


COUNCIL WORKSHOP

October 13, 2015

PUBLIC SAFETY, STAFFING and FACILITIES



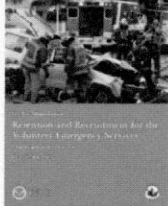
HISTORY TIMELINE

ADDITIONAL RESOURCES


"Emergency Management Magazine: Volunteer Fire Departments Face Recruitment, Retention Challenges: Minnesota's recruitment and retention efforts have been falling since the 1980s." <http://www.emmagazine.com/stories/volunteer-fire-departments-face-recruitment-retention-challenges>, 2011

"Fire departments face funding, recruitment challenges" <http://www.epj.com/industry/volunteer-fire-departments-face-funding-recruitment-challenges/129884172/>

FEMA: Retention and Recruitment in the Volunteer Fire Service: Problems and Solutions (LEFD has applied all feasible solutions presented here) <https://www.usfa.fema.gov/bvcc/bvcc/pubs/pubs07a-2-13.pdf>




261 Page Report



ISSUES

- STAFFING
- FACILITIES
- EQUIPMENT




HISTORY TIMELINE

Public Safety Committee

- 6/19/14 – Discussions began for "Future Station Locations". With the following topics discussed:

Locations – Current	Response Times	Staffing
Maintenance	Fleet Size	Maplewood Model
POC vs PT vs FT	Shifts	Building Costs
Shared Services Study from September 2011		Service Level
Staffing Costs		
- 9/18/14 – Maplewood Fire Chief Steve Lukin presented to the committee the "Maplewood Model" of staffing with PT shifts and the process they had recently gone through regarding staffing and building a station. This presentation followed a previous meeting between Lake Elmo and Maplewood Chief Officers to discuss these topics.




HISTORY TIMELINE

Public Safety Committee

- 11/13/13 – First meeting of the Public Safety Committee. Began discussion on recruitment/staffing. Many ideas proposed and pursued during this and future meetings.

Newsletter	Solicit Businesses	Mailings
Cable Channel	Increase Response Times	Reduce Requirements
Explorer Program	Public Works Staff	Ads w/LMC
Demographics	Responding to Scenes	Open Houses
HOA's	Promo Video	Incentives
Retention	Turnover	Morale
Rotary Meeting	Community Meetings-Surveys	

KARE11, NOVEMBER 2014



HISTORY TIMELINE


Public Safety Committee

- TO PRESENT – Discussed Pro's and Con's of 1 vs 2 Stations.

2 STATIONS WITH POC STAFFING

PROS
Closer response proximity for POC's to station and out of station to scene.

CONS
Staffing – recruiting issues, number of POC staff required
Double Costs – Land, Building Construction, Building Maintenance
Response – not guaranteed



HISTORY TIMELINE

1 STATION STAFFED 24/7 W/PT SHIFTS

PROS

- Reduced Costs – Land, Building Construction, Building Maintenance
- Central Location on major travel routes away from residential area.
- Possible reduction of fleet.
- Improved response times.
- Guaranteed response
- Staffing – Potentially a larger pool to hire from
- Reduce training costs by hiring trained FF's
- Interest expressed by Law Enforcement and EMS partners.

CONS

- Staffing – Increased costs, All Call response w/POC's



SERVICE AREA ANALYSIS: EXISTING FIRE STATIONS

Current Service Area for Fire Protection Services in Lake Elmo

Map 7 shows the area that can be served within 4 minutes (from the time a staffed fire vehicle leaves the station) from the two existing Lake Elmo fire stations. The 4-minute standard applies to career stations (those with full-time firefighters) according to the National Fire Protection Association. The service area on Map 7 takes into account the road pattern, speed limits on each road, and delays presented by traffic control devices.

