



Eileen M. Donoghue  
*City Manager*  
Michael McGovern  
*Assistant City Manager*

May 2, 2018

Mayor William Samaras  
and  
Members of the City Council

REFERENCE: **4/24/18 8.6. C. Cirillo** - Req. City Mgr. Add Park Avenue West To The Next Re-Paving Contract.

**5/1/18 9.1. C. Elliott** - Req. City Mgr. have proper department explore repair of Constance Drive and placing same on paving list.

Dear Mayor Samaras and City Councilors:

I am writing in response to the above motion made by Councilors Karen Cirillo and Rodney Elliott regarding the repair and paving of Park Avenue West and Constance Drive.

The City of Lowell contracted with BETA Group, Inc. to develop a Pavement Management Program (PMP) for the City's 235 miles of maintained roadways. The purpose of a PMP is to identify and catalogue the existing network, evaluate the roadway surface conditions, and the specification of its maintenance practices with associated costs. Pavement management software utilizes roadway inventory and distresses to create an extensive and powerful database used for subsequent analysis and report generation. This database was created by evaluating actual roadway infrastructure conditions that allowed for the formulation of a prioritized list of roadways and improvements. The survey of all Lowell roads, classified as both accepted and unaccepted, was completed in the fall of 2016; the list is typically valid for 3 years.

There are several criteria used to determine which streets are included on the paving list each year. The most important of these criteria is the Cost Benefit Value (CBV); the higher the CBV the better. This measurement takes into account the use of a street. The type of street (arterial vs. collector), the amount of daily traffic, and the type of repair proposed, reclamation vs. mill, and the average daily traffic (ADT), and overlay vs crack sealing. Other inputs include the funding source, Chapter 90 for accepted streets and City capital funds for unaccepted streets. The City's current Chapter 90 allotment and this fiscal year's capital funding for paving have both been allocated for this year's construction season. There is also an additional calculation that is factored in to the CBV when determining which streets are paved and that is the Roadway Surface Rating (RSR). This rating is solely based on the condition of the surface of the street.

The RSR is a score based between 0 and 100 (the higher the score, the better condition of the roadway) that indicates the condition of the road. Each street is inventoried and a score is calculated. Each year's paving list begins by reviewing the lower scores. City departments such as DPW, Water, Wastewater, as well as independent utilities such as National Grid coordinate their identified projects in order to complete all necessary infrastructure upgrades at one time.

We try to gather several low scoring streets in close proximity to each other. Grouping streets in this manner allows a contractor to focus on sections, rather than working on one street and then having to transport equipment to another street across the city. Clustering may also result in lower bid prices because construction becomes more efficient.

As stated above, the CBV is the criterion that carries the most weight in creating the paving list. While attempting to keep the average RSR in Lowell a rating of 70, the paving list is created by reviewing the portion of the list with a RSR of 60 and below and comparing the Cost Benefit Value of all streets below that number. Park Avenue West has a RSR of 31 and a CBV of 10.50. Constance Drive is rated at a RSR of 37 and a CBV of 4.2, therefore potential candidates for consideration in a future year's paving list. The estimate to pave both streets is \$180,000 – approximately \$90,000 per street. In the meantime, the DPW Streets Division will patch the potholes and examine the street and sidewalks to make temporary repairs if possible.

If the Council so chooses, we can prepare a more in-depth presentation to the Neighborhood Subcommittee.

Please feel free to contact me if you have any questions regarding this motion response.

Thank you,

A handwritten signature in cursive script that reads "Eileen M. Donoghue".

Eileen Donoghue  
City Manager