



Request for City Council Committee Action From the Department of Public Works

Date: February 5, 2008

To: Honorable Sandra Colvin Roy, Chair Transportation & Public Works Committee

Referral to: Honorable Paul Ostrow, Chair Ways & Means/Budget Committee

Subject: **Proposed Asphalt Pavement Resurfacing Program**

Recommendation:

Amend the Capital Budget 2008 Resolution 2007R-645 to establish a new Asphalt Pavement Resurfacing Program utilizing Capital Project number PV 056 for 2008 in the amount of \$4,799,000. This will be funded by assessments to benefiting property owners in the amount of \$3,000,000, Net Debt Bonds in the amount of \$799,000 and MSA in the amount of \$1,000,000. Request appropriation increase in the amount of \$4,799,000 to Fund/Department 04100-9010000 Project PV056 and revenue sources 365000 (Assessment Bonds) of \$3,000,000, 384601 (Net Debt Bonds) of \$799,000, and 321514 (MSA) in the amount of \$1,000,000

To accept the final costs of the Snelling Avenue Extension project for a total of \$0.00 and close the project. Paving construction capital appropriation 04100-9010000 project PV005 from resolution 2005R-658 shall be decreased by \$599,000 and the requesting resolution 2005R-661 is amended by replacing Snelling Avenue Extension project with the Asphalt Pavement Resurfacing Program 2008.

To accept the final costs of the Public Works Project Enhancements project for a total of \$0.00 and close the project. Paving construction capital appropriation 04100-9010000 project PW001 from resolution 2005R-658 shall be decreased by \$200,000 and the requesting resolution 2005R-661 is amended by replacing Public Works Project Enhancements with the Asphalt Pavement Resurfacing Program 2008.

As a result of the above project closures, \$799,000 of bond authorization becomes available for re-allocation. This entire amount shall be re-allocated to Project number PV056 (Resurfacing Program) in 2008

Re-allocate Municipal State Aid dollars in the amount of \$500,000 from PV007 (SEMI Phase 2) to PV056 (Resurfacing Program) in 2008. Decrease appropriation in 04100-9010000 project PV007 by \$500,000

Re-allocate Municipal State Aid dollars in the amount of \$500,000 from TR013 (Railroad Safety Program) to PV056 (Resurfacing Program) in 2008. Decrease appropriation in 04100-9010000 project TR013 by \$500,000

Request the Board of Estimate and Taxation to issue assessment bonds in the amount of \$3,000,000 for the 2008 Asphalt Pavement Resurfacing Program PV056.

Establish the 2008 Resurfacing Uniform Assessment Rates as equal to one-half of the approved 2008 Street Renovation Uniform Assessment Rates.

Previous Directives:

- January 22, 2008 - Transportation and Public Works Committee action to “Establish 2008 Uniform Assessment Rates for Street Construction and Renovation”.

Prepared by: Paul W. Ogren, Public Works, 673-2456

Approved by: _____
Steven A. Kotke, P. E., City Engineer, Director of Public Works

Presenters: Michael D. Kennedy, P.E., Director of Transportation Maint. & Repair
Paul W. Ogren, P.E., Public Works

Permanent Review Committee (PRC):	Approval NA	Date _____
Civil Rights Affirmative Action Plan	Approval NA	Date _____
Policy Review Group (PRG):	Approval NA	Date _____

- ___ No financial impact
- ___ Action requires an appropriation increase to the X Capital Budget or X Operating Budget
- X Action provides increased revenue for appropriation increase
- ___ Action requires use of contingency or reserves
- ___ Action is within the Business Plan
- ___ Action requires a change to the Business Plan
- X Other financial impact (NEW ASSESSMENT RATE)
- ___ Request provided to the Finance Department when provided to the Committee Coordinator

Community Impact

Neighborhood Notification: Nothing required at this time
City Goals: The City’s infrastructure will be improved as well as enhancing our environment.
Comprehensive Plan: Consistent
Zoning Code: Not Applicable

Background/Supporting Information:

In light of the current budget and the Council adopted 5-Year Financial Plan, the City will be unable to prevent the continuing overall deterioration of City streets while solely employing current construction and maintenance practices. As a consequence, Public Works is proposing the establishment and funding of an Asphalt Pavement Resurfacing Program that, if approved, will accomplish the resurfacing of approximately 15-20 miles of City streets each year, and extend their useful life. This action will help to slow the deterioration of the overall City street network while providing the motoring public with improved driving surfaces, and provide an effective pavement management practice to fill the gap until the time when Public Works can return to a more comprehensive and optimal program that utilizes a broader range of management strategies.

