2009 Annual Revision Cycle

Report on Proposals

A compilation of NFPA® Technical Committee Reports on Proposals for public review and comment

Public Comment Deadline: August 29, 2008

NOTE: The proposed NFPA documents addressed in this Report on Proposals (ROP) and in a follow-up Report on Comments (ROC) will only be presented for action at the NFPA June 2009 Association Technical Meeting to be held June 8–11, 2009, at McCormick Place in Chicago, IL, when proper Amending Motions have been submitted to the NFPA by the deadline of April 3, 2009. Documents that receive no motions will not be presented at the meeting and instead will be forwarded directly to the Standards Council for action on issuance. For more information on the rules and for up-to-date information on schedules and deadlines for processing NFPA documents, check the NFPA website (www.nfpa.org) or contact NFPA Standards Administration.

National Fire Protection Association®
1 BATTERYMARCH PARK, QUINCY, MA 02169-7471

ISSN 1079-5332

Information on NFPA Codes and Standards Development

I. Applicable Regulations. The primary rules governing the processing of NFPA documents (codes, standards, recommended practices, and guides) are the NFPA *Regulations Governing Committee Projects (RGCPs)*. Other applicable rules include NFPA *Bylaws*, NFPA *Technical Meeting Convention Rules*, NFPA *Guide for the Conduct of Participants in the NFPA Standards Development Process*, and the NFPA *Regulations Governing Petitions to the Board of Directors from Decisions of the Standards Council*. These rules and regulations are contained in the *NFPA Directory*. For copies of the *Directory*, contact Codes and Standards Administration at NFPA Headquarters; these documents are also available on the NFPA website at "www.nfpa.org."

The following is general information on the NFPA process. All participants, however, should refer to the actual rules and regulations for a full understanding of this process and for the criteria that govern participation.

II. Technical Committee Report (TCR). The Technical Committee Report is defined as "the Report of the Technical Committee and Technical Correlating Committee (if any) on a document. A Technical Committee Report consists of the Report on Proposals (ROP), as modified by the Report on Comments (ROC), published by the Association" (see 1.4 of *RGCPs*).

III. Step 1: Report on Proposals (ROP). The ROP is defined as "a report to the Association on the actions taken by Technical Committees and/or Technical Correlating Committees, accompanied by a ballot statement and one or more proposals on text for a new document or to amend an existing document" (see 1.4 of *RGCPs*). Any objection to an action in the ROP must be raised through the filing of an appropriate Comment for consideration in the ROC or the objection will be considered resolved.

IV. Step 2: Report on Comments (ROC). The ROC is defined as "a report to the Association on the actions taken by Technical Committees and/or Technical Correlating Committees accompanied by a ballot statement and one or more comments resulting from public review of the Report on Proposals (ROP)" (see 1.4 of *RGCPs*). The ROP and the ROC together constitute the Technical Committee Report. Any outstanding objection following the ROC must be raised through an appropriate Amending Motion at the Association Technical Meeting or the objection will be considered resolved.

V. Step 3a: Action at Association Technical Meeting. Following the publication of the ROC, there is a period during which those wishing to make proper Amending Motions on the Technical Committee Reports must signal their intention by submitting a Notice of Intent to Make a Motion. Documents that receive notice of proper Amending Motions (Certified Amending Motions) will be presented for action at the annual June Association Technical Meeting. At the meeting, the NFPA membership can consider and act on these Certified Amending Motions as well as Follow-up Amending Motions, that is, motions that become necessary as a result of a previous successful Amending Motion. (See 4.6.2 through 4.6.9 of *RGCPs* for a summary of the available Amending Motions and who may make them.) Any outstanding objection following action at an Association Technical Meeting (and any further Technical Committee consideration following successful Amending Motions, see *RGCPs* at 4.7) must be raised through an appeal to the Standards Council or it will be considered to be resolved.

VI. Step 3b: Documents Forwarded Directly to the Council. Where no Notice of Intent to Make a Motion is received and certified in accordance with the Technical Meeting Convention Rules, the document is forwarded directly to the Standards Council for action on issuance. Objections are deemed to be resolved for these documents.

VII. Step 4a: Council Appeals. Anyone can appeal to the Standards Council concerning procedural or substantive matters related to the development, content, or issuance of any document of the Association or on matters within the purview of the authority of the Council, as established by the *Bylaws* and as determined by the Board of Directors. Such appeals must be in written form and filed with the Secretary of the Standards Council (see 1.6 of *RGCPs*). Time constraints for filing an appeal must be in accordance with 1.6.2 of the *RGCPs*. Objections are deemed to be resolved if not pursued at this level.

VIII. Step 4b: Document Issuance. The Standards Council is the issuer of all documents (see Article 8 of *Bylaws*). The Council acts on the issuance of a document presented for action at an Association Technical Meeting within sixty days from the date of the recommendation from the Association Technical Meeting, unless this period is extended by the Council (see 4.8 of *RGCPs*). For documents forwarded directly to the Standards Council, the Council acts on the issuance of the document at its next scheduled meeting, or at such other meeting as the Council may determine (see 4.5.7 and 4.8 of *RGCPs*).

IX. Petitions to the Board of Directors. The Standards Council has been delegated the responsibility for the administration of the codes and standards development process and the issuance of documents. However, where extraordinary circumstances requiring the intervention of the Board of Directors exist, the Board of Directors may take any action necessary to fulfill its obligations to preserve the integrity of the codes and standards development process and to protect the interests of the Association. The rules for petitioning the Board of Directors can be found in the *Regulations Governing Petitions to the Board of Directors from Decisions of the Standards Council* and in 1.7 of the *RGCPs*.

X. For More Information. The program for the Association Technical Meeting (as well as the NFPA website as information becomes available) should be consulted for the date on which each report scheduled for consideration at the meeting will be presented. For copies of the ROP and ROC as well as more information on NFPA rules and for up-to-date information on schedules and deadlines for processing NFPA documents, check the NFPA website (www.nfpa.org) or contact NFPA Codes & Standards Administration at (617-984-7246).

2009 Annual Revision Cycle ROP Contents

by NFPA Numerical Designation

Note: Documents appear in numerical order.

2009 Annual Revision Cycle ROP
Committees Reporting

Key to Proposal Headings

The first line of every proposal includes the following information:

Document No.	Proposal No.	Log No.	Paragraph Reference	Committee Action
101	6	38	3.4	Accept

Example: 101-6 Log #38 **Final Action: Accept**
(**3.4**)

TYPES OF ACTION

P Partial Revision **C** Complete Revision **N** New Document **R** Reconfirmation **W** Withdrawal

The following classifications apply to Committee members and represent their principal interest in the activity of the Committee.

1. M Manufacturer: A representative of a maker or marketer of a product, assembly, or system, or portion thereof, that is affected by the standard.

2. U User: A representative of an entity that is subject to the provisions of the standard or that voluntarily uses the standard.

3. IM Installer/Maintainer: A representative of an entity that is in the business of installing or maintaining a product, assembly, or system affected by the standard.

4. L Labor: A labor representative or employee concerned with safety in the workplace.

5. RT Applied Research/Testing Laboratory: A representative of an independent testing laboratory or independent applied research organization that promulgates and/or enforces standards.

6. E Enforcing Authority: A representative of an agency or an organization that promulgates and/or enforces standards.

7. I Insurance: A representative of an insurance company, broker, agent, bureau, or inspection agency.

8. C Consumer: A person who is or represents the ultimate purchaser of a product, system, or service affected by the standard, but who is not included in (2).

9. SE Special Expert: A person not representing (1) through (8) and who has special expertise in the scope of the standard or portion thereof.

NOTE 1: “Standard” connotes code, standard, recommended practice, or guide.

NOTE 2: A representative includes an employee.

NOTE 3: While these classifications will be used by the Standards Council to achieve a balance for Technical Committees, the Standards Council may determine that new classifications of member or unique interests need representation in order to foster the best possible Committee deliberations on any project. In this connection, the Standards Council may make such appointments as it deems appropriate in the public interest, such as the classification of “Utilities” in the National Electrical Code Committee.

NOTE 4: Representatives of subsidiaries of any group are generally considered to have the same classification as the parent organization.

FORM FOR COMMENTS ON NFPA REPORT ON PROPOSALS
2009 ANNUAL REVISION CYCLE
FINAL DATE FOR RECEIPT OF COMMENTS: 5:00 pm EDST, August 29, 2008

For further information on the standards-making process, please contact the Codes and Standards Administration at 617-984-7249 or visit www.nfpa.org/codes.

For technical assistance, please call NFPA at 1-800-344-3555.

FOR OFFICE USE ONLY

Log #: _____

Date Rec'd: _____

Please indicate in which format you wish to receive your ROP/ROC ☐ **electronic** ☐ **paper** ☒ **download**
(Note: If choosing the download option, you must view the ROP/ROC from our website; no copy will be sent to you.)

Date 8/1/200X **Name** John B. Smith **Tel. No.** 253-555-1234

Company _____ **Email** _____

Street Address 9 Seattle St. **City** Tacoma **State** WA **Zip** 98402

******If you wish to receive a hard copy, a street address MUST be provided. Deliveries cannot be made to PO boxes.***

Please indicate organization represented (if any) Fire Marshals Assn. of North America

1. (a) NFPA Document Title National Fire Alarm Code **NFPA No. & Year** NFPA 72, 200X ed.

(b) Section/Paragraph 4.4.1.1

2. Comment on Proposal No. (from ROP): 72-7

3. Comment Recommends (check one): ☐ new text ☐ revised text ☒ deleted text

4. Comment (include proposed new or revised wording, or identification of wording to be deleted): [Note: Proposed text should be in legislative format; i.e., use underscore to denote wording to be inserted (inserted wording) and strike-through to denote wording to be deleted (~~deleted wording~~).]

Delete exception.

5. Statement of Problem and Substantiation for Comment: (Note: State the problem that would be resolved by your recommendation; give the specific reason for your Comment, including copies of tests, research papers, fire experience, etc. If more than 200 words, it may be abstracted for publication.)

A properly installed and maintained system should be free of ground faults. The occurrence of one or more ground faults should be required to cause a 'trouble' signal because it indicates a condition that could contribute to future malfunction of the system. Ground fault protection has been widely available on these systems for years and its cost is negligible. Requiring it on all systems will promote better installations, maintenance and reliability.

6. Copyright Assignment

(a) ☒ **I am the author of the text or other material (such as illustrations, graphs) proposed in this Comment.**

(b) ☐ **Some or all of the text or other material proposed in this Comment was not authored by me. Its source is as follows** (please identify which material and provide complete information on its source)**:**

_____

I agree that any material that I author, either individually or with others, in connection with work performed by an NFPA Technical Committee shall be considered to be works made for hire for the NFPA. To the extent that I retain any rights in copyright as to such material, or as to any other material authored by me that I submit for the use of an NFPA Technical Committee in the drafting of an NFPA code, standard, or other NFPA document, I hereby grant and assign all and full rights in copyright to the NFPA. I further agree and acknowledge that I acquire no rights in any publication of the NFPA and that copyright and all rights in materials produced by NFPA Technical Committees are owned by the NFPA and that the NFPA may register copyright in its own name.

Signature (Required) _____

PLEASE USE SEPARATE FORM FOR EACH COMMENT • email: proposals_comments@nfpa.org • NFPA Fax: (617) 770-3500
Mail to: Secretary, Standards Council, National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471

FORM FOR COMMENTS ON NFPA REPORT ON PROPOSALS
2009 ANNUAL REVISION CYCLE
FINAL DATE FOR RECEIPT OF COMMENTS: 5:00 pm EDST, August 29, 2008

For further information on the standards-making process, please contact the Codes and Standards Administration at 617-984-7249 or visit www.nfpa.org/codes.

For technical assistance, please call NFPA at 1-800-344-3555.

FOR OFFICE USE ONLY

Log #: _____

Date Rec'd: _____

Please indicate in which format you wish to receive your ROP/ROC ☐ electronic ☐ paper ☐ download
(Note: If choosing the download option, you must view the ROP/ROC from our website; no copy will be sent to you.)

Date _____ **Name** _____ **Tel. No.** _____

Company _____ **Email** _____

Street Address _____ **City** _____ **State** _____ **Zip** _____

******If you wish to receive a hard copy, a street address MUST be provided. Deliveries cannot be made to PO boxes.***

Please indicate organization represented (if any) _____

1. (a) NFPA Document Title _____ **NFPA No. & Year** _____

(b) Section/Paragraph _____

2. Comment on Proposal No. (from ROP): _____

3. Comment Recommends (check one): ☐ new text ☐ revised text ☐ deleted text

4. Comment (include proposed new or revised wording, or identification of wording to be deleted): [Note: Proposed text should be in legislative format; i.e., use underscore to denote wording to be inserted (inserted wording) and strike-through to denote wording to be deleted (~~deleted wording~~).]

5. Statement of Problem and Substantiation for Comment: (Note: State the problem that would be resolved by your recommendation; give the specific reason for your Comment, including copies of tests, research papers, fire experience, etc. If more than 200 words, it may be abstracted for publication.)

6. Copyright Assignment

(a) ☐ I am the author of the text or other material (such as illustrations, graphs) proposed in this Comment.

(b) ☐ Some or all of the text or other material proposed in this Comment was not authored by me. Its source is as follows (please identify which material and provide complete information on its source)**:**

_____

I agree that any material that I author, either individually or with others, in connection with work performed by an NFPA Technical Committee shall be considered to be works made for hire for the NFPA. To the extent that I retain any rights in copyright as to such material, or as to any other material authored by me that I submit for the use of an NFPA Technical Committee in the drafting of an NFPA code, standard, or other NFPA document, I hereby grant and assign all and full rights in copyright to the NFPA. I further agree and acknowledge that I acquire no rights in any publication of the NFPA and that copyright and all rights in materials produced by NFPA Technical Committees are owned by the NFPA and that the NFPA may register copyright in its own name.

Signature (Required) _____

PLEASE USE SEPARATE FORM FOR EACH COMMENT • email: proposals_comments@nfpa.org • NFPA Fax: (617) 770-3500
Mail to: Secretary, Standards Council, National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471

4/16/2008

Sequence of Events Leading to Issuance of an NFPA Committee Document

Step 1 Call for Proposals

▼ Proposed new document or new edition of an existing document is entered into one of two yearly revision cycles, and a Call for Proposals is published.

Step 2 Report on Proposals (ROP)

▼ Committee meets to act on Proposals, to develop its own Proposals, and to prepare its Report.

▼ Committee votes by written ballot on Proposals. If two-thirds approve, Report goes forward. Lacking two-thirds approval, Report returns to Committee.

▼ Report on Proposals (ROP) is published for public review and comment.

Step 3 Report on Comments (ROC)

▼ Committee meets to act on Public Comments to develop its own Comments, and to prepare its report.

▼ Committee votes by written ballot on Comments. If two-thirds approve, Report goes forward. Lacking two-thirds approval, Report returns to Committee.

▼ Report on Comments (ROC) is published for public review.

Step 4 Technical Committee Report Session

▼ *"Notices of intent to make a motion"* are filed, are reviewed, and valid motions are certified for presentation at the Technical Committee Report Session. ("Consent Documents" that have no certified motions bypass the Technical Committee Report Session and proceed to the Standards Council for issuance.)

▼ NFPA membership meets each June at the Annual Meeting Technical Committee Report Session and acts on Technical Committee Reports (ROP and ROC) for documents with "certified amending motions."

▼ Committee(s) vote on any amendments to Report approved at NFPA Annual Membership Meeting.

Step 5 Standards Council Issuance

▼ Notification of intent to file an appeal to the Standards Council on Association action must be filed within 20 days of the NFPA Annual Membership Meeting.

▼ Standards Council decides, based on all evidence, whether or not to issue document or to take other action, including hearing any appeals.

The Technical Committee Report Session of the NFPA Annual Meeting

The process of public input and review does not end with the publication of the ROP and ROC. Following the completion of the Proposal and Comment periods, there is yet a further opportunity for debate and discussion through the Technical Committee Report Sessions that take place at the NFPA Annual Meeting.

The Technical Committee Report Session provides an opportunity for the final Technical Committee Report (i.e., the ROP and ROC) on each proposed new or revised code or standard to be presented to the NFPA membership for the debate and consideration of motions to amend the Report. The specific rules for the types of motions that can be made and who can make them are set forth in NFPA's rules, which should always be consulted by those wishing to bring an issue before the membership at a Technical Committee Report Session. The following presents some of the main features of how a Report is handled.

What Amending Motions Are Allowed. The Technical Committee Reports contain many Proposals and Comments that the Technical Committee has rejected or revised in whole or in part. Actions of the Technical Committee published in the ROP may also eventually be rejected or revised by the Technical Committee during the development of its ROC. The motions allowed by NFPA rules provide the opportunity to propose amendments to the text of a proposed code or standard based on these published Proposals, Comments, and Committee actions. Thus, the list of allowable motions include motions to accept Proposals and Comments in whole or in part as submitted or as modified by a Technical Committee action. Motions are also available to reject an accepted Comment in whole or part. In addition, Motions can be made to return an entire Technical Committee Report or a portion of the Report to the Technical Committee for further study.

The NFPA Annual Meeting, also known as the NFPA World Safety Conference & Exposition®, takes place in June of each year. A second Fall membership meeting was discontinued in 2004, so the NFPA Technical Committee Report Session now runs once each year at the Annual Meeting in June.

Who Can Make Amending Motions. NFPA rules also define those authorized to make amending motions. In many cases, the maker of the motion is limited by NFPA rules to the original submitter of the Proposal or Comment or his or her duly authorized representative. In other cases, such as a Motion to Reject an accepted Comment, or to Return a Technical Committee Report or a portion of a Technical Committee Report for Further Study, anyone can make these motions. For a complete explanation, NFPA rules should be consulted.

The Filing of a Notice of Intent to Make a Motion. Before making an allowable motion at a Technical Report Session, the intended maker of the motion must file, in advance of the session, and within the published deadline, a Notice of Intent to Make a Motion. A Motions Committee appointed by the Standards Council then reviews all notices and certifies all amending motions that are proper. The Motions Committee can also, in consultation with the makers of the motions, clarify the intent of the motions and, in certain circumstances, combine motions that are dependent on each other together so that they can be made in one single motion. A Motions Committee report is then made available in advance of the meeting listing all certified motions. Only these Certified Amending Motions, together with certain allowable Follow-Up Motions (that is, motions that have become necessary as a result of previous successful amending motions) will be allowed at the Technical Committee Report Session.

Consent Documents. Often there are codes and standards up for consideration by the membership that will be noncontroversial and no proper Notices of Intent to Make a Motion will be filed. These "Consent Documents" will bypass the Technical Committee Report Session and head straight to the Standards Council for issuance. The remaining Documents are then forwarded to the Technical Committee Report Session for consideration of the NFPA membership.

Action on Motions at the Technical Committee Report Session. In order to actually make a Certified Amending Motion at the Technical Committee Report Session, the maker of the motion must sign in at least an hour before the session begins. In this way a final list of motions can be set in advance of the session. At the session, each proposed document up for consideration is presented by a motion to adopt the Technical Committee Report on the document. Following each such motion, the presiding officer in charge of the session opens the floor to motions on the document from the final list of Certified Amending Motions followed by any permissible Follow-Up Motions. Debate and voting on each motion proceeds in accordance with NFPA rules. NFPA membership is not required in order to make or speak to a motion, but voting is limited to NFPA members who have joined at least 180 days prior to the session and have registered for the meeting. At the close of debate on each motion, voting takes place, and the motion requires a majority vote to carry. In order to amend a Technical Committee Report, successful amending motions must be confirmed by the responsible Technical Committee, which conducts a written ballot on all successful amending motions following the meeting and prior to the Document being forwarded to the Standards Council for issuance.

Standards Council Issuance

One of the primary responsibilities of the NFPA Standards Council, as the overseer of the NFPA codes and standards development process, is to act as the official issuer of all NFPA codes and standards. When it convenes to issue NFPA documents, it also hears any appeals related to the document. Appeals are an important part of assuring that all NFPA rules have been followed and that due process and fairness have been upheld throughout the codes and standards development process. The Council considers appeals both in writing and through the conduct of hearings at which all interested parties can participate. It decides appeals based on the entire record of the process as well as all submissions on the appeal. After deciding all appeals related to a document before it, the Council, if appropriate, proceeds to issue the document as an official NFPA code or standard. Subject only to limited review by the NFPA Board of Directors, the decision of the Standards Council is final, and the new NFPA code or standard becomes effective twenty days after Standards Council issuance.

Report of the Technical Correlating Committee on

Automatic Sprinkler Systems (AUT-AAC)

Edward K. Budnick, *Chair*
Hughes Associates, Inc., MD [SE]

James D. Lake, *Nonvoting Secretary*
National Fire Protection Association, MA

Jose R. Baz, JRB Associates Group Inc., FL [M]
Rep. NFPA Latin American Section
Kerry M. Bell, Underwriters Laboratories Inc., IL [RT]
Russell P. Fleming, National Fire Sprinkler Association, Inc., NY [M]
Scott T. Franson, The Viking Corporation, MI [M]
Michael J. Friedman, Friedman Consulting, Inc., MD [SE]
Raymond A. Grill,Arup Fire,DC [SE]
Luke Hilton, Liberty Mutual Property, NC [I]
Alex Hoffman, Viking Fire Protection Inc., Canada [IM]
Rep. Canadian Automatic 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
Andrew Kim, National Research Council of Canada, Canada [RT]
John G. O'Neill, The Protection Engineering Group, PC, VA [SE]
Chester W. Schirmer, Schirmer Engineering Corporation, NC [I]
J. William Sheppard, General Motors Corporation, MI [U]
Robert D. Spaulding, FM Global, MA [I]
Douglas Paul Stultz, US Department of the Navy, VA [E]
Lynn K. Underwood, Axis US Property, IL [I]

Alternates

Donald D. Becker, RJC & Associates, Inc., MO [IM]
(Alt. to Roland J. Huggins)
Thomas C. Brown, The RJA Group, Inc., MD [SE]
(Alt. to Raymond A. Grill)
David B. Fuller, FM Global, MA [I]
(Alt. to Robert D. Spaulding)
Kenneth E. Isman, National Fire Sprinkler Association, Inc., NY [M]
(Alt. to Russell P. Fleming)
George E. Laverick, Underwriters Laboratories Inc., IL [RT]
(Alt. to Kerry M. Bell)
Garner A. Palenske, Schirmer Engineering Corporation, CA [I]
(Alt. to Chester W. Schirmer)
Donato A. Pirro, Electro Sistemas De Panama, S.A., Panama [M]
(Alt. to Jose R. Baz)
J. Michael Thompson, The Protection Engineering Group, PC, VA [SE]
(Alt. to John G. O'Neill)

Nonvoting

James B. Biggins, Marsh Risk Consulting, IL [I]
Rep. TC on Private Water Supply Piping Systems
Antonio C. M. Braga, FM Global, CA [I]
Rep. TC on Hanging & Bracing of Water-Based Systems
Robert M. Gagnon, Gagnon Engineering, MD [SE]
Rep. TC on Foam-Water Sprinklers
William E. Koffel, Koffel Associates, Inc., MD [SE]
Rep. Safety to Life Correlating Committee
Kenneth W. Linder, Swiss Re, Global Asset Protection Services, CT [I] Rep. TC on Sprinkler System Discharge Criteria
Joe W. Noble, Noble Consulting Services, LLC, NV [E]
Rep. TC on Sprinkler System Installation Criteria
Maurice M. Pilette, Mechanical Designs Ltd., MA [SE]
Rep. TC on Residential Sprinkler Systems
John J. Walsh, UA Joint Apprenticeship Committee, MD [SE]
(Member Emeritus)

Committee Scope: This Committee shall have overall responsibility for documents that pertain to the criteria for the design and installation of automatic, open and foam-water sprinkler systems including the character and adequacy of water supplies, and the selection of sprinklers, piping, valves, and all materials and accessories. This Committee does not cover the installation of tanks and towers, nor the installation, maintenance, and use of central station, proprietary, auxiliary, and local signaling systems for watchmen, fire alarm, supervisory service, nor the design of fire department hose connections.

Report of the Technical Committee on

Hanging and Bracing of Water-Based Fire Protection Systems (AUT-HBS)

Antonio C. M. Braga, *Chair*
FM Global, CA [I]

James D. Lake, *Nonvoting Secretary*
National Fire Protection Association, MA

James B. Biggins, Marsh Risk Consulting, IL [I]
Richard W. Bonds, Ductile Iron Pipe Research Association, AL [M]
Samuel S. Dannaway, S. S. Dannaway Associates, Inc., HI [SE]
John Deutsch, City of Brea Fire Department, CA [E]
Daniel C. Duggan, Fire Sprinkler Design, MO [M]
Thomas J. Forsythe, Hughes Associates, Inc., CA [SE]
John D. Gillengerten, State of California, CA [E]
Rep. Building Seismic Safety Council/Code Resource Support Committee
Jeffrey E. Harper, The RJA Group, Inc., IL [SE]
Tina Marie King, XL Global Asset Protection Services, CA [I]
Kraig Kirschner, AFCON, CA [M]
Alan R. Laguna, Merit Sprinkler Company, Inc., LA [IM]
George E. Laverick, Underwriters Laboratories Inc., IL [RT]
Philip D. LeGrone, ICAT Managers, LLC, TN [I]
Norman J. MacDonald, III, FlexHead Industries, Inc., MA [M]
Wayne M. Martin, Wayne Martin & Associates Inc. (WMA), CA [SE]
Gregory F. Masterson, Liberty Mutual Property, MA [I]
David S. Mowrer, HSB Professional Loss Control, TN [I]
Randy R. Nelson, VFS Fire and Security Services, CA [IM]
Rep. American Fire Sprinkler Association
Janak B. Patel, Bechtel Savannah River Company, GA [U]
Michael A. Rothmier, UA Joint Apprenticeship Committee, CO [L]
Rep. United Assn. of Journeymen & Apprentices of the Plumbing & Pipe Fitting Industry
Peter T. Schwab, Wayne Automatic Fire Sprinklers, Inc., FL [IM]
Zeljko Sucevic, Vipond Fire Protection, Canada [IM]
Rep. Canadian Automatic Sprinkler Association
James Tauby, Mason Industries, Inc., NY [M]
Jack W. Thacker, Allan Automatic Sprinkler Corp. of So. California, CA [IM]
Rep. National Fire Sprinkler Association
Victoria B. Valentine, National Fire Sprinkler Association, Inc., NY [M]
Thomas G. Wellen, American Fire Sprinkler Association, Inc., TX [M]

Alternates

Robert E. Bachman, Consulting Structural Engineer, CA [M]
(Alt. to Norman J. MacDonald, III)
Charles W. Bamford, Bamford Inc., WA [IM]
(Alt. to Randy R. Nelson)
Sheldon Dacus, Security Fire Protection Company, TN [M]
(Alt. to Victoria B. Valentine)
Christopher I. Deneff, FM Global, RI [I]
(Alt. to Antonio C. M. Braga)
Todd A. Dillon, XL Global Asset Protection Services, OH [I]
(Alt. to Tina Marie King)
George Von Gnatensky, Tolco, CA [M]
(Voting Alt. to NFSA Rep.)
Charles W. Ketner, National Automatic Sprinkler Fitters LU 669, MD [L]
(Alt. to Michael A. Rothmier)
Michael J. Madden, Hughes Associates, Inc., CA [SE]
(Alt. to Thomas J. Forsythe)
Emil W. Misichko, Underwriters Laboratories Inc., IL [RT]
(Alt. to George E. Laverick)
Glenn E. Thompson, Liberty Mutual Property, CA [I]
(Alt. to Gregory F. Masterson)
Kenneth W. Wagoner, Parsley Consulting Engineers, CA [M]
(Alt. to Thomas G. Wellen)
Ronald N. Webb, S.A. Comunale Company, Inc., OH [IM]
(Alt. to Jack W. Thacker)

Committee Scope: This Committee shall have the primary responsibility for those portions of NFPA 13 that pertain to the criteria for the use and installation of components and devices used for the support of water-based fire protection system piping including protection against seismic events.

