NFPA 1452

Guide for Training Fire Service Personnel to Conduct Dwelling Fire Safety Surveys

2005 Edition

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This edition of NFPA 1452, *Guide for Training Fire Service Personnel to Conduct Dwelling Fire Safety Surveys*, was prepared by the Technical Committee on Fire Safety Training and acted on by NFPA at its November Association Technical Meeting held November 13–17, 2004, in Miami Beach, FL. It was issued by the Standards Council on January 14, 2005, with an effective date of February 7, 2005, and supersedes all previous editions.

This edition of NFPA 1452 was approved as an American National Standard on February 7, 2005.

Origin and Development of NFPA 1452

This text was developed by the Committee on Fire Service Training and processed in accordance with NFPA Regulations Governing Committee Projects. This guide was a revision of and replacement for the NFPA booklet entitled *How to Train Fire Fighters to Make Dwelling Inspections*. The 2000 edition of this document was a complete revision of the 1993 edition. It included updated statistics and public safety and educational information that had not been included in prior editions.

The 2005 edition of this document is a complete revision of the 2000 edition. The previous numbering of chapters and paragraphs has changed to reflect requirements of the *Manual of Style for NFPA Technical Committee Documents*.

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

Committee Scope: This Committee shall have primary responsibility for all fire service training techniques, operations, and procedures to develop maximum efficiency and proper utilization of available personnel. Such activities can include training guides for fire prevention, fire suppression, and other missions for which the fire service has responsibility.

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

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

Chapter 1 Administration

1.1 Scope. The intent of this document is to provide fire department training officers or other fire service personnel with a guide for the establishment of a community fire safety program for dwellings.

1.1.1 To be effective and to adequately deal with local fire problems, the solution to a particular fire safety problem should be developed locally. This document is intended to be a basic guide to possible elements for inclusion in a locally developed program.

1.1.2 Because the majority of fire deaths occur in residential occupancies, it is essential that fire safety survey programs become an integral part of the total fire safety program in a community. This guide can be applied to both rural and urban communities. Principles contained in this document can be applied to single-family as well as multifamily dwellings, such as apartments, town houses, and condominiums, as local conditions dictate.

1.1.3 This document is not intended to be a training manual or a fire inspection manual, but rather to serve as a guide for establishing a locally prepared dwelling inspection program geared to address the specific problem(s) faced by the local fire service organization. By utilizing fire suppression personnel in this capacity, fire departments can achieve some or all of the following benefits:

(1) Increased productivity
(2) Increased community contact
(3) Familiarization with residential properties

1.1.4 Residents of the community also benefit from a survey program by becoming aware of the following issues:

(1) Fire safety in the home
(2) Protective measures to improve the quality of life
(3) Public safety and awareness

1.1.5 Specific sections of this guide can be included or eliminated as local conditions dictate.

1.2 Purpose.

1.2.1 Fire is a major problem in the United States. Fire is the third leading cause of unintentional injury deaths in the home, and homes (both dwelling and apartments) account for 80 percent of all fire deaths in a typical year. NFPA fire loss statistics for 2001 (not including the terrorist attacks of September 11) reported approximately 383,000 fires in one- and two-family dwellings, resulting in 3200 fatalities, 17,200 injuries, and more than $8 billion in property loss.

1.2.2 The local fire department is responsible for the protection of life and property. If the downtrend in residential fire deaths in the past few years is to continue, a community effort toward public fire safety education — including fire-safe behaviors and the use of smoke detectors, residential fast-response sprinklers, and a fire escape plan — should be incorporated into every community's fire protection system. An effective home survey program is a primary method of fire prevention, with proven success in lowering loss of life, injury, and property damage from fire.

1.2.3 In addition to reducing loss of life and property damage, an effective dwelling fire safety program will generate the following opportunities, which benefit the department and the entire community:

(1) Publicizing year-round community programs and activities. Citizens who support the fire department believe they are getting more for their money in terms of a comprehensive fire service organization.
(2) Meeting residents of the community on a one-to-one basis and distributing various fire prevention literature, telephone stickers, and other fire safety information
(3) Answering specific fire protection or fire safety inquiries
(4) Allowing fire fighters to become better acquainted with street names and layouts, hydrant and water supply locations, community development, and home construction, as well as pre-fire planning
(5) Noting the items in (4) and other useful information for discussion during training sessions
(6) Using fire apparatus regularly, thereby improving driver proficiency
(7) Increasing the productivity of fire fighters, specifically in fire service–related duties
(8) Assisting the professional development of fire fighters engaged in the program's activities
(9) Allowing the fire service to become acquainted with construction types, interior designs, avenues of fire spread, and locations of various concealed spaces. For example, the entrance to attics and crawl spaces can be determined prior to an emergency.

1.2.4 As worthwhile as the fringe benefits of 1.2.3 are, the most important responsibility is making good fire surveys in order to reduce fire hazards and fires and to provide effective public fire prevention education throughout the community.

Chapter 2 Referenced Publications

2.1 General. The documents or portions thereof listed in this chapter are referenced within this guide and should be considered part of the recommendations of this document.

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

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NFPA 10, *Standard for Portable Fire Extinguishers,* 2002 edition.

NFPA 70, *National Electrical Code®,* 2002 edition.

NFPA 211, *Standard for Chimneys, Fireplaces, Vents, and Solid Fuel-Burning Appliances,* 2003 edition.

NFPA 720, *Recommended Practice for the Installation of Household Carbon Monoxide (CO) Warning Equipment,* 2003 edition.

NFPA 1141, *Standard for Fire Protection in Planned Building Groups,* 2003 edition.

NFPA 1144, *Standard for Protection of Life and Property from Wildfire,* 2002 edition.

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

Chapter 3 Definitions

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

3.2 NFPA Official Definitions.

3.2.1* Approved. Acceptable to the authority having jurisdiction.

3.2.2* Authority Having Jurisdiction (AHJ). An organization, office, or individual responsible for enforcing the requirements of a code or standard, or for approving equipment, materials, an installation, or a procedure.

3.2.3 Guide. A document that is advisory or informative in nature and that contains only nonmandatory provisions. A guide may contain mandatory statements such as when a guide can be used, but the document as a whole is not suitable for adoption into law.

3.2.4 Should. Indicates a recommendation or that which is advised but not required.

3.3 General Definitions. (Reserved)

Chapter 4 Program Benefits

4.1 Material Distribution. Fire safety surveys of dwellings provide the fire department with one of the best means of delivering public fire prevention education through direct contact with residents of the community. Maximum effectiveness can be accomplished through the distribution of fire prevention literature directed at the local fire problem. Fire fighters can explain specific items in the literature and answer any questions that homeowners might have on specific fire department campaigns. Many fire departments find it advantageous to print special cards, certificates, or door stickers to compliment homeowners when their dwellings are found to be in a good, fire-safe condition.

4.2 Support of Other Programs. Personal visits by fire fighters to dwellings for fire safety surveys generally improve the fire department's public image in the community. The program enables fire fighters to distribute information on smoke detector use and placement, the benefits of the installation of residential fast-response sprinklers (RFRS), home fire escape planning, safety hints for babysitters, and a variety of other safety-related subjects. Fire fighters can supplement the fire survey by giving homeowners telephone stickers or cards showing the emergency telephone numbers and procedures for sending a fire alarm. Additionally, the survey program can identify the increasing numbers of unregulated daycare and adult care centers in residential occupancies.

4.3 Continuing Dwelling Survey Programs. In the planning stages of a dwelling fire safety survey program, the fire chief and fire officers should look beyond the immediate short-term benefits, anticipating its extension and continuation as a permanent program. Although the initial dwelling fire safety survey can be a resounding success, the fire department should continue to analyze and evaluate the effectiveness of the program and its continued ability to address the current local fire problem. The fire department should realize that planning, implementation, and evaluation processes should be a continuous cycle that reacts to the varying needs of the community. The experiences of fire departments that have initiated successful dwelling fire safety survey programs have led them to retain these activities year after year. The success of these programs has, in some communities, resulted in a drastic reduction in life and property loss from fire.

