

# **HANFORD FIRE DEPARTMENT**

**EST. 1891**

## **White Paper: Shift Battalion Chiefs**

**Steve Pendergrass**

**Fire Chief  
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## **Background**

The BC is a fundamental middle-management/leadership position for the fire service. The Fire Captain is responsible for leading and managing the daily operations for geographical response area. BC's are responsible for managing the day-to-day operations and administration of all stations for their given shift. Managerial responsibility includes managing staffing needs, managing multi-company activities, and other functions to allow captains to focus on small to moderate incident response, training, public education, programs, and other daily operations in their jurisdiction.

BC's bring consistency and stabilization to shift and incident mitigation, management, and leadership. Consistency is brought out in training, incident management, disciplinary practices, overtime management, and other functions of the department 24/7. Stabilization in management and leadership occurs with a single leader on each shift providing direction and guidance. BC's mirroring subordinate schedules prevent issues from slipping through the cracks. Consistency builds up morale which increases retention.

For several decades, BC's and the Fire Chief have covered their assigned duty shifts, creating a simultaneous 40-hour/56-hour work schedule. This includes after-hours, weekends, and holidays. Chief officers coordinate taking time off for vacations to manage coverage. The practice requires chief officers to adjust their home lives to accommodate both the shift coverage and their normal work week. As the city and department has grown, so have call volumes and incident intricacy, making the accommodations more difficult to manage.

The difference in cost between a shift BC and an administrative BC is negligible. Especially when compared to the benefits gained by the community and the City. Fiscally, a trial study

would have no additional budget impact due to current vacancies. The estimated increase in overtime is the only anticipated increase and would be completely offset with current vacancies.

## **Definitions**

Automatic Aid: Assistance provided and received from neighboring jurisdictions without having to seek department head approval. Usually consists of one or two apparatus and is responded as part of the initial dispatch. This agreement requires a pre-established contract to reduce response times. These agreements may be used in determining ISO rating for the home agency. Hanford Fire Department (HFD) has an automatic aid agreement with Kings County Fire Department (KCFD). Routinely, KCFD provides nearly double the automatic aid to HFD than they receive due to our increased call volume.

Battalion Chief: When on shift a BC is usually the highest-ranking officer on duty. They are tasked with creating work schedules and managing personnel for all fire stations under their command. They are responsible to verify staffing levels and manage vacation, sick leave, and duty trades and certify accuracy in payroll system daily. Vacations and specialized training are required for certain assignments, requiring shifting personnel to the appropriate positions and stations. During larger and more intricate incidents, BC's provide management and leadership to allow Captains to handle tactical assignments and maintain span of control.

Company: The crew assigned to an apparatus (engine, ladder truck, patrol, etc.) is identified as a company. Minimum staffing for a company is a Captain, Engineer, and at least one firefighter. Additional Firefighters, volunteers, and explorers may be part of the company. Company designation is utilized for tracking and accountability.

Daily Operations: The activities performed by personnel during a 24-hour shift. This includes, but not limited to emergency response incident mitigation, training, inspections, public

education and prevention, physical fitness, hydrant maintenance, and routine activities such as equipment and apparatus inspections, equipment and station maintenance, and any other task that needs to be accomplished by the company.

**Effective Response Force (ERF):** Established by the NFPA, the ERF is the minimum recommended resources to mitigate specific incidents. NFPA considers safety, efficiency, and effectiveness of resources for recommendations. Determining recommendations is established through NIST studies, research from historic events, and industry best practices and standards.

**Fire Captain:** The highest-ranking officer at the scene of an emergency assigned to direct operations as needed. At the station, oversees the day-to-day operations and training of the company. Captains are responsible for completed assigned programs such as hydrant maintenance, inspections, and public education events.

**Fire Safety Research Institute:** From FSRI website – Underwriters Laboratory's (UL) Fire Safety Research Institute (FSRI) advances fire safety knowledge to address the world's unresolved fire safety risks and emerging dangers. As part of UL, we are committed to sharing our fire safety insights with everyone to advance UL's public safety mission of providing safe living and working environments for people everywhere. Through advanced fire science, rigorous research, extensive outreach and education in collaboration with our international network of partners, we impart stakeholders with the information, tools and resources that enable them to make better, more fire-safe decisions that ultimately save lives and property. Since 1894, UL has objectively researched safety issues and evaluated products to address fire, shock and casualty risk. It is from this commitment to safety science and a desire to help others that FSRI was born as UL

Firefighter Safety Research Institute in 2013 with the purpose of increasing firefighter knowledge to reduce injuries and deaths in the fire service and in the communities they serve.

Incident: Event, whether emergent or not, requiring HFD mitigation efforts. Incident vary in priority from public assistance and hazardous condition to structure fires and rescues.

Insurance Services Office (ISO): Organization consolidated in 1971 from several rating bureaus.

In 2008, a new company 'Verisk' was formed and is no longer controlled by the insurers. ISO provides advisory information to insurance companies, actuaries, agents and brokers, and government entities. Insurance rates are based on the ratings created by the ISO. More importantly, the rating provides jurisdictions with a measurement of effectiveness of efforts and a plan for improvements.

ISO Rating: In the fire service, the ISO rating utilizes fire prevention and suppression capabilities from the local jurisdiction. Information is from the jurisdiction is compared to the Fire Suppression Rating Schedule (FSRS) Overview manual to calculate a rating from class 1 to class 10, with 1 being excellent and 10 being absent of service. A total of 105. 5 points may be awarded based on the following criteria:

- Emergency Communications      Maximum 10 points
- Fire Department      Maximum 50 point
- Water Supply      Maximum 40 points
- Community Risk Reduction      Maximum 5.5 points

More information may be found at: <https://www.isomitigation.com/ppc/fsrs/items-considered-in-the-fsrs/>

Legacy Construction: Pre-1949 construction known for utilizing true dimensional lumber and ‘cut and stack’ truss construction.

Minimum Staffing: Least number of personnel assigned during a shift. Minimum staffing for the shift is currently nine people for three stations. Minimum staffing for an apparatus is a Captain, Engineer, and Firefighter. Positions may be filled with qualified persons of each rank for temporary coverage. For example; an engineer may work up as captain if qualified by the MOU and policy. Persons working our to position retain their permanently assigned pay rate.

Mitigation: Bringing stabilization or improving the status of the incident enough to be able to turn the situation or property back over to the responsible party.

Modern Construction: Post 1949, engineered building construction. Buildings have greater failure rates when exposed to fire.

Multi-Company: An event or incident requiring two or more apparatus to mitigate. These include larger fires, rescues, and other activities that are personnel taxing.

Mutual Aid (MA): Assistance provide and received from neighboring jurisdiction by request. Department head, or their designee, must give permission to send resources into MA areas. Every fire department in the state must participate in the mutual aid system to receive some grants and assistance. It is recommended that local jurisdictions formalize their MA’s with neighboring jurisdictions. MA’s traditionally spell out what an agency can provide so that dispatch protocols can be developed. However, additional resources may be requested if needed.

National Institute of Science and Technology (NIST): From NIST website – “Fire testing may have started some 2.5 million years ago when one of our ancestors stuck his hand into the

first flame and “scientifically” determined that the temperature was too hot to bear. Since that primitive beginning, humans have been on an unending quest to understand, measure and exploit the behavior of fire—and most importantly, to improve our ability to protect life and property from its ravages. Fire testing at NIST, a staple of the agency’s research since the early 1900s, has helped provide much of the data, insights and knowledge demanded by that pursuit. Research run has covered everything from fire safety engineering and firefighting to fire investigation and fire testing to fire data management and intentional burning.”

National Fire Protection Association (NFPA): From NFPA website – “The National Fire Protection Association (NFPA) is a global self-funded nonprofit organization, established in 1896, devoted to eliminating death, injury, property and economic loss due to fire, electrical and related hazards. NFPA delivers information and knowledge through more than 300 consensus codes and standards, research, training, education, outreach and advocacy; and by partnering with others who share an interest in furthering our mission. Our mission is to help save lives and reduce loss with information, knowledge and passion.”

Overtime (OT): Overtime is the pay for hours worked outside the normal scheduled work period.

Response Plan: See Appendix G for response plans for Hanford Fire Department and surrounding jurisdictions. HFD’s response plan is still being developed with dispatch changes.

Unreinforced Masonry Buildings: are old brick buildings typically built prior to 1945. Because these buildings were not built using modern building codes, they are much more likely to experience damage or collapse during an earthquake. Most URMs have brick walls and

wood-frame floors and roofs. These buildings can be reinforced with sleaves that can line either or both inner and outer walls.

## Organizational Structure

On August 7, 1945, the first paid fire department was established in the City of Hanford. Staffing data was limited prior to the late 1970's. In 1977 the population of the City of Hanford was 18,300 people and the department was staffed with one fire chief, one Asst Fire Chief, one Fire Marshal, and 20 line personnel on two platoon working out of a single station. Ten firefighters were assigned to 24 hour shifts and administrative staff assisted with large calls after hours, weekends, and holidays. City of Hanford Population 18,300. See Figure 1.

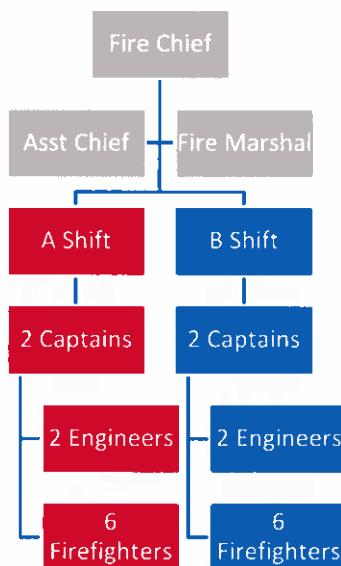


Figure 1. 1977 HFD Staffing with 1 Fire Station and 10 Daily Line Personnel

In 1982 the population of the City of Hanford was 22,414 people. The HFD reorganized into three platoons, still responding from a single station. The Fire Marshal position was dissolved, and an additional firefighter was added to even out the shifts. The department now had 20 line personnel, but daily staffing dropped from ten to seven and chief officers were reduced from three to one to cover large calls after hours, weekends, and holidays. See Figure 2.

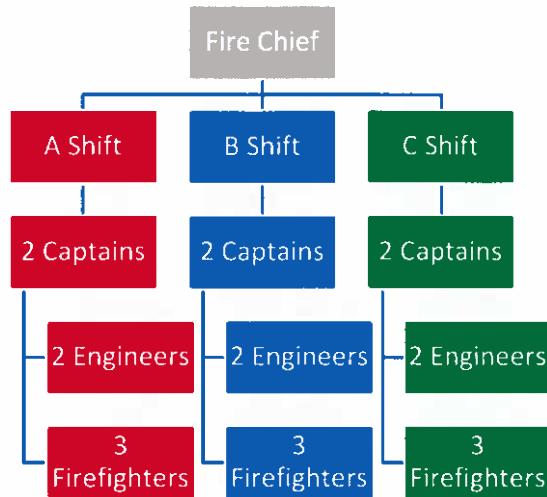


Figure 2. 1982 HFD Staffing with 1 Fire Station with 7 Daily Line Personnel

In 1989 the population of the City of Hanford was 24,499 people. To better serve the city, the HFD moved operations from a single fire station on Lacey, to the two new stations, one on Grangeville Blvd and the other on Houston Ave. Three additional firefighters were hired to allow for each station to have four personnel on duty every shift at each station. The department now had 24 line personnel, and daily staffing was raised to eight. The department was still led by a single chief officer who responded to larger emergencies after hours, weekends, and holidays.

See Figure 3.

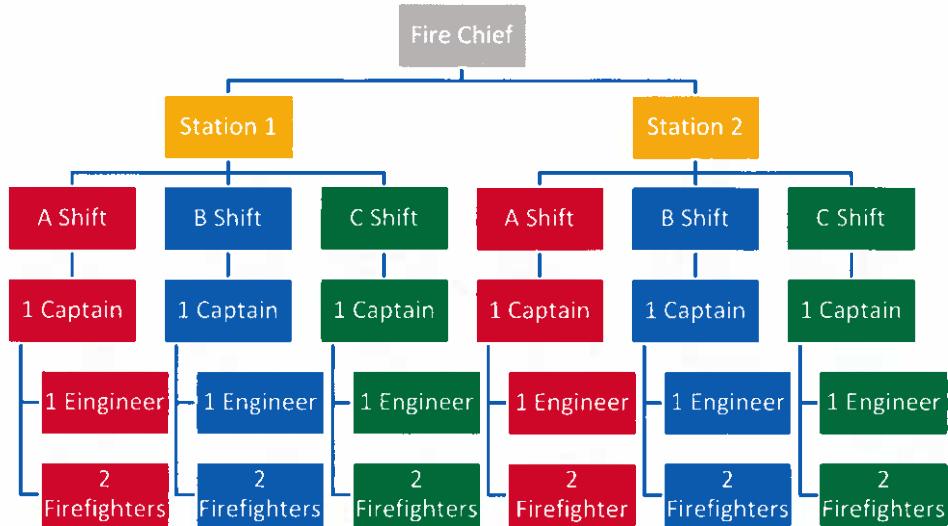


Figure 3. 1989 HFD Staffing with 2 Fire Stations with 8 Daily Line Personnel

In 2007 the population of the City of Hanford was 50,370. An Assistant Fire Chief was added to help manage the department and split after hours, weekend, and holiday large incident coverage. In 2008, with an increase in call volumes the Deputy Fire Chief position was reorganized into a Deputy Fire Chief and a Fire Marshal / Battalion Chief, beginning the assigned shift coverage for Chief Officers. Chief officers work a 40-hour, Monday through Friday schedule and respond from home for incidents after normal working hours. In 2013 the Deputy Fire Chief position was dissolved into two Battalion Chiefs and the Fire Marshal portion was dissolved into a civilian Fire Prevention Coordinator position, but the position was never filled. With a SAFER grant 2018 saw an increase of three additional firefighters.

In 2019 the population of the City of Hanford was 58,105 and the third fire station was opened and to address a gap in services between Stations one and two. Staffing was not increased, but rather reorganized again in 2020, see Figure 4, to provide supervision for each station and response area. Additional gaps have been identified in the north and northwest, as

well as on the east side of the City. To grow appropriately, the infrastructure and management must be in place to make sure the growth and responses are managed properly. The Fire Chief is responsible for all aspects of the department. With the same three chief officers, each manages a platoon. The Fire Chief directly supervises one platoon while also managing the BC's over the other two platoons and the rest of the administration of the department. Establishing innovative mitigation techniques and improving deliver services and options becomes delayed when managers are forced from the 10,000-foot view into the weeds.

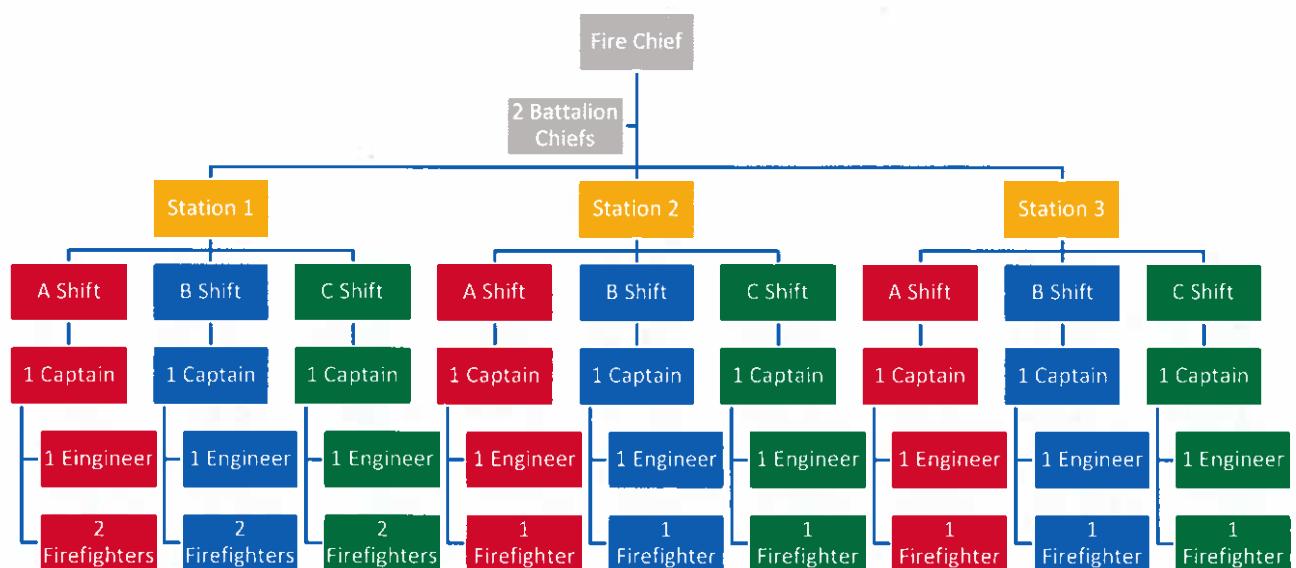


Figure 4. 2021 HFD Staffing with 3 Fire Stations with 10 Daily Line Personnel – Minimum Staffing of 9

## Roles and Responsibilities

The roles and responsibilities for a Fire Battalion Chief (BC), taken from the City of Hanford class specifications (Appendix B), state that a BC may be required to:

- Develop and implement goals, objectives, policies, and procedures
- Plan, organize and direct emergency activities, training, and public education

- Direct, oversee and participate in suppression work, including planning, monitoring workflow, and evaluating progress
- Evaluations of performance and maintain the integrity of crews
- Response to emergency incidents requiring multiple companies to maintain span of control and crew integrity
- Station and personnel operational readiness
- Foster relationships, trust, respect, cooperation, communication and integrity as part of the team with personnel and community

### **Effective Response Force**

City of Hanford General Plan Policy P53 states that adequate personnel and staff should be provided to meet the increased demands from population growth. The expansion to the third station is one component, with future additional station needs to be addressed at a later time, but management of personnel needs to be updated to effectively address management of personnel and resources

HFD Community Risk Assessment & Standard of Cover (CRASOC), Appendix C: The City contracted with Michael Kraus Leadership to develop a CRASOC for the City's fire protection. Opportunity for Improvement #14 states the HFD "work collaboratively with City of Hanford to create shift BC positions, in the effort to meet the NFPA 1710 standard on Effective Response Force." The primary role of a BC is the manage shift operations and mitigate incident and emergency activity. This has been demonstrated numerous times as they drop whatever activity they may be engaged to respond to emergencies. They are also used to cover shifts after hours and on weekends to help establish the effective work force.

National Fire Protection Association (NFPA), Appendix E (1&2): NFPA 1710 Chapter

4.8.2 recommends that fire departments develop plans to implement an Effective Response Force (ERF) to ensure uniform operations. Chapter 5.2.2.1 establishes that the number of personnel in EFR is established by the jurisdiction based on:

1. Life hazard and populace protected
2. Provisions for safe and effective fire-fighting performance conditions for the fire fighters
3. Potential property loss
4. Nature, configuration, hazards, and internal protection of properties involved
5. Types of fireground tactics and evolutions employed as standard procedures, type of apparatus used, and results to be obtained at the fire scene

Insurance Services Office (ISO): ISO utilizes personnel for a total of 7.5% of the overall score. ISO utilizes NFPA 1710 for recommended response personnel. For personnel not normally assigned to the fire station, the rating is reduced to account for notification, travel, and assembly to the fire ground. An ISO rating is the overall score for how well a fire department can protect a community or home. ISO is a tool used by organizations seeking to invest resources into a city.

Industry standard is to have a BC to supervise incidents when two or more companies are responding. An effective workforce consists of supervisory personnel to manage the entire incident, and not just the fire companies. This allows companies to focus on supervising geographical divisions or functional groups within the incident, while still maintaining control of their assigned resources. A recent study of the Worcester Fire Department cited a lack of BC's as

factor in the nine line of duty deaths that have plagued the department over the last twenty years.

(Appendix D)

After hours, weekends, and holidays, the overhead supervision to manage complex, multi-unit incidents is coming from home. During the work-week, BC's are responding from administrative functions. The delay in response forces the Fire Captain to assume the role as incident commander instead of utilizing the Fire Captain for a tactical supervisor. One team member is now removed from the incident. The following link shows the importance of having a shift BC that can quickly manage the incident instead of a company officer. A successful rescue was performed because the Fire Captains were able to perform as tactical supervisors for fire attack and rescue while the BC managed the incident and set up the resources to provide the best outcome for the fire victim.

- [El Camino Apartment Fire Save - Sacramento Metro Fire.MP4 - YouTube](#)

HFD crews have recently responded to many large and multifamily dwelling fires where the first arriving Captain assumed command and was never relieved or delayed relief by a BC. We have to assume the potential for rescue in every fire situation. If these situations, as the video above, had an actual rescue component the management of the rescue would have been much more difficult without the additional tactical supervisor to assist with Rescue Group or Fire Attack Group. The BC in the video also had the ability to manage EMS resources that provided the victim instant ALS care.

### **Needs Assessment**

An administrative BC must develop balance between administrative and operational duties. This is possible in smaller jurisdictions with minimal personnel and call volumes. In organizations with expanded operational complexity, predictable issues begin to develop. These

events surface in the form of injuries, exposure, and decreased moral. Engine companies are capable of supervising subordinates during the shift and on emergency activity. Incident complexity dictates the response and as soon as two or more companies are assigned, the management complexity increases to meet those needs. Unlike other disciplines, the fire service span of control shifts daily with incident and training activities.

Shift BC's becomes responsible for the daily staffing, training, and managing of operational activities for all stations. During a shift there are three captains making the decisions for their specific response areas. Under the direction of each captain, crews come together for emergency response, training, and administrative purposes. The equal rank potentially hinders operations, usually with the loudest voice winning out. This has created animosity and moral issues in numerous departments. These issues have led to injury, hindered succession development, and damaged department cohesion.

The two administrative BC's and the Fire Chief are assigned a shift to manage the cohesion. This includes after hours, weekends, and holidays. Crews work a shift schedule that does not align with their direct supervisor. This means that a crew may work three cycles before they align with their BC. Training is required every day and at any time to make it relevant to emergency activity. BC level supervision is often delayed due to responding from home or from other administrative duties. In addition, administrative duties are often interrupted due to emergency responses. The unpredictable nature of emergency activity does not provide for a measured balance between administration and operations.

Comparing the fire service to a retail store. A firefighter is the worker that stocks shelves or cleans the store. The Engineer is the skilled Laborer that has trained for many years to work specialized equipment such as a forklift or an IT person. The Captain is the department specific

supervisor, maybe manages the bakery, or sporting goods section. The BC is the daily store manager that assures everything is working smoothly. If the manager is gone, the bakery supervisor steps in. This causes the Engineer or IT person to run the bakery. Thus, causing the Firefighter or laborer to not have the support or supervision normally necessary for success. By not having depth in positions, we constantly struggle to achieve our best outcomes, while increasing risk and exposure. Most organizations from government agencies to local organizations utilize this model because it works and has been demonstrated to be most effective in most circumstances.

