000 cubic feet gross volume of combustible empty assembled packing cases, boxes, barrels, pallets, or similar containers;

17. Storage of more than 2,500 but less than 5,000 cubic feet gross volume of rubber tires, baled cotton, rubber, cork or other similarly combustible material;

18. Storage of matches with more than 25 but fewer than 50 cases in the aggregate;

19. Storage of fireworks, explosives or blasting agents in a type UG magazine;

i. Type 2 and 3 magazines are portable and intended only for the temporary storage of explosives and blasting agents, and as such, must be covered by a permit.

20. Above ground aggregate storage of more than 50,000 but less than 1,000,000 gallons of Class II or IIIA combustible liquids.

21. Factories and other industrial uses of Use Group F-1, not otherwise classified, of 12,000 or more but less than 24,000 square feet in gross floor area.

22. Warehouses, storehouses and freight depots, used for the storage and handling of ordinary combustible materials, not otherwise classified, of 12,000 or more, but less than 24,000 square feet in gross floor area.

23. Any installation of liquefied petroleum gas or liquefied natural gas utilizing storage containers of over 1,000 gallons individual water capacity or with an aggregate water capacity exceeding 2,000, but not more than 4,000, gallons.

(g) Type Bg life hazard uses are as follows:

1. Any high-rise structure of seven or more but fewer than 10 stories;

2. Prisons and other facilities of 50 or more but fewer than 100 beds where residents, occupants, or inmates are kept under restraint;

3. Free-standing institutional and similar facilities including, but not limited to, outpatient surgery facilities, renal dialysis facilities, abortion clinics, and birthing centers, in buildings of less than 10,000 square feet;

4. Motion picture theaters, and theaters incorporating a legitimate, regular or thrust stage without any scenery or prop storage area behind a proscenium arch, with a maximum permitted occupancy of 200 or more persons;

5. Eating and/or drinking establishments with a maximum permitted occupancy of 200 or more but fewer than 300 persons;

6. Retail stores and other mercantile uses of 24,000 or more but less than 48,000 square feet in gross floor area;

7. Hotels or motels which exceed three stories, and which have 50 or more but fewer than 100 rooms, with any interior exit-ways;

8. Buildings with a maximum permitted occupancy of 200 persons or more in which persons assemble for entertainment or amusement not otherwise classified herein, such as, but not limited to, art galleries, exhibition halls and museums;

9. Transportation terminals with a maximum permitted occupancy of 100 or more persons;

10. Spraying or dipping operations, as regulated by N.J.A.C. 5:18-3.7(a), in all approved areas of 250 or more but less than 500 square feet, as defined in N.J.A.C. 5:18-3.7(c)1 or 3.7(d)1;

11. Equipment, processes, and operations involving dust which, if mixed with air, become explosive including, but not limited to, grain bleachers or elevators; flour, starch or feed mills; malt houses; wood flour manufacturing plants; or plants that pulverize aluminum, coal, cocoa, magnesium, spices, or sugar in all buildings or structures of 50,000 or more but less than 100,000 square feet;

12. Crop ripening or coloring processes in all buildings or structures of 50,000 or more but less than 100,000 square feet;

13. Lumber yards and/or woodworking plants in which 250,000 or more but less than 500,000 board feet of lumber is to be stored;

14. Tire recapping or rebuilding plants in buildings or structures of 50,000 or more but less than 100,000 square feet;

15. Organic coating manufacturing operations making one gallon or more of an organic coating in a working day;

16. Manufacturing of articles of cellulose nitrate plastics including the use of cellulose nitrate plastics in the manufacture or assembly of other articles in all buildings or structures of 50,000 or more but less than 100,000 square feet;

17. Processing, handling or use of 100 or more but less than 500 cubic feet of loose combustible vegetable or animal fibers, including, but not limited to, readily ignitable and free burning fibers such as cotton, sisal, henequen, ixtel, jute, hemp, tow, cocoa fiber, oakum, baled waste, baled waste paper, kapok, hay, straw, Spanish moss, excelsior, certain synthetic fibers, and cloth in the form of scraps and clippings;

18. The manufacture of matches in all buildings or structures of 50,000 or more but less than 100,000 square feet;

19. The manufacture of fireworks, explosives or blasting agents in all buildings or structures of 50,000 or more but less than 100,000 square feet;

20. Welding or cutting operations using flammable gases on a regular basis in buildings or structures of 10,000 or more but less than 50,000 square feet;

21. Storage of 5,000 or more but less than 10,000 cubic feet gross volume of combustible empty assembled packing cases, boxes, barrels, pallets, or similar containers;

22. Storage of 5,000 or more but less than 10,000 cubic feet gross volume of rubber tires, baled cotton, rubber, cork or other similarly combustible material;

23. Storage of cellulose nitrate motion picture film or cellulose nitrate (pyroxlin) plastics in quantities which exceed 25 pounds;

24. Storage of 100 or more but less than 500 cubic feet of loose combustible vegetable or animal fibers;

25. Storage of matches with 50 or more cases in the aggregate;

26. Storage of fireworks, explosives or blasting agents in a type 1 magazine;

NOTE: Type 2 and 3 magazines are portable and intended only for the temporary storage of explosives and blasting agents, and as such, must be covered by a permit.

27. Above ground storage of 10,000 or more but less than 100,000 gallons of Class I flammable liquids;

28. Buildings used for dry cleaning purposes, using flammable cleaning solvents;

29. (Reserved)

30. Factories and other industrial uses of Use Group F-1, not otherwise classified, of 24,000 or more, but less than 50,000 square feet, in gross floor area;

31. Warehouses, storehouses and freight depots, used for the storage and handling of ordinary combustible materials, not otherwise classified, of 24,000 or more, but less than 50,000, square feet in gross floor area.

(h) Type Bh life hazard uses are as follows:

1. Prisons and other facilities of 100 or more but fewer than 200 beds where residents, occupants, or inmates are kept under restraint;

2. Hotels or motels which exceed three stories, and which have 100 rooms or more, with any interior exit-ways;

3. The manufacture, processing or blending of more than 10,000 but less than 100,000 gallons of Class II and/or IIIA combustible liquids in any one working day. Blending must be in a vessel, not in piping at or near the point of delivery;

4. Any installation of liquefied petroleum gas or liquefied natural gas utilizing storage containers of over 4,000 gallons aggregate water capacity.

(i) Type Bi life hazard uses are as follows:

1. Prisons and other facilities of 200 beds or more where residents, occupants, or inmates are kept under restraint;

2. Factories and other industrial uses of Use Group F-1, not otherwise classified, of 50,000 or more, but less than 100,000 square feet in gross floor area;

3. Warehouses, storehouses and freight depots, used for the storage and handling of ordinary combustible materials, not otherwise classified, of 50,000 or more, but less than 100,000 square feet in gross floor area.

(j) Type Bj life hazard uses are as follows:

1. Any high-rise structure of 10 or more but fewer than 20 stories;

2. Free-standing institutional and similar facilities including, but not limited to, outpatient surgery facilities, renal dialysis facilities, abortion clinics, and birthing centers, in buildings of 10,000 square feet or more;

3. (Reserved)

4. Retail stores and other mercantile uses of 48,000 square feet or more in gross floor area;

5. Stadiums, race tracks and other similar exterior places of amusement with enclosed interior spaces, with a maximum permitted occupancy of fewer than 5,000 persons;

6. Spraying or dipping operations, as regulated by N.J.A.C. 5:18-3.7(a), in all approved areas of 500 square feet or more, as defined in N.J.A.C. 5:18-3.7(c)1 or 3.7(d)1;

7. Equipment, processes, and operations involving dust which, if mixed with air, become explosive including, but not limited to, grain bleachers or elevators; flour, starch or feed mills; malt houses; wood floor manufacturing plants; or plants that pulverize aluminum, coal, cocoa, magnesium, spices, or sugar in all buildings or structures of 100,000 square feet or more;

8. Crop ripening or coloring processes in all buildings or structures of 100,000 square feet or more;

9. Lumber yards and/or woodworking plants in which 500,000 board feet or more of lumber is to be stored;

10. Tire recapping or rebuilding plants in buildings or structures of 100,000 square feet or more;

11. Manufacturing of articles of cellulose nitrate plastics including the use of cellulose nitrate plastics in the manufacture or assembly of other articles in all buildings or structures of 100,000 square feet or more;

12. Processing, handling or use of 500 or more but less than 2,500 cubic feet of loose combustible vegetable or animal fibers, including, but not limited to, readily ignitable and free burning fibers such as cotton, sisal, henequen, xitel, jute, hemp, tow, cocoa fiber, oakum, baled waste, baled waste paper, kapok, hay, straw, Spanish moss, excelsior, certain synthetic fibers, and cloth in the form of scraps and clippings;

13. The manufacture of matches in all buildings or structures of 100,000 square feet or more;

14. The manufacture of fireworks, explosives or blasting agents in all buildings or structures of 100,000 square feet or more;

15. The manufacture, processing or blending of more than 10,000 but less than 100,000 gallons of Class I flammable liquids in any one working day. Blending must be in a vessel, not in piping at or near the point of delivery;

16. Welding or cutting operations using flammable gases on a regular basis in buildings or structures of 50,000 square feet or more;

17. Storage of 10,000 cubic feet or more gross volume of combustible empty assembled packing cases, boxes, barrels, pallets, or similar containers;

18. Storage of 10,000 cubic feet or more gross volume of rubber tires, baled cotton, rubber, cork or other similarly combustible material;

19. Storage of 500 or more but less than 2,500 cubic feet of loose combustible vegetable or animal fibers;

20. Above ground aggregate storage of 1,000,000 or more but less than 5,000,000 gallons of Class II or IIIA combustible liquids, or above ground storage of 100,000 or more but less than 1,000,000 gallons of Class I flammable liquids;

21. Buildings with atrium spaces three or more stories in height in buildings which exceed 12,000 square feet in gross floor area.

(k) Type Bk life hazard uses are as follows:

1. Any high-rise structure of 20 or more but fewer than 30 stories;

2. Processing, handling or use of 2,500 cubic feet or more of loose combustible vegetable or animal fibers, including, but not limited to, readily ignitable and fire burning fibers such as cotton, sisal, henequen, xitel, jute, hemp, tow, cocoa fiber, oakum, baled waste, baled waste paper, kapok, hay, straw, Spanish moss, excelsior, certain synthetic fibers, and cloth in the form of scraps and clippings;

3. Storage of 2,500 cubic feet or more of loose combustible vegetable or animal fibers;

4. Above ground aggregate storage of 5,000,000 gallons or more of Class II and/or IIIA combustible liquids.

5. Factories and other industrial uses of Use Group F-1, not otherwise classified, of 100,000 or more, but less than 150,000 square feet in gross floor area.

6. Warehouses, storehouses and freight depots, used for the storage and handling of ordinary combustible materials, not otherwise classified, of 100,000 or more, but less than 150,000 square feet in gross floor area.

(l) Type Bl life hazard uses are as follows:

1. Any high-rise structure of 30 stories or more;

2. The manufacture, processing or blending of more than 100,000 but less than 1,000,000 gallons of Class II and/or IIIA combustible liquids in any one working day. Blending must be in a vessel, not in piping at or near the point of delivery.

3. Factories and other industrial uses of Use Group F-1, not otherwise classified, of 150,000 or more, but less than 200,000 square feet in gross floor area.

4. Warehouses, storehouses and freight depots, used for the storage and handling of ordinary combustible materials, not otherwise classified, of 150,000 or more, but less than 200,000 square feet in gross floor area.

(m) Type Bm life hazard uses are as follows:

1. Stadiums, race tracks and other similar exterior places of amusement with enclosed interior spaces, with a maximum permitted occupancy of 5,000 or more but fewer than 10,000 persons;

2. The manufacture, processing or blending of more than 100,000 but less than 1,000,000 gallons of Class I flammable liquids in any one working day. Blending must be in a vessel, not in piping at or near the point of delivery;

3. Above ground aggregate storage of 1,000,000 gallons or more but less than 5,000,000 gallons of Class I flammable liquids.

4. Factories and other industrial uses of Use Group F-1, not otherwise classified, of 200,000 or more square feet in gross floor area;

5. Warehouses, storehouses and freight depots, used for the storage and handling of ordinary combustible materials, not otherwise classified, of 200,000 or more square feet in gross floor area.

(n) Type Bn life hazard uses are as follows:

1. The manufacture, processing or blending of 1,000,000 gallons or more of Class I, II and/or IIIA flammable or combustible liquids in any one working day. Blending must be in a vessel, not in piping at or near the point of delivery;

2. Above ground aggregate storage of 5,000,000 gallons or more of Class I flammable liquids.

(o) Type Bo life hazard uses are as follows:

1. Stadiums, race tracks and other similar exterior places of amusement with enclosed interior spaces, with a maximum permitted occupancy of 10,000 or more persons;

2. Refining of flammable and combustible liquids.

New Rule, R.1987 d.508, effective December 7, 1987.

See: 19 N.J.R. 1680(a), 19 N.J.R. 2266(a).

Amended by R.1991 d.504, effective October 7, 1991.

See: 23 N.J.R. 2234(a), 23 N.J.R. 2999(a).

Text at (b)4, 5, (d)5, 6, 7, (g)29, 30 added; (b)1, (e)1, (f)6, (j)3 deleted.

Amended by R.1992 d.385, effective October 5, 1992.

See: 24 N.J.R. 2654(a), 24 N.J.R. 3519(a).

Added uses at (b)4, (d)7, (f)21, 22 and 23, (g)30, (h)4, (i)2 and 3, (k)5 and 6, (l)3 and 4, (m)4 and 5.

#### Case Notes

Life hazard use registration fee could properly be imposed on church school. *New Life Gospel Church v. State*, Dept. of Community Affairs, Div. of Housing Bureau of Fire Safety, 257 N.J.Super. 241, 608 A.2d 397 (A.D.1992), certification denied 133 N.J. 429, 627 A.2d 1136.

#### 5:18-2.4C Type Ca through Ci life hazard uses

(a) Type Ca life hazard uses are as follows:

1. Theaters incorporating a legitimate, regular or thrust stage having any scenery or prop storage area behind a proscenium arch and having a maximum permitted occupancy of fewer than 100 persons;

2. (Reserved)

(b) Type Cb life hazard uses are as follows:

1. Theaters incorporating a legitimate, regular or thrust stage having any scenery or prop storage area behind a proscenium arch and having a maximum permitted occupancy of 100 or more but fewer than 200 persons.

(c) Type Cc life hazard uses are as follows:

1. (Reserved)

2. Institutional and similar facilities including, but not limited to, hospitals and long term care facilities which house people suffering from physical limitation due to age, health, or handicaps which have fewer than 100 beds.

3. Eating and/or drinking establishments with a maximum permitted occupancy of 300 or more but fewer than 500 persons.

(d) Type Cd life hazard uses are as follows:

1. Theaters incorporating a legitimate, regular or thrust stage having any scenery or prop storage area behind a proscenium arch and having a maximum permitted occupancy of 200 or more but fewer than 300 persons;

2. Institutional and similar facilities including, but not limited to, hospitals and long term care facilities which house people suffering from physical limitation due to age, health, or handicaps which have 100 or more but fewer than 200 beds.

(e) Type Ce life hazard uses are as follows:

1. Theaters incorporating a legitimate, regular or thrust stage having any scenery or prop storage area behind a proscenium arch with a maximum permitted occupancy of 300 or more persons;

2. (Reserved)

3. Institutional and similar facilities including, but not limited to, hospitals and long term care facilities which house people suffering from physical limitation due to age, health, or handicaps which have 200 beds or more;

4. (Reserved)

(f) Type Cf life hazard uses are as follows:

1. Places of amusement with a maximum permitted occupancy of fewer than 200 persons which are designed to disorient the occupant, reduce vision, present barriers or otherwise impede the free flow of traffic such as haunted houses, fun houses, tunnels of love and similar uses.

(g) Type Cg life hazard uses are as follows:

1. (Reserved)

2. Places of amusement with a maximum permitted occupancy of 200 or more persons which are designed to disorient the occupant, reduce vision, present barriers or otherwise impede the free flow of traffic such as haunted houses, fun houses, tunnels of love and similar uses.

3. Eating and/or drinking establishments with a maximum permitted occupancy of 500 or more but less than 750 persons.

(h) Type Ch life hazard uses are as follows:

1. Eating and/or drinking establishments with a maximum permitted occupancy of 750 or more but fewer than 1,000 persons.

(i) Type Ci life hazard uses are as follows:

1. Eating and/or drinking establishments with a maximum permitted occupancy of 1,000 or more persons.

New Rule, R.1987 d.508, effective December 7, 1987.

See: 19 N.J.R. 1680(a), 19 N.J.R. 2266(a).

Amended by R.1991 d.504, effective October 7, 1991.

See: 23 N.J.R. 2234(a), 23 N.J.R. 2999(a).

Text at (c)3, (g)3, (h), (i) added; text at (a)2, (c)1, (e)2 and 4, (g)1 deleted.

#### 5:18-2.4D Type Da through Dc life hazard uses

(a) Type Da life hazard uses are as follows:

1. Covered mall buildings with a mall portion of 12,000 or more but less than 50,000 square feet.

(b) Type Db life hazard uses are as follows:

1. Covered mall buildings with a mall portion of 50,000 or more but less than 100,000 square feet.

(c) Type Dc life hazard uses are as follows:

1. Covered mall buildings with a mall portion of 100,000 or more square feet.

Amended by R.1991 d.504, effective October 7, 1991.

See: 23 N.J.R. 2234(a), 23 N.J.R. 2999(a).

Da revised, Db and Dc added.

### 5:18-2.5 Required inspections

(a) All life hazard uses shall be inspected for compliance with the provisions of this Code periodically but not any less often than specified herein:

1. Type Aa through Aj life hazard uses: once every 12 months, except day nurseries and daycare centers with a maximum permitted occupancy of 100 or more which shall be inspected once every six months.

2. Type Ba through Bo life hazard uses: once every 12 months.

3. Type Ca through Ci life hazard uses: once every three months.

4. Type Da through Dc life hazard uses: once every three months.

The periodic inspection of a covered mall may be limited to the common areas.

(b) Where a life hazard use is operated on a seasonal basis, the number of required annual inspections shall not be reduced. Inspections of type Ca through Ci and type Da through Dc life hazard uses which are in operation for only a portion of the year shall be conducted immediately prior to opening and closing and twice during operation of the use.

(c) Within 30 days following each annual and every other quarterly inspection of a life hazard use, the owner shall file an application for a certificate of inspection on forms provided by the local enforcing agency. Forms shall be provided either before or at the time of inspection. The form shall be returned to the local enforcing agency.

(d) Upon completion of a required inspection, the local enforcing agency shall issue a certificate of inspection. A certificate of inspection shall not be issued until all violations cited have been corrected. The certificate of inspection shall be posted by the owner of the use in a conspicuous location therein.

Amended by R.1985 d.611, effective December 2, 1985.

See: 17 N.J.R. 1015(b), 17 N.J.R. 2870(a).

Added (b)i.

Amended by R.1987 d.247, effective June 15, 1987.

See: 18 N.J.R. 1225(a), 19 N.J.R. 1078(a).

Old (c) deleted and new text substituted; (d) added.

Amended by R.1987 d.508, effective December 7, 1987.

See: 19 N.J.R. 1680(a), 19 N.J.R. 2266(a).

Added text to (a) "except day nurseries ... every six months".

Amended by R.1989 d.556, effective November 6, 1989.

See: 21 N.J.R. 2431(a), 21 N.J.R. 3453(a).

Added new (e) and (f).

Amended by R.1993 d.197, effective May 3, 1993.

See: 25 N.J.R. 393(a), 25 N.J.R. 1868(a).

Rule amended at (a)3 and 4 to add new uses.

Amended by R.1993 d.628, effective December 6, 1993.

See: 25 N.J.R. 4363(a), 25 N.J.R. 5466(a).

Amended by R.1995 d.58, effective March 6, 1995.

See: 26 N.J.R. 4258(a), 27 N.J.R. 878(b).

### 5:18-2.6 Registration of buildings and uses

(a) Whenever the Commissioner or any local enforcing agency shall have cause to believe that a building or use is a life hazard use, then the Commissioner or the agency shall submit a registration application to the owner. It shall be a violation of the Code for an owner to fail to complete and return such an application within 30 days.

1. Whenever the use of a building or any portion thereof is conducted on a seasonal basis, the Commissioner may require the owner of the building to comply with this registration requirement for any use conducted therein.

(b) The owner of a life hazard use shall file with the Commissioner, upon forms provided by the Commissioner, a registration application. Each registration application shall include at least the following information:

1. The name, address, and telephone number of the applicant;

2. Where the applicant is a corporation, the names and residential addresses of each officer, director and stockholder holding more than 10 percent of the stock. Stockholder information shall not be required for a publicly traded stock corporation;

3. Where the applicant is a corporation, the name, address, and telephone number of the agent for service of process. The address must be a physical location and shall not be a post office box;

4. A description of the use being applied for, including:

i. Geographical location, including street address, and tax lot and block numbers;

ii. Height of building in which use is located;

iii. Location of use in building;

iv. Floor area of use;

v. Capacity when the use is public assembly; and



vi. Description of processes carried out or material stored when it is processed or storage which causes the use to be subject to registration.

5. Where the owner of the use and the owner of the building in which it is located are not the same then the application shall include the same information for the owner of the building as is herein required for the owner of the use.

(c) Upon receipt of the application, and the required registration fee, the Commissioner shall forthwith issue to the owner of the life hazard use a certificate of registration, which shall be posted by the owner of the use in a conspicuous location therein but only upon subsequent receipt of a certificate of inspection. The certificate of registration shall be in such form as may be prescribed by the Commissioner.

(d) Where more than one life hazard use exists at a given building or premises or where one or more life hazard uses occur within a high rise building or other life hazard use such as a night club within a hotel, then each such life hazard use shall be separate and distinct and shall be registered separately.

(e) When applying for registration, the owner of each life hazard use shall appoint an agent for the purpose of receiving service of process and orders or notices issued by the Commissioner or a local enforcing agency pursuant to the Act and designate the street address of the location at which such agent may be served. Each agent shall be either a resident of this State or a person who maintains a bona fide office in this State or shall be a corporation licensed to do business in this State.

(f) If the ownership of a life hazard use is transferred, whether by sale, assignment, gift, intestate succession, testate devolution, reorganization, receivership, foreclosure or execution process, the new owner shall file with the Commissioner, within 30 days of the transfer, an application for a certificate of registration, and appoint an agent for the service of process, pursuant to this section.

(g) If an owner of a life hazard use has not fulfilled the requirements of this Section, the Commissioner shall notify the owner in writing that he is in violation of this Section and shall order that registration be accomplished within 30 days. The notice and order shall include an accurate restatement of the subsection with which the owner has not complied.

1. If the owner has not complied with the order of the Commissioner within 30 days of the date on which it was mailed, the Commissioner shall order him to pay \$500.00 for each registration. Pursuant to N.J.S.A. 52:27D-201, the Commissioner may issue a certificate to the clerk of the Superior Court stating that the owner is indebted for the payment of the penalty and the clerk shall immediately enter upon his record of docketed judgments the name of the owner and of the Department, a designation of the

statute under which the penalty is imposed, the amount of the penalty certified and the date the certification was made. The making of the entry shall have the same effect as the entry of the docketed judgment in the office of the clerk but without prejudice to the owner's right of appeal.

(h) The owner of each life hazard use in the State shall pay to the Department an annual fee in the amount specified in this subchapter. The owner shall pay the annual fee within 30 days of the bill date. If the owner fails to do so, the Department may, pursuant to N.J.S.A. 52:27D-201, issue a certificate to the clerk of the Superior Court stating that the owner is indebted to the Department for the payment of the annual fee and the clerk shall immediately enter upon his record of docketed judgments the name of the owner and of the Department, a designation of the statute under which the fee is assessed, the amount of the fee certified and the date the certification was made. The making of the entry shall have the same effect as the entry of a docketed judgment in the office of the clerk, but without prejudice to the owner's right of appeal. The owner shall also be subject to a penalty in accordance with N.J.A.C. 5:18-2.12(b)8ii.

1. Upon application by a local enforcing agency and approval by the Division, the certificate obtained pursuant to this subsection shall be assigned to the local enforcing agency in which the life hazard use is located. The local enforcing agency shall pursue collection and forward any fees collected to the Division in accordance with N.J.A.C. 5:18A-2.6(a)4.

Amended by R.1987 d.508, effective December 7, 1987.

See: 19 N.J.R. 1680(a), 19 N.J.R. 2266(a).

Added (a)1 and deleted text from (d) "However where more ..." Administrative Correction to (i).

See: 21 N.J.R. 3085(a).

Amended by R.1992 d.104, effective March 2, 1992.

See: 23 N.J.R. 3552(a), 24 N.J.R. 739(a).

Text at (h)1 deleted; text at (i)1 added.

Amended by R.1993 d.628, effective December 6, 1993.

See: 25 N.J.R. 4363(a), 25 N.J.R. 5466(a).

Amended by R.1995 d.58, effective March 6, 1995.

See: 26 N.J.R. 4258(a), 27 N.J.R. 878(b).

### 5:18-2.7 Permits required

(a) Permits shall be required and obtained from the local enforcing agency for the activities specified in this section, except where they are an integral part of a process by reason of which a use is required to be registered and regulated as a life hazard use. Permits shall at all times be kept in the premises designated therein and shall at all times be subject to inspection by the fire official.

1. Type 4 permits shall not be required when the storage or activity is incidental or auxiliary to the agricultural use of a farm property.

2. In a public or private K-12 educational building registered as a life hazard use, no permit shall be required

for activities which are consistent with the designed and intended use of the building or part thereof.

3. Type 1 permit:

- i. Bonfires;
  - ii. The use of a torch or flame-producing device to remove paint from, or seal membrane roofs on, any building or structure;
  - iii. Tents and temporary tensioned membrane structures without appurtenances, such as platforms and special electrical equipment, which exceed 900 square feet or 30 feet in any dimension (excluding canopies), whether single or made up of multiple smaller units when used for purposes which would constitute a life hazard use if found in a building;
  - iv. Individual portable kiosks or displays when erected in a covered mall for a period of less than 90 days, and when not covered by a Type 2 permit;
  - v. The use of any open flame or flame-producing device, in connection with any public gathering, for purposes of entertainment, amusement, or recreation;
  - vi. Welding or cutting operations except where the welding or cutting is performed in areas approved for welding by the fire official and is registered as a type B life hazard use;
  - vii. The possession or use of explosives or blasting agents, other than model rocketry engines regulated under N.J.A.C. 12:194;
  - viii. Helistops; or
  - ix. The occasional use in any buildings of a multi-purpose room, with a maximum permitted occupancy of 100 or more for amusement, entertainment or mercantile type purposes.
  - x. The storage or handling of class I flammable liquids in closed containers of aggregate amounts of more than 10 gallons, but not more than 660 gallons inside a building, or more than 60 gallons, but not more than 660 gallons outside a building.
  - xi. The storage or handling of class II or IIIA combustible liquids in closed containers of aggregate amounts of more than 25 gallons, but not more than 660 gallons inside a building, or more than 60 gallons, but not more than 660 gallons outside a building.
  - xii. Any permanent cooking operation that requires a suppression system in accordance with N.J.A.C. 5:18-4.7(g) and is not defined as a life hazard use in accordance with N.J.A.C. 5:18-2.4.
4. Type 2 permit:
- i. Bowling lane resurfacing and bowling pin refinish-ing involving the use and application of flammable liquids or materials;

- ii. Fumigation or thermal insecticide fogging;
- iii. Carnivals and circuses employing mobile enclosed structures used for human occupancy;
- iv. The use of a covered mall in any of the following manners:
  - (1) Placing or constructing temporary kiosks, display booths, concession equipment or the like in more than 25 percent of the common area of the mall;
  - (2) Temporarily using the mall as a place of assembly;
  - (3) Using open flame or flame devices;
  - (4) Displaying liquid or gas fueled powered equipment; or
  - (5) Using liquified petroleum gas, liquified natural gas, and compressed flammable gas in containers exceeding five pound capacity.

5. Type 3 permit:

- i. Industrial processing ovens or furnaces operating at approximately atmospheric pressures and temperatures not exceeding 1,400 degrees Fahrenheit which are heated with oil or gas fuel or which contain flammable vapors from the product being processed;
- ii. Wrecking yards, junk yards, outdoor used tire storage, waste material handling plants, and outside storage of forest products not otherwise classified; or
- iii. The storage or discharging of fireworks.

6. Type 4 permit:

- i. Storage or use at normal temperature and pressure of more than 2,000 cubic feet of flammable compressed gas or 6,000 cubic feet of nonflammable compressed gas;
- ii. The production or sale of cryogenic liquids; the storage or use of more than 10 gallons of liquid oxygen, flammable cryogenic liquids or cryogenic oxidizers; or the storage of more than 500 gallons of nonflammable, non-toxic cryogenic liquids;
- iii. The storage, handling, and processing of flammable, combustible, and unstable liquids in closed containers and portable tanks in aggregate amounts of more than 660 gallons;
- iv. To store or handle (except medicines, beverages, foodstuffs, cosmetics, and other common consumer items, when packaged according to commonly accepted practices):
  - (1) More than 55 gallons of corrosive liquids;
  - (2) More than 500 pounds of oxidizing materials;
  - (3) More than 10 pounds of organic peroxides;

- (4) More than 500 pounds of nitromethane;
- (5) More than 1,000 pounds of ammonium nitrate;
- (6) More than one microcurie of radium not contained in a sealed source;
- (7) More than one millicurie of radium or other radiation material in a sealed source or sources;
- (8) Any amount of radioactive material for which a specific license from the Nuclear Regulatory Commission is required; or
- (9) More than 10 pounds of flammable solids.

v. The melting, casting, heat treating, machining or grinding of more than 10 pounds of magnesium per working day; or

vi. Heliports.

7. Type 5 permit:

i. Airports.

(b) Application for a permit required by this Code shall be made to the fire official in such form and detail as the fire official shall prescribe. Applications for permits shall be accompanied by plans or drawings as required by the fire official for evaluation of the application.

(c) Before a permit is issued, the fire official or the fire official's designated representative shall make or cause to be made such inspections or tests as necessary to assure that the use and activity for which application is made complies with the provisions of this Code.

(d) A permit shall constitute permission to maintain, store or handle materials, or to conduct processes which produce conditions hazardous to life or property, or to install equipment used in connection with such activities in accordance with the provisions of this Code. Such permissions shall not be construed as authority to violate, cancel or set aside any of the provisions of this Code.

(e) Plans approved by the fire official are approved with the intent they comply in all respects to this Code. Any omission or error on the plans does not relieve the applicant of complying with all applicable requirements of this Code.

(f) The fire official may revoke a permit or approval issued under the provisions of this Code if upon inspection any violation of the Code exists, or if conditions of a permit have been violated, or if there has been any false statement or misrepresentation as to material fact in the application, data or plans on which the permit or approval was based.

(g) A permit shall remain in effect until revoked, or for one year unless a shorter period of time is otherwise specified. Permits are not transferable and any change in use, operation or tenancy shall require a new permit.

1. Exception: A type 1 permit for welding or cutting shall be effective throughout the local enforcing agency's jurisdiction and shall be issued on an annual basis.

(h) Any permit issued shall become invalid if the authorized work or activity is not commenced within six months after issuance of the permit, or if the authorized work or activity is suspended or abandoned for a period of six months after the time of commencement.

(i) A permit shall not be issued until the designated fees have been paid.

1. There shall be no fee for a permit required by this subchapter if a municipality has by ordinance established a periodic inspection and fee schedule for a use substantially similar to the permit requirement.

(j) No permit(s) shall be issued for a carnival, as defined in N.J.A.C. 5:18-1.5, if the carnival has not been registered in accordance with N.J.A.C. 5:18-2.21.

Amended by R.1985 d.611, effective December 2, 1985.  
See: 17 N.J.R. 1015(b), 17 N.J.R. 2870(a).

Substantially amended.

Amended by R.1987 d.247, effective June 15, 1987.  
See: 18 N.J.R. 1225(a), 19 N.J.R. 1078(a).

Deleted the word "fireworks" from (b)2vii.  
See correction notice in July 20, 1987 Register.  
Administrative Correction to (e).

See: 21 N.J.R. 3085(a).  
Amended by R.1989 d.556, effective November 6, 1989.  
See: 21 N.J.R. 2431(a), 21 N.J.R. 3453(a).

Added new 2 under (b) and renumbered existing 2-6 as 3-7.  
Amended by R.1990 d.325, effective July 2, 1990.  
See: 21 N.J.R. 1654(a), 22 N.J.R. 2001(a).

Text at (b)2iii amended to decrease tent area to 900 square feet; text at (b)3iii deleted.

Amended by R.1991 d.504, effective October 7, 1991.  
See: 23 N.J.R. 2234(a), 23 N.J.R. 2999(a).

Text deleted at (b)5ii and 6v.  
Amended by R.1992 d.385, effective October 5, 1992.  
See: 24 N.J.R. 2654(a), 24 N.J.R. 3519(a).

Text added at (b)3x and xi, 5ii, 6iii; deleted at 6v.  
Amended by R.1993 d.197, effective May 3, 1993.  
See: 25 N.J.R. 393(a), 25 N.J.R. 1868(a).

Permit required for cooking operations using a fire suppression system, if not already registered; fee for fire official allowed, if not already provided for.

Amended by R.1995 d.58, effective March 6, 1995.  
See: 26 N.J.R. 4258(a), 27 N.J.R. 878(b).

Amended by R.1995 d.59, effective March 6, 1995.  
See: 26 N.J.R. 4249(a), 27 N.J.R. 891(a).

## 5:18-2.8 (Reserved)

### Case Notes

Life hazard use registration fee could properly be imposed on church school. *New Life Gospel Church v. State*, Dept. of Community Affairs, Div. of Housing Bureau of Fire Safety, 257 N.J.Super. 241, 608 A.2d 397 (A.D.1992), certification denied 133 N.J. 429, 627 A.2d 1136.

## 5:18-2.9 Fees: registration; certificate of smoke detector compliance; permit; carnival registration certificate

(a) The annual registration fee for life hazard uses shall be as follows:

1. Type Aa—\$70.00 per year;
2. Type Ab—\$103.00 per year;
3. Type Ac—\$110.00 per year;
4. Type Ad—\$123.00 per year;
5. Type Ae—\$138.00 per year;
6. Type Af—\$166.00 per year;
7. Type Ag—\$208.00 per year;
8. Type Ah—\$248.00 per year;
9. Type Ai—\$331.00 per year;
10. Type Aj—\$414.00 per year;
11. Type Ba—\$110.00 per year;
12. Type Bb—\$208.00 per year;
13. Type Bc—\$331.00 per year;
14. Type Bd—\$414.00 per year;
15. Type Be—\$484.00 per year;
16. Type Bf—\$622.00 per year;
17. Type Bg—\$662.00 per year;
18. Type Bh—\$828.00 per year;
19. Type Bi—\$997.00 per year;
20. Type Bj—\$1,036.00 per year;
21. Type Bk—\$1,242.00 per year;
22. Type Bl—\$1,450.00 per year;
23. Type Bm—\$1,656.00 per year;
24. Type Bn—\$2,070.00 per year;
25. Type Bo—\$2,484.00 per year;
26. Type Ca—\$828.00 per year;
27. Type Cb—\$994.00 per year;
28. Type Cc—\$1,076.00 per year;
29. Type Cd—\$1,159.00 per year;
30. Type Ce—\$1,325.00 per year;
31. Type Cf—\$1,450.00 per year;
32. Type Cg—\$1,656.00 per year;
33. Type Ch—\$2,080.00 per year;
34. Type Ci—\$2,500.00 per year;
35. Type Da—\$1,650.00 per year;
36. Type Db—\$2,500.00 per year;
37. Type Dc—\$3,250.00 per year.

(b) Where more than one life hazard use exists under one ownership at a given location, the highest life hazard use shall be registered at full fee and subsequent life hazard uses at one-half the scheduled fee; provided, however, that no public or private K-12 educational building shall pay more than one \$138.00 life hazard use registration fee, regardless of the number or type of life hazard uses contained within the building.

1. Each life hazard use that is separately owned shall be registered at full fee.

(c) The application fee for a permit shall be as follows:

1. Type 1—\$35.00;
2. Type 2—\$138.00;
3. Type 3—\$276.00;
4. Type 4—\$414.00;

i. Exception: There shall be no fee for Type 4 permits for storage or activity at a premises registered as a life hazard use in accordance with this subchapter.

5. Type 5—\$1,380.00.

(d) The application fee for a certificate of smoke detector compliance, as required by N.J.A.C. 5:18-2.3, shall be \$20.00.

(e) The application fee for a carnival registration certificate shall be as follows:

1. For 10 or fewer locations: \$50.00;
2. For 11 to 25 locations: \$75.00;
3. For 26 or more locations: \$100.00.

(f) A municipality having a local enforcing agency may establish by ordinance a different permit and certificate of smoke detector compliance fee schedule based on the actual cost anticipated or incurred for the enforcement of these Code provisions.

Amended by R.1985 d.611, effective December 2, 1985.

See: 17 N.J.R. 1015(b), 17 N.J.R. 2870(a).

Deleted "not in excess of fees in Schedule (b) above".

Amended by R.1987 d.508, effective December 7, 1987.

See: 19 N.J.R. 1680(a), 19 N.J.R. 2266(a).

Added (a)5 through (a)33.

Emergency amendment, R.1989 d.404, effective July 3, 1989 (expires September 1, 1989).

See: 21 N.J.R. 2126(a), 21 N.J.R. 2402(a).

Increased life hazard use registration fees and permit fees by approximately 15 percent.

Fee increases in (a) and (c).

Adopted concurrent proposal, R.1989 d.513, effective September 1, 1989.

See: 21 N.J.R. 2126(a), 21 N.J.R. 2402(a), 21 N.J.R. 3084(a).

Provisions of emergency amendment, R.1989 d.404 readopted without change.

Amended by R.1989 d.556, effective November 6, 1989.

See: 21 N.J.R. 2431(a), 21 N.J.R. 3453(a).

Established limit of no more than 1 \$115.00 fee for K-12 educational building, at (b).

Amended by R.1991 d.504, effective October 7, 1991.

See: 23 N.J.R. 2234(a), 23 N.J.R. 2999(a).

Fees increased.

Amended by R.1991 d.530, effective November 4, 1991.

See: 23 N.J.R. 2234(a), 23 N.J.R. 2453(a), 23 N.J.R. 3325(a).

Added (a)33.

Amended by R.1992 d.11, effective January 6, 1992.

See: 23 N.J.R. 3064(a), 24 N.J.R. 88(a).

Application fee added at (d).

Amended by R.1992 d.385, effective October 5, 1992.

See: 24 N.J.R. 2654(a), 24 N.J.R. 3519(a).

Exception to Type 4 permit requirements added at (c)4i.

Recodified from 5:18-2.8 and amended by R.1995 d.58, effective March 6, 1995.

See: 26 N.J.R. 4258(a), 27 N.J.R. 878(b).

Amended by R.1995 d.59, effective March 6, 1995.

See: 26 N.J.R. 4249(a), 27 N.J.R. 891(a).

### 5:18-2.10 Enforcement procedures

(a) Whenever the fire official or the fire inspector observes a violation of a provision of this Code or locally adopted amendments the fire official shall prepare and serve on the owner a written notice of violation identifying the condition which is in violation, including the location, the appropriate Code section, and specifying time limits for the required repairs or improvements to be made. The notice shall contain or be accompanied by a written statement of the owner's right to appeal as set forth in N.J.A.C. 5:18-2.19.

(b) Time periods allowed for abatement of violations of this Code shall be as follows:

1. For any violation of N.J.A.C. 5:18-3, the fire official shall allow a minimum of 15 days.

i. The fire official may specify a time period of not less than three days where there is a dangerous condition that is liable to cause or contribute to the spread of fire or endanger the occupants.

2. For any violation of N.J.A.C. 5:18-4, the fire official shall allow a minimum of 30 days for abatement of the submission of a request for an extension, in accordance with (d) below.

(c) These time limits shall not apply to violations constituting an imminent hazard in accordance with N.J.A.C. 5:18-2.16 or to the revocation of permits in accordance with N.J.A.C. 5:18-2.7(f).

(d) The fire official may grant extensions of time whenever he shall determine that despite diligent effort compliance cannot be accomplished within the time specified in the notice.

1. No extension shall be granted unless it is requested in writing by the owner. A request for extension shall set forth the work which has been accomplished, the work that remains, the reason why an extension is necessary and the date by which the work will be completed.

2. An application for an extension shall be deemed to be an admission that the notice of violation is factually

and procedurally correct and that the violations do or did exist.

i. An owner who inquires concerning an extension shall be informed of the provisions of (d)2 above.

ii. If the local enforcing agency provides forms for an application for extension, the provisions of (d)2 above shall be prominently printed on them.

(e) If the notice of violation is not complied with within the time specified by the fire official, the fire official shall institute the appropriate enforcement proceedings to restrain, correct or abate such violation or to require removal or termination of the unlawful use of the building or structure in violation of the provisions of this Code or of any order or direction made pursuant thereto.

(f) If the fire official determines that the Code cannot be adequately or safely enforced without police support, he or she shall request the police to provide assistance. If no assistance is forthcoming, he or she shall pursue formal action to address the situation and shall not use physical force.

(g) Any person, firm or corporation violating any of the provisions of the Code or failing to comply with any order issued pursuant to any section thereof, shall be subject to the penalties provided in N.J.A.C. 5:18-2.12. The imposition of penalties shall not prevent the fire official from instituting appropriate action to restrain, correct or abate a violation; or to prevent illegal occupancy of a building, structure or premises; or to stop an illegal act, business or use in or about any premises.

Amended by R.1992 d.104, effective March 2, 1992.

See: 23 N.J.R. 3552(a), 24 N.J.R. 739(a).

Text at (a)1-10 deleted; reference to N.J.A.C. 5:18-3 added.

Amended by R.1993 d.195, effective May 3, 1993.

See: 25 N.J.R. 397(a), 25 N.J.R. 1872(a).

Old (d)1 deleted; new (d)1 and 2 added; authorized representative to follow required procedures.

Recodified from 5:18-2.9 and amended by R.1995 d.58, effective March 6, 1995.

See: 26 N.J.R. 4258(a), 27 N.J.R. 878(b).

### 5:18-2.11 Service of notice and orders

(a) Notice, rules, decisions and orders issued and served pursuant to the Act shall be effective if served by any one of the methods set forth below:

1. By personal delivery; or

2. By leaving the document at the addressee's office or dwelling unit with a person 14 years of age or older; or

3. By certified mail return receipt requested to the person's last known address; however, if the document is returned as "refused" or "unclaimed" with no indication of a change of address, service may be made by ordinary mail to the same address; or

4. If on an owner, by serving the document on the Secretary of State, who shall be deemed the owner's agent for service of process; if:

- i. A certified mailing was returned; and
- ii. A copy of the document is posted in a conspicuous location on the premises, which location shall include the walls in a front vestibule, common foyer or hallway near the inside main front entrance.

(b) The date of personal service or the third day after mailing shall be considered the date of service.

(c) A copy of any notice or order served upon the owner of a State-leased or owned property shall be sent to the Director of Property and Facilities Management, Department of Treasury.

Recodified from 5:18-2.10 and amended by R.1995 d.58, effective March 6, 1995.  
See: 26 N.J.R. 4258(a), 27 N.J.R. 878(b).

### 5:18-2.12 Penalties

(a) The Commissioner or a local enforcing agency may assess, levy and collect penalties to ensure compliance with the Code. No penalty shall be imposed except upon issuance of a written order requiring abatement and the allowance of a reasonable specified period in which to comply, unless clear notice of the violation otherwise exists.

(b) The maximum penalty for any act or omission in violation of the act or code but not enumerated in this subsection is \$5,000 per violation per day. Except as specified below, a violation of N.J.A.C. 5:18-3 or 4 shall subject a violator to a maximum penalty of \$500.00 per violation, per day. Specific violations shall subject violators to penalties as follows:

#### 1. Imminent hazard—punitive closure:

i. Failure to obey an imminent hazard order—a maximum of \$5,000 per day for each day that the failure continues.

ii. Failure to obey an order to close for fixed period of time issued pursuant to N.J.A.C. 5:18-2.17—a maximum of \$5,000 per day for each day that the failure continues.

#### 2. Egress:

i. Blocking, locking, or obstructing required exits in a place of public assembly or education—a maximum of \$5,000 per occurrence;

ii. Blocking, locking, or obstructing required exits in any other place—a maximum of \$2,500 per occurrence.

#### 3. Occupancy:

i. Exceeding the maximum permitted occupancy in a place of public assembly or education;

(1) For the first offense—a maximum of \$2,500;

(2) For a subsequent offense—a maximum of \$5,000;

ii. Exceeding the maximum permitted occupancy in any other place;

(1) For the first offense—a maximum of \$500.00;

(2) For a subsequent offense—a maximum of \$2,500.

#### 4. Fire protection equipment:

i. Failure to install a required suppression or detection device after having been given written notice of the requirement to do so:

(1) In a place of public assembly or education—a maximum of \$2,500 per violation per day;

(2) In any other place—a maximum of \$1,000 per violation per day.

ii. Disabling or decreasing the effectiveness of any fire suppression or alarm device or system.

(1) In a place of public assembly or education—a maximum of \$5,000 per occurrence;

(2) In any other place—a maximum of \$1,000 per occurrence.

#### 5. Failure to comply with a lawful action:

i. A negligent or inadvertent failure to comply with a lawful order, ruling, notice or other action of the Commissioner or a local enforcing agency—a maximum of \$2,000 per occurrence.

ii. A refusal or deliberate failure to comply with a lawful order, ruling, notice or other action of the Commissioner or a local enforcing agency—a maximum of \$5,000 per occurrence.

#### 6. Obstruction:

i. Anyone who obstructs, hinders, delays or interferes by force or otherwise with the Commissioner or any member of a local enforcing agency in the exercise of any power or the discharge of any function or duty under the provisions of this Code—a maximum of \$2,500 per occurrence.

#### 7. Permits:

i. Failure to obtain a required permit prior to commencing the operation, process or activity for which a permit was required—a maximum of double the amount of the applicable permit fee.

ii. Failure to obtain a required permit after being ordered to do so while continuing the operation, process or activity—a maximum of \$5,000 per day during which the operation, process, or activity continues.

#### 8. Registration:



i. Failure to file a registration application after having been ordered to do so—an amount equal to double the applicable registration fee, but not less than \$200.00 or more than \$1,000 for each registration.

ii. Failure to pay the required annual registration fee when due—an amount equal to the unpaid fee. Payment of the fee after imposition of the penalty shall not absolve the owner from responsibility for the penalty nor shall payment of the penalty be deemed to absolve the owner from the obligation to pay the fee.

9. False statements:

i. Preparing, uttering or rendering any false statement, pertaining to reports, documents, plans or specifications permitted or required under the provisions of this code—a maximum of \$5,000.

ii. Submission of a materially false application for a permit or registration—a maximum of \$1,000 per occurrence.

10. Special hazards:

i. For any violation of N.J.A.C. 5:18-3 or 4 of this Code which is not specifically enumerated above but which, under the circumstances, presents a specific hazard to life—a maximum of \$5,000 per violation per day. The violation notice must set forth the basis for determining the basis for a special hazard.

(c) Each day during which the violation remains unabated after the date or time specified in the order or notice for its correction or termination shall constitute an additional and separate violation.

(d) The filing of a timely appeal shall stay the action until a decision is made by the construction board of appeals or the Commissioner, as the case may be.

(e) A violation that is recurring justifies imposition of an immediate penalty without the necessity for an interval in which correction can be made. A violation shall be deemed to be a recurring violation if a notice has been served within two years from the date that a previous notice was served and the violation, premises and responsible party are substantially the same.

(f) If a penalty order has not been satisfied by the 30th day after its issuance, the Commissioner or local enforcing agency may institute a civil penalty action by a summary proceeding under the Penalty Enforcement Law (N.J.S.A. 2A:58-1 et seq.) in the Superior Court or municipal court.

1. A person who fails to pay immediately a money judgment rendered against him may be sentenced to imprisonment by the court for a period not exceeding six months, unless the judgment is sooner paid.

2. All moneys that are recovered as a result of the assessment of penalties shall be paid into the designated

trust account and shall be appropriated to support the local enforcing agency's operation.

(g) The Commissioner or fire official may offer to reduce any penalty provided that such reduction is in the best interest of fire safety and will assure compliance. No penalty reduction can be made final while the violation that led to its assessment remains in existence.

Amended by R.1985 d.611, effective December 2, 1985.

See: 17 N.J.R. 1015(b), 17 N.J.R. 2870(a).

(b)1 added.

Amended by R.1993 d.195, effective May 3, 1993.

See: 25 N.J.R. 397(a), 25 N.J.R. 1872(a).

Added new subsection (f); recodified old (f) to (g) and added (g)2.

Amended by R.1995 d.58, effective March 6, 1995.

See: 26 N.J.R. 4258(a), 27 N.J.R. 878(b).

### 5:18-2.12A Dedicated and compensatory penalties

(a) When an owner has been given notice of the existence of a violation and has not abated the violation, that owner shall, in addition to being liable to the penalty provided for by N.J.A.C. 5:18-2.12, be liable to a dedicated penalty assessed pursuant to this subsection.

1. Whenever any penalty is assessed pursuant to N.J.A.C. 5:18-2.12, then a dedicated penalty in like amount shall be assessed pursuant to this section.

2. The amount of any dedicated penalty assessed pursuant to this subsection shall be in accordance with the standards set forth in N.J.A.C. 5:18-2.12(b), except that a dedicated penalty of up to \$50,000 for each violation may be assessed where there is a serious injury or loss of human life directly or indirectly resulting from any unabated violation.

3. Dedicated penalties assessed pursuant to the requirements of this subsection shall be assessed only once and shall not be assessed each day, as may be done in the case of penalties assessed pursuant to N.J.A.C. 5:18-2.12.

(b) All monies collected pursuant to this section shall be placed in a special municipal trust fund to be applied to the cost to the municipality of firefighter training and/or new firefighting equipment.

1. In the case where a fire district is the local enforcing agency, the funds shall be placed in the general treasury of the district subject to separate accounting and annual certification to the Department from the district chief financial officer.

2. In any case in which the enforcing agency is the Department, a county fire marshal, or an intermunicipal agency, all revenue from dedicated and compensatory penalties shall be paid into the fund maintained, in accordance with this section, by the municipality or fire district in which the building, structure or premises at which the violation occurred is located.

Amended by R.1993 d.195, effective May 3, 1993.

See: 25 N.J.R. 397(a), 25 N.J.R. 1872(a).

Rule retitled "Dedicated and compensatory penalties"; added (a)1-3 and (c)1; penalty upper limited specified as \$150,000.

Recodified from 5:18-2.17 and amended by R.1995 d.58, effective March 6, 1995.

See: 26 N.J.R. 4258(a), 27 N.J.R. 878(b).

### 5:18-2.13 Fire department costs

(a) An owner who has been given notice of a violation shall be responsible for a penalty not exceeding \$150,000 or the costs of suppressing any fire which directly or indirectly results from the violation, whichever is greater. To create an obligation, the violation need not have been the initial cause of the fire; it is sufficient if the violation's existence has increased the intensity of the fire or the difficulty of its extinguishment. This penalty is independent of any penalty issued in accordance with N.J.A.C. 5:18-2.12 for failure to abate the violation. Suppression costs may be imposed for a fire which occurs during the period allowed for abatement.

(b) The suppression costs shall include, but not be limited to, costs of labor, equipment and material incurred by municipalities, fire districts or fire departments involved in suppressing the fire, as well as any other actual expenses, including attorney fees, incurred for the collection of the penalty. If a compensatory penalty in excess of \$150,000 is sought, the cost of suppression shall be certified to the fire official of the area in which the fire occurred by the chiefs of the suppression units involved.

