

NFPA® 1521

Standard for Fire Department Safety Officer Professional Qualifications

2015 Edition



NFPA, 1 Batterymarch Park, Quincy, MA 02169-7471
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NFPA® 1521

Standard for

Fire Department Safety Officer Professional Qualifications

2015 Edition

This edition of NFPA 1521, *Standard for Fire Department Safety Officer Professional Qualifications*, was prepared by the Technical Committee on Fire Service Occupational Safety and Health and released by the Correlating Committee on Professional Qualifications. It was issued by the Standards Council on April 29, 2014, with an effective date of May 19, 2014, and supersedes all previous editions.

This edition of NFPA 1521 was approved as an American National Standard on May 19, 2014.

Origin and Development of NFPA 1521

The first edition of the *Standard for Fire Department Safety Officer* was issued in 1977 as NFPA 1501 and established a standard for a new role in the fire service. Very few fire departments had safety officers, and their role was not well defined. The second edition was issued in 1987 to coincide with and support a new document, NFPA 1500, *Standard on Fire Department Occupational Safety and Health Program*. The 1987 edition of NFPA 1501 provided more specific direction on the duties, responsibilities, and qualifications for the position based on the experience and insight gained since the first edition.

In 1992, the document was redesignated as NFPA 1521, and the concept of assistants serving as safety officers under a fire department safety officer was introduced, recognizing that the safety job requires many persons operating in the system. The text was revised in several areas to emphasize the role of the fire department safety officer as the program manager.

The 1997 edition focused on differentiating between the incident safety officer (ISO) and the health and safety officer (HSO) in response to questions concerning the roles, responsibilities, qualifications, and training required for each of these positions. That edition also showed how each position fit into a fire department's risk management plan, and it included sample forms for fire station inspections.

The 2002 edition was a reconfirmation of the standard with editorial changes to bring the document in line with the *Manual of Style for NFPA Technical Committee Documents*.

The 2008 edition updated the standard to reflect current practices in organizing and appointing a health and safety officer within a fire department. The qualifications and functions of both a health and safety officer and an incident safety officer were updated to reflect both current requirements and best practices. A role was defined for a person with special technical expertise to serve as an assistant to the incident safety officer when the technical complexities of the incident are beyond the expertise of an incident safety officer.

In the 2008 edition, the requirement for the health and safety officer to be a fire department officer was deleted, as this position is sometimes filled by a person who is not a uniformed member of the fire department. The requirement for the incident safety officer to be a fire department officer was also changed to allow persons who have certain professional qualifications to fill that role even if they are not appointed as fire department officers.

Annex material was added to assist the incident safety officer in writing a post-incident analysis (PIA) report, along with examples of forms that can be used to track the items the ISO is responsible for at the incident scene.

For the 2015 edition, the document has been entirely rewritten to match the formatting of the Job Performance Requirement (JPR) documents that reside within the Professional Qualifications project. Previous editions of NFPA 1521 were written in standard *Manual of Style for NFPA Technical Committee Documents* formatting. This marked change in the formatting of the document comes after several years of discussion, questions, and committee work within the Fire Service Occupational Safety and Health Technical Committee, the Professional Qualifications project, and the Correlating Committee for the Professional Qualifications.

The real impetus for this change came as an indirect result of the Professional Qualifications “Now and Beyond Workshop” that was held back in 2011. One item that was discussed at the workshop was how certifications were being provided by the Pro Board and International Fire Service Accreditation Congress (IFSAC) on NFPA documents that were not in the JPR format. At the time NFPA 472, *Standard for Competence of Responders to Hazardous Materials/Weapons of Mass Destruction Incidents*, and NFPA 1521 were two such documents. The work by the committee responsible for NFPA 472 was well underway; however, the recurring question was “Should NFPA 1521 be rewritten into the JPR format at its next revision?” This was brought back to the committee by the committee chair at the time, Chairman Glenn Benarick, as he was in attendance at the workshop, to see if the committee was interested in following a similar approach that was being addressed by the committee responsible for NFPA 472.

This revision for NFPA 1521 was a completely new process in which a committee that had never developed a JPR document was doing just that — developing a JPR document based on an existing document. Another interesting twist in this process is that all documents that are written in JPR format must be a part of the Professional Qualifications project, thus reporting to the Professional Qualifications Correlating Committee. What is also unique is that NFPA 1521 is the only document that the Fire Service Occupational Safety and Health Technical Committee is responsible for that reports through a Correlating Committee.

These changes, both in reformatting and rewriting the document, and the fact that the document now is part of the Professional Qualifications project and Correlating Committee, required the collaboration and hard work of many. While this revision cycle was a learning experience for all those involved in the process, the document now better meets the needs and demands of the end user and the responder community.

The committee would like to recognize David Ross, who represented the Fire Department Safety Officers Association through the Toronto Fire Service, who suddenly passed away during the revision of this edition. His hard work and dedication to this document, to the Fire Service Occupational Safety and Health Technical Committee, and to the fire service cannot go unrecognized, and he will be greatly missed.

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Committee Scope: This Committee shall have primary responsibility for documents on occupational safety and health in the working environment of the fire service. The Committee shall also have responsibility for documents related to medical requirements for fire fighters, and the professional qualifications for Fire Department Safety Officer.

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

Chapter 1 Administration

1.1 Scope. This standard identifies the minimum job performance requirements (JPRs) for health and safety officer (HSO) and incident safety officer (ISO) for a fire department.

1.2* Purpose. The purpose of this standard is to specify the minimum JPRs for service as a fire department HSO and ISO.

1.2.1 This standard shall define HSO and ISO for a fire department.

1.2.2 The intent of this standard shall be to ensure that personnel serving as HSOs and ISOs for a fire department are qualified.

1.2.3* This standard shall not address organization or management responsibility.

1.2.4 It is not the intent of this standard to restrict any jurisdiction from exceeding or combining these minimum requirements.

1.2.5 JPRs for each level or position are the tasks personnel shall be able to perform to carry out the job duties. (See Annex D.)

1.2.6* The HSO and ISO shall remain current with the general knowledge, skills, and JPRs for each qualification level.

