

NFPA[®] 150

Standard on Fire and Life Safety in Animal Housing Facilities

2016 Edition



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NFPA®150

Standard on

Fire and Life Safety in Animal Housing Facilities

2016 Edition

This edition of NFPA 150, *Standard on Fire and Life Safety in Animal Housing Facilities*, was prepared by the Technical Committee on Animal Housing Facilities. It was issued by the Standards Council on May 26, 2015, with an effective date of June 15, 2015, and supersedes all previous editions.

This edition of NFPA 150 was approved as an American National Standard on June 15, 2015.

Origin and Development of NFPA 150

After a series of disastrous fires in racetrack stables in 1975, NFPA established the Committee on Firesafety in Racetrack Stables. This committee began its work in 1976 with the establishment of three working subcommittees covering construction, occupancy requirements, and fire protection. NFPA 150, *Standard on Firesafety in Racetrack Stables*, was first published in 1979. In the 1985 edition, minor changes were made to the standard that included the printing of Table 3 from NFPA 220, *Standard on Types of Building Construction*, in Appendix A. Changes to both the 1991 and 1995 editions consisted of editorial improvements and clarifications of the existing text.

The 2000 edition added a section on equivalency and essentially revised other portions of the text to reflect the *Manual of Style for NFPA Technical Committee Documents* for use of mandatory language.

In 2004, the scope of NFPA 150 expanded to include life and safety requirements for both humans and animals in all types of animal housing facilities. In July of 2004, the Standards Council approved the expansion and changed the name of the document to *Standard on Fire and Life Safety in Animal Housing Facilities*. The expanded NFPA 150 provided better guidance to authorities having jurisdiction by addressing all types of animal housing facilities and made possible the consistent treatment of such facilities from jurisdiction to jurisdiction.

The 2009 edition included several updates related primarily to the referenced codes and standards and to some of the extracted text. A new provision allowing the use of the room-corner test from NFPA 286, *Standard Methods of Fire Tests for Evaluating Contribution of Wall and Ceiling Interior Finish to Room Fire Growth*, was introduced to allow an alternative test protocol to evaluate interior finish materials. These refinements continued and a new chapter on performance-based design approaches was added for the 2013 edition. Other changes for that edition included supplemental provisions for the built-in fire protection systems that are mandated by the standard.

Changes for the 2016 edition include several clarifications and additions, including scoping criteria with regard to how the standard should be applied to existing buildings, classification of all agricultural animals in the Category B scheme for protection purposes, and a provision that extends automatic sprinkler and smoke control systems into all facilities that board or house horses.

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Committee Scope: This Committee shall have primary responsibility for documents on the loss of animal and human life and property from fire in animal housing facilities, including, but not limited to the following: barns; stables; kennels; animal shelters; animal hospitals; veterinary facilities; zoos, special amusement parks; agricultural facilities; laboratories; and racetrack stable and kennel areas including those stable and kennel areas, barns, and associated buildings at state, county, and local fairgrounds. This Committee does not cover building code or life safety code requirements that are handled by other committees.