Current and Historical Perspective

There are 1,062 miles of streets within the City of Minneapolis. Two major components of the system are 632 miles of residential streets, and 209 miles of Municipal State Aid (MSA) streets totaling of 841 miles. Of these 841 miles, approximately 160 miles are concrete pavement while approximately 720 miles are comprised of asphalt pavements.

In 1997, Public Works submitted to the City Council and Mayor the State of the Infrastructure Report. Part of that document reported on the City's investment in streets and prescribed funding needs and programs to protect that investment. Since that time, there have been significant financial changes affecting the department's ability to address the reconstruction and maintenance activities that are required to sustain the overall condition of the MSA and residential street network, as well as the entire street system. At about that same time, it was recognized that as the residential paving program was essentially completed, a new approach was needed to protect the investment that the City had made in these streets. The street "Renovation Program" was introduced as a capitally funded program that was less aggressive and expensive than reconstruction yet cost-effectively extended the life of the pavement and improved street conditions. From that time forward, the three main strategies being used for pavement management in the City for asphalt surfaced streets were seal coating (general fund), street renovation and reconstruction (capital fund).

Since 1997, financial pressures on both the capital fund and general fund have resulted in the virtual elimination of the ability to perform preventative maintenance seal coating, with the greatest loss occurring since 2003 with the reduction in revenues from Local Government Aid (LGA). At the same time, both the reconstruction and renovation programs have diminished to all-time lows. The Street Department has been unable to perform maintenance seal coating and their ability to even perform routine street patching has been significantly diminished.

The table below illustrates the recent funding levels for the paving Capital Improvement Program (CIP) as well as the General Fund target reductions taken in Street Maintenance. As can be seen, between 2006 and 2008 there has been an average \$4 million reduction per year on the capital side and an average annual reduction of \$362,000 on the maintenance side, and the 5-Year CIP and budget forecast shows little significant change from the 2008 levels into the future.

CIP Year	Reconst. Cost \$ Million	Renovation Cost \$ Million	Total Cost \$ Million	Total Miles Improved	General Fund Target Reductions Taken in Street Maintenance
2006	\$11.1	\$3.3	\$14.4	5.8	\$465,000
2007	\$7.6 *	\$3.3	\$10.9 *	5.6 *	\$300,700
2008	\$2.1	\$2.4	\$4.5	2.5	\$319,700

* Includes \$542,000 spend for the reconstruction of 1 mile of local roads (Stevens and 2nd Avenue South combined) as part of the Crosstown project.

During the Public Works presentations to Results Minneapolis, CLIC and a Council Study Session regarding the Pavement Condition Index (PCI) and pavement management, it was pointed out that with time, the average PCI in the last number of years throughout the City is declining at a rate of approximately 1 point per year, and at our current levels of funding of maintenance and construction, it will likely begin to decrease at a faster rate unless steps can be taken to significantly increase the amount of annual improvements being made to the system. It was also shown that the best strategy for sustaining the system is a managed application of seal coating, renovation and reconstruction.

In summary:

- The overall condition of the City's street system is declining and the rate of decline is projected to increase unless measures are taken to reverse the current rate of deterioration.
- The amount of capital funding and maintenance funding in the recent years has decreased dramatically to an all time low and is not projected to rise significantly in the next 5 years.
- Street repair activities will need to continue to be cut based upon financial projections.
- The average age of residential and MSA streets is currently 26 years and 35 years, respectively.
- At the average rate (2006 to 2008) of 4.6 miles per year of capitally improved streets, it will take well over 200 years to get through the entire system.

At this rate, in 30 years, 90% of the City street system will be well beyond its design life, and be likely in need of complete reconstruction.

