



Public Works Department

DATE: March 25, 2025

TO: City Council

FROM: Edward Arango, Assistant Public Works Director/City Engineer

Jennifer Ng, Public Works Director

VIA: Kimbra McCarthy, City Manager

SUBJECT: Pavement Management Program Update

PURPOSE

This memorandum provides an update on the pavement condition, in process and planned paving projects already funded in the Capital Improvement Program (CIP), and an updated evaluation of future funding needs.

BACKGROUND

Staff provided an update on the Pavement Management Program to Council in <u>April 9, 2024</u> as part of the CIP Study Session. Council agreed with staff's recommendation to continue prioritizing pavement projects, including the integration of bicycle and pedestrian improvements and to continue to seek opportunities to deliver active transportation projects.

Biennially, the City coordinates with the Metropolitan Transportation Commission (MTC) to evaluate the overall condition of the City's street network and develop a rehabilitation and maintenance strategy that will improve the overall condition of the street network. The City's street network is typically evaluated biennially by an MTC-assigned consultant who provides a Pavement Management Plan (PMP) report with a network Pavement Condition Index (PCI) rating. The PCI is a measurement of pavement condition that ranges from zero to 100. A newly constructed or overlaid street would have a PCI of 100 while a poor/failed roadway (requiring major rehabilitation or reconstruction) would have a PCI under 49 (see Table 1).

Table 1: Pavement Condition Categories

Very Good—Excellent PCI = 80-100	Newly constructed or resurfaced pavement with few signs of distress.
Good PCI=70-79	Pavement requiring mostly preventive maintenance and showing only low levels of distress.
Fair PCI=60-69	Pavement at the low end of this range is significantly distressed and may require a combination of rehabilitation and preventive maintenance.
At Risk PCI=50-59	Deteriorated pavement requiring immediate attention, including rehabilitative work.
Poor PCI=25-49	Pavement showing extensive distress and requiring major rehabilitation or reconstruction.
Failed PCI=24	Extremely rough pavement that needs complete reconstruction.

The MTC and the Santa Clara Valley Transportation Authority (VTA) expect cities to strive for a minimum network PCI of 70, representing a good condition. Below 70, it becomes exponentially more expensive to repair and maintain pavement. The most cost-effective way to maintain a good pavement condition is to avoid deferred maintenance and invest in preventive maintenance and pavement preservation.

The MTC's PMP report published in 2024 identified the City's PCI at 67. In October 2024, the MTC published the 2023 report of the rolling three-year average PCI for all Bay Area jurisdictions, showing Mountain View's three-year average at 68 (see Exhibit A). The City's goal is to maintain a Citywide-network PCI above 70. More information about the City's PCI and maintenance strategies can be found on the City's website at Roadway Pavement. The next MTC PMP report identifying the City's PCI is expected in early 2026.

The PCI is in a state of constant decline due to normal wear and tear. Normally, a city can expect its pavement index to drop 2-3 points over the course of a year. However, the high amount of construction activity in the roadways occurring in the City aggravates this decline. Add on top of that, it is very common in this area to add trips (i.e., wear and tear) to the road via front-door delivery services with the increasing numbers of electric vehicles (which are heavier than internal combustion engine vehicles), and the pavement is actually degrading more quickly than it has historically.

DISCUSSION

The MTC's biennial pavement evaluation reported that the City's network PCI rating was 67 in 2024. As previously noted to Council in April 2024, the City's PCI is in decline. Staff previously identified the following factors that contributed to the rating:

- During 2020 to 2022, the Engineering Division of the Public Works Department had significant staffing challenges, particularly in the Civil Infrastructure Section that manages the pavement program.
- The staffing challenges required prioritization of capital projects with grant funding or other critical deadlines, creating a backlog and delayed delivery of road pavement projects for several years.
- During the backlog, the pavement condition continued to decline without paving projects constructed to stabilize the City's overall PCI rating.

Funded Pavement Projects

Staff has been aggressively addressing the backlog of projects over the past 12 months by assigning paving projects to multiple project managers as well as combining similar paving projects from multiple years into one project. Staff will continue this effort to speed up the project delivery. Tables 2, 3, and 4 provide a detailed summary of the pavement projects and their current status.