Contents

Chapter 1 Administration	150- 4	7.5 Structural Design.	150- 13
1.1 Scope.	150- 4	7.6 Fire-Rated Separations Between Animal Housing Facilities and Hazardous Areas.	150- 13
1.2 Purpose.	150- 4	7.7 Wildland/Urban Interface or Wildland/Urban Intermix.	150- 13
1.3 Application.	150- 4		
1.4 Retroactivity.	150- 4	Chapter 8 Means of Egress Requirements	150- 14
1.5 Equivalency.	150- 4	8.1 General.	150- 14
1.6 Units.	150- 5	8.2 Animal Occupant Load.	150- 14
1.7 Enforcement.	150- 5		
Chapter 2 Referenced Publications	150- 5	Chapter 9 Requirements for Protection from Fire and Special Hazards	150- 14
2.1 General.	150- 5	9.1 General.	150- 14
2.2 NFPA Publications.	150- 5	9.2 Sprinkler Protection.	150- 14
2.3 Other Publications.	150- 5	9.3 Fire Alarm Systems.	150- 14
2.4 References for Extracts in Mandatory Sections.	150- 5	9.4 Fire Extinguishers.	150- 14
Chapter 3 Definitions	150- 5	9.5 Lightning Protection.	150- 15
3.1 General.	150- 5	9.6 Special Hazards.	150- 15
3.2 NFPA Official Definitions.	150- 5	9.7 Vertical Openings.	150- 15
3.3 General Definitions.	150- 6	9.8 Special Requirements for Category A Animals. .	150- 15
Chapter 4 General Requirements	150- 7	Chapter 10 Interior Finishes, Contents, and Furnishings	150- 16
4.1 Goals and Objectives.	150- 7	10.1 General.	150- 16
4.2 Fundamental Fire and Life Safety Requirements.	150- 7	10.2 Insulation.	150- 16
4.3 General Requirements.	150- 8	Chapter 11 Class 1 Animal Housing Facilities	150- 16
Chapter 5 Performance-Based Design Option	150- 8	11.1 General.	150- 16
5.1 General Requirements.	150- 8	11.2 Means of Egress Requirements.	150- 16
5.2 Safety-from-Fire Goals.	150- 9	11.3 Protection.	150- 16
5.3 Retained Prescriptive Requirements.	150- 9	11.4 Operating Features.	150- 17
5.4 Performance-Based Design Characteristics and Assumptions.	150- 10	Chapter 12 Class 2 Animal Housing Facilities	150- 17
5.5 Design Scenarios.	150- 10	12.1 General.	150- 17
5.6 Evaluation of Proposed Designs.	150- 10	12.2 Means of Egress Requirements.	150- 17
5.7 Safety Factors.	150- 11	12.3 Protection.	150- 17
5.8 Documentation Requirements.	150- 11	12.4 Operating Features.	150- 17
Chapter 6 Subclassification of Animal Housing Facilities and Categorization of Animals ...	150- 11	Chapter 13 Class 3 Animal Housing Facilities	150- 18
6.1 General.	150- 11	13.1 General.	150- 18
6.2 Animal Housing Facility Subclassifications.	150- 11	13.2 Means of Egress Requirements.	150- 18
6.3 Categorization of Animals.	150- 12	13.3 Protection.	150- 18
Chapter 7 Construction and Separation Requirements	150- 12	13.4 Operating Features.	150- 18
7.1 Types of Construction.	150- 12	Annex A Explanatory Material	150- 18
7.2 Height and Area Requirements.	150- 12	Annex B Sample Ordinance Adopting NFPA 150	150- 24
7.3 Stall, Cage, and Enclosure Requirements.	150- 13	Annex C Informational References	150- 25
7.4 Exposure Protection.	150- 13	Index	150- 26

NFPA 150

Standard on

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Facilities

2016 Edition

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

A reference in brackets [] following a section or paragraph indicates material that has been extracted from another NFPA document. As an aid to the user, the complete title and edition of the source documents for extracts in mandatory sections of the document are given in Chapter 2 and those for extracts in informational sections are given in Annex C. Extracted text may be edited for consistency and style and may include the revision of internal paragraph references and other references as appropriate. Requests for interpretations or revisions of extracted text shall be sent to the technical committee responsible for the source document.

Information on referenced publications can be found in Chapter 2 and Annex C.

Chapter 1 Administration

1.1 Scope.

1.1.1* This standard shall provide the minimum requirements for the design, construction, fire protection, and classification of animal housing facilities.

1.1.2 Animal housing facilities shall be designed, constructed, and maintained in accordance with the adopted building, fire, and life safety codes and the requirements herein.

1.1.3 Where requirements of this standard differ from the adopted fire prevention, life safety, and building codes, the requirements of this standard shall govern the protection of the animal occupants and animal handlers.

1.2 Purpose. The purpose of this standard shall be to prevent the loss of animal life, human life, and property from fire or other emergencies by providing the minimum requirements for the design, construction, operation, and maintenance of facilities where animals are housed, including but not limited to rest, feed, work, exercise, and production areas.