1.2.7 The JPRs shall be accomplished in accordance with the requirements of the authority having jurisdiction (AHJ), NFPA 1500, *Standard on Fire Department Occupational Safety and Health Program*, and NFPA 1561, *Standard on Emergency Services Incident Management System and Command Safety*.

1.3 Application. The application of this standard is to specify which requirements within the document shall apply to an HSO and ISO for a fire department.

1.3.1 The requirements of this standard shall apply to members serving in organizations providing rescue, fire suppression, emergency medical services, hazardous materials mitigation, special operations, and other emergency services, including public, military, private, and industrial fire departments.

1.3.2 This standard shall not apply to members serving in industrial fire brigades, which might also be known as emergency brigades, emergency response teams, fire teams, plant emergency organizations, or mine emergency response teams.

1.3.3 The JPRs shall be accomplished in accordance with the requirements of the AHJ and all applicable NFPA standards.

1.3.4 It shall not be required that the JPRs be mastered in the order in which they appear. The AHJ shall establish instructional priority and the training program content to prepare personnel to meet the JPRs of this standard. (See Annex D.)

1.3.5* Performance of each requirement of this standard shall be evaluated by personnel approved by the AHJ.

1.3.6 The JPRs for each level shall be completed in accordance with recognized practices and procedures or as defined by law or by the AHJ.

1.3.7 Personnel assigned the duties in Chapter 4 shall meet all the requirements defined in Chapter 4 prior to being qualified. Personnel assigned the duties in Chapter 5 shall meet all the requirements defined in Chapter 5 prior to being qualified.

1.3.8 The AHJ shall provide personal protective clothing and the equipment necessary to conduct assignments.

1.3.9 JPRs involving exposure to products of combustion shall be performed in approved PPE.

1.3.10 Prior to training to meet the requirements of the standard, personnel shall meet the following requirements:

- (1) Educational requirements established by the AHJ
- (2) Age requirements established by the AHJ
- (3)*Medical requirements as developed and validated by the AHJ and in compliance with applicable legal requirements
- (4) Job-related physical performance requirements as developed and validated by the AHJ

1.3.11 Wherever in this standard the terms *rules, regulations, policies, procedures, supplies, apparatus, or equipment* are referred to, it is implied that they are those of the AHJ.

1.4 Units. In this standard, values for measurement are followed by an equivalent in SI units, but only the first stated value shall be regarded as the requirement. Equivalent values in SI units shall not be considered as the requirement, as these values can be approximate. (See Table 1.4.)

Table 1.4 U.S.-to-SI Conversions

Quantity	U.S. Unit/Symbol	SI Unit/Symbol	Conversion Factor
Length	inch (in.)	millimeter (mm)	1 in. = 25.4 mm
	foot (ft)	meter (m)	1 ft = 0.305 m
Area	square foot (ft ²)	square meter (m ²)	1 ft ² = 0.0929 m ²

Chapter 2 Referenced Publications

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

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

NFPA 414, *Standard for Aircraft Rescue and Fire-Fighting Vehicles*, 2012 edition.

NFPA 472, *Standard for Competence of Responders to Hazardous Materials/Weapons of Mass Destruction Incidents*, 2013 edition.

NFPA 1006, *Standard for Technical Rescuer Professional Qualifications*, 2013 edition.

NFPA 1021, *Standard for Fire Officer Professional Qualifications*, 2014 edition.

NFPA 1403, *Standard on Live Fire Training Evolutions*, 2012 edition.

NFPA 1500, *Standard on Fire Department Occupational Safety and Health Program*, 2013 edition.

NFPA 1561, *Standard on Emergency Services Incident Management System and Command System*, 2014 edition.

NFPA 1581, *Standard on Fire Department Infection Control Program*, 2010 edition.

NFPA 1582, *Standard on Comprehensive Occupational Medical Program for Fire Departments*, 2013 edition.

NFPA 1710, *Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments*, 2010 edition.

NFPA 1720, *Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Volunteer Fire Departments*, 2014 edition.

NFPA 1901, *Standard for Automotive Fire Apparatus*, 2009 edition.

NFPA 1906, *Standard for Wildland Fire Apparatus*, 2012 edition.

NFPA 1911, *Standard for the Inspection, Maintenance, Testing, and Retirement of In-Service Automotive Fire Apparatus*, 2012 edition.

NFPA 1912, *Standard for Fire Apparatus Refurbishing*, 2011 edition.

NFPA 1917, *Standard for Automotive Ambulances*, 2013 edition.

NFPA 1951, *Standard on Protective Ensembles for Technical Rescue Incidents*, 2013 edition.

2.3 Other Publications.

2.3.1 U.S. Government Publications. U.S. Government Printing Office, Washington, DC 20402.

Title 29, Code of Federal Regulations, Part 1910.1030, "Occupational Exposure to Bloodborne Pathogens," December 6, 1991.

2.3.2 Other Publications.

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

Ryan White HIV/AIDS Treatment Extension Act (S.1793) and Part G: The Ryan White Life Threatening Disease List and Reporting Guidelines, 2009.

2.4 References for Extracts in Mandatory Sections.

NFPA 472, *Standard for Competence of Responders to Hazardous Materials/Weapons of Mass Destruction Incidents*, 2013 edition.

NFPA 600, *Standard on Industrial Fire Brigades*, 2010 edition.

NFPA 1002, *Standard for Fire Apparatus Driver/Operator Professional Qualifications*, 2014 edition.

NFPA 1006, *Standard for Technical Rescuer Professional Qualifications*, 2013 edition.

NFPA 1026, *Standard for Incident Management Personnel Professional Qualifications*, 2014 edition.

NFPA 1451, *Standard for a Fire and Emergency Service Vehicle Operations Training Program*, 2013 edition.

NFPA 1500, *Standard on Fire Department Occupational Safety and Health Program*, 2013 edition.

NFPA 1561, *Standard on Emergency Services Incident Management System and Command Safety*, 2014 edition.

NFPA 1581, *Standard on Fire Department Infection Control Program*, 2010 edition.

NFPA 1670, *Standard on Operations and Training for Technical Search and Rescue Incidents*, 2014 edition.

NFPA 1901, *Standard for Automotive Fire Apparatus*, 2009 edition.

Chapter 3 Definitions

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

3.2 NFPA Official Definitions.

3.2.1* Approved. Acceptable to the authority having jurisdiction.