Chapter 5 Planning the Dwelling Survey Program

5.1 General.

5.1.1 Careful planning and preparation are essential if a dwelling fire safety survey program is to be successful.

5.1.2 The chief of the fire department should demonstrate a commitment to the planning and execution of the program. Every department member is responsible for educating the people of the community that the program is beneficial. The items to consider when the program is planned are presented in Sections 5.2 through 5.9.

5.2 Publicity. Dwelling surveys should be "sold" to the public. Homeowners should be fully informed of the value of surveys, including how such surveys can save lives and protect their homes from fire. Education can be accomplished by enlisting the assistance of local radio and television stations and newspapers to inform the public of the purpose and benefits of the dwelling survey service. The local chamber of commerce, community service clubs, church groups, fraternal orders, and schools should be contacted for additional program support. Generally, most of these organizations are glad to cooperate. Careful planning and widespread community support will increase the overall success of these programs.

5.3 Training.

5.3.1 One of the most important phases of any training program is teaching fire fighters to apply the knowledge gained to a practical situation. Fire fighters should be able to recognize hazards of all types and make proper recommendations for their correction. They should also be able to explain and offer reasons for the corrections suggested. For example, a fire fighter should be prepared to recommend the installation of safety devices, such as fire extinguishers and smoke detectors, and to specify proper locations for their installation. Fire fighters should be knowledgeable in recognizing fire hazards and technically informed about the recommended methods for their removal. Fire fighters should project an image and attitude that leaves a positive, lasting impression.

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5.3.2 Visual and mechanical training aids are extremely useful to achieving these goals in training fire fighters. For example, color slides showing typical hazards and faulty installations should help fire fighters recognize these hazards. It is suggested that training officers seek the aid of technically qualified individuals, such as building inspectors and electrical inspectors, to assist in instructing fire fighters in the use and application of local codes and building regulations pertaining to fire protection and prevention.

5.3.3 Fire fighters should be thoroughly trained before being sent out on their own to conduct surveys. Training should consist of classroom instruction and application of knowledge and principles in the field of fire prevention.

5.3.3.1 Classroom instruction should include the following:

(1) Proper methods of introduction and explanation of program rationale for the homeowner
(2) Proper methods of securing permission from the homeowner to perform the dwelling survey (The homeowner can refuse an inspection.)
(3) Common fire hazards that can be expected to be found in a dwelling
(4) Provisions of the local fire code that are applicable to dwellings (Inspections generally should be made as a courtesy, not because of fire prevention laws.)

5.3.3.2 Training officers should take fire fighters into the field for supervised on-the-job training before fire fighters are allowed to perform surveys on their own. This procedure will allow fire fighters to build confidence in their survey abilities under the supervision of an experienced individual. Field surveys with an experienced training officer should be continued until the training officer is sure the fire fighters are competent and at ease when they deal with the public. Dwelling surveys should be conducted by a minimum of two fire fighters. However, the presence of too many fire fighters at a single dwelling could be perceived as an authoritative force, causing a negative occupant reaction to a survey.

5.4 Program Duration. Surveys of dwellings should be done on a year-round basis. The program should contain elements to be emphasized during specific times of the year, such as access to fire hydrants or heating equipment problems during winter months.

5.5 Buildings to Be Surveyed. Every dwelling unit in the fire department's jurisdiction should be surveyed. In large cities, it could be impossible to inspect all dwellings each year. Where this is the case, the fire chief should decide how many dwellings will be surveyed each year.

5.6 Scheduling. The scheduling of dwelling surveys should take into consideration citizens' receptiveness to the program. The fire department should develop a sensitivity to potential situations that might cause problems for the program. Scheduling a time for survey visits depends a great deal on whether a department has career, call, or volunteer members, a combination of these, or civilian survey personnel. The best times to conduct dwelling surveys are midmorning (9 a.m. to 11 a.m.) and midafternoon (1 p.m. to 3:30 p.m.), Monday through Friday, except holidays. Some fire departments could find it necessary to schedule weekends and evenings, but care should be taken to avoid conflict with meal hours.

5.7 Survey Procedures.

5.7.1 Before leaving the station, the officer in charge should ensure that all fire fighters are in proper uniform and are properly equipped. A dress uniform is recommended; however, if one is not available, a clean work uniform with proper insignia or identification is necessary.

5.7.2 Fire apparatus utilized by the surveying fire fighters should be kept in proximity to the area being surveyed to facilitate a quick response to an emergency alarm. Alarm notification can be accomplished through the use of normal and accepted wireless communications, or one member can be assigned to stay with the apparatus to notify the remaining crew members through a predesignated signal, such as sounding the vehicle siren or air horn.

5.7.2.1 Personnel assigned to the vehicle should be aware and cautious of children in the vicinity of the vehicle, particularly during times of vehicle movement.

5.7.2.2 Personnel should also be prepared to answer questions from the public relating to both the apparatus and fire safety in general.

5.7.2.3 Consideration should be given to carrying a sign on the side of the apparatus explaining that surveys are in progress in the area to improve fire safety in the community. The banner or sign should also state that the unit is in service and responds to emergencies during the surveys.

5.7.3 The officer in charge should assign teams of fire fighters to survey dwellings. Most fire departments rely on two-person teams to conduct dwelling surveys, for the protection of the survey personnel and because the conduct of single fire fighters could be subject to unverifiable accusations.

5.7.3.1 A dwelling should be approached by a walkway or path, not by walking across the lawn.

5.7.3.2 Fire fighters should not smoke during a survey.

5.7.3.3 If the occupant is home, the fire fighters should introduce themselves, show proper identification, explain the purpose of the visit, and ask permission to enter. If a publicity campaign has been properly conducted, the occupant will know why the fire fighters are there.

5.7.3.4 If admittance is refused, the fire fighters should thank the occupant and leave appropriate fire prevention materials.

5.7.3.5 If no one is home, a card should be left explaining that the visit was made and asking the occupant to call the fire station for an appointment to reschedule the survey.

5.7.4 Once inside the dwelling, the survey should begin without delay. The fire fighters should be helpful and courteous at all times. They should take care to avoid unnecessary conversation, because they can overlook a potential fire hazard and slow the survey. Because fires can occur in any room, the entire dwelling should be surveyed. However, if the occupant objects to survey of certain rooms, the occupant's wishes should be respected. Closets and cabinets should be opened by the homeowner rather than the fire fighters.

5.7.5 Fire fighters must remember that a survey is voluntarily accepted by the occupant. The occupant should be asked to accompany the fire fighters to see and to hear explanations of any fire hazards. If the occupant is unable to accompany the fire fighters, the survey should be rescheduled for a more convenient time.

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5.7.6 Fire hazards identified should be noted on the survey form. This form is only a list of recommendations, not of violations. However, if a hazardous situation that violates local fire regulations is found, it should be recorded by the fire department. For example, most fire codes require the installation of smoke detectors in residential occupancies. If surveying fire fighters find a home where smoke detectors are not present, the resident should be advised to obtain one and a notation of the recommendation should be made. During the survey, the fire fighters should not argue any point, but merely make suggestions. The purpose of the survey is to eliminate hazards to life and property, and all conversations should be directed toward this goal.

5.7.7* The survey form should be filled out completely and in duplicate. The fire department should give serious consideration to omitting specific name and address information from the survey sheet.

5.7.7.1 If no hazards are found during the survey, the occupant should be complimented for his or her efforts. Prior to leaving the premises, the fire fighters should sign the survey sheet, and the original should be left with the occupant.

5.7.7.2 Particular attention should be given to the legal considerations of the survey form. Any form that is utilized should be reviewed and approved by the fire department's legal counsel.

5.7.8 Questions asked about the department should be answered. Questions regarding policy matters should be referred to the company officer and should not be answered by fire fighters. If the answer to any question is not known, fire fighters should research the matter and advise the resident as soon as possible. Fire fighters should realize that many persons will base their opinion of the entire fire department on this one contact; therefore, a professional attitude and demeanor must be maintained at all times.