1.3 Application.

1.3.1* This standard shall apply to animal housing facilities that are subject to local, state, or federal licensing or permitting requirements, including but not limited to the following:

- (1) Barns and stables
- (2) Kennels
- (3) Racetrack stable/kennel areas, including those stable/kennel areas, barns, and associated buildings at state, county, and local fairgrounds
- (4) Animal shelters
- (5) Animal hospitals and veterinary facilities
- (6) Zoos and special amusement parks
- (7) Laboratories
- (8) Agricultural facilities
- (9) Mercantile or business occupancies with animals

1.3.2 This standard shall apply to new animal housing facilities.

1.3.3* This standard shall also apply to existing facilities where any one of the following conditions applies:

- (1) A change of use or occupancy classification occurs where animals are introduced.
- (2) A change is made in the subclassification or category of the animals housed.
- (3) An extensive modification, reconstruction, or addition is made.
- (4) A building or structure with an animal housing facility is relocated.
- (5) A building with an animal housing facility is considered damaged, unsafe, or a fire hazard.
- (6) A property line that affects compliance with any provision of this standard is created or relocated.

1.3.4* This standard shall apply to temporary structures housing animals solely for the purposes of developing a disaster/emergency management program in accordance with 4.3.4.

1.4 Retroactivity. The provisions of this standard provide an acceptable degree of protection from the hazards addressed in this standard at the time the standard was issued.

1.4.1 Unless otherwise specified, the provisions of this standard shall not apply to facilities, equipment, structures, or installations that existed or were approved for construction or installation prior to the effective date of the standard. Where specified, the provisions of this standard shall be retroactive.

1.4.2 This standard shall apply to existing installations that are determined by the AHJ to constitute imminent danger to animal occupant or animal handler safety.

1.4.3 The retroactive requirements of this standard shall be permitted to be modified if their application clearly would be impractical in the judgment of the authority having jurisdiction, and only where it is clearly evident that a reasonable degree of safety is provided.

1.5 Equivalency. Nothing in this standard is intended to prevent the use of systems, methods, or devices of equivalent or

superior quality, strength, fire resistance, effectiveness, durability, and safety over those prescribed by this standard.

1.5.1 Technical documentation shall be submitted to the authority having jurisdiction to demonstrate equivalency.

1.5.2 The system, method, or device shall be approved for the intended purpose by the authority having jurisdiction.

1.5.3 Alternative systems, methods, or devices approved as equivalent by the authority having jurisdiction shall be recognized as being in compliance with this standard.

1.6 Units.

1.6.1 SI Units. Metric units in this standard are in accordance with the modernized metric system known as the International System of Units (SI).

1.6.2 Primary and Equivalent Values. If a value for a measurement as given in this standard is followed by an equivalent value in other units, the first stated value shall be regarded as the requirement. A given equivalent value might be approximate.

1.7 Enforcement. This standard shall be administered and enforced by the authority having jurisdiction designated by the governing authority. (See Annex B for sample wording for enabling legislation.)

Chapter 2 Referenced Publications

2.1 General. The documents or portions thereof listed in this chapter are referenced within this standard and shall be considered part of the requirements of this document.

2.2 NFPA Publications. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471.

NFPA 1, *Fire Code*, 2015 edition.

NFPA 10, *Standard for Portable Fire Extinguishers*, 2013 edition.

NFPA 13, *Standard for the Installation of Sprinkler Systems*, 2016 edition.

NFPA 31, *Standard for the Installation of Oil-Burning Equipment*, 2011 edition.

NFPA 54/ANSI Z223.1, *National Fuel Gas Code*, 2015 edition.

NFPA 58, *Liquefied Petroleum Gas Code*, 2014 edition.

NFPA 70®, *National Electrical Code*®, 2014 edition.

NFPA 72®, *National Fire Alarm and Signaling Code*, 2016 edition.

NFPA 90A, *Standard for the Installation of Air-Conditioning and Ventilating Systems*, 2015 edition.

NFPA 90B, *Standard for the Installation of Warm Air Heating and Air-Conditioning Systems*, 2015 edition.

NFPA 92, *Standard for Smoke Control Systems*, 2015 edition.

NFPA 101®, *Life Safety Code*®, 2015 edition.

NFPA 211, *Standard for Chimneys, Fireplaces, Vents, and Solid Fuel-Burning Appliances*, 2013 edition.

