

NFPA[®]

170

Standard for
Fire Safety and
Emergency Symbols

2021



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NFPA® 170

Standard for

Fire Safety and Emergency Symbols

2021 Edition

This edition of NFPA 170, *Standard for Fire Safety and Emergency Symbols*, was prepared by the Technical Committee on Fire Safety and Emergency Symbols. It was issued by the Standards Council on October 5, 2020, with an effective date of October 25, 2020, and supersedes all previous editions.

This edition of NFPA 170 was approved as an American National Standard on October 25, 2020.

Origin and Development of NFPA 170

The 1994 edition of NFPA 170 represented the completion of an effort to combine four previously separate documents that covered fire safety symbols for different purposes. These documents were the following:

- (1) NFPA 171, *Public Firesafety Symbols*
- (2) NFPA 172, *Fire Protection Symbols for Architectural and Engineering Drawings*
- (3) NFPA 174, *Fire Protection Symbols for Risk Analysis Diagrams*
- (4) NFPA 178, *Symbols for Fire Fighting Operations*

The Technical Committee on Fire Safety Symbols believed that placing all fire safety symbols in one document made it easier for users of symbols to find the one(s) most appropriate for their application. It also eliminated duplication between these and eventually other NFPA documents.

The first edition of NFPA 170, in 1991, placed these four documents in one document but did not combine them, except for definitions that were in each document.

For the second edition of NFPA 170, in 1994, the Technical Committee on Fire Safety Symbols completely restructured the text into a logical and cohesive arrangement. The duplication of symbols that occurred during the aforementioned consolidation of documents was eliminated. New symbols added included those for *campfire prohibitions*, *smoke barriers*, *illuminated exit signs*, and *belowground tanks*.

For the 1996 edition of NFPA 170, changes included the following: (1) Upgrading recommendations on pre-incident planning to requirements; (2) Adding new symbols for pull station, area of refuge, and cooking prohibition; (3) Clarifying the symbols for smoke detectors, battery-powered emergency lights, and fire service/emergency telephone station; and (4) Recognizing the phaseout of Halon now taking place and the introduction of clean agents.

The 1999 edition further recognized the introduction of clean agents by adding new symbols for clean agent and water mist systems. A new appendix (Appendix C) was added to include symbols that can be used for life safety planning.

The 2002 edition was reformatted to conform to the *Manual of Style for NFPA Technical Committee Documents*. Symbols for fire alarm system components were added for consistency with NFPA 72®, *National Fire Alarm Code*®.

In 2004, the scope of the committee was expanded to include emergency symbols to allow emergency mapping symbols in a new Chapter 8.

The 2006 edition of NFPA 170 included the refinement of exit symbology for better recognition of exit, arrow, and flame symbols that are consistent with international standards.

A new Chapter 8, *Symbology for Emergency Management Mapping*, was added to assist the user in the preparation for, prevention of, protection against, response to, and recovery from threats to the nation's population centers and critical infrastructure from terrorist, criminal, accidental, or natural origin.

The symbols in Chapter 8 were the result of efforts by the Federal Geographic Data Committee — Homeland Security Working Group. The symbols were included in the 2006 edition so that they can be processed through an accredited standards-writing organization and made available to the public.

The 2009 edition of NFPA 170 included a new chapter (Chapter 9) that provided guidance on the development of emergency evacuation diagrams and plans.

The 2012 edition of NFPA 170 included a new Chapter 7 and a new Chapter 8, previously contained in the old Chapter 6. This affected symbol details for devices such as fire alarm devices, fire sprinkler devices, electronic fire and smoke detection, and so forth. This action better organized existing symbols in the standard for the user.

The 2015 edition revised several symbols for consistency and clarity. For example, the “wisp of smoke” was replaced by an “S” to simplify the symbol when viewed on plans. Many tables were reorganized for clarity and ease of use as well.

In the 2018 edition, the tornado symbol was added, and several references were updated. The term *smoke barrier* was changed to *smoke rated*, and the term *fire barrier* was changed to *fire rated*. More details were added to the symbols for a fire department connection. A distinction was made between water-driven and electric-driven water flow alarms.

The 2021 edition of NFPA 170 provides a new symbol for dry hydrants/drafting ports to illustrate the significant distinction between hydrants that are connected to a pressurized water system and hydrants connected to a static source of water. In addition, signage for fire station apparatus bay doors has been addressed, and new tables have been created for fire pump type symbols and fire pump device symbols. Lastly, a symbol for a radio communication enhancement system has been added to be consistent with the term used in other codes.

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Committee Scope: This Committee shall have primary responsibility for documents on fire safety and emergency symbols including those for building design plans, investigation diagrams, maps, and for public fire safety and emergency. It shall coordinate its work with NFPA technical committees and other groups dealing with subjects to which fire safety symbols apply.

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NFPA 170

Standard for

Fire Safety and Emergency Symbols

2021 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. 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 and extracted publications can be found in Chapter 2 and Annex E.