The map shows that, while the two stations serve the middle part of the city very well, vast portions of Lake Elmo fall cannot be served within 4-minute benchmark from the current stations. In general, station number 1 (blue outline), serves a vast area along the eastern border of the City, and is also able to cover the full area to the western border with Wooddale. Station number 2 also serves the middle section of the City, and is able to cover the area to the northeast of Tai Lakes, generally extending to Lake Elmo Boulevard. However, the significant overlap of the service areas leaves many areas un-served with fire protection services. This suggests to us that the current fire station locations are inefficient, and do not work well together as a team to maximize the coverage area in the City.

In particular, the location of station number 2 on the south side of the Tai Lakes area renders it ineffective in serving the northeast corner of the City. Despite its close location "as the crow flies" near the homes north or east of Lake Demontreville, station number 2 cannot quickly, easily serve this area due to circuitous roads and lake barriers. With regard to station number 1, the park reserve greatly restricts the service area to the south and west.

Another critical area that is currently not served within 4 minutes is the entire southern portion of Lake Elmo, where future development density will be highest in the City.

1. Fire Publications NFA 1710: Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations in the Public Safety Community, 2003 Edition.

Dahlgren, Shardlow and Urban, Inc.
Urbanshople, Minnesota

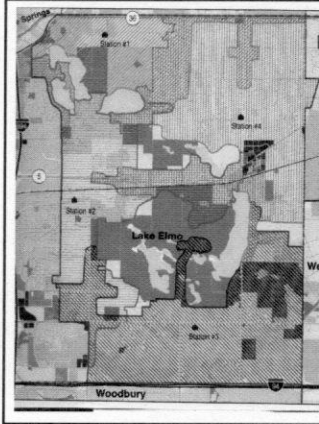


Preliminary Staffing Costs for 1 Station, PT shifts

This is having 1 officer @ \$14.20/hr and 2 FF's @ \$12.20/hr	# FF Needed	Hours per week	Cost Per Hour	Total Cost	FF staff will be the officer
FF's PT M-F 8-4	2FF @ \$12.20	40	\$24.40	\$976.00	
FF's PT M-F 4pm-8am	2 @ \$12.20 & 1 Officer @ \$14.20	80	\$38.60	\$3,088.00	
FF's PT Friday 4pm - Monday 8am	2 @ \$12.20 & 1 Officer @ \$14.20	48	\$38.60	\$1,852.80	
hours per week		168		Total Cost Per Week \$5,916.80	
				Total Cost Per Year (52 Weeks) \$307,873.60	
	SS	6.20%		\$19,075.76	
	Medicare	1.45%		\$4,460.27	
	ER Pera	16.20%		\$49,843.12	
	Work Comp	\$7.32/\$1000		\$2,246.09	
	TOTAL			\$383,298.84	



Response times do not include time for Paid On Call staff to drive to stations.



Proposed 4-Station/ 4-minute Response Fire Service

Comprehensive Fire Services Study
Lake Elmo, Minnesota



PRELIMINARY ANALYSIS: FIRE PROTECTION NEEDS Lake Elmo, Minnesota

TO: Mr. Chuck Dillard
City of Lake Elmo

FROM: Mr. Thomas O'Neil
Mr. Hongyi Duan
Dahlgren, Shardlow and Urban, Inc.

INTRODUCTION

DSU Research, the research arm of Dahlgren, Shardlow and Urban (DSU), was hired by the City of Lake Elmo to determine the community's needs for fire protection infrastructure now and in the future. DSU was charged to recommend new infrastructure and site locations (stations and roads) and address staffing issues. In particular, DSU was hired to identify the best locations for fire stations and assess, and to determine the number of stations that would fully serve the city.

This memo is intended to provide preliminary information to Lake Elmo officials, to meet the deadline of year's end for the delivery of important information on fire station locations. Given that information on the development pattern in the southern portion of the city was unavailable for the deadline, the project is not complete, and will not be, until we receive accurate information on the future land use pattern, street locations and development densities in the southern portion of Lake Elmo.

The mapping analysis portion of the project has been completed, and is outlined as full in the memorandum. This analysis helps us to determine the station locations and sites that would serve the city most effectively. The map also gives us the ability to provide preliminary recommendations on the value of possibly pursuing a regional fire service plan, or joint agreements with specific cities to provide service to specific parts of Lake Elmo.

