

**NFPA<sup>®</sup>**

# 901

---

Standard Classifications for  
Fire and Emergency Services  
Incident Reporting

---

**2021**



## IMPORTANT NOTICES AND DISCLAIMERS CONCERNING NFPA® STANDARDS

NFPA® codes, standards, recommended practices, and guides (“NFPA Standards”), of which the document contained herein is one, are developed through a consensus standards development process approved by the American National Standards Institute. This process brings together volunteers representing varied viewpoints and interests to achieve consensus on fire and other safety issues. While the NFPA administers the process and establishes rules to promote fairness in the development of consensus, it does not independently test, evaluate, or verify the accuracy of any information or the soundness of any judgments contained in NFPA Standards.

The NFPA disclaims liability for any personal injury, property, or other damages of any nature whatsoever, whether special, indirect, consequential or compensatory, directly or indirectly resulting from the publication, use of, or reliance on NFPA Standards. The NFPA also makes no guaranty or warranty as to the accuracy or completeness of any information published herein.

In issuing and making NFPA Standards available, the NFPA is not undertaking to render professional or other services for or on behalf of any person or entity. Nor is the NFPA undertaking to perform any duty owed by any person or entity to someone else. Anyone using this document should rely on his or her own independent judgment or, as appropriate, seek the advice of a competent professional in determining the exercise of reasonable care in any given circumstances.

The NFPA has no power, nor does it undertake, to police or enforce compliance with the contents of NFPA Standards. Nor does the NFPA list, certify, test, or inspect products, designs, or installations for compliance with this document. Any certification or other statement of compliance with the requirements of this document shall not be attributable to the NFPA and is solely the responsibility of the certifier or maker of the statement.

### REVISION SYMBOLS IDENTIFYING CHANGES FROM THE PREVIOUS EDITION

Text revisions are shaded. A  before a section number indicates that words within that section were deleted and a  to the left of a table or figure number indicates a revision to an existing table or figure. When a chapter was heavily revised, the entire chapter is marked throughout with the  symbol. Where one or more sections were deleted, a • is placed between the remaining sections. Chapters, annexes, sections, figures, and tables that are new are indicated with an **N**.

Note that these indicators are a guide. Rearrangement of sections may not be captured in the markup, but users can view complete revision details in the First and Second Draft Reports located in the archived revision information section of each code at [www.nfpa.org/docinfo](http://www.nfpa.org/docinfo). Any subsequent changes from the NFPA Technical Meeting, Tentative Interim Amendments, and Errata are also located there.

### REMINDER: UPDATING OF NFPA STANDARDS

Users of NFPA codes, standards, recommended practices, and guides (“NFPA Standards”) should be aware that these documents may be superseded at any time by the issuance of a new edition, may be amended with the issuance of Tentative Interim Amendments (TIAs), or be corrected by Errata. It is intended that through regular revisions and amendments, participants in the NFPA standards development process consider the then-current and available information on incidents, materials, technologies, innovations, and methods as these develop over time and that NFPA Standards reflect this consideration. Therefore, any previous edition of this document no longer represents the current NFPA Standard on the subject matter addressed. NFPA encourages the use of the most current edition of any NFPA Standard [as it may be amended by TIA(s) or Errata] to take advantage of current experience and understanding. An official NFPA Standard at any point in time consists of the current edition of the document, including any issued TIAs and Errata then in effect.

To determine whether an NFPA Standard has been amended through the issuance of TIAs or corrected by Errata, visit the “Codes & Standards” section at [www.nfpa.org](http://www.nfpa.org).

## **ADDITIONAL IMPORTANT NOTICES AND DISCLAIMERS CONCERNING NFPA® STANDARDS**

### **Updating of NFPA Standards**

Users of NFPA codes, standards, recommended practices, and guides (“NFPA Standards”) should be aware that these documents may be superseded at any time by the issuance of a new edition, may be amended with the issuance of Tentative Interim Amendments (TIAs), or be corrected by Errata. It is intended that through regular revisions and amendments, participants in the NFPA standards development process consider the then-current and available information on incidents, materials, technologies, innovations, and methods as these develop over time and that NFPA Standards reflect this consideration. Therefore, any previous edition of this document no longer represents the current NFPA Standard on the subject matter addressed. NFPA encourages the use of the most current edition of any NFPA Standard [as it may be amended by TIA(s) or Errata] to take advantage of current experience and understanding. An official NFPA Standard at any point in time consists of the current edition of the document, including any issued TIAs and Errata then in effect.

To determine whether an NFPA Standard has been amended through the issuance of TIAs or corrected by Errata, visit the “Codes & Standards” section at [www.nfpa.org](http://www.nfpa.org).

### **Interpretations of NFPA Standards**

A statement, written or oral, that is not processed in accordance with Section 6 of the Regulations Governing the Development of NFPA Standards shall not be considered the official position of NFPA or any of its Committees and shall not be considered to be, nor be relied upon as, a Formal Interpretation.

### **Patents**

The NFPA does not take any position with respect to the validity of any patent rights referenced in, related to, or asserted in connection with an NFPA Standard. The users of NFPA Standards bear the sole responsibility for determining the validity of any such patent rights, as well as the risk of infringement of such rights, and the NFPA disclaims liability for the infringement of any patent resulting from the use of or reliance on NFPA Standards.

NFPA adheres to the policy of the American National Standards Institute (ANSI) regarding the inclusion of patents in American National Standards (“the ANSI Patent Policy”), and hereby gives the following notice pursuant to that policy:

NOTICE: The user’s attention is called to the possibility that compliance with an NFPA Standard may require use of an invention covered by patent rights. NFPA takes no position as to the validity of any such patent rights or as to whether such patent rights constitute or include essential patent claims under the ANSI Patent Policy. If, in connection with the ANSI Patent Policy, a patent holder has filed a statement of willingness to grant licenses under these rights on reasonable and nondiscriminatory terms and conditions to applicants desiring to obtain such a license, copies of such filed statements can be obtained, on request, from NFPA. For further information, contact the NFPA at the address listed below.

### **Law and Regulations**

Users of NFPA Standards should consult applicable federal, state, and local laws and regulations. NFPA does not, by the publication of its codes, standards, recommended practices, and guides, intend to urge action that is not in compliance with applicable laws, and these documents may not be construed as doing so.

### **Copyrights**

NFPA Standards are copyrighted. They are made available for a wide variety of both public and private uses. These include both use, by reference, in laws and regulations, and use in private self-regulation, standardization, and the promotion of safe practices and methods. By making these documents available for use and adoption by public authorities and private users, the NFPA does not waive any rights in copyright to these documents.

Use of NFPA Standards for regulatory purposes should be accomplished through adoption by reference. The term “adoption by reference” means the citing of title, edition, and publishing information only. Any deletions, additions, and changes desired by the adopting authority should be noted separately in the adopting instrument. In order to assist NFPA in following the uses made of its documents, adopting authorities are requested to notify the NFPA (Attention: Secretary, Standards Council) in writing of such use. For technical assistance and questions concerning adoption of NFPA Standards, contact NFPA at the address below.

### **For Further Information**

All questions or other communications relating to NFPA Standards and all requests for information on NFPA procedures governing its codes and standards development process, including information on the procedures for requesting Formal Interpretations, for proposing Tentative Interim Amendments, and for proposing revisions to NFPA standards during regular revision cycles, should be sent to NFPA headquarters, addressed to the attention of the Secretary, Standards Council, NFPA, 1 Batterymarch Park, P.O. Box 9101, Quincy, MA 02269-9101; email: [stds\\_admin@nfpa.org](mailto:stds_admin@nfpa.org).

For more information about NFPA, visit the NFPA website at [www.nfpa.org](http://www.nfpa.org). All NFPA codes and standards can be viewed at no cost at [www.nfpa.org/docinfo](http://www.nfpa.org/docinfo).

Copyright © 2020 National Fire Protection Association®. All Rights Reserved.

## NFPA® 901

### Standard Classifications for

## Fire and Emergency Services Incident Reporting

### 2021 Edition

This edition of NFPA 901, *Standard Classifications for Fire and Emergency Services Incident Reporting*, was prepared by the Technical Committee on Fire Reporting. It was issued by the Standards Council on October 5, 2020, with an effective date of October 25, 2020, and supersedes all previous editions.

This edition of NFPA 901 was approved as an American National Standard on October 25, 2020.

### Origin and Development of NFPA 901

As the objectives of fire defense management have narrowed from the control of conflagrations early in the 20th century to the control of fires in rooms, the need for uniform information about fire incidents and an effective method of collecting and using that information has become evident.

In 1938, a fire reporting system prepared by NFPA was published by the International City Managers Association. This system served as a start toward the uniform reporting of fire incident information.

In 1951, the NFPA Committee on Fire Casualty Statistics was formed. The report of that committee was adopted as NFPA 3 in May 1953. In its introduction, that document contained the following statement: “The absence of accurate and detailed statistics on fire casualties has hindered attempts by educational and other means to reduce the number of deaths and injuries from fire.”

In 1961, the NFPA Board of Directors, after two years of surveying the need, called a national conference on fire reporting. On the recommendation of that conference, an NFPA committee was formed in February 1963 to devise a uniform and useful system of fire reporting adaptable to the needs of the fire service in the United States and Canada. From 1963 to 1969, the committee strived to develop a uniform language for fire defense management and issued tentative documents as work progressed.

In 1969, the five tentative documents were combined and officially adopted as the first edition of NFPA 901, *Coding System for Fire Reporting*. The document was updated in 1971 with minor revisions. With the 1973 edition, the title was changed to *Uniform Coding for Fire Protection*, and data elements were added to report on mobile property and the details of fire casualties (deaths and injuries). By the 1976 edition, the committee was getting feedback from persons using the data elements in reporting systems and was able to make modifications to improve the understanding of the data elements. Data elements were also added to report structural fire defenses and their performance during incidents.

In 1981, data elements were added to enhance the reporting of wildland fires, firefighter casualties, and pre-hospital medical care administered. The 1986 edition introduced data elements for reporting on hazardous material. Those data elements were expanded in the 1991 edition to a comprehensive set of hazardous materials data elements. The 1995 edition reorganized the document editorially to better group the data elements in relation to each other. Discussion of how the data elements were intended to be used was added, and classifications within some of the data elements were revised to reflect changing needs when capturing or using data. Also, the title for the 1995 edition was changed to *Standard Classifications for Incident Reporting and Fire Protection Data*.

The 2001 edition added several new data elements and extensively revised others based on a detailed analysis by the US Fire Administration and the National Fire Information Council of the way that data are collected and used by fire departments. Some of the changes split the data elements so that a data element could focus on a single question or issue rather than multiple issues, as had sometimes been the case in the past. New technology available for data capture and storage no

longer placed limitations on the record size and data manipulation, which had sometimes been obstacles in the past.

The 2006 edition was revised to comply with the *Manual of Style for NFPA Technical Committee Documents*. Various sections were updated editorially for clarification.

The 2011 edition was a reconfirmation of the 2006 edition. There were no substantive edits or changes made to the document.

The 2016 edition featured changes to align the language and information with the National Fire Incident Reporting System (NFIRS). An effort was made to tie the two more closely together, and additional tables were added to reflect changes in the NFIRS.

The 2021 edition features a complete reworking of the document. Tables have been consolidated, eliminated, and moved to the annex to make NFPA 901 more usable. New chapters were added, notably on fire investigation, to bring the standard in line with NFPA 921, *Guide for Fire and Explosion Investigations*. Special attention was paid to the current uses of reporting and the structures that make the most sense.

## Technical Committee on Fire Reporting

**David J. Icove**, *Chair*  
The University of Tennessee, TN [U]  
Rep. TC on Fire Investigations

**Vytenis “Vyto” Babrauskas**, Fire Science and Technology Inc., NY [SE]

**Danny E. Beeler**, City of Knoxville Fire Department, TN [E]

**Delvin R. Bunton**, US Department of Agriculture, WA [E]

**James Caton**, Donan Fire Investigation, AR [SE]

**Ron G. Corona**, Los Angeles City Fire Department, CA [IM]

**Joseph S. Davis**, Mill Spring Fire Department, NC [U]

**Derryl J. Dion**, Massachusetts Department of Fire Services, MA [U]  
Rep. National Fire Information Council

**Luca Fiorentini**, TECSA, Italy [SE]

**Katelyn Fowler**, Nuclear Electric Insurance Limited (NEIL) Services, DE [I]

**Joshua Stephen Goyet**, Virginia Beach Fire Department, VA [U]

**James W. Horton**, Fort Worth Fire Department, TX [U]

**Thomas Randall MacKay**, The Arizona Fire & Medical Authority, AZ [E]

**Richard J. Meier**, Meier Fire Investigation LLC, FL [SE]

**Lori L. Moore-Merrell**, International Association of Fire Fighters, DC [L]

**Clarence William Potter**, Carrboro Fire Rescue, NC [U]

**William Ratliff**, N Charleston Fire Department, SC [E]

**Stephen P. Rinaldi**, Los Alamos County Fire Department, NM [E]

**Peter Tom**, Emergency Management Solutions, Inc., NJ [M]

**Rexford Wilson**, Lynchburg, VA [SE]

**Felix I. Zemel**, Town of Dover, MA [SE]

### Alternates

**James Patrick Danylik**, Los Angeles Fire Department, CA [IM]  
(Alt. to Ron G. Corona)

**Gregory A. Lampkin**, Knox County Fire Bureau, TN [E]  
(Alt. to Danny E. Beeler)

**Michael G. Meyer**, Emergency Management Solutions, Inc., NJ [M]  
(Alt. to Peter Tom)

**Karen C. Short**, US Department of Agriculture, MT [E]  
(Alt. to Delvin R. Bunton)

### Nonvoting

**Marion A. Long**, US Fire Administration, MD [C]

**Chris Farrell**, NFPA Staff Liaison

*This list represents the membership at the time the Committee was balloted on the final text of this edition. Since that time, changes in the membership may have occurred. A key to classifications is found at the back of the document.*

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

**Committee Scope:** This Committee shall have primary responsibility for documents on standard methods of compiling fire experience data by the fire service. The main purposes of this Committee are to develop standard occupancy and cause classification for use by cities and states in the reporting of fires, to suggest other useful information that needs to be collected, and to develop standard forms for these purposes.

## Contents

|                                                                 |        |                                                                   |        |
|-----------------------------------------------------------------|--------|-------------------------------------------------------------------|--------|
| <b>Chapter 1 Administration</b> .....                           | 901-6  | 8.5 Heat Source. ....                                             | 901-33 |
| 1.1 Scope. ....                                                 | 901-6  | 8.6 Material Identification. ....                                 | 901-34 |
| 1.2 Purpose. ....                                               | 901-6  | 8.7 Level of Origin. ....                                         | 901-37 |
| 1.3 Application. ....                                           | 901-6  | 8.8 Occupant of Room or Space of Origin at Time of Ignition. .... | 901-37 |
| <b>Chapter 2 Referenced Publications</b> .....                  | 901-6  | 8.9 Wildland Fuel Model. ....                                     | 901-37 |
| 2.1 General. ....                                               | 901-6  | 8.10 Fire Danger Rating Class. ....                               | 901-37 |
| 2.2 NFPA Publications. ....                                     | 901-6  | <b>Chapter 9 Incident Growth and Spread</b> .....                 | 901-38 |
| 2.3 Other Publications. ....                                    | 901-6  | 9.1 Administration. ....                                          | 901-38 |
| 2.4 References for Extracts in Mandatory Sections. ....         | 901-7  | 9.2 Contributing Factors. ....                                    | 901-38 |
| <b>Chapter 3 Definitions</b> .....                              | 901-7  | 9.3 Fire Detection and Alarm. ....                                | 901-39 |
| 3.1 General. ....                                               | 901-7  | <b>Chapter 10 Detection, Alarm, and Control Equipment</b> .....   | 901-40 |
| 3.2 NFPA Official Definitions. (Reserved) .....                 | 901-7  | 10.1 Administration. ....                                         | 901-40 |
| 3.3 General Definitions. ....                                   | 901-7  | 10.2 Limitations. ....                                            | 901-41 |
| <b>Chapter 4 Objectives</b> .....                               | 901-10 | 10.3 Automatic Detection. ....                                    | 901-41 |
| 4.1 Abbreviations for States and Provinces. ....                | 901-10 | 10.4 Automatic Alarm Transmission Coding Structure. ....          | 901-41 |
| 4.2 Abbreviations for Street Types. ....                        | 901-10 | 10.5 Protection. ....                                             | 901-41 |
| 4.3 Objectives. ....                                            | 901-10 | 10.6 Water Supply. ....                                           | 901-43 |
| 4.4 Guiding Concepts for Reporting Systems. ....                | 901-10 | 10.7 Performance of Fire Spread Limitation Features. ....         | 901-43 |
| 4.5 Fact Finding. ....                                          | 901-11 | 10.8 Performance of Exit System. ....                             | 901-43 |
| 4.6 Data Processing. ....                                       | 901-11 | <b>Chapter 11 Fire Department Intervention</b> .....              | 901-43 |
| 4.7 Agency-Specific Classifications. ....                       | 901-11 | 11.1 Purpose. ....                                                | 901-43 |
| 4.8 Other Data. ....                                            | 901-11 | 11.2 Limitations. ....                                            | 901-43 |
| <b>Chapter 5 Incident Identification and Location</b> .....     | 901-11 | 11.3 Incident Type. ....                                          | 901-43 |
| 5.1 Administration. ....                                        | 901-11 | 11.4 Condition of Fire on Arrival. ....                           | 901-46 |
| 5.2 Incident Number. ....                                       | 901-11 | 11.5 Type of Action Taken. ....                                   | 901-46 |
| 5.3 Shift. ....                                                 | 901-11 | 11.6 Fire Suppression Factors. ....                               | 901-47 |
| 5.4 Incident Events. ....                                       | 901-12 | 11.7 Method of Extinguishment. ....                               | 901-47 |
| 5.5 Incident Location. ....                                     | 901-12 | 11.8 Fire Service Resources. ....                                 | 901-49 |
| 5.6 Business, Tenant, or Occupant. ....                         | 901-12 | 11.9 Outside Fire Service Assistance. ....                        | 901-49 |
| 5.7 Property Owner. ....                                        | 901-12 | <b>Chapter 12 Demographic Data</b> .....                          | 901-50 |
| 5.8 Fire Service Personnel. ....                                | 901-13 | 12.1 Administration. ....                                         | 901-50 |
| <b>Chapter 6 Property Use</b> .....                             | 901-13 | 12.2 Date of Birth. ....                                          | 901-50 |
| 6.1 Administration. ....                                        | 901-13 | 12.3 Gender. ....                                                 | 901-50 |
| 6.2 Limitations. ....                                           | 901-13 | 12.4 Race and Origin Coding Structure. ....                       | 901-50 |
| 6.3 General Property Use. ....                                  | 901-13 | 12.5 Ethnicity Coding Structure. ....                             | 901-50 |
| 6.4 Specific Property Use. ....                                 | 901-18 | 12.6 Affiliation. ....                                            | 901-50 |
| 6.5 Mobile Property. ....                                       | 901-18 | 12.7 Relationships. ....                                          | 901-50 |
| 6.6 Property Management. ....                                   | 901-20 | 12.8 Familiarity with the Incident Area. ....                     | 901-50 |
| 6.7 On-Site Material. ....                                      | 901-20 | 12.9 Factors Preventing Escape. ....                              | 901-50 |
| <b>Chapter 7 Structure Characteristics</b> .....                | 901-22 | 12.10 Mobility of Occupant. ....                                  | 901-50 |
| 7.1 Purpose and Application. ....                               | 901-22 | <b>Chapter 13 Property and Human Loss</b> .....                   | 901-52 |
| 7.2 Limitations. ....                                           | 901-22 | 13.1 Administration. ....                                         | 901-52 |
| 7.3 Definition of Structure. ....                               | 901-22 | 13.2 Limitations. ....                                            | 901-52 |
| 7.4 Structure Features. ....                                    | 901-22 | 13.3 Summary Data. ....                                           | 901-52 |
| 7.5 Compartment Characteristics. ....                           | 901-24 | 13.4 Extent of Damage. ....                                       | 901-52 |
| 7.6 Compartment Quality. ....                                   | 901-24 | <b>Chapter 14 Casualty Data</b> .....                             | 901-52 |
| 7.7 External Exposure. ....                                     | 901-24 | 14.1 Purpose and Application. ....                                | 901-52 |
| 7.8 Perimeter Access. ....                                      | 901-24 | 14.2 Case Severity. ....                                          | 901-52 |
| 7.9 Electrical Service Quality. ....                            | 901-25 | 14.3 Apparent Symptom(s). ....                                    | 901-53 |
| 7.10 Heating Service Quality. ....                              | 901-25 | 14.4 Part(s) of Body. ....                                        | 901-53 |
| 7.11 Control of Smoking Practices. ....                         | 901-25 | 14.5 Casualty Type by Situation Found. ....                       | 901-53 |
| 7.12 Fuel Control. ....                                         | 901-25 | 14.6 Human Factors Contributing to Injury or Death. ....          | 901-54 |
| 7.13 Obstacles to Rescue and Fire Control. ....                 | 901-26 | 14.7 Situational Factors Contributing to Injury or Death. ....    | 901-54 |
| <b>Chapter 8 Preliminary Origin</b> .....                       | 901-26 | 14.8 Medical Care for Casualty. ....                              | 901-55 |
| 8.1 Administration. ....                                        | 901-26 |                                                                   |        |
| 8.2 Data Collection. ....                                       | 901-26 |                                                                   |        |
| 8.3 Area of Fire Origin or Release of Hazardous Materials. .... | 901-27 |                                                                   |        |
| 8.4 Equipment Identification. ....                              | 901-27 |                                                                   |        |

|                   |                                                                    |         |                   |                                                  |          |
|-------------------|--------------------------------------------------------------------|---------|-------------------|--------------------------------------------------|----------|
| 14.9              | Activity at Time of Injury. ....                                   | 901– 55 | 16.3              | Discussion and Examples. ....                    | 901– 64  |
| 14.10             | Physical Condition at Time of Injury. ....                         | 901– 56 | 16.4              | Hazardous Materials Identification. ....         | 901– 64  |
| 14.11             | Status of Injured Prior to Alarm at Which<br>Injury Occurred. .... | 901– 56 | 16.5              | Container Description. ....                      | 901– 66  |
| 14.12             | Activity at Time of Fire Service Injury or<br>Accident. ....       | 901– 56 | 16.6              | Release Information. ....                        | 901– 69  |
| 14.13             | Where Fire Service Injury Occurred. ....                           | 901– 57 | 16.7              | Responsible Persons. ....                        | 901– 72  |
| 14.14             | Cause of Injury. ....                                              | 901– 57 | 16.8              | Disposition of Incident. ....                    | 901– 72  |
| 14.15             | Factor Contributing to Injury. ....                                | 901– 58 | <b>Chapter 17</b> | <b>Fire Origin and Cause Investigation</b> ..... | 901– 73  |
| 14.16             | Object Involved in Injury. ....                                    | 901– 58 | 17.1              | Administration. ....                             | 901– 73  |
| 14.17             | Protective Equipment. ....                                         | 901– 59 | 17.2              | Case Management. ....                            | 901– 73  |
| <b>Chapter 15</b> | <b>Prehospital Care</b> .....                                      | 901– 60 | 17.3              | Personal Factors. ....                           | 901– 73  |
| 15.1              | Administration. ....                                               | 901– 60 | 17.4              | Incendiary Devices. ....                         | 901– 73  |
| 15.2              | Emergency Medical Responder. ....                                  | 901– 60 | 17.5              | Ignition. ....                                   | 901– 74  |
| 15.3              | Patient Physical Condition. ....                                   | 901– 61 | 17.6              | Flame Development. ....                          | 901– 75  |
| 15.4              | Cardiac Condition/Assessment. ....                                 | 901– 62 | 17.7              | Smoke Development. ....                          | 901– 76  |
| 15.5              | Prehospital Care Provided. ....                                    | 901– 62 | 17.8              | Weather Information. ....                        | 901– 77  |
| 15.6              | Medication. ....                                                   | 901– 63 | 17.9              | Scene Information. ....                          | 901– 77  |
| 15.7              | Patient Disposition. ....                                          | 901– 63 | 17.10             | Juvenile Firesetter. ....                        | 901– 79  |
| 15.8              | Patient Transport Services. ....                                   | 901– 63 | <b>Annex A</b>    | <b>Explanatory Material</b> .....                | 901– 79  |
| <b>Chapter 16</b> | <b>Hazardous Materials Data</b> .....                              | 901– 64 | <b>Annex B</b>    | <b>Informational References</b> .....            | 901– 163 |
| 16.1              | Administration. ....                                               | 901– 64 | <b>Index</b>      | .....                                            | 901– 164 |
| 16.2              | Limitations. ....                                                  | 901– 64 |                   |                                                  |          |

## NFPA 901

## Standard Classifications for

## Fire and Emergency Services Incident Reporting

2021 Edition

**IMPORTANT NOTE:** This NFPA document is made available for use subject to important notices and legal disclaimers. These notices and disclaimers appear in all publications containing this document and may be found under the heading “Important Notices and Disclaimers Concerning NFPA Standards.” They can also be viewed at [www.nfpa.org/disclaimers](http://www.nfpa.org/disclaimers) or obtained on request from NFPA.

**UPDATES, ALERTS, AND FUTURE EDITIONS:** New editions of NFPA codes, standards, recommended practices, and guides (i.e., NFPA Standards) are released on scheduled revision cycles. This edition may be superseded by a later one, or it may be amended outside of its scheduled revision cycle through the issuance of Tentative Interim Amendments (TIAs). An official NFPA Standard at any point in time consists of the current edition of the document, together with all TIAs and Errata in effect. To verify that this document is the current edition or to determine if it has been amended by TIAs or Errata, please consult the National Fire Codes® Subscription Service or the “List of NFPA Codes & Standards” at [www.nfpa.org/docinfo](http://www.nfpa.org/docinfo). In addition to TIAs and Errata, the document information pages also include the option to sign up for alerts for individual documents and to be involved in the development of the next edition.

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

A reference in brackets [ ] following a section or paragraph indicates material that has been extracted from another NFPA document. Extracted text may be edited for consistency and style and may include the revision of internal paragraph references and other references as appropriate. Requests for interpretations or revisions of extracted text shall be sent to the technical committee responsible for the source document.

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

## Chapter 1 Administration

### 1.1 Scope.

**1.1.1** This document describes and defines data elements and classifications used by fire and emergency services to report incidents, including fire, life safety, and response activity data.

**1.1.2** This document does not provide guidelines for a reporting system or related forms.

**1.1.3\*** A report completed in accordance with this document is not to be used as a fire or explosion investigation report. If a separate fire or explosion investigation report is not completed, consideration shall be given to including data elements listed in Table A.1.1.3 in the narrative of the incident report.

### 1.2 Purpose.

**1.2.1** This document provides a common language for the collection of pre-incident information, fire and other emergency incident data, and post-incident damage assessments.

**1.2.2** This standard defines numeric classifications for various data elements that describe fire protection and fire service information.

### 1.3 Application.

**1.3.1** This standard applies to the preliminary reports of fire or emergency services agencies.

**1.3.2** This standard does not apply to reports for fire or explosion investigations.

## Chapter 2 Referenced Publications

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

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

NFPA 30, *Flammable and Combustible Liquids Code*, 2021 edition.

NFPA 72®, *National Fire Alarm and Signaling Code*®, 2019 edition.

NFPA 80A, *Recommended Practice for Protection of Buildings from Exterior Fire Exposures*, 2017 edition.

NFPA 220, *Standard on Types of Building Construction*, 2021 edition.

NFPA 1021, *Standard for Fire Officer Professional Qualifications*, 2020 edition.

NFPA 1033, *Standard for Professional Qualifications for Fire Investigator*, 2014 edition.

NFPA 5000®, *Building Construction and Safety Code*®, 2021 edition.

### 2.3 Other Publications.

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

ASTM D323, *Standard Test Method for Vapor Pressure of Petroleum Products (Reid Method)*, 2015a edition.

**2.3.2 US Government Publications.** US Government Publishing Office, 732 North Capitol Street, NW, Washington, DC 20401-0001.

*Code Manual*, National Crime Information Center (NCIC), US Department of Justice, Federal Bureau of Investigation.

ERG RSPA-5800.6, *Emergency Response Guidebook*.

Title 49, Code of Federal Regulations, Part 173: Subpart C — Definitions, Classification and Packaging for Class 1; Subpart D — Definitions, Classification, Packing Group Assignments and Exceptions for Hazardous Materials Other Than Class 1 and Class 7; and Subpart I — Class 7 (Radioactive) Materials.

**2.3.3 US Postal Service Publications.** US Postal Service, 475 L'Enfant Plaza SW, Washington, DC 20260-6800.

Publication 65, *National Five-Digit ZIP Code and Post Office Directory*, 1999 edition.

### 2.3.4 Other Publications.

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

## ▲ 2.4 References for Extracts in Mandatory Sections.

NFPA 30, *Flammable and Combustible Liquids Code*, 2018 edition.