5.7.9 Many fire departments have discontinued providing window decals for invalids because these signs are now believed to identify the home as an easy target for burglary or robbery. A more popular alternative to invalid stickers is keeping in the fire communications center a manual or computerized listing of invalids or persons needing special assistance, whereby responding fire companies can be given the information en route to an emergency location. With the occupant's permission, telephone stickers showing the fire department's emergency number can be placed on the telephones in the residence.

5.7.10 Prior to leaving the premises, the fire fighters should make sure the occupant understands any fire hazards that have been found and what corrective action should be taken. Literature should be provided, and an invitation should be issued to the occupant to stop by the fire station any time he or she has a question relating to fire safety or is interested in learning more about services offered by the fire department. Last, but not least, the occupant should be thanked for allowing the survey.

5.8 Communications. When dwelling survey programs are being planned, some provisions should be made for specific communications between the survey teams and headquarters. Usually, fire apparatus operators can handle these communications, but occasionally the officer in charge will need to notify headquarters of certain hazardous situations or other important information. The use of portable two-way radios or pagers should be considered as a means of ensuring prompt notification and quick response to an emergency while fire units are in the field conducting dwelling surveys. Portable radios should be operated at low volume to avoid disturbing any occupants, especially children.

5.9 General Procedures.

5.9.1 The fire chief should identify the goals and objectives of the dwelling fire safety program, which can include the percentage of dwellings to be surveyed, areas of operation, the schedule of surveys, and other matters of general policy.

5.9.2 General procedures should also be developed to utilize the information obtained and to conduct a periodic program evaluation to identify any changes to the program operation that would increase its effectiveness.

Chapter 6 Common Hazards Found in Dwellings

6.1 General.

6.1.1 The explanations of hazards in this chapter should be adapted to local regulations and codes and should be included in a survey report form designed to apprise the resident of hazards found, corrective measures required, and other recommendations of the survey team.

6.1.2 Other hazards that can be a problem in the specific community should also be described on the form.

6.1.3 Fire fighters should carry fire safety pamphlets, along with a copy of the survey report form, for distribution at the completion of the survey.

6.2 Careless Use of Candles, Smoking Materials, Matches, and Other Open-Flame Devices. Unattended lit candles, careless smoking, and the improper disposal of matches and other open-flame items that can cause ignition are common causes of fire.

6.2.1 Fire fighters conducting dwelling surveys should ascertain whether there are smokers in the household and suggest the use of adequate fire-safe ashtrays and proper disposal of smoking materials and ashes.

6.2.2 Fire fighters should explain the fire dangers associated with unattended lit candles and smoking in bed or when extremely fatigued. They should suggest that furniture upholstery be checked after parties and before retiring for the evening.

6.2.3 The following items are among those that should be noted during the survey:

(1) Ashtrays located in bedrooms, especially on night tables or within arm's reach of the bed
(2) Burn marks on table tops, furniture upholstery, rugs, and other locations
(3) The location and storage of matches and whether they are secure from small children (Matches and lighters should always be kept up high and out of sight and reach of children, preferably in a locked cabinet.)
(4) Ornamental cigarette lighters on coffee tables or pocket lighters left lying around (Fire fighters should explain that these items are attractive to children. Lighters can present an extreme safety hazard; not only could they be used to start a fire, but an inexperienced individual could be burned by them.)
(5) Candles and other open-flame devices used in the dwelling

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6.2.4 A common fire occurrence deserves special warning. Many residents have extinguished fires in upholstery or in mattresses without calling the fire department, then retired for the night, thinking the fire was out. Because of the deep-seated nature of these fires, total extinguishment is extremely difficult. When sufficient oxygen is provided, sometimes hours later, the upholstery reignites. This often results in a serious fire and loss of life. Even under conditions in which fire will not propagate, volumes of carbon monoxide and other harmful gases can rise to lethal levels without the knowledge of persons sleeping in the dwelling. The occupant should be told to notify the fire department of all fires in and around the home, even if they seem minor.

6.3 Electrical Installations.

6.3.1 Violations and Hazards. Problems in electrical installations and equipment are generally associated with several types of violations or with misunderstandings of the items' design features. A great deal of technical knowledge is required for recognition of improper design features. Hazards might be hidden from view by the building's configuration. However, certain telltale signs of problem areas are recognizable to the trained fire fighter.

6.3.2 Overcurrent Protection.

6.3.2.1 The commonly used overcurrent protection devices for the protection of feeders, circuits, and equipment are fuses, circuit breakers, and thermal overload units. The basic purpose of the fuse, circuit breaker, or fuse cartridge is the same: to open the circuit if the electrical current reaches a value that will cause an excessive or dangerous temperature in the conductor, a condition becoming more common with the increasing numbers of electrical appliances now in use. This safety feature is negated when a fuse or circuit breaker of a higher-rated capacity is used to replace one of a lower rating (for example, replacing a 15 amp fuse with a 30 amp fuse) or by bridging the circuit by placing a conductor behind the fuse.

6.3.2.2 It can be difficult to determine such overloading unless fire fighters know the gauge of the wire used in the circuit and the electrical devices it feeds. Normally, the only way to determine improper overloading is to remove the fuse and examine it for excessive heating at the fuse base. It should also be checked for the presence of metallic bridging. Overheating can also be the result of a loose fuseholder, or the fuse might be shorted. Residents should be requested to label branch circuits in the space provided on the panel box door.

6.3.2.3 Plug fuses consist of two basic types: the ordinary Edison-base type and the S type. Either could be a time-delay type. Edison-type fuses are designed for ease of replacement and will account for most problems. The Edison-base fuseholder will take an Edison-base fuse of any size up to the maximum 30 amp rating. Where 30 amp fuses are discovered in branch-circuit panelboards, the occupant should be cautioned that these circuits might not be designed for this ampere service.

6.3.2.4 Adapters can be installed in Edison-base fuseholders that will prevent the use of higher-rated S-type fuses in an adapter designed for lower ratings. Adapters also prevent the use of common bridging devices, including pennies.

6.3.2.5 Cartridge fuses are provided in two types: the one-time type and the renewable link type. Cartridge fuseholders are designed to prevent, or to make extremely difficult, the insertion of a fuse other than the type for which the fuseholder was designed. Renewable link cartridge fuses have the following disadvantages:

(1) The links can be doubled or tripled, thereby defeating their purpose and usefulness.
(2) The links, upon replacement, can be left with loose connections.

6.3.2.6 Circuit breaker overloading will be more difficult to determine without tracing the circuit that it protects. Explaining the design features of fusing to the occupant might be the best way to determine an unintentional violation. Any differences in the physical appearances of circuit breakers in a panel could be an indication of circuit overloading and is worthy of further investigation by a qualified electrician.

6.3.2.7 Ground-fault circuit interrupters (GFCIs) are devices that sense when current, even a small amount, passes to ground through any path other than the proper conductor. When this situation occurs, the GFCI trips almost instantly, stopping the flow of current in the circuit and through the person receiving the ground-fault shock. NFPA 70, *National Electrical Code*, requires GFCI protection on all 135 V, single-phase, 15 and 20 amp receptacle outlets installed outdoors where there is direct grade-level access to the dwelling unit and to the receptacles. GFCI protection is also required for 125 V, single-phase, 15 and 20 amp receptacles installed in garages, in crawl spaces at or below grade level, in unfinished basements, within 6 ft (2 m) of a kitchen sink where receptacles serve countertop surfaces, and in bathrooms. Receptacles located within 20 ft (6 m) of the inside walls of a permanently installed pool, fountain, or similar location must also be protected by a ground-fault circuit interrupter.

6.3.2.8 If GFCIs are found in the course of a survey, the occupant should be requested to operate the test button on the unit to determine whether the unit is operating correctly. If so, the reset button will pop out and the circuit will open. It is returned to normal mode by depressing the reset button. If non–GFCI-protected receptacles are found near sinks or outdoors, the occupant should be advised of the safety advantages to be gained by replacing them with GFCI-type receptacles.

