



Budget Engagement Commission

City of Arts & Innovation

TO: **BUDGET ENGAGEMENT COMMISSION** DATE: **JULY 11, 2024**
FROM: **PUBLIC WORKS DEPARTMENT** WARDS: **ALL**
SUBJECT: **MEASURE Z – PAVEMENT MANAGEMENT PROGRAM UPDATE AND FISCAL
YEAR 2024-25 PROJECT SELECTION**

ISSUE:

Receive an update on the Pavement Management Program including the proposed Fiscal Year 2024-2025 projects and provide input on Measure Z fund allocations for City roads.

RECOMMENDATION:

That the Budget Engagement Commission receive an update and provide input on Measure Z fund allocations for City roads as part of the City's Pavement Management Program.

BACKGROUND:

In 2013, the City used bond proceeds backed by the City's Measure A revenue to secure approximately \$38 million for a three-year maintenance program with an annual debt service payment of \$3 million through 2033. Based on the terms of the agreement, the Finance Department recommended that the Public Works Department (Public Works) consider refinancing the loan to decrease the annual obligation or payoff the debt sooner. With the support of the Finance Department, Public Works successfully refinanced this debt in June 2023 and estimates a savings of \$2.4 million throughout term of the loan.

Public Works has engaged the Budget Engagement Commission (BEC) and City Council during the past several years to provide Pavement Management Program (PMP) updates, request supplemental appropriations, and detail the City's investment to address paving and maintenance needs. Since 2017, the City's PMP budget has increased substantially with the adoption of California's Senate Bill 1, which is referred to as the Road Repair and Recovery Act (SB-1) and the implementation of the City's Measure Z one-cent transaction and use tax to pay for critical unfunded City needs including road maintenance and traffic safety.

On September 20, 2022, the City Council approved extending the paving moratorium from three to five years to mitigate some of the impacts to roads by reducing trenching operations on newly paved roads and encourage increased collaboration between utility companies and the City.

On December 12, 2023, City Council approved an agreement with Nicols Consulting Engineers to complete a Pavement Cut Fee Study. The purpose of the study is to evaluate the potential of

assessing fees to utility companies and developers when contractors trench within City streets. Trench cuts impact the roadways’ rideability and reduce their useful life, thus, the fees would help offset these direct impacts.

DISCUSSION:

In 2017, Public Works completed a comprehensive pavement condition assessment of 875 centerline miles of roads and alleys to determine the City’s overall Pavement Condition Index (PCI), and to provide budgetary recommendations for various target funding levels. In 2021, a 5-year program was approved to reassess the City’s roadways to systematically complete partial network surveys throughout the City annually over the 5-year period.

The purpose and function of pavement management is to confirm what assets the City owns and maintains, identify the status and total network deficiency and to develop a 5-year budget rehabilitation plan. The health of the City’s road network can be summarized with the following three metrics including Network PCI, percentage of streets in excellent condition, and the percentage of streets in poor or very poor condition, also known as Backlog. Table 1 provides the results of these three key metrics from the City’s previous three PMP reports received to date.

Table 1 – PMP Street Network PCI Summary

Report Month/Year	May 2018	July 2022	May 2023
Network PCI	61	58	59
Excellent Roads	13.2%	33.0%	33.4%
Backlog	12.7%	24.0%	21.5%

In 2017, the City was operating on a maintenance budget of approximately \$15M. The May 2018 report recommended a 5-year operating budget of \$24M. Measure Z funding contributed to increased paving budgets in subsequent years, although, the Public Works Department’s operating budget did not reach the recommended \$24M budget until FY 2022-2023 and by that time the funding requirements to maintain a stable PCI score exceeded \$24M. The reduced funding resulted in a decrease in Network PCI and an increase in streets categorized as “Poor” and “Very Poor” which was detailed in subsequent reports. However, there was a vast percent increase in Excellent streets which reflects the City’s commitment to improving the quality of streets in the past several years.

In addition to funding deficiencies, inflation has negatively impacted the PMP in recent years. Inflation is a national issue and construction costs have risen approximately 35% for City projects in just the past few years. Unfortunately, due to the length of time needed from planning projects to awarding contracts, inflation caused large budget overages for the FY 2021-2022 and FY 2022-2023 projects. All planned projects will be completed, however, due to labor and material cost increases the construction of some projects has been delayed.

