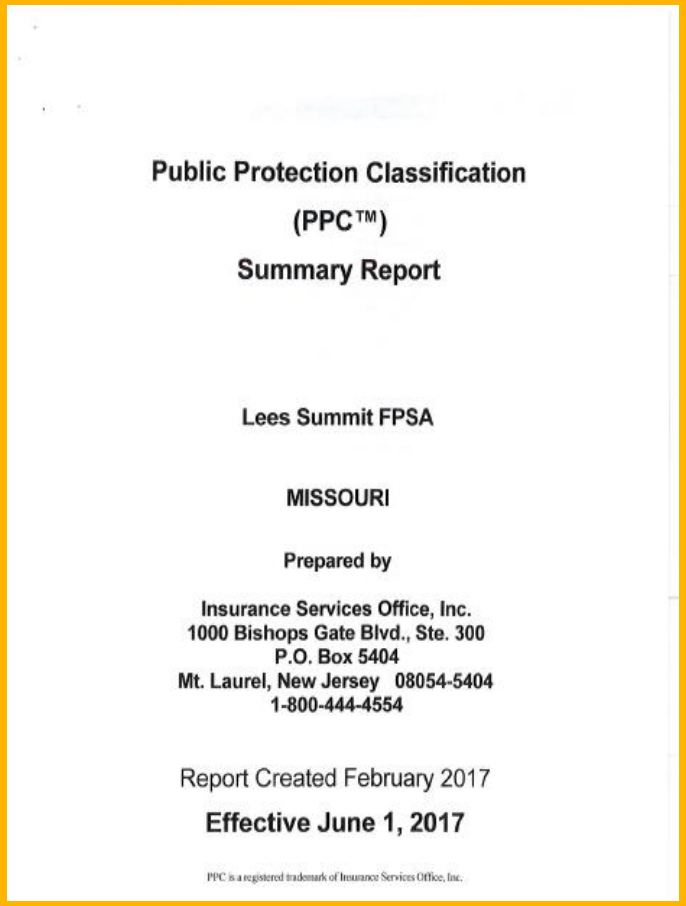
Accreditation Report

LEE'S SUMMIT MISSOURI

What We Will Cover

- 2017 Insurance Services Offices (ISO) report
- 2016 Commission on Fire Accreditation International (CFAI) Report
- CFAI Annual Compliance Report (ACR)
  - Transition to the updated CFAI model, 9th Edition
  - 2016 response times
- Build out update
- Staffing Plan

ISO report



Public Protection Classification

(PPC™)

Summary Report

Lees Summit FPSA

MISSOURI

Prepared by

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Report Created February 2017

Effective June 1, 2017

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- Evaluates structure fire suppression capabilities only.
  - Emergency Communications
  - Fire Department
  - Water Supply
  - Community Risk Reduction

