

CAPITAL PROJECT DETAIL

PROJECT TITLE

Road Resurfacing

PROJECT CATEGORY

Transportation Improvements

PROJECT LOCATION

Citywide (see attached project listings)

PROJECT MANAGEMENT

Engineering Services

PROJECT DESCRIPTION

In January 2008, the City's pavement management consultant, *Infrastructure Management Systems (IMS), Inc.*, performed an inventory of the pavement condition for all the streets in the City. Based on this updated conditions information the "Five Year Prioritization List" for road resurfacing was developed. Over the next 5 years, approximately 26.5 miles of the City's 250 lane miles will be resurfaced at a cost of approximately \$2.3 million. The current average condition rating of the recommended list of roads is currently 65 (with 100 being excellent condition) although half the roads on the 5 year list are below that condition rating.

The pavement condition inventory includes an inspection for each block of roadway, including the measurement of cracks, weathering and other distresses. Based on this evaluation, a numerical value was assigned to each street reflecting the overall condition of the roadway. This index is called the Pavement Condition Index (PCI). The PCI index is an objective rating method based on the measurements of the quantity and severity of each distress type that is present in the pavement. The PCI is a numerical indicator that divides the condition rating into 7 main categories from Excellent to Very Poor.

Therefore, the primary factor in developing the priority list is the PCI. However, this is not the only factor that affects the rankings. Other criteria used to rank the roadways involved the "roadway classification"; that is, if a roadway functions as an arterial, collector or a local street, it can be expected that the higher classification roadways will carry a larger volume of traffic and will therefore rank higher on the prioritization list. Another factor that affects the prioritization is the age of the neighborhoods and the history of paving within that neighborhood.

The priority list also takes into account the benefits of grouping a number of streets in a particular neighborhood to reduce the contractor mobilization costs and to take advantage of the "bulk rate" in paving. It also takes into consideration "patched streets" as a result of the reclaim water and other storm water projects.

Generally, the City's "Pavement Management Strategies" consists of three categories:

- Preventative Maintenance (micro-surfacing)
- Major Repair (edge mill and overlay, full mill and overlay)
- Reconstruction (full base recycling)

PROJECT JUSTIFICATION

A regular program of road resurfacing is necessary to prevent City-maintained roads from rapid deterioration. The Pavement Management System is designed to treat arterials and residential streets in the worst conditions along with preventative maintenance measures to

treat roadways in good to fair condition. This approach is proven to be the most efficient and cost-effective in pavement management and one which will have a lasting effect on the City.

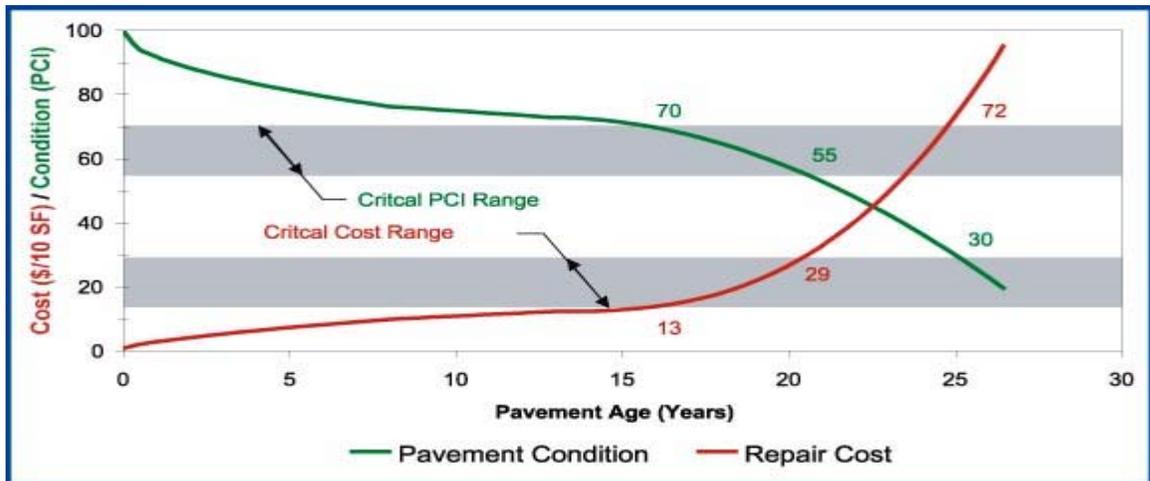
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The graphic below illustrates what can happen to a street if it is not maintained properly over time.



As can be seen, the maintenance costs increase exponentially once the condition falls below the “critical PCI range”. Therefore, it is important to perform maintenance before the roadway reaches the “critical PCI range” or when the pavement condition is between 60 and 69.

EXPENDITURE SCHEDULE:

<u>Project Cost Elements</u>	<u>FY 10-11</u>	<u>FY 11-12</u>	<u>FY 12-13</u>	<u>FY 13-14</u>	<u>FY 14-15</u>	<u>TOTAL</u>
Resurfacing	492,243	465,255	373,919	339,054	637,276	2,307,747

FUNDING SCHEDULE:

<u>Source of Funding</u>	<u>FY 10-11</u>	<u>FY 11-12</u>	<u>FY 12-13</u>	<u>FY 13-14</u>	<u>FY 14-15</u>	<u>TOTAL</u>
Local Option Gas Tax	492,243	465,255	373,919	339,054	637,276	2,307,747