We are also still determining the general space, facility and staffing needs for the fire department, which depends on the opinions of the Fire Chief and his officers. While we have interviewed these officials, we still need to gather additional information on facility needs and to finalize details on these parts of our recommendations. It will finalize the information after the first of the year. We will also address any ISD related issues at this point.



Response times do not include time for Paid On Call staff to drive to stations.



Alternative 3-Station/ 4.5-Minute Response Fire Service

Comprehensive Fire Services Study
Lake Elmo, Minnesota



Meeting Agenda
Fire Service Study - Preliminary Findings
February 4, 2008

Attendees: Chuck Dillmore, City Planner
 Long Malmgren, Fire Chief
 Hangei Dean, Consultant
 Tom O'Neil, Consultant

I. General Review of the findings
 a. City of Lake Elmo
 b. Fire Department

II. Questions and concerns
 a. Details regarding station locations
 b. Details regarding hours
 c. Other factors not covered

III. Further recommendations
 a. City needs at least two full-time fire employees
 b. Process and timing procedure between fire and rest of city departments
 c. Acquire the land budget and address for the two stations
 d. Update comprehensive plan and transportation plan
 e. Incorporate sensitive roadway systems and traffic lights for higher level of accessibility to low density residential developments
 f. Dealing with MNDOT on I-94 Y-30 access and fire response issues
 g. A detailed examination of staffing structure (number levels, recent targets and current members), establish of employee guidelines. This needs to be done within the fire department
 h. Build and equip the new stations following industry standards such as in the examples and the suggestions from the chief

IV. Further steps
 a. We do not believe a master plan as proposed is appropriate at this point, we don't affect much on the station locations. Instead, if the City decides, we can help the City update the comprehensive plan in a way that looks at all aspects of the city development, and in a manner which would bring a much more comprehensive view and direction for all developments and conservations. A master plan can be a final product of that process
 b. We will incorporate into major points from our research that support the findings into the document for the final report. We will send this report for your review and make any changes you deem necessary
 c. Final presentation to the City Council

Feasibility Study for Shared or Cooperative Fire and Emergency Services, (cont.)

	Functionality	Safety	Suitable for Current Use	Adaptable for Future Use
Lake Elmo FD #1	Minimal	Minimally	No	No
Lake Elmo FD #2	Adequate	Minimally	Yes	Yes
Mahtomedi FD	Minimal	Adequate	Yes	Yes
Stillwater FD	Minimal	Adequate	Yes	No

December 22, 2004
 Tom O'Neil, PhD

Item:

As a follow-up to our meeting on Monday, December 20, 2004, I have put together a list of items to be distributed into a new document as well as a list of questions that may be raised at the meeting. This is a preliminary list of items and will be updated as we develop the final report. I believe that the items on this list will be helpful to you in terms of your current and future needs.

There is a list of items that are for review by the fire department and the city council:

- **Station site selection:**
 - Station site selection: Review the site selection process and determine if the site is suitable for the fire department.
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Equipment to station:

- Minimum 75' Ladder Truck for residential fire coverage on I-94. Ladder for response to commercial response and residential structure fire.
- Pumper Truck for response to non-hydrant areas or engine for response to areas with hydrants.
- Pumper truck for residential fire coverage in response area.
- Pumper truck for residential fire coverage in response area.
- Pumper truck for residential fire coverage in response area.

The above information is presented as a basis for discussion. Items listed may vary depending on number of stations.

Feasibility Study for Shared or Cooperative Fire and Emergency Services, (cont.)