6.3.3 Grounded Receptacles.

6.3.3.1 NFPA 70, *National Electrical Code*, requires all electric service to be grounded. Receptacles installed on 15 and 20 amp branch circuits are required to be of the grounded type and should be effectively grounded. Testing meters that, when inserted into receptacles, indicate proper grounding of the receptacle are available. Local electrical inspectors can be very helpful in explaining local codes in fire department training sessions.

6.3.3.2 Even though older dwellings might not have grounded receptacles, major appliances, such as dishwashers, dryers, washing machines, and garbage disposals, should be grounded externally, or special grounded branch circuits should be provided for them. The surveyor should be especially alert for the use of three-pronged plugs whose grounding prong has been removed or on which adapters have been attached to mate with two-prong polarized outlets. Such practices can give rise to a shock hazard for users of such appliances, and the occupant should be so advised.

6.3.4 Outdoor Electrical Service. Electrical main service coming into the dwelling should be inspected. Cables that are too close to trees, swimming pools, spas, saunas, antennas, down

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spouts, or gutters, or that are not securely attached to the building, could present a life or fire hazard. Outdoor antennas should not be attached to any electric service raceway or service mast. Live vegetation such as trees should not be used for the support of outside overhead conductors. Underground branch circuits are permitted to be used for this supply to outdoor lighting fixtures and associated electrical equipment on trees.

6.3.5 Other Common Electrical Hazards Found in the Home.

6.3.5.1 Heat buildup occurs in wiring when resistance to electrical current flow is experienced. Loose wire nuts or cable connections (especially in aluminum wiring), wiring run through doorways or under carpeting, and furniture or other heavy objects resting on wires can produce this condition.

6.3.5.2 Unusual wear to insulation on wiring can result from cables not being properly secured, objects hanging on cables, or, as described in 6.3.5.1, wiring run through doorways or under carpeting.

6.3.5.3 Dirty, poorly maintained electric motors or missing covers on junction boxes can eventually result in a short circuit or a fire. All unused openings (knockouts) in boxes and cabinets (panel boards) should be properly closed.

6.3.5.4 Extension cords (even though UL listed) can be too small for certain electrical loads, such as irons and air conditioners. Extension cords should never be used for permanent connections; they should be used only temporarily. If fire fighters are to provide worthwhile guidance to the occupant, they should be trained to match the current-carrying capability of the extension cord with the current demand of the electrical loads connected to it.

6.3.5.5 "Octopus" fittings allow an oversupply of electrical devices to be connected to one outlet, causing excessive current flow with resultant heat buildup. Power strips with integral overcurrent protection should be recommended to replace octopus fittings.

6.3.5.6 Insulation that is frayed is unsafe, and its breakdown could be imminent. Fraying is often a problem, especially on powered hand tools. It should be recommended that such wiring be replaced.

6.3.5.7 To avoid possible ignition should a gas leak occur, electrical outlets or fuse panels should not be located adjacent to gas meters or gas diaphragms.

6.3.5.8 The use of appliances, fixtures, and wiring that are not listed by a testing laboratory should be discouraged.

6.3.5.9 The use of child safety covers should be recommended on all electrical outlets in homes that have young children. Such plugs are intended to cover the receptacle openings so that a child cannot insert a conductive object.

6.3.5.10 Clear spaces should be kept around all electrical panels.

6.3.5.11 Where the surveyor encounters lighting fixtures with halogen bulbs, the occupant should be advised of the hazard presented by the high temperature of such bulbs and the need to keep combustibles well away from them. Many manufacturers of such fixtures have developed guards for installation over bulbs. (Other types of bulbs also can get hot enough to cause fires if they come into contact with light combustible materials such as window curtains.)

6.3.5.12 Most modern television receivers, stereo components, VCRs, and DVD players have a so-called instant-on feature. These units are energized when plugged into a wall. The occupant should be advised that it is a good practice to unplug such units when leaving home for an extended period of time.

6.4 Flammable Liquids. Dwelling fires caused by flammable liquids usually result from the improper storage and use of such liquids. The properties of these materials are generally misunderstood. Common areas of concern to fire fighters should include the issues discussed in 6.4.1 and 6.4.2.

6.4.1 Storage and Dispensing Practices.

6.4.1.1 Flammable liquids such as gasoline should be stored only in listed safety cans of substantial design and construction and of a type approved by the authority having jurisdiction. Glass jars, unapproved plastic containers, or open pails and buckets should never be used. Flammable liquids should be handled and disposed of only in well-ventilated areas free from sources of ignition.

6.4.1.2 Storing excessive quantities of flammable liquids should be discouraged. Fire fighters should look for excessive amounts of flammable liquids stored in basements or garages, especially during times of shortages of such products. Even if stored in approved containers, flammable liquids exposed to heat can result in the escape of vapors through vent holes or other openings. Flammable liquids should not be stored in basements or near potential sources of ignition.

6.4.1.3 The use of flammable liquids as solvents for removing grease, oil, or paint is extremely dangerous. Such practices should be discouraged. Most flammable liquids used in the home produce vapors heavier than air and thus sink to the floor and spread. If the vapors reach a source of ignition, even at a considerable distance, an explosion and fire can result. A light switch, for example, can produce a spark capable of igniting vapors.

6.4.1.4 Greasy or oil-based paint-soaked rags and brushes can also cause fire from spontaneous ignition. They should be cleaned and washed after each use and air-dried outside. Paint manufacturers' instructions should be consulted regarding cleanup and disposal.

6.4.2 Other Flammable Liquid Hazards.

6.4.2.1 Using flammable liquids in the home for dry-cleaning purposes should be discouraged.

6.4.2.2 Smoking when using flammable liquids should be discouraged.

6.4.2.3 Using flammable liquids to start fires in stoves or fireplaces is a dangerous practice and should be discouraged.

6.4.2.4 The use of liquid charcoal starters should be restricted to products marketed specifically for that purpose. Applying these products after ignition is achieved, whether or not live flame is noted, is extremely hazardous. Flame can be transmitted to the container contents, with a resultant ignition and pressure explosion.

6.5 Heating Systems and Appliances.

6.5.1 General Hazards. Types of heating systems vary in different climates. Dwellings built in recent years usually have gas- or oil-fired furnaces or electrical heating. Homes might also have coal or wood heating units. Increased fuel costs have brought about an increase in the use of wood-burning appliances. Room heaters and portable heaters are also common in some areas.

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6.5.1.1 A common hazard is the storage of combustible materials where they can be ignited by heat radiated or conducted by a furnace, stove, or other heating appliance. The area around any heating appliance should be kept free of combustibles. Heating units also require sufficient space around them to provide adequate ventilation for proper combustion.

6.5.1.2 Flues and smoke pipes can constitute a hazard; both should be kept in good condition and have adequate clearance from any combustibles. Smoke pipes should be kept as short as possible. If more than 3 ft (1 m) in length, they should be supported by hangers. Flues should be cleaned annually and inspected for damage or holes. In addition, throughout the heating season, checks should be made for creosote buildup in the flue pipe and chimney connected to coal- and wood-burning appliances. When a buildup is evident, the system should be cleaned. Care should also be taken when inspecting chimneys and flues where they pass through attic areas. Where flues pass through partitions, they should have sufficient clearance or be protected by an approved, ventilated metal thimble.

6.5.1.3 Steam pipes or steam-heating appliances improperly spaced from wood surfaces can result in lower ignition temperatures over long periods of exposure. In some cases, pyrolitic decomposition of the wood fibers has caused ignition temperatures as low as 150°F (65°C).

6.5.2 Types of Heating Systems.

6.5.2.1 Gas-Fueled Systems. Gas heating systems can be supplied by natural, manufactured, or liquefied petroleum gas. Piping should be of an approved type and in good condition; loose connections and poor piping are hazardous. The burner should be properly adjusted. A check should be made for any odor of gas. Where individual gas heaters are distributed throughout the home, fire fighters should check to ensure that they are properly secured and vented.

