



DATE: October 28, 2020
TO: Council Infrastructure Committee
FROM: Director of Public Works
SUBJECT: Review and Comment on the FY21 Pavement Improvement Project

RECOMMENDATION

That the Council Infrastructure Committee reviews and comments on the FY21 Pavement Improvement Project.

SUMMARY

The FY21 Pavement Improvement Project (PIP) is currently under design and tentatively calls for the rehabilitation of fifty-eight street sections and preventive maintenance of thirty street sections for a total of eighty-eight street sections. Please see Attachment II for the list of streets. The proposed improvements will repair failed pavement sections and improve street surfaces.

The project budget is \$10,465,000. The funding comes from Gas Tax, Measure BB, Measure B, Vehicle Registration Fees and anticipated Road Repair and Accountability Act (SB1) funds.

BACKGROUND

The PIP involves one of four types of treatments:

Pavement Rehabilitation:

- 1) Standard overlay of the existing street pavement with new Hot Mix Asphalt surfacing.
- 2) Cold-In-Place Recycling (CIR), which involves removing the top layer of asphalt, mixing the removed aggregates with a recycling agent and other additives on-site, replacing this pavement material onto the same roadway, then applying a Hot Mix Asphalt overlay.
- 3) Full Depth Reclamation (FDR), which consists of pulverizing and mixing distressed asphalt and underlying pavement materials with or without the addition of stabilizing agents, using the resulting material as a base for the renewed pavement structure and adding a new Hot Mix Asphalt cap.

Preventive Maintenance:

- 4) Varying combinations of: crack sealing, 6” spot repair, and micro-surfacing.

Street selections for the PIP are based on staff’s analysis using several criteria described below:

- **Technology** – The Pavement Management Program (PMP)¹ evaluates current and predicts future roadway conditions. It provides logical and efficient methods of identifying street rehabilitation needs. It also determines the most cost-effective allocation of funds to the street segments needing preventive maintenance, rehabilitation, or reconstruction. Staff utilized the PMP to compile an initial list of recommended streets. This list is then revised to consider other criteria and project budget allocation parameters.
- **Internal Reports** - Reports from the City’s Maintenance Services staff on streets needing repair were considered.
- **Council Member Input** – Council member requests for selecting streets were considered.
- **Public Input** - Public requests for selecting streets were considered.
- **Geographic Location** – Selecting streets in close vicinity to help lower construction bids was considered.
- **Funding Availability** – Available funding and potential for obtaining outside grant funding was evaluated.

The Pavement Condition Index (PCI) is an overall rating of road conditions. The PCI of each arterial and collector street segment is evaluated by an independent third-party every other year, and each residential street segment is evaluated every five years.

<u>PCI Rating</u>	<u>Description</u>
100	This rating is given to newly constructed or rehabilitated roadways.
85 - 99	Highly functional roadway. No action required.
70 - 85	Roadway can be maintained ("preventive maintenance") with crack sealing, slurry seals, micro-surfacing, and some minor, localized pothole repairs. As the roadway pavement ages, preventive maintenance may not be effective after a few maintenance cycles.
40 - 70	Extensive "dig-outs," grinding, fabric, or asphalt overlays may be required to maintain (or "rehabilitate") roadway.
0 - 40	Roadway requires complete reconstruction using full depth reconstruction, cold in place recycling, or hot in-place recycling methods. If a street deteriorates beyond certain points, it

¹ The PMP is a Metropolitan Transportation Commission (MTC) recommended software program.

becomes progressively more expensive to bring that street back to the desired standard.

As part of the 2018 Capital Improvement Program (CIP) agenda item at the November 29, 2017² CIP meeting, the committee reviewed and agreed to the following budget allocations for annual pavement improvement projects:

- Minimum 20% for preventive maintenance (streets with PCI of 70-85).
- Minimum 10% for deteriorated streets (streets with PCI of 0-30).
- Minimum 15% for streets located in Industrial Hayward as recommended by the Economic Development Strategic Plan in 2014.

