



## MEMORANDUM

**TO:** City Council

**FROM:** Bill Robeson, Assistant City Manager/Public Works Director

**BY:** Jill McPeck, Capital Improvement Project Manager

**SUBJECT:** Consideration of Street Selection for the 2022 Pavement Management Program

**DATE:** August 23, 2022

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### **SUMMARY OF ACTION:**

Approval of the recommended treatments and streets will allow the City to prepare construction documents for the 2022 Pavement Management Program projects.

### **IMPACT ON FINANCIAL AND PERSONNEL RESOURCES:**

The FY 2022-23 Capital Improvement Program (CIP) budget includes \$4,786,548 for the subject project, and it is anticipated that \$1,478,117 of unencumbered FY 2021-022 revenues will be available for carryover for a total budget of \$6,264,665 (\$68,900 of Urban State Highway Account (USHA) funds, \$768,685 of General Fund, \$307,200 of Senate Bill 1 (SB1) funds, and \$5,119,880 of Local Sales Tax funds). It is estimated \$5,109,700 will be used for construction and \$510,915 for construction contingencies. The remaining \$644,050 will be used for consultant engineering and testing services for the project, and additional pavement management program items that include the annual StreetSaver subscription and City-wide striping refresh. Staff time will be necessary to coordinate the design plans with the consultant.

### **RECOMMENDATION:**

Review and approve the recommended treatments and streets for the 2022 Pavement Management Program, including the streets identified in Attachments 1 through 3, and direct staff to work with the City's design consultant to value engineer proposed treatments and proposals for the streets identified in Attachment 4.

### **BACKGROUND:**

In 2017, based on recommendations from staff and the City's pavement consultant, the City Council approved a street repairs program focused on addressing potential structural issues and other critical point repairs, rather than a rotating slurry seal program, in order to prioritize spending of the City's limited budget. This approach has also resulted in

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annual street repair programs that have provided corrections to arterials and collector streets, with little to no ability to address needs on residential streets.

On April 10, 2018, the City Council reviewed treatment options for the 2018 Street Repairs project (James Way) and selected Alternative 1 - Digouts and Overlay, as the preferred alternative. For this alternative, it was estimated that 2-1/2 years of the City's Pavement Management Program budget would be dedicated to James Way, with, digouts completed in Summer 2018 and curb ramps and overlay scheduled to be completed in the subsequent years (e.g., 2019 and 2020). The digouts of James Way were completed in 2018, however, due to ongoing deterioration and the winter rains of 2019, two vital arterials, West Branch Street and Traffic Way, reached a critical point of deterioration in 2019 that would have moved into a full "reconstruction category" without immediate repairs to multiple segments. In response, on June 11, 2019, Council approved digout improvements on West Branch Street and Traffic Way and delayed the curb ramps and overlay on James Way based on the fact that the digouts previously completed were effective and could hold up another year or two without deteriorating while awaiting a full overlay treatment.

In order to stretch the available budget and slow the deterioration of certain streets to help avoid near-term reconstruction for the 2021 Street Repairs project, staff and the City's pavement engineer recommended to Council in April 2021 that the City continue to correct base failures (digouts) and alligator cracking on streets found to be in the most urgent condition up to the amount of the budget available. On July 27, 2021, Council reviewed alternatives for appropriating funds in excess of the 20% Fund Balance Goal Limit and elected to invest \$1.75 million of excess reserves into the City's infrastructure, specifically pavement maintenance. As a result, additional street segments that had been evaluated and identified in the April 27, 2021 staff report were added to the 2021 Street Repairs project utilizing the excess reserves. At that time, it was identified that any funds remaining after the 2021 Street Repairs project would be carried over to the 2022 pavement management program.