### **Benefit of Shift Battalion Chiefs**

The overarching benefit of shift BC's is to provide clear leadership and management 24 hours a day, 7 days a week, including holidays. Leadership influence, motivates, and enables others to contribute to the organization's success. Management consists of controlling personnel to accomplish a goal. Both are required for the success of the organization to meet our Vision "to strive to advance public safety through metrics, self-assessment, and industry advancements... remain proactive and in control of our future... to accept the challenges that will come with the same discipline and integrity of our forebears."

The separation between BC and Captain is significant in authority and responsibility. Currently, captains are functioning as BC's in the ability to approve station time, including overtime. While the Fire Chief approves and signs the final time sheets up to two weeks later, the daily review exists at station level by each captain. Captains have the authority to authorize overtime, due to simply being present when the need arises. Having a shift BC would introduce daily accountability and oversite of time for payroll.

Captains are tactical in monitoring direct tasks to implement the objectives assigned by their BC. This could be fire attack or ventilation on a structure fire, patient care or extrication on a vehicle accident, or any training assignment. BC's provide added a safety component by not being directly involved in implementation of tactics and maintaining a 10,000-foot perspective on incidents, trainings, and daily activity. Captains have the ability to lead with the same perspective, but no one is now tactical during the incident.

With all due respect to captains, they are line-level supervisors. They are given tertiary training on budgets, discipline, and managerial functions of the fire department. Coupled with emergency activity, training, public education and prevention programs, the administrative responsibilities are the first to be pushed back. A BC is critical to hold everything together for the entire shift.

### **Cost Estimates**

The base salary difference for an employee on a 40-hour work schedule and a 56-hour work schedule is nearly identical. Attached is a spread sheet breaking down the estimated costs associate with this trial study. The total annual compensation for a BC's on an administrative schedule is budgeted at \$196,742. The total annual compensation for a shift BC's salary and benefits are estimated at \$195,390. Hours worked on a shift schedule are 2,912 as compared to 2080 on an administrative schedule. To offset this, the base pay is divided by 1.4 to keep the overall base pay comparable. BC's on a 40-hour schedule are eligible for an addition 3% for cafeteria pay. BC's on a 56-hour schedule are compensated for FLSA and Holiday in Lieu. FLSA is calculated on a 24-day cycle, so cannot be calculated in a biweekly estimate, but is roughly \$275 every 24 days and added to the paycheck in the following pay period. Holiday in Lieu is based on the annual holidays and is equivalent to approximately \$5,600. With cafeteria

pay removed for the 56-hour schedule, due to the employee's ability to earn overtime, the total base compensation package difference is \$3,302 annually. The most difficult estimate to measure is overtime. Overtime is based on a total of two 24-hour shifts per month. It is impossible to determine what the overtime number will be, so it was estimated high. Two 24-hour shifts per month is approximately \$2,997. See Appendix A

### **BC Utilization within Surrounding Jurisdictions (Including Brice Study Agencies)**

Every surrounding jurisdiction with three or more stations utilizes BC's, or Division Chiefs (DC) in the case of Tulare City, however, Tulare City utilizes their DC's similar to the way other jurisdictions utilize BC's. It was difficult to find the specific carve-outs for BC's when researching Memorandum of Understandings (MOU) of surrounding jurisdictions. Most were located within special management MOU's. Below are the links to those MOU's with page numbers for easy reference. In each surrounding jurisdiction, BC's are compensated for additional shift coverage and reimbursable assignments. PDF copies are located in Appendix F.

- Visalia MOU
  - <https://www.visalia.city/civicax/filebank/blobdload.aspx?BlobID=38942> (page 2)
  - Organizational Structure: [blobdload.aspx \(Visalia. City\)](#)
- Tulare
  - [https://www.tulare.ca.gov/home/showpublisheddocument/13282/6370795692243\\_00000](https://www.tulare.ca.gov/home/showpublisheddocument/13282/6370795692243_00000)
  - Entire document with salary and overtime on pages 4-5
  - Organizational Structure: The primary responsibility of the *Fire Department* fire suppression and first responder units are to respond to fire, emergency medical, rescue, and life safety emergencies within Tulare.

Emergency Services are delivered through four (4) in-service fire companies from three (3) strategically located fire stations within the city. Three of the fire companies are staffed with three personnel (captain, engineer, and firefighter/paramedic) and one company cross staffs an engine and ladder truck with three personnel (captain, engineer, and firefighter/paramedic). A division chief is on duty each day to perform as an incident commander, supervise fire suppression activities, and provide personnel supervision.

- Porterville
  - <http://www.ci.porterville.ca.us/depts/AdministrativeServices/documents/EmployeePay.BenefitPlan21.22.pdf> (page 7)
  - Organizational Structure: At the end of the PFD-SART is the old Organizational Structure prior to adding a assistant chief position.  
<http://www.ci.porterville.ca.us/depts/Fire/documents/PFD-SART-Report.pdf>
- County of Kings
  - <https://www.countyofkings.com/home/showpublisheddocument/116/636167238015800000> (pages 6-7)
  - Website explaining Suppression BC's, Assistant Chief, Training Chief, and Sworn Fire Marshal: [Fire Suppression Information | Kings County \(countyofkings.com\)](http://www.countyofkings.com)

## Predicted Results

As the City grows, call volumes and incident intricacy are anticipated to grow commensurate to the population, as has been seen over the last century. Mitigating the gap in

service requires an adjustment or growth in organizational structure. The department has seen little growth in the last 20 years, accomplishing changes through restructuring current resources rather than adding resources. It is anticipated that placing Battalion Chiefs on a shift schedule will show moderate to extreme benefits in morale, program management, and safety of all personnel. Opening the third station was a necessity to provide fire protection to underserved areas in the city. Providing the next level of supervision is the next step.

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National Fire Protection Association (NFPA) 1710: Fireground staffing levels for career fire departments.

Population by Jurisdiction and Year. Kings County, California. Retrieved from:

[https://www.kingscog.org/vertical/sites/%7BC427AE30-9936-4733-B9D4-140709AD3BBF%7D/uploads/Kings\\_County\\_Historical\\_Population\\_by\\_Jurisdiction.pdf](https://www.kingscog.org/vertical/sites/%7BC427AE30-9936-4733-B9D4-140709AD3BBF%7D/uploads/Kings_County_Historical_Population_by_Jurisdiction.pdf)



# City of Hanford Fire Department

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Appendix B: City of Hanford Battalion Chief Job Specification

Appendix C: Link to CRA/SORC

Appendix D: Link to Worcester Report

Appendix E: NFPA 1710

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documents

Appendix G: Categorized Fire Problem Natures Master List



City of Hanford  
Fire Department

**Appendix A**  
**Battalion Chief Cost Calculations**

DIVISION  
POSITION  
BARGAINING UNIT

1611  
BATTALION CHIEF (ADMIN)  
IAFF Local 3898

	BI-WKLY/MONTHLY	ANNUAL	CY HOURS
HOURLY RATE	\$ 58.27		
SALARY	\$ 10,100.13	121,202	2080
CELL ALLOWANCE	\$ 50	600	
CAR ALLOWANCE		-	
UNIFORM ALLOWANCE	\$ 100	1,200	
DEFERRED COMP	\$ 75	1,950	
BI LINGUAL	0%	-	
OTHER	0%	-	
LONGEVITY	5%	6,060	
CAFETERIA (Not PERSable)	3%	3,636	134,648
HEALTH	848.31	10,689	Insurance
DENTAL	50.81	640	Markup 5.00%
VISION	6.73	85	
LIFE	3.42	43	11,457
PERS	13.900%	18,211	
W/C	18.540%	22,471	
TAXES		2,672	
TOTAL COMP	189,458		\$91.09

PERS	
MISC-CLASSIC	13.900%
MISC-PEPRA	13.900%
POLICE-CLASSIC	21.748%
POLICE-PEPRA	13.786%
FIRE-CLASSIC	21.748%
FIRE-PEPRA	13.786%

WORKERS' COMP	
MISC	1.46%
FIRE	18.54%
POLICE	11.64%
LABOR	6.51%
REFUSE	38.86%
PROF	5.87%

MONTHLY INSURANCE	EE Only	EE+1	EE+2
HEALTH	\$ 424.15	\$ 848.31	\$ 1,102.81
DENTAL	\$ 23.87	\$ 50.81	\$ 78.88
VISION	\$ 7.22	\$ 6.73	\$ 10.67
LIFE	\$ 2.86	\$ 3.42	\$ 4.32

FIXED ASSET PURCHASE(S)

List fixed assets (vehicle, computer, etc)  
COMPUTER 1,200.00 (example)

DESCRIPTION OF POSITION

Department	Print Name & Sign	Date
FIRE		02/20/22

DIVISION  
POSITION  
BARGAINING UNIT

1611  
BATTALION CHIEF (SHIFT)  
IAFF Local 3898

	BI-WKLY/MONTHLY	ANNUAL	CY HOURS
HOURLY RATE	\$ 41.62		
SALARY	\$ 10,099.79	121,197	2912
CELL ALLOWANCE	\$ 50	600	
CAR ALLOWANCE		-	
UNIFORM ALLOWANCE	\$ 100	1,200	
DEFERRED COMP	\$ 75	1,950	
BI LINGUAL	0%	-	
OTHER	0%	-	
LONGEVITY	5%	6,060	
CAFETERIA (Not PERSable)	0%	-	131,007

HEALTH	848.31	10,689	Insurance
DENTAL	50.81	640	Markup 5.00%
VISION	6.73	85	
LIFE	3.42	43	11,457

PERS	13.900%	18,210
W/C	18.540%	22,470
TAXES		2,601

TOTAL COMP 185,745 \$89.30

PERS	
MISC-CLASSIC	13.900%
MISC-PEPRA	13.900%
POLICE-CLASSIC	21.748%
POLICE-PEPRA	13.786%
FIRE-CLASSIC	21.748%
FIRE-PEPRA	13.786%

WORKERS' COMP	
MISC	1.46%
FIRE	18.54%
POLICE	11.64%
LABOR	6.51%
REFUSE	38.86%
PROF	5.87%

MONTHLY INSURANCE	EE Only	EE+1	EE+2
HEALTH	\$ 424.15	\$ 848.31	\$ 1,102.81
DENTAL	\$ 23.87	\$ 50.81	\$ 78.88
VISION	\$ 7.22	\$ 6.73	\$ 10.67
LIFE	\$ 2.86	\$ 3.42	\$ 4.32

**FIXED ASSET PURCHASE(S)**

List fixed assets (vehicle, computer, etc)  
COMPUTER 1,200.00 (example)

**DESCRIPTION OF POSITION**

Department	Print Name & Sign	Date
FIRE		02/20/22



City of Hanford  
Fire Department

**Appendix B**  
**City of Hanford**  
**Job Specification**  
**Battalion Chief**



CITY OF HANFORD  
Established Date: Jul 1, 2012  
Revision Date: Apr 2, 2015

Battalion Chief

Class Code:  
BATTALION CHIEF

Bargaining Unit: Fire Mid  
Management

#### SALARY RANGE

\$3,817.38 - \$4,662.00 Biweekly  
\$8,271.00 - \$10,101.00 Monthly  
\$99,252.00 - \$121,212.00 Annually

#### DEFINITION:

To plan, organize, direct and coordinate the activities of the suppression division within the Fire department including training and emergency response; to coordinate division activities with other divisions and City departments; and to provide highly complex staff assistance to the Fire Chief.

#### EXAMPLES OF DUTIES:

EXAMPLES OF ESSENTIAL DUTIES - Duties may include, but are not limited to, the following:

Develop and implement division goals, objectives, policies and procedures.

Plan, organize and direct suppression activities including emergency response, training, and public education programs.

Direct, oversee and participate in the development of the suppression division work plan; assign work activities, projects and programs; monitor workflow; review and evaluate work products, methods and procedures.

Prepare the division budget; assist in budget implementation; participate in the forecast of additional funds needed for staffing, equipment, materials and supplies; administer the approved budget.

Recommend the appointment of staff; provide or coordinate staff training; conduct performance evaluations; implement discipline procedures as required; maintain discipline and high standards necessary for the efficient and professional operation of the division.

Develop and implement new programs to enhance the Fire Department's organizational objectives; facilitate public education programs; create public service announcements.

Direct multiple fire companies during emergency operations.

Develop, organize and present training curriculum and activities; create testing and evaluation tools.

Provide administrative assistance to the Fire Chief in the form of special projects, analytical studies, and policy input and development.

Inspect fire stations and personnel for operational readiness.

Represent the division and department to outside agencies and organizations; participate in outside community and professional groups and committees; provide technical assistance as necessary.

Research and prepare technical and administrative reports; prepare written correspondence.

Build and maintain positive working relationships with co-workers, other City employees and the public using principles of good customer service.

Foster an environment that embraces diversity, integrity, trust, and respect.

Be an integral team player, which involves flexibility, cooperation, and communication.

Perform related duties as assigned.

## **QUALIFICATIONS:**

### **MINIMUM QUALIFICATIONS**

#### **Knowledge of:**

Modern fire suppression methods, technology and equipment.

Principles and practices of leadership, motivation, team building and conflict resolution.

Incident Command System emergency response management skills.

Principles, methods and techniques of emergency medical services (EMS), cardiopulmonary resuscitation (CPR), automated external defibrillators (AED), and hazardous materials incident management.

Pertinent local, State and Federal rules, regulations and laws.

Modern office practices, methods and computer equipment.

Principles and practices of organizational analysis and management.

Budgeting procedures and techniques.

Principles and practices of supervision, training and personnel management.

#### **Ability to:**

Organize and direct the operations of the fire suppression division.

On a continuous basis, analyze budget and technical reports; interpret and evaluate staff reports; know laws, regulations and codes; observe performance and evaluate staff; problem solve division related issues; remember various rules and procedures; and explain and interpret policy.

Intermittently, sit while driving to emergency scenes or performing office work; stand and walk while performing suppression activities; exert strenuous physical effort; bend, squat, twist, crawl or climb; climb ladders, or climb up onto apparatus to begin operations; perform simple and power grasping, pushing, pulling, and fine manipulation; use telephone, write or use a keyboard to communicate through written means; and lift or carry weight of up to 100 pounds.

Analyze problems, identify alternative solutions, project consequences of proposed actions and implement recommendations in support of goals.

Gain cooperation through discussion and persuasion.

Interpret and apply City, department, and division policies, procedures, rules and regulations.

Supervise, train and evaluate staff.

Use sound judgment in recognizing scope of authority.

Operate and use modern office equipment including computers and applicable software.

Maintain regular attendance and adhere to prescribed work schedule to conduct job responsibilities.

Utilize appropriate safety procedures and practices for assigned duties.

Communicate effectively orally and in writing.

Relate effectively with people of varied academic, cultural, and socio-economic backgrounds using tact, diplomacy, and courtesy.

Establish and maintain effective, cooperative and collaborative working relationships with others.

Work beyond normal business hours, attend evening meetings and/or perform weekend work, and travel.

#### Experience and Education

Any combination of experience and education that would provide the required knowledge and abilities is qualifying. A typical way to obtain the required knowledge and abilities would be:

##### Experience:

Five years of increasingly responsible experience in fire suppression and/or training in a recognized fire department, including two years of supervisory experience at the level of fire captain or above.

##### Education:

Equivalent to an Bachelor's degree from an accredited college with major course work in fire science, education, public administration or a related field.

##### License and Certificate

Possession of, or ability to obtain, an appropriate, valid California driver's license.

Possession of, or ability to obtain, valid CPR and EMT-1 certificates.

Possession of a Fire Officer or Company Officer certificate from the State Board of Fire Services.

Possession of, or ability to obtain, a Chief Fire Officer certificate from the State Board of Fire Services within twelve months of appointment.



City of Hanford  
Fire Department

**Appendix C**  
**See**  
**Community Risk Assessment**  
**Standard of Response Coverage**  
**(CRA/SORC)**



# City of Hanford Fire Department

## Appendix D

### See

Bonner, M. (2021). 'End the cycle;' Report outlines 10 recommendations on how the Worcester Fire Department can prevent line-of-duty deaths. *Mass Live*. Retrieved from:

<https://www.masslive.com/worcester/2021/09/end-the-cycle-report-outlines-10-recommendations-on-how-the-worcester-fire-department-can-prevent-line-of-duty-deaths.html>



City of Hanford  
Fire Department

## Appendix E

### **NFPA 1710**



## NFPA 1710

# Changes to Fireground Staffing Levels for Career Fire Departments

NFPA 1710 provides the minimum requirements relating to the organization and deployment of fire suppression operations, emergency medical operations, and special operations to the public by career fire departments.

For the 2016 edition of the standard, subsection 5.2.4 on fire department service deployment was revised to include three new occupancies, along with the appropriate response staffing levels for each. The minimum staffing level for each occupancy is listed below. (For the full breakdown of staffing requirements by position, refer to the subsections specific to each occupancy in 5.2.4.)

### ► **Single-Family Dwelling – minimum of 14 members (15 if aerial device is used)**

The initial full alarm assignment to a structure fire in a typical 2000 ft<sup>2</sup> (186 m<sup>2</sup>), two-story, single-family dwelling without a basement and with no exposures must provide for a minimum of 14 members (15 if an aerial device is used).

### ► **Open-Air Strip Mall – minimum of 27 members (28 if aerial device is used)**

The initial full alarm assignment to a structure fire in a typical open-air strip shopping center ranging from 13,000 ft<sup>2</sup> to 196,000 ft<sup>2</sup> (1203 m<sup>2</sup> to 18,209 m<sup>2</sup>) in size must provide for a minimum of 27 members (28 if an aerial device is used).

### ► **Garden-Style Apartment – minimum of 27 members (28 if aerial device is used)**

The initial full alarm assignment to a structure fire in a typical 1200 ft<sup>2</sup> (111 m<sup>2</sup>) apartment within a three-story, garden-style apartment building must provide for a minimum of 27 members (28 if an aerial device is used).

### ► **High-Rise – minimum of 42 members (43 if building equipped with fire pump)**

The initial full alarm assignment to a fire in a building with the highest floor greater than 75 ft (23 m) above the lowest level of fire department vehicle access must provide for a minimum of 42 members (43 if the building is equipped with a fire pump).

### ► **Fire departments that respond to fires in occupancies that present hazards greater than those found in 5.2.4 shall deploy additional resources as described in 5.2.4.5 on the initial alarm.**

---

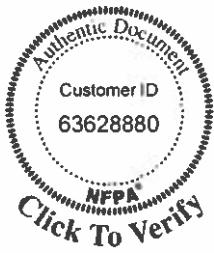
NOTE: Even though fireground staffing levels have changed, NFPA 1710 continues to require that engine companies be staffed with a minimum of 4 on-duty members, as stated in subsection 5.2.3. In addition, paragraph 5.2.2.1 requires that the fire department identify minimum company staffing levels as necessary to meet the deployment criteria required in 5.2.4 to ensure that a sufficient number of members are assigned, on duty, and available to safely and effectively respond with each company.

Material used in this summary is taken from the 2016 edition of 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*. This reprinted material is not the complete and official position of the NFPA or its Technical Committees on the referenced subject, which is represented solely by the standard in its entirety. That standard can be accessed online at [www.nfpa.org](http://www.nfpa.org).

# 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

2016 Edition



NFPA, 1 Batterymarch Park, Quincy, MA 02169-7471  
An International Codes and Standards Organization

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**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**

**2016 Edition**

This edition of 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*, was prepared by the Technical Committee on Fire and Emergency Service Organization and Deployment—Career and acted on by NFPA at its June Association Technical Meeting held June 22–25, 2015, in Chicago, IL. It was issued by the Standards Council on August 18, 2015, with an effective date of September 7, 2015, and supersedes all previous editions.

This edition of NFPA 1710 was approved as an American National Standard on September 7, 2015.

**Origin and Development of NFPA 1710**

In 2001, the first edition of NFPA 1710 was issued. The development of that benchmark standard was the result of a considerable amount of hard work and tenacity by the Technical Committee members and the organizations they represented. That standard was the first organized approach to defining levels of service, deployment capabilities, and staffing levels for substantially career fire departments. Research work and empirical studies in North America were used by the Committee as a basis for developing response times and resource capabilities for those services, as identified by the fire department.

Following the issuance of the first edition, the NFPA Standards Council asked the Technical Committee to begin the revision process for a 2004 edition of the standard. The Committee formed several Task Groups to look at various aspects of the document. However, recognizing that the standard had not been fully field tested, the extent of the changes proposed were minimal with a cleanup of definitions, the addition of wording regarding equivalency in the annex, and clarification that the discussion on rate of fire propagation in the annex involved unsprinklered rooms.

The 2010 edition of NFPA 1710 standardized and refined terminology and definitions used in the document. Particular attention was paid to terminology for time frames for the various events that occur from event initiation to the end of the fire department's involvement with the incident. This included recognition that there is a time interval to initiate action or intervene at the end of travel time and before control and mitigation actually begin. The requirements for time frames for alarm handling were revised to correspond to changes being made to NFPA 1221. The time allowance for turnout for fires and special operations was lengthened to 80 seconds, but the time measurement was defined to start at the beginning of the transmission of response data to the emergency response units or emergency response facilities. All times shown as both minutes and seconds were changed to seconds only because that is the level of precision in which the committee intends time to be measured. An application section was added in Chapter 1. The travel times for units responding on the first alarm were clarified to indicate the first unit must arrive within 4 minutes travel time and all units must arrive within 8 minutes travel time. The quadrennial report required to be provided to the AHJ in the previous edition was changed to an annual report.

The annex material related to the requirement stated for an initial full alarm assignment capability has been moved to the body of the standard to clarify that the requirement applies to a structure fire in a typical 2000 ft<sup>2</sup> (186m<sup>2</sup>), two-story single-family dwelling without basement and with no exposures. In addition, wording was added to require additional resources be deployed on fires in occupancies that present hazards greater than the two-story single-family dwelling. The community-wide risk management model that has been in an annex to NFPA 1720 has been added as an annex to NFPA 1710.

**1710-2 ORGANIZATION AND DEPLOYMENT OF FIRE SUPPRESSION OPERATIONS BY CAREER FIRE DEPARTMENTS**

---

The work done by the Committee provided the user with a template for developing an implementation plan on the standard. Most important, it provided the body politic and citizens a true picture of the risks in their communities and the fire departments' capabilities to respond to and manage those risks.

In the 2016 edition, the Committee has added three new occupancies and the appropriate response staffing levels for garden-style apartment, open-air strip mall, and high-rise occupancies. In addition, redundant text has been removed, and some language has been clarified.