NFPA 53, *Recommended Practice on Materials, Equipment, and Systems Used in Oxygen-Enriched Atmospheres*, 2016 edition.

NFPA 68, *Standard on Explosion Protection by Deflagration Venting*, 2018 edition.

NFPA 101®, *Life Safety Code®*, 2018 edition.

NFPA 221, *Standard for High Challenge Fire Walls, Fire Walls, and Fire Barrier Walls*, 2018 edition.

NFPA 306, *Standard for the Control of Gas Hazards on Vessels*, 2019 edition.

NFPA 400, *Hazardous Materials Code*, 2019 edition.

NFPA 921, *Guide for Fire and Explosion Investigations*, 2017 edition.

NFPA 1051, *Standard for Wildland Firefighting Personnel Professional Qualifications*, 2016 edition.

NFPA 1141, *Standard for Fire Protection Infrastructure for Land Development in Wildland, Rural, and Suburban Areas*, 2017 edition.

NFPA 5000®, *Building Construction and Safety Code®*, 2018 edition.

## Chapter 3 Definitions

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

### 3.2 NFPA Official Definitions. (Reserved)

### 3.3 General Definitions.

**3.3.1 Alarm.** Any notification made to a fire or emergency services organization that a situation exists or could exist that requires a response.

**3.3.2 Arc.** A high-temperature luminous electric discharge across a gap or through a medium such as charred insulation. [921, 2017]

**3.3.3 Area of Origin.** A structure, part of a structure, or general geographic location within a fire scene, in which the "point of origin" of a fire or explosion is reasonably believed to be located. [921, 2017]

**3.3.4 Automatic.** Capable of performing a function without the necessity of human intervention. [101, 2018]

**3.3.5\* Backfire.** A fire set along the inner edge of a fire control line to consume the fuel in the path of a wildland fire or change the direction of force of the fire's convection column.

**3.3.6 Building.** A structure enclosed with walls and a roof and used to enclose an occupancy.

**3.3.7 Building Fire.** See 3.3.91, Structure Fire.

**3.3.8 Burning.** See 3.3.13, Combustion.

**3.3.9 Census Data.** Enumeration and demographic population data available by statistical areas from a governmental agency.

**3.3.10 Char.** Carbonaceous material that has been burned or pyrolyzed and has a blackened appearance. [921, 2017]

**3.3.11 Combustible.** Capable of undergoing combustion. [921, 2017]

**3.3.12 Combustible Liquid.** Any liquid that has a closed-cup flash point at or above 100°F (37.8°C). [306, 2019]

**3.3.13 Combustion.** A chemical process of oxidation that occurs at a rate fast enough to produce heat and usually light in the form of either a glow or flame. [921, 2017]

**3.3.14 Complex.** See 3.3.48, General Property Use.

**3.3.15\* Confine a Fire.** To restrict a fire within determined boundaries established either prior to the fire or during the fire. For wildland fires, the strategy employed in appropriate responses by which a fire perimeter is managed by a combination of direct and indirect actions and use of natural topographic features, fuel, and weather factors.

**3.3.16 Contain a Fire.** To take suppression action that is expected to stop the fire spread; for wildland fires, signifies that a control line has been completed around the fire and any associated spot fires.

**3.3.17 Contents Fire.** See 3.3.91, Structure Fire.

**3.3.18 Emergency Medical Responder (EMR).** A person who has trained to at least advanced first aid and has additional training but is not an EMT.

**3.3.19 Emergency Medical Services (EMS).** Organization providing patient services that might include assessment, treatment, and other prehospital procedures.

**3.3.20 Emergency Medical Technician (EMT).** A person who has completed a certified basic life support program and holds a current certificate or license.

**3.3.21 Emergency Rescue Vehicle.** A vehicle that is not designed for patient transport, but that contains tools, advanced life support equipment, and personnel capable of providing extrication and emergency medical care.

**3.3.22 Emergency Scene.** The area encompassed by the incident and the surrounding area needed by the emergency forces to stage apparatus and mitigate the incident.

**3.3.23 Explosion.** The sudden conversion of potential energy (chemical or mechanical) into kinetic energy with the production and release of gases under pressure, or the release of gas under pressure. These high-pressure gases then do mechanical work such as moving, changing, or shattering nearby materials. [921, 2017]

**3.3.24 Exposure.** Any fixed or mobile property threatened by a fire or other hazard in any other fixed or mobile property.

**3.3.25\* Exposure Fire.** A fire in a building, structure, vehicle, or outside property resulting from a fire outside that building, structure, vehicle, or outside property.

**3.3.26 Fatality.** An injury that is fatal or becomes fatal within one year of the incident.

**3.3.27 Fire.** A rapid oxidation process, which is a chemical reaction resulting in the evolution of light and heat in varying intensities. [921, 2017]

Δ **3.3.28\* Fire Area.** The boundary of fire effects within a scene in which the area of origin will be located.

• **3.3.29 Fire Barrier Wall.** A wall, other than a fire wall, having a fire resistance rating.

**3.3.30 Fire Casualty.** A person who is injured or dies at the scene of a fire, whether from natural causes, direct involvement with the fire, or an accident sustained while involved in fire control, a rescue attempt, or escaping from the dangers of the fire.

**3.3.31 Fire Contained.** That point in time when fire spread is stopped but the fire is not necessarily under control.

**3.3.32 Fire Control Line.** Comprehensive term for all constructed or natural barriers and treated fire edges used to control a wildland fire.

**3.3.33\* Fire Damage.** The total damage to a building, structure, vehicle, natural vegetation cover, or outside property resulting from a fire and the act of controlling that fire.

• **3.3.34 Fire Extinguished.** See 3.3.37, Fire Out.

**3.3.35 Fire Ground.** See 3.3.22, Emergency Scene.

**3.3.36 Fire or Emergency Services Personnel.** All employees, whether career or volunteer, of a fire or emergency services organization who are assigned or might be assigned to perform duties at emergency incidents.

**3.3.37 Fire Out.** The point in time when there is no longer any sign of active combustion.

**3.3.38 Fire-Rated Assembly.** An assembly (e.g., wall, floor, or roof) that has been tested using standard test methods and has received at least a 1-hour fire resistance rating.

**3.3.39 Fire-Rated Compartment.** A complete compartment surrounded on all sides by fire-rated assemblies having a 1-hour fire resistance rating or more.

Δ **3.3.40\* Fire Under Control.** The point in time when a fire is suppressed and no longer threatens destruction of additional property.

**3.3.41 Fire Wall.** A wall separating buildings or subdividing a building to prevent the spread of fire and having a fire resistance rating and structural stability. [221, 2018]

Δ **3.3.42 Fixed Object.** An object, device, or appliance that is fastened or secured at a specific location.

**3.3.43 Fixed Property Use.** See 3.3.88, Specific Property Use.

**3.3.44 Flames.** A body or stream of gaseous material involved in the combustion process and emitting radiant energy at specific wavelength bands determined by the combustion chemistry of the fuel.

**3.3.45 Flammable Liquid.** Any liquid that has a closed-cup flash point below 100°F (37.8°C), as determined by the test procedures and apparatus set forth in Section 4.4 of NFPA 30, and a Reid vapor pressure that does not exceed an absolute pressure of 40 psi (276 kPa) at 100°F (37.8°C), as determined by ASTM D323, *Standard Test Method for Vapor Pressure of Petroleum Products (Reid Method)*. Flammable liquids are classified according to Section 4.3 of NFPA 30. [30, 2018]

**3.3.46 Fuel.** Any material that will maintain combustion under specified environmental conditions. [53, 2016]

**3.3.47 Gas.** The state of matter characterized by complete molecular mobility and unlimited expansion; used synonymously with the term *vapor*. [68, 2018]

**3.3.48 General Property Use.** The actual general (overall) use of land or space under the same management or ownership, or within the same legal boundaries, including any structures, vehicles, or other appurtenances thereon. (See Section 6.3.)

**3.3.49 Grade.** Reference plane representing the elevation of finished ground level adjoining the building at the main entrance, used synonymously with the term *ground level*.

**3.3.50 Ground Fault.** An unintended current that flows outside the normal circuit path, such as (a) through the equipment grounding conductor; (b) through conductive material in contact with lower potential (such as earth), other than the electrical system ground (metal water or plumbing pipes, etc.); (c) or through a combination of these ground return paths. [921, 2017]

**3.3.51 Hazardous Material.** A chemical or substance that is classified as a physical hazard material or a health hazard material, whether the chemical or substance is in usable or waste condition. [400, 2019]

Δ **3.3.52 Heat of Ignition.** The heat energy that brings about ignition. [921, 2017]

**3.3.53 Hostile Fire.** A fire that becomes uncontrollable or breaks out of where it was intended to be.

**3.3.54 Human Exposure.** Potential for injury or death to humans.

**3.3.55 Ignitable Liquid.** Any liquid or the liquid phase of any material that is capable of fueling a fire, including a flammable liquid, combustible liquid, or any other material that can be liquefied and burned.

**3.3.56 Ignition.** The process of initiating self-sustained combustion. [921, 2017]

**3.3.57\* Incident.** An event, natural or human-caused, that requires organized response, mitigation, or recovery actions by a fire or emergency services organization to protect life, property, and public health and safety and to minimize any disruption of governmental, social, and economic services.

• **3.3.58 Incident Record.** The official file on an incident.

**3.3.59\* Incident Report.** A document prepared by fire or emergency services personnel on a particular incident.

**3.3.60\* Industrialized Unit.** A factory-built structure, designed for either permanent site installation or as a portable unit, and constructed to the requirements of a model building code or other state construction regulations.

**3.3.61 Injury.** Physical damage to a person suffered as the result of an incident that requires (or should require) treatment by a practitioner of medicine, a registered EMT, or a paramedic within one year of the incident (regardless of whether treatment was actually received) or that results in at least one day of restricted activity immediately following the incident.

**3.3.62 Lighter.** Flame-producing product commonly used to light cigarettes, cigars, and pipes, although it can be used to light other materials.

**3.3.62.1 Novelty Lighter.** Lighters that depict or resemble articles commonly recognized as appealing to or intended for use by children under 5 years of age.

**3.3.63 Liquid.** A material that has a vapor pressure not exceeding 40 psia (2068.6 mm Hg) at 100°F (37.8°C).

**3.3.64 Manual.** As applied to fire protection devices, a device or system activated by human action.

**3.3.65 Manufactured Home.** A structure, transportable in one or more sections, that is 8 body-ft (2.44 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 ft<sup>2</sup> (28 m<sup>2</sup>) 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. (Also see 3.3.60, *Industrialized Unit*.)

**3.3.66\* Material First Ignited.** The fuel that is first set on fire by the heat of ignition.

**N 3.3.67 Mobile.** The ability to move 150 ft (45 m) in 90 seconds unaided.

**3.3.68 Mobile Intensive Care Unit.** An ambulance-type unit with space, equipment, supplies, communications, and treatment capabilities necessary for supportive, definitive, and therapeutic emergency medical care for the ill or injured either on site or during transport.

**3.3.69 Mobile Property Type.** Property that was designed to be movable in relation to fixed property regardless of whether the property is currently movable, for example, vehicles, ships, and airplanes. (See 6.5.5.)

**3.3.70 Modular Structure.** See 3.3.60, *Industrialized Unit*.

**3.3.71 Mop-up.** The act of making a wildland fire scene safer after the fire has been controlled, such as extinguishing or removing burning material along or near the control line, felling snags, and trenching logs to prevent rolling. (For *structure fires*, see 3.3.77, *Overhaul*.)

**3.3.72 Non-Fire Service Personnel.** All persons, including police, utility company employees, non-fire service medical personnel, and civilians, who are involved with an incident but who are not fire service personnel.

**3.3.73 Not Occupied.** An area with no persons present, though contents or equipment might be present, which indicate that the structure is not vacant.

**3.3.74\* Occupancy.** The purpose for which a building or other structure, or part thereof, is used or intended to be used. [5000, 2018]

**3.3.75\* Occupied.** An area with persons present.

**3.3.76 Open Fire.** Any fire other than a structure or mobile property fire that freely interacts with the external environment.

**3.3.77 Overhaul.** A firefighting term involving the process of final extinguishment of all traces of fire after the main body of the fire has been knocked down. (For *wildland fires*, see 3.3.71, *Mop-up*.)

**3.3.78\* Overheat.** Destruction of material by heat without self-sustained combustion.

**3.3.79 Panelized Structure.** See 3.3.60, *Industrialized Unit*.

**3.3.80 Paramedic.** A medical technician who has received extensive training and is certified in advanced life support and emergency medicine.

• **3.3.81 Prescribed Fire (Burning).** Any fire ignited by management actions to meet specific objectives. [1051, 2016]

• **3.3.82\* Rekindle.** A return to flaming combustion after apparent but incomplete extinguishment. [921, 2017]

▲ **3.3.83 Reportable Fire.** Any hostile fire that comes to the attention of an agency keeping fire records, whether discovered in progress or discovered after extinguishment.

**3.3.84 Response.** The deployment of a fire or emergency service organization resource to an incident.

• **3.3.85\* Scorch.** Discoloring (browning or blackening) of a material, a characteristic of the overheat condition.

**3.3.86 Short Circuit.** An abnormal connection of low resistance between normal circuit conductors where the resistance is normally much greater. This is an overcurrent situation but it is not an overload.

**3.3.87 Smoldering.** Combustion without flame, usually with incandescence and smoke. [921, 2017]

**3.3.88 Specific Property Use.** The purpose for which a specific space, structure, or portion of a structure is used by the owner, tenant, or occupant of the space.

• **3.3.89 Story.** The portion of a building located between the upper surface of a floor and the upper surface of the floor or roof next above. [5000, 2018]

**3.3.90\* Structure.** That which is built or constructed and limited to buildings and nonbuilding structures as defined herein. [5000, 2018]

**3.3.91\* Structure Fire.** Any fire inside, on, under, or touching a structure.

**3.3.92 Toxic Material.** A material that produces a lethal dose or a lethal concentration within any of the following categories: (1) a chemical or substance that has a median lethal dose (LD50) of more than 50 mg/kg but not more than 500 mg/kg of body weight when administered orally to albino rats weighing between 200 g and 300 g each; (2) a chemical or substance that has a median lethal dose (LD50) of more than 200 mg/kg but not more than 1000 mg/kg of body weight when administered by continuous contact for 24 hours, or less if death occurs within 24 hours, with the bare skin of albino rabbits weighing between 2 kg and 3 kg each, or albino rats weighing 200 g to 300 g each; (3) a chemical or substance that has a median lethal concentration (LC50) in air of more than 200 parts per million but not more than 2000 parts per million by volume of gas or vapor, or more than 2 mg/L but not more than 20 mg/L, of mist, fume, or dust when administered by continuous inhalation for 1 hour, or less if death occurs within 1 hour, to albino rats weighing between 200 g and 300 g each. [5000, 2018]

**3.3.93 Vacant.** A space having no persons, furnishings, or equipment present.

• **3.3.94 Wildland.** Land in an uncultivated, more or less natural state and covered by timber, woodland, brush, and/or grass.

**3.3.95\* Wildland Fire.** An unplanned and uncontrolled fire spreading through vegetative fuels, including any structures or other improvements thereon. [1141, 2017]

## Chapter 4 Objectives

### 4.1 Abbreviations for States and Provinces.

**4.1.1 US States.** Abbreviations for states shall be consistent with the Federal Information Processing Standard (FIPS) as listed in Table 4.1.1.

**4.1.2 US Territories and Possessions.** Abbreviations for US territories and possessions shall be consistent with FIPS as listed in Table 4.1.2.

**4.1.3 Canadian Provinces.** Abbreviations for Canadian provinces shall follow the Canada Post as listed in Table 4.1.3.

**4.1.4 Mexico.** When it is necessary to record addresses in Mexico, the abbreviation “MX” shall be used in place of a state abbreviation.

**Δ 4.2 Abbreviations for Street Types.** For street type or street suffix abbreviations, the US Postal Service's Publication 65, *National Five-Digit ZIP Code and Post Office Directory*, shall be used.

**4.3 Objectives.** Systematic methods shall be available for the routine collection, processing, and use of significant local information.

**Δ 4.3.1** The objectives of a uniform reporting system shall be as follows:

- (1) To provide for the collection of data required for legal record purposes and control of the fire problem
- (2) To provide local fire service management and decision makers with information to indicate trends; to measure the effectiveness of fire prevention, fire suppression, and emergency mitigation procedures currently being used; and to indicate those areas that could require further attention
- (3) To provide a pre-fire inventory of property in a fire service district so that future needs for fire protection resources and codes or regulations can be anticipated and potential problems corrected before a fire
- (4) To provide uniform data to regional, national, and international fire and emergency organizations for the following aims:
  - (a) To make the full extent of the fire and emergency problem known
  - (b) To reveal facts that require action on these levels
  - (c) To guide the effective development and administration of codes and standards
  - (d) To guide fire prevention, fire protection, emergency medical treatment, and hazardous materials handling research

**Δ 4.3.2** A common set of definitions for reporting incident and other fire protection data, together with a method for systematic data collection, processing, and information use, shall comprise a complete reporting system.

**Δ 4.4 Guiding Concepts for Reporting Systems.** Reporting systems shall use a uniform set of definitions and a uniform data classification structure.

**Δ Table 4.1.1 US State Abbreviations**

| State                | FIPS Code | Abbreviation |
|----------------------|-----------|--------------|
| Alabama              | 01        | AL           |
| Alaska               | 02        | AK           |
| Arizona              | 04        | AZ           |
| Arkansas             | 05        | AR           |
| California           | 06        | CA           |
| Colorado             | 08        | CO           |
| Connecticut          | 09        | CT           |
| Delaware             | 10        | DE           |
| District of Columbia | 11        | DC           |
| Florida              | 12        | FL           |
| Georgia              | 13        | GA           |
| Hawaii               | 15        | HI           |
| Idaho                | 16        | ID           |
| Illinois             | 17        | IL           |
| Indiana              | 18        | IN           |
| Iowa                 | 19        | IA           |
| Kansas               | 20        | KS           |
| Kentucky             | 21        | KY           |
| Louisiana            | 22        | LA           |
| Maine                | 23        | ME           |
| Maryland             | 24        | MD           |
| Massachusetts        | 25        | MA           |
| Michigan             | 26        | MI           |
| Minnesota            | 27        | MN           |
| Mississippi          | 28        | MS           |
| Missouri             | 29        | MO           |
| Montana              | 30        | MT           |
| Nebraska             | 31        | NE           |
| Nevada               | 32        | NV           |
| New Hampshire        | 33        | NH           |
| New Jersey           | 34        | NJ           |
| New Mexico           | 35        | NM           |
| New York             | 36        | NY           |
| North Carolina       | 37        | NC           |
| North Dakota         | 38        | ND           |
| Ohio                 | 39        | OH           |
| Oklahoma             | 40        | OK           |
| Oregon               | 41        | OR           |
| Pennsylvania         | 42        | PA           |
| Rhode Island         | 44        | RI           |
| South Carolina       | 45        | SC           |
| South Dakota         | 46        | SD           |
| Tennessee            | 47        | TN           |
| Texas                | 48        | TX           |
| Utah                 | 49        | UT           |
| Vermont              | 50        | VT           |
| Virginia             | 51        | VA           |
| Washington           | 52        | WA           |
| West Virginia        | 54        | WV           |
| Wisconsin            | 55        | WI           |
| Wyoming              | 56        | WY           |

**Δ 4.4.1 Commitment.**

**N 4.4.1.1** A reporting system shall be based on the commitment of the entire organization.

**Table 4.1.2 US Territories and Possessions Abbreviations**

| Territory or Possession          | FIPS Code | Abbreviation |
|----------------------------------|-----------|--------------|
| American Samoa                   | 60        | AS           |
| Guam                             | 66        | GU           |
| Federated States of Micronesia   | 64        | FM           |
| Marshall Islands                 | 68        | MH           |
| Northern Mariana Islands         | 69        | MP           |
| Palau                            | 70        | PW           |
| Puerto Rico                      | 72        | PR           |
| US Minor Outlying Islands        | 74        | UM           |
| Virgin Islands                   | 78        | VI           |
| Canal Zone                       | 07        | CZ           |
| Department of Defense            | —         | DD           |
| Native American Tribal Authority | —         | NA           |
| Other                            | —         | OO           |

**Table 4.1.3 Canadian Provinces Abbreviations**

| Province             | Abbreviation |
|----------------------|--------------|
| Alberta              | AB           |
| British Columbia     | BC           |
| Manitoba             | MB           |
| New Brunswick        | NB           |
| Newfoundland         | NF           |
| Northwest Territory  | NT           |
| Nova Scotia          | NS           |
| Nunavut              | NU           |
| Ontario              | ON           |
| Prince Edward Island | PE           |
| Quebec               | PQ           |
| Saskatchewan         | SK           |
| Yukon                | YT           |

**4.4.1.2** Personnel shall be trained on the purposes, benefits, and procedures of a reporting system.

**4.4.2 Simplicity.**

**4.4.2.1\*** A reporting system shall be based on a single incident record for each fire service incident.

**4.4.2.2** Each report shall be geared to what a person can gather within his or her normal duties.

**4.4.3 Raise Questions.** Reporting systems shall reveal areas for action and areas for additional study.

**4.4.4\* Report Completion.** The original report(s) shall be completed by the person who gathered the data.

**4.4.5 Report All Incidents.** Every incident shall be reported regardless of type or extent.

**4.5 Fact Finding.**

**4.5.1 Purpose.**

**4.5.1.1** The traditional legal function of reporting incidents shall be a written narrative of the basic facts or an automated system from which data can be retrieved on demand.

**4.5.1.2** To serve as input to a fire reporting system, an incident report shall be clearly structured and use uniform definitions and terminology.

**4.5.2\* Pre-Incident Data.** Pre-incident data shall contain information about the property, its location, the use of the property, the size and construction of any structures on the property, available fire protection features, and known hazards.

**4.5.3\* The Incident Report.**

**4.5.3.1** The reporting agency shall establish in its administrative policy whether information gathered initially at the scene and included in reports is to be considered preliminary or final.

**4.5.3.2** Preliminary information shall be subject to updates and supplemental reports based on additional investigation.

**4.6\* Data Processing.**

**4.6.1** Once data is received, it shall be processed into a report useful for legal, planning, and management purposes.

**4.6.2** Reports shall be checked for accuracy and completeness.

**4.7 Agency-Specific Classifications.** Data shall be collected according to standard classifications to allow data from multiple departments to be merged or to allow data to be contributed to a state or national database.

**4.8 Other Data.**

**4.8.1\* Numeric Information.** Where possible, data elements shall be recorded directly with numbers.

**4.8.2\* Text.** Useful incident data that cannot be realistically classified by or reduced to numbers shall be entered as text.

## Chapter 5 Incident Identification and Location

**5.1 Administration.**

**5.1.1 Purpose.** The purpose of the data elements identified by this chapter is to provide sufficient information to uniquely describe each incident and response.

**5.1.2 Application.**

**5.1.2.1** The data elements are intended to uniquely identify an incident response by a fire or emergency services organization.

**5.1.2.2** The data elements are to be used for both pre-incident and post-incident data collection efforts.

**5.2 Incident Number.**

**5.2.1** The “incident number” data element shall be a unique, sequential number assigned to an incident to assure that no two incidents to which an individual fire department responded in a given year have the same incident number.

**5.2.2** The incident number shall be used to correlate all reports and materials concerning the incident.

**5.3 Shift.** The “shift” data element shall be the designation of the shift that was on duty or on call when the incident was reported and responded to the incident.

#### 5.4 Incident Events.

**N 5.4.1** Incident reports shall include the date and time of the incident and the incident number.

**N 5.4.1.1\*** The date shall be formatted as YYYYMMDD.

**N 5.4.1.2\*** The time shall be formatted as HHMMSS.

#### 5.4.2 Event Times.

##### Δ 5.4.2.1 Event Start Time.

**N 5.4.2.1.1** The event start time shall be the time of ignition or the start of the event in the incident chronology.

**N 5.4.2.1.2** The time shall be estimated as accurately as possible.

**• 5.4.2.2 Detection (Discovery) Time.** The detection (discovery) time shall be the moment at which a person becomes aware of danger or an incident or the moment at which an automatic detector closes its contacts and sounds an alarm.

**5.4.2.3 Report (Alarm) Time.** The report (alarm) time shall be the time at which the dispatch or alarm center responsible for dispatching a fire or emergency services organization first learns of the incident.

**5.4.2.4 Dispatch Time.** The dispatch time shall be the time an alarm answered at the communications center is transmitted to an emergency response unit(s) in the field.

**5.4.2.5 En Route Time.** The en route time shall be the time at which the resource(s) or apparatus begins its response to the incident.

#### 5.4.2.6 Arrival Time.

**Δ 5.4.2.6.1** The arrival time shall be the time at which the resource(s) or apparatus arrives at the scene of an incident.

**5.4.2.6.2** Arrival times shall be tracked for each responding unit.

**Δ 5.4.2.7 First Action Time.** The first action time shall be the time at which control or mitigation activities begin.

**5.4.2.8 Agent Application Time.** The agent application time shall be the time at which the extinguishing agent first contacts the flames.

**5.4.2.9\* Containment Time.** The containment time shall be the time at which control lines or natural barriers surround a fire or the fire spread is stopped.

**Δ 5.4.2.10 Control (Knock-Down) Time.** The control (knock-down) time shall be the time at which the commanding officer believes the fire is sufficiently surrounded and suppressed that it no longer threatens further spread or destruction of additional property.

**Δ 5.4.2.11 Fire Out (Blackout) Time.** The fire out (blackout) time shall be the time at which there is no open flame or glow of burned material.

**Δ 5.4.2.12 Scene Release Time.** The scene release time shall be the time at which all actions by the fire service have ceased and the scene has been released to the property owner, resident, or other entity.

**Δ 5.4.2.13 In-Service Time.** The in-service time shall be the time at which a specific resource is ready to respond to an alarm.

**• N 5.4.2.14 Tracking.** Fire and emergency service organizations shall track the dispatch time, arrival time, and in-service times for each resource or apparatus dispatched to the incident.

**• 5.5 Incident Location.** The incident location shall be the geographic designation of an incident, described as an address or as latitude and longitude.

#### 5.5.1 Property Address.

**5.5.1.1\* Street Address.** The address of the property shall establish its legal location in the community.

##### Δ 5.5.1.2 City, State, and Postal (ZIP) Code.

**N 5.5.1.2.1** The city, state, and ZIP code of the property shall be recorded. (See 4.1.1 for state abbreviations.)

**N 5.5.1.2.2** The postal or ZIP code shall be recorded for all incidents to allow for linking incident data with demographic data available by ZIP code.

**Δ 5.5.2\* Geographical Coordinates.** Latitudinal and longitudinal coordinates shall be recorded.

**• 5.5.3 Census Tract.** The census tract number shall be referenced.

#### • N 5.5.4 District.

##### N 5.5.4.1 First Due Response Zone.

**N 5.5.4.1.1** A first due response zone shall be the designation of the fire department response area.

**N 5.5.4.1.2** First due response zones shall be recorded.

**N 5.5.4.2 Automatic Aid Response.** Responses occurring between two or more fire or emergency services organizations for immediate joint response on first alarms shall be known as automatic aid responses.

**N 5.5.4.3 Mutual Aid Response.** Responses occurring between two or more fire or emergency services organizations for immediate joint response on first alarms shall be known as automatic aid responses.

**Δ 5.5.4.4 Demand Zone.** Demand zones shall be areas within which a particular type of demand is placed on the fire service.

**5.5.4.5 Parcel Number.** Parcel numbers, where available, shall be recorded for incident locations.

**5.5.4.6 Property Number.** Property numbers (i.e., addresses) shall be recorded for incident locations.

##### Δ 5.5.4.7 Structure Identifier.

**N 5.5.4.7.1** If there is more than one structure on the property, each structure shall be uniquely identified by a different structure number.

**N 5.5.4.7.2** The property number shall remain the same for all structures on the same property.

**N 5.5.4.8 Floor and Unit.** Floor information and unit or suite information, where applicable, shall be uniquely identified.

**Δ 5.6 Business, Tenant, or Occupant.** The name of the business, tenant, or occupant of the space within the property shall be recorded.

**5.7 Property Owner.** The identification, address, and contact information of the owner of the property shall be recorded.

## 5.8 Fire Service Personnel.

**5.8.1 Officer in Charge.** The name of the officer on scene and in charge of the incident shall be recorded.

**5.8.2 Member Making Report.** The name of the fire department member who completed the incident report shall be recorded.

## Chapter 6 Property Use

### 6.1 Administration.

**6.1.1 Purpose and Application.** The purpose of the data elements outlined in this chapter is to provide a uniform way to identify property and how it is used. These data elements can be used to identify property, whether fixed or mobile, in both a pre-incident and a post-incident data system. Pre-incident data collection might be for property inventory files, code enforcement files, pre-fire plan files, or any application requiring the identification and use of property.

**6.1.2\* Special Definitions.** A list of special terms used in this chapter follows:

- (1) General Property Use. See 3.3.48.
- (2) Mobile Property Type. See 3.3.69.
- (3) Specific Property Use. See 3.3.88.