Chapter 1 Administration

1.1 Scope. This standard presents symbols used for fire safety, emergency, and associated hazards.

1.2 Purpose. The purpose of this standard is to standardize the symbols used in representing fire safety, emergency, and associated hazards.

1.3 Retroactivity. The provisions of this standard reflect a consensus of what is necessary to provide an acceptable degree of protection from the hazards addressed in this standard at the time the standard was issued.

1.3.1 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.

1.3.2 In those cases where the authority having jurisdiction determines that the existing situation presents an unacceptable degree of risk, the authority having jurisdiction shall be permitted to apply retroactively any portions of this standard deemed appropriate.

to apply retroactively any portions of this standard deemed appropriate.

1.3.3 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.

1.4 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.

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

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

1.5 Units. Metric units of measurement used in this standard shall be in accordance with the International System of Units (SI). One unit (liter), outside of but recognized by SI, is commonly used in international fire protection. For conversion factors, see Table 1.5.

Table 1.5 Metric Conversion Factors

Name of Unit	Unit Symbol	Conversion Factor
Liter	L	1 gal = 3.785 L
Cubic decimeter	dm ³	1 gal = 3.785 dm ³
Pascal	Pa	1 psi = 6894.757 Pa
Meter	m	1 ft = 0.3048 m
Millimeter	mm	1 in. = 25.4 mm

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 704, *Standard System for the Identification of the Hazards of Materials for Emergency Response*, 2017 edition.

2.3 Other Publications.

2.3.1 ANSI Publications. American National Standards Institute, Inc., 25 West 43rd Street, 4th Floor, New York, NY 10036.

ICC/ANSI A117.1, *Accessible and Usable Buildings and Facilities*, 2017.

ANSI Z535.1, *American National Standard for Safety Colors*, 2017.

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

ASTM E2072, *Standard Specification for Photoluminescent (Phosphorescent) Safety Markings*, 2014.

ASTM E2073, *Standard Test Method for Photopic Luminance of Photoluminescent (Phosphorescent) Markings*, 2019.

▲ **2.3.3 FAMA Publications.** Fire Apparatus Manufacturers Association, P.O. Box 397, Lynnfield, MA 01940.

FAMA TC010, *Standard Product Safety Sign Catalog for Automotive Fire Apparatus*, 2012, revised 2015.

2.3.4 NECA Publications. National Electrical Contractors Association, 3 Bethesda Metro Center, Suite 1100, Bethesda, MD 20814.

NECA NEIS 100, *Symbols for Electrical Construction Drawings*, 2013.

▲ **2.3.5 UL Publications.** Underwriters Laboratories Inc., 333 Pfingsten Road, Northbrook, IL 60062-2096.

UL 325, *Door, Drapery, Gate, Louver, and Window Operators and Systems*, 2017.

UL 924, *Emergency Lighting and Power Equipment*, 2016, revised 2018.

UL 1994, *Luminous Egress Path Marking Systems*, 2015.

2.3.6 Other Publications.

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

2.4 References for Extracts in Mandatory Sections.

NFPA 10, *Standard for Portable Fire Extinguishers*, 2018 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 Photoluminescent. Having the property of emitting light that continues for a length of time after excitation by visible or invisible light has been removed. [UL 924:Section 4.42]

3.3.2 Pre-incident Planning. A written document resulting from the gathering of general and detailed information/data to be used by public emergency response agencies and private industry for determining the response to reasonable anticipated emergency incidents at a specific facility.

3.3.3* Referent. An object or concept (message) represented by a symbol.

▲ **3.3.4 Self-Luminous Exit Sign.** A sign with an integral legend that is powered continuously by a self-contained energy source other than a battery, such as radioactive tritium gas. Operation of a self-luminous sign is independent of external power supplies or other external forms of energy. This definition does not include exit signs dependent upon photoluminescent materials. [UL 924:Section 4.52]

3.3.5* Supplementary Indicators. Figures, numbers, subscripts, or letter abbreviations used to enhance the effectiveness of symbols.

3.3.6* Symbol. A graphic representation of a referent.

Chapter 4 Symbols for General Use

4.1 Introduction.

4.1.1 This chapter presents general referents and symbols for fire prevention and visual alerting that shall be used for fire and related life safety emergencies.

4.1.2 Purpose.

4.1.2.1 This chapter shall provide uniform fire safety symbols to improve communication wherever signs and symbols are employed to provide fire safety information.

4.1.2.2 This chapter provides uniformity in the selection of symbols that shall be designed to assist in locating exits, fire safety alerting equipment, and safe areas.

4.1.2.3* The fundamental imagery for symbols, as well as their background color and shape, shall be designated in this chapter.

4.1.3* Symbol Presentation.

4.1.3.1 The orientation for prohibition symbols shall not be altered from that shown in this chapter.

4.1.3.2 The symbol background shape shall be as specified in Table 4.2.

4.1.3.2.1* For prohibition symbols, a circle and diagonal slash (at 45 degrees from upper left to lower right) shall be used.

