



Update on the Townwide Street Management Program

Town Council Meeting

April 9, 2025

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Presentation Goals

- Street Management Overview and Approaches
- Street Condition History Pre-2012
- Street Condition History 2012-2019
- Street Condition History 2020 - 2024
- Street Management Program 2025 - 2044





Street Management Overview and Approaches



Town of Moraga Street System

- 56.0 centerline miles of pavement
- 9.6 million square feet of pavement
- Townwide average weighted PCI of 78
- Replacement Value = \$157.7 million
- Deferred Maintenance = \$22.6 million

Table 1. Network Summary Statistics

Functional Class	Number of Sections	Centerline Miles	Lane Miles	Network Area (%)	PCI
Arterial	84	13.8	26.6	25.7%	74
Collector	123	15.8	31.4	28.1%	83
Residential	237	26.4	52.8	43.6%	77
Total	444	56.0	110.8	100.0%	78
Parking Lot/Pathway ¹	13	2.6	2.6	2.6%	41



Street Management Program Overview

In the San Francisco Bay Area, cities are required to utilize the Metropolitan Transportation Commission's (MTC) StreetSaver pavement management software to be eligible for federal, state and regional funds.

StreetSaver is a software tool to help plan maintenance and repair of pavement surfaces of streets and pathways

StreetSaver is a cost-effective decision-making tool

- Input street segments
- Input pavement condition from the field survey
- Input pavement treatments
- Input financial assumptions (funding available, treatment costs, inflation)
- Run scenarios based on financial and pavement condition goals
- Output potential projects and street treatment scopes
- Database tracks street conditions over time





Why Pavement Deteriorates

Environmental Factors

Sun

Heat/cold

Water

Time



New flexible,
black asphalt concrete

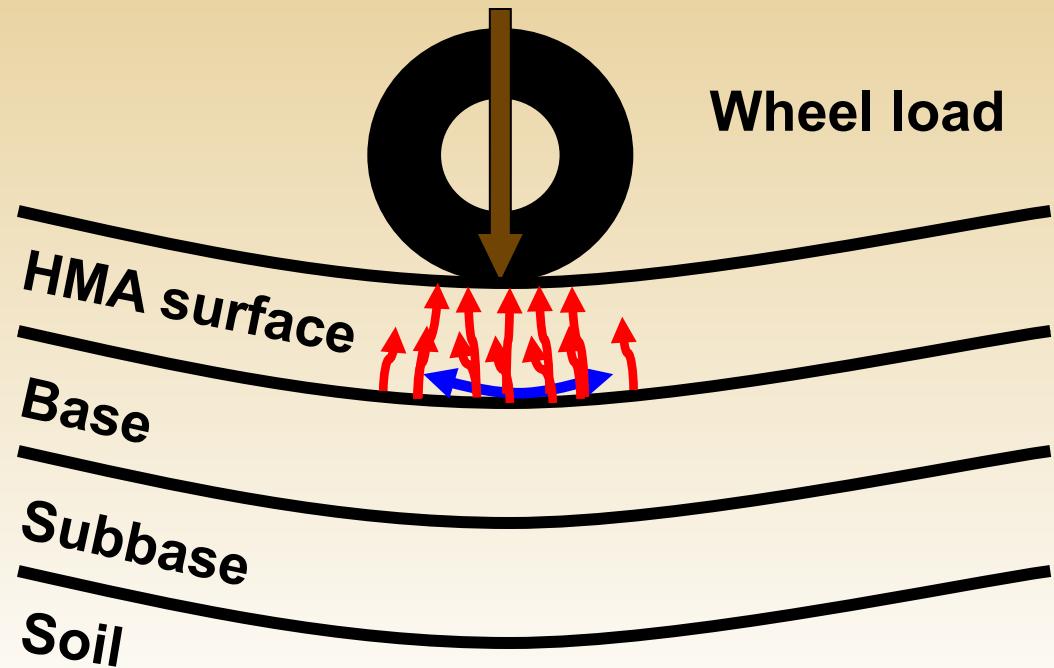
Grey and brittle material
+
With time – weathered surface
Hot/cold temperature cycling