**6.2 Limitations.** The data elements in this chapter classify the use of the property only. This corresponds in many situations to the occupancy of a structure or portion thereof. They do not identify the configuration of buildings or other important details of a property such as access, ownership, size, or internal weaknesses in construction or fire defenses. For example, property used for storage of a product shall be shown for that use whether the storage is inside or outside.

### 6.3 General Property Use.

**Δ 6.3.1** The “general property use” designation shall capture data on the overall use of property so that all specific uses of segments of that property are linked to its general use.

**N 6.3.2\*** If a portion of the general property is leased, managed, and maintained as a separate property, it shall be treated as a separate general property use for reporting purposes.

**Δ 6.3.3\* General Property Use Coding Structure.** Where data on general property use is to be coded, the two-digit coding structure provided in 6.3.3.1 through 6.3.3.9 shall be used.

**N 6.3.3.1 Assembly Property (1).** For assembly properties, the following coding structure shall be used:

- (1) Fixed use amusement and recreation places (11), as follows:
  - (a) Bowling establishment — 111
  - (b) Billiard center — 112
  - (c) Amusement center — 113
  - (d) Ice rink — 114
  - (e) Roller rink — 115
  - (f) Swimming facility — 116
  - (g) Fixed use amusement and recreation places not able to be classified further — 110
- (2) Variable use amusement and recreation places (12), as follows:
  - (a) Ballroom, gymnasium, dance hall — 121

- (b) Exhibition hall, exposition hall — 122
  - (c) Arena, stadium — 123
  - (d) Playground or outdoor area with fixed recreational equipment — 124
  - (e) Variable use amusement and recreation places not able to be classified further — 120
- (3) Places of worship and funeral parlors (13), as follows:
  - (a) Place of worship — 131
  - (b) Funeral parlor, chapel — 134
  - (c) Places of worship and funeral parlors not able to be classified further — 130
- (4) Clubs (14), as follows:
  - (a) City club — 141
  - (b) Country club — 142
  - (c) Yacht club — 143
  - (d) Casino, gaming or gambling place — 144
  - (e) Clubs not able to be classified further — 140
- (5) Libraries, museums, and courtrooms (15), as follows:
  - (a) Library — 151
  - (b) Museum, art gallery — 152
  - (c) Historic building — 153
  - (d) Memorial structure, monument — 154
  - (e) Courtroom — 155
  - (f) Legislative hall — 156
  - (g) Libraries, museums, and courtrooms not able to be classified further — 150
- (6) Eating and drinking places (16), as follows:
  - (a) Restaurant — 161
  - (b) Nightclub — 162
  - (c) Tavern — 163
  - (d) Lunchroom, drive-in — 164
  - (e) Eating and drinking places not able to be classified further — 160
- (7) Passenger terminals (17), as follows:
  - (a) Airport passenger terminal — 171
  - (b) Heliport, helistop — 172
  - (c) Bus passenger terminal — 173
  - (d) Street-level rail terminal — 174
  - (e) Underground rail terminal — 175
  - (f) Elevated rail terminal — 176
  - (g) Marine passenger terminal — 177
  - (h) Passenger terminals not able to be classified further — 170
- (8) Theaters and studios (18), as follows:
  - (a) Legitimate theater — 181
  - (b) Auditorium, concert hall — 182
  - (c) Motion picture theater — 183
  - (d) Drive-in motion picture theater — 184
  - (e) Radio, TV studio — 185
  - (f) Motion picture studio — 186
  - (g) Theaters and studios not able to be classified further — 180
- (9) Other assembly properties (10) not able to be classified further — 100

**N 6.3.3.2 Education or Day Care Property (2).** For education or day care properties, the following coding structure shall be used:

- (1) Nonresidential schools (21), as follows:
  - (a) Nursery school — 211
  - (b) Elementary school — 213
  - (c) Junior high school — 214

- (d) High school — 215
- (e) Schools, non-adult, other — 210
- (2) Residential schools (22), as follows:
  - (a) Residential school classroom building — 221
  - (b) Residential schools not able to be classified further — 220
- (3) Trade and business schools other than high school or college (23), as follows:
  - (a) Vocational, trade school — 231
  - (b) Business school — 232
  - (c) Specialty school — 233
  - (d) Rehabilitation center where attendance is by choice — 234
  - (e) Trade and business schools other than high school or college not able to be classified further — 230
- (4) Colleges and universities (24) not able to be classified further — 240
- (5) Day care facilities (25), as follows:
  - (a) Day care in commercial property or as a dedicated facility — 254
  - (b) Day care associated with residential property, licensed — 255
  - (c) Day care associated with residential property, unlicensed — 256
  - (d) Day care facilities not able to be classified further — 250
- (6) Other educational or day care properties (20) not able to be classified further — 200

#### **N 6.3.3.3 Health Care or Detention and Correctional Property**

(3). For health care or detention and correctional properties, the following coding structure shall be used:

- (1) Nursing homes (31), as follows:
  - (a) Facility, licensed by the state, providing 24-hour nursing care for four or more persons — 311
  - (b) Nursing home not able to be classified further — 310 *[for facilities without 24-hour nursing staff, see 6.3.3.4(5)]*
- (2) Limited care facilities (32), as follows:
  - (a) Mental retardation (MR)/development disability facility — 321
  - (b) Alcohol or substance abuse center where individuals are incapable of self-preservation — 322
  - (c) Limited care facilities not able to be classified further — 320
- (3) Hospitals (33), as follows:
  - (a) Medical, psychiatric, pediatric, or hospital-type infirmary, including specialty hospitals, accredited or licensed by a state — 331
  - (b) Hospices — 332
  - (c) Hospital and hospital-type facilities not able to be classified further — 330
- (4) Ambulatory care facilities (34), as follows:
  - (a) Clinic, including outpatient clinics and freestanding emergency medical facilities where four or more patients could be rendered temporarily incapable of self-preservation — 341
  - (b) Office of an oral surgeon, dentist, or doctor — 342 *[for facilities with fewer than four patients incapable of self-preservation, see 6.3.3.5(9)(c)]*
  - (c) Hemodialysis unit — 343

- (d) Ambulatory care facility not able to be classified further — 340
- (5) Other health care facilities (35) not able to be classified further — 350
- (6) Care of the physically restrained (36), as follows:
  - (a) Prison, cell block for men — 361
  - (b) Prison, cell block for women — 362
  - (c) Juvenile detention facility — 363
  - (d) Adult detention facility — 364
  - (e) Police station — 365
  - (f) Vocational rehabilitation center — 366
  - (g) Care of the physically restrained not able to be classified further — 360
- (7) Other detention and correctional facilities (39) not able to be classified further — 390

**N 6.3.3.4 Residential Property (4).** For residential properties, the following coding structure shall be used:

- (1) One- and two-family dwellings (41) — 419
- (2) Multifamily dwellings (42) — 429
- (3) Rooming, boarding, or lodging houses (43) — 439
- (4) Hotels, motels, inns, lodges (44) — 449
- (5) Residential board and care (45) — 459
- (6) Dormitories (46), as follows:
  - (a) Sorority house, fraternity house — 462
  - (b) Barracks, dormitory — 464
  - (c) Dormitory-type residences not able to be classified further — 460
- (7) Other residential properties (40) not able to be classified further — 400

**N 6.3.3.5 Mercantile or Business Property (5).** For mercantile or business properties, the following coding structure shall be used:

- (1) Food, beverage sales (51), as follows:
  - (a) Supermarket — 511
  - (b) Market, grocery store — 512
  - (c) Specialty food store — 513
  - (d) Liquor, beverage store — 514
  - (e) Creamery, dairy store — 515
  - (f) Delicatessen — 516
  - (g) Food, beverage sales not able to be classified further
- (2) Textile, wearing apparel sales (52), as follows:
  - (a) Clothing store — 521
  - (b) Clothing accessories, shoe store — 522
  - (c) Shoe repair shop — 523
  - (d) Tailor, dressmaking shop — 524
  - (e) Fur store — 525
  - (f) Dry goods store — 526
  - (g) Textile, wearing apparel sales not able to be classified further — 520
- (3) Household goods sales, repairs (53), as follows:
  - (a) Furniture store — 531
  - (b) Appliance store — 532
  - (c) Hardware store — 533
  - (d) Music or video store — 534
  - (e) Wallpaper, paint store — 535
  - (f) Rug, floor covering store — 536
  - (g) Furniture repair shop — 537
  - (h) Appliance repair shop — 538
  - (i) Household goods sales, repairs not able to be classified further — 530

- (4) Specialty shops (54), as follows:
    - (a) Book, stationery store — 541
    - (b) Newsstand, tobacco shop — 542
    - (c) Drug store — 543
    - (d) Gift, jewelry store — 544
    - (e) Electronic specialty store — 545
    - (f) Leather goods shop — 546
    - (g) Florist shop, greenhouse — 547
    - (h) Optical goods sales — 548
    - (i) Specialty shops not able to be classified further — 540
  - (5) Recreation, hobby, or home repair supply sales, personal services (55), as follows:
    - (a) Hobby, toy shop — 551
    - (b) Sporting goods store — 552
    - (c) Photographic supply sales, still-picture studio — 553
    - (d) Garden supply store — 554
    - (e) Retail lumber sales — 555
    - (f) Pet store, animal hospital — 556
    - (g) Barber, beauty shop — 557
    - (h) Fireworks sales — 558
    - (i) Recreation, hobby, or home repair supply sales, personal services not able to be classified further
  - (6) Professional supplies, services (56), as follows:
    - (a) Professional supply sales — 561
    - (b) Trade supply sales — 562
    - (c) Art supply sales — 563
    - (d) Self-service laundry, dry cleaning — 564
    - (e) Linen supply house — 565
    - (f) Laundry, dry cleaner pick-up shop — 566
    - (g) Home maintenance services — 567
    - (h) Restaurant supplies, services — 568
    - (i) Professional supplies, services not able to be classified further — 560
  - (7) Motor vehicle or boat sales, services (57), as follows:
    - (a) Public service station — 571
    - (b) Private service station — 572
    - (c) Motor vehicle repair, paint shop — 573
    - (d) Motor vehicle, trailer sales — 574
    - (e) Motor vehicle accessory sales — 575
    - (f) Boat, pleasure-craft sales — 576
    - (g) Marine service station — 577
    - (h) Car washing facility — 578
    - (i) Motor vehicle or boat sales, services not able to be classified further — 570
  - (8) General item stores (58), as follows:
    - (a) Department store — 581
    - (b) Small variety store — 582
    - (c) Large variety store — 583
    - (d) Mail order store — 584
    - (e) Mall — 585
    - (f) General item stores not able to be classified further — 580
  - (9) Offices (59), as follows:
    - (a) General business office — 591
    - (b) Bank, with first-story banking facilities — 592
    - (c) Medical, research, scientific office — 593
    - (d) Engineering, architectural, technical office — 594
    - (e) Mailing firm — 595
    - (f) Post office — 596
    - (g) Offices not able to be classified further — 590
  - (10) Mercantile, business property not able to be classified further (500)
- 6.3.3.6 Basic Industry, Utility, Defense, Agriculture, or Mining Property (6).** For basic industry, utility, defense, agriculture, or mining properties, the following coding structure shall be used:
- (1) Nucleonics, energy production (61), as follows:
    - (a) Radioactive material working — 611
    - (b) Nuclear ordnance plant — 612
    - (c) Nuclear energy plant — 613
    - (d) Steam, heat-generating plant — 614
    - (e) Electric generating plant — 615
    - (f) Gas manufacturing plant — 616
    - (g) Nucleonics, energy production not able to be classified further — 610
  - (2) Laboratories (62), as follows:
    - (a) Chemical, medical laboratory — 621
    - (b) Physical materials testing laboratory — 622
    - (c) Personnel, psychological laboratory — 623
    - (d) Radioactive materials laboratory — 624
    - (e) Electrical, electronic laboratory — 625
    - (f) Agricultural laboratory — 626
    - (g) General research laboratory — 627
    - (h) Laboratories not able to be classified further — 620
  - (3) Communications, defense, document facilities (63), as follows:
    - (a) National defense site not elsewhere classified — 631
    - (b) Radio, radar site — 632
    - (c) Fire, police, industrial communications center — 633
    - (d) Telephone exchange, central office — 634
    - (e) Computer, data-processing center — 635
    - (f) Document center, record repository — 636
    - (g) Communications, defense, document facilities not able to be classified further — 630
  - (4) Utility, energy distribution systems (64), as follows:
    - (a) Electric transmission, distribution system — 642
    - (b) Gas distribution system, gas pipeline — 644
    - (c) Flammable or combustible liquid distribution system, pipeline — 645
    - (d) Steam, heat distribution system — 646
    - (e) Water supply system — 647
    - (f) Sanitary service, garbage and sewage disposal — 648
    - (g) Utility, energy distribution systems not able to be classified further — 640
  - (5) Agriculture (65), as follows:
    - (a) Livestock production — 651
    - (b) Crops, orchards — 655
    - (c) Curing and drying facility for agricultural products — 656
    - (d) Fruit, vegetable packing — 657
    - (e) Agriculture not able to be classified further — 650
  - (6) Forests, hunting, fishing (66), as follows:
    - (a) Forest, standing timber without logging operations — 661
    - (b) Forest, standing timber with logging operations — 662
    - (c) Hunting, trapping, game propagation — 663
    - (d) Fish hatchery — 665
    - (e) Wood-chip pile — 666

- (f) Forests, hunting, fishing not able to be classified further — 660
  - (7) Mining, quarrying of natural raw materials (67), as follows:
    - (a) Coal mine — 671
    - (b) Ore mine — 672
    - (c) Ore concentration plant — 673
    - (d) Petroleum, natural gas well with accompanying reservoir — 674
    - (e) Stone, slate, clay, gravel, sand quarries, pits — 675
    - (f) Salt mine — 676
    - (g) Chemical, fertilizer, mineral mine — 677
    - (h) Nonmetallic mineral mine, quarry — 678
    - (i) Mining, quarrying of natural raw materials not able to be classified further — 670
  - (8) Nonmetallic mineral, mineral products manufacture (68), as follows:
    - (a) Structure clay products manufacture — 681
    - (b) Glass manufacture, excluding containers — 682
    - (c) Glass container manufacture — 683
    - (d) Pottery, china, earthenware manufacture — 684
    - (e) Cement manufacture — 685
    - (f) Concrete batch plant — 686
    - (g) Abrasives manufacture — 687
    - (h) Nonmetallic mineral product manufacture — 688
    - (i) Nonmetallic mineral, mineral products manufacture not able to be classified further — 680
  - (9) Other basic industry, utility, defense, agriculture, mining properties (60) not able to be classified further — 600
- N 6.3.3.7 Manufacturing or Processing Property (7).** For manufacturing or processing properties, the following coding structure shall be used:
- (1) Food industries (71), as follows:
    - (a) Slaughtering, preparation, preserving of meat — 711
    - (b) Dairy processing and manufacture — 712
    - (c) Canning, preserving of fruits, vegetables — 713
    - (d) Canning, preserving of fish, seafood — 714
    - (e) Manufacture of grain mill products — 715
    - (f) Bakery product manufacture — 716
    - (g) Sugar refining, confectionary manufacture — 717
    - (h) Snack foods manufacture — 718
    - (i) Special foods industries — 719
    - (j) Food industries not able to be classified further — 710
  - (2) Beverages, tobacco, essential oils (72), as follows:
    - (a) Distilling, rectifying, blending spirits — 721
    - (b) Wines, winery — 722
    - (c) Brewery, manufacture of malt — 723
    - (d) Soft drink, carbonated water industry — 724
    - (e) Tobacco products manufacture — 725
    - (f) Vegetable and animal oil, fat; soap making — 726
    - (g) Beverages, tobacco, essential oils not able to be classified further — 720
  - (3) Textiles (73), as follows:
    - (a) Cotton gin — 731
    - (b) Cotton spinning, weaving — 732
    - (c) Wool or worsted spinning, weaving — 733
    - (d) Mixed, blended, other fibers — 734
    - (e) Textile finishing plant — 735
    - (f) Knitting mills for all fibers — 736
    - (g) Cordage, rope, twine, net manufacture — 737
  - (h) Floor covering, coated fabric manufacture, excluding rubber — 738
  - (i) Textiles not able to be classified further — 730
  - (4) Footwear, wearing apparel, leather, rubber (74), as follows:
    - (a) Footwear manufacture — 741
    - (b) Wearing apparel manufacture, excluding footwear — 742
    - (c) Made-up textile goods manufacture, excluding wearing apparel — 743
    - (d) Tanneries, leather finishing — 744
    - (e) Fur products manufacture, excluding wearing apparel — 745
    - (f) Leather products manufacture, excluding footwear, wearing apparel — 746
    - (g) Rubber, rubber products manufacture — 747
    - (h) Footwear, wearing apparel, leather, rubber not able to be classified further — 740
  - (5) Wood, furniture, paper, printing (75), as follows:
    - (a) Sawmill, planing mill, wood products mill — 751
    - (b) Manufacture and assembly of mobile and modular buildings — 752
    - (c) Wood, cane, cork products manufacture — 753
    - (d) Furniture, fixture, bedding manufacture — 754
    - (e) Paper, pulp, paperboard manufacture — 755
    - (f) Paper, pulp, paperboard products manufacture — 756
    - (g) Newspaper or magazine printing, publishing — 757
    - (h) Printing, publishing, allied industry — 758
    - (i) Wood, furniture, paper, printing not able to be classified further — 750
  - (6) Chemical, plastic, petroleum (76), as follows:
    - (a) Industrial chemical manufacture — 761
    - (b) Hazardous chemical manufacture — 762
    - (c) Plastic manufacture — 763
    - (d) Plastic product manufacture — 764
    - (e) Paint, varnish, lacquer, ink, wax, adhesive manufacture — 765
    - (f) Drug, cosmetic, pharmaceutical manufacture — 766
    - (g) Petroleum refinery, natural gas plant — 767
    - (h) Asphalt, coal product manufacture — 768
    - (i) Chemical, plastic, petroleum not able to be classified further — 760
  - (7) Metal, metal products (77), as follows:
    - (a) Iron, steel manufacture — 771
    - (b) Nonferrous metal manufacture — 772
    - (c) Metal product manufacture — 773
    - (d) Machinery manufacture — 774
    - (e) Electrical equipment manufacture — 775
    - (f) Electrical appliance, electronics equipment manufacture — 776
    - (g) Metal, metal products not able to be classified further — 770
  - (8) Vehicle assembly, manufacture (78), as follows:
    - (a) Shipbuilding, repairing of vessels over 65 ft (20 m) — 781
    - (b) Boat building, repairing of vessels 65 ft (20 m) and under — 782
    - (c) Railway equipment manufacture, assembly, repair — 783
    - (d) Motor vehicle manufacture, assembly — 784

- (e) Bicycle manufacturing, assembly, repair — 785
  - (f) Aircraft and rocket manufacturing, assembly, repair — 786
  - (g) Manufacture of special transport equipment — 787
  - (h) Vehicle assembly, manufacture not able to be classified further — 780
  - (9) Other manufacturing (79), as follows:
    - (a) Instrument manufacture — 791
    - (b) Photographic, optical goods manufacture — 792
    - (c) Watch, clock manufacture — 793
    - (d) Jewelry manufacture — 794
    - (e) Musical instrument manufacture — 795
    - (f) Laundry, dry cleaning plant — 796
    - (g) Photographic film processing laboratory — 797
    - (h) Toy, sporting goods manufacturing not classified in other divisions — 798
    - (i) Other manufacturing not able to be classified further
  - (10) Other manufacturing, processing property (70), as follows:
    - (a) General maintenance shop not elsewhere classified — 708
    - (b) Manufacturing, processing properties not able to be classified further — 700
- N 6.3.3.8 Storage Property (8).** For storage properties, the following coding structure shall be used:
- (1) Agricultural products storage (81), as follows:
    - (a) Seeds, beans, nuts, silage storage in bulk — 811
    - (b) Boxed, crated, packaged agricultural products storage — 812
    - (c) Loose, bagged agricultural products storage — 813
    - (d) Loose, baled tobacco storage — 814
    - (e) Barns, stables — 815
    - (f) Grain elevators — 816
    - (g) Livestock storage — 817
    - (h) Agricultural supply storage — 818
    - (i) Agricultural products storage not able to be classified further — 810
  - (2) Textile storage (82), as follows:
    - (a) Baled cotton storage — 821
    - (b) Baled wool, worsted storage — 822
    - (c) Baled silk, synthetic fiber storage — 823
    - (d) Baled jute, hemp, flax, sisal, other mixed or blended fiber storage — 824
    - (e) Cloth, yarn storage — 825
    - (f) Wearing apparel, garments, finished textile storage — 826
    - (g) Leather, leather products storage — 827
    - (h) Fur, skin, hair products storage — 828
    - (i) Textile storage not able to be classified further — 820
  - (3) Processed food, tobacco storage (83), as follows:
    - (a) Packaged foodstuff storage — 831
    - (b) Canned or bottled food, soft drink storage — 832
    - (c) Loose, bagged processed food storage — 833
    - (d) Food locker plants — 834
    - (e) Cold storage — 835
    - (f) Bulk sugar storage — 836
    - (g) Bulk flour, starch storage — 837
    - (h) Packaged tobacco product storage — 838
    - (i) Processed food, tobacco storage not able to be classified further — 830
  - (4) Petroleum products, alcohol beverage storage (84), as follows:
    - (a) Flammable, combustible liquid tank storage — 841
    - (b) Gasometer, cryogenic gas storage — 842
    - (c) LP-Gas bulk plant — 843
    - (d) Missile, rocket fuel storage — 844
    - (e) Packaged petroleum products storage — 845
    - (f) Alcoholic beverage storage — 846
    - (g) Petroleum products, alcoholic beverage storage not able to be classified further — 840
  - (5) Wood, paper products storage (85), as follows:
    - (a) Lumberyard, building materials storage — 851
    - (b) Wood products, furniture storage — 852
    - (c) Fiber products storage — 853
    - (d) Rolled paper storage — 854
    - (e) Paper, paper products storage — 855
    - (f) Timber, pulpwood, logs, wood fuel — 856
    - (g) Wood, paper products storage not able to be classified further — 850
  - (6) Chemical or plastic, chemical or plastic product storage (86), as follows:
    - (a) Industrial chemical storage — 861
    - (b) Hazardous chemical storage not specifically listed below — 862
    - (c) Plastic, plastic product storage — 863
    - (d) Fertilizer storage — 864
    - (e) Paint, varnish storage — 865
    - (f) Drug, cosmetic, pharmaceutical storage — 866
    - (g) Rubber, rubber products storage — 867
    - (h) Photographic film storage — 868
    - (i) Chemical or plastic, chemical or plastic product storage not able to be classified further — 860
  - (7) Metal, metal product storage (87), as follows:
    - (a) Basic metal form storage — 871
    - (b) Metal parts storage (often in trays or bins or on racks) — 872
    - (c) Hardware storage — 873
    - (d) Machinery storage — 874
    - (e) Electrical appliance, supply storage — 875
    - (f) Finished metal products storage (often in cartons or crates) — 876
    - (g) Scrap, junkyards — 877
    - (h) Metal, metal products storage not able to be classified further — 870
  - (8) Vehicle storage (88), as follows:
    - (a) Residential parking garage — 881
    - (b) General vehicle parking garage — 882
    - (c) Bus, truck, auto fleet, automobile dealer storage — 883
    - (d) Heavy machine, equipment storage — 884
    - (e) Boat, ship storage — 885
    - (f) Aircraft hangar — 886
    - (g) Railway storage — 887
    - (h) Fire stations — 888
    - (i) Vehicle storage not able to be classified further — 880
  - (9) General item storage (89), as follows:
    - (a) General warehouse — 891
    - (b) Bagged mineral products storage — 892
    - (c) Packaged mineral products storage — 893

- (d) Freight terminal — 894
- (e) Coal, coke briquette, charcoal storage — 895
- (f) Military stores, national defense storage not elsewhere classified — 896
- (g) Ice storage — 897
- (h) Wharf, pier — 898
- (i) Self-storage units for residential commodities — 899
- (j) General item storage not able to be classified further — 890
- (10) Other storage property (80), as follows:
  - (a) Toolshed, contractor's shed — 808
  - (b) Storage properties not able to be classified further — 800

**N 6.3.3.9 Outside or Special Property (9).** For outside or special properties, the following coding structure shall be used:

- (1) Landfills, dumps, and recycling facilities (91), as follows:
  - (a) Managed nonhazardous refuse disposal site — 911
  - (b) Unmanaged nonhazardous refuse disposal site — 912
  - (c) Managed hazardous materials waste disposal site — 913
  - (d) Unmanaged hazardous materials waste disposal site — 914
  - (e) Temporary hazardous materials waste disposal site — 915
  - (f) Recycling facility — 916
  - (g) Landfills, dumps, and recycling facilities not able to be classified further — 910
- (2) Special structures (92), as follows:
  - (a) Bridge, trestle — 921
  - (b) Tunnel — 922
  - (c) Public mailbox — 923
  - (d) Toll station — 924
  - (e) Shelter — 925
  - (f) Outbuilding, excluding garage — 926
  - (g) Outdoor telephone booth — 927
  - (h) Aerial tramway — 928
  - (i) Special structures not able to be classified further — 92
- (3) Outdoor properties (93), as follows:
  - (a) Open land, field — 931
  - (b) Residential yards — 933
  - (c) Cemetery — 934
  - (d) Campsite with utilities — 935
  - (e) Vacant lot — 936
  - (f) Beaches, seashores, riverfront areas (salt or fresh water) — 937
  - (g) Graded and cared-for plots of land — 938
  - (h) Outdoor properties not able to be classified further — 930
- (4) Water areas (94), as follows:
  - (a) In open sea, tidal waters — 941
  - (b) Within designated port, channel, anchorage — 942
  - (c) Alongside quay, pier, pilings — 943
  - (d) At flammable liquid or gas loading, unloading facility — 944
  - (e) Storm drain, flood control culvert — 945
  - (f) Inland water area — 946
  - (g) Water areas not able to be classified further — 940
- (5) Railroad property (95), as follows:

- (a) Railroad right of way — 951
- (b) Switchyard, marshalling yard — 952
- (c) Siding — 953
- (d) Railroad signaling, switch control equipment location — 954
- (e) Railroad properties not able to be classified further — 950
- (6) Road, parking property (96), as follows:
  - (a) Limited-access highway, divided highway — 961
  - (b) Paved public street — 962
  - (c) Paved private street, way — 963
  - (d) Unpaved street, road, path — 964
  - (e) Uncovered parking area — 965
  - (f) Road, parking properties not able to be classified further — 960
- (7) Aircraft areas (97), as follows:
  - (a) In flight — 971
  - (b) On runway — 972
  - (c) On taxiway, uncovered parking area, maintenance area — 973
  - (d) At loading ramp — 974
  - (e) Aircraft areas not able to be classified further — 970
- (8) Outside equipment operating areas (98), as follows:
  - (a) Construction site — 981
  - (b) Oil, gas field — 982
  - (c) Pipeline, power line, or other utility right of way — 983
  - (d) Industrial plant yard area — 984
  - (e) Outside equipment operating areas not able to be classified further — 980
- (9) Other outside or special properties (90) not able to be classified further — 900
- (10) Other specific property use (00), as follows:
  - (a) Vacant structure unable to be classified elsewhere — 097
  - (b) Specific property use not applicable — 098
  - (c) Specific property use not able to be classified further — 000
  - (d) Specific property use undetermined or not reported — UUU

**6.4\* Specific Property Use.** Where data on specific property use is to be coded, the three-digit coding structure in 6.3.3.1 through 6.3.3.9 shall be used.

## 6.5 Mobile Property.

**6.5.1** Mobile property shall be property that is designed to be movable in relation to fixed property, regardless of whether or not it is still capable of being moved.

**N 6.5.2** The specific property on which a mobile property is located shall be reported.

**6.5.3** The following data shall be recorded for proper identification of a mobile property:

- (1) Model year
- (2) Name of manufacturer or brand name
- (3) Model name or model number, if applicable
- (4) Manufacturer's serial number or vehicle identification number (VIN)
- (5) License or registration number, including the state or agency issuing the license or registration

**6.5.4\* Mobile Property Involvement Coding Structure.**

Where data on mobile property involvement is to be coded, the following coding structure shall be used:

- (1) Mobile property was not involved in ignition, but burned in a fire following ignition — 1
- (2) Mobile property was involved in ignition, but it did not burn — 2
- (3) Mobile property was involved in ignition, and it burned — 3
- (4) No mobile property was involved — N
- (5) Mobile property involvement undetermined or not reported — U

**6.5.5 Mobile Property Type.**

**6.5.5.1** This data element shall be used to record the specific type of mobile property involved, regardless of whether or not it is still capable of being moved.

**Δ 6.5.5.2\* Mobile Property Type Coding Structure.** Where data on mobile property type is to be coded, the coding structure provided in 6.5.5.2.1 through 6.5.5.2.8 shall be used.

