Fire Station Location Analysis Proposal and Agreement

Attached is a proposal and agreement from the Illinois Fire Chiefs Association to perform an independent study of the Fire Department’s response times and an assessment of the current and optimal locations of our fire stations.

This study will review several different scenarios that the Village will need to plan for in the foreseeable future, including the following:

- Future development at the west end of the community. The Village should conduct an analysis to evaluate if the current stations will be located optimally to serve new residential and commercial development to the west.

- 911 Consolidation effort - As you know, Mundelein participates on the county-wide consortium that is developing a plan to consolidate dispatch centers across the county. Mundelein is also one of several communities that may be considered as a host location for a future regional dispatch center. Station #1 is currently on the consortium’s list of potential facilities that can be repurposed as a regional dispatch facility. At this time it is unknown if the consortium would view this building as a shared facility with the Fire Department or if the entire building would be needed. If the Village decides to repurpose this facility, we need to understand how to best plan for a replacement station.

- Seminary land option - A study is needed to assess the potential benefit of the Village’s land option agreement with the Saint Mary of the Lake Seminary as a possible station site east of the CN railroad tracks.

This type of assessment is completed by analyzing local traffic conditions and Fire Department response times and incident data by type, location, and frequency. The analysis will also take into account future population growth and expansion of our municipal boundaries. An independent third party should be used to perform this long-term study and provide objective insights on how to optimize the Department’s performance under various station scenarios based on quantitative data analysis.

Proposals to complete a study for the Village were solicited from three vendors. Proposals were received from the Center for Public Safety Management, McGrath Consulting Group, and the Illinois Fire Chiefs Association. McGrath Consulting Group and the Illinois Fire Chiefs Association were invited to present their proposals to Village staff.

The proposal submitted by the Illinois Fire Chiefs Association was determined to be the most responsive and best suited for our needs.

It is my recommendation that the Village move forward with the proposal and agreement submitted by the Illinois Fire Chiefs Association to provide the Village with a Fire Station Location Analysis.
Motion to authorize the Village Administrator to execute a Fire Station Location Analysis Proposal and Agreement with the Illinois Fire Chiefs Association in the amount of $14,950.
MUNDELEIN

FIRE DEPARTMENT

Fire Station Location Analysis with Predictive Modeling

Prepared by the Illinois Fire Chiefs Association
September 25, 2018
September 25, 2018

To: Bill Lark, Fire Chief
   Mundelein Fire Department

   Regarding: Fire Station Location Analysis Data (GIS) with Predictive Modeling

Project Summary

Every day local leaders, managers, and fire chiefs are faced with decisions that relate to providing fire protection, emergency medical and other services for their community. Now, more than ever, these leaders are faced with the constant pressure of doing more with less. Many local governmental executives are hard-pressed to justify any increase in expenditures unless directly attributed to improved or expanded service delivery in their community. This effort has been hampered by the lack of a nationally accepted set of performance criteria by which a community can evaluate the level and quality of fire, EMS, and other services it provides to its constituents.

Scope of Work

The objective of this project is to conduct a Fire Station Location Analysis of the distribution and concentration of the Mundelein Fire Department fire stations for producing baseline performance measures. The analysis will also evaluate the ideal placement of an additional fire station. The Mundelein Fire Department will receive a catalog of maps containing incident, incident related, and agency data along with an Executive Summary.

Project Engagement

The IFCA Team will identify service demands from existing data (incident, incident related, and agency) and utilize land/station information provided by the Mundelein Fire Department as it pertains to the scope of work.
Service demands are established by analyzing historical incident data. The dimensions used when analyzing incident data are:

- Type of Incident
- Location of Incident
- Frequency of Incident

Using the service demands, the agency’s fire station’s distribution and concentration are measured to establish benchmarks of the agency’s effectiveness and efficiency in providing emergency services.

- Fire Station Distribution – The fire station’s geographic location within its area of responsibility (AOR) to provide first-due resources within a given drive time.
- Fire Station Concentration – The fire station’s geographic location in relation to adjacent fire station AORs to provide additional resources to meet an effective response force (ERF).

Predictive modeling uses the service demands and statistical tools to analyze the “what-if” scenarios producing predictions of future performance which are measured against the agency’s current benchmarks.

The Fire Station Location Analysis with Predictive Modeling will answer the following questions:

- How close to ideal is the geographic location of fire stations?
- Where should a fire station be moved based on ideal locations and service demand?
- Where should new fire stations be built based on ideal locations and service demands?
- What is the first-due performance of the fire stations?
- What is the concentration performance of the fire stations?
- What percentages of total incidents are within each station AOR?
- What percentage of Agency incidents are within the first-due time criteria?
- What percentage of AOR incidents are within the first-due time criteria?
- What percentage of AOR incidents are within adjacent stations ERF time criteria?
- How much of my Agency is covered by multiple stations when using the ERF time criteria?
- How much of my station AOR is covered by multiple stations when using the ERF time criteria?

To conduct this scope of services, the Illinois Fire Chiefs Consulting Group “IFCA Team” may/will engage the following (where applicable):

Mundelein Fire Department Command staff, Dispatch Center Supervisors and Records Management personnel.
Initiate Project

Upon award of contract, the IFCA Team will contact the Dispatch Center Supervisor, Records Management Coordinator with the assistance of the Fire Chief. This contact will begin the process of securing the necessary data to meet the scope of work.

Submission of Data

Adhering to the parameters as established, the IFCA Team will prepare and provide the data (maps) for the stakeholders.

The Mundelein Fire Department and the IFCA Team will work in collaboration to extract the data from the appropriate source(s) within 60 days of the contract acceptance. Once the data is collected and reviewed, a first draft report can be expected to be available for review within 90-120 days (after the data has been secured).

The Mundelein Fire Department will receive a large catalog of maps containing incident, incident related, and agency data along with an Executive Summary.

Consulting Fees

The IFCA Team agrees to complete the project as proposed (GIS Analysis/Mapping, Data Collection & Organization) for $14,950.00 in consultation fees and expenses. The IFCA will submit an invoice of 50% ($7,475.00) upon acceptance of the proposal and the balance at the conclusion of the project. Payment should be remitted within 30 days of receipt of the invoices.

Conclusion

From the final document that is submitted, the Mundelein Fire Department will have the data that will assist them in making rational decisions for fire station locations within their community.

Thank you for considering the Illinois Fire Chiefs Association for your project.

Acceptance Signature: _____________________  Date: _____________

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