

Memorandum

City of Lawrence

Public Works

TO: Mark Thiel, Assistant Director of Public Works
FROM: Steven M. Lashley, P.E., Project Engineer
CC: David P. Cronin, P.E., City Engineer
Charles F. Soules, P.E., Director of Public Works
Date: February 6, 2017
RE: Pavement Management Program Update & 2017 Comprehensive Street Maintenance Program - City Manager's Report

Program Update

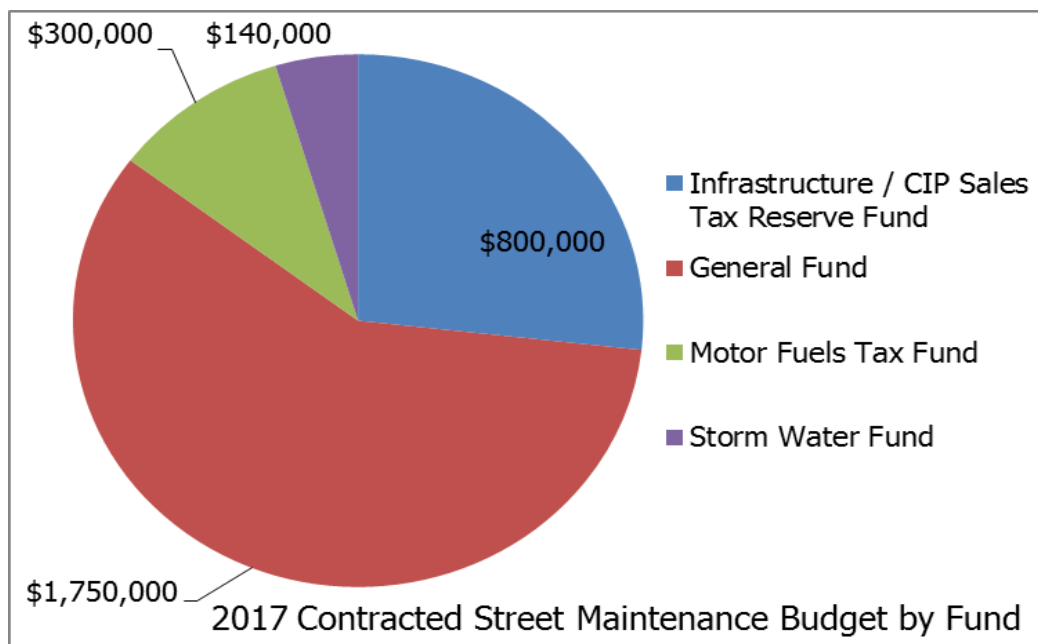
The pavement management program provides Public Works with a tool to maintain an inventory of street pavement, track the respective condition and maintenance work history, and identify budget needs and impacts associated with preservation strategies and asset management. By applying this tool, and with the continued support of the city's citizens and representatives, the City has seen the implementation of a wide range of maintenance techniques from preventative maintenance measures to major rehabilitation and reconstruction impacting the overall Pavement Condition Index (PCI) and pavement deterioration. According to the 2015 citizen survey, the maintenance of streets remains a top priority for improvement.

Positive contributing impacts of the program can be seen through the last several years. However, it is evident through data analysis that overall impact is leveling out and potentially indicating signs of regression that appear to correlate with the street maintenance funding level.

The third quarter (Phase 3) of street rating Cycle 4 was completed in 2016 and followed by recent comparative analysis of the new survey data with existing data in the City's pavement management program. The current overall average PCI is 73.73 and the overall average deterioration rate is +0.70 versus the end of Cycle 3 PCI of 75.54 and deterioration rate of +2.67.

2017 Street Maintenance Program and Funding

In August 2016, the City commission approved approximately \$2.99 million to be utilized for the 2017 Contracted Street Maintenance Program. The pie chart below gives a breakdown of the various funding sources. The "2017 Comprehensive Street Maintenance Program" map is attached to this document. The map includes streets identified for maintenance work such as crack sealing, patching, mill and overlay, curb and gutter, and internal street maintenance project areas that include concrete and asphalt rehabilitation work. Significant project locations such as the intersections at 19th and Naismith, Naismith and Crescent, Harvard and Wakarusa, 23rd and Ousdahl, and the reconstruction of Kasold from 6th to Bob Billings Pkwy and Queens from 6th to north of Wakarusa are also shown on the map.



The microsurfacing (surface sealing) part of the typical annual maintenance program will be deferred in 2017 due to prioritization and the need to address the growing backlog of residential, collector, and arterial streets requiring milling and overlay. Some preparatory asphalt street patching will still be performed in anticipated surface seal locations.

The city typically receives \$200,000 in State matching funds for mill and overlay on State designated roadways within the city limits. The Kansas Department of Transportation did not fund a KLINK program for 2017, so that funding is not available this year.

Public Works will utilize approximately \$100,000 of street maintenance funding to participate with KU on the reconstruction and geometric traffic calming alteration to the intersection of Naismith and Crescent.

Staff Coordination and Recommendations

The proposed 2017 program map has been provided to other City departments for review as well as multiple other public and private entities. Public Works will coordinate potential conflict locations including scheduling and phasing of projects. Contracted maintenance work will be coordinated by the Public Works Street Maintenance Division which enhances the overall project impact and success.

Bicycle facilities pursuant to the approved bikeway map and approved traffic calming locations have been reviewed in relation to the planned street maintenance work locations. Complete streets improvements such as the addition of bicycle pavement markings (sharrows) and bike route signs are planned for inclusion in the 2017 pavement management program at an estimated cost of \$30,000. Annually, the maintenance program has incurred costs associated with pedestrian, bicycle and traffic

calming needs. Bicycle markings were installed at a cost of \$10,000 in 2012, \$32,000 in 2014, \$35,000 in 2015, and \$23,000 in 2016. In 2015, two speed cushions were installed costing \$20,000. The cost of these types of additional improvements with increasing construction costs and dwindling street maintenance funding levels presents a challenge to maintain overall street condition progress levels with a result of fewer annual street maintenance projects.

Attachments: 2017 Comprehensive Program Map

2017 Comprehensive Street Maintenance Program

Date: 1/27/2017