6.5.2.2 Oil-Fired Systems. Several types of heating devices use oil.

6.5.2.2.1 Some homes with central heating use an oil burner to heat water, which is then distributed to radiators or baseboard systems. Large oil tanks can be located in the basement and should be properly installed, with tight connections. A quick check will show whether there are any leaks or whether a tank is unsecured. If a leak is found, sand should be spread to confine the leakage or an emergency patch should be placed on the leak. The homeowner should replace leaking or damaged tanks immediately.

6.5.2.2.2 In climates where heat is only occasionally required, small oil or kerosene heaters can be used. Condition of the flue pipe and tank and security of the installation should be inspected. These devices should be mounted on metal trays to prevent overflow of liquid onto the floor.

6.5.2.3 Coal and Wood Furnaces. These solid fuel furnaces radiate a lot of heat. Their flues should have at least an 18 in. (457 mm) clearance from any combustible material. Solid fuel can also cause more damage to smoke pipes than other types of fuels. Installations with covered pipes that should be periodically inspected for loose or missing covering can cause a fire. Improper storage of fuel, ashes, or both can result in a fire. Fuels should be stored in bins. Ashes should be placed in metal containers and removed from the dwelling.

6.5.2.4 Fireplaces. The use of factory-built fireplaces, fireplace stoves, and masonry fireplaces has increased for both heating and enjoyment. Spark screens should always be provided for a fireplace, and dampers, if any, should be of a type that can be operated from outside the fireplace. Listed or approved factory-built fireplaces and fireplace stoves that are designed to be placed directly on or immediately adjacent to combustible building construction should be installed strictly in accordance with the terms of the listing and the manufacturer's instructions. NFPA 211, *Standard for Chimneys, Fireplaces, Vents, and Solid Fuel-Burning Appliances*, should be followed. Masonry fireplaces should be checked to ensure that linings are free from cracks, and flues should be cleaned annually. Ashes should be placed in metal containers and removed from the dwelling.

6.5.3 Cooking Appliances and Venting Systems.

6.5.3.1 Generally, fire hazards in cooking appliances and venting systems are associated with poor housekeeping practices. When pointing out such deficiencies, tact is imperative. Unless an obvious accumulation of grease or residue is present, general statements regarding the extinguishment of grease fires should serve as a reminder.

6.5.3.2 Grease ducts and vented hoods should be inspected for buildup of grease. Filters should be inspected and the resident cautioned about the dangers of fire transmittal and spread through these areas.

6.5.3.3 Electric ranges, wall-mounted ovens, and counter-mounted cooking units require a means of disconnection from the supplying electrical circuit. In freestanding household ranges, a separable connector or a plug and receptacle is sufficient. In wall-mounted ovens and counter-mounted cooking units or ranges without plugged receptacles, the circuit controlling the appliance should be well defined at the electrical panel.

6.5.3.4 Gas ranges should be equipped with an inline gas cutoff valve located at the appliance. Pilot lights and gas valves should be checked for leakage and proper burning characteristics.

6.5.3.5 Gas appliances designed for cooking should not be used to heat rooms.

6.5.3.6 Fire fighters should inform the occupant about the dangers and effects of careless cooking, or, more popularly termed, "food on the stove" problems.

6.5.4 Other Heating Devices.

6.5.4.1 Gas heaters should be of an approved type. Gas appliances should display the American Gas Association (AGA) seal.

6.5.4.2 Portable electric heaters should be of an approved type and should be located away from combustibles. These devices should also be equipped with a tilt switch that causes the heater to shut off if it is overturned. Care should be exercised to avoid overloading electrical circuits.

6.5.4.3 Use of portable kerosene space heaters as supplements to residential heating systems has increased. These units require additional safety information and consideration by the occupant. Rules for safe operation of these devices should include the following:

(1) Use only clean kerosene in these units. Do not use fuel oil or diesel fuel.
(2) Never use gasoline, naphtha, paint thinners, alcohol, or other volatile fuels.
(3) Use these units only in well-ventilated rooms.
(4) Operate these units on level surfaces only, away from drafts and wind.

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(5) Locate these units at least 3 ft (1 m) from furniture and other combustibles. Keep draperies and clothing away from the top of the heater.
(6) Do not move, handle, or service these units while they are hot or burning. Ironically, in many jurisdictions it is a code violation to use these heaters but not a violation to own them. Fire fighters should be knowledgeable of state and local regulations, ordinances, and codes pertaining to portable kerosene heaters.
(7) Refueling should be performed outside of buildings.

6.5.4.4 Charcoal should not be burned in confined areas or in other than approved devices.

6.5.4.5 Gas- and oil-fired water heaters and furnaces found in closets or other rooms should not have combustibles stored next to them.

6.5.4.6 Small electrical appliances, such as toasters, coffee makers, televisions, and blenders, should be disconnected from power sources when not in use.

6.6 Housekeeping, Storage, and Rubbish Hazards.

6.6.1 An occupant's reluctance to throw anything away can result in the storage of quantities of old clothes, magazines, newspapers, rags, and other "junk." Because a collection of these items is unsightly, moreover, the occupant usually stores them in the attic, basement, closet, garage, or around the furnace. The occupant should be informed that these useless combustibles present a serious hazard, facilitating a fire's start, and should be removed.

6.6.2 Large quantities of trash and leaves around the exterior of a dwelling are also a fire hazard. If the community provides pickup of household trash, trash should be stored in metal containers with tight-fitting metal lids until removed. If the occupant burns household trash on the premises, fire fighters should check the place of burning, type of incinerator, and condition and use with respect to local burning regulations.

6.6.3 Garages, both attached and unattached, should be included in any dwelling survey. Even if unattached to the dwelling, garages often represent exposure fire potential and afford many storage hazards.

6.6.4 During the course of the survey, fire fighters should ask about the use of furniture waxes and polishes and, most important, about the storage of rags used to apply these products.

6.6.5 Use and storage of portable home barbecue grills should be restricted to the outdoors. Charcoal briquettes should always be allowed to cool naturally and then be properly discarded. Charcoal should be stored in a dry area, because damp or wet charcoal is sensitive to spontaneous heating once dried.

6.6.6 If a residence has a pool or hot tub, fire fighters should review with the occupant the need for maintenance of pool fences, gates, locking devices, and other safety equipment to minimize risks to children. In addition, fire fighters should advise the occupant to maintain proper containment, handling, separation, and storage of pool chemicals. Pool chemicals should not be kept near petroleum products or other combustible materials.

6.6.7 Home workshops often contain conditions that foster fire propagation. These areas should be checked for possible hazards during the survey.

6.6.8 Fire fighters should survey the outside of the dwelling for any rubbish accumulations, defective electrical equipment, flammable liquid storage, or other hazards.

6.6.9 Fire fighters should be prepared to provide or recommend to the occupant specific information on home fire extinguishers and fire detection systems that conform to nationally accepted standards.

6.6.10 Hazardous chemicals (e.g., herbicides, pesticides, vehicle fluids, painting materials, swimming pool chemicals, cleaning fluids) are often found in the course of dwelling surveys, usually under sinks in bathrooms and kitchens and in garages, basements, or storage outbuildings. These materials can present an extreme danger to young children in the household and to fire fighters during a fire. The occupant should be advised to keep these materials in secure cabinets and to keep only the minimum amount actually needed. Many communities have scheduled pickup or disposal days for such materials. If so, the occupant should be advised about how to properly dispose of excess hazardous materials.

6.7 Fire Safety Precautions in Earthquake-Prone Areas.

6.7.1 Water heaters should be secured against toppling according to code requirements.

6.7.2 Flammable liquids should not be placed on high shelves that allow the containers to fall and spill their contents on the floor.

6.7.3 Fire fighters should ask the occupant whether he or she knows the location of the main gas and water shutoffs and has the tools necessary to turn them off.