In Table 2, Project 21-40 has started construction, and the remaining projects will be starting construction in summer and fall 2025.

Table 2: Pavement Projects Starting Construction in 2025

Project No.	Category	Streets	Funding (millions)
STARTING	CONSTRUCTION		
16-48	East Whisman Transit Oriented Development Improvements, Phase II: Ellis Street	Ellis Street between Fairchild Drive and Manila Avenue	\$4.72
18-43	Shoreline Boulevard Interim Bus Lane and Utility Improvements, Phase 1	Shoreline Boulevard between Middlefield and Pear	2.63*
20-01	Annual Street Maintenance	Miramonte Avenue, Cuesta Drive to Castro Street	5.88

Project No.	Category	Streets	Funding (millions)		
21-40	California Complete Street Pilot	California Street, Showers Drive to Shoreline Boulevard	5.90		
21-41	Street Reconstruction	Crittenden Lane and North Shoreline Boulevard	2.27		
23-03	SB 1 Streets	Various neighborhood streets	4.73		
	TOTAL				

^{*} Pavement portion of project

Table 3 lists the five projects in design. To catch up with the workload, staff combined several similar projects for efficiency and economy of scale. Projects 22-01 and 24-03 include grant funding. Design schedules range from nine to 12 months, allowing construction to start in 2026.

Table 3: Pavement Projects in Design

Project No.	Category	Streets	Funding (millions)			
IN DESIG	N DESIGN					
20-40	Plymouth/Space Park Realignment, Phase 3	Plymouth Street between Joaquin and Shoreline	\$2.75*			
21-38	El Monte Corridor Improvements	El Monte between Springer and El Camino Real	4.03			
22-01	Annual Street Maintenance	Middlefield Road Complete Street	5.32			
24-01	Annual Street Maintenance	Various streets: Central Neighborhood and Monta Loma/Farley/Rock neighborhood	1.57			
24-03	SB 1 Streets	Moffett Boulevard Complete Streets	5.14			
		TOTAL	\$18.81			

^{*} Pavement portion of project

Lastly, Table 4 lists the next set of projects, anticipated to start design within the next nine to 12 months. Staff expects to again be combining several similar projects listed to fully catch up with the pavement project backlog.

Table 4: Pavement Projects Not Yet Started

Project No.	Category	Streets	Funding (millions)
NOT YET	STARTED		
23-31	Street Reconstruction	Miramonte Avenue: Castro Street to El Camino Real	\$1.16
24-28	Street Reconstruction	Various neighborhood streets	1.00
25-01	Annual Street Maintenance	Various neighborhood streets	2.15
25-03	SB 1 Streets	Various neighborhood streets	2.00
25-28	Street Reconstruction	Various neighborhood streets	1.00
26-01	Annual Street Maintenance	Various neighborhood streets	2.24
26-03	SB 1 Streets	Various neighborhood streets	2.0
26-xx	Street Reconstruction	Various neighborhood streets	1.0
		TOTAL	\$12.55

In total, the City has accumulated \$57.49 million (Tables 2, 3, and 4 combined) from various funding sources for paving projects. Staff will be delivering \$44.94 million (Tables 2 and 3 combined) in pavement projects by 2026. **This continues to be a high volume of projects.**

Pavement Funding Analysis

The pavement program currently receives an annual allocation of approximately \$6.5 million from various pavement fund sources, including the Gas Tax, 2010 Measure B Vehicle Registration Fee, 2016 Measure B Sales Tax, SB 1, and Measure G. Measure G was newly passed by the voters in November 2024, and Council identified the spending priorities for staff allocating 5 to 15% to Other Government Services, including road maintenance. It is too early to identify to what extent Measure G will be able to supplement the pavement program funding.

