

NFPA 1201
Standard for
Developing
Fire Protection Services
for the Public

1994 Edition



National Fire Protection Association, 1 Batterymarch Park, PO Box 9101, Quincy, MA 02269-9101
An International Codes and Standards Organization

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NFPA 1201
Standard For
Developing Fire Protection Services for the Public
1994 Edition

This edition of NFPA 1201, *Standard for Developing Fire Protection Services for the Public*, was prepared by the Technical Committee on Public Fire Service Organization and Operation and acted on by the National Fire Protection Association, Inc., at its Annual Meeting held May 16-18, 1994, in San Francisco, CA. It was issued by the Standards Council on July 14, 1994, with an effective date of August 5, 1994, and supersedes all previous editions.

The 1994 edition of this document has been approved by the American National Standards Institute.

Origin and Development of NFPA 1201

Sections of this document were developed by the committee and adopted by the Association on a tentative basis in 1963, 1964, 1965, 1966, and 1967. In 1968, the entire document was adopted as NFPA 4B. The document was revised in 1971 and renumbered as NFPA 4. In 1977, the document was completely revised and renumbered as NFPA 1201.

The 1984 edition was a complete revision that incorporated new chapters on emergency management and emergency medical services. At the same time, the existing 13 chapters were reorganized into 18 chapters.

In 1989, NFPA 1202, *Recommendations for Organization of a Fire Department*, and NFPA 1301, *Guide to Public Fire Prevention Criteria*, were integrated into this document, and the document was completely revised. New chapters on governmental responsibility, incident command systems, and hazardous materials were added.

For this 1994 edition, the committee revised the document from a recommended practice to a standard. The chapters were expanded to include updated material that was important to fire department organizations. The appendix material was also expanded to include additional explanatory material.

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

Committee Scope: This Committee shall have primary responsibility for documents on the organization, operation, and evaluation of public fire protection services.

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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 Appendix A.

Information on referenced publications can be found in Chapter 22 and Appendix C.

Chapter 1 General

1-1* Scope. This standard contains requirements and recommendations on the structure and operation of organizations providing public fire protection services.

1-2* Purpose. This standard is intended for the use and guidance of those charged with providing fire protection (safety) services to protect lives, property, and the environment from the effects of fire and, in many cases, other perils.

1-3* Introduction. This standard discusses public fire departments that serve a defined area and are generally under the auspices of a local government authority.

1-4 Relationship to Other Standards. The requirements of other NFPA standards that contain mandatory provisions related to the operation of a fire department and the delivery of fire protection shall be met.

1-5* Concept of Risk. The level of service provided and the degree of risk accepted by the jurisdiction shall be subject to local determination.

1-6* Fire Protection Alternatives. Where possible, fire departments shall periodically evaluate and redefine fire protection needs for their jurisdiction through the strategic (master) planning process.

1-7 Definitions.

Approved.* Acceptable to the authority having jurisdiction.

Authority Having Jurisdiction.* The organization, office, or individual responsible for approving equipment, an installation, or a procedure.

Company. A group of members:

- (a) Under the direct supervision of an officer or leader;
- (b) Trained and equipped to perform assigned tasks;
- (c) Usually organized and identified as engine companies, ladder companies, rescue companies, or squad companies;
- (d) Usually operating with one piece of fire apparatus (pumper, ladder truck, elevating platform, rescue, squad, ambulance);
- (e) Arriving at the incident scene on fire apparatus or assembling at the scene prior to assignment. "Company," as used in this standard, is synonymous with company unit, response team, and response group.

Fire Chief. The highest ranking officer in charge of a fire department.

Fire Department. An organization providing rescue, fire suppression, and related activities. The term "fire department" shall include any public, governmental, private or military organization engaging in this type of activity.

Hazardous Material. A substance that when released is capable of creating harm to people, the environment, and property.

Incident Management System. An organized system of roles, responsibilities, and standard operation procedures used to manage and direct emergency operations. Such systems are sometimes referred to as incident command systems (ICS).

Shall. Indicates a mandatory requirement.

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

Standard Operating Procedure. An organizational directive that establishes a standard course of action.

Chapter 2 Purpose of a Fire Department

2-1 Purpose. The fire department shall have programs, procedures, and organizations for preventing the outbreak of fires in the community and to minimize the danger to persons and damage to property caused by fires that do occur. The fire department also shall carry out other compatible emergency services as mandated.

2-2 Fire Prevention and Risk Reduction.

2-2.1* Every fire department shall have a program under which its personnel regularly examine every part of the community where a significant fire problem might develop. Personnel shall inspect real property in the community with an emphasis on those occupancies identified by a risk schedule as subject to a high level of hazard to life and property.

2-2.2* The fire department shall offer its services to local individuals and organizations with potential fire hazard conditions and shall assist in their solution.

2-3 Fire Suppression.

2-3.1 The fire department shall be organized to effectively combat fires that occur within the area it serves. A department's commitment to provide nonemergency services activities shall not interfere with its ability to effectively combat fires when they occur.

2-3.2 The priority of goals in the suppression of fire shall be as follows:

- (a) Save lives
- (b) Limit the spread of the fire
- (c) Extinguish the fire
- (d) Minimize property damage from fire-related hazards.

2-4 Rescue and Emergency Medical Services.

2-4.1* Preservation of human life shall be the primary responsibility of the fire department during fires and other emergencies.

2-5 Hazardous Materials.

2-5.1* The fire department shall be prepared to carry out at least first responder level functions in the event of hazardous materials incidents in its jurisdiction. Occupational Safety and Health Administration (OSHA) regulations require that all fire departments be trained to handle hazardous materials incidents at the first responder level.

2-6 Disaster Planning.

2-6.1* Comprehensive response plans shall be prepared in writing describing the fire department role and providing for management and coordination of all public and private services called into action in natural and technological (man-made) disasters.

Chapter 3 Governmental Responsibilities

3-1 Local Government.

3-1.1* Purpose. The government agency responsible for establishment and operation of the fire department shall adopt a formal statement (bylaw statute) of purpose and policies for the fire department that includes the type and levels of services that are to be provided, the area to be served, and the delegation of authority to the fire chief and other officers to manage and operate the fire department.

3-1.2* The fire department shall maintain a close working relationship with the agencies responsible for law enforcement and water supply, among others, in order to operate in an effective and cooperative manner.

3-2 Intergovernmental Relationships.

3-2.1* State statutes, municipal charters, and the charters of townships, fire districts, or counties shall document the legal authority for operation of the fire department. The fire department shall operate within and comply with the existing laws respecting its areas of jurisdiction and responsibilities in all instances.

Chapter 4 Strategic (Master) Planning

4-1* Purpose. The fire department, in conjunction with the community administration, shall develop and implement a total concept strategic (master) plan for a community-wide balanced and cost-effective fire control strategy that takes existing conditions and anticipated overall community growth into consideration.

4-1.1* The fire department shall concern itself with developing its internal operations and involvement with all other community departments in planning for anticipated overall community growth.

4-2 Research and Planning.

4-2.1* The fire department shall maintain a continuing program of research and planning.

4-2.2 The research and planning function shall encompass examination of any or all aspects of the fire department's activities, both generally and specifically. It shall be directed toward improving and maintaining the efficiency and effec-

tiveness of the fire department and toward maintaining a responsive approach to the community's changing needs for service.

4-2.3* Where provided, the research and planning staff of the fire department shall maintain an ongoing relationship with other agencies involved in community planning and shall keep the fire chief and other staff informed of community development plans, projected service demands, alternative approaches, and problems that might develop as change occurs.

4-2.4 The staff or individuals assigned to research and planning shall maintain constant awareness of programs that produce state of the art in the delivery of public protection services, in order to evaluate alternative approaches and methods and to consider their applicability to local situations.

4-3 Strategic Planning Process.

4-3.1* The strategic planning process shall be designed to evaluate the kind and level of fire risk in a community and to establish future objectives for minimizing or reducing that risk.

4-3.2* The strategic planning process shall attempt to project the future fire protection needs of a community for periods of 10 and 20 years.

4-3.3* Strategic planning shall be utilized to develop a series of criteria to determine the levels of fire risk that will prevail in the community relative to the fire suppression resources to be maintained.

4-3.4* The strategic planning decisions shall be directed toward establishing and justifying the budget to be allocated annually for operation of the fire department after cost/benefit and program effectiveness analysis studies have been completed.

4-3.5* The fire department, in cooperation with building, planning, and water utility officials, shall evaluate the benefits of automatic fire sprinkler systems and other forms of private fire protection relative to their impact on the entire public fire protection system.

4-3.6* Within the strategic planning process, the fire chief, in concert with the community administration, shall prepare practical contingency plans for implementation in the event of curtailment of local government ability to provide normal fire protection or other assigned emergency services.

4-3.7* Research reports and analyses of fire loss, structural and occupancy trends, and demographic information shall form the basis for all long-range planning. A statement shall be prepared projecting fire department goals for a minimum period of 5 years and shall include budget requests for personnel, equipment, and facilities based on established objectives.

Chapter 5 Organizational Structure of the Fire Department

5-1 Purpose. The fire department shall have an organizational structure that facilitates efficient and effective management of its resources to carry out its mandate as required in Chapters 2 and 3.

5-2 Management/Fire Chief.

5-2.1* The manager of the fire department shall be the fire chief. The fire chief shall be governed in the development of regulations and orders by the provisions of all applicable laws or ordinances and shall maintain a file of such documents.

5-2.2* The fire chief shall be appointed on the basis of merit and ability. NFPA 1021, *Standard for Fire Officer Professional Qualifications*, shall be used as the basis for determining qualifications.

5-2.3* The fire chief shall communicate closely with the local government chief executive and governing body.

5-2.4* The governing body shall establish only the primary policies of the fire department and shall not act as an administrative agency nor direct day-to-day management of the department.

5-3 Line Organization.

5-3.1* Those officers designated to command operations at fire scenes and other emergencies and the fire company officers shall be considered part of the line organization, and the fire companies shall be considered the line units.

5-3.2* The fire chief shall determine the organization, number, and distribution of the operating line units of the department.

5-4 Fire Department Organizational Plans.

5-4.1* The fire department shall have an organizational plan that illustrates the relationship of the individual operating divisions to the entire organization.

5-4.2* The fire department organizational plan shall reflect the current organizational and staffing status of the department and shall include a job description or list of responsibilities for each position.

5-5 Operating Units.

5-5.1* Fire companies whose primary functions are to pump and deliver water and perform basic fire fighting at fires shall be known as engine or pumper companies.

5-5.2* Fire companies whose primary functions are to perform the variety of ancillary services associated with ladder truck work, such as forcible entry, ventilation, rescue, utility control, illumination, overhaul, and salvage work, shall be known as ladder companies.

5-5.3* Other types of companies equipped with specialized apparatus and equipment shall be provided to assist pumper and ladder companies where deemed necessary as part of established practice.

5-5.4* The department shall maintain a periodically updated community fire risk analysis to identify the size and scope of the potential fire problem in order to determine the necessary number and deployment of fire companies.

5-6 Fire Suppression Force Staffing.

5-6.1* The fire company or response group assigned to respond to a fire call shall be comprised of the numbers necessary for safe and effective fire-fighting performance relative to the expected fire-fighting conditions. These shall be determined through task analysis procedures. The conditions to be considered shall include:

- (a) Life hazard to the populace protected
- (b) Provisions of safe and effective fire-fighting performance conditions for the fire fighters
- (c) The potential property loss
- (d) The nature, configuration, hazards, and internal protection of the properties involved
- (e) The types of fireground tactics employed as standard procedure, the type of apparatus used, and the results expected to be obtained at the fire scene
- (f) Budgetary constraints.

5-6.2* Each company shall be led by an officer whenever the company is involved in any fire-fighting activity who shall be considered part of the total personnel of the company.

5-6.3* Supervisory chief officers shall be available to command the fire companies or response group at each fire or other emergency scene. Provision shall be made for chief officers to designate aides for support in managing an incident.

5-7 Other Functions.

5-7.1* The fire chief shall have responsibility for all managerial functions and command of the fire suppression operating forces.

5-7.2* Fire department officers and personnel shall perform managerial and administrative functions and fireground/emergency management functions as assigned.

5-7.3* Administrative and managerial functions shall be established by department policies or regulations and assignments designated on the basis of the function performed, not the rank of the person in charge.

5-8 Intercommunity Organization (Mutual Aid).

5-8.1 Where practical and as conditions require, the fire department shall have an effective mutual aid arrangement with neighboring jurisdictions.

5-8.2* Mutual aid agreements shall be in writing and shall address such issues as liability for injuries, cost of service, authorization to respond, staffing, and equipment, including the resources to be made available and the designation of the incident commander.

5-8.3 Training of personnel for all fire departments in a mutual aid plan shall be comprehensive and standardized to produce an effective fire force and to ensure uniform operations. All personnel shall receive sufficient training to ensure compatible operations. Operational methods shall be as uniform as practicable.

5-8.4 Apparatus for responding to mutual aid incidents shall be equipped with radios that allow personnel to communicate with incident commanders and sector officers. Separate frequencies shall be provided that allow mutual aid companies to communicate without disruption of their local frequency.

5-9 Intracommunity Cooperation or Consolidation.

5-9.1* The fire chief shall ensure establishment of a positive, ongoing relationship with other resource groups in the community such as police, public works, and water departments to facilitate useful cooperation, particularly under emergency conditions.

5-9.2* The fire chief shall promote coordination of effort with the police department in locating fire hazards, providing crowd and traffic control at emergency incidents, investigating fires, and providing other emergency services to the public.

Chapter 6 Financial Management and Budgeting

6-1 Purpose. The fire department shall have a system of accounts for financial administration that includes a record of funds received and expended by the department. The system shall account for how the money has been spent and provide analytical information.

6-2 Accounting and Budgeting.

6-2.1* There shall be an established policy for periodic review of fire department personnel work hours, salary, and benefits to ensure competitiveness with comparable fire departments providing the same level and quality of services.

6-2.2* Relation to Planning. Effective budget management shall include the analysis of conditions and operations for the prior and current budgets.

6-2.3* In establishing personnel requirements for staffing fire-fighting companies, the fire chief shall allow for sick leave, vacations, and other absences in order to maintain established minimum strengths at all times. The chief shall keep attendance records covering all personnel and analyze these to provide statistics for the specific conditions affecting the department.

6-2.4* The financing of physical facilities shall be coordinated with the overall financial policies and capital improvement financing of the jurisdiction. A list of capital projects shall be compiled, and studies and surveys shall be undertaken to establish the priority of these projects.

6-2.5* The responsibility for the functions of budget control shall fall under the direction of the fire chief in all fire departments, even the largest. Within a local jurisdiction's budget control operation, the fire chief shall work closely with the chief administrative officer and department of finance on budget policy matters affecting the department.

6-3 Purchasing.

6-3.1* A fire department's records on purchases shall be sufficiently detailed to permit the chief to have data available for the actual cost estimates needed for planning and budget purposes. Records shall be maintained on requisitions, quotations received from bidders, purchase orders, and general correspondence.

6-3.2* Standard specifications shall be used for major purchases, and the fire department shall maintain a file of such specifications for major items, including fire apparatus, protective clothing, and fire-fighting tools and equipment.

6-3.3* A departmental inventory control system shall be established that provides a record of the custody/location of major items.

6-4 Available Resources.

6-4.1 The fire chief shall identify other revenue and equipment supply sources that are available to the department, such as federal, state, and provincial grant programs and surplus property agencies.

Chapter 7 Human Resources Management

7-1 Purpose. The fire department shall have a human resources management policy, including personnel standards, selection, promotion, benefits, and personnel practices, that ensures fair and equitable treatment of all personnel and promotes an environment conducive to maintenance of a competent and well-trained work force.

7-2 Personnel Standards Administration.

7-2.1* Personnel Objectives. The objectives of the personnel standards for the fire department shall be to establish and maintain a competent and well-trained force by attracting and retaining qualified personnel and by providing a fulfilling career from recruitment to retirement. The fire department shall strive to build a work force diverse in both gender and culture and representative of the community's available labor pool. All personnel policies shall be in compliance with applicable local, state, provincial, and federal publications and laws.

7-2.1.1* The fire chief shall continually review, revise, and enforce the personnel standards of the department and, to the extent empowered, issue the orders necessary for administering personnel procedures.

7-2.1.2* The fire chief shall have authority to determine station and platoon or work group assignments for each member of the department.

7-2.2 Standards Applying to All Members.

7-2.2.1 All members of the department shall be kept informed of expectations for an individual's attendance; punctuality; duty performance; compliance with laws, rules, regulations, and procedures; and professional behavior that contribute to the maintenance of a positive work environment. Each member shall be provided with a personnel manual or set of department regulations that explains working conditions, prohibited behaviors, and responsibilities for the care of department equipment. Each member also shall be provided with the rules and procedures for disciplinary actions and grievance proceedings.

7-2.2.2* A rank system shall be established to create officer positions for the department. If a position classification system is used, it shall be correlated to these ranks. Ranks shall reflect the level of responsibility and not specific detailed duties. NFPA 1021, *Standard for Fire Officer Professional Qualifications*, shall be used for determining the qualifications of personnel to fill any officer position.

7-2.2.3* Departmental regulations shall describe the procedures to be followed in cases where disciplinary action is necessary. They shall be administered by the fire chief and fire department officers.

7-2.3 Personnel Records.

7-2.3.1 When a new member is added to the department, a comprehensive personnel record shall be established. Access and control of individual personnel records shall be in accordance with applicable local, state, provincial, and federal regulations.

7-2.3.2 A comprehensive personnel record shall include data regarding medical history, training, personal performance evaluations, employment or membership history, department training courses, and other information.

7-2.3.3 Attendance records shall be maintained as a part of the procedures for performance evaluations and compensation.

7-2.4 Health and Safety.

7-2.4.1 The fire department shall adopt an occupational health and safety program that complies with NFPA 1500, *Standard on Fire Department Occupational Safety and Health Program*, and other applicable laws, standards, and regulations. Safe work procedures shall be stressed, and they shall be emphasized throughout a member's career.

7-2.4.2 All fire department members shall be physically fit for the duties they are expected to perform and shall be tested in accordance with the requirements of NFPA 1500, *Standard on Fire Department Occupational Safety and Health Program*. The fire department shall adopt a mandatory physical fitness program that addresses the particular demands of fire department activities. The program shall be under the direction of qualified medical personnel.

7-2.4.3 Candidates and members who will engage in fire suppression shall meet the medical requirements of NFPA 1582, *Standard on Medical Requirements for Fire Fighters*, prior to being medically certified for duty by the fire department physician.

7-2.4.4* All members of the department shall be furnished with an annual medical and physical examination. The medical reports shall establish the ability of each member of the department to perform emergency duties. The confidentiality of personal health records shall be maintained.

7-2.4.5 Accidents and injuries shall be investigated, and findings shall be included in the member's personnel record and appropriate actions taken. All supervisors shall be responsible for ensuring that their employees use and maintain safety equipment in accordance with department regulations as well as state, provincial, and federal legislation.

7-2.4.6 The fire department shall appoint a safety officer charged with the duties and responsibilities defined in NFPA 1521, *Standard for Fire Department Safety Officer*.

7-3 Selection of Personnel.

7-3.1* Recruitment. The fire department shall establish a recruitment program coordinated with the procedures of municipal or other personnel or civil service agencies having jurisdiction and in accordance with federal, state, and provincial requirements.

7-3.2 A minimum age limit that is consistent with state, provincial, and federal labor laws shall be specified to ensure that members possess sufficient physical and mental maturity to perform fire-fighting duties.

7-3.3* A high school education, or state-recognized equivalent, shall be required as a minimum to ensure the candidate has the educational background to accommodate the wide variety of activities in which fire fighters now participate.