## Technical Committee on Fire and Emergency Service Organization and Deployment-Career

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Frank De Clercq, City of San Diego Fire-Rescue Department, CA [L]

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Thomas Hanify, The Professional Firefighters Union of Indiana, IN [L]

Rep. International Association of Fire Fighters

Todd A. Harms, Phoenix Fire Department, AZ [E]

Jason M. Hoevelmann, Florissant Valley Fire Protection District, MO [U]

Thomas C. Jenkins, Rogers Fire Department, AR [E]

Kevin P. Kuntz, Insurance Services Office, Inc., NJ [I]

Cortez Lawrence, U.S. Department of Homeland Security, MD [SE]

Frank Lima, United Firefighters of Los Angeles City, CA [L]

Michael Merchan, City of Cape Coral Fire Rescue, FL [U]

Gary Rainey, Florida Professional Firefighters, FL [L]

David L. Rohr, City of Fairfax Fire Department, VA [E]

Chris Ross, Association des Pompiers de Montreal Inc., Canada [L]

Mark A. Sanders, Ohio Association of Professional Firefighters, OH [L]

Joseph Schulle, IAFF Local 22, PA [L]

Rep. International Association of Fire Fighters

James L. Silvernail, Metro West Fire Protection District, MO [U]

L. Charles Smeby, University of Florida, FL [SE]

Patrick N. Smith, U.S. Department of Energy, TN [U]

Catherine L. Spain, The Spain Group LLC, MD [C]

Rep. National League of Cities

Donald H. J. Turno, Savannah River Nuclear Solutions, LLC, SC [U]

J. Curtis Varone, Public Agency Training Council, RI [SE]

### Alternates

Michael S. Digman, Metro West Fire Protection District, MO [U]

(Alt. to J. L. Silvernail)

Anne M. Finn, League of Minnesota Cities, MN [C]

(Alt. to D. J. Greensweig)

Anthony Gamboa, United Firefighters of Los Angeles City, CA [L]

(Alt. to F. Lima)

William A. Garrett, Fairfax County Fire & Rescue Department, VA [E]

(Alt. to J. J. Caussin)

Brian D. Goss, Brentwood Fire & Rescue Department, TN [E]

(Alt. to R. R. Bruegman)

Michael D. Masters, Oak Ridge National Laboratory (USDOE), TN [U]

(Alt. to P. N. Smith))

Kevin McDonald, Springdale Fire Department, AR [E]

(Alt. to T. C. Jenkins)

Patrick J. Morrison, International Association of Fire Fighters, DC [L]

(Alt. to T. Hanify)

Richard D. Riley, Clearwater Fire & Rescue, FL [E]

(Alt. to M. R. Brown)

Andrew J. Vita, City of Fairfax Fire Department, VA [E]

(Alt. to D. L. Rohr)

Jimm Walsh, Winter Park Fire Department, FL [U]

(Alt. to W. L. Bingham)

Thomas J. Wieczorek, International City/County Management Assn., DC [E]

(Voting Alt. to ICMA Rep.)

Steven F. Sawyer, NFPA Staff Liaison

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

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**Committee Scope:** This Committee shall have primary responsibility for documents on the organization, operation, deployment, and evaluation of substantially all career public fire protection and emergency medical services.

**1710-4 ORGANIZATION AND DEPLOYMENT OF FIRE SUPPRESSION OPERATIONS BY CAREER FIRE DEPARTMENTS**

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**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**  
**2016 Edition**

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

## Chapter 1 Administration

**1.1\* Scope.** This standard contains minimum requirements relating to the organization and deployment of fire suppression operations, emergency medical operations, and special operations to the public by substantially all career fire departments.

**1.1.1** The requirements address functions and objectives of fire department emergency service delivery, response capabilities, and resources.

**1.1.2** This standard also contains general requirements for managing resources and systems, such as health and safety,

incident management, training, communications, and pre-incident planning.

**1.1.3** This standard addresses the strategic and system issues involving the organization, operation, and deployment of a fire department and does not address tactical operations at a specific emergency incident.

### 1.2 Purpose.

**1.2.1\*** The purpose of this standard is to specify the minimum criteria addressing the effectiveness and efficiency of the career public fire suppression operations, emergency medical service, and special operations delivery in protecting the citizens of the jurisdiction and the occupational safety and health of fire department employees.

**1.2.2** Nothing herein is intended to restrict any jurisdiction from exceeding these minimum requirements.

### 1.3 Application.

**1.3.1** This standard applies to the deployment of resources by a fire department to emergency situations when operations can be implemented to save lives and property.

**1.3.2** The standard is a benchmark for most common responses and a platform for developing the appropriate plan for deployment of resources for fires in higher hazard occupancies or more complex incidents.

**1.4\* Equivalency.** Nothing in this standard is intended to prohibit the use of systems, methods, or approaches of equivalent or superior performance to those prescribed by this standard, provided technical documentation is submitted to the authority having jurisdiction to demonstrate equivalency.

## 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 403, *Standard for Aircraft Rescue and Fire-Fighting Services at Airports*, 2014 edition.

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

NFPA 1143, *Standard for Wildland Fire Management*, 2014 edition.

NFPA 1221, *Standard for the Installation, Maintenance, and Use of Emergency Services Communications Systems*, 2016 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 1670, *Standard on Operations and Training for Technical Search and Rescue Incidents*, 2014 edition.

### 2.3 Other Publications.

**2.3.1 U.S. Government Publications.** U.S. Government Publishing Office, Washington, DC 20402.

Title 29, Code of Federal Regulations, Part 1910.120, "Hazardous Waste Operations and Emergency Response."

Title 29, Code of Federal Regulations, Part 1910.146, "Permit-Required Confined Space."

### 2.3.2 Other Publications.

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

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

NFPA 1081, *Standard for Industrial Fire Brigade Member Professional Qualifications*, 2012 edition.

NFPA 1142, *Standard on Water Supplies for Suburban and Rural Fire Fighting*, 2012 edition.

NFPA 1221, *Standard for the Installation, Maintenance, and Use of Emergency Services Communications Systems*, 2016 edition.

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

NFPA 1521, *Standard for Fire Department Safety Officer Professional Qualifications*, 2015 edition.

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

NFPA 1901, *Standard for Automotive Fire Apparatus*, 2016 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.

**3.2.5 Standard.** An NFPA Standard, the main text of which contains only mandatory provisions using the word "shall" to indicate requirements and that is in a form generally suitable for mandatory reference by another standard or code or for adoption into law. Nonmandatory provisions are not to be considered a part of the requirements of a standard and shall be located in an appendix, annex, footnote, informational note, or other means as permitted in the NFPA Manuals of Style. When used in a generic sense, such as in the phrase "standards development process" or "standards development activities," the term "standards" includes all NFPA Standards, including Codes, Standards, Recommended Practices, and Guides.

### 3.3 General Definitions.

**3.3.1 Advanced Life Support (ALS).** See 3.3.36.1.

### 3.3.2 Aid.

**3.3.2.1\* Automatic Aid.** A plan developed between two or more fire departments for immediate joint response on first alarms. [1142, 2012]

**3.3.2.2 Mutual Aid.** A written intergovernmental agreement between agencies and/or jurisdictions that they will assist one another on request by furnishing personnel, equipment, and/or expertise in a specified manner.

**3.3.3 Aircraft Rescue and Fire Fighting.** See 3.3.21.1.

**3.3.4\* Aircraft Rescue and Fire-Fighting (ARFF) Vehicle.** A vehicle intended to carry rescue and fire-fighting equipment for rescuing occupants and combating fires in aircraft at, or in the vicinity of, an airport. [1002, 2014]

**3.3.5\* Alarm.** A signal or message from a person or device indicating the existence of an emergency or other situation that requires action by an emergency response agency. [1221, 2016]

**3.3.6 Alarm Answering Time.** See 3.3.53.1.

**3.3.7 Alarm Handling Time.** See 3.3.53.2.

**3.3.8 Alarm Processing Time.** See 3.3.53.3.

**3.3.9 Alarm Transfer Time.** See 3.3.53.4.

**3.3.10 Apparatus.**

**3.3.10.1 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, 2016]

**3.3.10.2 Quint Apparatus.** A fire apparatus with a permanently mounted fire pump, a water tank, a hose storage area, an aerial device with a permanently mounted waterway, and a complement of ground ladders.

**3.3.10.3 Specialized Apparatus.** A fire apparatus or vehicle that is used for support or specialized equipment and services at emergency scenes for functions such as, but not limited to, command, technical rescue, hazardous materials mitigation, urban search and rescue, air supply, electrical generation and lighting, or transport of equipment and personnel.

**3.3.11 Automatic Aid.** See 3.3.2.1.

**3.3.12 Basic Life Support (BLS).** See 3.3.36.2.

**3.3.13\* Company.** A group of members: (1) under the direct supervision of an officer; (2) trained and equipped to perform assigned tasks; (3) usually organized and identified as engine companies, ladder companies, rescue companies, squad companies, or multi-functional companies; (4) operating with one piece of fire apparatus (pumper, aerial fire apparatus, elevating platform, quint, rescue, squad, ambulance) except where multiple apparatus are assigned that are dispatched and arrive together, continuously operate together, and are managed by a single company officer; (5) arriving at the incident scene on fire apparatus. [1500, 2013]

**3.3.14 Company Officer.** See 3.3.40.1.

**3.3.15 Crew.** See 3.3.52, Team.

**3.3.16 Emergency Incident.** Any situation to which an 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]

**3.3.17 Emergency Medical Care.** The treatment of patients using first aid, cardiopulmonary resuscitation, basic life support, advanced life support, and other medical procedures prior to arrival at a hospital or other health care facility.

**3.3.18 Emergency Operations.** See 3.3.41.1.

**3.3.19 Fire Apparatus.** See 3.3.10.1.

**3.3.20 Fire Department Member.** See 3.3.38, Member.

**3.3.21 Fire Fighting.**

**3.3.21.1\* Aircraft Rescue and Fire Fighting.** The fire-fighting actions taken to rescue persons and to control or extinguish fire involving or adjacent to aircraft on the ground. [1500, 2013]

**3.3.21.2\* Marine Rescue and Fire Fighting.** The fire-fighting action taken to prevent, control, or extinguish fire involved in or adjacent to a marine vessel and the rescue actions for occupants using normal and emergency routes for egress.

**3.3.21.3 Structural Fire Fighting.** The activities of rescue, fire suppression, and property conservation in buildings or other structures, vehicles, rail cars, marine vessels, aircraft, or like properties.

**3.3.22 Fire Protection.** Methods of providing fire detection, control, and extinguishment.

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

**3.3.24\* First Responder (EMS).** Functional provision of initial assessment (i.e., airway, breathing, and circulatory systems) and basic first-aid intervention, including CPR and automatic external defibrillator (AED) capability.

**3.3.25 Forcible Entry.** Techniques used by fire personnel to gain entry into buildings, vehicles, aircraft, or other areas of confinement when normal means of entry are locked or blocked.

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

**3.3.27 Hazardous Material.** A substance that is capable of creating harm to people, the environment, or property due to its toxicity, chemical reactivity, decomposition, or corrosivity; is capable of explosion or detonation; or presents etiological hazards, whether used for its intended purpose or as a weapon of mass destruction (WMD) or for illicit labs purposes, environmental crimes, or industrial sabotage.

**3.3.28\* High-Hazard Occupancy.** An occupancy that presents a high life hazard or large fire potential due to its construction, configuration, or the presence of specific materials, processes, or contents.

**3.3.29 Incident Commander.** The member responsible for all incident activities, including the development of strategies and tactics and the ordering and the release of resources. [472, 2013]

**3.3.30\* Incident Management System (IMS).** An organized 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.

**3.3.31 Incident Safety Officer.** See 3.3.40.2.

**3.3.32 Initial Full Alarm Assignment.** Those personnel, equipment, and resources ordinarily dispatched upon notification of a structure fire.

**3.3.33 Initial Rapid Intervention Crew (IRIC).** See 3.3.44.1.

**3.3.34 Initiating Action/Intervention Time.** See 3.3.53.5.

**3.3.35 Intergovernmental Agreement.** A written formal authorization for services between two or more jurisdictions.

**3.3.36 Life Support.**

**3.3.36.1 Advanced Life Support (ALS).** Emergency medical treatment beyond basic life support that provides for advanced airway management including intubation, advanced cardiac monitoring, defibrillation, establishment and maintenance of intravenous access, and drug therapy.

**3.3.36.2\* Basic Life Support (BLS).** A specific level of pre-hospital medical care provided by trained responders, focused on rapidly evaluating a patient's condition; maintaining a patient's airway, breathing, and circulation; controlling external bleeding; preventing shock; and preventing further injury or disability by immobilizing potential spinal or other bone fractures.

**3.3.37 Marine Rescue and Fire Fighting.** See 3.3.21.2.

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

**3.3.39 Mutual Aid.** See 3.3.2.2.

**3.3.40 Officer.**

**3.3.40.1\* Company Officer.** A supervisor of a crew/company of personnel.

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

**3.3.40.3\* Supervisory Chief Officer.** A member whose responsibility is to assume command through a formalized transfer of command process and to allow company officers to directly supervise personnel assigned to them.

**3.3.41 Operations.**

**3.3.41.1 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]

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

**3.3.42 Public Safety Answering Point (PSAP).** A facility in which 9-1-1 calls are answered. [1221, 2016]

**3.3.43 Quint Apparatus.** See 3.3.10.2.

**3.3.44\* Rapid Intervention Crew (RIC).** A dedicated crew of fire fighters who are assigned for rapid deployment to rescue lost or trapped members.

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**3.3.44.1 Initial Rapid Intervention Crew (IRIC).** Two members of the initial attack crew who are assigned for rapid deployment to rescue lost or trapped members.

**3.3.45 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]

**3.3.46 Special Operations.** See 3.3.41.2.

**3.3.47 Specialized Apparatus.** See 3.3.10.3.

**3.3.48\* Staff Aide.** A fire fighter or fire officer assigned to a supervisory chief officer to assist with the logistical, tactical, and accountability functions of incident, division, or sector command.

**3.3.49 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. [1521, 2015]

**3.3.50 Structural Fire Fighting.** See 3.3.21.3.

**3.3.51 Supervisory Chief Officer.** See 3.3.40.3.

**3.3.52 Team.** Two or more members who have been assigned a common task and are in communication with each other, coordinate their activities as a work group, and support the safety of one another. [1081, 2012]

### 3.3.53 Time.

**3.3.53.1 Alarm Answering Time.** The time interval that begins when the alarm is received at the communication center and ends when the alarm is acknowledged at the communication center.

**3.3.53.2 Alarm Handling Time.** The time interval from the receipt of the alarm at the primary PSAP until the beginning of the transmittal of the response information via voice or electronic means to emergency response facilities (ERFs) or the emergency response units (ERUs) in the field.

**3.3.53.3 Alarm Processing Time.** The time interval from when the alarm is acknowledged at the communication center until response information begins to be transmitted via voice or electronic means to emergency response facilities (ERFs) and emergency response units (ERUs).

**3.3.53.4 Alarm Transfer Time.** The time interval from the receipt of the emergency alarm at the PSAP until the alarm is first received at the communication center.

**3.3.53.5\* Initiating Action/Intervention Time.** The time interval from when a unit arrives on the scene to the initiation of emergency mitigation.

**3.3.53.6\* Total Response Time.** The time interval from the receipt of the alarm at the primary PSAP to when the first emergency response unit is initiating action or intervening to control the incident.

**3.3.53.7 Travel Time.** The time interval that begins when a unit is en route to the emergency incident and ends when the unit arrives at the scene.

**3.3.53.8 Turnout Time.** The time interval that begins when the emergency response facilities (ERFs) and emergency response units (ERUs) notification process begins by

either an audible alarm or visual annunciation or both and ends at the beginning point of travel time.

**3.3.54 Total Response Time.** See 3.3.53.6.

**3.3.55 Travel Time.** See 3.3.53.7.

**3.3.56 Turnout Time.** See 3.3.53.8.

## Chapter 4 Organization

### 4.1 Fire Department Organizational Statement.

**4.1.1\*** The authority having jurisdiction (AHJ) shall maintain a written statement or policy that establishes the following:

- (1) Existence of the fire department
- (2) Services that the fire department is required to provide
- (3) Basic organizational structure
- (4) Expected number of fire department members
- (5) Functions that fire department members are expected to perform

**4.1.2\*** The fire department organizational statement shall provide service delivery objectives, including specific time objectives for each major service component [i.e., fire suppression, emergency medical services (EMS), special operations, aircraft rescue and fire fighting, marine rescue and fire fighting, and/or wildland fire fighting] and objectives for the percentage of responses that meet the time objectives.

**4.1.2.1** The fire department shall establish the following objectives:

- (1) Alarm handling time to be completed in accordance with 4.1.2.3.
- (2) 80 seconds turnout time for fire and special operations response and 60 seconds turnout time for EMS response
- (3)\*240 seconds or less travel time for the arrival of the first arriving engine company at a fire suppression incident
- (4) For other than high-rise, 480 seconds or less travel time for the deployment of an initial full alarm assignment at a fire suppression incident
- (5) For high-rise, 610 seconds or less travel time for the deployment of an initial full alarm assignment at a fire suppression incident
- (6) 240 seconds or less travel time for the arrival of a unit with first responder with automatic external defibrillator (AED) or higher level capability at an emergency medical incident
- (7) 480 seconds or less travel time for the arrival of an advanced life support (ALS) unit at an emergency medical incident, where this service is provided by the fire department provided a first responder with AED or basic life support (BLS) unit arrived in 240 seconds or less travel time

**4.1.2.2** The fire department shall document the initiating action/intervention time.

### 4.1.2.3 Alarm Handling.

**4.1.2.3.1** The fire department shall establish a performance objective of having an alarm answering time of not more than 15 seconds for at least 95 percent of the alarms received and not more than 40 seconds for at least 99 percent of the alarms received, as specified by NFPA 1221.

**4.1.2.3.1.1** Any call not answered within 20 seconds shall be routed to a secondary answering (alternate) center if the primary center is full. An alarm should sound if a call is not answered (not processed, just answered) within 60 seconds.

**4.1.2.3.2** When the alarm is received at a public safety answering point (PSAP) and transferred to a secondary answering point or communication center, the agency responsible for the PSAP shall establish a performance objective of having an alarm transfer time of not more than 30 seconds for at least 95 percent of all alarms processed, as specified by NFPA 1221.

**4.1.2.3.3** The fire department shall establish a performance objective of having an alarm processing time of not more than 64 seconds for at least 90 percent of the alarms and not more than 106 seconds for at least 95 percent of the alarms, as specified by NFPA 1221.

**4.1.2.3.3.1** Emergency alarm processing for the following call types shall be completed within 90 seconds 90 percent of the time and within 120 seconds 99 percent of the time:

- (1) Calls requiring emergency medical dispatch questioning and pre-arrival medical instructions
- (2) Calls requiring language translation
- (3) Calls requiring the use of a TTY/TDD device or audio/video relay services
- (4) Calls of criminal activity that require information vital to emergency responder safety prior to dispatching units
- (5) Hazardous material incidents
- (6) Technical rescue
- (7) Calls that require determining the location of the alarm due to insufficient information
- (8) Calls received by text message

**4.1.2.4** The fire department shall establish a performance objective of not less than 90 percent for the achievement of each turnout time and travel time objective specified in 4.1.2.1.

#### **4.1.2.5 Evaluations.**

**4.1.2.5.1\*** The fire department shall evaluate its level of service and deployment delivery and alarm handling time, turnout time, and travel time objectives on an annual basis.

**4.1.2.5.2\*** The evaluations shall be based on emergency incident data relating to level of service, deployment, and the achievement of each time objective in each geographic area within the jurisdiction of the fire department.

**4.1.2.6** The fire department shall provide the AHJ with a written report annually.

**4.1.2.6.1** The annual report shall define the geographic areas and/or circumstances in which the requirements of this standard are not being met.

**4.1.2.6.2** The annual report shall explain the predictable consequences of these deficiencies and address the steps that are necessary to achieve compliance.

**4.2 Fire Suppression Services.** The fire department organizational statement shall set forth the criteria for the various types of fire suppression incidents to which the fire department is required to respond.

#### **4.3 Emergency Medical Services.**

**4.3.1** The fire department organizational statement shall set forth the criteria for the various types of emergency medical

incidents to which the fire department is required and/or expected to respond.

**4.3.2** The fire department organizational statement shall ensure that the fire department's emergency medical response capability includes personnel, equipment, and resources to deploy at the first responder level with AED or higher treatment level.

**4.3.3** Where emergency medical services beyond the first responder with AED level are provided by another agency or private organization, the AHJ, based on recommendations from the fire department, shall include the minimum staffing, deployment, and response criteria as required in Section 5.3 in the following:

- (1) The fire department organizational statement
- (2) Any contract, service agreement, governmental agreement, or memorandum of understanding between the AHJ and the other agency or private organization

#### **4.4 Special Operations.**

**4.4.1** The fire department organizational statement shall set forth the criteria for the various types of special operations response and mitigation activities to which the fire department is required or expected to respond.

**4.4.2\*** The fire department organizational statement shall ensure that the fire department's hazardous materials response capability includes personnel, equipment, and resources to deploy at the first responder operational level as required by 29 CFR 1910.120.

**4.4.3** The fire department organizational statement shall ensure that the fire department's confined space response capability includes personnel, equipment, and resources to deploy at the confined space operational level as required by 29 CFR 1910.146.

**4.4.4** The fire department organizational statement shall set forth the criteria for the various types of fire department response during natural disasters or terrorism incidents, weapons of mass destruction incidents, or large-scale or mass casualty events.

**4.5 Airport Rescue and Fire-Fighting Services.** The fire department organizational statement shall set forth the criteria for the various types of airport rescue and fire-fighting incidents to which the fire department is required or expected to respond.

**4.6 Marine Rescue and Fire-Fighting Services.** The fire department organizational statement shall set forth the criteria for the various types of marine rescue and fire-fighting incidents to which the fire department is required or expected to respond.

**4.7 Wildland Fire Suppression Services.** The fire department organizational statement shall set forth the criteria for the various types of wildland fire suppression incidents to which the fire department is required and/or expected to respond.

#### **4.8 Intercommunity Organization.**

**4.8.1\*** Mutual aid, automatic aid, and fire protection agreements shall be through a written intergovernmental agreement and shall address issues such as liability for injuries and deaths, disability retirements, cost of service, authorization to respond, staffing, and equipment, including the resources to

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be made available, availability of interoperable communications, and the designation of the incident commander.

**4.8.2** Procedures and training of personnel for all fire departments in mutual aid, automatic aid, and fire protection agreement plans shall be comprehensive to produce an effective fire force and to ensure uniform operations.

### Chapter 5 Fire Department Services

#### 5.1 Purpose.

**5.1.1** The services provided by the fire department shall include those activities identified by the organizational statement developed as required by Chapter 4.

**5.1.2** The procedures involved in providing these services, including operations and deployment, shall be established through written administrative regulations, standard operating procedures (SOPs), and departmental orders.