6.7.4 Fire fighters should determine whether the occupant keeps emergency supplies of food and water and knows the proper actions to take during and immediately after an earthquake.

6.8 Flammable Gases.

6.8.1 Fire fighters should be alert for containers of flammable gases (e.g., liquefied petroleum gas, acetylene) in workshop, basement, garage, and patio areas. Fire fighters should discuss with the occupant the safe handling and storage of such gases (including the recommendation that they should not be stored in the dwelling). The location of such materials should be noted on company pre-fire planning records.

6.8.2 The occupant should be advised to keep spare cylinders of flammable gases in a secure location outside the dwelling.

6.8.3 If quantities of cylinders are found in excess of reasonable need, the danger should be discussed and the occupant should be encouraged to dispose of the excess in an acceptable manner.

Chapter 7 Life Safety Considerations

7.1 Exit and Escape Routes.

7.1.1 One of the fire protection weaknesses found in the average dwelling is lack of sufficient exits from all parts of the building. For example, basements or rooms on the second or third story might be served by only an interior stairway; if a fire starts on the first floor, persons in these other areas can become trapped. Fire fighters should explain the need for the occupant to determine at least two routes of escape from each room.

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7.1.2 Particular attention should be given to dwelling windows that might be designated as secondary escape routes. Windows that are blocked by air-conditioning units or that are too small or too high above the floor for quick egress from the room are a potential for trouble in the event of a fire.

7.1.3 Because of security concerns, barriers (e.g., metal bars, shutters, or latticework) are sometimes found on doors and windows that are possible escape routes. Such devices should be installed with a method of quick release from the inside of the dwelling during a fire emergency. Many fire departments are making this issue a high priority for dwelling surveys due to a large number of recent fires that resulted in loss of life.

7.2 Fire Exit Drill Plan.

7.2.1 The occupant should be encouraged to develop a fire exit drill plan. In particular, family members should be instructed on how to escape from second-story windows, porches, and other parts of upper floors. Removal of windows and screens in emergencies and directing of young children to escape routes are essential to a good home fire exit drill plan.

7.2.2* All persons should know the best route of escape from all parts of the home. A safe meeting place should be determined so that all family members can assemble in the event of evacuation.

7.3 Occupants with Special Needs.

7.3.1 Fire fighters should be alert to occupants with special needs (e.g., sight or hearing impaired, limited mobility). If an occupant has special needs, fire fighters should discuss evacuation routes and requirements in the event of a fire or other emergency. If possible, the sleeping area for an occupant with special needs should be located on the first floor near an accessible exit.

7.3.2 The use of stickers or decals on the exterior of the dwelling to indicate the presence of invalids or children is discouraged for the following reasons:

(1) The home might be targeted for burglaries and break-ins.
(2) The fire department has no guarantee that the stickers are valid for current residents.
(3) A false sense of security can be created for the occupants of the home.
(4) The homeowners could be led to believe that, rather than install smoke detectors and establish a home fire escape plan as a primary means of escape, they should rely on the fire department for rescue during a fire.

7.3.3 Listing dwellings that have special fire fighting considerations such as an invalid occupant might be acceptable for inclusion in dispatch information. Fire fighters have an excellent opportunity to collect such data while conducting dwelling fire safety surveys. Permanent stickers or decals providing emergency telephone numbers, such as 911 or other fire emergency numbers, are an excellent public relations tool.

7.4 Smoke Detectors and Other Early Warning Devices.

7.4.1 The use of approved smoke detectors and other early warning devices should be emphasized in dwelling surveys. Statistics have proved the worth of such warning devices as life savers when they are combined with good escape planning practices. Many jurisdictions now require that residential smoke detectors and other early warning devices such as carbon monoxide detectors be installed in all new construction and, in more and more cases, in existing structures.

7.4.2 Fire fighters should request that the occupant actuate the test button on any smoke detectors encountered in the course of the survey. Activation tests the internal circuitry of the smoke detector and establishes that it has an adequate power supply. A sensing test should be conducted using a commercially available aerosol product. Special care should be taken with systems that are tied to a central station, and appropriate notification must be made before performing any tests on such systems.

7.4.3 Fire fighters should be familiar with local laws and should be able to answer questions such as the following pertaining to the purchase, installation, and maintenance of these devices:

(1) Which type, which power supply, and how many are necessary?
(2) What is the cost?
(3) Where should they be placed, and how are they installed?
(4) How are they tested?
(5) What maintenance is necessary?

7.4.4 Installation of smoke detection devices in residential dwellings should be in accordance with the manufacturer's recommendations.

7.5 Poisons. Poison control precautions should be discussed with the occupant. The discussion could address storage of poisons and drugs, poison control center phone numbers, and actuation of the local emergency medical system.

7.6 Carbon Monoxide Detectors. Effective, reasonably priced carbon monoxide detectors are available for installation in all dwellings. Fire fighters should take note of the existence of such detectors and discuss the test and battery replacement schedules with the occupant. The hazards associated with carbon monoxide and proper actions to be taken in case of an alarm should also be discussed, and fire fighters should recommend that the occupant or persons in authority install detectors in accordance with recommendations of the manufacturer and with NFPA 720, *Recommended Practice for the Installation of Household Carbon Monoxide (CO) Warning Equipment.*

Chapter 8 Fire-Extinguishing Equipment

8.1 Fire Extinguishers.

8.1.1 If no fire extinguisher is found in the course of a dwelling survey, fire fighters should recommend that one be purchased and installed.

8.1.2 If fire extinguishers are encountered, fire fighters should check that the rating and classification are appropriate and that the units have the listing mark of a nationally recognized testing laboratory. If the extinguishers are single-use units, the inspector should check for expiration dates. Inspection tags on rechargeable extinguishers should be checked for up-to-date servicing.

8.1.3 Fire fighters should be able to answer questions such as the following pertaining to the purchase, installation, and maintenance of household fire extinguishers:

(1) Which kind, which rating, and how many are necessary?
(2) What is the cost?

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(3) Where should they be placed, and how should they be mounted?
(4) How are they operated and tested, and what periodic maintenance is necessary?

8.1.4 Installation of portable fire extinguishers in residential buildings should be in accordance with NFPA 10, *Standard for Portable Fire Extinguishers*.

8.2 Residential Automatic Sprinkler Systems. Automatic sprinkler systems are becoming more common in dwellings due to code changes and increased homeowner awareness. Fire fighters should be alert to any conditions in the dwelling such as obstructions to sprinklers that might impair the performance of the system during a fire. The homeowner or occupant should be requested to operate the waterflow test connection in the presence of the fire fighters after appropriate notifications have been made to any central station alarm services.

Chapter 9 Urban–Wildland Interface

9.1 General. There is a growing tendency to build dwellings in areas subject to wildland fires. Homeowners in those areas need to take special precautions to reduce the risk that their homes will fall victim to a rapidly spreading fire in heavily vegetated areas. Often, occupants need to be educated in such precautions.

9.2 Precautions.

9.2.1 Precautions against wildfires can include but are not necessarily limited to the following:

(1) Maintaining a survivable space (buffer zone) of at least 30 ft (10 m) around the dwelling
(2) Installing noncombustible roofs
(3) Maintaining roof and gutters clear of debris
(4) Planting slow-burning vegetation near the dwelling
(5) Placing ¼ in. mesh metal screens on foundation and eaves vents
(6) Enclosing sides of stilt foundations and decks
(7) Providing screens or spark arresters of ½ in. or smaller mesh on chimneys
(8) Providing an emergency water supply for use by fire fighters
(9) Restricting open burning

9.2.2 Additional wildfire safety education information can be obtained from local, state, or national forestry agencies, or links to them and other sites can be found at www.firewise.org. In areas with specific problems of urban–wildland interface, the fire department should be familiar with NFPA 1144, *Standard for Protection of Life and Property from Wildfire*, and NFPA 1141, *Standard for Fire Protection in Planned Building Groups*.