7-3.4* Job-related physical performance requirements shall be used to select candidates who are physically qualified.

7-3.5* The fire department shall adopt job-related medical standards. All persons offered a fire fighter's position shall meet the medical requirements as outlined in NFPA 1582,

Standard on Medical Requirements for Fire Fighters. The confidentiality of personal health records shall be maintained.

7-3.6* For a specified period of at least 12 months before permanent appointment to the department, candidates shall be assigned to a probationary training program and supervision. Candidates shall meet the requirements for Fire Fighter I and, preferably, Fire Fighter II of NFPA 1001, *Standard for Fire Fighter Professional Qualifications*, before permanent appointment.

7-3.7* Candidates shall be kept in probationary status until all phases of the selection process are completed, including the period of probationary training. The chief shall dismiss any candidate at any point during the period of probation for unsatisfactory performance after reasonable written warning and notice.

7-4 Promotion of Personnel.

7-4.1* The fire department shall establish a documented job-related personnel evaluation program for internal and lateral entry promotion to the various ranks. The program shall be coordinated with the procedures of municipal or other personnel or civil service agencies having jurisdiction.

7-4.2* Internal and lateral entry candidates for officer shall meet the requirements for that officer rank for which they have applied in accordance with NFPA 1021, *Standard for Fire Officer Professional Qualifications*. Promotion examination questions, whether administered by the fire department or a personnel agency, shall be related to the principal duties to be performed.

7-4.3* Internal and lateral entry candidates for promotion to positions requiring special qualifications shall have education and experience that meet the requirements for the effective performance of the mandated duties of those positions. Candidates shall meet the professional qualifications required in accordance with NFPA 1021, *Standard for Fire Officer Professional Qualifications*; NFPA 1031, *Standard for Professional Qualifications for Fire Inspector*; NFPA 1033, *Standard for Professional Qualifications for Fire Investigator*; NFPA 1035, *Standard for Professional Qualifications for Public Fire and Life Safety Educator*; and NFPA 1041, *Standard for Fire Service Instructor Professional Qualifications*.

7-5 Personnel Benefits Programs and Retirement.

7-5.1* A retirement plan shall be established to enhance the benefits of the fire service and thus increase recruitment.

7-5.2 A job-related compulsory retirement system shall be adopted. The system shall determine the ability of members to perform their jobs in terms of mental and physical fitness and shall not be confused with voluntary retirement that is based on age and years of service. The annual medical examination furnished by the department shall provide the basis for personnel decisions and actions regarding retirement.

7-6 Personnel Practices.

7-6.1* In the development of personnel standards, the fire chief shall seek the opinion of members of the fire department as individuals and as offered by any employee organization where such exists.

7-6.2* The fire chief shall ensure that lines of communication are open within the department.

7-6.3 Educational Programs for Department Personnel.

7-6.3.1* Ongoing educational programs for department personnel shall be made available to and brought to the attention of all members of the department to help improve fire science and management related skills.

Chapter 8 Training

8-1 Purpose. The fire department shall have a training program and policy that ensures that personnel are trained and competency is maintained to effectively, efficiently, and safely execute all responsibilities consistent with the department's mandate in Chapters 2 and 3.

8-2 Management Functions.

8-2.1* The fire chief shall be responsible for the department training program and shall designate an individual to act as administrator of the program. The fire chief shall budget for training facilities, expendable supplies, training aids, and training staff, including both in-house and guest instructors, where used. The department shall utilize training services furnished by the National Fire Academy and state, provincial, and regional training programs where available and practicable.

8-2.2 Chief officers shall be required to fully support and ensure that the training activities developed by the training officer are carried out within their respective commands. They shall coordinate training with other activities, report on training completed, and assist the training officer in evaluating the effectiveness of the program.

8-3 The Training Officer.

8-3.1 The training officer shall furnish the subjects for the training program. The program shall be coordinated with the needs of department personnel and shall utilize available resources within the community. Compliance with the appropriate requirements of NFPA 1021, *Standard for Fire Officer Professional Qualifications*; NFPA 1031, *Standard for Professional Qualifications for Fire Inspector*; NFPA 1033, *Standard for Professional Qualifications for Fire Investigator*; NFPA 1035, *Standard for Professional Qualifications for Public Fire and Life Safety Educator*; and NFPA 1041, *Standard for Fire Service Instructor Professional Qualifications*, shall be met.

8-3.2* The training officer shall furnish the performance standards to be covered by the training program and develop schedules to ensure that the appropriate members of the department meet the standards.

8-3.3* The effectiveness of department training shall be evaluated on an ongoing basis by department staff, using fire critiques as an aid in such evaluation. At least annually, the program shall be reviewed and a report made to the chief.

8-3.4* Chief officers and company officers shall make regular reports to the training officer on training activities in which they are involved.

8-3.5* The training officer shall be responsible for supervising the work of department personnel assigned as instructors or assistants. Internal and lateral entry candidates for training officer shall meet Level 3 of NFPA 1041, *Standard for Fire Service*

Instructor Professional Qualifications. All instructors shall meet the professional qualifications of NFPA 1041 at a level determined by the authority having jurisdiction.

8-3.6 The training officer shall be responsible for the operation of training equipment, fire service library, buildings, training aids, and other facilities. Departmental rules shall cover the use of shared facilities and equipment.

8-4 Special Functions.

8-4.1 The officers in charge of fire prevention, maintenance, communications, and other specialized bureaus shall be responsible for special training needed by the personnel assigned to their particular staff function. They shall coordinate this special training with other programs of the department and with the training officer.

8-4.2 All officers shall be involved in the training process for the purpose of determining subject matter, time length of instruction, and other details of department-wide training as they relate to their own responsibilities.

8-5 Education and Training of Company Officers.

8-5.1* Courses for the education and training of personnel to meet minimum qualifications as company officers shall be provided by the training officer. Departments that do not offer comprehensive training courses shall arrange to provide such courses at any appropriate educational institution or fire department training facility.

8-5.1.1 Company officers shall be required to meet the Level I requirements of NFPA 1021, *Standard for Fire Officer Professional Qualifications*, and the Level I requirements of NFPA 1041, *Standard for Fire Service Instructor Professional Qualifications*.

8-5.2* The subject matter of training courses shall be designed to achieve the stated performance objectives of the specific officer levels of NFPA 1021, *Standard for Fire Officer Professional Qualifications*. Candidates shall pass an examination on these objectives as well as an examination on the complete training course. Candidates shall be evaluated on the basis of their examination grades and class participation and in exercises that test their performance of officers' duties.

8-5.3 The training officer shall ensure that the content of courses for promotion is appropriate, coordinate the scheduling of courses, provide the necessary instructors, and administer the examinations, except where these are delegated to an outside educational facility. The training officer shall also be required to advise the fire chief of the candidate's overall performance in the training courses and to evaluate the candidate's suitability for appointment as a company officer.

8-6 Training of Company Members.

8-6.1 Company officers shall be responsible for the ongoing, in-service training of members of the company assigned to them, since the unit must work together as an effective team.

8-6.2 Sufficient time shall be spent on training during company duty tours in career departments and at convenient times for volunteers so that regular tests of proficiency are met. Training shall be in the form of classroom instruction, practice drills, familiarization inspection, and pre-fire planning.

8-6.3 The training officer shall furnish the subject matter for the training sessions so that all personnel in the department periodically complete training in specified subjects. The training officer shall supervise the training program and review and approve lesson plans prepared by company officers.

8-6.4* Company officers shall be required to complete the training scheduled, including all hours of training mandated and covering all subject matter as developed by the chief and the training officer. They shall coordinate the various daily company activities so that all assigned members receive the scheduled training. They shall be required to coordinate an individual's training so that each member receives all required training despite sick leave and vacations.

8-6.5 Company officers periodically shall evaluate members assigned to their company to determine that the training is effective and to provide a basis for evaluation of the performance of individuals.

8-6.6* Company officers shall evaluate the performance of assigned members during fires and drills to ensure that members are utilizing the techniques covered by the training program. Critiques of all company operations during fires shall be held to discuss the company's performance as a team in general terms.

8-6.7 Company officers shall furnish to the training officer, through appropriate channels, reports on training sessions held, subjects covered, and hours trained. Reports on the performance of members of the company receiving training shall be made by the company officer and sent to the training officer for further evaluation.

8-7 Training of New Personnel.

8-7.1 New personnel shall receive training before engaging in emergency duties to ensure that trainees can work safely and effectively at fires. This training shall be a foundation for subsequent in-service training.

8-7.2 The course of probationary training shall be consistent with the performance objectives for the designated fire fighter level in accordance with NFPA 1001, *Standard for Fire Fighter Professional Qualifications*, as required by the authority having jurisdiction.

8-7.3 The course duration for new personnel instruction shall be at least the minimum number of hours necessary to meet the performance objectives for the designated fire fighter level in accordance with NFPA 1001, *Standard for Fire Fighter Professional Qualifications*, as required by the authority having jurisdiction. This entry training shall take place prior to serving as a probationary member of a company.

8-7.4 Probationary training shall be under the direction of the training officer unless carried out by an outside agency.

8-8 Group Training and Evaluation.

8-8.1* All fire-fighting personnel, including each shift of each company, shall be assigned to the training officer periodically for group training with other shifts and companies. This assignment shall be scheduled to ensure that each member completes the program objectives.

8-8.2 Annually, or more often as appropriate, the training officer shall furnish the fire chief with a report on the performance of each company in group training sessions.

8-9 Other Training.

8-9.1* Specialized and advanced training courses shall be provided for individuals or groups throughout the department to the extent that such specialized skills are needed in carrying out their duties.

8-10 Training Safety Considerations. Safety shall be a primary consideration in all training exercises and drills. Prior to undertaking any training exercise, the related safety aspects shall be discussed with all participants.

8-11 Training Preplanning. Every training evolution and hands-on training session shall be reviewed in advance for proper protection of personnel from accidents. Live structural fire and other training exercises shall conform to the requirements of NFPA 1403, *Standard on Live Fire Training Evolutions in Structures*; NFPA 1406, *Standard for Outside Live Fire Training Evolutions*; and NFPA 1500, *Standard on Fire Department Occupational Safety and Health Program*, and all training programs shall comply with these requirements to ensure personnel safety. The fire chief ultimately shall be responsible for the safety of all fire department members.

Chapter 9 Organization for Fire Suppression

9-1 Purpose. Fire suppression operations shall be organized to ensure adherence to an operational guideline that includes fire company procedures and staffing; officers; and duty requirements and responses to fire and other emergencies that achieve effective, efficient, and safe execution of the fire department's mandate.

9-2 Operational Guidelines and Orders.

9-2.1 The fire chief shall promulgate the department's organizational and operational procedures by issuing written administrative regulations and operating guidelines and orders.

9-2.2* Departmental procedures shall state clearly the succession of command responsibility.

9-3 Fire Company Procedures and Staffing.

9-3.1* Personnel designated to respond to fires and other emergencies shall be organized into company units or response teams and shall have appropriate apparatus and equipment assigned to such companies or teams.

9-3.2* The fire department shall identify minimum staffing requirements to ensure that a sufficient number of members to operate safely and effectively are available to respond with each company or response team.

9-3.3* Departmental regulations shall specify the officer's responsibility for the apparatus and equipment assigned to each company or response group.

9-3.4* Departmental procedures shall specify that company officers are responsible for:

(a) Assigning individual members to the various working positions on the apparatus and at the emergency scene.

(b) Ensuring that drivers, operators, and other members are properly qualified under the department's training procedures for their assigned duties.

(c) Training members of their companies in the use of all company equipment and providing familiarity with hazards likely to be encountered in their district.

9-3.5 The company officer shall be aware of the identity of all members assigned to the company at all times and of the location and activity of each assigned member. Each member of the company shall be aware of the identity of the company officer. Orders addressed to individual members, particularly verbal orders and orders at incident scenes, shall be transmitted through the company officer.

9-3.6 Fire companies shall be responsible for identifying all target hazards or unusual properties in their districts and for developing pre-fire plans for use in the event a fire or other related emergency occurs at such a location.

9-3.7 Departmental procedures shall require that each company or response group be assigned to a district within which it is to be responsible for the programs of the department, including inspections. In such districts, the company officer shall be responsible for familiarization of the company with high-risk properties and special hazards and participation in pre-incident planning operations.

9-3.8* A journal shall be kept for each station and company to provide a written record of daily activities.

9-3.9 The journal shall record all incidents and all pertinent information relating to the operation of the company, including the names of all members on duty, members on vacation, sick leave, and special assignments, and those members absent for other reasons.

9-3.10* The company officer shall prepare a standard report containing specified information for each response made by the company. These reports shall include the location and nature of the fire or emergency and describe the operations performed. For volunteer departments, this report shall identify the members responding to the incident.

9-4 Emergency Operations Officers.

9-4.1* A company officer or qualified acting officer shall be assigned to be in charge of each company at all times. An assistant officer also shall be assigned in the case of volunteer companies.

9-4.2 Departmental regulations shall assign specific responsibilities among the individual officers assigned to each station for the management and administration of the station and all assigned personnel. Procedures shall require the officers assigned to each station to coordinate activities for executing the various programs of the department. In career companies, the off-going and on-coming officers shall be required to meet during the change of duty shifts for the purpose of coordinating duty assignments between shifts.

9-4.3* A suitable number of chief officers shall be designated for incident command purposes, based on the size and work load of the fire department. Departmental procedures shall provide for at least one command officer to be available to respond and direct operations at a fire or other emergency incident at all times.

9-5 Suppression Duty Requirements.

9-5.1* Departmental procedures shall designate work groups or shifts to ensure that an adequate number of members are on duty or available to respond at all times.

9-6 Duty Roster.

9-6.1 Departmental procedures shall provide for a duty roster and instructions for its maintenance.

9-6.2 The duty roster shall list all members of the department by their name and rank and their current assignments. It shall include assignments to staff work or special assignments, members on duty in companies or assigned to vehicles to respond to fires and other emergencies, members on shifts or work groups, members off duty, members on regular leave or vacation, and members on sick leave.

9-6.3 A master duty roster shall be maintained at fire department headquarters. That part of the roster affecting companies and other units shall be maintained by the officers responsible for each unit and posted in unit quarters or fire stations. In departments with districts (battalions) or divisions, the district or division officers shall maintain respective rosters for districts and divisions.

9-6.4 Departmental regulations shall designate holidays and general vacation periods for department personnel. The roster maintenance procedure shall provide for approval of the vacation and holiday schedule of every member by the fire chief or designated officer.

9-6.5 Departmental regulations shall include procedures for handling absences due to sickness or injury and to avoid unnecessary absences. A record of absences shall be maintained in the personnel file of each member. The fire department shall have one or more physicians on call for assistance. The fire department shall have a program to promote physical fitness and health maintenance for all members as required by NFPA 1500, *Standard on Fire Department Occupational Safety and Health Program*, Chapter 8.

9-7 Response to Fires and Other Emergencies.

9-7.1 Standard response assignments and procedures, predetermined by the location and nature of the reported incident, shall regulate the dispatch of companies, response groups, and command officers to fires and other emergency incidents.

9-7.2 The dispatcher shall be responsible for maintaining awareness of the location and status of all units and their availability to respond at all times and shall have some latitude in dispatching assignments within prescribed limits.

9-7.3* The number and type of units assigned to respond to a reported fire incident shall be determined by risk analysis and pre-fire planning based on specific location or neighborhood.

Chapter 10 Emergency Scene Management

10-1* Purpose. An incident management system shall be provided to form the basic structure of all emergency operations of the fire department, regardless of the scale of the department or the emergency. An effective incident management system shall be designed to manage incidents of different types, including structure fires, wildland fires, hazardous materials incidents, emergency medical operations, and other types of emergencies that might be handled by the department.

10-2 Establishment of On-scene Command.

10-2.1 Departmental procedures shall require the officer or member in charge of the first arriving unit on the scene of any fire or emergency to assume command and provide a brief situation report by radio that indicates the nature and extent of the emergency. The report shall identify the on-scene unit, confirm assumption of command, describe the incident parameters, state the obvious conditions, and briefly describe the course of action initiated by that unit. In addition, the first officer to arrive shall establish an effective command position, rapidly evaluate the situation (size-up), develop an action plan, assign other incoming units, and, if necessary, call for additional assistance.

10-3 Transfer of Command.

10-3.1* Transfer of command from the first commander shall be carried out according to the accepted principles of this system, whereby continuity of command responsibility is formally turned over in person on the scene.

10-4 Command Options.

10-4.1* When a command officer arrives with the first arriving units, this command officer shall assume command and establish a fixed command post. If a company is the first to arrive at the scene, it shall be the responsibility of the company officer to assume command until relieved by an officer of higher rank.

10-5 Command Structures.

10-5.1* The incident commander shall delegate responsibility to subordinates in order to concentrate on overall strategy. This results in an increase in the number of staff and command positions, as an emergency escalates, in conformity with an established command structure.

10-6 Deployment of Resources.

10-6.1* Operational procedures shall be established whereby the high concentration of emergency vehicles on the scene of an incident will be alleviated in an orderly manner through use of a staging process.

Chapter 11 Emergency Medical Systems**11-1 Purpose.**

11-1.1 Where the department provides or participates in emergency medical systems (EMS), the fire department shall provide appropriate resources, planning, and training that are consistent with the level of EMS service the community expects from the department.

11-1.2* Where a fire department organization provides or participates in EMS, the provisions of this chapter shall apply.

11-2 Resources.

11-2.1* The fire department shall analyze and report to the governing authority its resource needs and ability to provide the level of emergency medical service to which it is committed in addition to its fire-fighting and other responsibilities.

11-3 Planning.

11-3.1* The fire department shall participate in community-wide planning to assure residents of the most effective available services at all times and at the levels to which it is committed.

11-4 Level of Service.

11-4.1* Based on local needs, preferences, and resources, the community shall develop a policy statement that specifies the type of emergency medical service to be provided for the community and the role to be played by the fire department in delivery of that service.

11-5 Training.

11-5.1 All fire department members who respond to emergencies that involve life-threatening situations shall be trained and certified to the minimum level of emergency medical care required in NFPA 1001, *Standard on Fire Fighter Professional Qualifications*.

11-5.2 Fire departments that utilize the services of helicopter medical evacuation programs shall ensure that on-scene personnel are adequately trained for, but not limited to, loading zone preparation, ground-to-air communications, and helicopter emergency crash procedures.

11-6 Medical Protocol.

11-6.1 The fire department shall maintain a close working relationship with a physician to provide for an appropriate level of medical supervision for the service level to which it is committed. Standard medical operating guidelines outlining performance criteria shall be established and approved by the physician or medical authority and shall include treatment modalities.

11-7 Patient/Client Records.

11-7.1 All patient/client reports and treatments shall be reviewed by a medical control officer approved by the physician and service director. Records shall be critiqued according to the guidelines for quality patient care. Patient/client records shall be maintained in confidence and include as a minimum:

- (a) History
- (b) Vital signs taken every 10 minutes
- (c) Chief medical complaint/nature of incident
- (d) Medical care rendered
- (e) Disposition
- (f) Time log (received call, arrived on scene, left scene, arrived tertiary care center, and in-service).

11-8 Personnel Protection.

11-8.1* Medical exposure plans shall be established that provide each employee with an understanding of infection control procedures and training, prevention measures, and appropriate immunization where available. The department shall fund, provide, and maintain the immunizations and their records as well as the protective clothing for its employees and members.

11-9 Incident Management.

11-9.1* A regionally approved incident management system shall be utilized for all medical incidents. Procedures shall be established on a regional basis to provide for an orderly response when multiple casualty incidents occur and an organization must expand its capacity.