NFPA 220, *Standard on Types of Building Construction*, 2015 edition.

NFPA 286, *Standard Methods of Fire Tests for Evaluating Contribution of Wall and Ceiling Interior Finish to Room Fire Growth*, 2015 edition.

NFPA 720, *Standard for the Installation of Carbon Monoxide (CO) Detection and Warning Equipment*, 2015 edition.

NFPA 780, *Standard for the Installation of Lightning Protection Systems*, 2014 edition.

NFPA 1144, *Standard for Reducing Structure Ignition Hazards from Wildland Fire*, 2013 edition.

NFPA 1600®, *Standard on Disaster/Emergency Management and Business Continuity Programs*, 2013 edition.

NFPA 5000®, *Building Construction and Safety Code*®, 2015 edition.

2.3 Other Publications.

2.3.1 ASTM Publications. ASTM International, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428-2959.

ASTM E84, *Standard Test Method of Surface Burning Characteristics of Building Material*, 2014.

ASTM E1591, *Standard Guide for Obtaining Data for Deterministic Fire Models*, 2007.

2.3.2 UL Publications. Underwriters Laboratories Inc., 333 Pfingsten Road, Northbrook, IL 60062-2096.

ANSI/UL 723, *Standard for Test of Surface Burning Characteristics of Building Material*, 2008, with revisions through September 13, 2010.

2.3.3 Other Publications.

Merriam-Webster's Collegiate Dictionary, 11th edition, Merriam-Webster, Inc., Springfield, MA, 2003.

2.4 References for Extracts in Mandatory Sections.

NFPA 5000®, *Building Construction and Safety Code*®, 2015 edition.

Chapter 3 Definitions

3.1 General. The definitions contained in this chapter shall apply to the terms used in this standard. Where terms are not defined in this chapter or within another chapter, they shall be defined using their ordinarily accepted meanings within the context in which they are used. *Merriam-Webster's Collegiate Dictionary*, 11th edition, shall be the source for the ordinarily accepted meaning.

3.2 NFPA Official Definitions.

3.2.1* Approved. Acceptable to the authority having jurisdiction.

3.2.2* Authority Having Jurisdiction (AHJ). An organization, office, or individual responsible for enforcing the requirements of a code or standard, or for approving equipment, materials, an installation, or a procedure.

3.2.3 Labeled. Equipment or materials to which has been attached a label, symbol, or other identifying mark of an organization that is acceptable to the authority having jurisdiction and concerned with product evaluation, that maintains periodic inspection of production of labeled equipment or materials, and by whose labeling the manufacturer indicates compliance with appropriate standards or performance in a specified manner.

3.2.4* Listed. Equipment, materials, or services included in a list published by an organization that is acceptable to the authority having jurisdiction and concerned with evaluation of

products or services, that maintains periodic inspection of production of listed equipment or materials or periodic evaluation of services, and whose listing states that either the equipment, material, or service meets appropriate designated standards or has been tested and found suitable for a specified purpose.

3.2.5 Shall. Indicates a mandatory requirement.

3.2.6 Should. Indicates a recommendation or that which is advised but not required.

3.2.7 Standard. An NFPA Standard, the main text of which contains only mandatory provisions using the word “shall” to indicate requirements and that is in a form generally suitable for mandatory reference by another standard or code or for adoption into law. Nonmandatory provisions are not to be considered a part of the requirements of a standard and shall be located in an appendix, annex, footnote, informational note, or other means as permitted in the NFPA Manuals of Style. When used in a generic sense, such as in the phrase “standards development process” or “standards development activities,” the term “standards” includes all NFPA Standards, including Codes, Standards, Recommended Practices, and Guides.

3.3 General Definitions.

3.3.1 Addition. An increase in the building area, aggregate floor area, building height, or number of stories of a structure. [5000, 2015]

3.3.2 Animal. For the purposes of this standard, an air-breathing vertebrate.

3.3.2.1* Confined Animals. Animals housed such that human intervention is required for their release and evacuation in case of emergency.

3.3.3* Animal Handler. A person responsible for the handling, grooming, and care of confined animals, or reasonably expected to assist in their handling and evacuation in case of emergency.