Block cracking and
thermal cracking



Why Pavement Deteriorates Traffic Loads

- Trucks (Freight, Construction, Garbage/Recycling)
- Buses
- Cars

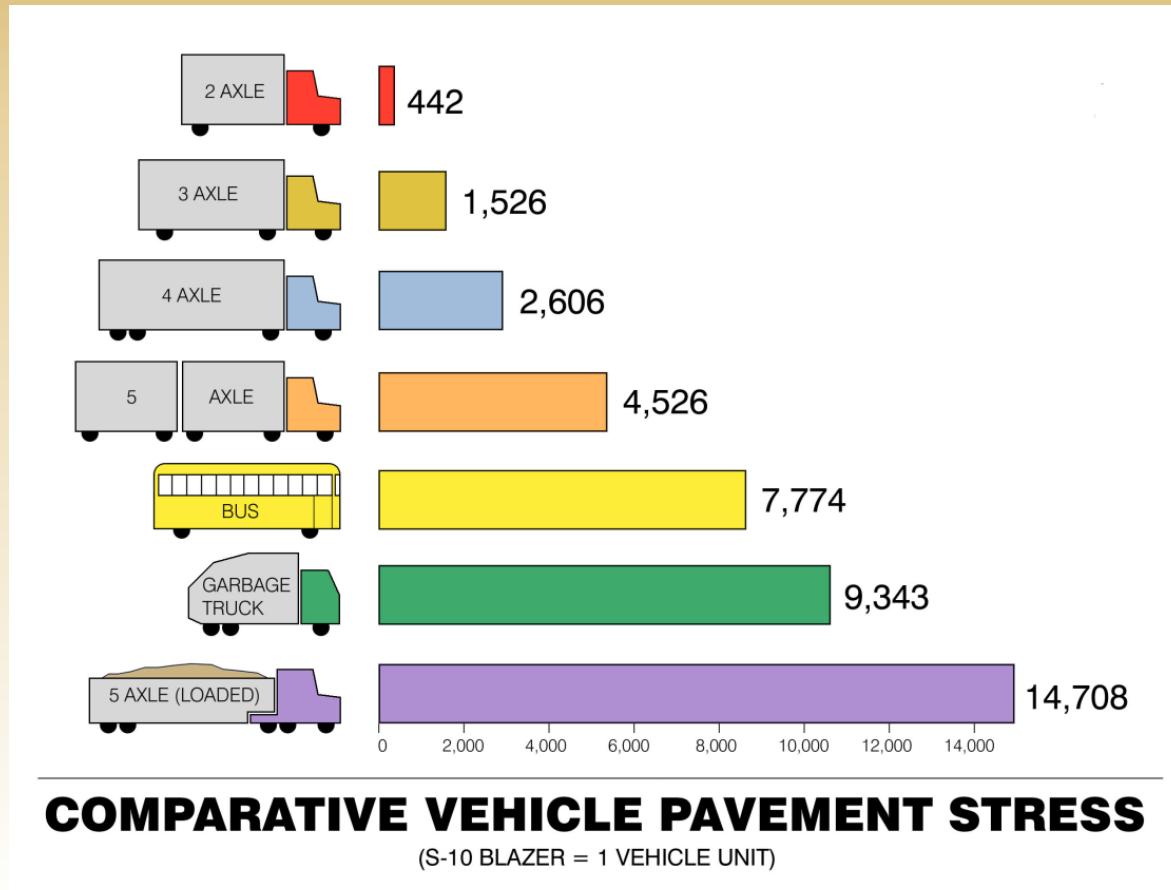


“Alligator Cracking”



Impacts of Heavy Truck Traffic Mitigation Measures in Place

- Garbage Impact Fee
- Hauling Permit
- Transportation Permit
- Moratorium “No-Cut” streets after Town paving





Pavement Management House Analogy Approach



Slurry Seal



Overlay



Reconstruct



Paint



Siding



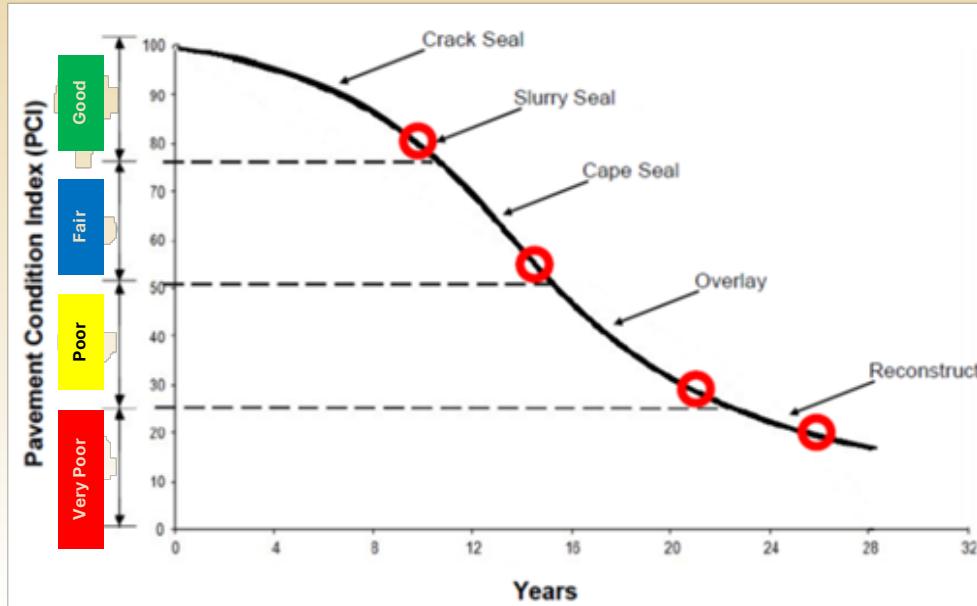
Framing

Pavement is like a house



Street Management Strategies

- Best-First “Top Down” Management
- Worst-First ‘Bottom-Up” Management
- Critical-Point Management (StreetSaver)



Critical-Point Management selects streets before they deteriorate and need the next most expensive treatment.