Chapter 12 Community Relations

12-1 Purpose. The fire department shall carry out a program to develop public awareness and cooperation in management of the fire risk, based on analysis of the fire record in the identifiable physical and social sectors of the community.

12-2 The Public Information Function.

12-2.1* The fire department shall endeavor to develop the community's understanding of the fire department mission through an active public relations program.

12-2.2* The department shall be managed with consideration given to community awareness, and the community relations program shall include the participation of all department members.

12-3 Relations with the Community.

12-3.1 The department shall identify the service needs of all segments of the community and provide these services for all citizens without discrimination. Where feasible, support programs such as arson victim assistance and crisis intervention shall be established in cooperation with other local service agencies for citizens affected by fires.

12-3.2 The department shall promote public understanding through active liaison with its various citizens groups, such as the chamber of commerce, service clubs, parent-teacher associations, senior citizens organizations, youth groups, multicultural groups, and neighborhood associations.

12-4 Relations with the Local Government.

12-4.1* The fire department's community relations program shall ensure that the members of the municipal council, board, or commission (or governing body of its fire district) are kept fully informed of the department's achievements, operations, and problems.

12-5 Media Relations.

12-5.1* Good media relations shall be developed through cooperation with the media and provision of facilitated access to the entire fire department.

Chapter 13 Public Fire Safety Education

13-1 Purpose. The fire department shall carry out a public fire safety education program to achieve/develop a level of fire safety awareness and attitude that assists the fire department in the management and reduction of the fire risk in the community.

13-1.1* Fire safety education shall be considered a major component of fire protection management.

13-1.2* Fire safety education objectives shall focus on providing citizens with information to help them to protect their lives and their property from fire.

13-2 Responsibility.

13-2.1 The fire chief shall be responsible for carrying out a program of public fire safety education within the community.

13-3 Staffing for Public Fire Safety Education.

13-3.1* The fire chief shall designate a public fire safety education officer to coordinate all fire safety education programs. The appointed officer/specialist shall meet the professional qualifications of the position in accordance with NFPA 1035, *Standard for Professional Qualifications for Public Fire and Life Safety Educator*.

13-4 Promoting Community Understanding of Fire Dangers.

13-4.1* The fire department shall provide for an orderly flow of information to the citizens of the community to help increase their fire safety awareness. All effective outlets for dissemination of information, including neighborhood, multicultural, social, and youth groups, shall be utilized.

13-4.2* The fire department shall provide consulting and advisory services in fire safety tailored to meet the needs of the various population elements that comprise the community.

13-5 Fire Safety Education Program.

13-5.1* Fire safety education programs shall be monitored for effectiveness on an established basis.

13-6 Message Delivery Techniques.

13-6.1* The fire department shall effectively utilize all communication media such as newspapers, magazines, newsletters, in-house publications, radio and television stations, billboards, and vehicle advertising signs.

13-6.2 The fire department shall make available and encourage the use of speakers, demonstrations, and audiovisual fire safety materials for presentation to or use by local community organizations.

13-6.3* A program of private home fire safety surveys shall be part of the fire department's effort to reduce residential losses in the community.

13-6.4* The fire department shall encourage and assist industrial and commercial firms in instructing employees in fire safety practices on and off the job. Special efforts and emphasis shall be placed on fire safety training programs in hospitals, nursing homes, schools, and other occupancies where a high hazard to life might be involved.

13-7 Use of Special Dates to Promote Programs.

13-7.1* The fire department shall make effective use of the nationally observed annual Fire Prevention Week, which is the full calendar week including October 9, the date of the great Chicago Fire of 1871.

Chapter 14 Code Enforcement

14-1 Purpose.

14-1.1 The fire department, subject to legal authority, shall establish policies and procedures for the enforcement of fire and life safety codes that enhance compliance with applicable fire safety legislation.

14-1.2* The enforcement of fire and life safety codes shall be one of the major focus areas for a fire department.

14-2 Legal Authority.

14-2.1* Fire chiefs shall determine the status of their code enforcement authority and shall be aware of how this authority interfaces with other federal, state or provincial, and political subdivisional agencies.

14-3 Codes and Regulations.

14-3.1* The fire department shall have the authority to enforce a comprehensive modern fire prevention code unless this is the responsibility of another authority.

14-3.1.1 If a fire prevention code is not in effect in the jurisdiction, the fire chief shall initiate the adoption and enforcement of a model fire prevention code. If state or provincial law preempts local authority to adopt or enforce a model fire prevention code, the fire chief shall establish and implement policies and programs to assist the appropriate agency in the enforcement of state or provincial fire safety laws.

14-3.1.2 If a building code is not in effect, the fire chief shall actively promote the adoption and enforcement of a model building code by an appropriate authority.

14-3.2* There shall be an organized fire prevention code and regulations revision process for the code adopted, with an established schedule for revision.

14-3.3* The fire chief shall identify any legislative need, in addition to the codes and regulations, for selected supplemental fire protection measures and shall initiate their adoption by local ordinances.

14-4 Enforcement Administration.

14-4.1 Where not the responsibility of another authority, the fire chief shall manage a structured program of code enforcement within the department's jurisdiction to satisfy the needs of the codes and regulations in force.

14-4.2 The agency responsible for administration of fire prevention regulations shall establish an inspection schedule for all appropriate new and existing properties in the community. Inspectors shall have sufficient authority granted by the authority having jurisdiction to enforce the provisions of the fire prevention regulations. Inspectors shall meet the requirements of Fire Inspector I, II, and III of NFPA 1031, *Standard for Professional Qualifications for Fire Inspector*.

14-5 Fire Prevention Enforcement Staffing.

14-5.1 Specialist Enforcement Personnel.

14-5.1.1* The fire chief shall appoint, within the limitations imposed by local government, sufficient specialist fire prevention staff to permit the execution of a competent fire prevention and code enforcement program, including follow-up and reinspection of violations.

14-5.2 Fire Company Inspections.

14-5.2.1* Where needed to ensure a thorough and sufficiently frequent inspection enforcement schedule, the fire chief shall utilize the fire suppression personnel by incorporating fire prevention duties into fire company activities. Company officers shall meet the requirements of Fire Inspector I of NFPA 1031, *Standard for Professional Qualifications for Fire Inspector*.

14-5.3 Inspection Program.

14-5.3.1* Where inspection intervals are set by law, they shall be followed strictly, including the necessary follow-up on violations and reinspections.

14-5.3.2 The fire department or other agency responsible for fire prevention enforcement shall provide for a structured program of scheduled field checks to determine the quality and adequacy of inspections being performed. There shall be a periodic review of the adequacy, effectiveness, and efficiency of the procedures used in identifying, scheduling, assigning, and performing inspections and related activities and the adequacy of the training that supports those activities.

14-5.3.3* The fire department, in coordination with legal counsel, shall develop a program for issuing citations of code violations and the proper follow-up of all citations issued to ensure compliance or correction. This process shall be documented.

14-5.4* Code enforcement education and training shall be an important part of the department's overall training goal. Regular code enforcement education and training shall be provided to ensure that inspection staff and fire companies perform code enforcement current with new codes, policies, and interpretations. New employees shall receive instruction in fire codes and inspection practices.

14-6 Enforcement Procedures.

14-6.1* On all matters affecting fire protection, building construction and site plans shall require the consent of the fire department, except upon successful appeal to the board of appeals.

14-6.2* The fire department shall provide prompt and complete staff advisory services in the technical areas concerning advance planning for buildings and subdivisions, technical subjects, and code interpretation. The code enforcement staff also shall assist fire suppression forces in developing pre-fire plans.

14-6.3* Accurate records shall be kept and maintained of all complaints, permits, past inspections, legal action, investigations, and special conditions.

14-7 Zoning Regulations.

14-7.1* Fire departments shall seek to establish good working relationships with the local zoning and planning authorities so that review of development and construction proposals can identify fire protection concerns.

14-8 Building Regulations.

14-8.1* The fire department shall seek to establish a good working relationship with the agency or authority responsible for enforcing the building code so that the review of the design, construction, alteration, or demolition of buildings and structures can be monitored to identify fire protection concerns. In the event that authority for enforcement of building regulations has not been delegated within the jurisdiction, the fire chief shall actively encourage the adoption of a model building code by the appropriate agency or jurisdiction.

14-8.2 A procedure shall be established to obtain the approval of the fire official on all matters that affect fire safety. Fire protection and safety criteria shall be part of the building permit application, plans check, approval, and certificate of occupancy process.

Chapter 15 Fire Investigation

15-1 Purpose.

15-1.1 The fire department, subject to legal authority, shall investigate all fires by gathering information that assists in developing an effective fire prevention program, improving fire safety legislation, identifying public education programs, describing the community's fire problems, evaluating fire protection capability and assisting law enforcement.

15-1.2* All fires shall be investigated to determine the origin and cause of the fire. If the fire is determined to be accidental, the investigation shall consider methods of eliminating or reducing that type of fire. If the fire is determined to be incendiary or suspicious, a full investigation shall be initiated.

15-2 Organization for Investigation.

15-2.1 All fire suppression personnel shall be trained in basic fire cause determination, arson detection, and investigation procedures to provide a high rate of origin and cause determination.

15-2.2* As the lead agency, it shall be the responsibility of the fire department to organize an arson investigation team and direct its activities unless such a team is otherwise established by a higher jurisdiction.

15-2.3 Any persons appointed to fire investigator positions shall meet the appropriate professional qualifications required by NFPA 1033, *Standard for Professional Qualifications for Fire Investigator*.

15-2.4* Control and release of all information regarding suspicious fires shall be performed under the supervision of the fire chief, the fire marshal, or the supervisor of the fire investigation team.

15-3 Fire Investigation Information Systems.

15-3.1* A fire investigation information system (often referred to as an arson information system) shall be established and maintained for efficient and effective information

retrieval. This system shall cover the county or, if possible, the state.

15-3.2* The fire department shall establish systems to collect information needed for each fire incident, and special information needs for particular types of incidents such as incendiary or suspicious fires shall be identified.

Chapter 16 Communications

16-1 Purpose.

16-1.1 The fire department shall have a reliable communications system to facilitate prompt delivery of public fire services.

16-1.2* A secure communications center shall be provided and staffed to receive requests for emergency assistance from the public, to dispatch that assistance, to coordinate communications with units providing emergency services, and to provide overall coordination and control of fire department operation communications.

16-2 Communications Center.

16-2.1 All communications facilities and equipment shall comply with NFPA 1221, *Standard for the Installation, Maintenance, and Use of Public Fire Service Communication Systems*.

16-2.2 The facilities provided at the communications center shall be based on the needs of the area for which service is to be provided, with emphasis on the adequacy and reliability of the systems provided, for both routine and emergency conditions, including the capability to receive communications from hearing-impaired persons.

16-2.3* In larger jurisdictions, a separate communications facility shall be provided and staffed with trained operators. In a small fire department, an adequate communications system shall be permitted to be provided and designed as part of a fire station or other facility. In both cases, the needs of the area shall be served adequately and reliably on a 24-hour basis. The fire chief shall ensure that adequate and reliable communications for the fire department mission and operations, without compromises that serve other priorities, are provided.

16-2.4 Where joint communications systems are operated with other services, adequate supervision, training, operating procedures, and systems shall be provided to ensure that communications center personnel are prepared to meet the inherently different needs of the fire department.

16-3 Public Reporting of Fires and Emergencies.

16-3.1* Facilities and systems shall be provided to ensure that the public can notify the fire department of fires and emergencies easily and promptly.

16-3.2* The fire department shall conduct an ongoing public education and information program to ensure that citizens are aware of the proper methods for requesting fire department emergency services.

16-3.3* The telephone number used to report emergencies shall be easy to recognize and remember. The use of the 911 emergency number shall be encouraged.

16-3.4 Reporting Facilities.

16-3.4.1* The communications center shall have sufficient incoming telephone lines and trained operators to answer the volume of calls that reasonably can be anticipated under routine, unusual, and emergency conditions.

16-3.4.2* A contingency plan shall be in place to provide for emergency reporting in the event of a failure of all or part of the public telephone system.

16-3.5 The connection of automatic-dialing emergency reporting equipment to the primary emergency reporting lines shall be prohibited to prevent malfunctioning equipment from occupying the lines. An alternate telephone number shall be permitted to be provided for this purpose, or the authority having jurisdiction shall be permitted to require such equipment to be connected to an approved alarm monitoring service.

16-3.6* Where fire alarm box systems accessible to the public are installed, they shall conform to NFPA 1221, *Standard for the Installation, Maintenance, and Use of Public Fire Service Communication Systems*.

16-4 Dispatch Systems.

16-4.1* The communications center shall be responsible for dispatching the appropriate units to any reported emergency incident, based on written operational guidelines.

16-4.2 A minimum of two approved methods shall be available to transmit a dispatch message from communications to each fire station so that a fully independent back-up is immediately available in the event of failure of the primary method. The methods shall be as specified in NFPA 1221, *Standard for the Installation, Maintenance, and Use of Public Fire Service Communication Systems*.

16-4.3* All units that are available for dispatch to emergency incidents and are not located in quarters at a fire station shall be capable of constant radio contact with the communications center.

16-4.4 Where the response of volunteer or on-call personnel is anticipated, the communications system shall have a reliable means to notify these personnel of an alarm, such as tone-activated radios and pagers, outside horns or sirens, and special telephone systems.

16-4.5* Appropriate methods shall be employed to alert personnel within each fire station when an alarm is received. These methods shall be permitted to include the activation of lights, visual indicators, and/or audible devices, activated automatically or by a member assigned to house-watch duties.

16-4.6 Each fire station shall have a means to manually acknowledge the receipt of alarms received from the communications center.

16-4.7* The communications center shall be informed of all changes in the availability status of each unit in order to determine properly which units are available for dispatch to emergency incidents.

16-4.8 Where automated or computer-aided equipment and systems are used as a routine part of the dispatch system, manual back-up systems and procedures shall be in place and exercised periodically to maintain operator skills in the event of a failure.

16-4.9 A high priority shall be placed on maintaining all dispatch equipment and systems in full working order at all times.

16-5 Radio Communications.

16-5.1* Radio transmitter/receivers shall be provided at headquarters and in emergency vehicles. Every chief officer and company officer shall be provided with a portable transmitter/receiver while assigned to emergency duty.

16-5.2* The fire department shall have a selective alerting system by which it can summon designated on-call personnel, including volunteers and career staff, at any hour of the day or night.

16-5.3* Sufficient radio frequencies shall be provided to accommodate the operational needs of the fire department or communications system, based on the amount of radio traffic that is anticipated and the need to communicate simultaneously with different individuals or groups.

16-5.4 Frequency allocations shall meet the requirements of the Federal Communications Commission in the United States or Transport Canada.

16-5.5 Specific radio frequencies shall be designated for use in anticipated situations according to a written communications plan. Where a group of fire departments operates a common communications system and mutual aid network, all users shall have access to any and all frequencies used in the system to provide for effective communication.

16-5.6* The department shall establish operational guidelines for radio communications. All members shall be trained in radio procedures to provide for efficient use of the system. In regions where multiple fire departments might be involved in an emergency, communications procedures shall be formalized with all assisting departments.

16-5.7 All radio and telephone messages to the communications center shall be automatically recorded using equipment that automatically records the time as well. Small fire departments shall be permitted to substitute a frequent statement of the time in the recorded messages for the time recording equipment. Separate equipment shall be provided to play back immediately pertinent telephone and radio communications related to the reporting or handling of fires or emergencies.

16-6 Fireground Communications.

16-6.1* Operational procedures shall mandate that the first unit to arrive at an emergency notify the communications center by radio of its arrival and provide a brief description of the visible conditions and the location of the incident. The first responding officer shall establish incident command at the fire or emergency scene.

16-7 Nonemergency Communications.

16-7.1* The fire department shall have a functional business communications system separate from the emergency communications system. This system shall be designed and operated in a manner to ensure that emergency communications take priority over nonemergency messages. Where components of the emergency communications system are utilized for nonemergency purposes, such use shall yield to the priority of emergency functions.

16-8 Private Alarm Systems.

16-8.1 Property owners shall be encouraged to install automatic and manual fire alarm systems that can be connected directly to fire communications centers or to alarm monitoring services. Such systems shall be properly installed and maintained in accordance with appropriate NFPA standards to provide for reliable operation and to minimize unnecessary alarms.

Chapter 17 Equipment and Buildings

17-1 Purpose.

17-1.1 The fire department shall maintain an inventory of all equipment, buildings, and land owned, leased, utilized, or maintained by the fire department to assist in day-to-day operations and for future planning.

17-1.2* The fire department shall maintain a current inventory of all apparatus, vehicles, and equipment owned, leased, utilized, or maintained by the department. This inventory shall include the current status of all assets of the department, project the remaining service life, and serve as a programming tool for future needs and procurement of requisite approvals for acquisitions.

17-2 Purchasing of Equipment.

17-2.1* Specifications shall be prepared for the acquisition of all pieces of fire apparatus, vehicles, major equipment, and minor equipment as needed. Fire apparatus shall be acquired in accordance with the requirements of the appropriate NFPA 1900 series standards, which address such vehicles.

17-3 Maintenance.

17-3.1 Following any response, maintenance and inspection shall be performed immediately to restore the apparatus and equipment to ready status in anticipation of another response. This shall include replenishment of supplies used and restoration of ladders, tools, and respiratory equipment after use, inspection of apparatus and equipment for damage, and verification that all personal safety equipment is fully operational. Any unsatisfactory condition noted shall be recorded properly and corrective action initiated.

17-3.2* In addition to regular inspections by the vehicle operator, a procedure for periodic inspection of apparatus and related equipment by qualified personnel shall be established. Written instructions shall define the work to be performed, the inspection frequency schedule, and the requirements for documentation.

17-3.3 Pumps, aerial ladders, and ground ladders shall be tested on a periodic basis and after major repairs. Apparatus testing shall include a road performance test and operation of all functions. Ladders also shall be tested after any suspected destructive impact, overloading, or destructive exposure to fire.

17-3.3.1* NFPA 1901, *Standard for Pumper Fire Apparatus*; NFPA 1904, *Standard for Aerial Ladder and Elevating Platform Fire Apparatus*; NFPA 1911, *Standard for Service Tests of Pumps on Fire Department Apparatus*; NFPA 1914, *Standard for Testing Fire*

Department Aerial Devices; and NFPA 1932, *Standard on Use, Maintenance, and Service Testing of Fire Department Ground Ladders*, shall be the basis of the test procedures. Suitable and adequate records of all test procedures and results shall be maintained for the service life of each piece of covered equipment.

17-4 Hose.

17-4.1* A complete inventory of all fire hose, including purchase date, cost, and results of acceptance and annual service tests shall be maintained. To facilitate such record maintenance, each length of hose or each hose coupling shall be given a unique serial number for inventory purposes.

17-4.2 The department shall adopt standards for the amount and size of hose carried on each piece of apparatus, depending on department operating practices, rated apparatus pump capacity, and its operational utilization in delivering fire flows.

17-4.3 Hose coupling and connection threads, including those on all master stream and other water delivery devices, shall be standardized throughout the department. Where threaded connection couplings are employed, coupling threads shall conform to the American National Fire Hose Connection Screw Thread as specified in NFPA 1963, *Standard for Fire Hose Connections*.

17-4.4 For situations where hose or devices of different threads have to be connected, suitable adapter couplings shall be acquired and provided on all responding units.

17-4.5 All fire department hose shall be tested in accordance with NFPA 1962, *Standard for the Care, Use, and Service Testing of Fire Hose Including Couplings and Nozzles*. Hose shall also be tested after exposure to freezing and after repair or replacement of any coupling.

17-5 Personal Equipment.