#### 5.2\* Fire Suppression Services.

##### 5.2.1 Fire Suppression Capability.

**5.2.1.1** Fire suppression operations shall be organized to ensure that the fire department's fire suppression capability encompasses deployment of personnel, equipment, and resources for an initial arriving company, the initial full alarm assignment, and additional alarm assignments.

**5.2.1.2** The fire department shall be permitted to use established automatic aid and mutual aid agreements to comply with the requirements of Section 5.2.

**5.2.2\* Staffing.** The number of on-duty fire suppression members shall be sufficient to perform the necessary fire-fighting operations given the expected fire-fighting conditions.

**5.2.2.1** These numbers shall be determined through task analyses that take the following factors into consideration:

- (1) Life hazard to the populace protected
- (2) Provisions of safe and effective fire-fighting performance conditions for the fire fighters
- (3) Potential property loss
- (4) Nature, configuration, hazards, and internal protection of the properties involved
- (5) Types of fireground tactics and evolutions employed as standard procedure, type of apparatus used, and results expected to be obtained at the fire scene

**5.2.2.2\*** On-duty members assigned to fire suppression shall be organized into company units and shall have appropriate apparatus and equipment assigned to such companies.

**5.2.2.2.1\*** The fire department shall identify minimum company staffing levels as necessary to meet the deployment criteria required in 5.2.4 to ensure that a sufficient number of members are assigned, on duty, and available to safely and effectively respond with each company.

**5.2.2.2.2** Each company shall be led by an officer who shall be considered a part of the company.

**5.2.2.2.3\*** Supervisory chief officers shall be dispatched or notified to respond to all full alarm assignments.

**5.2.2.2.4** The supervisory chief officer shall ensure that the incident management system is established as required in Section 6.2.

**5.2.2.2.5\*** Supervisory chief officers shall have staff aides deployed to them for purposes of incident management and accountability at emergency incidents.

**5.2.3 Operating Units.** Fire company staffing requirements shall be based on minimum levels necessary for safe, effective, and efficient emergency operations.

**5.2.3.1** Fire companies whose primary functions are to pump and deliver water and perform basic fire fighting at fires, including search and rescue, shall be known as engine companies.

**5.2.3.1.1** These companies shall be staffed with a minimum of four on-duty members.

**5.2.3.1.2** In jurisdictions with a high number of incidents or geographical restrictions, as identified by the AHJ, these companies shall be staffed with a minimum of five on-duty members.

**5.2.3.1.2.1** In jurisdictions with tactical hazards, high-hazard occupancies, or dense urban areas, as identified by the AHJ, these fire companies shall be staffed with a minimum of six on-duty members.

**5.2.3.2** Fire companies whose primary functions are to perform the variety of services associated with truck work, such as forcible entry, ventilation, search and rescue, aerial operations for water delivery and rescue, utility control, illumination, overhaul, and salvage work, shall be known as ladder or truck companies.

**5.2.3.2.1** These fire companies shall be staffed with a minimum of four on-duty members.

**5.2.3.2.2** In jurisdictions with a high number of incidents or geographical restrictions, as identified by the AHJ, these fire companies shall be staffed with a minimum of five on-duty members.

**5.2.3.2.2.1** In jurisdictions with tactical hazards, high-hazard occupancies, or dense urban areas, as identified by the AHJ, these fire companies shall be staffed with a minimum of six on-duty members.

##### 5.2.3.3 Other Types of Companies.

**5.2.3.3.1** Other types of companies equipped with specialized apparatus and equipment shall be provided to assist engine and ladder companies where necessary to support the fire departments' SOPs.

**5.2.3.3.2** These companies shall be staffed with the minimum number of on-duty members required to deal with the tactical hazards, high-hazard occupancies, high incident frequencies, geographical restrictions, or other pertinent factors as identified by the AHJ.

##### 5.2.3.4 Fire Companies with Quint Apparatus.

**5.2.3.4.1** A fire company that deploys with quint apparatus, designed to operate as either an engine company or a ladder company, shall be staffed as specified in 5.2.3.

**5.2.3.4.2** If the company is expected to perform multiple roles simultaneously, additional staffing, above the levels specified in 5.2.3, shall be provided to ensure that those operations can be performed as required.

#### 5.2.4 Deployment.

##### 5.2.4.1 Single-Family Dwelling Initial Full Alarm Assignment Capability.

**5.2.4.1.1\*** The initial full alarm assignment to a structure fire in a typical 2000 ft<sup>2</sup> (186 m<sup>2</sup>), two-story single-family dwelling

without basement and with no exposures shall provide for the following:

- (1) Establishment of incident command outside of the hazard area for the overall coordination and direction of the initial full alarm assignment with a minimum of one member dedicated to this task
- (2) Establishment of an uninterrupted water supply of a minimum of 400 gpm (1520 L/min) for 30 minutes with supply line(s) maintained by an operator
- (3) Establishment of an effective water flow application rate of 300 gpm (1140 L/min) from two handlines, each of which has a minimum flow rate of 100 gpm (380 L/min) with each handline operated by a minimum of two members to effectively and safely maintain the line
- (4) Provision of one support member for each attack and backup line deployed to provide hydrant hookup and to assist in laying of hose lines, utility control, and forcible entry
- (5) Provision of at least one victim search and rescue team with each such team consisting of a minimum of two members
- (6) Provision of at least one team, consisting of a minimum of two members, to raise ground ladders and perform ventilation
- (7) If an aerial device is used in operations, one member to function as an aerial operator to maintain primary control of the aerial device at all times
- (8) Establishment of an IRIC consisting of a minimum of two properly equipped and trained members

**5.2.4.1.2** When an incident escalates beyond an initial full alarm assignment, or when significant risk is present to the member due to the magnitude of the incident, the incident commander shall request an EMS crew consisting of a minimum of two members to provide treatment and transport for injured members and civilians.

**5.2.4.1.3** When an incident escalates beyond an initial full alarm assignment or when significant risk is present to the members due to the magnitude of the incident, the incident commander shall upgrade the IRIC to a full rapid intervention crew (s) (RIC) that consists of an officer and at least three members who are fully equipped and trained in RIC operations.

#### **5.2.4.2 Open-Air Strip Shopping Center Initial Full Alarm Assignment Capability.**

**5.2.4.2.1\*** The initial full alarm assignment to a structure fire in a typical open-air strip shopping center ranging from 13,000 ft<sup>2</sup> to 196,000 ft<sup>2</sup> (1203 m<sup>2</sup> to 18,209 m<sup>2</sup>) in size shall provide for the following:

- (1) Establishment of incident command outside the hazard area for the overall coordination, direction, and safety of the initial full alarm assignment with a minimum of two members dedicated to managing this task.
- (2) Establishment of two uninterrupted water supplies at a minimum of 500 gpm (1892 L/min), with each supply line maintained by an operator
- (3) Establishment of an effective water flow application rate of 500 gpm (1892 L/min) from three handlines, each of which has a minimum flow rate of 150 gpm (568 L/min), with each handline operated by a minimum of two members to effectively and safely maintain each handline.
- (4) Provision of one support member for each attack, backup, and exposure line deployed to provide hydrant hookup and to assist in laying of hose lines, utility control, and forcible entry.

- (5) Provision of at least two victim search-and-rescue teams, each team consisting of a minimum of two members.
- (6) Provision of at least two teams, each team consisting of a minimum of two members, to raise ground ladders and perform ventilation.
- (7) If an aerial device(s) is used in operations, one member to function as an aerial operator and maintain primary control of the aerial device at all times.
- (8) The establishment of an RIC consisting of an officer and at least three members who are fully equipped and trained in RIC operations.
- (9) The establishment of an initial medical care component consisting of at least two members capable of providing immediate on-scene emergency medical support and transport that provides rapid access to civilians or members potentially needing medical treatment. Where this level of emergency medical care is provided by outside agencies or organizations, these agencies and organizations shall be included in the deployment plan and meet these requirements.

#### **5.2.4.3 Apartment Initial Full Alarm Assignment Capability.**

**5.2.4.3.1** The initial full alarm assignment to a structure fire in a typical 1200 ft<sup>2</sup> (111 m<sup>2</sup>) apartment within a three-story, garden-style apartment building shall provide for the following:

- (1) Establishment of incident command outside the hazard area for the overall coordination, direction, and safety of the initial full alarm assignment with a minimum of two members dedicated to managing this task.
- (2) Establishment of two uninterrupted water supplies at a minimum of 400 gpm (1520 L/min), with each supply line maintained by an operator.
- (3) Establishment of an effective water flow application rate of 300 gpm (1140 L/min) from three handlines, each of which has a minimum flow rate of 100 gpm (380 L/min), with each handline operated by a minimum of two members to effectively and safely maintain each handline.
- (4) Provision of one support member for each attack, backup, and exposure line deployed to provide hydrant hookup and to assist in laying of hose lines, utility control, and forcible entry.
- (5) Provision of at least two victim search-and-rescue teams, each team consisting of a minimum of two members.
- (6) Provision of at least two teams, each team consisting of a minimum of two members, to raise ground ladders and perform ventilation.
- (7) If an aerial device is used in operations, one member to function as an aerial operator and maintain primary control of the aerial device at all times.
- (8) The establishment of an RIC consisting of an officer and at least three members who are fully equipped and trained in RIC operations.
- (9) The establishment of an initial medical care component consisting of at least two members capable of providing immediate on-scene emergency medical support, and transport that provides rapid access to civilian or members potentially needing medical treatment. Where this level of emergency medical care is provided by outside agencies or organizations, those agencies and organizations must be included in the deployment plan and meet these requirements.

#### **5.2.4.4\* High-Rise Initial Full Alarm Assignment Capability.**

**5.2.4.4.1** Initial full alarm assignment to a fire in a building with the highest floor greater than 75 ft (23 m) above the

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lowest level of fire department vehicle access shall provide for the following:

- (1) Establishment of a stationary incident command post outside the hazard area for overall coordination and direction of the initial full alarm assignment with a minimum of one officer with an aide dedicated to these tasks. All operations shall be conducted in compliance with the incident command system.
- (2) Establishment of an uninterrupted water supply to the building standpipe/sprinkler connection sufficient to support fire attack operations maintained by an operator. If the building is equipped with a fire pump, one additional member with a radio shall also be sent to the fire pump location to monitor and maintain operation.
- (3) Establishment of an effective water flow application rate on the fire floor at a minimum of 500 gpm (1892 L/m) from two handlines, each operated by a minimum of two members to safely and effectively handle the line.
- (4) Establishment of an effective water flow application rate on the floor above the fire floor at a minimum of 250 gpm (946 L/m) from at least one handline, with each handline deployed operated by a minimum of two members to safely and effectively handle the line.
- (5) The establishment of an RIC consisting of four properly equipped and trained members to replace the IRIC two floors below the fire floor (non-IDLH atmosphere) or on the ground floor if the fire is on the second floor or below.
- (6) Provision of two or more search-and-rescue teams consisting of a minimum of two members each.
- (7) Provision of one officer, with an aide dedicated to these tasks, to establish oversight at or near the entry point on the fire floor(s) and on the floor above the fire.
- (8) Provision of two or more evacuation management teams to assist and direct building occupants with evacuation or sheltering actions, with each team consisting of a minimum of two members.
- (9) Provision of one or more members to account for and manage elevator operations.
- (10) Provision of a minimum of one trained incident safety officer.
- (11) Provision of a minimum of one officer two floors below the fire floor to manage the interior staging area.
- (12) Provision of a minimum of two members to manage member rehabilitation. At least one of the members shall be trained to the ALS level.
- (13) Provision of an officer and a minimum of three members to conduct vertical ventilation operations.
- (14) Provision of a minimum of one officer to manage the building lobby operations.
- (15) Provision of a minimum of two members to transport equipment to a location below the fire floor.
- (16) Provision of one officer to manage external base operations.
- (17) Provision of a minimum of two crews trained in emergency medical services with on-scene transport capability, each crew with a minimum of two members. At least one of the members shall be trained to the ALS level.

### 5.2.4.5 Additional Alarm Assignments.

5.2.4.5.1\* Fire departments that respond to fires in occupancies that present hazards greater than those found in the occupancy described in 5.2.4.1 shall deploy additional resources on the initial alarm.

5.2.4.5.2\* The fire department shall have the capability to deploy additional alarm assignments that can provide for additional command staff, members, and additional services, including the application of water to the fire; engagement in search and rescue, forcible entry, ventilation, and preservation of property; safety and accountability for personnel; and provision of support activities for those situations that are beyond the capability of the initial full alarm assignment.

5.2.4.5.3 An incident safety officer shall be deployed to all incidents that escalate beyond an initial full alarm assignment or when significant risk is present to members.

5.2.4.5.4 The incident safety officer shall ensure that the safety and health system is established as required in Section 6.1.

**5.3\* Emergency Medical Services (EMS).** The purpose of this section shall be to provide standards for the delivery of EMS by fire departments.

5.3.1 The fire department shall clearly document its role, responsibilities, functions, and objectives for the delivery of EMS.

5.3.1.1 EMS operations shall be organized to ensure that the fire department's emergency medical capability includes members, equipment, and resources to deploy the initial arriving company and additional alarm assignments.

5.3.1.2 The fire department shall be permitted to use established automatic aid or mutual aid agreements to comply with the requirements of Section 5.3.

### 5.3.2\* System Components.

#### 5.3.2.1 Treatment Levels.

5.3.2.1.1 The basic treatment levels within an EMS system, for the purposes of this standard, shall be categorized as first responder, basic life support (BLS), and advanced life support (ALS).

5.3.2.1.2 The specific patient treatment capabilities associated with each level shall be determined by the AHJ based on the requirements for approval and licensing of EMS providers within each state or province.

#### 5.3.2.2 Training Levels.

5.3.2.2.1 The minimal level of training for all members that respond to emergency incidents shall be to the first responder/AED level.

5.3.2.2.2 The AHJ shall determine if further training is required.

### 5.3.3 EMS System Functions.

5.3.3.1 The AHJ shall determine which of the following components of an EMS system the fire department shall be responsible for providing:

- (1) Initial response to provide medical treatment at the location of the emergency (first responder with AED capability or higher)
- (2) BLS response
- (3) ALS response
- (4) Patient transport in an ambulance or alternative vehicle designed to provide for uninterrupted patient care at the ALS or BLS level while en route to a medical facility
- (5) Assurance of response and medical care through a quality management program

### 5.3.3.2 Staffing.

5.3.3.2.1 On-duty EMS units shall be staffed with the minimum members necessary for emergency medical care relative to the level of EMS provided by the fire department.

5.3.3.2.2 EMS staffing requirements shall be based on the minimum levels needed to provide patient care and member safety.

5.3.3.2.2.1 Units that provide emergency medical care shall be staffed at a minimum with members trained to the first responder/AED level.

5.3.3.2.2.2 Units that provide BLS transport shall be staffed and trained at the level prescribed by the state or provincial agency responsible for providing EMS licensing.

5.3.3.2.2.3 Units that provide ALS transport shall be staffed and trained at the level prescribed by the state or provincial agency responsible for providing EMS licensing.

### 5.3.3.3 Service Delivery Deployment.

5.3.3.3.1 The fire department shall adopt service delivery objectives based on time standards for the deployment of each service component for which it is responsible.

5.3.3.3.2 Personnel deployed to ALS emergency responses shall include a minimum of two members trained at the emergency medical technician-paramedic level and two members trained at the emergency medical technician-basic level arriving on scene within the established travel time.

### 5.3.4 Quality Management.

5.3.4.1 The fire department shall institute a quality management program to ensure that the service has met time objectives as required in 4.1.2 for all medical responses.

### 5.3.4.2 Fire Department Medical Personnel Review.

5.3.4.2.1 All first responder and BLS medical care provided by the fire department shall be reviewed by the fire department medical personnel.

5.3.4.2.2 This review process shall be documented.

### 5.3.4.3 Medical Director Review.

5.3.4.3.1 All fire departments with ALS services shall have a named medical director with the responsibility to oversee and ensure quality medical care in accordance with state or provincial laws or regulations.

5.3.4.3.2 This review process shall be documented.

5.3.4.4 Fire departments providing ALS services shall provide a mechanism for immediate communications with EMS supervision and medical oversight.

**5.4 Special Operations Response.** Special operations shall be organized to ensure that the fire department's special operations capability includes members, equipment, and resources to deploy the initial arriving company and additional alarm assignments providing such services.

5.4.1 The fire department shall be permitted to use established automatic aid or mutual aid agreements to comply with the requirements of Section 5.4.

5.4.2 The fire department shall adopt a special operations response plan and SOPs that specify the roles and responsibilities of the fire department and the authorized functions of

members responding to hazardous materials emergency incidents.

5.4.3 All fire department members expected to respond to emergency incidents beyond the first responder operations level for hazardous materials response shall be trained to the applicable requirements of NFPA 472.

5.4.4 All fire department members expected to respond to emergency incidents beyond the confined space operations level for confined space operations shall be trained to the applicable requirements of NFPA 1670.

5.4.5 The fire department shall have the capacity to implement an RIC during all special operations incidents that would subject members to immediate danger or injury in the event of equipment failure or other sudden events, as required by NFPA 1500.

5.4.6 If a higher level of emergency response is needed beyond the capability of the fire department for special operations, the fire department shall determine the availability of outside resources that deploy these capabilities and the procedures for initiating their response.

5.4.7 The fire department shall limit its activities to only those specific special operations functions for which its members have been trained and are correctly equipped.

### 5.5 Airport Rescue and Fire-Fighting (ARFF) Services.

5.5.1 Airport fire departments shall adopt operations response plans and SOPs that specify the roles and responsibilities for nonaircraft incidents as required by 5.1.2.

5.5.2 ARFF operations shall be organized to ensure that the fire department's capability includes members, equipment, and resources to deploy the initial arriving company, the initial full alarm assignment, and additional alarm assignments as required in 5.2.4.

5.5.3 Airport fire departments shall have access to special tools, equipment, supplies, personal protective equipment (PPE), and other airport resources that are required to perform operations in their assigned roles and responsibilities.

### 5.5.4 Deployment.

5.5.4.1 The airport fire department shall deploy the required number of ARFF vehicles required for the airport's assigned category as established by NFPA 403.

5.5.4.2 Airport fire department companies equipped with specialized apparatus and equipment shall be provided to assist ARFF companies where deemed necessary as identified in 5.5.1.

5.5.4.3 Airport fire department companies that deploy to structure fire incidents on airport property shall meet the time objective requirements of 4.1.2.

5.5.4.4 Airport fire department companies that deploy to emergency medical incidents on airport property shall meet the time objective requirements of 4.1.2.

5.5.4.5 The airport fire department shall be permitted to use established automatic aid or mutual aid agreements to comply with the requirements of Section 5.5.

### 5.5.5 Staffing.

5.5.5.1 Airport fire department ARFF companies shall be staffed as required by NFPA 403.

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**5.5.5.2** Airport fire department companies that deploy to structure fire incidents on airport property shall meet the staffing requirements of 5.2.2.

**5.5.5.3** Airport fire department companies that deploy to emergency medical incidents on airport property shall meet the staffing requirements of 5.3.3.2.

### 5.5.6 Emergency Operations.

**5.5.6.1** At all emergency scene operations, an incident management system shall be used that meets the requirements of Section 6.2.

**5.5.6.2\*** Incident command shall be established outside of the hazard area for the overall coordination and direction of the initial full alarm assignment.

**5.5.6.3** An member shall be dedicated to the task of incident commander.

### 5.5.6.4 Incident Safety Officer.

**5.5.6.4.1** An incident safety officer shall be deployed to all incidents that escalate beyond a full alarm assignment or when members face significant risk.

**5.5.6.4.2** The incident safety officer shall ensure that the safety and health system is established as required in Section 6.1.

### 5.6\* Marine Rescue and Fire-Fighting (MRFF) Services.

**5.6.1** MRFF operations shall be organized to ensure that the fire department's marine capability includes members, equipment, and resources to deploy to the alarm assignments associated with a marine emergency incident.

### 5.6.2 Response Plan.

**5.6.2.1** The fire department shall adopt a marine operations response plan and SOPs that specify the roles and responsibilities of the fire department and the authorized functions of members responding to marine emergencies.

**5.6.2.2** Fire department marine operations response plans and SOPs shall be coordinated with the applicable agencies, such as the port or harbor authority and supporting agencies.

**5.6.3** Marine fire departments shall have access to special tools, equipment, supplies, PPE, and other marine resources that are required to perform operations in their assigned roles and responsibilities.

### 5.6.4 Staffing.

#### 5.6.4.1 Numbers of On-Duty Marine Personnel.

**5.6.4.1.1** On-duty marine personnel shall consist of the number necessary for fire-fighting performance relative to the expected MRFF conditions.

**5.6.4.1.2** On-duty marine members numbers shall be determined through task analyses as required for types of marine vessels and through additional task analyses that take the following factors into consideration:

- (1) Life hazard to the populace protected
- (2) Provisions of safe and effective fire-fighting performance conditions for the members
- (3) Potential property loss
- (4) Nature, configuration, hazards, and internal protection of the properties involved

- (5) Types of tactics and evolutions employed as standard procedure, type of marine vessel used, and results expected to be obtained at the fire scene
- (6) Requirements of the regulatory AHJs over navigable waters, ports, and harbors

#### 5.6.4.2 Organization of On-Duty Members.

**5.6.4.2.1** On-duty members assigned to marine fire fighting shall be organized into company units and shall have required vessels and equipment assigned to such companies.

**5.6.4.2.2** Each marine company shall be led by an officer who shall be considered a part of the company.

### 5.6.5 Operating Units.

**5.6.5.1\*** Fire companies whose primary function is to deliver and pump water and extinguishing agents at the scene of a marine incident shall be known as marine companies.

**5.6.5.2** These companies shall be staffed with a minimum number of on-duty members as required by the tactical and occupancy hazards to which the marine vessel responds and by the regulatory AHJs over navigable waters, ports, and harbors.

### 5.7 Wildland Fire Suppression Services.

**5.7.1** Wildland fire suppression operations shall be organized to ensure that the fire department's wildland fire suppression capability includes members, equipment, and resources to deploy wildland direct operations that can address marginal situations before they get out of control and wildland indirect fire-fighting operations that can be assembled and placed into operation against major wildland fires.

### 5.7.2 Organization.

**5.7.2.1** Fire departments performing wildland operations shall adopt a wildland fire-fighting operations response plan and SOPs that specify the roles and responsibilities of the fire department and the authorized functions of members responding to wildland fire emergencies.

**5.7.2.2** All wildland fire suppression operations shall be organized to ensure compliance with NFPA 1143.

**5.7.3** Fire departments performing wildland operations shall have access to special tools, equipment, supplies, PPE, and other wildland resources that are required to perform operations in their assigned roles and responsibilities.

**5.7.4 Staffing.** The number of on-duty wildland fire-fighting personnel shall be sufficient to perform the necessary fire-fighting operations given the expected wildland fire-fighting conditions.