Report of the Technical Committee on

Private Water Supply Piping Systems (AUT-PRI)

James B. Biggins, *Chair*
Marsh Risk Consulting, IL [I]

James D. Lake, *Nonvoting Secretary*
National Fire Protection Association, MA

Richard W. Bonds, Ductile Iron Pipe Research Association, AL [M]
Phillip A. Brown, American Fire Sprinkler Association, Inc., TX [IM]
Stephen A. Clark, Jr., Allianz Risk Consultants, LLC, GA [I]
Brandon W. Frakes, XL Global Asset Protection Services, NC [I]
David B. Fuller, FM Global, MA [I]
Robert M. Gagnon, Gagnon Engineering, MD [SE]
Charles F. Hill, Ryan Fire Protection, Inc., IN [IM]
Rep. National Fire Sprinkler Association
Luke Hilton, Liberty Mutual Property, NC [I]
Jeffrey M. Hugo, National Fire Sprinkler Association, Inc., MI [M]
Gerald Kelliher, Washington Savannah River Company, SC [U]
Alan R. Laguna, Merit Sprinkler Company, Inc., LA [IM]
John Lake, Marion County Fire Rescue, FL [E]
George E. Laverick, Underwriters Laboratories Inc., IL [RT]
James M. Maddry, James M. Maddry, P.E., GA [SE]
Kevin D. Maughan, Tyco Fire Suppression & Building Products, RI [M]
David S. Mowrer, HSB Professional Loss Control, TN [I]
Robert A. Panero, Pacific Gas and Electric Company, CA [U]
Rep. Edison Electric Institute
Darrin A. Parsons, Road Sprinkler Fitters Local Union 669, MD [L]
Rep. United Assn. of Journeymen & Apprentices of the Plumbing & Pipe Fitting Industry
Sam Sat Salwan, Environmental Systems Design, Inc., IL [SE]
James R. Schifiliti, Fire Safety Consultants, Inc., IL [IM]
Rep. Illinois Fire Prevention Association
Peter T. Schwab, Wayne Automatic Fire Sprinklers, Inc., FL [IM]
J. William Sheppard, General Motors Corporation, MI [U]
Rep. NFPA Industrial Fire Protection Section
James W. Simms, The RJA Group, Inc., CA [SE]

Alternates

Mark A. Bowman, XL Global Asset Protection Services, OH [I]
(Alt. to Brandon W. Frakes)
James A. Charrette, Allan Automatic Sprinkler Corp. of So. California, CA [IM]
(Alt. to Charles F. Hill)
James K. Clancy, The RJA Group, Inc., CA [SE]
(Alt. to James W. Simms)
Tanya M. Gilbreath, Liberty Mutual Property, MA [I]
(Alt. to Luke Hilton)
Cliff Hartford, Tyco Fire & Building Products, NY [M]
(Alt. to Kevin D. Maughan)
Andrew C. Higgins, Allianz Risk Consultants, Inc., GA [I]
(Alt. to Stephen A. Clark, Jr.)
Martin Ramos, Environmental Systems Design, Inc., IL [SE]
(Alt. to Sam Sat Salwan)
Blake M. Shugarman, Underwriters Laboratories Inc., IL [RT]
(Alt. to George E. Laverick)
Lawrence Thibodeau, Hampshire Fire Protection Company Inc., NH [IM]
(Alt. to Phillip A. Brown)

Nonvoting

Geoffrey N. Perkins, Bassett Consulting Engineers, Australia [SE]

Committee Scope: This Committee shall have the primary responsibility for documents on private piping systems supplying water for fire protection and for hydrants, hose houses, and valves. The Committee is also responsible for documents on fire flow testing and marking of hydrants.

Report of the Technical Committee on

Residential Sprinkler Systems (AUT-RSS)

Maurice M. Pilette, *Chair*
Mechanical Designs Ltd., MA [SE]

James D. Lake, *Nonvoting Secretary*
National Fire Protection Association, MA

George W. Baker, Mashpee Fire & Rescue Department, MA [E]
Rep. International Association of Fire Chiefs
Kerry M. Bell, Underwriters Laboratories Inc., IL [RT]
Fred Benn, Advanced Automatic Sprinkler, Inc., CA [IM]
Jonathan C. Bittenbender, REHAU Incorporated, VA [M]
Frederick C. Bradley, FCB Engineering, GA [SE]
Phillip A. Brown, American Fire Sprinkler Association, Inc., TX [IM]
Thomas G. Deegan, The Viking Group, Inc., MI [M]
Rep. National Fire Sprinkler Association
Dana R. Haagensen, Massachusetts Office of the State Fire Marshal, MA [E]
Mark Hopkins, Hughes Associates, Inc., MD [SE]
Kenneth E. Isman, National Fire Sprinkler Association, Inc., NY [M]
Rep. National Fire Sprinkler Association
Gary L. Johnson, Noveon, Inc., VA [M]
Rep. Committee for Firesafe Dwellings
Charles W. Ketner, National Automatic Sprinkler Fitters LU 669, MD [L]
Rep. United Assn. of Journeymen & Apprentices of the Plumbing & Pipe Fitting Industry
David Killey, Fire Busters Incorporated, Canada [IM]
Rep. Canadian Automatic Sprinkler Association
Alan G. Larson, Uponor-USA, MN [M]
Daniel Madrzykowski, US National Institute of Standards & Technology, MD [RT]
M. Larry Maruskin, US Department of Homeland Security, MD [C]
Ronald G. Nickson, National Multi Housing Council, DC [U]
Steven Orlowski, National Association of Home Builders, DC [U]
Steven R. Rians, Standard Automatic Fire Enterprises, Inc., TX [IM]
Rep. American Fire Sprinkler Association
Chester W. Schirmer, Schirmer Engineering Corporation, NC [I]
Harry Shaw, Fail Safe Safety Systems Inc., MD [M]
Sandra Stanek, Fire Code Consultants, CA [E]
Rep. California Fire Chiefs Association
George W. Stanley, Wiginton Fire Systems, FL [IM]
Rep. National Fire Sprinkler Association
Randolph W. Tucker, The RJA Group, Inc., TX [SE]
Ed Van Walraven, Aspen Fire Protection District, CO [E]
Terry L. Victor, Tyco/SimplexGrinnell, MD [M]
Hong-Zeng Yu, FM Global, MA [I]

Alternates

David W. Ash, Noveon, Inc., OH [M]
(Alt. to Gary L. Johnson)
Edward K. Budnick, Hughes Associates, Inc., MD [SE]
(Alt. to Mark Hopkins)
Michael F. Cabral, REHAU Inc., VA [M]
(Alt. to Jonathan C. Bittenbender)
James K. Clancy, The RJA Group, Inc., CA [SE]
(Alt. to Randolph W. Tucker)
Mark E. Fessenden, Tyco Fire Suppression & Building Products, RI [M]
(Alt. to Terry L. Victor)
David B. Fuller, FM Global, MA [I]
(Alt. to Hong-Zeng Yu)
Timothy C. Higgins, Aegis Fire Systems, Inc., CA [IM]
(Alt. to Phillip A. Brown)
George E. Laverick, Underwriters Laboratories Inc., IL [RT]
(Alt. to Kerry M. Bell)
Stephen M. Leyton, Protection Design and Consulting, CA [IM]
(Alt. to Steven R. Rians)
Thomas L. Multer, Reliable Automatic Sprinkler Company, Inc., SC [M]
(Alt. to Thomas G. Deegan)
Matthew Osburn, Canadian Automatic Sprinkler Association, Canada [IM]
(Alt. to David Killey)
Peter T. Schwab, Wayne Automatic Fire Sprinklers, Inc., FL [IM]
(Alt. to George W. Stanley)
Ronald N. Webb, S.A. Comunale Company, Inc., OH [M]
(Alt. to Kenneth E. Isman)
Joseph E. Wiehagen, National Association of Home Builders, MD [U]
(Alt. to Steven Orlowski)
James V. C. Yates, West Windsor Emergency Services, NJ [E]
(Alt. to George W. Baker)

Nonvoting

Rohit Khanna, US Consumer Product Safety Commission, MD [C]

Committee Scope: This Committee shall have primary responsibility for documents on the design and installation of automatic sprinkler systems in dwellings and residential occupancies up to and including four stories in height, including the character and adequacy of water supplies, and the selection of sprinklers, piping, valves, and all materials and accessories.

Report of the Technical Committee on

Sprinkler System Discharge Criteria (AUT-SSD)

Kenneth W. Linder, *Chair*
Swiss Re, Global Asset Protection Services, CT [I]

James D. Lake, *Nonvoting Secretary*
National Fire Protection Association, MA

Weston C. Baker, Jr., FM Global, MA [I]
Charles O. Bauroth, Liberty Mutual Property, MA [I]
Rep. Property Casualty Insurers Association of America
Kerry M. Bell, Underwriters Laboratories Inc., IL [RT]
Tracey D. Bellamy, TVA Fire and Life Safety, Inc., GA [U]
Rep. The Home Depot
Michael H. Blumenthal, Rubber Manufacturers Association, DC [M]
James C. Bollier, Sprinkler Fitters UA Local 483, CA [L]
Rep. United Assn. of Journeymen & Apprentices of the Plumbing & Pipe Fitting Industry
Thomas G. Deegan, The Viking Group, Inc., MI [M]
John August Denhardt, Strickland Fire Protection, Inc., MD [IM]
Rep. American Fire Sprinkler Association
James G. Gallup, The RJA Group, Inc., AZ [SE]
James E. Golinveaux, Tyco Fire Suppression & Building Products, RI [M]
Bo Hjorth, AlbaCon AB, Sweden [SE]
Alfred J. Hogan, Winter Haven, FL [E]
Rep. New England Association of Fire Marshals
Donald Hopkins, Jr., Hughes Associates, Inc., MD [SE]
Roland J. Huggins, American Fire Sprinkler Association, Inc., TX [IM]
Kenneth E. Isman, National Fire Sprinkler Association, Inc., NY [M]
Sultan M. Javeri, SC Engineering, France [IM]
Larry Keeping, Vipond Fire Protection, Canada [IM]
Rep. Canadian Automatic Sprinkler Association
Andrew Kim, National Research Council of Canada, Canada [RT]
William E. Koffel, Koffel Associates, Inc., MD [SE]
Chris LaFleur, General Motors Corporation, MI [U]
Thomas L. Multer, Reliable Automatic Sprinkler Company, Inc., SC [M]
Rep. National Fire Sprinkler Association
Richard Pehrson, Futrell Fire Consult and Design, Inc., MN [E]
Rep. International Fire Marshals Association
Chester W. Schirmer, Schirmer Engineering Corporation, NC [I]
Peter A. Smith, International Paper Company, TN [U]
Jack W. Thacker, Allan Automatic Sprinkler Corp. of So. California, CA [IM]
Rep. National Fire Sprinkler Association

Alternates

Carl P. Anderson, Tacoma Fire Department, WA [E]
(Voting Alt. for Fire Service Rep.)
Gordon Bates, Minneapolis Fire Department, MN [E]
(Alt. to Richard Pehrson)
Richard Battista, Fire Protection Industries, Inc., NJ [M
(Alt. to Kenneth E. Isman)
Thomas C. Brown, The RJA Group, Inc., MD [SE]
(Alt. to James G. Gallup)
Edward K. Budnick, Hughes Associates, Inc., MD [SE]
(Alt. to Donald Hopkins, Jr.)
Pravinray D. Gandhi, Underwriters Laboratories Inc., IL [RT]
(Alt. to Kerry M. Bell)
Joseph B. Hankins, Jr., American Fire Sprinkler Association, NC [IM]
(Alt. to John August Denhardt)
Stephen R. Ide, Victaulic Fire Safety, PA [M]
(Alt. to Thomas L. Multer)
Daniel Madrzykowski, US National Institute of Standards & Technology, MD [RT]
(Voting Alt. to NIST Rep.)
Rodney Marchand, International Paper Company, TN [U]
(Alt. to Peter A. Smith)
Thomas McNamara, United Assn. of Journeymen & Apprentices of the Plumbing & Pipe Fitting Industry, MI [L]
(Alt. to James C. Bollier)
Jack A. Medovich, East Coast Fire Protection, Inc., MD [IM]
(Alt. to Roland J. Huggins)
Matthew Osburn, Canadian Automatic Sprinkler Association, Canada [IM]
(Alt. to Larry Keeping)
Garner A. Palenske, Schirmer Engineering Corporation, CA [I]
(Alt. to Chester W. Schirmer)
Michael D. Sides, XL Global Asset Protection Services, FL [I]
(Alt. to Kenneth W. Linder)
George W. Stanley, Wiginton Fire Systems, FL [IM]
(Alt. to Jack W. Thacker)
Peter W. Thomas, Tyco Fire & Building Products, RI [M]
(Alt. to James E. Golinveaux)
William J. Tomes, TVA Fire and Life Safety, Inc., GA [U]
(Alt. to Tracey D. Bellamy)
Rep. The Home Depot
Martin H. Workman, The Viking Corporation, MI [M]
(Alt. to Thomas G. Deegan)

Nonvoting

Barry M. Lee, Tyco International, Australia [M]

Committee Scope: This Committee shall have primary responsibility for those portions of NFPA 13 that pertain to the classification of various fire hazards and the determination of associated discharge criteria for sprinkler systems employing automatic and open sprinklers.

Report of the Technical Committee on

Sprinkler System Installation Criteria [AUT-SSI]

Joe W. Noble, *Chair*
Noble Consulting Services, LLC, NV [E]
Rep. International Fire Marshals Association

James D. Lake, *Nonvoting Secretary*
National Fire Protection Association, MA

Michael A. Amar, Gage-Babcock & Associates, Inc., CA [SE]
Hamid R. Bahadori, Hughes Associates, Inc., FL [SE]
Weston C. Baker, Jr., FM Global, MA [I]
Cecil Bilbo, Jr., National Fire Sprinkler Association, Inc., IL [M]
Robert G. Caputo, Consolidated Fireprotection, Inc., CA [IM]
Rep. American Fire Sprinkler Association
Del Dornbos, The Viking Corporation, MI [M]
Rep. National Fire Sprinkler Association
Robert E. Duke, Fire Control Incorporated, IL [IM]
Ralph Gerdes, Ralph Gerdes Consultants, LLC, IN [SE]
Rep. American Institute of Architects
Luke Hilton, Liberty Mutual Property, NC [I]
Rep. Property Casualty Insurers Association of America
Elwin G. Joyce, II, Eastern Kentucky University, KY [U]
Rep. NFPA Industrial Fire Protection Section
Larry Keeping, Vipond Fire Protection, Canada [IM]
Rep. Canadian Automatic Sprinkler Association
Charles W. Ketner, National Automatic Sprinkler Fitters LU 669, MD [L]
Rep. United Assn. of Journeymen & Apprentices of the Plumbing & Pipe Fitting Industry
Michael D. Kirn, Code Consultants, Inc., MO [SE]
George E. Laverick, Underwriters Laboratories Inc., IL [RT]
Kenneth W. Linder, Swiss Re, Global Asset Protection Services, CT [I]
Ausmus S. Marburger, Fire Protection Industries, Inc., PA [IM]
Rep. National Fire Sprinkler Association
Rodney A. McPhee, Canadian Wood Council, Canada [U]
Michael F. Meehan, Virginia Sprinkler Company, Inc., VA [IM]
Rep. American Fire Sprinkler Association
Thomas H. Miller, Varley-Campbell & Associates, Inc., IL [E]
Rep. NFPA Fire Service Section David S. Mowrer, HSB Global Standards, TN [I]
Chester W. Schirmer, Schirmer Engineering Corporation, NC [I]
Peter T. Schwab, Wayne Automatic Fire Sprinklers, Inc., FL [IM]
Paul A. Statt, Eastman Kodak Company, NY [U]
Craig R. Studer, The RJA Group, Inc., CA [SE]
Lynn K. Underwood, Axis US Property, IL [I]
Terry L. Victor, Tyco/SimplexGrinnell, MD [M]

Alternates

Kerry M. Bell, Underwriters Laboratories Inc., IL [RT]
(Alt. to George E. Laverick)
Phillip A. Brown, American Fire Sprinkler Association, Inc., TX [IM]
(Alt. to Robert G. Caputo)
Edward K. Budnick, Hughes Associates, Inc., MD [SE]
(Alt. to Hamid R. Bahadori)
James A. Charrette, Allan Automatic Sprinkler Corp. of So. California, CA [IM]
(Alt. to Ausmus S. Marburger)
Todd A. Dillon, XL Global Asset Protection Services, OH [I]
(Alt. to Kenneth W. Linder)
David B. Fuller, FM Global, MA [I]
(Alt. to Weston C. Baker, Jr.)
James E. Golinveaux, Tyco Fire Suppression & Building Products, RI [M]
(Alt. to Terry L. Victor)
Donald G. Goosman, The RJA Group, Inc., IL [SE]
(Alt. to Craig R. Studer)
Stephen R. Ide, Victaulic Fire Safety, PA [M]
(Alt. to Del Dornbos)
Matthew Osburn, Canadian Automatic Sprinkler Association, Canada [IM]
(Alt. to Larry Keeping)
Michael A. Rothmier, UA Joint Apprenticeship Committee, CO [L]
(Alt. to Charles W. Ketner)
Steven J. Scandaliato, Scandaliato Design Group, Inc., CO [IM]
(Alt. to Michael F. Meehan)
LeJay Slocum, Schirmer Engineering Corporation, MD [I]
(Alt. to Chester W. Schirmer)
William B. Smith, Code Consultants, Inc., MO [SE]
(Alt. to Michael D. Kirn)
Glenn E. Thompson, Liberty Mutual Property, CA [I]
(Alt. to Luke Hilton)
Robert Vincent, Shambaugh & Son, L.P., IN [M]
(Alt. to Cecil Bilbo, Jr.)

Nonvoting

Barry M. Lee, Tyco International, Australia [M]

Staff Liaison: **James D. Lake**

Committee Scope: This Committee shall have the primary responsibility for those portions of NFPA 13 that pertain to the criteria for the use and installation of sprinkler systems components (with the exception of those components used for supporting of piping), position of sprinklers, types of systems, plans and calculations, water supplies, and acceptance testing.

These lists represent the membership at the time the Committee was balloted on the text of this edition. Since that time, changes in the membership may have occurred. A key to classifications is found at the front of this book.

The Report of the Committee on **Automatic Sprinkler Systems** is presenting five reports for adoption, as follows:

The Reports were prepared by the:

- Technical Correlating Committee on Automatic Sprinkler Systems (AUT-AAC)
- Technical Committee on Hanging and Bracing of Water-Based Fire Protection Systems (AUT-HBS)
- Technical Committee on Private Water Supply Piping Systems (AUT-PRI)
- Technical Committee on Residential Sprinkler Systems (AUT-RSS)
- Technical Committee on Sprinkler System Discharge Criteria (AUT-SSD)
- Technical Committee on Sprinkler System Installation Criteria (AUT-SSI)

Report I: The Technical Committee proposes for adoption, amendments to NFPA 13, **Standard for the Installation of Sprinkler Systems**, 2007 edition. NFPA 13 is published in Volume 2 of the 2008 National Fire Codes and in separate pamphlet form.

The report on NFPA 13 has been submitted to letter ballot of the individual **Technical Committees**. The results of the balloting, after circulation of any negative votes, can be found in the report.

This Report on Proposals has also been submitted to the **Technical Correlating Committee on Automatic Sprinkler Systems** in two parts. Part 1 is a letter ballot on the TCC Actions, if any; and Part 2 is an informational letter ballot on the Report as a whole. The TCC, which consists of 19 voting members, voted as follows:

Part 1: 17 voted affirmatively, and 2 ballots were not returned (S. Javeri, D. Stultz).

Part 2: 17 voted affirmatively, and 2 ballots were not returned (S. Javeri, D. Stultz).

Report II: The Technical Committee proposes for adoption, amendments to NFPA 13D, **Standard for the Installation of Sprinkler Systems in One- and Two-Family Dwellings and Manufactured Homes**, 2007 edition. NFPA 13D is published in Volume 2 of the 2008 National Fire Codes and in separate pamphlet form.

The report on NFPA 13D has been submitted to letter ballot of the **Technical Committee on Residential Sprinkler Systems**, which consists of 28 voting members. The results of the balloting, after circulation of any negative votes, can be found in the report.

This Report on Proposals has also been submitted to the **Technical Correlating Committee on Automatic Sprinkler Systems** (TCC) in two parts. Part 1 is a letter ballot on the TCC Actions, if any; and Part 2 is an informational letter ballot on the Report as a whole. The TCC, which consists of 19 voting members, voted as follows:

Part 1: 17 voted affirmatively, and 2 ballots were not returned (S. Javeri, D. Stultz).

Part 2: 17 voted affirmatively, and 2 ballots were not returned (S. Javeri, D. Stultz).

Report III: The Technical Committee proposes for adoption, amendments to NFPA 13R, **Standard for the Installation of Sprinkler Systems in Residential Occupancies up to and Including Four Stories in Height**, 2007 edition. NFPA 13R is published in Volume 2 of the 2008 National Fire Codes and in separate pamphlet form.

The report on NFPA 13R has been submitted to letter ballot of the **Technical Committee on Residential Sprinkler Systems**, which consists of 24 voting members. The results of the balloting, after circulation of any negative votes, can be found in the report.

This Report on Proposals has also been submitted to the **Technical Correlating Committee on Automatic Sprinkler Systems** (TCC) in two parts. Part 1 is a letter ballot on the TCC Actions, if any; and Part 2 is an informational letter ballot on the Report as a whole. The TCC, which consists of 19 voting members, voted as follows:

Since there were no TCC Actions, there is no ballot on Part 1.
Part 2: 17 voted affirmatively, and 2 ballots were not returned (S. Javeri, D. Stultz).

Report IV: The Technical Committee proposes for adoption, amendments to NFPA 24, **Standard for the Installation of Private Fire Service Mains and Their Appurtenances**, 2007 edition. NFPA 24 is published in Volume 2 of the 2008 National Fire Codes and in separate pamphlet form.

The report on NFPA 24 has been submitted to letter ballot of the **Technical Committee on Residential Sprinkler Systems**, which consists of 24 voting members. The results of the balloting, after circulation of any negative votes, can be found in the report.

This Report on Proposals has also been submitted to the **Technical Correlating Committee on Automatic Sprinkler Systems** (TCC) in two parts. Part 1 is a letter ballot on the TCC Actions, if any; and Part 2 is an informational letter ballot on the Report as a whole. The TCC, which consists of 19 voting members, voted as follows:

Part 1: 17 voted affirmatively, and 2 ballots were not returned (S. Javeri, D. Stultz).

Part 2: 17 voted affirmatively, and 2 ballots were not returned (S. Javeri, D. Stultz).

Report V: The Technical Committee proposes for adoption, amendments to NFPA 291, **Recommended Practice for Fire Flow Testing and Marking of Hydrants**, 2007 edition. NFPA 291 is published in Volume 14 of the 2008 National Fire Codes and in separate pamphlet form.

The report on NFPA 291 has been submitted to letter ballot of the **Technical Committee on Private Water Supply Piping Systems**, which consists of 24 voting members. The results of the balloting, after circulation of any negative votes, can be found in the report.

This Report on Proposals has also been submitted to the **Technical Correlating Committee on Automatic Sprinkler Systems** (TCC) in two parts. Part 1 is a letter ballot on the TCC Actions, if any; and Part 2 is an informational letter ballot on the Report as a whole. The TCC, which consists of 19 voting members, voted as follows:

Since there were no TCC Actions, there is no ballot on Part 1.

Part 2: 17 voted affirmatively, and 2 ballots were not returned (S. Javeri, D. Stultz).

13D-1 Log #CP10 AUT-RSS **Final Action: Accept**
(Entire Document)

Submitter: Technical Committee on Residential Sprinkler Systems,
Recommendation: Review entire document to: 1) Update any extracted material by preparing separate comments to do so, and 2) review and update references to other organizations documents, by preparing comment(s) as required.
Substantiation: To conform to the NFPA Regulations Governing Committee Projects.
Committee Meeting Action: Accept
Number Eligible to Vote: 28
Ballot Results: Affirmative: 23
Ballot Not Returned: 5 Baker, G., Ketner, C., Madrzykowski, D., Maruskin, M., Schirmer, C.

13D-2 Log #10 AUT-RSS **Final Action: Accept in Principle**
(1.1)

Submitter: Jon Nisja, Northcentral Regional Fire Code Development Committee
Recommendation: Revise Section 1.1 to read:
1.1* Scope. This standard shall cover the design and installation of automatic sprinkler systems for protection against the fire hazards in one- and two-family dwellings and manufactured homes. This standard is also applicable to townhouses and row houses when such dwellings are fire separated from each other and classified as separate buildings per the adopted building code.
Substantiation: NFPA 1, 101, and 5000 now require sprinkler protection in new residential occupancies. The scope of NFPA 13D is currently limited to one- and two-family dwellings and the definition for one- and two-family dwellings states: "A building that contains not more than two dwelling units with independent cooking and bathroom facilities." (NFPA 5000). This definition seems to preclude the use of NFPA 13D for townhouse or row house style residential occupancies. NFPA 5000 contains fire separation requirements for townhouses; these requirements are located under Chapter 22 One- and Two-Family Dwellings. This change clarifies that properly fire-separated townhouses or row houses can be protected with automatic sprinklers installed pursuant to NFPA 13D. Implementation and enforcement problems are experienced if NFPA 13D sprinkler systems cannot be used to protect these buildings as these buildings are often owner-occupied and no common spaces exist for the installation of NFPA 13 or NFPA 13R sprinkler systems.
Committee Meeting Action: Accept in Principle
See Committee Action on Proposal 13D-5 (Log #8).
Committee Statement: Proposal 13D-5 (Log #8) addresses this issue.
Number Eligible to Vote: 28
Ballot Results: Affirmative: 22 Negative: 1
Ballot Not Returned: 5 Baker, G., Ketner, C., Madrzykowski, D., Maruskin, M., Schirmer, C.
Explanation of Negative:
HAAGENSEN, D.: See explanation for negative vote on 13D-5 (Log #8).