3.3.4* Animal Housing Facility. Area of a building or structure, including interior and adjacent exterior spaces, where animals are fed, rested, worked, exercised, treated, exhibited, or used for production.

3.3.5 Building Height. The vertical distance from the grade plane to the average elevation of the highest roof surface. [5000, 2015]

3.3.6 Cage. A box or enclosure from which an animal or animals cannot normally escape without human intervention.

3.3.7 Confined Animals. See 3.3.2.1.

3.3.8 Feed Room. See 3.3.20.1.

3.3.9 Fire Resistance Rating. The time in minutes or hours that materials or assemblies have withstood a fire exposure, as established in accordance with the tests or methods based on tests prescribed by this standard. [5000, 2015]

3.3.10 General Public. People who do not have an intimate knowledge of the layout of the building or structure, or the general behavior of the animals at the facility, and are not intended personnel.

3.3.11 Halter. A piece of equipment, composed of rope or straps and buckles, that fits securely around the head of an animal such as a horse or cow, used in handling and leading animals from place to place.

3.3.12 Intended Personnel. People working in the animal housing facility with an intimate knowledge of the layout of the building or structure and the general behavior of the animals at the facility, such as employees or students, who are not considered the general public.

3.3.13 Lead. A rope, chain, or strap of suitable length with a clasp at one end used for handling and leading animals by a halter, collar, or harness.

3.3.14 Mechanical Equipment Room. See 3.3.20.2.

3.3.15 Modification. The reconfiguration of any space, the addition or elimination of any door or window, the addition or elimination of load-bearing elements, the reconfiguration or extension of any system, or the installation of any additional equipment. [5000, 2015]

3.3.16 Occupancy. The purpose for which a building or other structure, or part thereof, is used or intended to be used. [ASCE/SEI 7:1.2]

3.3.17* Protection. A device, material, or system that provides a specified level of safety to achieve a desired outcome.

3.3.18 Reconstruction. The reconfiguration of a space that affects an exit, or a corridor shared by more than a single tenant; or reconfiguration of space such that the rehabilitation work area is not permitted to be occupied because existing means of egress and fire protection systems, or their equivalent, are not in place or continuously maintained. [5000, 2015]

3.3.19 Renovation. The replacement in kind, strengthening, or upgrading of elements, materials, equipment, or fixtures that does not result in a reconfiguration of the building or spaces within. [5000, 2015]

3.3.20 Room.

3.3.20.1 Feed Room. Room used to store feed and feed supplies for animals.

3.3.20.2 Mechanical Equipment Room. Room that contains mechanical, electrical, air conditioning, or other equipment.

3.3.20.3 Storage Room. Enclosed room within a building containing tack and equipment used for animal handling, capture, restraint, grooming, training, care, and upkeep of the animal facility.

3.3.20.4 Tack Room. A storage area for tack and stable equipment.

3.3.21 Stall. A room or compartment that normally houses one or more animals.

3.3.22 Storage Room. See 3.3.20.3.

3.3.23 Tack. Stable gear; also harnesses, bridles, saddles, and other accessories used in riding or driving horses.

3.3.24 Tack Room. See 3.3.20.4.

3.3.25 Trainer. A person responsible for the care and training of animals.

Chapter 4 General Requirements

4.1* Goals and Objectives.

4.1.1* Goals. The primary goals of this standard shall be safety and facility usability for both human and animal occupants, including property protection as it relates to the primary goals.

4.1.2* Objectives. To achieve the goals stated in 4.1.1, the goals and objectives of 4.1.3 and 4.1.4 shall be satisfied.

4.1.3 Safety. The intent of the safety goal of this standard shall be to reduce the probability of injury or death to both animal and human occupants from fire, similar emergencies, and facility use.

4.1.3.1 Safety from Fire.

4.1.3.1.1* Safety-from-Fire Goals. The fire safety goals of this standard shall be as follows:

- (1) To provide an environment for human occupants inside an animal housing facility that is reasonably safe from fire and similar emergencies
- (2) To provide an environment for animal occupants inside or adjacent to a structure that is reasonably safe from fire and similar emergencies
- (3) To provide reasonable safety for fire fighters and emergency responders during search and rescue operations for animal and human occupants
- (4) To attempt to minimize loss of property and interruption of facility operations from fire and similar emergencies

4.1.3.1.2 Safety-from-Fire Objectives.

4.1.3.1.2.1 Facilities shall be designed and constructed to protect human and animal occupants not intimate with the initial fire development for the time needed to evacuate, relocate, or defend in place.