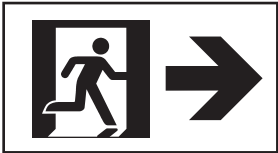
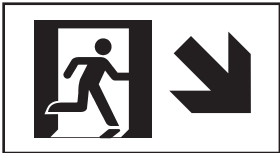
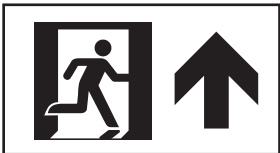
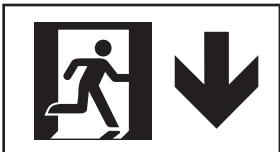
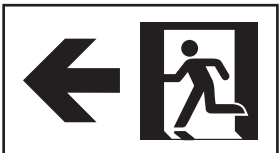
▲ **4.1.3.3** The symbol color shall meet the requirements of ANSI Z535.1, *American National Standard for Safety Colors*.

4.1.3.4* Symbols shall be permitted to be used in combination with other symbols, either vertically or horizontally, on the same sign or on separate signs adjacent to each other.

4.2* Symbols for General Use. The symbols for general use shall be as given in Table 4.2.

4.3 Class of Fire Symbols. The symbols for class of fire shall be as given in Figure 4.3(a) and Figure 4.3(b).

Table 4.2 Symbols for General Use

Symbol	Characteristics	Application	Example
Emergency Exit 	Square field Background green Door opening white Image in green	The identification and location of an emergency exit	The location of exit for use in a fire emergency
Emergency Exit Use of Arrows — Rectangular Field 	Painted version: Background color white Arrows red or black Backlit version: Doorway, arrows, and lettering in green or red	The identification and location of a route to an emergency exit	Progress to the right
	Painted version: Background color white Arrows red or black Backlit version: Doorway, arrows, and lettering in green or red	The identification and location of a route to an emergency exit	Progress up and to the right
	Painted version: Background color white Arrows red or black Backlit version: Doorway, arrows, and lettering in green or red	The identification and location of a route to an emergency exit	Progress down and to the right
	Painted version: Background color white Arrows red or black Backlit version: Doorway, arrows, and lettering in green or red	The identification and location of a route to an emergency exit	Progress forward
	Painted version: Background color white Arrows red or black Backlit version: Doorway, arrows, and lettering in green or red	The identification and location of a route to an emergency exit	Progress down
	Painted version: Background color white Arrows red or black Backlit version: Doorway, arrows, and lettering in green or red	The identification and location of a route to an emergency exit	Progress to the left

(continues)

Table 4.2 Continued

Symbol	Characteristics	Application	Example
	Painted version: Background color white Arrows red or black Backlit version: Doorway, arrows, and lettering in green or red	The identification and location of a route to an emergency exit	Progress up and to the left
	Painted version: Background color white Arrows red or black Backlit version: Doorway, arrows, and lettering in green or red	The identification and location of a route to an emergency exit	Progress down and to the left
Emergency Exit Route (Combination of Two Symbols) 	Square field Background green Door opening white Image in green For arrows: Square field Green arrow on white background or white arrow on green background	The identification and location of a route to be used in an emergency	The direction to a fire exit
Accessible Emergency Exit (Combination of Two Symbols) 	Square field Background green Door opening white Image in green International symbol of accessibility per ICC/ANSI A117.1, <i>Accessible and Usable Buildings and Facilities</i>	The identification of a route that leads to an emergency exit that is accessible to disabled users, as specified by ICC/ANSI A117.1, <i>Accessible and Usable Buildings and Facilities</i>	The location of a route toward a fire exit that is accessible to disabled users

(continues)

Table 4.2 Continued

Symbol	Characteristics	Application	Example
Accessible Emergency Exit Route (Combination of Three Symbols) 	Square field Background green Door opening white Image in green International symbol of accessibility per ICC/ANSI A117.1, <i>Accessible and Usable Buildings and Facilities</i> For arrows: Square field Green arrow on white background or white arrow on green background	The identification of a route that leads to an emergency exit that is accessible to disabled users	The location of the route toward a fire exit that is accessible to disabled users
Not an Exit 	Circular field Red prohibition symbol Background white Door frame green Door opening white Image in black	The identification of doors that do NOT lead to an exit	The location of an interior door such as one leading to a closet, an interior courtyard, or a basement
Use Stairs in Case of Fire 	Square field Red flame Black figure White background	An instruction to the user to use stairs (downward egress) in case of fire	The identification that stairs are to be used in case of fire
Use Stairs in Case of Fire 	Square field Red flame Black figure White background	An instruction to the user to use stairs (upward egress) in case of fire	The identification that stairs are to be used in case of fire
Do Not Use Elevator in Case of Fire 	Rectangular field Red flame Black figures White background Red circle and slash	An instruction not to use elevators in case of fire	Posted near elevator call button

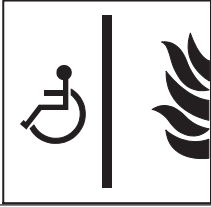
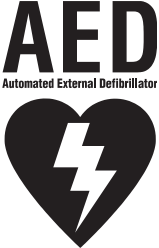
(continues)