13D-3 Log #11 AUT-RSS **Final Action: Accept in Principle**
(1.1)

Submitter: Eddie Phillips, Southern Regional Fire Code Development Committee
Recommendation: Revise to read:
1.1* Scope. This standard shall cover the design and installation of automatic sprinkler systems for protection against the fire hazards in one- and two-family dwellings, townhouses and manufactured homes.
Substantiation: There is significant confusion among AHJ, designers and contractors as to the appropriateness of an NFPA 13D installation in the townhouse environment. This proposal will clarify the intent that these systems are appropriate and consistent with NFPA 5000 section 22.3.5 as 13D applies to a dwelling as a single building under 3.3.3 and 5000 states a 13D system is appropriate for this application:
22.3.5* Extinguishment Requirements.
22.3.5.1 All one- and two-family dwellings shall be protected throughout by an automatic sprinkler system installed in accordance with 22.3.5.2.
22.3.5.2* Unless otherwise specified in Chapter 7, where modifications are permitted by this code based on the installation of an automatic sprinkler system, such modifications shall be permitted where the automatic sprinkler system complies with NFPA 13, Standard for the Installation and Sprinkler Systems; NFPA 13D, Standard for the Installation of Sprinkler Systems in One- and Two-Family Dwellings and Manufactured Homes; or NFPA 13R, Standard for the Installation of Sprinkler Systems in Residential Occupancies up to and Including Four Stories in Height.
22.3.5.3 Where an automatic sprinkler system is provided, either for total or partial building coverage, the system shall be in accordance with NFPA 13, NFPA 13D, or NFPA 13R.
Section 3.3.3 of NFPA 13D states that a Dwelling is "Any Building... " Section 22.4 of NFPA 5000 states that townhouses are separate "buildings" when separated by a 2 hour wall as per 22.4 of NFPA 5000:
22.4 Separation Between Townhouses.
Each townhouse shall be constructed as a separate building. Townhouses shall be separated from adjoining townhouses by exterior walls constructed in accordance with Section 7.3, or by a single wall meeting the requirements of 22.4.1 through 22.4.6.
22.4.1 Walls used to create separate buildings shall provide not less than a 2-hour fire resistance rating.
Based on the current language of 13D and NFPA 5000, a 13D system is appropriate for a true "townhouse" application. This code change would bring clarity to what is already allowed by the code.
If the TC is concerned about the proper application of the 13D systems to true townhouses, annex text could be provided to further clarify the intent of the code.
Committee Meeting Action: Accept in Principle
See Committee Action on Proposal 13D-5 (Log #8).
Committee Statement: Committee Action on Proposal 13D-5 (Log #8) addresses this issue.
Number Eligible to Vote: 28
Ballot Results: Affirmative: 22 Negative: 1
Ballot Not Returned: 5 Baker, G., Ketner, C., Madrzykowski, D., Maruskin, M., Schirmer, C.
Explanation of Negative:
HAAGENSEN, D.: See explanation for negative vote on 13D-5 (Log #8).

13D-4 Log #1 AUT-RSS **Final Action: Reject**
(1.1 and 3.3.5 Manufactured Home)

Submitter: Robert Bourke, Northeastern Regional Fire Code Development Committee
Recommendation: Revise text to read as follows:
1.1* Scope. This standard shall cover the design and installation of automatic sprinkler systems for protection against the fire hazards in one- and two-family dwellings ~~and manufactured homes~~.
Delete ~~3.3.5* Manufactured Home. A structure, transportable in one or more sections, which, in the traveling mode, is 8 body-ft (2.4 m) or more in width or 40 body-ft (12.2 m) or more in length or, when erected on site, is 320 ft2 (29.7 m2) or more and which is built on a permanent chassis and designed to be used as a dwelling, with or without a permanent foundation, when connected to the required utilities, and includes plumbing, heating, air-conditioning, and electrical systems contained therein; except that such terms shall include any structure which meets all the requirements of this paragraph except the size requirements and with respect to which the manufacturer voluntarily files a certification required by the regulatory agency. Calculations used to determine the number of square feet in a structure are based on the structure's exterior dimensions, measured at the largest horizontal projections when erected on site. These dimensions include all expandable rooms, cabinets, and other projections containing interior space, but do not include bay windows.~~
Add a new definition to read: 3.3.x* One- and Two-Family Dwelling Unit. A building that contains not more than two dwelling units with independent cooking and bathroom facilities. [5000, 2006]
Substantiation: The standard is currently confusing on applicability. It does not matter how or what the one- and two-family dwelling is constructed of. It should be tied to the occupancy definition which is not included in the standard. The proposed text is from NFPA 5000 for consistency between NFPA codes and standards.
Committee Meeting Action: Reject
Committee Statement: It is and has been the intent of this committee this standard applies to manufactured homes. The committee believes that removing manufactured homes in the standard would create confusion. Definition of dwelling unit is currently included in NFPA 13D.
Number Eligible to Vote: 28
Ballot Results: Affirmative: 22 Negative: 1
Ballot Not Returned: 5 Baker, G., Ketner, C., Madrzykowski, D., Maruskin, M., Schirmer, C.
Explanation of Negative:
HAAGENSEN, D.: Less confusion would be created if the term "manufactured home" was removed from the title/scope, as the standard covers any one- or two-family dwelling regardless of whether it is built on site or off-site. This is especially true today given that one can purchase manufactured multi-family buildings and single-family manufactured homes that do not meet this (HUD) definition.

13D-5 Log #8 AUT-RSS **Final Action: Accept in Principle**
(1.1, 1.1.1, 3.2.x, Townhouse, and A.1.1.1 (New))

Submitter: Anthony C. Apfelbeck, City of Altamonte Springs
Recommendation: Revise text to read as follows:
1.1*Scope.
This standard shall cover the design and installation of automatic sprinkler systems for protection against the fire hazards in one- and two-family dwellings, townhouses and manufactured homes.
1.1.1 Townhouses
This standard shall cover townhouses that are completely separated form adjacent townhouses by fire-resistive construction sufficient to have each townhouse considered separate buildings under the local building code.

Townhouses that are not completely separated form adjacent townhouses by fire-resistive construction sufficient to have them considered separate buildings under the local building code shall be protected in accordance with NFPA 13R. *Standard for the Installation of Sprinkler Systems in Residential Occupancies up to and Including Four Stories in Height* or NFPA 13, *Standard for the Installation of Sprinkler Systems.*

A.1.1 NFPA 13D is appropriate for protection against fire hazards only in one- and two-family dwellings, townhouses and manufactured homes. Residential portions of any other type of building or occupancy should be protected with residential sprinklers in accordance with NFPA 13, Standard for the Installation of Sprinkler Systems, or in accordance with NFPA 13R, Standard for the Installation of Sprinkler Systems in Residential Occupancies up to and Including Four Stories in Height. Other portions of such buildings should be protected in accordance with NFPA 13 or NFPA 13R as appropriate for areas outside the dwelling unit. Townhouses are included within the scope of NFPA 13D since each individual townhouse is constructed and considered a separate building under NFPA 5000, the International Building Code and the International Residential Code. If townhouses are not constructed in a manner sufficient to have them considered separate buildings, then the townhouses need to be protected by a 13R or 13 system.

3.2.X Townhouse. A one-family dwelling constructed in attached groups of three or more units in which each unit extends from the foundation to the roof and has open space on at least two sides.[**5000**: 3.3.624].

Substantiation: This proposal clarifies that NFPA 13D systems are in appropriate application in the townhouse environment. This position is justified based on the definition of the term "townhouse" as a separated building by NFPA 5000, the IRC and the IBC.

A townhouse is defined as a single-family dwelling by the International Building Code, the International Residential Code, and NFPA 5000. The IRC further indicates in Section R317.2, "*Each townhouse shall be considered a separate building*...". This position is also mirrored in NFPA 5000 section 22.4, "*Each townhouse shall be constructed as a separate building*." NFPA 13D's definition of dwelling states, "Any *building* that contains not more than one or two dwelling units. ..". Therefore, since each townhouse is classified as a separate building designed under the IBC, IRC and 13D definitions, the 13D system is an appropriate level of protection for each townhouse.

In addition, there are a number of practical difficulties that preclude the utilization of a 13R system in a townhouse environment without significant additional accommodations and costs:

1. Since "townhomes" typically involve separate ownership of property and the units extend from "foundation to roof", a common 13R system piping supplying all units would necessitate a complex common ownership element shared between the differing property owners. A community association would need to be established in order to "own" the common element. This common element may also require recorded easement to access the system in each person's house.

2. This community association would need to maintain the 13R system since 13R systems require maintenance and inspections in accordance with NFPA 25. This would involve coordinated access to each property and a shared maintenance cost.

3. If an external bell or monitoring of the 13R system is required, this would necessitate a separate house electrical panel, again owned by a community association. This would create an ongoing expense of electrical service and maintenance/testing of a fire alarm monitoring panel, if present.

4. If monitoring of the 13R system is required, this would then mandate a method of transmission which may involve the added expense of phone lines to the community association. An easement may be needed to access the phone lines.

5. From an operational standpoint, shutting down a 13R system would shut down the fire protection for the entire series of attached buildings. This is not the case with a 13D system as each townhouse would have their own system.

None of these issues are present when an NFPA 13D system is installed in a townhouse. Therefore, the 13D system is appropriate for the townhouse application.

In addition to the scope clarification, this proposal adds clarifying language to the annex and extracts the "Townhouse" definition from NFPA 5000.

Committee Meeting Action: Accept in Principle

Revise the dwelling definition in Section 3.3.3, so Section 3.3.3 reads:

3.3.3 Dwelling. Any detached building, or any part of a townhouse structure which is separated from the remainder of the townhouse structure with fire resistance rated assemblies in accordance with local building code, that contains no more than two dwelling units intended to be used, rented, leased, let, or hired out to be occupied or that are occupied for habitation purposes.

Accept the proposed definition "Townhouse" from NFPA 5000.

Committee Statement: The committee agrees that townhouses can be protected in accordance with NFPA 13D provided one- or two-family dwelling units within the townhouse structure are appropriately separated.

Number Eligible to Vote: 28

Ballot Results: Affirmative: 22 Negative: 1

Ballot Not Returned: 5 Baker, G., Ketner, C., Madrzykowski, D., Maruskin, M., Schirmer, C.

Explanation of Negative:

HAAGENSEN, D.: The original intent of NFPA 13D was to address one- and two-family detached homes. NFPA 13R and NFPA 13 were meant to address multi-family homes. The lack of physical separation allows the spread of fire too easily and makes an entirely different fire attack scenario for responding fire departments. From a fire service perspective, a townhouse style building will act as a single building regardless of separation, as fire can/has spread over the top of the separations in these multi-family structures. Furthermore, the proposed wording does not require that the one- and two-family dwelling units be separated such that the local building code considers each unit "separate buildings," and sets up a potential conflict between the references to the local building code and NFPA 5000.

13D-6 Log #2 AUT-RSS **Final Action: Accept in Principle**
(1.1.1 (New))

Submitter: Eddie Phillips, Southern Regional Fire Code Development Committee

Recommendation: Add a new 1.1.1 as follows:

1.1* Scope.

This standard shall cover the design and installation of automatic sprinkler systems for protection against the fire hazards in one- and two-family dwellings and manufactured homes.

1.1.1 One- and two-family dwellings shall include townhouses where such townhouses are constructed as separate buildings that are separated from adjoining townhomes by a structurally independent 2hr rated wall.

Substantiation: AHJ's and designer are currently left without guidance as to the appropriateness of utilizing an NFPA 13D design with "townhomes." Interpretations by jurisdictions vary from allowing 13D to mandating a 13R design. This language utilizes the common model building code language that is used to determine the criteria for a townhouse. Townhouses are one-and two-family dwellings and should therefore be allowed to be protected by an NFPA 13D design in the townhouse environment as long as the minimum separation is provided to define these properties as townhouses. (In fact, it is more appropriate than a 13R due to ownership issues of the common system running across various properties with different ownership.)

Committee Meeting Action: Accept in Principle

See Committee Action on Proposal 13D-5 (Log #8).

Committee Statement: Proposal 13D-5 (Log #8) addresses this issue.

Number Eligible to Vote: 28

Ballot Results: Affirmative: 22 Negative: 1

Ballot Not Returned: 5 Baker, G., Ketner, C., Madrzykowski, D., Maruskin, M., Schirmer, C.

Explanation of Negative:

HAAGENSEN, D.: See explanation for negative vote on 13D-5 (Log #8).

13D-7 Log #21 AUT-RSS **Final Action: Accept in Principle**
(1.1.1 and A.1.1.1 (New))

Submitter: Kenneth E. Isman, National Fire Sprinkler Association, Inc.

Recommendation: Add new Section 1.1.1 and annex note as follows:

1.1.1* This standard is written with the assumption that the sprinkler system is being designed to protect against a single fire originating within the building.

A.1.1.1 The overwhelming majority of fire deaths occur from fires that start in buildings and threaten people in those buildings. Since the objective of this standard is to provide life safety for building occupants, the focus of this document is to require sprinklers for the interior portions of the building. However, this standard does also provide some level of property protection. Fire sprinklers have been successfully used within a building to prevent a fire from outside the structure from burning into the structure through unprotected openings.

This proposal was approved by the National Fire Sprinkler Association's Engineering and Standards Committee.

Substantiation: Questions frequently arise regarding multiple ignition points and the need to make the water supply bigger. Questions also frequently arise regarding the use of sprinklers to prevent the spread of fire originating outside of the building (wildfires, exposure fires, etc.). These issues need to be clarified within the standard.

Committee Meeting Action: Accept in Principle

1.1.1 This standard assumes that the sprinkler system is designed to protect against a fire originating from a single ignition location.

Committee Statement: The revised text more clearly describes the intent that the fire originates from a single location.

Number Eligible to Vote: 28

Ballot Results: Affirmative: 23

Ballot Not Returned: 5 Baker, G., Ketner, C., Madrzykowski, D., Maruskin, M., Schirmer, C.

13D-8 Log #CP1 AUT-RSS **Final Action: Accept**
(1.2)

Submitter: Technical Committee on Residential Sprinkler Systems,

Recommendation: Revise Chapter as follows:

1.2 Purpose

1.2.1 The purpose of this standard shall be to provide a sprinkler system that aids in the detection and control of residential fires and thus provides improved protection against injury, life loss, and property damage.

1.2.2 A sprinkler system designed and installed in accordance with this standard shall be expected to prevent flashover (total involvement) in the room of fire origin, where sprinklered, and to improve the chance for occupants to escape or be evacuated.
1.2.3 The layout, calculation, and installation of systems installed in accordance with this standard shall only be performed by people knowledgeable and trained in such systems.
Substantiation: Editorial revision breaking out multiple requirements.
Committee Meeting Action: Accept
Number Eligible to Vote: 28
Ballot Results: Affirmative: 23
Ballot Not Returned: 5 Baker, G., Ketner, C., Madrzykowski, D., Maruskin, M., Schirmer, C.

13D-9 Log #3 AUT-RSS **Final Action: Reject**
(1.3)

Submitter: Eddie Phillips, Southern Regional Fire Code Development Committee
Recommendation: Revise Section 1.3 as follows:
1.3 Retroactivity.
1.3.1 Retroactivity of this Standard
1.3.1.1The 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. 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. 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. 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.~~
1.3.1.2 Where specified, the provisions of this standard shall be retroactive.
1.3.1.3 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.
1.3.1.4 Facilities, equipment, structures, and installations, installed in accordance with this standard, shall be maintained in accordance with the installation edition of this standard.
1.3.1.5 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.
1.3.2 Retroactivity of Referenced Standards
1.3.2.1 Unless otherwise specified, the current provisions of the referenced standards shall not apply to facilities, equipment, structures, or installations that existed or were approved for construction or installation prior to the effective date of this code.
1.3.2.2 Where specified for existing occupancies, conditions or systems, the provisions of the referenced standards shall be retroactive.
1.3.2.3 Facilities, equipment, structures, and installations, installed in accordance with a referenced standard, shall be maintained in accordance with the installation edition of such standard.
1.3.2.4 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 the current standards deemed appropriate.
Substantiation: The proposed change accomplishes three items. First, it reformats the existing retroactivity language into appropriate code text. The last two sentences of the retroactivity paragraph are actually exception to the first part. Second, the new 1.3.1.4 clarifies the intent that equipment shall be maintained in accordance with the installation edition. This directs the AHJ as to what edition of the standard to reference if there is a question as to the design of an existing installation. Lastly, this proposal adds a new 1.3.2 addressing the retroactivity of the referenced standards. A common situation is that an AHJ will attempt to enforce a current edition of a referenced standard on an existing installation. This language clarifies that referenced standards should be treated in a similar manner to the underlying standard.
Committee Meeting Action: Reject
Committee Statement: The current text provides authorities having jurisdiction concise information and flexibility in applying this standard. The retroactivity of referenced standards is outside the scope of this standard.
Number Eligible to Vote: 28
Ballot Results: Affirmative: 23
Ballot Not Returned: 5 Baker, G., Ketner, C., Madrzykowski, D., Maruskin, M., Schirmer, C.

13D-10 Log #CP2 AUT-RSS **Final Action: Accept**
(1.3)

Submitter: Technical Committee on Residential Sprinkler Systems,
Recommendation: Revise paragraph as follows:
1.3 Retroactivity.
1.3.1 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.
1.3.2 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.
1.3.3 Where specified, the provisions of this standard shall be retroactive. 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.
1.3.4 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.
Substantiation: Editorial revision breaking out multiple requirements.
Committee Meeting Action: Accept
Number Eligible to Vote: 28
Ballot Results: Affirmative: 23
Ballot Not Returned: 5 Baker, G., Ketner, C., Madrzykowski, D., Maruskin, M., Schirmer, C.
Comment on Affirmative:
ISMAN, K.: While we agree with what the committee is trying to accomplish, we believe that the "Retroactivity" clause was written by the Standards Council with the intent of being standardized in all NFPA documents. Section A.1.6.1.5 of the Manual of Style suggests that we should use the standardized wording. Should we propose a change to the Manual of Style?

13D-11 Log #4 AUT-RSS **Final Action: Accept in Principle**
(1.5)

Submitter: Eddie Phillips, Southern Regional Fire Code Development Committee
Recommendation: Insert a 1.5 as follows and renumber the remaining:
1.5 New Technology.
1.5.1 Nothing in this standard shall be intended to restrict new technologies or alternate arrangements, provided the level of safety prescribed by this standard is not lowered.
1.5.2 Materials or devices not specifically designated by this standard shall be utilized in complete accord with all conditions, requirements, and limitations of their listings.
Substantiation: This language addresses the use of new technology. Currently, this exact language is contained in NFPA 13.
Committee Meeting Action: Accept in Principle
Replace 1.4 (Equivalency) with the current text in 1.5 of NFPA 13 on equivalency.
Add new 1.6 (New Technology) using current text in 1.6 of NFPA 13.
Committee Statement: The NFPA 13 text on technology is identical to the text in the proposal.
Number Eligible to Vote: 28
Ballot Results: Affirmative: 23
Ballot Not Returned: 5 Baker, G., Ketner, C., Madrzykowski, D., Maruskin, M., Schirmer, C.

13D-12 Log #53 AUT-RSS **Final Action: Accept**
(3.3.4 Dwelling Unit and Chapter 2)

Submitter: Marcelo M. Hirschler, GBH International
Recommendation: Revise as follows:
3.3.4 Dwelling Unit. One or more rooms, arranged for the use of one or more individuals living together~~, as in a single housekeeping unit, that normally have cooking, living, sanitary, and sleeping facilities~~ providing complete, independent living facilities, including permanent provisions for living, sleeping, eating, cooking, and sanitation. (NFPA 5000)
Also, add a reference to NFPA 5000 into Chapter 2.
Substantiation: The existing definition is different from the NFPA preferred definition, contained in NFPA 5000. The term "dwelling unit" is extensively used in NFPA 13D, but the preferred definition would be equally applicable to the usage within NFPA 13. It is therefore recommended, in order to improve consistency within NFPA documents that the preferred definition be extracted from NFPA 5000 as shown.
I am the chairman of the NFPA Advisory Committee on the Glossary on Terminology. The committee was created by NFPA Standards Council to provide consistency in terminology throughout the NFPA documents. The committee has not had time to review all of my recommendations for NFPA 13, NFPA 13D and NFPA 13R definition of terms. Therefore, this proposal is being submitted in my own name only.

Committee Meeting Action: Accept
Number Eligible to Vote: 28
Ballot Results: Affirmative: 22 Negative: 1
Ballot Not Returned: 5 Baker, G., Ketner, C., Madrzykowski, D., Maruskin, M., Schirmer, C.
Explanation of Negative:
HAAGENSEN, D.: This revision of the term "Dwelling Unit" removes a key element of "household unit," therefore allowing dorms, group homes, and communal living, with an unlimited number of unrelated persons to live within the same dwelling unit.

13D-13 Log #24 AUT-RSS **Final Action: Accept in Principle**
(3.3.5 Compartment and 4.1)

Submitter: Kenneth E. Isman, National Fire Sprinkler Association, Inc.
Recommendation: Revise the definition of "Compartment" to be consistent with NFPA 13.
Substantiation: There were changes to the definition of "compartment' in the 2007 edition of NFPA 13 that were not picked up by NFPA 13D. There will likely be ore changes in he 2010 edition due to questions that have already arisen on the application of the new definition. Whatever definition ends up in NFPA 13 should be consistent with NFPA 13D.
This proposal was approved by the National Fire Sprinkler Association' Engineering and Standards Committee.
Committee Meeting Action: Accept in Principle
Revise proposed definition from NFPA 13 as follows:
Compartment. A space completely enclosed by walls and a ceiling. Each wall in the compartment ~~The compartment enclosure~~ is permitted to have openings ~~in walls~~ to an adjoining space if the openings have a minimum lintel depth of 8 in. (203 mm) from the ceiling and the total width of the openings in a single wall does not exceed 8 ft (2.44 m) in width. A single opening of 36 in. (914 mm) or less in width without a lintel is permitted when there are no other openings to adjoining spaces.
Committee Statement: The compartment definition is excessive for NFPA 13D systems. The requirement to limit openings to 8ft total could require the installation of sprinklers in areas such as closets and small bathrooms that exceeds the intent of the standard.
Number Eligible to Vote: 28
Ballot Results: Affirmative: 23
Ballot Not Returned: 5 Baker, G., Ketner, C., Madrzykowski, D., Maruskin, M., Schirmer, C.

13D-14 Log #54 AUT-RSS **Final Action: Accept in Principle**
(3.3.5 Manufactured Home)

Submitter: Marcelo M. Hirschler, GBH International
Recommendation: It is recommended that the technical committee choose the preferred definition of "manufactured home" as contained in NFPA 501.
3.3.5* Manufactured Home. A structure, transportable in one or more sections, that, in the traveling mode, is 8 body-ft (2.4 m) or ore in width or 40 body-ft (12.2 m) or more in length or, when erected on site, is 320 ft2 (29.7 m2) or more and that is built on a permanent chassis and designed to be used as a dwelling, with or without a permanent foundation, when connected therein. The term manufactured home includes any structure that meets all the provisions of this paragraph except the size requirements and with respect to which the manufacturer voluntarily files a certification required by the regulatory agency and except that such term shall not include any self-propelled recreational vehicle. Calculations used to determine the number of square feet (square meters) in a structure are based on the structure's exterior dimensions, measured at the largest horizontal projections when erected on site. These dimensions include all expandable rooms, cabinets, and other projections containing interior space, but do not include bay windows. (NFPA 501).
~~3.3.5 Manufactured Home. A structure, transportable in one or more sections, that is 8 body ft (92.4 m) or more in width or 40 body ft (12.2 m) or more in length in the traveling mode, or when erected on site, is 320 ft2 (29.7 m2) or more, which is built on a chassis and designed to be used as a dwelling, with or without a permanent foundation, when connected to the required utilities, including the plumbing, heating, air conditioning, and electrical systems contained therein. Calculations used to determine the number of square feet in a structure are based on the structure's exterior dimensions,measured at the largest horizontal projections when erected on site. These dimensions include all expandable rooms, cabinet, and other projections containing interior space, but do not include bay windows.~~
Also, add a reference to NFPA 501 into Chapter 2.
Substantiation: The existing definition is different from the NFPA preferred definition, contained in NFPA 501. The term "manufactured home" is extensively used in NFPA 13D, and the technical committee must decide whether the preferred definition would be equally applicable to the usage within NFPA 13D. It s recommended, if applicable, in order to improve consistency within NFPA documents that the preferred definition be extracted from NFPA 501 as shown. It is also recommended that definitions be contained within a single sentence and that added information be placed in alternate locations (such as an annex) and that requirements not be included in definitions.
I am the chairman of the NFPA Advisory Committee on the Glossary on Terminology. The committee was created by NFPA Standards Council to provide consistency in terminology throughout the NFPA documents. The committee has not had time to review all of my recommendations for NFPA 13, NFPA 13D and NFPA 13R definition of terms. Therefore, this proposal is being submitted in my own name only.
Committee Meeting Action: Accept in Principle
Change is not necessary.
Committee Statement: The definition in the 2007 Edition of NFPA 13D is consistent with the proposal.
Number Eligible to Vote: 28
Ballot Results: Affirmative: 23
Ballot Not Returned: 5 Baker, G., Ketner, C., Madrzykowski, D., Maruskin, M., Schirmer, C.