(c) The fire official shall serve notice on the owner and order payment. The notice shall state the violations justifying imposition of the penalty. If payment is not received within 30 days, the fire official shall pursue collection in the manner specified herein for penalties. The monies collected shall be paid to the municipalities or districts and appropriated in accordance with N.J.A.C. 5:18-2.12A(b).

New Rule, R.1995 d.58, effective March 6, 1995.

See: 26 N.J.R. 4258(a), 27 N.J.R. 878(b).

### 5:18-2.14 Variances

(a) Upon the application of a property owner or lessee with the consent of the owner, the fire official may grant a variance from the requirements of a regulation or standard adopted pursuant to the Act; provided, however, that no variance shall be granted unless it is determined that strict compliance would result in practical difficulty and that the variance, if granted, would not unreasonably jeopardize the safety of the occupants or intended occupants, fire fighters or the public generally.

1. In any facility subject to regulation by any State agency, no variance shall be granted except after consultation with that State agency.

2. Financial hardship alone shall not be grounds for a variance.

(b) An application for a variance shall be made in writing, shall be filed with the fire official and shall set forth the following information:

1. The requirements of the regulation from which a variance is sought;

2. The manner in which strict compliance with the regulation would result in practical difficulty;

3. The nature and extent of the practical difficulty; and

4. Feasible alternatives which would adequately protect the occupants or intended occupants, fire fighters and the public generally.

(c) Within 30 days after receiving an application for a variance, the fire official shall grant or deny the application in writing, stating the reasons for his action.

1. An application which is not granted within 30 days shall be deemed to have been denied.

2. A denial of an application for a variance may be appealed in the same manner as any other ruling of the fire official.

(d) Copies of all variance applications and records of the action taken on them shall be maintained as permanent public records by the fire official.

1. A fire official shall promptly provide the Division with copies of all decisions granting or denying variances after they have been rendered.

(e) Variations to requirements found in the Uniform Construction Code may only be granted by the Construction Official in accordance with the Uniform Construction Code.

Amended by R.1986 d.214, effective June 16, 1986.

See: 17 N.J.R. 1161(a), 18 N.J.R. 1260(b).

(e) added.

Amended by R.1993 d.628, effective December 6, 1993.

See: 25 N.J.R. 4363(a), 25 N.J.R. 5466(a).

Recodified from 5:18-2.3 and amended by R.1995 d.58, effective March 6, 1995.

See: 26 N.J.R. 4258(a), 27 N.J.R. 878(b).

### 5:18-2.15 Injunctive relief

The enforcing agency may petition the Superior Court for mandatory injunctive relief enforcing an order issued pursuant to the Act. The Superior Court may proceed in a summary manner or otherwise, and shall have power to grant temporary relief or a restraining order as it may deem just and proper, and to make and enter a decree enforcing, modifying, and enforcing as so modified, or setting aside, in whole or in part, any order issued pursuant to the Act.

Recodified from 5:18-2.13, R.1995 d.58, effective March 6, 1995.

See: 26 N.J.R. 4258(a), 27 N.J.R. 878(b).

**5:18-2.16 Imminent hazards**

(a) If, upon an inspection, the enforcing agency discovers a violation of the Act that constitutes an imminent hazard as defined in (b) below, the enforcing agency shall issue and cause to be served on the owner of the premises, or on the violator, a written order directing that the premises be vacated, closed, or removed forthwith or that the violation be corrected within a period not to exceed 24 hours. The order shall state the nature of the violation and the date and hour by which the premises shall be vacated, closed or removed or the violation shall be abated.

(b) The following violations, by their nature, constitute imminent hazards to the health, safety or welfare of the occupants or intended occupants of a building, structure or premises, of firefighters, or of the general public:

1. Unsafe structural conditions;
2. Locking or blocking of any means of egress;
3. Presence of explosives, explosive fumes or vapor in violation of this Code;
4. Presence of toxic fumes, gases or materials, or flammable or combustible liquids in violation of this Code; and
5. Inadequacy of any required fire protection system.

(c) Upon determination of the existence of an imminent hazard in accordance with this section, the fire official shall immediately notify the construction code official of his or her findings.

(d) The enforcing agency shall reinspect the premises within 48 hours of receiving written notice from the owner, violator or agent thereof stating that the violation has been terminated. If, upon reinspection, the enforcing agency determines that the violation has been terminated, it shall mark the violation "abated", and rescind the order requiring the vacation of the premises and occupancy may be resumed immediately. If the reinspection is not made by the local enforcing agency within 48 hours of the receipt of the notice, the owner, violator or agent may apply to the Division for a reinspection and shall provide a copy of such application to the local enforcing agency. The Division shall complete a reinspection and make a determination within three working days from the date of notification. If a local enforcing agency completes its reinspection prior to issuance of the Division's notice, it shall immediately notify the Division; an oral notification shall be followed promptly in writing.

Amended by R.1987 d.247, effective June 15, 1987.  
See: 18 N.J.R. 1225(a), 19 N.J.R. 1078(a).

(c) deleted.

Amended by R.1993 d.195, effective May 3, 1993.  
See: 25 N.J.R. 397(a), 25 N.J.R. 1872(a).

Subsection (c) and (d) added.

Amended by R.1993 d.628, effective December 6, 1993.  
See: 25 N.J.R. 4363(a), 25 N.J.R. 5466(a).

Recodified from 5:18-2.14 and amended by R.1995 d.58, effective March 6, 1995.

See: 26 N.J.R. 4258(a), 27 N.J.R. 878(b).

Prior text at 5:18-2.16, Time limits for abatement of violations, repealed.

**5:18-2.17 Evacuation of unsafe premises**

(a) When, in the opinion of the fire official, there is actual and/or potential danger to the occupants or those in proximity to any premises because of any condition constituting an imminent hazard in accordance with N.J.A.C. 5:18-2.16, the fire official is hereby authorized and empowered to order the imminent evacuation of said premises.

1. All occupants so notified shall immediately leave the premises and no person shall enter or re-enter until authorized to do so by the fire official.

2. Any person who shall refuse to leave, or who shall interfere with the evacuation of other occupants or continue any operation after having been given an evacuation order, except such work as that person is directed to perform to remove a violation or unsafe condition, shall be deemed to have violated this Code, and may be subject to arrest as provided in N.J.A.C. 5:18-2.10(f). This paragraph shall not be used to penalize a properly qualified individual who is authorized to perform, and is performing, work to abate the violation and eliminate the unsafe condition.

3. The fire official shall cause to be posted at each entrance to such premises a notice reading as follows: This premises is unsafe due to violations of the Uniform Fire Code and its use or occupancy has been prohibited by the fire official. It shall be unlawful for any person to enter such premises, except for the purpose of making the required repairs, until fire safety hazards have been removed and entry is permitted by the fire official.

New Rule, R.1995 d.58, effective March 6, 1995.

See: 26 N.J.R. 4258(a), 27 N.J.R. 878(b).

**5:18-2.18 Punitive closing**

If the enforcing agency finds a violation of the provisions of the Act in a life hazard use to be willful or grossly negligent, or to be in violation of a previously issued order, and to constitute a clear danger to human life, in addition to ordering the building, structure or premises vacated and closed until the violation is abated, the enforcing agency may order the building, structure or premises to remain vacated and closed for a further period not to exceed 60 days and until such time as a certificate of continued occupancy, issued pursuant to the Uniform Construction Code shall be obtained by the owner.

Recodified from 5:18-2.15 and amended by R.1995 d.58, effective March 6, 1995.

See: 26 N.J.R. 4258(a), 27 N.J.R. 878(b).

Prior text at 5:18-2.18, Certificate of Fire Code Status, repealed.

**5:18-2.19 Appeals**

(a) The person aggrieved may appeal any enforcement action, including rulings, orders and notices, by submitting a written hearing request as set forth herein. Either the owner of the premises or of the use, or an authorized agent of the owner, may be a person aggrieved.

1. If from the act of a local enforcing agency, the request shall be made to the Construction Board of Appeals in the municipality where the building, structure or premises is located. If no such Board exists, then the request shall be to the County Construction Board of Appeals in the county where the building, structure or premises is located. At the time made, a copy of the request shall be sent to the local enforcing agency.

2. If from the act of the Department the request shall be made to the Hearing Coordinator, Department of Community Affairs, CN 802, Trenton, New Jersey 08625. The hearing shall be conducted by the Office of Administrative Law, with the Commissioner or his or her designee issuing the final decision.

3. All hearing requests shall be signed by a proper party and shall include:

- i. The date of the act which is the subject of the appeal;
- ii. The name and status of the person submitting the appeal;
- iii. The specific violations or other act claimed to be in error; and
- iv. A concise statement of the basis for the appeal.

(b) Hearing requests shall not be valid unless submitted within 15 days after service of a ruling, order or notice, except in cases of imminent hazards.

(c) In imminent hazard cases, except in emergent circumstances, and in punitive closure cases, the owner shall have a period of 24 hours to request a hearing before the order to close, vacate or remove shall be effective. In emergent circumstances, orders may be effective immediately. Hearing requests within the 24 hour period may be made orally to the person designated on the form served but shall be written in accordance with (a)3 above and served on the enforcing agency at the hearing. At the expiration of 24 hours, if the action required in the order has been taken, the owner shall have a period of 15 days to request a hearing.

1. If a request is made within 24 hours, a hearing shall be conducted and a final decision issued within 48 hours of receipt of the hearing request.

2. If the request is to a Construction Board of Appeals and no final decision is issued within two working days, thereafter, the owner may make written application for a hearing to the Department at the address specified in (a)2 above. The application shall clearly state that it is an imminent hazard appeal and shall identify the local enforcing agency and Construction Board of Appeals. In such case, a hearing shall be held and a final decision issued within three working days from receipt of the request.

3. If the hearing request is made in accordance with the 15 day provision, a hearing shall be held and a final decision issued within seven working days.

Amended by R.1987 d.247, effective June 15, 1987.

See: 18 N.J.R. 1225(a), 19 N.J.R. 1078(a).

Old text deleted and new text substituted.

Administrative correction to (a)2.

See: 21 N.J.R. 3085(a).

Amended by R.1993 d.628, effective December 6, 1993.

See: 25 N.J.R. 4363(a), 25 N.J.R. 5466(a).

Recodified from 5:18-2.11 and amended by R.1995, d.58, effective March 6, 1995.

See: 26 N.J.R. 4258(a), 27 N.J.R. 878(b).

**5:18-2.20 Identifying emblems for structures with truss construction**

(a) Identifying emblems shall be permanently affixed to the front of structures with truss construction.

1. The emblem shall be of a bright and reflective color, or made of reflective material. The shape of the emblem shall be an isosceles triangle and the size shall be 12 inches horizontally by six inches vertically. The following letters, of a size and color to make them conspicuous, shall be printed on the emblem:

- i. "F" to signify a floor with truss construction;
- ii. "R" to signify a roof with truss construction; or
- iii. "F/R" to signify both a floor and roof with truss construction.

2. The emblem shall be permanently affixed to the left of the main entrance door at a height between four and six feet above the ground and shall be installed and maintained by the owner of the building.

(b) Detached one and two family residential structures with truss construction that are not part of a planned real estate development shall be exempt from the requirements of (a) above, unless otherwise provided by municipal ordinance.

(c) Individual structures and dwelling units with truss construction that are part of a planned real estate development shall not be required to have an identifying emblem if there is an emblem affixed at each entrance to the development.

New Rule, R.1992 d.5, effective January 6, 1992.

See: 23 N.J.R. 2168(a), 24 N.J.R. 89(a).

Recodified from 5:18-2.19 by R.1995 d.58, effective March 6, 1995.  
See: 26 N.J.R. 4258(a), 27 N.J.R. 878(b).

### 5:18-2.21 (Reserved)

### 5:18-2.22 Registration of carnivals

(a) No carnival shall be operated at any time or at any location unless a carnival registration certificate has been issued by the Division.

(b) The owner of every carnival shall apply for a carnival registration certificate at least 30 days before the first intended operation. The application shall include the following:

1. Dates and locations of intended operation;
2. All uses requiring a permit under N.J.A.C. 5:18-2.7;
3. Complete plans for all mobile enclosed structures to be used for human occupancy;
4. Flame spread certifications, seating and usage diagrams for all tents;
5. Certificate of insurance;
6. Name, address and telephone number of the owner(s) of the carnival; and
7. Name of the person who will be with the carnival and will be responsible for securing all permits required by N.J.A.C. 5:18-2.7 and for the correction of any violations of this Code.

(c) Upon review and approval of the application, the Division will issue a carnival registration certificate to the owner. Additionally, copies shall be provided to all local enforcing agencies identified on the submitted schedule.

1. The certificate must be maintained by the responsible party identified pursuant to (b)7 above at all show locations and be available for inspection by the fire official.

2. Possession of a carnival registration certificate shall not relieve the owner of responsibility for obtaining permits as required by N.J.A.C. 5:18-2.7 or for otherwise complying with the requirements of this chapter.

(d) Any application for a carnival registration certificate shall be accompanied by the fee as set forth in N.J.A.C. 5:18-2.8.

New Rule, R.1995 d.59, effective March 6, 1995.  
See: 26 N.J.R. 4249(a), 27 N.J.R. 891(a).

## SUBCHAPTER 3. STATE FIRE PREVENTION CODE

### 5:18-3.1 Purpose and scope

(a) The purpose of this subchapter is to prescribe minimum requirements and controls to safeguard life, property, or public welfare from the hazards of fire and explosion.

(b) This subchapter shall be applicable to:

1. All buildings, structures, and premises within this State, with the exception of owner-occupied one and two-family dwellings used exclusively for dwelling purposes within this State; and

2. All fire safety hazards arising from the storage, handling or use of substances, materials or devices and arising from conditions hazardous to life, property or public welfare in the use or occupancy of buildings, structures, sheds, tents, lots or premises.

3. Buildings or other facilities built under and in full compliance with the codes in force at the time of construction or alteration thereof, and that have been properly maintained and used for such use as originally permitted, shall be exempt from the requirements of this subchapter pertaining to any of the following matters:

i. Fire protection of structural elements except as provided for existing buildings under the Uniform Construction Code;

ii. Isolation of hazardous operations: provided, however, that the fire official may require the installation of fire safety devices or systems (fire extinguishers, fire alarms, fire detection devices, sprinklers or similar systems) where, in the judgment of the fire official, they are necessary to provide safety to life and property.

iii. In lieu of requiring the installation of safety devices or systems or when necessary to secure safety in addition thereto, the fire official may prescribe limitations on the handling and storage of materials or substances or upon operations that are liable to cause fire, contribute to the spread of fire, or endanger life or property.

(c) Whenever, in this subchapter, reference is made to the Appendix, the provisions in the Appendix shall not apply unless specifically adopted herein.

Amended by R.1993 d.197, effective May 3, 1993.

See: 25 N.J.R. 393(a), 25 N.J.R. 1868(a).

Added "used exclusively for dwelling purposes" at (b)1.

Amended by R.1995 d.58, effective March 6, 1995.

See: 26 N.J.R. 4258(a), 27 N.J.R. 878(b).

### Case Notes

Term "individual dwelling unit" in Uniform Fire Code has same meaning as term "dwelling unit" in Uniform Fire Safety Act; term thus applies to both permanent and transient occupancies. *Venuti v. Cape*



May County Const. Bd. of Appeals, 231 N.J.Super. 546, 555 A.2d 1175 (A.D.1989).

Hotel and motel rooms with cooking facilities are "individual dwelling units" and thus exempt from Uniform Fire Code requirements for fire suppression systems. *Venuti v. Cape May County Const. Bd. of Appeals*, 231 N.J.Super. 546, 555 A.2d 1175 (A.D.1989).

Municipal subcode official did not have authority to require portable fire extinguishers to be placed in motel and hotel efficiency units with cooking facilities. *Venuti v. Cape May County Const. Bd. of Appeals*, 231 N.J.Super. 546, 555 A.2d 1175 (A.D.1989).

### 5:18-3.2 Definitions

The following terms shall have the meanings indicated except where the context clearly requires otherwise. Where a term is not defined then the definition of that term found in this code at N.J.A.C. 5:18-1.5 or within the Uniform Construction Code at N.J.A.C. 5:23-1.4 shall govern:

"Acetylene, low pressure" means acetylene at a pressure not exceeding one pound per square inch gauge (psig).

"Acetylene, medium pressure" means acetylene at pressures exceeding one psig but not exceeding 15 psig.

"Acetylenic compound" means a material, like acetylene, having a triple bond between two carbon atoms.

"Agent" means any person who shall have charge, care or control of any buildings as owner, or agent of the owner, or as executor, executrix, administrator, administratrix, trustee or guardian of the estate of the owner. Any such person representing the actual owner shall be bound to comply with the provisions of this code to the same extent as if that person were the owner.

"Air supported structure" means a structural and mechanical system, which is constructed of high strength fabric or film and achieves its shape, stability and support by pretensioning with internal air pressure.

"Alarm" means any audible or visible signal or intelligence indicating existence of a supposed fire or emergency requiring response and emergency action on the part of the fire fighting service. Also, the alarm devices or device by which fire and emergency signals are received.

"Approved" means approved by the fire official or the Department.

"Automatic detecting device" means a device which automatically detects heat, smoke or other products of combustion.

"Automatic fire alarm system" means a fire alarm system containing automatic detecting device(s) which actuates a fire alarm signal and which may contain manual fire alarm devices.

"Automatic fire suppression system" means an engineered system using carbon dioxide (CO<sub>2</sub>), dry chemical, a halogenated extinguishing agent, or an automatic sprinkler system to automatically detect and suppress a fire through fixed piping and nozzles.

"Automatic sprinkler system" for fire protection purposes means an integrated sprinkler system of underground and/or overhead piping designed in accordance with fire protection engineering standards. The system includes a suitable water supply. The portion of the system aboveground is a network of specially sized or hydraulically designed piping installed in a building, structure or area, generally overhead, and to which automatic sprinklers are connected in a systematic pattern. The system is usually activated by heat from a fire and discharges water over the fire area.

"Automatic water supply" means water supplied through a gravity or pressure tank or automatically operated fire pumps, or from a direct connection to an approved municipal water main.

"Blasting agent" means any material or mixture consisting of a fuel and oxidizer intended for blasting, not otherwise classified as an explosive, in which none of the ingredients are classified as explosives, provided that the finished product, as mixed and packaged for use or shipment, cannot be detonated by means of a No. 8 test blasting cap when unconfined. Materials or mixtures classified as nitro carbonitrates by U.S. Department of Transportation (DOT) regulations shall be included in this definition.

"Boiling point" means the temperature at which the vapor pressure of a liquid equals the atmospheric pressure of 14.7 pounds per square inch gauge (psig) of mercury. Where an accurate boiling point is unavailable for the material in question, or for mixtures which do not have a constant boiling point, for purposes of this classification, the 10 percent of a distillation performed in accordance with ASTM D86 listed in Appendix 3-A, incorporated herein by reference, may be used as the boiling point of the liquid.

"Bonfire" means a large, public, open-air fire kindled to mark or highlight some public event.

"Building Code" means the New Jersey Uniform Construction Code (N.J.A.C. 5:23), including all of its component subcodes.

"Building code in effect at the time of first occupancy" means the building code regulations in effect at the time the specific occupancy use, or operation, was legally established.

"Carbon dioxide (CO<sub>2</sub>) extinguishing system" means a system to supply carbon dioxide (CO<sub>2</sub>) from a pressurized vessel through fixed pipes and nozzles. The system includes an automatic detection and actuating mechanism.



"Catalytic combustion system" means an oven heater or any construction that employs catalysts to accelerate oxidation or combustion of fuel-air or fume-air mixtures for eventual release of heat to an oven process.

"Central station system" means a system, or group of systems, the operations of which are signaled to, recorded in, maintained and supervised from an approved central station, in which there are competent and experienced observers and operators in attendance at all times whose duty it shall be, upon receipt of a signal, to take such action as shall be required under the rules established for their guidance. Such systems shall be controlled and operated by a person, firm or corporation whose principal business is the furnishing and maintaining of supervised protective signaling service and who does not have interest in the protected properties.

"Combustible fibers" means readily ignitable and free burning fibers, such as cotton, sisal, henequen, ixtel, jute, hemp, tow, cocoa fiber, oakum, baled waste paper, kapok, hay, straw, Spanish moss, excelsior, certain synthetic fibers and other like materials.

"Combustible liquids" means any liquid having a flash point at or above 100 degrees Fahrenheit. Combustible liquids shall be known as Class II or III liquids and shall be divided into the following classifications:

1. Class II: Liquids have a flash point at or above 100 degrees F. and below 140 degrees Fahrenheit;
2. Class IIIA: Liquids having flash points at or above 140 degrees F. and below 200 degrees Fahrenheit; and
3. Class IIIB: Liquids having flash points at or above 200 degrees Fahrenheit.

"Combustible waste matter" means magazines, books, trimmings from lawns, trees or flower gardens, leaves, pasteboard boxes, rags, paper, straw, sawdust, packing material, shavings, boxes and all rubbish and refuse that will ignite through contact with flames or ordinary temperatures.

"Compressed gas" means any mixture or material, when enclosed in a container, having either a vapor pressure of 40 psia at 70 degrees Fahrenheit, or a vapor pressure of 140 psia at 130 degrees Fahrenheit; or any flammable material having a vapor pressure exceeding 40 psia at 100 degrees Fahrenheit, as determined by ASTM D323 (Reid Method) listed in Appendix 3-A, incorporated herein by reference.

"Construction official" means the officer or other designated authority charged with the administration and enforcement of the building code.

"Cooking appliances" means all ranges, ovens, food boilers, upright broilers, charcoal broilers, char-broilers, griddles, deep-fat fryers or similar appliances used to heat, cook or process food for human or animal consumption.

"Cooking fire" means an outdoor fire which is used to prepare food.

"Corrosive liquid" means those acids, alkaline caustic liquids and other corrosive liquids which, when in contact with living tissue, will cause damage to such tissue by chemical action; or in case of leakage will materially damage or destroy other containers of other hazardous commodities by chemical action and cause the release of their contents; or are liable to cause fire when in contact with organic matter or with certain chemicals.

"Cryogenic liquid" means those liquids that have a boiling point below -200 degrees Fahrenheit.

"Cryogenic vessel" means any pressure vessel, low pressure tank, or atmospheric tank on which venting, insulation, refrigeration, or a combination of these, are used in order to maintain the operating pressure, and the contents in a liquid phase.

"Decorative material" means all materials such as curtains, draperies, streamers, surface coverings applied over the building finish for decorative, acoustical or other effect, and also cloth, cotton batting, straw, vines, leaves, trees and moss used for decorative effect.

"Detector, smoke" means an approved, listed detector for sensing visible or invisible products or combustion.

"Dispensing" means the pouring or transferring of any material from a container, tank or similar vessel whereby vapors, dusts, mists or gases may be released to the atmosphere.

"DOT container" means any container approved by DOT 49CFR listed in Appendix 3-A, incorporated herein by reference, for shipping any liquid, gaseous or solid material of a flammable, toxic or other hazardous nature.

"Dry chemical" means a powder composed of small particles, usually of sodium bicarbonate, potassium chloride, potassium bicarbonate, potassium bicarbonate/urea or ammonium phosphate, with added particular material supplemented by special treatment to prevent caking and provide flowability.

"Dry chemical extinguishing system" means a system consisting of dry chemical and expellant gas storage tanks, fixed piping, and nozzles used to assure proper distribution of an approved extinguishing agent on a specific fire hazard or into a potential fire area. The system includes an automatic detection and actuating mechanism.

"Dry cleaning" means the process of removing dirt, grease, paint and other stains from wearing apparel, textiles, fabrics, rugs, etc., by the use of nonaqueous liquid solvents, flammable or nonflammable, and it shall include the process of dyeing clothes or other fabrics or textiles in a solution of dye colors and nonaqueous liquid solvents.

"Dry pipe system" as applied to water fire suppression systems, shall mean a system of piping which is filled with air under pressure and a permanent water supply is controlled by an approved automatic dry pipe valve which releases the water supply by the release of air in the event of fire.

"Dry system" as applied to water fire suppression systems, shall mean a system without permanent or automatic water supply but equipped with a fire department connection.

"Egress" see "means of egress."

"Engineered system" means a functional unit requiring individual calculation and design to determine the flow rates, nozzle pressures, quantities of extinguishing agent and the number and types of nozzles and their placement for the protection of a specific hazard.

"Explosive" means a chemical compound or mechanical mixture, that is commonly used or intended for the purpose of producing an explosion, that contains any oxidizing and combustible units, or other ingredients, in such proportions, quantities, or packing, that an ignition by fire, by friction, by concussion, by percussion, or by detonation of any part of the compound or mixture may cause such a sudden generation of highly heated gases that the resultant gaseous pressures are capable of producing destructive effects on contiguous objects or of destroying life and limb. The term "explosive" includes all materials classified as Class A, Class B or Class C explosives by DOT regulations and includes, but is not limited to, dynamite, black powder, pellet powders, initiating explosives, blasting caps, electric blasting caps, safety fuse, fuse igniters, fuse lighters, squibs, conreau detonant fuse, instantaneous fuse, ignitor cord and igniters.

"Explosive-actuated power device" means any tool or special mechanized device which is actuated by explosives, but not to include propellant-actuated power devices. Examples of explosive-actuated power devices are jet tappers and jet perforators.

"Fire alarm system" means a functionally related group of devices that when either automatically or manually activated will sound audio or visual warning devices on or off the protected premises and may control other devices or equipment.

"Fire department connection" means a connection on a building for fire department use in supplementing or supplying water for standpipes and sprinkler systems. Also 2½ inch standpipe outlets provided for attaching fire department hose as contrasted with outlets for small first aid hose.

"Fire door" means a door and its assembly, so constructed and assembled in place as to give protection against the passage of fire.

"Fire hazard" means any thing or act which increases or may cause an increase of the hazard or menace of fire to a greater degree than that customarily recognized by persons in the public service regularly engaged in preventing, suppressing or extinguishing fire; or which may obstruct, delay, hinder or interfere with the operations of the fire department or the egress of occupants in the event of fire.

"Fire inspector" means a person working under the direction of the fire official who is certified by the Commissioner of the Department of Community Affairs and appointed or designated to enforce the Code by the appointing authority of a local enforcing agency.

"Fire official" means a person certified by the Commissioner of the Department of Community Affairs and appointed or designated to direct the enforcement of the Code by the appointing authority of a local enforcing agency.

"Fire prevention" means the preventive measures which provide for the safe conduct and operation of hazardous processes, storage of combustible and flammable materials, conducting of fire drills and the maintenance of fire protection, detection and extinguishing service equipment and good housekeeping conditions. That part of fire protection activities exercised in advance of the outbreak of fire to prevent such outbreaks and to minimize loss when fire does occur.

"Fire protection system" means a system including systems, devices and equipment to detect a fire, actuate an alarm or suppress fire or any combination thereof.

"Flammable" means capable of burning or producing flame at ordinary temperatures, or easily being ignited.

"Flammable anesthetic" means a compressed gas which is flammable and administered as an anesthetic and shall include among others, cyclopropane, divinyl ether, ethyl chloride, ethyl ether and ethylene.

"Flammable compressed gas" means a gas that when either: a mixture of 13 percent or less (by volume) with air forms a flammable mixture; or, the flammable range with air is wider than 12 percent regardless of the lower limit.

"Flammable cryogenic liquid" means those cryogenic liquids which are flammable in their vapor state.

"Flammable liquid" means any liquid having a flash point below 100 degrees Fahrenheit, and having a vapor pressure not exceeding 40 psia at 100 degrees Fahrenheit. Flammable liquids shall be known as Class I liquids and be divided into the following classifications:

1. Class IA: Liquids having flash points below 73 degrees Fahrenheit and having a boiling point below 100 degrees Fahrenheit;

2. Class IB: Liquids having flash points below 73 degrees Fahrenheit and having a boiling point at or above 100 degrees Fahrenheit; and

3. Class IC: Liquids having flash points at or above 73 degrees Fahrenheit and below 100 degrees Fahrenheit.

(See "combustible liquids" for Class II or III liquids.)

"Flammable liquid gas" means a "liquified compressed gas" which under the charged pressure is partially liquid at a temperature 70 degrees Fahrenheit and which is flammable.

"Flammable solid" means a solid substance, other than one classified as an explosive, which is liable to cause fires through friction, through absorption of moisture, through spontaneous chemical changes, or as a result of retained heat from manufacturing or processing.

"Flash point" means the minimum temperature in degrees Fahrenheit at which a flammable liquid will give off sufficient vapors to form an ignitable mixture with air near the surface or in the container, but will not sustain combustion. The flash point of a liquid shall be determined by appropriate test procedure and apparatus as specified in ASTM D56 and ASTM D93 listed in Appendix 3-A, incorporated herein by reference.

"Foam extinguishing system" means a special system to discharge a foam made from concentrates, either mechanically or chemically, over the area to be protected.

"Fuel gas" means acetylene, hydrogen, LP-Gas, and other liquefied and nonliquefied flammable gases.

"Fumigant" means any substance which by itself or in combination with any other substance emits or liberates a gas, fume or vapor used for the destruction or control of insects, fungi, vermin, germs, rats, or other pests, and shall be distinguished from insecticides and disinfectants which are essentially effective in the solid or liquid phases. Examples are methyl bromide, ethylene dibromide, hydrogen cyanide, carbon disulphide and sulfuryl fluoride.

"Fumigation" means the use within an enclosed space of a fumigant in concentrations which may be hazardous or acutely toxic to man.

"Grease consuming appliances or fume incinerator" means devices intended for placement over restaurant type cooking equipment in the exhaust duct and through which all exhaust vapors or smoke must pass. Grease and other particulate matter from cooking fumes and exhaust are removed by open flames.

"Grease extractor" means a device intended for the removal of smoke and grease-laden particles from exhaust fumes or vapors created by cooking operations. A grease extractor device normally consists of a hood, a grease collecting device, a wash system, means to detect excessive

temperature of the exhaust gases which activates a device to prevent flame and excessively hot gases from entering the exhaust duct, and associated electrical controls.

"Halogenated extinguishing agents" means a halogenated compound is one which contains one or more atoms of an element from the halogen chemical series; fluorine, chlorine, bromine and iodine. Halogenated extinguishing compounds shall be restricted to the following:

1. Halon 1211, bromochlorodifluoromethane,  $\text{CBrClF}_2$ ; or
2. Halon 1301, bromotrifluoromethane,  $\text{CBrF}_3$ .

"Halogenated extinguished system" means a system of pipes, nozzles and an actuating mechanism and a container of halogenated agent under pressure.

"Handling" means the deliberate transport by any means to a point of storage or use.

"Highly toxic material" means a material so toxic to man as to afford an unusual hazard to life and health during fire fighting operations. Examples are: parathion, TEPP (tetraethyl phosphate), HETP (hexaethyl tetraphosphate), and similar insecticides and pesticides.

"Liquefied petroleum gas (LP-Gas or LPG)" means any material having vapor pressure not exceeding that allowed for commercial propane composed predominantly of the following hydrocarbons, either by themselves or as mixtures: propane, propylene, butane (normal butane or isobutane) and butylenes including isomers.

"Liquefied petroleum gas equipment" means all containers, apparatus, piping (not including utility distribution piping systems) and equipment pertinent to the storage and handling of liquefied petroleum gas. Gas consuming appliances shall not be considered as being liquefied petroleum gas equipment.

"Manual fire alarm system" means an interior alarm system composed of sending stations and signaling devices in a building, operated on an electric circuit, so arranged that the operation of any one station will ring all signals throughout the building and at one or more approved locations.

"Means of egress" means a continuous and unobstructed path of travel from any point in a building or structure to a public way and consists of three separate and distinct parts: the exit access; the exit; and the exit discharge. A means of egress comprises the vertical and horizontal means of travel and shall include intervening room spaces, doors, hallways, corridors, passageways, balconies, ramps, stairs, enclosures, lobbies, escalators, horizontal exits, courts, aisles and yards.

"Noncombustible building material" means one which, in the form and thickness in which it is used, meets any of the following requirements:

1. Materials which are intended to be classified as noncombustible shall be tested in accordance with ASTM E136 listed in Appendix 3-A, incorporated herein by reference. Such materials shall be acceptable as noncombustible materials when at least three of the four specimens tested meet all of the following criteria:

i. The recorded temperature of the surface and interior thermocouples shall not at any time during the test rise more than 54 degrees Fahrenheit above the furnace temperature at the beginning of the test;

ii. There shall be no flaming from the specimen after the first 30 seconds; and

iii. If the weight loss of the specimen during testing exceeds 50 percent, the recorded temperature of the surface and interior thermocouples shall not at any time during the test rise above the furnace air temperature at the beginning of the test, and there shall be no flaming of the specimen.

2. Materials having a structural base of noncombustible materials as defined in paragraph 1 above, with a surfacing not more than  $\frac{1}{8}$  inch thick which has a flame spread rating not greater than 50 when tested in accordance with ASTM E84 listed in Appendix 3-A, incorporated herein by reference.

The term noncombustible does not apply to the flame spread characteristics of interior finish or trim materials. A material shall not be classed as noncombustible building construction material which is subject to increase in combustible or flame spread rating beyond the limits herein established through the effects of age, moisture or other atmospheric conditions.

"Occupancy" means the purpose for which a building or premises, or part thereof, is used or intended to be used. The term shall also include the building, room or enclosed space that houses a use.

"Occupancy classification" means the various use groups as classified in this Code.

"Occupant load" means the total number of persons that are permitted to occupy a building or portion thereof at any one time.

"Open burning" means the burning of any materials wherein products of combustion are emitted directly into the ambient air without passing through a stack or chimney from an enclosed chamber. For the purposes of this definition, a chamber shall be regarded as enclosed when, during the time combustion takes place, only apertures, ducts, stacks, flues, or chimneys necessary to provide combustion air and to permit the escape of exhaust gas are open.

"Organic coating" means a liquid mixture of binders such as alkyd, nitrocellulose, acrylic, or oil, and flammable and combustible solvents such as hydrocarbon, ester, ketone, or alcohol, which when spread in a thin film convert to a durable protection and decorative finish.

"Overcrowding" means exceeding the total number of persons that may occupy a building or portion thereof at any one time.

"Oxidizing material" means substances such as chlorates, permanganates, peroxides, or nitrates, that yield oxygen readily to stimulate combustion.

"Person" means a corporation, firm, partnership, association, organization and any other group acting as a unit as well as individuals. It shall also include an executor, administrator, trustee, receiver or other representative appointed according to law. Whenever the word "person" is used in any section of this Code prescribing a penalty or fine, as to partnerships or associations, the word shall include the partners or members thereof, and as to corporations, shall include the officer, agents or members thereof who are responsible for any violation of such section.

"Poisonous gas" means any noxious gas of such nature that a small amount of the gas in air is dangerous to life. Examples are: chlorine, cyanogen, fluorine, hydrogen cyanide, nitric oxide, nitrogen tetraoxide and phosgene.

"Portable kerosene-fired heater" means a non-flue-connected, self-contained, self-supporting heater, with integral fuel reservoir, that is designed to be carried from one location to another.

"Radioactive material" means any material or combination of material that spontaneously emits ionizing radiation.

"Residual pressure" means pressure remaining in a fire protection system while water is being discharged from outlets.

"Riser" means a vertical water supply pipe used to carry water for fire protection to elevations above or below grade; such as a standpipe riser, sprinkler riser, etc.

"Rubbish (trash)" means combustible and noncombustible waste materials including the residue from the burning of coal, wood, or coke or other combustible material, paper, rags, cartons, tin cans, metals, mineral matter, glass crockery, dust and discarded refrigerators, heating, cooking or incinerating appliances.

"Safety can" means an approved container, not over five gallons capacity, having a spring closing lid and spout cover and so designed that it will safely relieve internal pressure when subjected to fire exposure. Such containers shall be clearly marked with the product contained therein.

"Self-closing" means, as applied to a fire door or other opening protective, normally closed and equipped with an approved device, which will insure closing after having been opened for use.

"Siamese" means a hose fitting for combining the flow from two or more lines into a single stream.

"Small arms ammunition" means any shotgun, rifle, pistol or revolver cartridge.

"Solid fuel-fired heater" means a flue connected heater, fired with solid fuels, such as a fireplace, fireplace insert or stove, free standing wood stove or similar solid fuel-fire appliance.

"Special industrial explosive device" means any explosive power-pack containing an explosive charge in the form of a cartridge or construction device. The term includes, but is not limited to, explosive rivets, explosive bolts, explosive charges for driving pins or studs, cartridges for explosive-actuated power tools and charges of explosives used in jet tapping of open hearth furnaces and jet perforation of oil well casings.

"Special industrial high explosive materials" means sheets, extrusions, pellets and packages of high explosives containing dynamite, trinitrotoluol, pentaerythritol tetranitrate, cyclotrimethylene trinitramine, or other similar compounds used for high energy rate forming, expanding and shaping in metal fabrication, and for dismemberment and quick reduction of scrap metal.

"Spraying area" see N.J.A.C. 5:18-3.7(c)1.

"Sprinkler alarm system" means an alarm activated by waterflow from a sprinkler system.

"Standpipe" means a wet or dry pipe line, extending from the lowest to the topmost story of a building or structure, equipped with a shutoff valve with hose outlets at every story.

"Storage" means articles that are stored, kept or accumulated for some future use, or for disposal, and are drawn upon as needed.

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

"Structure" means that which is built or constructed.

"Thermal insecticidal fogging" means the use of insecticidal liquids that are passed through thermal fog-generating units where they are, by means of heat, pressure and turbulence, transformed and discharged in the form of a fog or mist that is blown into an area to be treated.

"Unstable (reactive) chemical" means any substance, other than one classified as an explosive or blasting agent, that will vigorously and energetically react, is potentially explosive, will polymerize, decompose instantaneously, undergo uncontrollable auto-reaction or can be exploded by heat, shock, pressure or combinations thereof. Examples are: organic peroxides, nitromethane, and ammonium nitrate.

"Use group" see N.J.A.C. 5:18-1.5.

"Volatile-flammable" means any liquid, gas substance, mixture or compound that readily emits flammable vapors at a temperature below 73 degrees Fahrenheit when tested in accordance with ASTM D56 listed in Appendix 3-A, incorporated herein by reference.

"Wet system" as applied to water fire suppression systems shall mean a system that is filled with water and connected to a permanent water supply under pressure so that water is discharged immediately from sprinklers opened by a fire or from open hose outlet valves.

Amended by R.1993 d.197, effective May 3, 1993.

See: 25 N.J.R. 393(a), 25 N.J.R. 1868(a).

Added definition of building code in use at time of first occupancy.

#### Case Notes

Term "individual dwelling unit" in Uniform Fire Code should be construed to have the same meaning as term "dwelling unit" in Uniform Fire Safety Act; term thus applies to both permanent and transient occupancies. *Venuti v. Cape May County Const. Bd. of Appeals*, 231 N.J.Super. 546, 555 A.2d 1175 (A.D.1989).

Hotel and motel rooms with cooking facilities are "individual dwelling units" and therefore exempt from the requirements imposed by the Uniform Fire Code for fire suppression systems. *Venuti v. Cape May County Const. Bd. of Appeals*, 231 N.J.Super. 546, 555 A.2d 1175 (A.D.1989).

#### 5:18-3.3 General precautions against fire

(a) The following provisions are general provisions for precautions against fire to be applied to the use of all properties.

1. Any dangerous or hazardous conditions that are outlined in (a)1i through x below shall be removed or remedied in accordance with the provisions of N.J.A.C. 5:18-2.9:

i. Dangerous conditions that are liable to cause or contribute to the spread of fire in or on said premises, building or structure or endanger the occupants thereof;

ii. Conditions that would interfere with the efficiency and use of any fire protection equipment;

iii. Obstruction to or on fire escapes, stairs, passageways, doors or windows, liable to interfere with the egress of occupants or the operation of the fire department in case of fire;



iv. Accumulations of dust or waste material in air conditioning or ventilating systems or grease in kitchen or other exhaust ducts;

v. Accumulations of grease on kitchen cooking equipment, or oil, grease or dirt upon, under or around any mechanical equipment;

vi. Accumulations of rubbish, waste, paper, boxes, shavings or other combustible materials, or excessive storage of any combustible material;

vii. Hazardous conditions arising from defective or improperly used or installed electrical wiring, equipment or appliances;

viii. Hazardous conditions arising from defective or improperly installed equipment for handling or use of combustible, explosive or otherwise hazardous materials;

ix. Dangerous or unlawful amounts of combustible, explosive or otherwise hazardous materials; or

x. All equipment, materials, processes, or operations that are in violation of the provisions and intent of this Code.

(b) The following apply to bonfires and outdoor fires:

1. Burning of rubbish shall be prohibited except in approved incinerators.

2. The burning of herbaceous or infested plant life, the burning of orchard prunings and cuttings, prescribed burnings and the clearing of agricultural land by burning are prohibited by this subchapter, unless in accordance with a permit issued under the provisions of N.J.A.C. 7:27-2, administered by the State Forest Fire Service in the New Jersey Department of Environmental Protection and Energy (NJDEPE).

3. A person shall not kindle or maintain any bonfire or authorize any such fire to be kindled or maintained unless:

i. The location is approved by the fire official and is not less than 50 feet from any structure, and adequate provision is made to prevent fire from spreading to within 50 feet of any structure; or

ii. The fire is contained in an approved burner located safely not less than 15 feet from any structure.

4. Fuel for bonfires shall consist of seasoned dry wood only and shall be ignited with a small quantity of paper only. Bonfires shall not contain rubbish, garbage, trash, any material made of or coated with rubber, plastic, leather or petroleum based materials and shall not contain any flammable or combustible liquids. The allowable quantity of wood to be burned shall be determined by the fire official and shall be based upon the fire safety requirements of the situation and the desirable duration of burn.

5. Bonfires shall be constantly attended by a competent person until such fire is extinguished. This person shall have fire extinguishing equipment readily available for use as deemed necessary by the fire official.

6. The fire official may prohibit any or all bonfires that are or could be offensive or objectionable due to smoke or odor emissions when atmospheric conditions or local circumstances make such fires hazardous. The fire official shall order the extinguishment, by the permit holder or the fire department, of any bonfire that creates or adds to a hazardous or objectionable situation.

7. In districts for which fire wardens have been appointed in accordance with the General Forest Fire Act (N.J.S.A. 13:9-44.1 et seq.), the granting of permits for campfires shall be administered and enforced by the State Forest Fire Service.

8. Open burning shall be allowed without prior notice to the fire official for cooking fires, highway safety flares, smudge pots and similar occupational needs.

(c) A person shall not deposit hot ashes or cinders, or smoldering coals, or greasy or oily substances susceptible to spontaneous ignition into any combustible receptacle, or place the same within 10 feet of any combustible materials, except in metal or other noncombustible covered receptacles. Such receptacles, unless resting on a noncombustible floor or on the ground outside of the building, shall be placed on noncombustible stands and in every case shall be kept at least two feet away from any combustible wall or partition, or exterior window or door opening.

(d) Any person using a torch or other flame-producing device for removing paint, for the sealing of membrane roofs, or for any similar use in or around any building, structure or combustible material is responsible for the prevention of fire and shall do the following:

1. Provide, in a ready state, within 15 feet, (4.6 meters) travel distance of the work being done, either an approved fire extinguisher having a minimum 2A rating or a water hose connected to a reliable water supply. If a water hose is used as the approved extinguisher, it shall be charged and be equipped with a suitable nozzle;

2. Provide shielding, wetting, or other approved means to protect exposed combustible material in close proximity of the flame. Approved stored pressure water fire extinguisher shall not be used to wet combustible material; and

3. Remain in the immediate vicinity for a minimum of one hour or a period of time sufficient to assure that no fire will result from the work that was done or to detect any fire that does occur, which fire shall be reported immediately.

(e) Accumulations of waste paper, wood, hay, straw, weeds, litter or combustible or flammable waste or rubbish of any kind shall not be permitted to remain upon any roof or in any court, yard, vacant lot, alley, parking lot or open space. All weeds, grass, vines or other growth, when same endangers property, or is liable to be fired, shall be cut down and removed by the owner or occupant of the property. All combustible rubbish, oily rags or waste material when kept within a building, shall be stored in approved metal containers. Storage shall not produce conditions that, in the opinion and judgment of the fire official, will tend to create a nuisance or a hazard to the public health, safety or welfare.

(f) The following apply to materials storage:

1. The storage of combustible or flammable material shall be confined to approved storage areas.

2. In sprinklered buildings, storage shall be maintained a minimum of 18 inches below sprinkler head deflectors.

3. Storage in buildings and structures shall be orderly, shall not be within two feet of the ceiling, and located so as not to obstruct egress from the building.

4. The outside storage of combustible or flammable materials shall not be more than 20 feet in height and shall be compact and orderly. Such storage shall be located as not to constitute a hazard and not less than 15 feet from any other building on the site or from a lot line.

5. The clearance between stored materials and unit heaters, radiant space heaters, duct furnaces, and flues shall not be less than three feet in all directions or shall be in accordance with the clearances shown on the approval agency label.

(g) Flammable materials, such as cotton batting, straw, dry vines, leaves, trees, artificial flowers or shrubbery and foam plastic materials, shall not be used for decorative purposes in show windows or other parts of buildings in such a quantity to constitute a fire hazard, unless such material is flameproofed in an approved manner. Electric light bulbs shall not be decorated with paper or other combustible materials unless such materials shall first have been rendered flameproof.

(h) The following apply to open flame or light:

1. A person shall not take or use an open flame or light into any structure, building, barn, vessel, boat or any other place where highly flammable, combustible or explosive material is used or stored. All lighting appliances shall be well secured in a glass globe and wire mesh cage or similar approved device.

2. Heating or lighting apparatus or equipment capable of igniting flammable materials of the types stored or handled shall not be used in the storage area of any warehouse storing rags, excelsior, hair or other highly

flammable or combustible material; nor in the work area of any shop or factory used for the manufacture, repair or renovating of mattresses or bedding; nor in the work areas of any establishment used for the upholstering of furniture.

3. Portable LP-gas cooking equipment such as barbecue grills shall not be stored or used:

- i. On any porch, balcony or any other portion of a building;

- ii. Within any room or space of a building;

- iii. Within five feet of any combustible exterior wall;

- iv. Within five feet, vertically or horizontally, of an opening in any wall; or

- v. Under any building overhang.

(i) The following apply to chimneys and heating appliances:

1. All existing chimneys, smokestacks or similar devices for conveying smoke or hot gases to the outer air and all stoves, ovens, furnaces, incinerators, boilers or any other heat producing devices or appliances shall be constructed in accordance with the building and mechanical codes in effect at the time of first occupancy and maintained in accordance with NFPA 54 and 211 listed in Appendix 3-A, incorporated herein by reference, where the provisions of this section do not specifically cover conditions and operations, and in such a manner as not to create a fire hazard.

- i. Every chimney, flue, vent and smokestack shall be inspected, cleaned and maintained as often as necessary to ensure adequate draft, structural integrity and freedom from combustible deposits and obstructions.

- ii. All fixed heat producing appliances shall be inspected, cleaned and serviced as often as necessary to maintain the appliance in a safe operating condition.

- iii. Connector pipes between appliances and chimneys shall be inspected, cleaned or replaced as often as necessary to ensure safe operation of the appliance. All joints shall be gas tight and mechanically fastened with connections made with the pipe installed inside of the following section to ensure conveyance of products of combustion to the exterior.

- iv. Appliances which do not vent their flue gases properly to the exterior of the building shall be immediately removed from service in accordance with (i)2 below.

- v. Appliances shall only be fired with the fuel for which the appliance is designed and approved.

2. The fire official shall order the sealing (preventing the use) of any existing stove, oven, furnace, incinerator, boiler or any other heat producing device or appliance found to be defective or in violation of Code require-

ments for existing appliances after giving 10 days notice to this effect to any person, owner, firm, agent or operator in charge of same. However, the fire official may seal any device or appliance without notice when inspection shows the existence of an immediate fire hazard or when imperiling human life. The sealed defective appliance shall remain withdrawn from service until all necessary repairs or alterations have been made.

i. It shall be deemed a violation of this Code for any person or user, firm or agent to continue the use of any device or appliance which has been sealed or ordered sealed under (i)2 above, unless written authority to remove said seal is given by the fire official. Removing or breaking the seal shall be deemed a violation of this Code.

3. All incinerating operations shall be subject to the following restrictions and a sign of permanent design, furnished by the owner, shall be posted in a conspicuous location at or near the incinerator to inform the operators of said restrictions:

i. Fuel-fired incinerators shall be preheated 30 minutes before using;

ii. Only competent operators are allowed to operate the incinerator;

iii. After loading the main combustion chamber, the feed door shall be closed until the combustion cycle is complete;

iv. The waste material ash compartment shall be cleaned regularly; and

v. Waste matter shall not be burned, under permit or otherwise, if such waste matter would, if burned, cause or create a dense smoke or odor.

(j) The following apply to building protection:

1. Fire resistance rated walls, floors and ceilings shall be maintained as originally designed or constructed. Holes in rated walls, floors or ceilings that will allow the movement of fire or smoke shall be repaired to their original rating using approved materials to prevent such movement. All membrane fire protection shall be maintained at all times.

2. All required fire resistance rated doors or smoke barriers, including all hardware necessary for the proper operation thereof, shall be maintained in good working order. The use of door stops, wedges and other unapproved hold-open devices is prohibited. Where it is desired to keep the doors open, the fire official shall require the installation of approved heat rate of rise or smoke actuated self-closing devices.

i. For smoke barrier doors, only smoke actuated devices shall be allowed.

3. All doors to service equipment areas shall be identified, as to the equipment contained within the room, with a permanently affixed sign with letters at least one inch in height.

(k) The following apply to smoking conditions:

1. The smoking or carrying of a lighted pipe, cigar, cigarette or tobacco in any form is prohibited in the areas herein provided.

2. Smoking shall be prohibited where conditions are such as to make smoking a hazard, including areas of piers, wharves, warehouses, stores, industrial plants, institutions, schools, places of assembly and in spaces where combustible materials are stored or handled. The fire official shall designate specific safe locations, if necessary, in any building, structure or place in which smoking may be permitted.

3. The fire official is empowered and authorized to order the owner or occupant to post "No Smoking" signs in each building, structure, room or place in which smoking shall be prohibited. The content, lettering, size, color and location of required "No Smoking" signs shall be subject to the approval of the fire official.

4. It shall be a violation of this Code for any person to obscure, remove, deface, mutilate or destroy a posted "No Smoking" sign.

5. It shall be a violation of this Code for any person to smoke, throw or deposit any lighted or smoldering substance in any place where "No Smoking" signs are posted.

6. Where smoking is permitted, there shall be provided on each table and at other convenient locations suitable noncombustible ash trays or match receivers.

(l) The following apply to fire lanes on private property:

1. The fire official, with the approval of the chief executive officer of the fire department and the chief of police of the jurisdiction, may designate fire lanes on private property to which the public is invited or which is devoted to public use, if it is necessary to provide safety for the public or to provide proper access for fire department operations in the event of an emergency.

2. Whenever a determination has been made for the fire lane designation, pursuant to (l)1 above, the fire official shall notify the owner of the property in writing by registered or certified mail, or by hand delivering such notice, specifically describing the area designated and the reason for making the designation.

3. The marking of fire lanes shall be the responsibility of, and at the expense of, the property owner and shall be accomplished within 30 days of the receipt of the notification.

4. It shall be a violation of this Code for any person to park a motor vehicle in, or otherwise to obstruct, a fire lane.

(m) The following apply to electrical equipment and hazards:

1. When any electrical hazards arising from defective or improperly used or installed electrical wiring, equipment or appliances are identified, such conditions shall be abated. All identified hazardous electrical conditions in permanent wiring shall be referred to the construction official.

2. Clearance of not less than 30 inches shall be provided between all electrical service equipment and storage.

3. The use of multi-plug adaptors, such as cube adaptors, unfused plug strips, or any other device that is not approved by a nationally recognized testing agency shall be prohibited.

4. Extension cords and flexible cords shall not be used as a substitute for permanent wiring. Extension cords and flexible cords shall not be affixed to structures, extended through walls, ceilings, floors, under doors or floor coverings, nor be subject to environmental damage or physical impact.