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

3.2.3 Shall. Indicates a mandatory requirement.

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

3.3 General Definitions.

3.3.1 Accident. An unplanned occurrence, which results in a loss such as unintended injury, illness, death, property damage, or damage to the environment.

3.3.2 Active Cooling. See 3.3.6.1.

3.3.3 Assistant. Title for subordinates of the command staff positions; this title indicates a level of technical capability, qualifications, and responsibility subordinate to the primary functions.

3.3.4 Cold Zone. See 3.3.5.1.

3.3.5 Control Zones. The areas at an incident that are designated based upon safety and the degree of hazard. [1500, 2013]

3.3.5.1 Cold Zone. The control zone of an incident that contains the command post and such other support functions as are deemed necessary to control the incident. [1500, 2013]

3.3.5.2 Environmental Factors. A collection of characteristics such as weather, terrain, access/egress pathways, structural components, smoke production, fire spread potential, and other physical features at a given incident scene.



3.3.5.3 Hostile Fire Event. A general descriptor for hazardous fire conditions, including flashover, backdraft, smoke-explosion, flameover, and rapid fire spread.

3.3.5.4 Hot Zone. The control zone immediately surrounding a hazardous area, which extends far enough to prevent adverse effects to personnel outside the zone. [1500, 2013]

3.3.5.5 No-Entry Zone. Those areas at an incident scene that no person(s) are allowed to enter, regardless of what personal protective equipment (PPE) they are wearing due to dangerous conditions.

3.3.5.6 Warm Zone. The control zone outside the hot zone where personnel and equipment decontamination and hot zone support takes place. [1500, 2013]

3.3.6 Cooling.

3.3.6.1 Active Cooling. The process of using external methods or devices (e.g., hand and forearm immersion, misting fans, ice vests) to reduce elevated core body temperature.

3.3.6.2 Passive Cooling. The process of using natural evaporative cooling (e.g., sweating, doffing personal protective equipment) to reduce elevated core body temperature.

3.3.7 Emergency Incident. Any situation to which the emergency services organization responds to deliver emergency services, including rescue, fire suppression, emergency medical care, special operations, law enforcement, and other forms of hazard control and mitigation. [1561, 2014]

3.3.8 Emergency Medical Care. The provision of treatment to patients, including first aid, cardiopulmonary resuscitation, basic life support (first responder or EMT level), advanced life support (paramedic level), and other medical procedures that occur prior to arrival at a hospital or other health care facility.

3.3.9 Emergency Operations. Activities of the fire department relating to rescue, fire suppression, emergency medical care, and special operations, including response to the scene of the incident and all functions performed at the scene. [1500, 2013]

3.3.10 Fire Apparatus. A vehicle designed to be used under emergency conditions to transport personnel and equipment, and to support the suppression of fires and mitigation of other hazardous situations. [1901, 2009]

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

3.3.12* Fire Department. An organization providing rescue, fire suppression, emergency medical care, special operations, and related services.

3.3.13* Fire Department Facility. Any building or area owned, operated, occupied, or used by a fire department on a routine basis. [1500, 2013]

3.3.14 Fire Department Member. See 3.3.32, Member.

3.3.15 Fire Department Safety Officer. See 3.3.47, Safety Officer.

3.3.16 Fire Department Vehicle. Any vehicle, including fire apparatus, operated by a fire department. [1002, 2014]

3.3.17* Fire Suppression. The activities involved in controlling and extinguishing fires. [1500, 2013]

3.3.18* Hazard. A condition that presents the potential for harm or damage to people, property, or the environment.

3.3.19 Hazardous Energy Sources. Electrical, mechanical, hydraulic, pneumatic, chemical, nuclear, thermal, gravitational, or any other form of energy that could cause injury due to the unintended motion energizing, start-up, or release of such stored or residual energy in machinery, equipment, piping, pipelines, or process systems.

3.3.20 Health and Safety Management System. A management system that integrates and directs the risk management process to enable an organization to control and/or reduce the frequency and severity of the risks associated with fire department emergency and nonemergency operations in order to realize the fire department's health and safety goals. Health and safety programs are elements of a health and safety management system.

3.3.21 Health and Safety Officer (HSO). See 3.3.47.1.

3.3.22 Health Hazard. Any property of a material that either directly or indirectly can cause injury, illness, or incapacitation, either temporary or permanent, from exposure by contact, inhalation, or ingestion.

3.3.23 Hot Zone. See 3.3.5.4.

3.3.24 Imminent Hazard. An act or condition that is judged to present a danger to persons or property that is so urgent and severe that it requires immediate corrective or preventive action.

3.3.25 Incident Action Plan. The objectives reflecting the overall incident strategy, tactics, risk management, and member safety that are developed by the incident commander. Incident action plans are updated throughout the incident. [1500, 2013]

3.3.26 Incident Commander (IC). The individual responsible for all incident activities, including the development of strategies and tactics and the ordering and the release of resources. [472, 2013]

3.3.27* Incident Management System (IMS). A system that defines the roles and responsibilities to be assumed by responders and the standard operating procedures to be used in the management and direction of emergency incidents and other functions. [1561, 2014]

3.3.28 Incident Safety Officer (ISO). See 3.3.47.2.

3.3.29 Incident Safety Plan. Hazard control strategies developed by the incident safety officer to address the incident action plan and the type of incident encountered.

3.3.30* Incident Scene. The location where activities related to a specific incident are conducted. [1561, 2014]

3.3.31 Industrial Fire Brigade. An organized group of employees within an industrial occupancy who are knowledgeable, trained, and skilled in at least basic fire-fighting operations, and whose full-time occupation might or might not be the provision of fire suppression and related activities for their employer. [600, 2010]

3.3.32* Member. A person involved in performing the duties and responsibilities of a fire department, under the auspices of the organization. [1500, 2013]

3.3.33 No-Entry Zone. See 3.3.5.5.

3.3.34 Occupational Illness. An illness or disease contracted through or aggravated by the performance of the duties, responsibilities, and functions of a fire department member. [1500, 2013]

3.3.35 Occupational Injury. An injury sustained during the performance of the duties, responsibilities, and functions of a fire department member. [1500, 2013]

3.3.36* Occupational Safety and Health Program. An occupation specific program, implemented to reduce the risks associated with the occupation, that outlines the components of a program and the roles and responsibilities of the fire department and its members.