**5.7.4.1** On-duty wildland fire-fighting members numbers shall be determined through task analyses that take the following factors into consideration:

- (1) Life hazard to the populace protected
- (2) Provisions of safe and effective fire-fighting performance conditions for the members
- (3) The number of trained response members available to the department, including mutual aid resources
- (4) Potential property loss
- (5) Nature, configuration, hazards, and internal protection of the properties involved



- (6) Types of wildland tactics and evolutions employed as standard procedure, type of apparatus used, and results expected to be obtained at the fire scene
- (7) Topography, vegetation, and terrain in the response area(s)

**5.7.4.2** On-duty personnel assigned to wildland operations shall be organized into company units and shall have required apparatus and equipment assigned to such companies.

**5.7.4.2.1** The fire department shall identify minimum company staffing levels necessary to meet the deployment criteria to ensure that a sufficient number of members are assigned, on duty, and available to respond with each company.

**5.7.4.2.2** Each company shall be led by an officer who shall be considered a part of the company.

**5.7.4.2.3** Supervisory chief officers shall be dispatched or notified to respond to all full alarm assignments.

**5.7.4.2.4** The supervisory chief officer shall ensure that the incident management system is established as required in Section 6.2.

**5.7.5 Operating Units.** Fire companies whose primary function is to deliver and pump water and extinguishing agents at the scene of a wildland fire shall be known as wildland companies.

**5.7.5.1** These companies shall be staffed with a minimum of four on-duty members.

**5.7.5.2** Engine and ladder (truck) companies that respond to wildland fire fighting and/or urban interface wildland fire fighting incidents shall be staffed as required by 5.2.3.

#### **5.7.5.3 Other Types of Companies.**

**5.7.5.3.1** Other types of companies equipped with specialized apparatus and equipment for wildland fire fighting, including aircraft, heavy equipment, mini pumper, and fast attack vehicles, shall be provided to assist wildland engine and ladder companies where deemed necessary as part of established practice.

**5.7.5.3.2** These companies shall be staffed with a minimum number of on-duty personnel as required by the tactical, topographical, environmental, fuel (vegetation), and occupancy hazards.

#### **5.7.6 Deployment.**

##### **5.7.6.1 Required Number of Vehicles.**

**5.7.6.1.1** The fire department shall deploy from its wildland resources the number of vehicles required for a direct and/or indirect attack.

**5.7.6.1.2\*** Prior to the initiation of any wildland fire attack, the fire department shall have the capacity to establish a lookout(s), communications with all crew members, escape route(s), and safety zone(s) for vehicles and members.

#### **5.7.6.2 Direct Attack.**

**5.7.6.2.1** The fire department shall have the capability to initiate a direct wildland attack within 10 minutes after arrival of the initial company or crew at the fire scene.

**5.7.6.2.2** One member in the first arriving company or crew shall be assigned as the incident commander for the overall coordination and direction of the direct attack activities.

**5.7.6.2.3** The direct wildland attack shall include the establishment of an effective water flow application rate of 30 gpm (114 L/min) from at least two 500 ft (150 m) 1½ in. (38 mm) diameter attack handlines from two engines.

**5.7.6.2.4** Each attack handline shall be operated by a minimum of two members to deploy and maintain the line.

**5.7.6.2.5** One operator shall remain with each fire apparatus supplying water flow to ensure uninterrupted water flow application.

**5.7.6.2.6** A wildland crew leader or company officer shall be provided with each crew to be responsible for overall supervision of each of the crew and for maintaining personnel accountability and crew safety.

#### **5.7.6.3 Indirect Attack.**

**5.7.6.3.1** The fire department providing wildland fire suppression operations shall have the capability to deploy an indirect attack, including application of water to the fire, engagement in search and rescue and preservation of property, accountability for personnel, and provision of support activities for those situations that are beyond the capability of the direct attack.

**5.7.6.3.2** An incident safety officer shall be deployed to all incidents that escalate beyond a direct attack alarm assignment or when members face significant risk.

#### **5.7.7 Non-Wildland Emergencies.**

**5.7.7.1** Wildland companies that deploy to structure fire incidents shall meet the time objective requirements of 4.1.2.

**5.7.7.2** Wildland companies that deploy to emergency medical incidents shall meet the time objective requirements of 4.1.2.

## **Chapter 6 Systems**

**6.1 Safety and Health System.** A fire-fighter occupational safety and health program shall be provided in accordance with NFPA 1500.

#### **6.2\* Incident Management System.**

**6.2.1** An incident management system shall be provided in accordance with NFPA 1561 to form the basic structure of all emergency operations of the fire department, regardless of the scale of the department or the emergency.

**6.2.2\*** An 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 could be encountered by the department.

#### **6.3 Training Systems.**

**6.3.1** The fire department shall have a training program and policy that ensure that members are trained and competency is maintained to execute all responsibilities consistent with the department's organization and deployment as addressed in Chapters 4 and 5.

**6.3.2** The agency must demonstrate in its annual report that it has ensured competency for necessary knowledge, skills, and abilities based on the community's specific hazards and risks, to include at least the hazards specifically addressed in

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this standard, for each member that is considered part of the effective response force.

**6.3.3** The agency must adopt training standards based on the sited hazards and risk, set appropriate objectives to achieve the standards, and demonstrate that it is meeting the objectives as part of demonstrating training and competency.

### 6.4 Communications Systems.

**6.4.1** The fire department shall have a reliable communications system to facilitate prompt delivery of public fire suppression, EMS, and special operations.

**6.4.2** All communications facilities, equipment, staffing, operating procedures, performance objectives, and reporting shall comply with NFPA 1221.

**6.4.3** Operating procedures for radio communications shall provide for the use of standard protocols and terminology at all types of incidents.

**6.4.4** Standard terminology, in compliance with NFPA 1561, shall be established to transmit information, including strategic modes of operation, situation reports, and emergency notifications of imminent hazards.

### 6.5\* Pre-Incident Planning.

**6.5.1** The fire department shall set forth operational requirements to conduct pre-incident planning.

**6.5.2** Particular attention shall be provided to all target hazards.

## Annex A Explanatory Material

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

**A.1.1** The standard includes minimum requirements that are intended to provide effective, efficient, and safe protective services that operate on a sound basis to prevent fires, reduce risk to lives and property, deal with incidents that occur, and prepare for anticipated incidents. It sets minimum standards considered necessary for the provision of public fire protection by career fire departments. It addresses the structure and operation of organizations providing such services, including fire suppression and other assigned emergency response responsibilities, which include EMS and special operations.

**A.1.2.1** A fundamental concept of fire risk is 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, limit the extent and severity of fires, provide for the removal or rescue of endangered persons, control and extinguish fires that occur within the jurisdiction, and perform other emergency response operations and delivery of EMS.

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.1.4** Nothing in this standard is intended to prohibit the use of systems, methods, or approaches of equivalent or superior performance to those prescribed by this standard. The equivalency statement contained in this standard allows jurisdictions to use other "systems, methods, or approaches" to meet requirements of the standard if they can validate and document in writing that such are equal or superior to the requirements contained in the standard. This equivalency statement is not intended to allow any jurisdiction or fire department to reduce the requirements in the standard and still claim compliance. Moreover, it specifically requires any jurisdiction relying on "equivalent" systems, methods, or approaches to validate, demonstrate, and document in writing that the standard is equal or superior to the requirements contained in this standard.

The authority having jurisdiction (AHJ) determines what systems, methods, or approaches are equivalent or superior in performance. The AHJ should approach the assessment by reviewing the overall public fire protection and EMS system performance.

**A.3.2.1 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 that is concerned with product evaluations and is thus in a position to determine compliance with appropriate standards for the current production of listed items.

**A.3.2.2 Authority Having Jurisdiction (AHJ).** The phrase "authority having jurisdiction," or its acronym AHJ, 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.3.3.2.1 Automatic Aid.** Automatic aid is established through a written intergovernmental agreement that provides for the simultaneous dispatch of a predetermined response of personnel and equipment to a neighboring jurisdiction upon receipt of an alarm and is included as part of a communication center's dispatch protocols.

**A.3.3.4 Aircraft Rescue and Fire-Fighting (ARFF) Vehicle.** The apparatus is typically equipped with a large water tank [commencing at 1000 gal (3800 L) and extending to over 6000 gal (22,800 L)]; a supply of fire-fighting extinguishing agents; remote-controlled large roof turret(s), extendable turret nozzle(s), and bumper turret(s) (ground sweep nozzles) that are used for the discharge of extinguishing agent; and pre-connected handlines.



**A.3.3.5 Alarm.** In some jurisdictions, an alarm is referred to as an incident or call for service.

**A.3.3.13 Company.** For fire suppression and other emergency operations, in some jurisdictions, the response capability of the initial arriving company is configured with two apparatus operating together. This can be a result of apparatus not being configured with seated and belted positions for four members, therefore requiring a second vehicle to carry additional personnel. It can also be the result of the fire department's SOPs, which require two apparatus operating together to complete the operational procedures. The objective is to ensure that a minimum of four personnel are assigned to and deployed as a company. The two (or more) pieces of apparatus would always be dispatched and respond together as a single company. Some examples of this include the following:

- (1) A pumper and tanker/tender that would be responding together outside a municipal water district
- (2) A multiple-piece company, specified as such in a fire department's SOPs, such as an engine or ladder company that responds with a rescue unit, water tender, or other type of apparatus
- (3) A company that consists of a pumper with an additional vehicle as a personnel carrier
- (4) A pumper and an ambulance or rescue unit that always respond together

**A.3.3.21.1 Aircraft Rescue and Fire Fighting.** Such rescue and fire-fighting actions are performed both inside and outside of the aircraft.

**A.3.3.21.2 Marine Rescue and Fire Fighting.** Marine companies can be utilized for special operations, including a platform for dive and scuba operations and for providing a secure water supply for land-based operations.

**A.3.3.23 Fire Suppression.** Fire suppression includes all activities performed at the scene of a fire incident or training exercise that expose fire department members to the dangers of heat, flame, smoke, and other products of combustion, explosion, or structural collapse. [1500, 2013]

**A.3.3.24 First Responder (EMS).** A first responder also assists higher level EMS providers.

**A.3.3.26 Hazard.** Hazards include the characteristics of facilities, equipment systems, property, hardware, or other objects; and the actions and inactions of people that create such hazards.

**A.3.3.28 High-Hazard Occupancy.** These occupancies include schools, hospitals, and other special medical facilities, nursing homes, high-risk residential occupancies, neighborhoods with structures in close proximity to one another, high-rise buildings, explosives plants, refineries, and hazardous materials occupancies.

**A.3.3.30 Incident Management System (IMS).** The system should be consistent with NIMS and the National Response Framework. The system is also referred to as an incident command system (ICS).

**A.3.3.36.2 Basic Life Support (BLS).** Basic life support could also include expediting the safe and timely transport of the patient to a hospital emergency department for definitive medical care.

**A.3.3.38 Member.** A fire department member can be a full-time or part-time employee or a paid or unpaid volunteer, can

occupy any position or rank within the fire department, and can engage in emergency operations. [1500, 2013]

**A.3.3.40.1 Company Officer.** This person can be someone appointed in an acting capacity. The rank structure could be either sergeant, lieutenant, or captain.

**A.3.3.40.3 Supervisory Chief Officer.** The position of supervisory chief officer is above that of a company officer, who responds automatically and/or is dispatched to an alarm beyond the initial alarm capabilities, or other special calls. In some jurisdictions, this is the rank of battalion chief, district chief, deputy chief, assistant chief, or senior divisional officer (U.K. fire service).

**A.3.3.41.2 Special Operations.** Special operations include water rescue, extrication, hazardous materials, confined space entry, high-angle rescue, aircraft rescue and fire fighting, and other operations requiring specialized training. [1500, 2013]

**A.3.3.44 Rapid Intervention Crew (RIC).** The RIC reports directly to the incident commander or operations chief. This dedicated crew is not to be confused with the IRIC.

**A.3.3.48 Staff Aide.** This member is assigned to a supervisory chief officer who assists at incident scene operations, which can include personnel accountability, communications, and other logistical and administrative support. In addition, this member can assist in coordinating training activities, respond to citizen inquiries, coordinate staffing issues and sick leave follow-up, and assign resource allocations for facilities and apparatus under the supervisory chief officer's jurisdiction. Staff aides can be known as field incident technician, staff assistant, battalion fire fighter, or battalion adjutant.

**A.3.3.53.5 Initiating Action/Intervention Time.** A benchmark time frame isn't set to initiate a mitigating action or take other steps to intervene in resolving the issue that created the incident. Fire departments should track these times based on their SOPs and evaluate the data based on the nature of the incident.

**A.3.3.53.6 Total Response Time.** A "cascade of events" chart, shown as Figure A.3.3.53.6, is provided to assist understanding the relationship between NFPA 1221, NFPA 1710, and Initiating Time/Intervention Time (currently not addressed by a single NFPA standard). Three phases are included in total response time. They are as follows:

- (1) Phase One — Alarm Handling Time, which includes alarm transfer time, alarm answering time, and alarm processing time (addressed by NFPA 1221)
- (2) Phase Two — Turnout Time and Travel Time (addressed by NFPA 1710)
- (3) Phase Three — Initiating Action/Intervention Time

**A.4.1.1 The AHJ generally has the responsibility to determine the following:**

- (1) Scope and level of service provided by the fire department
- (2) Necessary level of funding
- (3) Necessary level of personnel and resources, including facilities

To provide service, the AHJ 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,

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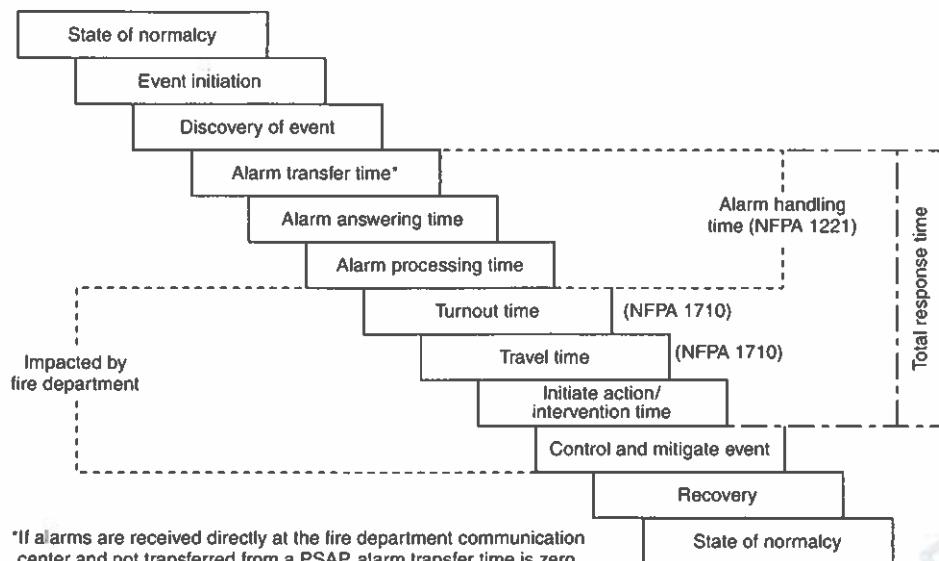


FIGURE A.3.3.53.6 Cascade of Events Chart.

such as fire prevention, community life safety education, fire suppression, employee training, communications, maintenance, and department administration.

The organizational statement is a very important basis for many of the provisions of this standard. The statement sets forth the legal basis for operating a fire department, the organizational structure of the fire department, number of members, training requirements, expected functions, and authorities and responsibilities of various members or defined positions.

A key point is to clearly set out the specific services the fire department is authorized and expected to perform. Most fire departments are responsible to a governing body. The governing body has the right and should assert its authority to set the specific services and the limits of the services the fire department will provide. It also has the responsibility to furnish the necessary resources for delivery of the designated services. The fire department should provide its governing body with a specific description of each service, with options or alternatives and an accurate analysis of the costs and resources needed for each service.

Such services could include structural fire fighting, wildland fire fighting, airport/aircraft fire fighting, emergency medical services, hazardous materials response, high-angle rescue, heavy rescue, and others.

Spelling out the specific parameters of services to be provided allows the fire department to plan, staff, equip, train, and deploy members to perform these duties. It also gives the governing body an accounting of the costs of services and allows it to select those services it can afford to provide. Likewise, the governing body should identify services it cannot afford to provide and cannot authorize the fire department to deliver, or it should assign those services to another agency.

The factors that should be included in the AHJ's risk assessment process include adopted building codes, required fire/life safety related engineering controls, accepted service delivery performance objectives, complexity of facilities, and

occupancy hazards (low, medium, and high) within the jurisdiction.

The fire department should be no different than any other government agency that has the parameters of its authority and services clearly defined by the governing body.

Legal counsel should be used to ensure that any statutory services and responsibilities are being met.

The majority of public fire departments are established under the charter provisions of their governing body or through the adoption of statutes. These acts define the legal basis for operating a fire department, the mission of the organization, the duties that are authorized and expected to be performed, and the authority and responsibilities that are assigned to certain members to direct the operations of the fire department.

The documents that officially establish the fire department as an identifiable organization are necessary to determine specific responsibilities and to determine the parties responsible for compliance with the provisions of this standard.

In many cases, these documents can be part of state laws, a municipal charter, or an annual budget. In such cases, it would be appropriate to make these existing documents part of the organizational statement, if applicable.

**A.4.1.2** There can be incidents or areas where the response criteria are affected by circumstances such as response personnel who are not on duty, unstaffed fire station facilities, natural barriers, traffic congestion, insufficient water supply, and density of population or property. The reduced level of service should be documented in the written organizational statement by the percentage of incidents and geographical areas for which the total response time criteria are achieved.

Additional service delivery performance objectives should be established by the AHJ for occupancies other than those identified within the standard for benchmark single-family dwellings. Factors to be considered include specific response areas (i.e., suburban, rural, and wilderness) and occupancy hazards.



**A.4.1.2.1(3)** This service delivery requirement is intended to have a fire department plan and situate its resources to consistently meet a 240-second travel time for the initial company fire suppression response; for other than high-rise, a 480-second travel time for the full alarm fire response assignment; and for high-rise, a 610-second travel time for the full alarm fire response assignment.

**A.4.1.2.5.1** The evaluation of the fire department's provided level of service needs to be performed against the AHJ's established service delivery performance objectives. These objectives should be based on a jurisdictional risk assessment. The objectives established within this standard are based on a 2000 ft<sup>2</sup> (186 m<sup>2</sup>), two-story, single-family home without a basement and having no exposures. The AHJ's response objectives should be established based on numerous factors such as the circumstances affecting response personnel, adopted building codes, required fire/life safety-related engineering controls, accepted turnout/travel times, complexity of facilities, and occupancy hazards within the jurisdiction.

**A.4.1.2.5.2** The collection of data is required to determine the organization's ability to meet its locally determined objectives and the performance objectives contained in the standard with regard to emergency incidences (warning lights and sirens). Organizations respond to numerous types of emergency and nonemergency incidents. While the collection and analysis of all of the response data is important, attainment of the 90 percent objective is only to be evaluated against emergency incident responses.

**A.4.4.2** Occupational Safety and Health Administration (OSHA) regulations require that all fire departments be trained to respond to hazardous materials incidents at the first responder operations level.

Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA), known as the Emergency Planning and Community Right-to-Know Act, established requirements for federal, state, and local governments and industrial facilities regarding emergency planning for spills or other releases, community right-to-know, and reporting of hazardous and toxic chemicals.

The Emergency Planning and Community Right-to-Know Act covers the following four major areas that provide the fire service and communities with a broad perspective on the chemical hazards within the local area and those at individual facilities:

- (1) Sections 301 through 303 — emergency planning
- (2) Section 304 — emergency release notification
- (3) Sections 311 and 312 — community right-to-know reporting requirements
- (4) Section 313 — toxic chemical release inventory

**A.4.8.1** 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 depart-

ment. The management of responses can be made easier by utilizing computerization, "running cards," and other advance planning.

**A.5.2** Suppression capability is an expression of how much fire-fighting power can be put into action when there is a fire. It includes the amount of apparatus, equipment, and personnel available; the time needed to respond and place equipment in action; the water supply; the application of strategy and tactics; the level of training; and all of the components that add up to effective fireground operations.

**A.5.2.2** For more information, see NFPA 1250; FEMA, National Fire Academy, "Fire Risk Analysis: A Systems Approach"; and Phoenix, AZ, Fire Department, "Fire Department Evaluation System (FIREDAP)."

**A.5.2.2.2** For further information on companies, see 3.3.13 and A.3.3.13.

**A.5.2.2.2.1** An early, aggressive, and offensive primary interior attack on a working fire, where feasible, is usually the most effective strategy to reduce loss of lives and property damage. In Figure A.5.2.2.2.1, the line, which combines temperature rise and time, represents a rate of fire propagation in an unsprinklered room and roughly corresponds to the percentage of property destruction. At approximately 10 minutes into the fire sequence, the hypothetical room of origin flashes over. Extension outside the room begins at that point.

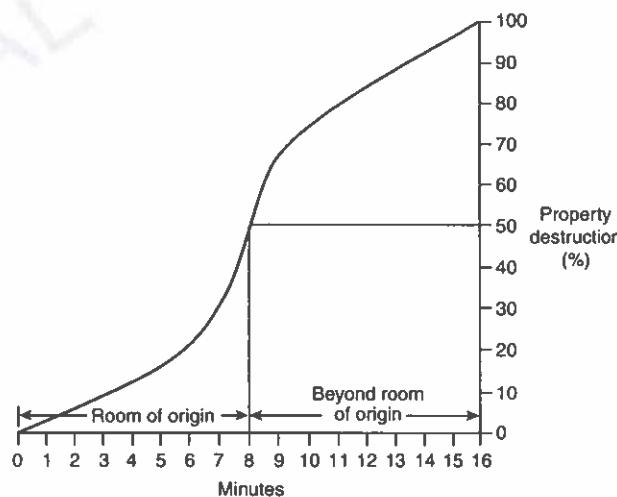


FIGURE A.5.2.2.2.1 Fire Propagation Curve.

Consequently, given that the progression of a structure fire to the point of flashover (i.e., the very rapid spreading of the fire due to superheating of room contents and other combustibles) generally occurs in less than 10 minutes, two of the most important elements in limiting fire spread are the quick arrival of sufficient personnel and equipment to attack and extinguish the fire as close to the point of its origin as possible. For more information, refer to *Fire Service Today*, "Reduced Staffing: At What Cost," and NIST, "Hazard I Fire Hazard Assessment Method." Also, refer to National Fire Academy, "Fire Risk Analysis: A Systems Approach," and Office of the Ontario Fire Marshal, *Shaping the Future of Fire Ground Staffing and Delivery Systems Within a Comprehensive Fire Safety Effectiveness Model*.