5. Open junction boxes and open wiring splices shall be prohibited. Approved covers shall be provided for all switch and electrical outlet boxes.

6. All electrical motors shall be maintained free from accumulations of oil, dirt, waste, and debris.

7. Illumination shall be maintained for all service equipment areas, motor control centers and electrical panelboards.

8. All unused fixtures, circuits, wiring and electrical devices or fixtures shall be removed or properly secured in place.

9. Electrical appliances or fixtures that have not been approved by a nationally recognized testing agency shall not be placed in service.

(n) The following apply to asphalt (tar) kettles:

1. This subsection shall not apply to any use of a tar kettle in conjunction with a valid construction permit.

2. It shall be unlawful to transport or to permit to be transported any asphalt (tar) kettle beneath which is maintained any open fire, heated coals or ashes, over any highway, road or street.

3. Asphalt (tar) kettles shall not be used inside of or on the roof of any building. Fired asphalt (tar) kettles shall not be left unattended.

4. There shall be a minimum of one 20-B:C rated portable fire extinguisher within 30 feet of each asphalt

(tar) kettle during the period such kettle is in use, and one additional minimum 20-B:C rated portable fire extinguisher on the roof being covered. Every kettle shall be equipped with a tight fitting cover. A kettle, when in operation, shall be placed a safe distance from any combustible material or buildings.

5. When liquified petroleum gas cylinders or containers are utilized for fueling asphalt (tar) kettles, the LPG cylinder shall be protected against vandalism and tampering.

i. When possible, all LPG cylinders and containers shall be placed in a secured area for protection against tampering.

ii. The storage of LPG cylinders on roof tops shall be prohibited.

(o) All high rise structures served by elevators shall be equipped with emergency control devices in accordance with N.J.A.C. 5:18-4.17(e).

(p) The following apply to fire safety and evacuation plans:

1. A fire safety and evacuation plan shall be prepared as set forth in this subsection where required by (p)1i through v below and by N.J.A.C. 5:18-3.15(b)3.

i. Use Group R-1: All Use Group R-1 buildings;

ii. Use Group I: All Use Group I buildings;

iii. High rise buildings: All high rise buildings as defined in this Code;

iv. Casinos: All buildings licensed as hotel-casinos by the New Jersey Casino Control Commission pursuant to N.J.S.A. 5:12-1 et seq. (see also (t) below);

v. Flammable liquid storage terminals: All flammable liquid storage terminals required to install High Level Alarm Systems by N.J.A.C. 5:18B shall submit a fire and emergency plan as required by N.J.A.C. 5:18B-3.4(a).

2. The fire safety plan shall be approved by the fire official and shall be distributed by the owner to all tenants and employees. The plan shall contain the location of the nearest exits and fire alarms; the procedures to be followed when a smoke or fire alarm sounds; and the procedures to be followed in the event of fire or smoke.

i. A copy of the fire safety plan shall be readily available at all times within the building. In hotel-casinos the plan shall be located in the Fire Command Center.

3. The evacuation plan shall be conspicuously posted on every floor for the occupants' use.

i. Exception: In R-1 Use Groups the evacuation plan shall be posted on the inside of each guest room

door, other than a door opening directly to the outside at grade level.

4. The fire safety and evacuation plan shall be maintained to reflect changes in the use and physical arrangement of the building.

5. All hotel-casino employees who are assigned duties under the plan shall be periodically instructed and kept informed in respect to their respective duties and responsibilities. Such training shall include the proper use of portable fire extinguishers and other manual fire suppression equipment. With respect to new staff members, such training shall be provided within 30 days of entrance to duty. With respect to existing staff, refresher training shall be provided at least annually and whenever a reassignment significantly alters an employee's duties and responsibilities under the plan.

(q) The following apply to portable kerosene fired and solid fuel fired heaters:

1. Portable kerosene fired and solid fuel fire heaters shall be operated and installed with at least the minimum clearance to combustibles for which the appliance has been tested.

i. Exception: Clearances may be reduced in accordance with the mechanical subcode of the Uniform Construction Code.

2. Portable kerosene fired heaters shall be tested in accordance with UL 647 and bear the label of an approved testing agency complying with the criteria for labeling specified in the mechanical subcode of the Uniform Construction Code.

i. The use of portable kerosene fired heaters is prohibited in all Use Groups except R-3.

ii. Portable kerosene fired heaters shall not be offered for sale unless a conspicuous sign is posted at the point of sale and display indicating that the use of portable kerosene fired heaters is prohibited in all buildings except one- and two-family dwellings and is prohibited by ordinance in some municipalities in all dwellings.

iii. Portable containers for kerosene shall be either of a plastic or metal construction with fill and vent openings. The container shall be predominantly medium blue. The word "Kerosene" shall be displayed around the perimeter of the container.

3. Chimneys connected to solid-fuel fired heaters shall be inspected annually and maintained free of significant deposits of creosote and soot.

i. Exceptions to (q)3 above are Use Group R-3 single family dwellings, and chimneys serving fireplaces which are not equipped with fireplace stoves or inserts.

(r) The following apply to vacant and abandoned buildings and structures:

1. All buildings or structures that are, or hereafter become, vacant as a result of damage, fire, or abandonment shall be secured against unauthorized entry as ordered by the fire official. Structures which appear to be in danger of collapse shall be referred to the building official for remedial action in accordance with the Uniform Construction Code.

2. All utilities which represent a potential source of ignition shall be disconnected in a manner approved by the fire official.

3. Fire protection systems shall be maintained as required in N.J.A.C. 5:18-3.4(b)5.

(s) The following apply to fire drills:

1. Fire drills shall be held in buildings and parts thereof, when of Use Group E or Use Group I, in day care centers regardless of use group and in dormitories having an occupancy load of 50 or more.

2. Fire drills shall be held at least once a month in day care centers and buildings of Use Group E, at least twice annually in dormitories, and at least once every three months on each work shift in buildings of Use Group I. During severe weather, fire drills may be postponed.

3. A record of fire drills shall be kept on the premises and shall be made available to the fire official upon request. Such records shall contain the date of drill, weather conditions at the time, number of occupants evacuated, total time for evacuation and any other information relevant to the drill.

4. In day care centers, educational uses and dormitories, fire drills shall include complete evacuation of all persons from the building. In institutional uses, fire drills shall be conducted to familiarize operating personnel with their assigned positions of emergency duty. Complete evacuation of occupants from the building at the time of the fire drill shall be required in institutional uses only where it is practicable and does not involve moving or disturbing persons under medical care or restraint.

(t) The following apply to casino fire safety programs:

1. Every establishment licensed as a hotel-casino by the New Jersey Casino Control Commission shall establish a Fire Safety Unit consisting of trained personnel who shall be under the direct supervision of a supervisor who shall have responsibility for the operation of the Unit and the Fire Command Center and whose sole responsibility during a fire-related emergency incident shall be the direction of the unit and center. The supervisor shall report directly to the Director of the Department under which the Fire Safety Unit is organized.



2. The responsibilities of the Fire Safety Unit shall include the following as listed in (t)2i through ix below. The Fire Safety Unit shall:

- i. Ensure continual staffing of the Fire Command Center with trained hotel-casino personnel. There shall be at least one such trained person in the Center at all times who shall, while on duty, be responsible for the direction of the unit and the center during a fire-related emergency;
- ii. Develop and implement a comprehensive fire safety and evacuation plan;
- iii. Provide specialized training for all employees to assure compliance with the fire safety plan;
- iv. Familiarize all employees of the hotel-casino with the fire safety plan and with the built-in fire detection and suppression systems in the casino and hotel;
- v. Familiarize management and security employees with local fire department operations and procedures for various emergencies in the hotel-casino;
- vi. Provide training for employees on specific support functions to be performed to assist fire department personnel in an emergency;
- vii. Provide training for employees in early detection and proper evaluation of a fire emergency and the proper use of first aid, firefighting equipment and techniques;
- viii. Provide training annually for all security personnel and Fire Safety Unit staff in cardiopulmonary resuscitation; and
- ix. Ensure the maintenance of the building and its fire protection features in compliance with the Uniform Construction Code and the Uniform Fire Code.

3. The Fire Command Center shall maintain a comprehensive log which shall include the information required in (t)3i and ii below.

- i. The name and signature of each employee on duty in the Fire Command Center along with the date and time of arrival and departure; and
- ii. A description of each incident occurring within the casino or hotel including the date, time, location and action taken. An incident shall include, but not be limited to, fire, alarm activation, trouble signal, fire protection equipment malfunction, and any unrecorded communication pertaining to fire or life safety which are made to or from the Fire Command Center.

(u) The following apply to kitchen exhaust systems:

1. Commercial kitchen exhaust systems shall be cleaned to remove deposits of residue and grease in the system at intervals specified in the cleaning schedule.

Thorough cleaning of ducts, hoods and fans shall require scraping, brushing or other positive cleaning methods.

2. When a cleaning schedule is not on file, the fire official shall require an approved cleaning schedule to be submitted indicating the method of cleaning and the time intervals between cleanings.

(v) The following apply to HVAC and mechanical equipment:

1. All heating ventilating and air conditioning (HVAC) and mechanical equipment shall be maintained free of excessive accumulations of oil, grease, dust or waste materials.

2. All emergency controls shall be maintained and tested in accordance with N.J.A.C. 5:18-3.4(c). All fire and smoke dampers shall be free at all times of obstructions that prevent proper operations.

3. All equipment for the handling or use of combustible, explosive or otherwise hazardous materials shall be installed and maintained as required by this Code. Where the provisions of this Code do not specifically cover conditions and operations, the equipment shall be installed and maintained in accordance with nationally recognized good practice so as not to create any hazardous conditions.

(w) The following apply to rooming and boarding houses:

1. Every rooming and boarding house shall have rules prohibiting the activities listed in (w)1i and ii below, which shall be accepted in writing by every resident as a condition of residency.

i. The use of cooking and food warming devices, other than microwave ovens, is prohibited in rooming units.

ii. Smoking is prohibited in rooming units.

Administrative correction, effective May 18, 1992.

See: 24 N.J.R. 1875(a).

Amended by R.1993 d.197, effective May 3, 1993.

See: 25 N.J.R. 393(a), 25 N.J.R. 1868(a), 25 N.J.R. 2519(a).

Added restriction on outside burning at (a); description of required acting at (i); subsection (w) added.

Amended by R.1995 d.59, effective March 6, 1995.

See: 26 N.J.R. 4249(a), 27 N.J.R. 891(a).

### 5:18-3.4 Fire protection systems

(a) The general provisions of this section on fire protection systems are as follows:

1. The provisions of this section shall govern the operation, maintenance, and testing of all existing fire protection systems, devices, units and fire safety equipment in all occupancies as herein provided. Such systems shall comply with maintenance provisions of NFPA 13, 13A, 14, 15, 20, 22, 24, 71, 72A, 72B, 72C, 72D, 231, 231C and 231D listed in Appendix 3-A, incorporated herein by



reference, where provisions of this section do not specifically cover conditions and operations.

2. Before any fire alarm, detection or fire suppression system is installed, enlarged or extended, a construction permit shall be secured from the construction official.

3. All required tests shall be conducted by and at the expense and risk of the owner or a representative of the owner. The fire official shall not be held responsible for any damages incurred during any such test. Where the presence of the fire official is required for tests under the provisions of this section, the fire official shall be notified not less than 48 hours before said test is made.

4. All fire department connections and fire pump test connections shall be properly marked with a sign indicating their purpose and shall be maintained in a manner and location satisfactory to the fire official. A metal sign with raised letters at least one inch in size shall be mounted on all fire department connections serving fire sprinklers, standpipes and/or fire pump connections. Such signs shall read Automatic Sprinklers and/or Standpipes and/or Test Connection.

5. All threads provided for fire department connections to sprinkler systems, standpipe systems, yard hydrants or any other fire hose connections shall be uniform to those used by the fire department.

(b) The following apply to protection maintenance:

1. All fire protection systems, devices, units, and service equipment which were installed in compliance with any law, ordinance or order, shall be maintained in an operative condition at all times, and it shall be a violation of this Code for any owner or occupant to reduce the effectiveness of the protection so required; except this shall not prohibit the owner or occupant from temporarily reducing or discontinuing the protection where necessary to make tests, repairs, alterations or additions. The fire official shall be notified before disconnection and interruption of protection, tests, repairs, alterations or additions are started and upon its completion, and shall be advised of the extent of and reason for such work. The restoration of the protection shall be diligently pursued.

2. Anyone disabling, tampering or interfering with the effectiveness of any component of a fire detection or alarm system shall be in violation of this Code.

3. When any required fire alarm, fire communication, fire extinguishing, fire detecting, first-aid fire fighting system, device or unit, or part thereof becomes inoperative and affects the fire safety of a building or structure or the occupants therein, the fire official may order said building or structure or portion thereof vacated until said inoperative system, device or unit is repaired and returned to full service.

4. For buildings under construction, the standpipe system shall be carried up with each floor and shall be installed and ready for use as each floor progresses as required by the Uniform Construction Code. Standpipes shall not be more than one floor below the highest forms or staging.

5. Vacant or unoccupied buildings or portions thereof shall maintain all required sprinkler and standpipe systems and all component parts in a workable condition at all times. Fire alarm systems shall be maintained in operating condition at all times, except in accordance with (b)5i below, and the system shall be tested in the presence of the fire official upon restoration to use.

i. Exception: In vacant or unoccupied buildings, where the fire official determines the type of construction, fire separation and security of the building is such as not to create a fire hazard, the fire official may permit the fire protection and/or detection systems to be taken out of service in such a manner and for such a time as the official specifically prescribes.

6. When a building is being demolished and a standpipe or sprinkler system exists within said building, such standpipe and/or sprinkler system shall be maintained in an operable condition so as to be available for use by the fire department. Such standpipe and/or sprinkler system shall be demolished with the building, but in no case shall the system, or systems, be more than one floor below the floor being demolished.

7. Existing non-required fire protection systems, devices, units and service equipment that do not conform to current Code requirements shall continue in service without alteration provided the fire official determines said system, device, unit or equipment does not constitute a serious protection deficiency. Serious protection deficiencies shall be corrected at the discretion of the fire official.

i. All non-required fire protection equipment shall be arranged and maintained in a manner consistent with the requirements at the time of installation unless discontinuation of the equipment is approved by the fire official. All discontinued equipment and devices (pullstations, nozzles, detectors, heads, sensors, panels, hose connections, etc.) shall be removed so as not to give a false indication that the building, area, or space is protected.

8. In any use of carbon dioxide, dry chemical, or halon total flooding systems where there is a possibility that personnel will be trapped in, or enter into, atmosphere made hazardous by a discharge, warning signs, discharge alarms and breathing apparatus, when provided, shall be maintained to insure prompt evacuation of and to prevent entry into such atmospheres and also to provide means for prompt rescue of any trapped personnel.

(c) The following apply to periodic inspections and tests:

1. Inspections and field tests of fire suppression, alarm, detection and any other fire protection systems, devices and equipment shall be conducted by the owner or an authorized representative as herein required.

2. When testing any suppression system, standpipe or fire alarm system which is connected through a central supervisory station directly to the fire or police department, notification shall be given to the fire official before initiation of the tests.

3. All standpipe fire lines in all buildings and structures shall be tested at least every five years. In high rise structures, tests shall be made at intervals of not more than two years. Wet and dry pipe systems shall meet the flow demands required at the time of installation or as required by (d)2i below, and dry systems shall meet the pressure demands of (d)2 below. At the time of the test, all control valves, including those inside hose cabinets, shall be operated and then reset in their proper position to insure the workability of these valves. Wet and dry systems unable to meet the flow requirements at the time of installation or as required by (d)2i below shall be required to install automatic fire pumps or tanks if deemed necessary by the fire official for the occupancy of the building.

4. The inspector's test connections, main drain valves and all control valves on all sprinkler systems shall be operated at least once a year to determine that there is a free water flow at adequate pressure and that the supervisory service, if any exists, is operating properly. An internal inspection of the piping shall be performed periodically, but at least once every 10 years to check for debris buildup, and the piping is to be flushed if needed. If debris buildup is noted, internal inspections shall be at five year intervals thereafter. Each dry pipe valve shall be cleaned and reset at least once each year. Automatic antifreeze solution systems and limited area systems that are supplied from a domestic water source and which are not required to provide a test line shall be exempt from the requirements of this section.

5. All fire pumps that automatically supply water to suppression systems and standpipes shall be operated periodically until water is discharged freely from the relief valve and at least once every 30 days. A yearly test shall be made in accordance with NFPA 20 listed in Appendix 3-A, incorporated herein by reference, to make sure that neither pump nor suction pipe is obstructed. Where the suction supply is from public mains, the test shall not draw the residual suction pressure at the pump below 20 pounds per square inch (psi).

6. Automatic and manual fire alarm systems and each of their components shall be tested annually in accordance with (c)6i through iii below.

i. An alarm shall be simulated for each zone of the system and shall cause the alarm to be audibly and/or visually received throughout the entire building and at

the control panel and at any other location at which the alarm signal is required to be received.

ii. The supervisory circuits of each zone shall be tested in accordance with the manufacturer's instructions and cause a trouble signal to be received both audibly and visually at the control panel.

iii. A failure of the main power supply to the fire alarm system shall be simulated. The emergency power supply shall then be capable of indicating, both audibly and visually, trouble and alarm signals at the control panel.

7. All high level alarm systems installed in accordance with N.J.A.C. 5:18B shall be periodically tested in accordance with N.J.A.C. (a)4 above.

8. Smoke control systems shall be tested annually in accordance with (c)8i through iv below.

i. Smoke detection systems utilized to activate smoke control systems shall be tested in accordance with (c)6 above.

ii. Smoke control systems shall be placed into operation by manual and automatic means. The proper sequence and operation of system components shall be kept in writing on the premises, shall be available to the fire official and shall be verified when the system is activated.

iii. For pressurization systems, pressure readings shall be taken with all doors closed to verify that the system continues to meet the standards of its approval under the Uniform Construction Code, including maintaining the exhaust capacity.

iv. For smoke removal systems, exhaust discharge readings shall be taken to verify that the system maintains the exhaust capacity required by the Uniform Construction Code.

9. Tests shall be performed on emergency and standby power generation systems annually in accordance with (c)9i and ii below.

i. The main power supply shall be interrupted and cause the generator to start automatically under full load.

ii. Emergency power shall be supplied by the generator in 10 seconds or less under full load. Standby power shall be supplied by the generator in 60 seconds or less under full load.

10. Elevators shall be tested annually in accordance with (c)10i and ii below. The fire official may accept a current Certificate of Compliance issued in accordance with the Uniform Construction Code as evidence of compliance with this section.

i. Upon simulated activation of an elevator lobby detector, the elevator controller shall cause all elevator cars that serve that lobby to return nonstop to the designated lobby, and prevent further operation of the elevators without the use of an emergency service key.

ii. The emergency service keys shall be utilized to place the recalled elevators into emergency operation and to verify proper functioning of the elevator for fire service operation.

11. Foam extinguishing systems shall be periodically tested and maintained in accordance with NFPA 11, 11A and 16 listed in Appendix 3-A, incorporated herein by reference.

12. Carbon dioxide extinguishing systems shall be periodically tested and maintained in accordance with NFPA 12 listed in Appendix 3-A, incorporated herein by reference.

13. Halogenated extinguishing systems shall be periodically tested and maintained in accordance with NFPA 12A and 12B listed in Appendix 3-A, incorporated herein by reference.

14. Dry chemical extinguishing systems shall be periodically tested and maintained in accordance with NFPA 17 listed in Appendix 3-A, incorporated herein by reference.

15. Wet chemical extinguishing systems shall be periodically tested and maintained in accordance with NFPA 17A listed in Appendix 3-A, incorporated herein by reference.

16. Water spray fixed extinguishing systems shall be periodically tested and maintained in accordance with NFPA 15 listed in Appendix 3-A, incorporated herein by reference.

17. A complete written record of all tests and inspections required under this section shall be maintained on the premises by the owner or occupant in charge of said premises, and all such records shall be submitted to the fire official when requested for inspection and evaluation.

(d) The following apply to standpipe systems:

1. All standpipe systems and equipment, including fire pumps, shall be periodically tested in accordance with this Code.

2. All standpipe systems, including dry, wet and dry pipe systems, shall be tested hydrostatically to demonstrate that the system will sustain for two hours a pressure of not less than 200 psi or 50 psi in excess of the maximum static pressure when the maximum static pressure is in excess of 150 psi.

i. Wet and dry pipe systems shall be tested to determine that the source of water supply, held back by air pressure, is adequate to maintain a minimum flow and pressure at the topmost hose outlet as required for the system design by the Uniform Construction Code. A working test of dry pipe valves, quick opening devices and air maintenance devices, if installed, shall be made before acceptance. Dry pipe systems must deliver water at the most remote hose outlet in not more than 60 seconds, starting at the normal operating air pressure.

ii. Standpipe fire lines without permanent or automatic water supply and equipped with a fire department connection shall be capable of delivering 250 gallons per minute (gpm) simultaneously from each of any three outlets under the operation of one fire engine or pumper.

3. All fire hose stations for dry standpipe fire lines shall be marked with a permanently attached noncombustible sign with letters not less than two inches high, in a color which contrasts with the background color, and reading "Dry Hose—Fire Department Use Only" which is mounted or painted on or near said fire hose station.

4. When fire fighting equipment (standpipe, fire hose, fire extinguishers, fire axes, fire department valves, and so forth) is enclosed in cabinets, these cabinets shall not be blocked from use or obscured from view in any manner.

5. When fire fighting equipment is enclosed in cabinets which are equipped with doors, said doors shall conform with the following provisions:

i. Painted over, covered, or solid metal cabinet doors without visual identification glass panels shall not be bolted, locked, or secured in any manner unless said lock is approved by the fire official. Such doors shall be marked by a permanently attached noncombustible sign with letters not less than two inches high, in a color which contrasts with the background color, and shall indicate what equipment is contained therein. The fire official may allow doors to be marked with a permanently attached noncombustible picture of the equipment contained therein provided said doors are not large enough to accommodate a written sign.

ii. Cabinet doors with an approved visual identification clear glass panel need not be marked provided said door is not locked, bolted or secured in any unapproved manner. Cabinet doors with approved visual identification clear glass panels may be locked provided the following conditions are met:

(1) All locking devices shall be approved by the fire official and shall be capable of being opened when a glass panel is broken away;

(2) Unlocking handles shall be painted red and shall indicate the direction in which the handle must be pushed or pulled to unlock said door; and

(3) Visual identification glass panels shall be unobscured or painted panes that can readily be broken so that access can be obtained, and a permanently attached noncombustible sign with letters not less than two inches high, in a color that contrasts with the background color, and reading "Fire Equipment—In Case of Fire Break Glass and Operate Red Handle" shall be mounted or painted on the cabinet doors.

iii. Cabinet doors that have complete glass door panels may be locked provided said glass can readily be broken and access obtained, and a noncombustible sign with letters not less than two inches high in a color that contrasts with the background color and reading "In Case of Fire Break Glass" shall be mounted or painted on the glass panel.

(e) The following apply to fire suppression systems for cooking operations:

1. The provisions of this subsection shall govern the operation and maintenance of fire suppression systems for range hoods and food preparation centers in all buildings and structures.

2. An approved automatic fire suppression system shall be installed in all hoods and connecting hood and duct systems as required by N.J.A.C. 5:18-4.7(g). Such fire suppression systems shall provide surface protection for all cooking appliances and equipment that may be a source of ignition in or under the hood.

i. Automatic safe shut-off valves, remote manual pull stations, surface protection or extended surface protection shall be required by the fire official on any existing automatic or nonautomatic fire suppression system when said system does not conform to the provisions of this section and when additional protection is deemed necessary by the fire official for the safety and protection of the operation, the occupants or the operator.

3. All nozzles, fusible links and cylinders shall be readily accessible for cleaning, replacement, inspection and service. It shall be the responsibility of the person in charge of said cooking operation to see that the extinguishing systems are inspected at least every six months and whenever said system is activated or found inoperative. Inspections shall be made only by properly trained and qualified personnel. Regular service contracts with the manufacturer or an authorized installing or maintenance company are recommended. All actuation components, including remote manual pull stations, mechanical or electrical devices, detectors, actuators, etc., shall be checked for proper operation during inspection. All fusible links and fusible link sprinkler heads shall be replaced annually. Manual stations shall be sealed and safety pinned or latched. An inspection tag shall be located at the manual pull station indicating the date of the last inspection and the signature and name of the person and company who performed the work.

i. A certificate of inspection shall be forwarded to the fire official whenever any system is placed back into service after being discharged or deactivated for repair work, and after each required semi-annual inspection, by the person or company who performed said inspection. Certificates of inspection shall be submitted in such form as the fire official may prescribe.

4. All cooking operations and all food preparation centers within any occupancy, except individual dwelling units, shall provide a sufficient number of portable fire extinguishers to afford adequate fire safety as determined by the fire official but not less than one unit. All extinguishers shall carry a minimum of 20-B:C rating and capacity and be compatible with the fire suppression system extinguishing agent. The extinguisher shall be located not more than 15 feet and not less than 10 feet from the hazard.

5. When an existing kitchen exhaust suppression system discharges, the protected cooking appliances shall not be operated until the suppression system has been recharged and placed back in service. When the system is recharged, it shall be tested in accordance with (c) above.

(f) The following apply to portable fire extinguishers:

1. All hand operated portable fire extinguishers shall be selected, distributed, inspected, maintained, tested and recharged in accordance with NFPA 10 listed in Appendix 3-A, incorporated herein by reference, and (f)2 below.

2. Portable fire extinguishers shall be provided in all buildings and structures except Use Group R-2 and R-3 as set forth in (f)2i through vi below.

i. Theaters shall be provided with at least two approved fire extinguishers in the stage area behind the proscenium wall where movable scenery is installed; not less than one fire extinguisher on stages or platforms without scenery or stage equipment; one in each tier of dressing rooms; and one immediately outside the entrance to every motion picture booth.

ii. Schools, assembly and lecture halls shall be provided with one fire extinguisher for each 2,500 square feet of floor area or fraction thereof but not less than one fire extinguisher in each laboratory, shop or other vocational room.

iii. In hotels, dormitories and lodging houses, at least one fire extinguisher shall be provided on each floor at the stairway landing and in the corridor at each elevator or bank of elevators.

iv. Hospitals, nursing homes, prisons and group homes shall be provided with one fire extinguisher for each 2,500 square feet of floor area, but not less than one per floor, and one in each kitchen.

v. Portable fire extinguishers shall be provided as required by the fire official in accordance with NFPA 10 listed in Appendix 3-A, incorporated herein by reference.

vi. Where required in other sections of this Code as outlined by Table 3.4(f)2 below:

TABLE 3.4(f)2  
PORTABLE FIRE EXTINGUISHERS

Code Section	Description
3.3(d)1	Torches for removing paint
3.3(n)4	Asphalt (tar) kettles
3.4(e)4	Cooking operations
3.6(e)1	Airports
3.6(e)2	Aircraft towing vehicles
3.6(e)3	Welding apparatus
3.6(e)4	Aircraft refueler
3.6(e)5	Aircraft service areas
3.7(c)9	Spray finishing
3.7(d)8	Dip tanks
3.9(b)3	Dry cleaning plants
3.13(b)7	Lumber yards
3.13(c)2	Woodworking machines
3.16(e)6	Service stations
3.17(d)6	Tents, air supported and other temporary structures
3.20(d)4	Welding and cutting operations
3.25(e)2	Cryogenic liquid tank vehicles
3.28(h)1	Flammable and combustible liquid storage
3.28(h)1i	Interior storage rooms
3.28(h)1ii	Inside storage
3.31(d)2	Magnesium processing
3.33(b)3	Organic coatings manufacturing

3. When auxiliary emergency equipment is enclosed in cabinets, said cabinets shall conform to (d)4 through 5 above.

4. In isolated hazardous locations, incidental to the general use of the building, a limited area sprinkler system serviced from the building water supply complying with the Uniform Construction Code may be accepted as a substitute for portable fire extinguishers.

5. Actuated extinguishers shall be immediately moved away from their designated location and shall be temporarily replaced with a standby or spare unit of the same type and capacity as the actuated unit.

6. Soda acid, foam, loaded stream, antifreeze and water portable fire extinguishers of the inverting type shall not be recharged or placed in service for fire protection use. Extinguishers of these types shall not be considered approved devices for fire protection use under the provisions of this code and shall immediately be removed from service.

(g) The following apply to fire alarm systems:

1. Fire alarm systems and all devices attached thereto shall be maintained in proper working order at all times and shall be subjected to periodic tests as required by (c) above.

i. Exception to maintenance and periodic tests: Vacant buildings (see (b)5 above).

2. Battery operated smoke detectors in Use Group R-1 and R-2 buildings and in bed and breakfast homes-tays shall be maintained, tested and inspected as follows:

i. The owner of the building or his representative shall inspect each detector whenever a change of occupant occurs; and

ii. The owner of the building or his representative shall clean the detector and/or replace the batteries as necessary, but at least once a year, to assure proper operation.

Administrative correction, effective May 18, 1992.

See: 24 N.J.R. 1875(a).

Amended by R.1993 d.197, effective May 3, 1993.

See: 25 N.J.R. 393(a), 25 N.J.R. 1868(a).

Added requirements to obtain approval prior to disconnecting alarm in vacant structure; added reference to elevator subcode.

Amended by R.1995 d.59, effective March 6, 1995.

See: 26 N.J.R. 4249(a), 27 N.J.R. 891(a).

### 5:18-3.5 Means of egress

(a) The provisions of this section shall govern the maintenance and use of means of egress as provided in buildings and structures in accordance with the requirements of the Uniform Construction Code and this code (see N.J.A.C. 5:18-3.15 for additional requirements for places of assembly and education).

(b) The following apply to hazards relating to means of egress:

1. All means of egress elements, such as egress doors and their hardware, corridors, stairways, fire escapes and similar egress components, shall be maintained in a safe and operable condition at all times, and be available for immediate use. The fire official may require a load test on any exterior stairway or fire escape to determine structural stability.

2. A person shall not at any time place any encumbrance within or upon any element of a means of egress which reduces its width to less than that required by the Uniform Construction Code. Draperies or similar decorative hangings shall not obstruct the view of, nor access through, any element of a means of egress. Mirrors shall not be placed in or adjacent to a means of egress in any manner which may confuse the direction of egress. Exit doors shall not be decorated in any way that would obscure or confuse the purpose of the door.

3. Exits shall not be used for any purpose other than a means of egress. Spaces within a stairway enclosure shall not be utilized for storage or location of any materials or items. Exterior spaces below and within 10 feet horizontally of fire escapes and exterior stairs shall not be utilized for the storage of combustible materials or location of refuse containers.

4. Enclosed exit access corridors shall be maintained free of accumulations of flammable or combustible materials at all times except for the conditions listed in (b)4i and ii below:

i. Decorative items affixed directly to walls or ceilings; or



ii. Furniture located within seating or waiting areas which is fixed in place which does not reduce the required width of the corridor.

(c) The following apply to egress doors:

1. All interior exit stairway doors shall be openable from either side; and all egress doors shall be openable from the side from which egress is to be made without the use of a key or special knowledge or effort at all times the building or area served is occupied except as provided in (c)2 below.

i. All keys necessary for unlocking doors installed in means of egress shall be individually identifiable by both touch and sight.

2. Exceptions: Locks or fasteners may be installed on egress doors under the following conditions only:

i. In mental, penal or other institutions where the security of inmates is necessary, in which case properly trained supervisory personnel shall be continuously on duty and approved provisions are made to safely remove occupants in case of fire or other emergency;

ii. In problem security areas, special purpose door alarms or locking devices shall be approved by the fire official prior to installation. Manually operated edge or surface molded flush bolts are prohibited; and

iii. In high rise buildings with stairway doors arranged in accordance with the Uniform Construction Code.

(d) The following apply to emergency escape windows:

1. Emergency escape windows and doors shall be maintained operational and available to occupants of sleeping rooms in residential uses.

2. Existing bars, grills, grates or similar devices may be permitted in required emergency escape windows provided such devices are approved by the fire official, in accordance with N.J.A.C. 5:18A-2.1 and 3.3, and are equipped with approved release mechanisms which are openable from the inside without the use of a key or special knowledge or excessive force. Installation of new devices shall be in accordance with the New Jersey Uniform Construction Code.

(e) The following apply to signs and lighting:

1. All exit signs shall be maintained in a clean and legible condition and shall be clearly illuminated at all times that the building is occupied. Supplemental internally illuminated directional signs, when necessary, shall be installed indicating the direction and way of egress.

i. A sign shall be provided at each landing in all interior stairways more than three stories in height designating the floor level above the exit discharge.

2. Any door, passage or stairway which is neither a means of egress nor access to a means of egress and which is so located or arranged as may be mistaken for a means of egress shall be properly identified as to its use.

3. Decorations, furnishings or equipment which impair the visibility of egress signs shall not be permitted nor shall there be any brightly illuminated sign (for other than egress purposes), display or object in or near the line of vision to the required egress sign of such a character as to so detract attention from the egress sign that it may not be noticed.

4. Stairways, hallways and other means of egress, including exterior open spaces to or through which an exit leads, shall be kept adequately lighted at all times that the building served thereby is occupied.

5. All elevator lobby call stations on all floor levels in buildings more than six stories or 75 feet in height shall be marked with approved signs reading as follows: "Use Stairways in Case of Fire—Do Not Use Elevators." The requirements of this paragraph shall apply to existing as well as new buildings.

6. Emergency lighting units shall be maintained, operable and ready for use at all times and shall activate upon primary power failure. Nothing shall be placed so as to block or obstruct these devices.

i. Emergency lighting units shall be tested on at least an annual basis.

ii. The owner of the building or his representative shall maintain a written record of all maintenance and tests on the premises.

(f) The following apply to fire and exit doors:

1. All self-closing and automatic doors serving as a means of egress or providing a fire or smoke barrier as required by the building code in effect at the time of first occupancy shall be maintained in operable condition at all times in accordance with NFPA 80 listed in Appendix 3-A, incorporated herein by reference, where provisions of this section do not specifically cover conditions and operations.

i. It shall be unlawful to block open any interior egress door or any fire door which is required to be self-closing.

Amended by R.1993 d.197, effective May 3, 1993.

See: 25 N.J.R. 393(a), 25 N.J.R. 1868(a).

Added clarification of approval responsibilities at (d).

Amended by R.1995 d.59, effective March 6, 1995.

See: 26 N.J.R. 4249(a), 27 N.J.R. 891(a).

**5:18-3.6 Airports, heliports and helistops**

(a) The following are general provisions applicable to this section:

1. The provisions of this section shall apply to all airports, heliports, helistops and aircraft hangars.

2. All applicable facilities shall be operated and maintained in accordance with the provisions of this code.

(b) The following apply to service areas:

1. A person shall not install, operate, or maintain an aircraft service except in accordance with the provisions of N.J.A.C. 5:18-3.16 and 3.28. All transferring apparatus, pumps, hoses, electrical equipment, fueler units and accessory equipment shall be approved and shall comply with NFPA 407 listed in Appendix 3-A, incorporated herein by reference.

2. The dispensing, transfer or storage of flammable or combustible liquid shall not be permitted inside of or upon any building or structure. Flammable or combustible liquid shall not be dispensed into or removed from a container, tank, vehicle or aircraft except in a location approved by the fire official.

3. All repairing of aircraft requiring the use of open flames, spark-producing devices or the heating of parts above 500 degrees Fahrenheit shall be done in the open or in an area conforming to the provisions of the Uniform Construction Code.

4. A person shall not smoke or produce any open flame within 50 feet of any point where fuel is being transferred, nor shall any electrical or motor driven device be connected to or disconnected from any aircraft at any time fueling operations are in progress on such aircraft.

(c) Safety requirements are as follows:

1. Application of flammable finishes shall be conducted in areas approved by the fire official.

2. A person shall not clean any aircraft, engine or parts of an aircraft or engine with any Class I flammable liquid.

3. Every aircraft hangar shall be provided and maintained with metal drip pans under the engines of all aircraft, except turbine-powered aircraft, stored or parked therein.

4. An open flame, flame-producing device or other source of ignition shall not be permitted in any hangar, except in approved locations.

5. Smoking shall be prohibited on loading and servicing ramps or within 50 feet of any parked aircraft. Smoking in hangars shall be allowed only in areas designated by the fire official. "No Smoking" signs shall be provided in accordance with (k) below.

6. The engines of any aircraft shall not be run in an aircraft hangar except in approved engine test areas.

7. Combustible materials or other hazardous materials shall not be stored in an aircraft hangar except in locations and containers approved by the fire official.

8. The touchdown area for helicopters shall be surrounded on all sides by a clear area having a minimum average width at roof level of 15 feet with no width less than five feet and shall be so maintained.

9. Landing areas on structures shall be so maintained as to confine any flammable liquid spillage to the landing area itself and provision shall be made to drain such spillage away from any exit servicing the landing area or from a structure housing such exit.

(d) The following apply to passenger facilities:

1. Passenger traffic may be permitted during the time fuel transfer operations are in progress, provided the following provisions are strictly enforced by the owner of the aircraft or an authorized employee.

i. A person shall not smoke or produce any open flame in the cabin of the aircraft or on the outside thereof within 50 feet. A qualified employee of the aircraft owner shall be responsible for seeing that passengers are not allowed to smoke when remaining aboard the aircraft, nor while crossing the ramp from the gate to the aircraft or vice versa.

ii. Passengers shall not be permitted to linger about the aircraft but shall proceed directly between the loading gate and the aircraft.

iii. Passenger loading stands shall be left in loading position until all fuel transfer operations are completed.

iv. Fuel transfer operations shall not be performed on the main exit side of any aircraft containing passengers except when the owner of the aircraft or a capable and qualified employee of the owner shall remain inside to direct and assist the escape of such passengers through regular and emergency exits in the event of fire. A passenger shall not board or exit the aircraft on the same side as the refueling operation.

2. Exits from applicable facilities shall be maintained in compliance with N.J.A.C. 5:18-3.5 except that all landing areas located on buildings shall have at least two independent exits.

(e) The following apply to portable fire extinguishers:

1. Portable fire extinguishers suitable for flammable liquid and electrical type fires shall be provided as specified by the fire official.

2. Every vehicle for towing aircraft shall be equipped with at least one fire extinguisher having a minimum 20-B:C rating.

3. Every welding apparatus shall be equipped with at least one fire extinguisher having a minimum rating of 2-A:10-B:C.

4. Every aircraft refueler shall be equipped with a minimum of two extinguishers having a 20-B:C rating. A fire extinguisher shall be readily accessible from either side of the vehicle.

5. Every aircraft service area shall be provided with at least two fire extinguishers as specified in NFPA 407 listed in Appendix 3-A, incorporated herein by reference.

6. The use of any fire extinguishing equipment under any circumstances shall be reported to the airport manager and the fire official immediately after use.

#### 5:18-3.7 Application of flammable finishes

(a) The following are general provisions applicable to this section:

1. The locations or areas where the following activities are intended to be conducted or are done shall comply with the provisions of this section.

i. The application of flammable or combustible paint, varnish, lacquer, stain or other flammable or combustible liquid applied as a spray by whatever means, in continuous or intermittent process; and

ii. Dip tank operations in which articles or materials are passed through contents of tanks, vats or containers of flammable or combustible liquids, including coating, finishing, treating and similar processes.

2. This section does not cover the outdoor spray application of buildings, tanks or other similar structures, nor does it cover small portable spraying apparatus not used repeatedly in the same location; provided, however, that the herein described fundamental safeguards pertaining to cleanliness, care of flammable liquids, dangerous vapor-air mixtures and sources of ignition shall be applicable.

(b) Fire safety requirements are as follows:

1. The layout, arrangement and construction of buildings and structures in which spraying or dipping operations are done shall comply with the applicable requirements of the building code in effect at the time of first occupancy for the appropriate use group classification, and shall be provided with fire protection and fire extinguishing equipment as required by N.J.A.C. 5:18-4 and that code. Buildings and structures and their service equipment shall be maintained in proper operating condition as required by this code and NFPA 33 and 34 listed in Appendix 3-A, incorporated herein by reference, where provisions of this section do not specifically cover conditions and operations.

2. Smoking and open flames shall be prohibited in any spray finishing area and in the vicinity of dip tanks. Signs with lettering of approved size shall be conspicuously posted in such areas and shall read "No Smoking By Order of the Fire Official."

3. Electrical wiring and equipment shall conform to the provisions of N.J.A.C. 5:18-3.3(m) and shall be installed as specified in NFPA 70 listed in Appendix 3-A, incorporated herein by reference.

(c) The following apply to spray finishing:

1. Any area in which quantities of flammable vapors or combustible residues, dusts or deposits are present due to the operation of spraying processes shall be considered a spraying area. The fire official may define the limits of the spraying area in any specific case. A spraying area shall include:

i. The interior of spray booths;

ii. The interior of ducts exhausting from spraying processes; and

iii. Any area in the direct path of spray or any area containing dangerous quantities of air-suspended combustible residue, dust, deposits, spray or vapor as a result of spraying operations.

2. Spray-finishing operations shall not be conducted in buildings used for assembly, educational, institutional or residential occupancies, except in a room designed for that purpose, protected with an approved fire suppression system and separated vertically and horizontally from other areas as required by the Uniform Construction Code or N.J.A.C. 5:18-4.

3. Spray booths shall be maintained according to (c)3i through vii below.

i. The interior surfaces of spray booths shall be smooth and continuous without edges and otherwise maintained to prevent pocketing of residues and facilitate cleaning and washing without injury.

ii. The floor construction of spray areas, if combustible, shall be covered by approved noncombustible material. All spraying areas shall be kept free from the accumulation of deposits of combustible residues. Combustible coverings (thin paper, plastic, and so forth) and strippable coatings may be used to facilitate cleaning operations in spraying areas. If residue accumulates to excess in booths, ducts or duct discharge points or other spraying areas, then all spraying operations shall be discontinued until conditions are corrected.

iii. If installed, baffle plates shall be of noncombustible material, readily removable or accessible on both sides for cleaning and designed to promote an even flow of air through the booth and to prevent the deposit of overspray before it enters the exhaust duct. Such baffle plates shall not be located in exhaust ducts.

iv. Each spray booth having a frontal area larger than nine square feet shall have a metal deflector or curtain not less than 4½ inches deep installed at the upper outer edge of the booth, over the opening.

v. Each spray booth shall be separated from other operations by at least three feet or by such partition or wall as the fire official may require to reduce the hazard from adjoining operations.

vi. Spray booths shall be so installed that all portions are readily accessible for cleaning. A clear space of not less than three feet on all sides shall be kept free from storage or combustible construction. This does not preclude the installation of a spray booth against a partition or wall having a one hour fire resistance rating providing the booth can be maintained and cleaned.

vii. When spraying areas are illuminated through glass panels or other transparent materials, only fixed lighting units shall be used as a source of illumination. Panels shall effectively isolate the spraying area from the area in which the lighting unit is located and shall be of noncombustible material of such a nature or so protected that breakage will be unlikely. Panels shall be so arranged that normal accumulations of residue on the exposed surface of the panel will not be raised to a dangerous temperature by radiation or conduction from the source of illumination.

4. Overspray dry filters or filter rolls, if installed in conventional dry-type spray booths, shall conform to the provisions of (c)4i through v below.

i. All discarded filter pads and filter rolls shall be immediately removed to a safe, well-detached location or placed in a water filled metal container and disposed of at the close of the day's operation unless maintained completely immersed in water.

ii. The location of filters in a spray booth shall be so as to not reduce the effective booth enclosure of the objects being sprayed.

iii. Clean filters or filter rolls shall be noncombustible or of an approved type.

iv. Filters or filter rolls shall not be used when applying a spray material known to be highly susceptible to spontaneous heating and ignition.

v. Filters and filter rolls shall not alternately be used for different types of coating materials where the combination of materials may be conducive to spontaneous ignition.

5. There shall be no open flame, spark-producing equipment or exposed surfaces exceeding the ignition temperature of the material being sprayed in the areas specified in (c)5i and ii below, except as specifically permitted in (c)11 and (e) below. Further, there shall be no equipment or processes that may produce sparks or particles of hot metal located above or adjacent to the areas in (c)5i and ii below, unless means are provided to prevent the sparks or particles of hot metal from entering these areas.

i. A spraying area as defined in (c)1 above; and

ii. An area adjacent to a spraying area which would require electrical equipment conforming to the provisions of NFPA 70 listed in Appendix 3-A for Division 2 locations, incorporated here by reference, unless separated therefrom by a partition extending at least to the boundary of the Division 2 location.

6. Room heating appliances, steam pipes or hot surfaces shall not be located in a spraying area where deposits of combustible residues may readily accumulate.

7. A ventilation system shall be operated and maintained for all spray booths and spray areas in accordance with the BOCA Mechanical Code listed in Appendix 3-A, incorporated herein by reference.

8. The storage and handling of flammable liquids shall be in accordance with N.J.A.C. 5:18-3.28 and shall also conform to the provisions of this paragraph.

i. Where the quantity of liquid in five gallon and smaller containers, other than original sealed containers, exceeds a total of 10 gallons, it shall be stored in a storage cabinet or an interior storage room conforming to N.J.A.C. 5:18-3.28.

ii. Original closed containers, approved portable tanks, approved safety cans or a properly arranged system of piping shall be used for bringing flammable liquids into spray finishing areas. Open or glass containers shall not be used.

iii. Containers supplying spray nozzles shall be of a closed type or provided with metal covers kept closed. Containers not resting on floors shall be on noncombustible supports or suspended by wire cables. Containers supplying spray nozzles by gravity flow shall not exceed 10 gallons capacity.

iv. All containers or piping to which is attached a hose or flexible connection shall be provided with a shutoff valve at the connection. Such valves shall be kept shut when spraying operations are not being conducted, except when a circulating system is used and it is provided with an automatically operated anti-runaway control.

v. Heaters shall not be located in spray booths or other locations subject to the accumulation of deposits of combustible residue.

vi. If flammable or combustible liquids are supplied to spray nozzles by positive displacement pumps, means shall be provided to prevent the discharge pressure from exceeding the operating pressure of the system. Any discharge shall be to a safe location.

vii. Whenever flammable liquids are transferred from one container to another, both containers shall be bonded or effectively grounded. Piping systems for flammable liquid shall be permanently grounded.

9. All spraying areas shall be provided with portable fire extinguishers suitable for flammable liquid fires as specified for extra hazardous occupancies in NFPA 10 listed in Appendix 3-A and incorporated herein by reference.

10. All spraying areas shall be kept free from the accumulation of deposits of combustible residues. Combustible coverings (thin paper, plastic, and so forth) and strippable coatings may be used to facilitate cleaning operations in spraying areas. If residue accumulates to excess in booths, duct or duct discharge points or other spraying areas, then all spraying operations shall be discontinued until conditions are corrected.

i. Scrapers, spuds or other such tools used for cleaning purposes shall be of nonsparking material.

ii. Residue scraping and debris contaminated with residue shall be immediately removed from the premises and properly disposed of.

iii. Solvents for cleaning operations shall have flash points above 100 degrees Fahrenheit except that for cleaning spray nozzles and auxiliary equipment, solvents having flash points not less than those normally used in spray operations may be used. Cleaning operations using flammable or combustible solvents shall be conducted inside spray booths with ventilating equipment operating during the cleaning procedure.

iv. Spray booths shall not be alternately used for different types of coating materials, where the combination of the materials may be conducive to spontaneous ignition, unless all deposits of the first used material are removed from the booth and exhaust ducts prior to spraying with the second.

v. Approved metal waste cans equipped with self-closing lids shall be provided wherever rags or waste are impregnated with finishing material and all such rags or waste shall be deposited therein immediately after use. The contents of waste cans shall be properly disposed of at least once daily and at the end of each shift.

11. In addition to conforming to the requirements of this section, drying apparatus shall comply with the applicable provisions of N.J.A.C. 5:18-3.14.

i. Spray booths, rooms or other enclosures used for spraying operations shall not alternately be used for the purpose of drying by any arrangement which will cause a material increase in the surface temperature of the spray booth, room or enclosure.

ii. Except as specifically provided in (c)11iii below, drying or baking units utilizing a heating system having open flames or which may produce sparks shall not be installed in a spraying area as defined in (c)1 above, but may be installed adjacent thereto when equipped with an interlocked ventilating system arranged to:

(1) Thoroughly ventilate the drying space before heating system can be started;

(2) Maintain a safe atmosphere at any source of ignition; and

(3) Automatically shut down the heating system in the event of failure of the ventilating system.

iii. Automobile refinishing booths or enclosures, installed and maintained in conformity with this section, may alternately be used for drying with portable infrared drying apparatus when conforming to all of the following requirements:

(1) The procedure shall be restricted to low-volume, occasional spray application;

(2) The interior of spray enclosures shall be kept free of over-spray deposits; and

(3) During spray operations, the drying apparatus and electrical connections and wiring thereto shall not be located within spray enclosure nor in any other location where spray residue may be deposited thereon.

(4) Spraying apparatus, drying apparatus, and ventilating system of spray enclosure shall be equipped with suitable interlocks so arranged that:

(A) Spraying apparatus cannot be operated while drying apparatus is inside spray enclosure;

(B) Spray enclosure will be purged of spray vapors for a period of not less than three minutes before drying apparatus can be energized; and

(C) Ventilating system will maintain a safe atmosphere within the enclosure during the drying process and drying apparatus will automatically shut off in the event of failure of the ventilating system.

(5) All electrical wiring and equipment of drying apparatus shall conform to the provisions of N.J.A.C. 5:18-3.3(m). Only equipment of a type approved for Class I, Division 2, hazardous locations shall be located within 18 inches of floor level. All metallic parts of drying apparatus shall be properly electrically bonded and grounded.

(d) The following apply to dip tanks:

1. The provisions of this subsection shall apply to any tank, vat or container of flammable or combustible liquid in which articles or materials are immersed for the purpose of coating, finishing, treating or similar processes, which are known as dip tanks, and to any area containing dangerous quantities of flammable vapors in the vicinity of dip tanks, their drain boards or associated drying, conveying or other equipment, during operation or shut-down periods, which shall be known as vapor areas. The fire official may determine the extent of the vapor area, taking into consideration the characteristics of the liquid, the degree of sustained ventilation and the nature of the operations.



2. Dip tank operations shall not be conducted in buildings used for assembly, educational, institutional or residential occupancies, except in a room designed for the purpose, protected with an approved automatic fire suppression system and separated vertically and horizontally from other areas as required by the Uniform Construction Code.

3. A ventilation system shall be operated and maintained in all areas in accordance with this code and the BOCA mechanical code listed in Appendix 3-A.

4. Dip tanks, including drain boards if provided, shall be constructed of substantial noncombustible material and their supports shall be of heavy metal, reinforced concrete or masonry and shall comply with the following provisions of (d)14i through iii below.

i. Dip tanks of over 150 gallons in capacity or 10 square feet in liquid surface area shall be equipped with a properly trapped overflow pipe leading to a safe location outside the building. The bottom of the overflow connection shall not be less than six inches below the top of the tank.

ii. Dip tanks over 500 gallons in liquid capacity shall be equipped with bottom drains automatically and manually arranged to quickly drain tank in event of fire unless the viscosity of the liquid at normal atmospheric temperature makes this impractical. Manual operation shall be from a safely accessible location. Where gravity flow is not practicable, automatic pumps shall be provided.

iii. All bottom drains shall be trapped and shall discharge to a closed properly vented salvage tank or to a safe outside location.

5. Dip tanks utilizing a conveyor system shall be so arranged that, in the event of fire, the conveyor system shall automatically cease motion and required bottom drains shall open.