13D-15 Log #55 AUT-RSS **Final Action: Reject**
(3.3.8.2 Residential Sprinkler)

Submitter: Marcelo M. Hirschler, GBH International
Recommendation: Revise as follows:
3.3.8.2 Residential Sprinkler. A type of fast-response sprinkler having a thermal element with an RTI of 50 (meters-seconds) $^{1}/_{2}$ or less, that has been specifically investigated for its ability to enhance survivability in the room of fire origin, and that is listed for use in the protection of dwelling units.
Substantiation: The definition in NFPA 13 is the NFPA preferred definition. However, the definition contained in NFPA 13R and in NFPA 13D is equivalent to that and more generic.
The definition in NFPA 13 reads as follows:
Residential sprinkler. A type of fast-response sprinkler that meets the criteria of 3.6.1(a)(1) that has been specifically investigated for its ability to enhance survivability in the room of fire origin and is listed for use in the protection of dwelling units.
It is therefore recommended that the NFPA 13R and NFPA 13D definitions be retained and that the NFPA 13 definition be revised to be identical to the one in NFPA 13R and NFPA 13D which basically involves replacing the issue of the "criteria of 3.6.1(a) (1) by the actual criteria in terms of the response time index (RTI). This is being done in order to improve consistency within NFPA documents.
I am chairman of the NFPA Advisory Committee on the Glossary on Terminology. The committee was created by NFPA Standards Council to provide consistency in terminology throughout the NFPA documents. The committee has not had time to review all of my recommendations for NFPA 13, NFPA 13D and NFPA 13R definitions of terms. Therefore, this proposal is being submitted in my own name only.
Committee Meeting Action: Reject
Committee Statement: This proposal is to NFPA 13 and not applicable to NFPA 13D as the language is the same as that which is currently in the standard.
Number Eligible to Vote: 28
Ballot Results: Affirmative: 23
Ballot Not Returned: 5 Baker, G., Ketner, C., Madrzykowski, D., Maruskin, M., Schirmer, C.

13D-15a Log #CP11 AUT-RSS **Final Action: Accept**
(3.3.9, 5.1.3, 5.1.4, 5.2.1.3, 5.2.5.3)

Submitter: Technical Committee on Residential Sprinkler Systems,
Recommendation: Add the following definitions:
3.3.9.9 Stand Alone Sprinkler System. A sprinkler system where the aboveground piping serves only fire sprinklers. Underground piping is permitted to serve domestic use as well as sprinkler system use, but once the split is made between systems, the piping serving fire sprinklers only serves the fire sprinklers.
3.3.9.10* Passive Purge Sprinkler System. A type of stand alone sprinkler system that serves a single toilet in addition to the fire sprinklers. The toilet needs to be on a remote portion of the system or the system needs to be designed as a loop so that water moves through a majority of the fire sprinkler system piping when the toilet is flushed.
A.3.3.9.10 This type of system is also known by the term "Flow-Through System" in some portions of North America.
5.1.3 Revise this sentence by adding to the list of devices that do not need to be listed, "pressure reducing valves"
Add a new section:
5.1.4 Systems shall be designed and installed so that the system working pressure is less than or equal to the rated pressure of all components.
5.1.4.1 Where the static pressure from the water supply exceeds the rated working pressure of any system component, a pressure reducing valve shall be installed between the water supply and the component such that all components are only exposed to working pressure that is acceptable for the component.
Revise paragraph 5.2.1.3 as follows:
5.2.1.3 Nonmetallic pipe used in multipurpose piping systems not equipped with a fire department connection or passive purge systems not equipped with a fire department connection shall be designed to withstand a working pressure of not less than 130 psi (8.9 bar) at 120°F (49°C).
Revise paragraph 5.2.5.3 as follows
5.2.5.3 Nonmetallic fittings used in multipurpose piping systems not equipped with a fire department connection or passive purge systems not equipped with a fire department connection shall be designed to withstand a working pressure of not less than 130 psi (8.9 bar) at 120°F (49°C).
Substantiation: There is a great deal of confusion regarding the use of passive purge systems. The Task Group did not want to consider these systems to be multipurpose systems because they truly do not serve the domestic needs of the

dwelling. Instead, they have been used to mollify concerns about water stagnation in the sprinkler system to lessen or eliminate the demand for backflow devices on the part of some water utilities. These systems also have the effect of helping to get rid of excess pressure trapped in sprinkler system pipes due to pressure surges, which was the concern of the Committee when they wrote the original sections 5.2.1.3 and 5.2.5.3. Since the passive purge systems have the capacity to eliminate the excess pressure from the sprinkler system, they become a viable alternative to the multipurpose system for the types of pipe that do not meet the 175 psi rating.

Committee Meeting Action: Accept
Number Eligible to Vote: 28
Ballot Results: Affirmative: 17 Negative: 6
Ballot Not Returned: 5 Baker, G., Ketner, C., Madrzykowski, D., Maruskin, M., Schirmer, C.
Explanation of Negative:

BENN, F.: Voted negative for the following reason:
5.1.4, 5.2.1.3 and 5.2.5.3 need to be deleted from CP11 because:
"The use of a toilet as a pressure relief valve is unreliable"
And
"130 psi @ 120 degree pex pipe is manufactured in SDR 9. If it was manufactured in SDR 7, it would meet the 175 psi requirement so that the standard would not have to be lowered to meet the inferior SDR 9 Pex product"
And
"Pex pipe burns like a roman candle and drips flaming liquid. It would need to be exposed to connect to the toilet and is only listed for concealed applications"

DEEGAN, T.: I am voting Negative because the wording in 3.3.9.9 and 3.3.9.10 is incompatible. By definition, a Stand Alone Sprinkler System clearly only serves fire sprinklers. A Passive Purge Sprinkler System is defined as also serving a toilet.

HOPKINS, M.: A stand alone system should only serve sprinklers. A toilet is not a reliable means for pressure relief.

JOHNSON, G.: Voted negative for the following reason:
5.1.4, 5.2.1.3 and 5.2.5.3 need to be deleted from CP11 because:
"The use of a toilet as a pressure relief valve is unreliable and some are seldom used"
And
"A passive purge system has been defined as a stand alone fire sprinkler system. NFPA 13D has historically required that stand alone systems be able to withstand 175 psi. The lowering of the requirement on the pressure bearing capability of the fire sprinkler pipe in a stand alone system compromises the reliability of the entire system. An option for the manufacturer of fire sprinkler pipe and fittings to improve their product to meet the 175 psi requirement is to increase the wall thickness of their pipe or fitting from SDR 9 to SDR 7. It is not necessary to lower the performance requirements.

STANLEY, G.: I believe that any aboveground pipe that is directly attached to a fire sprinkler should be rated at 175psi. I know we make an exception for a multipurpose piping system where plumbing pipe is rated lower, but a passive purge system only has one fixture attached which may not be used on a regular basis. I am concerned with the possibility of excess pressure on the system.

VICTOR, T.: While I support the use of passive purge systems to eliminate the need for a backflow prevention device, I do not believe the integrity of the sprinkler system piping should be compromised by lowering the working pressure requirements.

A toilet on the end of a sprinkler system should not be considered a reliable pressure relief device.

The concept of classifying a passive purge system as a stand-alone sprinkler system has merit, but only when the maximum working pressure anticipated does not exceed the rating of the toilet.

13D-16 Log #56 AUT-RSS **Final Action: Reject**
(3.3.9.7 Sprinkler System)

Submitter: Marcelo M. Hirschler, GBH International
Recommendation: Revise as follows:

3.3.9.7* Sprinkler System. For fire protection purposes, an integrated system of underground and overhead piping designed in accordance with fire protection engineering standards. ~~The installation includes one or more automatic water supplies. The portion of the sprinkler system aboveground is a network of specially sized or hydraulically designed piping installed in a building, structure,or area, generally overhead, and to which sprinklers are attached in a systematic pattern. The system is usually activated by heat from a fire and discharges water over the fire area.~~ (NFPA 13)

A.3.3.9.7 Sprinkler System. The installation includes one or more automatic water supplies. The portion of the sprinkler system aboveground is a network of specially sized or hydraulically designed piping installed in a building, structure, or area, generally overhead, and to which sprinklers are attached in a systematic pattern. The system is usually activated by heat from a fire and discharges water over the fire area.

Substantiation: The definition in NFPA 13 is the NFPA preferred definition. However, the definitions contained in NFPA 13D and in NFPA 13R both appear to address some aspects that are different.

The definition in NFPA 13 reads as follows:

NFPA 13: Sprinkler System. For fire protection purposes, an integrated system of underground and overhead piping designed in accordance with fire protection engineering standards. The installation includes at least one automatic water supply which supplies one or more systems. The portion of the sprinkler system above ground is a network of specially sized or hydraulically designed piping installed in a building, structure, or area, generally overhead, and to which sprinklers are attached in a systematic pattern. Each system has a control valve located in the system riser or its supply piping. Each sprinkler system includes a device for actuating an alarm when the system is in operation. The system is usually activated by heat from a fire and discharges water over the fire area.

Committee Meeting Action: Reject
Committee Statement: The proposal places text in the annex that is intended to be mandatory, such as the requirement for an automatic water supply. In addition, the concept that the system responds to the heat of a fire is central to the theme of a sprinkler system and should not be separated from the definition by being sent to the annex. It is noted that the same proposal has been sent to the committee responsible for NFPA 13, and, in the interest of correlation, it is suggested that the Technical Correlating Committee on Automatic Sprinklers be asked to define this term so that its use is the same throughout all of the documents relating to fire sprinklers (NFPA 13, NFPA 13R, NFPA 13D, and NFPA 16).
Number Eligible to Vote: 28
Ballot Results: Affirmative: 23
Ballot Not Returned: 5 Baker, G., Ketner, C., Madrzykowski, D., Maruskin, M., Schirmer, C.

13D-17 Log #52 AUT-RSS **Final Action: Accept**
(3.3.10.2 Control Valve)

Submitter: Marcelo M. Hirschler, GBH International
Recommendation: Retain the existing definition and do not adopt the preferred definition:

3.3.10.2* Control Valve. An indicating valve employed to control (shut) a supply of water to a sprinkler system.

Substantiation: The existing definition is different from the NFPA preferred definition, contained in NFPA 25. The term "control valve" is extensively used in NFPA 13D, and it appears that the preferred definition would not be as equally applicable to the usage within NFPA 13D as the existing one.

The preferred definition, from NFPA 25, reads as follows:

Control Valve. (preferred) NFPA 25-2002 A valve controlling flow to water-based fire protection systems. Control valves to not include hose valves, inspector's test valves, drain valves, trim valves for dry pipe, preaction and deluge valves, check valves, or relief valves.

It is therefore recommended, in spite of the preference to improve consistency within NFPA documents that the preferred definition not be adopted by NFPA 13D but that the current definition be retained and that Standards Council be informed that a secondary definition is preferred by the NFPA 13D committee.

I am the chairman of the NFPA Advisory Committee on the Glossary on Terminology. The committee was created by NFPA Standards Council to provide consistency in terminology throughout the NFPA documents. The committee has not had time to review all of my recommendations for NFPA 13, NFPA 13D and NFPA 13R definition of terms. Therefore, this proposal is being submitted in my own name only.

Committee Meeting Action: Accept
Number Eligible to Vote: 28
Ballot Results: Affirmative: 23
Ballot Not Returned: 5 Baker, G., Ketner, C., Madrzykowski, D., Maruskin, M., Schirmer, C.

13D-18 Log #23 AUT-RSS **Final Action: Accept**
(4.1)

Submitter: Kenneth E. Isman, National Fire Sprinkler Association, Inc.
Recommendation: Section 4.1 should be eliminated and the definitions moved to Chapter 3.
Substantiation: The information in Section 4.1 is a definition and should be in the definition chapter.

This proposal was approved by the National Fire Sprinkler Association's Engineering and Standards Committee.

Committee Meeting Action: Accept
Committee Statement: See also Committee Action on Proposal 13D-13 (Log #24).
Number Eligible to Vote: 28
Ballot Results: Affirmative: 23
Ballot Not Returned: 5 Baker, G., Ketner, C., Madrzykowski, D., Maruskin, M., Schirmer, C.

13D-19 Log #32 AUT-RSS **Final Action: Reject**
(4.2)

TCC Action: The TCC directs the TC on Residential Sprinkler Systems to submit a request to NFPA Standards Council to expand the scope of the committee and NFPA 13D only, to include inspection, testing and maintenance of residential sprinkler systems and to consider expanding the provisions in Chapter 4 to address this proposal.
Submitter: Roger Wilkins, Tyco Fire Suppression and Building Products
Recommendation: Revise as follows:
4.2* Maintenance.
4.2.1~~* The installer shall provide in the owner/occupant instructions on inspecting, testing, and maintaining the system.~~ The owner shall be responsible for the condition of a sprinkler system and shall keep the system in normal operating condition.
4.2.2 ~~Operated or damaged sprinklers shall be replaced with sprinklers having the same performance characteristic s as the original equipment.~~ Sprinkler systems shall be inspected, tested, and maintained in accordance with NFPA 25, Standard for the Inspection, Testing, and Maintenance of Water-Based Fire protection Systems.
4.2.3 The installing contractor shall provide the property owner or the property owner's authorized representative with the following:
(1) All literature and instructions provided by the manufacturer describing proper operation and maintenance of any equipment and devices installed.
(2) NFPA 25, Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems.
~~A.4.2.1~~ A.4.2 The responsibility for properly maintaining a sprinkler system is that of the owner or manager, who should understand the sprinkler system operation. A minimum monthly maintenance program should include the following:
(1) Visual inspection of all sprinklers to ensure against obstruction of spray.
(2) Inspection of all valves to ensure that they are open.
(3) Testing of all waterflow devices.
(4) Testing of the alarm system, where installed. Note that where it is likely that the test will result in a fire department response, notification to the fire department should be made prior to the test.
(5) Operation of pumps, where employed. (NFPA 20, Standard for the Installation of Stationary Pumps for Fire Protection.)
(6) Checking of the pressure of air used with dry systems.
(7) Checking of the water level in tanks.
(8) Special attention to ensure that sprinklers are not painted either at the time of installation or during subsequent redecoration. When sprinkler piping or areas next to sprinklers are being painted, the sprinklers should be protected by covering them with a bag, which should be removed immediately after painting is finished.
(For further information, see NFPA 25, Standard for the Inspection, Testing, and Maintenance of Water-based Fire Protection Systems.)
Substantiation: With the changes to NFPA 101 requiring fire sprinklers in all newly constructed homes, there is a need for standardized inspecting, testing, and maintenance per NFPA 25, and defining what the installer is to provide to the owner. The proposed text for 4.2.3 will be in alignment with NFPA 13 and 13R.
Committee Meeting Action: Reject
Committee Statement: The committee agrees with the submitter that the issue of maintaining residential sprinkler systems is important. However, the committee feels that the language in NFPA 25 is onerous and the language in the standard and in the Annex sufficiently addresses the necessary guidance for these systems.
Number Eligible to Vote: 28
Ballot Results: Affirmative: 23
Ballot Not Returned: 5 Baker, G., Ketner, C., Madrzykowski, D., Maruskin, M., Schirmer, C.
Comment on Affirmative:
VICTOR, T.: While I agree with the technical committee that NFPA 25 is too onerous for the owner of a 13D system, I also agree with the submitter that there needs to be standardized inspection and testing procedures in 13D, as well as specific instructions on the information the installing contractor must provide the home owner.

13D-20 Log #9 AUT-RSS **Final Action: Reject**
(4.3)

Submitter: Richard Young, Fire Safe Systems, LLC
Recommendation: Revise text as follows:
4.3 Water Flow and Hydrostatic Tests
4.3.3 Prior to system acceptance, a calibrated orifice shall be installed and flow tested to determine the adequacy of the water supply to meet the maximum calculated flow rate.
Substantiation: The water main tap; water meter; water supply line and submersible pump system are not normally installed by the fire sprinkler contractor. I test all systems with a 4.2 K factor smooth orifice discharging through a 1 1/2" collapsible drain hose prior to acceptance. The test is performed at the riser manifold (base of riser). I have found undersized meters and submersible pumps. Properly sized submersible pumps and supplies have failed to produce the maximum calculated flow rate because of pump deterioration caused by abuse during construction. Masonry contractors tend to energize pumps and allow them to run constantly while occasionally using water from a valve. This common practice drastically deteriorates the pump performance. I obtained a flow of 19 gpm recently on a submersible pump that produced 27 gpm after the pump head was replaced. Only proper testing and oversight will assure the adequacy of the water supply.
Committee Meeting Action: Reject
Committee Statement: The standard already addresses system acceptance. See Section 7.2.5. This provision is excessive.
Number Eligible to Vote: 28
Ballot Results: Affirmative: 23
Ballot Not Returned: 5 Baker, G., Ketner, C., Madrzykowski, D., Maruskin, M., Schirmer, C.

13D-21 Log #34 AUT-RSS **Final Action: Reject**
(4.3)

Submitter: Richard Derr, Miller Fire Protection, Inc.
Recommendation: Revise as follows:
4.3 ~~Hydrostatic~~ System Tests
4.3.1 Where a fire department pumper connection is not provided, the system shall be hydrostatically tested for leakage at normal system operating pressure prior to piping concealment.
4.3.2 Where a fire department pumper connection is provided, the system shall pass a hydrostatic pressure test performed in accordance with NFPA 13, *Standard for the Installation of Sprinkler Systems*, prior to piping concealment.
4.3.3 Prior to acceptance, a system utilizing a pump shall be tested by opening the drain/test connection. The pump shall sense flow, turn on, and flow water for the required duration of 6.1.2 or 6.1.3 (as appropriate) without interruption.
Substantiation: NFPA13D 2007 edition does not address any criteria for pumps other than the system acceptance test, which should be included in section 4.3 ~~Hydrostatic~~ System Tests.
Committee Meeting Action: Reject
Committee Statement: Systems utilizing pumps would be tested in the same manner as those without pumps.
Number Eligible to Vote: 28
Ballot Results: Affirmative: 23
Ballot Not Returned: 5 Baker, G., Ketner, C., Madrzykowski, D., Maruskin, M., Schirmer, C.

13D-22 Log #43 AUT-RSS **Final Action: Reject**
(4.3)

Submitter: Richard Derr, Miller Fire Protection, Inc.
Recommendation: 4.3 ~~Hydrostatic~~ System Tests
4.3.1 Where a fire department pumper connection is not provided, the system shall be hydrostatically tested for leakage at normal system operating pressure prior to piping concealment.
4.3.2 Where a fire department pumper connection is provided, the system shall pass a hydrostatic pressure test performed in accordance with NFPA 13, *Standard for the Installation of Sprinkler Systems*, prior to piping concealment.
4.3.3 Prior to acceptance, the system shall be tested by opening the drain/test connection and verifying water flow at test location.
4.3.3.1 On a system utilizing a pump, the system shall be tested by opening the drain/test connection, the pump shall sense flow, turn on, and flow water for the required duration of 6.1.2 or 6.1.3 (as appropriate) without interruption.
Substantiation: NFPA13D 2007 edition section 4.3 Hydrostatic Tests is for leaks and possible material defects. NFPA 13D does not address any criteria for verifying water actually flows to the system piping. This section should be changed to include verification of water flowing at the test location.
Committee Meeting Action: Reject
See Proposal 13D-21 (Log #34).
Committee Statement: Proposal 13D-21 (Log #34) addresses this.
Number Eligible to Vote: 28
Ballot Results: Affirmative: 23
Ballot Not Returned: 5 Baker, G., Ketner, C., Madrzykowski, D., Maruskin, M., Schirmer, C.

13D-23 Log #39 AUT-RSS **Final Action: Reject**
(Chapter 5)

Submitter: Dana Haagensen, Dana R. Haagensen Consulting
Recommendation: Review specially listed components addressed by this chapter (i.e. plastic pipe) and create new sections that standardize generic conditions specified by all of the manufacturer/listings.
Substantiation: It is becoming more and more difficult for designers, installers and AHJ's to "weed" through the cut sheets to determine the special conditions on using/installing the product. I have reviewed several projects where the installation had to be completely redone due to the installer missing a condition or two specified by the manufacturer/listing. Some of the cut sheets for specially listed products are over 20 pages.
Committee Meeting Action: Reject

Committee Statement: This is a Certification Agency and manufacturer responsibility and this issue will be considered at the next industry manufacturers meeting. The current text addresses the basic requirement. However, there is no substitution for studying and understanding the details of specially listed products.

The responses are correlated with the Proposal 13-52 (Log #278) and Proposal 13-49 (Log #279) committee responses for identical proposals.

The committee agrees with the submitter that more complicated application criteria associated with evolving, enhanced approvals can be difficult to apply. To the degree that manufacturers' data can be harmonized, it can have a positive impact on appropriate and consistent installations.

The rate of change in some products' listings and capabilities is currently faster than the process to change the installation standards and to have them adopted by jurisdictions. In order to keep the information as up-to-date as possible, it is more viable to address the submitter's concern via the manufacturers and the certification agencies. While there is still time involved in this process, it is currently more compatible with a reasonable means to address the problem.

Existing groups offer a means by which manufacturers and certification agencies can accomplish the desired changes. The groups have existed for some time and have a track record of getting changes made. Action has already been taken by the groups to address the issues identified in the proposals.

Given the array of products and the changes that would have to be made to the standard to accommodate them, it seems more reasonable to try to address the problem via the data sheets themselves rather than include significant additional text in the standard.

In the last cycle, several proposals were made to add information regarding the installation of CPVC. After discussion, the committee concluded that such information is included in the installation manuals and shouldn't be duplicated in the standard.

Number Eligible to Vote: 28
Ballot Results: Affirmative: 23
Ballot Not Returned: 5 Baker, G., Ketner, C., Madrzykowski, D., Maruskin, M., Schirmer, C.

13D-24 Log #38 AUT-RSS **Final Action: Reject**
(5.1.4 (New))

Submitter: Dana Haagensen, Dana R. Haagensen Consulting
Recommendation: Add a new 5.1.4 to read: "Listed devices and materials shall have in the manufacturer's informational sheets a dedicated section that identifies only the instructions/conditions that are additional to or modify the requirements of this standard."
Substantiation: It is becoming more and more difficult for designers, installers and AHJ's to "weed" through the cut sheets to determine the special conditions on using/installing the product. I have reviewed several projects where the installation had to be completely redone due to the installer missing a condition or two specified by the manufacturer/listing. Some of the cut sheets for specially listed products are over 20 pages.
Committee Meeting Action: Reject
Committee Statement: This is a Certification Agency and manufacturer responsibility and this issue will be considered at the next industry manufacturers meeting. The current text addresses the basic requirement. However, there is no substitution for studying and understanding the details of specially listed products.

The responses are correlated with the Logs 278 and 279 committee responses for identical proposals.

The committee agrees with the submitter that more complicated application criteria associated with evolving, enhanced approvals can be difficult to apply. To the degree that manufacturers' data can be harmonized, it can have a positive impact on appropriate and consistent installations.

The rate of change in some products' listings and capabilities is currently faster than the process to change the installation standards and to have them adopted by jurisdictions. In order to keep the information as up-to-date as possible, it is more viable to address the submitter's concern via the manufacturers and the certification agencies. While there is still time involved in this process, it is currently more compatible with a reasonable means to address the problem.

Existing groups offer a means by which manufacturers and certification agencies can accomplish the desired changes. The groups have existed for some time and have a track record of getting changes made. Action has already been taken by the groups to address the issues identified in the proposals.

Given the array of products and the changes that would have to be made to the standard to accommodate them, it seems more reasonable to try to address the problem via the data sheets themselves rather than include significant additional text in the standard.

In the last cycle, several proposals were made to add information regarding the installation of CPVC. After discussion, the committee concluded that such information is included in the installation manuals and shouldn't be duplicated in the standard.

Number Eligible to Vote: 28
Ballot Results: Affirmative: 23
Ballot Not Returned: 5 Baker, G., Ketner, C., Madrzykowski, D., Maruskin, M., Schirmer, C.

13D-25 Log #25 AUT-RSS **Final Action: Accept**
(5.2)

Submitter: Kenneth E. Isman, National Fire Sprinkler Association, Inc.
Recommendation: Rename Section 5.2 to, "Aboveground Pipe and Equipment"
Substantiation: The current title of "Pipe" for this section is inappropriate. First of all, the information in this section applies to more types of equipment than just pipe. The section also deals with fittings, coupling and Teflon tape.

Second, the information in this section only applies to aboveground situations. With the title being just "pipe", some AHJ's have tried to apply these rules to underground situations which is a problem because the rules don't apply to underground. For example, section 5.2.1.2 requires pipe to be rated for 175 psi, which is onerous for underground pipe.

This proposal was approved by the National Fire Sprinkler Association's Engineering and Standards Committee.
Committee Meeting Action: Accept
Number Eligible to Vote: 28
Ballot Results: Affirmative: 23
Ballot Not Returned: 5 Baker, G., Ketner, C., Madrzykowski, D., Maruskin, M., Schirmer, C.

13D-26 Log #44 AUT-RSS **Final Action: Reject**
(5.2.1.2)

Submitter: Michael F. Cabral, Rehau Inc.
Recommendation: Revise text to read as follows:

5.2.1.2 Pipe used in sprinkler systems other than those addressed in 5.2.1.3 shall be designed to withstand a working pressure of not less than ~~175~~ 130 psi (12.1 bar).
Substantiation: The 175 psi pressure rating for sprinkler pipe for 13D is excessive for the application. In order to obtain the 175 psi rating the burst pressure needs to be 875 psi a five (5) to one (1) safety factor. While this number has been around for years it is arbitrary and excessive for the application. A 130 psi rating @ 120 F would indicate a burst pressure of not less than 650 psi. That burst pressure is more than sufficient for this application. The 175 psi pressure rating is restrictive to new products and this number has been used to prevent entry or limit the use of new products. This is not the intent of the standard. We should not lose sight of the genesis of the 13D standard. The standard was developed to provide cost effective design criteria to make fire sprinklers for one and two family dwellings affordable. When you consider some of the original concession made during the development process this adjustment to the working pressure would have gone through the process without a whimper. A few of these initial concessions were; Water supply, a 7 or 10 minute duration, non-listed pumps, non-listed valves, no detection of waterflow, no monitoring of valve position, no requirement or inspection or testing just to name a few. I submit to this committee that the 175 psi rating has been used to protect the installing contractors when in reality it has forced a competitive product namely PEX pipe into the hands of plumbers and limits the use of PEX pipe to multipurpose systems a segment of the market that most sprinkler contractors chose not to participate. Changing the working pressure of sprinkler material used in residential fire sprinkler systems would allow the use of PEX pipe and fittings in a stand alone sprinkler system and would allow the market to decide its competitiveness.
Committee Meeting Action: Reject
Committee Statement: The proposed language does not address the associated temperature at 130 psi and also does not address the issue of higher pressures associated with fire department connections. Other components of the system must be rated at 175 psi. No data on the reliability impact on the system has been submitted.
Number Eligible to Vote: 28
Ballot Results: Affirmative: 21 Negative: 2
Ballot Not Returned: 5 Baker, G., Ketner, C., Madrzykowski, D., Maruskin, M., Schirmer, C.
Explanation of Negative:

BITTENBENDER, J.: The 130 psi @ 120°F rating is a result of long term testing 2 years at pressure and temperature. During the debate at the tech committee meeting committee members had some concerns regarding short term exposure to higher temperatures than the 120°F listing. Test results reveal that PEXa Pipe has a short term rating of 150 PSI at 210°F for 48 hours and burst strength of 210 PSI @ 180°F. Documentation will be posted on the committee e-page pertaining to these findings.
There is no technical justification to *NOT* allow these piping materials in an NFPA 13D stand-alone system application as long as the listed pressure rating of the piping is not exceeded. I ask the committee members to reconsider this proposal after they have had time to review this technical data.