2017 ISO Scores

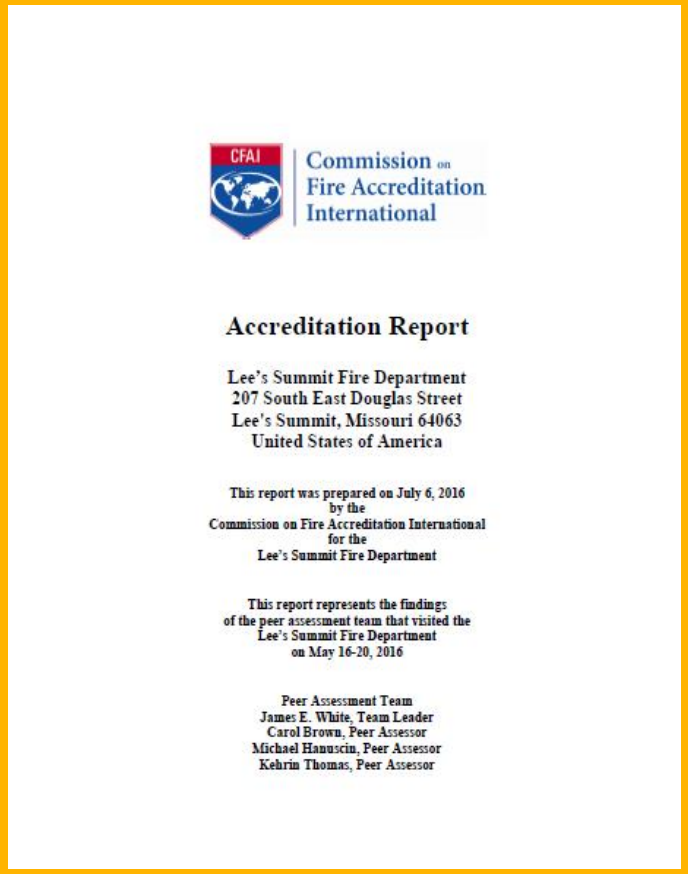
FSRS Feature	Earned Credit	Credit Available
Emergency Communications		
414. Credit for Emergency Reporting	2.40	3
422. Credit for Telecommunicators	4.00	4
432. Credit for Dispatch Circuits	3.00	3
440. Credit for Emergency Communications	9.40	10
Fire Department		
513. Credit for Engine Companies	5.94	6
523. Credit for Reserve Pumpers	0.49	0.50
532. Credit for Pump Capacity	3.00	3
549. Credit for Ladder Service	0.86	4
553. Credit for Reserve Ladder and Service Trucks	0.17	0.50
561. Credit for Deployment Analysis	3.83	10
571. Credit for Company Personnel	9.56	15
581. Credit for Training	8.00	9
730. Credit for Operational Considerations	2.00	2
590. Credit for Fire Department	33.85	50
Water Supply		
616. Credit for Supply System	29.34	30
621. Credit for Hydrants	2.87	3
631. Credit for Inspection and Flow Testing	6.39	7
640. Credit for Water Supply	38.60	40
Divergence	-5.76	--
1050. Community Risk Reduction	4.45	5.50
Total Credit	80.54	105.50

- Strengths via ISO
  - Communications (9.4/10)
    - 94% credit
  - Water Supply (38.60/40)
    - 97% credit
  - Risk Reduction (4.45/5.5)
    - 81% credit
- Challenges
  - Fire Department (33.85/50)
    - 68% credit
  - Divergence (-5.76)

ISO Divergence

- What is divergence?
  - From ISO:
    - "Divergence: Even the best fire department will be less than fully effective if it has an inadequate water supply. Similarly, even a superior water supply will be less than fully effective if the fire department lacks the equipment, personnel, or operational considerations to use the water. If the relative scores for fire department and water supply are different, ISO adjusts the total score downward to reflect the limiting effect of the less adequate item on the better one."

2016 CFAI Report



CFAI Commission on Fire Accreditation International

Accreditation Report

Lee's Summit Fire Department
207 South East Douglas Street
Lee's Summit, Missouri 64063
United States of America

This report was prepared on July 6, 2016
by the
Commission on Fire Accreditation International
for the
Lee's Summit Fire Department

This report represents the findings
of the peer assessment team that visited the
Lee's Summit Fire Department
on May 16-20, 2016

Peer Assessment Team
James E. White, Team Leader
Carol Brown, Peer Assessor
Michael Hanuscin, Peer Assessor
Kehrin Thomas, Peer Assessor

- Community Driven Strategic Plan
- Standards of Cover (SOC)
- Self-Assessment Manual (SAM)
- Site-visit
- Commission Hearing
- 26 Recommendations

CFAI Recommendations

- 26 Recommendations associated with CFAI competencies spanning accreditation categories and criterion.
  - Governance
  - Assessment and Planning
  - Fire Prevention
  - Public Education
  - Emergency Medical Services
  - Domestic Preparedness
  - Physical Resources
  - Human Resources
  - Training and Competency
  - Communications Systems
  - Water Supply
  - Administrative Support Services / Office Systems

CFAI Annual Compliance Report

- Verification of the departments efforts towards continuous improvement to the CFAI.
  - Strategic recommendation documentation with exhibits to validate efforts of improvement.
  - Response times by risk category and classification from the previous year (2016).
  - Annual program appraisal documentation
  - Documentation of efforts of transitioning towards the new CFAI model.
    - Response quality by planning zone vs. population density.
    - Annual communication with the AHJ.