Therefore, as in 1997, it is necessary that new and different pavement preservation practices and funding strategies be developed to manage our pavements and at least have an interim program until such future date when a more optimum, comprehensive and long-term pavement management strategy can again be implemented.

Recommended Strategy

To address the critical need to stretch our available funding more effectively, Public Works proposes the introduction of an additional new strategy called "Pavement Resurfacing" or what may be commonly called pavement overlays. The immediate goal is to perform work that will extend pavement life more than seal coating, but is less costly than a renovation project, which allows more miles to be completed. The life expectancy of Resurfacing is also less than Renovation, but it is still based upon sound engineering and pavement management principles that should be used to optimize the life of our streets.

Like seal coating, Resurfacing will deal predominantly with asphalt pavements, and it only addresses the pavement surface. Unlike Renovation, Resurfacing will not involve work to correct base or subgrade deficiencies, drainage or other structures (i.e. private utilities), or concrete curb and gutter problems (except extreme deficiencies). The key physical work aspects of the program are:

- Remove and replace minimal concrete curb and gutter, up to a maximum of 2% per project.
- Milling of the pavement only at the edges to match the gutter lip (edge of concrete curb and gutter) or at areas deemed appropriate for the given situation.
- Milled and paved through intersections (i.e. not around curb radius)
- Place a 1 ½" or 2" (to be determined) asphalt overlay. (This activity will slightly increase the cross-slope of the existing roadway.)
- No subgrade or underlying base corrections are performed.
- No traffic calming facilities are installed as part of the project.
- The work may progress at up to 2 – 2 ½ miles per week (i.e. approximately 16-20 blocks per week).

An example of this work was successfully performed this past summer on a segment of Kenwood Parkway from Morgan Avenue South to Lake of the Isles Blvd, as a cost effective way to mitigate severely distressed pavement, ride/aesthetic problems as well as public complaints, and extend the life of the pavement to when it can be programmed by the Park Board for reconstruction. A survey of other communities and agencies in the metropolitan area indicates

that this type of pavement treatment is not unique and is utilized in various other communities. The communities that were contacted expressed satisfaction with this type of approach.

Funding proposal for the “Resurfacing Program”

This is a new approach to doing business in Public Works. Similarly, we propose new thinking regarding its funding. Currently the City assesses for its Renovation program at an established uniform assessment rate. The proposed Pavement Resurfacing in many ways is a “lighter” form of renovation so it is proposed we use a similar funding model. The already established Pavement Renovation is designed to extend the useful pavement life for 20 years since the curb and gutter is repaired/replaced extensively as needed (a costly aspect to this program), a 2” minimum mill and overlay is done on the entire street section, drainage and other structures may be repaired, and subgrade correction is performed on failing sections where needed.

After comparing the existing Renovation program with the above proposed Resurfacing description, it is Public Works recommendation that the Resurfacing program be assessed at a rate of ½ of the Renovation rate because:

- It is estimated that Resurfacing will extend the useful pavement life 10 years rather than 20 years (The communities that were contacted stated that their resurfacing seem to be lasting more in the 15 year area or so, however, it is Public Works recommendation that we assume and communicate a 10 year life span increase).
- For the most part, curb and gutter deficiencies are not addressed, unless deemed extreme.
- None of the other activities like traffic calming, subgrade correction*, drainage structure work, and private utility work will be performed.

* This will mean that many streets that would be good candidates for Renovation may not be candidates for Resurfacing because without sufficient strength of the base and/or subgrade correction, the surface will fail prematurely. However, there may be streets that would have been good candidates for seal coating with extensive preparation work that may be good candidates for Resurfacing that would otherwise have not been addressed for years due to General Fund budget limitations.

This funding idea varies from the past in that it has been typical that assessments for pavement CIP projects have been in the range of 25% of the total cost. The Resurfacing program results in up to 75% of the project cost being assessed. However, the assessed party will only see ½ the amount on their property tax bill due to the significant lower cost of this program per mile. The remainder of the funding will need to come from City Net Debt Bond or Municipal State Aid contributions, just like the Renovation and Reconstruction programs.

It should be noted that this is not a “new” fee or tax. Assessments for capital street upgrades are a well established practice in the City. This is just a new rate for a new paving program.