17-5.1 Members of the department shall be provided with personal protective clothing and equipment prior to engagement in any fire department response or hands-on training activity. This requirement shall be applicable to both fire-fighting and EMS functions that might be carried out. All equipment necessary to meet the requirements of NFPA 1500, *Standard on Fire Department Occupational Safety and Health Program*, as well as federal, state, provincial, or local law, shall be provided.

17-5.1.1* When purchasing personal protective equipment for fire fighting and medical protection, such as breathing apparatus, protective clothing, gloves, footwear, and helmets, special consideration shall be given to meeting the NFPA standards for such personal protective clothing and equipment.

17-5.2 Maintenance of Personal Equipment.

17-5.2.1 Procedures shall be implemented for thoroughly inspecting and servicing personal protective equipment, particularly following fires or other emergency usage. The procedures employed for such servicing, particularly product washing or other cleaning, shall be in conformance with the manufacturer's recommendations and with NFPA 1581, *Standard on Fire Department Infection Control Program*, and OSHA Blood-Borne Pathogens regulations.

17-5.2.2* A procedure shall be established for determining whether personal equipment shall be repaired or replaced. All repairs shall be made in conformance with the manufacturer's recommendations. Completed repairs shall be approved by the department.

17-6 Fire Department Buildings.

17-6.1 Building Records and Planning.

17-6.1.1* A file record shall be established for all buildings and structures owned, occupied, or utilized by the fire department, with future building needs identified.

17-6.2 Land Needs Planning.

17-6.2.1* Land for fire department buildings shall be obtained in accordance with a planned program of development and acquisition. Measures shall be taken to prepare sites for future fire department use.

17-6.3 Maintenance of Land and Buildings.

17-6.3.1* Routine maintenance procedures shall be established for all fire department facilities, including land, buildings, and grounds. These procedures shall address the building structure, including exterior and interior finish, as well as each major component of the building services, including plumbing, heating, and air conditioning.

17-6.3.2* Fire stations shall be designed to meet their respective service demands in terms of space for practical utilization by apparatus and personnel. Construction specifications shall include details of facilities to be provided in new fire stations that provide for efficient, safe, and convenient functioning of the emergency fire service. Specifications shall comply with the requirements of NFPA 1500, *Standard on Fire Department Occupational Safety and Health Program*, and NFPA 101®, *Life Safety Code*®.

17-6.4 Training Facilities.

17-6.4.1* Sufficient training facilities shall be provided for the department's in-service, special skills, and probationary programs. These shall include adequate classroom, lecture hall, conference room, library and study room, assembly area, and audiovisual facilities for the needs of the fire department.

17-6.4.2 Adequate audiovisual and reference materials shall be available to support the department's training activities and subjects addressed in the NFPA professional qualifications standards for respective ranks of personnel in the department.

17-6.4.3* The department shall have access to facilities for ground ladder training, live smoke and fire training, flammable liquids fires, pumping and drafting operations, and apparatus driver training.

17-6.5 Vehicle Maintenance Buildings.

17-6.5.1* The fire department requirements for vehicle maintenance facilities shall be assessed, and facilities appropriate to these needs shall be established.

Chapter 18 Management of Water for Fire Protection

18-1 Purpose.

18-1.1 The fire department shall carry out and maintain a program for evaluating all sources of water supplies and delivery systems for fire fighting within the community and facilitate the delivery of adequate water supply consistent with the fire risk and the fire department capabilities.

18-1.2* The fire department shall carry out a continuing program of evaluation for all water supplies for fire fighting, maintaining a liaison with the water authorities on fire protection water supply matters.

18-1.3* The fire department shall assess the adequacy or weakness of water supplies in relation to the fire risk throughout the community in conjunction with its pre-fire inspection or planning program.

18-1.4* The fire chief shall assign a full- or part-time water officer to assist the chief and keep the department informed of the available water supplies for fighting fires from all sources and to maintain regular contact with the managers of public and private water systems.

18-2 Fire Department Water Supply Operations.

18-2.1* The fire department shall have operational guidelines for utilization of available water supplies, both piped and static, taking into account any weaknesses or deficiencies and providing contingency plans for potential service outages. The fire department shall develop and maintain inspection and testing procedures to evaluate the adequacy and availability of a public or private water supply for fire protection.

18-2.2* Command officers shall have water resource information available to them en route to and at incidents by means of maps or telecommunications, and each fire company in the fire department shall maintain a water resources map and records of its response area. These information sources shall include, as a minimum:

- (a) The location and size of water distribution mains in public or private water systems
- (b) The location and capacities of hydrants on the public or private system
- (c) Identification of any sections of the water source where insufficient flows or pressures might require special operations
- (d) The accessibility and capacity of auxiliary water supplies.

18-2.3* The fire suppression training program shall include information and instructions on available water supplies and their use.

18-3 Fire Department/Water Utility Relationship.

18-3.1* Where the utility is owned by the city and both the fire chief and the manager of the water system report to the chief administrative officer of the city, the respective responsibilities of the two departments shall be delineated clearly and liaison personnel shall be provided. The chief administrator shall resolve conflicts, making recommendations to the city's council or governing board where needed.

18-3.2* Where the municipality owns the utility but an independent administration or board is established to govern its operation, the fire chief shall be a member, ex officio, of the water authority board.

18-4 Hydrant Service.

18-4.1* All hydrants shall be inspected and tested at least once per year, preferably twice per year, and after use at fires if problems related to hydrant performance have been experienced. If not inspected and tested by the water utility, the hydrants shall be inspected and tested by the fire department. Where problems or deficiencies are identified, the fire department shall file a report with the water utility requesting specific relocations, repairs, or other adjustments to correct the problem.

18-4.2* Fire hydrant locations shall be clearly marked and maintained so that each hydrant location is visible and accessible at all times. Each hydrant shall be marked to provide pumper operators with an indication of available flow.

18-4.3 The fire department communications center shall be notified by the water utility whenever any fire hydrant is placed out of service or returned to service. The communications center shall then advise all stations for the purpose of posting this information for all members.

18-5 Private Fire Connections.

18-5.1* It shall be a policy of the fire department to encourage the installation and maintenance of private hydrant supply and automatic sprinkler systems and to stay informed as to the nature and condition of these systems.

18-6 Alternate Water Supplies.

18-6.1* The fire department shall study alternate sources of water supply to be used in the event of a major disruption in public water supply capabilities.

18-6.2 Written agreements shall be signed with the parties concerned where the auxiliary water sources are privately owned or under the control of a separate public authority.

18-7 Supervision of Private Water Systems.

18-7.1* The fire department shall require managers of properties with private fire protection systems to notify the department when any of the valves controlling private water supplies have to be closed for repairs, extensions, or other reasons.

Chapter 19 Hazardous Materials

19-1 Purpose.

19-1.1 The fire department shall have a viable plan for the protection of the community from the risks associated with storage, use, and transportation of hazardous materials.

19-1.2* The fire department shall assume one of the lead agency roles in protecting the community from risks associated with storage, use, and transportation of hazardous materials. The fire department shall participate in the process of gathering and organizing information, identifying risks, and regulating the storage, use, transportation, and disposal of hazardous materials and hazardous wastes. The fire chief shall ensure compliance with NFPA 472, *Standard for Professional*

Competence of Responders to Hazardous Materials Incidents, and NFPA 473, *Standard for Competencies for EMS Personnel Responding to Hazardous Materials Incidents*.

19-2 Hazardous Materials Incident Response.

19-2.1 All fire department members shall be trained to recognize and deal with emergencies involving hazardous materials. The level of training for individual members shall depend on the role each is expected to perform during a hazardous materials incident. The training level shall be derived from established and recognized criteria as described in NFPA 472, *Standard for Professional Competence of Responders to Hazardous Materials Incidents*, and NFPA 473, *Standard for Competencies for EMS Personnel Responding to Hazardous Materials Incidents*.

19-2.2 To safely and effectively manage hazardous materials incidents, fire service personnel shall be trained and equipped properly and shall have access to resources in addition to those normally used for fire suppression, including specialized protective clothing and breathing apparatus, disposal containers, neutralizing agents, monitoring equipment, reference materials, and communication with other agencies and sources of information that might be needed in the event of a leak or spill.

19-2.3 The fire department shall provide an inventory and specific information on the hazardous materials that are stored or used at each fixed location in the community. This information shall include material safety data sheets, plans and diagrams, information on potential sources of leaks or spills, and appropriate intervention strategies to be employed in predictable situations.

19-2.4* The fire department shall adopt operational guidelines for hazardous materials incidents that are integrated with the incident command system and procedures used for other types of incidents. Pre-incident plans shall be prepared for specific target occupancies.

19-2.5* Hazardous materials response teams shall be established as deemed necessary in jurisdictions with substantial hazardous materials risks.

Chapter 20 Major Emergency Management

20-1* Purpose. The fire department shall have a viable plan for the protection of the community from the anticipated risks associated with natural and technological emergencies that are more severe than the scale of most fires and hazardous material incidents and have the potential to exceed the resource capabilities of a particular jurisdiction.

20-2 Disaster Planning.

20-2.1* A disaster plan shall be developed that is broad enough to encompass all situations that a community might face (all-hazard approach).

20-2.2 The disaster plan shall identify and evaluate risk (hazard analysis), formulate objectives, determine resource requirements and availability, assign responsibilities, develop special situation plans, provide the structure for directing and managing response operations, and develop plans for short- and long-term recovery.

20-2.3* Local disaster plans shall be coordinated with any county and state or provincial emergency plans as well as with plans by federal agencies.

Chapter 21 Management Reports and Records

21-1* Purpose. A management information system shall be maintained to support the management of the fire department by providing the fire chief and other administrative officers with data that indicates the effectiveness of the department in preventing, suppressing, and investigating fires and all other major services and functions of the department. The records system shall provide data for reports on department activities, accomplishments, and long-range needs. The management information system shall be used to develop reports to the governing officials or members of a fire department.

21-2 Records Retention.

21-2.1* The fire chief shall review legal requirements relating to reporting and retention of records and specify the records to be kept and the methods of gathering data. A records retention and disposal system shall be instituted.

21-3 Incident Reporting.

21-3.1* Reports on emergency operations shall outline conditions encountered at an emergency and all actions taken by the department to control the condition, and they shall serve as a basis for determining incident responsibility.

21-3.2* Each fire company shall record necessary information on each response. The officer in charge of each response shall collect the company information and consolidate that data which applies to a particular incident or fire.

21-3.3 When a fire occurs in a building, reports shall cover operations of the department, investigation of the fire, and details on the losses incurred. If subsequent data is collected as a result of additional investigations by members of the department, it shall be added to the report or filed with the report.

21-3.4 A fire record journal shall be kept to provide a chronological record of all fires, alarms, and other emergency incidents. The journal shall include the date, time, location of the incident, and names of persons sustaining a loss, together with a brief description of the incident.

21-4 Administrative Reports.

21-4.1* A consolidated report shall be developed to allow the fire chief to review department activities on a regular basis.

21-4.2* The status of fire department operations and incident and fire loss data shall be summarized periodically.

21-5 Annual Reports.

21-5.1* The fire chief shall submit an annual report to the administrative head of the jurisdiction served by the fire department. This report shall include a complete summary of

the department's periodic reports as well as a discussion of department policies, important changes that have occurred during the year, and recommendations for the coming year.

Chapter 22 Referenced Publications

22-1 The following documents or portions thereof are referenced within this standard and shall be considered part of the requirements of this document. The edition indicated for each reference is the current edition as of the date of the NFPA issuance of this document.

22-1.1 NFPA Publications. National Fire Protection Association, 1 Batterymarch Park, P.O. Box 9101, Quincy, MA 02269-1901.

NFPA 101, *Life Safety Code*, 1994 edition.

NFPA 472, *Standard for Professional Competence of Responders to Hazardous Materials Incidents*, 1992 edition.

NFPA 473, *Standard for Competencies for EMS Personnel Responding to Hazardous Materials Incidents*, 1992 edition.

NFPA 1001, *Standard for Fire Fighter Professional Qualifications*, 1992 edition.

NFPA 1021, *Standard for Fire Officer Professional Qualifications*, 1992 edition.

NFPA 1031, *Standard for Professional Qualifications for Fire Inspector*, 1993 edition.

NFPA 1033, *Standard for Professional Qualifications for Fire Investigator*, 1993 edition.

NFPA 1035, *Standard for Professional Qualifications for Public Fire and Life Safety Educator*, 1993 edition.

NFPA 1041, *Standard for Fire Service Instructor Professional Qualifications*, 1992 edition.

NFPA 1221, *Standard for the Installation, Maintenance, and Use of Public Fire Service Communication Systems*, 1994 edition.

NFPA 1402, *Guide to Building Fire Service Training Centers*, 1992 edition.

NFPA 1403, *Standard on Live Fire Training Evolutions in Structures*, 1992 edition.

NFPA 1406, *Standard for Outside Live Fire Training Evolutions*, 1993 edition.

NFPA 1500, *Standard on Fire Department Occupational Safety and Health Program*, 1992 edition.

NFPA 1521, *Standard for Fire Department Safety Officer*, 1992 edition.

NFPA 1581, *Standard on Fire Department Infection Control Program*, 1991 edition.

NFPA 1582, *Standard on Medical Requirements for Fire Fighters*, 1992 edition.

NFPA 1901, *Standard for Pumper Fire Apparatus*, 1991 edition.

NFPA 1904, *Standard for Aerial Ladder and Elevating Platform Fire Apparatus*, 1991 edition.

NFPA 1911, *Standard for Service Tests of Pumps on Fire Department Apparatus*, 1991 edition.

NFPA 1914, *Standard for Testing Fire Department Aerial Devices*, 1991 edition.

NFPA 1932, *Standard on Use, Maintenance, and Service Testing of Fire Department Ground Ladders*, 1994 edition.

NFPA 1962, *Standard for the Care, Use, and Service Testing of Fire Hose Including Couplings and Nozzles*, 1993 edition.

NFPA 1963, *Standard for Fire Hose Connections*, 1993 edition.

22-1.2 Other Publication.

22-1.2.1 AWWA Publication. American Water Works Association, 6666 W. Quincy Avenue, Denver, CO 80235.

AWWA M-17-1989, *Manual on Installation, Field Testing, and Maintenance of Fire Hydrants*.

Appendix A Explanatory Material

This Appendix is not a part of the requirements of this NFPA document but is included for informational purposes only.

A-1-1 Public fire protection services include, but are not limited to, fire suppression, fire prevention, fire investigations, public fire safety education, disaster management, rescue, emergency medical services, hazardous materials response, and response to other emergencies as needed.

A-1-2 The standard includes recommendations that are intended to provide effective and efficient protective services that operate on a sound basis to prevent fires and reduce risk to lives and property, to deal with incidents that occur, and to prepare for anticipated incidents. It sets minimum standards considered necessary for the provision of public fire protection. It addresses the structure and operation of organizations providing such services, including fire suppression, fire prevention, related code enforcement, public fire safety education, fire investigation, and other assigned emergency response responsibilities, including medical services and hazardous materials operations.

A-1-3 In North America, protection of the public from fire is generally regarded as a local government function, often within a regulatory framework. The basic requirements contained within this standard could be adopted by a private organization or by a governmental organization operating under a different structure. The basic principles of organization are similar, whether operated by a city, town, county, special district, voluntary organization, or private organization, even though administrative practices might vary.

A-1-5 There is a fundamental concept of fire risk associated with modern society. Public fire service organizations are expected to reduce the risk within their areas of jurisdiction by taking measures to prevent the outbreak of fires, to limit the extent and severity of fires, to provide for the removal or rescue of endangered persons, to control and extinguish fires that occur within the jurisdiction, and to perform other emergency response operations and delivery of emergency medical services.

The cumulative effects of preventive efforts, risk reduction and control, and fire suppression capabilities result in variable levels of risk to the jurisdictions and their residents.

The risk remaining after deducting the cumulative effect of the public fire service organization's efforts is the responsibility of each individual, including owners, operators, occupants, and casual visitors to properties. It should be noted that fire risk cannot be completely avoided or eliminated.

A-1-6 The strategic planning method can result in the proposal of methods other than suppression that contribute to an acceptable level of fire protection. An example of this is securing legislation requiring automatic sprinkler systems in buildings, thus providing a protection alternative that reduces the level of risk and the demands on the fire service. In addition, requiring smoke detectors and/or sprinkler systems in residential properties ensures that occupants will be alerted so they can self-rescue and summon the fire department early in the fire development, thus minimizing life and property loss due to fire. The primary result of sound strategic planning is the shift of emphasis from fire suppression to fire prevention.

A-1-7 Approved. The National Fire Protection Association does not approve, inspect, or certify any installations, procedures, equipment, or materials; nor does it approve or evaluate testing laboratories. In determining the acceptability of installations, procedures, equipment, or materials, the authority having jurisdiction may base acceptance on compliance with NFPA or other appropriate standards. In the absence of such standards, said authority may require evidence of proper installation, procedure, or use. The authority having jurisdiction may also refer to the listings or labeling practices of an organization concerned with product evaluations that is in a position to determine compliance with appropriate standards for the current production of listed items.

A-1-7 Authority Having Jurisdiction. The phrase "authority having jurisdiction" is used in NFPA documents in a broad manner, since jurisdictions and approval agencies vary, as do their responsibilities. Where public safety is primary, the authority having jurisdiction may be a federal, state, local, or other regional department or individual such as a fire chief; fire marshal; chief of a fire prevention bureau, labor department, or health department; building official; electrical inspector; or others having statutory authority. For insurance purposes, an insurance inspection department, rating bureau, or other insurance company representative may be the authority having jurisdiction. In many circumstances, the property owner or his or her designated agent assumes the role of the authority having jurisdiction; at government installations, the commanding officer or departmental official may be the authority having jurisdiction.

A-2-2.1 In a modern society where combustibles are prevalent, this aspect of the fire department's activities should encompass a variety of approaches, including inspections, enforcement of fire codes, review of plans for new construction projects, consultation with builders, developers, and those responsible for the management of individual properties, and public education programs.

Fire chiefs usually are required, through state or provincial and local statutes, to safeguard the public and its property from the dangers of fire and panic through prudent code enforcement. Case law has made it very clear that the fire chief, authorized representatives of other governmental agencies, are obligated to discharge the duties of their positions and can be held liable for not carrying out their legal obligations for fire prevention. It is essential that all members of the fire service realize that this is an important part of their activity. Many fire departments have developed a combination fire inspector and fire company inspection organization to accomplish their inspection goals. This approach has gained wide acceptance because it allows for both the technical expertise and the necessary personnel to maintain a regular inspection program throughout the community.

A-2-2.2 Studies indicate that the majority of building fires are caused by carelessness and ignorance and are preventable primarily through educational and motivational efforts. Reducing the number of life losses, injuries, dollar losses, and fire incidents in this category depends on fire department development of ongoing, comprehensive fire safety programs — with emphasis on high-risk populations. Public fire safety education is becoming an increasingly productive and cost-effective element in the community fire protection system. It should be a planned program including needs assessment, determination of objectives, evaluation, and allocation of sufficient resources.

A-2-4.1 The delivery of services that are directed toward saving lives from a variety of perils is generally included in the mission of the fire service, although the nature and extent of these services varies from one jurisdiction to another. Fire departments usually are staffed and deployed in a manner that readily supports the delivery of such varying emergency services where the necessary resources are provided.

In addition to duties at fires, fire departments should be prepared to perform rescue work and provide emergency care for those injured in connection with such incidents as traffic accidents, train wrecks, aircraft crashes, floods, windstorms, and earthquakes, unless specifically excluded from involvement. (*See NFPA 1581, Standard on Fire Department Infection Control Program, and OSHA regulations on blood-borne pathogens.*)

In many areas, the fire department is designated as the primary provider of emergency medical services (EMS). This might involve the delivery of basic or advanced (paramedic) life-support services and might include ambulance service. These services might be performed by fire fighters or by members of the fire department specializing in EMS. The impact on fire department resources and the department's continued ability to perform its fire control responsibilities should be considered when undertaking the EMS activity.