6. There shall be no open flames, spark producing devices or heated surfaces having a temperature sufficient to ignite vapors in any vapor area.

i. Electrical wiring and equipment in any vapor area shall be explosion-proof type approved for use in such hazardous locations. Such area shall be considered as Class I, Division 1, hazardous locations as specified in NFPA 70 listed in Appendix 3-A.

ii. Unless specifically approved for locations containing both deposits of readily ignitable residues and explosive vapors, there shall not be electrical equipment in the vicinity of dip tanks or associated drain boards or drying operations which are subject to splashing or dripping of dip tank liquids, except wiring in rigid conduit or in threaded boxes or fittings not containing taps, splices or terminal connections, and except as specifically permitted in (e) below relating to electrostatic apparatus.

iii. In any floor space outside a vapor area, but within 20 feet therefrom, and not separated by tight partitions, open flames or spark producing devices shall be prohibited, except drying and baking apparatus may be installed adjacent to vapor areas when conforming to (c)11ii above. Such area shall be considered a Class I, Division 2, hazardous location as specified in NFPA 70 listed in Appendix 3-A.

7. Areas in the vicinity of dip tanks shall be maintained as clear combustible stock as practical and shall be kept entirely free of combustible debris.

i. When waste or rags are used in connection with dipping operations, approved metal waste cans equipped with self-closing lids shall be provided and all impregnated rags or waste deposited therein immediately after use. The contents of waste cans shall be disposed of at least once daily and at the end of each shift.

8. Areas in the vicinity of dip tanks shall be provided with portable fire extinguishers suitable for flammable liquid fires as specified for extra hazardous occupancies in NFPA 10 listed in Appendix 3-A, incorporated herein by reference.

9. Covers arranged to close automatically in the event of fire shall be actuated by approved automatic devices and shall also be arranged for manual actuation and operation.

i. Covers shall be of substantial noncombustible material or of tin-clad type with enclosing metal applied with locked joints.

ii. Chains or wire rope shall be used for cover support or operating mechanism where the burning of a cord would interfere with the action of a device.

iii. Covers shall be kept closed when tanks are not in use.

10. Hardening and tempering tanks shall conform to (d)4 and 7 above, as well as (d)10i through iv below.

i. Tanks shall be located as far as practicable from furnaces and shall not be located on or near combustible construction.

ii. Tanks shall be provided with a noncombustible hood and vent or other equally effective means, terminating outside of the building to serve as a vent in case of fire. All such vent ducts shall be treated as flues and proper clearances shall be maintained from combustible materials.

iii. Tanks shall be equipped with a high temperature limit switch arranged to sound an alarm when the temperature of the quenching medium reaches 50 degrees Fahrenheit below the flash point.

iv. Air under pressure shall not be used to fill or to agitate oil in tanks.

11. Flow coat operations shall conform to the requirements for dip tanks, considering the area of the sump and any areas on which paint flows as the area of a dip tank.

i. Paint shall be supplied by direct low pressure pumping arranged to automatically shut down by means of approved heat actuated devices in case of fire, or by a gravity tank not exceeding 10 gallons in capacity.

12. The processes of roll coating, spreading and impregnating, in which fabrics, paper or other materials are passed directly through a tank or trough containing flammable liquids, or over the surface of a roller that revolves partially submerged in a flammable liquid, shall conform to the requirements of this subsection and to the applicable provisions of this section.

i. Adequate arrangements shall be made to prevent sparks from static electricity by electrically bonding and grounding all metallic rotating and other parts of machinery and equipment and by the installation of static collectors or maintaining a conductive atmosphere such as a high-relative humidity.

(e) The following apply to electrostatic apparatus:

1. Approved electrostatic equipment shall be used in connection with paint spraying operations.

2. Transformers, power packs, control apparatus and all other electrical portions of the equipment, with the exception of high voltage grids and electrostatic atomizing heads and their connections, shall be located outside of the spraying or vapor areas as defined in (c) and (d) above or shall conform to the requirements of (c)5 and (d)6 above.

3. A space of at least twice the sparking distance shall be maintained between goods painted and fixed electrodes, electrostatic atomizing heads or conductors. A suitable sign stating the sparking distance shall be conspicuously posted near the assembly.

4. Electrostatic apparatus shall be equipped with automatic controls which will operate without time delay to disconnect the power supply to the high voltage transformer and to signal the operator under any of the following conditions:

i. Stoppage of ventilating fans or failure of ventilating equipment from any cause;

ii. Stoppage of the conveyor carrying goods past the high voltage grid;

iii. Occurrence of a ground or of an imminent ground at any point of the high voltage system; or

iv. Reduction of clearance below that specified in (e)3 above.

(A) Hand electrostatic equipment shall be interlocked with the ventilation system for the spraying

area so that the equipment cannot be operated unless the ventilating system is in operation.

5. Adequate booths, fencing, railings or guards shall be so placed about the equipment that it is either by their location or character or both that a safe isolation of the process is maintained from plant storage or personnel. Such railings, fencing and guards shall be of conducting material, adequately grounded, and shall be at least five feet from processing equipment.

6. Signs shall be posted designating the process zone as dangerous with respect to fire and accident.

7. All insulators shall be kept clean and dry. Drip plates and screens subject to paint deposits shall be removable and shall be taken to a safe place for cleaning.

8. The spraying area shall be adequately ventilated so as to insure a safe condition from a fire and health standpoint.

(f) The following apply to automobile undercoating:

1. Automobile undercoating spray operations, conducted in areas having adequate natural or mechanical ventilation, may be exempt from the provisions of (c) above as approved by the fire official when using undercoating materials that are not more hazardous than fuel oil or undercoating materials using only solvents having a flash point in excess of 100 degrees Fahrenheit.

2. Undercoating spray operations not conforming to (f)1 above shall be subject to all applicable provisions of this section.

Amended by R.1993 d.197, effective May 3, 1993.

See: 25 N.J.R. 393(a), 25 N.J.R. 1868(a).

Added (a)2; deleted (c)9 and added new text.

### 5:18-3.8 Bowling establishments

(a) The equipment, processes and operation of bowling alleys and establishments shall comply with the applicable requirements of this Code and the provisions of this section.

(b) Fire safety requirements are as follows:

1. The layout, arrangement and construction of buildings and structures used for bowling alleys or establishments shall comply with the applicable requirements of the building code in effect at the time of first occupancy for the appropriate use group classification, and shall be provided with fire protection and fire extinguishment equipment as required by that code. Buildings and structures and their service equipment shall be maintained in proper operating condition as required by this Code.

2. A metal waste can with self-closing cover shall be provided for all waste materials and rags, and the contents shall be disposed of daily.

(c) In the operation and maintenance of bowling establishments, the following conditions shall be observed.

1. Resurfacing operations shall not be carried on while the establishment is open for business. The fire official shall be notified when the bowling lanes are to be resurfaced. Mechanical ventilation shall be provided to adequately remove flammable vapors. Heating, ventilating or cooling systems employing recirculation of air shall not be operated during resurfacing operations or within one hour following the application of flammable finishes. All electric motors or other equipment in the area which might be a source of ignition shall be shut down, and all smoking and use of open flame shall be prohibited during the application of flammable finishes and for one hour thereafter.

2. Pin refinishing involving the application of flammable finishes shall be done only in a special room meeting the requirements of the building code in effect at the time of first occupancy or N.J.A.C. 5:18-4. Smoking shall be prohibited at all times in refinishing rooms.

3. All power tools in the room shall be effectively grounded. A substantial metal box or other receptacle approved by the fire official shall be provided for catching dust of lathes and sanding or buffing machines thrown off during operation. The contents shall be removed daily and disposed of safely.

4. Storage of flammable or combustible liquids in such rooms shall not exceed a combined aggregate of 60 gallons in original metal containers, or five gallons individual capacity in approved safety containers in accordance with N.J.A.C. 5:18-3.28, where provisions of this section do not specifically cover conditions and operations.

### 5:18-3.9 Dry cleaning plants

(a) The following general provisions apply to dry cleaning plants:

1. The equipment, processes and operation of dry cleaning plants shall comply with the construction requirements of the building code in effect at the time of first occupancy and the maintenance provisions of NFPA 32 listed in Appendix 3-A, incorporated herein by reference, where the provisions of this section do not specifically cover conditions and operations.

2. Dry cleaning systems shall be classified as follows:

i. High hazard: All such establishments shall be classified as high hazard which employ gasoline or other solvents having a flash point below 100 degrees Fahrenheit per ASTM D56 listed in Appendix 3-A, incorporated herein by reference, in quantities of more than three gallons, or more than 60 gallons of combustible solvents with a flash point between 100 and 140 degrees Fahrenheit.

ii. Moderate hazard: All such establishments employing less than three gallons of volatile flammables with a flash point of less than 100 degrees Fahrenheit or less than 60 gallons of solvent with a flash point between 100 and 140 degrees Fahrenheit shall be classified as moderate hazard.

iii. Low hazard: All such establishments using solvents of other than flammable liquids or solvents with a flash point more than 140 degrees Fahrenheit in cleaning and dyeing operations shall be classified as low hazard.

(b) Fire safety requirements are as follows:

1. The layout, arrangement and construction of buildings and structures used for drycleaning operations shall comply with the applicable requirements of the building code in effect at the time of first occupancy for the appropriate use group classification, and shall be provided with fire protection and fire extinguishing equipment as required by that code or by N.J.A.C. 5:18-4. Buildings and structures and their service equipment shall be maintained in safe condition as required by this Code.

2. Every dry cleaning room, and dry dyeing room employing high and moderate hazard solvents, shall be protected with an approved automatic fire suppression system in accordance with this Code and the Uniform Construction Code.

3. Adequate portable fire extinguishing appliances of a type suitable for fighting fires involving flammable liquids shall be provided in all dry cleaning plants; at least one extinguisher shall be provided at each entrance to every room or area where flammable liquids are stored or used.

4. Smoking in all plants shall be strictly prohibited, except in smoking rooms so designated by the fire official, and "No Smoking" signs shall be posted.

(c) Storage and handling of cleaning solvents shall be as follows:

1. All solvent containers and storage tanks shall be stored and maintained in accordance with N.J.A.C. 5:18-3.28.

2. The handling of solvents from storage tanks or containers through the various machines and equipment and back to the settling and clear solvent tanks shall be through closed circuits of piping. Pipe systems shall contain a sufficient number of valves to operate the system properly and to protect the plant.

i. All piping shall be tested to a pressure of at least 50 percent in excess of normal operating pressure and proven tight and protected against physical damage.

- ii. Piping, valves, fittings and ground joint unions for solvents shall be designed for the working pressures and structural stresses to which they may be subjected. They shall be of steel or other material suitable for use with the solvent. Pipe systems shall be substantially supported and protected against physical damage and excessive stresses arising from settlement, vibration, expansion or contraction. Cast iron fittings for pressure piping shall be prohibited.
3. Pumps of positive displacement-type shall have a bypass and relief valve.

4. Sight glasses, the breakage of which would permit the escape of liquids, shall be of a type not readily damaged by heat and shall be protected against physical damage.

- i. Liquid level gauge glasses in moderate hazard systems shall be equipped with an automatic device which will immediately shut off the flow of solvent if the glass is broken. These liquid level gauge glasses shall be guarded against physical damage.
5. Pressure-type filters shall be equipped with a reliable pressure gauge and shall not be operated at pressures exceeding those for which they are designed. The filters shall be provided with an air-bleeding valve and line connected to discharge into the washer or into the storage tank vent line. Such air-bleeding lines shall not discharge into the room.

6. When underground treating and settling tanks are used, a separate suction and discharge connection shall be provided to the pump for removal of sludge. The suction pipe shall be carried to the tank bottom, and the discharge connection to a suitable container.

(d) The following apply to stills and condensers:

1. Steam or hot water only shall be used as the source of heat. If steam is used, a pressure regulating valve shall be installed in the steam supply line to the still.
2. Stills shall be designed for operation on the vacuum principle.
3. Stills and condensers shall be liquid and gas tight. If a relief valve is provided, it shall be equipped with a vent line extending to the outside.
4. Each still shall be provided with a combination vacuum and pressure gauge.
5. Each still shall be equipped with a constant level valve to automatically maintain the solvent liquid level in the still at the proper height.

(e) The following apply to washing machines:

1. Washing machines shall be substantially constructed. The loading door opening shall be equipped with a close fitting door so designed as to prevent solvent leaks due to splash. The machine shall be provided with

interlocks to prevent cylinder rotation under power except for inching when doors are open.

- i. Individual button and lint traps shall be provided for each washer.
2. The cylinders and shells of all washing machines shall be permanently and effectively grounded to dissipate static electricity in accordance with NFPA 77 listed in Appendix 3-A, incorporated herein by reference. The grounding of the cylinder in each case shall be through the trunnion shaft and, in cases where wooden cylinders are used, shall be grounded also across the inner surface of the cylinder.
3. Each washing machine shall be provided with an overflow pipe one size larger than the size of the solvent supply line to the machine. Such overflow pipe shall be connected to the shell of the washer so that the top of the overflow is below the bottom of the trunnion shaft; it shall be without shutoff valves and shall be arranged to discharge to a suitable tank. The supply pipe shall enter the washing machine above the charged liquid level.
4. In high hazard and moderate hazard systems, each washing machine shall be provided with an approved automatic fire suppression system in accordance with this Code and the building code in effect at the time of first occupancy.

(f) The following apply to drying tumblers and cabinets:

1. Drying tumblers in high hazard and moderate hazard systems shall be of substantial construction, well secured to substantial foundations, and shall be provided with self-closing explosion hatches having an area equal to at least one square foot for each 30 cubic feet of cylinder volume. Hatches shall be arranged to open away from the operator.
  - i. Drying tumblers in high hazard and moderate hazard systems shall be provided with a steam jet of not less than  $\frac{3}{8}$  inch size for humidifying during the drying process.
2. The cylinder and shell of all drying tumblers shall be permanently and effectively grounded to dissipate static electricity in accordance with NFPA 77 listed in Appendix 3-A, where provisions of this section do not specifically cover conditions and operations. The grounding of the cylinder in each case shall be through the trunnion shaft.
3. Drying tumblers and drying cabinets shall be ventilated to the outside air by means of properly constructed pipes or ducts connected to an exhaust fan of sufficient capacity to remove all dust, vapors, or lint generated by the process. Such discharge pipes or ducts shall be carried to a height of not less than six feet above the roof and shall be provided with cleanout facilities if used for the high hazard or moderate hazard systems.

i. Discharge pipes shall not terminate within 10 feet measured horizontally of any door, window or frame walls of any adjoining or adjacent building.

ii. The fan shall be properly housed and so interlocked as to insure operation while the drying tumbler is in use. The fan spiders, blades or running rings shall be constructed of non-ferrous metal. The fan motor shall not be mounted within the ventilating duct.

4. Each drying tumbler in high hazard or moderate hazard systems shall be provided with an approved automatic fire suppression system in accordance with this Code and the building code in effect at the time of first occupancy.

(g) The following apply to extractors:

1. Extractors shall be provided with liquid-tight covers, or they shall be designed so that none of the liquid solvent is thrown out of the extractor while it is in operation. Covers shall be equipped with automatic mechanical or electrical interlocks which will prohibit operating the extractors while the cover is open and which will prohibit opening the cover until the basket comes to rest. The basket shall have a rim of non-ferrous metal and shall be well balanced.

i. Extractors shall be provided with a drain pipe not less than 1½ inches in diameter connected direct to underground storage tanks or to a suitable above-ground container, or to the washer through an approved extractor pump with connections fitted with proper valves.

ii. Brakes, if used, shall be so designed as to prevent the creation of sparks or excessive heat.

2. The outside shell of extractors shall be permanently and effectively grounded for dissipation of static electricity in accordance with NFPA 77 listed in Appendix 3-A.

3. Extractors shall not be operated at a speed in excess of that prescribed by the manufacturer as shown on name plate, which must be provided on each machine.

4. Extractors equipped with a solvent spray nozzle for spray rinsing of garments after the primary extraction shall comply with the following provisions:

i. Installation of spray rinse equipment on existing extractors shall be subject to approval of the fire official.

ii. Extractor covers shall be made splashproof to prevent leakage of the solvent, and shall be equipped with a latch to hold the cover closed during operation.

iii. Supply pumps of positive displacement-type shall be provided with a bypass and relief valve set so as to prevent excessive pressure.

iv. Valves in the supply line between pump and outlet shall be installed in such a manner that the cutoff is effected ahead of any flexible portion of the supply line.

v. Extractor drain lines shall not be less than two inches for extractors up to and including 40 inches in diameter and three inches for extractors in excess of 40 inches in diameter.

vi. Extractors shall be provided with at least one drain line open at all times. If more than one extractor drain line is provided for the purpose of alternating use, quick opening valves or equivalent shall be installed in each line and interlocked so that when either valve is shut, the other valve is open.

vii. If a separate extractor drain tank is provided, it shall have a capacity equal to the combined total gallonage of the charged solvent extraction, the rinse and the rinse extraction.

viii. Drainage from extractors to all tanks shall be by gravity flow.

(h) The following apply to combination dry cleaning units:

1. Machines in which the washing and extracting cycles are complete within the same enclosure shall be of substantial construction. The machines shall be provided with splashproof doors, or covers, with interlocking means to prevent cylinder rotation, under power, except for inching at slow speed when doors or covers are open. Such interlocks shall provide that during the extracting cycle, opening of the door or cover will disconnect the drive motor and apply braking means to bring the cylinder to rest before access to cylinder is possible. Machines shall be provided with braking means to insure stoppage within reasonable time without the creation of sparks or excessive heat.

i. Cylinders shall be supported so as to provide sufficient clearance to prevent striking or rubbing adjacent parts during rotation.

ii. Individual button and lint traps with suitable lids shall be provided for each machine.

2. The cylinders and shells of all machines in high hazard and moderate hazard systems shall be permanently and effectively grounded to dissipate static electricity in accordance with NFPA 77 listed in Appendix 3-A, where the provisions of this section do not specifically cover conditions and operations.

3. Each machine shall be provided with an overflow pipe one size larger than the size of the solvent supply line to the machine. Such overflow shall be connected so that the top of the overflow is below the bottom of the trunnion shaft and arranged to discharge into a suitable tank. The supply pipes to machines, whether from pumps, filters or storage tanks, shall be arranged to deflect solvent steam away from tub openings.



4. The machine shall be furnished with name plate indicating maximum cylinder speed and a warning that it shall not be operated in excess of such speed.

5. Each machine in a high hazard and moderate hazard system shall be provided with an approved automatic fire suppression system in accordance with this Code and the building code in effect at the time of first occupancy.

(i) The following apply to scouring, brushing and spotting operations:

1. The brushing (prespotting) table shall have a liquid-tight top with a curb on all sides not less than one inch high. The top of the table shall be pitched so as to insure thorough draining to a 1½ inch drain connected to a suitable container especially provided and marked for that purpose.

2. All scouring or brushing and spotting (prespotting) operations utilizing solvents of a higher hazard than the solvent used in the plant dry cleaning machines shall be limited to one gallon and dispensed from an approved safety can. Additional storage shall be in approved safety cans of not over one gallon capacity, or in unopened shipping containers.

i. Scouring or brushing operations utilizing in excess of one gallon of solvents of a higher hazard than the solvent used in the plant dry cleaning machines shall be conducted only in a room or building conforming to all the requirements for a dry cleaning system utilizing the same type of solvent.

ii. The total amount of Class II and III solvents used on scouring or brushing tables or in scrubbing tubs, in accordance with (i)2i above, shall not exceed three gallons. The scouring or brushing table or scrubbing tub shall be so located as to insure thorough and effective disposal of vapors through the ventilating system. Scrubbing tubs shall be used only for articles, the character of which prevents their washing in the usual washing machines. Scrubbing tubs shall be secured to the floor and shall be provided with permanent 1½ inch trapped drains to a suitable container specially provided and marked for that purpose.

#### 5:18-3.10 Dust explosion hazards

(a) Equipment, processes and operations which involve dust consisting of pulverized particles of any material which, if mixed with air in the proper portions, becomes explosive and may be ignited by flame or spark shall comply with the applicable requirements of this code and the provisions of this section, and shall be maintained in accordance with NFPA 61A, 61B, 61C, 65, 68, 69, 85F, 91, 120, 490, 651, 654, and 655 listed in Appendix 3-A, incorporated herein by reference, where provisions of this section do not specifically cover conditions and operations.

(b) General requirements pertaining to dust explosion hazards are as follows:

1. Equipment and processes in plants where dust hazards exist shall comply with the requirements of the following paragraphs. Where specific requirements are not otherwise established, plants producing dusts shall comply with nationally recognized good practice.

2. All dust-producing or dust-agitating machinery, such as grinding mills and separators, and all elevators, elevator legs, spouts, hoppers and other conveyors shall be provided with casing or enclosures maintained as nearly dust-tight as possible.

3. Approved magnetic or pneumatic separators shall be installed ahead of all shellers, crackers, crushers, grinding machines, pulverizers and similar machines in which the entrance of foreign materials may cause sparks to be generated.

4. Suitable dust collecting equipment shall be installed and accumulation of dust shall be kept at a minimum in the interior of buildings.

5. All machinery and metal parts of the crushing, drying, pulverizing and conveying systems shall be electrically grounded in accordance with NFPA 77 listed in Appendix 3-A.

(c) Fire safety requirements are as follows:

1. Buildings and structures in which equipment or processes involving dust hazards are housed shall comply with the applicable requirements of the building code in effect at the time of first occupancy for the appropriate use group classification and shall be provided with fire protection and fire extinguishing equipment as required by that code or by N.J.A.C. 5:18-4. Buildings and structures and their service equipment shall be maintained in a safe condition as required by this Code.

2. Smoking and the carrying of matches, the use of heating or other devices employing an open fire, or use of any spark producing equipment is prohibited in areas containing dust-producing or dust-agitating operations. Artificial lighting in such areas shall be by electricity with all wiring and electrical equipment installed in accordance with NFPA 70 listed in Appendix 3-A, incorporated herein by reference.

#### 5:18-3.11 Crop ripening or coloring processes

(a) This section shall apply to the equipment and operations for the process of ripening bananas, tomatoes, pears or honeydew melons, and coloring tobacco, citrus fruits or other crops in tightly closed rooms, and shall include those processes where ethylene gas is introduced into the room to assist these processes.

(b) Fire safety requirements are as follows:

1. The layout, arrangement and construction of buildings and structures in which the process of ripening or coloring of crops is conducted shall comply with the applicable requirements of the building code in effect at the time of first occupancy for the appropriate use group classification, and shall be provided with fire protection and fire extinguishing equipment as required by that code. Buildings and structures and their service equipment shall be maintained in safe conditions as required by this Code.

2. The location of buildings in which crop ripening or coloring processes utilizing gas containers of ethylene are conducted shall be approved by the fire official.

i. The method for introducing ethylene shall provide positive control. The ethylene shall be measured so that the quantity introduced does not exceed one part ethylene to 1,000 parts of air.

ii. Containers storing ethylene gas shall be built in an approved manner.

iii. Ethylene gas containers other than those connected for use shall be stored outside of the building or in a special building except that not more than two portable U.S. Department of Transportation (DOT) containers not connected for use may be stored inside of the building premises. Such inside rooms or portions of buildings used for storage of these containers shall be constructed in accordance with N.J.A.C. 5:18-3.29(g)4.

iv. Ethylene piping shall be of steel pipe. Flexible connectors and hose, when used, shall be an approved type. Tubing shall be of brass or copper with not less than 0.049 inch wall thickness.

3. Electrical wiring and equipment shall be installed as specified in NFPA 70 listed in Appendix 3-A. Artificial lighting shall be by electricity only.

4. Heating of ripening and coloring rooms shall be by indirect means with low pressure steam, hot water or warm air; approved electric heaters; or approved gas heaters or approved kerosene heaters, both of which shall have sealed combustion chambers.

i. Steam and hot water pipes and radiators shall have a clearance of at least one inch to combustible material.

ii. Gas heaters and their vents shall be installed in an approved manner. Gas heaters shall be equipped with an automatic pilot device to shut off gas supply whenever the flame is extinguished.

iii. Burners for gas or kerosene heaters shall be installed so that air for combustion is taken from outside the ripening or coloring room and the products of combustion are discharged outside the building in an approved manner.

iv. Kerosene heaters shall be installed in accordance with the applicable provisions of the Building Code.

v. Electric heaters shall be of a type not having an exposed surface at a temperature higher than 800 degrees Fahrenheit and with thermostatic elements which do not produce sparks. They shall be of a type approved for use in hazardous locations.

vi. A protective guard shall be provided around any heater to prevent the possibility of its being knocked over by other equipment such as vehicles or lift trucks.

5. Open flame heaters and open lights shall not be permitted in ripening or coloring rooms using ethylene from gas tanks or cylinders. "No Smoking" signs shall be posted at every entrance and smoking shall be prohibited in the ripening or coloring rooms.

6. Rooms for ripening or coloring shall be frequently cleared of all combustible material.

Amended by R.1995 d.58, effective March 6, 1995.  
See: 26 N.J.R. 4258(a), 27 N.J.R. 878(b).

#### 5:18-3.12 Fumigation and thermal insecticidal fogging

(a) Fumigation and thermal insecticidal fogging operations shall conform to the provisions of this section and all other applicable requirements of this Code.

(b) Fire safety requirements are as follows:

1. Any building where fumigation and thermal insecticidal fogging operations are conducting shall comply with the following fire protection and safety requirements.

2. All fires, open flames and similar sources of ignition shall be eliminated from the space under fumigation or thermal insecticidal fogging. Heating, if needed, shall be by indirect means with steam or hot water.

i. Electricity shall be shut off, except that circulating fans may be used provided such equipment is designed and installed so as not to create an ignition hazard. Electrical equipment shall be designed and installed in accordance with NFPA 70 listed in Appendix 3-A.

3. The fire official shall be notified in writing at least 24 hours before any building or structure is to be closed in connection with the use of any toxic or flammable fumigant. Such notification shall give the location of the building, structure, ship or enclosed space to be fumigated or fogged as well as its character and use, the fumigants or insecticides to be used, the person or persons in charge of the operation and the date and time when it will be started. Notice of any fumigation or thermal insecticidal fogging shall be served with sufficient advance notice upon the occupants of any building or other enclosed space involved in the operation to enable them to evacuate the premises.

i. Suitable warning signs indicating the danger, type of chemical involved and recommended precautions shall be posted on all doors and entrances to the premises and upon all gangplanks and ladders from the deck, pier or land to the ship. Such notice is to be printed in red ink on white background. Letters in the headlines are to be at least two inches in height and shall state the date and time of the operation, the name and address of the person, the name of the operator in charge, together with a warning to the effect that the premises so occupied shall be vacated at least one hour before the operation is started and must not be re-entered until the danger signs have been removed by the proper authorities.

ii. All persons engaged in the business of fumigation or thermal insecticidal fogging shall maintain and have available approved protective breathing apparatus.

iii. During the period fumigation is in progress, except when fumigation is conducted in a gastight vault or tank, a capable, alert watchman or watchmen shall remain on duty at the entrance or entrances to the building, ship, or enclosed space fumigated until after the fumigation is completed and until the premises are properly ventilated and again safe for human occupancy. Sufficient watchmen shall be provided to prevent any person from entering the building, ship or enclosed space under fumigation without being observed.

4. Thermal insecticidal fogging liquids with a flash point below 100 degrees Fahrenheit shall not be used.

5. The fire official shall require that any fire detection or alarm system components be safeguarded to prevent accumulation of the fogging agent or fumigant within the devices.

#### **5:18-3.13 Lumber yards, exterior storage or processing of forest products and woodworking plants**

(a) Lumber yards, exterior storage or processing of forest products and woodworking plants shall comply with the applicable requirements of this Code and the provisions of this section.

(b) Fire safety requirements are as follows:

1. The layout, arrangement and construction of buildings and structures used for lumber yards or woodworking plants shall comply with the applicable requirements of the building code in effect at the time of first occupancy for the appropriate use group classification, and shall be provided with fire protection and fire extinguishing equipment as required by that code. Buildings and structures and their service equipment shall be maintained in safe condition as required by this Code and in accordance with NFPA 46 listed in Appendix 3-A, incorporated herein by reference, where the provisions of this section do not specifically cover conditions and operations.

2. Lumber shall be piled with due regard to stability of piles and in no case higher than 20 feet.

i. Driveways between and around lumber piles shall be at least 15 feet wide and maintained free from accumulation of rubbish, equipment or other articles or materials. Driveways shall be so spaced that a maximum grid system unit of 50 feet by 150 feet is produced.

ii. Permanent lumber storage shall be surrounded with a suitable fence at least six feet high, unless storage is within a building.

3. The burning of shavings, sawdust and refuse materials shall be permitted only under boilers, in furnaces or in incinerators or refuse burners safely constructed and located. Stacks shall be provided with approved spark arresters having openings not greater than  $\frac{3}{4}$  inch, or other effective means provided, such as an expansion chamber, baffle walls or other effective arrangement, which will eliminate the danger from sparks. At the boiler or other points where sawdust or shavings are used as fuel, a storage bin of noncombustible construction with raised sill shall be provided.

4. Smoking shall be prohibited except in specified safe locations in buildings. Large "No Smoking" signs shall be painted on exterior building walls and on signs erected at edges of driveways. "No Smoking" signs shall be posted throughout all buildings except in specific locations designated as safe for smoking purposes.

5. Weeds shall be kept down throughout the entire yard and shall be sprayed as often as needed with a satisfactory weed killer or cut or grubbed out. Dead weeds shall be removed.

6. Debris such as sawdust, chips and shorts shall be removed regularly from piling areas and not less frequently than quarterly. Proper housekeeping shall be maintained at all times.

7. Portable fire extinguishing equipment suitable for the fire hazard involved shall be provided at convenient, conspicuous, accessible locations in open yards. When used, approved Class A portable fire extinguishers, properly protected against freezing where necessary, shall be provided so that the travel distance to the nearest unit does not exceed 75 feet. In buildings, fire protection equipment shall be provided as required by the building code in effect at the time of first occupancy.

(c) The following apply to woodworking plants:

1. Sawmills, planing mills and other woodworking plants shall be equipped with refuse removal systems which will collect and remove sawdust and shavings as produced, or suitable metal or metal-lined bins, provided with normally closed covers or automatically closing covers, shall be installed at or near such machines, and shavings and sawdust shall be swept up and deposited in

such bins at sufficiently frequent intervals as to keep the premises clean. Blower and exhaust systems shall be installed in accordance with nationally recognized good practice.

2. Fire fighting equipment, either portable fire appliances or small hose supplied from a suitable water system, shall be provided near any machine producing shavings or sawdust.

3. Where specific requirements are not otherwise established, woodworking plants shall comply with NFPA 91 and 664 listed in Appendix 3-A, incorporated herein by reference.

Amended by R.1993 d.197, effective May 3, 1993.

See: 25 N.J.R. 393(a), 25 N.J.R. 1868(a).

Added exterior storage of forest products.

#### 5:18-3.14 Industrial processing ovens and furnaces

(a) The following general provisions apply to industrial processing ovens and furnaces:

1. The provisions of this section shall apply to the location, design, construction and operation of industrial processing ovens and furnaces operating at approximately atmospheric pressures and temperatures not exceeding 1,400 degrees Fahrenheit which are heated with oil or gas fuel or which during operation contain flammable vapors from the product being processed. It is the intent of this section to provide for the operation of these ovens and furnaces within certain limitations of control depending on oven or furnace design, flammable formulations and ventilation needs, the disregard of which may cause them to function in an unsafe manner, thereby becoming liable to destruction by fire or explosion. Where applicable for maintenance, NFPA 86 listed in Appendix 3-A, incorporated herein by reference, shall be used where provisions of this section do not specifically cover conditions and operations.

2. An application for a permit shall be accompanied by plans showing all essential details as to location, design, construction, controls, and calculations for safe operation. The process and materials involved shall be fully described. Catalytic combustion systems utilized for the oxidation or combustion of the exhaust gases or vapors shall be described.

(b) Fire safety requirements are as follows:

1. The layout, arrangement and construction of buildings and structures in which industrial processing ovens and furnaces are installed or operated shall comply with the applicable requirements of the building code in effect at the time of first occupancy for the appropriate use group classification, and shall be provided with fire protection and fire extinguishing equipment as required by that code. Buildings and structures and their service equipment shall be maintained in safe condition as required by this Code.

(c) Location and construction requirements are as follows:

1. Ovens, furnaces and related equipment shall be located with due regard to the possibility of fire resulting from overheating or from the escape of fuel gas or fuel oil, and the possibility of damage to the building and injury to persons resulting from explosion.

2. Ovens and furnaces shall be located at or above grade, or, if in basements, at least 50 percent of the wall area of the room in which the oven or furnace is located shall be above grade.

3. Ovens and furnaces shall be so located as to be readily accessible for inspection and maintenance and with adequate clearances to permit the proper functioning of explosion vents. Roofs and floors of ovens and furnaces shall be sufficiently insulated and ventilated to keep temperatures at combustible ceilings and floors below 160 degrees Fahrenheit.

4. Ovens and furnaces shall be constructed of noncombustible materials throughout except where the maximum oven temperature is not over 160 degrees Fahrenheit. The amount of insulation used in oven panel construction shall be enough to prevent the outside surface temperature from exceeding 160 degrees Fahrenheit or adequate guards shall be provided to protect personnel. The metal frames of ovens or furnaces shall be electrically grounded.

5. Ovens and furnaces which may contain flammable air-gas mixtures shall be equipped with relief vents for freely relieving internal explosion pressures and all explosion-venting panels or doors shall be arranged so that when open, the full vent opening will be an effective relief area.

6. All duct work shall be constructed of noncombustible material. Ducts shall be made tight throughout and shall have no openings other than those required for the proper operation and maintenance of the system. Ducts passing through combustible walls, floors, or roofs shall have adequate insulation and clearances to prevent surface temperatures from exceeding 160 degrees Fahrenheit. Exhaust ducts shall not discharge near doors, windows or other air intakes in a manner that will permit re-entry of vapors into the building.

(d) Ventilation requirements are as follows:

1. Ovens and furnaces in which flammable or toxic vapors are liberated or through which products of combustion are circulated shall be ventilated by the introduction of a supply of fresh air and proper exhaust to the outdoors. Discharge pipes shall not terminate within 10 feet measured horizontally of any door, window or wood frame walls of any building.

2. Ventilation shall be arranged to provide vigorous and well distributed air circulation within the oven or furnace to insure that the flammable vapor concentration will be safely below the lower explosive limit at all times. Unless the oven or furnace is operated in accordance with specific approval specifying particular solvents and rate of ventilation, the rate of ventilation shall not be less than 10,000 cubic feet of fresh air per gallon of solvent evaporated in continuous process ovens or furnaces, and not less than 380 cubic feet per minute per gallon of flammable solvent evaporated in batch process ovens or furnaces.

3. Exhaust duct openings shall be located in the area of greatest concentration of vapors.

4. All exhaust shall be by mechanical means using power driven fans.

5. Safety controls shall be sufficient in number and substantially constructed and arranged to maintain the required conditions of safety and prevent the development of fire and explosion hazards.

i. Ventilation controls, suitably interlocked, shall be provided which will insure the required prevention and ventilation of the system.

ii. Fuel safety controls, suitably interlocked and arranged to minimize the possibility of dangerous accumulations of explosive air-fuel mixtures in the heating system, shall be provided.

iii. Excess temperature controls shall be provided to maintain a safe operating temperature within the oven or furnace.

iv. Conveyor interlocks shall be provided in conveyor ovens or furnaces having a flammable vapor hazard, so that the conveyor cannot move unless ventilating fans are operating and discharging the required amount of air.

#### 5:18-3.15 Places of assembly and education

(a) General provisions concerning places of assembly and education are as follows:

1. The decoration, operation or use of places of assembly and education shall comply with the applicable requirements of this Code and the provisions of this section.

2. A place of assembly shall be a room or space accommodating individuals for religious, recreational, political, social or amusement purposes or for the consumption of food and drink, including all connected rooms or spaces with a common means of egress and entrance.

3. Each place of assembly or education, including each separate room or space used for purposes of assembly or education, shall be posted with an approved legible sign in contrasting colors conspicuously located near the main exit from the room or space stating the number of occupants permitted within such space. The number of

occupants permitted shall be determined by the Fire Safety Code, N.J.A.C. 5:18-4.11(f). Assembly rooms or spaces which have multiple use capability shall be posted for all such uses. The owner shall be responsible for installing and maintaining such signs.

i. An owner shall not permit overcrowding or admittance of any person beyond the established posted occupant load of any place of assembly or education. The fire official, upon finding overcrowding conditions or obstruction in aisles, passageways or other means of egress, or upon finding any condition which constitutes a hazard to life and safety, shall cause the performance, presentation, spectacle or entertainment to be stopped until such a condition or obstruction is corrected and the addition of any further occupants prohibited until the posted occupant load is reestablished.

(b) Fire safety requirements are as follows:

1. The layout, arrangement and construction of buildings and structures in which rooms or places of assembly or education are located shall comply with the applicable requirements of the building code in effect at the time of first occupancy for the appropriate use group classification, and shall be provided with fire protection and fire extinguishing equipment as required. Buildings and structures and their service equipment shall be maintained in safe condition.

2. Employees or attendants of places of assembly and education shall be instructed in the proper use of portable fire extinguishers and other manual fire suppression equipment if provided.

3. A fire safety and evacuation plan shall be prepared as set forth in N.J.A.C. 5:18-3.3(p). All employees shall be trained in the duties they are to perform under the plan.

(c) The following apply to decorative material:

1. Decorative materials shall include all such materials as curtains, draperies, streamers, fabrics, cotton batting, straw, hay, vines, leaves, stalks, trees and moss used for decorative effect, including surface coverings applied over interior finish materials for acoustical or decorative purposes. All such decorative materials shall be noncombustible or they shall be flame resistant complying with the requirement of NFPA 701 listed in Appendix 3-A, incorporated herein by reference. The term decorative materials shall not include ordinary window shades or interior finish materials, such as wainscoting, paneling or wallpaper which are regulated by the Uniform Construction Code.

i. A finished floor covering shall be exempt from the requirements of this paragraph, provided, however, that in any case where the fire official finds a floor surface to be of unusual hazard, the floor surface shall



be considered a part of the interior finish for the purposes of this code.

ii. No burlap, fish netting, or other similar type material shall be suspended from the ceiling of any building, unless approved by the fire official.

2. The fire official shall subject decorative materials, where required to be flame resistant, to a field test in accordance with Chapter 6 of NFPA 701 listed in Appendix 3-A.

i. Treatments used to accomplish this flameproofing shall be renewed as often as may be necessary to maintain the flameproof effect. The fire official may require a certificate to be supplied by the firm or person providing the flameproofing and such certificate shall indicate the date of treatment, the name of the chemical used, and nature of the process. The certificate shall be filed with the fire official.

ii. Pyroxylin coated fabric used as a decorative material in accordance with (c)1 above or as a surface covering on fixed furnishings shall be limited in amount to the following: such fabrics containing 1.4 ounces or more of cellulose nitrate per square yard shall not be used in excess of a total amount equivalent to one square foot of fabric surface to 15 cubic feet of room volume. Each square foot of such fabric which contains 1.7 ounces or more of cellulose nitrate per square yard shall be counted as two square feet in making this computation.

(d) In places of assembly or education, a motion picture screen or screen masking shall not be used which will ignite and allow flame to spread over the surface when exposed to the field test described in (c)2 above.

(e) The following apply to means of egress:

1. The operator or the person in charge of operation or use of any place of assembly or education shall check egress facilities before such building is occupied for any use, to determine compliance with the provisions of this section. If such inspection reveals that any element of the required means of egress is obstructed, inaccessible, locked, fastened or otherwise unsuited for immediate use, admittance to the building shall not be permitted until necessary corrective action has been completed.

i. As may be required by the fire official, not more than 10 minutes prior to the scheduled commencement of any activity, event, performance, show, meeting, function, or other occasion for which persons will gather at a place of assembly or education with a capacity of 50 or more people, the owner or his authorized agent shall orally notify all attendees concerning the location of the exits to be used in case of fire or other emergency, and shall also notify all attendees of smoking regulations.

ii. In theaters, motion picture theaters, auditoriums and other similar places of public assembly where there are noncontinuous programs, an audible or visual announcement shall be made immediately prior to the start of each program to notify occupants of the location of the exits to be used in case of a fire or other emergency.

2. During the period of occupancy, an egress door shall not be locked, bolted or otherwise fastened or obstructed by any means, so that the door cannot be opened from the inside by the use of the ordinary door latch or knob or by pressure on the door or on a panic release device except as provided in N.J.A.C. 5:18-3.5(c).

3. In each room where chairs, or tables and chairs, are used, the arrangement shall be such as to provide for ready access by aisles to each egress door. Aisles leading directly to an egress door shall have not less than 44 inches clear width. When serving an occupant load of 50 or less, such required clear width shall be 36 inches. Aisles shall not be obstructed by chairs, tables or other objects.

4. A part of a stairway, whether interior or exterior, or of a hallway, corridor, vestibule, balcony or bridge leading to a stairway or exit shall not be used in any way that will obstruct or restrict its use as a means of egress or that will present a hazardous condition.

5. A plan showing the occupant load, seating diagram and location of exits and of aisles leading thereto shall be submitted for approval to the fire official and an approved copy shall be kept on the premises. Temporary deviation from the specifics of the approved seating diagram shall be permitted provided the occupant load is not increased and the intent of this section is maintained.

i. The employees or attendants of places of public assembly and education shall be trained and drilled in the duties they are to perform in case of fire, panic or other emergency.

6. The signs and lighting of means of egress required for places of assembly or education shall be maintained in proper operating condition as required by N.J.A.C. 5:18-3.5(e).

(f) The following apply to projection rooms:

1. Every projection room shall be of permanent construction consistent with the requirements of the building code in effect at the time of first occupancy.

2. Temporary projection rooms shall be permitted for incidental amusement and educational purposes by the fire official when in accordance with N.J.A.C. 5:18-3.

3. Each projection room shall be provided with rewind and film storage facilities. A maximum of four containers for flammable liquids not greater than 16 ounce capacity and of a nonbreakable type may be permitted in each projection room.

Amended by R.1995 d.58, effective March 6, 1995.  
See: 26 N.J.R. 4258(a), 27 N.J.R. 878(b).

### 5:18-3.16 Service stations, garages and fuel dispensing operations

(a) General provisions concerning service stations, garages and fuel dispensing operations are as follows:

1. The provisions of this section shall apply to all service stations and all other locations where flammable and combustible fuels are stored and dispensed to motor vehicles, and all buildings and structures used for the storage or servicing of motor vehicles. The maintenance provisions of NFPA 30A listed in Appendix 3-A, incorporated herein by reference, shall apply where the provisions of this section do not specifically cover conditions and operations.

2. The layout, arrangement and construction of buildings and structures shall comply with the applicable requirements of the building code in effect at the time of first occupancy and shall be provided with fire protection and fire extinguishing equipment as required.

3. All service stations, garages, buildings, storage areas and premises shall be operated and maintained in a safe condition at all times and shall conform to all applicable provisions of this Code.

(b) Flammable and combustible liquids used or intended to be used as fuel for motor vehicles shall be stored in underground or approved aboveground tanks on the premises in conformance with N.J.A.C. 5:18-3.28.

1. Flammable and combustible fuel may be stored in approved containers inside a building provided the total amount does not exceed 120 gallons.

(c) Fuel dispensing requirements are as follows:

1. Motor vehicle fuels shall be transferred from underground storage tanks to vehicle tanks by means of approved dispensing units located at least 15 feet from a property line. A pump or other mechanical equipment for dispensing Class I flammable liquids shall not be installed inside a building or less than 10 feet from the outside of the building unless it has been specifically approved by the construction official. The transfer of such liquids shall not be made into an open container.

2. Special type dispensers, such as coin or card operated devices, for self-service operations shall be installed and operated in accordance with the Uniform Construction Code.

3. These provisions shall not prevent the use of portable or semi-portable tanks and dispensing devices to refuel vehicles or motorized equipment on property not generally accessible to the general public provided specific approval is obtained from the fire official.

(d) The following apply to fuel pumps and dispensers:

1. Dispensers shall be designed to prevent leakage or accidental discharge and shall be provided with remote master control devices to shut off all pumps in the event of an emergency. Such devices shall be adequately identified as pump shutoff controls.

2. All dispensers shall be protected from vehicle damage by mounting them on a concrete platform at least 6 inches in height extending a minimum of 12 inches beyond the dispenser in any direction.

i. When the protective devices required above are diminished in effectiveness by repaving or other circumstances, additional safeguards shall be provided such as pipe bollards or guard rails.

3. All dispenser hoses shall be equipped with automatic self-closing type nozzles.

4. Each service station open to the public shall have an attendant on duty familiar with the location of pump controls and operation of safety equipment.

5. An approved, rigidly anchored emergency shutoff valve designed to close automatically in the event of a fire or severe impact shall be properly installed in the liquid supply line at the base of each dispenser supplied by a remote pump. The valve shall be so installed that the shear groove is flush with or within  $\frac{3}{4}$  inch of the top of the concrete dispenser island, and that there is ample clearance provided around the valve body and operating parts. In cases of overhead-type dispensers, the valve shall be installed at the liquid supply line inlet of each dispenser. If installed, a vapor return line inside the dispenser housing shall have a shear section or approved flexible connector so that the liquid supply line emergency shutoff valve will function properly. All emergency shutoff valves shall further be installed and maintained in accordance with the manufacturer's instructions, shall be tested at the time of initial installation and shall be tested at least yearly thereafter by manually tripping the hold-open linkage.

(e) Fire safety requirements are as follows:

1. Motors of vehicles receiving fuel shall be shut off during the fueling operation. Smoking shall not be permitted in areas where motor vehicles are fueled or serviced.

2. All heating and ventilating appliances and equipment shall comply with the provisions of the building code in effect at the time of first occupancy. Other devices generating a glow, spark or flame capable of igniting flammable vapors shall not be installed or used within 18 inches of the floor of a building without proper ventilation.

3. Floor drains to oil or gasoline separators or traps discharging to the sewer shall be installed in accordance with the Uniform Construction Code. Contents of oil separators or traps of floor drainage systems shall be

collected at sufficiently frequent intervals and removed from the premises to prevent oil from being carried into the sewers. Self-closing metal cans shall be used for all oily waste or waste oils.

4. A Class I flammable liquid shall not be used in any building for washing parts or removing grease or dirt.

5. Service station buildings shall not contain basements or rooms partially below grade. Pits in service areas shall comply with the requirements of the Uniform Construction Code.

6. Fire extinguishers shall be provided in all service stations of a size, type and location approved by the fire official, and shall be maintained in accordance with NFPA 10 listed in Appendix 3-A, incorporated herein by reference, where the provisions of this section do not specifically cover conditions and operations.

7. Warning signs shall be visibly posted in every fuel dispensing area. The signs shall indicate: Smoking is prohibited; and, Engine must be shut off during refueling; and additional signage as required by N.J.A.C. 5:18-3.28(b)2iii.

8. Operating instructions shall be visibly posted on every pump at a private unattended fuel dispensing area.

(f) Marine service stations shall be installed and operated in conformance with NFPA 30A and 303 listed in Appendix 3-A, incorporated herein by reference.

(g) The following apply to gaseous motor fuels:

1. Motor fuel service stations which store, handle and dispense gaseous motor fuels in addition to or instead of flammable and combustible liquid motor fuels shall comply with the provisions of this section.

2. The storage, handling and dispensing of LP gas as a motor fuel shall comply with the requirements of N.J.A.C. 5:18-3.30 and NFPA 58 listed in Appendix 3-A, incorporated herein by reference.

3. The compressing, storage, handling and dispensing of natural gas as a motor fuel shall comply with the applicable provisions of NFPA 54 listed in Appendix 3-A, incorporated herein by reference.

4. The use of liquefied petroleum gas (LP gas) and compressed natural gas (CNG) for self-service operations in service stations open to the public shall be prohibited.

Amended by R.1995 d.58, effective March 6, 1995.  
See: 26 N.J.R. 4258(a), 27 N.J.R. 878(b).

### **5:18-3.17 Tents and air-supported and other temporary structures**

(a) General provisions concerning tents and air-supported and other temporary structures are as follows:

1. The provisions of this section shall apply to air-supported, air-inflated, membrane-covered cable and membrane-covered frame structures, collectively known as membrane structures, erected for a period of less than 90 days.

i. Membrane structures erected for more than 90 days shall comply with the building code in effect at the time of first occupancy.

ii. This section shall not apply to membrane structures that do not require a permit under N.J.A.C. 5:18-2.7(b)3iii.

2. The entire membrane or air-supported structure system shall be inspected at regular intervals to assure that the installation is maintained in proper condition.

i. Every three months, the owner of the membrane or air-supported structure shall file a maintenance inspection report. The inspection report shall verify that the structure has been inspected and serviced by a qualified representative of the structure's manufacturer.

ii. All anchors shall be inspected daily and shall be adjusted or repaired immediately to insure a secure base attachment and seal.

iii. The fabric envelope shall be inspected daily and any fabric damage shall be repaired immediately to prevent more extensive damage.

(b) Construction requirements are as follows:

1. All structures shall be constructed and erected in conformance with requirements of the building code in effect at the time of first occupancy and maintained in accordance with NFPA 102 listed in Appendix 3-A, incorporated herein by reference, where the provisions of this section do not specifically cover conditions and operations.

2. All membrane shall be constructed of flame resistant materials or materials treated to render the material flame resistant in a manner approved by the fire official. The membrane material shall be either noncombustible as defined in N.J.A.C. 5:18-3.2 or flame resistant conforming to NFPA 701 listed in Appendix 3-A, incorporated herein by reference.

3. An affidavit or affirmation shall be submitted to the fire official and a copy retained on the premises on which the membrane or air-supported structure is located, attesting to the following information relative to the flame resistance of the fabric:

i. The names and addresses of the owners of the membrane or air-supported structure;

ii. The date fabric was last treated with flame resistant solution;

iii. The trade name or kind of chemical used in treatment;

iv. The name of person or firm treating the material; and

v. The name of testing agency and test standard by which the fabric was tested.

4. Operating pressure shall be maintained at the design pressure specified by the manufacturer to assure structural stability and to avoid excessive distortion during high wind or snow loads.

5. Under high wind over 50 miles per hour or snow conditions, the use of doors in air-supported structures shall be controlled to avoid excessive air loss. Doors shall not be left open under any conditions.

(c) The following apply to means of egress:

1. All membrane or air-supported structures, and every balcony or tier thereof considered separately, shall be provided with means of egress meeting the following provisions:

i. At least two exits as remote from each other as practical and leading directly to the outside shall be provided. When the occupant load exceeds 500, additional exits shall be provided in accordance with Table 3.17(c)1 below.

ii. The length of travel to an exit shall not be greater than 100 feet.

iii. The aggregate clear width of all elements of a means of egress from any membrane or air-supported structure shall be determined on a basis of not less than one unit of 22 inches width for each 100 persons. Exit openings shall not be less than 36 inches wide and aisles, corridors or passageways shall not be less than 44 inches wide.

iv. Grandstands and bleachers shall comply with the requirements of the building code in effect at the time of first occupancy in respect to occupant loading, type of construction, design, aisles and seats.

v. The height of doors, aisles or passageways shall in no case be less than 6 $\frac{7}{8}$  feet.

vi. When exit doors are located above the ground level, a ramp approved by the fire official shall be provided on both sides of the doorway.

vii. Exit doors from air-supported structures shall swing in the direction of exit travel. All such doors shall be capable of automatically closing against operating pressures. Fasteners on the door shall be capable of being readily opened from the inner side. The opening force on the door shall not exceed 15 pounds.

viii. Exit openings from any tent shall remain open or may be covered by canvas provided said coverings shall be free sliding on a proper support. The support shall not be less than 12 inches above the top of the opening. The coverings shall be so arranged that,

when open, no part of the covering shall obstruct the opening; and, said coverings shall be of a color or colors which definitely contrast with the color of the tent.

ix. Exits, aisles and passageways leading to them shall be adequately lighted at all times when said structures are occupied. Artificial light shall be provided whenever natural light is inadequate.

x. Exit doorways shall be adequately indicated by signs reading "Exit" in red letters on a white background or in other approved distinguishable colors. Sign letters shall be at least six inches high and not less than  $\frac{3}{4}$  inch in width. "Exit" signs shall be illuminated in membrane and air-supported structures with occupant loads over 100 persons in the following manner:

(1) Two separate electrical sources for occupant loads over 600; and

(2) Two separate electrical circuits, one of which shall be separate from other circuits, for occupant loads under 600.