Table 4.2 Continued

Symbol	Characteristics	Application	Example
No Open Flame — Flame 	Circular field Red circle and slash Black image White background	The identification of areas in which open flame is prohibited	The identification of areas, such as combustible storage areas, gas stations, and hazardous areas
No Open Flame — Lighted Match 	Circular field Red circle and slash Black image White background	An instruction not to use lighted matches	Where posted, the use of matches is prohibited
No Smoking 	Circular field Red circle and slash Black image White background	The identification of areas in which smoking is prohibited	The identification of areas, such as those for flammable liquid storage, where smoking could lead to fire or explosion
No Campfires 	Circular field Red circle and slash Black image White background	The identification of areas where campfires are not permitted	The identification of areas, such as municipal parks, where campfires are not permitted
Manual Station — Pull Station/Fire Alarm Box 	Rectangular field Red background White flame White hand White box White horn	An instruction to actuate an alarm-initiating device in a fire emergency	Posted above a manually activated initiating device
No Cooking 	Square field White background Red flame Black pot and steam Red circle and slash	An instruction not to cook food in an area	Posted inside a guest room in a hotel or a student room in a college dormitory

(continues)

Table 4.2 Continued

Symbol	Characteristics	Application	Example
Area of Refuge 	Square field White background Red flame	The identification of an area of refuge	A designated area of refuge to be used in a fire emergency
Severe Weather Shelter Area 	Background yellow Figures black Black storm symbol	The identification for a severe weather shelter. Include appropriate symbol for type of storm anticipated (e.g., cyclone, tornado)	Tornado shelter
No Hanger 	Red circle and slash Black image	To prohibit hanging clothes or other items from sprinklers	Where posted
Automated External Defibrillator (AED) 	Square field White background Red heart White bolt through the heart Black lettering	To identify the location of AEDs	Posted in airports and other places of assembly
Fire Extinguisher 	Square field Red background White symbol	For everyday use in workplaces and public areas; supplementary text sign can be used to increase comprehension	Fire safety signage, manuals, and notices
Fire Hose or Standpipe 	Square field Red background White symbol	For everyday use in workplaces and public areas; supplementary text sign can be used to increase comprehension	Fire safety signage, manuals, and notices

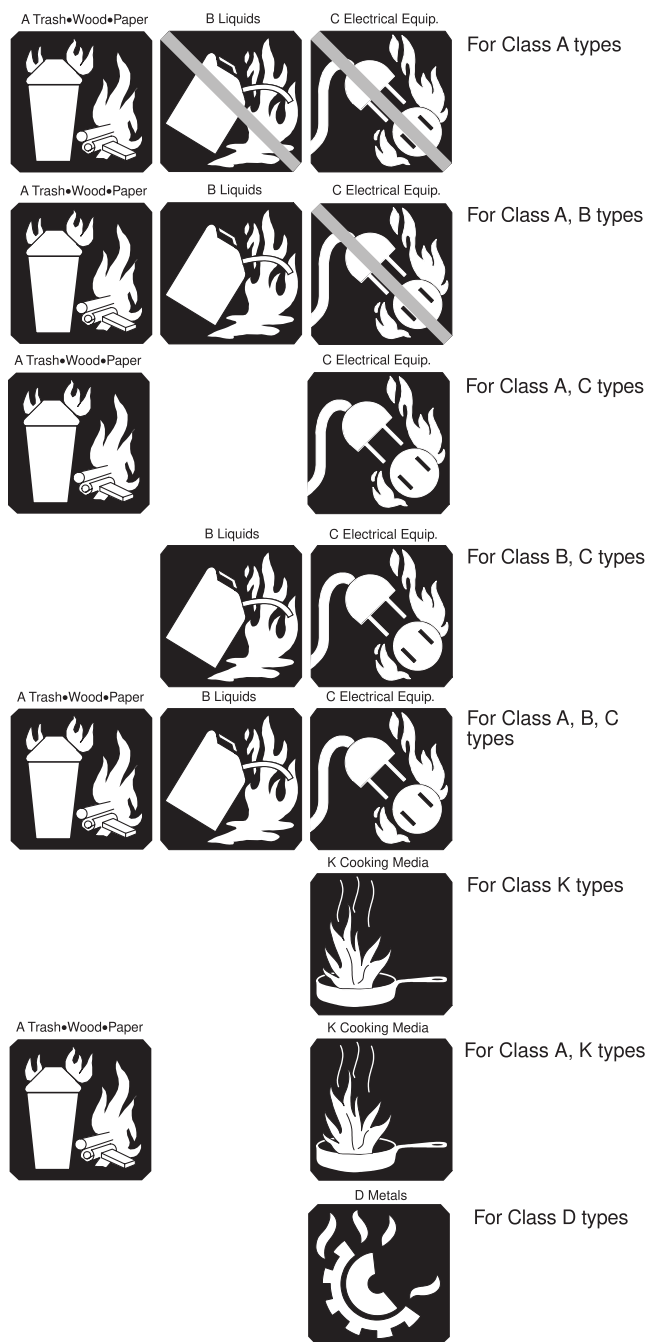
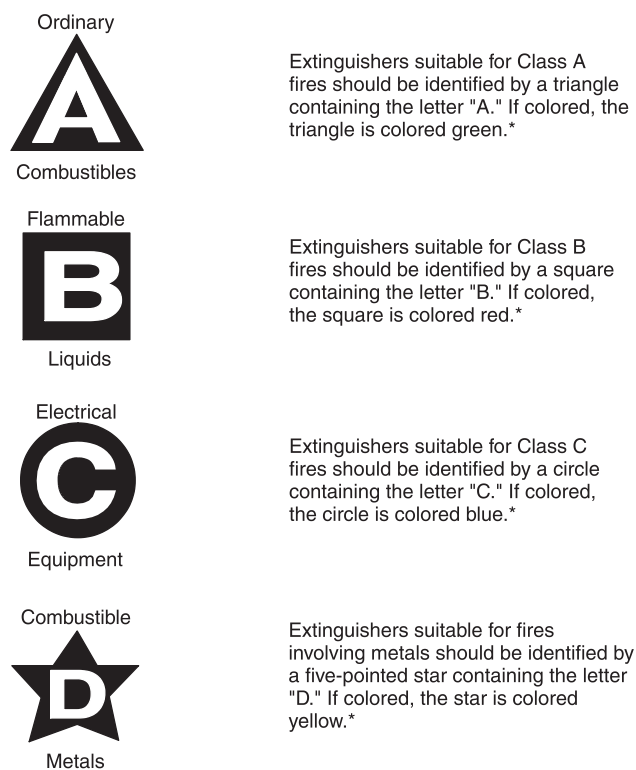