A-2-5.1 In many communities, the fire department is assigned primary responsibility for the management of hazardous materials emergencies. In some cases, this includes regulatory responsibilities to identify and minimize risks to the community resulting from the storage, use, transportation, and disposal of hazardous materials. (*See 29 CFR, 1910.120.*)

A-2-6.1 Disaster planning should be coordinated at all levels of government in anticipation of large-scale emergencies. There might be legislation or legal restrictions that establish the overall controlling authority in disaster operations. All planning and activity should operate within the framework of these restrictions.

A-3-1.1 Fire protection is considered to be a local government responsibility in most areas in North America. Local government is broadly interpreted to include municipalities, comprising jurisdictions such as cities, towns, villages, and townships. Fire protection responsibilities might be assigned to fire districts and other jurisdictions established by law to provide services to the public. In most cases, state or provincial legislation identifies the specific level or unit of government that is responsible for providing public fire protection by granting charters or by statute. For the purposes of this standard, the term "local government" is used to cover all these jurisdictions.

A-3-1.2 Where fire services are provided by a governmental agency, the resources of other related governmental units, such as personnel systems, finance departments, planning agencies, purchasing systems, and similar components should be used cooperatively to achieve the most effective service delivery system.

A-3-2.1 Even independent volunteer fire departments and fire associations that are not under local governmental operation are subject to state or provincial laws defining the operations of such departments or associations. These laws also commonly provide authority to a fire department to operate outside of the municipal territory to which it is assigned and define the terms of such operation. Modification of these laws should be sought where necessary to allow for broader operations.

Fire investigation and fire prevention activity are fire department functions authorized by provincial or state and local law. In most states in the United States and provinces in Canada, authority for these functions is vested in a state official (the state or provincial fire marshal) with the general provision that local fire chiefs may be permitted to act in a similar capacity within their respective municipal jurisdictions in accordance with state or provincial law.

There is also a class of legislation that imposes limits on municipal officials. Examples are laws that specify the pay and working hours and other conditions of work for the members of fire departments. This type of legislation imposes specific limits on the financial and operational management of a fire department by the municipalities.

One of the most important of province-state service functions performed for fire departments is the operation of a fire service oriented educational and training program. This often is administered by a state educational agency or institution cooperating with individual fire departments and other organizations in operating schools and training facilities.

Some federal regulations have a direct impact on fire department operations. These include the OSHA fire brigade, right-to-know, and hazardous chemical regulations, the DOT regulations controlling emergency medical technician training, and others.

The organization of employees for first-aid fire fighting is one form of private protection. In some cases, the property management also provides a fire department for its own protection within its property. Such a property is sometimes large enough so that the form of its fire department is similar to that of a fire department organized for the protection of a city or town.

Where a fire department is equipped to supply fire protection for a specific piece of property, it should be described as "industrial" or "private" to distinguish it from one provided for a city, town, or other local governmental unit. The decision to provide such additional private protection should be based on a management evaluation of risk.

"Industrial" or "private" fire departments are discussed in other NFPA publications. (*See NFPA 600, Standard on Industrial Fire Brigades.*)

There are also private, commercial, or independently owned and operated fire departments providing fire protection services to the public. In some areas, these departments contract with individual property owners to provide services where there is no fire department operating as a function of local government. Some fire districts and municipalities contract with private or commercial fire protection for fire protection services.

A-4-1 A total concept strategic plan will include extensive utilization of built-in fire protection, including early warning smoke and fire detection and automatic suppression systems in addition to fire-fighting measures and fire prevention/education programs.

A-4-1.1 The governing body should be encouraged to adopt a long-range community plan dedicated to the reduction of life and property loss from fire. (See *"America Burning,"* the report of the National Commission on Fire Prevention and Control, and *"America Burning Revisited."*)

Where increased economic efficiency and program effectiveness are prime objectives in choosing between programs, cost/benefit analysis can be used to obtain a ranking of alternative programs and provide the basis for department planning.

Program effectiveness is an important part of cost/benefit analysis. A method that incurs higher cost might be the most effective, although not the most cost-effective. In the emergency services, value criteria should be considered. For example, life safety is valued more highly than physical property.

Cost/benefit analysis typically consists of five steps that draw heavily on systems analysis: determining need, developing objectives, developing the criteria for measuring effective accomplishment, generating alternatives, and analyzing and selecting alternatives.

A-4-2.1 In larger departments, this should be carried out with a full-time staff, while smaller departments should assign these functions to committees or personnel with other responsibilities. In some cases, these functions should be performed in part by consultants or by planning agencies working within or in cooperation with governmental agencies.

A-4-2.3 These liaisons should include budget and planning agencies, redevelopment agencies, water, street, traffic, and engineering departments, and private sector developers.

A-4-3.1 The overall approach is comprehensive, since it examines the resources available for fire prevention and suppression, together with the level of risk created by the built environment under varying regulatory approaches. The assumption is that the need for public protection can be modified by increasing the required level of protection provided by the private sector in the form of fire alarm and detection systems and automatic sprinklers and by limiting the size and type of construction that are permitted. A desirable approach provides a low level of fire risk at a low overall cost, although the specific cost and risk levels are determined by local option.

A-4-3.2 The costs of the fire department might be reduced by minimizing both the potential life hazards and the combustible features of the community. If, in the area served by the fire department, the construction or existence of buildings of excessive area or noteworthy risk to life without provision of automatic sprinkler or other appropriate private fire protection are tolerated, the taxpayers have to accept either a high level of fire department expense or inadequate protection. The same is true of tolerance of other design characteristics that set up a high conflagration hazard or present unreasonably difficult fire control problems.

A-4-3.3 Some communities have chosen to require automatic sprinklers in all new construction or to retrofit protection in existing high-risk structures, reducing the need for fire suppression capability. Alternatively, restrictions on types of construction, building size and siting, occupancy, and other building features have been used to reduce local fire exposure. (Some communities do not have these powers granted to them in legislation.)

A-4-3.4 Some communities support a quality of fire department service that other communities have never had and, therefore, do not miss. Many fire departments do not receive adequate support simply because taxpayers have never experienced the valuable services that an effective fire department can provide. Expenditure standards involve both technical questions and value judgments. The annual operating cost of a fire department is largely established when the number of pumper and ladder companies it will maintain and the personnel required for these companies have been determined by an analysis of the degree of desired protection and the ability to provide financial support.

A-4-3.5 The inhabitants of the jurisdiction should be informed that the amount of money appropriated annually for the fire department is related closely to how well property owners accept responsibility for better protection of their individual properties from fire. They should understand the impact on fire risk of unnecessary requirements or added costs for connections to water systems for automatic sprinkler systems.

One of the most effective means of private fire protection is through the use of automatic sprinkler systems. The terms under which the water utility serving the community furnishes connections to such systems are a factor in whether property owners will consider this means of self-protection. Local requirements often include installation of flow detection devices, meters, and unnecessarily high annual charges. Unnecessary requirements for sprinkler connections can generate relatively little income for the water utility and trivial savings in water loss. In contrast, lack of private fire protection can result in large fire losses and heavy water consumption for fire suppression. These losses can cause an increase in fire department expenditure over a period of years far in excess of the water utility income or savings.

Fire code enforcement, fire safety education, and community cleanup programs are an accepted approach in the reduction of fire suppression work load. On a short-term basis, they offer limited opportunity to affect fire department operating costs, but they can be more productive where undertaken on a long-term basis.

A-4-3.6 Future reduction of the ability of local government to provide public fire protection should be considered in any planning process. These reductions might be temporary, as in the case of a strike or natural disaster, or permanent, because of a reduction in the tax base. The result of such events can range from slight inconvenience to total elimination of usual services. The fire department, unlike many community departments, provides an emergency service upon which the saving of lives and control of major property destruction can depend. Local, state, and federal regulations and agreements should be guiding factors when planning for the contingency of any work curtailment.

A-4-3.7 Computer software packages can be utilized to help determine optimum station locations, necessary number of companies, and best response routes. In addition, they can assist in development of interjurisdictional fire suppression response plans, including mutual and automatic aid plans.

Over a period of several years, expenditure for capital items can be spread out by use of reserve funds or borrowing, if necessary. Under a reasonably accurate forecast, a five-year plan enables major changes to be carried out on an extended and rational basis.

A statement should be prepared describing potential master plan goals over a period of 10 years. It should indicate how long-range programs for the department and the community can begin to reduce losses. It should show how capital cost items for equipment and fire stations will be provided when needed.

A-5-2.1 The management activities of the department are separate from the activities of the governing body. The manager of the fire department commonly is designated as the fire chief, and use of that title is intended to apply to the manager of the department even where some other title is used. Provisions of law by which fire departments can be organized include statutes, city charters, or special acts that define a fire department's service area. In addition, there might be ordinances that apply to the fire department's organization and operations. These might include civil service provisions and other laws that regulate such items as permissible work hours for fire department members.

A-5-2.2 Typically, the fire chief is appointed for an indefinite term and is removable only for cause. If local regulations require election of the fire chief, the job qualifications should nonetheless be the same.

A-5-2.3 This requirement is essential for long-range planning, goal setting, and program and budget development. The local government chief executive or governing board should be kept abreast of department performance and needs through regular reports submitted by the fire chief.

The fire chief typically reports to a governing body corresponding to the board of directors in any enterprise.

A-5-2.4 The governing body generally has the responsibility to determine:

- (a) The scope and level of service provided by the fire department;
- (b) The necessary level of funding; and
- (c) The necessary level of personnel and resources, including facilities.

In order to provide service, the governing body should have the power to levy taxes or solicit funding, to own property and equipment, and to cover personnel costs. The authority necessary is conveyed by law to a local jurisdiction.

In addition, the governing body also should monitor the achievement of the management goals of the department, such as fire prevention, fire suppression, employee training, communications, maintenance, public fire safety education, and department administration.

A-5-3.1 Officers assigned to the line organization commonly are organized in the following ranking and designations:

- (a) Fire chief
- (b) Deputy or assistant chiefs
- (c) Divisional or platoon chiefs
- (d) District or battalion chiefs
- (e) Company officers (captains and lieutenants)
- (f) Apparatus operators
- (g) Fire fighters.

A-5-3.2 The governing body of the fire department, by its authorization of activities and appropriations, determines the total numbers of equipment and personnel necessary. The fire chief should determine how operating units of the department should be organized into bureaus, divisions, fire companies, or response teams/groups together with the number and distribution of such units.

Traditional practice as followed in the United States and Canada establishes the fire company as the basic unit of a fire department. A fire company is provided with at least one piece of fire apparatus and includes the personnel necessary to place the apparatus into service and operation when needed. Some apparatus vehicles might be assigned a staff of only a single operator who works in support of company crews, forming part of a response group.

A-5-4.1 Fire departments, like other organizations, are comprised of a group of people working together in a coordinated effort to achieve a common set of objectives. An organizational plan does not preclude the necessity for active leadership; it provides a means to promote effective management of the organization.

Organizational charts for typical structures of small, medium, and large fire departments are shown in Figures A-5-4.1 (a), A-5-4.1 (b), and A-5-4.1 (c). Modern management practice suggests that an effective span of control should include five to seven units.

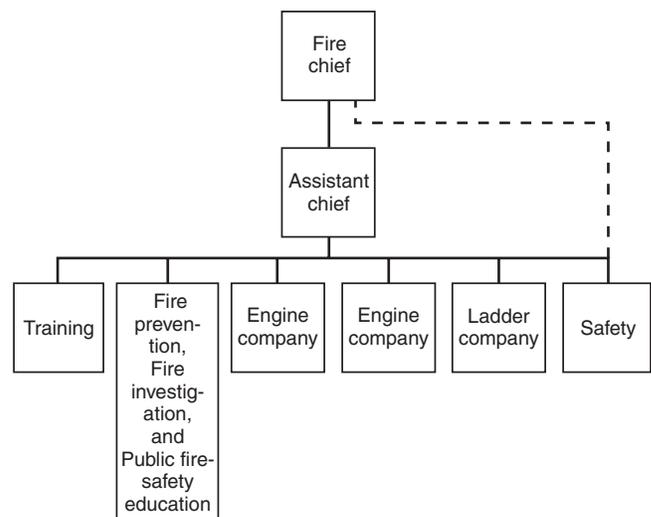


Figure A-5-4.1(a) Organizational chart for typical small-size fire department.

A-5-4.2 The manner in which fire departments are organized is dependent upon the size of the department and the scope of its operations. Organizational plans are intended to illustrate the relationship and responsibility of each operating division to the total organization. A good organizational plan is essentially a blueprint of the organization and can be useful for budgetary and planning purposes.

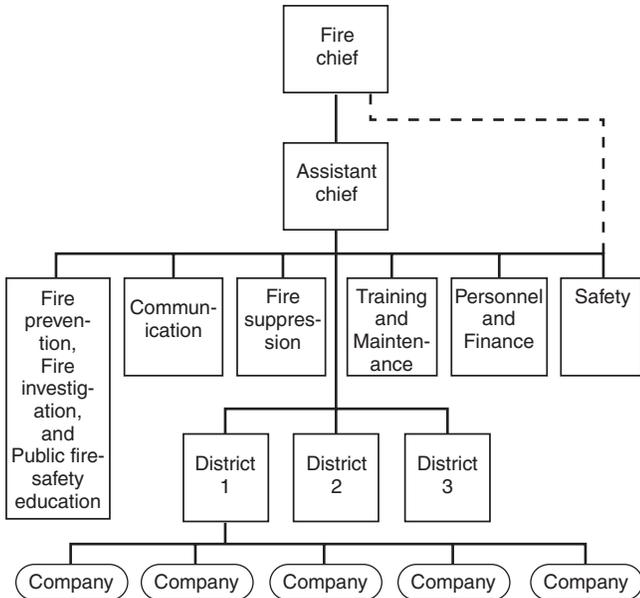


Figure A-5-4.1(b) Organizational chart for typical medium-size fire department.

Important to the organizational plan is a list of responsibilities or a job description for each position. In smaller departments, a single individual might have responsibility for more than one function. For example, one officer might be responsible for training, safety, and maintenance. This should be detailed in the job description.

A-5-5.1 One engine company generally can perform the basic individual fire-fighting evolutions, but not several evolutions simultaneously.

A-5-5.2 Ladder company operations can be performed by engine, rescue, or other companies at fires if appropriate equipment is available. Single companies are increasingly being equipped with quintuple combination aerial trucks or engines carrying aerial devices and might be capable of carrying out either engine or ladder truck company duties. However, they normally cannot perform these simultaneously due to personnel limitations, and this should be recognized in departmental operating procedures.

A-5-5.3 Some departments provide companies or vehicles for special purposes such as salvage, rescue, lighting, refilling self-contained breathing apparatus, and handling hazardous materials incidents. Tankers and off-road vehicles are common to urban-rural and rural jurisdictions. Marine or aircraft fire-fighting companies can be considered special engine companies. (See Chapter 9.)

A-5-5.4 The risk analysis also determines the needed staffing level. See National Fire Academy Publication, "Community Fire Protection—Master Planning," for an example of fire suppression resources analysis, and also see Chapter 4.

A-5-6.1 Response personnel refers to the number of physically able, competent, and well-trained personnel assigned and available to respond and includes both officers and fire fighters. NFPA 1001, *Standard for Fire Fighter Professional Qualifications*; NFPA 1002, *Standard for Fire Department Vehicle Driver/Operator Professional Qualifications*; and NFPA 1021, *Standard for Fire Officer Professional Qualifications*, should be used as the basis for determining personnel qualifications.

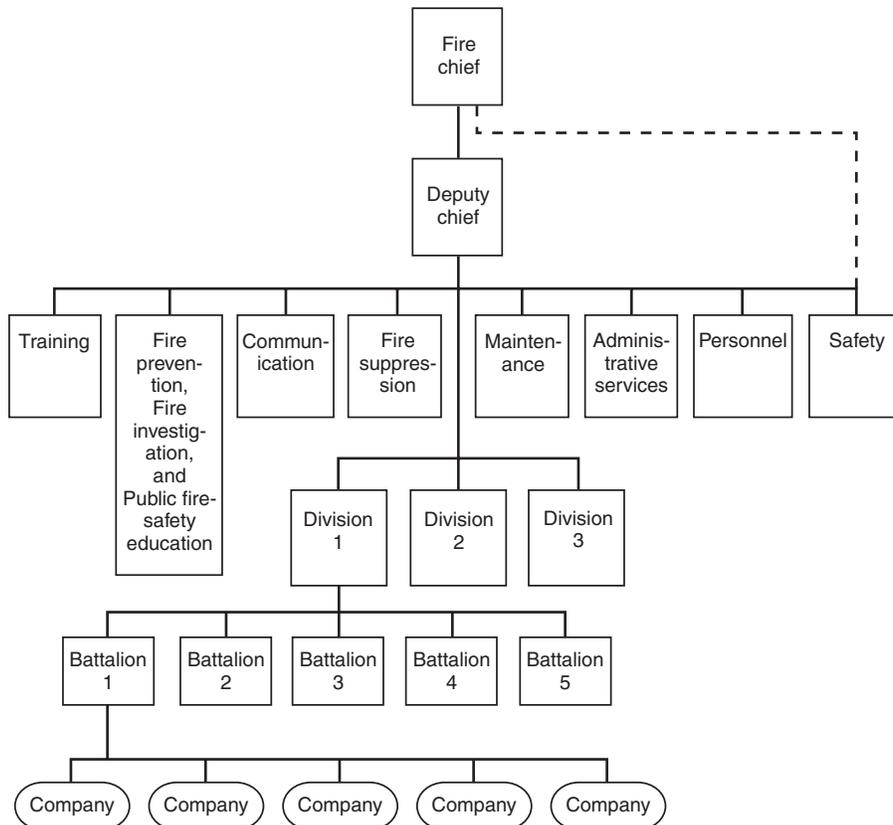


Figure A-5-4.1(c) Organizational chart for typical large-size fire department.

Fire departments in North America staff fire companies with personnel that respond from a fire station, personnel (volunteer or paid) who respond to an alarm from home or other work, or other variations of these staffing methods. The mode of staffing tends to be determined by the level of fire frequency and severity, the ability of the community to afford paid personnel, and the availability of suitable volunteer personnel. In order to meet a minimum staffing level, some suburban communities have had to utilize a paid force for response by day, because volunteer personnel are available principally only at night and on weekends/holidays.

Departments that are composed principally of volunteer personnel should ensure adequate response staffing by designating personnel for scheduled response. One successful method has been to designate personnel responsible for responding on a predetermined schedule.

A-5-6.2 A company officer should be designated and held accountable for the company's management and its performance of operational functions.

A-5-6.3 The number of supervisory chief officers needed depends on the size of the department. In some instances, the functions of chief officers below the rank of chief of department might be combined. In a department of one or two companies, a ranking company officer reasonably can be designated second in command. The management objective should be to provide a ranking officer in command of the companies working at each fire or emergency with reasonable promptness. Such district or battalion chiefs should be provided as necessary, considering geographical distribution and work load.

The function of the aide is to provide direct support to the command officer in managing the incident. These functions might include managing and recording information, operating communications equipment, making observations and reporting on conditions, transmitting orders, and providing other forms of assistance to the command officer. In some fire departments, the duties of an aide might include assisting with administrative functions and maintaining and operating the command vehicle.

A-5-7.1 The managerial activities are referred to as staff functions and include financial management, personnel management, fire protection engineering, fire prevention, code enforcement, fire safety education, fire investigation, research and planning, maintenance, training, community relations, communications, safety and health, and other activities.