Table 2 represents the Condition Index PCI Scoring Rating used to assess the roadway network. When the City Network PCI score decreases, that indicates that a higher percentage of roads will be classified Marginal, Poor, and Very Poor and thus would create an increased financial burden.

Table 2 – Condition Index Rating and PCI Score

Condition	Pavement Condition Index Score
Very Poor	0-25
Poor	25-40
Marginal	40-50
Fair	50-60
Good	60-70
Very Good	70-85
Excellent	85-100

As the City continues with a proactive PMP, the deterioration curves will become more accurate and more reflective of how the City’s pavement treatments are performing over time. Figure 1 demonstrates a typical degradation curve and the importance of maintaining the streets in good condition. As a street develops cracking, it is prone to greater water infiltration, more susceptible to vehicular loads, and will begin to deteriorate rapidly. Therefore, the increased funding to the PMP has allowed the City to increase its commitment to preservation treatments, thereby extending the life of the pavement. Investing in preservation treatments can also avert more costly repairs as Figure 1 shows that spending \$1 on preservation efforts may eliminate or delay more costly repairs.

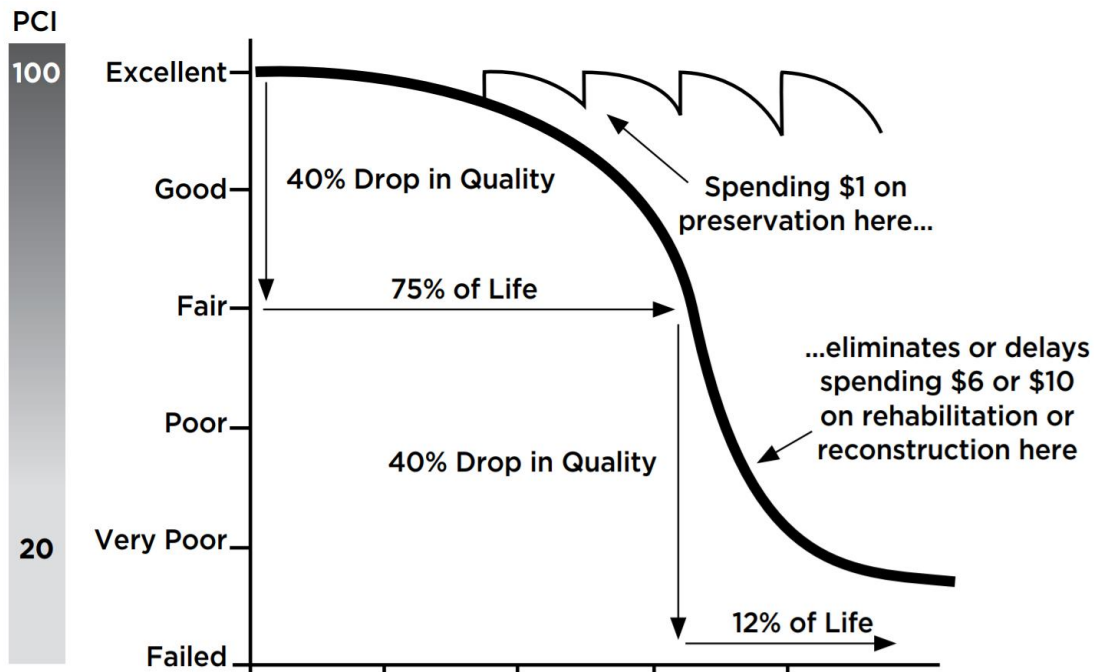


Figure 1: Pavement Degradation Curve

Table 3 provides a 5-year PCI and funding analysis comparing 2018 to 2023, considering varying annual budgets with their corresponding resulting PCI and Backlog. It is important to evaluate the Backlog because once it exceeds 20%, the ability to adequately fund the PMP and reduce the Backlog becomes extremely difficult. As anticipated by the 2018 study, the City Network PCI decreased, and the Backlog increased as the PMP was not operating with the recommended annual budget.