DISCUSSION

The plans and specifications for the FY21 PIP are currently in design and expected to be complete in February 2021. Based on staff's analysis using the criteria described above, the project parameters are as follows:

Project Budget Allocation	Goal	Current Performance	Difference
Preventive Maintenance Treatment	20% minimum	11%	-9%
Streets Located in Industrial Hayward	15% minimum	10%	-5%
Streets with PCI Less than 30	10% minimum	45%	35%

The project budget allocation is skewed towards streets in very poor condition (PCI less than 30) less towards preventive maintenance and streets located in industrial areas of the City due to various reasons:

- Including streets in very poor condition with high number of resident requests in order to improve and increase equity in distribution of City services (Roxanne Ave, Tulip Ave, Hermes Ct, Carroll Ave, Medinah St, & Arden Rd).
- Focus on selecting streets in neighborhoods adjacent to the Mission Blvd Corridor Phase 2 project. These streets have a high number of deteriorated streets and may have been further impacted by drivers using them as traffic detour routes for the Mission Blvd Corridor Phase 2 project.
- The establishment of the Old Highlands (OHHA) Assessment District requires the inclusion of streets from the area (Cotati St & Tribune Ave).

This selection requires both judgement and experience. Staff has engaged an experienced consultant, Pavement Engineering, Inc., to confirm the selection of streets sections, the approximate level of treatment for each, and to provide engineering support services.

² <https://hayward.legistar.com/LegislationDetail.aspx?ID=3216497&GUID=3338D0E9-5E80-437E-8EC8-CDEFA3459426&Options=&Search=>

Seven (7) miles of bike lane striping will be installed at the following locations:

- Arden Rd, from Eden Landing Rd to Baumberg Ave (2.4 miles)
- Arrowhead Wy, Industrial Pkwy to Mission Blvd (1.5 miles)
- Clawiter Rd, from Industrial Pkwy to Winton Ave (1.8 miles)
- Gresel St, Brae burn Ave to Mission Blvd (0.6 miles)
- Pulaski Dr, Revere Ave to City Limits (0.9 miles)

ECONOMIC IMPACT

This project is fully funded by the City’s Capital Improvement Program.

FISCAL IMPACT

The estimated project funding sources are as follows:

• 210 - Gas Tax	\$1,050,000
• 212 - Measure BB – Local Transportation	\$2,340,000
• 215 - Measure B – Local Transportation	\$3,050,000
• 218 – Vehicle Registration Fee	\$1,025,000
• 211 – RRAA (SB1)	<u>\$3,000,000</u>

Total: \$10,465,000

STRATEGIC ROADMAP

This agenda item supports the Strategic Priority of Improve Infrastructure. Specifically, this item relates to the implementation of the following project(s):

Project 5, Part 5a: Maintain Pavement Condition Index (PCI) at 70.
Project 5, Part 5c: Construct various OHHA Pavement Improvements

SUSTAINABILITY FEATURES

The project requires the contractor to recycle all construction and demolition debris generated from the project.

This project is consistent with City’s Complete Streets Policy and improves travel for all users including:

- Improved pavement for motorists
- Additional bike lanes and sharrows for bicyclists
- More visible pavement markings for pedestrians, including near school zones
- New or upgraded curb ramps to meet the recently revised Caltrans standards for pedestrians

The project satisfies the following General Plan policies:

- PFS-7.10 Recycled Products or Processes for Capital Projects
- HQL-2.5 Safe Routes to School
- HQL-2.6 Education on Sharing the Road
- M-1.7 Eliminate Gaps (in pedestrian networks)
- M-3.1 Serving All Users
- M-5.1 Pedestrian Needs
- M-5.6 Safe Pedestrian Crossings
- M-6.2 Encourage Bicycle Use

PUBLIC CONTACT

There has been no public contact related to this project to date.

NEXT STEPS

Submit approval of plans, specifications, and call for bids for Council's approval	February 2021
Bid Opening	March 2021
Award of Contract	April 2021
Start of Construction	May 2021
End of Construction	September 2021

Prepared by: Yama Farouqi, Associate Civil Engineer
Kathy Garcia, Deputy Director of Public Works

Recommended by: Alex Ameri, Director of Public Works

Approved by:



Kelly McAdoo, City Manager