Address of facility: 3530 Lawrence Avenue
Year facility was initially constructed: 1957

General room information: 2000
 Building square feet: Unknown
 Apparatus Bay: 2
 Risk in case of fire: Unknown
 Building height: One story
 Construction type: Type B - Protected Non-Combustible
 Climate/zone: Moderate
 Overall construction features present: None

Does structure appear to be ADA compliant? No
Building code issues evident: Yes no one-hour separation bays to offices

Overall size of facility adequate for current use? No
Apparatus well: Yes (to traffic flow safe and unimpeded)
Building and property blend well with neighborhood? Yes
Building and property adaptable if future expansion needed? No

Additional information: Several programs made by occupants
 Automatic fire response in building? Yes
 Automatic fire extinguishing system? No
 Automatic fire sprinklers present? None
 Alarm systems present: No alarm systems present

Stillwater, Lake Elmo, Mahtomedi Minnesota

Feasibility Study for Shared or Cooperative Fire and Emergency Services

September 2011

Per Capita Cost of Fire Protection

National Average	\$104.00
Minnesota Average	\$68.61
Lake Elmo FD	\$46.66
Mahtomedi FD	\$62.50
Stillwater FD	\$45.39

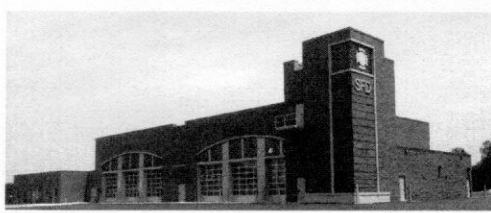
Is commercial cooking equipment present? Yes
Proper hood, duct and grease filters in place? No
Fixed fire extinguishing system in hood properly inspected? Yes
Are all flammable and combustible liquids stored in approved cabinet? Yes
Are all gas cylinders stored properly? Yes
Is fire extinguisher present? Yes
Are all fire extinguishers present and usable? Yes

Backup generator present? No generator present
Apparatus exhaust removal? No exhaust removal effort in place, (We've added to trucks)
Underground storage tanks present? No
Apparatus fire extinguishers present? No generator use
Adequate space for working in, on or around apparatus? Space around apparatus cramped and movement is limited Apparatus parking is impeded due to inadequate space
Apparatus room accommodates working on small equipment, hose, tools, etc.? Space is small and limited
Personnel can move quickly and easily to apparatus for response? Compromised, turnout gear is cramped between equipment
Adequate space for cooking and eating? Compromised, any eating occurs in classroom
Apparatus space for food preparation, cooking and eating? Yes
Are components necessary for food preparation? No
Adequate space for personal hygiene? No
Adequate space for sleeping? Not intended for sleep accommodation
Adequate space for storage? No
Identify any additional operational compromises made by staff or crews to compensate for facility inadequacies:
Classroom doubles as dayroom/lounge, dining room.

Facility features: Separate wash room/toilet office
 Administrative support office
 Kitchen
 Classroom 100
 Turnout gear storage cabinet
 SCBA filling station

Address of facility: 4208 Lenora
 Year facility was initially constructed: unknown
 Building square feet: unknown
 Apparatus Room:
 Back up generator present? **Back up generator present?**
 Building height: One story
 Construction type: TYPE II - B - Unprotected Non Combustible
 Outside finish: Masonry Block
 Overall construction condition: **Overall construction condition:** **Worn paint or finishes:**
 Does structure appear to be built completely? **Does structure appear to be built completely?**
Building code issues evident: Yes no one-hour separation bays to living areas
 Roof type: Flat membrane
 Roof age: Original building
 Roof condition: No known problems
 Type of heating system: Radiant water/gas
 Heating system age: Original building
 Air conditioning: Window AC unit - living areas only
 Overall state of facility adequate for use? **Overall state of facility adequate for use?**
 Apparatus room: Constructed apparatus room at remote impervious
 Building and property listed with fire department? **Building and property listed with fire department?**
 Building and property adaptable for future expansion needs? **Building and property adaptable for future expansion needs?**
 Adequate staff and visitor parking? **Adequate staff and visitor parking?**
 Automatic floor drains installed down operating property? **Automatic floor drains installed down operating property?**
 Adequate fire extinguishers on apparatus? **Adequate fire extinguishers on apparatus?**
Cooking equipment central shutdown? No cooking equipment present
Automatic fire sprinklers present? None
Alarm systems present: No alarm systems present
Is commercial cooking equipment present? No
 Are all flammable and combustible liquids stored in approved cabinet? **Are all flammable and combustible liquids stored in approved cabinet?**
 Location of emergency stored flammable/combustible? **Location of emergency stored flammable/combustible?**
 All propane cylinders stored properly? **All propane cylinders stored properly?**
SCBA compressor system present? No
Backup generator present? No generator present
Apparatus exhaust removal? No exhaust removal effort in place, (We've added to trucks)
 Undersigned storage tanks present? **Undersigned storage tanks present?**
 Apparatus floor drain off separations in place? **Apparatus floor drain off separations in place?**