3.3.37 Operational Factors. The collection of strategic and tactical assignments, positions, equipment, resources, and processes utilized by incident personnel.

3.3.38 Passive Cooling. See 3.3.6.2.

3.3.39 Procedure. An organizational directive issued by the authority having jurisdiction or by the department that establishes a specific policy that must be followed. [1561, 2014]

3.3.40* Rapid Intervention Crew/Company (RIC). A minimum of two fully equipped personnel on site, in a ready state, for immediate rescue of disoriented, injured, lost, or trapped rescue personnel. [1006, 2013]

3.3.41 Recovery. Those activities directed at locating and removing persons who have obviously or likely sustained fatal consequences from the incident.

3.3.42* Rehabilitation. An intervention designed to mitigate against the physical, physiological, and emotional stress of fire fighting in order to sustain a member's energy, improve performance, and decrease the likelihood of on-scene injury or death.

3.3.43 Rescue. Those activities directed at locating endangered persons at an emergency incident, removing those persons from danger, treating the injured, and providing for transport to an appropriate health care facility. [1500, 2013]

3.3.44 Risk. A measure of the probability and severity of adverse effects that result from exposure to a hazard. [1451, 2013]

3.3.45* Risk Management. Identification and analysis of exposure to hazards, selection of appropriate techniques to control exposures, implementation of chosen techniques, and monitoring of results to ensure the health and safety of members.

3.3.46 Risk Management Plan. A risk management plan is a written document that evaluates all the activities typically performed by a fire department and identifies the risk associated with those activities.

3.3.47 Safety Officer. A generic title given to a member within a fire department or emergency service organization who performs the functions of a health and safety officer, an incident safety officer, or who serves as an assistant to a person in either of those positions.

3.3.47.1* Health and Safety Officer (HSO). The individual assigned and authorized by the fire chief as the manager of the health and safety program.

3.3.47.1.1 Assistant Health and Safety Officer. The individual assigned and authorized by the AHJ to assist the fire department HSO in the performance of the duties and responsibilities of the HSO.

3.3.47.2* Incident Safety Officer (ISO). A member of the command staff responsible for monitoring and assessing safety hazards or unsafe situations and for developing measures for ensuring personnel safety.

3.3.47.2.1 Assistant Incident Safety Officer. A member of the fire department appointed to respond or assigned at an incident scene by the IC to assist the ISO in the performance of the ISO functions.

3.3.48 Service Test. The regular, periodic inspection and testing of apparatus and equipment, according to an established schedule and guideline, to ensure that they are in safe and functional operating condition. [1500, 2013]

3.3.49* Special Operations. Those emergency incidents to which the fire department responds that require specific and advanced training and specialized tools and equipment. [1500, 2013]

3.3.50 Standard Operating Guideline. A written organizational directive that establishes or prescribes specific operational or administrative methods to be followed routinely, which can be varied due to operational need in the performance of designated operations or actions.

3.3.51* Standard Operating Procedure. A written organizational directive that establishes or prescribes specific operational or administrative methods to be followed routinely for the performance of designated operations or actions.

3.3.52 Tactical Level Management Component (TLMC). A management unit identified in an incident management system commonly known as "division" or "group."

3.3.53 Technical Rescue. The application of special knowledge, skills, and equipment to safely resolve unique and/or complex rescue situations. [1670, 2014]

3.3.54* Technical Specialist. A person with specialized skills, training, and/or certification who can be used anywhere within the incident management system organization where their skills might be required.

3.3.55 Warm Zone. See 3.3.5.6.

Chapter 4 Health and Safety Officer

4.1 General.

4.1.1 The fire department health and safety officer (HSO) shall meet the job performance requirements (JPRs) defined in Sections 4.2 through 4.12.

4.1.2* A fire department HSO shall recuse himself/herself from any investigatory process where a conflict of interest exists.

4.2* Risk Management.

4.2.1* Develop an organizational risk management plan that addresses the risks specified in Chapter 4 of NFPA 1500, *Standard on Fire Department Occupational Safety and Health Program*, given injury reports, vehicle incident reports, near-miss or equipment malfunction or failure reports, and other reports as determined by the AHJ, so that risks are identified, categorized, and control measures are implemented and monitored.

(A) Requisite Knowledge. Standard operating procedures/guidelines (SOP/Gs), regulations and standards as determined by AHJ; fire behavior, building construction, proper



use and performance limitations of protective clothing and protective equipment; national and local injury and health data.

(B) Requisite Skills. Ability to identify risks; develop goals, objectives, and action plans to manage those risks; analyze data; perform cost-benefit analysis.

4.2.2* Manage an organizational risk management plan, given an organization, organizational activities, a risk management plan and a communications method for distributing the plan, so that the plan is communicated to the members of the organization, elements of the plan are integrated into the organizational operation, needed modifications are identified, and the modifications are implemented.

(A) Requisite Knowledge. SOP/Gs, regulations and standards as determined by the AHJ; fire behavior, building construction, proper use and performance limitations of protective clothing and protective equipment, hazards associated with various types of emergency and nonemergency locations; national and local injury and health statistics; and communications methods used by the AHJ.

(B) Requisite Skills. Ability to identify risks, develop goals, objectives, and action plans to manage those risks; perform cost-benefit analysis; compile and analyze data, obtain feedback from personnel, and observe performance and behavior changes; revise plans and communicate the revisions.

4.2.3* Implement safety provisions of the organization's risk management plan into training and education programs, given an organizational risk management plan, a training or education program, and organizational goals and objectives, so that the organization's risk management program is incorporated into the training and education programs, records are maintained, and the training and education programs meet the stated operational safety goals and objectives for emergency and nonemergency incidents.

(A) Requisite Knowledge. AHJ risk management plan; data analysis from AHJ safety and incident reports; local, state, and federal safety programs; organizations with safety programs; outreach sources available from professional organizations for safety development programs; risks associated with administration, facilities, training, vehicle operations (both emergency and nonemergency); proper use and performance limitations of protective clothing and protective equipment; operations at emergency incidents, operations at nonemergency incidents, and other related activities.