ACR transition to the 9th Edition

- Compliance of meeting the following two performance indicators:
  - **CFAI 2D.8** On at least an annual basis, the agency formally notifies the authority having jurisdiction (AHJ) of any gaps in the operational capabilities and capacity of its current delivery system to mitigate the identified risks within its service area, as identified in its standards of cover.
  - **CFAI 2D.9** On at least an annual basis, the agency formally notifies the AHJ of any gaps between current capabilities, capacity, and the level of service approved by the AHJ.

CFAI 2D.8 Operational Capability

- LSFD Capability
  - Fire Suppression
    - All community fire risk suppression capability, relative to resource availability and response time quality.
  - Emergency Medical Services (EMS)
    - First arriving unit (fire apparatus) capable of providing basic life support with the effective response force capable of advanced life support (single paramedic).
      - Exception of Pumper 3 and Pumper 6 (advanced life support).

Capability cont.

- LSFD Capability cont.
  - Hazardous Materials
    - The department responds to all hazardous materials incidents. Operational objectives are relative to the amount of material and type.
      - LSFD's Hazardous Materials Team is not associated with minimum daily staffing.
  - Technical Rescue
    - Capability is relative to the type of rescue.
      - Motor vehicle collisions (MVC) extrication, surface water, and Ice rescue.
    - The department responds to all rescue types but may rely on mutual aid to perform the rescue.
      - High/Low-angle rope, swift-water, underwater, trench, building collapse, and confined space.

Effective Response Force (ERF)

What's an ERF?

- An ERF is all of the necessary resources, both human and physical, to mitigate critical tasks associated with the emergency incident.
- The total response time (TRT) of the ERF ends when the last resource needed arrives on-scene.
  - If the inclusion response criteria is not met, the response data for concentration (ERF) is not included in the data tables. Other components of the TRT may be retained.

Critical Tasks High-Risk Fire "Structure Fire"

Critical Task	Number of Personnel
Command	1
Safety Officer	1
Pump Operations / Water Supply	1
Fire Attack	2
Back Up Attack Line	2
Search and Rescue	2
Ventilation	2
Medical / Rehab	2
Rapid Intervention Crew (RIC)	3
Aerial Operations / Utility / Exposures	2
	Number of Units Deployed
Pumpers	3
Ladder Truck (Quint)	1
ALS Rescue Ambulances	2
Chief Officers	2
Total Firefighters	18

2D.8 Operational Capacity

- LSFD protects approximately 70 square miles and 100,000 residents (including Unity and Greenwood by contract) from seven fire stations.
  - Minimum daily staffing is 33 operational personnel.
    - 2 Ladder trucks, 5 Pumpers, 5 Ambulances, and 2 Operations Chiefs
    - A recall for personnel occurs when resources drop to 1 pumper or 0 ambulances.

Capacity cont.

- If all units are available, what is the department's effective response force (ERF) capacity?
  - Independently by program
    - Fire
      - 1 structure fire (18 firefighters and officers)
        - » A second fire would still have resources, but not an ERF.
    - EMS
      - 5 medical calls (25 firefighters/medics)
        - » 2 cardiac arrests (10 firefighters/ and 2 chiefs)
        - » Additional arrests would have resources but not an ERF.

Capacity cont.

- By program continued.
  - Technical Rescue / Vehicle accidents
    - 2 injury accidents (18 firefighters and 2 chiefs)
    - Additional injury accidents would have resources, but not an ERF.
  - Hazardous Materials
    - 2 gas line breaks (18 firefighters and 2 chiefs)
    - Additional gas line breaks would have resources, but not an ERF.