Table 3.17(c)1.

#### NUMBER OF ADDITIONAL EXITS

Capacity	Minimum number of exits
501 to 900	3
901 to 1,500	4
over 1,500	one additional for each 500 persons

(d) Fire safety requirements are as follows:

1. Hay, straw, shavings or similar combustible materials shall not be allowed within any tent or air-supported structure used for public assembly other than that necessary for the daily feeding and care of animals. Sawdust and shavings may be used for a public performance or exhibit when kept damp. Combustible materials shall not be permitted under stands or seats at any time. The area within, and adjacent to the membrane or air-supported structure, shall be maintained clear of all flammable material or vegetation which will create a fire hazard within a distance of 20 feet from the structure. All combustible trash shall be regularly (daily) removed from the structure during the period that the structure is used by the public.

2. Gasoline, gas, charcoal or other cooking device or any other unapproved, open flame shall not be allowed inside or within 20 feet of the membrane or air-supported structure.

3. Spot or effect lighting shall be by electricity only; all combustible construction within six feet of such equipment shall be protected with approved noncombustible insulation.

4. Membrane or air-supported structures shall not be used for the display of motion pictures unless safety film is used.

5. Proper clearance shall be maintained between the fabric envelope and all material or equipment stored inside the air-supported structure. There shall be a minimum clearance of at least three feet between the envelope and the inside contents.

6. Fire extinguishing equipment of approved types shall be furnished by the owner or operator of membranes or air-supported structures in such amount and in such locations as may be directed by the fire official. Such fire extinguishing equipment shall be maintained in proper working order and shall be operated by employees of said operation who shall be properly trained for the purpose, and who shall be required to exhibit their skill on order of the fire official.

Administrative correction, effective May 18, 1992.

See: 24 N.J.R. 1875(a).

Amended by R.1993 d.197, effective May 3, 1993.

See: 25 N.J.R. 393(a), 25 N.J.R. 1868(a).

Tents up for more than 90 days are subject to the building code; tents smaller than 90 square feet are not.

### 5:18-3.18 Vehicle tire rebuilding plants

(a) The equipment, processes and operation of automobile tire rebuilding and recapping plants shall comply with the applicable requirements of this Code and the provisions of this section.

(b) Fire safety requirements are as follows:

1. The layout, arrangement and construction of buildings and structures used for tire rebuilding or recapping shall comply with the applicable requirements of the building code in effect at the time of first occupancy for the appropriate use group classification, and shall be provided with fire protection and fire extinguishing equipment as required by that code. Buildings and structures and their service equipment shall be maintained in safe condition as required by this Code.

2. Fire doors or other opening protectives to exit or elevator enclosures or similar shaft enclosures required by the Uniform Construction Code shall be kept closed except when the opening is in actual use.

3. When tire rebuilding plants are required to be separated from other uses in the building by the Uniform Construction Code, such separation shall be maintained in good condition and shall not be pierced or broken in any manner. When a sprinkler system is required in a tire rebuilding plant, it shall be maintained in proper and continuous working order.

4. Buffing machines shall be located in a room separated from the remainder of the plant as required by the Uniform Construction Code and fire doors in such separations shall be maintained free of all obstructions at all times. Each machine shall be connected to an ample dust collecting system conforming to NFPA 91 listed in Appendix 3-A, incorporated herein by reference.

5. Each room where rubber cement is used or mixed, or flammable or combustible solvents are applied, shall be equipped with effective mechanical or natural ventilation.

### 5:18-3.19 Vehicle wrecking yards, junkyards, and waste material handling plants

(a) General provisions concerning vehicle wrecking yards, junkyards and waste material handling plants are as follows:

1. The equipment, processes and operation of vehicle wrecking yards, junkyards and waste material handling plants shall comply with the applicable requirements of this Code and the detail provisions of this section.

2. Materials stored within a vehicle wrecking yard, junkyard or waste material handling plant shall not be located as to seriously expose adjoining or adjacent properties to any hazard of fire or explosion.

(b) Fire safety requirements are as follows:

1. The layout, arrangement and construction of buildings and structures used in connection with a vehicle wrecking yard or waste material handling plant shall comply with the applicable requirements of the building code in effect at the time of first occupancy for the appropriate use group classification, and shall be provided with fire protection and fire extinguishing equipment as required by that code. Buildings and structures and their service equipment shall be maintained in safe condition as required by this Code.

2. Reasonably safe aisles, driveways and uniform passageways shall be provided to permit reasonable access for firefighting operations. This shall include areas where stripped vehicle bodies are stored.

3. Picking rooms shall be provided with exhaust systems of sufficient capacity to remove dust and lint.

4. The burning of wrecked or discarded vehicles, or any parts thereof, or junk, or any waste materials shall be prohibited unless specifically authorized by the fire official.

### 5:18-3.20 Welding or cutting, calcium carbide and acetylene generators

(a) Welding or cutting shall include gas, electric arc or flammable liquid welding or cutting or any combination thereof. The operation and maintenance of equipment for use of such materials shall comply with the provisions of this section and NFPA 51 listed in Appendix 3-A, incorporated herein by reference, where provisions of this section do not specifically cover conditions and operations.

(b) For the purpose of this section and as used in this Code, the following words and terms shall have the meaning shown:

"Machine" means a device in which one or more torches using fuel gas and oxygen are incorporated.



"Manifold" means an assembly of pipe and fittings for connecting two or more cylinders for the purpose of supplying gas to a piping system or directly to a consuming device.

"Oxygen manifold, high pressure" means a manifold connecting oxygen containers having a U.S. Department of Transportation (DOT) service pressure exceeding 200 psig.

"Oxygen manifold, low pressure" means a manifold connecting oxygen containers having a DOT service pressure not exceeding 200 psig.

"Piping" means rigid conduit.

"Portable outlet header" means an assembly of piping and fittings used for service outlet purposes which is connected to the permanent service piping by means of hose or other nonrigid conductors.

"Station outlet" means the point at which gas is withdrawn from the service piping system.

"Tubing" means semi-rigid conduit.

(c) General requirements are as follows:

1. In the performance of welding or cutting operations, only approved equipment shall be used and the equipment shall be installed and operated in accordance with nationally recognized good practice.

2. A permit for welding or cutting operations shall not be issued unless the individuals in charge of performing such operations are capable of doing such work in a safe manner. Demonstration of a working knowledge of the provisions of this section shall constitute acceptable evidence of compliance with this requirement.

3. Companies, corporations, copartnerships and owner-operators required to have a permit shall maintain a record of all locations where welding or cutting operations are performed and have it available for inspection by the fire official.

(d) Fire safety requirements are as follows:

1. The layout, arrangement and construction of buildings and structures designed and approved for welding shall comply with the applicable requirements of the building code in effect at the time of first occupancy for the appropriate use group classification, and shall be provided with fire protection and fire extinguishing equipment as required by that code. Buildings and structures and their service equipment shall be maintained in safe condition as required by this Code.

2. Before welding or cutting operations are begun in areas not designed or approved for the purpose, specific authorization shall be obtained from the owner of the premises or a duly authorized agent.

3. When welding or cutting operations are performed above or within 35 feet of combustible construction or material exposed to the operation, or within 35 feet of the floor, ceiling or wall openings so exposed, the requirements listed in (d)3i through iii below shall be met:

i. Such combustible construction or material shall be protected by noncombustible shields or covers from possible sparks, hot metal or oxide.

ii. Such floor, ceiling or wall openings shall be protected by noncombustible shields or covers.

iii. A fire watcher shall be provided to watch for fires, make use of portable fire extinguishers or fire hose, and perform similar fire prevention duties. The fire watcher shall remain on the job at least 30 minutes after the welding or cutting operations have been completed to insure that no fire exists. A signed inspection report attesting to that fact shall be filed and available for inspection by the fire official.

4. One portable fire extinguisher having a rating of not less than 2-A:20-B:C shall be kept at the location where welding or cutting is to be done, and one portable fire extinguisher having a rating of not less than 2-A:10-B:C shall be attached to all portable welding carts.

5. Welding or cutting shall not be done in or near rooms or locations where flammable gases, liquids or vapors, lint, dust or loose combustible stocks are present when sparks or hot metal from the welding or cutting operations may cause ignition or explosion of such materials.

6. Except as provided herein, welding or cutting shall not be performed on containers and equipment which contain or have contained flammable liquids, gases or solids until these containers and equipment have been thoroughly cleaned or inerted or purged; except that "hot tapping" may be permitted on tanks and pipe lines.

7. Sprinkler protection shall not be shut off while welding or cutting work is being performed. When welding or cutting is done close to automatic sprinkler heads, sheet asbestos or damp cloth guards may be used to shield the individual heads, but shall be removed when the work is completed.

(e) Gas welding and cutting requirements are as follows:

1. Devices or attachments facilitating or permitting mixture of air or oxygen with combustible gases prior to consumption, except at the burner or in a standard torch or blow pipe, shall not be allowed unless approved for the purpose.

2. Fuel gas cylinders stored inside of buildings, except those in actual use or attached ready for use, shall be limited to a total capacity of 2,000 cubic feet of gas or 300 pounds of liquefied petroleum gas. Storage exceeding 2,000 cubic feet total gas capacity of cylinders or 300

pounds of liquefied petroleum gas shall be in a separate room in accordance with (h)4 and (h)4i below, or cylinders shall be stored outside or in a separate building. All compressed gas cylinders in storage or in service shall be adequately secured to prevent falling or being knocked over.

i. Separate rooms or buildings for fuel gas storage shall be well ventilated. Heating shall be by steam, hot water or other indirect means. Heating by flames or fires shall be prohibited in outside generator houses or inside generator rooms or in any enclosure communicating with them. All electrical wiring and equipment in outside generator houses or inside generator rooms shall be reasonably safe to persons and property. When electrical wiring and equipment are used in outside generator houses or inside generator rooms, such electrical wiring and equipment shall be of a type approved for use in Class I, Division 2, hazardous locations as specified in NFPA 70 listed in Appendix 3-A, incorporated herein by reference, and such equipment shall be installed in accordance with nationally recognized safe practice. Sources of ignition shall be prohibited in outside generator houses or inside generator rooms.

ii. Cylinders permitted inside of buildings shall be stored at least 20 feet from highly combustible materials and where they will not be exposed to excessive rise in temperature, physical damage or tampering by unauthorized persons.

iii. Oxygen cylinders in storage shall be separated from fuel gas cylinders or combustible materials (especially oil or grease), a minimum distance of 20 feet or by a noncombustible barrier at least five feet high having a fire resistance rating of at least one-half hour.

iv. Oxygen cylinders shall not be stored in inside acetylene generator rooms.

v. Oxygen cylinders stored in outside generator houses shall be separated from the generator or carbide storage rooms by a noncombustible partition having a fire resistance rating of at least one hour. This partition shall be without openings and shall be gas-tight.

vi. Cylinders of dissolved acetylene shall be stored with the valve end up to minimize the possibility of solvent being discharged as liquid.

3. When moving compressed gas cylinders by crane, suitable cradles shall be used to prevent the possibility of dropping them. Ordinary rope slips or electromagnets shall not be used.

4. Fuel gas cylinders shall be placed with valve end up whenever they are in use.

5. The user shall not transfer gases from one cylinder to another or mix gases in a cylinder.

6. When a cylinder is not in use, the valve shall be closed and the valve protection cap shall be in place, hand-tight.

7. A cylinder or cylinder manifold for oxygen shall be provided with a pressure regulating device intended for use with oxygen, and so marked.

8. Empty cylinders shall have their valves closed while in storage and during shipment.

9. Fuel gas shall not be used from cylinders through torches or other devices equipped with shutoff valves without reducing the pressure through a suitable regulator attached to the cylinder valve or manifold.

i. Pressure adjusting screws on regulators shall be fully released before the regulator is attached to a cylinder and the cylinder valve opened.

ii. Before a regulator is removed from a cylinder valve, the cylinder valve shall be closed and the gas released from the regulator.

10. Valves on cylinders or compressed gas shall be opened slowly.

11. Cylinders, valves, regulators, hose and other apparatus and fittings containing or using oxygen shall be kept free from oil or grease. Oxygen cylinders, apparatus and fittings shall not be handled with oily hands, oily gloves, or greasy tools or equipment.

12. Acetylene gas shall not be generated, piped (except in approved cylinder manifolds and cylinder manifold connections), or utilized at a pressure in excess of 15 psig unless dissolved in a suitable solvent in cylinders manufactured according to DOT 49 CFR listed in Appendix 3-A, incorporated herein by reference. Acetylene gas shall not be brought in contact with unalloyed copper except in a blowpipe or torch.

13. Oxygen and fuel gas cylinders and acetylene generators shall be placed far enough away from the welding area to prevent them from being heated by radiation from heated materials, by sparks or slag, or by misdirection of the torch flame.

14. When gas welding or cutting operations are discontinued for a substantial period of time, such as during lunch hour or overnight, the torch valve shall be closed and the gas supply to the torch completely shut off.

15. Welding or cutting work shall not be supported on compressed gas cylinders or containers.

16. Tests for leaks in any piping system or equipment shall be made with soapy water. Flames shall not be used.

(f) Electric arc welding and cutting requirements are as follows:

1. The frame or case of electric arc welding or cutting machines, except internal combustion engine driven machines, shall be grounded. Ground connections shall be mechanically strong and electrically adequate for the required current.

2. Welding current return circuits from the work to the machine shall have proper electrical contact at all joints and periodic inspection shall be made to ascertain that proper electrical contact is maintained.

3. When electric arc welding or cutting is to be discontinued for any period of time of one hour or more, all electrodes shall be removed from the holders, the holders shall be carefully located so that accidental contact cannot occur, and the machines shall be disconnected from the power source.

(g) The following apply to calcium carbide systems:

1. Containers used for the storage of calcium carbide shall be of metal of sufficient strength to insure handling without rupture, and shall be provided with a screw top or its equivalent. They shall be of water-tight and air-tight construction. Solder shall not be used on joints in such manner that fire would disrupt the package. Packages shall be marked "Calcium carbide—Dangerous If Not Kept Dry".

2. Storage of calcium carbide inside buildings shall be in a dry, waterproof and well ventilated location.

i. Calcium carbide not in excess of 600 pounds may be stored inside of buildings or in the same room with fuel gas cylinders, but not with oxygen cylinders.

ii. Calcium carbide in excess of 600 pounds, but not in excess of 5,000 pounds, shall not be stored in a building containing other uses unless in an acetylene generator room or separate room or compartment in a one-story building without a basement underneath the carbide storage section. Such rooms shall be separated from the remainder of the building by construction having a fire resistance rating required under the applicable provisions of the building code in effect at the time of first occupancy. Openings to other parts of the building shall be protected by approved self-closing fire doors. Adequate ventilation shall be provided. This storage room shall not be used for any other purpose.

3. Calcium carbide in excess of 5,000 pounds shall be stored in buildings not exceeding one story in height without a basement and used for no other purpose, or in outside acetylene generator houses. Location of such storage buildings shall be outside congested mercantile and manufacturing districts. If the storage building is of noncombustible construction, it may adjoin other one-story buildings if separated therefrom by unpierced fire walls; if detached less than 10 feet from such building or buildings, there shall not be an opening within that distance. If the storage building is of combustible construction, it shall not be within 20 feet of any other one of two-

story building, nor within 30 feet of any other building exceeding two stories.

(h) The following apply to acetylene generators:

1. Acetylene generators shall be of approved type, and shall be plainly marked with the rate in cubic feet of acetylene per hour for which they are designed, the amount or weight of carbide necessary for a single charge, the manufacturer's name and address, and the name or number of the type of generator.

2. Stationary generators shall be installed either in a well ventilated one-story noncombustible outside generator house, or in a well ventilated room or compartment of ample size and of construction as outlined in (h)4 below, either in a one-story building or on the top floor or roof of a multistory building. The storage of fuel gas cylinders in such rooms or compartments shall not exceed a total capacity of 2,000 cubic feet of gas, 300 pounds in case of liquefied petroleum gas.

3. The walls or partitions, floor and ceiling of such room or compartment shall be constructed having fire resistance ratings as required by the applicable provisions of the building code in effect at the time of first occupancy. At least one wall of an inside generator room shall be an exterior wall.

i. Openings from a generator room or compartment to other parts of the building shall be protected by an approved self-closing fire door of the swinging type and close into a rabbet, or otherwise be made tight to prevent passage of flame around the edge. Exit doors shall be located so as to be readily accessible in case of emergency. Windows, if provided in partitions, shall be wired glass in approved metal frames with fixed sash.

ii. A portion of the exterior wall equal to not less than 10 percent of the combined areas of the enclosing walls shall be of light noncombustible material such as single thickness, single strength glass. Single thickness, single strength window glass skylights, or lightly fastened roof hatch covers, swinging doors in exterior wall opening outward, sheet metal siding or lightly fastened roofs, may be accepted in part or entirely in lieu of the glass area or its equivalent, provided the required percentage of explosion venting area is thus obtained.

4. Portable generators shall not be used in rooms of total volume less than 35 times the total gas generating capacity per charge of all generators in the room. The gas generating capacity in cubic feet per charge shall be assumed as four and one-half times the weight of carbide per charge in pounds. Generators shall not be used in rooms having a ceiling height less than 10 feet. An acetylene generator shall not be moved by derrick, crane or hoist while charged.

5. Generators shall be placed where water will not freeze. Common salt (sodium chloride) or other corro-

sive chemical shall not be used as a protection against freezing.

6. Cylinders of fuel gases stored inside a building, except those in actual use or attached ready for use, shall be limited to a total capacity of 2,000 cubic feet of gas or 300 pounds of liquefied petroleum gas. For storage in excess of 2,000 cubic feet total gas capacity of cylinders or 300 pounds of liquefied petroleum gas, a separate room or compartment as required by (g)2ii above shall be provided, or cylinders shall be kept outside or in a special building. Buildings, rooms or compartments provided for such storage shall be well ventilated and shall be without open flame heating or lighting devices.

7. Cylinders or oxygen stored inside of buildings shall comply with the requirements for oxygen manifolds covered in (i)2 below.

(i) The following apply to piping manifolds and hose systems for fuel gases and oxygen:

1. Except as herein provided, piping shall be steel, wrought iron, brass or copper pipe, or seamless copper, brass or stainless steel tubing. Piping and fittings shall comply with nationally recognized good practice except that pipe and fittings shall be standard weight as a minimum for sizes not over six inches in normal size.

i. Acetylene piping shall be steel or wrought iron pipe only.

ii. Oxygen piping at pressures in excess of 700 pounds per square inch shall be stainless steel or nonferrous tubing.

iii. Joints in steel or wrought iron pipe shall be welded or made up with threaded or flanged fittings, or rolled, forged or cast steel, or malleable iron fittings may be used. Joints in brass or copper pipe may be welded, brazed, threaded or flanged. Joints in seamless copper, brass or stainless steel tubing shall be by approved gas tubing fittings or shall be brazed. Socket type points in brass or copper pipe or in seamless copper, brass or stainless steel tubing shall be brazed with silver brazing alloy or similar high melting point filler. Cast iron fittings shall be prohibited. Threaded connections in oxygen piping shall be tinned, or made up with litharge and glycerine, or other joint compound approved for oxygen service and applied to male threads only.

iv. Piping shall be protected against physical damage, and allowance made for contraction, expansion, jarring and vibration. If laid underground, it shall be below the frost line and protected against corrosion. Low points in piping shall be provided with drip pots and drain valves, the latter to be normally closed with screw cap or plugs.

v. All piping shall be tested and proved tight at one and one-half times its maximum working pressure. Any medium used for testing oxygen lines shall be oil free.

vi. All buried pipe and tubing and outdoor ferrous pipe and tubing shall be covered or painted with a suitable corrosion-resisting material.

2. Oxygen manifolds shall not be located in an acetylene generator room. Oxygen manifolds shall be located at least 20 feet away from both highly flammable material, such as oil or grease, and combustible gas cylinders unless the combustible gas cylinders are separated by a fire resistive partition constructed as required by (g)2ii above.

i. The aggregate capacity of oxygen cylinders connected to one manifold inside a building shall not exceed 6,000 cubic feet. More than one such manifold may be located in the same room provided the manifolds are at least 50 feet apart.

ii. An oxygen manifold connected to cylinders having an aggregate capacity of more than 6,000 cubic feet shall be located outside, in a separate building, or in a separate room constructed in accordance with (g)2ii above with no combustible material within 20 feet of the manifold.

iii. Oxygen manifolds with service pressures not exceeding 200 psig shall be marked:

#### "Low Pressure Manifold

#### Do Not Connect High Pressure Cylinders"

iv. The aggregate capacity of fuel gas cylinders connected to one manifold inside a building shall not exceed 3,000 cubic feet of gas or 300 pounds of liquefied petroleum gas. More than one such manifold may be located in the same room provided the manifolds are at least 50 feet apart.

v. A fuel gas manifold connected to cylinders having an aggregate capacity of more than 3,000 cubic feet of gas or 300 pounds of liquefied petroleum gas shall be located outside, in a separate building, or in a separate room constructed in accordance with (g)2ii above.

3. Hose shall be capable of withstanding a hydrostatic pressure of at least 800 psi.

i. A single hose having more than one gas passage, a wall failure of which would permit the flow of one gas into the other gas passage, shall not be used.

ii. Single and double hose, except as provided herein, shall be identified by exterior colors using green for oxygen hose, red for acetylene, LP-gas and other fuel gases and black for inert gases and air hose.

iii. When two hoses are joined by a web to form integral lengths of double hose, the color of both hoses shall be red, and the exterior surface of oxygen hose shall be smooth to the touch, while fuel gas hose shall be corrugated or ribbed.

iv. When parallel lengths of oxygen and acetylene hose are taped together for convenience and to prevent tangling, there must be at least one foot between taped sections and the taped section shall not be more than two inches in length.

v. Hose connections shall be clamped or otherwise securely fastened in a manner that will withstand, without leakage, twice the pressure to which they are normally subjected in service, but not less than a pressure of 300 psi.

vi. Hose shall be inspected frequently for leaks, burns, worn places, loose connections or other defects which may render the hose unfit for service. Where hose shows excessive wear or has been subjected to flashback, it shall be inspected and tested at twice the normal pressure to which it is subjected in service, but not at less than 200 psi before being returned to service. Defective lengths of hose shall be discarded.

Amended by R.1993 d.197, effective May 3, 1993.

See: 25 N.J.R. 393(a), 25 N.J.R. 1868(a).

Time period at (f) changed to one hour or more.

#### 5:18-3.21 Cellulose nitrate motion picture film

(a) The equipment, processes and operation of the storage and handling of cellulose nitrate motion picture film, hereafter referred to as "nitrate film," shall comply with NFPA 40 listed in Appendix 3-A, incorporated herein by reference.

(b) A person shall not sell, lease or otherwise dispose of any nitrate film to any person not having a permit to handle, use or display such film.

(c) Fire safety requirements are as follows:

1. The layout, arrangement and construction of buildings and structures used for the use or storage of flammable film shall comply with the applicable requirements of the Uniform Construction Code for the appropriate use group classification, and shall be provided with fire protection and fire extinguishing equipment as required by that code. Buildings and structures and their service equipment shall be maintained in safe condition as required by this Code.

#### 5:18-3.22 Cellulose nitrate (pyroxylin) plastics

(a) The equipment, processes and operations for the storage or handling of any plastic substance, material or compound other than cellulose nitrate film covered by N.J.A.C. 5:18-3.21, having cellulose nitrate as a base, by whatever name known, when in the form of blocks, slabs,

sheets, tubes or fabricated shapes shall comply with NFPA 40E listed in Appendix 3-A, incorporated herein by reference.

(b) Fire safety requirements are as follows:

1. The layout, arrangement and construction of buildings and structures in which cellulose nitrate (pyroxylin) plastics are used or stored shall comply with the applicable requirements of the building code in effect at the time of first occupancy for the appropriate use group classification, and shall be provided with fire extinguishing equipment as required by that code. Buildings and structures and their service equipment shall be maintained in safe condition as required by this Code. Smoking shall be in accordance with N.J.A.C. 5:18-3.3(k).

2. All new and existing buildings or any portions of the building used for the manufacture or storage of articles of cellulose nitrate (pyroxylin) plastic shall be equipped with an approved automatic fire suppression system as required by the building code in effect at the time of first occupancy. Vaults located within buildings for the storage of raw pyroxylin shall be protected with an approved automatic sprinkler system capable of discharging 1.66 gallons per minute (gpm) per square foot over the area of the vault.

3. In buildings or rooms where cellulose nitrate (pyroxylin) plastics are handled or stored, heating systems shall be installed in accordance with the requirements of the building code in effect at the time of first occupancy.

#### 5:18-3.23 Combustible fibers

(a) The equipment, processes and operations for handling, storage or use of combustible vegetable or animal fibers, including, among others, readily ignitable and free burning fibers such as cotton, sisal, henequen, ixtel, jute, hemp, tow, cocoa fiber, oakum, baled waste, baled waste paper, kapok, hay, straw, Spanish moss, excelsior, certain synthetic fibers and cloth in the form of scraps and clippings, shall comply with the applicable requirements of this Code and the provisions of this section.

(b) Fire safety requirements are as follows:

1. The layout, arrangement and construction of buildings and structures involving the storage or use of combustible fibers shall comply with the applicable requirements of the building code in effect at the time of first occupancy for the appropriate use group classification, and shall be provided with fire protection and fire extinguishing equipment as required by that code. Buildings and structures and their service equipment shall be maintained in safe condition as required by this Code.

2. Loose combustible fibers (not in suitable bales or packages), whether housed or in the open, shall not be stored within 100 feet of any building, except as hereinafter specified.



i. Not more than 100 cubic feet of loose combustible fibers may be kept in any building, provided storage is in a metal or metal-lined bin equipped with a self-closing cover.

ii. Quantities exceeding 100 cubic feet of loose combustible fibers, but not exceeding 500 cubic feet, may be stored in rooms or compartments having floor, walls and ceiling with a fire resistance rating of not less than one hour. Each opening into such rooms or compartments from other parts of the building shall be equipped with an approved opening protective. Such fire separations shall comply with the applicable requirements of the building code in effect at the time of first occupancy.

iii. Quantities exceeding 500 cubic feet of loose combustible fibers may be stored in approved vaults, constructed as required by the Uniform Construction Code.

iv. A maximum of 2,500 cubic feet of loose fibers may be stored in a detached "loose house" suitably located, with openings properly protected against entrance of sparks. The "loose house" shall not be used for any other purpose.

3. A single block or pile shall not contain more than 25,000 cubic feet of fiber exclusive of aisles or clearances. Blocks or piles of baled fiber shall be separated from adjacent storage by aisles not less than five feet wide, or by flash fire barriers consisting of continuous sheets of noncombustible material extending from floor to a height of at least one foot above the highest point of piles and projecting at least one foot beyond the sides of the piles.

i. Sisal and other fibers in bales bound with combustible tie ropes, and also jute and other fibers liable to swell when wet, shall be stored to allow for expansion in any direction without endangering building walls, ceilings or columns. Not less than three feet clearance shall be left between walls and sides of piles, except that if the storage compartment is not more than 30 feet in width, one foot clearance at side walls will be sufficient, provided a center aisle not less than five feet wide is maintained.

4. Not less than three feet clearance shall be maintained between the sprinklers and tops of piles.

5. A person shall not store hay, straw or similar agricultural products adjacent to buildings or combustible material unless a cleared horizontal distance equal to the height of pile is maintained between such storage and combustible material and buildings. Storage shall be limited to stacks of 100 tons each. Unlimited quantities of hay, straw and other agricultural products may be stored in or near farm buildings located outside closely built areas. A permit shall not be required for agricultural storage.

6. Ashes, waste, rubbish or sweepings shall not be kept in wood or other combustible receptacles and shall be removed from the building daily. Grass or weeds shall not be allowed to accumulate at any point on the premises.

#### 5:18-3.24 Compressed gases

(a) The equipment, processes and operations of bulk oxygen systems for the storage, handling and use of compressed gases, as defined herein, shall comply with the applicable requirements of this Code and the provisions of this section, and shall be maintained in accordance with NFPA 50, 99, and 99C listed in Appendix 3-A incorporated herein by reference, where the provisions of this section do not specifically cover conditions and operations. Liquefied petroleum gases and compressed gases used in conjunction with welding or cutting operations are exempt from these provisions.

(b) For the purpose of this section and as used in this Code, the following words and terms shall have the meaning indicated.

"Bulk oxygen system" means an assembly of equipment, such as oxygen storage containers, pressure regulators, safety devices, vaporizers, manifolds and interconnecting piping, which has a storage capacity at normal temperature and pressure of more than 13,000 cubic feet of oxygen connected in service or ready for service, or more than 25,000 cubic feet of oxygen, including unconnected reserve on hand at the site. The bulk oxygen system terminates at the point where oxygen at the service pressure first enters the supply line. The oxygen may be stored as a liquid or gas in either stationary or portable containers.

"Gaseous hydrogen system" means a facility in which hydrogen is delivered, stored and discharged in the gaseous form to consumer piping. The system includes stationary or movable containers, pressure regulators, safety relief devices, manifolds, interconnecting piping and controls. The system terminates at the point where hydrogen at service pressure first enters the consumer's distribution piping.

"Nonflammable medical gas" means a compressed gas which is nonflammable and used for therapeutic purposes and includes, among others, oxygen and nitrous oxide.

"Piped distribution system" means a central supply system with control equipment, and a system of piping extending to the points in the hospital where nonflammable medical gases are used, and to suitable station outlet valves at each use point.

(c) Storage and use requirements are as follows:

1. The containers, systems and methods of use of compressed gases shall comply with the following conditions of this subsection.

2. Cylinders and pressure vessels shall be designed, constructed, tested and maintained in accordance with ANSI K61.1, DOT 49 CFR or NFPA 50, 50A, 99 or 99C listed in Appendix 3-A, incorporated herein by reference.

3. Each cylinder, pressure vessel or group of containers shall be marked with the name of the gas contained in accordance with DOT 49 CFR listed in Appendix 3-A.

4. Cylinders containing flammable anesthetics and nonflammable medical gases, in hospitals and similar facilities, shall be stored, handled and used so as to be reasonably safe to persons and property.

5. Piping systems shall not be used to distribute flammable medical gases in any hospital or similar facility. Piped distribution systems handling non-flammable medical gases, in hospitals and similar facilities, shall be installed and used in accordance with NFPA 99 listed in Appendix 3-A.

6. Bulk oxygen systems located at industrial and institutional consumer sites shall be installed and maintained in accordance with NFPA 50 listed in Appendix 3-A.

7. Anhydrous ammonia shall be stored and handled in accordance with ANSI K61.1 listed in Appendix 3-A.

8. Gaseous hydrogen systems shall be installed and maintained in accordance with NFPA 50A listed in Appendix 3-A.

9. All compressed gas cylinders in storage or in service shall be adequately secured to prevent falling or being knocked over. Separate cylinder storage or manifold enclosure shall be provided for flammable gases and oxidizing gases. Such enclosures shall serve no other purpose and shall be constructed in accordance with the requirements of the Uniform Construction Code.

#### 5:18-3.25 Cryogenic liquids

(a) This section shall apply to the storage, handling and transportation of cryogenic liquids except that this section shall not include liquefied petroleum gas as defined in N.J.A.C. 5:18-3.30(a). The storage, handling and transportation shall comply with NFPA 50, 50A and 50B listed in Appendix 3-A, incorporated herein by reference, where provisions of this section do not specifically cover conditions and operations.

(b) For the purpose of this section and as used in this Code, the following words and terms shall have the meaning indicated.

“Container” means any cryogenic vessel whether used for transportation or storage.

(c) The following apply to containers and equipment:

1. All containers, valves and piping shall be located so that they are readily accessible for inspection and repair and shall be protected against tampering.

2. All containers including piping, valves and pressure relief devices shall be located, designed and constructed in accordance with the requirements of the Uniform Construction Code and NFPA 50, 50B and 59A listed in Appendix 3-A, incorporated herein by reference, and they shall be maintained in a safe condition.

3. Warning labels and signs shall be posted on all containers and equipment.

(d) Fire safety requirements are as follows:

1. Dispensing of flammable cryogenic liquids, liquefied oxygen or liquid oxidizers shall be only at locations approved by the fire official. Water lines and hose shall be provided for cleaning and melting areas.

2. Flammable cryogenic liquids, liquid oxygen or cryogenic oxidizers shall not be loaded, unloaded, dispensed or handled where vapors can reach a source of ignition. Smoking shall be prohibited and “No Smoking” signs shall be conspicuously posted. Loading, unloading and dispensing of oxygen shall not be permitted in the vicinity of loading, unloading or dispensing of gaseous or liquid fuel.

(e) Transportation requirements are as follows:

1. Containers, tanks and vessels used for transporting cryogenic liquids shall meet all applicable requirements of the DOT 49 CFR listed in Appendix 3-A.

2. Vehicles used for transportation of cryogenic liquids shall be placarded at the front, rear and each side with the name of the product in addition to placards which are required by DOT 49 CFR listed in Appendix 3-A. Vehicles shall be equipped with at least one approved fire extinguisher with a minimum 20-B:C rating and with adequate wheel chock blocks.

#### 5:18-3.26 Explosives, ammunition and blasting agents

(a) General provisions applicable to explosives, ammunition and blasting caps are as follows:

1. The equipment, processes and operations involving the manufacture, possession, storage, sale and use of explosives and blasting agents shall comply with the applicable requirements of this code and the provisions of this section and shall be maintained in accordance with NFPA 495 and DOT 49 CFR listed in Appendix 3-A, incorporated herein by reference, except as herein specifically exempted or where provisions of this section do not specifically cover conditions and operations.

2. Exceptions: Nothing in this section shall be construed as applying to the following uses:

i. The possession, storage, transportation or use of explosives or explosive weaponry in any form by the Armed Forces of the United States or of a state;

ii. Explosives in forms prescribed by the official United States Pharmacopoeia;

iii. The sale or use of fireworks which are regulated by N.J.A.C. 5:18-3.27;

iv. The possession, transportation and use of small arms ammunition for personal use;

v. The possession, storage, transportation and use of not more than 15 pounds of smokeless powder and 1,000 small arms primers for hand loading of small arms ammunition for personal use;

vi. The possession, transportation and use of special industrial explosive devices that are legally permitted; or

vii. The transportation and use of explosives or blasting agents by the United States Bureau of Mines, the Federal Bureau of Investigation, the United States Secret Service or police and fire departments acting in their official capacity.

3. The following explosives shall not be permitted:

i. Liquid nitroglycerin;

ii. Dynamite (except gelatin dynamite) containing over 60 percent of liquid explosive ingredient;

iii. Dynamite having an unsatisfactory absorbent or one that permits leakage of a liquid explosive ingredient under any conditions liable to exist during storage;

iv. Nitrocellulose in a dry and uncompressed condition in quantity greater than 10 pounds net weight in one package;

v. Fulminate of mercury in a dry condition and fulminate of all other metals in any condition except as a component of manufactured articles not hereinafter forbidden;

vi. Explosive compositions that ignite spontaneously or undergo marked decomposition, rendering the products or their use more hazardous, when subjected for 48 consecutive hours or less to a temperature of 167 degrees Fahrenheit;

vii. New explosive until approved by DOT 49 CFR listed in Appendix 3-A, except that permits may be issued to educational, governmental or industrial laboratories for instructional or research purposes;

viii. Explosives condemned by DOT 49 CFR listed in Appendix 3-A;

ix. Explosives not packed or marked in accordance with the requirements of DOT 49 CFR listed in Appendix 3-A; and

x. Explosives containing an ammonium salt and a chlorate.

4. Any self-employed person in possession of a valid permit to use explosives for blasting purposes, issued by the New Jersey Department of Labor pursuant to N.J.A.C. 12:190-3.11, shall have an insurance coverage for blasting damage not less than \$500,000 for property damage including explosion, collapse, and underground utility damage and \$500,000 to \$1,000,000 for personal injury.

i. Any person in possession of a valid permit to use explosives for blasting purposes, as outlined in (a)4 above, and who is not self-employed, shall not use explosives unless the employer is insured as specified in that paragraph.

ii. Proof of the possession of a valid insurance policy covering blasting damage shall be readily available for inspection at the site.

iii. Nothing in this section shall be construed as preventing greater insurance coverage for damage from blasting when requested by any person for whom blasting is being performed.

5. For the purpose of this section and as used in this Code, the following words and terms shall have the meaning shown.

"Carrier" means a person who engages in the transportation of articles or materials by rail, highway, water or air.

"Highway" means any public street, alley or road.

"Magazine" means any building, structure or other enclosure or container other than an explosives manufacturing building, used for the storage of explosives. Magazines shall be of five types as follows:

i. A Type 1 magazine means a permanent outdoor magazine used for storage of high explosives or other classes of explosives;

ii. A Type 2 magazine means an indoor or outdoor magazine that is portable or mobile; such as a skid magazine or a trailer or semi-trailer used for the temporary storage of high explosives or other classes of explosives;

iii. A Type 3 magazine means a portable outdoor magazine; such as a "day-box" or a magazine on skids used, while attended, for the temporary storage of high explosives or other classes of explosives;

iv. A Type 4 magazine means an indoor or outdoor magazine used for the storage of low explosives, smokeless powder, or blasting agents. Detonators that will not mass detonate may also be stored in Type 4 magazines;

v. Type UG magazine means a magazine for the permanent storage of explosives in underground operations.

"Public conveyance" means any railway car, streetcar, cab, bus, airplane or other vehicle transporting passengers for hire.

"Railway" means any steam, electric or other railroad or railway which carries passengers for hire.

"Terminal" means those facilities used by carriers for the receipt, transfer, temporary storage or delivery of articles or materials.

"Testing blasting cap No. 8" means one containing two grams of a mixture of 80 percent mercury fulminate and 20 percent potassium chlorate, or a cap of equivalent strength.

"Vehicle" means a conveyance of any type operated upon the highways.

(b) Prohibitions on manufacture, storage, display and use are as follows:

1. The manufacture of explosives or blasting agents shall be prohibited unless such manufacture is authorized by the fire official. This shall not apply to hand loading of small arms ammunition for personal use when not for resale.

2. The storage of explosives and blasting agents is prohibited within the limits established by law as the limits of the district in which such storage is to be prohibited, except for temporary storage for use in connection with approved blasting operations, provided, however, this prohibition shall not apply to wholesale and retail stocks of small arms ammunition, explosive bolts, explosive rivets or cartridges for explosive-actuated power tools in quantities involving less than 500 pounds of explosive material.

3. The fire official may limit the quantity of explosives or blasting agents to be permitted at any location.

4. A person shall not sell or display explosives or blasting agents on highways, sidewalks, public property or in places of public assembly or education.

- i. No person shall sell or use explosives without obtaining a permit for that purpose from the Commissioner of Labor, pursuant to the applicable provisions of N.J.A.C. 12:190.

(c) Fire safety requirements are as follows:

1. The layout, arrangement and construction of buildings and structures in which explosives, ammunition and blasting agents are permitted shall comply with the applicable provisions of this Code. Buildings and structures and their service equipment shall be maintained in safe condition as required by this Code.

(d) Requirements for storage of explosives are as follows:

1. Explosives, including special industrial high explosive materials, shall be stored in magazines which meet the requirements of this section. This shall not be construed as applying to wholesale and retail stocks of small arms ammunition, explosive bolts, explosive rivets or cartridges for explosive-actuated power tools in quantities involving less than 500 pounds of explosive material. Magazines shall be in the custody of a competent person at all times who shall be at least 21 years of age, and who shall be held responsible for compliance with all safety precautions.

2. The fire official may authorize the storage of up to 50 pounds of explosives and 5,000 blasting caps in wholesale or retail hardware stores or other approved establishments. Explosives and blasting caps shall be stored in separate Type 2 and Type 4 indoor magazines at approved locations on the first floor not more than 10 feet from an entrance. A distance of 10 feet shall be maintained between the magazines. Their location shall not be changed without approval of the fire official. Two such magazines may be located in the same building provided one magazine is used for the storage of not more than 5,000 detonators and when a distance of ten feet is maintained between magazines.

3. Smokeless powder not exceeding 400 pounds intended for resale shall be stored in a warehouse or storage room which is not accessible to unauthorized personnel. It shall be stored in non-portable cabinets as follows:

- i. Not more than two cabinets in a building and not more than 200 pounds of smokeless powder in a single cabinet.

- ii. Cabinets shall be located against the walls of the warehouse or storage room with a minimum separation of 10 feet between cabinets.

- iii. A cabinet for smokeless powder shall have walls at least one inch thick with an interior of non-sparking material. Shelves shall not exceed a three foot separation. The cabinet shall have at least one lock and hinges and hasps that cannot be removed when the door is closed and locked.

4. Magazines shall be located as provided in this subsection, except as specifically provided in (d)4ii below for Type 2 indoor magazines.

- i. Type 1 magazines and Type 2 outdoor magazines shall be located outside of buildings. When used for the storage of high explosives, they shall be located no closer to inhabited buildings, passenger railways, public highways, or other magazines in which high explosives are stored than the distance specified in Table 3.26(d) below.

- ii. The location, either outside or inside buildings, of Type 3 magazines, shall be as far as practicable from the neighboring inhabited buildings, railways, highways,

and any other magazine, and shall be closely attended when in a use location.

iii. Type 4 outdoor magazines shall be located outside of buildings and, when used for the storage of low explosives, shall be located no closer to inhabited buildings, passenger railways, public highways, or other magazines in which explosives are stored than the distances specified in Table 3.26(d)1 below whether barricaded or unbarricaded. When a Type 4 outdoor magazine is used for storage of blasting agents, Table 3.26(d) below shall be used.

iv. Type 2 indoor and Type 4 indoor magazines shall be located as provided in (d)2 above.

5. Location of ammonium nitrate and blasting agents from high explosives or blasting agents shall be as follows:

i. Ammonium nitrate and ammonium nitrate based blasting agents shall be separated from nearby stores of high explosives or blasting agents referred to as the "donor" by the distances provided in Table 3.26(d)2 below;

ii. If storage of ammonium nitrate is located within the sympathetic detonation distance of explosives or blasting agents, one-half the mass of the ammonium nitrate shall be included in the mass of the "donor" when calculating separation distances;

iii. When ammonium nitrate or a blasting agent, or both, is not barricaded, the distances shown in Table (d)2 below shall be multiplied by six. These distances allow for the possibility of high velocity metal fragments from mixers, hoppers, truck bodies, sheet metal structures, metal containers and the like which may enclose the "donor." Where storage is in bullet-resistant magazines recommended for explosives or where the storage is protected by a bullet-resistant wall, the distances and barricade thickness need not exceed those prescribed in Table 3.26(d) below;

iv. Table 3.26(d)1 below shall apply to blasting agents which pass the insensitivity test prescribed in the definition of blasting agent;

v. Earthen dikes, sand dikes or enclosures filled with the required minimum thickness of earth or sand shall be acceptable artificial barricades. Hills of timber of sufficient density shall be acceptable natural barricades;

vi. For determining the distances to be kept from inhabited buildings, passenger railways, and public highways, Table 3.26(d) below shall apply. Ammonium nitrate, when stored with blasting agents or explosives, may be counted at one-half its actual weight.



TABLE 3.26(d)  
HIGH EXPLOSIVES  
DISTANCES IN FEET

Quantity of Explosives		Inhabited Buildings		Public Highways with Traffic Volume of 3,000 or less Vehicles/Day		Passenger Railways Public Highways with Traffic Volume of More Than 3,000 Vehicles/Day		Separation of Magazines	
Pounds Over	Pounds Not Over	Barricaded	Unbarricaded	Barricaded	Unbarricaded	Barricaded	Unbarricaded	Barricaded	Unbarricaded
2	5	70	140	30	60	51	102	6	12
5	10	90	180	35	70	64	128	8	16
10	20	110	220	45	90	81	162	10	20
20	30	125	250	50	100	93	186	11	22
30	40	140	280	55	110	103	206	12	24
40	50	150	300	60	120	110	220	14	28
50	75	170	340	70	130	127	254	15	30
75	100	190	380	75	150	139	278	16	32
100	125	200	400	80	160	150	300	18	36
125	150	215	430	85	170	159	318	19	38
150	200	235	470	95	190	175	350	21	42
200	250	255	510	105	210	189	378	23	46
250	300	270	540	110	220	201	402	24	48
300	400	295	590	120	240	221	442	27	54
400	500	320	640	130	260	238	476	29	58
500	600	340	680	135	270	253	506	31	62
600	700	355	710	145	290	266	532	32	64
700	800	375	750	150	300	278	556	33	66
800	900	390	780	155	310	289	578	35	70
900	1,000	400	800	160	320	300	600	36	72
1,000	1,200	425	850	165	330	318	636	39	78
1,200	1,400	450	900	170	340	336	672	41	82
1,400	1,600	470	940	175	350	351	702	43	86
1,600	1,800	490	980	180	360	366	732	44	88
1,800	2,000	505	1,010	185	370	378	756	45	90
2,000	2,500	545	1,090	190	380	408	816	49	98
2,500	3,000	580	1,160	195	390	432	864	52	104
3,000	4,000	635	1,270	210	420	474	948	58	116
4,000	5,000	685	1,370	225	450	513	1,026	61	122
5,000	6,000	730	1,460	235	470	546	1,092	65	130
6,000	7,000	770	1,540	245	490	573	1,146	68	136
7,000	8,000	800	1,600	250	500	600	1,200	72	144
8,000	9,000	835	1,670	255	510	624	1,248	75	150
9,000	10,000	865	1,730	260	520	645	1,290	78	156
10,000	12,000	875	1,750	270	540	687	1,374	82	164
12,000	14,000	885	1,770	275	550	723	1,446	87	174
14,000	16,000	900	1,800	280	560	756	1,512	90	180
16,000	18,000	940	1,880	285	570	786	1,572	94	188
18,000	20,000	975	1,950	290	580	813	1,626	98	196
20,000	25,000	1,055	2,000	315	630	876	1,752	105	210
25,000	30,000	1,130	2,000	340	680	933	1,866	112	224
30,000	35,000	1,204	2,000	360	720	981	1,962	119	238
35,000	40,000	1,275	2,000	380	760	1,026	2,000	124	248
40,000	45,000	1,340	2,000	400	800	1,068	2,000	129	258
45,000	50,000	1,400	2,000	420	840	1,104	2,000	135	270
50,000	55,000	1,460	2,000	440	800	1,140	2,000	148	280
55,000	60,000	1,515	2,000	455	910	1,173	2,000	145	290
60,000	65,000	1,565	2,000	470	940	1,206	2,000	150	300
65,000	70,000	1,610	2,000	485	970	1,236	2,000	155	310
70,000	75,000	1,655	2,000	500	1,000	1,263	2,000	160	320
75,000	80,000	1,695	2,000	510	1,020	1,293	2,000	165	330
80,000	85,000	1,730	2,000	520	1,040	1,317	2,000	170	340
85,000	90,000	1,760	2,000	530	1,060	1,344	2,000	175	350
90,000	95,000	1,790	2,000	540	1,080	1,369	2,000	180	360
95,000	100,000	1,815	2,000	545	1,090	1,392	2,000	185	370
100,000	110,000	1,835	2,000	550	1,100	1,437	2,000	195	390
110,000	120,000	1,855	2,000	555	1,110	1,479	2,000	205	410
120,000	130,000	1,875	2,000	560	1,120	1,521	2,000	215	430
130,000	140,000	1,890	2,000	565	1,130	1,557	2,000	225	450
140,000	150,000	1,900	2,000	570	1,140	1,593	2,000	235	470
150,000	160,000	1,935	2,000	580	1,160	1,629	2,000	245	490
160,000	170,000	1,965	2,000	590	1,180	1,662	2,000	255	510
170,000	180,000	1,990	2,000	600	1,200	1,695	2,000	265	530
180,000	190,000	2,010	2,010	605	1,210	1,725	2,000	275	550
190,000	200,000	2,030	2,030	610	1,220	1,755	2,000	285	570
200,000	210,000	2,055	2,055	620	1,240	1,782	2,000	295	590
210,000	230,000	2,100	2,100	635	1,270	1,836	2,000	315	630
230,000	250,000	2,155	2,155	650	1,300	1,890	2,000	335	670
250,000	275,000	2,215	2,215	670	1,340	1,950	2,000	360	720
275,000	300,000	2,275	2,275	690	1,380	2,000	2,000	385	770

TABLE 3.26(d)1  
LOW EXPLOSIVES

Low Explosives			Distance in Feet from		Low Explosives		Distance in Feet from	
Pounds over	Pounds not over	Inhabited Building	Public Railroad and Highway	Above-ground Magazine	Pounds over	Pounds not over	Inhabited Building	Public Railroad and Highway
0	1,000	75	75	50	10,000	20,000	190	190
1,000	5,000	115	115	75	20,000	30,000	215	215
5,000	10,000	150	150	100	30,000	40,000	235	235
					40,000	50,000	250	250
					50,000	60,000	260	260
					60,000	70,000	270	270

Low Explosives			Distance in Feet from	
Pounds over	Pounds not over	Inhabited Building	Public Railroad and Highway	Above-ground Magazine
70,000	80,000	280	280	190
80,000	90,000	295	295	195
90,000	100,000	300	300	200
100,000	200,000	275	275	250
200,000	300,000	450	450	300

TABLE 3.26(d)2

**LOCATION OF AMMONIUM NITRATE AND BLASTING AGENTS FROM HIGH EXPLOSIVES OR BLASTING AGENTS**

Donor* pounds over	Weight pounds not over	Minimum Separation Distance of Acceptor** When Barricaded (feet)		Minimum Thickness of Artificial Barricades (inches)
		Ammonium Nitrate	Blasting Agent	
0	100	3	11	12
100	300	4	14	12
300	600	5	18	12
600	1,000	6	22	12
1,000	1,600	7	25	12
1,600	2,000	8	29	12
2,000	3,000	9	32	15
3,000	4,000	10	36	15
4,000	6,000	11	40	15
6,000	8,000	12	43	20
8,000	10,000	13	47	20
10,000	12,000	14	50	20
12,000	16,000	15	54	25
16,000	20,000	16	58	25
20,000	25,000	18	65	25
25,000	30,000	19	68	30
30,000	35,000	20	72	30
35,000	40,000	21	76	30
40,000	45,000	22	79	35
45,000	50,000	23	83	35
50,000	55,000	24	86	35
55,000	60,000	25	90	35
60,000	70,000	26	94	40
70,000	80,000	28	101	40
80,000	90,000	30	108	40
90,000	100,000	32	115	40
100,000	120,000	34	122	50
120,000	140,000	37	133	50
140,000	160,000	40	144	50
160,000	180,000	44	158	50
180,000	200,000	48	173	50
200,000	220,000	52	187	60
220,000	250,000	56	202	60
250,000	275,000	60	216	60
275,000	300,000	64	230	60

\* High explosives and blasting agents are donors. Ammonium nitrate, by itself, is not considered to be a donor.

\*\* Ammonium nitrate and blasting agents are acceptors.

## Notes to Tables

(1) If any two or more Type 1 and Type 2 magazines are separated from each other by less than distances specified in the column reading "Separation of Magazines," the two or more magazines, as a group, shall be considered as one magazine. The total quantity of explosives stored in that group shall then be treated as if stored in a single magazine and shall comply with the distances from other magazines, inhabited buildings, railways, or highways of Table 3.26(d).

(2) For quantity and distance purposes, the following shall apply to blasting caps and detonating cord:

(A) All types of blasting caps in strengths through No. 8 cap shall be rated at one and one-half pound of explosives per 1,000 caps. For strengths higher than No. 8 caps, consult the manufacturer.

(B) Detonating cord of 50 to 60 grains shall be calculated as equivalent to nine pounds of explosives per 1000 feet. Heavier or lighter core loads shall be rated proportionately.