LARSON, A.: The 175 psi requirement in all the NFPA standards is intended to protect the system piping, fittings and sprinklers from damage caused primarily by the effects of fire departments attaching to pumper connections on the sprinkler system. NFPA 13D systems are not required to have such connections. With no connection present, the 175 psi requirement appears arbitrary and excessive.

The piping materials currently listed at less than 175 psi are crosslinked polyethylene (PEX-a) materials. These piping materials carry multiple listings for various applications, from a low of 80 psi @ 200°F to 160 psi at 73.4°F. They are all tested to ASTM standards F876 and F877. Additionally, internal manufacturer's testing show that the actual burst pressures for these piping products range from a low of 260 psi at 200°F to a high of 800 psi at 73.4°F. In other words, these piping materials have structural integrity which far exceeds that which might be seen in a residential non-pumper connected fire sprinkler system.

These listed piping materials have more than a ten-year track record of installations. No performance issues have arisen, and successful activations have been documented. We discuss national building code mandates and not restricting technologies that will result in more fire sprinklered residences, yet our actions as a committee do not always move that agenda forward. There is no technical justification to NOT allow these piping materials in an NFPA 13D stand-alone system application as long as the listed pressure rating of the piping is not exceeded. I encourage all members to reconsider the committee position on this proposal.

13D-27 Log #45 AUT-RSS **Final Action: Reject**
(5.2.1.3)

Submitter: Michael F. Cabral, Rehau Inc.
Recommendation: Revise text to read as follows:

5.2.1.3 Nonmetallic pipe used in ~~multipurpose~~ piping systems not equipped with a fire department connection shall be designed to withstand a working pressure of not less than 130 psi (8.9 bar) at 120°F (49°C) when equipped with a pressure relief valve set at a maximum of 130 psi (8.9 bar) or connected to the domestic plumbing system.

Substantiation: Pressure relief from pressure surge or thermal expansion can be achieved from the usage of a domestic plumbing fixture or from a listed pressure relief valve. There are listed pressure relief valves with a standard setting of 125 psi as well as adjustable pressure relief valves that can be set at 130 psi. These devices can provide pressure relief in place of the domestic fixture for use on piping systems not equipped with a fire department connection while still maintaining the temperature/pressure requirements of 130 psi (8.9 bar) 120°F (49°C).

In addition, it is very common for fire sprinkler contractors to install pressure relief valves in fire sprinkler systems. In fact it is already recognized in NFPA 13 as a requirement for installing a relief valve in gridded wet pipe systems. Additional guidance can be provided to the fire sprinkler contractor on where to discharge the relief valve as per section P2803.6.1 of the International Residential Code. Since pressure relief valves are already installed on every water heater in a residence, locating the discharge pipe for the pressure relief valve on the fire sprinkler system should be no problem for the fire sprinkler contractor.

It should also be noted that there are numerous manufacturers of pre-fabricated riser assemblies that includes a pressure relief valve that are listed for NFPA 13D applications.

Committee Meeting Action: Reject
Committee Statement: The proposed language does not address the associated temperature at 130 psi. Other components of the system must be rated at 175 psi. No data on the reliability impact on the system has been submitted.
Number Eligible to Vote: 28
Ballot Results: Affirmative: 21 Negative: 2
Ballot Not Returned: 5 Baker, G., Ketner, C., Madrzykowski, D., Maruskin, M., Schirmer, C.
Explanation of Negative:

BITTENBENDER, J.: As discussed in the proposal and during committee debate, the use of pressure relief valves is prevalent in both domestic plumbing systems and commercial fire protection systems to protect the system and components from over pressurization. The central point of discussion was the alleged failure modes of these devices, most notably from debris in commercial fire protection systems. The system types we are discussing here are far different than commercial fire protection systems, most notably in the fact that the piping will not corrode nor be affected adversely in any other way by the water it contains. Evidence suggests that relief valves on domestic hot water heating appliances fail far less than we are led to believe that they fail in commercial fire protection applications. I do not know of any statistical evidence as to the failure rates of relief valves in either application. I do know that the installation committee, which includes many members of AUT-RSS, continues to allow their installation on commercial fire protection systems of large size and elevated hazard.

The 175 psi requirement in all the NFPA standards is intended to protect the system piping, fittings and sprinklers from damage caused primarily by the effects of fire departments attaching to pumper connections on the sprinkler system. NFPA 13D systems are not required to have such connections. With no connection present, the 175 psi requirement appears arbitrary and excessive. The standards allow pressure relief valve protected commercial systems, yet we restrict them from fire sprinklered residences? The technical justification to allow or not allow pressure relief valves does not seem to jibe very well from standard to standard, especially when the system types are recognized. I encourage all members to reconsider the committee position on this proposal.

LARSON, A.: As discussed in the proposal and during committee debate, the use of pressure relief valves is prevalent in both domestic plumbing systems and commercial fire protection systems to protect the system and components from over pressurization. The central point of discussion was the alleged failure modes of these devices, most notably from debris in commercial fire protection systems. The system types we are discussing here are far different than commercial fire protection systems, most notably in the fact that the piping will not corrode nor be affected adversely in any other way by the water it contains. Evidence suggests that relief valves on domestic hot water heating appliances fail far less than we are led to believe that they fail in commercial fire protection applications. I do not know of any statistical evidence as to the failure rates of relief valves in either application. I do know that the installation committee, which includes many members of AUT-RSS, continues to allow their installation on commercial fire protection systems of large size and elevated hazard.

The 175 psi requirement in all the NFPA standards is intended to protect the system piping, fittings and sprinklers from damage caused primarily by the effects of fire departments attaching to pumper connections on the sprinkler system. NFPA 13D systems are not required to have such connections. With no connection present, the 175 psi requirement appears arbitrary and excessive.

The standards allow pressure relief valve protected commercial systems, yet we restrict them from fire sprinklered residences? The technical justification to allow or not allow pressure relief valves does not seem to jibe very well from standard to standard, especially when the system types are recognized. I encourage all members to reconsider the committee position on this proposal.

13D-28 Log #46 AUT-RSS **Final Action: Accept**
(5.2.2.2)

Submitter: Michael F. Cabral, Rehau Inc.
Recommendation: Revise text as follows:

5.2.2.2* Chlorinated polyvinyl chloride (CPVC) ~~and polybutylene (PB) pipe~~ shall comply with the portions of the American Society for Testing and Materials (ASTM) standard specified in Table 5.2.2.2 that apply to fire protection service.

Substantiation: Polybutylene (PB) pipe is no longer manufactured and reference to this material should be removed form the standard. Striking this text will help eliminate confusion between PD and PEX pipe.
Committee Meeting Action: Accept
Number Eligible to Vote: 28
Ballot Results: Affirmative: 23
Ballot Not Returned: 5 Baker, G., Ketner, C., Madrzykowski, D., Maruskin, M., Schirmer, C.

13D-29 Log #17 AUT-RSS **Final Action: Accept**
(5.2.2.2, B.1.2.1, 2.3.3, and A.5.2.2.2)

Submitter: David W. Ash, Lubrizol Advanced Materials
Recommendation: Revise text and table as follows:

5.2.2.2* Chlorinated polyvinyl chloride (CPVC) ~~and polybutylene (PB)~~ pipe shall comply with the portions of the American Society for Testing and Materials (ASTM) standards specified in Table 5.2.2.2 that apply to fire protection service.

Table 5.2.2.2 Specially Listed Pipe or Tube Materials and Dimensions

Materials and Dimensions	
Nonmetallic Piping:	
Standard Specification for Chlorinated Poly (Vinyl) Chloride (CPVC) Pipe	ASTM F 442
~~Standard Specification for Polybutylene (PB) Plastic Hot- and Cold-Water Distribution Systems~~	~~ASTM D 3309~~

B.1.2 Other Publications.

B.1.2.1 ASTM Publications. ASTM International, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428-2959.

~~ASTM D-3309, Standard Specification for Polybutylene (PB) Plastic Hot and Cold Water Distribution Systems, 1996.~~

ASTM F 437, Standard Specification for Threaded Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe Fittings, Schedule 80, 1996.

ASTM F 438, Standard Specification for Socket-Type Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe Fittings, Schedule 40, 1997.

ASTM F 439, Standard Specification for Socket-Type Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe Fittings, Schedule 80, 1997.

ASTM F 442, Standard Specification for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe (SDR-PR), 1997.

IEEE/ASTM SI-10, Standard for Use of the International System of Units (SI): The Modern Metric System, 1997.

2.3.3 ASTM Publications.

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

ASTM A 53, Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc Coated, Welded and Seamless, 1998.

ASTM A 135, Standard Specification for Electric-Resistance-Welded Steel Pipe, 1997.

ASTM A 234, Standard Specification for Piping Fittings of Wrought Carbon Steel and Alloy Steel for Moderate and Elevated Temperatures, 1997.

ASTM A 795, Standard Specification for Black and Hot-Dipped Zinc-Coated (Galvanized) Welded and Seamless Steel Pipe for Fire Protection Use, 1997.

ASTM B 32, Standard Specification for Solder Metal, 1996.

ASTM B 75, Standard Specification for Seamless Copper Tube, 1999.

ASTM B 88, Standard Specification for Seamless Copper Water Tube Tube, 1999.

ASTM B 251, Standard Specification for General Requirements for Wrought Seamless Copper and Copper-Alloy Tube, 1997.

ASTM B 813, Standard Specification for Liquid and Paste Fluxes for Soldering Applications of Copper and Copper-Alloy Tube, 2000.

ASTM B 828, Standard Practice for Making Capillary Joints by Soldering of Copper and Copper Alloy Tube and Fittings, 2000.

~~ASTM D 3309, Standard Specifications for Polybutylene (PB) Plastic Hot- and Cold-Water Distribution Systems, 1996.~~

A.5.2.2.2 Not all pipe or tube made to ~~ASTM D 3309, Standard Specification for Polybutylene (PB) Plastic Hot- and Cold-Water Distribution Systems, and~~ ASTM F442, Standard Specifications for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe (SDR-PR), as described in 5.2.2.2 is listed for fire sprinkler service. Listed pipe is identified by the logo of the listing agency.

Substantiation: Polybutylene material has not been manufactured for a long time and should be removed from the standard.

Committee Meeting Action: Accept

Number Eligible to Vote: 28

Ballot Results: Affirmative: 23

Ballot Not Returned: 5 Baker, G., Ketner, C., Madrzykowski, D., Maruskin, M., Schirmer, C.

13D-30 Log #47 AUT-RSS **Final Action: Reject**
(5.2.5.3)

Submitter: Michael F. Cabral, Rehau Inc.

Recommendation: Revise text to read as follows:

5.2.5.3 Nonmetallic fittings used in ~~multipurpose~~ piping systems not equipped with a fire department connection shall be designed to withstand a working pressure of not less than 130 psi (8.9 bar) at 120°F (49°C) when equipped with a pressure relief valve set at a maximum of 130 psi (8.9 bar) or connected to the domestic plumbing system.

Substantiation: Pressure relief from pressure surge or thermal expansion can be achieved from the usage of a domestic plumbing fixture or from a listed pressure relief valve. There are listed pressure relief valves with a standard setting of 125 psi as well as adjustable pressure relief valves that can be set at 130 psi. These devices can provide pressure relief in place of the domestic fixture for use on piping systems not equipped with a fire department connection while still maintaining the temperature/pressure requirements of 130 psi (8.9 bar) 120°F (49°C).

In addition, it is very common for fire sprinkler contractors to install pressure relief valves in fire sprinkler systems. In fact it is already recognized in NFPA 13 as a requirement for installing a relief valve in gridded wet pipe systems. Additional guidance can be provided to the fire sprinkler contractor on where to discharge the relief valve as per section P2803.6.1 of the International Residential Code. Since pressure relief valves are already installed on every water heater in a residence, locating the discharge pipe for the pressure relief valve on the fire sprinkler system should be no problem for the fire sprinkler contractor.

It should also be noted that there are numerous manufacturers of pre-fabricated riser assemblies that includes a pressure relief valve that are listed for NFPA 13D applications.

Committee Meeting Action: Reject

Committee Statement: Committee action on this issue correlates with Committee Action on Proposal 13D-27 (Log #45).

Number Eligible to Vote: 28

Ballot Results: Affirmative: 23

Ballot Not Returned: 5 Baker, G., Ketner, C., Madrzykowski, D., Maruskin, M., Schirmer, C.

13D-31 Log #48 AUT-RSS **Final Action: Accept**
(5.2.9.2)

Submitter: Michael F. Cabral, Rehau Inc.

Recommendation: Revise text as follows:

5.2.9.2* Chlorinated polyvinyl chloride (CPVC) ~~and polybutylene (PB)~~ shall comply with the portions of the American Society for Testing and Materials (ASTM) standard specified in Table 5.2.9.2 that apply to fire protection service.

Substantiation: Polybutylene (PB) pipe is no longer manufactured and reference to this material should be removed form the standard. Striking this text will help eliminate confusion between PD and PEX pipe.

Committee Meeting Action: Accept

Number Eligible to Vote: 28

Ballot Results: Affirmative: 23

Ballot Not Returned: 5 Baker, G., Ketner, C., Madrzykowski, D., Maruskin, M., Schirmer, C.

13D-32 Log #26 AUT-RSS **Final Action: Accept in Principle**
(5.3 and A.5.2.1)

Submitter: Kenneth E. Isman, National Fire Sprinkler Association, Inc.

Recommendation: Insert a new Section 5.3 and annex as follows and renumber existing section 5.3 as 5.4.

5.3* Underground Pipe.

5.3.1 Any type of pipe or tube acceptable under the plumbing code for underground supply pipe shall be acceptable as underground supply for fire sprinkler system when installed between the point of connection and the system riser.

A.5.3 It is not the intent of NFPA 13D to require the use of NFPA 24 for any supply piping.

Then delete annex note A.5.2.1.

Substantiation: Currently, the standard does not make any distinction between aboveground or underground pipe, so the case could be made that the aboveground rules should apply to the underground, which would be a bad decision. The rules for underground should be explicit in the body of the standard and not hidden in the annex.

The standard needs to be clear that it does not expect NFPA 24 to be used. Some AHJ's are forcing NFPA 24 to be used due to blanket references to "sprinkler systems" in that document and in some fire codes.

This proposal was approved by the National Fire Sprinkler Association's Engineering and Standards Committee.

Committee Meeting Action: Accept in Principle

Add "applicable" before the words...plumbing code"

Committee Statement: Editorial revision.

Number Eligible to Vote: 28

Ballot Results: Affirmative: 23

Ballot Not Returned: 5 Baker, G., Ketner, C., Madrzykowski, D., Maruskin, M., Schirmer, C.

13D-33 Log #40 AUT-RSS **Final Action: Reject**
(Chapter 6)

Submitter: Dana Haagensen, Dana R. Haagensen Consulting

Recommendation: Review specially listed components addressed by this chapter (i.e. residential sprinklers under sloped ceilings) and create new sections that standardize generic conditions specified by all of the manufacturer/listings.

Substantiation: It is becoming more and more difficult for designers, installers and AHJ's to "weed" through the cut sheets to determine the special conditions on using/installing the product. I have reviewed several projects where the installation had to be completely redone due to the installer missing a condition or two specified by the manufacturer/listing. Some of the cut sheets for specially listed products are over 20 pages.

Committee Meeting Action: Reject

Committee Statement: No specific proposal made.

Number Eligible to Vote: 28

Ballot Results: Affirmative: 23

Ballot Not Returned: 5 Baker, G., Ketner, C., Madrzykowski, D., Maruskin, M., Schirmer, C.

13D-34 Log #33 AUT-RSS **Final Action: Reject**
(6.2)

Submitter: Richard Derr, Miller Fire Protection, Inc.

Recommendation: Revise as follows:

6.2 Water Supply Sources

6.2.1 ~~Prior to system acceptance, a~~ Any system utilizing a pump shall meet the following:

1. All wetted components shall be constructed of corrosion-resistant materials equivalent to or exceeding that of brass or bronze alloy, or series 300 stainless steel.
2. Pump shall include the following as applicable:
a. Automatic air-release valve or vent tube, excluding self-venting pumps.
b. Circulation relief valve except when pump does not develop temperatures exceeding 180oF (82.2oC) at the pump casing during operation at no flow conditions.

6.2.2 Where a ~~pump and~~ tank is the source of supply for a fire sprinkler system ~~but is not a portion of the domestic water system~~ the following shall be met:

1. ~~A test connection shall be provided downstream of the pump that creates a flow of water equal to the smallest sprinkler on the system. The connection shall return water to the tank.~~
2. ~~Pump motors using ac power shall be connected to a 240 V normal circuit.~~
3. ~~Any disconnecting means for the pump shall be approved.~~
4. An automatic method for refilling the tank shall be ~~piped to the tank~~ installed.
5. A method of seeing the water level in the tank shall be provided without having to open the tank.
6. ~~The pump shall not be permitted to sit directly on the floor.~~
7. Tank shall be of constructed corrosion resistant material(s).

Substantiation: Systems installed in residential one and two family homes should be installed in accordance with a criteria and materials that can withstand long periods of time between maintenance.

There are three (3) items critical to the operation of a pump system;
1. Mechanical operation of the pump
2. Water flow
3. Electrical supervision

The build up of corrosion in the pump housing and other wetted components can lead to mechanical failure, blockage to water flow, and increased electric load with resulting failure of pump operation. Corrosion resistant material will significantly reduce the build up of corrosion and potential pump failure. Pumps will generate heat when operating under a no flow condition. Heat in excess of 180°F at the pump casing can severely damage the pump. A circulation relief valve will allow some water flow which will then provide ample cooling of the pump

Committee Meeting Action: Reject
Committee Statement: This provision would make it impossible to use the domestic pump for the fire sprinkler system.
Number Eligible to Vote: 28
Ballot Results: Affirmative: 23
Ballot Not Returned: 5 Baker, G., Ketner, C., Madrzykowski, D., Maruskin, M., Schirmer, C.

13D-35 Log #CP3 AUT-RSS **Final Action: Accept**
(6.2(5))

Submitter: Technical Committee on Residential Sprinkler Systems,
Recommendation: Move second sentence of item (5) to a new paragraph 6.1.4.

(5) A well with a pump of sufficient capacity and pressure to meet the sprinkler system demand.

6.1.4 The stored water requirement of 6.1.2 or 6.1.3 shall be permitted to be a combination of the water in the well (including the refill rate) plus the water in the holding tank if such tank can supply the sprinkler system.
Substantiation: This requirement does not belong in the list of water supply sources but in the general requirements for water supply.
Committee Meeting Action: Accept
Number Eligible to Vote: 28
Ballot Results: Affirmative: 23
Ballot Not Returned: 5 Baker, G., Ketner, C., Madrzykowski, D., Maruskin, M., Schirmer, C.

13D-36 Log #19 AUT-RSS **Final Action: Accept**
(Figure 6.2(a), (b), and (c))

Submitter: Eric Price, Engineered Fire Systems, Inc.
Recommendation: Correct:
*Rubber faced check valves are optional
*To read:
*Rubber face optional
Substantiation: Can be misread to interpret that the entire check valve is optional.
Committee Meeting Action: Accept
Number Eligible to Vote: 28
Ballot Results: Affirmative: 22 Negative: 1
Ballot Not Returned: 5 Baker, G., Ketner, C., Madrzykowski, D., Maruskin, M., Schirmer, C.
Explanation of Negative:
HAAGENSEN, D.: 13D does not require a check valve, so it appears the original intent of the submitter is correct.

13D-37 Log #CP4 AUT-RSS **Final Action: Accept**
(6.2.1)

Submitter: Technical Committee on Residential Sprinkler Systems,
Recommendation: Revise paragraph as follows:
6.2.1* Prior to system acceptance, a system utilizing a pump shall be tested by opening the drain/test connection.
6.2.1.1 The pump shall sense the flow, turn on, and flow water for the required duration of 6.1.2 or 6.1.3 ~~(as appropriate)~~ without interruption.
Substantiation: Editorial revision to break out multiple requirements and remove unnecessary language.
Committee Meeting Action: Accept
Number Eligible to Vote: 28
Ballot Results: Affirmative: 23
Ballot Not Returned: 5 Baker, G., Ketner, C., Madrzykowski, D., Maruskin, M., Schirmer, C.

13D-38 Log #37 AUT-RSS **Final Action: Reject**
(6.2.3 (New))

Submitter: Dana Haagensen, Dana R. Haagensen Consulting
Recommendation: Add a new 6.2.3 to read: "6.2.3 In two-family dwelling using a waterworks system as the water supply and each unit having separate domestic water systems, each dwelling unit shall have its own dedicated sprinkler system."
Substantiation: I have reviewed plans for multiple projects where the fire sprinkler system in a two-family home was tapped off of one of the dwelling unit's domestic water. There is the potential that the tenant of the unit with the fire sprinkler system tap inadvertently shuts off the water to the other tenants fire protection without the other tenant knowing. It is not uncommon in this area of the country to have tenants shut-off water and turn down heat during the winter when they are living somewhere else. There does not seem to be an significant cost increase if separate domestic taps are already being provided.
Committee Meeting Action: Reject
Committee Statement: See Committee Action on Proposal 13D-39 (Log #28).
Number Eligible to Vote: 28
Ballot Results: Affirmative: 23
Ballot Not Returned: 5 Baker, G., Ketner, C., Madrzykowski, D., Maruskin, M., Schirmer, C.

13D-39 Log #28 AUT-RSS **Final Action: Accept**
(6.2.3 and A.6.2.3)

Submitter: Kenneth E. Isman, National Fire Sprinkler Association, Inc.
Recommendation: Add a new Section 6.2.3 and annex as follows:

6.2.3* Where more than one dwelling unit is served by the same water supply pipe, each dwelling unit shall have an individual control valve that serves the fire sprinkler system in that dwelling unit and the owner shall have access to the valve that controls the sprinkler system in their unit.

A.6.2.3 The best method for getting the water supply into the unit for a stand-alone sprinkler system (one that does not also provide direct connections to the cold water fixtures) is to have a common pipe for the domestic system and the sprinkler system between the water supply and the dwelling unit. Once inside the dwelling unit, the pipes can be split to provide the individual domestic and sprinkler systems. In this arrangement, a single control valve on the combined pipe (prior to the split) as shown in Figure A.6.2(a) being the only control valve that shuts the sprinkler system is preferred because it insures that people that have running water to their domestic fixtures also have fire protection. This serves as a form of supervision for the control valve and can be used to make sure that the valve stays open in place of other, more expensive, options like tamper switches with monitoring service.

Some waste utilities insist on separate taps and supply pipes from the water supply to the dwelling unit for fire sprinkler systems due to concerns about shutting the water supply off for nonpayment of bills and the desire not to shut off fire protection if this ever occurs. While this type of arrangement is acceptable (see Figure A.6.2(b)) it is not cost efficient and should be discouraged due to the extra burden this places on the building owner. The concern of shutting off the water for nonpayment of bills is a non issue for a number of reasons. First the water utilities rarely actually shut off water for nonpayment. Second, if they do shut off water for nonpayment, they are creating violations of all sorts of health and safety codes, allowing people to live in a home without running water. Concern over the fire protection for those individuals when they are violating all kinds of other health codes is disingenuous. It is more likely that the water utility will not shut off the water and will follow other legal avenues to collect on unpaid bills such as liens on property. Millions of people should not have to pay hundreds of millions of dollars to install separate water taps and lines for the few services that might get shut off.

Substantiation: There are townhouse designs that are technically single family dwellings and legitimately can be sprinklered using NFPA 13D, but are being protected with a single system and a single control valve serving multiple homes. There is nothing in the standard that prohibits this practice.

Each individual dwelling unit needs its own individual control valve in order to limit the number of people without fire protection when that valve is closed for any reason.

Each owner needs access to their own valves which can be handled by putting the valves in their units or by putting a set of valves in a common room that each owner has keys to enter.

The annex note was added to discuss the concerns that have been raised by water utilities and to have an established NFPA position in a consensus document that can be shown to the water utilities to help make sprinkler systems more affordable.

This proposal was approved by the National Fire Sprinkler Association's Engineering and Standards Committee.

Committee Meeting Action: Accept
Number Eligible to Vote: 28
Ballot Results: Affirmative: 22 Negative: 1
Ballot Not Returned: 5 Baker, G., Ketner, C., Madrzykowski, D., Maruskin, M., Schirmer, C.
Explanation of Negative:
HAAGENSEN, D.: The proposed wording does not prohibit the installation of a main control valve on water supply, which could be located in one of the two dwelling units and be inaccessible to one of the two owners.

13D-40 Log #CP5 AUT-RSS **Final Action: Accept**
(6.3)

Submitter: Technical Committee on Residential Sprinkler Systems,
Recommendation: Revise section as follows:
6.3* Multipurpose Piping System.
6.3.1 A multipurpose piping system shall be installed in accordance with 6.3.2 through 6.3.6
~~A piping system serving both sprinkler and domestic needs shall be considered to be acceptable by this standard where the following conditions are met:~~
6.3.2 ~~(4)~~ Multipurpose piping systems shall be approved by the ~~Permitted by the~~ local plumbing or health authority.
6.3.3 ~~(2)~~ All piping in the system supplying sprinklers shall be listed and conforms to the piping specifications of this standard.
6.3.3.1 ~~(3)~~ Piping connected to the system that supplies only plumbing fixtures shall comply with local plumbing and health authority requirements but is not required to be listed.
6.3.4 ~~(1)~~ In common water supply connections serving more than one dwelling unit, 5 gpm (19 L/min) shall be added to the sprinkler system demand to determine the size of common piping and the size of the total water supply requirements where no provision is made to prevent flow into the domestic water system upon operation of a sprinkler.
6.3.5 ~~(5) Warning Sign.~~ A warning sign, with minimum ¼ in. letters, shall be affixed adjacent to the main shutoff valve that states ~~in minimum ¼ in. (6.4 mm) letters~~ the following;
Warning The water system for this home supplies fire sprinklers that require certain flows and pressures to fight a fire. Devices that restrict the flow or decrease the pressure or automatically shut off the water to the fire sprinkler system, such as water softeners, filtration systems, and automatic shutoff valves, shall not be added to this system without a review of the fire sprinkler system by a fire protection specialist. Do not remove this sign.
6.3.6 ~~(6)~~ Where water treatment and filtration are installed, one of the following conditions shall be met:
(a) The flow restriction and pressure loss through the water treatment equipment shall be taken into account in the hydraulic calculations.
(b) An automatic bypass shall be installed around the water treatment equipment that directs all water directly to the system.
Substantiation: This is an editorial restructuring of 6.3.
This list format is not appropriate for the requirements.
Each requirement should have its own section reference.
Committee Meeting Action: Accept
Number Eligible to Vote: 28
Ballot Results: Affirmative: 23
Ballot Not Returned: 5 Baker, G., Ketner, C., Madrzykowski, D., Maruskin, M., Schirmer, C.