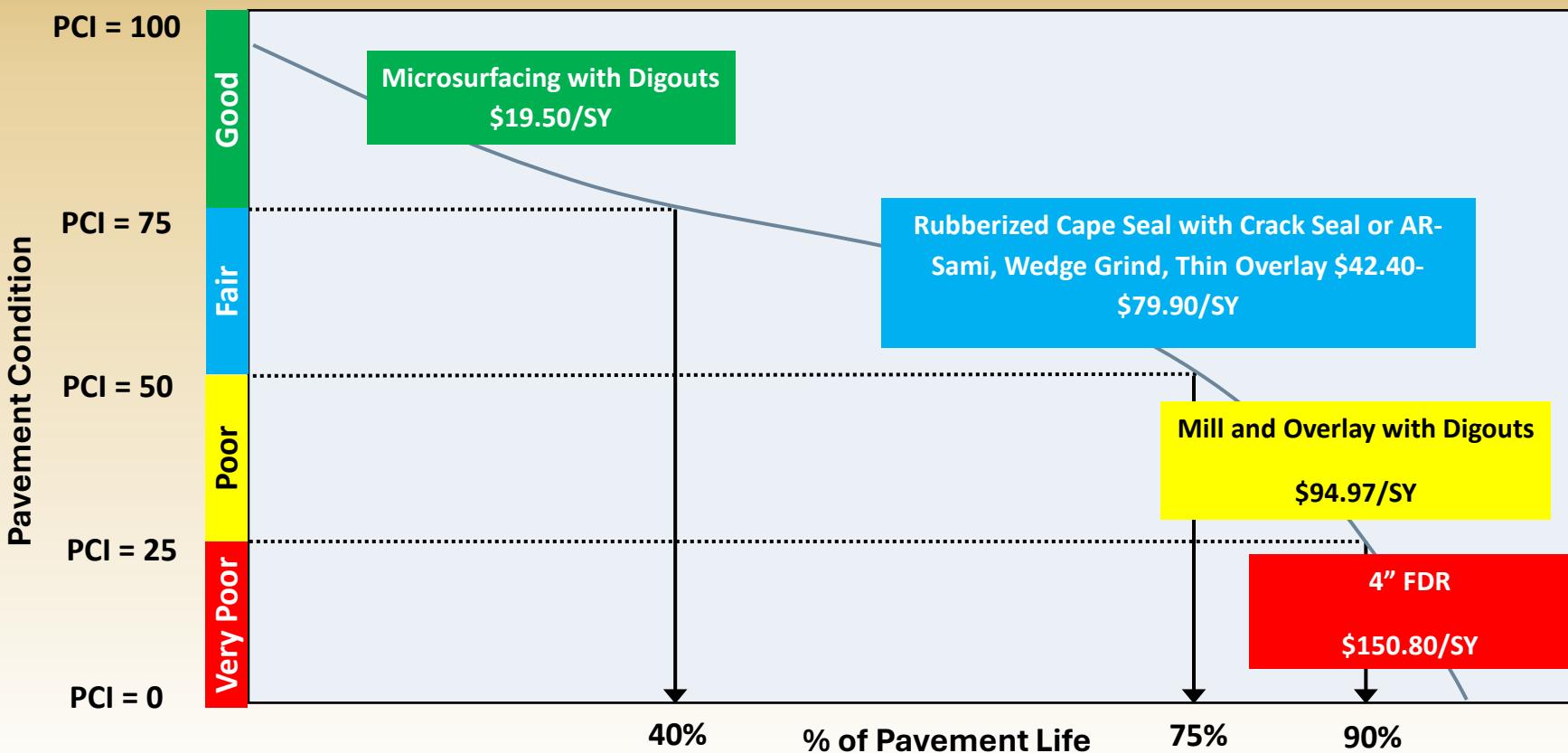
Street Management Program Overview

Condition Category	Pavement Condition Index (PCI)		General Treatment Strategy
	Upper Limit	Lower Limit	
Good	100	75	Do Nothing/ Corrective Maintenance
Fair	75	50	Preventative Maintenance/ Surface Seal
Poor	50	25	Rehabilitation/ Overlay
Very Poor	25	0	Reconstruction