Often times, supplemental funding is provided by the Construction/Conveyance Tax (C/C Tax) and CIP Reserve funds, however these two sources have experienced significant decline due to new hybrid remote work trends and current economic conditions. While some bounce back of funding has occurred, it has been slow. As shown in Figure 1, at current baseline funding levels of approximately \$6.5 million per year, the PCI will continue to slowly decline. While the planned paving projects may temporarily increase PCI, staff expects over the longer run, it will be offset due to the delay in full implementation for almost two years as the pavement continues to degrade.

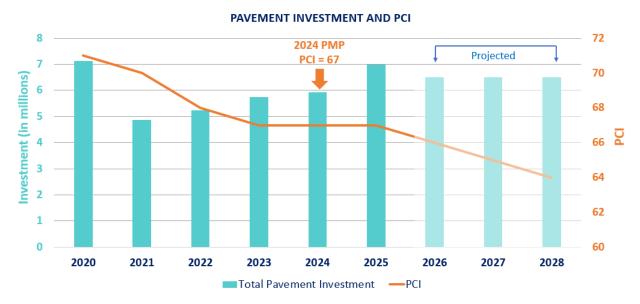


Figure 1: Pavement Investment and PCI Status

In 2024, staff evaluated the program funding needs to maintain the network PCI at the current level as well as needs to increase the network PCI by five points, using the latest financial information from the 2024 PMP report. To maintain PCI levels, there will be a need to increase baseline funding levels to avoid further decline. A minimum of \$8 million is needed per year (an increase of \$1.5 million per year over current baseline funding) to maintain the PCI and a minimum of \$14 million per year for five years (an increase of \$7.5 million per year over current baseline funding) to increase the PCI by five points (see Figure 2).

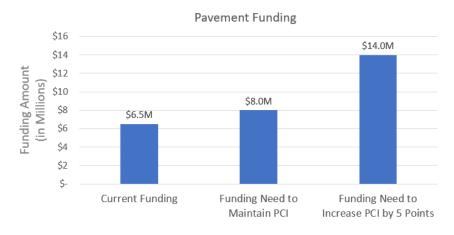


Figure 2: Annual Funding Needs for Pavement Maintenance

NEXT STEPS

Staff continues to see a need for an increased investment in the pavement infrastructure. Staff recommends continuing to prioritize pavement projects, aiming to maintain and improve the network PCI toward our goal of a Citywide average of 71, as expressed in the 2025 Council Strategic Priorities session. Considering the expected flat trending revenues from several funding sources and the magnitude of the pavement program funding needs, staff anticipates that this will require moving CIP Reserve and C/C Tax funds away from discretionary projects, such as City buildings/facilities and bicycle/pedestrian improvement projects, and into pavement maintenance.

EA-JN/LL/1/PWK 932-03-25-25M

Exhibit: A. Pavement Condition of Bay Area Jurisdictions 2023

cc: PWD, APWD—Arango, PCE—Gonzales, SCE—Houghton

Pavement Condition of Bay Area Jurisdictions 2023

Pavement Condition Index (PCI) for Bay Area Jurisdictions, 2023

Very Good (PCI = 80-89)

			3-YEAR MOVING AVERAGE			
Jurisdiction	County	Total Lane Miles	2021	2022	2023	
Larkspur	Marin	65.8	59	75	83	
Orinda	Contra Costa	189.9	81	84	83	
Palo Alto	Santa Clara	414.5	84	83	83	
Cupertino	Santa Clara	297.7	85	83	82	
Hillsborough	San Mateo	166.4	78	79	81	
Solano County	Solano	931.6	80	80	81	

Good (PCI = 70-79)

			3-YEAR MOVING AVERAGE		
Jurisdiction	County	Total Lane Miles	2021	2022	2023
Brentwood	Contra Costa	425.9	81	80	79
Dublin	Alameda	349.7	84	80	79
Los Altos Hills	Santa Clara	124.4	79	79	79
Yountville	Napa	16.4	74	78	79
Daly City	San Mateo	256.8	79	77	78
Danville	Contra Costa	324.4	80	79	78
Emeryville	Alameda	47.4	74	76	78
Foster City	San Mateo	117.9	80	78	78
San Ramon	Contra Costa	509.4	78	78	78
Menlo Park	San Mateo	196.8	79	78	77
Burlingame	San Mateo	170.8	79	77	77
Clayton	Contra Costa	94.2	81	78	77
Livermore	Alameda	733.9	79	78	77