6. A Type 1 magazine shall be a permanent structure: a building, an igloo, a tunnel, or a dugout. It shall be resistant to fire, theft, bullets, and the weather, and shall have no openings except for entrances and ventilation. Materials and methods of construction shall be as follows:

i. Masonry wall construction shall consist of at least six inches of brick, concrete, tile, cement block, or cinder block. Hollow masonry units shall have all hollow spaces filled with well-tamped, coarse, dry sand or weak concrete (at least a mixture of one part cement and eight parts sand with enough water to dampen the mixture while tamping in place).

ii. Fabricated metal wall construction shall consist of sectional sheets of steel or aluminum not less than No. 14 gauge, securely fastened to a metal framework. Metal wall construction shall be either lined inside with brick, solid cement blocks, or hardwood not less than four inches thick, or shall have at least a six inch sand fill between interior and exterior walls.

iii. In wood frame wall construction, the exterior of outer wood walls shall be covered with iron or aluminum not less than No. 26 gauge. The interior wall shall be constructed so as to provide a space of not less than six inches between the outer and inner walls. The space shall be filled with coarse, dry sand or weak concrete.

iv. Interior walls shall be constructed of or covered with a non-sparking material.

v. Floor shall be constructed of or covered with a suitable non-sparking material and shall be strong enough to bear the weight of the maximum quantity of explosives to be stored.

vi. Foundations shall be constructed of brick, concrete, cement block, stone, or metal or wood posts. If piers or posts are used in lieu of a continuous foundation, the spaces thus created under the building shall be enclosed with fire-resistant material.

vii. Outer roofs shall be constructed of fabricated metal, tile, non-friable asbestos, concrete, or other fire-resistant material. Where it is possible for a bullet to be fired directly through the roof and into the magazine at such an angle that the bullet would strike the explosives stored within, the magazine shall be protected by one of the following methods: a sand tray lined with a layer of building paper, plastic or other non-porous material, and filled with not less than four inches of coarse, dry sand located at the tops of inner walls covering the entire ceiling area, except that portion necessary for ventilation; or a fabricated metal roof constructed of  $\frac{3}{16}$  inch plate steel lined with four inches of hardwood. For each additional  $\frac{1}{16}$  inch of plate steel, the hardwood lining may be decreased one inch.

viii. No sparking material shall be exposed to contact with stored explosive materials. All ferrous nails in the floor and side walls which might be so exposed shall be blind-nailed or counter-sunk on the floor and side walls covered with a lattice work or other non-sparking material.

ix. Igloo, tunnel, and dugout magazines shall be constructed of reinforced concrete, masonry, metal or a combination of these materials. They shall have an earth mound covering of not less than 24 inches on top, sides and rear unless the magazine complies with vii above.

x. Exterior doors shall be constructed of  $\frac{1}{4}$  inch plate steel and lined on the interior with two inches of hardwood.

xi. Hinges and hasps shall be attached to the doors by welding, riveting, or bolting with nuts on the inside of the door. The hinges and hasps shall be installed in such a manner that they cannot be removed when the door is closed and locked.

xii. Each door shall be equipped with one or more of the following: two mortise locks; or two padlocks fastened in separate hasps and staples. Padlocks shall have at least five tumblers and a case-hardened shackle of at least  $\frac{3}{8}$  inch diameter. Outdoor padlocks shall be protected with:

- (1) One-quarter inch steel hoods constructed so as to prevent sawing or lever action on the locks or hasps;
- (2) A combination of a mortise lock and padlock;
- (3) A mortise lock that requires two keys to open;
- (4) A three-point lock; or
- (5) A bolt, lock or bar that cannot be actuated from the outside.

7. A Type 2 outdoor magazine shall be a box, trailer, semi-trailer, or other mobile facility. It shall be resistant to fire, theft, bullets and the weather and shall be supported in such a manner as to prevent direct contact with the ground. If less than one cubic yard in size, it shall be securely fastened to a fixed object to prevent theft of the

entire magazine. Materials and methods of construction shall be as follows:

i. The exterior and covers of doors shall be constructed of  $\frac{1}{4}$  inch steel and shall be lined with two inches of hardwood. Magazines with top openings shall have lids with water-resistant seals or the lids shall overlap the side by at least one inch when in a closed position.

ii. Hinges and hasps, locks, padlocks, padlock protection, and sparking materials shall comply with the applicable provisions of (d)6 above.

8. A Type 2 indoor magazine shall be a portable or mobile magazine which is resistant to fire and theft. It need not be bullet- or weather-resistant if the building in which it is stored provides protection from the weather and from bullet penetration. Materials and methods of construction shall be as follows:

i. Wood magazines shall have sides, bottoms, and covers or doors constructed of two inches of hardwood and shall be well braced at corners. They shall be covered with sheet metal of not less than No. 20 gauge. Nails exposed to the interior of magazines shall be counter-sunk.

ii. Metal magazines shall have sides, bottoms, and covers or doors constructed of No. 12 gauge metal and shall be lined inside with a non-sparking material. Edges of metal covers shall overlap the sides at least one inch.

iii. Magazines for blasting caps (cap boxes) in quantities of 100 or less shall have sides, bottoms, and covers or doors constructed of No. 12 gauge metal and shall be lined with a non-sparking material.

iv. Hinges, hasps, locks, padlocks, padlock protection, and sparking materials shall comply with the applicable provisions of (d)5 above; except that only one padlock shall be required on a Type 2 indoor magazine that is located in a room that is also secured by a lock.

9. A Type 3 magazine shall be a "day-box" or other portable magazine which is resistant to fire, weather and theft. Materials and methods of construction shall be as follows:

i. A Type 3 magazine shall be constructed of not less than No. 12 gauge steel lined with at least  $\frac{1}{2}$  inch plywood or  $\frac{1}{2}$  inch Masonite-type hardboard.

ii. No sparking material shall be exposed to contact with stored explosive materials.

iii. Doors or covers shall overlap sides of Type 3 magazines by not less than one inch.

iv. Hinges and hasps shall be attached by welding or riveting by bolting with nuts on the inside.

v. One steel padlock which need not be protected by a steel hood, having at least five tumblers and a case-hardened shackle of not less than  $\frac{3}{8}$  inch diameter shall be provided for locking purposes.

10. A Type 4 outdoor magazine shall be a building, igloo, tunnel, dugout, box, trailer, semi-trailer or other mobile magazine which is resistant to fire, weather, and theft. Materials and methods of construction shall be as follows:

i. A Type 4 outdoor magazine shall be constructed of masonry, metal-covered wood, fabricated metal, or a combination of these materials.

ii. The walls and floors shall be constructed of, or covered with a non-sparking material, or lattice work.

iii. Foundations shall be constructed of brick, concrete, cement, block, stone or metal or wood posts. If piers or posts are used in lieu of a continuous foundation, the spaces thus created under the building shall be enclosed with fire-resistive material.

iv. The doors or covers shall be metal or solid wood covered with metal.

v. Hinges and hasps, locks, padlocks, padlock protection and sparking materials shall comply with the applicable provisions of (d)5 above.

11. A Type 4 indoor magazine shall be fire and theft resistant. It need not be bullet- or weather-resistant if the building in which it is stored provides protection from the weather and from bullet penetration. Materials and methods of construction shall be as follows:

i. Wood magazines shall have sides, bottoms, and covers or doors constructed of not less than one inch of hardwood and shall be well braced at corners. They shall be covered with sheet metal of not less than No. 26 gauge. Ferrous nails exposed to the interior of magazines shall be counter-sunk.

ii. Metal magazines shall have sides, bottoms, and covers or doors constructed of not less than No. 16 gauge metal and shall be lined inside with a non-sparking material.

iii. Hinges and hasps, locks, padlocks, padlock protection, and sparking materials shall comply with the applicable provisions of (d)4 above, except that only one padlock shall be required on a Type 4 indoor magazine that is located in a room that is also secured by a lock.

12. A Type UG magazine shall be used for the storage of not more than 5,000 pounds of explosives underground in underground mining operations and shall not be permitted unless the mining has progressed to a point where the magazine is at least 300 feet from any shaft, is at least 15 feet from any haulage way or travel way, has a travel way to the nearest means of egress with at least two sharp turns, could not impede evacuation of all persons in the event of detonation of the explosives in the magazine, and is at least 50 feet from any magazine containing blasting caps. A Type UG magazine shall be constructed in accordance with the following:

i. In solid rock with the front opening constructed in accordance with the applicable provisions of (d)4 above for Type 1 magazines, unless otherwise specified in this paragraph.

ii. Doors shall have at least No. 16 gauge metal outer covering or equivalent fire resistance protection and be lined with at least two inches of hardwood.

iii. Doors shall be provided with one padlock having at least five tumblers and a case-hardened shackle of at least  $\frac{3}{8}$  inch diameter. Outdoor padlocks shall be protected with  $\frac{1}{4}$  inch steel hoods constructed so as to prevent sawing or lever action on the locks or hasps.

iv. Floors shall be wood lined or covered with wooden slats.

v. Provisions shall be made so that water will drain away.

vi. Adequate ventilation shall be provided.

vii. A conspicuous marking, reading "EXPLOSIVES" shall be provided.

13. Magazines shall not be provided with artificial heat and light, except that if artificial lighting is necessary, approved electric safety battery lamps or approved electric lights, wiring and equipment of a type designed for the hazardous location may be used.

14. Magazines shall be maintained in good repair. Before repairing the interior of magazines, all explosive material shall be removed and their interior shall be cleaned. Before repairing the exterior of magazines, all explosive materials shall be removed if there exists any possibility that repairs may produce sparks or flame. Any explosive material removed from magazines under repair shall be:

i. Placed in other magazines appropriate for the storage of those materials in accordance with this section; or

ii. Placed a safe distance from the magazine under repair, where they shall be properly guarded and protected until the repairs have been completed.

15. Smoking, matches, open flames, spark producing devices and firearms shall be prohibited inside or within 100 feet of magazines. Combustible materials shall not be stored within 100 feet of magazines.

i. The land surrounding magazines shall be kept clear of brush, dried grass, leaves, trash and debris for a distance of at least 50 feet.

ii. Magazines shall be kept locked except when being inspected or when explosives are being placed therein or being removed therefrom.

iii. Magazines shall be kept clean, dry and free of grit, paper, empty packages and rubbish.

iv. Detonators shall not be stored in the same magazine with other explosives, except as follows: detonators that will not mass detonate may be stored with electric squibs, safety fuses, igniters and igniter cords in a Type 1 or Type 2 magazine; and detonators may be stored with delay devices, electric squibs, safety fuses, igniter cords and igniters in a Type 1 or Type 2 magazine. Detonators are defined as any device containing a detonating charge that is used for initiating detonation in an explosive. The term includes, but is not limited to, electric blasting caps of instantaneous and delay types, blasting caps for use with safety fuses, detonating-cord delay connectors, and non-electric instantaneous or delay blasting caps.

v. Except with respect to fiberboard or other non-metal containers, containers of explosive materials shall not be unpacked or repacked inside a magazine or within 50 feet of a magazine. Containers of explosive materials shall be securely closed while being stored.

vi. Magazines shall not be used for the storage of any metal tools or of any commodity except explosives, but this restriction shall not apply to the storage of blasting agents, blasting supplies and oxidizers used in compound blasting agents.

16. When an explosive has deteriorated to an extent that it is in an unstable or dangerous condition, or if nitroglycerin leaks from any explosive, then the person in possession of such explosive shall immediately report the fact to the fire official and upon his authorization shall proceed to destroy such explosives and clean floors stained with nitroglycerin in accordance with the instructions of the manufacturer. Only experienced persons shall do the work of destroying explosives.

17. Sign requirements are as follows:

i. On the premises where a Type 1 magazine, a Type 2 outdoor magazine or a Type 4 outdoor magazine is located, the holder of a "permit to store" explosives shall post a conspicuous sign reading "EXPLOSIVES—KEEP OFF" in letters at least three inches in height on a contrasting background, and so located that a bullet passing through the face of the signs will not strike the magazine.

ii. Type 2 and Type 4 indoor magazines shall be labeled "EXPLOSIVES—KEEP FIRE AWAY".

iii. All Type 3 magazines shall bear the word "EXPLOSIVES" in letters at least three inches in height and legible on a contrasting background.

iv. The provisions of (d)17 above shall not apply when it is deemed by the fire official that a warning sign would have counter-productive results.

(e) The following apply to the storage of blasting agents and supplies:

1. Blasting agents or oxidizers, when stored in conjunction with explosives, shall be stored in the manner set forth in (d) above for explosives. The quantity of blasting agents or oxidizers shall be included when computing the total quantity of explosives for determining distance requirements.

2. Buildings used for storage of blasting agents separate from explosives shall be located away from inhabited buildings, passenger railways and public highways in accordance with Table 3.26(d).

3. The interior of buildings used for the storage of blasting agents shall be kept clean and free from debris and empty containers. Spilled materials shall be cleaned up promptly and safely removed. Combustible materials, flammable liquids, corrosive acids, chlorates, nitrates other than ammonium nitrate or similar materials shall not be stored in any building containing blasting agents unless separated therefrom by construction having a fire resistance rating of not less than one hour. The provisions of this paragraph shall not prohibit the storage of blasting agents together with non-explosive blasting supplies.

4. Semi-trailers or full trailers may be used for temporarily storing blasting agents, provided they are located away from inhabited buildings, passenger railways and public highways, in accordance with Table 3.26(d). Trailers shall be provided with substantial means for locking, and the trailer doors shall be kept locked except during the time of placement or removal of blasting agents.

5. Piles of oxidizers and buildings containing oxidizers shall be adequately separated from readily combustible fuels.

6. Caked oxidizer, either in bags or in bulk, shall not be loosened by blasting.

(f) The following apply to the handling of explosives:

1. Buildings or other facilities used for mixing blasting agents shall be located away from inhabited buildings, passenger railways and public highways in accordance with Table 3.26(d).

2. Not more than one day's production of blasting agents or the limit determined by Table 3.26(d), whichever is less, shall be permitted in or near the building or other facility used for mixed blasting agents. Larger quantities shall be stored in separate buildings or magazines.

3. Compounding and mixing of recognized formulations of blasting agents shall be conducted in accordance with nationally recognized good practice.

4. Smoking or open flames shall not be permitted within 100 feet of any building or facility used for the mixing of blasting agents.

i. Tools used for opening packages of explosives shall be constructed of non-sparking materials.



5. Empty oxidizer bags shall be disposed of daily by burning in a safe manner in the open at a safe distance from buildings or combustible materials.

i. Empty boxes and paper and fiber packing materials which have previously contained high explosives shall not be used again for any purpose, but shall be destroyed by burning at an approved isolated location out of doors, and any person shall not be nearer than 100 feet after the burning has started. Explosives shall not be abandoned.

(g) Blasting requirements are as follows:

1. Blasting operations shall be conducted during daylight hours except when authorized at other times by the fire official.

2. The handling and firing of explosives shall be performed by the person possessing a permit issued by the N.J. Department of Labor pursuant to N.J.A.C. 12:190 to use explosives or by employees under that person's direct supervision who are at least 18 years old.

i. A person shall not handle explosives while under the influence of intoxicants or narcotics.

ii. A person shall not smoke or carry matches while handling explosives or while in the vicinity thereof.

iii. An open flame light shall not be used in the vicinity of explosives.

iv. A permit to blast does not confer any right or privilege to conduct business or perform any operation including storage or handling of explosives which is contrary to or in conflict with provisions of any law of the State of New Jersey or any Federal law.

3. At the site of blasting operations, a distance of at least 150 feet shall be maintained between magazines and the blast area when the quantity of explosives temporarily kept therein is in excess of 25 pounds, and at least 50 feet when the quantity of explosives is 25 pounds or less. When site restrictions are such that the distance specified herein cannot be met, then the magazine shall be moved from the site the required distance when the blasting is actually to be performed.

4. Whenever blasting is being conducted within 50 feet of gas, electric, water, fire, alarm, telephone, telegraph or steam utilities, the blaster shall notify the appropriate representatives of such utilities at least 24 hours in advance of blasting, specifying the location and intended time of such blasting. Verbal notice shall be confirmed with written notice. In an emergency this time limit may be waived by a fire official.

5. Before a blast is fired, the person in charge shall make certain that all surplus explosives are in a safe place, all persons and vehicles are at a safe distance or under sufficient cover, and a loud warning signal has been sounded.

6. Due precautions shall be taken to prevent accidental discharge of electric blasting caps from current induced by radio or radar transmitters, lightning, adjacent power lines, dust storms or other sources of extraneous electricity. These precautions shall include:

i. The suspension of all blasting operations and removal of persons from the blasting area during the approach and progress of an electrical storm;

ii. The posting of signs warning against the use of mobile radio transmitters on all roads within 350 feet of the blasting operations; and

iii. The blaster shall comply with the Safety Guide for the Prevention of Radio Frequency Radiation Hazards, IME No. 20-1981 (ANSI C-95-4), incorporated herein by reference.

7. When blasting is done in congested areas or in close proximity to a building, structure, railroad, highway or any other installation that may be damaged, the blast shall be covered before firing, with a mat constructed so that it is capable of preventing rock from being thrown into the air.

Administrative correction, effective May 18, 1992.  
See: 24 N.J.R. 1875(a).

### 5:18-3.27 Fireworks

(a) General provisions concerning fireworks are as follows:

1. The display, sale or discharge of fireworks shall comply with the requirements of this section.

2. Application for permits for display or discharge shall be made in writing at least 15 days in advance of the date of the display or discharge of fireworks. The sale, possession, use and distribution of fireworks for such display shall be lawful under the terms and conditions approved with the permit and for that purpose only. A permit granted hereunder shall not be transferable, nor shall any such permit be extended beyond the dates set out therein.

3. For the purpose of this section and as used in this Code, the following words and terms shall have the meaning indicated.

"Dangerous fireworks" means and includes the following:

(1) Toy torpedoes containing more than five grains of explosive composition;

(2) Paper caps containing more than .25 grain of explosive composition;

(3) Firecrackers or salutes exceeding five inches in length or  $\frac{3}{4}$  inch in diameter;

(4) Cannons, canes, pistols, or other devices designed for use otherwise than with paper caps;

(5) Any fireworks containing a compound or mixture of yellow or white phosphorous or mercury;

(6) Any fireworks that contain a detonator or blasting cap;

(7) Fireworks compositions that ignite spontaneously or undergo marked decomposition when subjected for 48 consecutive hours to a temperature of 167 degrees Fahrenheit;

(8) Fireworks that can be exploded en masse by a blasting cap placed in one of the units or by impact of a rifle bullet or otherwise;

(9) Fireworks, such as sparklers or fuses, containing a match tip, or head, or similar igniting point or surface, unless each individual tip, head or igniting point or surface is thoroughly covered and securely protected from accidental contact or friction with any other surface; and

(10) Fireworks containing an ammonium salt and a chlorate.

"Fireworks" include any combustible or explosive composition, or any substance or combination of substances, or article prepared for the purpose of producing a visible or an audible effect by combustion, explosion, deflagration, or detonation.

"Fireworks factory building" means any building or other structure in which the manufacture of fireworks, other than sparklers, is carried on.

"Fireworks plant" means and includes all lands, with buildings thereon, used in connection with the manufacturing or processing of fireworks, as well as storehouses located thereon for the storage of finished fireworks.

"Highway" means any public street, public alley, public road, or navigable stream.

"Navigable streams" means streams susceptible of being used, in their ordinary condition, as highways of commerce, over which trade or travel are or may be conducted in the customary modes, but shall not include streams that are not capable of navigation by barges, tugboats and other large vessels.

"Railroad" means any steam, electric or other railroad which carries passengers for hire, but shall not include sidings or spur tracks installed primarily for the use of the fireworks plant.

(b) Sale and discharge requirements are as follows:

1. It shall be a violation of this Code for any person to store, to offer for sale, expose for sale, sell at retail, or use or explode any fireworks, except as provided for by the fire official when granting a permit for supervised displays of fireworks by the jurisdiction, fair association, amuse-

ment park, or other organization. Every such display shall be handled by a competent operator approved by the fire official. The fireworks shall be arranged, located, discharged or fired in a manner that, in the opinion of the fire official, will not be a hazard to property or endanger any person. In matters not specifically covered by this subsection, the provisions of NFPA 1123 and 1124 listed in Appendix 3-A, incorporated herein by reference, shall be deemed to provide adequate protection.

2. The governing body of any municipality may, upon application in writing accompanied by proof of proper insurance coverage, grant a permit for the public display of fireworks by municipalities, religious, fraternal or civic organizations, fair associations, amusement parks, or other organizations or groups of individuals, approved by the governing body of such municipality to whom the application is made. The governing body is authorized to grant such permission by resolution. After such permission shall have been granted, and a permit shall have been issued by the fire official, pursuant to N.J.A.C. 5:18-2.7(b)5, the possession and use of fireworks for such display shall be lawful for that purpose only.

i. All applications for permits shall set forth the date, the hour, the place of making such display, and the place for storing of fireworks prior to the display. The application shall also contain the names of the person, persons, firm, partnership, corporation, association, or group of individuals making the display, and the name of the person or persons in charge of the igniting, firing, setting-off, exploding or causing to be exploded such fireworks. The location of the storage place shall be subject to the approval of the fire official of the jurisdiction.

ii. The governing body of the municipality shall require insurance in a sum of not less than \$500,000 conditioned for the payment of all damages, which may be caused either to a person or persons or to property, by reason of the display so as aforesaid permitted, and arising from any acts of the permit holder, his agents, employees, or subcontractors. Such surety shall run to the municipality in which the permit is granted, and shall be for the use and benefit of any person, persons, or the owner or owners of any property so damaged, who is or are authorized to maintain an action thereon, or his or their heirs, executors, administrators, successors or assigns.

3. Exceptions: Nothing in this section shall be construed to prohibit any resident wholesaler, dealer or jobber to sell at wholesale such fireworks as are not herein prohibited, or the sale of any kind of fireworks provided the same are to be shipped directly out-of-State, or the use of fireworks by railroads or other transportation agencies for signal purposes or illumination, or the sale or use of blank cartridges for a show or theater, or for signal or ceremonial purposes in athletic or sports, or for use by military organizations. Such wholesalers, deal-

ers and jobbers shall store their supplies of fireworks in accordance with N.J.A.C. 5:18-3.26(d).

4. The fire official shall seize, take, remove or cause to be removed at the expense of the owner, all stocks of fireworks offered or exposed for display or sale, stored or held in violation of this section.

5. The use of what are technically known as fireworks showers, or of any composition containing potassium and sulphur, in theaters or public halls shall be subject to prior approval by the fire official and the following conditions shall apply:

i. Fireworks shall be discharged at a height no greater than four feet above the stage floor.

ii. Fireworks shall be discharged and operated in accordance with manufacturers directions and specifications.

iii. The owner/operator shall provide a full demonstration to the fire official prior to final operation.

iv. Fireworks shall be discharged so as not to endanger the public by escape of any hot particles from the stage area.

v. A fire watch, with proper extinguishing equipment as approved by the fire official, shall be maintained during the operation at both sides of the stage area.

6. It shall be unlawful to manufacture, sell, transport or use dangerous fireworks within the State.

(c) Manufacturing requirements are as follows:

1. No factory building shall be situated nearer than 200 feet from any inhabited building or to any highway or to any railroad, nor nearer than 50 feet from any building used for the storage of explosives or fireworks, nor nearer than 25 feet to any other factory building. This subsection shall not apply to factory buildings existing on March 25, 1930, in fireworks plants then in operation.

2. No building in a fireworks plant used for the storage of finished fireworks, other than those containing only sparklers, shall be situated nearer than 300 feet from any building not used in connection with the manufacture of fireworks, nor from any highway, railroad or navigable stream, nor within 300 feet of the property line of the fireworks plant. This subsection shall not apply to such storehouses existing on March 25, 1930.

3. All fireworks plants shall be enclosed on all sides by substantial fences and all openings to such enclosures shall be fitted with suitable gates, which, when not locked, shall be in charge of a competent watchman who shall have charge of the fireworks plant when it is not in operation.

4. Fireworks plants and all buildings situated within fireworks plant enclosures shall be equipped with suitable fire protection, commensurate with the hazard involved, to protect life and property from direct burning and exposure. Such fire protection shall be installed as directed by the fire official.

5. No stoves, exposed flame or electrical heating devices shall be used in any part of any fireworks plant, except in the boiler room or machine shop. No fireworks or chemicals are to be stored in those rooms. All parts of the buildings in fireworks plants shall be kept clean, orderly, and free from accumulations of dust or rubbish.

6. Fireworks in the finished state shall not be stored in buildings where fireworks are in process of manufacture.

7. No fireworks may be manufactured except such as shall be approved for transportation by the regulations of U.S. Department of Transportation.

8. Each outside package of fireworks shall bear upon the outside thereof the words "Fireworks—Handle Carefully—Keep Fire Away" in letters not less than  $\frac{7}{16}$  inch in height, and in addition shall show the name of the fireworks manufacturer.

9. No employee or other person shall enter or attempt to enter any fireworks plant with matches or other flame-producing devices, nor with liquor or narcotics in his or her possession or control, nor when under the influence of liquor or narcotics, nor partake of intoxicants or narcotics while in the plant.

10. No person shall smoke nor carry matches, a lighted cigar, cigarette, or pipe within any room or enclosed place or upon any part of a fireworks plant.

11. All fireworks plants shall be properly posted with "Warning" and "No Smoking" signs.

12. It shall be the duty of the superintendent, foreman or other person in charge of any fireworks plant to provide safety containers for matches at all main entrances of the plant, where all matches in the possession of all persons shall be deposited before entering the plant enclosure.

13. On receipt of an application to operate a fireworks plant, the fire official shall cause an inspection to be made of the premises described in the application for the purpose of determining whether they conform to the provisions of this chapter, and applicable sections of the Uniform Construction Code and N.J.A.C. 5:18-4.

14. A record of the certificates of registration issued and revoked shall be kept on file in the office of the Commissioner, and a notice sent to the fire official of each community in which a fireworks plant is located.

15. The owner or operator of any fireworks plant, within 60 days after demand therefor in writing by the Commissioner of Community Affairs, shall file and keep on file with the Department of Insurance of the State, an indemnity bond payable to the State of New Jersey in such sums as may be determined by the Commissioner and set forth in such demand, not in excess of \$1,000,000 nor less than \$500,000, with surety or sureties satisfactory to the Department of Community Affairs conditioned for the payment of all final judgments that may be rendered against such owner or operator for damages caused to persons and property by reason of any explosion at such fireworks plant of the product or component part or parts thereof there manufactured, processed or handled.

#### 5:18-3.28 Flammable and combustible liquids

(a) General provisions concerning flammable and combustible liquids are as follows:

1. This section shall apply to the transportation, storage, handling and processing of flammable and combustible liquids as defined in N.J.A.C. 5:18-3.2. The provisions of NFPA 30 listed in Appendix 3-A, incorporated herein by reference, shall apply where the provisions of this section do not specifically cover conditions and operations.

2. A permit shall be obtained from the fire official in accordance with N.J.A.C. 5:18-2.7 for any of the following:

i. Storage, handling or use of Class I liquids in excess of five gallons in a dwelling or other place of human habitation, or in excess of 10 gallons in any other building or other occupancy, or in excess of 60 gallons outside of any building, except that no permit shall be required for:

(1) The storage or use of flammable liquids in the fuel tank of a motor vehicle, aircraft, motorboat, mobile power plant or mobile heating plant; or

(2) For the storage or use of paints, oils, varnishes or similar mixtures when such liquids are stored for painting or maintenance, or similar purposes upon the premises, and which are not stored for a period exceeding 30 days.

ii. Storage, handling or use of Class II combustible liquids or Class III combustible liquids in excess of 25 gallons in a building, or in excess of 60 gallons outside of a building, except for fuel oil used in connection with oil burning equipment in single family residential buildings.

(b) Fire safety requirements are as follows:

1. The layout, arrangement and construction of buildings and structures in which flammable liquids are used or stored shall comply with the applicable requirements of the building code in effect at the time of first occupancy

for the appropriate use group classification, and shall be provided with fire protection and fire extinguishing equipment as required by that code. Buildings and structures and their service equipment shall be maintained in a safe condition as required by this Code.

2. Containers, tanks, equipment and apparatus and all piping, fittings and appliances used or intended to be used for the storage, handling, use or movement of flammable or combustible liquids shall be constructed and tested in accordance with NFPA 30 listed in Appendix 3-A and approved by the fire official.

i. All cans, containers or vessels which contain flammable liquids or flammable liquids compounds or mixtures and are offered for sale shall be provided with a warning label painted or printed on the container, stating said liquid is flammable and should be kept away from heat or open flame. All portable cans, containers or vessels which are empty and offered for sale and which are intended for the conveyance or storage of flammable liquids of flammable liquid compounds or mixtures shall be conspicuously marked with the name of the product which they are intended to contain.

ii. Portable containers intended to hold 10 gallons or less and to be used for gasoline or other flammable liquid shall be red in color. The name of the flammable liquid shall be prominently displayed on the container in bold letters of a contrasting color. The containers shall be of metal or approved plastic with a spring-loaded or screw cap. Containers for kerosene shall be blue.

iii. Wherever flammable liquids or kerosene are dispensed into or offered for sale in containers, there shall be a prominent sign located in a conspicuous location indicating the required color and construction of this container for each product sold. The sign shall not be less than 12 inches in the least dimension.

3. The fire official may prohibit the sale or use of any heating, lighting or cooking appliance using a flammable or combustible liquid when said appliance presents a hazard.

4. It shall be unlawful for any person to sell or offer for sale any Class I flammable liquid for the purposes of domestic cleaning.

5. All flammable or combustible liquids shall be dispensed in accordance with the following requirements:

i. Flammable liquids shall not be dispensed by gravity from tanks, drums, barrels or similar containers. Approved pumps, taking suction from the top of the container, shall be used. An exception may be granted when the viscosity of the liquid makes such a restriction impractical. Combustible liquids may be drawn from tanks, drums or barrels by gravity through an approved self-closing valve or faucet which is affixed directly on

the container or a rigid closed piping system attached thereto. The provisions of this subparagraph shall not prohibit the temporary use of movable tanks in conjunction with the dispensing of flammable or combustible liquids into the fuel tanks of motor vehicles or other motorized equipment on premises not normally accessible to the public. Such installations shall only be made with the approval of the fire official.

ii. Flammable or combustible liquids shall not be dispensed by a device that operates through pressure within a storage tank, drum or container, unless the tank, drum or container has been approved as a pressure vessel for the intended use. Air or oxygen shall not be used to pressurize the approved vessel.

iii. Flammable or combustible liquids shall not be dispensed into a portable or stationary tank, drum or container which does not meet the requirements of this code.

iv. Fuel pumps and fuel dispensers shall be installed in accordance with N.J.A.C. 5:18-3.16.

6. A person shall not permit or cause to be permitted the discharge of flammable or combustible liquids, or any waste liquid containing petroleum or its products, into or upon any street, pavement, highway, drainage canal ditch, storm or sanitary drain or flood control channel, lake or waterway, or upon the ground. All waste petroleum products shall be stored in accordance with the requirements of this subchapter.

7. Class I flammable liquid shall not be used within a building for washing parts or removing grease or dirt unless it is used in a closed machine approved for such purpose or in a separately ventilated room constructed in accordance with the building code in effect at the time of first occupancy.

8. In locations where flammable vapors may be present, precautions shall be taken to prevent ignition by eliminating or controlling sources of ignition. Sources of ignition may include open flames, lightening, smoking, cutting or welding, hot surfaces, frictional heat, sparks (static, electrical, and mechanical), spontaneous ignition, chemical and physical-chemical reactions and radiant heat. The fire official may prohibit the use of devices or order the suspension of an operation when proper precautionary measures are not taken.

9. Flammable and combustible liquid spills and leaks shall be promptly reported to the fire official.

(c) Bulk processing or industrial plants, refineries or other plants and distilleries and all buildings, tanks and equipment used for the storage, processing, distillation, refining or blending of flammable or combustible liquids shall be located, constructed and used in accordance with the building code in effect at the time of first occupancy and NFPA 30 listed in Appendix 3-A and any other applicable law or ordinance of the jurisdiction.

(d) Aboveground tank storage requirements are as follows:

1. Aboveground storage tanks for the storage of combustible or flammable liquid shall be maintained in a safe operating condition as required by this Code.

2. Existing aboveground tank installations that have been previously approved may be continued, provided the installation does not constitute a hazard. The fire official shall periodically inspect the installation for safety, and if he or she determines the installation or operation is no longer conducted or maintained in a safe manner, he or she shall have authority to require unsafe tanks to be removed from service.

(e) Underground tank storage requirements are as follows:

1. Periodic tests of underground storage systems may be required by the fire official to determine that leakage has not occurred.

(f) The following apply to containers and portable tanks:

1. This subsection shall apply to the storage and dispensing of flammable or combustible liquids into or from containers or portable tanks not exceeding 660 gallons individual capacity.

2. Exceptions: The requirements of this subsection shall not apply to the following:

i. Flammable liquids in the fuel tanks of a motor vehicle, aircraft, motorboat, mobile power plant, or mobile heating plant; and

ii. Flammable or combustible paints, oils, varnishes, or similar mixtures when such liquids are stored from painting or maintenance or similar purposes, upon the premises and which are not stored for a period exceeding 30 days.

3. Containers and portable tanks for flammable and combustible liquids shall conform to (b)2 and (b)2i above and Table 3.28(f) below.

i. Exceptions: The requirements of (f)3 above shall not apply to the following: medicines, beverages, foodstuffs, cosmetics and other common consumer items, when packaged according to commonly accepted practices. Class 1A and 1B flammable liquids may be stored in glass containers of not more than one gallon capacity if the required liquid purity (such as ACS analytical reagent grade or higher) would be affected by storage in metal containers or if the liquid would cause excessive corrosion of the metal container.

4. Inside storage and handling rooms shall be enclosed with assemblies having a fire resistance rating of not less than two hours when quantities of more than 100 gallons are involved or such storage shall be in a separate exterior storage building constructed in accordance with the building code in effect at the time of first occupancy.



5. The inside storage of flammable or combustible liquids in approved and properly sized containers or tanks shall comply with Table 3.28(f)4 below.

i. Flammable or combustible liquids, including stock for sale, shall not be stored so as to limit use of the means of egress of the building.

6. Flammable or combustible liquid containers conforming to (b)2 and (b)2i and Table 3.28(f) above shall be stored as specified in NFPA 30 listed in Appendix 3-A.

TABLE 3.28(f)  
MAXIMUM ALLOWABLE SIZE OF CONTAINERS  
AND PORTABLE TANKS

Container Type	Flammable Liquids		Combustible Liquids		
	Class 1A	Class 1B	Class 1C	Class II	Class III
Glass	1 pt.	1 qt.	1 gal.	1 gal.	1 gal.
Metal (other than DOT drums) or approved plastic Safety cans	1 gal.	5 gal.	5 gal.	5 gal.	5 gal.
	2 gal.	5 gal.	5 gal.	5 gal.	5 gal.
Metal drums (DOT spec.)	60 gal.	60 gal.	60 gal.	60 gal.	60 gal.
Approved portable tanks	660 gal.	660 gal.	660 gal.	660 gal.	660 gal.

Table 3.28(f)4  
MAXIMUM INSIDE PILE STORAGE

Class Liquid	Storage Level (Note b)	Protected* Maximum Gals. (Note a)	Storage per Pile Height (Note c)	Unprotected Maximum Gals. (Note a)	Storage per Pile Height (Note c)
1A	Ground and upper floors	2,750 (50)	3 ft. (1)	660 (12)	3 ft. (1)
	Basement	Not permitted			Not permitted
1B	Ground and upper floors	5,500 (100)	6 ft. (2)	1,375 (25)	3 ft. (1)
	Basement	Not permitted			Not permitted
1C	Ground and upper floors	16,500 (300)	6 ft. (2)	4,125 (75)	3 ft. (1)
	Basement	Not permitted			Not permitted
II	Ground and upper floors	16,500 (300)	9 ft. (3)	4,125 (75)	9 ft. (3)
	Basement	5,500 (100)	9 ft. (3)	Not permitted	Not permitted
III	Ground and upper floors	55,000 (1,000)	15 ft. (5)	13,750 (250)	12 ft. (4)
	Basement	8,250 (150)	9 ft. (3)	Not permitted	Not permitted

\* A water sprinkler or equivalent fire suppression system installed in accordance with the Uniform Construction Code and approved by the fire official.

Note a: When two or more classes of materials are stored in a single pile, the maximum gallonage permitted in that pile shall be the smallest of separate maximum gallonage. Number below gallon quantity is the number of 55 gallon capacity containers.

Note b: Aisles shall be provided so that no portable tank is more than 12 feet from an aisle. Main aisles shall be at least eight feet wide and side aisles at least four feet wide.

Note c: Each pile shall be separated from each other pile by at least four feet. When stored on suitably protected racks or when the storage is suitably protected, portable tanks may be piled up to the height limits indicated in (g)6iv below, where approved by the fire official.

(g) Quantity requirements are as follows:

1. The storage of flammable or combustible liquids in containers or portable tanks shall comply with the following applicable paragraphs, except that the fire official may impose a quantity limitation or require greater protection where unusual hazard to life or property is involved. Increase of these amounts may be authorized where the type of construction, fire protection provided, or other factors substantially reduce the hazard.

2. Storage in excess of five gallons of flammable liquids or 60 gallons of combustible liquids shall be prohibited in buildings of Use Group R-3 and accompanying attached or detached garages, with the exception of owner occupied one-and-two-family dwellings.

3. Storage in excess of 10 gallons of flammable liquids or 60 gallons of combustible liquids shall be prohibited in buildings of Use Groups A, R-1 and R-2.

4. In buildings of Use Groups B, E and I, storage shall be limited to that required for operation of office equipment, maintenance, demonstration, treatment and laboratory work. All liquids in laboratories and at other points of use shall meet the following storage provisions:

i. A container for flammable liquids shall not exceed a capacity of one gallon, except that safety cans can be of two gallons capacity.

ii. Not more than 10 gallons of flammable liquids shall be stored outside of an approved storage cabinet or interior storage room, except in safety cans.

iii. Not more than 25 gallons of flammable liquids shall be stored in safety cans outside of an interior storage room or storage cabinet.

iv. Not more than 60 gallons of combustible liquids shall be stored outside of an interior storage room or storage cabinet.

v. Quantities of flammable and combustible liquids in excess of those set forth in this paragraph shall be stored in an approved interior storage room or storage cabinet.

5. Storage in buildings of Use Group M shall comply with the following provisions:

i. In rooms or areas accessible to the public, storage of Class I, Class II and Class IIIA liquids shall be limited to quantities needed for display and normal merchandising purposes but shall not exceed two gallons per square foot of gross floor area. The gross floor area used for computing the maximum quantity permitted shall be considered as that portion of the store actually being used for merchandising flammable and combustible liquids.

ii. Where the aggregate quantity of additional stock exceeds 60 gallons of Class IA, 120 gallons of Class IB, 180 gallons of Class IC, 240 gallons of Class II, or 660 gallons of Class IIIA liquids or any combination of flammable liquids exceeding 240 gallons, the excess shall be stored in a room or portion of the building that complies with the construction provisions for an inside storage room. For water-miscible liquids, these quantities may be doubled.

iii. Containers in a display area shall not be stacked more than three feet or two containers high, whichever is the greater, unless on fixed metal shelving or otherwise being satisfactorily secured.

iv. Shelving shall be made of stable metal construction, of sufficient depth and arrangement such that containers displayed thereon shall not be easily displaced.

v. Leaking containers shall be removed to an approved interior storage room or to a location outside the building safe from ignition sources, and the contents transferred to an undamaged container.

6. Storage in general purpose or industrial plant warehouses shall be in accordance with Tables 3.28(f) and 3.28(f)4 above and in buildings or in portions of such buildings separated by fire walls. Material creating fire exposure hazard to the flammable or combustible liquids may not be stored in the same area.

7. Flammable and combustible liquid warehouses or storage buildings shall comply with the following requirements:

i. The total quantity of liquids within a building shall not be restricted, but the arrangement of storage shall comply with Table 3.28(f)4 above provided said storage is in approved containers of sizes complying with Table 3.28(f) above.

ii. Containers in piles shall be separated by pallets or dunnage where necessary to provide stability and to prevent excessive stress on container walls.

iii. Portable tanks stored over one tier high shall be designed to nest securely, without dunnage, and adequate materials handling equipment shall be available to handle tanks safely at the upper tier level.

iv. No pile shall be closer than three feet to the nearest beam, chord, girder or other obstruction and shall be three feet below sprinkler deflectors or discharge orifices of water spray, or other overhead fire protection systems.

v. Aisles at least three feet wide shall be provided where necessary for access to doors, windows or stand-pipe connections.

(h) Fire control requirements are as follows:

1. Suitable fire extinguishing equipment, such as small hose or portable fire extinguishers, shall be available at locations where flammable or combustible liquids are stored.

i. At least one portable fire extinguisher having a rating of not less than 20-B:C shall be located outside of, but not more than 10 feet from, the door opening into any interior storage room.

ii. At least one portable fire extinguisher having a rating of not less than 20-B:C shall be located not less than 10 feet, nor more than 25 feet, from any flammable liquid storage area located outside of an interior storage room but inside the building.

2. Open flames and smoking shall not be permitted in flammable or combustible liquid storage areas.

3. Materials which will react with water shall not be stored in the same room with flammable or combustible liquids.

4. Containers and portable tanks used for flammable liquids shall be electrically bonded or grounded during transfer of liquids in accordance with NFPA 77 listed in Appendix 3-A, incorporated herein by reference.

(i) The following apply to tank vehicles:

1. The provisions of this subsection apply to tank vehicles which are to be used for the transportation of asphalt or flammable or combustible liquids. The intent of the provisions is to provide minimum requirements for the design and construction of cargo tanks and their appurtenances and to set forth certain matters pertaining to tank vehicles.

2. All tank vehicles, and appurtenances shall be designed and constructed in compliance with NFPA 385 listed in Appendix 3-A, incorporated herein by reference.

3. Tank vehicles shall be used and operated as specified in NFPA 385 listed in Appendix 3-A and as follows:

i. Tank vehicles shall not be parked or left unattended on any street, highway, avenue or alley, provided that this shall not prevent a driver from necessary absence from the vehicle in connection with the delivery of the load, except that during actual discharge of the liquid some responsible person shall be present at the vehicle, nor shall it prevent stops for meals during the day or night if the street is well lighted at point of parking. Tank vehicles shall not be parked out of doors at any one point for longer than one hour, except at flammable liquid bulk terminals, bulk plants and other locations approved by the fire official.

ii. Tank vehicles shall not be parked or garaged in any building or structure other than those specifically approved for such use by the fire official.

iii. Each tank vehicle shall be provided with at least one portable fire extinguisher having a rating of not less than 2-A:20-B:C.

4. The driver, operator or attendant of any tank vehicle shall not leave the vehicle while it is being filled or discharged. Delivery hose, when attached to a tank vehicle, shall be considered to be a part of the tank vehicle. When making or breaking hose connections, the motors of tank trucks or tractors shall be shut down. If loading or unloading is done without the use of a power pump, the tank truck or tractor motor shall be shut down throughout such operations.

i. Delivery of flammable liquids to underground tanks of more than 1,000 gallons capacity shall be made by means of vapor-tight connections between the hose and the fill pipe. In all cases where underground tanks are equipped with any type of vapor recovery system, all connections required to be made for the safe and proper functioning of the particular vapor recovery process shall be made. Such connections shall be made liquid and vapor-tight and shall remain connected throughout the unloading process. Vapors shall not be discharged into the atmosphere at grade level during delivery.

ii. Upon arrival at a point of delivery and prior to discharging any flammable or combustible liquids into underground tanks, the driver, operator or attendant of the tank vehicle shall ensure that all liquid delivery and vapor recovery (if required) hoses will be protected from physical damage by motor vehicles. Such protection shall be provided by positioning the tank vehicle so as to prevent motor vehicles from passing through the area(s) occupied by hoses or shall consist of portable traffic warning devices, such as traffic cones.

Administrative Correction, effective May 18, 1992.  
See: 24 N.J.R. 1875(a).

#### 5:18-3.29 Hazardous materials and chemicals

(a) The provisions of this section shall apply to hazardous materials which are not otherwise covered in this Code

which are highly flammable, or which may react to cause fires or explosions, or which by their presence create or augment a fire or explosion hazard, or which because of their toxicity, flammability, or liability to explosion render fire fighting abnormally dangerous or difficult; also to flammable liquids which are chemically unstable and which may spontaneously form explosive compounds, or undergo spontaneous reactions of explosive violence or with sufficient evolution of heat to be a fire hazard. Hazardous chemicals shall include such materials as flammable solids, corrosive liquids, radioactive materials, oxidizing materials, potentially explosive chemicals, highly toxic materials, and poisonous gases, as defined in N.J.A.C. 5:18-3.2.

(b) For the purpose of this section and as used in this Code, the following words and terms shall have the meaning shown.

“Sealed source” means a quantity of radiation so enclosed as to prevent the escape of any radioactive material but at the same time permitting radiation to come out for use.

“Storage, isolated” means storage away from incompatible materials in a different storage room or in a separate and detached building located at a safe distance from hazardous occupancies and important exposures.

“Storage, separated” means storage in the same fire area but physically separated by as much space as practicable, using sills or curbs as safeguards, or by intervening storage of nonhazardous, compatible commodities.

(c) General requirements for hazardous materials and chemicals are as follows:

1. The manufacture, storage, handling and use of hazardous materials and chemicals shall be safeguarded with such protective facilities as public safety requires.

2. The fire official may require the separation or isolation of any chemical that in combination with other substances may bring about a fire or explosion or may liberate a flammable or poisonous gas. The fire official may require separation from other storage facilities, dwellings, places of assembly, educational uses, railroads and public highways when the quantity stored constitutes a material hazard. Limitations on storable quantities shall be considered with regard to proximity of these exposures and congested commercial and industrial districts.

3. Defective containers which permit leakage or spillage shall be disposed of or repaired in accordance with recognized safe practices. Spilled materials shall not be allowed to accumulate on floors or shelves.

4. Where kept for retail sale in containers or packages usual to the retail trade, storage shall be neat and orderly and shelves shall be of substantial construction.

5. Where specific requirements are not otherwise established, storage, handling and use of hazardous materials and chemicals shall be in accordance with nationally recognized good practice.

6. All containers of materials and chemicals shall be individually labeled or shall have a sign or placard posted on the container.

7. All labels, signs and placards shall be prominently affixed to the container and shall provide the chemical name and hazard warning information related to the substance being contained. Fixed containers shall also be provided with placards in accordance with NFPA 704 listed in Appendix 3-A, incorporated herein by reference.

8. The owner shall have available for review and inspection a material safety data sheet for each hazardous material or substance on the premises. The material safety data sheet shall include the following information.

- i. The manufacturer's name, address and emergency telephone number;
- ii. The chemical name and synonyms; trade names and synonyms; and hazardous ingredients;
- iii. The physical data and reactivity data;
- iv. Fire and explosion data;
- v. Health hazard data; and
- vi. Special protection information and special precautions.

(d) The layout, arrangement and construction of buildings and structures in which hazardous chemicals are handled shall comply with the applicable requirements of the building code in effect at the time of first occupancy for the appropriate use group classification, and shall be provided with fire protection and fire extinguishing equipment as required by that Code. Buildings and structures and their service equipment shall be maintained in safe condition as required by this Code.

(e) Packaged oxidizing materials shall be stored in dry locations and separated from stored organic and other combustible materials. Bulk oxidizing materials shall not be stored on or against wooden surfaces.

(f) The following apply to radioactive materials:

1. Durable, clearly visible signs warning of radiation dangers shall be placed at all entrances to areas or rooms where radioactive materials are used or stored. In addition, on each container in which radioactive materials are used, stored or transported shall be the three-bladed radiation symbol in magenta or purple on a yellow background in accordance with nationally recognized good practice. The use, storage and handling of radioactive materials shall comply with NFPA 801 listed in Appendix 3-A, incorporated herein by reference, where provisions of this section do not specifically cover conditions and operations.

- i. Exception: Signs are not required for storage of manufactured articles other than liquids, such as instruments or clock dials or electronic tubes or apparatus of which radioactive materials are a component part, and luminous compounds, when securely packed in strong containers, provided the gamma radiation at any surface of the package is less than 10 milliroentgens in 24 hours.

2. When not in use, radioactive materials shall be kept in adequately shielded fire resistant containers of such design that the gamma radiation will not exceed 200 milliroentgens per hour or equivalent at any point of readily accessible surface.

(g) The following apply to unstable (reactive) chemicals:

1. Unstable chemicals shall be stored away from all incompatible chemicals and contaminating and sensitizing materials. Unstable reactive chemicals shall not be stored in the same building with or in close proximity to explosives and blasting agents, except in accordance with N.J.A.C. 5:18-3.26(e).

2. Such chemicals shall be kept away from all heat-producing appliances and electrical devices and shall be protected from external heat, fire and explosion. All electric bulbs shall be equipped with guards to prevent breakage. Open lights or flames and smoking shall be prohibited in or near storage areas. Internal combustion motor vehicles or lift trucks shall not be parked or stored in the room or compartment where such chemicals are located.

3. Good housekeeping shall be maintained. Uncontaminated contents of broken or cracked bags, packages or other containers shall be transferred to new and clean containers before storing. Other spilled materials and discarded containers shall be promptly gathered up and destroyed in an approved manner.

4. A detached, well isolated, ventilated and unheated storage building constructed with walls having a fire resistance rating of not less than two hours, a noncombustible floor and a lightweight insulated roof shall be provided for the storage of 50 pounds or more of organic peroxides. If not adequately protected by a fast-acting deluge type automatic sprinkler system, the storage building shall be located the minimum distances from flammable liquid storage combustible materials in the open and from any other building or highway, as indicated in the following Table 3.29(g)4 below.

- i. Stock supplies stored inside production buildings shall be limited to 50 pounds at any one time.

TABLE 3.29(g)4  
ORGANIC PEROXIDE STORAGE

Weight of organic peroxide (pounds)	Distance (feet)
50 to 100	75

Weight of organic peroxide (pounds)	Distance (feet)
100 to 500	100
500 to 1,000	125
1,000 to 3,000	200
3,000 to 5,000	300

ii. The organic peroxides shall be stored in the original shipping containers (U.S. Department of Transportation containers). Care shall be taken to avoid rough handling or contamination of these chemicals. Readily legible warning signs and placards shall be prominently placed in the storage and processing areas.

5. A suitably isolated outdoor storage area shall be provided for nitromethane. Hazardous processing shall not be permitted in the vicinity of this storage area. Nitromethane shall be stored in the drums in which it is received or in an underground tank with suitable corrosion protection and a minimum of two feet of earth over the tank or in barricaded tanks above ground. If the drum storage is not adequately protected by a fast-acting deluge type automatic sprinkler system, the storage of 2,000 pounds or more shall be located the minimum distances from inhabited buildings as shown in Table 3.29(g)5 below. Care shall be taken to avoid rough handling or contamination of this chemical. Readily legible warning signs and placards shall be prominently placed in the storage and processing areas.

