Omaha Fire Department

NFPA 1710 Annual Evaluation

It is the mission of the Omaha Fire Department to protect the lives, property, and environment of our community through preparation, prevention, and protection in a competent and courteous manner. The members of our department hold themselves and each other to a high ethical standard with integrity, professionalism, and compassion being at the core of every decision we make.
Message from the Fire Chief

The members of the Omaha Fire Department constantly strive to provide the highest level of emergent and non-emergent service to the citizens of Omaha. We are making progress in identifying cost saving measures while being very careful to maintain the level of service the community expects.

As a public safety organization we are mindful of the diverse needs of those that we serve and we are tailoring fire prevention and education programs that will produce positive outcomes for all members of the community. One example of this involves our cooperative effort with the First Responders Critical Support Foundation. Together we provide and install smoke detectors specially designed for members of our deaf and hard of hearing community. Additionally, we opened a Fire Prevention & Education satellite office in northeast Omaha that will provide smoke and carbon monoxide detectors as well as fire safety education to better serve those residents. We hope to expand on this as we research a location for a new fire station with a community center located in southeast Omaha.

Our organization is unique in terms of our scope of responsibility and areas of coverage. We are the only City department that provides emergency coverage, code enforcement, and public education services to citizens of three communities in two counties. Through the State of Nebraska’s Inter-local Cooperation Act, members of the Omaha Fire Department provide contracted fire protection service to residents of the Elkhorn Suburban Fire Protection District and Millard Fire Protection District which includes portions of Sarpy County. This gives our organization a total response area covering 192 square miles, serving a combined population of 486,000.

We are honored to be called public servants and we don’t take lightly the responsibility that comes with that title. The members of the Omaha Fire Department take great pride in providing the high level of service the community expects from their fire department and we are constantly looking at ways to efficiently expand on those services.

Respectfully,

Fire Chief Bernard J. Kanger Jr
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The Omaha Fire Department was established on May 2, 1860 with a hand drawn cart and staffed with 40 volunteer personnel. In 2013, the budgeted complement was 632 sworn fire personnel and five civilian personnel. The Fire Department provides fire protection, rescue and emergency medical services for the city of Omaha. Typical functions of fire department personnel include, but are not limited to: firefighting, advanced life support treatment and transportation, hazardous material response, fire inspections, high angle and confined space rescue.
DEFINITIONS

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

NFIRS: National Fire Incident Reporting System

PSAP: Public Safety Answering Point (Douglas County 911)

Response Objective: Measurement of time segments that include Turnout Time and Travel Time

Response Time is defined as turnout time plus travel time

Total Response Time is defined as 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

Travel Objective: Measurement of time segment which includes only Travel Time

Travel Time is defined as the time interval when the emergency units are first en route (wheels turning) to an emergency and the time when the unit arrives

Turnout Time is defined as the time interval that begins when the emergency response units notification process begins by either an audible alarm of visual annunciation or both and ends at the beginning point of travel time

Turnout Objective: Measurement of time segment which includes only Turnout Time

NFPA 1710 Objectives

*Total Response Time = PSAP until 1st Arriving Unit*
FIRE SUPPRESSION
Includes all 100 codes of the National Fire Incident Reporting System (NFIRS) to include, but not limited to: structure, mobile, natural vegetation & outside fires.

Fire suppression is defined as the activities involved in controlling and extinguishing fires. Fire apparatus is defined as 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 materials. An "engine" company is designed to carry and pump water to support extinguishing activities, along with other fire ground activities.

2013 – NFPA 1710 - 1st ENGINE OBJECTIVES
The 1st Engine objectives measures fractal times that involve engine companies. Turnout time is the amount of time it takes for an engine company from the sounding of the alarm until the "wheels are turning". Travel time measures when the "wheels are turning" until the engine arrives on location. Response time is the sum of turnout and travel time. The performance measurement is based upon the time of the first arriving engine on a fire incident.