Managing Operational Drawdown

Resource Drawdown

- As operational resources are committed to incidents, fewer resources remain available to deploy to new emergencies.
  - Structure Fire at 12:00 (noon)
    - 3 Pumpers, 1Truck, 2 Ambulances, and 2 Chiefs
  - Injury Car Accident at 12:15
    - 2 Pumpers/Truck, 2 Ambulances, and 1 Chief
  - Medical Call at 12:25
    - 1 Pumper/Truck and 1 Ambulance

Resource Management Strategies

- Once operational resources drop to 1 pumper or no ambulances, three strategies are actioned to reinforce community coverage.
  - Multi-incident recall
    - Recalls off-duty to staff reserves
  - Mutual-Aid is requested from neighboring agencies for coverage
  - Previous committed resources once released are assigned to new incidents.

2016 Resource Management Activity

- Multi-Major Incident recalls: **38**
  - When resources dropped to 1 pumper or less.
- Ambulance Recalls: **57**
  - When resources dropped to 0 ambulances.
- Chief Recalls: **23**
  - When both duty chiefs were committed to incidents.
  - During the 40-hour week, staff chiefs assist with coverage.

Station Resource Availability

- Station availability to respond to incidents within their response districts.
- Increasing demand on operational units impacts their resiliency to provide reliable response quality within their 1st due response areas.

	Station 1	Station 2	Station 3	Station 4	Station 5	Station 6	Station 7	Total Incidents
2012	91%	91%	92%	94%	97%	95%	97%	9027
2013	92%	95%	91%	95%	97%	95%	97%	8917
2014	92%	94%	91%	95%	96%	96%	97%	9073
2015	86%	90%	87%	90%	91%	91%	88%	10000
2016	88%	92%	89%	95%	92%	92%	89%	9781

- The target goal or benchmark is at least 90% availability from all stations.
- 2017 operational call demand is up 9% from 2016 through May.

Response Benchmarks (The bull's-eye)

Total Response Time (TRT) Benchmarks @ the 90th percentile		
	EMS	Fire, Rescue and Haz-Mat**
Call Handling	60 seconds	60 seconds
Turnout	60 seconds	80 seconds
Travel Time (1st Unit) (Distribution)	4 minutes	4 minutes
ERF Travel Time (Concentration) *Includes 1st arriving unit	8 minutes	8 minutes
Total Response Time (TRT)	10 minutes	10 minutes 20 seconds

2016 Response Times at the 90th percentile

Fire						
Risk Level		Benchmark	Low	Moderate	High	Maximum*
Alarm Handling	Pick-up to Dispatch	*01:00*	n = 397 01:28	n = 79 01:38	n = 121 01:42	n = 3 01:13
Turnout Time	Turnout Time 1st Unit	*01:20*	n = 395 02:19	n = 78 01:51	n = 121 02:02	n = 3 01:53
Travel Time	Travel Time 1st Unit **Distribution**	*04:00*	n = 372 06:21	n = 52 05:18	n = 80 05:06	n = 2 05:56
	Travel Time ERF **Concentration**	*Low 04:00 Others 08:00*	n = 372 06:21	n = 28 13:57	n = 30 14:56	n = 0
Total Response Time	Total Response Time 1st Unit **Distribution**	*06:20*	n = 373 08:56	n = 52 08:37	n = 80 08:15	n = 2 08:58
	Total Response Time ERF **Concentration**	*Low 06:20 Others 10:20*	n = 373 08:56	n = 28 17:00	n = 29 22:38	n = 0

*Maximum Fire events did not qualify for concentration numbers, due to Squad 1 not being deployed.

