

NFPA[®]

170

**Standard for Fire Safety
and Emergency Symbols**

2018



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NFPA® 170

Standard for

Fire Safety and Emergency Symbols

2018 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 April 3, 2017, with an effective date of April 23, 2017, and supersedes all previous editions.

This edition of NFPA 170 was approved as an American National Standard on April 23, 2017.

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:

NFPA 171, *Public Firesafety Symbols*

NFPA 172, *Fire Protection Symbols for Architectural and Engineering Drawings*

NFPA 174, *Fire Protection Symbols for Risk Analysis Diagrams*

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 third (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*
- (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 (<http://www.fgdc.gov/fgdc/homeland/index.html>). 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 all encompassed within the old Chapter 6. This affected symbol detail for various device symbols such as fire alarm devices, fire sprinkler devices, electronic fire and smoke detection, and so forth. This action better organized existing symbols within the standard for the user.

The 2015 edition revised several symbols for consistency and clarity. 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 has been added, and several references have been updated. The term *smoke barrier* has been changed to *smoke rated*, and the term *fire barrier* has been changed to *fire rated*. More details have been added to the symbols for a fire department connection. A distinction has been made between water-driven and electric-driven water flow alarms.

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

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

2018 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 E. 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 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.

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

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*, 2009.

ANSI Z535.1, *Safety Color Code*, 2011.