TABLE 3.29(g)5  
NITROMETHANE STORAGE

Weight of nitromethane (pounds over)	(pounds not over)	Approximate number of drums	Distance (feet)
Beginning at	2,000	4	100
2,000 to	10,000	20	200
10,000 to	20,000	40	300
20,000 to	40,000	80	400
40,000 to	80,000	160	500

6. All flooring in storage and handling areas shall be of noncombustible material and shall be without drains, traps, pits or pockets into which any molten ammonium nitrate could flow and be confined in case of fire.

i. Each storage pile of bags or other authorized packages and containers of such materials shall not exceed 20 feet in width and 50 feet in length. The length is not limited if the building is of fire resistive or noncombustible construction or sprinkler protected. For pile heights exceeding 15 feet, a hydraulically engineered sprinkler system shall be required. Such pile units shall be separated by a clear space of not less than three feet in width from the base to the top of the piles, serving as cross-aisles. At least one service or main aisle in the storage area shall be not less than four feet in width. A clearance of not less than 30 inches shall be maintained from building walls and partitions and of

not less than three feet from ceilings or roof structural members with a minimum of 18 inches from sprinklers.

ii. Ammonium nitrate storage areas shall be separated by a space of 30 feet with sills or curbs, or by approved type walls of not less than one hour fire resistance rating, from stocks of organic chemicals, corrosive liquids, flammable compressed gases, flammable and combustible materials, such as coal, sawdust, charcoal, or flour where storage of such materials is permitted with ammonium nitrate.

iii. Quantities of ammonium nitrate or ammonium nitrate fertilizer, not having organic coating, in the form of crystals, flakes, grains or prills including fertilizer grade, dynamite grade, nitrous oxide grade and technical grade ammonium nitrate and ammonium nitrate phosphate (containing 60 percent or more ammonium nitrate by weight) of more than 50 tons total weight shall be stored in a well ventilated building of fire resistive or noncombustible construction, or in buildings of other types of construction equipped with an approved automatic sprinkler system. In populated areas, quantities of 2,500 tons or more shall be stored in well ventilated buildings of fire resistive or noncombustible construction equipped with an approved automatic sprinkler system, and combustible materials or ammonium nitrate sensitizing contaminants shall not be stored in this building.

iv. Storage of ammonium nitrate, coated or mixed with organic anti-caking materials, except compounded blasting agents, shall not be permitted in populated and congested areas. Outside such areas, quantities of 500 tons or less may be stored in well ventilated buildings of fire resistive or noncombustible construction equipped with an approved automatic sprinkler system.

(h) The following apply to highly toxic materials:

1. Highly toxic materials shall be separated from other chemicals and combustible and flammable substances by storage in a room or compartment separated from other areas by walls and floor and ceiling assemblies having a fire resistance rating of not less than one hour. The storage room shall be provided with adequate drainage facilities and natural or mechanical ventilation to the outside atmosphere.

2. Legible warning signs and placards stating the nature and location of the highly toxic materials shall be posted at all entrances to areas where such materials are stored or used.

(i) The following apply to poisonous gases:

1. Storage of poisonous gases shall be in rooms of at least one hour fire resistance rated construction and having natural or mechanical ventilation adequate to remove leaking gas. Such ventilation shall not discharge to a point where the gases may endanger any person.



2. Legible warning signs stating the nature of hazard shall be placed at all entrances to locations where poisonous gases are stored or used.

3. Distributors of poisonous gases as defined in this chapter shall provide and maintain on their premises at least one complete commercial-type repair kit for each size and type poisonous gas cylinder stored or kept on said premises. Such repair kit(s) shall be so located that they will be accessible at all times for immediate use. Said repair kits shall be kept in durable containers and plainly marked as to the size of cylinder the repair kit is designed to service.

(j) Satisfactory provisions shall be made for containing and neutralizing leakage of corrosive liquids which may occur during storage or handling.

(k) The following apply to hazardous materials tank vehicles:

1. The provisions of this subsection apply to vehicles for transportation of hazardous materials as defined in (a) above.

2. Vehicles shall be operated as follows:

i. Vehicles shall not be parked or left unattended on any street, highway, avenue or alley, provided that this shall not prevent a driver from the necessary absence from the vehicle in connection with the delivery of the load, except that during actual discharge of the load some responsible person shall be present at the vehicle, nor shall it prevent stops for meals during the day or night if the street is well lighted at point of parking. Vehicles shall not be parked out of doors at any one point for longer than one hour except at locations approved by the fire official.

ii. Vehicles shall not be parked or garaged in any building or structure other than those specifically approved for such use by the fire official.

3. The driver, operator or attendant of any vehicle shall not leave the vehicle while it is being filled or discharged. Delivery hose, when attached to a tank vehicle, shall be considered to be a part of the tank vehicle. When making or breaking hose connections, the motors of tank trucks or tractors shall be shut down. If loading or unloading is done without the use of power pump, the tank truck or tractor motor shall be shut down throughout such operations.

Administrative Correction, effective May 18, 1992.  
See: 24 N.J.R. 1875(a).

### 5:18-3.30 Liquefied petroleum gases

(a) The equipment, processes and operations for storage and handling of liquefied petroleum gas shall comply with the applicable requirements of this Code and the provisions of this section and shall be installed and maintained in accordance with NFPA 58 listed in Appendix 3-A, incorporated herein by reference, where provisions of this section do not specifically cover conditions and operations.

(b) Installers shall maintain a record of all installations for which a permit is not required (but not including installation of gas burning appliances and replacing of portable cylinders) and have it available for inspection by the fire official.

(c) The following apply to tank container systems:

1. All aboveground tank container systems other than cylinder or bottled gas shall be located with respect to the nearest important building, group of buildings, or line of adjoining property which may be built upon as specified in Table 3.30(d) below.

2. Underground tank container systems shall be buried at least six inches below grade. All containers shall be protected against corrosion for the soil condition at the container site by a method in accordance with good engineering practices. The fire separation from the nearest important building, group of buildings, or line of adjoining property that may be built upon shall comply with Table 3.30(d) below.

(d) Container storage requirements are as follows:

1. Where storage containers having an aggregate water capacity more than 4,000 gallons are located in heavily populated or congested areas, the siting provisions of Table 3.30(d) below may be modified as indicated by the fire safety analysis described in Section 3-10.2 of NFPA 58 listed in Appendix 3-A.

2. Multiple container installations with a total storage water capacity of more than 180,000 gallons, or approximately 150,000 gallons LP-Gas capacity, shall be subdivided into groups containing not more than 180,000 gallons in each group. Such groups shall be separated by a distance of not less than 50 feet. Where one of these forms of protection in (d)2i through v below is provided, the separation shall not be less than 25 feet between such container groups.

- i. Burial or mounding in an approved manner;
- ii. Protection with approved insulation on such areas that may be subjected to impingement of ignited gas from pipelines or other leakage;
- iii. Protection by fire walls of approved construction;
- iv. Protection by an approved system for application of water; or
- v. Protection by other approved means.

TABLE 3.30(d)  
SEPARATION FOR TANK CONTAINER SYSTEMS

Water capacity per container (gallons)	Minimum distances between containers and buildings or lot lines		
	Mounded or under- ground <sup>d</sup>	Aboveground	Between aboveground containers
Less than 125 <sup>a</sup>	10 feet	None <sup>b</sup>	None

Water capacity per container (gallons)	Minimum distances between containers and buildings or lot lines		
	Mounded or under- ground <sup>d</sup>	Aboveground	Between aboveground containers
125 to 250	10 feet	10 feet	None
251 to 500	10 feet	10 feet	3 feet
501 to 2,000	25 feet <sup>c</sup>	25 feet <sup>c</sup>	3 feet
2,001 to 30,000	50 feet	50 feet	5 feet
30,001 to 70,000	50 feet	75 feet	
70,001 to 90,000	50 feet	100 feet	( $\frac{1}{4}$ of sum of diameters of adjacent containers)
90,001 to 120,000	50 feet	125 feet	

Note a: At a consumer site, if the aggregate water capacity of a multi-container installation comprised of individual containers having a water capacity of less than 125 gallons is 501 gallons or more, the minimum distance shall comply with the appropriate portion of this table, applying the aggregate capacity rather than the capacity per container. If more than one such installation is made, each installation shall be separated from any other installation by at least 25 feet. Do not apply the minimum distances between aboveground containers to such installations.

Note b: The following shall apply to aboveground containers installed alongside of buildings:

1. DOT specification containers shall be located and installed so that the discharge from the container safety relief device is at least three feet horizontally away from any building opening below the level of such discharge, and shall not be beneath any building unless this space is well ventilated to the outside and is not enclosed for more than 50 percent of its perimeter. The discharge from container safety relief devices shall be located not less than five feet in any direction away from any exterior source of ignition, openings into direct-vent (sealed combustion system) appliances, or mechanical ventilation air intakes.

2. ASME containers of less than 125 gallons water capacity shall be located and installed so that the discharge from safety relief devices shall not terminate in or beneath any building and shall be located at least five feet horizontally away from any building opening below the level of such discharge, and not less than five feet in any direction away from any exterior source of ignition, openings into direct vent (sealed combustion system) appliances, or mechanical ventilation air intakes.

3. The filling connection and the vent from liquid level gauges on either DOT or ASME containers filled at the point of installation shall not be less than 10 feet in any direction away from any exterior source of ignition, openings into direct-vent (sealed combustion system) appliances, or mechanical ventilation air intakes.

Note c: This distance may be reduced to not less than 10 feet for a single container of 1,200 gallons water capacity or less provided such container is at least 25 feet from any other LP-Gas container of more than 125 gallons water capacity.

Note d: Minimum distances for underground containers shall be measured from the relief valve and filling or liquid level gauge vent connection at the container, except that no part of an underground container shall be less than 10 feet from a building or line of adjoining property which may be built upon.

(e) Requirements for use inside buildings are as follows:

1. Containers and first stage regulating equipment shall be located outside of buildings other than buildings especially provided for this purpose, except containers and regulating equipment may be used indoors under the following conditions:

i. If temporarily used for demonstration purposes and the container has a maximum water capacity of 12 pounds (nominal five pounds LP-Gas capacity);

ii. If used with a completely self-contained gas hand torch or similar equipment, and the container has a maximum water capacity of 2½ pounds (nominal one pound LP-Gas capacity);

iii. In industrial and temporary applications when in conformance with N.J.A.C. 5:18-3.20(i)2 and Section 3-4 of NFPA 58 listed in Appendix 3-A;

iv. In use as a motor fuel ((e)2 below); or

v. In storage awaiting use or resale in accordance with Chapter 5 of NFPA 58 listed in Appendix 3-A.

2. The quantity of LP-Gas stored inside buildings for use as a motor fuel shall not exceed 300 pounds.

3. Gas for fuel purposes in either the liquid or vapor phase shall not be piped into any building at pressure in excess of 20 pounds per square inch gauge (psig) except as follows:

i. Buildings used exclusively to house equipment for vaporization, pressure reduction, gas mixing, gas manufacturing or distribution;

ii. Buildings, or portions of buildings, separated from other portions by walls, partitions and floor and ceiling assemblies of noncombustible material having a fire resistance rating of not less than two hours, used exclusively to house internal combustion engines or industrial processes or used exclusively for research and experimental laboratories; or

iii. Buildings, structures or equipment under construction or repair.

(f) Fire safety requirements are as follows:

1. The layout, arrangement and construction of buildings and structures in which liquefied petroleum gases are used or stored shall comply with the applicable requirements of the building code in effect at the time of first occupancy for the appropriate use group classification, and shall be provided with fire protection and fire extinguishing equipment as required by that code. Buildings and structures and their service equipment shall be maintained in safe condition as required by this Code.

2. All liquefied petroleum gas equipment, except such equipment installed at utility gas plants, shall be installed as specified in NFPA 58 listed in Appendix 3-A except as otherwise provided in this section. Liquefied petroleum gas equipment at utility gas plants shall be installed as specified in NFPA 59 listed in Appendix 3-A, incorporated herein by reference.

3. Every tank vehicle, or other vehicle used for the transportation of liquefied petroleum gas in excess of 1,000 pounds aggregate gross weight (product and container weight), shall be placarded according to DOT 49 CFR listed in Appendix 3-A.

i. The parking and garaging of tank vehicles used for the transportation of liquefied petroleum gases shall be in accordance with Section 6-6 of NFPA 58 listed in Appendix 3-A.

4. Liquefied petroleum gas installations at marine and pipeline terminals, natural gasoline plants, refineries and tank farms shall be designed and installed so as to be reasonably safe to persons and property.

(g) The following apply to abandonment of equipment:

1. The fire official shall be notified immediately when the use of any liquefied petroleum gas equipment is to be abandoned. Such equipment shall be abandoned in accordance with (g)2 below within 30 days after such notification.

2. Approved procedures for abandoned liquefied petroleum gas containers are as follows:

i. Tanks "temporarily out of service" shall have the fill line, gauge opening, any fuel line entering the building and the pump connection secured against tampering. Relief and regulating devices shall be maintained in accordance with the requirements of this section.

ii. Any tank not used for a period of 10 months shall be properly safeguarded or removed in a manner approved by the fire official.

(1) Exception: Emergency standby LP-Gas fuel systems which are not utilized within an 18 month period shall be purged of all flammable gases with an inert gas or removed. When LP-Gas containers are purged, the container shall be marked on two sides with 12 inch high, red or contrasting letters stating, "Purged-Inert Gas". The fire official shall be notified in writing as to which containers have been rendered out of service.

iii. Any tank which has been abandoned for a period of one year shall be removed from the property in a manner approved by the fire official and the site restored in an approved manner.

iv. Tanks which are to be reinstalled for liquefied petroleum gas shall comply with all of the provisions of this section.

v. Tanks which are to be returned to service shall be tested in a manner approved by the fire official.

(h) Container and site requirements are as follows:

1. Containers of 125 gallons or more water capacity shall be legibly marked with a warning followed by the name of the gas contained. The warning label shall read "Flammable Gas" followed by the name of the gas, such as "Propane" or "Butane".

2. Storage areas having containers exceeding 125 gallons aggregate water capacity shall be posted with adequate "NO SMOKING" and "FLAMMABLE GAS" signs legibly marked. The warning "FLAMMABLE GAS" shall be followed by the name of the gas stored on the site, such as "PROPANE" or "BUTANE".

3. All LP-Gas installations exceeding 250 gallons individual or aggregate water capacity shall be provided with a marker plate or sign indicating who should be called in the event of an emergency involving the LP-Gas installation. The marker or sign shall include the following:

i. The name of the gas supplier, plant installer, owner, or operator who will respond to the emergency; and

ii. The telephone number of that person.

4. The LP-Gas supplier, plant installer, owner or operator indicated on the marker plate or sign required in (h)3 above shall respond when notified to all LP-Gas emergencies occurring at the installation and shall maintain a 24-hour phone service.

5. Whenever there is a fire or explosion or accident involving serious injury or loss of life as a result of an incident involving an LP-Gas installation, the responsible party as required in (h)4 above shall promptly notify the fire official of its occurrence.

Amended by R.1993 d.197, effective May 3, 1993.

See: 25 N.J.R. 393(a), 25 N.J.R. 1868(a).

At (h), responsibility for notification of accidents specified.

### 5:18-3.31 Magnesium

(a) The equipment, processes and operation for the storage, handling or processing of magnesium shall comply with the applicable requirements of this Code and the provisions of this section. Magnesium, as herein referred to, shall include the pure metal and alloys of which the major part is magnesium.

(b) Storage requirements are as follows:

1. Outside storage of magnesium pigs, ingots and billets shall be in piles not exceeding 500 tons each, separated by aisles not less in width than one-half the height of the pile, and separated from combustible materials or buildings on the same or adjoining property by a distance of not less than the height of the nearest pile.

2. Storage of pigs, ingots and billets in buildings shall be on floors of noncombustible construction, in piles not larger than 250 tons each, separated by aisles not less in width than one-half the height of the pile.

3. The size of storage piles of magnesium articles in foundries and processing plants shall not exceed 1,250 cubic feet and shall be separated by aisles not less in width than one-half the height of the pile.

4. Magnesium storage in a quantity greater than 50 cubic feet shall be separated from storage of other materials that are either combustible or in combustible containers, by aisles equal in width to not less than the height of the piles of magnesium.

5. Magnesium storage in a quantity greater than 1,000 cubic feet shall be separated into piles each not larger than 1,000 cubic feet with aisles between equal in width to not less than the height of the piles.

6. Where storage in a quantity greater than 1,000 cubic feet is in a building of combustible construction, or the magnesium is packed in combustible crates or cartons, or there is other combustible storage within 30 feet of the magnesium, the storage area shall be protected by an automatic sprinkler system.

(c) Handling requirements are as follows:

1. At each grinding, buffing or wire-brushing operation on magnesium, not including rough finishing of castings, dust shall be collected by means of suitable hoods or enclosures connected to a liquid precipitation type of separator, such that the dust will be converted to sludge without contact in a dry state with any high speed moving parts.

i. Connecting ducts or suction tubes shall be completely grounded and as short as possible, without unnecessary bends. Ducts shall be carefully fabricated and assembled, with a smooth interior and with internal lap joints pointing in the direction of air flow, and without unused capped side outlets, pockets or other dead-end spaces which might allow an accumulation of dust.

ii. Each machine shall be equipped with an individual dust separating unit, except that with multi-unit machines not more than two dust-producing units may be served by one separator. Not more than four portable dust-producing units in a single enclosure or stand shall be served by one separator unit.

iii. Power supply to dust-producing machines shall be interlocked with the motor driving the exhaust blower and the liquid level controller of the wet collector in such a way that improper functioning of the dust collecting system will shut down the machine it serves. A time delay switch or equivalent device shall be provided in the dust-producing machine to prevent starting of its motor drive until the wet collector is in complete operation and several changes of air have swept out any residual hydrogen.

iv. All electrical wiring, fixtures and equipment in the immediate vicinity of and attached to dust-producing machines, including those used in connection with separator equipment, shall be of types approved for use in Class II, Group E, hazardous locations as specified in NFPA 70 listed in Appendix 3-A, incorporated herein

by reference, and shall be installed in accordance with nationally recognized safe practice.

v. All equipment shall be securely grounded by permanent ground wires.

2. Approved means shall be provided for control of magnesium fires in heat treating ovens.

3. Floors under and around melting pots shall be of noncombustible construction.

4. Chips, turnings and other fine magnesium scrap shall be collected from the pans or spaces under the machines and from other places where they collect at least once each working day and placed in a covered, vented steel container and removed to a safe location.

i. Magnesium fines shall be kept separate from other combustible materials. Storage in a quantity greater than 50 cubic feet of fine magnesium scrap shall be separated from other uses in accordance with the Uniform Construction Code or by an open space of at least 50 feet. Storage in a quantity greater than 1,000 cubic feet shall be separated from all buildings other than those used for magnesium scrap recovery operations by a distance of not less than 100 feet.

(d) Fire safety requirements are as follows:

1. The layout, arrangement and construction of buildings and structures where magnesium is stored, processed or handled shall comply with the applicable requirements of the building code in effect at the time of first occupancy for the appropriate use group classification and shall be provided with fire protection and fire extinguishing equipment as required by that code. Buildings and structures and their service equipment shall be maintained in safe condition as required by this code and NFPA 651 listed in Appendix 3-A, incorporated herein by reference, where provisions of this section do not specifically cover conditions and operations. Smoking shall be in accordance with N.J.A.C. 5:18-3.3(k).

2. A supply of approved extinguishing powder in a substantial container with a hand scoop or shovel for applying powder on magnesium fires or an approved extinguisher unit designed for use with such powder shall be kept within easy reach of every operator performing a machining, grinding or other processing operation on magnesium.

#### 5:18-3.32 Matches

(a) The equipment, processes, and operation for the manufacturing, storage or handling of matches in quantities as indicated herein shall comply with the applicable requirements of this Code and the provisions of this section.

(b) Fire safety requirements are as follows:

1. The layout, arrangement and construction of buildings and structures for use in connection with the manu-

facturing or storing of matches shall comply with the applicable requirements of the building code in effect at the time of first occupancy for the appropriate use group classification and shall be provided with fire protection and fire extinguishing equipment as required by that code. Buildings and structures and their service equipment shall be maintained in safe condition as required by this Code.

2. At wholesale establishments and wherever more than 25 cases of matches are stored, shipping containers containing matches shall be arranged in piles not exceeding 18 feet in height nor 25,000 cubic feet in volume. Such pile units shall be separated from each other and from other combustible material by a clear space of not less than four feet. Matches shall not be stored within 10 feet of any exit, open stairway, elevator shaft opening or other vertical opening.

3. Where matches are sold at retail, original sealed containers may be stored on shelves not closer than 10 feet to heaters, furnaces, compressors or other mechanical equipment.

4. Where shipping containers containing matches are opened, the contents of the opened containers shall be removed and stored in metal or metal-lined bins equipped with self-closing covers.

### 5:18-3.33 Organic coatings

(a) This section shall apply to processes manufacturing protective and decorative finishes or coatings (paints) for industrial, automotive, marine, transportation, institutional, household or other purposes, and the handling of flammable and combustible liquids, certain combustible solids and potential dust explosion conditions.

i. Exception: This section shall not apply to processes manufacturing nonflammable or water thinned coatings or operations applying coating materials.

(b) Fire safety requirements are as follows:

1. The layout, arrangement and construction of buildings and structures in which organic coatings are manufactured or stored shall comply with the applicable requirements of the building Code in effect at the time of first occupancy for the appropriate use group classification and shall be provided with fire protection and fire extinguishing equipment as required by that Code and this section. Buildings and structures and their service equipment shall be maintained in safe condition as required by this Code and NFPA 35 listed in Appendix 3-A, incorporated herein by reference, where provisions of this section do not specifically cover conditions and operations.

2. Portable fire extinguishers suitable for flammable liquid fires shall be provided as required by the fire official.

3. Open flames and direct-fired heating devices shall be prohibited in areas where flammable vapor-air mixtures may exist.

4. Smoking shall be prohibited except in designated areas approved by the fire official. "No Smoking" signs with lettering of approved size shall be conspicuously posted in such prohibited areas and shall read "By Order of the Fire Official".

5. Adequate aisles shall be maintained for the unobstructed movement of personnel and fire suppression equipment.

6. Power operated equipment and industrial trucks shall be of a type approved for the location.

7. The cleaning of tanks or vessels which have contained flammable or combustible liquids shall only be done under the supervision of persons who understand the fire and explosion potential.

i. When necessary to make repairs involving "hot work," the work shall be authorized by the responsible individual in charge before the work is started.

ii. When necessary to enter a tank, pit, manhole or other confined space, such entry shall be authorized by the responsible individual in charge.

iii. Empty containers previously used for flammable or combustible liquids shall be removed to a detached, outside location, and, if not cleaned on the premises, removed from the plant as soon as practical.

8. Drainage facilities shall be provided to direct flammable and combustible liquid leakage and fire protection water to a safe location away from the building, any other structure, storage area or adjoining property.

i. Emergency drainage systems containing flammable and combustible liquids connected to public sewers or discharging into public waterways shall be equipped with traps or separator tanks.

(c) Static protection requirements are as follows:

1. All equipment such as tanks, machinery and piping, where an ignitable mixture may be present, shall be bonded and connected to a ground. The bond or ground or both shall be physically applied or shall be inherently present by the nature of the installation. This electrically conductive path shall have a resistance of not more than 1,000,000 ohms.

2. Electrically isolated sections of metallic piping or equipment shall be bonded to the other portions of the system or grounded.

3. Tank vehicles loaded or unloaded through open connections shall be grounded and bonded to the receiving system.



4. When a flammable mixture is transferred from one portable container to another, a bond shall be provided between the two containers.

5. Metal framing of buildings shall be grounded with resistance of not more than five ohms.

(d) The following apply to the process building:

1. The process building shall be designed and constructed as required by the building code in effect at the time of first occupancy and without a basement or pit. The first floor shall be at or above grade.

2. An organic coating manufacturing operation shall not be located in the same building with other uses. Operations incidental to, or in connection with, organic coating manufacturing shall not be classed as "other uses" for the purpose of this provision.

3. An organic coating manufacturing operation shall be accessible from at least one side for the purpose of fire control.

4. Where topographical conditions are such that flammable and combustible liquids may flow from the organic coating manufacturing operation so as to constitute a fire hazard to properties of others, drainage facilities shall be provided in accordance with N.J.A.C. 5:18-3.33(b)8 and (b)8i.

5. Structures in which Class I liquids or finely divided flammable solids are processed shall be provided with explosion venting.

6. Enclosed buildings in which Class I liquids are processed or handled shall be ventilated at a rate of not less than one-half cubic foot per minute per square foot of solid floor area. This shall be accomplished by exhaust fans preferably taking suction at floor levels, and discharging to a safe location outside the building. Provision shall be made for introduction of noncontaminated intake air in such a manner that all portions of solid floor areas will be subject to continuous uniformly distributed movement of air.

7. Heating in hazardous areas, if required, shall be provided by indirect means. Ignition sources such as open flames, or electrical heating elements, except as provided in (c) above, shall not be used within the building.

(e) The following apply to process mills, mixers and kettles:

1. Mills operating with close clearances and used for the processing of flammable and heat sensitive materials, such as nitrocellulose, shall be located in a detached building without other uses. The amount of nitrocellulose or other flammable material brought into the area shall be no more than that required for a batch.

2. Mixers shall be of the enclosed type or, if of the open type, shall be provided with properly fitted covers. Where gravity flow is used, a shutoff valve shall be installed as close as practical to the mixer and a control valve shall be provided near the end of the fill pipe.

3. Open kettles shall be located in an outside area, provided with a protective roof or in a separate building of noncombustible construction or separated from other areas by means of a noncombustible wall or partition having a fire resistance rating of at least two hours.

4. The vaporizer section of heat transfer systems heating closed kettles containing solvents shall be remotely located. Contact heated kettles containing solvents shall be equipped with safety devices that in case of fire can turn the process heat off, turn the cooling medium on, and inject gas into the kettle.

5. The kettle and thin-down tank shall be instrumented, controlled and interlocked so that any failure of the controls will result in a safe condition. The kettle shall be provided with a pressure rupture disc in case the normal vent becomes inoperative. The vent piping from the rupture disc shall be of minimum length and shall discharge to a safe location. The thin-down tank shall be adequately vented. Thinning operations shall be provided with an adequate vapor removal system.

(f) The following apply to process piping:

1. All piping, valves and fittings shall be designed for the working pressures and structural stresses to which they may be subjected. They shall be of steel or other material approved for the service intended.

2. Valves shall be of an indicating type. Terminal valves on remote pumping systems shall be of the "dead-man" type which will shut off both the pump and the flow of solvent.

3. Piping systems shall be substantially supported and protected against physical damage. Piping shall be pitched to avoid unintentional trapping of liquids or suitable drains shall be provided.

4. Approved flexible connectors may be used where vibration exists or where frequent movement is necessary. Approved hose shall be used at dispensing stations.

5. Before being placed in service, all piping shall be free of leaks when tested to not less than one and one-half times the working pressure or a minimum of not less than five psig at the highest point in the system. Tests shall continue for a minimum of 30 minutes and shall be at the expense of the owner.

(g) The following apply to raw materials in process areas:

1. The amount of nitrocellulose brought into the operating area shall not exceed that required for a work shift. Any nitrocellulose which may be spilled on the floor or elsewhere shall be promptly swept up, put into a pail of

water, and removed at the end of the day or shift and disposed of by use or by burning in the open at a suitable detached location approved by the fire official.

2. Organic peroxides brought into the operating area shall be in the original shipping container and shall not exceed the quantity required for a work shift. When in the operating area, the peroxide shall not be placed in locations exposed to ignition source, heat or mechanical shocks.

(h) The following apply to the transfer of flammable and combustible liquids in process areas:

1. The transfer of large quantities of flammable and combustible liquids shall be through piping by means of pumps. The use of compressed air as a transfer medium shall be prohibited.

i. Pumps shall be selected for the flammable and combustible liquid use, the working pressures and the structural stresses to which they may be subjected.

2. Where solvents are pumped from storage to points of use, approved switches shall be provided in the processing areas and at the pumps to shut down the pumps in case of fire.

3. Empty and filled containers shall be stored outside the filling area.

(i) The following apply to the storage of raw materials and finished products:

1. The storage, handling and use of flammable and combustible liquids shall be in accordance with N.J.A.C. 5:18-3.28.

2. Tank storage for flammable and combustible liquids inside of buildings shall be permitted only in storage areas at or above grade which are separated from the processing area by a two hour fire-resistance rated fire separation wall. This is not intended to prevent processing equipment from container flammable and combustible liquids or storage in such quantities as are essential to the continuity of operations.

3. Tank car and tank vehicle loading and unloading stations for Class I liquids shall be separated from the processing area, other plant buildings, nearest line of adjoining property that may be built upon or public thoroughfare by a clear distance of not less than 25 feet.

i. Loading and unloading structures and platforms for flammable and combustible liquids shall be designed and installed in accordance with N.J.A.C. 5:18-3.28.

ii. Tank cars for flammable liquids shall be unloaded so as to be reasonably safe to persons and property. Tank vehicles for flammable and combustible liquids shall be loaded and unloaded in accordance with N.J.A.C. 5:18-3.28(i).

4. The nitrocellulose storage shall be in a separate building or in a room separated with a two hour fire-resistance rated fire separation wall. The nitrocellulose storage area shall not be used for any other purpose. Electrical wiring and equipment installed in such rooms or buildings shall conform to (c) above.

i. Nitrocellulose shall be stored only in closed containers. Barrels shall be stored on end and, if tiered, not more than two high. Barrels or other containers of nitrocellulose shall not be opened in the main storage building but at the point of use or other location set aside for the purpose.

ii. Spilled nitrocellulose shall be promptly wetted with water and disposed of by use or by burning in the open at a suitable detached location approved by the fire official.

5. The storage of organic peroxides shall be in accordance with N.J.A.C. 5:18-3.29(g).

i. The size of the package containing the organic peroxide shall be selected so that, as nearly as practical, full packages are utilized at one time. Any peroxide spilled shall be promptly cleaned up and disposed of as recommended by the supplier.

6. Finished products that are flammable or combustible liquids shall be stored outside of buildings, in a separate building, or in a room separated from the processing area by a wall having a fire-resistance rating of at least two hours, and openings shall be equipped with approved fire doors. The storage of finished products shall be in tanks or in closed containers in accordance with N.J.A.C. 5:18-3.28.

Administrative correction, effective May 18, 1992.  
See: 24 N.J.R. 1875(a).

#### 5:18-3.34 Pesticide storage

(a) This section shall apply to both inside and outside storage of all forms of pesticides in portable containers other than fixed installation on transportation equipment. This section shall not apply to the following:

1. Highly toxic materials as regulated in N.J.A.C. 5:18-3.29; and

2. Storage in dwellings or private garages of pesticides registered by the Environmental Protection Agency for use around the home.

(b) Storage requirements are as follows:

1. Pesticides shall be stored in accordance with the following:

i. Pesticides that are flammable or combustible liquids shall be stored in accordance with the requirements of N.J.A.C. 5:18-3.28.

- ii. Pesticides that are oxidizing agents shall be stored in accordance with N.J.A.C. 5:18-3.29.
- iii. Pesticides shall not be stored in the same area with ammonium nitrate fertilizer.
- iv. Pesticide storage shall be restricted to a first-story room or area which has direct access to the outside. Pesticides shall not be stored in basements. Storage areas shall be designed in a manner so as to prevent unauthorized entry.
- v. Pesticides in containers which could be damaged by moisture or water shall be stored off the floor.
- vi. Damaged or leaking containers of pesticides or materials contaminated by pesticides shall be immediately separated, disposed of or decontaminated in accordance with Department of Environmental Protection and Energy regulations.
- vii. Pesticide storage shall be constructed in such a manner so that run-off from fire streams will not contaminate streams, ponds, ground water, crop lands or buildings.
2. Material safety data sheets for each pesticide shall be available at each storage location.
3. Pesticide storage buildings, storage rooms and areas shall be identified by approved prominent and legible signs.
4. Drums and packages shall be stacked in a stable manner.
5. Compressed gas pesticides shall be stored away from heat such as steam pipes and direct sunlight.
- i. All compressed gas cylinders in service or storage shall be protected to insure against being knocked over.
- ii. Compressed gas pesticide containers shall be separated from other compressed gases in accordance with N.J.A.C. 5:18-3.24(c)9.
- iii. Containers shall be tightly closed and provided with a safety cap when not in use, whether empty or full.

## APPENDIX 3-A

The following is a list of the standards referenced in this Code, the effective date of the standard, the promulgating agency of the standard and the section(s) of this Code that refer to the standard.

ANSI American National Standards Institute, Inc.  
1430 Broadway  
New York, New York 10018

Standard reference number	Title	*Referenced in Code Section number
K61.1-81	Anhydrous Ammonia-Safety Regulations for the Storage and Handling	

Standard reference number	Title of .....	*Referenced in Code Section number
C-95-4	Safety Guide for the Prevention of Radio Frequency Radiation Hazards, IME No. 20-1981 .....	3.24(c)2 3.24(c)7
ASME	American Society of Mechanical Engineers 345 East 47th Street New York, New York 10017	
A17.1-1987	Safety Code For Elevators and Escalators .....	4.17(e)
UL 217	Single and Multiple Station Smoke Detectors .....	419(c)
ASTM	American Society for Testing & Materials 1913 Race Street Philadelphia, PA 19103	
D56-87	Flash Point by Tag Closed Tester—Test method for .....	3.2 3.9(a)2i
D86-82	Distillation of Petroleum Products—Test method for .....	3.2
D93-85	Flash Point by Pensky—Martens Closed Tester—Test method for .....	3.2
D323-82	Vapor Pressure of Petroleum Products (Reid Method)—Test method for .....	3.2
E84-87	Surface Burning Characteristics of Building Materials—Test method for .....	3.2
E136-82	Behavior of Materials in a Vertical Tube Furnace at 75°C.—Test method for .....	3.2
BOCA	Building Officials & Code Administrators, International 4051 West Flossmoor Road Country Club H) ll, Illinois 60477	
BOCA 84	Basic/National Mechanical Code .....	3.7(c)7 3.7(d)3
DOT	Department of Transportation 400 7th Street, S.W. Washington, D.C. 20234	
49-CFR	Explosive and Other Dangerous Articles, Shipping Containers—Specifications for Transportation of, Parts 100/199 .....	3.2(c)12 3.24(c)2 3.24(c)3 3.25(e)1 3.25(e)2 3.26(a)1 3.26(a)3vii 3.26(a)3viii 3.26(a)3ix 3.30(f)3
NFPA	National Fire Protection Association Batterymarch Park Quincy, Massachusetts 02269	
10-88	Extinguishers, Portable Fire—Standard for The Installation Maintenance and Use of .....	3.4(f)1

Standard reference number	Title	*Referenced in Code Section number	Standard reference number	Title	*Referenced in Code Section number
		3.4(f)2v 3.7(d)8 3.16(e)6	50-85	Oxygen Bulk Systems, at Consumer Sites—Standard for .....	3.24(a) 3.24(c)2 3.24(c)6 3.25(a) 3.25(c)2
11-88	Standard for Low Expansion Foam and Combined Agent Systems .....	3.4(c)11			
11A-88	Foam Systems, Medium and High Expansion—Standard for .....	3.4(c)11	50A-89	Hydrogen Systems, Gaseous, at Con- sumer Sites—Standard for .....	3.24(c)2 3.24(c)8 3.25(a)
12-89	Carbon Dioxide Extinguishing Sys- tem—Standard for .....	3.4(c)12			
12A-87	Halogenated Extinguishing Agent Systems—Halon 1301 .....	3.4(c)13	50B-89	Hydrogen Systems, Liquefied, at Consumer Sites—Standard for .....	3.25(a) 3.25(c)2
12B-85	Halogenated Extinguishing Agent Systems—Halon 1211 .....	3.4(c)13			
13-89	Sprinkler Systems—Standards for the Installation of .....	3.4(a)1	51-87	Gas Systems, Oxygen-Fuel for Welding, Cutting—Standard for the Installation and Operation of .....	3.20(a)
13A-87	Sprinkler Systems—Inspection, Test- ing and Maintenance .....	3.4(a)1	54-88	National Fuel Gas Code .....	3.3(i)1 3.16(g)3
14-86	Standpipe and Hose Systems—Stan- dard for the Installation of .....	3.4(a)1	58-89	Gases, Liquefied Petroleum—Stan- dard for the Storage and Handling of .....	3.16(g)2 3.30(a) 3.30(d)1 3.30(e)liii 3.30(e)lv 3.30(f)2 3.30(f)3i
15-85	Water Spray Fixed Systems for Fire Protection—Standard for .....	3.4(a)1 3.4(c)16			
16-86	Deluge Foam-Water Sprinkler Sys- tems and Foam-Water Spray Sys- tems—Standard for the Installation of .....	3.4(c)11	59-89	Gases, Liquefied Petroleum at Utili- ty Plants—Standard for the Storage and Handling of .....	3.30(f)2
17-85	Dry Chemical Extinguishing Sys- tems—Standard for .....	3.4(c)14	59A-85	Gas, Liquefied Natural—Standard for the Production, Storage and Handling of .....	3.25(c)2 3.10(a)
17A-86	Wet Chemical Extinguishing Systems .....	3.4(c)15	61A-89	Manufacturing and Handling Starch .....	3.10(a)
20-87	Pumps, Centrifugal Fire—Standard for the Installation of .....	3.4(a)1 3.4(c)5	61B-89	Dust Explosions in Grain Elevators and Bulk Grain Handling Facili- ties—Prevention of Fire .....	3.10(a)
22-87	Water Tanks for Private Fire Protec- tion—Standard for .....	3.4(a)1	61C-89	Dust Explosions in Feed Mills—Pre- vention of Fire .....	3.10(a)
24-87	Installation and Private Fire Service Mains and Their Appurtenances— Standard for .....	3.4(a)1	65-87	Aluminum—Standard for the Pro- cessing and Finishing of .....	3.10(a)
30-87	Liquid, Flammable and Combusti- ble—Code for .....	3.28(a)1 3.28(b)2 3.28(c) 3.28(f)6	68-88	Venting of Deflagrations—Guide for .....	3.10(a)
30A-87	Automotive and Marine Service Sta- tion Code .....	3.16(a)1 3.16(f)	69-86	Explosion Prevention Systems— Standards On .....	3.10(a)
32-85	Dry Cleaning Plants—Standard for .....	3.9(a)1	70-87	Electrical Code, National .....	3.7(b)3 3.7(c)5ii 3.7(d)6i 3.7(d)6iii 3.10(c)2 3.11(b)3 3.12(b)2i 3.20(e)2i 3.31(c)1iv
33-85	Spray Application Using Flammable and Combustible Materials—Stan- dard for .....	3.7(b)1			
34-87	Dipping and Coating Processes Us- ing Flammable or Combustible Liq- uids—Standard for .....	3.7(b)1	71-87	Signaling Systems, Central Station— Standard for .....	3.4(a)1
35-87	Coatings, Organic—Standard for the Manufacture of .....	3.33(b)1	72A-87	Signaling Systems, Local Protec- tive—Standard for .....	3.4(a)1
40-88	Film Motion Picture, Cellulose Ni- trate—Standard for the Storage and Handling of .....	3.21(a)	72B-86	Signaling Systems, Auxiliary Protec- tive, for Fire Alarm Service .....	3.4(a)1
40E-86	Pyroxylin Plastics—Code for Storage of .....	3.22(a)	72C-86	Signaling Systems, Remote Station Protective—Standard for .....	3.4(a)1
46-85	Forest Products—Recommended Safe Practice for Storage of .....	3.13(b)1	72D-86	Signaling Systems, Proprietary Pro- tective—Standard for .....	3.4(a)1

Standard reference number	Title	*Referenced in Code Section number	Standard reference number	Title	*Referenced in Code Section number
74-84	Household Fire Warning Equipment—Standard for the Installation, Maintenance, and Use of .....	419(b)	701-77	Fire Tests for Flame Resistant Textiles and Films—Standard Method for .....	3.15(c)1 3.15(c)2 3.17(b)2
77-88	Static Electricity—Recommended Practice for .....	3.9(e)2 3.9(f)2 3.9(g)2 3.9(h)2 3.28(h)4	704-85	Identification of the Fire Hazards of Materials .....	3.29(c)7
80-86	Fire Doors and Windows—Standard for .....	3.5(f)1	801-86	Radioactive Materials, Facilities Handling Recommended Fire Protection—Practice for .....	3.29(f)1
85F-88	Fuel Systems, Pulverized—Standard for the Installation and Operation of .....	3.10(a)	1123-90	Fireworks, Public Display of—Standard for .....	3.27(b)1
86-85	Industrial Furnace Design, Location and Equipment—Standard for .....	3.14(a)1	1124-88	Fireworks, Manufacture, Transportation and Storage of—Code for .....	3.27(b)1
91-83	Blower and Exhaust Systems for Dust, Stock and Vapor Removal or Conveying—Standard for the Installation of .....	3.10(a) 3.13(c)3 3.18(b)4	* All Code references refer to, and should be preceded by, N.J.A.C. 5:18-Administrative correction, effective May 18, 1992. See: 24 N.J.R. 1875(a). Amended by R.1993 d.197, effective May 3, 1993. See: 25 N.J.R. 393(a), 25 N.J.R. 1868(a). Add references to NFPA and ANSI standards.		
99-87	Health Care Facilities—Standards for .....	3.24(a) 3.24(c)2 3.24(c)5	<b>APPENDIX 3-B</b>		
99C-87	Gas and Vacuum Systems .....	3.24(a) 3.24(c)2	<b>Cross References:</b>		
102-86	Tents, Grandstands and Air Supported Structures, Used For Places of Assembly—Standard for .....	3.17(b)1	<b>Old Citation</b>	<b>New Citation</b>	
120-88	Coal Preparation Plants—Standards for .....	3.10(a)	F-200.0 .....	3.2(a)	
211-88	Chimneys, Fireplaces and Venting Systems—Standard for .....	3.3(i)1	F-201.0 .....	3.2(a)	
231-87	General Storage, Indoors—Standard for .....	3.4(a)1	F-300.0 .....	3.3(a)	
231C-86	Rack Storage—Standard for .....	3.4(a)1	F-301.0 .....	3.3(b)	
231D-86	Storage of Rubber Tires—Standard for .....	3.4(a)1	F-302.0 .....	3.3(c)	
303-86	Marinas and Boatyards, Fire Protection—Standard for .....	3.16(f)	F-303.0 .....	3.3(d)	
385-85	Liquids, Flammable and Combustible—Tank Vehicles—Recommended Regulatory Standard for .....	3.28(i)2 3.28(i)3	F-304.0 .....	3.3(e)	
407-85	Aircraft Fuel Servicing—Standard for .....	3.6(b)1 3.6(e)5	F-305.0 .....	3.3(f)	
490-86	Ammonium Nitrate—Code for the Storage of .....	3.10(a)	F-306.0 .....	3.3(g)	
495-85	Explosives and Blasting Agents—Code for the Manufacture Transportation, Storage and Use of .....	3.26(a)1	F-307.0 .....	3.3(h)	
651-87	Aluminum or Magnesium Powder—Standard for the Manufacture of .....	3.10(a) 3.31(d)1	F-308.0 .....	3.3(i)	
654-88	Dust Explosions in the Plastics Industry—Prevention of .....	3.10(a)	F-309.0 .....	3.3(j)	
655-88	Prevention of Sulfur Fires and Explosions .....	3.10(a)	F-310.0 .....	3.3(k)	
664-87	Dust Explosions in Woodworking and Wood Flour Manufacturing Plants—Prevention of .....	3.13(c)3	F-311.0 .....	3.3(l)	
			F-312.0 .....	3.3(m)	
			F-313.0 .....	3.3(n)	
			F-314.0 .....	3.3(o)	
			F-315.0 .....	3.3(p)	
			F-316.0 .....	3.3(q)	
			F-317.0 .....	3.3(r)	
			F-318.0 .....	3.3(s)	
			F-319.0 .....	3.3(t)	
			new section .....	3.3(u)	
			new section .....	3.3(v)	
			F-400.0 .....	3.4(a)	
			F-400.1 .....	3.2(a)	
			F-403.0 .....	3.4(b)	
			F-404.0 .....	3.4(c)	
			F-405.0 .....	3.4(d)	
			F-408.0 .....	3.4(e)	
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			F-501.0 .....	3.5(b)	
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			F-600.0 .....	3.6(a)	
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			F-602.0 .....	3.6(c)	
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			F-604.0 .....	3.6(e)	



Old Citation	New Citation
F-700.0	3.7(a)
F-701.0	3.7(b)
F-702.0	3.7(c)
F-703.0	3.7(d)
F-704.0	3.7(e)
F-705.0	3.7(f)
F-800.0	3.8(a)
F-801.0	3.8(b)
F-802.0	3.8(c)
F-900.0	3.9(a) and 3.2(a)
F-901.0	3.9(b)
F-902.0	3.9(c)
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F-904.0	3.9(e)
F-905.0	3.9(f)
F-906.0	3.9(g)
F-907.0	3.9(h)
F-908.0	3.9(i)
F-1000.0	3.10(a)
F-1001.1	3.10(b)
F-1002.0	3.10(c)
F-1100.0	3.11(a)
F-1101.0	3.11(b)
F-1200.0	3.12(a) and 3.2(a)
F-1201.0	3.12(b)
F-1300.0	3.13(a)
F-1301.0	3.13(b)
F-1302.0	3.13(c)
F-1400.0	3.14(a) and 3.2(a)
F-1401.0	3.14(b)
F-1402.0	3.14(c)
F-1403.0	3.14(d)
F-1500.0	3.15(a)
F-1501.0	3.15(b)
F-1502.0	3.15(c)
F-1503.0	3.15(d)
F-1504.0	3.15(e)
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F-1702.0	3.17(c)
F-1703.0	3.17(d)
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F-1801.0	3.18(b)
F-1900.0	3.19(a)
F-1901.0	3.19(b)
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F-2001.0	3.20(c)
F-2002.0	3.20(d)
F-2003.0	3.20(e)
F-2004.0	3.20(f)
F-2005.0	3.20(g)
F-2006.0	3.20(h)
F-2007.0	3.20(i)
F-2100.0	3.21(a)
F-2101.0	3.21(c)
F-2200.0	3.22(a)
F-2201.0	3.22(b)
F-2300.0	3.23(a)
F-2301.0	3.23(b)
F-2400.0	3.24(a) and 3.2(a)
F-2401.0	3.24(c)

Old Citation	New Citation
F-2500.0	3.25(a) and 3.2(a)
F-2501.0	3.25(c)
F-2502.0	3.25(d)
F-2503.0	3.25(e)
F-2600.0	3.26(a) and 3.2(a)
F-2601.0	3.26(b)
F-2602.0	3.26(c)
F-2603.0	3.26(d)
F-2605.0	3.26(e)
F-2607.0	3.26(f)
F-2608.0	3.26(g)
F-2700.0	3.27(a)
F-2701.0	3.27(b)
F-2702.0	3.27(c)
F-2800.0	3.28(a)
F-2801.0	3.28(b)
F-2802.0	3.28(c)
F-2803.0	3.28(d)
F-2804.0	3.28(e)
F-2805.0	3.28(f) and (g)
F-2806.0	3.28(h)
F-2807.0	3.27(i)
F-2900.0	3.29(a) and 3.2(a)
F-2901.0	3.29(c)
F-2902.0	3.29(d)
F-2903.0	3.29(e)
F-2904.0	3.29(f)
F-2905.0	3.29(g)
F-2906.0	3.29(h)
F-2907.0	3.29(i)
F-2908.0	3.29(j)
F-2909.0	3.29(k)
F-3000.0	3.30(a) and 3.2(a)
F-3001.0	3.30(c)
F-3002.0	3.30(d)
F-3003.0	3.30(e)
F-3004.0	3.30(f)
F-3005.0	3.30(g)
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F-3201.0	3.32(b)
F-3300.0	3.33(a) and 3.2(a)
F-3301.0	3.33(b)
F-3302.0	3.33(c)
F-3303.0	3.33(d)
F-3304.0	3.33(e)
F-3305.0	3.33(f)
F-3306.0	3.33(g)
F-3307.0	3.33(h)
F-3308.0	3.33(i)
new section	3.33(b)
new section	3.34(a)
Appendix A	Appendix 3-A
new section	Appendix 3-B

#### SUBCHAPTER 4. FIRE SAFETY CODE

##### 5:18-4.1 Code adopted; scope

(a) Pursuant to authority of the Uniform Fire Safety Act (P.L. 1983, c.383, N.J.S.A. 52:27D-192 et seq.), the Commissioner hereby adopts this subchapter as the State Fire Safety Code.

(b) All buildings for which requirements are established in this subchapter shall be in compliance with such applicable requirements of this subchapter, unless a date for compliance is set forth in this subchapter.

1. Use Group R-3 structures used exclusively for dwelling purposes shall not be subject to any requirements of this subchapter other than N.J.A.C. 5:18-4.19.

Amended by R.1987 d.247, effective June 15, 1987.

See: 18 N.J.R. 1225(a), 19 N.J.R. 1078(a).

(c), (d), and (e) added. Correction to rule, see July 6, 1987 Register at 19 N.J.R. 1190(a).

Amended by R.1987 d.388, effective October 5, 1987.

See: 19 N.J.R. 1263(a), 19 N.J.R. 1792(a).

Deleted text in (d)1 "which are classified . . . Uniform Construction Code" and substituted "used exclusively for . . . three dwelling units".

Amended by R.1989 d.556, effective November 6, 1989.

See: 21 N.J.R. 2431(a), 21 N.J.R. 3453(a).

At (b) cross referenced definitions; at (c)7 established date of applicability and deleted 12 and renumbered 13-15 as 12-14 and referenced dates for compliance in (d).

Amended by R.1992 d.104, effective March 2, 1992.

See: 23 N.J.R. 3552(a), 24 N.J.R. 739(a).

Text at (b) and (c) deleted; text at (d) recodified to (b).

Amended by R.1993 d.628, effective December 6, 1993.

See: 25 N.J.R. 4363(a), 25 N.J.R. 5466(a).

Amended by R.1995 d.58, effective March 6, 1995.

See: 26 N.J.R. 4258(a), 27 N.J.R. 878(b).

#### 5:18-4.2 Compliance with the State Fire Prevention Code and other fire safety regulations

(a) The requirements established by this subchapter are in addition to, and not in lieu of, requirements established by the State Fire Prevention Code (N.J.A.C. 5:18-3).

(b) All buildings which are specifically listed as under the scope of this subchapter as denoted in N.J.A.C. 5:18-4.1 and which are subject to requirements previously established including, without limitation, any requirement of the State Fire Prevention Code (N.J.A.C. 5:18-3.1 et seq.), shall be in compliance with those requirements as of the effective date of this subchapter and shall remain in compliance throughout the life of the structure.

(c) All buildings which are not specifically listed as under the scope of this subchapter as denoted in N.J.A.C. 5:18-4.1 shall continue to be subject to the provisions of applicable existing fire safety requirements as promulgated by the State or local agency having jurisdiction and shall remain in compliance with those requirements throughout the life of the structure.

(d) Existing fire suppression and detection systems that were installed in accordance with the Uniform Construction Code, the Uniform Fire Code or which met the intent of the applicable NFPA standards at the time of installation shall be accepted as meeting the requirements of this Code, except as otherwise specifically provided in this Code.

Amended by R.1995 d.58, effective March 6, 1995.

See: 26 N.J.R. 4258(a), 27 N.J.R. 878(b).

#### 5:18-4.3 Relationship to Uniform Construction Code

(a) A building in full compliance with the subcodes adopted pursuant to the Uniform Construction Code Act and regulations in force at the time of its construction and possessing a valid certificate of occupancy shall not be required to conform to the more restrictive requirements established by this subchapter.

1. Exception: The requirements of N.J.A.C. 5:18-4.19 shall apply to all Use Group R-3 structures other than newly-constructed buildings at the time of initial occupancy, regardless of their state of compliance with the Uniform Construction Code or any other code.

(b) A building in full compliance with the current fire safety requirements of the Uniform Construction Code, as determined by the construction official with the concurrence of the fire subcode official and in consultation with the fire official, shall not be required to conform to more restrictive requirements established by this subchapter.

1. A determination as to whether a Uniform Construction Code requirement involves fire safety shall, in a disputed case, be determined by the Division of Codes and Standards after consultation with the Division of Fire Safety, the construction official and the fire official and, if necessary, with the concurrence of the Assistant Commissioner, Department of Community Affairs, responsible for overseeing the Divisions of Fire Safety and Codes and Standards.

2. For purposes of this subsection, "current fire safety requirements" means requirements set forth in the New Jersey Uniform Construction Code in effect at the time of adoption of the requirement as part of this subchapter.

Amended by R.1987 d.247, effective June 15, 1987.