13D-41 Log #49 AUT-RSS **Final Action: Reject**
(6.3(a) and (b))

Submitter: Michael F. Cabral, Rehau Inc.
Recommendation: Revise text to read as follows:
6.3* Multipurpose Piping System. A piping system serving both sprinkler and domestic needs shall be considered to be acceptable by this standard where the following conditions are met:
(1) In common water supply connections serving more than one dwelling unit 5 gpm (19 L/min) shall be added to the sprinkler system demand to determine the size of common piping and the size of the total water supply requirements where no provision is made to prevent flow into the domestic water system upon operation of a sprinkler.
(2) All piping in the system supplying sprinklers is listed and conforms to the piping specification of this standard.
(3) Piping connected to the system that supplies only plumbing fixtures complies with local pluming and health authority requirements but is not required to be listed.
(4) Permitted by the local plumbing or health authority.
(6) Where water treatment and filtration are installed, one of the following conditions shall be met:
(a) When more than one plumbing fixture is connected to the multipurpose sprinkler system. The flow restriction and pressure loss through the water treatment equipment shall be taken into account in the hydraulic calculations.
(b) When more than one plumbing fixture is connected to the multipurpose sprinkler system. An automatic bypass shall be installed around the water treatment equipment that directs all water directly to the system.
Substantiation: No all multipurpose sprinkler systems are fully integrated. A single plumbing fixture usually a water closet is often connected to the sprinkler system to meet the intent of the standard. This fixture acts like a pressure relief valve and gives the home owner indication that the water supply is functioning when the fixture is operated. If the fixture did not operate this would provide cause for investigation helping to insure that the water supply is not impaired. Water treatment and filtration would not be required for this single fixture.
Committee Meeting Action: Reject
Committee Statement: If a water treatment device or a filter is installed between the water supply and the sprinkler system that causes a restriction of flow or a significant pressure loss, this device needs to be taken into account in the hydraulic calculations, regardless of how many fixtures are downstream of the device. Systems with a single toilet connected to the sprinkler system are not going to be considered as multipurpose systems and will not need to comply with any part of section 6.3.
Number Eligible to Vote: 28
Ballot Results: Affirmative: 23
Ballot Not Returned: 5 Baker, G., Ketner, C., Madrzykowski, D., Maruskin, M., Schirmer, C.

13D-42 Log #35 AUT-RSS **Final Action: Reject**
(7.2)

Submitter: Richard Derr, Miller Fire Protection, Inc.
Recommendation: Revise as follows:
7.2 Drains and Test Connections
7.2.1 Each sprinkler system shall have a drain/test connection on the system side of the control valve.
7.2.4 ~~Where waterflow alarms are provided, inspector's~~ A drain/test connections shall be installed at a locations that allows for flow testing of water supplies, connections, and alarm mechanisms.
7.2.4.1 Drain/test connections shall be installed so that the valve can be fully opened for a sufficient time to assure a proper test without causing water damage.
7.2.4.2 When a tank is the source of supply but not a portion of the domestic water system, the test connection shall return water to the tank.
7.2.5 The ~~inspector's~~ drain/test connections shall contain an orifice equal to or smaller than the smallest sprinkler installed in the system.
Substantiation: There is currently no requirement for any performance test of an NFPA 13D sprinkler system. A residential water service can have a kinked underground supply, or pebbles in the supply that can go unnoticed by the owner. But the increased flow required by a sprinkler activation can be severely restricted, and in a worst case scenario the flow can move pebbles to a restriction in the pipe completely blocking flow. A drain/test connection provides a simple, inexpensive method of assuring there is sufficient waterflow to the system.
Committee Meeting Action: Reject
Committee Statement: It is not the committee's intent to mandate test connections on all NFPA 13D systems.
Number Eligible to Vote: 28
Ballot Results: Affirmative: 23
Ballot Not Returned: 5 Baker, G., Ketner, C., Madrzykowski, D., Maruskin, M., Schirmer, C.

13D-43 Log #30 AUT-RSS **Final Action: Reject**
(7.2.4)

Submitter: Michael Henke, Potter Electric Signal
Recommendation: Revise text to read as follows:
~~Where waterflow alarms are provided, i~~ Inspectors test connections shall be installed at locations that allow testing of water supplies, connections and alarm mechanisms.
Substantiation: To comply with a proposal to revive NFPA 13D, 2007, 7.6 requiring waterflow alarms on all sprinkler systems in homes. When all 13D sprinkler systems have waterflow alarms, inspectors test connections shall be required on all systems.
Committee Meeting Action: Reject
Committee Statement: See Committee Action on Proposal 13D-44 (Log #31).
Number Eligible to Vote: 28
Ballot Results: Affirmative: 23
Ballot Not Returned: 5 Baker, G., Ketner, C., Madrzykowski, D., Maruskin, M., Schirmer, C.

13D-44 Log #31 AUT-RSS **Final Action: Reject**
(7.6)

Submitter: Michael Henke, Potter Electric Signal
Recommendation: Revise text to read as follows:
Alarms. Local waterflow alarms shall be provided on all sprinkler systems in homes. ~~not equipped with smoke alarms or smoke detectors in accordance with NFPA 72, National Fire Alarm Code~~
Substantiation: The fact a home may have smoke detectors installed at one time should not preclude the requirement for a waterflow alarm. Smoke detectors are frequently disabled, removed or disconnected from power. The additional cost of a waterflow alarm is miniscule compared to the additional or only notification of a fire in the dwelling.
Committee Meeting Action: Reject
Committee Statement: It is not the intent of the committee to require alarms on all sprinkler systems.

Number Eligible to Vote: 28
Ballot Results: Affirmative: 20 Negative: 3
Ballot Not Returned: 5 Baker, G., Ketner, C., Madrzykowski, D., Maruskin, M., Schirmer, C.
Explanation of Negative:

ISMAN, K.: We agree with Mr. Killey that all fire sprinkler systems need to have water flow alarms. The committee's statement is weak as to why they do not want to require the alarms and most jurisdictions that adopt NFPA 13D have chosen to require the alarms, putting contractors in a difficult position if they don't know about the special local rules. Where the majority of people see the need for a piece of equipment, it needs to be in the standard. This is not a significant cost issue.

KILLEY, D.: The requirement to have a flow alarm on all sprinkler systems will allow the occupant or a neighbor to be notified in the event of a fire. This will enhance the operation of the smoke alarm and the sprinkler system and provide a greater level of safety. Many jurisdictions already require the installation of the waterflow alarm proving it is a justifiable safety device. This proposal has been submitted for at least the past 3 code cycles which also proves it seems to have a viable argument to have flow alarms on all systems. This proposal should be accepted.

STANLEY, G.: I agree with Mr. Killey that all sprinkler systems should have an alarm, especially in a life safety situation. It gives the owner an added level of safety without adding a lot of cost. It also will reduce the amount of water damage if there is water discharge.

13D-45 Log #36 AUT-RSS **Final Action: Reject**
(7.8)

Submitter: Richard Derr, Miller Fire Protection, Inc.
Recommendation: Revise as follows:
7.8 Pumps
7.8.1 All electrical pump components shall be located a minimum of 12 inches above floor level.
7.8.2 A single electric disconnect switch arranged to shut off both the pump and a house lighting circuit shall be installed unless a separate disconnect switch for the pump is installed in accordance with 7.8.3.
7.8.3 The pump shall not have a separate electric disconnect switch installed unless supervised by one of the following methods.

1. Central station, proprietary, or remote station signal device.
2. Local signaling service that causes the sounding of an audible signal.
3. Disconnect switch that is locked ON.

Substantiation: Fire pumps must be located a minimum of 12 inches above floor level to comply with the National Electric Code. The basements of one and two family residences are subject to flooding due to undersized sump pumps, heavy rains, and electrical outages. Keeping the pump 12 inches above the floor will help protect the pump motor and electrical components from water damage

Electric power to pumps must be supervised to notify the owner of an electrical problem that may otherwise not be known. Without this supervision the pump circuit can be inadvertently shut off with potentially catastrophic results.
Committee Meeting Action: Reject
Committee Statement: Requirements for electrical components are addressed in the NEC, NFPA 70. A well pump could not comply with this requirement. The language is too restrictive for pumps installed in one- and two-family dwellings.
Number Eligible to Vote: 28
Ballot Results: Affirmative: 23
Ballot Not Returned: 5 Baker, G., Ketner, C., Madrzykowski, D., Maruskin, M., Schirmer, C.

13D-46 Log #5 AUT-RSS **Final Action: Reject**
(8.1.1.2.2)

Submitter: Eddie Phillips, Southern Regional Fire Code Development Committee
Recommendation: Revise 8.1.1.2.2 as follows:

8.1.1.2.2* The system shall provide at least the flow required to produce a minimum discharge density of 0.05~~2~~3 gpm/ft2 (~~2.04~~?? mm/min) to the design sprinklers.

Substantiation: The minimum discharge density of.005 is the greatest impediment to the widespread utilization and cost effective system installation. Due to this flow demand, a series of consequences are put in place that drastically impact system cost. The.05 density forces a minimum ¾ X ¾ inch meter at a minimum be utilized in a system design. This is an uncommon size that most utilities do not utilize. Most stock a standard 5/8 X ¾ inches which cannot supply the minimum demand. This forces an upsize to a full 1 inch meter which most utilities consider to be a commercial meter. A 1 inch meter can result in a significantly larger water impact fee, connection fee, tap-fee, stand-by fee and monthly minimum charge. In many circumstances, this additional charge exceeds the initial cost of the system installation. Also, it is questionable if the increased density of.05 has proven to provide a more effective system installation. System failures as a result of past.04 or.03 system designs have not materialized. The end result it that this greater density had significantly reduced the number of systems that will be installed. If the system is not installed to begin with, the specified density is moot as there is no system present to provide any level of protection.
Committee Meeting Action: Reject
Committee Statement: The 0.05 density is based upon extensive data and information previously considered by the committee. No further justification from previous revision cycles has been provided to substantiate the density reduction.
Number Eligible to Vote: 28
Ballot Results: Affirmative: 23
Ballot Not Returned: 5 Baker, G., Ketner, C., Madrzykowski, D., Maruskin, M., Schirmer, C.

13D-47 Log #18 AUT-RSS **Final Action: Reject**
(8.1.1.2.2)

Submitter: Peter T. Schwab, Wayne Automatic Fire Sprinklers, Inc.
Recommendation: Delete Section 8.1.1.2.2.
Substantiation: Currently listed sprinklers must undergo rigorous testing under UL 1626. The criteria of the fire test was modified in regards to the fuel package, etc. in conjunction with requiring a minimum density. The standard should not restrict advancements in technology by requiring a minimum density. If a manufacturer can develop a product that can pass the test and meets the performance criteria as spelled out in UL 1626, then the standard should allow its use.
Committee Meeting Action: Reject
Committee Statement: See Committee Action on Proposal 13D-46 (Log #5).
Number Eligible to Vote: 28
Ballot Results: Affirmative: 23
Ballot Not Returned: 5 Baker, G., Ketner, C., Madrzykowski, D., Maruskin, M., Schirmer, C.

13D-49 Log #6 AUT-RSS **Final Action: Reject**
(8.1.3.1.2)

Submitter: James Everitt, Western Regional Fire Code Development Committee
Recommendation: Revise to read:
8.1.3.1.2 Where construction features or other special conditions exist that are outside the scope of sprinkler listings, the designer shall work with the AHJ in developing an engineered solution ~~listed sprinklers shall be permitted to be installed beyond their listing limitations~~.
Substantiation: This is a new section in NFPA 13D. The base paragraph gives the designer "free range" at designing/installing sprinklers beyond their listing without any consideration to the design intent. There are instances when one must step outside the box to address a design issue. However it should be done in conjunction with the AHJ and the solution should be engineered.
Committee Meeting Action: Reject
Committee Statement: Residential home design results in many situations require installation beyond the listing limitations of the sprinkler (i.e. sloped ceilings). The Annex provides guidance for the AHJ in making the decision to permit this type of installation.
Number Eligible to Vote: 28
Ballot Results: Affirmative: 23
Ballot Not Returned: 5 Baker, G., Ketner, C., Madrzykowski, D., Maruskin, M., Schirmer, C.

13D-50 Log #58 AUT-RSS **Final Action: Reject**
(8.2.2.3 (New))

Submitter: Scott T. Martorano, The Viking Corporation
Recommendation: Add new text to read as follows:

8.2.2.3 Horizontal sidewall sprinkler deflectors shall be located no more than 6 in. (152 mm), and permitted to be located with their deflectors less than 4 in. (102 mm), from the wall on which they are located.

Substantiation: Several manufacturers of sprinklers publish technical data allowing residential horizontal sidewall sprinklers to be installed in this manner. Underwriters Laboratory has confirmed this deflector positioning to be in accordance with the sprinkler listings and authorized its inclusion into the manufacturers technical data sheets. In some retrofit applications where it is not possible to install the system piping within the wall allowing the recommended deflector positioning is essential.
Committee Meeting Action: Reject
Committee Statement: Paragraph 8.2.2.2 addresses this issue sufficiently.
Number Eligible to Vote: 28
Ballot Results: Affirmative: 23
Ballot Not Returned: 5 Baker, G., Ketner, C., Madrzykowski, D., Maruskin, M., Schirmer, C.

13D-51 Log #CP6 AUT-RSS **Final Action: Accept**
(8.3.4.1.1)

Submitter: Technical Committee on Residential Sprinkler Systems,
Recommendation: Revise paragraph and list as follows:
8.3.4.1.1 Sprinklers shall be specifically listed for use on dry pipe and double interlock preaction systems.
8.3.4.1.2 The following types of sprinklers and arrangements shall be permitted for dry pipe and preaction systems:
(1) Residential upright sprinklers.
(2) Residential dry sprinklers.
(3) Residential pendent and sidewall sprinklers installed on return bends, where the sprinklers, return bends, and branch line piping are in an area maintained at or above 40°F (4°C). ~~Return bends shall be permitted to be omitted when using potable water supplies combined with corrosion-resistant pipe.~~
(4) Residential horizontal sidewall sprinklers, installed so that water is not trapped.
8.3.4.1.3 Return bends required per 8.3.4.1.2(3) shall be permitted to be omitted when using potable water supplies combined with corrosion-resistant pipe.
Renumber subsequent paragraphs accordingly.
Substantiation: Editorial revision moving requirements out of the list.
Committee Meeting Action: Accept
Number Eligible to Vote: 28
Ballot Results: Affirmative: 23
Ballot Not Returned: 5 Baker, G., Ketner, C., Madrzykowski, D., Maruskin, M., Schirmer, C.

13D-52 Log #CP7 AUT-RSS **Final Action: Accept**
(8.3.4.8)

Submitter: Technical Committee on Residential Sprinkler Systems,
Recommendation: Revise paragraph as follows:
8.3.4.8 Auxiliary Drains.
8.3.4.8.1 Auxiliary drains shall be provided where a change in piping direction prevents drainage of system piping through the drain valve on the system side of the control valve.
8.3.4.8.2 At a minimum, auxiliary drains shall be a nipple and cap or plug not less than ½ in. (12.7 mm).
Substantiation: Editorial revision breaking out multiple requirements.
Committee Meeting Action: Accept
Number Eligible to Vote: 28
Ballot Results: Affirmative: 23
Ballot Not Returned: 5 Baker, G., Ketner, C., Madrzykowski, D., Maruskin, M., Schirmer, C.

13D-53 Log #CP8 AUT-RSS **Final Action: Accept**
(8.4.4)

Submitter: Technical Committee on Residential Sprinkler Systems,
Recommendation: Revise section as follows:
8.4.4* Pipe shall be sized by hydraulic calculations in accordance with the methods described in NFPA 13, *Standard for the Installation of Sprinkler Systems*, in accordance with 8.4.5, or in accordance with the following general method for straight-run systems connected to a city water main of at least 4 in. (102 mm) in diameter ~~[see Table 8.4.4(a) through Table 8.4.4(g)]~~:
(1) The system flow rate shall be established in accordance with Section 8.1, and it shall be determined that the flow allowed by the water meter ~~is adequate to~~ meets or exceeds the system demand and that the total demand flow does not exceed the maximum flow allowed by the piping system components.
(2) The water pressure in the street shall be determined.
(3) Pipe sizes shall be selected.
(4) ~~Meter pressure losses~~ Pressure loss for a water meter, if any, shall be determined and deducted. ~~[See Table 8.4.4(g)]~~ as follows:
(a) Using Table 8.4.4(g)
(b) Higher pressure losses specified by the manufacturer shall be used in place of those specified in Table 8.4.4(g)
(c) Lower pressure losses shall be permitted to be used where supporting data are provided by the meter manufacturer.
(5) Pressure loss for elevation shall be deducted as follows:
(a) Building height above street (in ft) × 0.434 = pressure loss (in psi)
(b) Building height above street (in m) × 0.098 = pressure loss (in bar)
(6)* Pressure loss~~es~~ from the city main to the inside control valve shall be deducted by multiplying the factor from Table 8.4.4(a) or Table 8.4.4(b) by the total length(s) of pipe in feet (meters).
A.8.4.4(6) The total length includes equivalent length of fittings as determined by applying Table 8.4.4(c), Table 8.4.4(d), Table 8.4.4(e), or Table 8.4.4(f).]
(7) Pressure loss~~es~~ for piping within the building shall be deducted by multiplying the factor from Table 8.4.4(a) or Table 8.4.4(b) by the total length in feet (meters) of each size of pipe between the control valve and the farthest sprinkler.
(8) Pressure loss for valves and fittings ~~pressure losses~~ shall be deducted as follows:
(a) The valves and fittings from the control valve to the farthest sprinkler shall be counted.
(b) The equivalent length for each valve and fitting as shown in Table 8.4.4(c), Table 8.4.4(d), Table 8.4.4(e), or Table 8.4.4(f) shall be determined and the values added to obtain the total equivalent length for each pipe size.
(c) The equivalent length for each size shall be multiplied by the factor from Table 8.4.4(a) or Table 8.4.4(b) and the values totaled.
(9) In multilevel buildings, the steps in 8.4.4(1) through 8.4.4(8) shall be repeated to size piping for each floor.
(10) If the remaining pressure is less than the operating pressure established by the testing laboratory for the sprinkler being used, the sprinkler system shall be redesigned.
(11) If the remaining pressure is higher than required, smaller piping shall be permitted to be used where justified by calculations.
(12 ~~1~~) The remaining piping shall be sized the same as the piping up to and including the farthest sprinkler unless smaller pipe sizes are justified by calculations.
Substantiation: This is an editorial revision that results in better list structure, removes unenforceable language, and provides clarity in the requirements.
Committee Meeting Action: Accept
Number Eligible to Vote: 28
Ballot Results: Affirmative: 23
Ballot Not Returned: 5 Baker, G., Ketner, C., Madrzykowski, D., Maruskin, M., Schirmer, C.
Comment on Affirmative:
ISMAN, K.: New section 8.4.4(4)(a) appears to be in error in that it is not a complete sentence. Should it read, "Pressure losses shall be permitted to be accounted for using the values in Table 8.4.4(g)"?

13D-54 Log #50 AUT-RSS **Final Action: Accept**
(Table 8.4.4 and 8.4.10 (New))

Submitter: Tom Lariviere, Madison Fire Department
Recommendation: Revise text as follows:
8.4.4* Unless the pipe size is in accordance with the prescriptive pipe sizing method of 8.4.10. ~~P~~pipe shall be sized by hydraulic calculations in accordance with the methods described in NFPA 13, Standard for the Installation of Sprinkler Systems, in accordance with 8.4.5, or in accordance with the following general method for straight-run systems connected to a city water main of at least 4 in. (102 mm) in diameter [see Table 8.4.4(a) through Table 8.4.4(g)]:
(Balance of 8.4.4 remains unchanged)
8.4.10 Prescriptive pipe sizing method. Pipe shall be sized by determining the available pressure to offset friction loss in piping and identifying a piping material, diameter and length using the equation in 8.4.10.1 and the procedure in 8.4.10.2.
Table 8.4.10.1A-Table 8.4.10.1I shown on the following pages.

8.4.10.1 Available pressure equation. The pressure available to offset friction loss in the interior piping system (Pt) shall be determined in accordance with the following formula.

$$P^t = P_{sup} - PL_{svc} - PL_m - PL_d - PL_e - P_{sp}$$

Where:
P_t = Pressure used in applying Tables 8.4.10.1A through 8.4.10.1I.
P_{sup} = Pressure available from the water supply source.
PL_{svc} = Pressure loss in the water-service pipe.
PL_m = Pressure loss in the water meter.
PL_d = Pressure loss from devices other than the water meter.
PL_e = Pressure loss associated with changes in elevation.
P_{sp} = Maximum pressure required by a sprinkler.
8.4.10.2 Calculation procedure. Determination of the required size for water distribution piping shall be in accordance with the following procedure:
Step 1 – Determine Psup Obtain the supply pressure that will be available from 1. The water main from the water purveyor, or 2. For a private source, such as a tank system, a private well system, or a combination of these, the available water supply pressure shall be based on the minimum pressure control setting for the pump. The pressure Psup shall be the the residual pressure available at the flow rate used when applying Table 8.4.10.1A.
Step 2 – Determine PLsvc Use Table 8.4.10.1A to determine the pressure loss in the water service pipe based on the selected size of the water service.
Step 3 – Determine PLm Use Table 8.4.10.1B to determine the pressure loss from the water meter based on the selected water meter size.
Step 4 – Determine PLd Determine the pressure loss from devices, other than the water meter, installed in the piping system supplying sprinklers, such as pressure-reducing valves, backflow preventers, water softeners or water filters. Device pressure losses shall be based on the device manufacturer's specifications. The flow rate used to determine pressure loss shall be the rate from 8.1.1 and 8.1.2, except that 5 gpm shall be added where the device is installed in a water-service pipe that supplies more than one dwelling. As alternative to deducting pressure loss for a device, an automatic bypass valve shall be installed to divert flow around the device when a sprinkler activates.
Step 5 – Determine PLe Use Table 8.4.10.1C to determine the pressure loss associated with changes in elevation. The elevation used in applying the table shall be the difference between the elevation where the water source pressure was measured and the elevation of the highest sprinkler.

Table 8.4.10.1A
Water Service Pressure Loss (PL_{svc})[a,b]

Flow Rate[c] (gpm)	3/4" Water Service Pressure Loss (psi)				1" Water Service Pressure Loss (psi)				1-1/4" Water Service Pressure Loss (psi)			
	40' or less	41' to 75'	76' to 100'	101' to 150'	40' or less	41' to 75'	76' to 100'	101' to 150'	40' or less	41' to 75'	76' to 100'	101' to 150'
8	5.1	8.7	11.8	17.4	1.5	2.5	3.4	5.1	0.6	1.0	1.3	1.9
10	7.7	13.1	17.8	26.3	2.3	3.8	5.2	7.7	0.8	1.4	2.0	2.9
12	10.8	18.4	24.9	NP	3.2	5.4	7.3	10.7	1.2	2.0	2.7	4.0
14	14.4	24.5	NP	NP	4.2	7.1	9.6	14.3	1.6	2.7	3.6	5.4
16	18.4	NP	NP	NP	5.4	9.1	12.4	18.3	2.0	3.4	4.7	6.9
18	22.9	NP	NP	NP	6.7	11.4	15.4	22.7	2.5	4.3	5.8	8.6
20	27.8	NP	NP	NP	8.1	13.8	18.7	27.6	3.1	5.2	7.0	10.4
22	NP	NP	NP	NP	9.7	16.5	22.3	NP	3.7	6.2	8.4	12.4
24	NP	NP	NP	NP	11.4	19.3	26.2	NP	4.3	7.3	9.9	14.6
26	NP	NP	NP	NP	13.2	22.4	NP	NP	5.0	8.5	11.4	16.9
28	NP	NP	NP	NP	15.1	25.7	NP	NP	5.7	9.7	13.1	19.4
30	NP	NP	NP	NP	17.2	NP	NP	NP	6.5	11.0	14.9	22.0
32	NP	NP	NP	NP	19.4	NP	NP	NP	7.3	12.4	16.8	24.8
34	NP	NP	NP	NP	21.7	NP	NP	NP	8.2	13.9	18.8	NP
36	NP	NP	NP	NP	24.1	NP	NP	NP	9.1	15.4	20.9	NP

NP – Not permitted. Pressure loss exceeds reasonable limits.
a. Values are applicable for underground piping materials permitted by the local plumbing code, and are based on an SDR of 11 and a Hazen Williams C Factor of 150.
b. Values include the following length allowances for fittings: 25% length increase for actual lengths up to 100 feet and 15% length increase for actual lengths over 100 feet.
c. Flow rate from 8.1.1 and 8.1.2. Add 5 gpm to the flow rate required by 8.4.10.2, Step 4 where the water-service pipe supplies more than one dwelling.

Table 8.4.10.1B
Minimum Water Meter
Pressure Loss (PL_m)[a]

Flow Rate (gpm)[b]	5/8" Meter Pressure Loss (psi)	3/4" Meter Pressure Loss (psi)
8	2	1
10	3	1
12	4	1
14	5	2
16	7	3
18	9	4
20	11	4
22	NP	5
24	NP	5
26	NP	6
28	NP	6
30	NP	7
32	NP	7
34	NP	8
36	NP	8

NP – Not permitted unless the actual water meter pressure loss is known.
a. Table 8.4.10.1B establishes conservative values for water meterpressure loss for installations where the water meter loss isunknown. Where the actual water meter pressure loss isknown, P_m shall be the actual loss.
b. Flow rate from 8.1.1. Add 5 gpm to the flow required by8.4.10.2, Step 4 where the water-service pipe supplies more than one dwelling.