FIGURE 4.3(a) Recommended Marking System. [10:Figure B.1.1]



* Recommended colors, per PMS (Pantone Matching System) include the following:

GREEN — Basic Green
RED — 192 Red
BLUE — Process Blue
YELLOW — Basic Yellow

FIGURE 4.3(b) Letter-Shaped Symbol Markings. [10:Figure B.2.2]

Chapter 5 Symbols for Use by the Fire Service

5.1 Introduction.

5.1.1* This chapter presents standard referents and symbols that shall be used for visually alerting firefighters and other emergency responders during fire and related emergencies.

5.1.2* Fundamental shapes of symbols, as well as the background color and shape, shall be as designated in this chapter.

5.1.3* Symbol Presentation.

5.1.3.1* Symbol Shapes. The shape of symbols shall be as illustrated in Section 5.2.

5.1.3.2 Symbol Background.

5.1.3.2.1 The symbol background shall be as specified in Table 5.2.

Δ 5.1.3.2.2 The symbol background color shall be red, white, or blue as designated and shall meet the requirements of ANSI Z535.1, *American National Standard for Safety Colors*, for safety red, white, or blue.

Δ 5.1.3.3 Symbol Color. The symbol color shall be safety white or blue and shall meet the requirements of ANSI Z535.1, *American National Standard for Safety Colors*, for safety white or blue.

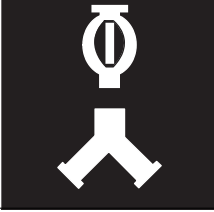
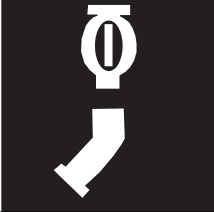
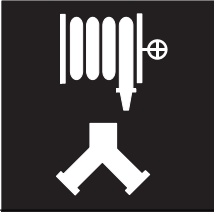
5.1.3.4 Symbol Orientation. Symbol orientation shall not be altered from that shown in this chapter.

5.2* Symbols for Use by the Fire Service. The symbols for use by the fire service shall be as given in Table 5.2.

5.3 Fire Apparatus Safety Symbols. Safety signs referenced in this standard beginning with the letters FAMA shall conform to the text and graphics of the referenced safety sign number found in FAMA TC010, *Standard Product Safety Sign Catalog for Automotive Fire Apparatus*.

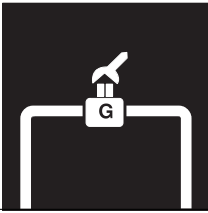
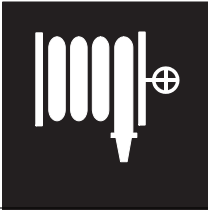
N 5.4 Fire Station Apparatus Bay Door Safety Signage and Symbols. Safety signage provided for fire station apparatus bay door areas for warning of entrapment and injury for occupants shall be in accordance with Section 62.2 and Figure 62.1 of UL 325, *Door, Drapery, Gate, Louver, and Window Operators and Systems*.