Pavement Condition Index Range & General Treatment Strategy



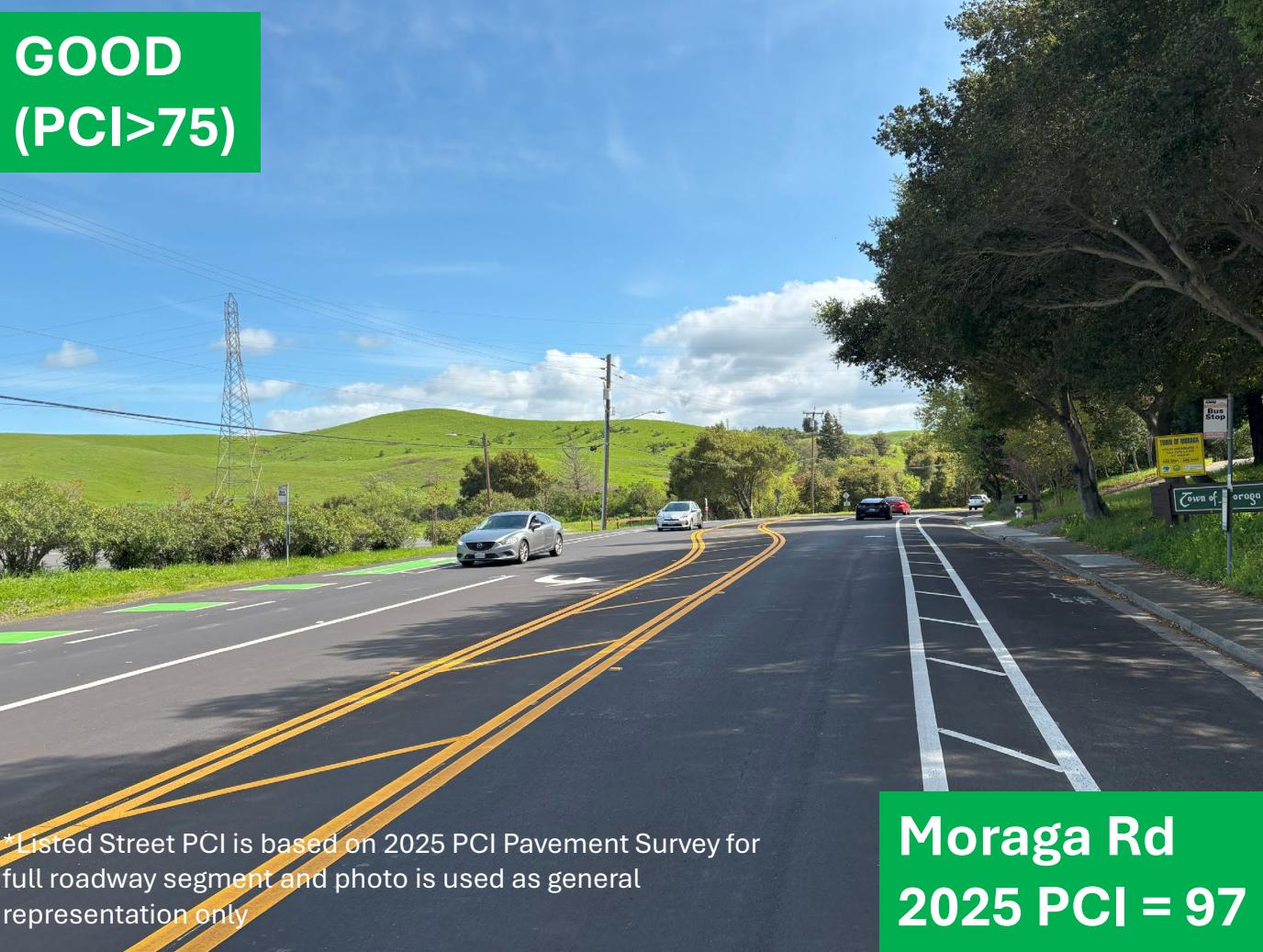
Pavement Management Approach





Existing Pavement Conditions

Pavement Condition Index (PCI)





Existing Pavement Conditions

Pavement Condition Index (PCI)





Existing Pavement Conditions

Pavement Condition Index (PCI)





Existing Pavement Conditions

Pavement Condition Index (PCI)

POOR
($25 < \text{PCI} \leq 50$)



*Listed Street PCI is based on 2024 PCI Pavement Survey for full roadway segment and photo is used as general representation only

Redfield Pl
2024 PCI = 28



Existing Pavement Conditions

Pavement Condition Index (PCI)

POOR
($25 < \text{PCI} \leq 50$)



*Listed Street PCI is based on 2024 PCI Pavement Survey for full roadway segment and photo is used as general representation only

Springfield PL
2024 PCI = 25



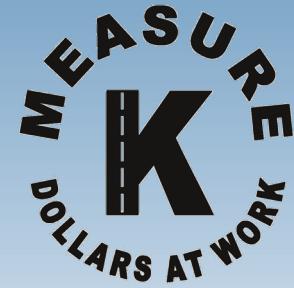
Existing Pavement Conditions

Pavement Condition Index (PCI)

VERY POOR
(PCI≤25)



*Listed Street PCI is based on 2024 PCI Pavement Survey for full roadway segment and photo is used as general representation only



Street Condition History

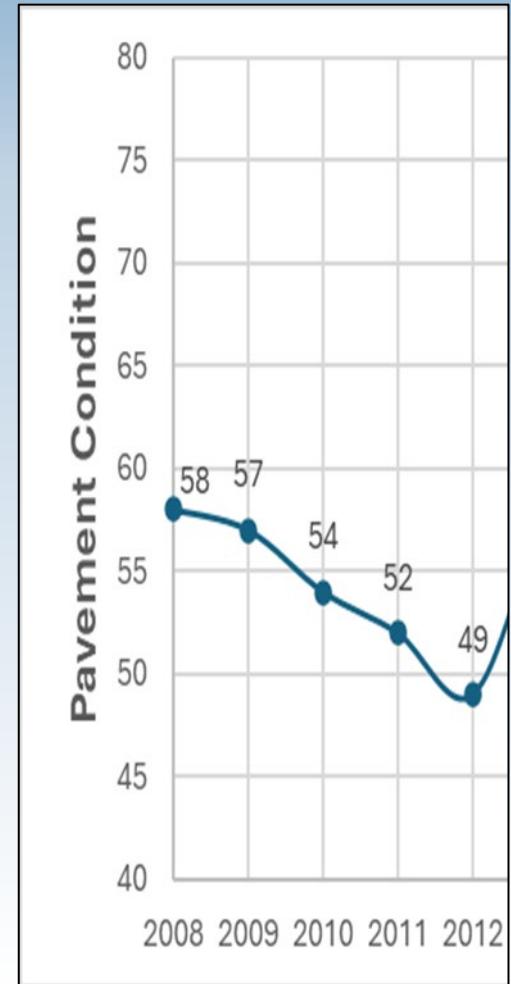
Pre-2012



Town's Network Conditions 2008 - 2012

- State budgetary issues result in withholding funding to local agencies
- RECON formed and recommends a Sales Tax initiative
- Townwide average PCI declines to 49 by 2012
- Deferred Maintenance = \$28 millions