2016 Response Times at the 90th percentile

EMS						
Risk Level		Benchmark	Low	Moderate	High	Maximum
Alarm Handling Turnout Time	Pick-up to Dispatch	*01:00*	n = 5418 00:58	n = 142 01:02	n = 0	n = 0
	Turnout Time 1st Unit	*01:00*	n = 5415 02:06	n = 142 01:55	n = 0	n = 0
Travel Time	Travel Time 1st Unit **Distribution**	*04:00*	n = 5375 05:36	n = 123 04:56	n = 0	n = 0
	Travel Time ERF **Concentration**	*08:00*	n = 4538 08:28	n = 78 10:44	n = 0	n = 0
Total Response Time	Total Response Time 1st Unit **Distribution**	*06:00*	n = 5388 07:50	n = 123 07:26	n = 0	n = 0
	Total Response Time ERF **Concentration**	*10:00*	n = 4543 10:57	n = 79 15:23	n = 0	n = 0

2016 Response Times at the 90th percentile

Rescue						
Risk Level		Benchmark	Low	Moderate	High	Maximum
Alarm Handling	Pick-up to Dispatch	*01:00*	n = 297 01:43	n = 258 01:55	n = 5 01:40	n = 0
Turnout Time	Turnout Time 1st Unit	*01:20*	n = 296 02:07	n = 257 01:58	n = 5 00:57	n = 0
Travel Time	Travel Time 1st Unit **Distribution**	*04:00*	n = 221 06:07	n = 119 06:02	n = 2 03:38	n = 0
	Travel Time ERF **Concentration**	*08:00*	n = 191 08:10	n = 56 15:02	n = 1 07:10	n = 0
Total Response Time	Total Response Time 1st Unit **Distribution**	*06:20*	n = 222 09:09	n = 119 09:11	n = 2 05:57	n = 0
	Total Response Time ERF **Concentration**	*10:20*	n = 193 11:13	n = 56 18:47	n = 1 10:40	n = 0

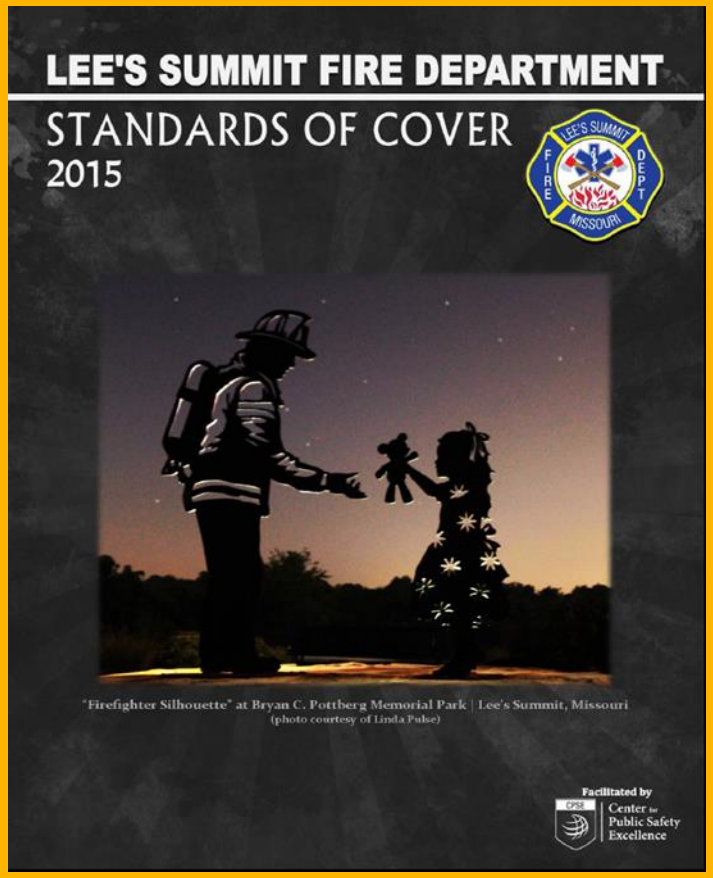
2016 Response Times at the 90th percentile