(B) Requisite Skills. Ability to educate and integrate health and safety aspects of the risk management program into training and education programs; risk identification, risk evaluation, establishment of priorities for action (frequency and severity), risk control techniques, and risk management monitoring (process and outcome evaluations).

4.2.4* Develop an operational risk management plan given the requirements of Chapter 8 of NFPA 1500, *Standard on Fire Department Occupational Safety and Health Program*, so that an incident management system (IMS) that meets the requirements of NFPA 1561, *Standard on Emergency Services Incident Management System and Command Safety*, is established with written SOP applying to all members involved in emergency operations.

(A) Requisite Knowledge. IMS for the AHJ; NFPA 1561, *Standard on Emergency Services Incident Management System and Command Safety*; Homeland Security Presidential Directives 5

(National Incident Management System) and 8 (National Response Framework); other applicable federal, state and local regulations and applicable NFPA standards.

(B) Requisite Skills. Utilize the IMS at all emergency incidents, drills, and exercises; management of the incident and the safety of all members involved at the scene by the IC; divide the incident into tactical-level management components as incidents escalate in size and complexity, assign an ISO to assess the incident scene for hazards or potential hazards; establish the organization of the command staff and general staff to control the position and function of all members operating at the scene and to ensure that safety requirements are satisfied.

4.2.5 Develop a plan for the treatment and transport of an injured or ill member to a medical or health care facility, given applicable resources, policies and procedures, and SOP/Gs, so that the procedure ensures that all members with life-threatening and non-life-threatening occupational injuries, illnesses, and exposures will receive immediate emergency medical care and, if necessary, transportation to the most appropriate medical or health care facility.

(A) Requisite Knowledge. SOP/Gs and health and safety policies used by the AHJ; life-threatening and non-life-threatening occupational injuries, and illnesses; and the technical knowledge necessary to develop and review SOP/Gs and EMS policy and procedures.

(B) Requisite Skills. The ability to determine the level of care needed if a member becomes ill or injured; and develop SOP/Gs for transportation of injured members.

4.3 Laws, Codes, and Standards.

4.3.1 Establish SOP/Gs for an occupational health and safety program, given an organization, applicable laws, codes, and standards, an established SOP/Gs template, so that the information is in a presentable format for fire department official review and adoption, the procedures and guidelines comply with applicable laws, codes, and standards, and the SOPs/Gs are reviewed and revised, as needed.

(A) Requisite Knowledge. Applicable health and safety laws, codes, and standards pertaining to the fire service; standardized format or template for writing SOP/Gs; criteria to determine effectiveness of fire department operations and training practices; and a list of required safety subjects to address, including selection criteria.

(B) Requisite Skills. Writing and critical thinking skills; ability to understand health and safety laws, codes, and standards pertaining to the fire service; and transcribe applicable material into SOP/Gs.

4.3.2* Assess and report the adequacy and effectiveness of compliance with occupational health and safety SOP/Gs, given access to current state/provincial and federal safety and health legislation, codes, regulations, and standards and a thorough knowledge of organizational operations, policies and training, so that accurate information on fire department compliance with the applicable laws, codes, standards, and SOP/Gs is communicated to the AHJ.

(A) Requisite Knowledge. Applicable laws, codes, and standards pertaining to the fire service, fire department SOP/Gs, and a method for evaluating compliance.

(B) Requisite Skills. Writing and critical thinking skills; ability to understand health and safety laws, codes, and standards pertaining to the fire service; and communicate the information.

4.4 Training and Education.

4.4.1 Develop and distribute health and safety information for the education of fire department members, given NFPA 1500, *Standard on Fire Department Occupational Safety and Health Program*, SOP/Gs, and health and safety policies used by the AHJ, and a means for conveying clear, concise, and correct information to update and train members.

(A) Requisite Knowledge. SOP/Gs, health and safety policies used by the AHJ; NFPA 1500, *Standard on Fire Department Occupational Safety and Health Program*; AHJ codes, standards, and regulations that relate to the fire department occupational safety and health program.

(B) Requisite Skills. Analyze information from different data sources; interpersonal and organizational interaction; use various means to communicate information.

4.4.2 Implement the training and education of fire department members on the organization's health and safety procedures and NFPA 1500, *Standard on Fire Department Occupational Safety and Health Program*, given NFPA 1500, SOP/Gs, and health and safety policies used by the AHJ, so that all emergency and nonemergency functions are evaluated, level of compliance is documented and communicated to the appropriate person(s).

(A) Requisite Knowledge. SOP/Gs and health and safety policies used by the AHJ; NFPA 1500, *Standard on Fire Department Occupational Safety and Health Program*; AHJ codes, standards, and regulations that relate to the fire department occupational safety and health program.

(B) Requisite Skills. Analyze information from different data sources; interpersonal and organizational interaction; use various means to communicate information.

4.4.3 Develop a safety procedure for live fire training exercises, given a list of live training evolutions utilized by the AHJ, instruction plans for live fire training exercises, and NFPA 1403, *Standard on Live Fire Training Evolutions*, so that safety procedures for instructors and students are documented, and the requirements of NFPA 1403 are met.

(A) Requisite Knowledge. SOP/Gs and health and safety policies used by the AHJ; live training evolutions used by the AHJ; life-threatening and non-life-threatening occupational injuries and illnesses; requirements of NFPA 1403.

(B) Requisite Skills. Ability to develop SOP/Gs; use resources for determining code compliance; complete reporting and documentation requirements.

4.5 Accident Prevention.

4.5.1* Manage a fire department accident prevention program by utilizing engineering controls, administrative policies and procedures, education, protective clothing and protective equipment, given the fire department's risk management plan, accident, occupational injury, and occupational illnesses data, and reports on department functions, so that the program meets the requirements of Section 4.2, the work practices are identified, and recommendations are communicated to the appropriate person(s).

(A) Requisite Knowledge. Understand the necessary components of a fire department accident prevention program;

proper use and performance limitations of protective clothing and protective equipment; procedures for developing recommendations based on fire department audits, incident reports, surveys, accident reports, occupational injury reports, inspection reports, and other applicable department information.

(B) Requisite Skills. Analyze the components necessary to be included in a fire department accident prevention program based on the requirements of Section 4.2. Analyze information from different sources; interact with or interview personnel associated with fire department operations, apparatus, equipment, fire department facilities, and SOP/Gs.