**N 6.5.5.2.1 Passenger Road Vehicles (1).** For passenger road vehicles, the following coding structure shall be used:

- (1) Automobile — 11
- (2) Bus, trackless trolley — 12
- (3) All-terrain vehicles — 13
- (4) Motor home — 14
- (5) Travel trailer — 15
- (6) Camping trailer — 16
- (7) Manufactured home, in transit — 17
- (8) Motorcycle, trail bike — 18
- (9) Passenger road vehicles not able to be classified further — 10

**N 6.5.5.2.2 Freight Road Vehicles (2).** For freight road vehicles, the following coding structure shall be used:

- (1) General use single-chassis trucks — 21
- (2) Truck tractor, semi-trailer or non-motorized trailer, or tractor-trailer combination — 23
- (3) Tank truck for nonflammable cargo — 24
- (4) Tank truck for flammable or combustible liquid, chemical — 25
- (5) Tank truck for compressed gas or LP-Gas — 26
- (6) Trash truck — 27
- (7) Commercial mobile business vehicle — 28
- (8) Freight road vehicles not able to be classified further — 20

**N 6.5.5.2.3 Rail Vehicles (3).** For rail vehicles, the following coding structure shall be used:

- (1) Passenger, diner car — 31
- (2) Freight, box, hopper car — 32
- (3) Tank car — 33
- (4) Container, piggyback car — 34
- (5) Locomotive, engine — 35
- (6) Self-powered rail car — 36
- (7) Maintenance equipment, car — 37
- (8) Rail vehicles not able to be classified further — 30

**N 6.5.5.2.4 Water Vessels (4).** For water vessels, the following coding structure shall be used:

- (1) Motor boat under 65 ft (20 m) length overall — 41

- (2) Boat or ship greater in length overall, but under 1000 gross tons (907 metric tons) — 42
- (3) Passenger ship greater than or equal to 1000 gross tons (907 metric tons) — 43
- (4) Tank ship — 44
- (5) Personal water craft — 45
- (6) Cargo or military ship over 1000 tons (907 metric tons) — 46
- (7) Non-self-propelled vessel — 47
- (8) Commercial fishing vessel — 48
- (9) Sailboats without auxiliary power — 49
- (10) Water vessels not able to be classified further — 40

**N 6.5.5.2.5 Air Vehicles (5).** For air vehicles, the following coding structure shall be used:

- (1) Personal, business, utility aircraft under 12,500 lb (5670 kg) gross weight — 51
- (2) Personal, business, utility aircraft 12,500 lb (5670 kg) gross weight and over — 52
- (3) Commercial aircraft, reciprocating-engine-powered, fixed-wing — 53
- (4) Commercial aircraft, jet- and other turbine-powered, fixed-wing — 54
- (5) Nonmilitary helicopters, vertical takeoff aircraft — 55
- (6) Military fixed-wing aircraft — 56
- (7) Military non-fixed-wing aircraft — 57
- (8) Balloon vehicles — 58
- (9) Gliders and kites — 59
- (10) Air vehicles not able to be classified further — 50

**N 6.5.5.2.6 Heavy Industrial and Agricultural Equipment (6).** For heavy industrial and agricultural equipment, the following coding structure shall be used:

- (1) Construction equipment — 61
- (2) Materials-handling equipment — 63
- (3) Crane — 64
- (4) Tractor, harvester, picker — 65
- (5) Timber harvest equipment — 67
- (6) Heavy industrial and agricultural equipment not able to be classified further — 60

**N 6.5.5.2.7 Special Mobile Property and Military Vehicles (7).** For special mobile properties and military vehicles, the following coding structure shall be used:

- (1) Garden equipment — 71
- (2) Mechanically moved shipping container — 73
- (3) Armored equipment — 74
- (4) Manned, unmanned space vehicles — 75
- (5) Aerial tramway vehicle — 76
- (6) Non-road rated racing vehicles — 77
- (7) Special mobile property and military vehicles not able to be classified further — 70

**N 6.5.5.2.8 Other Mobile Property Types (8).** For other mobile property types, the following coding structure shall be used:

- (1) Mobile property type not applicable — 98
- (2) Mobile property type not able to be classified further — 99
- (3) Mobile property type undetermined or not reported — UU

**Δ 6.5.6 Vehicle Make.**

**N 6.5.6.1** Where data on the make of a vehicle is to be coded, the National Crime Information Center (NCIC) *Code Manual* vehicle data codes and coding structure shall be used.

**N 6.5.6.2** The vehicle-make data element shall not apply to aircraft or watercraft.

**6.6\* Property Management.** Where data on property management is to be coded, the coding structure in Table 6.6 shall be used.

**6.7\* On-Site Material.**

**Δ 6.7.1** Each type of material identified in 6.7.2 shall have its use or application recorded using the classifications in Table 6.7.3.

**Δ 6.7.2\* On-Site Material Type Coding Structure.** Where data on on-site materials is to be coded, the coding structure provided in 6.7.2.1 through 6.7.2.9 shall be used.

**N 6.7.2.1 Foods, Beverages, or Agricultural Materials (1).** For foods, beverages, or agricultural materials, the following coding structure shall be used:

- (1) Foods (11), as follows:
  - (a) Baked goods — 111
  - (b) Meat products — 112
  - (c) Dairy products — 113
  - (d) Produce, fruit or vegetables — 114
  - (e) Sugar, spices — 115
  - (f) Deli products — 116
  - (g) Packaged cereals or grains — 117
  - (h) Fat or cooking grease — 118
  - (i) Foods not able to be classified further — 110
- (2) Beverages (12), as follows:
  - (a) Alcoholic beverage — 121
  - (b) Nonalcoholic beverage — 122
  - (c) Beverages not able to be classified further — 120
- (3) Agricultural materials (13), as follows:
  - (a) Trees, plants, flowers — 131
  - (b) Feed, grain, seed — 132
  - (c) Hay, straw — 133
  - (d) Crop, not grain — 134
  - (e) Livestock — 135

- (f) Pets — 136
- (g) Pesticides — 137
- (h) Fertilizer — 138
- (i) Agricultural materials not able to be classified further — 130

(4) Foods, beverages, or agricultural materials not able to be classified further (10) — 100

**N 6.7.2.2 Personal and Home Products (2).** For personal and home products, the following coding structure shall be used:

- (1) Fabrics (21), as follows:
  - (a) Curtains, drapes — 211
  - (b) Linens — 212
  - (c) Bedding — 213
  - (d) Cloth, yarn, dry goods — 214
  - (e) Fabrics not able to be classified further — 210
- (2) Wearable products (22), as follows:
  - (a) Clothes — 221
  - (b) Footwear — 222
  - (c) Eyeglasses — 223
  - (d) Perfumes, colognes, cosmetics — 225
  - (e) Toiletries — 226
  - (f) Wearable products not able to be classified further — 220
- (3) Accessories (23), as follows:
  - (a) Jewelry, watches — 231
  - (b) Luggage, suitcases — 232
  - (c) Purses, satchels, briefcases, wallets, belts, backpacks — 233
  - (d) Accessories not able to be classified further — 230
- (4) Furnishings (24), as follows:
  - (a) Furniture — 241
  - (b) Beds, mattresses — 242
  - (c) Clocks — 243
  - (d) Housewares — 244
  - (e) Glass, ceramics, china, pottery, stoneware, earthenware — 245
  - (f) Silverware — 246
  - (g) Furnishings not able to be classified further — 240
- (5) Personal and home products not able to be classified further (20) — 200

**N 6.7.2.3 Raw Materials (3).** For raw materials, the following coding structure shall be used:

- (1) Wood (31), as follows:
  - (a) Lumber, sawn wood — 311
  - (b) Timber — 312
  - (c) Cork — 313
  - (d) Pulp — 314
  - (e) Sawdust, wood chips — 315
  - (f) Wood not able to be classified further — 310
- (2) Fibers (32), as follows:
  - (a) Cotton — 321
  - (b) Wool — 322
  - (c) Silk — 323
  - (d) Fibers not able to be classified further — 320
- (3) Animal skins (33), as follows:
  - (a) Leather — 331
  - (b) Fur — 332
  - (c) Animal skins not able to be classified further — 330
- (4) Other raw materials (34), as follows:

**Table 6.6 Property Management Coding Structure**

| Code | Description                                               |
|------|-----------------------------------------------------------|
| 1    | Private tax-paying property.                              |
| 2    | Private non-tax-paying property.                          |
| 3    | City, town, village, or other local government property.  |
| 4    | County or parish government property.                     |
| 5    | State or provincial government property, except military. |
| 6    | Central or federal government property, except military.  |
| 7    | Foreign government property.                              |
| 8    | Military property.                                        |
| 0    | Property management not able to be classified further.    |
| U    | Property management undetermined or not reported.         |

- (a) Ore — 341
- (b) Rubber — 342
- (c) Plastics — 343
- (d) Fiberglass — 344
- (e) Salt — 345
- (5) Raw materials not able to be classified further (30) — 300

**N 6.7.2.4 Paper Products or Rope (4).** For paper products or rope, the following coding structure shall be used:

- (1) Paper products (41), as follows:
  - (a) Newspaper, magazines — 411
  - (b) Books — 412
  - (c) Greeting cards — 413
  - (d) Paper, rolled — 414
  - (e) Cardboard — 415
  - (f) Packaged paper products, including stationary — 416
  - (g) Paper records or reports — 417
  - (h) Paper products not able to be classified further — 410
- (2) Rope, twine, cordage (42) — 421
- (3) Paper products or rope not able to be classified further (40) — 400

**N 6.7.2.5 Flammables, Chemicals, or Plastics (5).** For flammables, chemicals, or plastics, the following coding structure shall be used:

- (1) Flammable or combustible liquids (51), as follows:
  - (a) Gasoline, diesel fuel — 511
  - (b) Flammable liquid — 512
  - (c) Combustible liquid — 513
  - (d) Motor oil — 514
  - (e) Heavy oils, grease, non-cooking-related — 515
  - (f) Asphalt — 516
  - (g) Adhesive, resin, tar — 517
  - (h) Flammable or combustible liquids not able to be classified further — 510
- (2) Flammable gases (52), as follows:
  - (a) Natural gas — 521
  - (b) LP-Gas, butane, propane — 522
  - (c) Hydrogen gas — 523
  - (d) Flammable gases not able to be classified further — 520
- (3) Solid fuel, coal type (53), as follows:
  - (a) Charcoal — 531
  - (b) Coal — 532
  - (c) Peat — 533
  - (d) Coke — 534
  - (e) Solid fuels, coal type not able to be classified further — 530
- (4) Chemicals or drugs (54), as follows:
  - (a) Hazardous chemicals — 541
  - (b) Nonhazardous chemicals — 542
  - (c) Cleaning supplies — 543
  - (d) Pharmaceuticals, drugs — 544
  - (e) Illegal drugs — 545
  - (f) Chemicals or drugs not able to be classified further — 540
- (5) Radioactive materials (55) — 551
- (6) Flammables, chemicals, or plastics not able to be classified further (50) — 500

**N 6.7.2.6 Construction, Machinery, or Metals (6).** For construction, machinery, or metals, the following coding structure shall be used:

- (1) Machinery or tools (61), as follows:
  - (a) Industrial machinery — 611
  - (b) Machine parts — 612
  - (c) Tools (power and hand tools) — 613
  - (d) Machinery or tools not able to be specified further — 610
- (2) Construction supplies (62), as follows:
  - (a) Hardware products — 621
  - (b) Construction and home improvement products — 622
  - (c) Pipes, fittings — 623
  - (d) Stone-working materials — 624
  - (e) Lighting fixtures and lamps — 625
  - (f) Electrical parts, supplies, equipment — 626
  - (g) Insulation — 627
  - (h) Abrasives — 628
  - (i) Fencing, fence supplies — 629
  - (j) Construction supplies not able to be classified further — 620
- (3) Floor and wall coverings (63), as follows:
  - (a) Carpets, rugs — 631
  - (b) Linoleum, tile — 632
  - (c) Ceramic tile — 633
  - (d) Wallpaper — 634
  - (e) Paint — 635
  - (f) Floor and wall coverings not able to be classified further — 630
- (4) Metal products (64), as follows:
  - (a) Steel, iron products — 641
  - (b) Nonferrous metal products — 642
  - (c) Combustible metals products — 643
  - (d) Metal products not able to be classified further — 640
- (5) Construction, machinery, or metals not able to be classified further (60) — 600

**N 6.7.2.7 Appliances, Electronics, and Medical and Laboratory Products (7).** For appliances, electronics, and medical and laboratory products, the following coding structure shall be used:

- (1) Appliances and electronics (71), as follows:
  - (a) Appliances — 711
  - (b) Electronic parts, supplies, equipment — 712
  - (c) Electronic media — 713
  - (d) Photographic equipment, supplies, materials — 714
  - (e) Appliances and electronics not able to be classified further — 710
- (2) Medical and laboratory products (72), as follows:
  - (a) Dental supply — 721
  - (b) Medical supply — 722
  - (c) Optical products — 723
  - (d) Veterinary supplies — 724
  - (e) Laboratory supplies — 725
  - (f) Medical and laboratory products not able to be classified further — 720
- (3) Appliances, electronics, and medical and laboratory products not able to be classified further (70) — 700

**N 6.7.2.8 Vehicles and Vehicle Parts (8).** For vehicles and vehicle parts, the following coding structure shall be used:

- (1) Motor vehicles and motor vehicle parts (81), as follows:
  - (a) Autos, trucks, buses, recreational vehicles — 811
  - (b) Construction vehicles — 812
  - (c) Motor vehicle parts — 813
  - (d) Tires — 814
  - (e) Motor vehicles and motor vehicle parts not able to be classified further — 810
- (2) Watercraft (82), as follows:
  - (a) Boats, ships — 821
  - (b) Watercraft not able to be classified further — 820
- (3) Aircraft (83), as follows:
  - (a) Planes, airplanes — 831
  - (b) Helicopters — 832
  - (c) Aircraft not able to be classified further — 830
- (4) Rail (84), as follows:
  - (a) Trains, light rail, rapid transit cars — 841
  - (b) Rail equipment — 842
  - (c) Rail not able to be classified further — 840
- (5) Nonmotorized vehicles (85), as follows:
  - (a) Bicycles, tricycles, unicycles — 851
  - (b) Nonmotorized vehicles not able to be classified further — 850
- (6) Vehicles and vehicle parts not able to be classified further (80) — 800

**N 6.7.2.9 Other Products (9).** For other products, the following coding structure shall be used:

- (a) Containers, packing materials (91), as follows:
  - (a) Bottles, barrels, boxes — 911
  - (b) Packing material — 912
  - (c) Pallets — 913
  - (d) Containers, packing materials not able to be classified further — 910
- (b) Previously owned products (92) as follows:
  - (a) Antiques — 921
  - (b) Collectibles — 922
  - (c) Used merchandise — 923
  - (d) Previously owned products not able to be classified further — 920
- (c) Ordnance, explosives, fireworks (93), as follows:
  - (a) Guns — 931
  - (b) Ammunition — 932
  - (c) Explosives — 933
  - (d) Fireworks commercially made — 934
  - (e) Rockets, missiles — 935
  - (f) Ordnance, explosives, fireworks not classified above — 930
- (d) Recreational or art products (94), as follows:
  - (a) Musical instruments — 941
  - (b) Hobbies, crafts — 942
  - (c) Art supplies and artwork — 943
  - (d) Sporting goods — 944
  - (e) Camping, hiking, outdoor products — 945
  - (f) Games, toys — 946
  - (g) Recreational or art products not able to be classified further — 940
- (e) Mixed sales products (95), as follows:
  - (a) Office supplies — 951

- (b) Restaurant supplies, not including food — 952
- (c) Mixed sales products not able to be classified further — 950
- (f) Discarded material (96), as follows:
  - (a) Discarded material, other — 960
  - (b) Junkyard materials — 961
  - (c) Recyclable materials — 962
  - (d) Trash, not recyclable — 963
- (g) On-site materials, other (00), as follows:
  - (a) On-site materials not able to be classified further — 000
  - (b) No on-site materials — NNN
  - (c) On-site materials undetermined or not reported — UUU

**Δ 6.7.3 On-Site Materials Storage or Use.** Where data on on-site materials storage or use is to be coded, the coding structure in Table 6.7.3 shall be used.

**Table 6.7.3 On-Site Material Storage or Use Coding Structure**

| Code | Description                                                   |
|------|---------------------------------------------------------------|
| 1    | Bulk storage or warehousing.                                  |
| 2    | Processing or manufacturing.                                  |
| 3    | Packaged goods for sale.                                      |
| 4    | Repair or service.                                            |
| N    | No on-site material storage or use.                           |
| U    | On-site material storage or use undetermined or not reported. |

## Chapter 7 Structure Characteristics

**7.1 Purpose and Application.** When collected in pre-fire surveys, the information may be used in connection with address and census tract information for the purposes of fire flow calculations and for allocating and deploying fire suppression resources throughout a jurisdiction. Similarly, when this information is recorded after an incident occurs, it may be used with geographic designators and supplemented with incident frequency and mutual aid information to analyze the effectiveness of current fire suppression resource allocation and deployment.

**7.2 Limitations.** The use of the data elements in this chapter shall be limited to reporting information on structures.

**7.3 Definition of Structure.** A structure is an assembly of materials forming a construction for occupancy or use in such a manner as to serve a specific purpose. A building is a form of a structure. Open platforms, bridges, roof assemblies over open storage or process areas, tents, air-supported structures, and grandstands are other forms of a structure.

### 7.4 Structure Features.

#### 7.4.1\* Type of Construction.

**Δ 7.4.1.1** Categories from *NFPA 5000* shall be given to maintain uniformity in data classification.

**7.4.1.2** Where type of construction is to be coded, the coding structure in Table 7.4.1.2 shall be used.

**Table 7.4.1.2 Type of Construction Coding Structure**

|   |                                                                                                                                                                                                                                                                                                |
|---|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Type I — Structural members, including walls, columns, beams, floors, and roofs, are of approved noncombustible or limited-combustible materials having high fire-resistive ratings. Structural frames have a fire-resistive rating of at least 3 hours. (Previously called “fire resistive.”) |
| 2 | Type II — Structural members, including walls, columns, beams, floors, and roofs, are of approved noncombustible or limited-combustible materials having fire-resistive ratings of 2 hours or less. (Previously called “noncombustible.”)                                                      |
| 3 | Type III — Exterior walls are of noncombustible or limited-combustible materials, and interior structural members, including walls, columns, beams, floors, and roofs, are of combustible materials. (Previously called “ordinary.”)                                                           |
| 4 | Type IV — Exterior walls are of noncombustible or limited-combustible materials, and interior structural members including columns, beams, arches, floors, and roofs, are of solid wood at least 2 in. (51 mm) nominal, qualifying as heavy timber under NFPA 220.                             |
| 5 | Type V — Exterior walls, bearing walls, and floors and roofs and their supports are wholly or partly of wood or other combustible material in dimensions smaller than those required in Type IV. (Previously called “wood frame.”)                                                             |
| 0 | Type of construction not able to be classified further.                                                                                                                                                                                                                                        |
| U | Type of construction undetermined or not reported.                                                                                                                                                                                                                                             |

**7.4.2\* Method of Construction Coding Structure.** Where method of construction is to be coded, the following coding structure shall be used:

- (1) Site-built structure — 1
- (2) Factory-built, site-installed, or assembled structure — 2
- (3) Manufactured home — 3
- (4) Method of construction not able to be classified further — 0
- (5) Method of construction undetermined or not reported — U

**7.4.3\* Year of Construction or Total Renovation.** The year of construction or total renovation shall be recorded.

#### **7.4.4 Structure Height or Depth.**

**7.4.4.1\* Structure Height.** Structure height shall be the distance from grade to the highest structural member or peak.

**N 7.4.4.1.1\*** Structure height shall be recorded in either feet or meters.

**N 7.4.4.1.2** The units of measure used for structure height shall be consistent throughout the application.

**Δ 7.4.4.2\* Structure Depth.** Structure depth or distance below grade shall be the distance from grade to the floor level of the lowest story that provides usable floor space and where there is room for a person to stand.

**N 7.4.4.2.1\*** Structure depth shall be recorded in feet or meters.

**N 7.4.4.2.2** The units of measure used for structure depth shall be consistent throughout the application.

**Δ 7.4.5\* Number of Stories.** Where the number of stories is to be recorded, it shall be done consistently and include all below-grade and abovegrade stories.

**N 7.4.5.1** A mezzanine shall be considered as an additional story if the building code defines the area as a mezzanine.

**N 7.4.5.2** Unused crawl spaces and unused ceiling/roof spaces shall not be considered as additional stories.

#### **N 7.4.6\* Floor Area.**

**N 7.4.6.1** Floor area shall be recorded in square feet or square meters.

**N 7.4.6.2** The units of measure shall be consistent throughout the application.

**7.4.7 Manufactured Home or Industrialized Unit Identification.** The following nameplate data shall be recorded for the proper identification of a manufactured home or industrialized unit property:

- (1) Name and address of the manufacturer
- (2) Serial number and model designation of the unit
- (3) Manufacture date or model year, if applicable (see 7.4.3)

#### **7.4.8 Structure Type.**

**Δ 7.4.8.1\*** The data element for structure type shall be used to describe the type of structure on a specific property.

**N 7.4.8.2\* Structure Type Coding Structure.** Where structure type is to be coded, the following coding structure in shall be used:

- (1) Enclosed building — 1
- (2) Portable or mobile structure — 2
- (3) Open structure — 3
- (4) Air-supported structure — 4
- (5) Tent — 5
- (6) Open platform — 6
- (7) Underground structure work areas — 7
- (8) Connective structure — 8
- (9) Structure type not able to be classified further — 0
- (10) Not a structure — N
- (11) Structure type undetermined or not reported — U

**Δ 7.4.9 Property Value.** Property value shall include the estimated total value of any building or structure, machinery and equipment, and contents.

**N 7.4.9.1** Property value shall not include the value of the land.

**N 7.4.9.2** If structure and content value are to be recorded separately, machinery and equipment shall be included with the content value.

**N 7.4.9.3\*** Values shall be recorded only to the whole-dollar level.

**N 7.4.10\* Structure Status Coding Structure.** Where structure status is to be coded, the following coding structure in shall be used:

- (1) Under construction — 1
- (2) In use, with furnishings in place and the property being routinely used — 2

- (3) Idle, with furnishings in place but the property not being routinely used — 3
- (4) Under major renovation — 4
- (5) Vacant, but property secured and maintained — 5
- (6) Vacant, with property unsecured and not maintained — 6
- (7) Being demolished — 7
- (8) Structure status not able to be classified further — 0
- (9) Structure status undetermined or not reported — U

## 7.5 Compartment Characteristics.

### 7.5.1 Interior Finish.

- ▲ 7.5.1.1\* The location of the interior finish being evaluated shall be reported for the data to have relevance.

7.5.1.2 Where the interior finish is to be coded, the coding structure in Table 7.5.1.2 shall be used.

### 7.5.2 Interior Finish Substrate or Solid Supporting Material.

- ▲ 7.5.2.1 The data element for interior finish substrate or solid supporting material shall be used with the data element for finish on substrate or solid supporting material (see 7.5.3) in identifying interior finish substrate and the finishes used on them.

- 7.5.2.2 If more than one material is present, the principal material used shall be identified.

7.5.2.3 Where the interior finish substrate or solid supporting material shall be coded, the coding structure in Table 7.5.2.3 shall be used.

### 7.5.3 Finish on Substrate or Solid Supporting Material.

- ▲ 7.5.3.1 The data element for finish on substrate or solid supporting material shall be used with the data element for interior finish substrate or solid supporting material (see 7.5.2) in identifying interior finish substrate and the finishes used on them.

- 7.5.3.2 If more than one material is present, the principal material shall be identified.

7.5.3.3 Where the finish on substrate or solid supporting material is to be coded, the coding structure in Table 7.5.3.3 shall be used.

**Table 7.5.1.2 Interior Finish Coding Structure**

|   |                                                                               |
|---|-------------------------------------------------------------------------------|
| 1 | Combustible wall, combustible ceiling, and combustible floor finish.          |
| 2 | Combustible wall, combustible ceiling, and noncombustible floor finish.       |
| 3 | Combustible wall, noncombustible ceiling, and combustible floor finish.       |
| 4 | Combustible wall, noncombustible ceiling, and noncombustible floor finish.    |
| 5 | Noncombustible wall, combustible ceiling, and combustible floor finish.       |
| 6 | Noncombustible wall, combustible ceiling, and noncombustible floor finish.    |
| 7 | Noncombustible wall, noncombustible ceiling, and combustible floor finish.    |
| 8 | Noncombustible wall, noncombustible ceiling, and noncombustible floor finish. |
| 0 | Interior finish not able to be classified further.                            |
| U | Interior finish undetermined or not reported.                                 |

## 7.6 Compartment Quality.

### 7.6.1 Protection of Openings in Horizontal Barriers.

- ▲ 7.6.1.1 The data element for protection of openings in horizontal barriers shall be used to measure the fire protection provided in horizontal fire barrier openings.

- 7.6.1.2\* Horizontal openings in stairways and shaft walls shall be reported using the “protection of stairways and vertical shafts” data element (see 7.6.1).

### 7.7 External Exposure.

7.7.1 The data element for external exposure is used to measure the exposure to the structure from potential fires outside of the structure. NFPA 80A shall be used as a guide in determining exposure severity.

7.7.2 Where the external exposure is to be coded, the coding structure in Table 7.7.2 shall be used.

### 7.8 Perimeter Access.

7.8.1 The data element for perimeter access is used to measure the number of sides of the structure that have at least 30 ft (10 m) of clear access for firefighting operations. Clear access facilitates fire department suppression operations and will help limit exposure fire potential. Access areas need not be capable of supporting the weight of fire apparatus but must be capable of providing clear access for fire department operations.

7.8.2 When perimeter access is to be coded, the coding structure designations in Table 7.8.2 shall be used.

**Table 7.5.2.3 Interior Finish Substrate or Solid Supporting Material Coding Structure**

|   |                                                              |
|---|--------------------------------------------------------------|
| 1 | Masonry, concrete, plaster.                                  |
| 2 | Gypsum board.                                                |
| 3 | Mineral board, noncombustible composite board.               |
| 4 | Glass.                                                       |
| 5 | Metal.                                                       |
| 6 | Plastic.                                                     |
| 7 | Wood, plywood, particle board.                               |
| 8 | Fiberboard, combustible composite board.                     |
| 0 | Interior finish substrate not able to be classified further. |
| U | Interior finish substrate undetermined or not reported.      |

**Table 7.5.3.3 Finish on Substrate or Solid Supporting Material Coding Structure**

|   |                                                        |
|---|--------------------------------------------------------|
| 1 | Wallpaper.                                             |
| 2 | Vinyl wall covering.                                   |
| 3 | Paint, stain.                                          |
| 4 | Varnish.                                               |
| 5 | Carpet.                                                |
| 6 | Textiles, fabric.                                      |
| 0 | Finish on substrate not able to be classified further. |
| N | None.                                                  |
| U | Finish on substrate undetermined or not reported.      |

**Table 7.7.2 External Exposure Coding Structure**

|   |                                                      |
|---|------------------------------------------------------|
| 1 | Light exposure, adequate protection provided.        |
| 2 | Light exposure, inadequate protection provided.      |
| 3 | Moderate exposure, adequate protection provided.     |
| 4 | Moderate exposure, inadequate protection provided.   |
| 5 | Severe exposure, adequate protection provided.       |
| 6 | Severe exposure, inadequate protection provided.     |
| 0 | External exposure not able to be classified further. |
| N | No exposure.                                         |
| U | External exposure undetermined or not reported.      |

**Table 7.8.2 Perimeter Access Coding Structure**

|   |                                                |
|---|------------------------------------------------|
| 1 | 30 ft (10 m) or more access on one side.       |
| 2 | 30 ft (10 m) or more access on two sides.      |
| 3 | 30 ft (10 m) or more access on three sides.    |
| 4 | 30 ft (10 m) or more access on four sides.     |
| N | No sides with access of 30 ft (10 m) or more.  |
| U | Perimeter access undetermined or not reported. |

**7.9 Electrical Service Quality.**

**7.9.1** The data element for electrical service quality is used to measure the quality of the electrical service based upon a physical survey of the property and readily observed conditions of electrical equipment and wiring.

**7.9.2** Where the electrical service quality is to be coded, the coding structure designations in Table 7.9.2 **shall** be used.

**Table 7.9.2 Electrical Service Coding Structure**

|   |                                                                                        |
|---|----------------------------------------------------------------------------------------|
| 1 | Visible frayed or damaged wire insulation.                                             |
| 2 | Temporary wiring or extension cords used in place of permanent wiring.                 |
| 3 | Metal junction boxes without connectors at cable entry points noted.                   |
| 4 | Heat at fuses, circuit breakers, or panel box noted.                                   |
| 5 | Overfused circuits noted.                                                              |
| 6 | Fluorescent lights with old-style ballasts mounted on combustible fiberboard ceilings. |
| 7 | A combination of designations 1 through 6.                                             |
| 8 | No electrical service deficiency noted in building or structure.                       |
| 0 | Electrical service quality not able to be classified further.                          |
| U | Electrical service quality undetermined or not reported.                               |

**7.10 Heating Service Quality.**

**7.10.1** The data element for heating service quality is used to measure the quality of the heating system in the facility based upon observation made through a physical survey of the premises.