Table 5.2 Symbols for Use by the Fire Service

Symbol	Characteristics	Application	Examples
Fire Department Automatic Sprinkler Connection — Siamese 	Square field Red background White symbol	The identification and location of a fire department automatic sprinkler connection	The location of a siamese automatic sprinkler connections on buildings The location of siamese freestanding automatic sprinkler connections
Fire Department Automatic Sprinkler Connection — Single 	Square field Red background White symbol	The identification and location of a fire department automatic sprinkler connection	The location of a single automatic sprinkler connection on buildings The location of a single freestanding automatic sprinkler connection
Fire Department Standpipe Connection 	Square field Red background White symbol	The identification and location of a fire department standpipe connection	The location of standpipe connections on buildings and structures The location of freestanding standpipe connections
Fire Department Combined Automatic Sprinkler/Standpipe Connection 	Square field Red background White symbol	The identification and location of a fire department combined automatic sprinkler/standpipe connection	The location of combined sprinkler/standpipe connections on buildings The location of freestanding combined sprinkler/standpipe connections
Fire Hydrant (All Types) 	Square field Red background White symbol	The identification and location of a fire hydrant	The location of fire hydrants, wall hydrants, underground hydrants, or other firefighting water supplies

(continues)

Table 5.2 Continued

Symbol	Characteristics	Application	Examples
Automatic Sprinkler Control Valve 	Square field Red background White symbol	The identification and location of an automatic sprinkler control valve	The location of control valves for automatic sprinkler systems On doors of rooms containing control valves
Electric Panel or Electric Shutoff 	Square field Blue background White symbol	The identification and location of an electrical panel or other electric shutoff device	The location of electric panels or other electric control devices that can be located in basements or mechanical rooms
Gas Shutoff Valve 	Square field Red background White symbol Red letter G	The location of a gas shutoff valve	The location of gas shutoff valves On doors of rooms containing gas shutoff valves
Firefighting Hose or Standpipe Outlet 	Square field Red background White symbol	The location of a firefighting hose or a standpipe outlet	The location of interior firefighting hose stations and standpipe outlets in buildings and structures The location on bridges or elevated highways
Fire Extinguisher 	Square field Red background White symbol	The location of a fire extinguisher	The location of fire extinguishers in buildings and exterior locations
Directional Arrow 	Square field Background green to correspond to accompanying sign White symbol	Direction to the location of firefighting equipment or utility; always used in conjunction with, and adjacent to, another symbol indicating the particular equipment or utility	

(continues)

Table 5.2 Continued

Symbol	Characteristics	Application	Examples
Diagonal Directional Arrow 	Square field Background green to correspond to accompanying sign White symbol	Direction to the location of firefighting equipment or utility; always used in conjunction with, and adjacent to, another symbol indicating the particular equipment or utility	
Child Care Center 	Square field Blue infant and hands White background	The identification and location of child care centers	On the door opening into child care centers At a fire department command or access point indicating presence and location of child care centers
Emergency Telephone 	Square field Red background White phone	The identification and location of fire service or emergency telephone system	
No Firefighting 	Red prohibition symbol Circular field White background Black truck within black octagonal outline	To be posted on, near, or on the approach to buildings where firefighting is not to occur	Explosives bunkers, frangible buildings, or contaminated buildings
Self-Contained Breathing Apparatus (SCBA) 	Rectangular field White symbol Green background	To indicate the location of SCBA, breathing air connections, or refill location	For SCBA fill locations in high-rise buildings
Dry Hydrant / Drafting Port 	Square field Red background White symbol	The identification and location of a dry hydrant/drafting port	The location of a dry hydrant/drafting port from a static source of water

Chapter 6 Symbols for Use in Architectural and Engineering Drawings and Insurance Diagrams

6.1* Introduction.

6.1.1 This chapter presents symbols that shall be used in drawings and diagrams.

6.1.2* Symbol Presentation.

6.1.2.1* Symbol Shapes. The shape of symbols shall be as illustrated in Sections 6.2 through 7.9.

6.1.2.2 Screened Lines. Screened lines in the chapter shall not be considered part of the symbol but shall be used to represent the piping, wiring, or mounting surface associated with the symbol.

6.1.2.3 Symbol Scale. All scales for symbols on any one drawing shall be the same relative size.

6.1.2.4* Symbol Orientation. Symbols shall be oriented to the walls, piping, electrical lines, and so forth, to which they are attached.

6.2 Symbols for Site Features.

6.2.1 Buildings.

6.2.1.1 The exterior walls of buildings shall be outlined in single thickness lines if other than fire rated and double thickness lines if fire rated.

6.2.1.2* The perimeter of canopies, loading docks, and other open-walled structures shall be shown by broken lines.

6.2.2 Railroad Tracks. Railroad tracks shall be shown by a single line with cross dashes, as shown in Figure 6.2.2.

6.2.3* Streets. Streets shall be shown.

6.2.4* Bodies of Water. Rivers, lakes, and so forth, shall be outlined.

6.2.5 Fences.

6.2.5.1 Fences shall be shown by lines with x's evenly spaced.

6.2.5.2* Gates shall be shown.