The City's contractor has recently completed the 2021 Street Repairs project and it is estimated that approximately \$1.478 million will be carried over to the 2022 pavement management program. In addition, \$3.6 million of Sales Tax monies have been made available for the 2022 pavement management program through reallocation of funds previously allocated to the Brisco/Halcyon Interchange Project, savings from Sales Tax projects that were funded through American Recovery Plan Act (ARPA), and allocations of the Sales Tax fund balance. In total, the FY 2022-23 CIP budget includes \$6,264,665 for the 2022 Street Repairs project (\$68,900 of Urban State Highway Account (USHA) funds, \$768,685 of General Fund, \$307,200 of Senate Bill 1 (SB1) funds, and \$5,119,880 of Local Sales Tax funds).

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#### **ANALYSIS OF ISSUES:**

The proposed 2022 Pavement Management Program was developed in consultation with City's pavement engineer and consists of a combination of three pavement maintenance strategies that may be employed because of the greater number and amount of streets that can be addressed with this year's additional funding. These three strategies are:

1. Preventive Maintenance
2. Pavement Rehabilitation
3. Hot Spot Repairs on Key City Streets

The purpose of this approach is to maximize the additional amount of funding infused into this year's pavement management program budget while also addressing critical point needs within the City's roadway network. If approved, the proposed 2022 Street Repair project will include some slurry seal treatments as well as repairs to a number of residential streets, as described in more detail below and in the attachments. The proposed strategy assumes that the increase will be limited due to the one-time nature of additional funds for the 2022 project. Consistent annual increases will allow staff to modify the annual pavement maintenance strategy on a longer-term basis.

#### **Strategy 1: Preventative Maintenance**

**\$1,683,000**

Pavement maintenance treatments are designed to slow the pavement aging process. Mainly, the treatments are designed to protect the pavement from the adverse effects of water and to some extent vehicle traffic. Over the past several years, the City has elected to forego preventative maintenance treatments to focus on correcting structural deficiencies (digouts) on streets segments, mainly collectors and arterials, that had moved into a critical point of deterioration and would most likely move into a reconstruction category without immediate structural repairs.

For this year's program, it is recommended that some preventative maintenance be accomplished due to the additional funding available. Twelve areas within the City have been identified that would benefit from receiving a slurry seal preventative maintenance treatment at this time. A slurry seal helps to preserve and protect the underlaying pavement structure, provides a new wearing surface, protects it from sun damage, and most importantly seals the pavement, thus preventing the infiltration of water, which is the most frequent cause of pavement failure.

These streets were selected using a best first approach that will keep the City's good streets in good condition. The City has expended several millions of dollars to improve streets throughout the City. Currently 26% of the City's network is identified as in "Good" condition (PCI between 90-71). Preventative maintenance will preserve that condition. This year's program, as proposed, will address approximately 12.4% percent of those good condition streets.

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A map of the twelve locations and street list are presented in Attachments 1 and 2.

**Strategy 2: Pavement Rehabilitation** **\$1,580,000**

Pavement rehabilitation consists of treatments used to restore the existing pavement or to add additional structural support to the pavement.

For this year's program, staff is recommending completing the James Way digout and overlay rehabilitation project. The project consists of overlaying the pavement on James Way from Equestrian Way to Tally Ho Road where digouts were previously performed. This street segment was selected to stay in alignment with the intent to come back in the future, when funds were available, and complete the James Way project that was partially completed in 2018.

An asphalt overlay is a layer of new asphalt applied over the existing base layer of asphalt on a road. An overlay is a treatment that can significantly extend the useful life of the road when the base of the pavement is in good shape.

The project will also include upgrading twenty-four non-compliant curb ramps within the project limits as an overlay is considered an alteration of a street under the Americans with Disabilities Act (ADA) and triggers the City's obligation to provide ADA compliant curb ramps where pedestrian walkways intersect the resurfaced street.

**Scenario 3: Hot Spot Repairs on Key City Streets** **\$1,837,000**

Digout Repairs **\$373,000**

Digouts are small areas of deteriorated pavement which are removed and replaced with new asphalt concrete to correct base failures and to help slow the deterioration of a street and avoid near-term reconstruction.