**7.10.2** Where the heating service quality is to be coded, the coding structure in Table 7.10.2 **shall** be used.

**Table 7.10.2 Heating Service Coding Structure**

|   |                                                                         |
|---|-------------------------------------------------------------------------|
| 1 | Odor of gas or fuel gases noted.                                        |
| 2 | Evidence of charring or smoke stains around chimney connector or flues. |
| 3 | Holes in chimney connector or flue noted.                               |
| 4 | Leaking valve or pipe.                                                  |
| 5 | Chimney connector hanger(s) missing.                                    |
| 7 | A combination of designations 1 through 6.                              |
| 8 | No heating service deficiency noted in building or structure.           |
| 0 | Heating service quality not able to be classified further.              |
| U | Heating service quality undetermined or not reported.                   |

**7.11 Control of Smoking Practices.**

**7.11.1** The data element for control of smoking practices is used to measure the control placed on smoking throughout the facility based upon observations made through a physical survey of the premises.

**7.11.2** Where the smoking practice quality is to be coded, the coding structure in Table 7.11.2 **shall** be used.

**Table 7.11.2 Control of Smoking Practices Coding Structure**

|   |                                                                                                                |
|---|----------------------------------------------------------------------------------------------------------------|
| 1 | Smoking permitted throughout the premises without restriction.                                                 |
| 2 | Smoking restricted in a few special “no smoking” areas — not adequately marked or evidence of violation noted. |
| 3 | Smoking restricted to a few special “smoking” areas — not adequately marked or evidence of violation noted.    |
| 4 | Smoking restricted in a few special “no smoking” areas — adequately marked and no evidence of violation noted. |
| 5 | Smoking restricted to a few special “smoking” areas — adequately marked and no evidence of violation noted.    |
| 6 | No smoking permitted on premises— evidence of violation noted.                                                 |
| 7 | No smoking permitted on premises— no evidence of violation noted.                                              |
| 0 | Control of smoking practices not able to be classified further.                                                |
| U | Control of smoking practices undetermined or not reported.                                                     |

**7.12 Fuel Control.****7.12.1 Solid Kindling Fuels.**

**7.12.1.1** The data element for solid kindling fuel is used to measure the general amount of kindling fuel present within the structure. A kindling fuel is a material that has been divided finely enough that it can be readily ignited. Examples of kindling fuels include wastepaper, corrugated cardboard, wood chips, and the like.

**7.12.1.2** The location of the solid kindling fuel being evaluated must be reported for the data to have relevance. For instance, it is important to report the difference in kindling fuels in occupied and unoccupied areas.

**7.12.1.3** Where solid kindling fuels are to be coded, the coding structure in Table 7.12.1.3 **shall** be used.

**Table 7.12.1.3 Solid Kindling Fuels Coding Structure**

|   |                                                                                                                                                                             |
|---|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Cluttered operations with kindling fuels in all areas.                                                                                                                      |
| 2 | Cluttered operations with kindling fuels in most areas.                                                                                                                     |
| 3 | Cluttered operations with kindling fuels in some areas.                                                                                                                     |
| 4 | Overcrowded operations with kindling fuels.                                                                                                                                 |
| 5 | Occasional pockets of kindling fuels.                                                                                                                                       |
| 7 | Neat and uncluttered operations but kindling fuels present or used in the process.<br>Included are neat and orderly warehouses using cardboard cartons, and neat libraries. |
| 0 | Solid kindling fuels not able to be classified further.                                                                                                                     |
| N | No kindling fuels present.                                                                                                                                                  |
| U | Solid kindling fuels undetermined or not reported.                                                                                                                          |

## 7.12.2 Flammable or Combustible Liquid Use.

**7.12.2.1** The data element for flammable or combustible liquid use is used to measure the extent to which flammable or combustible liquids are used in the business or tenant space and whether or not the flammable or combustible liquids are properly stored in safety cans.

**7.12.2.2** Where flammable or combustible liquid use is to be coded, the coding structure in Table 7.12.2.2 **shall** be used.

**Table 7.12.2.2 Flammable or Combustible Liquid Use Coding Structure**

|   |                                                                                 |
|---|---------------------------------------------------------------------------------|
| 1 | Flammable or combustible liquids used throughout — none in safety cans.         |
| 2 | Flammable or combustible liquids used throughout — some in safety cans.         |
| 3 | Flammable or combustible liquids used throughout — all in safety cans.          |
| 4 | Flammable or combustible liquids used in some areas only — none in safety cans. |
| 5 | Flammable or combustible liquids used in some areas only — some in safety cans. |
| 6 | Flammable or combustible liquids used in some areas only — all in safety cans.  |
| 0 | Flammable or combustible liquid use not able to be classified further.          |
| N | No flammable or combustible liquids present.                                    |
| U | Flammable or combustible liquid use undetermined or not reported.               |

## 7.13 Obstacles to Rescue and Fire Control.

**7.13.1** The data element for obstacles to rescue and fire control is used to define any feature of the property that would present an obstacle to rescuing people from a structure or controlling a fire within the structure. These could be obstacles

that impede access to the structure, obstacles that prevent proper exiting from the structure, or construction features that would make it difficult to work within or control a fire within the structure.

**7.13.2** Where the obstacles to rescue and fire control are to be coded, the coding structure designations in Table 7.13.2 **shall** be used.

**Table 7.13.2 Obstacles to Rescue and Fire Control Coding Structure**

|   |                                                                                                                                    |
|---|------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Access to structure impeded.<br>Included are weak bridges, fences, gates, terrain, parked cars, private road layout, and the like. |
| 2 | Windowless wall.<br>Included are glassless walls, walls with no breakable glass, fixed sash, and glass block walls.                |
| 3 | Type of window impedes egress.<br>Included are small steel sash, narrow casement windows, bars on windows, and fixed sunscreens.   |
| 4 | Exits not accessible or substandard.<br>Included are narrow, blocked, or locked exits, steep or open stairways, and weak hardware. |
| 5 | Internal arrangement.<br>Included are stock piled high, partitions creating confusion, and obstructions.                           |
| 6 | Difficult to ventilate.                                                                                                            |
| 7 | Multiple obstacles.                                                                                                                |
| 0 | Obstacles to rescue and fire control not able to be classified further.                                                            |
| N | No unusual obstacles to rescue or fire control.                                                                                    |
| U | Obstacles to rescue and fire control undetermined or not reported.                                                                 |



## Chapter 8 Preliminary Origin

### 8.1\* Administration.

**8.1.1 Purpose.** This chapter provides categories for documenting the following factors, which describe an area of origin: the point of origin or release of hazardous materials, any equipment involved in ignition or release of hazardous materials, the heat source, the materials involved, and the ignition sequence.

**8.1.2 Application.** Data elements within this chapter are used for documenting hazardous materials incidents and fires. Other data elements within this chapter provide categories that assist in describing fuels involved in wildland fires.

### 8.2 Data Collection.

**8.2.1** The collection of the data required for the completion of this chapter shall be made or supervised by a certified fire officer who has demonstrated proficiency in all of the job performance requirements of NFPA 1021.

**8.2.2** If a separate fire or explosion investigation report is not completed, consideration shall be given to the application of the scientific method listed in Figure A.1.1.3 in the narrative of the incident report.

### 8.3 Area of Fire Origin or Release of Hazardous Materials.

**8.3.1** The area of fire origin or release of hazardous materials identifies the room, area or portion of a room, a vehicle or a portion of a vehicle, or possibly some open area devoted to a specific use where the fire or hazardous materials incident originated. The area of origin or release shall be classified according to the use of that room or space at the time of the incident. The use of an area and its level within the building shall each be kept separate for reporting purposes. Thus, words like “attic” and “basement” shall not be used to describe an area of origin. If these areas are used for storage, that shall be reported; if they are used for some other purpose, that use shall be reported.

**8.3.2\*** Where the area of origin is to be coded, the coding structure in Table 8.3.2 shall be used.

### 8.4 Equipment Identification.

**8.4.1** This section is used to identify the equipment where the heat of ignition originated. It can also be used to identify equipment that was involved in the release of hazardous materials or where a piece of equipment was involved in another type of incident. Analysis of the equipment involved is useful for improving product safety and preventive maintenance. It is just as important to know the kind of equipment that was used improperly as it is to know the kind of equipment that malfunctioned. Misuse can be the direct result of the way the equipment is designed and constructed. When reported as involved in ignition, equipment information provides an important part of the causal data. Data on equipment involved in ignition can be compared with other causal data to determine if the equipment was (or was not) operating properly. The piece of equipment shall be identified with two qualifying data elements: the data element identifying the power source on which the equipment operates (*see 8.4.4*), and the data element identifying whether the equipment is portable or stationary (*see 8.4.5*).

**8.4.2** When equipment is involved in ignition or the release of hazardous material, the following information shall also be recorded:

- (1) Type of equipment
- (2) Equipment manufacturer's name
- (3) Model designation
- (4) Serial number
- (5) Year of manufacture
- (6) Brand or trade name
- (7) Laboratory certification (UL, FM, AGA, etc.)
- (8) If electrical, the current and voltage rating on the label

### 8.4.3 Equipment Involved.

**8.4.3.1** The piece of equipment that was actually involved in the ignition or the release of hazardous materials shall be identified and classified regardless of whether it operated properly or improperly.

**8.4.3.2\*** Where equipment involved is to be coded, the coding structure in Table 8.4.3.2 shall be used.

**Table 8.3.2 Area of Origin Coding Structure**

|    |                                                                                                                                                                           |
|----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 0  | Means of Egress.                                                                                                                                                          |
| 01 | Hallway, corridor, mall.                                                                                                                                                  |
| 02 | Exterior stairway.<br>Included are fire escapes and exterior ramps.                                                                                                       |
| 03 | Interior stairway.<br>Included are interior ramps.                                                                                                                        |
| 04 | Escalator interior or exterior.                                                                                                                                           |
| 05 | Lobby, entrance way.                                                                                                                                                      |
| 09 | Means of egress not able to be classified further.                                                                                                                        |
| 1  | Assembly, Sales Areas (groups of people).                                                                                                                                 |
| 11 | Large assembly area with fixed seats (100 or more persons).<br>Included are auditoriums, chapels, places of worship, theaters, arenas, and lecture halls.                 |
| 12 | Large open room without fixed seats (100 or more persons).<br>Included are ballrooms, gymnasiums, roller rinks, bowling alley lanes, multi-use areas, and the like.       |
| 13 | Small assembly area with or without fixed seats (less than 100 persons).<br>Included are classrooms, meeting rooms, multipurpose rooms, and the like.                     |
| 14 | Lounge area.<br>Included are living rooms, common rooms, TV rooms, dens, recreation rooms, family rooms, sitting rooms, music rooms, and the like.                        |
| 15 | Sales, showroom area.<br>Excluded are display windows (56).                                                                                                               |
| 16 | Library.<br>Included are art galleries and exhibit spaces.                                                                                                                |
| 17 | Swimming pool.                                                                                                                                                            |
| 10 | Assembly, sales areas not able to be classified further.                                                                                                                  |
| 2  | Function Areas.                                                                                                                                                           |
| 21 | Sleeping room for under five persons.<br>Included are patient rooms, bedrooms, cells, lockups, and the like.                                                              |
| 22 | Sleeping area for five or more persons.<br>Included are wards, dormitories, barracks, and the like.                                                                       |
| 23 | Dining area, lunchroom, cafeteria.<br>Included are dining rooms, mess rooms, canteens, and beverage service bars.                                                         |
| 24 | Kitchen, cooking area.                                                                                                                                                    |
| 25 | Lavatory, locker room, cloakroom.<br>Included are checkrooms, rest rooms, bathrooms, powder rooms, washrooms, shower rooms, sauna baths, outhouses, and portable toilets. |
| 26 | Laundry room, area.<br>Included are wash houses.                                                                                                                          |
| 27 | Office.                                                                                                                                                                   |

(continues)

Table 8.3.2 Continued

|    |                                                                                                                                                                                                                     |
|----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 28 | Personal service area.<br>Included are health clubs, massage parlors,<br>and barber and beauty treatment areas.                                                                                                     |
| 20 | Function area not able to be classified<br>further.                                                                                                                                                                 |
| 3  | Technical Areas.                                                                                                                                                                                                    |
| 31 | Laboratory.                                                                                                                                                                                                         |
| 32 | Printing or photographic room, area.                                                                                                                                                                                |
| 33 | First aid, treatment room.<br>Included are areas where minor surgery is<br>performed.                                                                                                                               |
| 34 | Operating room.<br>Included are recovery rooms and operating<br>theaters.                                                                                                                                           |
| 35 | Electronic equipment room, area.<br>Included are control centers, radar rooms,<br>electronic computer areas, data<br>processing centers, telephone equipment<br>rooms, telephone booths, and the like.              |
| 36 | Performance, stage area.<br>Included are backstage areas, dressing<br>rooms, ice rinks, boxing rings, and<br>basketball floors.                                                                                     |
| 37 | Projection room, area.<br>Included are stage light and spotlight areas.                                                                                                                                             |
| 38 | Process, manufacturing area.<br>Included are workrooms.                                                                                                                                                             |
| 30 | Technical area not able to be classified<br>further.                                                                                                                                                                |
| 4  | Storage Areas.                                                                                                                                                                                                      |
| 41 | Product storage room or area, storage tank,<br>storage bin.<br>Included are all areas where products are<br>held awaiting process, shipment, use, or<br>sale.                                                       |
| 42 | Closet.                                                                                                                                                                                                             |
| 43 | Supply storage room or area.<br>Included are tool rooms, maintenance<br>supply rooms, dead storage rooms, and<br>the like.                                                                                          |
| 45 | Shipping, receiving, loading area.<br>Included are packing departments, mail<br>rooms, and loading docks or bays.                                                                                                   |
| 46 | Trash or rubbish area, container.<br>Included are wastepaper storage areas,<br>industrial waste containers, compactors,<br>and garbage and trash chutes without<br>incinerators.<br>Excluded are incinerators (64). |
| 47 | Garage, carport, vehicle storage area.                                                                                                                                                                              |
| 40 | Storage areas not able to be classified<br>further.                                                                                                                                                                 |
| 5  | Service Facilities.                                                                                                                                                                                                 |
| 51 | Elevator, dumbwaiter.<br>Included are the shaft areas.                                                                                                                                                              |
| 52 | Utility shaft.<br>Included are pipe, ventilation, and conduit<br>shafts.                                                                                                                                            |
| 53 | Light shaft.                                                                                                                                                                                                        |

(continues)

Table 8.3.2 Continued

|    |                                                                                                                                                                                                                            |
|----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 54 | Chute.<br>Included are laundry chutes and mail<br>chutes.<br>Excluded are trash chutes (46).                                                                                                                               |
| 55 | Duct.<br>Included are air-conditioning, heating,<br>cable, and exhaust ducts.                                                                                                                                              |
| 56 | Display window.                                                                                                                                                                                                            |
| 57 | Chimney.<br>For fires not confined to the chimney, the<br>area of origin should be classified as the<br>first area where ignition occurs outside<br>the chimney, and the chimney is the<br>equipment involved in ignition. |
| 58 | Conveyor.                                                                                                                                                                                                                  |
| 50 | Service facilities not able to be classified<br>further.                                                                                                                                                                   |
| 6  | Service, Equipment Areas.                                                                                                                                                                                                  |
| 61 | Machinery room, area.<br>Included are elevator machinery rooms,<br>engine rooms, pump rooms, head<br>houses, refrigeration rooms, and the like.                                                                            |
| 62 | Heating equipment room or area, water<br>heater area.                                                                                                                                                                      |
| 63 | Switchgear area, transformer vault.                                                                                                                                                                                        |
| 64 | Incinerator room, area.<br>Included are all incinerator operations.<br>Excluded are rubbish areas without<br>incinerators (46).                                                                                            |
| 65 | Maintenance shop, area.<br>Included are repair shops, welding shops,<br>paint shops, workshops, and paint<br>spraying areas.                                                                                               |
| 66 | Test cell.                                                                                                                                                                                                                 |
| 67 | Enclosure with pressurized air.                                                                                                                                                                                            |
| 68 | Enclosure with enriched oxygen<br>atmosphere.                                                                                                                                                                              |
| 60 | Service, equipment areas not able to be<br>classified further.                                                                                                                                                             |
| 7  | Structural Areas.                                                                                                                                                                                                          |
| 71 | Crawl space, substructure space.                                                                                                                                                                                           |
| 72 | Exterior balcony, open porch.                                                                                                                                                                                              |
| 73 | Ceiling and floor assembly, concealed<br>floor/ceiling space.                                                                                                                                                              |
| 74 | Ceiling and roof assembly, concealed roof/<br>ceiling space.<br>Included are church steeples, cupolas,<br>vacant attics, and the like.                                                                                     |
| 75 | Wall assembly, concealed wall space.                                                                                                                                                                                       |
| 76 | Exterior wall surface.                                                                                                                                                                                                     |
| 77 | Exterior roof surface.                                                                                                                                                                                                     |
| 78 | Awning.                                                                                                                                                                                                                    |
| 70 | Structural areas not able to be classified<br>further.                                                                                                                                                                     |
| 8  | Transportation, Vehicle Areas.                                                                                                                                                                                             |
| 81 | Passenger area of transportation<br>equipment.                                                                                                                                                                             |

(continues)

Table 8.3.2 Continued

|    |                                                                                                                                                                                            |
|----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|    | Included are the operator areas where the operator and passengers are in the same compartment, as in automobiles, trucks, and buses.                                                       |
| 82 | Trunk, load-carrying area of transportation equipment.                                                                                                                                     |
| 83 | Engine area, running gear, wheel area of transportation equipment.                                                                                                                         |
| 84 | Fuel tank, fuel line area of transportation equipment.<br>Included are tanks and lines for flammable or combustible liquids up to the engine area.                                         |
| 85 | Separate operating, control area of transportation equipment.<br>Included are the bridges of ships, cockpits of planes, and the like.<br>Excluded are automobiles, trucks, and buses (81). |
| 86 | Exterior exposed surface of transportation equipment.                                                                                                                                      |
| 80 | Transportation, vehicle areas not able to be classified further.                                                                                                                           |
| 9  | Other Area of Origin.                                                                                                                                                                      |
| 91 | On or near railroad right of way, embankment.                                                                                                                                              |
| 92 | On or near highway, public way, street, parking lot.                                                                                                                                       |
| 93 | Court, terrace, patio.<br>Included are screened-in porches and patios.                                                                                                                     |
| 94 | Lawn, field, open area.<br>Included are farmland, parks, rangeland, and vacant lots.                                                                                                       |
| 95 | Wildland area, woods.                                                                                                                                                                      |
| 96 | Area under construction or major renovation.                                                                                                                                               |
| 98 | Vacant structural area with no current use.                                                                                                                                                |
| 99 | Multiple areas of origin.                                                                                                                                                                  |
| 00 | Area of fire origin or hazardous materials release not able to be classified further.                                                                                                      |
| UU | Area of fire origin or hazardous materials release undetermined or not reported.                                                                                                           |

#### 8.4.4 Equipment Power Source.

**8.4.4.1** The equipment power source shall identify the power that actually operates the piece of equipment, not what produces that power. For example, if a diesel engine drives a generator that produces electricity to operate a motor, the power source for the motor would be electricity. Identification of the equipment power source, combined with other factors in the ignition sequence, can help identify fire causes for analysis. Data on the power source is useful for determining compliance with standards, analyzing the effectiveness of codes and regulations, and targeting prevention programs.

**8.4.4.2** Where the equipment power source is to be coded, the coding structure in Table 8.4.3.2 shall be used.

Table 8.4.3.2 Equipment Involved Coding Structure

|     |                                                                                                                                                                                                                                                                                              |
|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1   | Heating, Ventilating, and Air Conditioning.                                                                                                                                                                                                                                                  |
| 111 | Air conditioner.                                                                                                                                                                                                                                                                             |
| 112 | Heat pump.                                                                                                                                                                                                                                                                                   |
| 113 | Fan.                                                                                                                                                                                                                                                                                         |
| 114 | Humidifier, non-heat producing.<br>Excluded are heaters with built-in humidifiers (131, 132).                                                                                                                                                                                                |
| 115 | Ionizer.                                                                                                                                                                                                                                                                                     |
| 116 | Dehumidifier.                                                                                                                                                                                                                                                                                |
| 117 | Evaporative cooler, cooling tower.                                                                                                                                                                                                                                                           |
| 121 | Masonry fireplace.                                                                                                                                                                                                                                                                           |
| 122 | Factory-built fireplace.                                                                                                                                                                                                                                                                     |
| 123 | Fireplace, insert/stove.                                                                                                                                                                                                                                                                     |
| 124 | Stove, heating.                                                                                                                                                                                                                                                                              |
| 125 | Chimney connector, vent connector.                                                                                                                                                                                                                                                           |
| 126 | Chimney — brick, stone, masonry.                                                                                                                                                                                                                                                             |
| 127 | Chimney — metal, including stovepipe, flue.                                                                                                                                                                                                                                                  |
| 131 | Furnace, local heating unit, built-in.                                                                                                                                                                                                                                                       |
| 132 | Furnace, central heating unit.<br>Also included are built-in humidifiers.<br>Included are furnaces where heat energy is created but the heat is ducted or piped to removed locations.<br>Excluded are process furnaces and kilns (353) and localized heating equipment (division 14 series). |
| 133 | Boiler (power, process, heating).                                                                                                                                                                                                                                                            |
| 141 | Localized heating unit.<br>Included are floor furnaces, wall heaters, and other localized heating equipment.<br>Excluded are central heating units (132), catalytic heaters (142), oil-filled heaters (143), and baseboard heaters (146).                                                    |
| 142 | Heater, catalytic.                                                                                                                                                                                                                                                                           |
| 143 | Heater, oil-filled.                                                                                                                                                                                                                                                                          |
| 144 | Heat lamp.                                                                                                                                                                                                                                                                                   |
| 145 | Heat tape.                                                                                                                                                                                                                                                                                   |
| 146 | Heater, baseboard.                                                                                                                                                                                                                                                                           |
| 151 | Water heater.<br>Included are sink-mounted instant hot water heaters and waterbed heaters.                                                                                                                                                                                                   |
| 152 | Steam line, heat pipe, hot air duct, radiators.                                                                                                                                                                                                                                              |
| 100 | Heating, ventilating, and air conditioning not able to be classified further.                                                                                                                                                                                                                |
| 2   | Electrical Distribution, Lighting, and Power Transfer.                                                                                                                                                                                                                                       |
| 211 | Electrical power (utility) line.<br>Excluded are wires from the utility pole or distribution transformer to the structure (212).                                                                                                                                                             |
| 212 | Electrical service supply wires; wires from the utility pole or distribution transformer to the structure.                                                                                                                                                                                   |
| 213 | Electric meter, meter box, and electric service entrance conductors.                                                                                                                                                                                                                         |
| 214 | Electrical wiring from meter box to distribution panel.                                                                                                                                                                                                                                      |

(continues)

**Table 8.4.3.2** *Continued*

|     |                                                                                                                                                                       |
|-----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 215 | Panel board (fuse), switchboard, circuit breaker board with or without ground-fault interrupter.                                                                      |
| 216 | Electrical branch circuit.<br>Includes armored (metallic) cable, nonmetallic sheathing, or wire in conduit; copper branch circuit and aluminum branch circuit wiring. |
| 217 | Outlet, receptacle.<br>Included are wall-type receptacles and electric dryer and stove receptacles.                                                                   |
| 218 | Wall-type switch.<br>Included are light switches.                                                                                                                     |
| 219 | Ground-fault interrupter (GFI), plug-in.                                                                                                                              |
| 221 | Transformer, distribution-type.                                                                                                                                       |
| 222 | Overcurrent, disconnect equipment.<br>Excluded are panel boards (215).                                                                                                |
| 223 | Low-voltage transformer (not more than 50 volts).                                                                                                                     |
| 224 | Generator.                                                                                                                                                            |
| 225 | Inverter, converter.                                                                                                                                                  |
| 226 | Uninterruptible power supply (UPS).                                                                                                                                   |
| 227 | Surge protector.                                                                                                                                                      |
| 228 | Battery charger, rectifier.                                                                                                                                           |
| 229 | Battery.<br>Includes all battery types                                                                                                                                |
| 230 | Lamp, lighting, other.                                                                                                                                                |
| 231 | Lamp — tabletop, floor, desk.<br>Excluded are lightbulbs (238).                                                                                                       |
| 232 | Lantern, flashlight.                                                                                                                                                  |
| 233 | Incandescent lighting fixture.                                                                                                                                        |
| 234 | Fluorescent lighting fixture, ballast.                                                                                                                                |
| 235 | Halogen lighting fixture or lamp.                                                                                                                                     |
| 236 | Sodium, mercury vapor lighting fixtures or lamps.                                                                                                                     |
| 237 | Portable or movable work light, trouble light.                                                                                                                        |
| 238 | Lightbulb.                                                                                                                                                            |
| 241 | Nightlight.                                                                                                                                                           |
| 242 | Decorative lights, line voltage.<br>Included are holiday lighting and Christmas lights.                                                                               |
| 243 | Decorative or landscape lighting, low voltage.                                                                                                                        |
| 244 | Skeleton neon or outline electric discharge lighting.<br>Excluded are electric signs (245).                                                                           |
| 245 | Electric sign.                                                                                                                                                        |
| 251 | Fence, electric.                                                                                                                                                      |
| 252 | Traffic control device.                                                                                                                                               |
| 253 | Lightning rod, arrester/grounding device.                                                                                                                             |
| 261 | Power cord, plug — detachable from appliance.                                                                                                                         |
| 262 | Power cord, plug — permanently attached to appliance.                                                                                                                 |
| 263 | Extension cord, flat.                                                                                                                                                 |
| 264 | Extension cord, round.                                                                                                                                                |
| 265 | Electrical adapter.                                                                                                                                                   |
| 200 | Electrical distribution, lighting, and power transfer not able to be classified further.                                                                              |

(continues)

**Table 8.4.3.2** *Continued*

|     |                                                                                                                                         |
|-----|-----------------------------------------------------------------------------------------------------------------------------------------|
| 3   | Shop Tools or Industrial Equipment.                                                                                                     |
| 311 | Power saw.                                                                                                                              |
| 312 | Power lathe.                                                                                                                            |
| 313 | Power shaper, router, jointer, planer.                                                                                                  |
| 314 | Power cutting tool.                                                                                                                     |
| 315 | Power drill, screwdriver.                                                                                                               |
| 316 | Power sander, grinder, buffer, polisher.                                                                                                |
| 317 | Power hammer, jackhammer.                                                                                                               |
| 318 | Power nail gun, stud driver, stapler.                                                                                                   |
| 321 | Paint dipper.                                                                                                                           |
| 322 | Paint flow coating machine.                                                                                                             |
| 323 | Paint mixing machine.                                                                                                                   |
| 324 | Paint sprayer.                                                                                                                          |
| 325 | Coating machine.<br>Included are asphalt-saturating and rubber-spreading machines.                                                      |
| 331 | Welding torch.<br>Excluded are cutting torches (332).                                                                                   |
| 332 | Cutting torch.<br>Excluded are welding torches (331).                                                                                   |
| 333 | Burners.<br>Included are Bunsen burners, plumber furnaces, and blowtorches.<br>Excluded are weed burners (523).                         |
| 334 | Soldering equipment.                                                                                                                    |
| 341 | Air compressor.                                                                                                                         |
| 342 | Gas compressor.<br>Included are air compressors (341).                                                                                  |
| 343 | Atomizing equipment.<br>Excluded is paint-spraying equipment (324).                                                                     |
| 344 | Pump.<br>Excluded are pumps integrated with other types of equipment.                                                                   |
| 345 | Wet/dry vacuum (shop vacuum).                                                                                                           |
| 346 | Hoist, lift, permanently installed crane.<br>Excluded are freight or passenger elevators (433).                                         |
| 347 | Powered jacking equipment.<br>Included are hydraulic rescue tools.                                                                      |
| 348 | Drilling machinery or equipment.<br>Included is water or gas drilling equipment.                                                        |
| 351 | Heat treating equipment.                                                                                                                |
| 352 | Incinerator.                                                                                                                            |
| 353 | Process furnace, oven, or kiln.<br>Included are industrial ovens and furnaces.<br>Excluded are ovens for cooking and baking food (646). |
| 354 | Tarpot, tar kettle.                                                                                                                     |
| 355 | Casting, molding, forging equipment.                                                                                                    |
| 356 | Distilling equipment.                                                                                                                   |
| 357 | Digester, reactor.                                                                                                                      |
| 358 | Extractor, waste recovery machine.<br>Included are solvent extractors such as used in drycleaning operations and garnetting equipment.  |
| 361 | Industrial or material-handling conveyor.<br>Excluded are agricultural conveyors (513).                                                 |
| 362 | Power transfer equipment: ropes, cables, blocks, belts.                                                                                 |

