

STAFF REPORT

DATE: September 8, 2014
TO: Finance and Budget Commission
FROM: Michael Mitchell, Principal Civil Engineer
SUBJECT: City of Davis Public Works Pavement Management

Recommendation

This item is informational.

Fiscal Impact

There are no direct fiscal impacts as a result of this item. However, since the Federal grant program for streets has gone, pavement management has and will result in projects funded mostly by the General Fund.

City Council Goal(s)

Preparation of this Report addresses the following City Council goals:

- (FS-3) Review pavement management index criteria for selection of projects.
- (I-3) Prioritize maintenance of sidewalks, bicycle paths and streets.
- (I-2) Examine projects and services in order to update and prioritize unmet needs. Identify funding mechanisms.

Background

In the past, the vast majority of our City streets were re-surfaced with Federal funds. These funds were mostly limited to the streets in the National Highway System and usually not for local streets. The last project of this type in Davis was in 2010 (Overlays for portions of B Street, Third Street, and Arlington. After 2010, the grant money was no longer available and municipalities had to seek other sources to fund their street pavement.

Since 2010 to the present, the City has sought after Sacramento Area Council of Governments (SACOG) grants for several projects involving the overlay of major street segments. These are:

1. First Street, A to G Streets – re-surfaced in 2013.
2. B Street, Sixth to Fourteenth Streets – re-surfaced in 2014
3. Eighth Street, F to J Streets – to be re-surfaced in fall 2014
4. L Street, Covell Boulevard to Eighth Street – currently in design
5. Mace Boulevard, Cowell Boulevard to Blue Oak – currently in design
6. Third Street, A to B Streets – currently in design

To be considered for funding, SACOG usually prefers some sort of ‘enhancement’ to a street, e.g., the bike buffers and boxes along B Street and First Street. SACOG does not typically fund

straight re-surfacing of streets without these enhancements. The projects also must have a local match of funds between 11 and 12 percent. Therefore, while the SACOG grants have been very helpful in getting some significant streets resurfaced in Davis, the grants cannot be used for general paving.

Since projects using government funding has become more limited and specialized, Staff sought to understand the magnitude and scope of the paving issue without the consideration of government funding. The first task to do that was to hire a consultant to perform a citywide survey of the streets and bikepaths and prepare a report analyzing the results and presenting to Council.

Nichole Consulting Engineers (NCE) was hired and performed the survey in late 2012 using laser mounted vehicles to measure the pavement condition index (PCI) of the streets and using staff to survey the bike paths. PCI is a measure of the condition of a street (or bike path) on a scale from 0 to 100 with a score of 100 given to a newly paved street or path.

The results of the street survey can be found online here:

<http://public-works.cityofdavis.org/Media/PublicWorks/Documents/PDF/PW/Engineering/PCI-by-Street-Listing.pdf>

In February 2013, NCE presented their survey to City Council and described several general pavement management strategies. Their lengthy report can be found here:

<http://public-works.cityofdavis.org/Media/PublicWorks/Documents/PDF/PW/Engineering/Pavement-Management-Report%20.pdf>

In their report, they stated that the overall PCI for the City streets was 62 and for bike paths was 59. These numbers can be judged to be “fair” condition. However, note that pavement conditions decrease about two or three points per year, so the average PCI for streets and bike paths now in 2014 is around 60 and 56, respectively.

The report looked at three scenarios for pavement management:

1. Keeping an annual funding amount fixed (in the report it is using a City’s average annual funding level of \$1 million per year).
2. Improving and maintaining a fixed average PCI (In the report it is 70).
3. Maintain a fixed amount of Unfunded Backlog (in the report it is fixed at \$21 million).

The report states that Scenario 1 (spending \$1 million per year) will result in a continually decreasing PCI. In other words, it would not be enough money to keep the current average PCIs.

The report concluded with a recommendation that the City Davis, as a minimum, consider increasing pavement expenditures to at least maintain the current deferred maintenance. The report stated that maintaining the current deferred maintenance (or Unfunded Backlog) would cost the City \$140 million over 20 years, or an average of \$7 million per year (7 times higher than the current expenditures for pavement management).

In April, May and October of 2013, Staff returned to Council to discuss other scenarios that the City could conceivably meet and the funding options for those scenarios. In all the scenarios, it was apparent that spending as much as possible as soon as possible gave the most value to the pavement condition. Considering the PCI degradation per year and the rising cost of oil for asphalt this seemed prudent.

The Council and Staff centered their discussions on a large amount spent in the first two years (\$15 million the first year and \$10 million the second year) and then about \$2 to \$4 million per year after that for pavement maintenance. The City Manager at the time, Steve Pinkerton, felt that either low-interest loans or increased revenue could make the large, up front paving projects viable.

With this idea, City Staff have allocated \$4.7 million to a paving program (Capital Improvement Project 8250). While this amount is less than the \$15 million mentioned above for the first year, it is better than the \$1 million previously allocated. The \$4.7 million will go toward a crack sealing and base repair project this fall and an overlay project next construction season on most or all of the streets that will undergo this season's crack sealing and base repair. The overlay project next year will include some bike paths and concrete curb, gutter and sidewalk repair as well as ADA compatible ramps.

In addition to the PCI for all City Streets and the NCE report, all the staff reports and presentations regarding Pavement Management can be found at the City's website here:
<http://public-works.cityofdavis.org/transportation/pavement-management>