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The ability of adequate fire suppression forces to significantly influence the outcome of a structure fire is undeniable and predictable. Data generated by NFPA and used by the committee in developing this standard provide empirical data that rapid and aggressive interior attack can substantially reduce the human and property losses associated with structure fires [see Table A.5.2.2.2.1(a) and Table A.5.2.2.2.1(b)].

The NFPA Fire Analysis and Research Division provided the data in Table A.5.2.2.2.1(b) as an update of Table A.5.2.2.2.1(a).

**Table A.5.2.2.2.1(a) Fire Extension in Residential Structures, 1994–1998**

Extension	Rate per 1000 Fires		
	Civilian Deaths	Civilian Injuries	Average Dollar Loss per Fire
Confined to room of origin	2.32	35.19	\$3,185
Beyond the room but confined to floor of origin	19.68	96.86	\$22,720
Beyond floor of origin	26.54	63.48	\$31,912

Note: Residential structures include dwellings, duplexes, manufactured homes (also called mobile homes), apartments, row houses, townhouses, hotels and motels, dormitories, and barracks.

Source: NFPA Annual Fire Experience Survey and National Fire Incident Reporting System (NFIRS).

**A.5.2.2.2.3** The assignment of specific response districts to command officers should be based on the number of companies, workload, and response distances. Department administrative procedures should indicate clearly the jurisdiction of command officers.

**A.5.2.2.2.5** For further information on staff aides, see 3.3.48 and A.3.3.48.

**A.5.2.4.1.1** The hazards presented by this scenario are not unusual, as all communities respond to fire incidents in this type of structure on a regular basis.

**A.5.2.4.2.1** The open-air strip shopping center represents more than 67 percent of types of shopping centers, as described by the International Council of Shopping Centers (ICSC). The ICSC describes these centers as “usually configured in a straight line as a strip, or may be laid out in an L or U shape, depending on the site and design. They consist of an attached row of stores or service outlets managed as a coherent retail entity, with on-site parking usually located in front of the stores. Open canopies may connect the store fronts, but a strip center does not have enclosed walkways linking the stores. The open air strip shopping center may contain between five and 40 stores of varying occupancy types and hazards with three or more being larger, anchor stores such as a discount store, supermarket, drug, or large specialty discount store.”

**A.5.2.4.4** See “Report on High-Rise Fireground Field Experiments,” NIST, April 2013, for more information.

**A.5.2.4.5.1** Other occupancies and structures in the community that present greater hazards should be addressed by addi-

**Table A.5.2.2.2.1(b) Fire Extension Home Structure Fires, 2006–2010 Rate per 1000 Fires**

Flame Spread	Rate per 1000 Fires		
	Civilian Deaths	Civilian Injuries	Average Dollar Loss per Fire
Confined fires or contained fire identified by incident type*	0.000	10.29	\$212
Confined fire or flame damage confined to object of origin	0.65	13.53	\$1,565
Confined to room of origin, including confined fires and fires confined to object	1.91	25.32	\$2,993
Beyond the room but confined to floor of origin	22.73	64.13	\$7,445
Beyond floor of origin	24.63	60.41	\$58,431

\* NFIRS 5.0 has six categories of confined structure fires: cooking fires confined to the cooking vessel, confined chimney or flue fires, confined incinerator fires, confined fuel burner or boiler fires or delayed ignitions, confined commercial compactor fires, and trash or rubbish fires in a structure with no flame damage to the structure or its contents.

Note: Homes include one- and two-family homes (including manufactured housing) and apartments or other multifamily housing. These statistics are national estimates based on fires reported to U.S. municipal fire departments and so exclude fires reported only to federal or state agencies. National estimates are projections. Casualty and loss projections can be heavily influenced by the inclusion or exclusion of one unusually serious fire. Property damage has not been adjusted for inflation.

Source: NFPA Annual Fire Experience Survey and National Fire Incident Reporting System (NFIRS).

tional fire fighter functions and additional responding personnel on the initial full alarm assignment. The NFPA *Fire Protection Handbook* categorizes occupancies in three broad groups:

- (1) High-hazard occupancies: schools, hospitals, nursing homes, explosives plants, refineries, high-rise buildings, and other high life hazard or large fire potential occupancies
- (2) Medium-hazard occupancies: apartments, offices, mercantile, and industrial occupancies not normally requiring extensive rescue or fire-fighting forces
- (3) Low-hazard occupancies: one-, two- or three-family dwellings and scattered small businesses and industrial occupancies. The NFPA 1710 benchmark occupancy fits into this low-hazard category.

In determining the initial responding force to these occupancies, AHJs must consider the additional potential of fire



spread, types of combustibles, increased life hazard, and various tasks that must be accomplished to achieve their mission.

**A.5.2.4.5.2** Once units arrive, or a determination is made that other resources are required, additional alarms should be called for and dispatched. Departments should have predetermined procedures for additional alarms. Many departments send the same number and type of units on the second alarm as on the first alarm. Incident commanders can always request unique resources when required. Many departments will only be able to handle additional alarms through automatic or mutual aid agreements that have been previously established.

**A.5.3** An EMS system is defined as a comprehensive, coordinated arrangement of resources and functions that are organized to respond in a timely, staged manner to medical emergencies, regardless of their cause. The term *system* can be applied locally or at the state, provincial, or national level. The fundamental functions of an EMS system are the following:

- (1) System organization and management
- (2) Medical direction
- (3) Human resources and training
- (4) Communications
- (5) Emergency response
- (6) Transportation
- (7) Care facilities
- (8) Quality assurance
- (9) Public information and education
- (10) Disaster medical services
- (11) Research
- (12) Special populations

**A.5.3.2** The following four functions do not necessarily exist as separate elements in a particular system:

- (1) The first responding unit can be an advanced life support (ALS) ambulance that can provide ALS treatment and ambulance transportation.
- (2) The first responding unit can be a fire suppression unit that can provide both initial and advanced-level medical care.
- (3) ALS can be provided by the ambulance or by an additional fire suppression unit or a unit that is dedicated to ALS response only.
- (4) The system might not have ALS treatment capability — only a fire apparatus with fire fighters trained as first responder AED can respond.

**A.5.5.6.2** The U.S. Air Force has defined the areas involved in the emergency within 75 ft (23 m) of the aircraft as immediately dangerous to life and health (IDLH).

**A.5.6** For additional information on marine fire fighting, see NFPA 1405.

**A.5.6.5.1** For additional information on marine rescue and fire-fighting vessels, see NFPA 1925.

**A.5.7.6.1.2** A system developed by Chief Paul Gleason of the United States Forest Service addresses specific mandatory fire orders in a system termed *LCES*, which stands for lookout(s), communication(s), escape route(s), and safety zone(s). These four items are to be implemented as an integrated system by a single resource unit, a strike team, or a full assignment. The implementation of LCES is a minimum safety requirement prior to the initiation of any wildland fire-fighting operations.

**A.6.2** 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.

**A.6.2.2** Unlike fire incidents where command is normally predicated by rank structure, EMS patient care is based on statutory recognition of the member with the highest level of medical certification. The recommendation is that departments adopt protocols that define the degree of both member and nonmember involvement in direct patient care based on local standards, medical control, and statutory requirements.

**A.6.5** For additional information, see NFPA 1620.

## Annex B Community-Wide Risk Management Model

*This annex is not a part of the requirements of this NFPA document but is included for information purposes only.*

**B.1** This model is an example of how a community-wide risk management plan can be used to protect both citizens and property. While NFPA 1710 is scoped to focus strictly on deployment, staffing, and service levels, it is one component of a total community fire protection planning process. An AHJ can determine other components that could reduce the risks of fire and adopt stronger building and fire prevention codes, enforce those more vigorously, and enhance public life safety education components. This model is included for that purpose. Figure B.1 illustrates a fire department process map.

NFPA 1730, Chapter 5 establishes a process to identify and analyze community risks to assist in the development and implementation of a community risk reduction (CRR) plan. Detailed guidance on conducting a CRR plan is provided in Annex B of NFPA 1730.

For other documents on community risk assessment and community risk reduction, see: *Fire Service Deployment: Assessing Community Vulnerability*, Urban Fire Forum; *ISO Fire Suppression Rating Schedule, CPSE Standard of Cover*, IFE V2020 CRR 2009 Project Report; IFE V2020 CRR Symposium Report; and *Washington Association of State Fire Marshals CRR Project Report*.

**B.1.1** This annex addresses the need for fire departments to develop an overall “defense-in-depth” strategy for the delivery of fire services. The development of such a strategy should include an assessment of the tools available to the fire service for accomplishing the goals of fire safety.

**B.1.2** Fire safety objectives can be defined as those ideas that a department aspires to deliver. For example, fire department objectives could include such statements as “Maintain injuries and life/property losses as low as reasonably achievable (community and department).” The accomplishment of this objective should not be left to fire-fighting operations alone. See Figure B.1.2 for fire safety concepts.

**B.1.3** Fire prevention is not simply preventing fire. It is the systematic application of codes, standard, engineering principles, and an understanding of human behavior to achieve the objective of limiting the loss of life and property.

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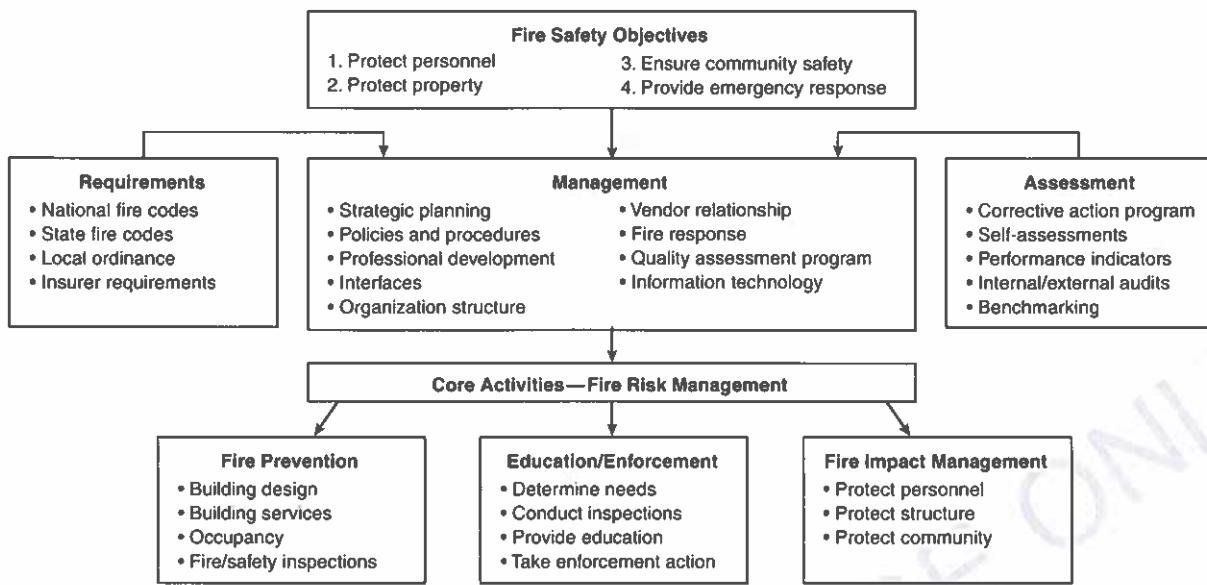


FIGURE B.1 Fire Department Process Map.

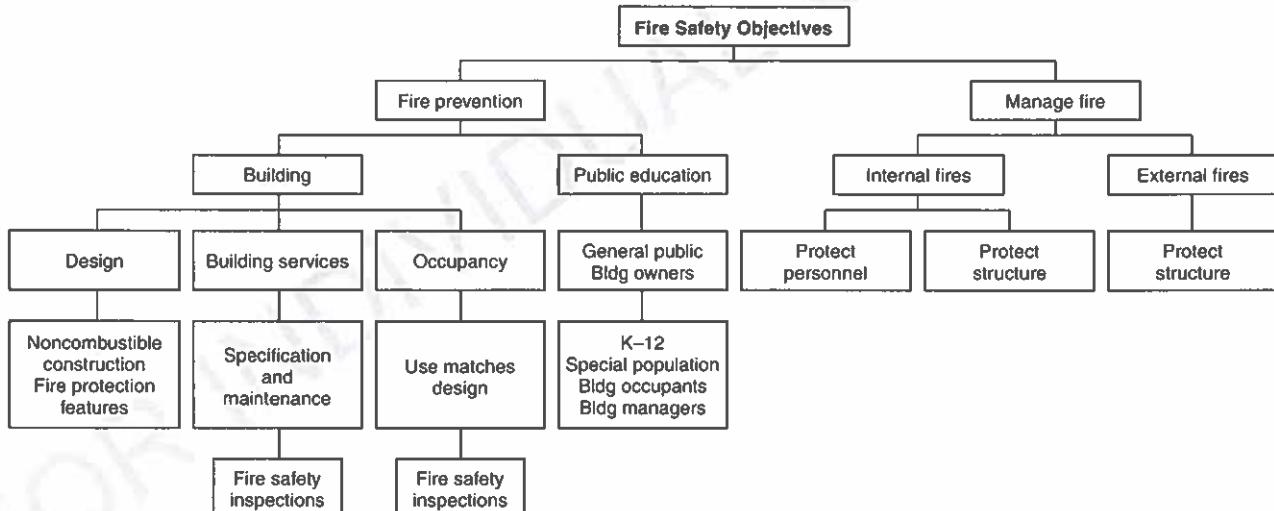


FIGURE B.1.2 Fire Safety Concepts for Fire Department Operations.

**B.1.3.1** As outlined in NFPA 1, fire prevention includes egress, construction design, building services, fire protection, and occupancy. All of these elements work together to provide the occupants and fire department personnel with a level of fire safety not otherwise available.

**B.1.3.2** By ensuring that each of these elements is balanced, the fire department can maintain a reasonable level of risk for the community and the department.

**B.1.3.3** To provide risk management, the fire department must utilize all of the tools available. In order of preference, those tools are as follows:

- (1) Fire-safe design and construction
- (2) Suppression systems
- (3) Detection systems
- (4) Occupant fire prevention practices
- (5) Fire department-conducted fire-safety inspections
- (6) Fire rescue response

**B.1.3.4** A structure designed and constructed to withstand the effects of fire is the most important asset in achieving fire risk management. A structure relying solely on fire rescue response offers the greatest challenge to the occupants and fire department personnel.



**B.1.4** Fire impact management is the ability to manage the impact of a fire on occupants and structures. The participation of the fire department in the design, construction, maintenance, and use of a structure provides defense-in-depth against fire losses.

**B.1.4.1** Structures that are designed with noncombustible construction, are protected with fire protection systems, and are routinely inspected to ensure appropriate occupant use are most likely to provide the lowest risk levels and therefore are the least difficult to manage.

**B.1.4.2** Fire-fighting operations on fully compliant structures for which the fire fighters know the occupancy conditions can be conducted with a plan that commits resources only as necessary to accomplish the pre-established goals.

**B.1.4.3** Pre-established goals for each structure define the commitment of resources in order to limit risk to occupants, the structure, and fire department personnel.

## Annex C Informational References

**C.1 Referenced Publications.** The documents or portions thereof listed in this annex are referenced within the informational sections of this standard and are not part of the requirements of this document unless also listed in Chapter 2 for other reasons.

**C.1.1 NFPA Publications.** National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471.

NFPA 1, *Fire Code*, 2015 edition.

NFPA 1221, *Standard for the Installation, Maintenance, and Use of Emergency Services Communications Systems*, 2016 edition.

NFPA 1250, *Recommended Practice in Fire and Emergency Service Organization Risk Management*, 2015 edition.

NFPA 1405, *Guide for Land-Based Fire Departments That Respond to Marine Vessel Fires*, 2016 edition.

NFPA 1620, *Standard for Pre-Incident Planning*, 2015 edition.

NFPA 1730, *Standard on Organization and Deployment of Fire Prevention Inspection and Code Enforcement, Plan Review, Investigation, and Public Education Operations*, 2016 edition.

NFPA 1925, *Standard on Marine Fire-Fighting Vessels*, 2013 edition.

*Fire Protection Handbook*, 20th edition, 2008.

"Reduced Staffing: At What Cost?" *Fire Service Today*, September 1981.

### C.1.2 Other Publications.

**C.1.2.1 AMA Publications.** American Medical Association, 515 North State Street, Chicago, IL 60610.

"Guidelines 2000 for Cardiopulmonary Resuscitation and Emergency Cardiac Care." 1992. *Journal of the American Medical Association*, 268(16) (October 28).

**C.1.2.2 FEMA Publications.** Federal Emergency Management Agency, 500 C Street, S.W., Washington, DC 20472.

"Fire Risk Analysis: A Systems Approach," NFA-SM-FRAS, National Emergency Training Center, National Fire Academy, July 20, 1984.

**C.1.2.3 NIST Publications.** National Institute of Standards and Technology, 100 Bureau Drive, Bldg. 820, Rm. 164, Gaithersburg, MD 20899.

"Hazard I Fire Hazard Assessment Method," U.S. Department of Commerce, June 1991.

"Report on High-Rise Fireground Field Experiments," April 2013.

**C.1.2.4 U.S. Government Publications.** U.S. Government Publishing Office, Washington, DC 20402.

Title 42, U.S. Code, Chapter 116, Emergency Planning and Community Right-to-Know Act, 1986.

**C.1.2.5 Other Publications.** "Basic Trauma Life Support for Paramedics and Other Providers," American College of Emergency Physicians, John Campbell (ed), 1997.

*Shaping the Future of Fire Ground Staffing and Delivery Systems within a Comprehensive Fire Safety Effectiveness Model*, Office of the Ontario Fire Marshal, 1993.

"Pre-Hospital Trauma Life Support," American College of Surgeons, Paturaas, Wertz and McSwain (eds), 1999.

"Pediatric Advanced Life Support," American Heart Association, Besson (ed), 1997.

"Fire Department Evaluation System (FIREDAP)," Phoenix, AZ Fire Department, December 1991.

"Emergency Care and Transportation of the Sick and Injured," American Association of Orthopedic Surgeons, Browner (ed), 1999.

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

**C.2.1 CPSE Publications.** Center for Public Safety Excellence, 4501 Singer Court, Suite 180, Chantilly, VA 20151.

*Fire and Emergency Service Self Assessment Manuals*, National Fire Service Accreditation Program, 8th edition, Commission on Fire Accreditation International, 2009.

Commission on Fire Accreditation International *Standard of Cover*, 5th edition, 2008.

**C.2.2 Government Accounting Standards Board.** Government Accounting Standards Board, 401 Merritt 7, P.O. Box 5116, Norwalk, CT 06856-5116.

**C.2.3 IAFC/IAFF Publications.** International Association of Fire Chiefs/International Association of Fire Fighters. International Association of Fire Chiefs, 4025 Fair Ridge Drive, Suite 300, Fairfax, VA 22033-2868. International Association of Fire Fighters, 1750 New York Avenue, NW, Washington, DC 20006.

"NFPA 1710 Implementation Guide," August 2002.

**C.2.4 IAFF Publications.** International Association of Fire Fighters, 1750 New York Avenue, NW, Washington, DC 20006.

*Department of Research and Labor Issues*, "Effectiveness of Fire-Based EMS," 1995.

*Department of Research and Labor Issues*, "Safe Fire Fighting Staffing," 1993.

*Department of Emergency Medical Services*, "Emergency Medical Services Performance Objectives," 2002.

**C.2.5 IFSTA/FPP Publications.** IFSTA/FPP, 930 N. Willis, Stillwater, OK 74078.

"Systems Approach to Managing Fire and Life Safety Services," Dennis Compton.

**C.2.6 Insurance Services Office Publications.** ISO Customer Service Division, 545 Washington Blvd., Jersey City, NJ 07310-1686.

"Public Protection Classification Service"; Fire Suppression Rating Schedule.

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**C.2.7 International City/County Management Association Publications.** 777 N. Capitol Street, Washington, DC 20022.

“Managing Fire and Rescue Services,” June 2002.  
“Interim Report of the Tricom Consortium.”

**C.2.8 U.S. Government Publications.** U.S. Government Publishing Office, Washington, DC 20402.

Title 29, Code of Federal Regulations, Part 1910.120, “Hazardous Waste Operations and Emergency Response,” 1986.

Title 29, Code of Federal Regulations, Part 1910.156, “Fire Brigades,” 1998.

**C.2.9 Other Publications.** “Guidelines 2000 for Cardiopulmonary Resuscitation and Emergency Cardiac Care,” *JAMA*, August 2000.

“Performance Measurement and Benchmarking Project,” Office of the Ontario Fire Marshal, 2003.

**C.3 References for Extracts in Informational Sections.** NFPA 1500, *Standard on Fire Department Occupational Safety and Health Program*, 2013 edition.



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<b>Time</b>	
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Definition .....	3.3.53.1
Alarm Handling Time	
Definition .....	3.3.53.2
Alarm Processing Time	
Definition .....	3.3.53.3
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<b>Total Response Time</b>	
Definition .....	3.3.54
<b>Travel Time</b>	
Definition .....	3.3.55
<b>Turnout Time</b>	
Definition .....	3.3.56

## Sequence of Events for the Standards Development Process

As soon as the current edition is published, a Standard is open for Public Input

### Step 1: Input Stage

- Input accepted from the public or other committees for consideration to develop the First Draft
- Committee holds First Draft Meeting to revise Standard (23 weeks)  
Committee(s) with Correlating Committee (10 weeks)
- Committee ballots on First Draft (12 weeks)  
Committee(s) with Correlating Committee (11 weeks)
- Correlating Committee First Draft Meeting (9 weeks)
- Correlating Committee ballots on First Draft (5 weeks)
- First Draft Report posted

### Step 2: Comment Stage

- Public Comments accepted on First Draft (10 weeks)
- If Standard does not receive Public Comments and the Committee does not wish to further revise the Standard, the Standard becomes a Consent Standard and is sent directly to the Standards Council for issuance
- Committee holds Second Draft Meeting (21 weeks)  
Committee(s) with Correlating Committee (7 weeks)
- Committee ballots on Second Draft (11 weeks)  
Committee(s) with Correlating Committee (10 weeks)
- Correlating Committee First Draft Meeting (9 weeks)
- Correlating Committee ballots on First Draft (8 weeks)
- Second Draft Report posted

### Step 3: Association Technical Meeting

- Notice of Intent to Make a Motion (NITMAM) accepted (5 weeks)
- NITMAMs are reviewed and valid motions are certified for presentation at the Association Technical Meeting
- Consent Standard bypasses Association Technical Meeting and proceeds directly to the Standards Council for issuance
- NFPA membership meets each June at the Association Technical Meeting and acts on Standards with "Certified Amending Motions" (certified NITMAMs)
- Committee(s) and Panel(s) vote on any successful amendments to the Technical Committee Reports made by the NFPA membership at the Association Technical Meeting

### Step 4: Council Appeals and Issuance of Standard

- Notification of intent to file an appeal to the Standards Council on Association action must be filed within 20 days of the Association Technical Meeting
- Standards Council decides, based on all evidence, whether or not to issue the Standards or to take other action

## Committee Membership Classifications<sup>1,2,3,4</sup>

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

1. M *Manufacturer*: A representative of a maker or marketer of a product, assembly, or system, or portion thereof, that is affected by the standard.
2. U *User*: A representative of an entity that is subject to the provisions of the standard or that voluntarily uses the standard.
3. IM *Installer/Maintainer*: A representative of an entity that is in the business of installing or maintaining a product, assembly, or system affected by the standard.
4. L *Labor*: A labor representative or employee concerned with safety in the workplace.
5. RT *Applied Research/Testing Laboratory*: A representative of an independent testing laboratory or independent applied research organization that promulgates and/or enforces standards.
6. E *Enforcing Authority*: A representative of an agency or an organization that promulgates and/or enforces standards.
7. I *Insurance*: A representative of an insurance company, broker, agent, bureau, or inspection agency.
8. C *Consumer*: A person who is or represents the ultimate purchaser of a product, system, or service affected by the standard, but who is not included in (2).
9. SE *Special Expert*: A person not representing (1) through (8) and who has special expertise in the scope of the standard or portion thereof.