(continues)

Table 8.4.3.2 *Continued*

|     |                                                                                                                                                                            |
|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 363 | Power take-off.                                                                                                                                                            |
| 364 | Powered valves.                                                                                                                                                            |
| 365 | Bearing or brake.                                                                                                                                                          |
| 371 | Picking, carding, weaving machine.<br>Included are cotton gins.                                                                                                            |
| 372 | Testing equipment.                                                                                                                                                         |
| 373 | Gas regulator.<br>Included are propane, butane, LP-Gas or<br>natural gas regulators, and flexible hose<br>connectors to gas appliances.                                    |
| 374 | Separate motor.<br>Included are bench motors.<br>Excluded are internal combustion motors<br>(375).                                                                         |
| 375 | Internal combustion engine (nonvehicular).                                                                                                                                 |
| 376 | Printing press.                                                                                                                                                            |
| 377 | Car washing equipment.                                                                                                                                                     |
| 300 | Shop tools or industrial equipment not<br>elsewhere classified.                                                                                                            |
| 4   | Commercial or Medical Equipment.                                                                                                                                           |
| 411 | Dental, medical, or other powered bed or<br>chair.<br>Included are powered wheelchairs.                                                                                    |
| 412 | Dental equipment, other.                                                                                                                                                   |
| 413 | Dialysis equipment.                                                                                                                                                        |
| 414 | Medical imaging equipment.<br>Included are MRI, CAT scanners, and<br>ultrasound.                                                                                           |
| 415 | Medical monitoring equipment.                                                                                                                                              |
| 416 | Oxygen administration equipment.                                                                                                                                           |
| 417 | Radiological, x-ray, radiation therapy<br>equipment.                                                                                                                       |
| 418 | Sterilizer: medical.<br>Excluded are nonmedical sterilizers (897).                                                                                                         |
| 419 | Therapeutic equipment.                                                                                                                                                     |
| 421 | Transmitter.                                                                                                                                                               |
| 422 | Telephone switching gear, PBX.                                                                                                                                             |
| 423 | TV monitor array.<br>Included are control panels with multiple TV<br>monitors and security monitoring stations.<br>Excluded are single TV monitor<br>configurations (753). |
| 424 | Studio-type TV camera.<br>Included are professional studio television<br>cameras.<br>Excluded are home camcorders (756).                                                   |
| 425 | Studio-type sound recording/modulating<br>equipment.                                                                                                                       |
| 426 | Radar equipment.                                                                                                                                                           |
| 431 | Amusement ride equipment.                                                                                                                                                  |
| 432 | Ski lift.                                                                                                                                                                  |
| 433 | Passenger or freight elevator or lift.                                                                                                                                     |
| 434 | Escalator.                                                                                                                                                                 |
| 441 | Microfilm, microfiche viewing equipment.                                                                                                                                   |
| 442 | Photo processing equipment.<br>Included is microfilm processing equipment.                                                                                                 |
| 443 | Vending machine.                                                                                                                                                           |
| 444 | Arcade game.<br>Included are pinball machines and the like.                                                                                                                |

(continues)

Table 8.4.3.2 *Continued*

|     |                                                                                              |
|-----|----------------------------------------------------------------------------------------------|
|     | Excluded are electronic video games (755).                                                   |
| 445 | Water fountain, water cooler.                                                                |
| 446 | Telescope.<br>Included are radio telescopes.                                                 |
| 451 | Electron microscope.                                                                         |
| 452 | Laboratory equipment.<br>Excluded are electron microscopes (451).                            |
| 400 | Commercial or medical equipment not able<br>to be classified further.                        |
| 5   | Garden Tools or Agricultural Equipment.                                                      |
| 511 | Combine, threshing machine.                                                                  |
| 512 | Hay processing equipment.                                                                    |
| 513 | Agricultural elevator or conveyor.                                                           |
| 514 | Silo loader, unloader, screw/sweep auger.                                                    |
| 515 | Feed grinder, mixer, blender.                                                                |
| 516 | Milking machine.                                                                             |
| 517 | Pasteurizer.<br>Included are milk pasteurizers.                                              |
| 518 | Cream separator.                                                                             |
| 521 | Sprayer, farm or garden.                                                                     |
| 522 | Chain saw.                                                                                   |
| 523 | Weed burner.                                                                                 |
| 524 | Lawn mower.                                                                                  |
| 525 | Lawn, landscape trimmer, edger.                                                              |
| 531 | Lawn vacuum.                                                                                 |
| 532 | Leaf blower.                                                                                 |
| 533 | Mulcher, grinder, chipper.<br>Included are leaf mulchers.                                    |
| 534 | Snow blower, thrower.                                                                        |
| 535 | Log splitter.                                                                                |
| 536 | Post-hole auger.                                                                             |
| 537 | Post driver, pile driver.                                                                    |
| 538 | Tiller, cultivator.                                                                          |
| 500 | Gardening tools or agricultural equipment<br>not able to be classified further.              |
| 6   | Kitchen and Cooking Equipment.                                                               |
| 611 | Blender, juicer, food processor, mixer.                                                      |
| 612 | Coffee grinder.                                                                              |
| 621 | Can opener.                                                                                  |
| 622 | Knife.                                                                                       |
| 623 | Knife sharpener.                                                                             |
| 631 | Coffee maker or teapot.                                                                      |
| 632 | Food warmer, hot plate.                                                                      |
| 633 | Kettle.                                                                                      |
| 634 | Popcorn popper.                                                                              |
| 635 | Pressure cooker or canner.                                                                   |
| 636 | Slow cooker.                                                                                 |
| 637 | Toaster, toaster oven, countertop broiler.                                                   |
| 638 | Waffle iron, griddle.                                                                        |
| 639 | Wok, frying pan, skillet.                                                                    |
| 641 | Bread-maker machine.                                                                         |
| 642 | Deep fryer.                                                                                  |
| 643 | Grill, hibachi, barbecue.                                                                    |
| 644 | Microwave oven.                                                                              |
| 645 | Oven or rotisserie for cooking and baking<br>food.                                           |
| 646 | Range, stove with or without oven or cooking<br>surface.<br>Includes counter-mounted stoves. |

(continues)

Shaded text = Revisions.  = Text deletions and figure/table revisions. • = Section deletions.  = New material



**Table 8.4.3.2** *Continued*

|     |                                                                                                                                                                                             |
|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 647 | Steam table, warming drawer/table.                                                                                                                                                          |
| 651 | Dishwasher.                                                                                                                                                                                 |
| 652 | Freezer when separate from refrigerator.                                                                                                                                                    |
| 653 | Garbage disposal.                                                                                                                                                                           |
| 654 | Grease hood/duct exhaust fan.                                                                                                                                                               |
| 655 | Ice maker when separate from refrigerator.                                                                                                                                                  |
| 656 | Refrigerator, refrigerator/freezer.                                                                                                                                                         |
| 600 | Kitchen and cooking equipment not able to be classified further.                                                                                                                            |
| 7   | Electronic and Other Electrical Equipment.                                                                                                                                                  |
| 710 | Computer device, other.                                                                                                                                                                     |
| 711 | Computer.<br>Included are devices such as hard drives and modems installed inside the computer casing.<br>Excluded are external storage devices (712).                                      |
| 712 | External, computer storage device.<br>Included are CD-ROM devices, DVD devices, tape drives, and disk drives.<br>Excluded are such devices when they are installed within a computer (711). |
| 713 | Computer modem, external.<br>Included are digital, ISDN modems, cable modems, and modem racks.<br>Excluded are modems installed within a computer (711).                                    |
| 714 | Computer monitor.<br>Included are LCD or flat-screen monitors.                                                                                                                              |
| 715 | Computer printer.                                                                                                                                                                           |
| 716 | Computer projection device, LCD panel, projector.                                                                                                                                           |
| 721 | Adding machine, calculator.                                                                                                                                                                 |
| 722 | Telephone or answering machine.                                                                                                                                                             |
| 723 | Cash register.                                                                                                                                                                              |
| 724 | Copier.                                                                                                                                                                                     |
| 725 | Fax machine.                                                                                                                                                                                |
| 726 | Paper shredder.                                                                                                                                                                             |
| 727 | Postage, shipping meter equipment.                                                                                                                                                          |
| 728 | Typewriter.                                                                                                                                                                                 |
| 731 | Guitar.                                                                                                                                                                                     |
| 732 | Electronic piano, organ.<br>Included are player pianos.                                                                                                                                     |
| 733 | Musical synthesizer or keyboard.<br>Excluded are pianos, organs (732).                                                                                                                      |
| 741 | CD player (audio).<br>Excluded are computer CD and DVD players (712).                                                                                                                       |
| 742 | Laser disc player.                                                                                                                                                                          |
| 743 | Radio.<br>Excluded are two-way radios (744).                                                                                                                                                |
| 744 | Radio, two-way.                                                                                                                                                                             |
| 745 | Record player, phonograph, turntable.                                                                                                                                                       |
| 747 | Speakers, audio — separate components.                                                                                                                                                      |
| 748 | Stereo equipment.<br>Included are receivers, amplifiers, and equalizers.<br>Excluded are speakers (747).                                                                                    |
| 749 | Tape recorder or player.                                                                                                                                                                    |
| 751 | Cable converter box.                                                                                                                                                                        |

(continues)

**Table 8.4.3.2** *Continued*

|     |                                                                              |
|-----|------------------------------------------------------------------------------|
| 752 | Projector: film, slide, overhead.                                            |
| 753 | Television.                                                                  |
| 754 | VCR or VCR/TV combination.                                                   |
| 755 | Video game — electronic.                                                     |
| 756 | Camcorder, video camera.                                                     |
| 757 | Photographic camera and equipment.<br>Included are digital cameras.          |
| 700 | Electronic and other electrical equipment not able to be classified further. |
| 8   | Personal or Household Equipment.                                             |
| 811 | Clothes dryer.                                                               |
| 812 | Trash compactor.                                                             |
| 813 | Washer/dryer combination (within one frame).                                 |
| 814 | Washing machine — clothes.                                                   |
| 821 | Hot tub, whirlpool, spa.                                                     |
| 822 | Swimming pool equipment.                                                     |
| 831 | Broom — electric.                                                            |
| 832 | Carpet-cleaning equipment.<br>Included are rug shampoos.                     |
| 833 | Floor buffer, waxer, cleaner.                                                |
| 834 | Vacuum cleaner.                                                              |
| 841 | Comb, hairbrush.                                                             |
| 842 | Curling iron.                                                                |
| 843 | Electrolysis equipment.                                                      |
| 844 | Hair curler warmer.                                                          |
| 845 | Hair dryer.                                                                  |
| 846 | Makeup mirror — lighted.                                                     |
| 847 | Razor, shaver.                                                               |
| 848 | Suntan equipment, sunlamp.                                                   |
| 849 | Toothbrush.                                                                  |
| 851 | Baby bottle warmer.                                                          |
| 852 | Heated blanket, mattress pad.                                                |
| 853 | Heating pad.                                                                 |
| 854 | Clothes steamer.                                                             |
| 855 | Clothes iron.                                                                |
| 861 | Automatic door opener.<br>Excluded are garage door openers (863).            |
| 862 | Burglar alarm.                                                               |
| 863 | Garage door opener.                                                          |
| 864 | Gas detector.                                                                |
| 865 | Intercom.                                                                    |
| 866 | Gas, smoke, or heat detector as part of an alarm system.                     |
| 866 | Smoke or heat detector, fire alarm.<br>Includes control equipment.           |
| 868 | Thermostat.                                                                  |
| 871 | Ashtray.                                                                     |
| 872 | Utility lighter.                                                             |
| 873 | Cigarette lighter, pipe lighter.                                             |
| 874 | Fire-extinguishing equipment.<br>Included are electronic controls.           |
| 875 | Insect trap.<br>Included are bug zappers.                                    |
| 876 | Timer.                                                                       |
| 877 | Novelty lighters.                                                            |
| 881 | Model vehicles.                                                              |

(continues)

**Table 8.4.3.2** *Continued*

|     |                                                                                                              |
|-----|--------------------------------------------------------------------------------------------------------------|
|     | Included are model airplanes, boats, rockets, and powered vehicles used for hobby and recreational purposes. |
| 882 | Toy, powered.                                                                                                |
| 883 | Woodburning kit.                                                                                             |
| 891 | Clock.                                                                                                       |
| 892 | Gun.                                                                                                         |
| 893 | Jewelry-cleaning machine.                                                                                    |
| 894 | Scissors.                                                                                                    |
| 895 | Sewing machine.                                                                                              |
| 896 | Shoe polisher.                                                                                               |
| 897 | Sterilizer for nonmedical purposes.                                                                          |
|     | Excluded are medical sterilizers (418).                                                                      |
| 800 | Personal or household equipment not able to be classified further.                                           |
| 0   | Other Equipment Involved.                                                                                    |
| 000 | Equipment involved not able to be classified further.                                                        |
| NNN | No equipment involved.                                                                                       |
| UUU | Equipment involved undetermined or not reported.                                                             |

**Table 8.4.4.2 Equipment Power Source Coding Structure**

|    |                                                                                           |
|----|-------------------------------------------------------------------------------------------|
| 1  | Electrical.                                                                               |
| 11 | Electrical line voltage (50 volts or greater).<br>Included is typical house current.      |
| 12 | Batteries and low voltage (less than 50 volts).                                           |
| 10 | Electrical not able to be classified further.                                             |
| 2  | Gaseous Fuels.                                                                            |
| 21 | Natural gas or other lighter-than-air gas.<br>Included is hydrogen.                       |
| 22 | LP-Gas or other heavier-than-air gas.<br>Included are propane and butane gas.             |
| 20 | Gaseous fuels not able to be classified further.                                          |
| 3  | Liquid Fuels.                                                                             |
| 31 | Gasoline.                                                                                 |
| 32 | Alcohol.                                                                                  |
| 33 | Kerosene, diesel fuel, No. 1 or No. 2 fuel oil.                                           |
| 34 | No. 4, No. 5, or No. 6 fuel oil.<br>Included are industrial furnace oils and bunker oils. |
| 30 | Liquid fuel not able to be classified further.                                            |
| 4  | Solid Fuels.                                                                              |
| 41 | Wood, paper.                                                                              |
| 42 | Coal, charcoal.                                                                           |
| 43 | Chemicals.                                                                                |
| 40 | Solid fuel not able to be classified further.                                             |
| 5  | Other Power Source.                                                                       |
| 51 | Compressed air.                                                                           |
| 52 | Steam.                                                                                    |
| 53 | Water.                                                                                    |
| 54 | Wind.                                                                                     |
| 55 | Solar.                                                                                    |
| 56 | Geothermal.                                                                               |
| 57 | Nuclear.                                                                                  |
| 58 | Fluid/hydraulic power source.                                                             |
| 00 | Power source not able to be classified further.                                           |
| UU | Power source undetermined or not reported.                                                |

**8.4.5 Equipment Portability.**

**8.4.5.1** The data element equipment “portability” identifies whether the piece of equipment is normally moved from location to location as it is used, or whether it is used in a single location.

**8.4.5.2** Where the equipment portability is to be coded, the coding structure in Table 8.4.5.2 **shall** be used.

**8.5 Heat Source.**

**8.5.1** The heat source identifies the heat energy that ignited the first material to cause the fire. This information, combined with other factors in the ignition sequence, permits analysis of how fires start. Also, some heat sources, such as cigarettes or lighters, are objects whose frequency of involvement in fires is of direct interest to fire prevention efforts. This data element applies to fires only.

**8.5.2\* Heat Source Coding Structure.** Where the heat source is to be coded, the coding structure **provided** in 8.5.2.1 through 8.5.2.7 **shall** be used.

**8.5.2.1 Heat Source from Operating Equipment (1).** For heat sources from operating equipment, the following coding structure shall be used:

- (1) Spark, ember, or flame from operating equipment — 11
- (2) Radiated, conducted heat from operating equipment — 12
- (3) Electrical arcing — 10
- (4) Heat sources from operating equipment not able to be classified further — 10

**8.5.2.2 Hot or Smoldering Object (4).** For hot or smoldering objects, the following coding structure shall be used:

- (1) Heat, spark from friction — 41
- (2) Molten, hot material — 42
- (3) Hot ember or ash — 43
- (4) Hot or smoldering objects not able to be classified further — 40

**8.5.2.3 Heat from Explosives or Fireworks (5).** For heat from explosives or fireworks, the following coding structure shall be used:

- (1) Munitions — 51
- (2) Tracer or incendiary ammunition — 52
- (3) Blasting agent, primer cord, black powder fuse — 53
- (4) Fireworks — 54
- (5) Model and amateur rockets — 55
- (6) Incendiary device — 56
- (7) Explosives or fireworks not able to be classified further — 50

**Table 8.4.5.2 Equipment Portability Coding Structure**

|   |                                                                                                                                                                                                      |
|---|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Portable.<br>Included is equipment that is able to be carried or moved by one or two persons, is designed to be used in a variety of locations, and does not require tools to install or operate it. |
| 2 | Stationary.<br>Included is equipment mounted at a fixed site or location or designed to be operated or used in one location.                                                                         |
| U | Equipment portability undetermined or not reported.                                                                                                                                                  |

**N 8.5.2.4 Heat from Other Open Flame or Smoking Material (6).**

For heat from other open flame or smoking material, the following coding structure shall be used:

- (1) Cigarette — 61
- (2) Pipe or cigar — 62
- (3) Heat from undetermined smoking material — 63
- (4) Match — 64
- (5) Lighter — 65
- (6) Candle, taper — 66
- (7) Warning or road flare — 67
- (8) Backfire from internal combustion engine — 68
- (9) Flames and torches used for lighting — 69
- (10) Heat from open flames or smoking materials not able to be classified further — 60

**N 8.5.2.5 Heat from Chemical or Natural Source (7).** For heat from chemical or natural sources, the following coding structure shall be used:

- (1) Sun's heat — 71
- (2) Spontaneous ignition, chemical reaction — 72
- (3) Lightning discharge — 73
- (4) Static discharge — 74
- (5) Heat from chemical or natural sources not able to be classified further — 70

**N 8.5.2.6 Heat Spread from Another Fire (8).** For heat spread from another fire, the following coding structure shall be used:

- (1) Heat from direct flame, convection currents spreading from another fire — 81
- (2) Radiated heat from another fire — 82
- (3) Heat from flying brand, ember, spark — 83
- (4) Conducted heat from another fire — 84
- (5) Heat spreading from another fire not able to be classified further — 80

**N 8.5.2.7 Other Heat Source (9).** For other heat sources, the following coding structure shall be used:

- (1) Multiple heat sources including multiple ignitions — 99
- (2) Heat source not able to be classified further — 00
- (3) Heat source undetermined or not reported — UU

**8.6 Material Identification.****8.6.1 Item Ignited.**

**8.6.1.1** The item ignited identifies the use or configuration of a material. Combined with the type of material data element, it can be used to classify the material first ignited, the material contributing most to smoke or flame development, or any other material and its use that a particular system might collect. This data element is designed for use with reporting information about fires. When used for recording the first material ignited, it shall identify the first item that had sufficient volume or heat intensity to extend to uncontrolled or self-perpetuating fire.

**8.6.1.2\*** Where the item ignited is to be coded, the coding structure in Table 8.6.1.2 shall be used.

**8.6.2 Type of Material.****Table 8.6.1.2 Item Ignited Coding Structure**

|    |                                                                                                                                                                                                 |
|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1  | Structural Component, Finish.                                                                                                                                                                   |
| 11 | Exterior roof covering, surface, finish.                                                                                                                                                        |
| 12 | Exterior sidewall covering, surface, finish.<br>Included are eaves.                                                                                                                             |
| 13 | Exterior trim, appurtenances.<br>Included are doors, porches, and platforms.                                                                                                                    |
| 14 | Floor covering, surface.<br>Included are rugs, carpets, or mats.                                                                                                                                |
| 15 | Interior wall covering.<br>Included are cloth wall coverings, wood paneling, and items permanently affixed to a wall or door.<br>Excluded are curtains and draperies (36) and decorations (42). |
| 16 | Interior ceiling covering, surface.<br>Included are cloth permanently affixed to ceiling, and acoustical tile.                                                                                  |
| 17 | Structural member, framing.                                                                                                                                                                     |
| 18 | Thermal, acoustical insulation within wall, partition, or floor/ceiling space.<br>Included are fibers, batts, boards, and loose fills.                                                          |
| 10 | Structural component or finish not able to be classified further.                                                                                                                               |
| 2  | Furniture, Utensils.<br>Included is built-in furniture.                                                                                                                                         |
| 21 | Upholstered sofa, chair, vehicle seats.                                                                                                                                                         |
| 22 | Nonupholstered chair, bench.                                                                                                                                                                    |
| 23 | Cabinetry.<br>Included are filing cabinets, pianos, dressers, chests of drawers, desks, tables, and bookcases.<br>Excluded are TV sets, bottle warmers, and appliance housings (25).            |
| 24 | Ironing board.                                                                                                                                                                                  |
| 25 | Appliance housing or casing.                                                                                                                                                                    |
| 26 | Household utensils.<br>Included are kitchen and cleaning utensils.                                                                                                                              |
| 20 | Furniture, utensils not able to be classified further.                                                                                                                                          |
| 3  | Soft Goods, Wearing Apparel.                                                                                                                                                                    |
| 31 | Mattress, pillow.                                                                                                                                                                               |
| 32 | Bedding, blanket, sheet, comforter.<br>Included are heating pads.                                                                                                                               |
| 33 | Linen, other than bedding.<br>Included are towels and tablecloths.                                                                                                                              |
| 34 | Wearing apparel not on a person.                                                                                                                                                                |
| 35 | Wearing apparel on a person.                                                                                                                                                                    |
| 36 | Curtain, blind, drapery, tapestry.                                                                                                                                                              |
| 37 | Goods not made up.<br>Included are fabrics and yard goods.                                                                                                                                      |
| 38 | Luggage.                                                                                                                                                                                        |
| 30 | Soft goods, wearing apparel not able to be classified further.                                                                                                                                  |
| 4  | Adornment, Recreational Material, Signs, Outdoor Material.                                                                                                                                      |
| 41 | Christmas tree.                                                                                                                                                                                 |
| 42 | Decoration.                                                                                                                                                                                     |

(continues)

Table 8.6.1.2 *Continued*

|    |                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 43 | Sign.<br>Included are outdoor signs such as billboards.                                                                                                                                                                                                                                                                                                                                                                                    |
| 44 | Chips.<br>Included are wood chips.                                                                                                                                                                                                                                                                                                                                                                                                         |
| 45 | Toy, game.                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 46 | Awning, canopy.                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 47 | Tarpaulin, tent.                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 40 | Adornment, recreational material, signs,<br>outdoor material not able to be classified<br>further.                                                                                                                                                                                                                                                                                                                                         |
| 5  | Supplies and Stock.                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 51 | Box, carton, bag, basket, barrel<br>Included are wastebaskets.                                                                                                                                                                                                                                                                                                                                                                             |
| 52 | Material being used to make a product.<br>Included are raw materials used as input to a<br>manufacturing or construction process.<br>Excluded are finished products.                                                                                                                                                                                                                                                                       |
| 53 | Pallet, skid (not in use).<br>Excluded are palletized stock (58).                                                                                                                                                                                                                                                                                                                                                                          |
| 54 | Rope, cord, twine, yarn.                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 55 | Packing, wrapping material.                                                                                                                                                                                                                                                                                                                                                                                                                |
| 56 | Baled goods or material.<br>Included is bale storage.                                                                                                                                                                                                                                                                                                                                                                                      |
| 57 | Bulk storage.                                                                                                                                                                                                                                                                                                                                                                                                                              |
| 58 | Palletized material, material stored on pallets.                                                                                                                                                                                                                                                                                                                                                                                           |
| 59 | Rolled, wound material.<br>Included are rolled paper and fabrics.                                                                                                                                                                                                                                                                                                                                                                          |
| 50 | Supplies and stock not able to be classified<br>further.                                                                                                                                                                                                                                                                                                                                                                                   |
| 6  | Liquids, Pipes, and Filters.                                                                                                                                                                                                                                                                                                                                                                                                               |
| 61 | Atomized or vaporized liquid.<br>Included are aerosols.                                                                                                                                                                                                                                                                                                                                                                                    |
| 62 | Fuel.<br>Included is flammable gas or ignitable liquid<br>in or escaping from an engine or burner.                                                                                                                                                                                                                                                                                                                                         |
| 63 | Flammable gas or ignitable liquid in or<br>escaping from its final container.<br>Included are flammable gases or ignitable<br>liquids in their final container prior to<br>direct transfer into the engine or burner or<br>the piping associated with this final transfer.<br>Excluded are flammable gases or ignitable<br>liquids stored in a container such that they<br>need to be transferred to another container<br>before use (64). |
| 64 | Flammable gas or ignitable liquid in or<br>escaping from a container or pipe.<br>Excluded are fuels in their final container<br>prior to direct transfer to the engine or<br>burner or in the piping associated with the<br>final transfer (63).                                                                                                                                                                                           |
| 65 | Flammable gas or ignitable liquid uncontained.<br>Included are accelerants.                                                                                                                                                                                                                                                                                                                                                                |
| 66 | Pipe, duct, conduit, hose.                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 67 | Pipe, duct, conduit covering.<br>Included are insulating materials whether for<br>acoustical or thermal purposes, and<br>whether inside or outside the pipe, conduit,<br>or duct.                                                                                                                                                                                                                                                          |

(continues)

Table 8.6.1.2 *Continued*

|    |                                                                                                                                                                                                                                                                                                                                                                                             |
|----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 68 | Filter.<br>Included are evaporative cooler pads.                                                                                                                                                                                                                                                                                                                                            |
| 60 | Liquids, pipes, and filters not able to be<br>classified further.                                                                                                                                                                                                                                                                                                                           |
| 7  | Organic Materials.                                                                                                                                                                                                                                                                                                                                                                          |
| 71 | Agricultural product.<br>Included are fruits and vegetables.                                                                                                                                                                                                                                                                                                                                |
| 72 | Light vegetation — not crop.<br>Included are grass, leaves, needles, chaff,<br>mulch, and compost.                                                                                                                                                                                                                                                                                          |
| 73 | Heavy vegetation — not crop.<br>Included are trees and brush.                                                                                                                                                                                                                                                                                                                               |
| 74 | Animal living or dead.                                                                                                                                                                                                                                                                                                                                                                      |
| 75 | Human living or dead.                                                                                                                                                                                                                                                                                                                                                                       |
| 76 | Cooking materials.<br>Included are edible materials for man or<br>animal.<br>Excluded are cooking utensils (26).                                                                                                                                                                                                                                                                            |
| 77 | Feathers or fur not on a bird or animal, but<br>not processed into a product.                                                                                                                                                                                                                                                                                                               |
| 70 | Organic materials not able to be classified<br>further.                                                                                                                                                                                                                                                                                                                                     |
| 8  | General Materials.                                                                                                                                                                                                                                                                                                                                                                          |
| 81 | Electrical wire, cable insulation.<br>Insulation on wiring should not be classified<br>as the first item ignited unless there were no<br>other materials in the immediate area, such<br>as might be found in a cable tray or<br>electrical vault. The first item of significance<br>that caught fire from the wire or wire<br>insulation should be classified as the item<br>first ignited. |
| 82 | Transformer.<br>Included are transformer fluids.                                                                                                                                                                                                                                                                                                                                            |
| 83 | Conveyor belt, drive belt, V-belt.                                                                                                                                                                                                                                                                                                                                                          |
| 84 | Tire.                                                                                                                                                                                                                                                                                                                                                                                       |
| 85 | Railroad ties.                                                                                                                                                                                                                                                                                                                                                                              |
| 86 | Fence or pole.                                                                                                                                                                                                                                                                                                                                                                              |
| 87 | Fertilizer.                                                                                                                                                                                                                                                                                                                                                                                 |
| 88 | Pyrotechnics or explosives.                                                                                                                                                                                                                                                                                                                                                                 |
| 89 | Recyclable material.<br>Included are materials being collected or set<br>aside for recycling, whether in a container<br>or loose.                                                                                                                                                                                                                                                           |
| 9  | General Materials Continued.                                                                                                                                                                                                                                                                                                                                                                |
| 91 | Book.                                                                                                                                                                                                                                                                                                                                                                                       |
| 92 | Magazine, newspaper, writing paper.<br>Included are files.                                                                                                                                                                                                                                                                                                                                  |
| 93 | Adhesive.                                                                                                                                                                                                                                                                                                                                                                                   |
| 94 | Dust, fiber, lint.<br>Included are sawdust and excelsior.                                                                                                                                                                                                                                                                                                                                   |
| 95 | Film, residue.<br>Included are paint or resin film and paint or<br>resin residue on spray booths, exhaust ducts<br>or dip tank drainboards, chimney residue<br>(soot), and other films and residues<br>produced as a by-product of an operation.                                                                                                                                            |
| 96 | Rubbish, trash, waste.                                                                                                                                                                                                                                                                                                                                                                      |
| 97 | Oily rags.                                                                                                                                                                                                                                                                                                                                                                                  |

(continues)

Shaded text = Revisions. ▲ = Text deletions and figure/table revisions. • = Section deletions. ■ = New material



**Table 8.6.1.2** *Continued*

|    |                                                                                                                                                                                                                                                                                                              |
|----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 98 | Item ignited not significant or not applicable.<br>This subdivision should be used only when this data element is being used for reporting an item ignited as other than the first item ignited and when the circumstances of the situation are such that the item ignited is not applicable or significant. |
| 99 | Multiple items first ignited.<br>This subdivision should be used only where there are multiple fires started at approximately the same time on the same property and more than one item was initially involved. If one major item was involved, the appropriate classification for that item should be used. |
| 00 | Item ignited not able to be classified further.                                                                                                                                                                                                                                                              |
| UU | Item ignited undetermined or not reported.                                                                                                                                                                                                                                                                   |

**8.6.2.1** The data element “type of material” identifies the composition of the material as it exists in its raw, common, or natural state. Combined with the data element “item ignited,” it will identify the material first ignited or the material contributing most to smoke or flame development, or the material involved in any other situation that is to be recorded. This data element applies to fires only. When used for recording the first material ignited, it shall identify the first item that had sufficient volume or heat intensity to extend to uncontrolled or self-perpetuating fire.