Hazardous Conditions						
Risk Level		Benchmark	Low	Moderate	High	Maximum
Alarm Handling	Pick-up to Dispatch	*01:00*	n = 12 01:50	n = 108 01:10	n = 2 02:29	n = 0
Turnout Time	Turnout Time 1st Unit	*01:20*	n = 12 01:54	n = 108 02:04	n = 2 01:40	n = 0
Travel Time	Travel Time 1st Unit **Distribution**	*04:00*	n = 11 05:51	n = 72 05:26	n = 1 03:50	n = 0
	Travel Time ERF **Concentration**	*Low* *04:00* *Others* *08:00*	n = 11 05:51	n = 39 10:13	n = 0	n = 0
Total Response Time	Total Response Time 1st Unit **Distribution**	*06:20*	n = 11 07:21	n = 72 07:51	n = 1 07:23	n = 0
	Total Response Time ERF **Concentration**	*Low* *06:20* *Others* *10:20*	n = 11 07:21	n = 39 12:39	n = 0	n = 0

Build Out

- City-wide effort
  - Public Works
  - Planning
  - Development Services
  - Information Technology Services

2015 CRASOC and Build Out



- Study of the capabilities and limitations of resources relative to hazards and risks in the community.
  - Reflected data from 2012-2014
  - CRASOC Recommendations
    - Immediate (within 12 months)
    - Near-term (2-5 years)
    - Far-term (5-10 years)
  - Based on the previous accreditation model (8th Edition)
    - Population density zones vs. Planning zones (9th Edition).

Current Stations

- Several fire stations are aging and need planning for renovation or replacement. ADA and gender needs.

LSFD Facility	Year Constructed	Age in years
Station 1 (HQ) Y	1976	41
Station 2	2011	6
Station 3 XYZ	1971	46
Station 4 YZ	1977	40
Station 5 YZ	1980	37
Station 6	1998	19
Station 7	2007	10

- X Indicates a replacement plan exists
- Y Indicates non ADA compliance
- Z Indicates gender needs

Build Out and Current Coverage

- The department is not built to meet benchmarks identified by the community (external stakeholders) through the community meeting in 2013 for strategic planning.
  - Expectation 1: “To provide fast emergency service in times of crisis. Quick emergency response meeting industry best practices.”

Total calls in 2016				9783
Approximate number in delayed areas				1466
Approximate percentage in areas of coverage				85.01%
Approximate percentage in delayed coverage				14.99%

- TransCAD coverage map for residential population.
- TransCAD coverage map for approved development.

Build Out and Resiliency

- Increasing demand on operational units is impacting their resiliency to provide reliable response quality within their 1st due response areas. *90% Benchmark*

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2016	88%	92%	89%	95%	92%	92%	89%	9781

- 2017 operational call demand is up 9% from 2016 through April.

Resiliency cont.

- TransCAD residential map reflecting drawdown. (ELMO)
- TransCAD development reflecting drawdown. (ELMO)

2015 CRASOC Recommendations

- Immediate (within 12 months) from 2015
  - Two items remain on the list:
    - Automatic Vehicle Location (AVL)
    - Build Administration, Training, Support Services, Prevention, Communications, and Operations Divisions to support the growth of the city.
- Near-term (within 2-5 years) from 2015
  - Several items in planning or process:
    - Multiple company resources at stations 1 and 3 to address reliability challenges.
    - Paramedic expansion to fire apparatus associated with minimum staffing.

2015 CRASOC cont.

- Far-term (5-10 years) from 2015.
  - Items on the list
    - Station addition in the northern area of the city.
    - Station addition in the area of Bailey and 291 Hwy.
    - Possible station addition in the area of New Longview and Paragon Star.
    - Operational staffing consistent with industry standards. Compliance with the *National Fire Protection Association (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*
      - Supported by the National Institute for Standards and Technology (NIST) Field Experiments Study

