

NFPA®

24

**Standard for
the Installation of Private
Fire Service Mains and
Their Appurtenances**

2019



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NFPA® 24

Standard for the

Installation of Private Fire Service Mains and Their Appurtenances

2019 Edition

This edition of NFPA 24, *Standard for the Installation of Private Fire Service Mains and Their Appurtenances*, was prepared by the Technical Committee on Private Water Supply Piping Systems and released by the Correlating Committee on Automatic Sprinkler Systems. It was issued by the Standards Council on May 4, 2018, with an effective date of May 24, 2018, and supersedes all previous editions.

This edition of NFPA 24 was approved as an American National Standard on May 24, 2018.

Origin and Development of NFPA 24

In 1903, the NFPA Committee on Hose and Hydrants first presented *Specifications for Mill Yard Hose Houses*, taken substantially from a standard published by the Eastern Factory Insurance Association. This text was revised and adopted in 1904. The NFPA Committee on Field Practice amended the Specifications in 1926, published as NFPA 25.

In 1925, the Committee on Field Practice prepared a *Standard on Outside Protection, Private Underground Piping Systems Supplying Water for Fire Extinguishment*, which was adopted by NFPA. It was largely taken from the 1920 edition of the *NFPA Automatic Sprinkler Standard*, Section M on Underground Pipes and Fittings. In September 1931, a revision was made, with the resulting standard designated as NFPA 24. In the 1981 edition, the title was changed from *Standard for Outside Protection* to *Standard for the Installation of Private Fire Service Mains and Their Appurtenances*.

In 1953, on recommendation of the Committee on Standpipes and Outside Protection, the two standards (NFPA 24 and NFPA 25) were completely revised and adopted as NFPA 24. Amendments were made leading to separate editions in 1955, 1959, 1962, 1963, 1965, 1966, 1968, 1969, 1970, 1973, 1977, 1981, 1983, and 1987.

The 1992 edition included amendments to further delineate the point at which the water supply stops and the fixed fire protection system begins. Minor changes were made concerning special topics such as thrust restraint and equipment provisions in valve pits.

The 1995 edition clarified requirements for aboveground and buried piping. Revisions were made to provide additional information regarding listing requirements, signage, valves, valve supervision, hydrant outlets, system attachments, piping materials, and thrust blocks. User friendliness of the document was also addressed.

The 2002 edition represented a complete revision of NFPA 24. Changes included reorganization and editorial modifications to comply with the *Manual of Style for NFPA Technical Committee Documents*. Additionally, all of the underground piping requirements were relocated into a new Chapter 10.

The 2007 edition was revised in five major areas: Chapter 10 was updated editorially, and minor technical changes were made. Newly established leakage test criteria, as well as updated requirements for thrust blocks and restrained joints, were added to Chapter 10. Two annexes were new to this edition: Annex C, *Recommended Practice for Fire Flow Testing*, and Annex D, *Recommended Practice for Marking of Hydrants*. These two annexes were developed based on the 2002 edition of NFPA 291.

The 2010 edition was revised in three major areas: the provisions for location and identification of fire department connections, valves controlling water supply, and protection of fire service mains entering the building.

The 2013 edition of NFPA 24 included clarifications on the requirements for running piping under buildings, including annex figures depicting clearances. The Contractors Material and Test

Certificate for Underground Piping (Figure 10.10.1) was modified to include confirmation that the forward flow test of the backflow preventer had been conducted. A provision requiring the automatic drip valve to be located in an accessible location that permits inspections in accordance with NFPA 25 was also added.

NFPA 24 underwent a structural rewrite for the 2016 edition. The hydrant definitions were clarified to describe the type of hydrant in question, as opposed to describing when and where they would be used. The valve arrangement requirements were rewritten for clarity, and annex figures added to provide figures that are consistent with NFPA 13. The title of Chapter 6 was changed from “Valves” to “Water Supply Connections” to better describe the material covered in the chapter. Revisions to Section 6.1 more clearly call out the permitted exceptions to indicating valves and permit nonlisted tapping sleeve and valve assemblies in connections to municipal water supplies. The center of hose outlet measurements was updated to include clear minimum and maximum values for the location of the outlet, along with the appropriate measurement for a hose house installation. The steel underground piping references have been removed from the table in Chapter 10 because steel pipe is required to be listed other than in the FDC line. A statement also was added to allow underground fittings to be used above ground to transition to aboveground piping.

The 2019 edition includes minor changes related to trenching and backfill. Acceptance testing requirements for aboveground piping have been included. The standard has also been revised to clarify the unacceptable use of steel piping for underground service.