**Δ 8.6.2.2\* Type of Material Coding Structure.** Where the type of material is to be coded, the following coding structure shall be used:

- (1) Naturally occurring wood or cellulose (0), as follows:
  - (a) Grass — 01
  - (b) Leaves, needles, litter (vegetative) — 02
  - (c) Duff (the material between the leaf and/or needle cover and the mineral soil) — 03
  - (d) Peat — 04
  - (e) Live tree, bush — 05
  - (f) Snag (standing dead tree) — 06
  - (g) Logs — 07
  - (h) Slash (felled brush, limbs, tree tops) — 08
  - (i) Rotten wood — 09
- (2) Flammable gas (not gasoline) (1), as follows:
  - (a) Natural gas — 11
  - (b) LP-Gas — 12
  - (c) Anesthetic gas — 13
  - (d) Acetylene gas — 14
  - (e) Hydrogen — 15
  - (f) Gases not able to be classified further — 10
- (3) Flammable or combustible liquid (2), as follows:
  - (a) Class IA flammable liquid — 21
  - (b) Class IB flammable liquid — 22
  - (c) Gasoline — 23
  - (d) Class IC flammable liquid — 24
  - (e) Class II combustible liquid — 25
  - (f) Class IIIA combustible liquid — 26
  - (g) Class IIIB combustible liquid — 27

- (h) Flammable or combustible liquids not able to be classified further — 20
- (4) Volatile solid or chemical (3), as follows:
  - (a) Fat, grease (food) — 31
  - (b) Grease (nonfood) — 32
  - (c) Polish — 33
  - (d) Adhesive, resin, tar — 34
  - (e) Applied paint, varnish — 35
  - (f) Combustible metal — 36
  - (g) Solid chemical — 37
  - (h) Radioactive material — 38
  - (i) Volatile solids or chemicals not able to be classified further — 30
- (5) Plastics (4) — 41
- (6) Natural product (5), as follows:
  - (a) Rubber — 51
  - (b) Cork — 52
  - (c) Leather — 53
  - (d) Hay, straw — 54
  - (e) Grain, natural fiber (preprocess) — 55
  - (f) Coal, coke, briquettes, peat — 56
  - (g) Food, starch — 57
  - (h) Tobacco — 58
  - (i) Natural products not able to be classified further — 50
- (7) Wood or paper (processed) (6), as follows:
  - (a) Wood residue — 61
  - (b) Round timber — 62
  - (c) Sawn wood — 63
  - (d) Plywood — 64
  - (e) Fiberboard, particleboard, and hardboard — 65
  - (f) Wood pulp, wood fibers — 66
  - (g) Paper — 67
  - (h) Cardboard — 68
  - (i) Wood or paper (processed) not able to be classified further — 60
- (8) Fabric, textile, fur (7), as follows:
  - (a) Fabric, fibers, cotton, blends, rayon, wool, silk, finished goods — 71
  - (b) Fur, whether as natural material for finished goods — 74
  - (c) Synthetic hair — 75
  - (d) Human hair — 76
  - (e) Plastic-coated fabric — 77
  - (f) Fabrics, textiles, furs not able to be classified further — 70
- (9) Material compounded with oil (8), as follows:
  - (a) Linoleum — 81
  - (b) Oilcloth — 82
  - (c) Asphalt-treated material — 86
  - (d) Materials compounded with oil not able to be classified further — 80
- (10) Other type of material (9), as follows:
  - (a) Chaff — 91
  - (b) Mulch — 92
  - (c) Litter, combinations of materials having no value in the same container or pile — 93
  - (d) Animal — 94
  - (e) Type of material not significant or not applicable — 98
  - (f) Multiple types of material first ignited — 99

- (g) Type of material not able to be classified further — 00
- (h) Type of material undetermined or not reported — UU

**8.7 Level of Origin.** The data element “level of origin” identifies the distance either above or below grade level where an incident originated. This shall be recorded as the story level or a number that represents the equivalent number of stories based on 10 ft (3 m) per story. The letter “A” or “B” shall precede the number to indicate whether the level is above (A) or below (B) grade. In the case of a structure such as a tunnel, grade shall be considered the level at the entrance. A fire on the ground-story level of a building would be recorded as A001. A fire originating at the ceiling level in a warehouse 35 ft (11 m) above the floor would be recorded as A004 [grade to 10 ft (3 m) = 001, 11 ft to 20 ft (4 m to 6 m) = 002, 21 ft to 30 ft (7 m to 9 m) = 003, and 31 ft to 40 ft (10 m to 12 m) = 004].

### 8.8 Occupant of Room or Space of Origin at Time of Ignition.

**8.8.1** Occupant of room identifies the person or persons who were present in the room or the space of origin at the time of ignition.

**8.8.2** Where the occupant of room or space of origin at time of ignition is to be coded, the coding structure in Table 8.8.2 shall be used.

### 8.9 Wildland Fuel Model.

**8.9.1** The National Fire Danger Rating System (NFDRS) used by wildland fire agencies in the United States identifies a set of wildland fuel complexes from which fire behavior and spread estimates can be calculated. Each fuel model has a defined fuel depth, density, and load that represents fuel conditions found in various parts of the United States.

**Table 8.8.2 Occupant of Room or Space of Origin at Time of Ignition Coding Structure**

|   |                                                                                                                                      |
|---|--------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Owner.<br>Included are family members.                                                                                               |
| 2 | Employee and/or customer.                                                                                                            |
| 3 | Lessee, renter, guest, patient.<br>Included are family members.                                                                      |
| 4 | Maintenance personnel.                                                                                                               |
| 5 | Contractor on premises.                                                                                                              |
| 6 | Trespasser.<br>Included are fires in stolen vehicles.                                                                                |
| 7 | Room or space of origin temporarily not occupied.<br>Included are spaces where there have been no people present for up to one week. |
| 8 | Room or space of origin not occupied.<br>Included are spaces where there have been no people present for one week or more.           |
| 0 | Occupant of room or space of origin at time of ignition not able to be classified further.                                           |
| U | Occupant of room or space of origin at time of ignition undetermined or not reported.                                                |

**Δ 8.9.2\* Wildland Fuel Model Coding Structure.** Where the wildland fuel model classification is to be coded, the following coding structure shall be used:

- (1) Fuel Model A — Annual grasses — 1
- (2) Fuel Model B — Mature brush [6 ft (2 m) and over] — 2
- (3) Fuel Model C — Open pine with grass — 3
- (4) Fuel Model D — Southern rough — 4
- (5) Fuel Model E — Hardwood litter (fall) — 5
- (6) Fuel Model F — Intermountain West brush — 6
- (7) Fuel Model G — West Coast conifers; close, heavy down materials — 7
- (8) Fuel Model H — Short-needle conifers; normal down woody materials — 8
- (9) Fuel Model I — Heavy slash, clear-cut conifers greater than 25 tons (25,400 kg) per acre — 9
- (10) Fuel Model J — Medium slash, heavily thinned conifers [less than 25 tons (25,400 kg) per acre] — 10
- (11) Fuel Model K — Light slash [less than 15 tons (15,240 kg) per acre] — 11
- (12) Fuel Model L — Perennial grasses — 12
- (13) Fuel Model N — Sawgrass, marsh needle-like grass — 14
- (14) Fuel Model O — High pocosin — 15
- (15) Fuel Model P — Southern long-needle pine — 16
- (16) Fuel Model Q — Alaska black spruce — 17
- (17) Fuel Model R — Hardwood litter (summer) — 18
- (18) Fuel Model S — Tundra — 19
- (19) Fuel Model T — Sagebrush with grass — 20
- (20) Fuel Model U — Western long-needle pine — 21
- (21) Wildland fuel model not applicable — N
- (22) Wildland fuel model undetermined or not reported — UU

### 8.10 Fire Danger Rating Class.

**8.10.1** The fire danger rating class refers to one method of describing the wildland fire threat in a particular area, based on the NFDRS. It is derived from both constant and variable fire danger factors that affect the ignition, spread, and difficulty of control of fires and the damage they cause. Factors considered in estimating the fire danger are temperature, relative humidity, wind speed, fuel type, and fuel moisture. This information is used in fire prevention activities to determine when fires are most likely to occur and their severity. “Burning bans” and park or forest closures or restrictions can be invoked based on the fire danger rating class. It is also useful in pre-suppression planning to determine staffing levels and critical initial attack times.

**8.10.2** Where the fire danger rating class is to be coded, the coding structure in Table 8.10.2 shall be used.

**Table 8.10.2 Fire Danger Rating Coding Structure**

|   |                                                        |
|---|--------------------------------------------------------|
| 1 | Class 1 — Low fire danger.                             |
| 2 | Class 2 — Moderate fire danger.                        |
| 3 | Class 3 — High fire danger.                            |
| 4 | Class 4 — Very high fire danger.                       |
| 5 | Class 5 — Extreme fire danger.                         |
| U | Fire danger rating class undetermined or not reported. |

## Chapter 9 Incident Growth and Spread

### 9.1 Administration.

**9.1.1 Purpose.** The purpose of the data elements in this chapter is to provide a uniform way of identifying factors that contribute to the growth and spread of fire.

**9.1.2 Application** The data elements in this chapter will identify and analyze building and equipment design as it relates to factors that contribute to the growth and spread of the fire.

### 9.2 Contributing Factors.

**9.2.1** Contributing factors shall be used to report incident information that was not captured by other data elements and that had a bearing on ignition, fire or smoke spread, incident complexity, or the existence of hazardous conditions.

**9.2.2** Contributing factors shall be used to clarify or complete elements of information that describe the incident.

**9.2.3** Consideration shall be given to providing multiple fields for recording contributing factors so that more than one factor can be recorded.

**9.2.4\* Contributing Factors Coding Structure.** Where the contributing factors are to be coded, the following coding structure provided in 9.2.4.1 through 9.2.4.7 shall be used.

**9.2.4.1 Building Construction or Design Factors (1).** For building construction or design factors, the following coding structure shall be used:

- (1) Roof collapse — 112
- (2) Ceiling collapse — 121
- (3) Holes or openings in walls or ceilings — 125
- (4) Wall collapse — 131
- (5) Difficult to ventilate — 132
- (6) Combustible interior finish — 134
- (7) Balloon construction — 137
- (8) Arrangement of partitions — 138
- (9) Arrangement of stock or contents — 139
- (10) Floor collapse — 141
- (11) Lack of fire barrier walls or doors — 151
- (12) Transoms — 153
- (13) Attic undivided — 161
- (14) Insulation: combustible — 166
- (15) Stairwell not enclosed — 173
- (16) Elevator shaft — 174
- (17) Dumbwaiter — 175
- (18) Ducts: vertical — 176
- (19) Chute: rubbish, garbage, laundry, etc. — 177
- (20) Supports unprotected — 181
- (21) Wood I-joist or open truss floor construction — 182
- (22) Wood roof truss construction — 183
- (23) Wood truss construction — 185
- (24) Metal truss construction — 186
- (25) Fixed burglar protection assemblies (bars, grills on windows and doors) — 187
- (26) Quick-release failure of bars on windows or doors — 188
- (27) Previous damage by fire — 192
- (28) Building construction or design factors not able to be classified further — 100

**9.2.4.2 Act or Omission (2).** For an act or omission, the following coding structure shall be used:

- (1) Doors left open or outside door unsecured — 213

- (2) Operation of fire doors obstructed or impeded — 214
- (3) Violation of fire or life safety code — 218
- (4) Illegal and clandestine drug operation — 222
- (5) Intoxication: drugs or alcohol — 232
- (6) Riot or civil disturbance — 253
- (7) Person(s) interfered with operations — 254
- (8) Accelerant used — 283
- (9) Acts or omissions not able to be classified further — 200

**9.2.4.3 On-Site Materials (3).** For on-site materials, the following coding structure shall be used:

- (1) Aisles blocked — 311
- (2) Significant and unusual fuel load from structure components — 312
- (3) Significant and unusual fuel load from contents — 313
- (4) Significant and unusual fuel load outside from natural environment conditions — 314
- (5) Significant and unusual fuel load from man-made condition — 315
- (6) Radiological hazard on site — 321
- (7) Biological hazard on site — 322
- (8) Cryogenic hazard on site — 323
- (9) Hazardous chemical, corrosive material, or oxidizer — 324
- (10) Flammable or combustible liquid hazard — 325
- (11) Explosives — 327
- (12) Fireworks — 328
- (13) Decorations — 331
- (14) Gas: natural or lighter than air — 341
- (15) Gas: Liquefied petroleum (LP-Gas) or heavier than air — 342
- (16) Combustible storage greater than 12 ft (4 m) to top of storage — 361
- (17) High rack storage — 362
- (18) Building contents not able to be classified further — 300

**9.2.4.4 Delays (4).** For delays, the following coding structure shall be used:

- (1) Delayed detection of fire — 411
- (2) Delayed reporting of fire — 412
- (3) Alarm system malfunction — 413
- (4) System appropriately shut off — 414
- (5) System inappropriately shut off — 415
- (6) Inability to contact fire department — 421
- (7) Information incomplete or incorrect — 424
- (8) Communications problem; system failure of local, public, or other telephone network — 425
- (9) Blocked roadway due to construction — 431
- (10) Poor access for fire apparatus — 434
- (11) Traffic delay — 435
- (12) Trouble finding location — 436
- (13) Size, height, or other building characteristic delayed access to fire — 437
- (14) Power lines down/arcing — 438
- (15) Hydrant access blocked — 441
- (16) Fire department connection access blocked — 442
- (17) Poor access for fire fighters — 443
- (18) Secured area — 444
- (19) Guard dogs — 445
- (20) Aggressive animals, excluding guard dogs — 446
- (21) Suppression delayed due to evaluation of hazardous or unknown materials at incident scene — 447
- (22) Locked or jammed doors — 448
- (23) Apparatus failure at remote location — 451
- (24) Hydrants inoperative — 452

- (25) Airspace restriction — 461
- (26) Military activity — 462
- (27) Hostile activity — 471
- (28) Closest apparatus unavailable — 481
- (29) Delays not able to be classified further — 400

**N 9.2.4.5 Protective Equipment (5).** For protective equipment, the following coding structure shall be used:

- (1) Extinguishing system failure — 510
- (2) Standpipe/fire department connection problem — 520
- (3) Water supply: inadequate private — 531
- (4) Water supply: inadequate public — 532
- (5) Electrical power outage — 543
- (6) Failure of rated fire protection assembly — 561
- (7) Protective equipment or systems negated illegally or irresponsibly — 562
- (8) Protective equipment not able to be classified further — 500

**N 9.2.4.6 Natural Conditions (7).** For natural conditions, the following coding structure shall be used:

- (1) Drought or low fuel moisture — 711
- (2) Humidity: low — 712
- (3) Humidity: high — 713
- (4) Temperature: low — 714
- (5) Temperature: high — 715
- (6) Fog — 721
- (7) Flooding — 722
- (8) Ice — 723
- (9) Rain — 724
- (10) Snow — 725
- (11) Wind — 732
- (12) Earthquake — 741
- (13) Vegetation fuel loading — 760
- (14) Threatened or endangered species — 771
- (15) Timber sale activity — 772
- (16) Fire restriction — 773
- (17) Historic disturbance (past fire history can dictate fire behavior) — 774
- (18) Urban-wildland interface — 775
- (19) Natural conditions not able to be classified further — 700

**N 9.2.4.7 Egress and Exit Factors (9).** For egress and exit factors, the following coding structure shall be used:

- (1) Occupancy load above legal limit — 911
- (2) Evacuation activity impeded fire department access — 912
- (3) Window type impedes egress — 913
- (4) Windowless wall — 914
- (5) Young occupants — 921
- (6) Elderly occupants — 922
- (7) Physically disabled occupants — 923
- (8) Mentally disabled occupants — 924
- (9) Physically restrained/confined occupants — 925
- (10) Medically disabled occupants — 926
- (11) Special event — 941
- (12) Public gathering — 942
- (13) Egress and exit factors not able to be classified further — 900
- (14) Contributing factors undetermined or not reported — UUU
- (15) Not investigated by a certified fire investigator — NI

## ▲ 9.3 Fire Detection and Alarm.

### 9.3.1 Method of Detection.

**9.3.1.1** The data element “method of detection” is used to identify the first person or system to detect the fire regardless of what action that person or system took toward reporting the fire. This data element allows study of the advantages and disadvantages of different methods of detection. It also allows detection “internal” to the property to be distinguished from detection outside, helping explain delays in detection.

**9.3.1.2** Where the method of detection is to be coded, the coding structure in Table 9.3.1.2 shall be used.

**Table 9.3.1.2 Method of Detection Coding Structure**

|    |                                                                  |
|----|------------------------------------------------------------------|
| 1  | Building or Property Occupant.                                   |
| 11 | Resident.                                                        |
| 12 | Tenant, permittee.                                               |
| 13 | Contractor personnel.                                            |
| 10 | Building or property occupant not able to be classified further. |
| 2  | Watchman, Guard for the Property on a Full-Time Basis.           |
| 21 | Building or property guard.                                      |
| 22 | Reporting agency fire lookout.                                   |
| 23 | Cooperator fire lookout.                                         |
| 24 | Reporting agency fire guard.                                     |
| 25 | Cooperator fire guard.                                           |
| 20 | Watchman, guard not able to be classified further.               |
| 3  | Roving Police, Guard Patrol.                                     |
| 31 | Reporting agency roving fire patrol.                             |
| 32 | Cooperator roving fire patrol.                                   |
| 33 | Roving non-fire patrol.                                          |
| 30 | Roving police, guard patrol not able to be classified further.   |
| 4  | Non-Occupant.                                                    |
| 41 | Non-occupant.                                                    |
| 42 | Visitor in area.                                                 |
| 43 | Neighbor.                                                        |
| 44 | On-duty reporting agency employee (including volunteers).        |
| 45 | Cooperator or cooperator employee.                               |
| 40 | Non-occupant not able to be classified further.                  |
| 5  | Automatic Suppression System with Alarm.                         |
| 50 | Automatic suppression system with alarm.                         |
| 6  | Automatic Fire, Heat, Smoke Detection System.                    |
| 60 | Automatic fire, heat, smoke detection system.                    |
| 7  | Aerial Detection.                                                |
| 71 | Agency fire patrol aircraft.                                     |
| 72 | Cooperator fire patrol aircraft.                                 |
| 73 | Aircraft in vicinity.                                            |
| 74 | Aircraft on regular route passing through area.                  |
| 75 | Infrared detection system.                                       |
| 76 | Satellite.                                                       |
| 70 | Aerial detection not able to be classified further.              |
| 8  | Fire Detected but No Alarm Given.                                |
| 81 | Detected after self-termination, damage easily visible.          |
| 82 | Detected after self-termination, damage not easily visible.      |

(continues)

**Table 9.3.1.2** *Continued*

|    |                                                        |
|----|--------------------------------------------------------|
| 0  | Other Method of Detection.                             |
| 00 | Method of detection not able to be classified further. |
| UU | Method of detection undetermined or not reported.      |

**9.3.2 Method of Alarm to the Fire Department.**

**9.3.2.1** The data element for the method of alarm is used to describe the method by which the incident was first brought to the attention of the fire department or appropriate alarm center. It is used to measure the different methods by which alarms are reported. This can determine the use of and accessibility to different communication methods to the fire department, which can be useful in making investment decisions.

**9.3.2.2** Where the method of alarm to the fire department is to be coded, the coding structure in Table 9.3.2.2 **shall** be used.

**Table 9.3.2.2 Method of Alarm to the Fire Department Coding Structure**

|   |                                                                                                                                                                                                                                         |
|---|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | 911 direct to fire service.<br>The reporting person dials 911 and reaches the fire alarm center.                                                                                                                                        |
| 2 | 911 direct to other agency with transfer capability.<br>The reporting person dials 911 and reaches some agency other than the fire alarm center, and the call must be transferred to the fire alarm center.                             |
| 3 | Direct to fire service, not 911.<br>The reporting person dials a regular telephone number and reaches the fire alarm center.                                                                                                            |
| 4 | Direct to other agency with transfer capability, not 911.<br>The reporting person dials a regular telephone number and reaches some agency other than the fire alarm center, and the call must be transferred to the fire alarm center. |
| 5 | Radio.<br>Included are fires reported by radio from vehicles on fire department, police department, natural resources department, or citizens band radio frequencies directly to alarm headquarters.                                    |
| 6 | Direct contact by person to fire service.<br>Included are fires seen from or reported to a fire station.                                                                                                                                |
| 7 | Municipal fire alarm system.<br>Included are telegraph systems, radio systems, voice signal systems, and auxiliary connections to them.                                                                                                 |
| 8 | Private fire alarm system.<br>Included are signals received from central stations and remote stations.                                                                                                                                  |
| 0 | Method of alarm to the fire department not able to be classified further.                                                                                                                                                               |
| U | Method of alarm to the fire department undetermined or not reported.                                                                                                                                                                    |

**9.3.3 Delay in Alarm.**

**9.3.3.1** When there is a delay in the transmission of an alarm, that delay is often at least partially responsible for the incident

growing in magnitude beyond what might have been easily handled by the fire department. Understanding the reason for the delay can help explain the extent of damage. When evaluated over a number of incidents, the reasons for delays can point to the need for corrective action by the fire department, whether through public education or other actions.

**9.3.3.2** Where the delay in alarm is to be coded, the coding structure in Table 9.3.3.2 **shall** be used.

**Table 9.3.3.2 Delay in Alarm Coding Structure**

|   |                                                                                                                                                                                                                                                                                                                                                                                                                     |
|---|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Person investigated or took time to verify there was an emergency.                                                                                                                                                                                                                                                                                                                                                  |
| 2 | Person assumed that the fire department had already been notified.                                                                                                                                                                                                                                                                                                                                                  |
| 3 | Person was too busy with emergency.<br>Included are trying to rescue other persons or remove property, determining the extent of the emergency, or taking inappropriate actions such as calling the owner or notifying management.<br>Excluded are investigating to determine whether there is an emergency (1) and actual fire fighting (4).                                                                       |
| 4 | Person thought he or she could control fire or emergency by self.                                                                                                                                                                                                                                                                                                                                                   |
| 5 | Person reporting the fire was unable to get through to the fire department by phone.                                                                                                                                                                                                                                                                                                                                |
| 6 | Person reporting the fire could not convey the correct message.<br>Included are situations where the person discovering the fire was physically or mentally disabled (not fire related) to a degree that the disability interfered with the ability to promptly notify the fire department, as well as situations where the person reporting the emergency could not speak the same language as the alarm operator. |
| 7 | Alarm transmission system failure.<br>Included are alarm box malfunctions.                                                                                                                                                                                                                                                                                                                                          |
| 8 | No unusual delay.                                                                                                                                                                                                                                                                                                                                                                                                   |
| 0 | Delay in alarm not able to be classified further.                                                                                                                                                                                                                                                                                                                                                                   |
| U | Delay in alarm undetermined or not reported.                                                                                                                                                                                                                                                                                                                                                                        |

**Chapter 10 Detection, Alarm, and Control Equipment****10.1 Administration.**

**10.1.1 Purpose and Application.** The purpose of the data elements outlined in this chapter is to provide a uniform way to identify protection and detection systems and their effectiveness and use. These data elements can be used to identify how occupants are alerted, the type and coverage of automatic extinguishment, the actions of the fire department, and the effectiveness of the various fire defenses. In general, a series of data elements **shall** be collected for each fire defense measure, including the type of system, the coverage provided by the system, the performance or effectiveness of the system, and the reason for the system's failure.

**10.1.2 Special Definitions.** A list of special terms used in this chapter follows:

- (1) Manual. See 3.3.64.

**10.2 Limitations.** The data elements describe fire defense features of an occupancy as well as classify the actions of the protection systems and the effectiveness of those systems during a fire. The incident report classification of protection systems is intended to describe not the design criteria but rather the effectiveness of that system. For example, a building might be equipped with a complete sprinkler system, but that system might not have been designed for the specific hazard it was protecting. The fire officer is not likely to have knowledge of how the system was designed at the time the incident report is completed.

▲ **10.3 Automatic Detection.** The purpose of the collection of these data elements shall be to track systems that are designed to detect fires and trigger an alarm, activate an extinguishing system, or take some other action automatically.

**10.3.1\* Automatic Detector Coverage Coding Structure.** Where the automatic detector coverage is to be coded, the coding structure in Table 10.3.1 shall be used.

• **10.3.2\* Detector Type Coding Structure.** Where the detector type is to be coded, the following coding structure shall be used:

- (1) Smoke detector — 1
- (2) Heat detector — 2
- (3) Combination smoke detector and heat detector — 3
- (4) Sprinkler/water flow detection — 4
- (5) More than one type of detection system present — 5
- (6) No detector present — N
- (7) Detector type undetermined or not reported — U

• **10.3.3\* Detector Power Supply Coding Structure.** Where the detector power supply is to be coded, the following coding structure shall be used:

- (1) Battery only — 1
- (2) Hard wire only — 2
- (3) Plug-in only — 3
- (4) Hard wire with battery backup — 4
- (5) Plug-in with battery backup — 5
- (6) Mechanical power — 6
- (7) More than one type of power supply (different detectors) — 7
- (8) No detector present — N
- (9) Detector power supplies not able to be classified further — 0
- (10) Detector power supplies undetermined or not reported — U

• **10.3.4\* Performance of Fire Detection Equipment.**

**10.3.4.1 Detector Operation.** Where the detector operation is to be coded, the coding structure in Table 10.3.4.1 shall be used.

**Table 10.3.1 Automatic Detector Coverage Coding Structure**

|   |                                                                                                      |
|---|------------------------------------------------------------------------------------------------------|
| 1 | Complete automatic detection coverage. The system complies with the requirements of <i>NFPA 72</i> . |
| 2 | Partial automatic detection coverage.                                                                |
| N | No automatic detection.                                                                              |
| 0 | Automatic detection not able to be classified further.                                               |
| U | Automatic detection undetermined or not reported.                                                    |

**Table 10.3.4.1 Detector Operation Coding Structure**

|   |                                                  |
|---|--------------------------------------------------|
| 1 | Fire too small to activate detector.             |
| 2 | Detector operated.                               |
| 3 | Detector failed to operate.                      |
| U | Detector operation undetermined or not reported. |

**10.3.4.2 Detector Effectiveness.** Where the detector effectiveness is to be coded, the coding structure in Table 10.3.4.2 shall be used.

▲ **Table 10.3.4.2 Detector Effectiveness Coding Structure**

|   |                                                          |
|---|----------------------------------------------------------|
| 1 | Detector alerted occupants; occupants responded.         |
| 2 | Detector alerted occupants; occupants failed to respond. |
| 3 | There were no occupants.                                 |
| 4 | Detector failed to alert occupants.                      |
| N | Detector effectiveness not a factor.                     |
| U | Detector effectiveness undetermined or not reported.     |

**10.3.5\* Reason for Detector Failure Coding Structure.** Where the reason for detector failure is to be coded, the following coding structure shall be used.

- (1) Failure of hardwired power supply — 1
- (2) Improper installation or placement of detector — 2
- (3) Defective detector instrument — 3
- (4) Inadequate maintenance — 4
- (5) Battery missing or disconnected — 5
- (6) Battery was discharged — 6
- (7) No detector failure — N
- (8) Reason for detector failure not able to be classified further — 0
- (9) Reason for detector failure undetermined or not reported — U

• **10.4\* Automatic Alarm Transmission Coding Structure.** Where the automatic alarm transmission is to be coded, the following coding structure shall be used:

- (1) Remote station system to fire department managed location — 1
- (2) Remote station system to non-fire department-managed location — 2
- (3) Proprietary system — 3
- (4) Central station system — 4
- (5) Auxiliary system with automatic master box — 5
- (6) Manual local — 6
- (7) Manual remote — 7
- (8) No automatic alarm transmission equipment provided — N
- (9) Automatic alarm transmission equipment not able to be classified further — 0
- (10) Automatic alarm transmission equipment undetermined or not reported — U

• **10.5 Protection.** This section shall provide the data elements to report data about various fire-suppression systems and their performance.