It is recommended that the Resurfacing program commence in 2008 in parallel with the approved Residential Renovation program and the Municipal State Aid Reconstruction projects as previously approved in the 2008 Budget. It is also recommended that \$1.799 M be re-designated utilizing Net Debt Bond (\$799,000) and MSA funding (\$1,000,000) to establish the Resurfacing program in 2008 and that the balance of the project be funded by assessments to the property owners benefited by the resurfacing at a rate of one-half the renovation rate. At this assessment rate, a typical 4, 800 square foot lot would pay an assessment of \$768. It is estimated that at this funding level, that approximately 16 plus miles of roadway can be resurfaced in 2008 that would not have been addressed at all otherwise. It is also Public Works intention to submit a Capital Budget Request into the 2009 - 2013 Capital Improvement Program for this Resurfacing Program in the up-coming Capital Budget determination cycle.

Therefore the financial actions need to implement this program in 2008 are:

Amend the Capital Budget 2008 to establish a new Public Works activities referred to as the Asphalt Pavement Resurfacing Program utilizing Capital Project number PV056 for 2008.

To accept the final costs of the Snelling Avenue Extension project for a total of \$0.00 and close the project. Paving construction capital appropriation 04100-9010000 project PV005 from resolution 2005R-658 shall be decreased by \$599,000 and the requesting resolution 2005R-661 is amended by replacing the Snelling Avenue Extension project with the Resurfacing Program 2008. It is Public Works intention to re-submit the Snelling Avenue Extension project in the spring of 2008 Capital Budget Request submittal for a future year.

To accept the final costs of the Public Works Project Enhancements project for a total of \$0.00 and close the project. Paving construction capital appropriation 04100-901000 project PW001 from resolution 2005R-658 shall be decreased by \$200,000 and the requesting resolution 2005R-661 is amended by replacing Public Works Project Enhancements with the Resurfacing Program 2008.

Request the City Council to reallocate Net Debt Bonds to project listed below. Request the concurrence of the Board of Estimate and Taxation in the re-allocation of existing bond authorization.

As a result of the above projects closures, \$799,000 of bond authorization becomes available for re-allocation. This entire amount shall be re-allocated to Project number PV056 (Resurfacing Program) in 2008

Re-allocate Municipal State Aid dollars in the amount of \$500,000 from PV007 (SEMI Phase 2) to PV056 (Resurfacing Program) in 2008. Decrease appropriation in 04100-901000 project PV007 by \$500,000.

Re-allocate Municipal State Aid dollars in the amount of \$500,000 from TR013 (Railroad Safety Program) to PV056 (Resurfacing Program) in 2008. Decrease appropriation in 04100-9010000 project TR013 by \$500,000.

Establish the 2008 Resurfacing Uniform Assessment Rates as equal to one-half of the approved 2008 Street Renovation Uniform Assessment Rates. Based on the approved 2008 Renovation Assessment Rates, the 2008 recommended Resurfacing Rates are as follows:

Improvement Category	Funding Category	Benefited Parcel Category	2008 Approved Renovation Rate Per Sq. Ft.	2008 Recommended Resurfacing Rate Per Sq. Ft.
Resurfacing	Local	Non-residential	\$0.84	\$0.42
Resurfacing	Other	Non-Residential	\$0.84	\$0.42
Resurfacing	Local	Residential	\$0.32	\$0.16
Resurfacing	Other	Residential	\$0.26	\$0.13

Note: Terms of the Resurfacing assessment shall be over 5 years.

To submit in the spring of 2008 a Capital Budget Request for the Public Works Resurfacing Program, so that this program may be a part of the 2009 – 2013 Capital Improvement Program.

This new resurfacing program will be tracked and modified as needed to maximize our paving relative to the funding provided and to optimize our pavement management program and strategies as needed for the foreseeable future.

Enclosure: Cross-section of work to be performed
Tentative map showing the potential 2008 Resurfacing areas

CC: Heidi Hamilton, Public Works
Dick Smith, Public Works
Don Elwood, Public Works
Greg Schroeder, Public Works
Suzette Hjermsstad, Public Works
Mike Ablen, Finance
Jack Qvale, Finance
William Schroeder, Finance