4.5.2* Implement training for safe work practices on emergency and nonemergency operations, given a risk management plan, SOP/Gs, and a training curriculum, so that the training class is delivered and members are given the necessary information to perform their job tasks in accordance with the risk management plan.

(A) Requisite Knowledge. Procedures for conducting job task analysis based on department SOP/Gs, the department's risk management plan, health and safety policies used by the AHJ, and the technical knowledge necessary to perform various job tasks.

(B) Requisite Skills. Analyze information from different sources; interact with or interview personnel involved in the training of department members; and understand delivery methods of instructional materials.

4.5.3 Develop an emergency vehicle safety program, given fire department SOP/Gs, applicable traffic laws, and an emergency vehicle operator manual, so that applicable SOP/Gs are communicated to members.

(A) Requisite Knowledge. Procedures for driving and operating fire apparatus based on department SOP/Gs, health and safety policies used by the AHJ, applicable traffic laws, and NFPA 1451, *Standard on Fire and Emergency Vehicle Operations Training Program*.

(B) Requisite Skills. Analyze information from different sources; interact with or interview personnel involved in the training of department members; and understand delivery methods of instructional materials.

4.5.4* Conduct a periodic safety audit, given NFPA 1500, *Standard on Fire Department Occupational Safety and Health Program*, fire department operations, apparatus, equipment, facilities, training and education programs, SOP/Gs, and an audit template, so that work practices and procedures are conducted in compliance with applicable federal, state/provincial, and local laws, codes and standards; and the safety audit report and recommendations are communicated to the appropriate person(s).

(A) Requisite Knowledge. Work practices and procedures for fire department operations, apparatus, equipment, training, and fire department facilities based on SOP/Gs, NFPA 1500, *Standard on Fire Department Occupational Safety and Health Program*, audit template, and federal, state/provincial, local laws, and codes and standards.

(B) Requisite Skills. Analyze information from different sources; interact with or interview personnel involved in the training of department members; document information, utilizing an audit template, and develop reports.



4.6 Accident Investigation, Procedures, and Review.

4.6.1 Conduct a safety and health investigation, given an incident or planned event involving an occupational injury, illness, exposure, fatality, near miss, or other potentially hazardous condition involving fire department members, fire department vehicles, apparatus, equipment or facilities, SOP/Gs, health and safety policies, so that the facts and the root cause of the incident are correctly identified, deviations from SOP/Gs established by the AHJ and health and safety policies are noted, recommendations are made for preventing similar losses in the future, and all information gathered in the investigation is documented, reported, and recorded according to policies established by the AHJ.

(A) Requisite Knowledge. Procedures for conducting, documenting, recording, and reporting a safety and health investigation; SOP/Gs and health and safety policies used by the AHJ; procedures for preserving evidence and documentation; and the technical knowledge pertinent to the incident under investigation, and federal, state/provincial, and local laws.

(B) Requisite Skills. Analyze information from different data sources; conduct root cause analysis; interact with or interview personnel associated with the incident; complete safety investigation documentation; identify cause(s) of injury, death, or property damage; and develop recommendations to prevent similar losses in the future.

4.6.2 Develop a policy for reporting accident and injury investigations, given an incident or planned event, applicable documents, techniques, SOP/Gs, and all applicable laws, regulations, and standards, so that the accident and/or injury is documented, procedures are reviewed, and all local, state/provincial, and federal requirements are met, documentation is completed, and recommendations for revision are made.

(A) Requisite Knowledge. Procedures for developing and reviewing accident and injury reporting and investigation; SOP/Gs and health and safety policies used by the AHJ; all applicable federal, state/provincial, and local laws, regulations, and standards.

(B) Requisite Skills. Analyze information from different data sources; interact with or interview personnel associated with the incident, often under conditions of personal stress; complete safety investigation documentation; identify cause(s) of injury, death, or property damage; and develop recommendations to prevent similar losses in the future.

4.6.3 Establish procedures for a health and safety component of a post-incident analysis, given an incident or planned event, incident information, data, reports or records, SOP/Gs, necessary technical knowledge, and all applicable laws, regulations, and standards, so that risks to personnel are identified and reduced or eliminated at future incidents, and the applicable AHJ SOP/Gs are reviewed and revised as needed.

(A) Requisite Knowledge. Knowledge of applicable hazards related to the incident; NFPA 1500, *Standard on Fire Department Occupational Safety and Health Program*; NFPA 1584, *Standard on the Rehabilitation Process for Members During Emergency Operations and Training Exercises*; NFPA 1561, *Standard on Emergency Services Incident Management*; SOP/Gs and health and safety policies used by the AHJ; all applicable federal, state/provincial, and local laws, regulations, and standards.

(B) Requisite Skills. Recognize hazards at an emergency scene; determine methods for correcting health and safety

hazards; analyze information from different data sources; interact with or interview personnel; write SOP/Gs.

4.6.4* Coordinate the development of a corrective action plan, given a team, a list of recommendations arising from the investigation of occupational accidents, injuries, deaths, illnesses, exposures, observation of incident scene activities, and departmental policies and procedures, so that root causes are determined, the plan is documented, and controls are implemented according to departmental policies and procedures.

(A) Requisite Knowledge. Applicable federal, state, and local laws, standards, and regulations; SOP/Gs and health and safety policies used by the AHJ; life-threatening and non-life-threatening occupational injuries and illnesses; procedures for conducting, documenting, recording, and reporting a safety and health investigation; procedures for preserving evidence and documentation; and the technical knowledge pertinent to the incident(s) under investigation.

(B) Requisite Skills. Analyze information from different data sources; interact with or interview personnel associated with the incident, often under conditions of personal stress; complete safety investigation documentation; identify cause(s) of injury, death, or property damage; and develop recommendations to prevent similar losses in the future.

4.7 Records Management and Data Analysis.

4.7.1 Manage the collection and analysis of data related to accidents, occupational deaths, injuries, illnesses, and exposures to infectious agents and communicable diseases, given incident-related data, a data collection and storage system, the requirements of Chapter 4 of NFPA 1500, *Standard on Fire Department Occupational Safety and Health Program*, so that the data summarizes fire department experience in different categories, comparisons can be made with other fire departments, national trends, and other occupations and industries, and the information can be accessed for future reference and use.