Table 8.4.10.1C
Elevation Loss (PL_e)

Elevation (feet)	Pressure Loss (psi)
5	2.2
10	4.4
15	6.5
20	8.7
25	10.9
30	13
35	**15.2**
40	**17.4**

Table 8.4.10.1D

Sprinkler Flow Rate[a] (gpm)	Water Distribution Size (inch)	Available Pressure – P_t (psi)									
		15	20	25	30	35	40	45	50	55	60
		Allowable Length of Pipe from Service Valve to Farthest Sprinkler (feet)									
8	3/4	217	289	361	434	506	578	650	723	795	867
9	3/4	174	232	291	349	407	465	523	581	639	697
10	3/4	143	191	239	287	335	383	430	478	526	574
11	3/4	120	160	200	241	281	321	361	401	441	481
12	3/4	102	137	171	205	239	273	307	341	375	410
13	3/4	88	118	147	177	206	235	265	294	324	353
14	3/4	77	103	128	154	180	205	231	257	282	308
15	3/4	68	90	113	136	158	181	203	226	248	271
16	3/4	60	80	100	120	140	160	180	200	220	241
17	3/4	54	72	90	108	125	143	161	179	197	215
18	3/4	48	64	81	97	113	129	145	161	177	193
19	3/4	44	58	73	88	102	117	131	146	160	175
20	3/4	40	53	66	80	93	106	119	133	146	159
21	3/4	36	48	61	73	85	97	109	121	133	145
22	3/4	33	44	56	67	78	89	100	111	122	133
23	3/4	31	41	51	61	72	82	92	102	113	123
24	3/4	28	38	47	57	66	76	85	95	104	114
25	3/4	26	35	44	53	61	70	79	88	97	105
26	3/4	24	33	41	49	57	65	73	82	90	98
27	3/4	23	30	38	46	53	61	69	76	84	91
28	3/4	21	28	36	43	50	57	64	71	78	85
29	3/4	20	27	33	40	47	53	60	67	73	80
30	3/4	19	25	31	38	44	50	56	63	69	75
31	3/4	18	24	29	35	41	47	53	59	65	71
32	3/4	17	22	28	33	39	44	50	56	61	67
33	3/4	16	21	26	32	37	42	47	53	58	63
34	3/4	NP	20	25	30	35	40	45	50	55	60
35	3/4	NP	19	24	28	33	38	42	47	52	57
36	3/4	NP	18	22	27	31	36	40	45	49	54
37	3/4	NP	17	21	26	30	34	38	43	47	51
38	3/4	NP	16	20	24	28	32	36	40	45	49
39	3/4	NP	15	19	23	27	31	35	39	42	46
40	3/4	NP	NP	18	22	26	29	33	37	40	44

Allowable Pipe Length for ¾ inch Type M Copper Water Tubing

NP – Not permitted.
a. Flow rate from Section 8.1.1 and 8.1.2.

Table 8.4.10.1E

Sprinkler Flow Rate[a] (gpm)	Water Distribution Size (inch)	Available Pressure – P_t (psi)									
		15	20	25	30	35	40	45	50	55	60
		Allowable Length of Pipe from Service Valve to Farthest Sprinkler (feet)									
8	1	806	1075	1343	1612	1881	2149	2418	2687	2955	3224
9	1	648	864	1080	1296	1512	1728	1945	2161	2377	2593
10	1	533	711	889	1067	1245	1422	1600	1778	1956	2134
11	1	447	596	745	894	1043	1192	1341	1491	1640	1789
12	1	381	508	634	761	888	1015	1142	1269	1396	1523
13	1	328	438	547	657	766	875	985	1094	1204	1313
14	1	286	382	477	572	668	763	859	954	1049	1145
15	1	252	336	420	504	588	672	756	840	924	1008
16	1	224	298	373	447	522	596	671	745	820	894
17	1	200	266	333	400	466	533	600	666	733	799
18	1	180	240	300	360	420	479	539	599	659	719
19	1	163	217	271	325	380	434	488	542	597	651
20	1	148	197	247	296	345	395	444	493	543	592
21	1	135	180	225	270	315	360	406	451	496	541
22	1	124	165	207	248	289	331	372	413	455	496
23	1	114	152	190	228	267	305	343	381	419	457
24	1	106	141	176	211	246	282	317	352	387	422
25	1	98	131	163	196	228	261	294	326	359	392
26	1	91	121	152	182	212	243	273	304	334	364
27	1	85	113	142	170	198	226	255	283	311	340
28	1	79	106	132	159	185	212	238	265	291	318
29	1	74	99	124	149	174	198	223	248	273	298
30	1	70	93	116	140	163	186	210	233	256	280
31	1	66	88	110	132	153	175	197	219	241	263
32	1	62	83	103	124	145	165	186	207	227	248
33	1	59	78	98	117	137	156	176	195	215	234
34	1	55	74	92	111	129	148	166	185	203	222
35	1	53	70	88	105	123	140	158	175	193	210
36	1	50	66	83	100	116	133	150	166	183	199
37	1	47	63	79	95	111	126	142	158	174	190
38	1	45	60	75	90	105	120	135	150	165	181
39	1	43	57	72	86	100	115	129	143	158	172
40	1	41	55	68	82	96	109	123	137	150	164

Allowable Pipe Length for 1 inch Type M Copper Water Tubing
a. Flow rate from Section 8.1.1 and 8.1.2.

Table 8.4.10.1F

Sprinkler Flow Rate[a] (gpm)	Water Distribution Size (inch)	Available Pressure – P_t (psi)									
		15	20	25	30	35	40	45	50	55	60
		Allowable Length of Pipe from Service Valve to Farthest Sprinkler (feet)									
8	3/4	348	465	581	697	813	929	1045	1161	1278	1394
9	3/4	280	374	467	560	654	747	841	934	1027	1121
10	3/4	231	307	384	461	538	615	692	769	845	922
11	3/4	193	258	322	387	451	515	580	644	709	773
12	3/4	165	219	274	329	384	439	494	549	603	658
13	3/4	142	189	237	284	331	378	426	473	520	568
14	3/4	124	165	206	247	289	330	371	412	454	495
15	3/4	109	145	182	218	254	290	327	363	399	436
16	3/4	97	129	161	193	226	258	290	322	354	387
17	3/4	86	115	144	173	202	230	259	288	317	346
18	3/4	78	104	130	155	181	207	233	259	285	311
19	3/4	70	94	117	141	164	188	211	234	258	281
20	3/4	64	85	107	128	149	171	192	213	235	256
21	3/4	58	78	97	117	136	156	175	195	214	234
22	3/4	54	71	89	107	125	143	161	179	197	214
23	3/4	49	66	82	99	115	132	148	165	181	198
24	3/4	46	61	76	91	107	122	137	152	167	183
25	3/4	42	56	71	85	99	113	127	141	155	169
26	3/4	39	52	66	79	92	105	118	131	144	157
27	3/4	37	49	61	73	86	98	110	122	135	147
28	3/4	34	46	57	69	80	92	103	114	126	137
29	3/4	32	43	54	64	75	86	96	107	118	129
30	3/4	30	40	50	60	70	81	91	101	111	121
31	3/4	28	38	47	57	66	76	85	95	104	114
32	3/4	27	36	45	54	63	71	80	89	98	107
33	3/4	25	34	42	51	59	68	76	84	93	101
34	3/4	24	32	40	48	56	64	72	80	88	96
35	3/4	23	30	38	45	53	61	68	76	83	91
36	3/4	22	29	36	43	50	57	65	72	79	86
37	3/4	20	27	34	41	48	55	61	68	75	82
38	3/4	20	26	33	39	46	52	59	65	72	78
39	3/4	19	25	31	37	43	50	56	62	68	74
40	3/4	18	24	30	35	41	47	53	59	65	71

Allowable Pipe Length for ¾ inch CPVC Pipe

a. Flow rate from Section 8.1.1 and 8.1.2.

Table 8.4.10.1G

Sprinkler Flow Rate[a] (gpm)	Water Distribution Size (inch)	Available Pressure – P_t (psi)									
		15	20	25	30	35	40	45	50	55	60
		Allowable Length of Pipe from Service Valve to Farthest Sprinkler (feet)									
8	1	1049	1398	1748	2098	2447	2797	3146	3496	3845	4195
9	1	843	1125	1406	1687	1968	2249	2530	2811	3093	3374
10	1	694	925	1157	1388	1619	1851	2082	2314	2545	2776
11	1	582	776	970	1164	1358	1552	1746	1940	2133	2327
12	1	495	660	826	991	1156	1321	1486	1651	1816	1981
13	1	427	570	712	854	997	1139	1281	1424	1566	1709
14	1	372	497	621	745	869	993	1117	1241	1366	1490
15	1	328	437	546	656	765	874	983	1093	1202	1311
16	1	291	388	485	582	679	776	873	970	1067	1164
17	1	260	347	433	520	607	693	780	867	954	1040
18	1	234	312	390	468	546	624	702	780	858	936
19	1	212	282	353	423	494	565	635	706	776	847
20	1	193	257	321	385	449	513	578	642	706	770
21	1	176	235	293	352	410	469	528	586	645	704
22	1	161	215	269	323	377	430	484	538	592	646
23	1	149	198	248	297	347	396	446	496	545	595
24	1	137	183	229	275	321	366	412	458	504	550
25	1	127	170	212	255	297	340	382	425	467	510
26	1	118	158	197	237	276	316	355	395	434	474
27	1	111	147	184	221	258	295	332	368	405	442
28	1	103	138	172	207	241	275	310	344	379	413
29	1	97	129	161	194	226	258	290	323	355	387
30	1	91	121	152	182	212	242	273	303	333	364
31	1	86	114	143	171	200	228	257	285	314	342
32	1	81	108	134	161	188	215	242	269	296	323
33	1	76	102	127	152	178	203	229	254	280	305
34	1	72	96	120	144	168	192	216	240	265	289
35	1	68	91	114	137	160	182	205	228	251	273
36	1	65	87	108	130	151	173	195	216	238	260
37	1	62	82	103	123	144	165	185	206	226	247
38	1	59	78	98	117	137	157	176	196	215	235
39	1	56	75	93	112	131	149	168	187	205	224
40	1	53	71	89	107	125	142	160	178	196	214

Allowable Pipe Length for 1 inch CPVC Pipe
a. Flow rate from Section 8.1.1 and 8.1.2.

Table 8.4.10.1H

Sprinkler Flow Rate[a] (gpm)	Water Distribution Size (inch)	Available Pressure – P_t (psi)									
		15	20	25	30	35	40	45	50	55	60
		Allowable Length of Pipe from Service Valve to Farthest Sprinkler (feet)									
8	3/4	93	123	154	185	216	247	278	309	339	370
9	3/4	74	99	124	149	174	199	223	248	273	298
10	3/4	61	82	102	123	143	163	184	204	225	245
11	3/4	51	68	86	103	120	137	154	171	188	205
12	3/4	44	58	73	87	102	117	131	146	160	175
13	3/4	38	50	63	75	88	101	113	126	138	151
14	3/4	33	44	55	66	77	88	99	110	121	132
15	3/4	29	39	48	58	68	77	87	96	106	116
16	3/4	26	34	43	51	60	68	77	86	94	103
17	3/4	23	31	38	46	54	61	69	77	84	92
18	3/4	21	28	34	41	48	55	62	69	76	83
19	3/4	19	25	31	37	44	50	56	62	69	75
20	3/4	17	23	28	34	40	45	51	57	62	68
21	3/4	16	21	26	31	36	41	47	52	57	62
22	3/4	NP	19	24	28	33	38	43	47	52	57
23	3/4	NP	17	22	26	31	35	39	44	48	52
24	3/4	NP	16	20	24	28	32	36	40	44	49
25	3/4	NP	NP	19	22	26	30	34	37	41	45
26	3/4	NP	NP	17	21	24	28	31	35	38	42
27	3/4	NP	NP	16	20	23	26	29	33	36	39
28	3/4	NP	NP	15	18	21	24	27	30	33	36
29	3/4	NP	NP	NP	17	20	23	26	28	31	34
30	3/4	NP	NP	NP	16	19	21	24	27	29	32
31	3/4	NP	NP	NP	15	18	20	23	25	28	30
32	3/4	NP	NP	NP	NP	17	19	21	24	26	28
33	3/4	NP	NP	NP	NP	16	18	20	22	25	27
34	3/4	NP	NP	NP	NP	NP	17	19	21	23	25
35	3/4	NP	NP	NP	NP	NP	16	18	20	22	24
36	3/4	NP	NP	NP	NP	NP	15	17	19	21	23
37	3/4	NP	NP	NP	NP	NP	NP	16	18	20	22
38	3/4	NP	NP	NP	NP	NP	NP	16	17	19	21
39	3/4	NP	NP	NP	NP	NP	NP	NP	16	18	20
40	3/4	NP	NP	NP	NP	NP	NP	NP	16	17	19

Allowable Pipe Length for ¾ inch PEX Tubing
NP – Not permitted.
a. Flow rate from Section 8.1.1 and 8.1.2.

Table 8.4.10.1I

Sprinkler Flow Rate[a] (gpm)	Water Distribution Size (inch)	Available Pressure – P_t (psi)									
		15	20	25	30	35	40	45	50	55	60
		Allowable Length of Pipe from Service Valve to Farthest Sprinkler (feet)									
8	1	314	418	523	628	732	837	941	1046	1151	1255
9	1	252	336	421	505	589	673	757	841	925	1009
10	1	208	277	346	415	485	554	623	692	761	831
11	1	174	232	290	348	406	464	522	580	638	696
12	1	148	198	247	296	346	395	445	494	543	593
13	1	128	170	213	256	298	341	383	426	469	511
14	1	111	149	186	223	260	297	334	371	409	446
15	1	98	131	163	196	229	262	294	327	360	392
16	1	87	116	145	174	203	232	261	290	319	348
17	1	78	104	130	156	182	208	233	259	285	311
18	1	70	93	117	140	163	187	210	233	257	280
19	1	63	84	106	127	148	169	190	211	232	253
20	1	58	77	96	115	134	154	173	192	211	230
21	1	53	70	88	105	123	140	158	175	193	211
22	1	48	64	80	97	113	129	145	161	177	193
23	1	44	59	74	89	104	119	133	148	163	178
24	1	41	55	69	82	96	110	123	137	151	164
25	1	38	51	64	76	89	102	114	127	140	152
26	1	35	47	59	71	83	95	106	118	130	142
27	1	33	44	55	66	77	88	99	110	121	132
28	1	31	41	52	62	72	82	93	103	113	124
29	1	29	39	48	58	68	77	87	97	106	116
30	1	27	36	45	54	63	73	82	91	100	109
31	1	26	34	43	51	60	68	77	85	94	102
32	1	24	32	40	48	56	64	72	80	89	97
33	1	23	30	38	46	53	61	68	76	84	91
34	1	22	29	36	43	50	58	65	72	79	86
35	1	20	27	34	41	48	55	61	68	75	82
36	1	19	26	32	39	45	52	58	65	71	78
37	1	18	25	31	37	43	49	55	62	68	74
38	1	18	23	29	35	41	47	53	59	64	70
39	1	17	22	28	33	39	45	50	56	61	67
40	1	16	21	27	32	37	43	48	53	59	64

Allowable Pipe Length for 1 inch PEX Tubing
a. Flow rate from Section 8.1.1 and 8.1.2.

Step 6 – Determine PLsp Determine the maximum pressure required by any individual sprinkler based on

1. The area of coverage,
2. The ceiling configuration,
3. The temperature rating, and
4. Any additional conditions specified by the sprinkler manufacturer.

The required pressure is provided in the sprinkler manufacturer's published data for the specific sprinkler model based on the selected flow rate.

Step 7 – Calculate PLt Using the equation in 8.4.10.1, calculate the pressure available to offset friction loss in water-distribution piping between the service valve and the sprinklers.

Step 8 – Determine the maximum allowable pipe length Use Tables 8.4.10.1D through 8.4.10.1I to select a material and size for water distribution piping. The piping material and size shall be acceptable if the developed length of pipe between the service valve the most remote sprinkler does not exceed the maximum allowable length specified by the applicable table. Interpolation of Pt between the tabular values shall be permitted.

The maximum allowable length of piping in tables 8.4.10.1D through 8.4.10.1I incorporates an adjustment for pipe fittings, and no additional consideration of friction losses associated with pipe fittings shall be required.

Substantiation: Fire sprinklers are universally recognized as the most effective means of reducing America's fire losses and preventing firefighter deaths and injuries associated with firefighting operations. Both of these objectives are fundamental to the mission of the International Association of Fire Chiefs (IAFC). Through this proposal, the IAFC hopes to encourage more widespread use of residential sprinklers by establishing a simple, straightforward design methodology for residential sprinklers that should appeal to homebuilders and code officials.

Many stakeholders in the residential construction industry have conveyed the need for a prescriptive requirements for designing residential sprinklers before they can be mainstreamed into new home construction. As an organization dedicated to the advancement of residential sprinklers, IAFC chose to undertake the challenge of sponsoring this code change proposal to advance this concept.

In an effort to simplify the design of residential sprinkler systems, comprehensive pipe sizing tables have been provided, which address elevation loss and all sources of pressure loss in a system as a basis for prescribing a maximum pipe length between the water supply and the most remote sprinkler. The tables accommodate different sizes for underground and aboveground piping and different meter sizes.

Given that a substantial portion of the cost of a sprinkler system installation can be associated with interior piping materials, a well-informed designer will consider cost-effective ways to increase the available pressure to interior piping (Pt) to permit smaller, less expensive interior piping and fittings. The pressure loss equation provides a framework for this approach by showing each source of pressure loss separately to facilitate this analysis. For example:

1. **For PLSVC:** Increasing the size of the water service pipe, which tends to be inexpensive, will reduce pressure loss in the service and increase available pressure to offset losses in water-distribution piping. This may result in being able to use smaller diameter water-distribution piping and fittings and in a reduction to overall system cost. It should be noted that much of the loss associated with the water service is often caused by friction loss in the service pipe versus loss in the water meter, and increasing the service pipe diameter while maintaining a smaller meter can be an inexpensive way to increase Pt.

2. **For PLm:** Increasing the size of the water meter, may or may not be cost effective versus reducing the size of water distribution piping. In cases where the water purveyor charges capital recovery fees or standby charges for larger meters, using the smallest meter size, even if it results in larger water distribution piping, may yield the lowest overall cost. Where upsizing the meter (or if it is permitted, using a different meter brand with better loss characteristics, without changing the meter size) can be done inexpensively, it can be a good way to increase available pressure to offset losses in water-distribution piping. This may result in being able to use smaller diameter water-distribution piping and fittings and in a reduction to overall system cost.

For simplicity, water distribution system tables have been developed for the three common interior piping materials used in these systems, copper, CPVC, and PEX. Because each material has a material inside diameter, separate tables are necessary to accommodate the different friction loss associated with each type of piping. Also for simplicity, the tables only address common pipe sizes used for residential sprinkler systems, which are 3/4 and 1 inch, and the tables assume that pipe sizes will not be mixed. If different pipe sizes are desired to gain a hydraulic advantage, then the system must be hydraulically calculated.

Overall, the tables reflect conservative design assumptions. These include:

1. The tables use the Hazen-Williams equation for calculating the allowable length of pipe, which correlates with NFPA 13D.

2. The C-factor used for each piping material in the Hazen-Williams calculation was 150. This correlates with C-factors assigned by NFPA 13D.

3. Conservative values were used in calculating the limits on pipe length. A fitting factor that assumes a 25 percent increase over the actual pipe length to accommodate additional friction loss associated with pipe fittings. This means that the length of piping specified by the tables has been adjusted to

accommodate a reasonable number of pipe fittings that would be expected. With the fittings already calculated into the length numbers in the tables, there is no need to separately consider losses in fittings.

4. A factor of safety is provided by assuming that the sprinkler requiring the greatest pressure and the room with the highest flow demand are always located at the most remote point in the system and that the most remote point in the system is always at the highest elevation, which typically will not be the case.

In conclusion, this proposal represents an advancement in the effort to simplify residential sprinkler system design, following on principles set forth in the express design guide developed by the U.S. Fire Administration and Prince George's County, Maryland more than 10 years ago.

Committee Meeting Action: Accept
Number Eligible to Vote: 28
Ballot Results: Affirmative: 21 Negative: 2
Ballot Not Returned: 5 Baker, G., Ketner, C., Madrzykowski, D., Maruskin, M., Schirmer, C.
Explanation of Negative:

HAAGENSEN, D.: Safety is being sacrificed by simplicity in this proposal. Particularly in the typical size home, the proposals under sizes pipe and does not account for many riser components installed on NFPA 13D systems.

HOPKINS, M.: The concept of providing an easy-to-use method, which can be applied by plumbers or sprinkler fitters without the need for engineered drawings and hydraulic calculations, is understandable. However, the method of application proposed does not adequately account for friction loss of all components and fittings. The method underestimates the system demand and must be modified before it is included in NFPA 13D because there is no factor of safety provided. This type of system relies heavily on the concept of having the sprinkler respond to a fire in its incipient stage, therefore it is essential to provide adequate water for control or extinguishment since the operation of a second sprinkler could result in a failure, e.g. loss of life.

13D-55 Log #20 AUT-RSS **Final Action: Accept**
(Table 8.4.4(d), (e), and (f))

Submitter: Eric Price, Engineered Fire Systems, Inc.
Recommendation: The fitting lengths for 1 in. and 1 1/4 in. in all three tables are printed reversed. Fitting lengths increase in length as the pipe diameter increases.
Substantiation: None
Committee Meeting Action: Accept
Number Eligible to Vote: 28
Ballot Results: Affirmative: 19 Negative: 4
Ballot Not Returned: 5 Baker, G., Ketner, C., Madrzykowski, D., Maruskin, M., Schirmer, C.
Explanation of Negative:

HOPKINS, M.: The proposal is incorrect. The equivalent lengths provided in the tables are correct.

ISMAN, K.: With all due respect to Mr. Price, he is not correct. We developed these tables several years ago by working with the Crane manual of friction loss in fittings and using the equations in NFPA 13 for modifying the equivalent length based on the internal diameter of the pipe and the "C" factor. When water travels through a fitting, it loses a similar amount of pressure in 1 inch and $1\text{-}^{1}/_{4}$ inch pipe, however, the expression of how much pipe will equate to that friction loss is dependant on a number of variables that do not automatically rise with the pipe diameter. For example, according to NFPA 13, the equivalent length of a 1 inch tee for schedule 40 steel pipe is 5 ft. Applying the correction factor for internal diameters of Type K copper tube and the C-factor correction, the equivalent length for 1 inch Type K copper turns out to be 5.8 ft, which rounds to 6 ft for the table. Making similar corrections for 1-1/4 inch Type K copper, the value for a tee turns out to be 5 ft for Type K copper. The equivalent length goes down as the pipe diameter goes up in this case. The numbers in the 2007 edition of NFPA 13D are correct, do not change them.

STANLEY, G.: I believe the submitter is in error. The fitting tables are correct as printed.

VICTOR, T.: I agree with Mr. Isman's explanation of his negative vote.

13D-56 Log #CP9 AUT-RSS **Final Action: Accept**
(8.6.7(5))

Submitter: Technical Committee on Residential Sprinkler Systems,
Recommendation: Move item (5) from the list and renumber as 8.6.7.1.
Substantiation: This is an independent requirement and does not belong in the list.
Committee Meeting Action: Accept
Number Eligible to Vote: 28
Ballot Results: Affirmative: 21 Negative: 2
Ballot Not Returned: 5 Baker, G., Ketner, C., Madrzykowski, D., Maruskin, M., Schirmer, C.
Explanation of Negative:

ISMAN, K.: Item 5 is an extension of item 4 in the list. If you take it out of the list, you end up in a situation where you are not allowing sprinklers to be omitted from skylights that have plastic tops because the materials do not meet item 4 in the list.

VICTOR, T.: I agree with Mr. Isman's explanation of his negative vote.

13D-57 Log #41 AUT-RSS **Final Action: Reject**
(Chapter 9 (New))

Submitter: Dana Haagensen, Dana R. Haagensen Consulting
Recommendation: Create a new Chapter 9 whose scope and application deals with a retrofit sprinkler application that is only enforceable where specifically adopted by the local codes. This chapter would be based on a single-sprinkler design, water supply through domestic plumbing/fittings, a single sprinkler installed over the stove, and sprinklers in any living room, family room, den or similar. Fire sprinklers would be standard quick-response sprinklers (pendent, upright, sidewall). A flushing connection would be required downstream of any sprinklers to outside or proper drain. The extent of sprinkler coverage could also be based on agreements with the occupants as to common fire sources - smoking, candles, space heaters.
Substantiation: Fire prevention folks are making slow progress in sprinklering homes, where the biggest fire problem is. What are the current estimates for the percentage of homes with fire sprinklers (<5%?). I would not want to weaken the requirements in the current NFPA 13D for the sake of getting more sprinkler systems in homes. The requirements of the 2007 edition are technically sound and do not lead to an unreasonable effort to install a system in new construction. Adding such a Chapter 9 would allow a jurisdiction to require, retroactively, fire sprinklers in existing or (potentially) non-substantial renovation with reference to a nationally recognized standard. Table A.1.2(b), in the 2007 edition, identifies that most residential civilian fire deaths occur when the fire starts in the living room (or similar), the bedroom and the kitchen. Also, note that kitchen fires are the most common location of fire origin in homes. The sprinklering of bedrooms would likely have an affect. However, requiring bedrooms to be sprinklered could raise the cost of the system significantly since most dwellings will have multiple bedrooms. Typically the average home has only one stove and one/two family room(s). Standard quick-response heads are not necessarily the ideal for tenability, but are a lot less restrictive in terms of water-supply requirements. This Chapter would not try to address the qualifications of the installer, as qualifications would be decided by the practice in each state. A flushing connection would helpfully calm the fears of water purveyors that there won't be dead end connections, and might allow for no backflow preventors as is common practice with outside garden hose connections.
Committee Meeting Action: Reject
Committee Statement: This issue of single sprinkler design is addressed and clarified in Proposal 13D-67a (Log # CP13). The residential sprinkler system is intended to be a life safety system. The life loss data supports the location of sprinklers as currently expressed in the standard. Any reduction in the level of protection would reduce the effectiveness of the residential sprinkler systems.
Number Eligible to Vote: 28
Ballot Results: Affirmative: 23
Ballot Not Returned: 5 Baker, G., Ketner, C., Madrzykowski, D., Maruskin, M., Schirmer, C.

13D-57a Log #CP14 AUT-RSS **Final Action: Accept**
(8.3.3)

Submitter: Technical Committee on Residential Sprinkler Systems,
Recommendation: The following are the recommendations of the task group.

1) Revise Table 8.3.3.2.3 to be the same as Table 7.6.2.2 from NFPA 13-2007

2) Revise Table 8.3.3.2.5 to be the same as Table 7.6.2.3 from NFPA 13-2007

3) Insert a new Figure 8.3.3.2.3(a) by copying Figure 7.6.2.5(b) from NFPA 13-2007

4) Insert a new Figure 8.3.3.2.3(b) by copying Figure 7.6.2.5(c) from NFPA 13-2007

5) Add a new section 8.3.3.4 as follows "Where pendent sprinklers are utilized, and where a hydrostatic test is to be performed, the hydrostatic test is to be performed with water and then the water is to be completely drained before antifreeze solution is placed in the system, or the hydrostatic test is to be performed with antifreeze solution at the proper concentration for the system."