Functional Class	2012 PCI
Arterials	67
Collectors	43
Residential	43





Street Condition History

2012 - 2019



Town's Network Conditions

2012 - 2019

- Measure K General Uses Sales Tax overwhelmingly passes at 70.5% Yes
- \$7.7 million bonded against future Measure K revenues for intensive 3-Year Paving Program
- Town's PCI 49 rises to 70 by 2015 and to 74 by 2020
- Introduced “Balanced” Street Management Program
 - Preventative Maintenance Treatments
 - Rubberized Cape Seals and Overlays
 - Mill and Fill Overlays, and Reconstruction



Street Condition History

2020-2024



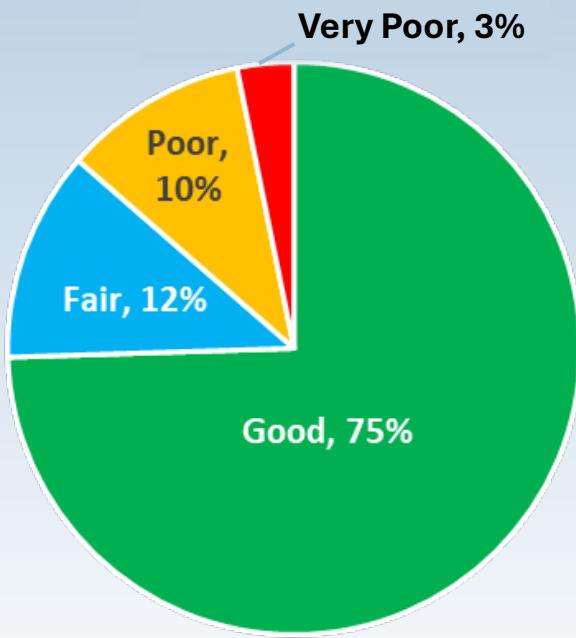
Town's Network Conditions

2020 - 2024

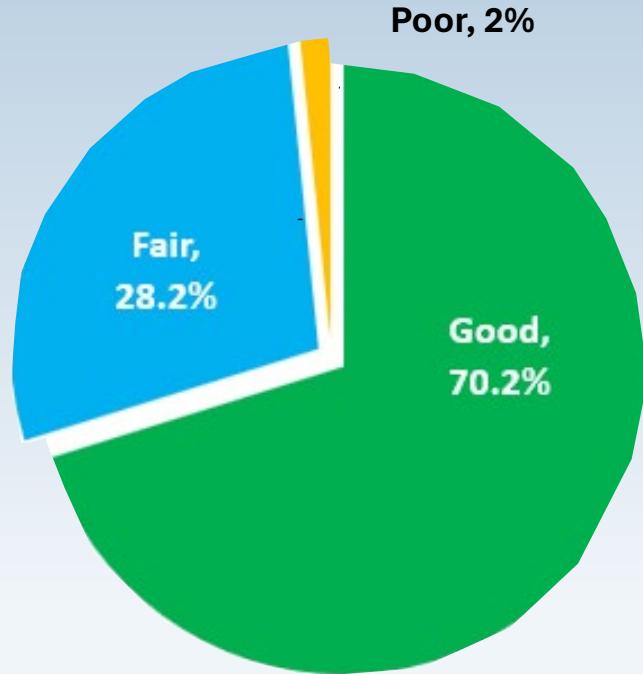
- By 2020, Town reduced the Network Poor (26 – 50 PCI) to 10.4% and Very Poor (0 – 25 PCI) to 3.2%
- Council approves “Worst First Residential Program” to eliminate Poor and Very Poor residential streets by the end of 2024
- Council approves Street Management Cost-Sharing Policy for Measure K Projects
- The Town’s PCI of 78, ranking Moraga in the 86th percentile among 109 Bay Area agencies



Existing Pavement Conditions Pie Chart Comparison



Results (2020)

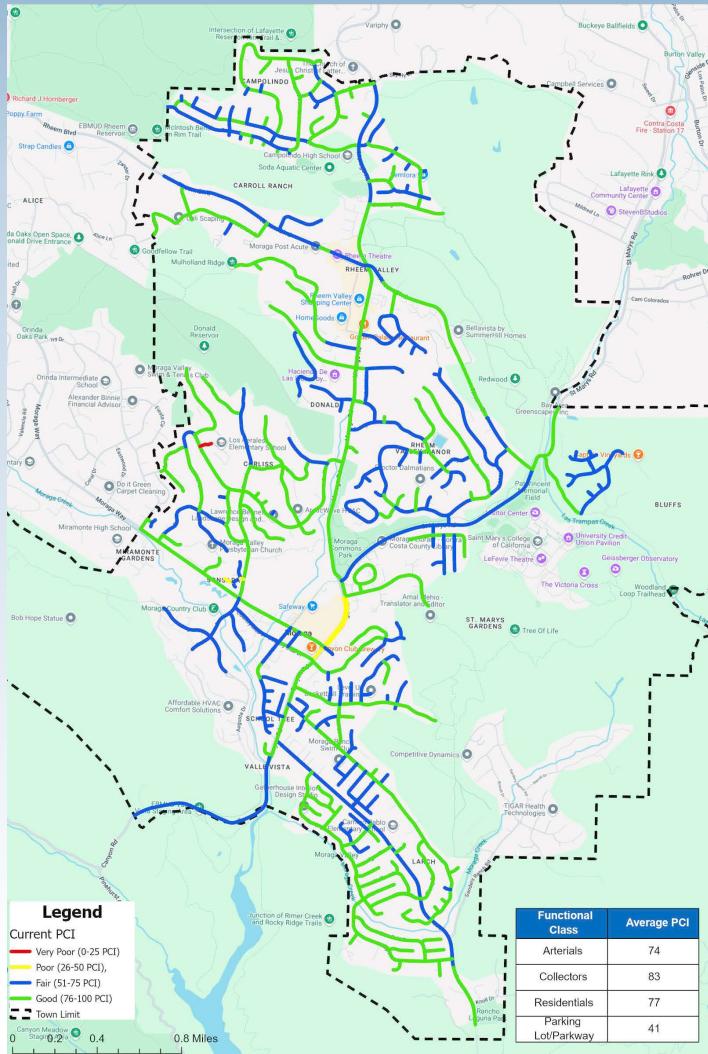


Results (2025)