Table 3 – 5-Year PCI and Funding Analysis

2018 (Overall PCI of 61)			2023 (Overall PCI of 59)		
Annual Budget	PCI	Backlog	Annual Budget	PCI	Backlog
\$13.5	57	26.7%	\$24M	54	31%
\$15.0	57	24.4%	\$31M	56	28%
\$18.5	58	22.9%	\$37M	58	25%
\$24.0	61	18.8%	\$45M	60	22%
\$30.0	63	15.2%	\$57M	62	19%
\$34.5	65	12.7%	\$65M	64	17%
--	--	--	\$80M	66	14%
--	--	--	\$89M	68	11%
--	--	--	\$98M	70	9%

To reduce that financial burden, Public Works utilizes a treatment of milling the existing pavement to an appropriate thickness, applying an Asphalt Rubber Aggregate Membrane (ARAM), followed by a new asphalt surface. This treatment is utilized on structurally stable streets, the exception are roads with excessively aged surfaces as the deformation/cracks require more extensive repairs. The ARAM interlayer serves as a barrier preventing water from penetrating into the subgrade and the cracking reflecting into the newly paved surface.

Table 4 reflects the various fund sources allocated for Fiscal Year 2024-2025. A portion of available funds are also allocated towards miscellaneous concrete repair projects and traffic safety enhancements. The concrete repair work will be completed as separate projects while the traffic safety enhancements will be included with the pavement maintenance projects. The May 2023 PMP report recommended an annual maintenance budget of \$37M. All FY 2022-2023 projects have been awarded to date and all FY 2023-2024 projects will be awarded by the end of Calander Year 2024.

Table 4 – FY 2024-2025 Fund Sources

Fund Source	PMP Budget	Misc. Concrete Repair Projects	Traffic Safety Enhancements
Measure A (State Sales Tax)	\$2.40M		
HUTA (State Gas Tax)	\$2.45M	\$0.8M	
RMRA (State SB-1 Gas Tax)	\$7.45M		
CDBG (Federal HUD)	\$1.63M		
Measure Z (City Sales Tax)	\$12.0M	\$0.6M	\$0.5M
Subtotal	\$25.9M	\$1.4M	\$0.5M

Table 5 provides the summary of deductions from available funds allocated in FY 2024-2025 to address prior project commitments and budget overages:

Table 5 – FY 2024-2025 Budget Deductions

Deduction	Amount
Budget Deficit Contribution *	- \$3.0M
Various Sidewalk Grant Project Support	- \$1.0M
Jurupa Avenue Extension Mitigation	- \$2.0M
Subtotal	- \$6.0M

* Current total PMP budget overage is estimated at \$9M.

Table 6 shows the positive impacts that Measure Z has had on the Pavement Management Program. Measure Z was passed in part to help pay for critical programs and services and roadway paving continues to be ranked as one of the highest priorities for the community.

Table 4 – PMP Budget from FY 2016/17 through FY 2024/25

Fiscal Year	Funding Source (Millions)					Subtotal
	Measure A	State Gas Tax	SB1 Gas Tax	CDBG	Measure Z	
2016/17			\$13.50		NA	\$13.50
2017/18			\$13.50		\$2.875	\$16.375
2018/19			\$13.50		\$2.875	\$16.375
2019/20	\$2.40	\$2.80	\$5.40	\$2.60	\$7.80	\$21.00
2020/21	\$1.20	\$1.40	\$2.70	\$0	\$7.80	\$15.80
2021/22	\$2.00	\$2.80	\$6.40	\$1.20	\$7.80	\$20.20
2022/23	\$2.40	\$2.10	\$7.20	\$1.90	\$12.30	\$25.90
2023/24	\$2.40	\$1.80	\$7.70	\$1.10	\$8.80	\$31.80*
2024/25	\$2.40	\$2.45	\$7.45	\$1.63	\$12.00	\$25.93

* A \$10 million appropriation from the City’s General Fund

The City utilizes *Lucity*, a pavement management software, which allows the Public Works Department to align the available budget with the needs identified in the software. Public Works also receives rehabilitation requests through the City’s 311 Call Center. Finally, Staff meets annually with respective councilmembers and the mayor to share updates, recommend paving and maintenance projects, share strategies to maximize roadway investment, and discuss priority paving needs.

