

# Saskatoon Fire Department Strategic Facilities Plan

## ISSUE

The Saskatoon Fire Department (the Department) is developing a Strategic Facilities Master Plan (the Plan) in order to ensure the City can continue to meet its emergency response objectives. As the City grows, gaps and overlaps in emergency response service requires re-evaluating station locations. Working with Geographic Information Systems (GIS) and capacity, station locations can be tied to the Growth Plan to Half a Million (the Growth Plan). The long-term strategy outlined in this report will enable the City to optimize the location of fire stations. Optimally located fire stations will result in the lowest long-term operating cost to meet the emergency response needs of Saskatoon citizens.

## BACKGROUND

At the November 5, 2018 public meeting of the Standing Policy Committee on Planning Development and Community Services, the Department provided an overview regarding the development of a Saskatoon Strategic Fire Facilities Master Plan.

## CURRENT STATUS

The Project Team (the Team) consists of members from Strategy and Transformation, Corporate Financial Services, Transportation and Construction (Major Projects), and the Department. The Team has identified key aspects of the Plan to best support the Department's response models to align with the Growth Plan.

1. A dedicated training facility
2. Future fire station builds
3. Future fire station replacements (including Fire Station No. 1, located at 125 Idylwyld Drive South)

## DISCUSSION/ANALYSIS

One of the first successes of this strategy was the relocation of Fire Station No. 3 from 1906 York Avenue to 2613 Clarence Avenue South. The Department evaluated heat maps while modelling traffic routes to determine the most appropriate location. It was confirmed, from this evaluation, that relocating Fire Station No. 3 would provide better response to the south-east area of the City. Through mapping analysis and knowledge of the City's footprint at its southern fringe, a location near Clarence Avenue and Wilson Crescent was identified as the appropriate area.

Since moving in July of 2018, the travel time data for incidents reflects the success of this relocation. Appendix 1 shows response coverage where actual out of range travel time data has improved from 19.2% to 7.1%. Strategic positioning of fire stations is a priority in working towards compliance to the National Fire Protection Association (NFPA) 1710 industry standards.

With the realignment of the service model in the south-east area of the City, the Department has adjusted district boundaries to support the overall response model. Previously, district boundaries were based on arterial roads and perception of dividing vehicular travel times. The adoption of technology in the fire service has emphasized the focus on data-driven decision making having a proven benefit of associating professional experience with factual data. Appendix 2 shows the previous response model based on assumptions modeled to the closest arterial road.

The realignment of districts, also shown in Appendix 2, was developed by using road speed analysis data related to travel times and plotted on maps to determine district alignments. The use of this GIS mapping technology supports improvements to our coverage model for the entire community and does align with actual data comparisons. This cross referencing of data analysis supports the defining of the optimum coverage model.

With further analysis of the current geographical model, the Department has identified some gaps in travel time. Two areas that were identified, Districts 2 and 7, have been cross referenced with actual incident data to validate the information.

Saskatoon has grown significantly to the west since the opening of Fire Station No. 2 (3111 Diefenbaker Drive) in 1981. District 2 is one of the busiest response areas within the City. Appendix 3 provides an overview of high incident intensity, coinciding with the diamond-shaped overlap, where a number of responses are not meeting the four-minute travel time benchmark.

Data has identified gaps that exist north and south in District 2. To optimize service to the areas, two fire station locations will be studied further to achieve the most efficient and effective response model; one would be located north of 33<sup>rd</sup> Street West while the other located near 11<sup>th</sup> Street West (Montgomery and South West Industrial). One of the two existing fire apparatus would be relocated and the other would remain at what is currently Fire Station No. 2. The future additional station would consist of one new fire apparatus requiring a total staffing compliment of 20 firefighters (four shifts of five people required to provide 24/7 coverage).

Appendix 4 demonstrates the proposed response coverage with the two west sector fire stations; addressing the current high volume of out of range percentages. Analysis will be completed using GIS to examine options available to achieve the most efficient and effective response model for this area of the City.

Another opportunity for the Department to improve service to citizens exists with Fire Station No. 7, located at 3550 Wanuskewin Road. Appendix 5 shows actual response coverage data indicating that the Department is not meeting the recommended four-minute travel time objective for emergency response into River Heights, Lawson Heights, and Silverwood Heights. A significant improvement in travel time to emergency incidents could be achieved with the relocation of Fire Station No. 7. Out of range

response percentages will decrease significantly to residential areas while having minimal impact on the North Industrial area.

The replacement of Fire Station No. 1, is motivated by its age and increasing maintenance requirements. Due to its location, an opportunity exists for potential partners in a combined facility. One option for the replacement provides the opportunity for outside funding if non-market housing is incorporated via the National Housing Strategy (NHS). The replacement will support sustainable growth to densify the downtown and continue to meet operational needs; being the hub of the fire response model. A creative business plan for this location will support the Imagine Idylwyld initiative and the redevelopment of downtown.

Population growth in new areas within city limits will necessitate new facilities. The Department is committed to identifying and quantifying travel time data so that it may be addressed appropriately. Regular monitoring and reporting of the out-of-range metric will assist in determining the appropriate timing to expand coverage to new areas with new facilities. The model of working with GIS through continuous review using defined parameters and known areas of future development by the Growth Plan is essential to decision making.

As a customer-facing emergency response provider, the Department has a responsibility to serve citizens; first through the proactive measures of community risk reduction. Through ongoing analysis of response model and station locations, the Department will use data-driven decision making to mark the balance between proactive measures and reactive response.

### **IMPLICATIONS**

There are no legal, social, or environmental implications identified.

As a result of this report there are no direct financial implications for 2020 or 2021, however, as the City begins to prepare for the next Business Plan and Budget cycle beginning in 2022 the Administration will continue to refine these figures and report back as part of the 2022 Business Plan and Budget Process regarding an appropriate phase-in.

### **NEXT STEPS**

This is part of a larger process that will be ongoing annually through data review, analysis, and reporting.

Follow up will consist of reporting back on the further work completed on the Plan, prior to next budget cycle.

Travel time data will continue to be mapped and assessed to provide the most effective and cost efficient service response by the Department to determine the mid and long-term priorities within the Plan.

**APPENDICES**

1. Response Coverage Improvement
2. Previous Response Model and Realignment of Districts
3. EMS and Fire Incident Intensities
4. Response Coverage – 2 West Sector Fire Stations
5. Current Response Coverage District 7

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