(A) Requisite Knowledge. Procedures for tabulating and compiling accident and injury data, including statistical applications, national statistical and investigative reports, NFPA 1500, *Standard on Fire Department Occupational Safety and Health Program*, SOP/Gs, and health and safety policies used by the AHJ.

(B) Requisite Skills. Basic statistical analysis in spreadsheets or other appropriate software; identify cause(s) and trends in injury, death, or property damage; and determine corrections to prevent similar losses in the future.

4.7.2 Verify records are maintained regarding the periodic inspection and service testing of fire apparatus and equipment, inspection and service testing of protective clothing and protective equipment, and fire department facilities, given NFPA 1500, *Standard on Fire Department Occupational Safety and Health Program*, inspection and service testing records for fire apparatus, equipment, protective clothing and protective equipment, so that records are secure, accessible, and in a format that can be easily analyzed.

(A) Requisite Knowledge. Procedures for management of records, NFPA 1500, *Standard on Fire Department Occupational Safety and Health Program*, all applicable federal, state/provincial, and local laws, regulations, and standards.

(B) Requisite Skills. Records management and organization.

4.7.3 Maintain records of corrective actions taken to mitigate health and safety hazards or unsafe practices, given evidence of corrective actions implemented, so that records of corrective actions are accessible and in a format that is appropriate for analysis.

(A) Requisite Knowledge. Procedures for management of records.

(B) Requisite Skills. Records management and organization.

4.7.4 Develop a report on fire department accidents, occupational injuries, illnesses, deaths, and exposures, given the accident and injury data and necessary equipment, so that the report, which may include recommendations, is communicated to the appropriate person(s).

(A) Requisite Knowledge. Procedures for developing reports and recommendations based on fire department audits, incident reports, surveys, accident reports, injury reports, inspection reports, and other applicable department information.

(B) Requisite Skills. Analyze information from different sources; interact with or interview personnel associated with fire department operations, apparatus, equipment, fire department facilities, and SOP/Gs; basic statistical analysis in spreadsheets or other appropriate software; identify cause(s) and trends in injury, death, or property damage; and develop recommendations to prevent similar losses in the future.

4.8 Apparatus and Equipment.

4.8.1 Recommend safety-related specifications for fire apparatus and fire equipment, given new or existing fire apparatus and fire equipment specifications, information on new fire apparatus and fire equipment technology, and risks identified in the risk management plan, so that the specifications meet the fire department needs identified in the risk management plan, and federal, state/provincial, local laws, and NFPA standards are complied with, and the specifications are documented.

(A) Requisite Knowledge. Chapter 6 of NFPA 1500, *Standard on Fire Department Occupational Safety and Health Program*; federal, state/provincial, and local laws that relate to fire apparatus specifications; new fire apparatus and fire equipment technology, and current fire apparatus specification procedures.

(B) Requisite Skills. Ability to develop safety-related fire apparatus and equipment specifications; determine compliance with federal, state/provincial, and local laws that relate to fire apparatus and equipment specifications.

4.8.2 Recommend safety-related specifications for protective clothing and protective equipment, given new or existing protective clothing and protective equipment specifications, new protective clothing and protective equipment technology, and risks identified in the risk management plan, so that the specifications meet the fire department needs identified in the risk management plan, federal, state/provincial, local laws, and NFPA standards are complied with, and the specifications are documented.

(A) Requisite Knowledge. Chapter 7 of NFPA 1500, *Standard on Fire Department Occupational Safety and Health Program*, federal, state/provincial, and local laws that relate to fire equipment specifications; current protective clothing and protective equipment specification procedures; current state of technology in the appropriate areas of protective clothing and protective equipment; procedures, training, equipment, and safety precautions for use of protective clothing and protective equipment; the organization's risk management plan.

(B) Requisite Skills. Ability to develop safety-related protective clothing and equipment specifications; determine compliance with federal, state/provincial, and local laws related to protective clothing and protective equipment.

4.8.3 Verify performance testing of fire apparatus and fire equipment is being conducted, given performance testing requirements, applicable provisions of Chapter 6 of NFPA 1500, *Standard on Fire Department Occupational Safety and Health Program*, so that a determination can be made for the suitability of continued service.

(A) Requisite Knowledge. Chapter 6 of NFPA 1500, *Standard on Fire Department Occupational Safety and Health Program*, federal, state/provincial, and local laws that relate to performance testing of apparatus and equipment; current apparatus and equipment service testing procedures and results.

(B) Requisite Skills. Ability to verify service testing of apparatus and equipment; determine compliance with federal, state/provincial, and local laws.

4.8.4 Verify the development of an annual evaluation plan for the organization's in-service fire and emergency vehicles, given the organization's emergency vehicles and current NFPA minimum vehicle safety standards, so that a plan to retire, refurbish, or replace them based on the requirements in NFPA 1911, *Standard for the Inspection, Maintenance, Testing, and Retirement of In-Service Automotive Fire Apparatus*, is developed and implemented.

(A) Requisite Knowledge. NFPA 1911, *Standard for the Inspection, Maintenance, Testing, and Retirement of In-Service Automotive Fire Apparatus*; NFPA 1906, *Standard for Wildland Fire Apparatus*; NFPA 414, *Standard for Aircraft Rescue and Fire-Fighting Vehicles*; NFPA 1912, *Standard for Fire Apparatus Refurbishing*; NFPA 1917, *Standard for Automotive Ambulances*.

(B) Requisite Skills. Ability to identify safety-related features on fire and emergency vehicles and verify whether they are in compliance with NFPA standards.

4.8.5 Verify the development of an annual evaluation plan for the organization's in-service fire and emergency vehicles, given the organization's emergency vehicles and current NFPA minimum vehicle safety standards, so that a plan to retire, refurbish, or replace them based on the recommendations in Annex D of NFPA 1901, *Standard for Automotive Fire Apparatus* and NFPA 1911, *Standard for the Inspection, Maintenance, Testing, and Retirement of In-Service Automotive Fire Apparatus* is developed and implemented.