A-5-7.2 When the fire chief assigns any of the functional areas to operational officers or personnel for attention, it should be in accordance with NFPA 1021, *Standard for Fire Officer Professional Qualifications*. Department officers are acting for the fire chief or principal deputies whenever performing administrative, managerial, or operational functions. In many departments, officers might have administrative and operational functions or assignments.

A-5-7.3 Personnel from any level of the department can be utilized to perform administrative and managerial functions. Nonsworn/nonuniform personnel should be permitted to be utilized. Many fire departments use qualified noncommissioned personnel, such as planners, educators, fire protection engineers, media specialists, and others, to direct functions including, but not limited to, master planning, community

education, fire prevention, emergency medical services, and fire investigation.

A-5-8.2 Where appropriate, the mutual aid agreement should include automatic responses on first alarms (automatic aid). This concept contemplates joint response of designated apparatus and personnel on a predetermined running assignment basis.

Mutual aid concepts should be considered on a regional basis. In an effective mutual aid arrangement, each fire department should retain reserves of personnel and apparatus. Traditionally and legally, overall command of the incident is vested with the senior officer of the jurisdiction experiencing the emergency.

Some areas use consolidated dispatching to coordinate the response of fire companies to assist an outside fire department. The management of responses can be made easier by utilizing computerization, "running cards," and other advance planning.

A-5-9.1 To save money or to provide the necessary personnel and equipment to perform a job adequately, some local government jurisdictions have combined compatible functions, such as communications, maintenance, and other services that can be shared with an overall increase in efficiency. In combining such functions, the fire chief should ensure that the ability of the fire department to effectively deliver emergency services is not impaired.

There is a direct relationship between the functions and objectives of a building department and a fire department, as both departments are involved in the enforcement of safety codes covering properties within the jurisdiction. In several jurisdictions, these functions have been combined successfully by making the building code enforcement program a part of the fire department organization structure.

Where politics and geography permit, smaller departments should be combined to create a fire department of a size that is capable of providing adequate protection to a defined area. This can be accomplished by having the municipalities concerned form fire department districts or by transferring management of the fire department function to a regional government unit.

Intergovernment cooperation also should be considered in areas such as communications, automatic aid, EMS delivery, disaster planning and management, hazardous materials response, fire investigation, central purchasing, maintenance, and training. These are accepted practices in many communities.

A-5-9.2 This coordination should recognize that the two departments have separate and distinct responsibilities but need to operate with an effective level of interaction to support their individual missions.

A-6-2.1 The system of accounts might include computer technology and books of original entry and ledgers. Books of original entry might include a general journal and register for cash receipts, purchase orders, contracts, material issued, and payroll.

There should be a general ledger as well as subsidiary ledgers for revenue, appropriation expenditures, stores, bank funds, and property. If, as an independent fire district, the fire department performs municipal functions, it should have additional books of original entry for bonds and interest, for investments, and for insurance. It should have additional ledgers for tax rolls, individual unit taxes, special assessments, bonded debt interest payable, and investments.

The recommended records should be maintained through appropriate computer technology. Care should be taken to maintain a back-up file of permanent records. Back-up files should be maintained in a secure location away from the area where master files are kept.

Salaries, hours, and benefits are principal factors in determining the cost of the service and the amounts of money that must be appropriated and administered. The authority responsible for fiscal administration (city council, mayor, supervisor, or board) should consult with the fire chief on negotiations because of the potential financial impact to the fire department budget.

A budget is the work program of the fire department expressed in dollars and cents. One portion lists the services, activities, and projects with the estimated expenditure for each service. The other segment identifies the income to be used to meet total expenses. Budgets usually cover one fiscal year. A final budget is adjusted when the appropriation items are known. In a municipality, the final fire department budget requires approval of the authority having jurisdiction, such as the city council, township, or fire district. In an independent fire department area, the chief usually is required to submit the budget to a governing body.

A-6-2.2 The result of this analysis should be reflected in the program on which the future budgets are based. Since annual budgets are inevitably affected by the financial arrangements that are made over a period of years, an annual budget is supplemented by a budget for longer periods. Fire department long-range proposed budgets for 5 years, 10 years, or longer should be considered. Proposed budgets for long periods should show the approximate priority of the financial needs and resources.

A budget for any current cycle is inevitably influenced by past commitments, established standards of service, existing organization structure, current methods of operation, and future needs. The budget-making process provides an opportunity to appraise the significance of established practices at intervals. (*See Chapter 4.*)

A-6-2.3 Staffing for effective fire-fighting companies is one of the most serious problems faced by a fire department. In order to fill vacancies due to sickness, vacations, and absences in excess of those covered by normal relief personnel or other arrangements, the fire chief should be authorized to employ available off-duty members, and pay for such extra duty should be included in the department budget.

The number of full-time personnel needed to fill a position can be determined by dividing 168 (7 days times 24 hours) by the number of hours in the duty work week. In addition, allowance should be provided for anticipated sick leave, vacations, and other absences.

The number of personnel in a volunteer fire department needed for staffing should be calculated considering the number and types of apparatus to be staffed, attendance records, and number and types of emergency responses. The use of duty rosters might be necessary to ensure sufficient response numbers on weekends or specific days or times of day.

A-6-2.4 In long-range budgets, a distinction has to be made between expenditures for normal, ongoing operations and those for capital improvements. The latter are long-term assets of higher cost. Once these two types of costs are identified, a fire department can create a long-term operating budget that

maintains both costs at an inflationary rate that can be met by a reasonable, uniform tax rate.

The financing of physical plants and facilities should be coordinated with the overall financial policies and capital improvement financing of the city. Long-range planning involves listing and prioritizing the capital items necessary for the next 5 or 10 years, or longer.

Options such as revenue programs, pay-as-you-go, leasing, establishing reserve funds, and borrowing funds should be adapted to coordinate with the interests of the individual department. In place of borrowing, communities should consider establishing reserve funds. These funds could be set up using generally accepted accounting principles. The funds then should be drawn on for specified purchases.

Borrowing obviously adds to the cost of expenditures for fire stations, equipment, and other physical facilities. Some communities finance the purchase of major equipment items by the issuance of bonds. Another possibility is the leasing of equipment (or purchasing it under a lease that eventually transfers the title to the governmental body). Leasing or lease/purchasing might be the most expensive of the methods of financing capital improvements, but it also might mean that facilities are available for use immediately.

A-6-2.5 For assistance, the fire chief should have administrative and other qualified technical support in proportion to the size of the department's operations. This support should comprise qualified personnel in either the fire department or another municipal department.

A-6-3.1 Requisitions and purchase orders should be numbered and filed by number. A commodity price file and a vendors' catalog file should be maintained. The records that the fire department should keep on its purchasing operations will vary somewhat with the size of the department and the rules of the administration. In those jurisdictions where central purchasing is in effect, certain information might be available in central files. A commodity price file on fire department items is useful in particular. It indicates the quantity used for a given item and the price experience for each item, and it lists vendors from whom it would be useful to solicit bids at the time of new purchases.

A-6-3.2 Reference should be made to the applicable NFPA standards and specifications that have been prepared by technical associations and testing laboratories. (*See Chapter 17.*)

It is not absolutely necessary to standardize all articles purchased, particularly small items. However, specifications for major items help the fire department to define special requirements. The fire department should identify acceptance tests on motorized fire equipment, hose, and other items.

Substantial savings have been realized through the use of joint purchasing programs by fire departments on a regional basis. Efforts should be made to participate in such programs.

A standard form should be prepared to be used in invitations to bid or requests for quotations on items to be purchased. Such a form should contain all of the general conditions applying to the purchase. Descriptions and specifications applying to each item should be attached to the form. If it is required that the lowest or best value bids be accepted, the fire chief should be permitted to use judgment, within established guidelines, in deciding which bid is to be accepted. Considerations related to such judgment decisions should include long-range cost of operations, maintenance, dependability of equipment, and reliability of supplier.

The fire chief should require a written report on goods received to show that they have been inspected and comply with the purchase order as to specifications, quantity, and cost and that the goods have complied with any test procedures specified.

A-6-3.3 Items for consumption should be released from stores only on the basis of properly signed requisitions to ensure authorized use. Departments that include a maintenance shop should require the shop to keep inventory records on major equipment. Companies should be charged for equipment issued to them. Equipment purchases for, or issued to, a training school, communications office, or other bureau should be charged to those bureaus.

There should be a record card or file on each parcel of land the fire department uses or has in custody, on each building, on major pieces of motor fire equipment, on small items of equipment, and on individual items of supplies. Purchase records of vendors and prices should be kept with each of these items. A physical inventory taken at least once each year should be checked against these basic records.

A-7-2.1 To accomplish this objective, hours of work, wages, and working conditions for fire department personnel should be equal at least to skilled personnel in the community or other skilled employees of a municipality. Volunteer fire departments continually should review and compare benefits and incentives to maximize quality recruitment and retention of members.

A-7-2.1.1 The fire chief should delegate authority to provide specific direction and control over members of the department, and these delegations then should be responsible for the mechanics of personnel administration. The fire chief should assign an assistant or deputy chief to specialize in personnel administration in order to create an effective department personnel office. The specific personnel activities conducted by the fire department depend to some extent on the character and extent of personnel services provided by municipal, state, or federal personnel agencies.

State or provincial legislation and the activities of independent municipal civil service commissions frequently affect the personnel policies of municipalities and fire departments. Such legislation might set standards of pay, hours, working conditions, and other features of personnel policy so as to limit the authority of the municipality and fire department. Final decisions affecting the personnel program for a fire department are made properly by the local governing authority or other authority having jurisdiction. The governing council or board defines the general policies of the department relative to salaries, methods of recruitment, promotion, conditions of employment, retirement, and other separations from the service within the scope of its responsibility. The governing body's power to make financial appropriations gives it continuous control over the number and quality of department members.

The complexity of personnel management has made it desirable to manage the administration of certain human resources functions on a central basis for all departments. A competent central human resources agency can perform valuable services of a technical nature for the fire department.

A-7-2.1.2 This management authority is essential to the proper utilization of emergency service organizations. The city council (or other governing board of the fire department), or the mayor, city manager, or other chief executive

officer of the municipality, should not limit the fire chief's responsibility for this function. The fire chief should be authorized to (1) place the member in a position that fully utilizes that individual's skill and knowledge, (2) train members in a variety of functions by assigning them to various positions to promote their future advancement in the department, and (3) foster maximum productivity by rotating the assignment of members to peak work loads as they occur. Great care should be taken to ensure that transfers are not made for punitive reasons, as this can damage department morale.

The company officers should assign the actual work detail within their general authority. A distinction should be made between a permanent assignment to regular stations and work groups and those "details" assigned by the appropriate supervisor to cover temporary situations such as absences, particularly within volunteer fire companies. There is always a chance that a "permanent detail" will be assigned in cases where there is no budgetary provision for an essential position.

A-7-2.2.2 Officer ranks are necessary to establish command responsibilities. A proliferation of special ranks for special assignments is undesirable, as it tends to require too many civil service examinations and procedures and to freeze personnel in specific jobs. The procedures most desirable are those where the chief can make special assignments with considerable freedom without prejudicing a member's opportunity for promotion. Pay scales for special assignments in a given rank should be established as appropriate for the qualifications required for the assignment and the work to be performed.

A-7-2.2.3 There should be some relatively informal procedures for dealing with minor disciplinary matters such as tardiness in attendance or in completion of routine duties or reports. For serious violation of departmental regulations, formal disciplinary procedures should be adopted. An important objective of discipline is to maintain an effective level of performance by the members of the department. Good leadership and management involves positive discipline and a minimum of punitive action.

A-7-2.4.4 This examination should be performed by the fire department physician or the same medical facility that examines department candidates. When members are found to be unfit for emergency duties or the performance of the functions of their positions, the fire department should attempt to assist members in correcting the problem or should reassign members to duties for which they are fit and pose no threat to safety.

A-7-3.1 The same goals of personnel selection as outlined below can be achieved with equal or higher quality results at lower cost by utilizing college preemployment education and training programs. These college programs can provide personnel that meet education and training requirements, medical requirements, and physical agility requirements before employment by a fire department.

It should be recognized that state regulations can vary and can be more restrictive than those of the federal government. The recruitment program should consist of the following steps:

(a) Conduct an active search for the best qualified persons available for membership in the department and encourage them to apply for appointment, with special effort made to encourage applicants from under-represented segments of the community labor pool. The recruitment process should include lateral entry of candidates meeting the respective

qualification level as outlined in the Standards of the National Professional Qualifications System.

(b) Minimum standards should be established and enforced, based on recognized hiring practices.

(c) Test to measure aptitudes and physical ability. Each candidate who receives a passing grade on the aptitude and physical ability tests should be interviewed. The oral interview should measure achievement and motivation characteristics.

(d) Subject candidates to a thorough physical and medical examination, which they should pass in order to fully perform fire department work.

(e) Investigate the character of candidates by interviewing former employers, personal references, neighbors, and others familiar with their record, and take fingerprints for police record checks.

(f) Require appropriate driving licenses before the completion of the recruitment training.

A-7-3.3 The nature of their duties makes it desirable for recruits to have higher levels of training and preparation than those that can be secured in elementary schools. It is not practical to recognize experience in lieu of education, because entry personnel for the fire service should be recruited at an early age, which can limit their experience. Lateral entry personnel bring higher levels of experience and training to the department. It is desirable to give consideration to candidates who have taken fire science, fire technology, and public administration college courses.

The candidate's application should require a full employment history and personal references. When candidates report for an interview or tests, photographs, fingerprints, and signatures should be taken for identification purposes. Credit ratings should be checked to eliminate irresponsible applicants. Police and motor vehicle records should be checked to evaluate character. However, the investigation of a candidate's background should be conducted in accordance with applicable provincial and federal legislation.

A-7-3.4 A series of tests should be given to determine the applicant's strength, coordination, agility, dexterity, and endurance. Tests employing actual fire service tasks provide job-related physical requirement testing.

A-7-3.5 The medical standards should require all persons offered a fire fighter's position to pass an examination to reveal any physical handicaps, deformities, disease, organic deficiencies, or the use of medication or illegal drugs that might impair performance. The standards should designate the physical or medical facility that is to be responsible for the examination.

It might be advisable for candidates to be given job-related written, oral, and performance tests for aptitudes and general knowledge. In most departments, preliminary assessment of aptitudes should be made from the candidate's interview and from reports of the supervisors and the training officer during the period of entry level or probationary training. Tests of general knowledge and measures of reading, thinking, and decision-making abilities should be verified for their relationship to the specific job and freedom from illegal discrimination.

A-7-3.6 Periodic written reports or individual significant event reports from a candidate's supervisors and department training officer should be used to evaluate the candidate's cooperation and the ability of the candidate to become a successful member of the department.

Fire fighting is primarily a team function. Furthermore, the daily life of a fire fighter involves group living and demands a high degree of ability to get along with others. It is desirable that the candidate work under at least three supervisors during probation and receive a satisfactory written rating from each supervisor before permanent appointment. Prior to permanent appointment, a review board composed of these supervisors should make these recommendations regarding permanent appointment.

A-7-3.7 The fire chief's authority should be limited to recommending action where a personnel agency outside the fire department has jurisdiction over probationers or where another agency makes the actual appointments. Where a pre-employment training procedure is not used, it often turns out that those who can meet the physical and written tests for candidates cannot meet the actual performance requirements of department work. Many candidates voluntarily drop out when they find that they cannot perform the work during the probationary period. It is preferable to encourage candidates to complete preemployment fire science courses and basic training academics before probationary employment is offered to them. This is more equitable to the candidate and to the taxpayers.

All candidates should complete an intensive program of work and training in the department operations with a satisfactory rating. The rating should be based on written reports from supervisors to whom they have been assigned and from the fire department training officer. A satisfactory rating should include passing an examination that verifies the assimilation of necessary information on fire department practices. Any candidate failing to meet these qualifications should be discharged at this point.

A-7-4.1 A printed career development guide should be provided to all full-time members upon their acceptance into the fire department. The guide should outline the opportunities and requirements for career advancement, including education, experience, time in job grade, equal opportunity, affirmative action, and other information. Personnel should not be placed in acting positions to circumvent the filling of vacancies.

In addition to the traditional promotional program described below, fire departments should not overlook well-organized and operated education programs available locally, regionally, and nationally. Some of these programs might be run by community colleges, universities, state or provincial fire academies, and the (U.S.) National Fire Academy.

The personnel evaluation program should include:

(a) Preparing lists of members for in-service training for promotion to company officers, chief officers, and positions requiring special qualifications.

(b) Arranging assignments so that officer candidates experience a variety of duties (in several companies or districts) and various types of staff work such as fire prevention, training, maintenance, and communications.

(c) Requiring a formal procedure whereby supervisors report on a candidate's aptitudes, participation, and ability to function as part of a company for the purpose of evaluating the candidate's qualifications for promotion. Evaluate lateral entry candidates for acceptance or rejection on merit.

(d) Requiring candidates to complete an in-service training program, based on a job analysis for each position, and to pass an examination on this training. Also, some departments require specialized training or completion of specific job-related classes before candidates become eligible to compete

for promotion. Lateral entry candidates might have completed the required levels of preparation previously.

(e) Arranging assignments so that interested members can pursue courses for academic credit or college degrees at accredited and approved colleges and schools.

(f) Appointing candidates to positions after the procedures of the fire department as well as those of the personnel agency having jurisdiction have been met.

A-7-4.2 In addition to serving as a fire fighter, such candidates should have experienced at least one phase of work covering fire prevention, training, maintenance, or communications.

A-7-4.3 Due to the growing range and complexity of the services provided by the fire service, an assortment of individuals that possesses unique talents and abilities can be utilized to ensure the public safety mission of the fire department. These individuals include, but are not limited to, planners, educators, fire protection engineers, and media specialists. Often the fire service loses talented professional staff due to limited career opportunities within the fire department. A promotional process should recognize the skills, knowledge, and abilities of the professional staff. Those individuals so qualified should be integrated into the organizational/command structure of the fire department.

A-7-5.1 The retirement plan should include vesting and reciprocity provisions and should comply with federal, state, provincial, and local regulations. Retirement plans for both career and volunteer members should be based on a minimum length of service and clearly establish how and when benefits are paid.

A-7-6.1 There should be procedures by which members can submit constructive suggestions and report grievances on working conditions. Members should also be consulted regarding department policies for member programs such as group insurance, group medical and nursing care, member assistance programs, credit unions, members' social and athletic clubs, and recreational facilities. The practical reason for such consultation is to promote understanding and support for personnel standards and policies.

A-7-6.2 Feedback from the ranks can be used to defuse problems before they become serious situations. A technique that can improve communication is the establishment of an organizational development program that involves personnel in group communication and problem-solving sessions. However, the potential for open communication is directly related to the attitude and example set by the fire chief.

A-7-6.3.1 The programs should be capable of responding to changes in the community's perception of the department. Departments should encourage and provide incentives for employees who continue their education.

Educational programs should inform personnel of methods for communicating with the community served and should respond to their existing needs consistent with the objectives of the department. In addition, they should provide department members with the skills necessary to perform successfully in a rapidly changing fire service.

A-8-2.1 It might be possible to establish and staff a joint-use training facility for an appropriate region, such as a county. Such a training facility can be created by the joint action of any group of departments. By joint contract or articles of association, several departments can provide for the government of a joint facility. Each department supporting the facility is

expected to budget for its proportionate share of expenses for facilities, supplies, equipment, and staff.

A-8-3.2 Instruction might take place either at the department's own facilities for training, in stations, or at regional fire department training schools. There are often other educational facilities within the community that can be utilized for aspects of personnel training.