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

NOTE 2: A representative includes an employee.

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

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

## **Submitting Public Input / Public Comment through the Electronic Submission System (e-Submission):**

As soon as the current edition is published, a Standard is open for Public Input.

Before accessing the e-Submission System, you must first sign-in at [www.NFPA.org](http://www.NFPA.org). *Note: You will be asked to sign-in or create a free online account with NFPA before using this system:*

- a. Click in the gray Sign In box on the upper left side of the page. Once signed-in, you will see a red "Welcome" message in the top right corner.
- b. Under the Codes and Standards heading, Click on the Document Information pages (List of Codes & Standards), and then select your document from the list or use one of the search features in the upper right gray box.

*OR*

- a. Go directly to your specific document page by typing the convenient short link of [www.nfpa.org/document#](http://www.nfpa.org/document#), (Example: NFPA 921 would be [www.nfpa.org/921](http://www.nfpa.org/921)) Click in the gray Sign In box on the upper left side of the page. Once signed in, you will see a red "Welcome" message in the top right corner.

To begin your Public Input, select the link The next edition of this standard is now open for Public Input (formally "proposals") located on the Document Information tab, the Next Edition tab, or the right-hand Navigation bar. Alternatively, the Next Edition tab includes a link to Submit Public Input online

At this point, the NFPA Standards Development Site will open showing details for the document you have selected. This "Document Home" page site includes an explanatory introduction, information on the current document phase and closing date, a left-hand navigation panel that includes useful links, a document Table of Contents, and icons at the top you can click for Help when using the site. The Help icons and navigation panel will be visible except when you are actually in the process of creating a Public Input.

Once the First Draft Report becomes available there is a Public comment period during which anyone may submit a Public Comment on the First Draft. Any objections or further related changes to the content of the First Draft must be submitted at the Comment stage.

To submit a Public Comment you may access the e-Submission System utilizing the same steps as previously explained for the submission of Public Input.

For further information on submitting public input and public comments, go to: <http://www.nfpa.org/publicinput>

### **Other Resources available on the Doc Info Pages**

**Document information tab:** Research current and previous edition information on a Standard

**Next edition tab:** Follow the committee's progress in the processing of a Standard in its next revision cycle.

**Technical committee tab:** View current committee member rosters or apply to a committee

**Technical questions tab:** For members and Public Sector Officials/AHJs to submit questions about codes and standards to NFPA staff. Our Technical Questions Service provides a convenient way to receive timely and consistent technical assistance when you need to know more about NFPA codes and standards relevant to your work. Responses are provided by NFPA staff on an informal basis.

**Products/training tab:** List of NFPA's publications and training available for purchase.

**Community tab:** Information and discussions about a Standard

## Information on the NFPA Standards Development Process

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

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

**II. Technical Committee Report.** The Technical Committee Report is defined as “the Report of the responsible Committee(s), in accordance with the Regulations, in preparation of a new or revised NFPA Standard.” The Technical Committee Report is in two parts and consists of the First Draft Report and the Second Draft Report. (See *Regs* at 1.4)

**III. Step 1: First Draft Report.** The First Draft Report is defined as “Part one of the Technical Committee Report, which documents the Input Stage.” The First Draft Report consists of the First Draft, Public Input, Committee Input, Committee and Correlating Committee Statements, Correlating Input, Correlating Notes, and Ballot Statements. (See *Regs* at 4.2.5.2 and Section 4.3) Any objection to an action in the First Draft Report must be raised through the filing of an appropriate Comment for consideration in the Second Draft Report or the objection will be considered resolved. [See *Regs* at 4.3.1(b)]

**IV. Step 2: Second Draft Report.** The Second Draft Report is defined as “Part two of the Technical Committee Report, which documents the Comment Stage.” The Second Draft Report consists of the Second Draft, Public Comments with corresponding Committee Actions and Committee Statements, Correlating Notes and their respective Committee Statements, Committee Comments, Correlating Revisions, and Ballot Statements. (See *Regs* at Section 4.2.5.2 and 4.4) The First Draft Report and the Second Draft Report together constitute the Technical Committee Report. Any outstanding objection following the Second Draft Report must be raised through an appropriate Amending Motion at the Association Technical Meeting or the objection will be considered resolved. [See *Regs* at 4.4.1(b)]

**V. Step 3a: Action at Association Technical Meeting.** Following the publication of the Second Draft Report, there is a period during which those wishing to make proper Amending Motions on the Technical Committee Reports must signal their intention by submitting a Notice of Intent to Make a Motion. (See *Regs* at 4.5.2) Standards that receive notice of proper Amending Motions (Certified Amending Motions) will be presented for action at the annual June Association Technical Meeting. At the meeting, the NFPA membership can consider and act on these Certified Amending Motions as well as Follow-up Amending Motions, that is, motions that become necessary as a result of a previous successful Amending Motion. (See 4.5.3.2 through 4.5.3.6 and Table 1, Columns 1-3 of *Regs* for a summary of the available Amending Motions and who may make them.) Any outstanding objection following action at an Association Technical Meeting (and any further Technical Committee consideration following successful Amending Motions, see *Regs* at 4.5.3.7 through 4.6.5.3) must be raised through an appeal to the Standards Council or it will be considered to be resolved.

**VI. Step 3b: Documents Forwarded Directly to the Council.** Where no Notice of Intent to Make a Motion (NITMAM) is received and certified in accordance with the Technical Meeting Convention Rules, the standard is forwarded directly to the Standards Council for action on issuance. Objections are deemed to be resolved for these documents. (See *Regs* at 4.5.2.5)

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

**VIII. Step 4b: Document Issuance.** The Standards Council is the issuer of all documents (see Article 8 of *Bylaws*). The Council acts on the issuance of a document presented for action at an Association Technical Meeting within 75 days from the date of the recommendation from the Association Technical Meeting, unless this period is extended by the Council (See *Regs* at 4.7.2). For documents forwarded directly to the Standards Council, the Council acts on the issuance of the document at its next scheduled meeting, or at such other meeting as the Council may determine (See *Regs* at 4.5.2.5 and 4.7.4).

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

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



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Country \_\_\_\_\_  
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- Facilities Safety Officer (F14)
- Fire Chief, Other Fire Service (A11)
- Loss Control, Risk Manager (L11)
- Inspector, Building Official, Fire Marshal (F03)
- Owner, President, Manager, Administrator (C10)
- Other (please specify): (G11) \_\_\_\_\_

### Type of Organization (check one)

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- Commercial Firm (Office, Retail, Lodging, Restaurant) (G13)
- Electrical Services, Installation (J11)
- Fire Service, Public and Private (AA1)
- Government (C12)
- Industrial Firm (Factory, Warehouse) (C11)
- Institutional (Health Care, Education, Detention, Museums) (B11)
- Insurance, Risk Management (B12)
- Utilities (G12)
- Other (please specify): (G11) \_\_\_\_\_

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City of Hanford  
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## Appendix E

### **NFPA 1710**



City of Hanford  
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**Appendix F**  
**KCFD Unrepresented Management MOU**

## SECTION V

## UNREPRESENTED MANAGEMENT BENEFITS

<u>Management Group I</u> =	Appointed and elected officials in salary bands.	
<u>Management Group II</u> =	Middle management (all other management not in Group I or III).	
<u>Confidential</u>		
<u>Management Group III</u> = (non-exempt)	All Executive Secretary positions Deputy Clerk to B.O.S. I/II Payroll Specialist Personnel Assistant I/II/III Personnel Technician I/II Risk Assistant I/II Risk Technician I/II	Safety Technician I/II Secretary to C.A.O. Secretary to County Counsel Secretary to District Attorney Secretary Supervising Legal Secretary

### VACATION

1. An eligible management employee may accrue vacation at the appropriate rate applicable to the employee's length of service (2080 hours of actual service as defined in the County Personnel rules equals one year) as follows:

Service Hours	Hours (days) Earned (based on hrs)	Rate (based on hours)
0 - 10,400	96 (12 days)	.046154
10,401 - 20,800	120 (15 days)	.057693
20,801 - 31,200	140 (17.5 days)	.067308
31,201 +	160 (20 days)	.076924

2. An eligible management employee may accrue vacation at the appropriate rate applicable to the employee's length of service (as set forth above) until the employee reaches one of the following accrued hours of vacation limits:

Hours (days) Earned (based on hrs)	Maximum Vacation Accumulation Limits
96 (12 days)	192 hours
120 (15 days)	240 hours
140 (17.5 days)	280 hours
160 (20 days)	320 hours

Once the appropriate accumulation limit has been reached, the employee shall cease to earn additional vacation until the employee's accumulated vacation balance falls below the limits listed above.

3. Effective July 1, 2014, management employees in Group I & II will be granted 64 hours of additional vacation time as management leave in the first full pay period of each fiscal year (or pro-rated upon hire date). These hours are a separate leave benefit and not counted against the maximum vacation accrual established based on length of service. Employees may, at their option, sell back up to 48 of the 64 hours of management leave each fiscal year at their hourly rate of pay. This leave will be tracked separately from the regular vacation accrual and is not intended to carry over from year to year. If this time is not used by the end of the fiscal year (see note), up to 48 hours of the remaining balance will be automatically cashed out to the employee. Any sale of management vacation hours will be deducted only from the management vacation leave balance. The remaining 16 hours of leave can not be cashed out and must be taken as time off only. If any hours remain at the end of the fiscal year after 48 hours are cashed out, the remaining hours will carry over to the new fiscal year (see note). However, the hours granted for the new fiscal year shall be reduced by the number of hours equal to those carried over.
  - a) All management attorneys in the District Attorney's Office, Child Support, Minors Advocate, and County Counsel will be granted 80 hours additional management leave in the first full pay period of each fiscal year (or pro-rated upon hire date) which will not carry over and may be cashed out in full.
  - b) Management employees in Group III will be granted 40 hours of vacation time in the first full pay period of each fiscal year (or pro-rated upon hire date). All other terms described above apply.

## SECTION V

## UNREPRESENTED MANAGEMENT BENEFITS

4. All Management employees may, at their option, sell back an additional 8 hours of accrued regular vacation each fiscal year, (see note) at their hourly rate of pay, to be contributed directly to the employee's deferred compensation account.
5. Upon the recommendation of the Human Resources Director, the County Administrative Officer may authorize a vacation accrual rate for management positions hired from outside the county at an amount equivalent to what their accrual would be if their service time with other public agencies was earned in Kings County. Additionally, when this advanced accrual rate is authorized at the time of hire, the prior public service time will be used for calculating future adjustments to the accrual rate as if the time was earned with Kings County.

**Note:** 1) For purposes of payroll processing of vacation hour sell backs described above, the end of the fiscal year is defined as the last day of pay period 13 in any year. 2) Management leave is not available for use during pay period 14. 3) Provisions regarding vacation do not apply to elected officials.

### HEALTH/DENTAL/OPTICAL PLAN PREMIUM CONTRIBUTION

Employees who elect to use a Health Plan offered by the County must continue to participate in the Dental and Optical plans and must remain in that plan until the open enrollment period of the plan. Employees electing to pretax their insurance will not be allowed to drop insurance coverage except at open enrollment unless the employee has a qualifying status change.

Effective July 1, 2016, the County contribution (per month based on 24 pay periods) to the health/dental/optical insurance premium will be as follows:

<b>PPO Plan</b>	
Health/Dental/Vision	
<u>Plan Level</u>	<u>County Share</u>
Single	\$569.84
Two-Party	\$1,037.48
Family	\$1,561.14

The County shall pay 100% of the health insurance premium (including the medical, dental and vision plans) for the health plan offered by the County for each management employee and their eligible family members, based on their enrollment in such health plan. Employees promoting into or demoting out of management classifications after open enrollment will be treated as a "status" change and may enter or leave the plan, or modify the number of dependents covered.

### DEFERRED COMPENSATION

Effective January 1, 2014, for every three dollars contributed to the County contracted deferred compensation programs by management employees, the County shall contribute one dollar to the employee's account, up to a maximum of twenty five hundred dollars \$2,500 per calendar year.

### RETIREMENT/PERS SERVICE CREDIT

The County contracts with the Public Employee Retirement System (PERS) for this benefit and pays the employee contribution for members of the Board of Supervisors only. All management employees pay the total Miscellaneous or Safety PERS employee contribution depending on their classification and status within PERS (Classic or "new member" – see below). Effective April 4, 2011, all non-fire law enforcement managers also pay 4% of the PERS employer contribution (with the exception of the current Sheriff-Coroner whose compensation cannot be reduced during the term of office)

Miscellaneous Non-Safety Management

1. New Members – Employees hired on or after January 1, 2013 and designated as “new members” to CalPERS are eligible for the PERS 2% at 62 Miscellaneous Plan pursuant to AB 340/SB197 (Pension Reform Act 2013). These employees pay the entire employee contribution rate reviewed and set annually by CalPERS, currently 6.25% of salary. Such payment shall vest to the employee.
2. Classic Members – Employees hired prior to January 1, 2013, or those hired on or after that date that are not designated as “new members” to CalPERS by the Pension Reform Act of 2013, are eligible for the 2% at 55 Miscellaneous Plan. These employees pay the entire employee contribution of 7.0% of salary. Such payment shall vest to the employee.
  - a) The 2% at 55 Plan has been modified to also include the following optional benefits: One-Year Final Compensation and Military Service Credit.
  - b) The Miscellaneous Plan has also been modified for employees to have, at their option, the ability to apply to PERS for retirement service credit for their unused sick leave balance. However, the County limits the use of this provision to employees who have not cashed out their sick leave or opted for the Retiree Health benefit.

Safety Management

1. New Members – Employees hired on or after January 1, 2013 and designated as “new members” to CalPERS are eligible for the PERS 2.7% at 57 Safety Plan pursuant to AB 340/SB197 (Pension Reform Act of 2013). These employees pay the entire employee contribution rate reviewed and set annually by CalPERS, currently 10.75% of salary. Such payment shall vest to the employee.
2. Classic Members – Employees hired prior to January 1, 2013, or those hired on or after that date that are not designated as “new members” to CalPERS by the Pension Reform Act of 2013, are eligible for the 3% at 55 Safety Plan, which became effective 4/1/02. These employees pay the entire 9% of salary PERS employee contribution. Such payment shall vest to the employee.
  - a) The 3% at 55 Plan has been modified to also include the following optional benefits: One-Year Final Compensation and Military Service Credit.

Elected Officials

Pursuant to State Law local elected officials have the option of declining participation in the Public Employees Retirement System. An amount equal to the Employee's share of retirement may, if an elected officer declines participation in PERS, be applied toward the County Sponsored deferred compensation plan in lieu of the PERS contribution. The County match amount for this benefit shall not exceed the match provided to management employees described above.

TERM LIFE/ACCIDENT INSURANCE

Term life/accident insurance (with an option for portability when leaving County service in good standing) is provided for management employees as follows:

Management Group I	\$ 50,000
Management Group II/III	\$ 40,000

LONG TERM DISABILITY INSURANCE

Long Term Disability (LTD) Insurance is provided to all management employees.

SICK LEAVE ACCRUAL

- a. All regular full-time and regular part-time management employees hired prior to January 1, 1999, shall be entitled to point zero-four-six-one-five-four (.046154) hours of sick leave with pay for each hour of the actual hours of regular employment.
- b. All regular full-time and regular part-time management employees hired January 1, 1999 or thereafter will accrue sick leave as follows:

Service Hours	Hours Earned	Sick leave earned at the rate of (based on hours worked)
0 - 10,400	80 (10 days)	.038462
10,401 - 20,800	88 (11 days)	.042308
20,801 +	96 (12 days)	.046154

Note: Provisions regarding sick leave do not apply to elected officials.

UNUSED SICK LEAVE PAYOFF/POST RETIREMENT HEALTH INSURANCE

- a) Management employees hired January 1, 1999 or later, who retire in good standing from PERS at the time of their separation from Kings County employment (or in the event of death of an employee, were eligible to retire) will receive a percentage of the dollar value of accrued sick put into an "account" to be used toward all or part of the total premium for Kings County health insurance until the employee, and/or spouse or dependent if covered, is no longer eligible, (by age and within COBRA guidelines if applicable) for the County health insurance program, or the money runs out, whichever is first. Pursuant to existing practice the balance does not accrue interest. If a balance remains at the time the employee, and/or spouse or eligible dependent can no longer participate in the County health insurance, this amount can be applied toward a Medicare Part B plan or Medicare supplement, or PERS Long Term Care plan. Participation in the County health Insurance program is not required for the employee, and/or spouse or eligible dependent to direct all or part of the funds in this account to a Medicare Part B or PERS Long Term Care plan premium. The retiree health benefit percentage shall be as follows:

Service Hours	Percent of compensation (based on hours)
10,401 - 41,600	40%
41,601 and over	50%

To qualify for the retiree health benefit the employee and any eligible dependents to be covered must be enrolled in the County's existing health benefit plan at the time of the employee's separation from County service and the employee must be eligible to retire on a service retirement at the time of separation. However, the employee or eligible dependent may defer use of this benefit if otherwise covered on the County health plan at retirement. Health benefit payments may be used toward coverage for the employee's dependents only as long as the dependent(s) is eligible for coverage under the plan, and, in the case of children, only to the age permitted under the plan contract as dependent children. In all other instances, any balance in account remains property of County.

- b) Management employees hired prior to January 1, 1999 who separate in good standing shall be allowed a one time irrevocable election to decide whether to receive the post retirement health insurance benefit or cash as follows:

Service Hours	Percent of Compensation (based on hrs) Cash	Percent of compensation (based on hrs) OR Retiree Health Benefit	
		25%	40%
10,401 - 41,600	25%	40%	
41,601 and over	30%	50%	

To qualify for the retiree health benefit (non-cash) benefit the employee and any eligible dependents to be covered must be enrolled in the County's existing health benefit plan at the time of the employee's retirement (or in the case of death of an employee, eligible to retire) from County service. However, the employee or eligible dependent may defer use of this benefit if otherwise covered on the County health plan at retirement. Pursuant to existing practice the balance does not accrue interest. Decision to accept cash or the retiree health benefit option must be made in writing to the Department of Finance not later than 14 days after retirement. In the event of death of an employee eligible to retire (while still employed in good standing), the qualifying eligible dependent(s) shall make a determination of either cash or the retiree health benefit option within 30 days of the death of the employee.

If employee (or in the event of death, eligible dependent) elects the cash option, the employee will receive the benefit if the employee separates in good standing as a result of resignation, layoff, retirement or death.

To qualify for the retiree health benefit the employee and any eligible dependents to be covered must be enrolled in the County's existing health benefit plan at the time of the employee's separation in good standing from County service and the employee must be eligible to retire on a service retirement at the time of separation. If employee elects the retiree health benefit option, the County will pay all or part of the total health insurance premium until the employee, and/or spouse or dependent if covered, is no longer eligible (by age or within COBRA guidelines if applicable) for the County health insurance program or the money runs out, whichever is first. Retiree health benefit payments may be used toward coverage for the employee's dependents only as long as the dependent(s) is eligible for coverage under the plan; and, in the case of children, only to the age permitted under the plan contract as dependent children. If a balance remains at the time the employee, and/or spouse or eligible dependent can no longer participate in the County health insurance, this amount can be applied toward a Medicare Part B plan or Medicare supplement, or PERS Long Term Care plan. Participation in the County health insurance program is not required for the employee, and/or spouse or eligible dependent to direct all or part of the funds in this account to a Medicare Part B or PERS Long Term Care plan premium.

Taxes will be paid by the employee on the full cash distribution, or the portion of the deposit into the account that could have been taken in cash. Additionally, the cash benefit is taxable in the year the cash is received. In all other instances, any balance in account remains property of County.

#### ELECTED OFFICIALS - POST RETIREMENT HEALTH INSURANCE

Kings County elected Officials may be eligible for a Post Retirement Health Benefit upon retiring from the County. All the criteria shall apply as for management post retirement health insurance generally except that: An elected official is eligible for the post retirement health insurance benefit described below if that elected official: 1) serves at least five (5) consecutive years in office without break in service between the five years served and the date of departure from elected office; and 2) either simultaneously retires from PERS at the end of such service (or is at that time already retired from PERS). The benefit is calculated by multiplying the hourly rate at the time of eligibility, by the number of consecutive years in office, and then multiplying the result by one half of the annual sick leave benefit provided to management employees at the time of eligibility. The official may defer use of this benefit if otherwise covered on the County health plan at the time of eligibility so long as there is no break in coverage during the deferral period. Pursuant to existing practice the balance does not accrue interest. (*Note: the change in the formula will go in to effect at the start of each sitting elected's next consecutive term in office and at the time of filing candidacy papers for any new candidate who is subsequently elected.* Any previously earned benefit will be calculated and recorded by the Finance Department.

If a balance remains at the time the elected, and/or his/her spouse or eligible dependent no longer participates in the County health insurance, this amount can be applied toward a Medicare Part B plan or

## SECTION V

## UNREPRESENTED MANAGEMENT BENEFITS

Medicare supplement, or PERS Long Term Care plan. Participation in the County health insurance program is not required for the elected, and/or spouse or eligible dependent to direct all or part of the funds in this account to a Medicare Part B or PERS Long Term Care plan premium. In all other instances, any balance on account remains property of County.