(A) Requisite Knowledge. NFPA 1901, *Standard for Automotive Fire Apparatus*; NFPA 1911, *Standard for the Inspection, Maintenance, Testing, and Retirement of In-Service Automotive Fire Apparatus*; NFPA 1906 *Standard for Wildland Fire Apparatus*; NFPA 414, *Standard for Aircraft Rescue and Fire-Fighting Vehicles*; NFPA 1912, *Standard for Fire Apparatus Refurbishing*; NFPA 1917, *Standard for Automotive Ambulances*.

(B) Requisite Skills. Ability to identify safety-related features on fire and emergency vehicles and verify whether they are in compliance with NFPA standards.

4.8.6 Verify the development, implementation, and maintenance of a protective clothing and protective equipment program that provides for the selection, care, maintenance, storage, and periodic inspection and evaluation of all protective clothing and equipment; given NFPA 1500, *Standard on Fire Department Occupational Safety and Health Program*, protective clothing and protective equipment, care, storage, and maintenance resources,

SOP/Gs established by the AHJ, and all applicable laws, regulations, and standards, so that a determination can be made for the suitability of continued service.

(A) Requisite Knowledge. Chapter 7 of NFPA 1500, *Standard on Fire Department Occupational Safety and Health Program*, and federal, state/provincial, and local laws that relate to protective clothing and equipment programs.

(B) Requisite Skills. Ability to develop a protective clothing and protective equipment program; determine compliance with federal, state/provincial, and local laws.

4.9 Facility Inspection.

4.9.1* Develop a health and safety facility inspection SOP/G, process, and checklist for a fire department facility, given the requirements of Chapter 9 of NFPA 1500, *Standard on Fire Department Occupational Safety and Health Program*, and available resources, so that the appropriate inspection procedures are developed, and safety and health hazards are noted in accordance with all applicable laws, regulations, and standards.

(A) Requisite Knowledge. Chapter 9 of NFPA 1500, *Standard on Fire Department Occupational Safety and Health Program*, federal, state/provincial, and local laws; current facility inspection procedures; resources for conducting a facility inspection; procedures, equipment, and safety precautions for conducting facility inspections.

(B) Requisite Skills. Develop SOP/Gs and procedures; acquire resources to initiate and coordinate a facility inspection; use resources for determining code compliance; complete reporting and documentation requirements; and understand and comply with all applicable laws, regulations, and standards.

4.9.2* Conduct a health and safety inspection for a fire department facility, given the requirements of Chapter 9 of NFPA 1500, *Standard on Fire Department Occupational Safety and Health Program*, a facility that requires an inspection, and available resources, so that the appropriate inspection procedures are selected and implemented in accordance with all applicable laws, regulations, and standards, the inspection is conducted safely, all the required reports are completed; and ensure the violations are corrected.

(A) Requisite Knowledge. Chapter 9, of NFPA 1500, *Standard on Fire Department Occupational Safety and Health Program*, federal, state/provincial, and local laws; current facility inspection procedures; resources for conducting a facility inspection; procedures, equipment, and safety precautions for conducting facility inspections.

(B) Requisite Skills. Use resources to determine code compliance; complete reporting and documentation requirements; and understand and comply with all applicable laws, regulations, and standards.

4.10 Health Maintenance.

4.10.1 Analyze the fire department health maintenance program, given a fire department health maintenance program and the medical and physical requirements of Chapter 10 of NFPA 1500, *Standard on Fire Department Occupational Safety and Health Program*, so that the program includes medical, physical performance, and health and fitness requirements, as well as a health database, infectious control procedures, a fire department physician, and fitness for duty evaluations; and recommendations are made to correct any noted deficiencies.

(A) Requisite Knowledge. Chapters 10, 11, and 12 of NFPA 1500, *Standard on Fire Department Occupational Safety and Health Program*; AHJ codes, standards, and regulations that relate to the fire department health maintenance program; fire department health maintenance program; medical surveillance, wellness programs, physical fitness, nutrition, and injury and illness rehabilitation programs; resources for conducting a fire department health maintenance program; procedures, equipment, and safety precautions for the fire department health maintenance program.

(B) Requisite Skills. Analyze and incorporate information from health maintenance programs; interact with or interview personnel associated with health and wellness.

4.10.2 Coordinate the fire department health maintenance program, given a fire department health maintenance program and the medical and physical requirements of Chapter 10 of NFPA 1500, *Standard on Fire Department Occupational Safety and Health Program*, so that the program includes medical, physical performance, and health and fitness requirements, as well as a health database, infectious control procedures, a fire department physician, and fitness for duty evaluations; and recommendations are made to correct any noted deficiencies.

(A) Requisite Knowledge. Chapters 10, 11, and 12 of NFPA 1500, *Standard on Fire Department Occupational Safety and Health Program*; AHJ codes, standards, and regulations that relate to the fire department health maintenance program; fire department health maintenance program; medical surveillance, wellness programs, physical fitness, nutrition, and injury and illness rehabilitation programs; resources for conducting a fire department health maintenance program; procedures, equipment, and safety precautions for the fire department health maintenance program.

(B) Requisite Skills. Analyze and incorporate information from health maintenance programs; interact with or interview personnel associated with health and wellness.

4.11 Liaison.

4.11.1 Communicate recommendations from the fire department occupational health and safety committee to the appropriate person(s), given SOP/Gs and health and safety policies used by the AHJ, a fire department occupational health and safety committee, and committee recommendations, so that all recommendations are documented and forwarded to the appropriate person(s).

(A) Requisite Knowledge. SOP/Gs and health and safety policies used by the AHJ; NFPA 1500, *Standard on Fire Department Occupational Safety and Health Program*; AHJ codes, standards, and regulations that relate to the fire department occupational safety and health committee.

(B) Requisite Skills. Evaluate recommendations and communicate them in a manner such that recommendations and objectives are met.

4.11.2 Provide information and assistance to personnel for surveying their districts regarding potential health and safety hazards, given a scenario, the fire department's risk management plan, and SOP/Gs, so that they will be able to identify and report health and safety hazards that could have adverse effects on fire department operations.

(A) Requisite Knowledge. Procedures for conducting job tasks based on department SOP/Gs, the department's risk management plan, health and safety policies used by the AHJ, and the technical knowledge necessary to perform various job tasks.