9.3 Preparations. Fire fighters should recommend the occupant take pre-fire preparations, including the following:

(1) Inventory home and possessions with photographic or videotape support.
(2) Store important documents, photographs, and valuables in a secure off-premises location such as a safe-deposit box.
(3) Select and mark a manageable number of treasured items to take along in the event of a wildfire evacuation.
(4) Maintain a small bag of personal care items that can be useful at an evacuation shelter.

Chapter 10 Dwelling Survey Forms

10.1 General Information. To fully document the types of fire hazards in dwellings and to ensure complete coverage of the community, a system of reports and records should be established for the dwelling survey program. If an existing fire inspection program for other properties is available, the system can be expanded to include the dwelling surveys. The required information system might be as simple or as comprehensive as the local fire problem and situation dictates. The information should include the numbers and types of fire hazards discovered and locations surveyed. The information collected should be gathered for specific reasons if it is to be meaningful; for example, the number and type of fire hazards might be analyzed to determine the direction of public education efforts. It is desirable to retain survey information by census tracts so as to create target populations while maintaining confidentiality for the dwellings surveyed.

10.2* Confidentiality of Results. The results of individual surveys should be retained carefully and held as confidential information by the fire department. Specific information relative to a survey at a particular location should not be released to news media, insurance agents, commercial concerns, and so forth. Reports and survey forms used in the program can be developed in the jurisdiction or obtained from other sources. Sample dwelling survey forms are included in Annex A.

10.3 Retaining Results. The survey report should be filled out completely and follow a logical sequence from start to finish. It should be filled out in duplicate, with the original given to the occupant and the duplicate retained for department use in tabulating hazards in the community. The retained portion could or could not identify the specific residence, depending on whether there is concern regarding the report being classified as a public record, which is required to be made available to other persons on request or subpoena.

10.4 Other Assistance. Another useful tool in a dwelling survey program is an introductory letter from the community's mayor, city manager, or equivalent high official recommending cooperation with the fire department. Every effort should be made to provide information on and assistance with the installation of smoke detectors or residential sprinkler systems and the establishment of an escape plan, along with encouragement to practice it regularly. The department could include such information during the dwelling survey.

Annex A Explanatory Material

Annex A is not a part of the recommendations of this NFPA document but is included for informational purposes only. This annex contains explanatory material, numbered to correspond with the applicable text paragraphs.

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A.5.7.7 The survey copy could be used for data analysis and determination of the numbers and types of fire hazards identified in the community. This information will assist in planning future fire prevention programs. However, because information obtained on dwelling surveys might not be protected under an Open Records Act, the fire department could be criticized for releasing information regarding a specific survey.

A.7.2.2 The NFPA widely promotes its public education programs, including *Exit Drills in the Home (EDITH), Learn Not to Burn®*, and *Risk Watch®*. Literature is available that can be given to the occupants of the dwelling.

A.10.2 The sample forms in Figure A.10.2(a) through Figure A.10.2(d) are good examples of documents routinely used as parts of dwelling fire safety programs and can be easily adapted by those fire departments planning to establish such a program.

Home Safety Survey Sheet
ANYTOWN Fire Department Fire Safety Education Program

Check to see whether any hazards exist in your home.

YES	NO	
❑	❑	No more than two appliances are being used with any single outlet or extension cord.
❑	❑	Outlets are not cracked or uncovered.
❑	❑	Extension cords are used appropriately.
❑	❑	Electrical cords are not under rugs.
❑	❑	Small appliances are unplugged when not in use.
❑	❑	Combustibles are removed from cooking areas.
❑	❑	Electrical cords are in good shape.
❑	❑	Wastepaper is properly disposed of.
❑	❑	Household chemicals are stored away from children.
❑	❑	Matches are out of reach of minors.
❑	❑	Large ashtrays are in every room where smoking may take place.
❑	❑	Flammable liquids are properly stored.
❑	❑	A smoke detector is installed.

The items checked "No" may cause a fire or be hazardous to you and your family. You are urged to correct these at once for your own safety.

FIGURE A.10.2(a) Sample Home Safety Survey Sheet to Be Completed by Homeowner.

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Fire Safety Survey
ANYTOWN Fire Department Fire Safety Education Program

YES	NO	
		General
❑	❑	Home has smoke detector.
❑	❑	Smoke detector is in working order.
❑	❑	Family has and practices an exit plan.
❑	❑	House numbers are visible from street.
		All Household Areas
❑	❑	Extension cords are used appropriately.
❑	❑	Electrical cords are in good shape.
❑	❑	There are no overloaded outlets.
❑	❑	Windows can be easily opened.
❑	❑	Wastepaper is properly disposed of.
❑	❑	Household chemicals are stored away from children.
❑	❑	Matches are out of reach of minors.
❑	❑	Large ashtrays are in every room where smoking may occur.
		Basement
❑	❑	Combustibles are removed from heating areas.
❑	❑	Furnace filters are clean and in good shape.
❑	❑	Fuse box does not have pennies.
❑	❑	Washer and dryer are properly grounded.
❑	❑	Clothes dryer lint collector is clean.
❑	❑	Basement door is closed.
		Kitchen
❑	❑	Combustibles are removed from cooking areas.
❑	❑	Small appliances are unplugged when not in use.
❑	❑	Kitchen hood vent is clean and maintained.
		Living Area
❑	❑	Fireplace has proper screen and hearth.
❑	❑	Chimney is clean, and ashes properly disposed of.
		Attic
❑	❑	Area is clear of all combustible materials.
❑	❑	Heating ducts are properly maintained.
		Garage
❑	❑	There is a solid core door between garage and residence.
❑	❑	Power mower is properly stored.
❑	❑	Flammable liquids are properly stored.

Remarks: _____

With your consent, the Fire Safety Survey Team has made a Fire Safety Survey of your home. The items checked "No" may cause a fire or be hazardous to you and your family. You are urged to correct these at once for your own safety. If all items have been checked "Yes," you are to be complimented on your personal fire prevention effort.
If you wish to discuss any hazard, or have any questions, please call the ANYTOWN Fire Department, Fire Safety Education Center at ###-####. You should know what to do in case of emergency.
For All Emergencies Call 911

FIGURE A.10.2(b) Sample Home Safety Survey Sheet to Be Completed by Fire Department Surveyor and Given to Homeowner.

ANYTOWN FIRE DEPARTMENT

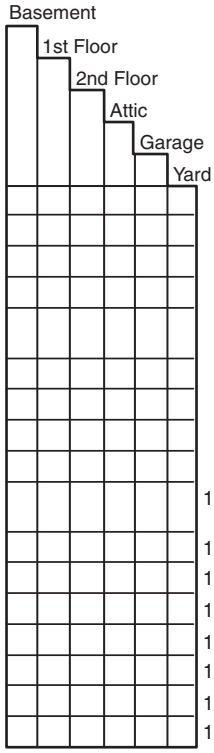
Home Inspection of number _____ St., Rd., Pl., Ave.

Dear Occupant:
With your consent, the undersigned fire department inspector has made a fire safety inspection of your home. The inspector has checked below those conditions that could start a fire and has left instructions on how to correct these fire hazards. YOU ARE URGED TO CORRECT THEM AT ONCE – please do not put it off. If you wish to discuss any hazard, please call the Fire Department – 555-5555.

(signed)

John Doe, Fire Chief.

_____ , 20 ____



1. Rubbish and trash accumulations.
2. Ashes improperly handled.
3. Flammable liquids improperly stored.
4. Painting materials, oily rags, unsafe.
5. Storage or work areas congested, not fire safe.
6. Combustibles too near heating devices.
7. Smokepipes and flues unsafely arranged.
8. Masonry chimneys unsafe.
9. Gas-fueled devices improperly arranged.
10. Electrical circuit overloading, improper fuses.
11. Electric cords and motors unsafe.
12. TV & radio sets poorly arranged.
13. Outbuilding and yard, cleanup needed.
14. Building maintenance fire safety.
15. Babysitter information.
16. Home fire extinguisher information.
17. NO DEFECTS NOTED. CONGRATULATIONS!