4.1.3.1.2.2* Facilities shall be designed and constructed to provide reasonable safety for fire fighters and emergency responders during search and rescue operations for animal and human occupants.

4.1.3.1.2.3 Facilities shall be designed and constructed to provide reasonable access to the structure for emergency responders.

4.1.3.1.2.4 Facilities shall be designed and constructed to reasonably protect adjacent persons, animals, and structures from injury, death, or substantial damage as a result of a fire.

4.1.3.2 Safety During Facility Use.

4.1.3.2.1* Safety-During-Facility-Use Goal. The safety-during-facility-use goal of this standard shall be to provide an environment for both the human and animal occupants of the facility that is reasonably safe during the normal use of the facility.

4.1.3.2.2 Safety-During-Facility-Use Objectives.

4.1.3.2.2.1 Facilities shall be designed and constructed to provide for reasonably safe animal and crowd movement during emergency and nonemergency conditions.

4.1.3.2.2.2 Facilities shall be designed and constructed to provide reasonable safety for animal and human occupants and workers during construction and demolition.

4.1.3.2.2.3* Facilities shall be designed and constructed to provide reasonable and appropriate notification to occupants during emergency situations.

4.1.3.2.2.4 Facilities shall be designed and constructed to provide reasonable signage to identify hazards, means of egress, and other building safety features.

4.1.4 Usability Goal. The intent of the usability goal of this standard shall be to ensure that the facility is capable of functioning at the level for which it was designed.

4.1.4.1 Function.

4.1.4.1.1* Function Goal. The intent of the function goal of this standard shall be to ensure that a facility and its systems, features, and construction, throughout its life, provide reasonable capability of operation to satisfy the other goals of this standard.

4.1.4.1.2* Function Objective. Facilities shall be designed and constructed to provide reasonable assurance that its systems, features, and construction are capable of performing their intended use to satisfy the objectives of this standard.

4.2 Fundamental Fire and Life Safety Requirements.

4.2.1 Multiple Safeguards.

4.2.1.1 The design of every facility intended for animal and human occupancy shall be such that reliance for property protection and safety to life does not depend solely on any single safeguard.

4.2.1.2 Additional safeguard(s) shall be provided for property protection and life safety in case any single safeguard is ineffective due to inappropriate animal or human actions, building failure, or system failure.

4.2.2 Appropriateness of Safeguards. Every facility shall be provided with means of egress and other fire and life safety safeguards of the kinds, numbers, locations, and capacities appropriate to the individual facility, with due regard to the following:

- (1) Character of the occupancy, including fire load
- (2) Characteristics and capabilities of both human and animal occupants and their responses to fire protection safeguards
- (3) Number of animals and persons exposed
- (4) Fire protection available
- (5) Height and type of construction of the facility
- (6) Other factors necessary to provide animal and human occupants with a reasonable degree of safety
- (7) Other factors necessary to protect the facility and contents from unacceptable damage

4.2.3 Means of Egress. The minimum number of means of egress for human and animal occupants shall be in accordance with Chapter 8.

4.2.4* Occupant Notification. In every facility of such size, arrangement, or occupancy that a fire itself might not provide adequate occupant warning, fire alarm systems shall be provided where necessary to warn occupants of the existence of fire.

4.2.5 System Design and Installation. Any fire protection system, building service equipment, feature of protection, or safeguard provided for fire and life safety shall be designed,

installed, and approved in accordance with applicable NFPA codes and standards.

4.2.6 Limiting Fire Spread.

4.2.6.1 The interior surfaces of the facility shall not contribute to an unacceptable rate and magnitude of fire spread and generation of heat and smoke.

4.2.6.2 The construction of concealed spaces shall not contribute to an unacceptable rate of the spread of fire, hot gases, and smoke to areas of the facility remote from the fire source and shall limit their spread beyond the immediate area of the origin of the fire.

