

### 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 for 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 and 480 seconds or less travel time for the deployment of an initial full alarm assignment at a fire suppression incident
- (4) 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
- (5) 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.

**4.1.2.3.2** 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 60 seconds for at least 90 percent of the alarms and not more than 90 seconds for at least 99 percent of the alarms, as specified by NFPA 1221.

**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 and/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 and/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 and/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 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 personnel 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 personnel 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 personnel.

**5.2.3.1.2** In jurisdictions with tactical hazards, high-hazard occupancies, high incident frequencies, geographical restrictions, or other pertinent factors as identified by the AHJ, these companies shall be staffed with a minimum of five or 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 companies shall be staffed with a minimum of four on-duty personnel.

**5.2.3.2.2** In jurisdictions with tactical hazards, high-hazard occupancies, high incident frequencies, geographical restrictions, or other pertinent factors as identified by the AHJ, these companies shall be staffed with a minimum of five or six on-duty personnel.

**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 personnel 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 Initial Arriving Company.**

**5.2.4.1.1** The fire department's fire suppression resources shall be deployed to provide for the arrival of an engine company within a 240-second travel time to 90 percent of the incidents as established in Chapter 4.

**5.2.4.1.2\*** Personnel assigned to the initial arriving company shall have the capability to implement an initial rapid intervention crew (IRIC).

**5.2.4.2 Initial Full Alarm Assignment Capability.**

**5.2.4.2.1** The fire department shall have the capability to deploy an initial full alarm assignment within a 480-second travel time to 90 percent of the incidents as established in Chapter 4.

**5.2.4.2.2\*** 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 individual 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 individuals to effectively and safely maintain the line
- (4) Provision of one support person 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 individuals
- (6) Provision of at least one team, consisting of a minimum of two individuals, to raise ground ladders and perform ventilation
- (7) If an aerial device is used in operations, one person to function as an aerial operator and 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 individuals

**5.2.4.2.3\*** Fire departments that respond to fires in high-, medium-, or low-hazard occupancies that present hazards greater than those found in the low-hazard occupancy described in 5.2.4.2.2 shall deploy additional resources on the initial alarm.

**5.2.4.3 Additional Alarm Assignments.**

**5.2.4.3.1\*** The fire department shall have the capability to deploy additional alarm assignments that can provide for additional command staff, personnel, 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.

**5.2.4.3.2** When an incident escalates beyond an initial full alarm assignment or when significant risk is present to the fire fighters 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 fire-fighters who are fully equipped and trained in RIC operations.

**5.2.4.3.3** 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 fire fighters.

**5.2.4.3.4** 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 personnel, 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 fire fighters 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 personnel 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 personnel 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** The fire department's EMS for providing a first responder with AED shall be deployed to provide for the arrival of a first responder with AED company within a 240-second travel time to 90 percent of the incidents as established in Chapter 4.

**5.3.3.3.3\*** When provided, the fire department's EMS for providing ALS shall be deployed to provide for the arrival of an ALS company within a 480-second travel time to 90 percent of the incidents provided a first responder with AED or BLS unit arrived in 240 seconds or less travel time as established in Chapter 4.

**5.3.3.3.4** 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.

**5.3.4.3.4** 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 personnel, equipment, and resources to deploy the initial arriving company and additional alarm assignments providing such services.