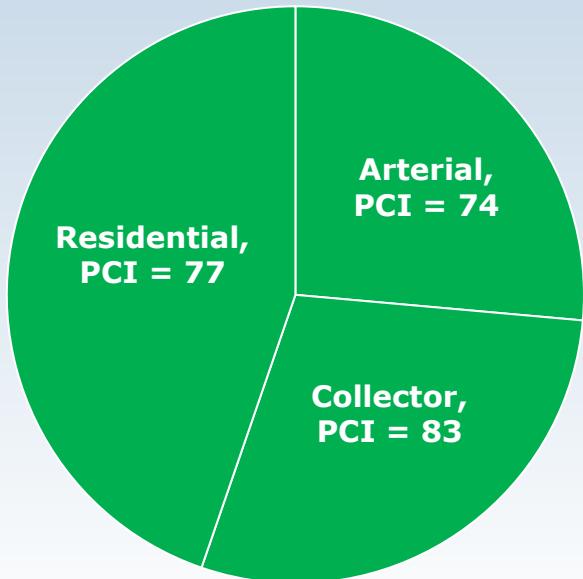


Town's Pavement History

2025 State of Pavement



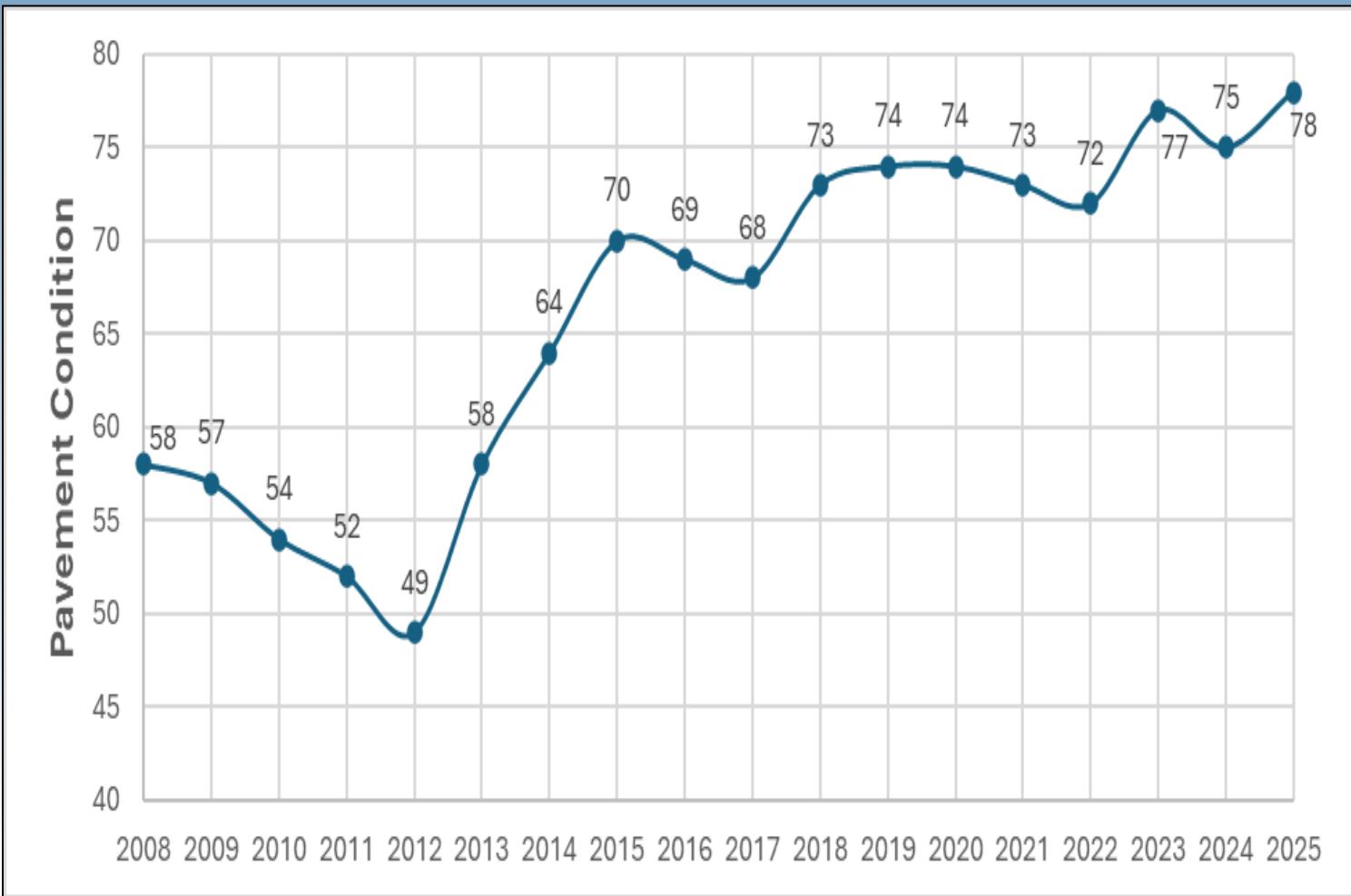
*Network Condition
in 2025*





Historical Network PCI

2008 to Present

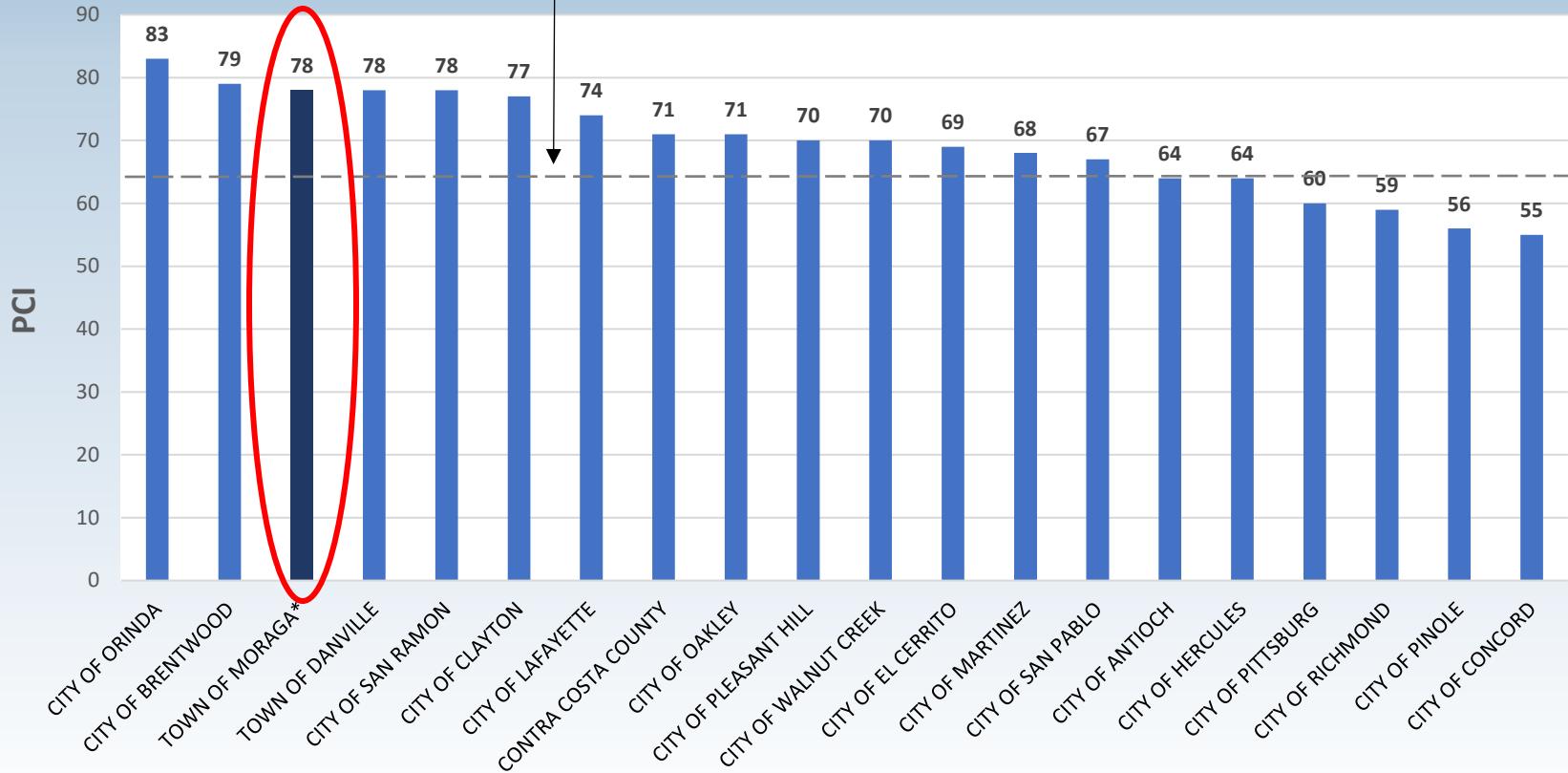




Agency Comparison

PCI Comparison By County

Statewide Average PCI = 65



PCIs from the 2023 MTC Pothole Report



Existing Pavement Conditions

Year	Completed Segments	Percent of Neighborhood Segments* (359)	Percent of Entire Town Network (442)
2013 - 2016	209	58.2%	47.3%
2017	5	1.4%	1.1%
2018	11	3.1%	2.5%
2019	40	11.1%	9.0%
2020	10	2.8%	2.3%
2021	14	3.9%	3.2%
2022-2023	40	11.1%	9.0%
2023-2024	52	13.9%	11.8%
Total	381	105.5%	86.2%
2025⁺	326	67%	73%