A-8-3.3 Reports should suggest alterations in methods or equipment for changing conditions. The training officer should witness operations at emergencies and at training sessions periodically to determine progress and to ensure that training is uniform and that procedures are followed properly.

A-8-3.4 The training officer should review statements of chief and company officers as to the performance of members of the department assigned to training under these officers. Performance records of members of the department taking instruction at a training school other than one operated by the department itself should be obtained. The training officer should evaluate the performance of members assigned for instruction at the department training facilities and should be responsible for ensuring that proper records and evaluation of training completed are furnished to the chief for the personnel file of each member of the department.

A-8-3.5 This should include periodic evaluations of each instructor, reviewing such skills as lesson preparation and instructional techniques.

A-8-5.1 Officer candidates should be relieved of company duty for the hours during which such courses are given. Whenever possible, the scheduling of such courses should not cause the member to miss regular training periods.

A-8-5.2 This primarily is to measure the effectiveness of the instruction. These examinations and evaluations can serve the purposes of the fire department as part of the qualification for promotion, but where a separate personnel agency has jurisdiction, the candidate might also have to pass other examinations to satisfy the personnel agency concerned.

A-8-6.4 The training schedules of individual companies should be varied for effective use of available training aids. Company officers should use lesson plans with a standard format so that each training session can be measured against a planned program of instruction. They should exercise versatility in using standard lesson plans to reflect conditions in the company's principal response district.

A-8-6.6 This procedure is one on which the training officer and chief should insist in order to avoid perfunctory training work.

A-8-8.1 Group training should enable the training officer to evaluate the ongoing ability of each company group to use assigned equipment properly. It should be provided to update operating methods and to demonstrate, or provide experience in the use of, new equipment or methods. It also should bring pumper and ladder companies together to enable the training officer to evaluate multicompany operations utilizing the department's standard operating procedures as a basis for this evaluation.

A-8-9.1 Examples include courses for prospective chief officers, chief officers' aides, and personnel for special duties, administration, fire prevention, fire investigation, fire safety education, communications, and maintenance. Other exam-

ples include advanced courses for operators of pumps, aerial devices, and special fire-fighting and rescue equipment and courses on advanced tactical operations.

A-9-2.2 Departmental regulations and operating guidelines and orders should be developed for the purpose of ensuring uniformity and effectiveness in department actions and operations. These should be published and circulated to all members, and training should be provided whenever major changes or additions are made. A system should be established that requires each member to read and acknowledge existing and revised regulations and procedures.

Such procedures should cover matters not subject to frequent changes and should be reviewed at least annually to ensure that they are current. All members should have access to the system of orders and directives that relate to their unit. Orders should be reviewed periodically by company officers during company meetings or training sessions.

The departmental procedures should specify the channels through which orders are to be transmitted. All orders should pass through the established chain of command and should be acknowledged. The chain of command also should be followed, in reverse order, for reports and other communications from units to headquarters.

For volunteer fire departments, this chain of command may be permitted to be far less structured as long as the essential objective of full communication is achieved.

The succession of command responsibility is necessary to provide for the continuity of operations due to death, injury, disability, or the absence of individuals. Succession should include the job title designation "acting" but should not imply automatic reassignment or promotion.

A-9-3.1 The fire chief should determine the number and type of fire company units to be provided. All personnel except those assigned to staff or support units or those serving as chief officers should be assigned to a specific company unit. It is the fire chief's responsibility to ensure that the best use is made of personnel and equipment. See NFPA 1561, *Standard on Fire Department Incident Management System*, for additional information.

A-9-3.2 See NFPA 1500, *Standard on Fire Department Occupational Safety and Health Program*, Section 6-4.

A-9-3.3 This responsibility includes the inspection, maintenance, inventory control, and records management of all assigned equipment. It might be divided among more than one officer, but the division of responsibilities should be defined clearly.

A-9-3.4 Each member normally should be assigned to a particular company and work under the direction of the company officer. This does not preclude cross-staffing involving responses of specialized vehicles nor staffing of volunteer apparatus based on order of arrival of personnel on the scene or at the station.

A-9-3.8 Weekly or monthly records might be sufficient in the case of volunteer stations.

A-9-3.10 The record of arrival time of units at incidents is important particularly for planning and analysis.

A-9-4.1 The use of a second officer to respond in volunteer companies increases the availability of leadership on the scene as well as the control over the larger size of such companies.

A-9-4.3 The assignment of specific response districts to command officers should be based on the number of companies, work load, and response distances. Department administrative procedures should indicate clearly the jurisdiction of command officers.

A-9-5.1 An adequate number of members on duty might be necessary only at certain times in volunteer companies, such as on weekends. The fire department should have a sufficient number of members to maintain the minimum company or response group strengths under normal vacation, sickness, and other leave conditions. Departmental procedures should indicate the minimum on-duty strength to be maintained in each company or response group. In order to maintain coverage of all essential positions, relief personnel, temporary assignments, or overtime might be necessary. An appropriate officer should be responsible for such assignments as are necessary to meet staffing requirements, including temporarily reassigning members from one company to another.

Where volunteers are used or off-duty members are subject to recall for emergency incidents, procedures should define the call-out or recall process. Such procedures should be periodically tested.

Departmental procedures should provide that career members in on-duty status remain on duty until the relieving members of the on-coming shift have been declared on duty by the officer in charge. The duty roster should not be interpreted to change automatically duty status at a given time except where permitted in the case of volunteer standby response groups.

Any exchange of shifts between individual company members should be approved by a designated officer.

A-9-7.3 A variety of factors should be taken into account including the size, height, and configuration of buildings, special life risks, exposures between structures, construction types, occupancy classifications, and other hazards.

Modern computerized dispatch systems have the capability of providing specific dispatch assignments for every specified building. Where street fire alarm boxes are provided, a response assignment should be prepared for each box location. Where there are no street boxes, zone numbers should be assigned to different points, sectors, or properties.

The number and type of units assigned to a particular incident depend on the availability of units at the time the incident occurs. Dispatchers should be given the authority to use judgement, within departmental guidelines, when they encounter situations or circumstances that demand modification of normal response assignments.

For unusual incidents that require the response of large numbers of companies, procedures should be established for companies to respond in groups. Situations requiring the recall of off-duty personnel should be defined in departmental procedures.

Procedures for the redistribution of available companies within the jurisdiction in such a manner as to provide the best possible protection in the event of major incidents or high activity should be established. Mutual aid companies should be used for back-up coverage in these situations.

A-10-1 Emergency incidents can involve operations that vary considerably in their complexity and scale. The control of these incidents depends on the planned, systematic implementation of an effective fireground organization to accomplish identified objectives. Every fire department, regardless of size, needs a proper system to regulate and direct emergency forces and equipment at both routine and major incidents. The incident management system forms the basic structure of operations, regardless of scale. An effective system is designed to manage incidents of different types, including structure fires, wildland fires, hazardous materials incidents, and medical and other emergencies. See NFPA 1561, *Standard on Fire Department Incident Management System*.

Incident management systems are designed to provide a standard approach and response to all types of incidents and have been developed and implemented by many fire departments. A basic concept of these systems uses an incremental approach in building a command structure, starting with the first officer arriving at the scene of an incident. The development of the command structure should coincide with the commitment of emergency forces assigned to the situation. The specific methods used by fire departments throughout the country differ, but the essential operational objectives remain consistent. The main distinguishing characteristics of the various incident management systems currently employed involve terminology and specific details of organization structures.

A model incident management system has been developed by the National Fire Service Incident Management System Consortium. The model combines command strategy with organizational procedures and is designed primarily for structure fire incidents using up to 25 fire companies, though much of the organizational design is applicable to other types of emergency incidents. The model reflects a merger of the California Firescope Incident Command System and the Phoenix Fireground Command System.

A-10-3.1 Command should never be transferred to an individual not on the scene. The arrival of senior officers on the scene does not result in an automatic transfer of command. The identity of incident command might change during the course of an incident, but the continuity of responsibility and accountability should be maintained.

On a typical first alarm assignment, the chain of command is usually transferred on the arrival of a chief officer. The officer being relieved should be prepared to provide the superior with an assessment of the general conditions and tactical priorities, such as the location of companies that have been assigned, the identity of companies available for assignment, and the need for additional resources.

A-10-4.1 The situation faced by a company officer assuming initial command of an incident dictates an operating mode in each case. The basic options available to that officer are:

(a) *Investigation Mode.* If there is no fire evident, the first arriving company officer investigates while all other units stand by in staging mode or positions. The company officer assumes command responsibility.

(b) *Initial Attack Mode.* The first arriving company officer assumes command responsibility while leading an initial rapid attack to stabilize the situation. This mode is effective where fast action is critical and will control the situation quickly.

(c) *Command Post Mode.* The first arriving company officer identifies a large, complex situation and assigns resources while setting up a command post operation from the outset.

In each case, the company officer assuming command is fully responsible for the identified tasks assigned to the command function. The degree of personal involvement in tactical actions varies in each mode.

A-10-5.1 Developing a command organizational structure should begin with the implementation of initial tactical control measures. The size and complexity of the organization are determined by the dimensions of the particular situation.

A model command structure for a large-scale emergency typically includes four levels of command plus staff support. (See Figure A-10-5.1.)

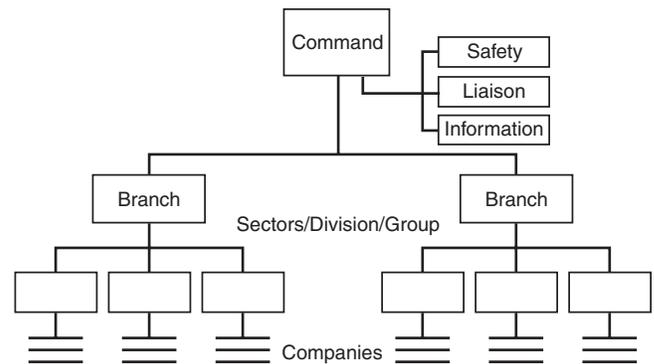


Figure A-10-5.1 Model command structure.

The command level includes the functions necessary for overall control of operations and identification of strategic objectives. It normally is staffed by the highest ranking officers.

The operations control level is an optional level that can be implemented when command finds it necessary to group tactical objectives together for coordination and to maintain a span of control. This level is crucial at large-scale incidents to provide coordination among sectors and should be staffed by experienced command officers reporting directly to command.

The sector or division level provides the immediate tactical level that concentrates on specific operating areas or functions to meet operational objectives. Several fire companies might be assigned to each sector or division directed by an assigned officer.

The task or company level refers to evolution-oriented functions at a company level. Each company officer supervises the efforts of a crew, under the direction of a sector or division officer. The combined efforts of these crews achieve the objectives of overall strategic plans.

As the need arises, specific positions can be added to the command structure to serve directly under command as staff or aides. This is meant to relieve the incident commander of the responsibility to supervise auxiliary activities not directly involved in the supervision of the emergency and to provide detailed or specialized information that might directly support command functions or fireground operations. These positions can be filled by a variety of personnel, depending on the situation and specific needs.

A-10-6.1 The responsibility for assigning fire companies at an emergency belongs to the incident commander, who must establish priorities and assign units based on identified objectives. Normally, on a first alarm response, the first engine company and truck company respond directly to the front of the emergency, while other responding units stand by or stage nearby until assigned to a particular task. Whenever an emergency situation demands extended operational activities, additional alarms should be called to provide reinforcements and a reserve supply of personnel and equipment at the scene.

Arriving companies that have not been assigned according to standard operating procedures or directions from the incident commander should proceed automatically to a standby or staging position. These units should stop short and remain uncommitted about a block from the scene until assigned by the incident commander. Staging positions should take into account access to potential operating positions, water supply, and traffic conditions. The primary emphasis is on avoiding the independent commitment of companies to tasks or positions that conflict with the incident commander's objectives. Once the initial command responsibilities have been completed, the incident commander should begin obtaining progress reports from operating units and begin to evaluate efforts. The initial action plan should then be revised or refined as necessary.

The convergence of many units at the scene of an incident, particularly units that are not part of a planned response system, can cause major problems. Procedures should be established on a regional basis to provide for orderly response when major incidents occur. All responding multiple alarm companies should gather in a specific area designated by the incident commander. This formal staging area should be located away from the emergency scene in order to provide adequate space for assembly of all response apparatus. The first officer to arrive in this designated location should automatically assume control of the staging area. This officer should maintain an accurate log of available companies and, when requested by command, should verbally assign companies to report to specific sectors or divisions or for specific functions, with instructions on where and to whom to report.

A-11-1.2 Emergency medical services (EMS) have become a major part of the work load of many fire departments, both career and volunteer. In many cases, the EMS activity level exceeds the work load from fires and other types of emergencies by a considerable margin. Comprehensive treatment of the management and delivery of EMS systems is beyond the scope of this standard. This chapter contains only general requirements and information relating to the subject as an element in a fire department's organization.

A-11-2.1 The resources needed to provide an emergency medical service system beyond a department's resources can include combinations of both public agencies and private organizations in a public-private partnership responding to medical incidents. The fire department is an available resource to participate in this system in most areas.

The local fire department is a source of medical aid capability since it generally has a sizable body of reliable, trained personnel operating in an existing emergency command structure, with a communications system and emergency vehicles strategically deployed throughout the community.

A well-designed EMS system should provide for rapid response by personnel trained at one or more of the following recognized levels, First Responder (FR), Emergency Medical

Technician (EMT) or Basic Life Support (BLS), Advanced Life Support (ALS), and patient transportation and specialized rescue and extrication capabilities.

A-11-3.1 In many cases, the fire department operates as part of a system that includes a combination of public and private sector resources, such as joint emergency responses or private ambulances transporting patients after initial response and treatment have been provided by fire department personnel. In other areas, EMS is provided by a public agency that is separate from the fire department, with initial response by the fire department units as first responders (tiered response).

A-11-4.1 Fire department involvement in EMS varies significantly from one location to another. Variations include personnel on engine and ladder companies trained as first responders or emergency medical technicians and ambulance systems operated by fire fighter-EMTs or civilian employees of the fire department. Advanced life support might be provided by paramedics operating ambulances or rescue vehicles or staffing regular fire suppression companies.

A-11-8.1 See NFPA 1581, *Standard on Fire Department Infection Control Program*, and 29 CFR, Part 1910.1030 (OSHA), "Occupational Exposure to Bloodborne Pathogens" regulations.

A-11-9.1 The benefits of an effective fire incident management system are readily transferrable to a medical incident. The fire department is often the first to arrive at the scene and the first to establish any command or control.

A-12-2.1 A positive community relations program should be a continuing effort and a persistent, well-planned and organized activity to promote community understanding and appreciation of fire department services.

Community relations is an important management function that identifies fire department activities with the various interests of the public. The fire department needs to justify its programs and resource needs with respect to other municipal departments demanding the attention of the public.

Due to the nature of community relations, the fire chief should personally monitor the program. The overall effectiveness of any community relations program is generally a direct reflection of the administrator's participation in the program. Wherever possible, a staff specialist should be assigned the responsibility for developing and implementing an organized program identifying objectives, time frames, and evaluation measures.

A-12-2.2 The fire department management should ensure that its personnel fully understand the department's organization and functions and the role each is expected to play in the department's community relations program. Good community relations begin with positive behavior by all department members. A vital part of a good program is the proper public perception of personnel both on duty and off duty, especially during high visibility activities.

A-12-4.1 The governing bodies should provide the fire department with an organizational structure and the necessary resources for community relations activities.

The fire department should carry out its public relations and educational programs in such a way as to strengthen the position of all departments of the local government with which it is associated. The chief executive official (mayor, city manager, town manager, or supervisor), heads of principal municipal or local government departments, and their employees generally should be kept informed of the fire

department's operations and programs. Municipal department heads should be consulted in all programs that might affect their departments and in cases where support of their departments might be beneficial. The various planning agencies and the water and building departments should receive particular attention.

Fire department public relations programs should be coordinated with those of neighboring communities especially as to the timing and scope of effort in education campaigns. These programs should be coordinated with area, county, and state-wide fire protection activities and fire prevention programs.

A-12-5.1 Good media relations are essential for the success of public education programs and the delivery of the fire safety message.

A-13-1.1 Fire officials recognize that public fire safety education is the most effective way to reduce fire incidence. The majority of fires and fire-related deaths and injuries occur in residential occupancies, which are more difficult to inspect because of social resistance and constitutional protection. Education brings safety attitudes into the home.

A-13-1.2 Fire safety education differs significantly from the community relations objective of promoting community understanding and appreciation of fire department services.

A-13-3.1 The public fire safety education officer or specialist also might serve as spokesperson for the department if assigned the community relations responsibilities as well. This individual provides for continuity and responsibility for the fire safety education function.

While a fire department can make effective contributions working alone, it should enlist the cooperation of individuals in the community. A community committee adds enormously to the staff time and resources available to accomplish fire safety education program objectives. Such a group might have administrative and/or policy responsibility.

A community committee can be composed of representatives of the community and/or members of the fire department. It usually has staff responsibility for carrying out the program if there is no department staff member or specialist assigned.

A-13-4.1 Active concern for and understanding of the hazards of fire by the public are necessary for the success of fire department fire safety education programs. A sense of common cause in the fight against fire is important.

A-13-4.2 The department should analyze the problem of communicating with people in homes, stores, institutions, businesses, and other occupancies in a community to determine how best to educate each. A community relations program should establish the foundation for citizen cooperation in cases where the fire department wishes to enter private property for home fire safety surveys or inspections by ensuring that the purpose of these surveys or inspections is understood.

A-13-5.1 The following steps should be considered as part of a cyclical process to be completed every 3 to 6 months by the fire department.

(a) Identify important local fire problems in order to make them a focus of the education effort. This includes gathering information on high-risk locations, victims, behaviors, and hazards.

(b) Identify community resources, available materials, and potential audiences, then select the appropriate objectives that meet the community's needs and resources.

(c) Create a program design by determining the content and format of the message and packaging the program for delivery within the community or high-risk population groups.

(d) Produce and distribute materials, train fire service personnel, and involve target audiences in the education process.

The impact of the program should be measured by comparing baseline data gathered prior to the program's implementation with data compiled at an appropriate point following the implementation of the program. Such data might include fire deaths, injuries, property losses, and number and type of incidents. Pre-program and post-program data on awareness, knowledge, and behavior in the community also should be compared to determine the success of the program and how it can be modified to improve its effectiveness.

A-13-6.1 Utilization of mass media is a basic resource for public education. Distribution of educational literature, displays, and exhibits also effectively reaches large numbers of people.

Recent improvements in data collection and analysis now allow identification of fire problems within a given neighborhood. Narrowly targeted campaigns are designed to utilize direct mail, face-to-face, and telephone contact. These specialized campaigns have been proven to be more effective for specific problems than mass media campaigns.

A-13-6.3 The home visit approach should be educational and designed to identify and explain existing hazards with suggestions for their elimination. Home fire safety survey programs accomplish direct elimination of fire hazards and have important educational aspects. Information on low-cost, quick-acting residential sprinkler systems and smoke detectors should be provided and strongly emphasized as part of home survey programs. During the visit, recommendations on other fire safety practices should be made. The program sometimes can be staffed by volunteers or senior citizens and/or citizens with disabilities. All personnel performing home fire safety surveys should be trained and supervised by a designated, qualified fire department officer.

Since children receive most of their formal education in schools, the elementary and secondary schools should be the focal point of their education and training in fire safety. The fire department should ensure that local school administrators are adequately supplied with fire safety information and materials. Prepackaged programs such as NFPA's "Learn Not to Burn[®]" and the Project Burn Prevention program provide comprehensive, educationally sound curricula for grade levels kindergarten through 12.