Staff's recommendation is to continue with the approach of performing localized repairs or digouts on key streets throughout the City. This approach is a "stop-gap" measure to keep important streets safe and help reduce the need for the road crew's immediate attention. The City has successfully used this approach over the past few years to address important, well used streets throughout the City.

A list of streets proposed to include digout repairs is presented in Attachment 3.

Value Engineer Selected Residential Streets **\$1,464,000**

Staff recommends using the remaining funds in this year's budget to address residential streets that are in poor condition. A proposed street list is presented in Attachment 4. These streets have a PCI between 27 and 49. Residential streets are typically low volume

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roads that were constructed with a thin layer of asphalt concrete ranging between 2 and 3 inches. Poor roads with low PCIs do not always require reconstruction. Sometimes these roads look bad but are still structurally adequate. The intent is to test these pavements, using non-destructive deflection testing to determine the structural adequacy of the pavement. If it is determined that the pavement is structurally adequate, then value engineering methods can be applied. Value Engineering is defined as the art of providing the most cost-effective pavement treatments without sacrificing quality or longevity. Value engineering approaches used in the past by other agencies include TMOs (thin maintenance overlays), cape seals with or without a leveling course, or fiberized slurry seals.

The streets list in Attachment 4 were identified as moving into a condition requiring reconstruction, which is estimated at \$4,115,000. For this year's program, staff is recommending a value engineering process of these streets, preceded by deflection testing, in order to stretch the amount of funding available. The goal is to address as many streets as possible on the list. It should be noted that some treatments will trigger curb ramp upgrades. Seventeen potential curb ramps have been identified that may need to be upgraded depending on the selected treatment. The current estimated construction cost of a curb ramp is approximately \$10,000. Staff is recommending to work closely with the design engineer to evaluate value engineering options with the intent of treating most, if not all, of the streets presented in Attachment 4.

Should the Council agree with the three pavement maintenance strategies presented above, it is recommended Council direct staff to work with the design engineer to evaluate the selected street segments identified in Attachment 4, verify that the proposed treatments are appropriate for each street segment, and identify the associated treatment costs. Staff will then return to Council to present the findings and recommendations and to request approval with the plans and specifications for the 2022 Street Repairs project.

#### **ALTERNATIVES:**

The following alternatives are provided for the Council's consideration:

1. Approve staff's recommendation;
2. Do not approve staff's recommendation;
3. Direct staff to investigate other potential treatments and streets and return to Council;  
or
4. Provide other direction to staff.

#### **ADVANTAGES:**

The available pavement management program budget will be maximized by employing three different pavement management strategies. Slurry seals will help to preserve and protect the underlying pavement structure from sun and water. Overlays will significantly extend the useful life of the road when the pavement base is in good shape. Digouts will

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provide permanent repairs where the pavement is failing helping to extend the pavement life. Value engineering will determine the most cost-effective pavement treatments.

**DISADVANTAGES:**

Implementation of the proposed pavement maintenance strategies reduces available funding for other potential street maintenance projects.

**ENVIRONMENTAL REVIEW:**

The project is categorically exempt from the California Environmental Quality Act (CEQA) pursuant to CEQA Guideline Section 15301(c) covering the repair and maintenance of existing streets, sidewalks, gutters and similar facilities.

**PUBLIC NOTIFICATION AND COMMENTS:**

The Agenda was posted at City Hall and on the City's website in accordance with Government Code Section 54954.2.

**Attachments:**

1. Proposed Pavement Maintenance Locations Map
2. Proposed Pavement Maintenance Streets List
3. Proposed Digout Repairs on Key City Streets List
4. Proposed Residential Streets List for Value Engineering
5. [Staff Report from the April 10, 2018 City Council meeting](#)
6. [Staff Report from the June 11, 2019 City Council meeting](#)
7. [Staff Report and Attachments from the April 27, 2021 City Council meeting](#)
8. [Staff Report and Attachments from the July 27, 2021 City Council meeting](#)