6.2.6 Property Lines. The notation given in Figure 6.2.6 shall indicate property lines.

6.2.7 Fire Department Access. The symbol for fire department access shall be as shown in Figure 6.2.7.

6.2.8 Other Site Features. For other fire protection site features, Section 7.2 shall be viewed.



FIGURE 6.2.2 Symbol for Railroad Tracks.



FIGURE 6.2.6 Notation Indicating Property Lines.



FIGURE 6.2.7 Symbol for Fire Department Access.

6.3 Symbols for Building Construction.

6.3.1* Types of Building Construction. Types of construction shall be shown narratively.

6.3.2* Height. Height shall be shown to indicate number of stories above ground, number of stories below ground, and height from grade to eaves.

6.3.3* Symbols for Walls and Parapets. Symbols for walls and parapets shall be as given in Table 6.3.3.

6.3.4 Symbols for Floor Openings, Wall Openings, Roof Openings, and Their Protection. Symbols for floor openings, wall openings, roof openings, and their protection shall be as given in Table 6.3.4.

6.3.5* Special Symbols for Cross-Sections. The symbols shown in Table 6.3.5 shall be used to indicate features of cross-sections. It is recognized that descriptive notes often are required.

6.3.6 Miscellaneous Features. A number of features related to fire protection that do not fall under 6.3.1 through 6.3.5 shall be as given in Table 6.3.6.

Table 6.3.3 Symbols for Walls and Parapets

Symbol	Description
	Wall — basic shape
	Smoke-rated wall
	1/2-hour fire-rated wall
	1/2-hour fire/smoke-rated wall
	3/4-hour fire-rated wall
	3/4-hour fire/smoke-rated wall
	1-hour fire-rated wall
	1-hour fire/smoke-rated wall
	2-hour fire-rated wall
	2-hour fire wall
	2-hour fire/smoke-rated wall
	3-hour fire-rated wall
	3-hour fire wall
	3-hour fire/smoke-rated wall
	4-hour fire-rated wall
	4-hour fire wall
	4-hour fire/smoke-rated wall
	Parapet — one cross for each 150 mm (6 in.) parapet that extends above roof (shown is plan view of symbol)

Table 6.3.4 Symbols for Floor Openings, Wall Openings, Roof Openings, and Their Protection and Life Safety Plans

Symbol	Description	Comments
	Opening in wall	
	Rated fire door in wall (less than 3 hours)	
	Fire door in wall (3-hour rated)	
	Elevator in combustible shaft	
	Elevator in noncombustible shaft	
	Open hoistway	
	Escalator	
	Stairs in combustible shaft	
	Stairs in fire-rated shaft	
	Stairs in open shaft	
	Skylight	
E: __	Egress component identifier	Specify egress component: EX# = Exit number HE = Horizontal exit EP = Exit passageway CP = Common path of travel PD = Public discharge RD = Room door ES = Escape
< __ >	Egress component capacity	Specify allowable number of persons through egress component (e.g., < 25 >)
<< __ >>	Governing component capacity	Specify maximum capacity of the egress path

(continues)

Table 6.3.4 Continued

Symbol	Description	Comments
	Travel distance	Left side: Distance to egress component Right side: Egress component identifier
	Occupancy capacity	Top: Specify capacity Middle: Specify area [square feet (square meters)] Bottom: Specify occupant load factor
	Fire door	
	Non-rated fire door	
	Non-rated smoke-resistant fire door	
	20-minute fire-rated fire door	
	20-minute fire-rated, smoke-resistant fire door	
	1/2-hour fire-rated fire door	
	1/2-hour fire-rated, smoke-resistant fire door	
	3/4-hour fire-rated fire door	
	3/4-hour fire-rated, smoke-resistant fire door	
	1-hour fire-rated fire door	

(continues)

Table 6.3.4 Continued

Symbol	Description	Comments
	1-hour fire-rated, smoke-resistant fire door	
	1 1/2-hour fire-rated fire door	
	1 1/2-hour fire-rated, smoke-resistant fire door	
	2-hour fire-rated fire door	
	2-hour fire-rated, smoke-resistant fire door	
	3-hour fire-rated fire door	
	3-hour fire-rated, smoke-resistant fire door	
	Exit	Wide, black, solid line
	Exit access	Wide, black, dashed line
	Exit discharge	Wide, black, short, dashed line

Table 6.3.5 Special Symbols for Cross-Sections

Symbol	Description	Comments
	Fire-resistive floor or roof	
	Wood-joisted floor or roof	
	Other floors or roofs	Note construction
	Floor/ceiling or roof/ceiling assembly	Details indicated, as necessary
	Floor on ground	
	Truss roof	Note construction

Table 6.3.6 Miscellaneous Features

Symbol	Description	Comments
	Boiler	
	Chimney	Describe height and construction
	Fire escape	
	Horizontal aboveground tank	Indicate type, dimensions, construction, capacity, pressurization, and content
	Vertical aboveground tank	Indicate type, dimensions, construction, capacity, pressurization, and content
	Belowground tank	Indicate type, dimensions, construction, capacity, pressurization, and content
	Class I, Division 1 or 0	Hatch patterns for electrically classified locations
	Class I, Division 1 or Zone 1	Hatch patterns for electrically classified locations
	Class I, Division 2 or Zone 2	Hatch patterns for electrically classified locations
	Designates the location of automated external defibrillators (AEDs) on plans	

Chapter 7 Symbols for Use in Water Supply, Extinguishing, and Sprinkler System Drawings and Insurance Diagrams

7.1* Introduction.