### P.O.S.T. EDUCATION INCENTIVE PAY

1. Employees in the classifications of Assistant Chief DA Investigator, Assistant Sheriff, Sheriff's Commander, Detentions Commander and Chief District Attorney Investigator who possess a valid P.O.S.T. Management Certificate shall be entitled to receive compensation in the amount of \$200.00 per month (\$92.31 per pay period). Employees must submit certification to the appropriate department head prior to payment authorization. Employees receiving compensation for P.O.S.T. Management Certification shall not be entitled to compensation for other P.O.S.T. certification.
2. Employees in the above indicated classifications possessing valid, current P.O.S.T. Supervisory Certification shall be entitled to receive compensation in the amount of \$150.00 per month (\$69.23 per pay period). Eligible employees must submit appropriate certification to the department prior to payment authorization. Employees receiving compensation for P.O.S.T. Supervisory Certification shall not be entitled to compensation for other P.O.S.T. certification.
3. Employees in the above indicated classifications possessing valid, current P.O.S.T. Advanced Certification shall be entitled to receive compensation in the amount of \$125.00 per month (\$57.69 per pay period). Eligible employees must submit appropriate certification to the department head prior to payment authorization. Employees receiving compensation for P.O.S.T. Advanced Certification shall not be entitled to compensation for other P.O.S.T. certification.
4. Employees in the above indicated classifications possessing valid, current P.O.S.T. Intermediate Certification shall be entitled to receive compensation in the amount of \$100.00 per month (\$46.15 per pay period). Eligible employees must submit appropriate certification to the department head prior to payment authorization. Employees receiving compensation for P.O.S.T. Intermediate Certification shall not be entitled to compensation for other P.O.S.T. certification.

### Battalion Chief Stipend

The intent for the Battalion Chief Stipend is to provide a method of compensation when Battalion Chiefs are assigned to work extra shifts outside their regular assigned working hours. Based on an estimate of anticipated vacation, training time and possible sick leave use for the three field Battalion Chiefs, it is necessary to provide additional field coverage for up to 52 shifts or partial shifts annually. The Battalion Chief Stipend applies to all assigned Battalion Chiefs in the Operations, Fire Prevention and Training Divisions.

The stipend rates are as follows:

<u>Stipend</u>	<u>Hours</u>
\$900	Full Shift - 24 hours
\$450	Partial Shift – 12 to 24 hours

\*Coverage of less than 12 hours will not be compensated. This time is compensated through Management Leave.

While the Administrative Battalion Chief assigned to Fire Prevention/Training activity would also be eligible for the stipend if he/she covers for an Operation Battalion, this stipend will not apply for coverage of the Fire Prevention/ Training Battalion Chief's absences.

Battalion Chief Holiday-in-Lieu

All Shift (56 Hour work week) Fire Battalion Chiefs shall receive Holiday-in-Lieu. Holiday-in-Lieu time will be recorded and paid as 24 hours of "Holiday-in-Lieu" for each whole holiday and 12 hours for each half-day holiday. If a Shift Battalion Chief is required to work on a holiday, no other day off will be traded or exchanged for the schedule day.

All Administrative (40 hour work week - Fire Prevention/ Training) Battalion Chiefs shall receive 8 hours Holiday Pay and will receive an additional 16 hours Holiday-in-Lieu for each whole holiday. On ½ day holidays, Administrative Battalion Chiefs will receive 4 hours of Holiday Pay with no additional compensation of Holiday-in-lieu.

UNIFORM ALLOWANCE

The management employees classifications listed below shall be entitled to receive a uniform allowance which will automatically be adjusted to the same amount as the bargaining unit employees they supervise, currently:

Assistant Chief DA Investigator	\$550
Assistant Fire Chief *	\$600
Assistant Sheriff	\$850
Battalion Chief *	\$600
Chief District Attorney Investigator	\$550
Chief Probation Officer	\$550
Deputy Chief Probation Officer	\$550
Detentions Commander	\$850
Detentions Lieutenant	\$850
Emergency Communications Manager	\$275
Emergency Services Coordinator	\$250
Executive Secretary (Fire only)	\$250
Fire Chief *	\$600
Food Services Manager	\$275
Juvenile Corrections Captain	\$550
Probation Division Manager	\$550
Sheriff	\$850
Sheriff's Commander	\$850
Sheriff's Records Manager	\$275

\* These employees participate in the uniform quartermaster system and this amount is deposited in the department's line item on their behalf.

1. All employees required to wear a uniform by the County shall receive a uniform allowance paid directly to the employee. Only the initial uniform allowance paid to employees shall be paid in a lump sum. New employees shall receive their initial allowance in the first full pay period following the date of employment. Employees who voluntarily terminate within the first 90 days after receiving their initial allowance shall be required to reimburse the County for one-half of their initial allowance. Those who voluntarily terminate during the second 90 days after receiving their initial allowance will be required to reimburse the County for one-quarter of the allowance.
2. Eligible employees who are on the regular County payroll in paid status shall receive the annual uniform allowance as follows: Employees will be paid 1/26 of the annual allowance each pay period in paid status. The uniform allowance shall not be paid for any pay period the employee is in unpaid status the entire pay period.
3. For employees hired on or after January 1, 2013 and designated as "new members" to CalPERS, any uniform allowance will not be subject to PERS pursuant to AB 340/SB197 (Pension Reform Act of 2013).

## SECTION V

## UNREPRESENTED MANAGEMENT BENEFITS

### BILINGUAL PAY

Upon the written request of a department head explaining the business necessity, the County Administrative Officer may approve bilingual pay for a management employee in the amount of \$25 per pay period when use of their bilingual skills is determined to be an essential service need. Bilingual pay shall be terminated, and a new request for bilingual compensation may be submitted, if the employee is demoted, promoted, transferred or reassigned. The decision of the County Administrative Officer regarding the granting and termination of bilingual payment shall be final and shall not be subject to appeal or grievance procedures. Employees receiving bilingual pay may be required to use their bilingual ability to assist other departments within the County. When a part-time employee is assigned bilingual duties, the bilingual pay shall be prorated. Employees who translate for more than one language are not eligible to receive additional bilingual compensation for the additional language(s).

### LEGAL SPECIALIST CERTIFICATION PAY

Employees who are hired at or promoted to the classifications such as Supervising Attorney or Deputy County Counsel III or IV are eligible for additional compensation as outlined below once they have acquired and maintain a State Bar of California-approved Legal Specialist Certification as a Family Law Specialist or Child Welfare Law Specialist. Certification in any other legal specialties will not be considered qualifying for Legal Specialist Certification pay.

<b>\$150 per month</b> Deputy County Counsel III	<b>\$200 per month</b> Deputy County Counsel IV Supervising Attorney Supervising Attorney – Child Adv. Supervising Attorney – Child Sup.
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Eligible employees must present proof of certification in order to qualify for Legal Specialist Certification Pay. Proof of re-certification must be presented at the end of each subsequent certification period in order to continue to qualify for certification pay.

### PUBLIC HEALTH DEPARTMENT PROFESSIONAL LICENSES

The County will pay for the professional license fees for unrepresented management employees in the following classifications (which will be monitored by the Public Health Department):

Deputy Health Director, Environmental Health	\$175 every 2 years
Deputy Health Director, Nursing & Comm. Svc.	\$140 every 2 years
Nutrition Services Manager	\$50 annually
Supervising Environmental Health Officer	\$175 every 2 years
Supervising Public Health Nurse	\$140 every 2 years



City of Hanford  
Fire Department

## Appendix F

### Porterville City Employee Benefit Plan 2020-21

[https://cms9files.revize.com/PortervilleCA/Document\\_Center/Department/Administrative/Employee%20Pay.Benefit%20Plan%202022.pdf](https://cms9files.revize.com/PortervilleCA/Document_Center/Department/Administrative/Employee%20Pay.Benefit%20Plan%202022.pdf)

### Porterville Fire Department Library Fire SART

<https://cms9files.revize.com/PortervilleCA/departments/Fire/PFD-SART-Report.pdf>

### Tulare City Chief Officer MOU

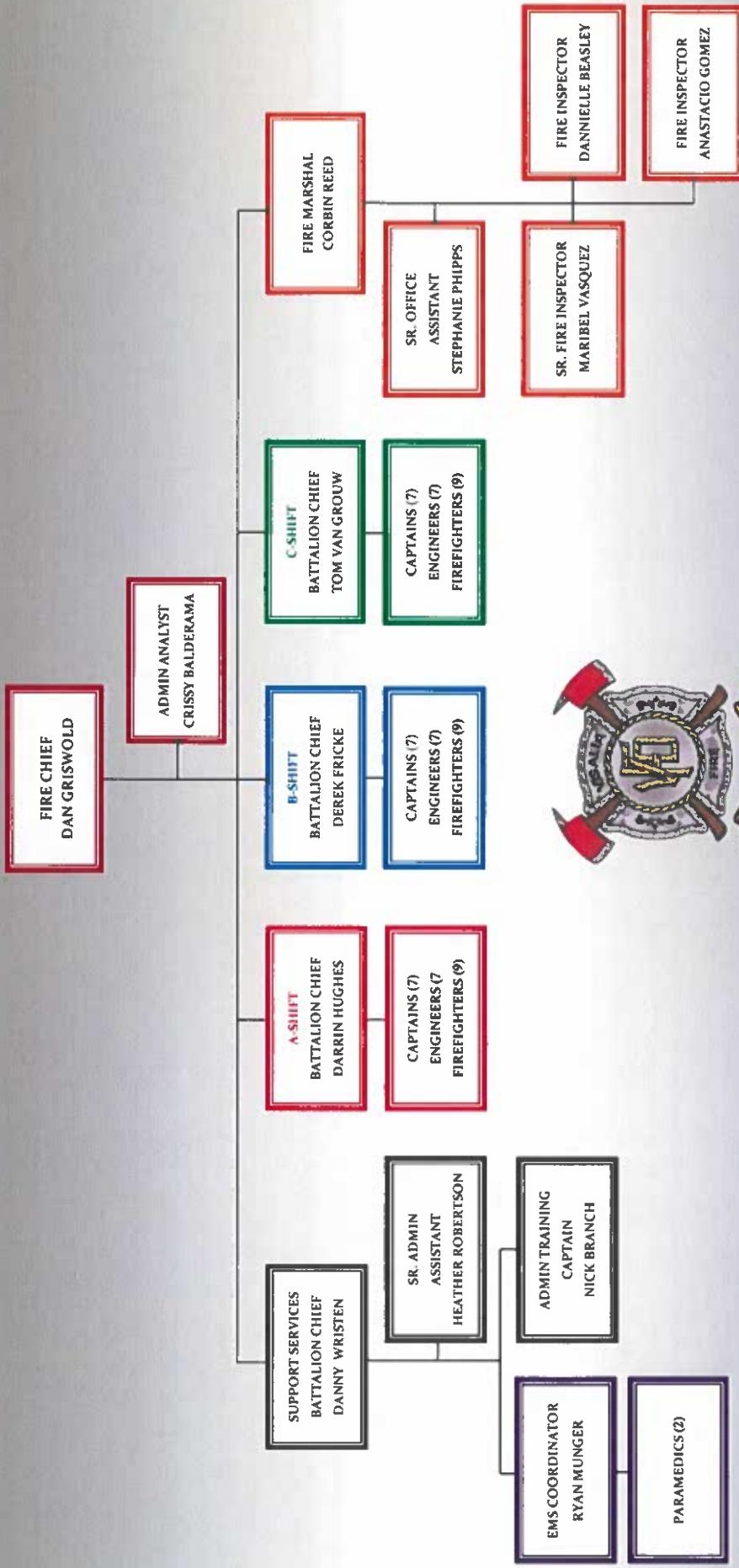
<https://www.tulare.ca.gov/home/showpublisheddocument/13284/637079569232270000>

### Visalia Confidential/Unrepresented Group Compensation and Benefit Summary

<https://www.visalia.city/civicax/filebank/blobdload.aspx?BlobID=38942>

### Visalia Fire Department Organization Chart

# Visalia Fire Department Organizational Chart





City of Hanford  
Fire Department

## Appendix G

### Categorized Fire Problem Natures Master List

Category	Problem Nature Description	Fire	Fire	North Central Metro Fire	Clovis Fire	Selma Fire	Kingsburg Fire
<b>Aid</b>							
Aid-Automatic Aid		BC Approval	BC Approval	1E	1E or 1T	1E	1E
Aid-Manual Aid		ARF Approval	BC Approval	N/A	N/A	N/A	N/A
Aircraft							
Aircraft-Alert I	No Response	ARF Notification	N/A	N/A	N/A	N/A	No Response
Aircraft-Alert II	1E or 1T	2 ARF, 2E, 1T, BC, I	N/A	N/A	N/A	N/A	No Response
Aircraft-Alert III	1E or 1T	2 ARF, 2E, 2T, BC, I	N/A	N/A	N/A	N/A	No Response
Aircraft-Crash (On FYI)	1E, 1T, 1C	2 ARF, 2T, BC, I	N/A	N/A	N/A	N/A	N/A
Aircraft-Emergency Landing	1E, 1T, 1C	5E, 2T, BC, I	5E, 2T, BC, I	3E, 1T, 1BC	4E, 1C	4E, 1C	4E, 1C
Alarms	1E or 1T	5E, 2T, BC, I	5E, 2T, BC, I	3E, 1T, 1BC	4E, 1C	4E, 1C	4E, 1C
Alarm-CO Alarm (No Trs)	1E or 1T	No FFD Response	No FFD Response	1E or 1T	1E	1E	1E
Alarm-Commercial	1E or 1T	1E or 1T	1E or 1T	1E or 1T	2E	1E	1E
Alarm-Residential	1E or 1T	1E or 1T	1E or 1T	1E or 1T	1E	1E	1E
Alarm-Residential with Reset	1E or 1T	1E or 1T	1E or 1T	1E or 1T	2E	1E	1E + R
Alarm-Tearer Alarm	1E or 1T	No NCED Response	No NCED Response	1E or 1T	1E	1E	1E
Alarm-Testing	N/A	No FFD Response	No FFD Response	N/A	N/A	N/A	N/A
All-Alarm-Trouble Alarm	No Response	No FFD Response	No FFD Response	No CFD Response	No Response	No Response	No Response
<b>Citizen Assist</b>							
Citizen Assist-Animal Problem	1E or 1T	SD 1E or 1T	SD 1E or 1T	1E or 1T	1E	1E	1E
Citizen Assist-Bees	1E or 1T	SD 1E or 1T	SD 1E or 1T	1E or 1T	1E	1E	1E
Citizen Assist-Other	1E or 1T	SD 1E or 1T	SD 1E or 1T	1E or 1T	1E	1E	1E
Citizen Assist-PL Locked in Vehicle (CALV)	1E or 1T	SD 1E or 1T	SD 1E or 1T	1E or 1T	1E	1E	1E
<b>Electrical</b>							
Electrical-Arcing in Structure	1E or 1T, 1C	(1E, or 1T, 1E)	(1E, or 1T, 1E)	(1E, or 1T, 1E)	1E or 1T	2E, T110	1E, 1C
Electrical-Arcing Power Lines	1E or 1T	SD 1E or 1T	SD 1E or 1T	1E or 1T	1E	1E	1E
Electrical-Arcing Power Lines with Hazards	1E or 1T	SD 1E or 1T	SD 1E or 1T	1E or 1T	2E	1E	1E
Electrical-Power Lines Down	1E or 1T	(1E, or 1T, 1E)	(1E, or 1T, 1E)	(1E, or 1T, 1E)	1E or 1T	2E	1E
Fire-Abandonment	4E, 1T, 1C	5E, 2T, BC	5E, 2T, BC	5E, 1T, 1BC	4E, T110, 1C	4E, T110, 1C	4E, T110, 1C
Fire-Commercial	1E or 1T, 1C	2E, 1T, 1BC	2E, 1T, 1BC	5E, 1T, 1BC	2E	1E, IC	1E, IC
Fire-Out Building	1E or 1T, 1C	(1E, or 1T, 1E)	(1E, or 1T, 1E)	(1E, or 1T, 1E)	1E or 1T	1E, SQ110	1E, 1C
Fire-Outdoors	1E or 1T, 1C	(1E, or 1T, 1E)	(1E, or 1T, 1E)	(1E, or 1T, 1E)	1E or 1T	2E, T110	1E, 1C
Fire-Oven Fire (Contained)	1E or 1T, 1C	3E, 1T, 1E or 1T, 1BC	4E, 1T, 1E or 1T, 1BC	4E, 1T, 1BC	4E, T110, 1C	4E, T110, 1C	4E, T110, 1C
Fire-Residential - W	1E or 1T, 1C	4E, 1T, 1E or 1T, 1BC	3E, 1T, 1E or 1T, 1BC	3E, 1BC	4E, SQ110, 1C	4E, SQ110, 1C	4E, SQ110, 1C
Fire-Riverbottom/Valley	1E or 1T, 1C	2E, 2P or 2B, 1W, 1BC	2E, 2P or 2B, 1W, 1BC	2E, 1BC	1E, SQ110	1E	1E
Fire-Vegetation (Large)	2E, 1BC						
Fire-Vegetation (Small)	1E or 1T	1E *seasonal + 1E	1E *seasonal + 1W, 1E	1E or 1T	1E	1E	1E
Fire-Vehicle	1E or 1T, 1C	(1E, or 1T, 1E)	(1E, or 1T, 1E)	(1E, or 1T, 1E)	1E or 1T	1E, 1C	1E, 1C
Fire-Warming	1E or 1T	SD 1E or 1T	SD 1E or 1T	1E or 1T	1E	1E	1E
Gas Leak	1E or 1T, 1C	SD 1E or 1T	SD 1E or 1T	1E or 1T, 1BC	1E	1E	1E
Gas Leak-Fuel Spill (Same)	1E or 1T, 1C	(1E, or 1T, 1E)	(1E, or 1T, 1E)	(2E, or 1T, 1E)	2E	1E, 1C	1E, 1C
Gas Leak-Natural Gas (Rupture)	1E or 1T, 1C	1E, 1T	1E, 1T	1E or 1T	2E	1E, 1C	1E, 1C
Gas Leak-Natural Gas Leak (Inside)	1E or 1T, 1C	(1E, or 1T, 1E)	(1E, or 1T, 1E)	(1E, or 1T, 1E)	1E or 1T	2E	1E, 1C
Gas Leak-Natural Gas Leak (Outside)	1E or 1T	SD 1E or 1T	SD 1E or 1T	1E or 1T	1E	1E	1E
Handicapped Waste	1E or 1T	SD 1E or 1T	SD 1E or 1T	1E, 1T, 1BC	2E	1E	1E
HazMat	1E or 1T	1E or 1T, HMRT, 1BC	1E, 1T, 1BC	1E or 1T	1E	1E	1E
Investigation							
Investigation-Fire Reported Out	1E	SD 1E or 1T	SD 1E or 1T	1E or 1T	1E	1E	1E
Investigation-Odor Gas (Outside)	4E, 1C	SD 1E or 1T	SD 1E or 1T	1E or 1T	4E, T110, 1C	4E, T110, 1C	4E, T110, 1C
Investigation-Odor Smoke (Inside)	1E or 1T	(1E, or 1T, 1E)	(1E, or 1T, 1E)	(1E, or 1T, 1E)	1E or 1T	1E	1E
Investigation-Odor Smoke (Outside)	1E or 1T	SD 1E or 1T	SD 1E or 1T	(1E, or 1T, 1E)	1E or 1T	1E	1E
Investigation-Smoke (Outside)	1E or 1T	SD 1E or 1T	SD 1E or 1T	SD 1E or 1T	1E or 1T	1E	1E
Investigation-Strange Odor w/o Pts	1E, 1C, 1A	1E or 1T, HMRT	1E, 1T, 1BC	1E or 1T	2E	1E	1E
Medical Aid	1E or 1T	1E	No FFD Response	No FFD Response	No Response	No Response	No Response
Med3-Priority 2 - Non-Life Threatening Emergency	1E or 1T	No FFD Response	No FFD Response	1E	1E	1E	1E
Med3-Priority 3 - Non-Emergent	1E or 1T	1E	No FFD Response	No FFD Response	No Response	No Response	No Response
Traffic Accident	1E, 1T, 1C	(1E, 1T, 1BC) or (2E, 1T, 1BC)	(1E, 1T, 1BC) or (2E, 1T, 1BC)	(1E, 1T, 1BC) or (2E, 1T, 1BC)	1E, 1T, 1BC	4E, T110, 1C	4E, 1C + R
Traffic Accident- Rollover	1E, 1T, 1C	1E, 1T, 1BC or (1E, 1T, 1BC)	1E, 1T, 1BC or (1E, 1T, 1BC)	1E, 1T, 1BC	4E, T110, 1C	4E, T110, 1C	4E, 1C + R
Rescue-Building Collapse/Trench	2E or 1T, 1C	1E, 1T, USAR2, 1BC	1E, 1T, 1BC	1E, 1T, 1BC	4E, T110, 1C	4E, T110, 1C	4E, 1C + R
Rescue-Entrapment	2E or 1T, 1C	1E, 1T, USAR1, 1BC	1E, 1T, 1BC	1E, 1T, 1BC	4E, T110, 1C	4E, T110, 1C	4E, 1C + R
Rescue-High Angle	2E or 1T, 1C	1E, 1T, USAR1, 1BC	1E, 1T, 1BC	1E, 1T, 1BC	4E, T110, 1C	4E, T110, 1C	4E, 1C
Rescue-Jumper	1E, 1T, 1C	1E, 1T, USAR3, 1BC	1E, 1T, 1BC	1E, 1T, 1BC	2E, T110	2E, T110	1E
Rescue-Other	1E, 1T, 1C	1E, 1T, USAR1, 1BC	1E, 1T, 1BC	SD 1E or 1T	4E, T110, 1C	4E, T110, 1C	4E, 2C
Rescue-Stuck in Elevator	1E, 1T, 1C	1E, 1T, WR1, 1BC	1E, 1T, 1BC	1E, 1T, 1BC	4E, 1C	4E, 1C	4E, 2C
Rescue-Water - Subs	1E, 1T, WR2, 1BC	1E or 1T	SD 1E or 1T	1E or 1T	1E	1E	1E
Train							
Train-Accident	A, Call	1E or 1T	In Service Detail (1E)	1E or 1T	1E	1E	1E
Train-Derailed	A, Call	1E, HMRT	SD 1E or 1T	1E or 1T	2E, T110***	2E, T110***	1E, 1C
Vehicle							
Vehicle-Problem-Broken Sprinkler Head	1E	1E or 1T	SD 1E or 1T	1E or 1T	1E	1E	1E
Vehicle-Problem-Water - Subs	1E	1E or 1T	1E or 1T	1E or 1T	1E	1E	1E
Water Problem							
Water Problem-Domestic water leak w/o elec haz	1E	1E or 1T	1E or 1T	1E or 1T	1E	1E	1E
Water Problem-Hydrant Leak	1E	1E or 1T	1E or 1T	1E or 1T	1E	1E	1E
Water Problem-Knocked off hydrant	1E	1E or 1T	1E or 1T	1E or 1T	1E	1E	1E
Water Problem-Structure Flooding (non fire related)	1E	1E or 1T	1E or 1T	1E or 1T	1E	1E	1E
Water Problem-Structure Flooding (non life related)	1E	1E or 1T	1E or 1T	1E or 1T	1E	1E	1E