Good (PCI = 70-79)

			3-YEAR MOVING AVERAGE		
Jurisdiction	County	Total Lane Miles	2021	2022	2023
Pleasanton	Alameda	519.6	78	78	77
Portola Valley	San Mateo	70.9	77	77	77
Ross	Marin	21.6	77	77	77
Sunnyvale	Santa Clara	641.5	76	77	76
Colma	San Mateo	26.9	78	76	75
South San Francisco	San Mateo	295.4	73	73	75
Woodside	San Mateo	96.3	81	76	75
Atherton	San Mateo	105.4	75	75	74
Lafayette	Contra Costa	199.3	75	75	74
Mill Valley	Marin	116.4	73	73	74
Morgan Hill	Santa Clara	302.4	73	73	74
San Francisco	San Francisco	2,148.3	74	74	74
San Mateo County	San Mateo	629.0	74	74	74
Santa Clara	Santa Clara	609.7	75	74	74
Brisbane	San Mateo	67.9	76	74	73
Moraga	Contra Costa	113.3	74	73	73
Vacaville	Solano	696.3	70	72	73
Windsor	Sonoma	172.2	76	75	73
Alameda County	Alameda	993.1	72	72	72
Belvedere	Marin	23.4	71	70	72
Los Gatos	Santa Clara	239.0	69	70	72
Newark	Alameda	262.8	74	72	72
Tiburon	Marin	67.7	77	74	72
Contra Costa County	Contra Costa	1,347.7	71	70	71

Good (PCI = 70-79)

			3-YEAR MOVING AVERAGE		
Jurisdiction	County	Total Lane Miles	2021	2022	2023
Fremont	Alameda	1,095.2	73	72	71
Hayward	Alameda	681.4	70	69	71
Los Altos	Santa Clara	227.1	68	69	71
Monte Sereno	Santa Clara	31.3	68	71	71
Oakley	Contra Costa	294.2	76	73	71
San José	Santa Clara	4,469.1	66	69	71
San Mateo	San Mateo	428.9	73	70	71
Milpitas	Santa Clara	308.4	73	70	70
Pleasant Hill	Contra Costa	225.4	67	69	70
Union City	Alameda	329.9	77	73	70
Walnut Creek	Contra Costa	398.8	73	72	70

Fair (PCI = 60-69)

			3-YEAR MOVING AVERAGE		
Jurisdiction	County	Total Lane Miles	2021	2022	2023
Cotati	Sonoma	49.7	59	65	69
El Cerrito	Contra Costa	137.0	76	70	69
Healdsburg	Sonoma	96.9	63	68	69
Redwood City	San Mateo	359.3	73	70	69
San Anselmo	Marin	81.0	68	68	69
Campbell	Santa Clara	218.5	70	69	68
Corte Madera	Marin	72.1	66	66	68
Martinez	Contra Costa	236.2	64	67	68

Fair (PCI = 60-69)

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				AR MOVING AVE	
Jurisdiction	County	Total Lane Miles	2021	2022	2023
Mountain View	Santa Clara	353.3	73	70	68
Belmont	San Mateo	139.2	60	65	67
Marin County	Marin	851.7	65	66	67
Rohnert Park	Sonoma	222.1	68	67	67
San Pablo	Contra Costa	104.2	71	69	67
Saratoga	Santa Clara	283.5	67	67	67
Alameda	Alameda	308.5	70	67	66
Half Moon Bay	San Mateo	55.4	66	67	66
Sonoma	Sonoma	68.4	71	69	66
Dixon	Solano	158.2	64	64	65
Fairfield	Solano	793.0	69	66	65
Santa Clara County	Santa Clara	1,424.3	66	64	65
Antioch	Contra Costa	683.2	66	64	64
Hercules	Contra Costa	124.6	67	65	64
Novato	Marin	319.8	68	66	64
Napa	Napa	498.7	69	65	63
Piedmont	Alameda	78.4	64	63	63
San Bruno	San Mateo	180.5	62	62	63
San Rafael	Marin	332.2	65	63	62
Gilroy	Santa Clara	274.1	62	59	61
Rio Vista	Solano	54.7	59	60	61
Santa Rosa	Sonoma	1,137.3	62	62	61
East Palo Alto	San Mateo	82.6	62	60	60
Pittsburg	Contra Costa	354.4	61	60	60