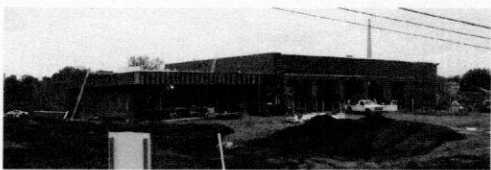
STILLWATER FD



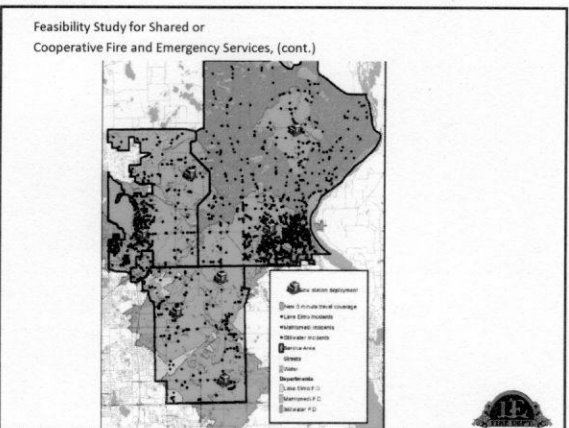
- > 3 acre site
- > 27,315 sq. ft. (this includes all landings in the hose tower)
- > \$217 per sq. ft. for building (\$5,929,947/27,315=217.00). Total bonded for project was \$7.3 million (this includes infrastructure work, fees, etc.)

Adequate space for working in, on or around apparatus? **Adequate space for working in, on or around apparatus?**
 Apparatus room accommodates working on small equipment, hose, tools, etc.? **Apparatus room accommodates working on small equipment, hose, tools, etc.?** **Space around apparatus is adequate**
 Personnel can move quickly and easily to apparatus for response? **Personnel can move quickly and easily to apparatus for response?**
 Adequate space for cooking and eating? **Adequate space for cooking and eating?**
 Adequate space for local company training drills? **Adequate space for local company training drills?**
 Are compressors necessary for hose, garden tooling? **Are compressors necessary for hose, garden tooling?**
 Two gender compartments: **Two gender compartments:**
Adequate space for personal hygiene? No
Adequate space for sleeping? Not intended for sleep accommodation
Adequate space for storage? No
 Identify any additional operational compromises made by staff or crews to compensate for facility inadequacies: **Identify any additional operational compromises made by staff or crews to compensate for facility inadequacies: Not capable of on-site residency**
 Facility features: **Facility features:**
 Separate work/recreation office
 Day room/ lounge
 Toweled gear maintenance washer


BAYPORT FD



- > 3 acre site
- > Building cost (both construction and soft costs) is \$5,366,912. Price per square foot is typically calculated off the construction costs only, so our price per s.f. for the 17,400 s.f. building came out to approximately \$252.



OAKDALE FD



- > 3.5 acre site
- > 17,000 sq. ft.