Based on the projected available funding levels including the required deductions, staff is recommending approximately \$20 million in FY 2024-2025 funds for street maintenance and preservation projects including traffic safety enhancements. Attachment 1 includes a Citywide list of recommended projects. This year, a special project along Victoria Avenue was included as part of the City’s broader effort to revitalize Victoria Avenue; Public Works plans to conduct maintenance along sections of Victoria over the next five years. The selected FY 2024-25 projects are anticipated to begin construction throughout calendar year 2025 as the selected streets need to be field reviewed, designed, and projects awarded and scheduled for construction. Table 7 summarizes the quantity of miles for the planned resurfacing and preservation projects.

Table 7 – FY 2024-25 Citywide Resurfacing and Preservation Project Miles

Roadway Classification	Asphalt Resurfacing	Slurry Preservation
Arterial Streets	4.1 miles	
Collector Streets	1.0 miles	
Minor Streets	5.0 miles	10.5 miles
Alleys (New Construction)	0.14 miles	
Total	20.7 Miles	

The proposed number of miles completed annually has declined in recent years as Public Works contends with the rise in construction costs. Another factor for the decrease in centerline miles for FY 2024-2025 projects from the previous fiscal year is the focus on paving more Arterial roads which have larger surfaces per centerline mile and usually require thicker asphalt lifts. Public Works will continue to observe the trend and may approach the City Council in the future to request additional funds to support the PMP.

Public Works continues to study best practices and programs from other agencies to help preserve and improve our roadway system. As previously discussed, Public Works extended the Paving Moratorium from 3 to 5 years and is exploring the potential to implement a Pavement Cut Fee to mitigate impacts to the roads and to promote better collaboration with utility purveyors and developers.

Public Works also implemented a new GIS map detailing the streets that have been paved in the past 5 years as well as planned paving projects. The GIS map allows elected officials and the public to track progress on projects, encourage collaboration between utility companies and the City on planned street work, and help enforce the City's pavement moratorium policy. In March 2023, Public Works updated its trench repair standard detail improving the paving restoration requirements and referencing both the paving moratorium and new GIS map.

STRATEGIC PLAN ALIGNMENT:

This item contributes to **Strategic Priority 6 – Infrastructure, Mobility and Connectivity** and **Goal 6.2 – Maintain, protect, and improve assets and infrastructure within the City's built environment to ensure and enhance reliability, resiliency, sustainability, and facilitate connectivity.**

This item aligns with each of the five Cross-Cutting Threads as follows:

1. **Community Trust** – The proposed improvements are part of a more significant endeavor to improve the City's roadway network and quality of life for residents and visitors. The Public Works Department has provided numerous presentations to the City Council, Mobility and Infrastructure Committee, Transportation Committee, and Budget Engagement Commission as part of the City's Pavement Management Program.
2. **Equity** – Public Works strives to improve the City's roadway network to provide safe and reliable transportation to all areas of the City. Additionally, staff meets with each City Councilmember to discuss goals, budgets, recommendations for street improvements, and obtain feedback on the requests received from their constituents. The proposed projects encompass street maintenance in all Wards and includes work within alleys, local, collector, and arterial roadways. The project list includes locations in eligible areas defined under the CDBG program.
3. **Fiscal Responsibility** – Public Works responsibly manages a variety of fund sources to complete projects included in the City's Capital Improvement Program. Public Works is a prudent steward of public funds and construction projects are always awarded to the lowest responsive bidders.
4. **Innovation** – Projects will utilize an Asphalt Rubber Aggregate Membrane interlay that has proven to extend the life of a street by creating an impenetrable barrier blocking rainwater from penetrating into the subgrade.
5. **Sustainability & Resiliency** – The construction materials specified for these projects are considered best practices in the industry. The use of rubberized and recycled material greatly benefits the environment, reducing wasted storage, providing extra layers of protection, and adding longevity to our resurfaced streets.

FISCAL IMPACT:

There is no fiscal impact to receive and file the PMP update and FY 2024-2025 project selection.

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Certified as to
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Approved as to form: Phaedra Norton, City Attorney

Attachments:

1. Fiscal Year 2024-25 Project Location List
2. Presentation