4.2.6.3 The facility shall be compartmented, as appropriate, by walls and floors, including their associated openings with proper closures, to limit the spread of fire, hot gases, and smoke to an acceptable area beyond the immediate area of fire origin.

4.2.7 Structural Integrity. The facility's structural members and assemblies shall be provided with the required degree of fire resistance to limit structural damage, damage to the building and its contents, and damage to adjacent buildings and property.

4.3 General Requirements.

4.3.1 Authority Having Jurisdiction.

4.3.1.1 The authority having jurisdiction (AHJ) shall determine whether the provisions of this standard are met.

4.3.1.2 Where it is evident that a reasonable degree of safety is provided, any requirement shall be permitted to be modified if, in the judgment of the AHJ, its application would be hazardous under normal occupancy conditions.

4.3.1.3* Where it is evident that special circumstances not specifically addressed in this standard exist in the design, construction, use, or operation of the facility, the AHJ shall be permitted to require additional safeguards such that a reasonable degree of safety is provided.

4.3.2 Provisions in Excess of Standard Requirements. Nothing in this standard shall be construed to prohibit a superior type of building construction, an additional means of egress, or an otherwise safer condition than that specified by the minimum requirements of this standard.

4.3.3 Maintenance and Testing.

4.3.3.1 Where any device, equipment, system, condition, arrangement, or level of protection, or any other feature, is required for compliance with the provisions of this standard, such device, equipment, system, condition, arrangement, level of protection, or other feature shall thereafter be continuously maintained in accordance with applicable NFPA requirements or as directed by the AHJ.

4.3.3.2 Equipment requiring periodic testing or operation to ensure its maintenance shall be tested or operated as specified elsewhere in this standard or as directed by the AHJ.

4.3.3.3 Maintenance and testing shall be under the supervision of a responsible person who shall ensure that testing and maintenance are made at specified intervals in accordance with applicable NFPA standards or as directed by the AHJ.

4.3.4 Disaster/Emergency Management Program.

4.3.4.1 General. Disaster/emergency management programs shall be required in all animal housing facilities to protect and ensure the safety of the animal and human occupants during fire or other similar emergencies.

4.3.4.2 Program Requirements.

4.3.4.2.1* Disaster/emergency management programs shall be developed in accordance with *NFPA 1600* and shall include the procedures for reporting emergencies; the occupant and staff response to emergencies; the design and conduct of disaster/emergency drills; the type and coverage of building fire protection systems; and other items required by the AHJ.

4.3.4.2.2 Required disaster/emergency management programs shall be submitted to the AHJ for review and approval.

4.3.4.2.3 Disaster/emergency management programs shall be reviewed and updated annually.

4.3.4.2.4 Revised plans shall be submitted for review and updates shall be provided whenever changes are made in the occupancy or physical arrangement of the building or fire protection systems or features.

4.3.4.2.5 Floor plans shall be provided to the AHJ, as requested.

4.3.4.2.6 In accordance with the disaster/emergency management program, equipment designated as necessary for the evacuation or relocation of animals shall be readily accessible at all times.

4.3.5* Disaster/Emergency Drills.

4.3.5.1 Disaster/emergency drills conforming to the provisions of this standard shall be conducted in cooperation with the local authorities and as specified by this standard or by the AHJ.

4.3.5.2 Drill Frequency.

4.3.5.2.1 Where required by this standard or the AHJ, disaster/emergency drills shall be held to familiarize occupants with the drill procedure and to establish conduct of the drill as a matter of routine.

4.3.5.2.2* Disaster/emergency drills shall include procedures to ensure that all persons subject to the drill participate.

Chapter 5 Performance-Based Design Option

5.1* General Requirements.

5.1.1 Application. The requirements of this chapter shall apply to buildings or structures, portions of buildings or structures, or building systems designed in accordance with the performance-based option permitted by Section 4.3.

5.1.2 Goals and Objectives. The performance-based design shall meet the goals and objectives of Section 4.1.

5.1.3* Independent Review. The authority having jurisdiction shall be permitted to require an approved, independent third party to review the proposed design and provide an evaluation of the design to the authority having jurisdiction at the expense of the owner.