Type of heat used in home _____

Number of home occupants ____ ; number of invalids ____ on ____ floor.

_____
Fire department inspector

FIGURE A.10.2(c) Sample Follow-up Correspondence from Fire Department to Homeowner.

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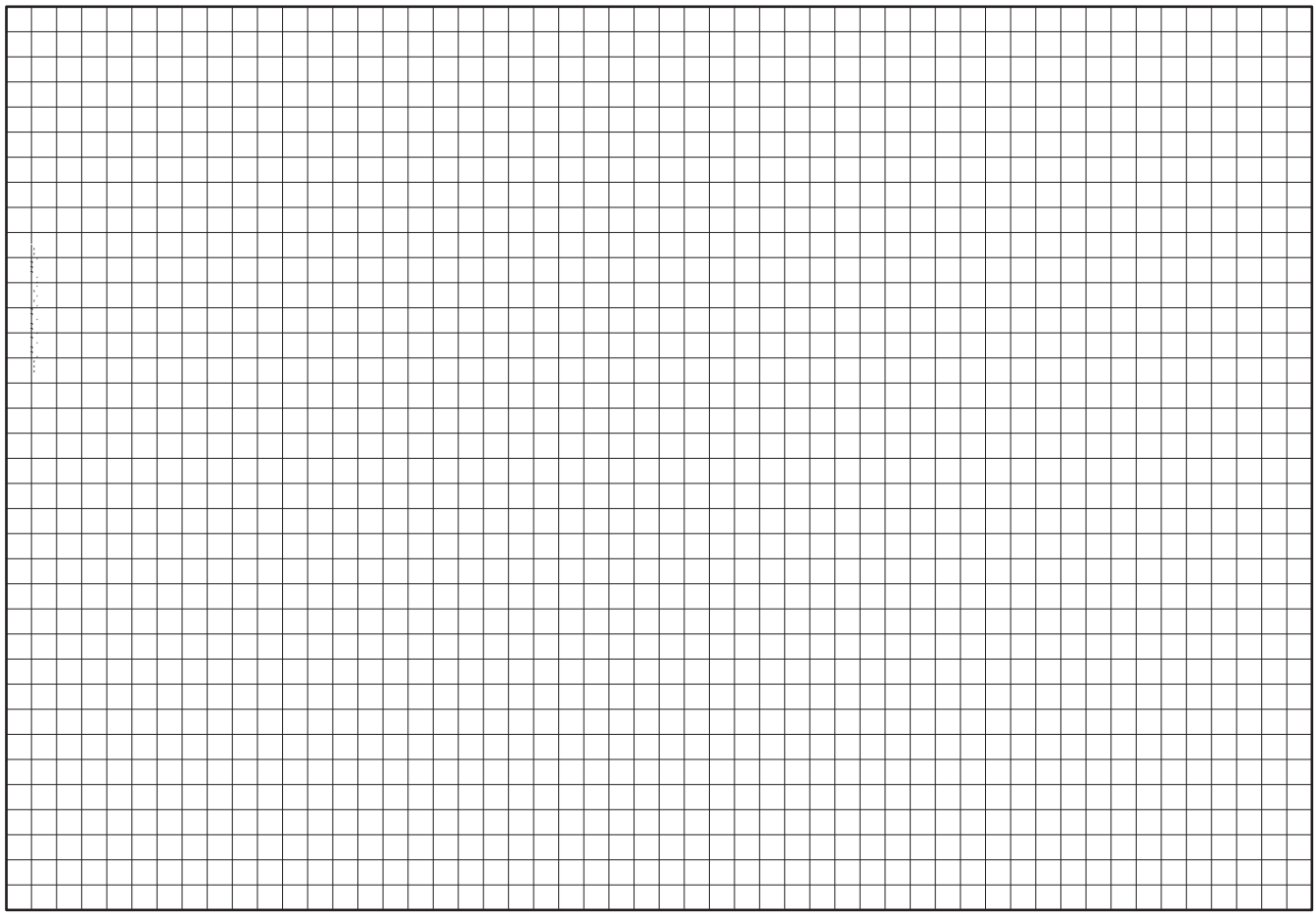
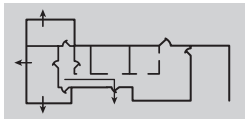


Floor Plan

1. Use the grid to draw a floor plan of each person's bedroom or to show the whole house. Sample floor plans are on the back page.
2. Show two exits. Write down the outside meeting place.



Discuss procedures with your family.

1. Sleep with the bedroom door closed. It will hold back deadly smoke while you escape.
2. Plan on your detector or some other signal to wake the family.
3. Test the door. If hot, use your alternative escape route. If cool, brace your shoulder against the door and open it cautiously. Be ready to slam it if smoke or heat rush in.
4. Crawl in smoke. Hold your breath, too.
5. Escape fast; don't stop to pack!
6. Choose a specific outdoor meeting spot so you can see that everyone is safe.
7. Assign somebody to make sure nobody returns to the burning house — Get Out! Stay Out!
8. Call the fire department from neighbor's phone.

Family Rehearsal

1. Everyone in bedrooms; doors closed.
2. One person sounds the alarm.
3. Each person tests his door.
4. Pretend it's hot; use alternative escape route.
5. Everyone meet outdoors at an assigned spot.

FIGURE A.10.2(d) Sample Grid Plan, Useful When Conducting Dwelling Fire Safety Surveys.

Annex B Informational References

B.1 Referenced Publications. (Reserved)

B.2 Informational References. The following documents or portions thereof are listed here as informational resources only. They are not a part of the recommendations of this document.

B.2.1 NFPA Publications. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471.

NFPA 72®, National Fire Alarm Code®, 2002 edition.

NFPA *101®, Life Safety Code®*, 2003 edition.

NFPA 5000®, Building Construction and Safety Code®, 2003 edition.

Fire Loss in the U.S. during 2001, 2001 edition.

B.3 References for Extracts. (Reserved)

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▼

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▼

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

▼

Committee meets to act on each public comment received.

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Company _____
Address 9 Seattle St. **City** Seattle **State** WA **Zip** 02255
Please indicate organization represented (if any) Fire Marshals Assn. of North America

1. **a) NFPA Document Title** National Fire Alarm Code
   b) NFPA No. & Edition NFPA 72, 2002 ed. **c) Section/Paragraph** 4.4.7.1.1

2. **Proposal Recommends:** *(check one)* ☐ **new text** ☐ **revised text** ☒ **deleted text**

3. **Proposal.** *(Include proposed new or revised wording, or identification of wording to be deleted.)* Note: Proposed text should be in legislative format, that is, use underscore to denote wording to be inserted (inserted wording) and strike-through to denote wording to be deleted (~~deleted wording~~). Delete exception.

4. **Statement of Problem and Substantiation for Proposal.** Note: State the problem that will be resolved by your recommendation. Give the specific reason for your proposal including copies of tests, research papers, fire experience, etc. If more than 200 words, it may be abstracted for publication. A properly installed and maintained system should be free of ground faults. The occurrence of one or more ground faults should be required to cause a "trouble" signal because it indicates a condition that could contribute to future malfunction of the system. Ground fault protection has been widely available on these systems for years and its cost is negligible. Requiring it on all systems will promote better installations, maintenance and reliability.

5. ☒ **This Proposal is Original Material.** Note: Original material is considered to be the submitter's own idea based on or as a result of his/her own experience, thought, or research and, to the best of his/her knowledge, is not copied from another source.

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4. **Statement of Problem and Substantiation for Proposal.** Note: State the problem that will be resolved by your recommendation. Give the specific reason for your proposal including copies of tests, research papers, fire experience, etc. If more than 200 words, it may be abstracted for publication. _____

5. ☐ **This Proposal is Original Material.** Note: Original material is considered to be the submitter's own idea based on or as a result of his/her own experience, thought, or research and, to the best of his/her knowledge, is not copied from another source.

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