TURNOUT PERFORMANCE - 84.5%
Objective is 80 seconds for 90% of events

1ST ENGINE PERFORMANCE - TRAVEL: 75.5%
Objective is 240 seconds for 90% of events

1ST ENGINE PERFORMANCE - RESPONSE: 83.0%
Objective is 320 seconds for 90% of events
EMERGENCY MEDICAL SERVICES

Includes all 300 codes of the National Fire Incident Reporting System (NFIRS) to include, but not limited to: medical emergencies, personal injury collisions, extrications, water and ice rescues.
2013 – NFPA 1710 - 1st EMS ARRIVAL OBJECTIVES

The 1st EMS objectives measures fractal times that involve engine, truck and medic companies. Turnout time is the amount of time it takes for a medic unit from the sounding of the alarm until the "wheels are turning". Travel time measures when the "wheels are turning" until the medic unit arrives on location. Response time is the sum of turnout and travel time. The performance is based upon the time of the first arriving engine, medic or truck on an EMS incident.

TURNOUT PERFORMANCE - 74.9%
Objective is 60 seconds for 90% of events

EMS 1st ARRIVAL PERFORMANCE - TRAVEL: 74.3%
Objective is 240 seconds for 90% of events

EMS 1st ARRIVAL PERFORMANCE - RESPONSE: 76.8%
Objective is 300 seconds for 90% of events

ADVANCED LIFE SUPPORT (ALS) OBJECTIVE

The ALS unit objective is defined as having an ALS unit arriving in 480 seconds of travel time and a BLS unit within 240 seconds of travel time at an emergency medical incident 90 percent of the time. The Omaha Fire Department (OFD) is in the process of testing new procedures for tracking the ALS Unit Objective and it will be included in the next annual evaluation.
INITIAL FULL ALARM ASSIGNMENT OBJECTIVES

The Initial Full Alarm Assignment Capability is defined as the fire department’s capability to deploy an initial full alarm assignment within 480 seconds travel time to 90% of the incidents as established in Chapter 4 (NFPA Standard). The OFD is in the process of testing new procedures for tracking the Initial Full Alarm Assignment Capability and it will be included in the next annual evaluation.

INCIDENT COUNT BY UNIT

The OFD responds to priority (lights and sirens) and non-priority incidents. NPPA 1710 uses only priority incidents in its criteria of measuring performance. Below are the incident count by unit that is used for our standards.

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Specialty Unit Incident Counts
Water Tender 71 – 14
Water Tender 77 – 85
Rescue 30 (Air Supply) – 185
Rescue 33 (Special Ops/Hazmat) – 1217
Rescue 60 (Backup Special Ops/Hazmat) – 273

GEOGRAPHY

Over the past few years the OFD has increased its collaboration with Douglas County GIS to gain a better understanding of presenting our data from a geographical statistical standpoint. Furthermore, Environmental System Research Institute (ESRI) Software has further enhanced the ability to evaluate this data. Geostastical data models have been created and the Fire Department is in the process of developing maps, applications and additional resources, with the assistance of Douglas County GIS, to monitor our emergency response data.

The city of Omaha, the largest in Nebraska, is bordered on two sides by the Missouri and Platte Rivers. Omaha has a wide variety of interstates, highways and residential streets totaling 4,326 miles. Additionally, the city has numerous biking and nature trails to include the Keystone Trail and Bob Kerrey Pedestrian Bridge.

Recent gentrification in historic areas has increased the population in areas such as Midtown, Benson and Aksarben. The central business district is located in downtown Omaha, which has a fluctuating populations during the day and major events at the Century Link and TD Ameritrade Park.