### 10.5.1 Automatic Extinguishing System.

**10.5.1.1\* Type of Automatic Extinguishing System.** Where the type of automatic extinguishing system present is to be coded, the following coding structure shall be used:

- (1) Wet-pipe sprinkler system — 1
- (2) Dry-pipe sprinkler system — 2
- (3) Other sprinkler system — 3
- (4) Dry chemical system — 4
- (5) Foam system — 5
- (6) Halogen-type system — 6
- (7) Carbon dioxide system — 7
- (8) Water spray system — 8
- (9) Types of automatic extinguishing systems not able to be classified further — 0
- (10) No automatic extinguishing system present — N
- (11) Type of automatic extinguishing system undetermined or not reported — U

**10.5.1.2\* Coverage of Automatic Extinguishing System.** Where the coverage of an automatic extinguishing system is to be coded, the following coding structure shall be used:

- (1) Complete coverage of a building or structure — 1
- (2) Partial coverage of a building or structure — 2
- (3) Total flooding of a room or space protected — 3
- (4) Localized coverage — 4
- (5) Coverage of automatic extinguishing systems not able to be classified further — 0
- (6) Coverage of automatic extinguishing system undetermined or not reported — U

**10.5.1.3\* Number of Automatic Sprinklers That Operated.** The number of automatic sprinklers that operated shall be recorded.

**10.5.1.4\* Performance of Automatic Extinguishing System.** Where the performance of an automatic extinguishing system is to be coded, the coding structure in Table 10.5.1.4 shall be used.

**10.5.1.5\* Reason for Extinguishing System Failure.** Where the reason for extinguishing system failure is to be coded, the following coding structure shall be used:

- (1) Extinguishing system shut off prior to the fire — 1
- (2) Not enough agent discharged to control the fire — 2
- (3) Agent discharged, but did not reach the fire — 3
- (4) Inappropriate system for the type of fire — 4
- (5) System components damaged — 5

**Table 10.5.1.4 Performance of Automatic Extinguishing System Coding Structure**

|   |                                                                                  |
|---|----------------------------------------------------------------------------------|
| 1 | System operated and was effective in controlling or extinguishing the fire.      |
| 2 | System operated and was not effective in controlling or extinguishing the fire.  |
| 3 | System was present but fire was too small to require operation.                  |
| 4 | System should have operated but did not.                                         |
| 0 | Performance of automatic extinguishing system not able to be classified further. |
| N | No system present in room or space of fire origin.                               |
| U | Performance of automatic extinguishing system undetermined or not reported.      |

- (6) System components damaged — 6
- (7) Lack of maintenance — 7
- (8) Manual intervention during the fire defeated the system — 8
- (9) Reason for extinguishing system failure not able to be classified further — 0
- (10) No extinguishing system failure — N
- (11) Reason for extinguishing system failure undetermined or not reported — U

**10.5.2\* Manual Protection Systems or Devices Available.**

**10.5.2.1\* Portable Fire Extinguishers.** Where the presence of portable fire extinguishers is to be coded, the coding structure in Table 10.5.2.1 shall be used.

**10.5.2.2\* Occupant Hose.** Where the occupant hose is to be coded, the coding structure in Table 10.5.2.2 shall be used.

**10.5.2.3\* Standpipe System.** Where the standpipe system is to be coded, the coding structure in Table 10.5.2.3 shall be used.

#### 10.5.2.4 Performance of a Manual Protection System or Device.

**10.5.2.4.1\* System or device failure shall be recorded.**

**10.5.2.4.2** Where the performance of a manual protection system or device is to be coded, the coding structure in Table 10.5.2.4.2 shall be used.

**10.5.2.5\* Reason for a Manual Protection System or Device Failure Coding Structure.** Where the reason for manual protection system or device failure is to be coded, the following coding structure shall be used:

- (1) Manual system shut off prior to the fire — 1
- (2) System or device not adequate for the situation — 2
- (3) Not enough agent discharged to control the fire — 3
- (4) Agent discharged, but did not reach the fire or was not applied properly — 4
- (5) Inappropriate agent for the type of fire — for example, electrical equipment or combustible metals — 5
- (6) System or device components not installed correctly, damaged, or missing — 6
- (7) Lack of maintenance — 7
- (8) Manual intervention during the fire defeated the system — 8
- (9) No manual protection system or device failure — N

**Table 10.5.2.1 Portable Fire Extinguisher Coding Structure**

|   |                                                                |
|---|----------------------------------------------------------------|
| 1 | Complete coverage.                                             |
| 2 | Partial coverage.                                              |
| 0 | Portable fire extinguishers not able to be classified further. |
| N | No portable fire extinguishers.                                |
| U | Portable fire extinguishers undetermined or not reported.      |

**Table 10.5.2.2 Occupant Hose Coding Structure**

|   |                                                  |
|---|--------------------------------------------------|
| 1 | Complete coverage.                               |
| 2 | Partial coverage.                                |
| N | No occupant hose.                                |
| 0 | Occupant hose not able to be classified further. |
| U | Occupant hose undetermined or not reported.      |

**Table 10.5.2.4.2 Performance of a Manual Protection System or Device Coding Structure**

|   |                                                                                               |
|---|-----------------------------------------------------------------------------------------------|
| 1 | System or device was operated and was effective in controlling or extinguishing the fire.     |
| 2 | System or device was operated and was not effective in controlling or extinguishing the fire. |
| 3 | System or device was present but was not used.                                                |
| 0 | Performance of manual protection system or device not able to be classified further.          |
| U | Performance of manual protection system or device undetermined or not reported.               |

  

|      |                                                                                             |
|------|---------------------------------------------------------------------------------------------|
| (10) | Reason for manual protection system or device failure not able to be classified further — 0 |
| (11) | Reason for manual protection system or device failure undetermined or not reported — U      |

**10.6 Water Supply.**

**10.6.1 Water Supply Type.** Where the water supply type is to be coded, the coding structure in Table 10.6.1 shall be used. Recognized water systems are engineered water main and hydrant systems under pressure.

**10.6.2 Water Supply Flow.** The flow shall reflect the sustained water supply capacity available for a period of 1 hour to apparatus responding on the first alarm. It shall be recorded in gallons per minute (gpm).

**10.7 Performance of Fire Spread Limitation Features.**

**10.7.1** This data element can be used in conjunction with the data elements that define compartment quality (*see Section 7.6*) to measure the performance of one of the building's fire

**Table 10.5.2.3 Standpipe System Coding Structure**

|   |                                                     |
|---|-----------------------------------------------------|
| 1 | Complete coverage.                                  |
| 2 | Partial coverage.                                   |
| N | No standpipe system.                                |
| 0 | Standpipe system not able to be classified further. |
| U | Standpipe system undetermined or not reported.      |

**Table 10.6.1 Water Supply Type Coding Structure**

|   |                                                                                                          |
|---|----------------------------------------------------------------------------------------------------------|
| 1 | Recognized water system, hydrants within 500 ft (150 m).                                                 |
| 2 | Recognized water system, hydrants 500 ft to 999 ft (150 m to 299 m) away.                                |
| 3 | Recognized water system, hydrants 1000 ft (300 m) or more away.                                          |
| 4 | Outside of recognized water system, other water source available within 500 ft (150 m).                  |
| 5 | Outside of recognized water system, other water source available 500 ft to 999 ft (150 m to 299 m) away. |
| 6 | Outside of recognized water system, other water source 1000 ft (300 m) or more away.                     |
| N | No water available.                                                                                      |
| 0 | Water supply type not able to be classified further.                                                     |
| U | Water supply type undetermined or not reported.                                                          |

defense measures. Fire spread limitation devices include enclosing walls, doors, dampers, and the like.

**10.7.2** Where the performance of fire spread limitation features is to be coded, the coding structure in Table 10.7.2 shall be used.

**Table 10.7.2 Performance of Fire Spread Limitation Features Coding Structure**

|   |                                                                                   |
|---|-----------------------------------------------------------------------------------|
| 1 | Operated satisfactorily.                                                          |
| 2 | Operated unsatisfactorily.                                                        |
| 3 | Fire too small to affect performance.                                             |
| N | No fire spread limitation features.                                               |
| 0 | Performance of fire spread limitation features not able to be classified further. |
| U | Performance of fire spread limitation features undetermined or not reported.      |

**10.8 Performance of Exit System.**

**10.8.1** The data element “performance of exit system” can be used in conjunction with the data elements that define the exit quality (*see Chapter 7*), to measure the performance of one of the building's exit systems. The exit system performance shall take into account all building factors relating to the egress of occupants from the building under fire conditions.

**10.8.2** Where the performance of an exit system is to be coded, the coding structure in Table 10.8.2 shall be used.

**Table 10.8.2 Performance of Exit System Coding Structure**

|   |                                                               |
|---|---------------------------------------------------------------|
| 1 | Enabled timely egress for all occupants.                      |
| 2 | Restricted egress for one or more occupants.                  |
| 3 | Prevented egress for one or more occupants.                   |
| 0 | Performance of exit system not able to be classified further. |
| N | No occupants present.                                         |
| U | Performance of exit system undetermined or not reported.      |

**Chapter 11 Fire Department Intervention**

**11.1 Purpose.** This chapter describes what the fire department found and did, and with what results. This data is useful in determining workload, effectiveness, training and equipment needs, and firefighter safety.

**11.2 Limitations.** These data elements may be inadequate to describe multiple activities on the fire scene — that is, simultaneous rescue, suppression, and salvage — and even less adequate to describe a hazardous materials incident or a mass casualty incident. Additional documentation will be required to cover these and other incidents of special interest adequately.

**11.3 Incident Type.**

**11.3.1** The data element for incident type is used to describe the most serious situation that occurred. This is generally the type of incident found when emergency personnel arrived at the scene, but if a more serious condition developed after the fire department arrival on the scene, that incident type shall be reported. This data element can be extremely useful in deter-

mining what other data **shall** be recorded about an incident. This data element helps fire departments document the various types of incidents to which they respond. This information can be used to analyze the frequency of different types of incidents, provide insight on fire and other incident problems, and identify training needs.

**Δ 11.3.2\* Incident Type Coding Structure.** Where the incident type is to be coded, the coding structure **provided in 11.3.2.1 through 11.3.2.9 shall** be used.

**N 11.3.2.1 Fire or Explosion (1).** For fires or explosions, the following coding structure shall be used:

- (1) Structure fire (11), as follows:
  - (a) Building fire — 111
  - (b) Fire in a structure fire other than in a building — 112
  - (c) Fire involving the contents of a cooking vessel without fire extension beyond the vessel — 113
  - (d) Fires originating in and confined to a chimney or flue — 114
  - (e) Trash or rubbish fire in a structure, with no flame damage to structure or its contents — 118
  - (f) Structure fires not able to be classified further — 110
- (2) Fire in mobile property when used as a structure (12), as follows:
  - (a) Fire in manufactured home used as a fixed residence — 121
  - (b) Fire in a motor home, camper, or recreational vehicle when used as a structure — 122
  - (c) Fire in a portable building, when used at a fixed location — 123
  - (d) Fires in mobile properties when used as fixed structures not able to be classified further — 120
- (3) Fire in mobile property outside a structure (13), as follows:
  - (a) Passenger vehicle fire — 131
  - (b) Road freight or transport vehicle fire — 132
  - (c) Rail vehicle fire — 133
  - (d) Water vehicle fire — 134
  - (e) Aircraft fire — 135
  - (f) Self-propelled motor home or recreational vehicle fire — 136
  - (g) Camper or recreational vehicle (RV) fire, not self-propelled — 137
  - (h) Off-road vehicle or heavy equipment fire — 138
  - (i) Fires in mobile properties outside structures not able to be classified further — 130
- (4) Fire in natural vegetation (14), as follows:
  - (a) Forest, woods, or wildland fire — 141
  - (b) Brush fire or brush-and-grass fire mixture — 142
  - (c) Fire confined to area characterized by grass ground cover — 143
  - (d) Fires in natural vegetation not able to be classified further — 140
- (5) Refuse fire outside (15), as follows:
  - (a) Outside rubbish, trash, or waste fire not in a container or receptacle — 151
  - (b) Garbage dump or sanitary landfill fire — 152
  - (c) Construction or demolition landfill fire — 153
  - (d) Outside trash receptacle fire — 154

- (e) Outside stationary compactor or compacted trash fire — 155
  - (f) Outside rubbish fires not able to be classified further — 150
- (6) Special outside fire [not included in 11.3.2.1(5) or 11.3.2.1(7)] (16), as follows:
- (a) Outside storage fire on residential or commercial/industrial property, not rubbish — 161
  - (b) Outside equipment fire — 162
  - (c) Outside gas or vapor combustion — 163
  - (d) Outside mailbox fire — 164
  - (e) Mulch — 165
  - (f) Special outside fires not able to be classified further — 160
- (7) Fire in cultivated vegetation or crop (17) as follows:
- (a) Cultivated grain or crop fire — 171
  - (b) Cultivated orchard or vineyard fire — 172
  - (c) Cultivated trees or nursery stock fire — 173
  - (d) Fires in cultivated vegetation or crops not able to be classified further — 170
- (8) Fires or explosions not able to be classified further (10) — 100

**N 11.3.2.2 Overpressure Rupture, Explosion, Overheat (No Fire) (2).** For overpressure ruptures, explosions, or overheats (no fire), the following coding structure shall be used:

- (1) Overpressure rupture from steam, air, or gas (no fire) (21), as follows:
  - (a) Overpressure rupture of pipe or pipeline — 211
  - (b) Overpressure rupture of boiler — 212
  - (c) Steam rupture of pressure or process vessel — 213
  - (d) Overpressure ruptures from steam, air, or gas not able to be classified further — 21
- (2) Overpressure rupture of pressure or process vessel due to a chemical reaction, with no ensuing fire (23) — 231
- (3) Explosion (no fire) (24), as follows:
  - (a) Munitions or bomb explosion (no fire) — 241
  - (b) Blasting agent explosion (no fire) — 242
  - (c) Fireworks explosion (no fire) — 243
  - (d) Explosion (no fire) not able to be classified further — 240
- (4) Excessive heat, overheat scorch burns with no ignition (25) — 251
- (5) Overpressure rupture, explosion, overheat not able to be classified further (20) — 200

**N 11.3.2.3 Rescue and Emergency Medical Service Incidents (3).** For rescue and emergency medical service incidents, the following coding structure shall be used:

- (1) Medical assist (31) — 311
- (2) Emergency medical services incident (32), as follows:
  - (a) Cardiac or related cardiovascular system issues — 321
  - (b) Motor vehicle accident with injuries — 322
  - (c) Motor vehicle/pedestrian (MV Ped) accident — 323
  - (d) Motor vehicle accidents with no injuries — 324
  - (e) Trauma not related to motor vehicle — 325
  - (f) Medical illness (including diabetes, seizures, or other internal medical systems illness) — 326
  - (g) Emergency medical incident not able to be classified further — 320
- (3) Lock-in (33) — 331

- (4) Search for lost person (34), as follows:
    - (a) Search for person on land — 341
    - (b) Search for person in water — 342
    - (c) Search for person underground — 343
    - (d) Search for lost person not able to be classified further — 340
  - (5) Extrication rescue (35), as follows:
    - (a) Extrication of victims from a building or structure, such as a building collapse — 351
    - (b) Extrication of victim(s) from vehicle — 352
    - (c) Removal of victim(s) from stalled elevator — 353
    - (d) Trench/below-grade rescue — 354
    - (e) Confined space rescue — 355
    - (f) High-angle rescue — 356
    - (g) Extrication of victim(s) from machinery — 357
    - (h) Extrication, rescue not able to be classified further — 350
  - (6) Water- or ice-related rescue (36), as follows:
    - (a) Swimming/recreational water areas rescue — 361
    - (b) Ice rescue — 362
    - (c) Swift-water rescue — 363
    - (d) Surf rescue — 364
    - (e) Watercraft rescue — 365
    - (f) Water- or ice-related rescue not able to be classified further — 360
  - (7) Electrical hazard rescue (37), as follows:
    - (a) Electrocutation or potential electrocutation — 371
    - (b) Trapped by power lines — 372
    - (c) Electrical hazard rescue not able to be classified further — 370
  - (8) Rescue or EMS standby for hazardous conditions (38) — 381
  - (9) Rescue and emergency medical service incidents not able to be classified further (30) — 300
- N 11.3.2.4 Hazardous Condition (No Fire) (4).** For hazardous conditions (no fire), the following coding structure shall be used:
- (1) Flammable or combustible liquid or flammable gas spill or leak (41), as follows:
    - (a) Gasoline or other flammable liquid spill — 411
    - (b) Gas leak (natural gas or LP-Gas) — 412
    - (c) Oil or other combustible liquid spill — 413
    - (d) Flammable or combustible liquid or gas spilled or leaking not able to be classified further — 410
  - (2) Chemical release, chemical reaction, or toxic condition (42), as follows:
    - (a) Chemical hazard (no spill or leak) — 421
    - (b) Chemical spill or leak — 422
    - (c) Refrigeration leak, including ammonia — 423
    - (d) Carbon monoxide incident — 424
    - (e) Chemical release, chemical reaction, or toxic condition not able to be classified further — 420
  - (3) Radioactive condition (43), as follows:
    - (a) Radiation leak, radioactive material — 431
    - (b) Radioactive condition not able to be classified further — 430
  - (4) Electrical wiring or equipment problem (44), as follows:
    - (a) Heat from short circuit (wiring) or arcing from electrical equipment — 441
    - (b) Overheated motor or wiring — 442
    - (c) Breakdown of light ballast — 443
    - (d) Power line down — 444
    - (e) Electrical wiring or equipment problem not able to be classified further — 440
  - (5) Confirmed or suspected biological hazard (45) — 451
  - (6) Accident, potential accident (46), as follows:
    - (a) Building or structure weakened or collapsed — 461
    - (b) Aircraft standby — 462
    - (c) Vehicle accident, general cleanup — 463
    - (d) Accident, potential accident not able to be classified further — 460
  - (7) Explosive hazard present (47) — 471
  - (8) Attempted burning, illegal action (48), as follows:
    - (a) Attempt to burn — 481
    - (b) Threat to burn — 482
    - (c) Attempted burning, illegal action not able to be classified further — 480
  - (9) Hazardous condition, standby not able to be classified further (40) — 400
- N 11.3.2.5 Service Call (5).** For service calls, the following coding structure shall be used:
- (1) Person in distress (51), as follows:
    - (a) Lock-out — 511
    - (b) Ring or jewelry removal, without transport to hospital — 512
    - (c) Person in distress not able to be classified further — 510
  - (2) Water problem (52), as follows:
    - (a) Water (not people) evacuation — 521
    - (b) Water or steam leak — 522
    - (c) Water problem not able to be classified further — 520
  - (3) Smoke or odor problem (53) — 531
  - (4) Animal problem or rescue (54), as follows:
    - (a) Animal problem — 541
    - (b) Animal rescue — 542
    - (c) Animal problem or rescue not able to be classified further — 540
  - (5) Public service assistance (55), as follows:
    - (a) Assist to police or other governmental agency — 551
    - (b) Police matter — 552
    - (c) Service to the public — 553
    - (d) Assist to invalid — 554
    - (e) Defective elevator, no occupants — 555
    - (f) Standby special event — 556
    - (g) Public service assistance not able to be classified further — 550
  - (6) Unauthorized burning (56) — 561
  - (7) Cover assignment, standby at fire station, move-up (57) — 571
  - (8) Service call not able to be classified further (50) — 500
- N 11.3.2.6 Good Intent Call (6).** For good intent calls, the following coding structure shall be used:
- (1) Incident cleared prior to arrival (61) — 611
  - (2) No emergency found (62), as follows:
    - (a) Wrong location — 621
    - (b) No incident on arrival at dispatched address — 622
    - (c) Lines other than power lines down — 623
  - (3) Controlled burning (63), as follows:

- (a) Authorized controlled burning — 631
- (b) Prescribed fire — 632
- (4) Vicinity alarm (incident at another location) (64) — 641
- (5) Steam, other gas mistaken for smoke (65), as follows:
  - (a) Smoke scare, odor of smoke, not steam — 651
  - (b) Steam, vapor, fog, or dust thought to be smoke — 652
  - (c) Smoke from barbecue or tar kettle — 653
  - (d) Steam, other gas mistaken for smoke not able to be classified further — 650
- (6) EMS call where injured parties have been transported by a non-fire service agency or have left the scene prior to arrival (66) — 661
- (7) Hazardous materials release investigation, with no hazardous condition found (67), as follows:
  - (a) Hazardous materials release investigation, with no hazardous condition found — 671
  - (b) Biological hazard investigation with no hazard condition found — 672
- (8) Good intent call not able to be classified further (60) — 600

**N 11.3.2.7 False Alarm or False Call (7).** For false alarm or false calls, the following coding structure shall be used:

- (1) Malicious or mischievous false call (71), as follows:
  - (a) Malicious or mischievous false alarm 711
  - (b) Malicious or mischievous false call not able to be classified further 710
- (2) Bomb scare, no bomb (72) — 721
- (3) System or detector malfunction (73), as follows:
  - (a) Sprinkler activated due to the failure or malfunction of the sprinkler system 731
  - (b) Extinguishing system activation due to malfunction 732
  - (c) Smoke detector activation due to malfunction 733
  - (d) Heat detector activation due to malfunction 734
  - (e) Alarm system sounded because of malfunction 735
  - (f) Carbon monoxide detector activation due to malfunction 736
  - (g) System or detector malfunction not able to be classified further 730
- (4) Unintentional system or detector operation with no fire (74), as follows:
  - (a) Sprinkler alarm activation, no fire — unintentional 741
  - (b) Extinguishing system activation 742
  - (c) Smoke detector activation, no fire — unintentional 743
  - (d) Heat detector activation, no fire — unintentional 744
  - (e) Alarm system sounded, no fire — unintentional 745
  - (f) Carbon monoxide detector activation, but no carbon monoxide detected with test equipment 746
  - (g) Unintentional system or detector operation with no fire not able to be classified further 740
- (5) False alarm or false call not able to be classified further (70) — 700

**N 11.3.2.8 Natural Condition (8).** For natural conditions, the following coding structure shall be used:

- (1) Severe weather and natural disaster (81), as follows:

- (a) Earthquake damage assessment where no rescue or other service is rendered — 811
- (b) Flood assessment — 812
- (c) Storm damage assessment — 813
- (d) Lightning strike (no fire) — 814
- (e) Severe weather or natural disaster standby — 815
- (f) Severe weather or natural disaster not able to be classified further — 800

**N 11.3.2.9 Special Incident Types (9).** For special incident types, the following coding structure shall be used:

- (1) Code or ordinance violation (91) — 911
- (2) Special incident type not able to be classified further (90), as follows:
  - (a) Special incident type not able to be classified further — 900
  - (b) Undetermined incident type — U
  - (c) Undetermined incident type — UU
  - (d) Undetermined incident type — UUU

**11.4\* Condition of Fire on Arrival.** Where the condition of fire on arrival is to be coded, the coding structure in Table 11.4 shall be used.

#### 11.5 Type of Action Taken.

**11.5.1** The data element “type of action taken” is used to describe the type of duties performed at the incident scene by the responding fire department and emergency personnel. This data element, together with the data element “incident type,” provides some indication of the specific types of services provided by the fire department.

#### Δ 11.5.2 Type of Action Taken.

**N 11.5.2.1\* Type of Action Taken Coding Structure.** Where the type of action taken by emergency services is to be coded, the coding structure provided in 11.5.2.1.1 through 11.5.2.1.10 shall be used.

**N 11.5.2.1.1 Fire Control or Extinguishment (1).** For fire control or extinguishment, the following coding structure shall be used:

- (1) Extinguishment by fire service personnel — 11
- (2) Salvage and overhaul — 12
- (3) Establish fire lines around wildland fire perimeter — 13
- (4) Manage prescribed fire in wildland — 17
- (5) Fire control or extinguishment not able to be classified further — 10

#### Δ Table 11.4 Condition of Fire on Arrival Coding Structure

|   |                                                                 |
|---|-----------------------------------------------------------------|
| 1 | Fire out on arrival.                                            |
| 2 | No fire or smoke showing.                                       |
| 3 | Smoke showing.                                                  |
| 4 | Fire showing.                                                   |
| 5 | Fully involved.                                                 |
| 6 | Fire spread to exposures.                                       |
| 0 | Condition of fire on arrival not able to be classified further. |
| U | Condition of fire on arrival undetermined or not reported.      |

**N 11.5.2.1.2 Search and Rescue Activity (2).** For search and rescue activity, the following coding structure shall be used:

- (1) Search for lost or missing person — 21
- (2) Rescue, remove from harm — 22
- (3) Extrication or disentangling of a person — 23
- (4) Recovery of body or body parts — 24
- (5) Assign rapid intervention team (RIT)/rapid intervention crew (RIC) — 25
- (6) Search and rescue activity not able to be classified further — 20

**N 11.5.2.1.3 Administer Emergency Medical Services (EMS) (3).** For administering emergency medical services (EMS), the following coding structure shall be used:

- (1) Provide first aid and check for injuries — 31
- (2) Provide basic life support — 32
- (3) Provide advanced life support (ALS) — 33
- (4) Transport of person from scene in fire service ambulance or apparatus — 34
- (5) Control bleeding — 39
- (6) Administer emergency medical services not able to be classified further — 30

**N 11.5.2.1.4 Mitigate Hazardous Conditions (4).** For mitigating hazardous conditions, the following coding structure shall be used:

- (1) Identification, analysis of hazardous materials — 41
- (2) Monitor hazardous materials — 42
- (3) Hazardous materials spill control and confinement — 43
- (4) Hazardous materials leak control and containment — 44
- (5) Remove hazard — 45
- (6) Decontaminate persons or equipment — 46
- (7) Decontamination of occupancy or area exposed to hazardous materials — 47
- (8) Remove hazardous materials — 48
- (9) Mitigate hazardous conditions not able to be classified further — 40

**N 11.5.2.1.5 Support Actions (5).** For support actions, the following coding structure shall be used:

- (1) Ventilation — 51
- (2) Forcible entry — 52
- (3) Evacuate area — 53
- (4) Determine the materials released to be nonhazardous — 54
- (5) Establish safe area — 55
- (6) Provide air supply — 56
- (7) Provide light or electrical power — 57
- (8) Utility control — 58
- (9) Fire extinguishment, rescue, and hazardous condition mitigation support not able to be classified further — 50

**N 11.5.2.1.6 Restore Systems or Provide Services (6).** For restoring systems or providing services, the following coding structure shall be used:

- (1) Restore utilities — 61
- (2) Restore sprinkler or fire protection system — 62
- (3) Restore fire alarm system — 63
- (4) Shut down system — 64
- (5) Secure property — 65
- (6) Remove water or control flooding condition — 66
- (7) Restore systems or provide services not able to be classified further — 60

**N 11.5.2.1.7 Provide Assistance (7).** For providing assistance, the following coding structure shall be used:

- (1) Assist physically disabled — 71
- (2) Assist animal — 72
- (3) Provide manpower or additional assistance — 73
- (4) Provide apparatus — 74
- (5) Provide equipment, where equipment is used by another agency — 75
- (6) Provide water — 76
- (7) Control crowd — 77
- (8) Control traffic — 78
- (9) Assess damage from severe weather or the results of a natural disaster — 79
- (10) Provide assistance not able to be classified further — 70

**N 11.5.2.1.8 Provide Information, Investigate, or Enforce Codes or Regulations (8).** For providing information, investigating, or enforcing codes or regulations, the following coding structure shall be used:

- (1) Incident command — 81
- (2) Notify other relevant agencies — 82
- (3) Provide information to the public or media — 83
- (4) Refer to proper authorities — 84
- (5) Enforce fire code and other codes — 85
- (6) Investigate — 86
- (7) Investigate, fire origin and cause — 87
- (8) Provide information, investigate, or enforce codes or regulations not able to be classified further — 80

**N 11.5.2.1.9 Fill-In or Standby (9).** For fill-in or standby, the following coding structure shall be used:

- (1) Fill in, move up to another fire station — 91
- (2) Stand by — 92
- (3) Canceled en route — 93
- (4) Fill-in, standby not able to be classified further — 90

**N 11.5.2.1.10 Other Actions Taken (10).** For other actions taken, the following coding structure shall be used:

- (1) Type of action taken not able to be classified further — 00
- (2) Type of action taken undetermined or not reported — UU

**N 11.5.2.2** Where more than one action is applicable, all applicable actions shall be recorded with time stamps as determined by the AHJ.

**11.6\* Fire Suppression Factors.** Where fire suppression factors are to be coded, the coding structure in Table 11.6 shall be used.

## • 11.7 Method of Extinguishment.

**Δ 11.7.1** The “method of extinguishment” data element shall be used to describe the mechanism by which the fire was finally extinguished.