See: 18 N.J.R. 1225(a), 19 N.J.R. 1078(a).

Added "in consultation with" to (b).

Amended by R.1992 d.11, effective January 6, 1992.

See: 23 N.J.R. 3064(a), 24 N.J.R. 88(a).

Exception for R-3 structures added.

Amended by R.1993 d.628, effective December 6, 1993.

See: 25 N.J.R. 4363(a), 25 N.J.R. 5466(a).

Amended by R.1995 d.58, effective March 6, 1995.

See: 26 N.J.R. 4258(a), 27 N.J.R. 878(b).

#### 5:18-4.4 General provisions

(a) The applicability of provisions of this subchapter to existing buildings or structures, identified or classified by the Federal, State or local government authority as historic buildings, shall be determined by the local construction code enforcing agency in consultation with the fire official, as outlined in Section 513.0 of the Building Officials and Code Administrators, Inc. (BOCA) Basic/National Building Code, 1984 edition.

(b) A variation previously granted to a provision of an existing code, which provision contains requirements substantially the same as the comparable provision of this

subchapter, shall remain valid, subject to the following conditions:

1. To be accepted the variation must have been:
  - i. Granted in writing;
  - ii. Granted through a formal process or procedure; and
  - iii. Granted upon a finding that equivalent life safety was provided.

(c) Nothing in this Code shall be construed as preventing any State agency from exceeding provisions of this Code in making improvements to buildings under their jurisdiction, ownership or control when such changes are mandated by or through Federal law or Federal regulations as a condition of funding such agency. Such action shall not reduce the requirements of these regulations.

(d) The provisions of N.J.A.C. 5:18-4.1 through 4.3 shall not prevent the fire official from making a finding of imminent hazard pursuant to N.J.A.C. 5:18-2.16 or the construction official from making a finding of unsafe building pursuant to the Uniform Construction Code and requiring correction of such hazard or unsafe condition in accordance with those regulations.

Repeal and New Rule, R.1995 d.58, effective March 6, 1995.  
See: 26 N.J.R. 4258(a), 27 N.J.R. 878(b).

Formerly "Relation to State Fire Prevention Code".

#### 5:18-4.5 Comprehensive facility fire protection plans

(a) A comprehensive facility fire protection plan may be submitted for facilities located within the jurisdiction of more than one local enforcing agency which are under single facilities management, ownership and operational control.

1. The plan shall be submitted to the Division for approval and shall include an original and one copy plus a copy for each local enforcing agency in which the subject facilities are located. The plan shall include the following:

- i. All buildings which are part of the facilities at every location included in the plan and for each building, the use group and an evaluation of the fire protection, including all requirements established in this subchapter;
- ii. A timetable for compliance with the requirements of this subchapter; and
- iii. A written application for a variance submitted in accordance with N.J.A.C. 5:18-2.14 for any proposed deviations from this subchapter.

2. The Division shall consult with each local enforcing agency in which facilities included on the plan are located before taking any final action.

3. Within 60 days after receiving the plan, the Division shall approve or disapprove it in writing. If the plan is disapproved, then the written statement shall include the reason(s) for the disapproval.

i. A plan which is not approved within 60 days shall be deemed to have been disapproved unless the 60 day period is extended by mutual agreement of the Division and the applicant;

ii. A disapproval may be appealed as provided in N.J.A.C. 5:18-2.19;

iii. No owner shall be required to retrofit a facility pending approval or disapproval of the plans by the Division.

4. The original approved plan shall be maintained on file by the Division. One copy of the approved plan shall be returned to the applicant and one copy shall be supplied to each local enforcing agency in which facilities included on the plan are located.

5. Any deviation from the plan as approved must be submitted to the Division for approval in accordance with the procedure established herein for the submission and approval of plans.

6. Inspections for compliance with the plans as approved shall be conducted by the local enforcing agency in which facilities are located.

Repeal and New Rule, R.1995 d.58, effective March 6, 1995.

See: 26 N.J.R. 4258(a), 27 N.J.R. 878(b).

Formerly "Modifications".

#### 5:18-4.6 Pre-existing violations

No violation committed, and no liability, penalty, or forfeiture, either civil or criminal, incurred, prior to the repeal or revision of any regulation or any part thereof by the enactment of this subchapter, shall be discharged, released or affected by the repeal or revision of the regulation or part thereof under which such offense, liability, penalty or forfeiture was incurred, and indictments, prosecutions and actions for such offenses, liabilities, penalties or forfeitures committed or incurred, prior to the effective date of this subchapter, shall be commenced or continued and be proceeded with in all respects as if the regulation or part thereof had not been repealed or revised.

#### 5:18-4.7 Fire suppression systems

(a) All buildings of Use Group A-2 or portions thereof when separated in accordance with (k) below with a permitted occupant load of 50 or more shall be equipped throughout with an automatic fire suppression system installed in accordance with the New Jersey Uniform Construction Code.

1. The following are exceptions to paragraph (a) above:

i. Buildings with a permitted occupancy of fewer than 300 having all components of the required means of egress on the same level as the use and having all such exits discharging not more than five feet above, nor more than two feet below, the adjacent grade;

ii. Buildings with a permitted occupancy of fewer than 200 having no portion of the required means of egress located more than one level above, or more than two feet below, the adjacent grade.

(b) All buildings of Use Group I-1 or portions thereof when separated in accordance with (k) below greater than two stories in height above grade or having an occupant load greater than 20 excluding staff shall be equipped throughout with an automatic fire suppression system installed in accordance with the New Jersey Uniform Construction Code.

(c) All buildings of Use Group I-2 or portions thereof when separated in accordance with (k) below shall be equipped throughout with an automatic fire suppression system installed in accordance with the New Jersey Uniform Construction Code.

1. The following are exceptions to (c) above:

i. Buildings of Type 1 or Type 2A construction of any height or of Type 2B construction not over one story in height as defined in the Uniform Construction Code.

ii. Day nurseries serving children below 2½ years of age, provided that all the children under 2½ years of age are cared for on the first floor in a room(s) having direct access to approved exits discharging directly to the exterior.

(d) All buildings of Use Group I-3 or portions thereof when separated in accordance with (k) below with an occupant load of six or more shall be equipped throughout with an automatic fire suppression system installed in accordance with the New Jersey Uniform Construction Code or shall be in compliance with all applicable provisions of Chapter 15 "Existing Detention and Correctional Occupancies" of the Life Safety Code, NFPA 101, 1985 edition.

1. Exception to (d) above: All buildings of Use Group I-3 not required to be equipped throughout with suppression by these provisions shall be equipped with suppression in all padded cells, boiler rooms, storage and workshop rooms 24 square feet and larger, mechanical equipment and similar rooms.

(e) All buildings of Use Group H or portions thereof when separated in accordance with (k) below shall be equipped throughout with an automatic fire suppression system installed in accordance with the New Jersey Uniform Construction Code.

1. All spraying operations as defined by N.J.A.C. 5:18-3.7(a) shall be equipped throughout with an auto-

matic fire suppression system installed in accordance with the New Jersey Uniform Construction Code.

2. Dipping operations as defined by N.J.A.C. 5:18-3.7(d)1 and as outlined in (e)2i through iii below shall be equipped with an automatic fire suppression system installed in accordance with the New Jersey Uniform Construction Code.

i. Dip tanks of over 150 gallons capacity or 10 square feet liquid surface area;

ii. Dip tanks containing a liquid with a flash point below 110 degrees F., when used in such manner that the liquid temperature may equal or be greater than its flash point from artificial or natural causes when having both a capacity of more than 10 gallons and a liquid surface area of more than four square feet; and

iii. Hardening and tempering tanks of over 500 gallons capacity or 25 square feet liquid surface area.

(f) All ballrooms, exhibit areas and accessory spaces of Use Group A-3 which exceed 12,000 square feet and are located in buildings of Use Groups R-1 and R-2, shall be equipped with an automatic fire suppression system installed in accordance with the New Jersey Uniform Construction Code.

1. The following are exceptions to (f) above:

i. Such assembly uses may be subdivided into fire areas not exceeding 12,000 square feet using permanent two-hour fire separation walls with 1½ hour opening protectives. Such walls shall be continuous from the floor to the deck above except that the wall may terminate at the ceiling if the ceiling is part of a fire-resistance rated floor/ceiling or roof/ceiling assembly.

ii. A-3 uses which are completely separated both horizontally and vertically from R-1 and R-2 uses by fire separation walls and floor/ceiling assemblies having a fire-resistance rating of not less than two hours with approved opening protectives having a fire-resistance rating of not less than 1½ hours. Walls shall be continuous from the floor to the deck above except that the walls shall be permitted to terminate at the ceiling if the ceiling is part of a fire-resistance rated assembly.

(g) All cooking operations that produce grease laden vapors shall be equipped with a ventilating hood, duct, and automatic fire suppression system designed and installed in accordance with the New Jersey Uniform Construction Code.

1. This subsection shall not apply to buildings in Use Groups R-2 or R-3.

2. Exception to (g) above: Ventilating hoods, ducts, and suppression shall not be required for completely enclosed ovens, steam tables, or auxiliary equipment that does not produce grease laden vapors.

(h) In all buildings, any windowless basement or story located below the seventh story shall be equipped throughout with an automatic fire suppression system installed in accordance with the New Jersey Uniform Construction Code.

1. Stories or basements shall not be considered windowless when there is provided on at least one side of such story or basement fire fighter access through openings, such as windows, doors or access panels, that are located entirely above the adjoining grade level.

2. Such openings shall be at least:

i. 32 inches by 48 inches in size, spaced not more than 100 feet apart in each story or basement; or

ii. 22 inches by 42 inches in size, spaced not more than 30 feet apart in each story or basement.

3. All openings for fire fighter access shall conform to all the following:

i. Openings shall be unobstructed to allow fire fighting and rescue operations from the exterior; and

ii. Openings in stories at or above grade shall have a sill height of not more than 36 inches as measured from the finished floor level. Openings in basements shall have no sill height restrictions; and

iii. Openings shall be readily identifiable and openable from the outside or shall be glazed with plain flat glass.

4. When openings in a story are provided on only one side and the opposite wall of such story is more than 75 feet from such openings, the story shall be considered windowless unless openings as specified above are provided on at least two sides of the exterior walls of the story.

5. If any portion of a basement is located more than 75 feet from openings as specified above, the basement shall be considered windowless.

6. Windowless basements not exceeding 3,000 square feet in area shall be exempt from this automatic suppression requirement, provided a supervised automatic fire alarm system shall be installed in accordance with the New Jersey Uniform Construction Code.

7. In windowless basements greater than 3,000 square feet, but not exceeding 10,000 square feet in area, the required suppression system need not be connected to a water supply other than an existing domestic supply if the following conditions are met:

i. The suppression system shall be provided with a fire department connection, which shall be marked with a sign reading "Basement Area Sprinkler Water Supply"; and

ii. A supervised automatic fire alarm system shall be installed in accordance with the New Jersey Uniform Construction Code.

(i) In all buildings of Use Group R-1 or portions thereof when separated in accordance with (k) below, not required by N.J.A.C. 5:18-4.17 to have a complete automatic fire suppression system, all storage and workshop rooms and rubbish, laundry and similar rooms shall be equipped with a suppression system or smoke detector system connected to an approved continuously staffed location in the building. Such systems shall be installed in accordance with the New Jersey Uniform Construction Code.

(j) Fire suppression systems required by this Code shall be supervised by one of the following methods as determined by the fire official:

1. Approved central station system in accordance with NFPA 71;

2. Approved proprietary system in accordance with NFPA 72D;

3. Approved remote station system of the jurisdiction in accordance with NFPA 72C; or

4. Approved local alarm service which will cause the sounding of an alarm in accordance with NFPA 72A;

5. The following are exceptions to (j) above:

i. Underground gate valves with roadway boxes;

ii. Halogenated extinguishing systems;

iii. Carbon dioxide extinguishing systems;

iv. Dry chemical extinguishing systems; and

v. Limited area sprinkler systems.

(k) In buildings containing mixed uses, one or more of which requires automatic suppression in accordance with this section, suppression will not be required throughout the building, provided that the uses requiring suppression are separated from those not requiring suppression by fire resistive construction having a minimum one hour rating. In Use Group H, the rating is to be increased to two hours.

Amended by R.1987 d.247, effective June 15, 1987.

See: 18 N.J.R. 1225(a), 19 N.J.R. 1078(a).

New (b) through (k) added with (h) reserved.

Correction to rule, see 19 N.J.R. 1190(a).

Amended by R.1987 d.373, effective September 21, 1987.

See: 19 N.J.R. 1023(a), 19 N.J.R. 1720(a).

(b): deleted condition concerning resident access to rooms above second story.

Amended by R.1989 d.556, effective November 6, 1989.

See: 21 N.J.R. 2431(a), 21 N.J.R. 3453(a).

New (h) and (k) added.

Amended by R.1992 d.104, effective March 2, 1992.

See: 23 N.J.R. 3552(a), 24 N.J.R. 739(a).

Ventilating hood and duct added at (g), supervised system installation requirements added at (h).

Amended by R.1992 d.405, effective October 19, 1992.

See: 24 N.J.R. 1938(a), 24 N.J.R. 3723(b).

Exceptions to A-2 with load over 50 added at 1i and ii.

Amended by R.1993 d.197, effective May 3, 1993.

See: 25 N.J.R. 393(a), 25 N.J.R. 1868(a).

Added (a)2; deleted (c)9 and added new text.



**5:18-4.8 Standpipe system**

(a) All buildings having floors used for human occupancy located more than six stories above grade shall be equipped with wet standpipes. Standpipes shall be located and installed in accordance with the New Jersey Uniform Construction Code except as follows:

1. Standpipes shall be capable of accepting a delivery by fire department apparatus of a minimum of 250 gpm at 65 psi to the topmost remote standpipe outlet in buildings equipped throughout with an automatic fire suppression system or a minimum of 500 gpm at 65 psi to the topmost remote standpipe outlet in all other buildings.

2. Hose and hose cabinets shall not be required.

**5:18-4.9 Automatic fire alarms**

(a) An automatic fire alarm system shall be installed as required below in accordance with the New Jersey Uniform Construction Code.

1. In all buildings of Use Group I;

i. Alarm systems in buildings of Use Group I must be supervised.

2. In all buildings of Use Group R-1 and R-2 and in R-3 bed and breakfast homestays;

i. In any municipality that enacted an ordinance requiring the installation of smoke detectors in hotels or multiple dwellings prior to November 12, 1980, a building fully conforming to the requirements of such ordinance prior to November 12, 1980 shall be deemed to be in either full or partial compliance with the requirements of this section if the fire official determines that the provisions of such ordinance provide reasonable life safety protection to the occupants and that replacement of equipment already installed in conformity with such ordinance would be an undue hardship for property owners.

(1) A general determination pursuant to this subsection shall be made by the fire official upon review of the ordinance and separate exceptions shall not then be required for individual properties covered by such general determination.

(2) If a general determination is made that full compliance with the ordinance is an acceptable substitute for partial compliance with the requirements of this section, the fire official shall specify all respects in which a building fully complying with the ordinance must be made to comply with this section.

ii. In dwelling units or guestrooms, battery-powered single station detectors may be installed, provided that the detectors are maintained in accordance with N.J.A.C. 5:18-3.4(g)2.

iii. In bed and breakfast homestays of Use Group R-3, the system shall not be required to be supervised or connected to an emergency power supply.

iv. All buildings of Use Group R-1, regardless of the number of units, shall have available at least one portable visual alarm type smoke detector for the deaf or hearing impaired for each 50 units or less. The owner may require a refundable deposit for such portable smoke detector not to exceed the value of the smoke detector. Notification of the availability of such devices shall be provided to each occupant.

3. In all buildings used as child day-care centers, regardless of Use Group.

4. In all buildings of Use Group E up to and including the 12th grade, the system shall consist of:

i. An approved system of automatic smoke detectors; or

ii. An approved automatic fire suppression system equipped with automatic fire alarm devices; or

iii. An approved system which combines the following elements shall be acceptable when devices are located as indicated below:

(1) Combination fixed temperature/rate-of-rise detectors in classrooms and ancillary spaces; and

(2) Photoelectric or projected-beam smoke detectors in exit access corridors and at the top of the exit stair enclosures.

(3) Fixed temperature detectors in such a system shall be accepted in locations such as boiler rooms, garage areas and other spaces in which conditions render other detectors inappropriate.

iv. Existing fire detection systems, installed and maintained in accordance with the manufacturer's recommendations, and meeting the intent of current standards for automatic fire alarms, shall be acceptable, provided:

(1) The existing system is tested, in accordance with the provisions of N.J.A.C. 5:18-3.4(c)6, by an approved service agency competent in the manufactured system, in the presence of the fire official or his designated representative. The fire official may accept a written report of test results in lieu of witnessing the test.

(2) Where a portion of an existing system is not serviceable and cannot be repaired, the existing system shall be replaced in accordance with the provisions of this Code.

(b) An automatic fire alarm system shall not be required in buildings, other than boarding homes of Use Group I-1, equipped throughout with an automatic fire suppression system, a manual fire alarm system and single station smoke

detectors located in the immediate vicinity of sleeping areas in accordance with NFIPA 72E or 74 as applicable.

(c) Automatic fire alarm systems required to be supervised by this Code shall employ one of the following methods as determined by the fire official:

1. Approved central station system in accordance with NFIPA 71;
2. Approved proprietary system in accordance with NFIPA 72D;
3. Approved remote station system of the jurisdiction in accordance with NFIPA 72C;
4. Approved local alarm service which will cause the sounding of an alarm in accordance with NFIPA 72A.

Amended by R.1987 d.247, effective June 15, 1987.

See: 18 N.J.R. 1225(a), 19 N.J.R. 1078(a).

(a)2 through (a)4 added.

Amended by R.1987 d.373, effective September 21, 1987.

See: 19 N.J.R. 1023(a), 19 N.J.R. 1720(a).

Deleted day nursery exception at (a)1i(1); added (a)2vi.

Administrative correction to (a)2iv(12).

See: 21 N.J.R. 3085(a).

Amended by R.1989 d.556, effective November 6, 1989.

See: 21 N.J.R. 2431(a), 21 N.J.R. 3453(a).

Exception established at (b).

Amended by R.1993 d.197, effective May 3, 1993.

See: 25 N.J.R. 393(a), 25 N.J.R. 1868(a).

Citation corrected at (a)4iv(1).

Amended by R.1995 d.59, effective March 6, 1995.

See: 26 N.J.R. 4249(a), 27 N.J.R. 891(a).

#### 5:18-4.10 Manual fire alarms

(a) A manual fire alarm system, designed and installed in accordance with the Uniform Construction Code, shall be required:

1. In all buildings more than three stories in height having an occupant load of 25 or more;
2. In all buildings of Use Group E up to and including the 12th grade; and
3. In all buildings required to have an automatic fire alarm system in accordance with N.J.A.C. 5:18-4.9, except hotels and multiple dwellings having an occupant load of less than 25 and having less than 10 dwelling units.

Amended by R.1987 d.247, effective June 15, 1987.

See: 18 N.J.R. 1225(a), 19 N.J.R. 1078(a).

#### 5:18-4.11 Means of egress

(a) Every story utilized for human occupancy having an occupant load of 500 or less shall be provided with a minimum of two exits, except as provided in (b) below. Every story having an occupant load of 501 to 1,000 shall have a minimum of three exits. Every story having an occupant load of more than 1,000 shall have a minimum of four exits.

1. Each mezzanine with an occupant load of more than 50 and in which the travel distance to an exit exceeds 75 feet shall have access to at least two independent means of egress by November 6, 1990.

2. When more than one exit is required, an existing fire escape shall be accepted as providing one of the required means of egress unless judged to be dangerous for use under emergency exiting conditions.

3. Any new fire escapes shall be constructed and installed in accordance with the Uniform Construction Code Formal Technical Opinion No. FTO-3, dated March 1985.

i. Access to a fire escape shall be through a door, except that window access shall be permitted from single dwelling units or guestrooms in Use Groups R-1, R-2 and I-1 or when serving spaces having a maximum occupant load of 10 in other use groups.

4. In all buildings of Use Group E, up to and including the 12th grade, buildings of Use Group I, rooming houses and child care centers, ladders of any type are prohibited on all new and existing fire escapes used as a required means of egress.

5. All occupants shall have unobstructed access to all new and existing fire escapes without having to pass through a room subject to locking.

6. In all bed and breakfast homestays, every sleeping room shall be provided with an approved window having sill height of not more than 44 inches.

7. In dwelling units in basements or stories below grade in buildings of Use Group R-2 that are not equipped throughout with an automatic fire sprinkler system, there shall be at least two exits from each dwelling unit.

i. An approved window providing a clear opening of at least five square feet in area, a minimum net clear opening of 24 inches in height and 20 inches in width, and a sill height of not more than 44 inches above the finished floor, shall be acceptable as one of the required exits.

(b) In buildings having only one exit, the single exit condition shall be permitted to continue as follows:

1. In buildings of Use Group R-3;

2. In all buildings, in the story at the level of exit discharge when the occupant load of the story does not exceed 50 and the exit access travel distance does not exceed 75 feet;

i. Exception to (b)2 above: In buildings of Use Group I and in rooming houses and child care centers, regardless of Use Group, two means of egress shall be required.

3. In buildings of Use Groups R-1 and R-2, from floors that are not more than 16 feet above exterior grade.

i. In community residences for the developmentally disabled, the maximum occupant load, excluding staff, is 12.

4. In buildings of Use Groups R-1 and R-2, not more than two stories in height, from floors that are more than 16 feet above exterior grade, when there are not more than four dwelling units per floor and the exit access travel distance does not exceed 50 feet. The minimum fire resistance rating of the exit enclosure and of the opening protection shall be one hour.

i. In community residences for the developmentally disabled, the maximum occupant load, excluding staff, is 12.

5. In buildings of Use Group B or S-2, not more than two stories in height, which are not greater than 3000 square feet per floor, when the exit access travel distance does not exceed 75 feet. The minimum fire resistance rating of the exit enclosure and of the opening protection shall be one hour.

6. Open parking structures where vehicles are mechanically parked.

(c) In multi-level dwelling units in buildings of Use Groups R-1 or R-2, an exit shall not be required from each level of the dwelling unit provided that the following conditions are met:

1. The building in which such dwelling units are contained is of type 1 or type 2 construction and the travel distance within the dwelling unit does not exceed 75 feet; or

2. The building in which such dwelling units are contained is not more than three stories in height and all third floor space is part of one or more dwelling units located in part on the second floor and no habitable room within any such dwelling unit shall have a travel distance that exceeds 50 feet from the outside of the habitable room entrance door to the inside of the entrance door to the dwelling unit.

(d) All rooms and spaces having an occupant load greater than 50 or in which the travel distance exceeds 75 feet shall have a minimum of two egress doorways.

1. The following are exceptions to (d) above:

i. Storage rooms having a maximum occupant load of 10;

ii. Classrooms having a maximum occupant load of 75 in buildings equipped throughout with an automatic fire suppression system;

iii. In buildings of Use Group I-2, any patient sleeping room or suite of rooms greater than 1,000

square feet shall have a minimum of two egress doorways.

(e) When buildings of Use Groups A-2 and A-3 have more than two individual rooms which can be used for separate functions and each room has an occupant load of more than 300, the required egress doors from such rooms shall lead directly outside or to an exit passageway.

1. Such passageways shall be completely enclosed by assemblies having a fire-resistance rating of not less than two hours.

2. Such passageways shall not be used for any other purpose and shall lead directly outside.

(f) The capacity of means of egress in each story shall be sufficient for the occupant load thereof.

1. The capacity per unit of egress width shall be computed in accordance with the Table 5:18-4.11(f)1 for the specified use groups.

Table 5:18-4.11(f)1

#### CAPACITY PER UNIT EGRESS WIDTH

Use group	Without fire suppression system Number of occupants		With fire suppression system Number of occupants	
	Stairways	Doors, Ramps and Corridors	Stairways	Doors, Ramps and Corridors
A	75	100	113	150
B	60	100	90	150
E	75	100	113	150
F	60	100	90	150
H	—	—	60	100
I-1	60	100	90	100
I-2	22	30	35	45
I-3	60	100	90	150
M	60	100	90	150
R	75	100	113	150
S	60	100	90	150

2. The unit of egress width for all approved types of means of egress parts and facilities shall be 22 inches with a credit of one half unit for each 12 inches width in addition to one or more 22 inch units. Fractions of a unit of width less than 12 inches shall not be credited.

3. The maximum permitted occupant load of a given space shall be determined by dividing the floor area for a given use by the occupant load factor in Table 5:18-4.11(f)3.

i. With the exception of Use Group A occupancies, the occupant load may be increased to the total number of occupants for which exit capacity is provided as determined by (f)1 above provided the resulting total occupant load shall not exceed one occupant per five square feet of net floor area over the entire use.

Table 5:18-4.11(f)3  
Floor Area Per Occupant

Use	Occupant Load Factor in square feet per occupant
Assembly	
Fixed seating	Note 1
Tables and chairs	15 net
Chairs only	7 net
Dance floors	7 net
Standing space	5 net
Waiting space (Note 2)	3 net
Bowling centers	
Lanes	5 persons
Other areas	per assembly above
Business	100 gross
Educational	
Fixed seating	Note 1
Classrooms	20 net
Shops and vocational areas	50 net
Industrial	100 gross
Institutional	
Inpatient treatment	240 gross
Outpatient	100 gross
Sleeping rooms	120 gross
Library	
Reading room	50 net
Stack area	100 gross
Mercantile	
Grade floor or basement	30 gross
All other floors	60 gross
Storage, stock, shipping	300 gross
Parking garages	200 gross
Residential	200 gross
Storage areas, mechanical equipment room	300 gross

Note 1. The occupant load for that portion of an assembly area having fixed seats shall be determined by the number of fixed seats installed. Capacity of seats without dividing arms is one person per 18 inches. For booths, one seat equals 24 inches. One person is allowed for each fixed seat with dividing arms or fixed stand alone stool.

Note 2. Waiting space means that space in an assembly occupancy where persons are admitted to the building at times when seats are not available to them and are allowed to wait in a lobby or similar space until seats are available. Such use of the lobby or similar space shall not encroach upon the required clear width of exits.

(g) All buildings of Use Group A with an occupant load of 100 or more shall be provided with a main entrance capable of serving as the main exit with an egress capacity for at least one-half the total occupant load. The remaining exits shall be capable of providing two-thirds of the total required exit capacity.

(h) The length of a dead end corridor shall not exceed 35 feet.

1. The following are exceptions to (h) above:

i. The maximum length of a dead end corridor shall be 50 feet in buildings equipped throughout with an automatic fire alarm system installed in accordance with the New Jersey Uniform Construction Code.

ii. The maximum length of a dead end corridor shall be 70 feet in buildings equipped throughout with an automatic fire suppression system installed in accordance with the New Jersey Uniform Construction Code.

(i) All means of egress shall be provided with artificial illumination as follows:

1. All means of egress in other than buildings of Use Group R-3 shall be equipped with artificial lighting facilities to provide the intensity of illumination herein prescribed continuously during the time that conditions of occupancy of the building require that the exits be available. Lighting shall also be provided to illuminate the exit discharge in all buildings other than Use Groups F, H and S. In buildings of Use Group R-2, means of egress lighting, except that lighting within a dwelling unit, shall be wired on a circuit independent of circuits within any dwelling unit. The disconnecting means and overcurrent protection device shall not be located within a dwelling unit or such that access must be obtained by going through a dwelling unit.

2. The intensity of light at floor level shall be not less than one foot candle.

3. In buildings of Use Groups A and E used for the exhibition of motion pictures or other projections by means of directed light, the illumination of aisles may be reduced during such period of projection to not less than 0.2 foot candle.

i. The lighting of exits, aisles and auditoriums shall be controlled from a location inaccessible to unauthorized persons. Supplementary control shall also be provided in the motion picture projection room.

(j) Means of egress lighting shall be connected to an emergency electrical system conforming to NFPA 70 (National Electrical Code) to assure continued illumination for a duration of not less than one hour in case of primary power loss in all buildings, rooms, or spaces required to have more than one exit or exit access.

(k) In all buildings, rooms or spaces required to have more than one exit or exit access, all required means of egress shall be indicated with approved internally illuminated or self-luminous signs reading "Exit", visible from the exit access and, when necessary, supplemented by directional signs in the exit access indicating the direction and way of egress. All "Exit" signs shall be located at exit doors or exit access areas, so as to be readily visible.

1. Exceptions to (k) above:

i. Exit signs shall not be required in buildings of Use Groups I-1, R-2 and R-3 having a total occupant load, excluding staff, of 20 or less.

ii. Exit signs shall not be required when the second means of egress is a fire escape that is accessed directly from the individual sleeping rooms.

iii. Approved main exterior doors that are clearly identified as exits are not required to have "Exit" signs.

2. "Exit" signs shall have red or green letters at least six inches high and the minimum width of each stroke shall be three-quarter inch on a white background or in other approved distinguishable colors. If an arrow is provided as part of an "Exit" sign, the construction shall be such that the arrow direction cannot be readily changed. The word "Exit" shall be clearly discernible when the internally illuminated sign is not energized.

3. Each sign shall be illuminated by a source providing not less than five foot candles at the illuminated surface.

i. Exception to (k)3 above: Approved self-luminous signs which provide evenly illuminated letters shall have a minimum luminance of 0.06 foot lamberts.

4. All "Exit" signs shall be illuminated at all times when the building is occupied. To assure continued illumination for a duration of not less than one hour in case of primary power loss, the "Exit" signs shall be connected to an emergency electrical system.

i. Exception to (k)4 above: Approved self-luminous signs which provide continuous illumination independent of external power sources need not be connected to an emergency electrical system.

(l) Means of egress doors shall conform to the following:

1. All egress doors serving an occupant load greater than 50 shall swing in the direction of exit travel;

2. In building of Use Groups R-1 and R-2 all doors opening onto a passageway at grade or exit stair shall be self-closing or automatic closing by listed closing devices.

3. All dwelling unit, guest room or rooming unit corridor doors in buildings of Use Groups R-1, R-2, and I-1 shall be at least 1 $\frac{3}{4}$  inch solid core wood or approved equal with approved door closers and shall not have any glass panels, other than approved wire glass in metal frames. Corridor doors shall not be constructed of hollow core wood, shall not contain louvers and shall not be of panel construction. Doors shall fit both plumb and level in frames, and be reasonably tight fitting. All replacement doors shall be 1 $\frac{3}{4}$  inch solid core wood or approved equal, unless existing frame will accommodate only a 1 $\frac{3}{8}$  inch door.

i. Existing doors meeting the requirements of Federal Housing and Urban Development Rehabilitation Guidelines No. 8 or of Section 5 of Appendix B of the BOCA Basic/National Existing Structures Code, 1984 Ed. for a rating of 15 minutes or better shall be accepted as meeting the provisions of this requirement.

(1) Modifications made to existing doors to achieve the required rating shall be conducted in accordance with the Uniform Fire Code.

ii. Existing doors in buildings provided with approved, complete automatic suppression shall be required only to provide a smoke barrier; shall not contain louvers; shall fit plumb and level; and be reasonably tight fitting.

iii. In group homes with a maximum of 15 occupants, and which are protected with an approved automatic detection system, closing devices may be omitted.

4. Buildings of Use Group I-3 having remote power unlocking capability on more than 10 doors shall be provided with an emergency power source for such locks. Power shall be arranged to automatically operate upon failure of normal power within 10 seconds and for a duration of not less than one hour.

5. All required exit doors equipped with latching devices in buildings or portions thereof of Use Group A with an occupant load greater than 100 shall be equipped with approved panic hardware by November 6, 1990.

(m) Every required exit stairway having three or more risers and not provided with handrails or in which the existing handrails are judged to be in danger of collapsing when used under emergency exiting conditions, shall be provided with handrails for the full length of the run of steps on at least one side. All exit stairways more than 66 inches wide and subject to the maximum designed occupancy load shall have handrails on both sides. Where there are no handrails or where the existing handrails must be replaced in order to correct a hazardous condition, the handrails shall be designed and installed in accordance with the provisions of the New Jersey Uniform Construction Code.

(n) Every open portion of a stair, landing, or balcony which is more than 30 inches above the floor or grade below and not provided with guards or those in which the existing guards are judged to be in danger of collapsing when used under emergency exiting conditions, shall be provided with guards. Where there are no guards or where the existing guards must be replaced in order to correct a hazardous condition, the guards shall be designed and installed in accordance with the New Jersey Uniform Construction Code.

(o) In all buildings of Use Group R-1 and R-2 all transoms shall be either glazed with  $\frac{1}{4}$ " wire glass set in metal frames and permanently secured in the closed position or sealed with materials consistent with the corridor construction. Any other sash, grill or opening in a corridor, and any window in a corridor not opening to the outside air, shall be sealed with materials consistent with the corridor construction.

Amended by R.1987 d.247, effective June 15, 1987.  
See: 18 N.J.R. 1225(a), 19 N.J.R. 1078(a).

Substantially amended.

Amended by R.1989 d.556, effective November 6, 1989.  
See: 21 N.J.R. 2431(a), 21 N.J.R. 3453(a).

Changes made at (a)1 and (l)2, 3, and new 5.



Amended by R.1992 d.104, effective March 2, 1992.

See: 23 N.J.R. 3552(a), 24 N.J.R. 739(a).

Text on transoms added at (o).

Amended by R.1993 d.197, effective May 3, 1993.

See: 25 N.J.R. 393(a), 25 N.J.R. 1868(a).

Added (a)3, Table (f)3 and (g); occupant load specified at (f)3.

Amended by R.1995 d.59, effective March 6, 1995.

See: 26 N.J.R. 4249(a), 27 N.J.R. 891(a).

#### 5:18-4.12 Interior finish

(a) The interior finish of walls and ceilings shall have a flame spread rating not greater than the class prescribed by Table 5:18-4.12(a).

1. The following are exceptions to (a) above:

i. The use of vinyl or paper wall coverings not exceeding  $\frac{1}{8}$ th of an inch in thickness which is applied directly to a noncombustible or fire retardant treated wood substrate shall not be regulated by this section.

ii. Interior trim which does not exceed 10 percent of the aggregate wall and ceiling area of any room or space shall not be regulated by this section.

iii. When an approved automatic fire suppression system is provided, interior finish of Class II or III materials shall be permitted where Class I or II materials, respectively, are required by this section.

iv. Exposed portions of structural members complying with the requirements for heavy timber construction in accordance with the Uniform Construction Code shall not be regulated by this section.

Table 5:18-4.12(a)

Interior Finish Requirements

Use Group	Exit Enclosures	Exit Access Enclosures	Rooms or Spaces
A <sup>†</sup> , E, I, R-1	I	II	III
All Other Use Groups	I	II	No Minimum

<sup>†</sup> See N.J.A.C. 5:18-4.16(a)2 for amusement buildings.

(b) The classification of interior finishes referred to herein corresponds to flame spread ratings determined by ASTM E84 as follows: Class I flame spread, 0-25; Class II flame spread, 26-75; Class III flame spread, 76-200. In all cases, the smoke developed rating determined by ASTM E84 shall not exceed 450.

(c) All existing interior finish materials which do not comply with the requirements of this section shall be removed or shall be treated with an approved fire retardant coating in accordance with the manufacturer's instructions to secure compliance with the requirements of this section.

(d) In buildings of Use Group I-3, interior furnishings, drapes, curtains, carpeting, decorations, bedding, etc. shall be flame retardant.

Amended by R.1987 d.247, effective June 15, 1987.

See: 18 N.J.R. 1225(a), 19 N.J.R. 1078(a).

Additions to table and (d) added.

Correction to rule, see 19 N.J.R. 1190(a).

Amended by R.1993 d.197, effective May 3, 1993.

See: 25 N.J.R. 393(a), 25 N.J.R.

Interior finish requirements include all use groups; educational facilities and hotels must meet requirements for enclosed rooms.

#### 5:18-4.13 Protection of interior stairways and other vertical openings

(a) All interior stairways and other vertical openings connecting more than six floor levels shall be enclosed with approved assemblies having a fire resistance rating of not less than two hours with approved opening protectives.

(b) All interior stairways and other vertical openings connecting four to six floor levels shall be enclosed with approved assemblies having a fire resistance rating of not less than one hour with approved opening protectives.

(c) Interior stairways and other vertical openings connecting no more than three levels shall be enclosed with approved assemblies and opening protectives having a fire resistance as follows:

1. In Use Group A, a minimum 30 minute fire barrier shall be provided to protect all interior stairways and other vertical openings not exceeding three stories. Such fire barrier may be omitted:

i. When connecting the main floor and mezzanines; or

ii. When all the following conditions are met:

(1) The communicating area has a low hazard occupancy, or has a moderate hazard occupancy which is protected throughout by an automatic suppression system; and

(2) The lowest or next to the lowest level is a street floor; and

(3) The entire area is open and unobstructed in a manner such that it may be assumed that a fire in any part of the interconnected spaces will be readily obvious to all of the occupants; and

(4) Exit capacity is sufficient to provide egress simultaneously for all the occupants of all levels by considering all areas to be a single floor area for the determination of required exit capacity; and

(5) Each floor level, considered separately, has at least one-half of its individual required exit capacity provided by an exit or exits leading directly out of that level without having to traverse another communicating floor level or be exposed to the smoke or fire spreading from another communicating floor level.

2. In Use Group B, a minimum 30 minutes fire barrier shall be provided to protect all interior stairways and other vertical openings not exceeding three stories. Such fire barriers may be omitted in buildings not exceeding 3,000 square feet per floor or when the building is protected throughout by an approved automatic fire suppression system.

3. In Use Group E, a minimum one-hour fire barrier shall be provided to protect all interior stairways and other vertical openings connecting not more than three floor levels. Such barrier may be omitted when the building is protected throughout by an approved automatic fire suppression system.

4. In Use Group F, a minimum one-hour fire barrier shall be provided to protect all interior stairways and other vertical openings not exceeding three floor levels. Such fire barrier may be omitted:

i. In special purpose occupancies when necessary for manufacturing operations and direct access is provided to at least one protected stairway;

ii. In buildings which are protected throughout by an approved automatic fire suppression system;

5. In Use Group H, a minimum one-hour fire barrier shall be provided to protect all interior stairways and other vertical openings not exceeding three floor levels. Such fire barrier may be omitted when necessary for manufacturing operations in a building where every floor level has direct access to at least two remote enclosed stairways or other approved exits.

6. In Use Group I-1, a minimum one-hour fire barrier shall be provided to protect all interior stairways and other vertical openings exceeding three floor levels. Such fire barrier may be omitted at either the top or bottom of a stairway which connects not more than two floor levels when such stairway does not serve as a required means of egress and the occupant load does not exceed 12, excluding staff.

7. In Use Group I-2, a minimum one-hour fire barrier shall be provided to protect all interior stairways and other vertical openings not exceeding three floor levels. Such fire barrier may be omitted when connecting not more than two floor levels which are separated by a one-hour fire barrier equipped with a self-closing or automatic-closing 20 minute door at the top or bottom of the stairway, when such stairway does not serve as a required means of egress.

8. (Reserved)

9. In Use Group M, a minimum 30 minute fire barrier shall be provided to protect all interior stairways and other vertical openings not exceeding three floor levels. Such fire barrier may be omitted when:

i. Openings connect only two floor levels, such as between the street floor and mezzanine or second floor; or

ii. Occupancies are protected throughout by an approved automatic fire suppression system.

10. In Use Group R-1, a minimum one-hour fire barrier shall be provided to protect all interior stairways and other vertical openings not exceeding three stories. Such fire barrier may be omitted:

i. In buildings which are protected throughout by an approved automatic fire suppression system installed in accordance with NFPA 13 or 13R; or

ii. In buildings with not more than 25 guests in which the following conditions are met:

(1) Every sleeping room is provided with an approved window having a sill height not greater than 44 inches;

(2) Every sleeping room above the second floor is provided with direct access to a fire escape or other approved secondary exit;

(3) Any exit access corridor exceeding eight feet in length which serves two means of egress, at least one of which is an unprotected vertical opening, shall be separated from the vertical opening by a one-hour fire barrier; and

(4) The building is protected throughout by an automatic fire alarm system, installed in accordance with the New Jersey Uniform Construction Code and supervised in accordance with N.J.A.C. 5:18-4.9(c).

11. In Use Group R-2, a minimum 30 minute fire barrier shall be provided to protect all interior stairways and other vertical openings not exceeding three stories. Such fire barrier may be omitted.

i. In buildings which are protected throughout by an approved automatic fire suppression system;

ii. When the vertical opening connects not more than two floor levels with not more than four dwelling units per floor and each dwelling unit has access to a fire escape or other approved secondary exit; or

iii. In owner-occupied buildings with not more than four dwelling units per floor, and in which the following conditions are met:

(1) Every sleeping room is provided with an approved window having a sill height not greater than 44 inches;

(2) Every dwelling unit or sleeping room above the second floor is provided with direct access to a fire escape or other approved secondary exit; and

(3) The building is protected throughout by an automatic fire alarm system, installed in accordance

with the New Jersey Uniform Construction Code and supervised in accordance with N.J.A.C. 5:18-4.9(c).

Amended by R.1989 d.556, effective November 6, 1989.

See: 21 N.J.R. 2431(a), 21 N.J.R. 3453(a).

Requirements added regarding fire barriers protecting interior stairways and other vertical openings.

Amended by R.1995 d.58, effective March 6, 1995.

See: 26 N.J.R. 4258(a), 27 N.J.R. 878(b).

Amended by R.1995 d.59, effective March 6, 1995.

See: 26 N.J.R. 4249(a), 27 N.J.R. 891(a).

#### 5:18-4.14 Information signs

(a) A sign shall be provided at each floor landing in all interior stairways more than three stories in height designating the floor level above the floor of discharge.

(b) All elevator lobby call stations on all floor levels shall be marked with approved signs reading, "Use Stairways in Case of Fire—Do not Use Elevators".

#### 5:18-4.15 Smoke barriers

(a) Wherever smoke barriers are required by this subchapter, they shall be constructed in accordance with the following provisions:

1. Smoke barriers shall have a fire resistance rating of not less than one-half hour and shall form an effective membrane continuous from outside wall to outside wall and from floor slab to floor or roof deck above, including continuity through all concealed spaces, such as those found above suspended ceilings, and including interstitial structural and mechanical spaces. Transfer grilles, whether equipped with fusible link-operated dampers or not, shall not be used in these partitions. Wire glass panels not exceeding 1,296 square inches in approved steel frames may be used in smoke barriers.

i. Exception to (a)1 above: Smoke barriers are not required in interstitial spaces when such spaces are designed and constructed with ceilings that provide resistance to the passage of fire and smoke equivalent to that provided by smoke barriers.

2. Doors in smoke barriers shall have a fire-resistance rating of not less than 20 minutes when tested in accordance with ASTM E152 without the hose stream and labeled by an approved agency. Double egress corridor doors shall have vision panels of one-quarter inch thick labeled wired glass mounted in approved steel frames. Such panels may also be provided in other doors in smoke barriers. The glass area of the vision panels shall be limited to 1,296 square inches for each door. The doors shall close the openings with only the clearance necessary for proper operation under self-closing or automatic closing and shall be without undercuts, louvers or grilles. Rabbits or astragals are required at the meeting edges of double egress doors, and stops are required on the head and jambs of all doors in smoke barriers. Positive latching devices are not required on double egress corridor doors, and center mullions are prohibited.

i. Exception to (a)2 above: Protection at the meeting edges of doors and stops at the head and sides of door frames may be omitted in buildings equipped with an approved engineered smoke control system. The engineered smoke control system shall respond automatically, preventing the transfer of smoke across the barrier.

3. Doors in smoke barriers shall be self-closing or shall be provided with approved door hold-open devices of the fail-safe type which shall release the doors causing them to close upon the actuation of smoke detectors as well as upon the application of a maximum manual pull of 50 pounds against the hold-open device.

4. An approved damper designed to resist the passage of smoke shall be provided at each point a duct penetrates a smoke barrier. The damper shall close upon detection of smoke by an approved smoke detector located within the duct.

i. In lieu of an approved smoke detector located within the duct, ducts which penetrate smoke barriers above doors are permitted to have the approved damper arranged to close upon detection of smoke by the local device designed to detect smoke on either side of the smoke barrier door opening.

ii. Dampers are not required in buildings equipped with an approved engineered smoke control system.

iii. Dampers are not required where the openings in ducts are limited to a single smoke compartment and the ducts are of steel construction.

(b) In buildings of Use Group I-2, every story used for sleeping purposes for more than 30 occupants and stories which are usable but unoccupied shall be divided into not less than two compartments by smoke barrier walls such that each compartment does not exceed 22,500 square feet and no more than 150 feet in length and width.

Amended by R.1987 d.247, effective June 15, 1987.

See: 18 N.J.R. 1225(a), 19 N.J.R. 1078(a).

#### 5:18-4.16 Amusement buildings

(a) All buildings or portions thereof, of Use Group A-3 which are designed to disorient the occupant, reduce vision, present barriers or otherwise impede the flow of traffic, shall conform to all other applicable provisions of this Code and the following:

1. Every such amusement facility shall be equipped throughout with an automatic fire suppression system installed in accordance with the New Jersey Uniform Construction Code.

2. The interior finish of all walls and ceilings shall in no case be less than a Class II material in accordance with N.J.A.C. 5:18-4.12(b) and (c).

3. Every such amusement facility shall be equipped with exit signs installed in accordance with N.J.A.C. 5:18-4.11(k).

4. Every such amusement facility shall be equipped throughout with an approved automatic fire alarm system installed in accordance with the Uniform Construction Code and in accordance with (a)5 through (a)8 below.

5. The automatic alarm system shall activate a prerecorded message which can be clearly heard throughout the entire facility instructing the patrons to proceed to the nearest exit. Any alarm signals used in conjunction with the prerecorded message shall produce a signal which is distinctive from all sounds used in the normal operation of the amusement facility.

6. Every such amusement facility shall be equipped with emergency lighting equipment installed in accordance with the New Jersey Uniform Construction Code. The emergency lighting equipment shall automatically activate when:

- i. The fire suppression system is activated;
- ii. The fire alarm system is activated; or
- iii. Loss of the primary power supply occurs.

7. All audio and visual equipment such as horns, bells, flashing or otherwise distracting stimuli and mechanized displays shall cease operation upon initiation of an alarm by the automatic fire alarm system or upon activation of the automatic fire suppression system.

8. Activation of the automatic alarm system shall automatically shut down the air distribution system.

#### 5:18-4.17 High rise buildings

(a) In addition to all other applicable provisions of this code, high rise buildings shall conform to the provisions of this section.

(b) All high rise buildings of Use Groups M and R-1 shall be equipped throughout with an approved automatic fire suppression system installed in accordance with the New Jersey Uniform Construction Code.

(c) All high rise buildings of Use Groups B and R-1 shall be equipped with central control station and communication systems as follows:

1. An approved public address communication system consisting of loudspeakers on each floor of the building, in each elevator and elevator lobby and in each stair enclosure which shall be capable of being operated from the central control station;

2. A two-way fire department communication system which shall operate between the central control and every elevator, elevator lobby and entry to enclosed exit stairways;

3. A central control station for fire department operations shall be provided in a location approved by the fire department. It shall contain where applicable the public address system panel; the fire department communications panel; fire detection and alarm system annunciator panels; status indicators and controls for air handling systems; sprinkler valve and water flow detector display panels; and status indicators and a telephone for fire department use with controlled access to the public telephone system.

(d) In all high rise structures, each re-circulating air or exhaust system which serves more than one floor shall be equipped with approved smoke and heat detection devices in accordance with the Uniform Construction Code. The devices shall stop the fan(s) automatically and shall be of the manual reset type. Automatic fan shutdown is not required when the system is part of an approved smoke removal or smoke control system.

(e) Elevators in high rise structures shall be equipped with the following emergency control devices:

1. All automatic (non-designated attendant) elevators having a travel of 25 feet or more above or below the designated level shall be equipped with Phase 1 Emergency Recall Operation as required by ASME A17.1 Rules 211.3a and 211.3b listed in Appendix 3-A to N.J.A.C. 5:18-3;

2. Access to all floors shall be provided by at least one elevator equipped with Phase II Emergency In-Car Operation, as required by ASME A17.1, Rule 211.3c listed in Appendix 3-A to N.J.A.C. 5:18-3; and

3. All designated attendant elevators having a travel of 25 feet or more above or below the designated level shall be equipped with emergency controls, as required by ASME A17.1 Rule 211.4 listed in Appendix 3-A to N.J.A.C. 5:18-3.

(f) In all high rise buildings of Use Groups R-1 and R-2, smoke barriers conforming to N.J.A.C. 5:18-4.15(a) shall be provided around all elevator landings on every floor above the main floor level, with the following exceptions:

1. Such lobbies are not required in buildings provided with a complete automatic fire suppression system.

2. The smoke barrier shall be permitted to terminate at the ceiling, provided the ceiling membrane provides resistance to the passage of smoke equivalent to that provided by smoke barriers.

New Rule R.1987 d.247, effective June 15, 1987.

See: 18 N.J.R. 1225(a), 19 N.J.R. 1078(a).

Amended by R.1992 d.104, effective March 2, 1992.

See: 23 N.J.R. 3552(a), 24 N.J.R. 739(a).

Text at (e) deleted and replaced with text referencing ASME standards.

Amended by R.1993 d.197, effective May 3, 1993.

See: 25 N.J.R. 393(a), 25 N.J.R. 1868(a).

Added requirements for recall operation for automatic elevators at (e)1.

**5:18-4.18 Boiler/furnace equipment rooms**

(a) Boiler/furnace equipment rooms shall be enclosed by one hour fire rated construction in the following facilities: day nurseries, children's shelter facilities, residential child care facilities and similar facilities with children below the age of 2½ years, and which are classified as Use Group I-2 in accordance with the Uniform Construction Code, shelter facilities, residences for the developmentally disabled, group homes, teaching family homes, transitional living homes, rooming and boarding houses, hotels and multiple dwellings.

1. Exception to (a) above: Furnace and boiler equipment of low pressure type (operating at pressures of 15 psig or less for steam equipment or 160 psig or less for hot water equipment) when installed in accordance with manufacturer recommendations or furnace and boiler equipment of residential (R-3) type (200,000 BTU per hour input rating or less) is not required to be enclosed.

(b) Emergency controls shall be provided in all structures classified as day nurseries, children's shelter facilities, residential child care facilities and similar facilities with children below the age of 2½ years, and which are classified as Use Group I-2 in accordance with the Uniform Construction Code and in group homes, teaching family homes, and supervised transitional living homes in accordance with the following:

1. Emergency shutoff switches for furnaces and boilers in basements must be at the top of the stairs leading to the basement;
2. Emergency shutoff switches for furnaces and boilers in other enclosed rooms must be located outside of the room.

Administrative correction to (a) and (b).  
See: 21 N.J.R. 3085(a).

**5:18-4.19 Smoke detectors for one and two-family dwellings**

(a) In all Use Group R-3 dwellings subject to the requirements of N.J.A.C. 5:18-2.3, smoke detectors shall be installed as follows:

1. On each level of the premises; and
2. Outside of each separate sleeping area.

(b) The smoke detectors required in (a) above shall be located in accordance with NFPA 74 listed in N.J.A.C. 5:18-Appendix 3A, incorporated herein by reference, and maintained in working order.

1. The detectors shall not be required to be interconnected.

(c) Smoke detectors may be battery powered and shall be listed in accordance with ANSI/UL 217 listed in N.J.A.C. 5:18-Appendix 3A, incorporated herein by reference.

1. A/C-powered smoke detectors shall be accepted as meeting the requirements of this section.

New Rule, R.1992 d.11, effective January 6, 1992.  
See: 23 N.J.R. 3064(a), 24 N.J.R. 88(a).  
Amended by R.1993 d.197, effective May 3, 1993.  
See: 25 N.J.R. 393(a), 25 N.J.R. 1868(a).  
Added reference to Appendix 3A.  
Administrative change.  
27 N.J.R. 2387(a).