At Risk (PCI = 50-59)

			3-YEAR MOVING AVERAGE		RAGE
Jurisdiction	County	Total Lane Miles	2021	2022	2023
American Canyon	Napa	113.4	62	60	59
Calistoga	Napa	30.6	61	60	59
Richmond	Contra Costa	580.4	63	60	59
Albany	Alameda	62.6	56	57	58
Sausalito	Marin	57.6	62	59	58
Cloverdale	Sonoma	65.1	56	55	57
Oakland	Alameda	2,052.3	52	54	57
San Carlos	San Mateo	179.3	61	58	57
Berkeley	Alameda	449.6	58	56	56
Pinole	Contra Costa	118.5	59	56	56
San Leandro	Alameda	393.8	55	55	56
Concord	Contra Costa	720.7	59	56	55
Suisun City	Solano	153.6	59	55	54
Fairfax	Marin	54.7	58	55	54
Benicia	Solano	197.7	51	52	54
Millbrae	San Mateo	112.6	56	55	53
Sonoma County	Sonoma	2,698.5	50	52	53
St Helena	Napa	50.7	54	49	50
Sebastopol	Sonoma	47.5	48	48	50

Poor (PCI = 40-49)

			3-YEAR MOVING AVERAGE			
Jurisdiction	County	Total Lane Miles	2021	2022	2023	
Napa County	Napa	819.6	45	45	48	
Petaluma	Sonoma	393.3	44	44	48	
Pacifica	San Mateo	189.1	42	43	47	
Vallejo	Solano	744.4	49	46	45	
Bay Area		44,108	67	67	67	

Aggregate City and County PCI for Bay Area Counties, 2023

Good (PCI = 70-79)

		3-YEAR MOVING AVERAGE				
Jurisdiction	Total Lane Miles	2021	2022	2023		
San Francisco County	2,148	74	74	74		
Santa Clara County	10,219	70	70	71		
San Mateo County	3,927	70	70	70		

Fair (PCI = 60-69)

		3-YEAR MOVING AVERAGE				
Jurisdiction	Total Lane Miles	2021	2022	2023		
Contra Costa County	7,128	69	68	68		
Alameda County	8,358	67	67	67		
Marin County	2,064	66	66	66		
Solano County	3,729	66	65	65		

At Risk (PCI = 50-59)

		3-YEAR MOVING AVERAGE				
Jurisdiction	Total Lane Miles	2021	2022	2023		
Sonoma County	4,951	55	56	57		
Napa County	1,529	55	54	54		
Bay Area	44,108	67	67	67		

Figure 1. Year-Over-Year Comparison of Pavement Conditions for Local Roadways 2006–2023 (Lane Miles)

Year	Excellent or Very Good (100-80)	Good or Fair (79-60)	At Risk (59-50)	Poor or Failed (49-0)
2023	35%	35%	9%	21%
2022	35%	34%	9%	22%
2021	35%	34%	9%	22%
2020	36%	33%	10%	21%
2019	37%	33%	9%	21%
2018	37%	31%	9%	23%
2017	37%	32%	9%	22%
2016	34%	34%	10%	23%
2015	34%	34%	10%	23%
2014	31%	35%	10%	23%*
2013	32%	34%	10%	23%*
2012	31%	35%	11%	23%
2011	31%	35%	11%	23%
2010	32%	34%	11%	23%
2008/09	33%	34%	11%	21%*
2007	35%	32%	10%	22%*
2006	34%	31%	10%	25%

*No Data

Regional Weighted Network PCI (Year over Year)

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Weighted PCI	66	66	66	67	67	67	67	67	67	67	67	67