Quick Facts

- The OFD is responsible for 192 square miles with a population base of 486,000, which includes the cities of Omaha, Millard and Elkhorn.
- The response area is divided into 7 main areas (battalions) with 183 fire zones.
- The OFD’s apparatus fleet includes:
  - 24 Fire Stations
  - 24 Engines (pumps)
  - 8 Trucks (ladders)
  - 15 Medic Units
  - 7 Battalion Chiefs
Douglas County Population Density

Definitions as per 5th Edition CFAI Standards of Cover Manual:

**Metropolitan:** A designation with both incorporated and/or unincorporated geography with populations of over 200,000 people in total and/or a population density of over 3,000 people per square mile. These areas are distinguished by mid-rise and high-rise buildings, which can be interspersed with smaller structures.

**Urban:** Designation refers to an incorporated or unincorporated area with a population of over 30,000 people and/or a population density of over 2,000 people per square mile.

**Suburban:** Designation refers to an incorporated or unincorporated area with a population of over 10,000-29,999 people and/or any area with a population density of 1,000-2,000 people per square mile.

**Rural:** Designation refers to an incorporated or unincorporated area with a total population of less than 10,000 people or with a population density of less than 1,000 people per square mile.
FIRE ZONE EVALUATIONS

FIRE ZONES 320 & 321

1. Southern portion of the zones near Harrison Street have frequent missed objectives due to the location being outside the four minute travel of Station 31. A mutual aid agreement exists with the Bellevue Fire Department in an effort to address missed objectives in the zones.

FIRE ZONE 501

2. Zone 501 has frequent missed objectives due to the location being outside the four minute travel of Station 31, Station 30, and Station 61.
FIRE ZONE 409

3. Zone 409 has frequent missed objectives due to the location being outside the four minute travel of Station 53, Station 42, and Station 41. Using GIS and historical data, it has been concluded that Station 53 is the closest station and it is correctly assigned as the first due station. Additional factors include heavy Dodge Street traffic, multiple lights en route and the restriction of residential streets.

FIRE ZONES 219 & 215

4. Zones 219 & 215 have frequent missed objectives due to the location being outside the 4 minute travel of Station 23, Station 21. Station 21 is required to cross Sorensen Parkway with limited crossing points. Station 23 is located at the northern most part of their territory which delays response times to both zones.
PREDICTABLE OUTCOMES

The Commission on Fire Accreditation International Standards of Cover identifies two critical response needs that drive the measurement of the first arriving units:

1. The flashover point of a fire.
2. The point of brain death in a cardiac arrest patient.

In both instances early arrival and intervention will provide for better patient outcomes and a safer work environment for our employees. We realize that any delay in responding to a call for service could possibly change the potential outcome of the incident to include greater fire intensity and lower survivability following a cardiac event. We will continue to monitor our service delivery and explore new technologies that will better assist in gathering data and problem identification.
ACHIEVING COMPLIANCE

In an effort to improve, our department has identified both long and short term goals as listed below (in no particular order). As noted, several of these items are currently underway.

1. Annual times training on donning personnel protective equipment.
2. Reinforce safe driving techniques with annual driver’s training.
3. CPT training on good data entry and maintenance.
4. Efforts underway for the new Motorola radios with CAD interactivity to improve the capture of unit times.
5. Staff development in gathering and developing geospatial statistics.
6. Monitor and adjust unit deployment in coordination with any major road projects in the city.
7. Major CAD upgrade in July 2013. Upgrade provided latitude and longitudes with incident information.
8. Continue to examine geographical deficiencies and potential unit movement within current fire station configuration.
9. Automatic aid agreement exists with Bellevue Fire Department.
10. Increase use of GIS technology (ESRI) for a more in-depth evaluation of missed objectives.
SOURCES


This evaluation is in compliance with the NFPA 1710 4.1.2.5.2 Evaluations guidelines.

GIS layer data (fire zones) provided by Michael Schonlau, Douglas County GIS.

Partial geography statement provided by Michael DeBoer, University of Nebraska at Omaha graduate student.

Douglas County Population Density – Joshua Corrigan, MAPA, GIS Coordinator