7.1.1 This chapter presents symbols that shall be used in drawings and diagrams.

7.1.2* Symbol Presentation.

7.1.2.1* Symbol Shapes. The shape of symbols shall be as illustrated in Sections 7.2 through 7.7.

7.1.2.2 Screened Lines. Screened lines in the chapter shall not be considered part of the symbol but shall be used to represent the piping, wiring, or mounting surface associated with the symbol.

7.1.2.3 Symbol Scale. All scales for symbols on any one drawing shall be the same relative size.

7.1.2.4* Symbol Orientation. Symbols shall be oriented to the walls, piping, electrical lines, and so forth, to which they are attached.

7.2* Water Supply and Distribution Symbols. Water supply and distribution symbols shall be as given in Table 7.2.

7.3 Reserved.

7.4 Symbols Related to Means of Egress. Symbols related to means of egress shall be as given in Table 7.4.

7.5 Indicating Appliances. Symbols for indicating appliances shall be as given in Table 7.5.

7.6* Symbols for Fire Extinguishing Systems.

7.6.1 Various Types of Fire Extinguishing Systems.

7.6.1.1 Water-Based Systems. Symbols for water-based systems shall be as given in Table 7.6.1.1.

7.6.1.2 Dry Chemical Systems. Symbols for dry chemical systems shall be as given in Table 7.6.1.2.

7.6.1.3 Systems Utilizing a Gaseous Medium. Symbols for systems utilizing a gaseous medium shall be as given in Table 7.6.1.3.

7.6.1.4 Supplementary Symbols. Supplementary symbols shall be as given in Table 7.6.1.4.

N 7.6.1.5 Fire Pump–Type Symbols. Supplementary symbols shall be as given in Table 7.6.1.5.

N 7.6.1.6 Fire Pump Device Symbols. Supplementary symbols shall be as given in Table 7.6.1.6.

7.6.2 Symbols for Fire Sprinklers. Symbols for fire sprinklers shall be as given in Table 7.6.2.

7.6.2.1* For sprinklers shown in Table 7.6.2, the temperature rating of the sprinkler and other characteristics shall be shown via legends or noted on drawings where a limited number of an individual type of sprinkler is called for by the design.

7.6.3* Symbols for Piping, Valves, Control Devices, and Hangers. Symbols for piping, valves, control devices, and hangers shall be as given in Table 7.6.3.

7.7 Symbols for Portable Fire Extinguishers. Symbols for portable fire extinguishers shall be as given in Table 7.7.

7.8 Symbols for Firefighting Equipment. Symbols for firefighting equipment shall be as given in Table 7.8.

7.9* Miscellaneous Symbols. Miscellaneous symbols shall be as given in Table 7.9.

Table 7.2 Water Supply and Distribution Symbols

Symbol	Description	Comments
—W—W—W	City or county public water main	Indicate pipe size and material
—F—F—F	Private fire line water main	Indicate pipe size and material
=====	Water main under building	Indicate pipe size and material
-----	Suction pipe	Indicate pipe size and material
	Thrust block	
	Riser	
	Wet riser	
	Dry riser	
	Preaction riser	
	Nitrogen-filled dry riser	
	Nitrogen-filled preaction riser	
	Pipe elbow up or down	Height on either side indicated by pipe height tags
	Pipe tee up or down	Height of crossed pipes indicated by pipe height tags
	Valves (general)	Basic shape; indicate valve size
	Valve in pit	Indicate valve size
	Post-indicator valve	Indicate valve size
	Key-operated valve	Indicate valve size

(continues)

Table 7.2 Continued

Symbol	Description	Comments
	OS&Y valve (outside screw and yoke, rising stem)	Indicate valve size
	Indicating butterfly valve	Indicate valve size
	Nonindicating valve (nonrising-stem valve)	Indicate valve size
	Check valve	Basic shape; indicate valve size, direction of flow
	Backflow preventer — double check type	Also referred to as a double check valve assembly
	Backflow preventer — reduced pressure zone (RPZ) type	
	Pressure-regulating valve	
	Pressure relief valve	
	Float valve	
	Meter	Indicate type
	Private hydrant, one hose outlet	Indicate size, type of thread, or connection
	Public hydrant, two hose outlets	Indicate size, type of thread, or connection
	Public hydrant, two hose outlets and pumper connection	Indicate size, type of thread, or connection
	Wall hydrant, two hose outlets	Indicate size, type of thread, or connection

(continues)