Fire station Evaluation Assumptions

- We will continue to have a Lake Elmo Fire Department
- Land will continue to be purchased for development reducing options for locations
- Cost of land will continue to increase over time
- National shortage of POC firefighters will continue
- New firefighters will continue to cost \$6k+ to train
- Want to continue to have exceptional response times
- Will continue to have historical response workload
- Moving toward a part-time structure will facilitate the recruitment and retention of firefighters
- Want to incorporate cost savings where possible to be good stewards of the tax dollars
- Maximize the flexibility of the space to allow for multiple uses for the City and for partnerships that could bring revenue to the City
- Reduce the cost of the LEFD fleet; size and maintenance
- Endeavor to meet future needs of the City

How to Read Assessment of Options

Option #	Description	Criteria Rank	Evaluation Criteria (ranking: Lower is Best)							Total Weighted Rank (Lower is Best)
			Speed	Cost	Safety	Maint	Future	Other	Partners	
1	Firehouse #1	1	1	2	3	2	2	2	2	55
2	Firehouse #2	2	2	1	1	1	4	4	4	75
3	Firehouse #3	3	1	2	3	3	3	3	3	76
4	Firehouse #4	4	1	2	6	12	15	18	21	80
5	Firehouse #5	5	1	2	6	8	10	6	7	80

Weighted rank of each option = Evaluation Criteria Rank x Option Rank

Sum of weighted ranks for the Option (lowest is best)

Evaluation Criteria Definitions

- Response Time:** time for staff to drive to a call
- Staffing Full-up:** most likely to have full staff
- Staffing Cost:** annual cost to have full staff
- Pedestrian Safety:** safest option for pedestrians
- Railroad:** time to transit to furthest location in city when there is a train in the way & distance from railroad for hazmat release safety
- Maintenance/Utilities:** cost to maintain the facilities or annual cost of utilities
- Equipment Cost:** cost to maintain necessary equipment for city
- Cost to Build:** is the cost to update, buy land or build the new facility
- Future City Growth:** multi-use government building possible for incorporation of city offices, multi-use space, or meeting space into the facility
- Public Safety Partners:** ability of the city to work with partner organizations providing space to Sheriff, Ambulance service, other... (some may involve rent for use of the space)

Assessment of Options

Evaluation of Lake Elmo Fire station Options

Option #	Description	Evaluation Criteria (ranking: Lower is Best)										Total Weighted Rank (Lower is Best)
		Response Time	Staffing Full-up	Staffing Cost	Pedestrian Safety	Railroad	Maint	Equip. Utilities	Cost to Build	Future City Growth	Public Safety Partners	
1	One Firehouse Downtown (3-5 acres)	1	1	2	3	3	1	1	4	2	2	119
	Weighted rank	3	2	6	12	15	6	7	32	18	20	119
2	Update Existing Two Firehouses	3	2	1	2	2	4	2	1	5	4	159
	Weighted rank	3	4	3	8	10	24	14	8	45	40	159
3	One Firehouse Expand Fire station #1	2	1	2	4	4	2	1	2	3	3	138
	Weighted rank	2	2	6	16	20	12	7	16	27	30	138
4	One Firehouse Downtown (10+ acres)	1	1	2	3	3	3	1	5	1	1	120
	Weighted rank	1	2	6	12	15	18	7	40	9	10	120
5	One Firehouse Distant to Downtown (3-5 acres)	4	1	2	1	1	4	1	3	4	2	132
	Weighted rank	4	2	6	4	8	24	7	24	36	20	132

Options Evaluated

- One Firehouse (3-5 acres): one station on minimum space required to house fireservice needs
- Update Existing Two Firehouses: improve existing firehouses to meet OSHA requirements and update to make functional
- One Firehouse Expand Fire station #1: expand fire station #1 into the building immediately north of it (into Mohar Building)
- One Firehouse (10+ acres): one station on larger space that would allow for additional city construction in the future
- One Firehouse Distant to Downtown (3-5 acres): one station distant to downtown for less expensive land and in lower traffic area

WHERE ARE WE NOW?

- FD is understaffed and struggling to get POC's. National problem.
- Need to plan for future, staffing and facilities.
- Determine which direction, 1 station w/PT Shifts or 2 stations w/POC will better meet the emergency response needs of the City?
- Based on direction, acquire land/option for either 1 or 2 stations while still available.
- 9/17/15 - Public Safety Comm. moved to recommend the City Council discuss securing land in a centralized location near Highway 5 for a fire station under a one station model. Motion carried 5 - 0.

QUESTIONS?