The fire department's responsibility is to convince and assist administrators and educators at local schools and in school districts to institute such programs, to help raise funds for materials, and to provide the necessary fire department resources for classroom visits and assemblies to reinforce program messages. Information on residential sprinklers and smoke detector programs are especially successful in conjunction with school programs that utilize children to carry information home to share with their parents.

A-13-6.4 The minimum education for all workers should include instruction in how to use exit facilities and turn in a fire alarm. The fire department should encourage instruction by persuading private sector firms and organizations to provide classes, demonstrations, bulletin board displays of posters and informational materials, folder distributions, and publicity in company newsletters and bulletins published for employ-

ees. Fire exit drills should be held periodically where practicable.

A-13-7.1 Fire Prevention Week campaigns provide numerous opportunities to emphasize the year-round need for attention to fire safety and call attention to current departmental programs.

Cleanup campaigns, conducted during the spring in many areas, provide excellent opportunities to emphasize public fire safety. The fire department should ensure that fire safety is emphasized in any general program of home and civic beautification that is sponsored in the community.

A thorough disposal of rubbish, trash, and other hazardous materials in homes, commercial establishments, industrial plants, and on farms should be the objective of these campaigns.

Seasonal holidays provide opportunities for fire departments to stress particular fire prevention messages. At Christmas, information on the safe use of Christmas trees, decorations, lighting sets, and wrappings should be provided. This is also an excellent opportunity for the fire department to recommend making gifts of smoke detectors. Fireworks hazards should be emphasized on the Fourth of July and during other holiday periods when fireworks are used. Halloween is a time when parents should be alerted to the hazards of flammable costumes and sources of ignition, such as bonfires and candles. The fire department should conduct specific educational activities in conjunction with other national or local events designed to promote fire safety awareness (e.g., "Change your clock, change your battery").

A-14-1.2 The fire chief and building official are given the legal authority and responsibility to establish and maintain fire and life safety throughout the community. Ultimately, citizens depend on the fire department to ensure that they are protected against the dangers of fire, panic, explosions, and other hazardous conditions and their effects that might occur within the jurisdiction or district.

A-14-2.1 An initial task of an effective code enforcement program is the comprehensive review of appropriate state laws and local ordinances in order to determine the legal authority of the fire chief to enforce laws for fire and life safety. Many federal, provincial, and state laws have direct impact on local fire departments. It is imperative to have contact with responsible legal authorities to determine the current status of the laws.

Some states or regions have preempted local authority by adopting specific laws governing fire safety of care facilities, schools, assemblies, high-rise buildings, and other occupancies subject to critical life safety hazards. The fire department might be involved in their enforcement.

A-14-3.1 Most fire departments secure community adoption of one of the recognized model codes that are developed by private or government code and standard development organizations. Sufficient time should be taken to review carefully each model code before adoption to ensure it meets the needs of the community. Model codes may be permitted to be amended for adaptation to local concerns and needs. The fire department should work closely with the local government's legal authority to develop an adoptive ordinance for the code. It is critical that the public have an opportunity to review and comment on the proposed code before it is amended or adopted.

A-14-3.2 The revision process should include:

(a) Input from a fire prevention regulations advisory committee that has representation from the fire department, building department, design profession, and from local business and other entities.

(b) Procedures to enact emergency regulations.

(c) Identification of retroactive requirements for existing buildings as well as requirements for new construction.

The local fire department should participate actively in the code revision process at the state level, within model code organizations, or wherever appropriate.

A-14-3.3 Many communities have determined that certain types of occupancies, or buildings exceeding specific heights or floor areas, should be required to install automatic fire sprinkler systems. Some local governments require automatic sprinklers in all buildings, including residential occupancies. The rationale is to build in the fire protection rather than rely completely on fire suppression services. New advances in automatic sprinkler technology have made systems cost-effective in residential properties. Such provisions have a direct impact on the overall life and property losses within the community as well as on the size and cost of providing manual suppression forces. The fire department should actively promote the installation and maintenance of automatic sprinkler systems. (*See Section 4-3.*)

Requirements for the installation of smoke detectors are intended to increase life safety by means of early warning for residents living in apartments, hotels, motels, dormitories, condominiums, dwellings, and other residential property. Smoke detector ordinances should be retroactive for existing occupancies and should apply to all new occupancies. Most model building codes currently require detectors in new residential occupancies, but local laws can make smoke detector requirements retroactive in order to protect the health and safety of the community. Properly installed and maintained smoke detectors have been proven to reduce loss of life due to fire. This is cost-effective fire protection, and fire departments should participate actively to ensure detector protection is provided in all residential occupancies.

Fire lanes should be required to provide access to structures for fire department vehicles during emergency incidents. Fire lane parking violation ordinances should be developed and enforced to keep these access roadways clear.

Other fire protection measures such as weed abatement ordinances and dilapidated building removal ordinances should be enacted and enforced as necessary to remove potential fire problems before they become a public danger.

A-14-5.1.1 Due to the limited number of full-time fire prevention positions available and the heavy demand for fire safety services, each community needs to decide what level of service the fire department should provide. Many departments have prioritized inspections based on life safety considerations in order to utilize their inspection staff in critical areas. Once these priorities have been established, each inspector can work within the priority areas. This allows a community to receive a high level of service for their investment.

A-14-5.2.1 In the past, most fire prevention activities were limited to a small nucleus of full-time specialists who might be civilian or uniformed personnel. While it is still necessary to maintain full-time, specialist fire prevention personnel, the responsibilities of the fire department are greater than can be performed by a few specialists. Fire suppression personnel have been increasingly active in inspections and code enforce-

ment. With proper training and support, suppression personnel are effective in performing code enforcement inspections. It is imperative that all fire department personnel recognize that fire safety education and prevention is a major part of the fire fighter's responsibilities.

The concept of utilizing fire companies for fire prevention inspection duties has been used widely in the fire service for the past several decades. This practice has allowed the fire department to maintain an acceptable level of fire and life safety in a broad range of critical occupancies. In order for this concept to be effective, several basic rules should be followed:

(a) The fire chief and personnel involved should thoroughly understand and fully support the concept.

(b) Each fire company member should receive adequate training on inspection procedures, laws and basic codes, and departmental policies.

(c) Fire company inspection manuals should be developed and issued to all personnel to provide general code violation and inspection procedures.

(d) Geographical areas of responsibility should be assigned to each fire company. These areas should correspond to first alarm suppression districts.

(e) Full-time fire prevention personnel should be assigned to assist the fire companies with technical advice.

(f) Criteria should be established to prioritize occupancies for life safety inspection (e.g., hospitals, schools).

(g) Fire company officers should be held accountable for completion of their assigned inspection responsibilities.

The advantages of this type of program for fire companies include increased productivity, risk familiarization, and more contact with the public. The ability to inspect far more occupancies reduces the need to expand full-time fire prevention positions and contributes to a higher level of service.

Fire companies also should be used to perform occupancy inspections in places of assembly (e.g., nightclubs, sporting events, special events), after normal business hours, to check for overcrowding, locked/blocked exits, and other similar violations. Fire companies and/or personnel should not be used to "stand by" for these events.

A-14-5.3.1 Certain model fire codes and national standards suggest that some occupancies be inspected quarterly or semi-annually. Many states license care facilities and schools and require an annual inspection.

A-14-5.3.3 The fire department should work with prosecutors, judges, and other elements of the legal system to ensure that sanctions sought by the fire department for uncorrected regulation violations are applied swiftly and fairly, with sufficient force to be effective, and in accordance with the requirements of due process. There should be a clear and effective chain of command for the department's regulations administration and enforcement activities.

A-14-5.4 The training staff should use specialists in the subject matter to provide this training. Some state and provincial fire marshals offer regular training classes for fire inspectors. Model code groups offer excellent courses for inspectors in fire codes, building codes, and plans review. The National Fire Academy offers classes to the fire service in fire prevention. In addition to these, state fire chief and fire prevention officer associations are good sources for information concerning special classes, seminars, tests, and demonstrations that might occur within the state or local area. Local colleges might offer courses in fire technology or fire science.

Three basic organizational plans have been developed within the fire service for code enforcement personnel. One utilizes a technical subject specialist who inspects only certain types of occupancies. The second employs a generalist who inspects all occupancies. The third plan utilizes a combination of specialist and generalist inspectors.

A-14-6.1 The design, construction, alteration, or demolition of buildings and structures should be governed by a model building code. Each model building code prescribes occasions where new construction must meet the requirements of its companion fire prevention codes. In addition, many building code provisions are predicated on assumptions about fire department operating procedures. Therefore, fire officials should be prepared to advise and consult with the building official concerning the control of hazards governed by the fire prevention code as well as interpretations of code requirements that are affected by fire department operating procedures.

Since most model fire prevention codes are intended to ensure that new or altered buildings are maintained in accordance with the requirements of the building code in effect when construction or alteration was performed, a close working relationship between the fire official and building official is necessary to ensure that public health, safety, and welfare are maintained.

A-14-6.2 During the planning phase of construction, the fire department should meet and confer with architects, building owners, and structural engineers to discuss details of the design, type of use, arrangement, integrity of exit systems, and fire protection and of any special agreements concerning the construction of the building and its siting, taking into consideration emergency vehicle access, hydrant location, and fire flow demands. The final agreements should be in writing and become part of the permanent record of the occupancy. If the representatives of the fire department determine that the matters being reviewed need further technical analysis, documentation on code compliance, or conformance with special conditions placed on the building, the owner should be required to obtain and provide, without cost to the fire department, the needed information.

A-14-6.3 These records are necessary because inspectors have to review the history of the occupancies prior to making inspections. Also, in case of litigation, fire department records are subject to subpoena as evidence in court. In addition, the data from the records can assist in prioritizing and scheduling inspection work loads and tracking violations in code compliance. Schedules for record retention should be established outlining the period for retention of all documents and the procedure for their timely purging.

A-14-7.1 Zoning regulations should be adopted. Zoning regulation planning should include provisions for evaluating how buildings and occupancies will affect the fire service demands of the community. Representatives from the fire department should be consulted by the local zoning authority on new proposals, revisions, or exceptions to the zoning regulations. Entities exempt from local zoning regulations should be identified.

Major use classifications should be established to categorize fire service demands. There should be a local determination based on size, environmental effects, height limitations, hazardous industrial processes, water supply requirements for fire fighting, and similar contingencies. Allowances should be considered for the provision of built-in fire protection such as fire

sprinkler systems, smoke and fire detection systems, fire standpipes, and compartmentation. Water supplies for fire suppression should be established in accord with the fire service demands and should be a part of the zoning requirement. The regulations should provide for a periodic review of zoning regulations to assess changing conditions, and adjustments to zoning requirements should be made accordingly.

A-14-8.1 Fire safety is only one of the objectives of modern building regulations. Fire officials should encourage the adoption and enforcement of model building codes to ensure adequate protection from fire and other natural and technological hazards. Likewise, building officials should consult closely with local fire prevention and fire suppression forces to ensure the proper application of model building code requirements. Due to the complex and specialized knowledge required to enforce a model building code, jurisdictions should consider creating specialized agencies to develop, adopt, and enforce these regulations.

A-15-1.2 The investigation of fires identifies factors that can be used to decrease the number and severity of fires in the future. Data from fire investigations should be a part of the department's management information system. A thorough investigation of all incendiary or suspicious fires is a powerful deterrent to the crime of arson.

Fire investigation information is a valuable tool in developing an effective fire prevention program, determining necessary code revisions or additions, identifying the need for public education programs, describing a community's fire problem, and planning future fire protection needs.

A-15-2.2 If suspicious fires are to be investigated successfully and arsonists apprehended and convicted, technical specialists are needed. These specialists should be trained and qualified in (1) cause and origin determination and (2) investigative procedures. Because these are two separate skills, it might be desirable to have an expert in each work as a team.

Teams or task forces made up of members from both fire and law enforcement agencies have been established throughout the United States and Canada. The most successful of these have combined the technical skills of the fire department investigator and the investigative skills of the law enforcement detective. Other teams have been formed from employees of the district attorney's office, federal enforcement agencies, the insurance industry, and citizen action groups.

The formation of a joint team or task force necessitates interagency coordination to determine responsibilities. A high ranking local government official with authority over all members should provide direction, define roles, and assign responsibilities.

When the formation of a fire investigation-arson team is not practical and the volume of work in fire investigation goes beyond that which the fire chief can handle or delegate, the fire chief should appoint fire investigation staff personnel, including a chief officer for fire investigation. In communities where a fire investigation official has been appointed prior to the formation of the fire department, the fire chief should recommend that the official be integrated into the fire department.

The fire marshal or chief of the fire prevention bureau is also charged with fire investigation work in many departments. State and some county fire marshals in the United

States and provincial fire marshals in Canada usually have the authority to subpoena witnesses to determine fire cause. This requires close coordination with the local agency responsible for the prosecution when the case goes to trial.

A-15-2.4 Information resulting from the investigation of a fire can have important implications in the development of a case against an arsonist. It is important that no information be released to the public until the cause of the fire has been firmly established. If the cause has been determined to be arson, then information should be released only upon the approval of the prosecutor or supervising fire investigator. Premature release of information often can damage an arson case. Only one individual should be responsible for the release of information to the media.

A-15-3.1 Such systems, as a minimum, should serve:

(a) A management function by providing accurate data for planning purposes regarding the scope and extent of the arson problem;

(b) As an investigative tool to provide prior fire activity data concerning the current fire incident and parties thereto, to quickly match trademark or modus operandi (MO) data with other incidents, and to cross-refer to hard copy files; and

(c) As an information source to provide any needed statistical data not provided in other reporting systems such as the incident reporting system.

The information system should be used easily by individual investigators but should be secure from compromise by unauthorized users.

A-15-3.2 NFPA 901, *Uniform Coding for Fire Protection*; NFPA 902M, *Fire Reporting Field Incident Manual*; NFPA 904, *Incident Follow-up Report Guide*; the *National Fire Incident Reporting System (NFIRS)*, which can be obtained from the Federal Emergency Management Agency, Washington, DC; and the Canadian Code Structure for Fire Statistics all provide information on incident reporting systems and should be used as the basis of development for an incident reporting system.

All information on each incident should be maintained at the fire investigation offices. A chronological list of all incidents should be kept. Reports should be cross-filed by street and number, owner/occupant, date, suspect, or MO, as this enables the complete fire history of any particular building, location, or person to be quickly identified.

In some fire investigations, information is developed that should not be made accessible to the public. These investigation files are regarded as confidential but should be kept in separate files in order to preserve their legal classification as confidential information.

A-16-1.2 The provision and operation of a reliable communications system is essential to facilitate the delivery of public fire services. The nature and extent of the system provided will vary with the size and nature of the jurisdiction served, the services provided, and other local conditions and preferences.

A fire communications system might serve an individual jurisdiction or multiple jurisdictions. In many cases, a regional system, operating under a valid intergovernmental agreement, provides operational advantages and reduced overall costs as compared with a number of smaller systems serving individual jurisdictions. The benefits might be reflected in a more functional mutual aid system, as well as in operational advantages within the communications system itself.

A-16-2.3 An emphasis should be placed on making the communications center highly reliable and safe from natural and human-caused perils. A back-up or alternate facility should be available in case the primary facility is disabled.

The communications center for a fire department can be incorporated with communications facilities provided for other emergency services, including emergency medical services, law enforcement, and other governmental operations.

A-16-3.1 The primary method of alerting the fire department in most jurisdictions is the public telephone system.

Alternate systems for notification of emergencies include public fire alarm box systems, automatic and manual fire alarm systems connected to private or public alarm monitoring systems, and 911 public safety telephone systems.

A-16-3.2 The telephone number to be used for reporting fires and other emergencies should be displayed prominently on the inside front cover of the local telephone directory and in the government pages under the community listings. Individual fire station telephone numbers should not be listed. Stickers for telephones indicating the proper emergency number should be distributed widely in the community.

A-16-3.3 Where 911 service has not been introduced, the telephone company should provide an operator to intercept calls from persons dialing 911 and connect the caller to an appropriate emergency service.

Automatic Number Identification (ANI) and Automatic Location Identification (ALI) are valuable supplementary systems to provide rapid assistance to dispatchers and those calling a 911 emergency reporting system.

When the telephone number for reporting emergencies is changed, the old number should be maintained in service as an alternate method to report emergencies until the public is fully aware of the new number. In many cases, this transition will take several years.

A-16-3.4.1 The staffing level should be varied, as appropriate, based on call volume experience for different hours of the day, days of the week, seasonal patterns, and unusual or emergency conditions. An adequate number of telephone lines and answering points should be provided for anticipated highest call volume periods.

A-16-3.4.2 This plan should include measures such as sending radio-equipped vehicles on patrol or to specific locations, establishing radio communications with other radio-equipped vehicle fleets (e.g., police, public vehicles, taxi cabs, ham radio operators), and notifying the public of the alternate methods that are to be used.

A-16-3.6 Public fire alarm box systems are an alternate method for summoning emergency assistance. These systems might be highly desirable on the street in commercial and industrial areas where telephones might not be readily available, particularly at night, and provide direct access to the fire department from schools, hospitals, and other public institutions. Alarm boxes are sometimes installed in residential areas, depending on local priorities and requirements.

Public fire alarm box systems include telegraph systems that transmit coded signals, radio alarm boxes, telephone boxes utilizing dedicated telephone lines, and other systems.

Alarm systems installed in buildings and individual properties may be permitted to be connected to public fire alarm systems if approved by the authority having jurisdiction.

Fire alarm box locations should be highly visible and marked with distinguishing lights or reflective material to provide for their rapid identification by persons reporting emergencies.

The decision to install or to remove public fire alarm boxes should be based on an evaluation of local conditions, including the availability and perceived reliability of public telephones, public utilization of the alarm system, false alarm experience, cost of maintenance and repair, and the number of properties protected by other systems.

A-16-4.1 These procedures should establish the standard response to any given location, as determined by a classification of the incident type. This necessitates the capability to research the location and classify the incident, reliable equipment to transmit the information to units selected for dispatch, and a method to keep track of the status of all units controlled by the communications center.

A variety of methods can be employed to research the location and determine the appropriate classification of an incident. These methods vary from manual quick-reference files to computer-aided dispatch systems. The system selected should be appropriate for the number of calls and the complexity of the service area to allow for the response to be determined within 30 seconds.

A-16-4.3 These units can include mobile radios in vehicles, portable radios assigned to units or individuals, and pagers assigned to various personnel.

A-16-4.5 It is preferable to have vocal alerting systems to announce the nature and location of alarms to all responding personnel. Auxiliary equipment should be included in the station alerting systems to perform such functions as opening and closing doors and turning off cooking appliances when an alarm is received.

A-16-4.7 A standard method should be used to record and display this unit status at all times. Unit status should be maintained by radio or telephone using a manually operated status display in small departments. Larger communications systems should be provided with automated status and display systems.

A-16-5.1 Radios are an integral part of a fire department's communications system and are essential for efficient operations. Radios keep fire-fighting units in communication with one another and with the communications center to coordinate fireground activities, provide progress reports, request assistance, or return units that are not needed. Radios are also necessary to maintain communication with units that are out of quarters to provide for their dispatch to emergency incidents.

A-16-5.2 Certain emergencies might necessitate summoning the fire chief, other officers, or off-duty members. Radio receivers or pagers can be provided for all personnel, as in volunteer departments, or for selected officers and personnel in other types of departments. Through these instruments, a particular individual or group of individuals can be alerted without disturbing the general public or other personnel.

A-16-5.3 In large fire departments, separate frequencies should be provided for dispatch, fireground communication, command officers, interagency and mutual aid communication, and other specialized purposes. Multichannel radios should be used to provide access for any channel that the user needs to access.