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Traffic and Parking Priority Tool Overview

What is the Traffic and Parking Priority Tool?

The Traffic and Parking Priority tool is one element used by the City of Salem's Traffic and Parking Department to help determine how city funds and resources are allocated. The tool is split into four different categories: Demographics, Land Uses, Crashes, and Speeds/Volumes. Each street in the city is given a weighted score for each category. The streets are ranked in each category based on the total weighted scores. An average of the rank for all four categories produces the final traffic calming priority rank.

What are the two tabs included in this spreadsheet?

The first tab, "All Streets," shows the data for each street for the demographic, land use and crash priority tools. These three tools have a separate tab because demographic, land use and crash data is currently available for every street in the City, while obtaining speed and volume data requires additional data collection.

The second tab, "Streets with Speed Data," shows the rankings for all four categories for every street on which speed and volume data have been collected.

The speed data is collected by the police department based on the ranking from the first tab, as well as requests from residents, city staff, and the police.

Column Definitions

All Streets Tab:

Functional Class: A road classification system used by Massachusetts that incorporates urban/rural census designations and the federal classification system.

Rank Order: Rank of the average of the Demographic Priority Rank, Land Use Proximity Rank, and the Crash Priority Rank.

Demographic Priority Total: The Demographic Priority Tool creates a weighted score for each street in the city. The score is based on 8 different demographic metrics, including low- to moderate-income areas, environmental justice areas, population density, diversity, age, per-capita income, student density, and health outcomes. The total points available for each street is 100. The tool places a number on every street in the city.

Demographic Priority Rank: Each street was ranked based on its average Demographic Priority total.

Avg, Land Use Proximity Total: The Land Use Proximity Priority Tool places a weighted score for each street in the city. This score is based on the walking distances to key locations with a propensity for

pedestrian activity. The total points available for each street is 100. The locations used are: Schools, City Buildings, Library, 30 busiest MBTA bus stations, Tourist locations, Food stores, Park and Beach entrances, Housing Authority locations, and Salem Skipper destinations.

Land Use Proximity Rank: Each street was ranked based on its average Land Use Proximity total.

Avg Crash Priority Total: The Crash Priority Tool places a weighted score for each street in the city. The score is based on types of vehicular crashes, with a focus on the crash severity. The data is based on 5 years of crashes from MassDOT records. The crash priority is updated throughout the year. This number does not indicate the total number of crashes.

Crash Priority Rank: Each street was ranked based on its average Crash Priority total.

Streets with Speed Data Tab:

The columns on the second tab remain the same as above, with the addition of Avg Speed and Volume Total and Speed Rank. The priority ranks are based on streets where speed and volume data have been collected.

Speed and Volume Total: The Speed and Volume Priority Tool places a weighted score for each street in the city. This score is based on speed and volume data collected by Salem Police Department. The score is based on average daily volume, 85th percentile speed, percent over the speed limit, high speeds and travel lane width. The priority is updated when new data is collected, roughly every couple of weeks, depending on police's availability to place the counters.

Speed and Volume Rank: Each street was ranked based on the average Speed and Volume Proximity total.

Rank Order with Speed Data: This is the final rank that the Traffic and Parking department uses to help prioritize funding for traffic calming.

For more details on how each element is weighted and the process of creating the various maps, please visit: https://traffic-calming-1-salemma.hub.arcgis.com/