Correlating Committee on Automatic Sprinkler Systems

Kenneth W. Linder, *Chair*
Swiss Re, CT [I]

Jose R. Baz, JRB Associates Group Inc., FL [M]
Rep. NFPA Latin American Section

Kerry M. Bell, UL LLC, IL [RT]

Tracey D. Bellamy, Telgian Corporation, GA [U]
Rep. The Home Depot

Scott T. Franson, The Viking Corporation, MI [M]

Michael J. Friedman, Friedman Consulting, Inc., MD [SE]

Luke Hilton, Liberty Mutual Property, NC [I]

Alex Hoffman, Viking Fire Protection Inc., Canada [IM]
Rep. Canadian Automatic Sprinkler Association

Mark Hopkins, National Fire Sprinkler Association, MD [M]
Rep. National Fire Sprinkler Association

Roland J. Huggins, American Fire Sprinkler Association, Inc., TX [IM]

Sultan M. Javeri, SC Engineering, France [IM]

Charles W. Ketner, National Automatic Sprinkler Fitters LU 669, MD [L]

Rep. United Assn. of Journeymen & Apprentices of the Plumbing & Pipe Fitting Industry

John A. LeBlanc, FM Global, MA [I]

David O. Lowrey, City of Boulder Fire Rescue, CO [E]

Brock Mitchell, Extended Stay Hotels, NC [U]

Garner A. Palenske, Jensen Hughes/AON Fire Protection Engineering, CA [SE]

Rep. JENSEN HUGHES

Adam Seghi, Coda Risk Analysis, TX [I]

Douglas Paul Stultz, U.S. Department of the Navy, VA [E]

J. Michael Thompson, GHD/The Protection Engineering Group, PC, VA [SE]

Alternates

Roland A. Asp, National Fire Sprinkler Association, Inc., MD [M]
(Alt. to Mark Hopkins)

Ralph E. Bless, Jr., Telgian Corporation, GA [U]
(Alt. to Tracey D. Bellamy)

James P. Carroll, Liberty Mutual Insurance, FL [I]
(Alt. to Luke Hilton)

Bruce H. Clarke, American International Group, Inc. (AIG), NC [I]
(Alt. to Adam Seghi)

Russell P. Fleming, Northeast Fire Suppression Associates, LLC, NH [SE]
(Alt. to Michael J. Friedman)

David B. Fuller, FM Approvals, RI [I]
(Alt. to John A. LeBlanc)

Jeffrey E. Harper, JENSEN HUGHES, IL [SE]
(Alt. to Garner A. Palenske)

Jeff Hebenstreit, UL LLC, IL [RT]
(Alt. to Kerry M. Bell)

Scott T. Martorano, The Viking Corporation, MI [M]
(Alt. to Scott T. Franson)

Jack A. Medovich, Fire & Life Safety America, MD [IM]
(Alt. to Roland J. Huggins)

John G. O'Neill, GHD/The Protection Engineering Group, PC, VA [SE]
(Alt. to J. Michael Thompson)

Lawrence Richard Phillips, U.S. Department of the Navy, VA [E]
(Alt. to Douglas Paul Stultz)

Donato A. Pirro, Electro Sistemas De Panama, S.A., Panama [M]
(Alt. to Jose R. Baz)

Jason W. Ryckman, Canadian Automatic Sprinkler Association, Canada [IM]
(Alt. to Alex Hoffman)

Joseph Su, National Research Council of Canada, Canada [RT]
(Voting Alt.)

Nonvoting

James B. Biggins, TUV SUD America Inc./Global Risk Consultants Corporation, IL [SE]
Rep. TC on Hanging & Bracing of Water-Based Systems

Robert G. Caputo, Fire & Life Safety America, AZ [M]
Rep. TC on Foam-Water Sprinklers

Raymond A. Grill, Arup, DC [SE]
Rep. TC on Sprinkler System Installation Criteria

Kenneth E. Isman, University of Maryland, MD [SE]
Rep. TC on Residential Sprinkler Systems

William E. Koffel, Koffel Associates, Inc., MD [SE]
Rep. Safety to Life Correlating Committee

David R. Hague, NFPA Staff Liaison

Chad Duffy, NFPA Co-Staff Liaison

Russell B. Leavitt, Telgian Corporation, AZ [U]
Rep. TC on Sprinkler System Discharge Criteria

Kenneth W. Wagoner, Parsley Consulting Engineers, CA [SE]
Rep. TC on Private Water Supply Piping Systems

John J. Walsh, UA Joint Apprenticeship Committee Local 669, MD [SE]
Rep. United Assn. of Journeymen & Apprentices of the Plumbing & Pipe Fitting Industry
(Member Emeritus)

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