6) Add a new section 8.3.3.5 as follows: "A placard shall be placed on the antifreeze system main valve that indicates the manufacturer type and brand of antifreeze solution, the concentration of antifreeze solution used, and the volume of the antifreeze solution used in the system."

7) Add an additional sentence to existing 8.3.3.2.3 as follows, "The concentration of antifreeze solutions shall be limited to the minimum necessary for the anticipated minimum temperature."

Substantiation: Items 1-4 are primarily a correlation issue with NFPA 13.

(5) This is a modified version of sections 7.6.1.3 and 7.6.1.3.1 of NFPA 13-2007. Since a hydrostatic test is not performed on all NFPA 13D systems, the rule needed to be modified.

(6) This is taken from section 7.6.1.5 of NFPA 13 and is a very good idea to help in the maintenance of systems long after the home has been occupied.

(7)This is the same idea as section 7.6.2.6 of NFPA 13-2007. The concept was necessary because antifreeze with too-high a concentration was being used in what some contractors thought was a safety factor. There are two problems with using a concentration that is too high. The first is that the higher solutions actually have higher freezing points, so it does not provide better protection. The second is that the solution is a combustible liquid that is okay when mixed

with water, but if there is too much antifreeze in the mix, there is a potential for the fire to be effected by the solution.
Committee Meeting Action: Accept
Number Eligible to Vote: 28
Ballot Results: Affirmative: 23
Ballot Not Returned: 5 Baker, G., Ketner, C., Madrzykowski, D., Maruskin, M., Schirmer, C.

13D-58 Log #7 AUT-RSS **Final Action: Accept in Principle**
(A.1.1)

Submitter: Peter T. Schwab, Wayne Automatic Fire Sprinklers, Inc.
Recommendation: Revise text to read as follows:
NFPA 13D is appropriate for protection against fire hazards only in one- and two-family dwellings and manufactured homes. Townhomes with connecting fire walls that classify as separate buildings per the local building code or AHJ should be considered single family dwellings and an NFPA 13D system is appropriate. Residential portions...".
Substantiation: A townhouse unit is essentially the same as a single family dwelling. The only difference is that it is on a zero lot line parcel. The IBC and NFPA 5000 allow units to be constructed side by side and if they are separated with the appropriate fire wall, are considered separate buildings.
Committee Meeting Action: Accept in Principle
See Committee Action on Proposal 13D-5 (Log #8).
Committee Statement: Proposal 13D- 5 (Log #8) addresses this issue.
Number Eligible to Vote: 28
Ballot Results: Affirmative: 22 Negative: 1
Ballot Not Returned: 5 Baker, G., Ketner, C., Madrzykowski, D., Maruskin, M., Schirmer, C.
Explanation of Negative:
HAAGENSEN, D.: See explanation for negative vote on 13D-5 (Log #8).

13D-59 Log #51 AUT-RSS **Final Action: Accept in Principle**
(A.1.1)

Submitter: Marcelo M. Hirschler, GBH International
Recommendation: Revise as follows:
A.1.1 NFPA 13D is appropriate for protection against fire hazards only in one- and two-family dwellings and manufactured homes. Residential portions of any other type of building or occupancy should be protected with residential sprinklers in accordance with NFPA 13, Standard for the Installation of Sprinkler Systems, or in accordance with NFPA 13R, Standard for the Installation of Sprinkler Systems in Residential Occupancies up to and including Four Stories in Height. Other portions of such buildings should be protected in accordance with NFPA 13 or NFPA 13R as appropriate for areas outside the dwelling unit.
The criteria in this standard are based on full-scale fire tests of rooms containing typical furnishings found in residential living rooms, kitchens, and bedrooms. The furnishings were arranged as typically found in dwelling units in a manner similar to that shown in Figure A.1.1(a), Figure A.1.1(b), and Figure A.1.1(c). Sixty full-scale fire tests were conducted in a two-story dwelling in Los Angeles, California, and 16 tests were conducted in a 14 ft (4.3 m) wide mobile home in Charlotte, North Carolina.
Sprinkler systems designed and installed according to this standard are expected to prevent flashover within the compartment of origin where sprinklers are installed in the compartment. A sprinkler system designed and installed according to this standard cannot, however, be expected to completely control a fire involving fuel loads that are significantly higher than average for dwelling units [10 lb/ft2 (49 kg/m2)] and where the interior finish has an unusually high flame spread index (greater than 225), when tested in accordance with ASTM E 84, Standard Test Method of Surface Burning Characteristics of Building Materials.
(For protection of multifamily dwellings, see NFPA 13 or NFPA 13R.)
Also, add reference to ASTM E84 into Annex B.
Substantiation: It is important to reference the test method used to assess flame spread index. The test method is the Steiner tunnel test, as standardized in ASTM 84. NFPA 255 is a similar test method but it is in the process of being withdrawn by the NFPA Fire Tests Committee. The NFPA 5000/101 Technical Committee recently met for its ROC meeting and made recommendations to other NFPA 101 and NFPA 5000 committees that all references to NFPA 255 be replaced by ones to ASTM E 84, which is being kept fully up-to-date on activities on mounting methods.
I am the chairman of the NFPA Advisory Committee on the Glossary on Terminology. The committee was created by NFPA Standards Council to provide consistency in terminology throughout the NFPA documents. The committee has not had time to review all of my recommendations for NFPA 13, NFPA 13D and NFPA 13R definition of terms. Therefore, this proposal is being submitted in my own name only.
Committee Meeting Action: Accept in Principle
Add "or ANSI/UL 723, Standard for Test for Surface Burning Characteristics of Building Materials" at the end of the proposed new text referencing ASTM E 84.
Committee Statement: Either ASTM E 84 or ANSI/UL 723 can be used to develop a flame-spread index.
Number Eligible to Vote: 28
Ballot Results: Affirmative: 23
Ballot Not Returned: 5 Baker, G., Ketner, C., Madrzykowski, D., Maruskin, M., Schirmer, C.

13D-59a Log #CP12 AUT-RSS **Final Action: Accept**
(A.1.2)

Submitter: Technical Committee on Residential Sprinkler Systems,
Recommendation: Delete "property damage" in Section 1.2.
Add new first sentence to A.1.2 to read as follows: "While the purpose of this standard is to provide improved protection against injury and loss of life, the use of these systems has demonstrated an ability to provide improved protection against property damage.
Substantiation: The primary purpose of this standard is to provide improved protection against injury and loss of life. However, these systems have demonstrated an ability to also provide improved protection against property damage
Committee Meeting Action: Accept
Number Eligible to Vote: 28
Ballot Results: Affirmative: 23
Ballot Not Returned: 5 Baker, G., Ketner, C., Madrzykowski, D., Maruskin, M., Schirmer, C.

13D-60 Log #22 AUT-RSS **Final Action: Accept in Principle**
(A.3.3.9.3 and Figures A.3.3.9.3(a) through (c))

Submitter: Kenneth E. Isman, National Fire Sprinkler Association, Inc.
Recommendation: Revise the annex note to read as follows:
A.3.3.9.3 Multipurpose piping system. Multipurpose piping systems typically feed all of the domestic cold water fixtures in the home. There is a type of sprinkler system commonly referred to as a "passive purge" system where only a single toilet is fed from the sprinkler system (see Figure A.3.3.9.3). The passive purge systems are used in jurisdictions concerned with waste stagnating in the sprinkler piping and posing some concern for the connection to the potable supply. Some water utilities eliminate the requirement for a backflow preventer if a passive purge system is installed. The backflow preventer isn't necessary in any fire sprinkler system. Tests have shown that water that sits in potable piping in fire sprinkler systems for a long time is no greater hazard than the domestic plumbing system, but the passive purge system makes some authorities more comfortable with the fire sprinkler system. A passive purge system is not typically considered a multipurpose system because it does not serve the entire cold water demand in a dwelling.
Also revise the figures as follows:
Revise the caption for figure A.3.3.9.3(a) to read: "Passive Purge System, Generally not considered a Multipurpose System."
Revise Figure A3.3.9.3(b) to not have the loop go through the bathroom so that individual lines to the sink and tub can be shown. Also, provide a line to the sink in the kitchen.
Revise Figure A.3.3.9.3(c) to include a line to the sink in the bathroom and the sink in the kitchen.
Substantiation: The concept of the passive purge system needs to be differentiated from the multipurpose systems that are fully integrated with the plumbing system. The figures also need to be clarified to show that the multipurpose system serve all of the plumbing fixture in the dwelling unit, not just the toilet.
This proposal was approved by the National Fire Sprinkler Association's Engineering and Standards Committee.
Committee Meeting Action: Accept in Principle
Replace the "generally" with "are not"
Committee Statement: Editorial revision for clarification.
Number Eligible to Vote: 28
Ballot Results: Affirmative: 23
Ballot Not Returned: 5 Baker, G., Ketner, C., Madrzykowski, D., Maruskin, M., Schirmer, C.
Comment on Affirmative:
ISMAN, K.: There is a typo in the fourth line of proposed A.3.3.9.3. The words "waste stagnation" should be "water stagnation". There is no waste in a fire sprinkler system.

13D-61 Log #15 AUT-RSS **Final Action: Accept in Principle**
(A.5.2.1)

Submitter: Gary Johnson, Lubrizol Advanced Materials
Recommendation: Add new table and text as follows:
A.5.2.1 This standard anticipates the water supply for the system to be in compliance with the governing plumbing code for the jurisdiction. It is intended that any pipe material or diameter permitted by a plumbing code for one- or two-family dwellings and satisfying the hydraulic criteria of NFPA 13D is considered to be in compliance.
For reference the following information is provided to assist in the determination of acceptable water availability.

SDR 13.5 Pipe (CPVC)

Nominal Pipe Size (in.)	Average Outside Diameter (in.)	Average Inside Diameter (in.)
3/4	1.050	0.874
1	1.315	1.101
1 1/4	1.660	1.394
1 1/2	1.900	1.598
2	2.375	2.003
2 1/2	2.875	2.423
3	3.500	2.95

SDR 9 Pipe (PEX)

Nominal Pipe Size (in.)	Average Outside Diameter (in.)	Average Inside Diameter (in.)
1/2	0.625	0.475
5/8	0.750	0.574
3/4	0.875	0.671
1	1.125	0.862

Substantiation: The addition of this table to the appendix will aid in the determination of the amount of water that each type of pipe can carry. There are noticeable differences in the inside diameters of pipe with the same nominal pipe size. The inclusion of this table in the appendix will identify those differences.
Committee Meeting Action: Accept in Principle
Revise Table titles as follows:
SDR 13.5 IPS Pipe (CPVC)
SDR 9 CTS Pipe (PEX)
Revise Table to add pipes sizes for PEX up to 2 inches.

SDR 9 CTS Pipe (PEX)

Nominal Diameter (in)	O.D. inches[1] (mm)	Wall inches[2] (mm)	I.D. inches (mm)
3/8	0.500 (12.7)	0.070 (1.8)	0.360 (9.1)
1/2	0.625 (15.9)	0.070 (1.8)	0.485 (12.3)
3/4	0.875 (22.2)	0.097 (2.5)	0.680 (17.2)
1	1.125 (28.6)	0.125 (3.2)	0.875 (22.2)
1 1/4	1.375 (34.9)	0.153 (3.9)	1.070 (27.2)
1 1/2	1.625 (41.2)	0.181 (4.6)	1.263 (32.1)
2	2.125 (54.0)	0.236 (6.0)	1.653 (42.0)

[1] Average dimensions from ASTM F 876
[2] Minimum wall thickness from ASTM F 876

Add Table A.6.3.2 and A.6.3.5 from NFPA 13 for pipe sizes up to 3 inches.
(See Tables A.6.3.2 and A.6.3.5 on the following page.)
Revise all table numbers to include only 2 numbers after the decimal.
Paragraph A.5.2.1 has been moved to the body of the standard by Proposal 13D-32 (Log #26).
Committee Statement: Committee agrees with the submitter and decided to expand the information to other types of pipe that might be used for residential sprinkler systems.
Number Eligible to Vote: 28
Ballot Results: Affirmative: 23
Ballot Not Returned: 5 Baker, G., Ketner, C., Madrzykowski, D., Maruskin, M., Schirmer, C.

13D-62 Log #13 AUT-RSS **Final Action: Reject**
(A.5.2.1.3)

Submitter: Gary Johnson, Lubrizol Advanced Materials
Recommendation: Add new text as follows:
An arrangement where a pressure regulating valve or a pressure relief valve is used to maintain a maximum pressure of 130 psi is not acceptable.
Substantiation: This appendix note clarifies the requirements of 5.2.1.3. This is supported by the committee's action during the 2007 ROC on NFPA 13D. The use of pressure regulating devices to control the system pressure is not consistent with the other requirements for the installation of stand alone fire sprinkler systems.
Committee Meeting Action: Reject
Committee Statement: Pressure regulating and pressure reducing valves may be required for certain design considerations.
Number Eligible to Vote: 28
Ballot Results: Affirmative: 23
Ballot Not Returned: 5 Baker, G., Ketner, C., Madrzykowski, D., Maruskin, M., Schirmer, C.

13D-63 Log #16 AUT-RSS **Final Action: Accept**
(A.5.2.2.2)

Submitter: David W. Ash, Lubrizol Advanced Materials
Recommendation: Revise text to read as follows:
A.5.2.2.2 Not all pipe or tube made to ASTM D 3309, Standard Specification for Polybutylene (PB) Plastic Hot- and Cold-Water Distribution Systems, and ASTM F 442, Standard Specification for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe (SDR-PR), as described in 5.2.2.2 is listed for fire sprinkler service. Listed pipe is identified by the logo of the listing agency.
All nonmetallic pipe and fitting materials may be damaged by contact with chemicals found in some construction products, such as thread sealants, leak detectors, firestops, etc. The chemical compatibility of such products with the particular pipe or fitting material must be verified prior to use. Otherwise, contact between the construction product and the pipe or fitting must be avoided.
Substantiation: Nonmetallic fire sprinkler system components can be susceptible to attack from various chemicals. This can result in damaged or cracked pipe and fittings. The manufacturer's installation instructions for nonmetallic pipe and fittings contain warnings about chemical compatibility and the potential for damage. Adding this information to the appendix of NFPA 13D will aid in making this warning known to a broader group.
Committee Meeting Action: Accept
Number Eligible to Vote: 28
Ballot Results: Affirmative: 23
Ballot Not Returned: 5 Baker, G., Ketner, C., Madrzykowski, D., Maruskin, M., Schirmer, C.

13D-64 Log #12 AUT-RSS **Final Action: Reject**
(A.5.2.5.3)

Submitter: Gary Johnson, Lubrizol Advanced Materials
Recommendation: Add new text as follows:
An arrangement where a pressure regulating valve or a pressure relief valve is used to maintain a maximum pressure of 130 psi is not acceptable.
Substantiation: This appendix note clarifies the requirements of 5.2.5.3. This is supported by the committee's action during the 2007 ROC on NFPA 13D. The use of pressure regulating devices to control the system pressure is not consistent with the other requirements for the installation of stand alone fire sprinkler systems.
Committee Meeting Action: Reject
Committee Statement: See Committee Statement on Proposal 13D-62 (Log #13).
Number Eligible to Vote: 28
Ballot Results: Affirmative: 23
Ballot Not Returned: 5 Baker, G., Ketner, C., Madrzykowski, D., Maruskin, M., Schirmer, C.

13D-65 Log #27 AUT-RSS **Final Action: Accept**
(A.6.2)

Submitter: Kenneth E. Isman, National Fire Sprinkler Association, Inc.
Recommendation: Add additional text at the end of the existing A.6.2 as follows:
Figure A.6.2(a) is the preferred method for getting the water supply into the unit for a stand-alone sprinkler system (one that does not also provide direct connections to the cold water fixtures) because the common supply pipe for the domestic system and the sprinkler system between the water supply and the dwelling unit has a single control valve that shuts the sprinkler system, which helps to insure that people that have running water to their domestic fixtures also have fire protection. This serves as a form of supervision for the control valve and can be used to make sure that the valve stays open in place of other, more expensive, options like tamper switches with a monitoring service.
Some water utilities insist on separate taps and supply pipes from the water supply to the dwelling unit for fire sprinkler systems as shown in Figure S.6.2(b), due to concerns about shutting the water supply off for nonpayment of bills and the desire not to shut off fire protection if this ever occurs. While this type of arrangement is acceptable, it is not cost efficient and should be discouraged due to the extra cost burden this places on the building owner. The concern of shutting off the water for nonpayment of bills is a non-issue for a number of reasons. First, the water utilities rarely actually shut off water for nonpayment. Second, if they do shut off water for nonpayment, they are creating violations of all sorts of health and safety codes, allowing people to live in a home without running water. Concern over the fire protection for those individuals when they are violating all kinds of other health codes is disingenuous. It is more likely that the water utility will not shut off the water and will follow other legal avenues to collect on unpaid bills such as liens on property. Millions of people should not have to pay hundreds of millions of dollars to install separate water taps and lines for the few services that might get shut off.

TABLE A.6.3.2 Steel Pipe Dimensions

Nominal Pipe Size		Outside Diameter		Schedule 5				Schedule 10[a]				Schedule 30				Schedule 40			
				Inside Diameter		Wall Thickness		Inside Diameter		Wall Thickness		Inside Diameter		Wall Thickness		Inside Diameter		Wall Thickness	
in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm
½[b]	15	0.840	21.3	—	—	—	—	0.674	17.0	0.083	2.1	—	—	—	—	0.622	15.8	0.109	2.8
¾[b]	20	1.050	26.7	—	—	—	—	0.884	22.4	0.083	2.1	—	—	—	—	0.824	21.0	0.113	2.9
1	25	1.315	33.4	1.185	30.1	0.065	1.7	1.097	27.9	0.109	2.8	—	—	—	—	1.049	26.6	0.133	3.4
1¼	32	1.660	42.2	1.530	38.9	0.065	1.7	1.442	36.6	0.109	2.8	—	—	—	—	1.380	35.1	0.140	3.6
1½	40	1.900	48.3	1.770	45.0	0.065	1.7	1.682	42.7	0.109	2.8	—	—	—	—	1.610	40.9	0.145	3.7
2	50	2.375	60.3	2.245	57.0	0.065	1.7	2.157	54.8	0.109	2.8	—	—	—	—	2.067	52.5	0.154	3.9
2½	65	2.875	73.0	2.709	68.8	0.083	2.1	2.635	66.9	0.120	3.0	—	—	—	—	2.469	62.7	0.203	5.2
3	80	3.500	88.9	3.334	84.7	0.083	2.1	3.260	82.8	0.120	3.0	—	—	—	—	3.068	77.9	0.216	5.5

TABLE A.6.3.5 *Copper Tube Dimensions*

Nominal Tube Size		Outside Diameter		Type K				Type L				Type M			
				Inside Diameter		Wall Thickness		Inside Diameter		Wall Thickness		Inside Diameter		Wall Thickness	
in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm
¾	20	0.875	22.2	0.745	18.9	0.065	1.7	0.785	19.9	0.045	1.1	0.811	20.6	0.032	0.8
1	25	1.125	28.6	0.995	25.3	0.065	1.7	1.025	26.0	0.050	1.3	1.055	26.8	0.035	0.9
1¼	32	1.375	34.9	1.245	31.6	0.065	1.7	1.265	32.1	0.055	1.4	1.291	32.8	0.042	1.1
1½	40	1.625	41.3	1.481	37.6	0.072	1.8	1.505	38.2	0.060	1.5	1.527	38.8	0.049	1.2
2	50	2.125	54.0	1.959	49.8	0.083	2.1	1.985	50.4	0.070	1.8	2.009	51.0	0.058	1.5
2½	65	2.625	66.7	2.435	61.8	0.095	2.4	2.465	62.6	0.080	2.0	2.495	63.4	0.065	1.7
3	80	3.125	79.4	2.907	73.8	0.109	2.8	2.945	74.8	0.090	2.3	2.981	75.7	0.072	1.8

Substantiation: The annex note is proposed to discuss the reasons that Figure A.6.2(a) is preferred to the other options and to address concerns that have been raised by water utilities. Text like this in the annex will establish an NFPA position in a consensus document that can be shown to the water utilities to help make sprinkler systems more affordable.

This proposal was approved by the National Fire Sprinkler Association's Engineering and Standards Committee.

Committee Meeting Action: Accept
Number Eligible to Vote: 28
Ballot Results: Affirmative: 23
Ballot Not Returned: 5 Baker, G., Ketner, C., Madrzykowski, D., Maruskin, M., Schirmer, C.

13D-66 Log #14 AUT-RSS **Final Action: Accept**
(A.6.2(a), A.6.2(b), and A.6.2(c))

Submitter: Gary Johnson, Lubrizol Advanced Materials
Recommendation: Revise text to read as follows:

Figure A.6.2(a) Preferable Arrangement for Stand Alone Piping Systems.

Figure A.6.2(b) Acceptable Arrangement for Stand Alone Piping Systems with Valve Supervision - Option 1.

Figure A.6.2(c) Acceptable Arrangement for Stand Alone Piping Systems with Valve Supervision - Option 2.

Substantiation: Modifying the titles to these diagrams clarifies what they are intended to describe. This was confirmed by the NFPA 13D committee in the actions regarding Proposal 13D-16 during the development of the 2007 edition of NFPA 13D.
Committee Meeting Action: Accept
Number Eligible to Vote: 28
Ballot Results: Affirmative: 23
Ballot Not Returned: 5 Baker, G., Ketner, C., Madrzykowski, D., Maruskin, M., Schirmer, C.

13D-67 Log #29 AUT-RSS **Final Action: Accept**
(A.7.5.5.3 (New))

Submitter: Kenneth E. Isman, National Fire Sprinkler Association, Inc.
Recommendation: Add an annex note to 7.5.5.3 as follows:

A.7.5.5.3 Care should be taken in positioning sprinklers in bathrooms near exhaust fan units. Some exhaust fan units have heaters built in to warm up the bathroom and these units have the potential to activate sprinklers. Combination exhaust fan and heater units should be treated as wall-mounted diffusers for the purposes of using Table 7.5.5.

Substantiation: There have been instances of unwanted sprinkler activations from bathroom exhaust fan units with built in heaters. Installers need to pay more attention to these kinds of details when determining where they are going to put sprinklers in bathrooms.

This proposal was approved by the National Fire Sprinkler Association's Engineering and Standards Committee.

Committee Meeting Action: Accept
Number Eligible to Vote: 28
Ballot Results: Affirmative: 23
Ballot Not Returned: 5 Baker, G., Ketner, C., Madrzykowski, D., Maruskin, M., Schirmer, C.

13D-67a Log #CP13 AUT-RSS **Final Action: Accept**
(A.8.1.2)

Submitter: Technical Committee on Residential Sprinkler Systems,
Recommendation: Add the following language to the Annex

A.8.1.2. Questions are frequently asked regarding the minimum two sprinkler design when certain sprinkler performance statistics have indicated that in a majority of the cases (with residential sprinklers) that the fire is controlled or suppressed with a single sprinkler. While these statistics may be correct, the water supplies for the fire sprinkler systems under which these statistics were generated were designed for two or more sprinklers in the first place. When the fires occurred, the first sprinkler operated in excess of its individual design flow and pressure because the sprinkler system's water supply was strong enough to handle multiple sprinklers and only a single sprinkler opened. At these higher flows and pressures, the discharge from a single sprinkler was sufficient to limit or suppress the heat generated from the fire. This concept is called "hydraulic increase". Hydraulic Increase may also occur when a water supply's capabilities during the fire event exceeded that required by the minimum design requirements of the standard. Since none of the data used to generate the above mentioned statistics captured the capabilities of the water supply in relation to the design requirements, the impact of the Hydraulic Increase on the number of single-sprinkler activations cannot be determined.

But if the minimum water supply requirement of the standard is reduced to only be capable of handling a single sprinkler, then there could be no hydraulic increase safety factor. When the first sprinkler opens, it will only get the flow and pressure that were originally designed for it, and there is a significant potential for that to be insufficient to control the fire given any obstructions and the layout of the space where the fire starts.

The National Institute for Standards and Technology, under a grant from the United States Fire Administration, studied this concept several years ago in the hopes of being able to propose a single sprinkler flow for the 2007 edition of NFPA 13D (see NIST Report NIST GCR 05-875 prepared by Underwriters Laboratories with a publication date of February 2004). Unfortunately, the research did not support the design of a sprinkler system with only the flow for a single sprinkler, even under conditions of small rooms with flat, smooth ceilings. Without the hydraulic increase associated with the two sprinkler design, there were too many fire scenarios where the first sprinkler to open would have insufficient flow to control the fire and then multiple sprinklers would open, causing the room to reach untenable conditions and the water supply to be overrun. These same fire scenarios were easily controlled by a sprinkler system designed for a two sprinkler water supply from the start.

In addition to the NIST tests, the National Fire Sprinkler Association conducted a series of full scale fire tests in simulated bedrooms that were 14 ft x 14 ft with an adjoining hallway, each with flat, smooth, 8 ft high ceilings. The tests were performed to determine better rules for keeping sprinklers clear of obstructions like ceiling fans, but baseline tests were also performed without any obstructions at the ceiling. In nine out of the twelve tests, including the two baseline tests without obstructions at the ceiling, a sprinkler in the hall outside the room of fire origin opened first, followed by the sprinkler in the room of origin. Even though the room of origin met all of the rules of NFPA 13D as a compartment, a sprinkler outside of this room was opening first. All of these fires were controlled by the sprinklers, but if the water supply had only been sufficient for a single sprinkler, there would have been no way for the sprinklers to provide fire control.

Substantiation: This proposal clarifies the committee's intent regarding the single sprinkler design.
Committee Meeting Action: Accept
Number Eligible to Vote: 28
Ballot Results: Affirmative: 23
Ballot Not Returned: 5 Baker, G., Ketner, C., Madrzykowski, D., Maruskin, M., Schirmer, C.

13D-68 Log #42 AUT-RSS **Final Action: Accept**
(B.1.2.3)

Submitter: Bob Eugene, Underwriters Laboratories Inc.
Recommendation: Revise text to read as follows:

B.1.2.3 UL Publications. Underwriters Laboratories Inc., 333 Pfingsten Road, Northbrook, IL 60062-2096.

ANSI/UL 1626, Residential Sprinklers for Fire-Protection Service, ~~1994~~ 2003.

Substantiation: Update referenced standards to current editions in conformance with NFPA Manual of Style Section 1.6.2.3 and 3.6.3.1.3.
Committee Meeting Action: Accept
Number Eligible to Vote: 28
Ballot Results: Affirmative: 23
Ballot Not Returned: 5 Baker, G., Ketner, C., Madrzykowski, D., Maruskin, M., Schirmer, C.