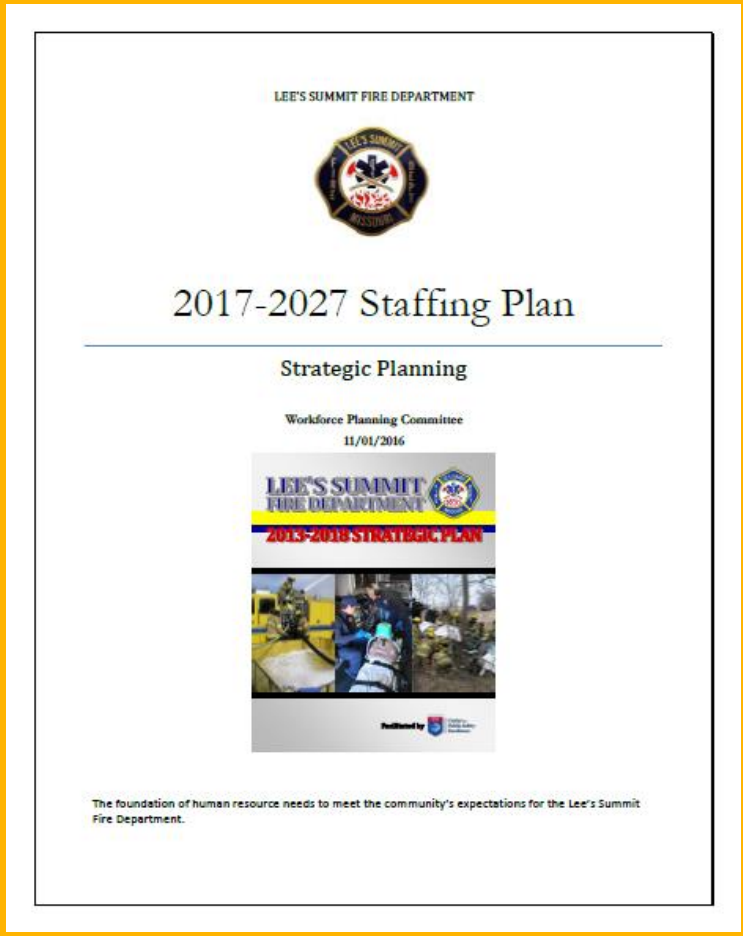
Staffing Plan

- Developed by the Lee's Summit Fire Department's Workforce Planning Committee to meet the Strategic Initiative 3B.

Objective 3B	Establish and effective staffing plan to provide for long term delivery of service.
Timeframe	In progress
Critical Tasks	• Conduct and analyze a task analysis of services delivered. • Develop an effective response force plan. • Identify current and future staffing needs based on service delivery to a changing population and demographics. • Create a report of findings, including budget considerations, implementation process and any needed training program(s) to department administrations for consideration.

  - Organizational planning objectives reflected findings from the Community Driven Strategic Plan, CRASOC, and critical task needs by department division
- The draft document was published in November 2016

Staffing Plan



LEE'S SUMMIT FIRE DEPARTMENT

2017-2027 Staffing Plan

Strategic Planning

Workforce Planning Committee
11/01/2016

LEE'S SUMMIT FIRE DEPARTMENT
2013-2018 STRATEGIC PLAN

The foundation of human resource needs to meet the community's expectations for the Lee's Summit Fire Department.

- Appendix A: FY18 budget requests are reflected in the City Managers Budget Message.
  - 10 Expansions
    - Communications Specialist x4
    - Captains of Training x2
    - Administrative Assistant
    - Assistant Chief of EMS
    - Captain of Prevention
    - Battalion Chief of Planning and Analysis
  - 1 Reclassification
    - Captain in Support Services

Next Steps

- Continue to evaluate response quality in all planning zones in accordance with the CFAI
- Investigate opportunities for rapid-response teams to deploy for lower risk incidents and increase organizational resiliency.
- Perform a station location study using build out data from the City's Master Plan.
  - Evaluate the location of existing stations and identify locations for additional stations.
- Publish a Fire Master Plan for station location and build-out while infusing the City's master plan.

Questions?