

Double Company Staffing Study

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Engine 10

Truck 10



The Why?

Mission Specific Objectives

Each apparatus has specific tasks and mission priorities depending upon the call for service received

Truck Operations

- Search & Rescue
- Technical Rescue
- Public Utilities
- Forcible Entry
- Ventilation
- Ladders
- Command & Control

Engine Operations

- Apparatus Positioning
- Fire Control & Extinguishment
- Fire Attack
- Containment/Isolation/Suppression
- Investigation
- Incident Isolation

Dual Operations

- Assisting Customers
- Motor Vehicle Accidents
- Medical Incidents
- Fire Incidents
- Special Operations



Critical/Time Sensitive Tasks



The Project & Methodology

January 1st, 2022

The double company staffing study was initiated on
January 1st, 2022

"B" Shift assigned project and study
Personnel involved in the study:

Captain Peter Cummins

Acting Lieutenant Spencer Mays

Step-up Driver Michael Moss

Step-up Driver Chris Caster

Firefighter Cade Hayden

Firefighter Matthew Selzer

Firefighter Tavin Ramm



The Project & Methodology

Goals

- Enhance service delivery to the customer
- Enhance safety of personnel
- Mitigate hazards more effectively
- Validation through measurable data collection
- Review incident case studies provided by personnel



The Project & Methodology

Goals

There are three basic components of fire department emergency response performance:

- **Availability**—The degree to which the resources are ready and available to respond.
- **Capability**—The abilities of deployed resources to manage an incident.
- **Operational Effectiveness**—A product of availability and capability. It is the outcome achieved by the deployed resources or the ability to match resources deployed to the risks to which they are responding.



Measurable Date



Measurable Date

- **Financial**
 - Vehicle & Equipment Maintenance
 - Mileage
- **Calls for Service**
- **Turnout & Response Times**
- **Incident activities**
 - Percentile (%) achieved (ERF less than 8 minutes)
 - Time to fire control
 - Time to victim search and rescue



Measurable Date

- **Overlapping (calls for service)**
 - Percentile (%)
 - Concurrent calls for service
 - E10 & T10 assigned to different calls for service simultaneously
 - Automatic/mutual aid received
- **Safety**
 - Percentile (%) of calls for service requiring both apparatus (E10 & T10)



Measurable Date

Mileage & Costs

Engine 10

July 2021 = 16,325

July 2022 = 22,553

In-Service: 86.23% / 120 days

Work Order Costs: \$14,460

12 Work Orders

Truck 10

July 2021 = 1,829

July 2022 = 6,139

In-Service: 100% / 139 days

Work Order Costs: \$1,380

5 Work Orders

Includes Preventative Maintenance, Pump Testing,
Ladder Testing, and Other Maintenance Activities



Measurable Date

Calls for Service

Engine 10

January 1st - July 1st

313 Calls for Service

Truck 10

January 1st - July 1st

233 Calls for Service

Overlapping Calls for Service = 109 or 20%

13 Structure Fires

192 Medical Calls

23 Fire Alarms

52 Vehicle Accidents

9 Hazmat

53 Citizen Assists



Measurable Date

Turnout Times 90%

Engine 10

January 1st - July 1st

26 Seconds

Truck 10

January 1st - July 1st

29 Seconds

NFPA 1710 Standards

Goal= >60 seconds / EMS

Goal= >80 seconds / FIRE



Measurable Date

Response Times 90%

Engine 10

January 1st - July 1st
3 minutes, 46 seconds

Truck 10

January 1st - July 1st
4 minutes, 10 seconds

NFPA 1710 Standards

First Apparatus Arrival

Goal= > 240 seconds (4 minutes)

Minimum Staffing = 4 Personnel

Second Apparatus Arrival

Goal= > 360 seconds (6 minutes)

Minimum Staffing = 4 Personnel

Depending upon incident type



Measurable Date

Incident Activities %

Effective Response Force (ERF)

Fire Containment

100% Compliant

Search & Rescue

100% Compliant

Incident Stabilization

100% Compliant

Automatic/Mutual Aid Received/Given

"The LWFD is still reliant upon automatic aid; however, critical/time sensitive tasks can now be completed safely and effectively without delay."



Measurable Date

Safety.

Motor Vehicle Accidents

Building Fires

Fire Alarms

Customer Service
Citizen/Public Assists

Vehicle Fires

Technical Rescue

Property Fires

Hazmat

EMS

NFPA 1710 Standards

Initial Full Alarm (Low/medium hazard) 8 minutes

Initial Full Alarm (High hazard/high rise) 10 minutes, 10 seconds

Initial Alarm Deployment (*number of fire fighters including officers)

- Low hazard = 15 Firefighters
- Medium hazard = 28 Firefighters
- High hazard = 43 Firefighters



Case Study Review

Incidents

Structure Fire

6000 Block Yearly Street

Engine & Truck Assigned
ERF under 5 minutes

Fire contained within 5 minutes

Search and rescue completed within 5
minutes

Incident stabilization within 8 minutes

Motor Vehicle Accident

7000 Block Jacksboro Hwy

Engine & Truck Assigned
Technical rescue completed
Auto pedestrian accident

Motor Vehicle Accident

3000 Block Roberts Cut Off

Engine & Truck Assigned
Technical rescue completed
Extrication complete within 3 mins

Structure Fire

3000 Block Shawnee Trail

Engine & Truck Assigned
ERF under 3 minutes

Fire contained within 4 minutes

Search and rescue completed within 5
minutes

Incident stabilized within 6 minutes



Collected Analysis

Recommendations

Based upon the data collected and overall impact on the organization the department would seek future full implementation of this staffing concept.

- Approval of (1) FTE (Firefighter) for FY 22-23.
- Approval of (1) FTE (Firefighter) and Implementation of the Fire Lieutenant Rank/Position (3 positions) for FY 23-24.
- Implementation of (3) Additional Driver/Engineer Positions.
- *Adhering to this approval process will allow for gradual implementation of this staffing model while also allowing sufficient time for professional staff development.*



Grant opportunities may be investigated to supplement any full-time positions, i.e. AFG/SAFER (FEMA)