*Neighborhood sections combines collectors and residential streets in the Town

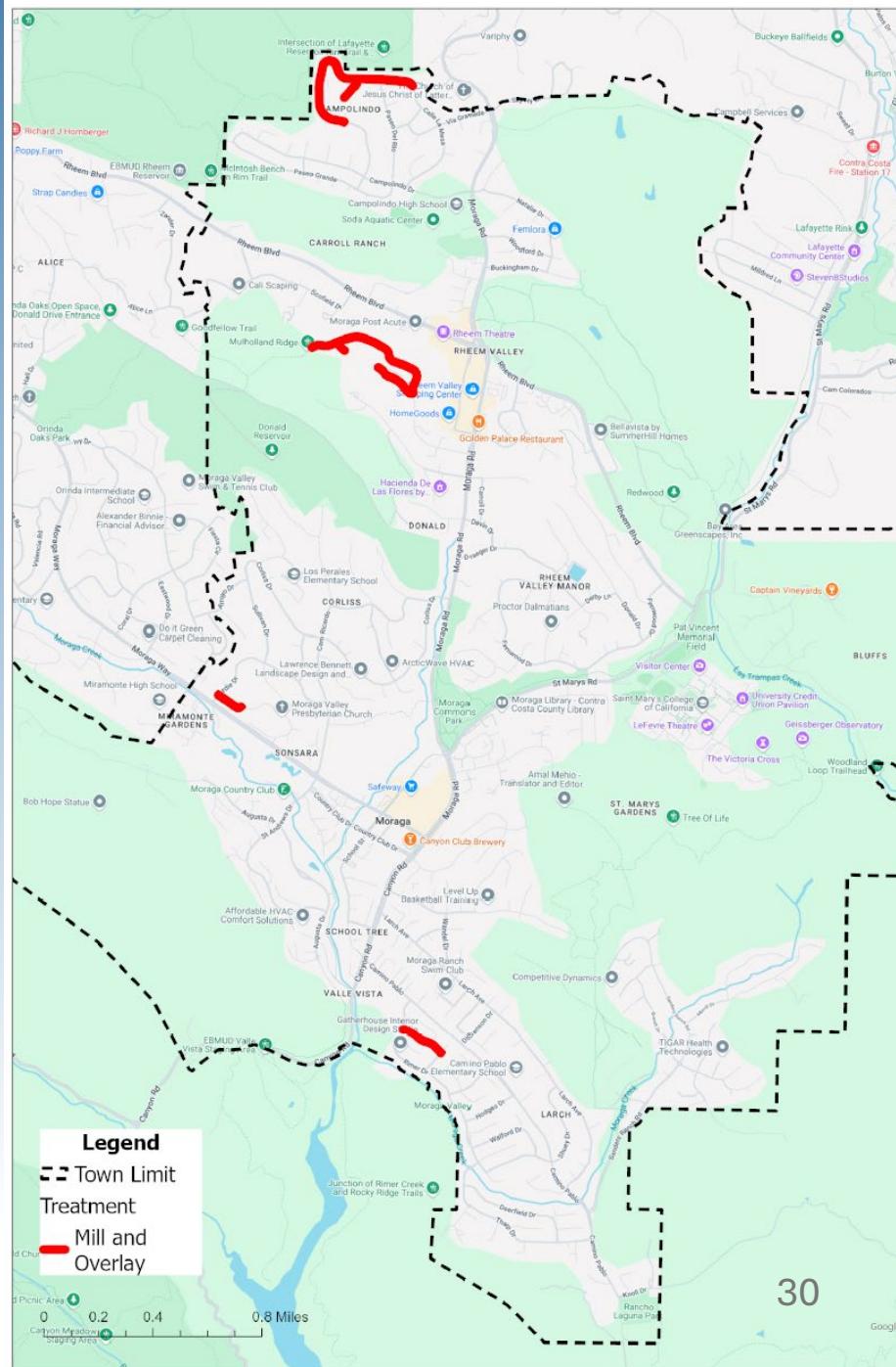
⁺Project currently in the planning stage. Street list is subject to change.



2020 Pavement Rehabilitation Project

The project focuses on pavement rehabilitation techniques including

- Mill and Fill Overlays
- Reconstruct Surface (AC)



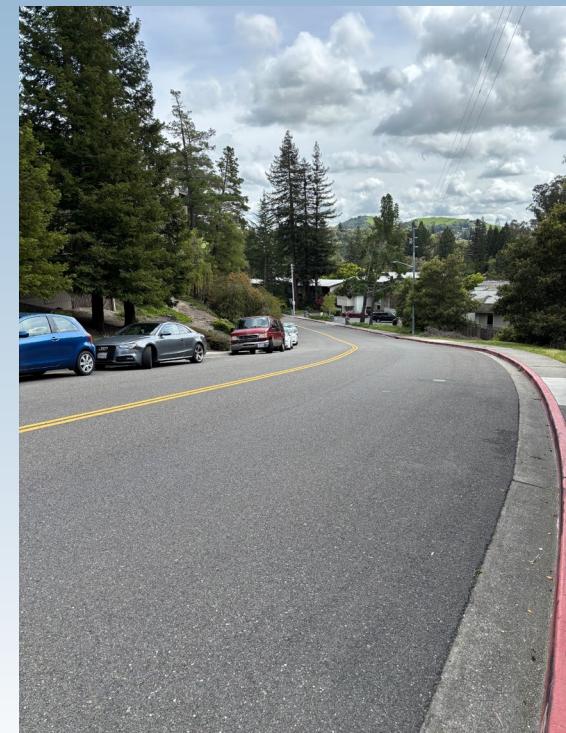


2020 Pavement Rehabilitation Project

Idlewood Court



Ascot Dr



Cedarwood Dr





2020 Pavement Rehabilitation Project

- 10 Street Segments paved.
- 2,130 YD paved
- 395 SY of concrete repaired



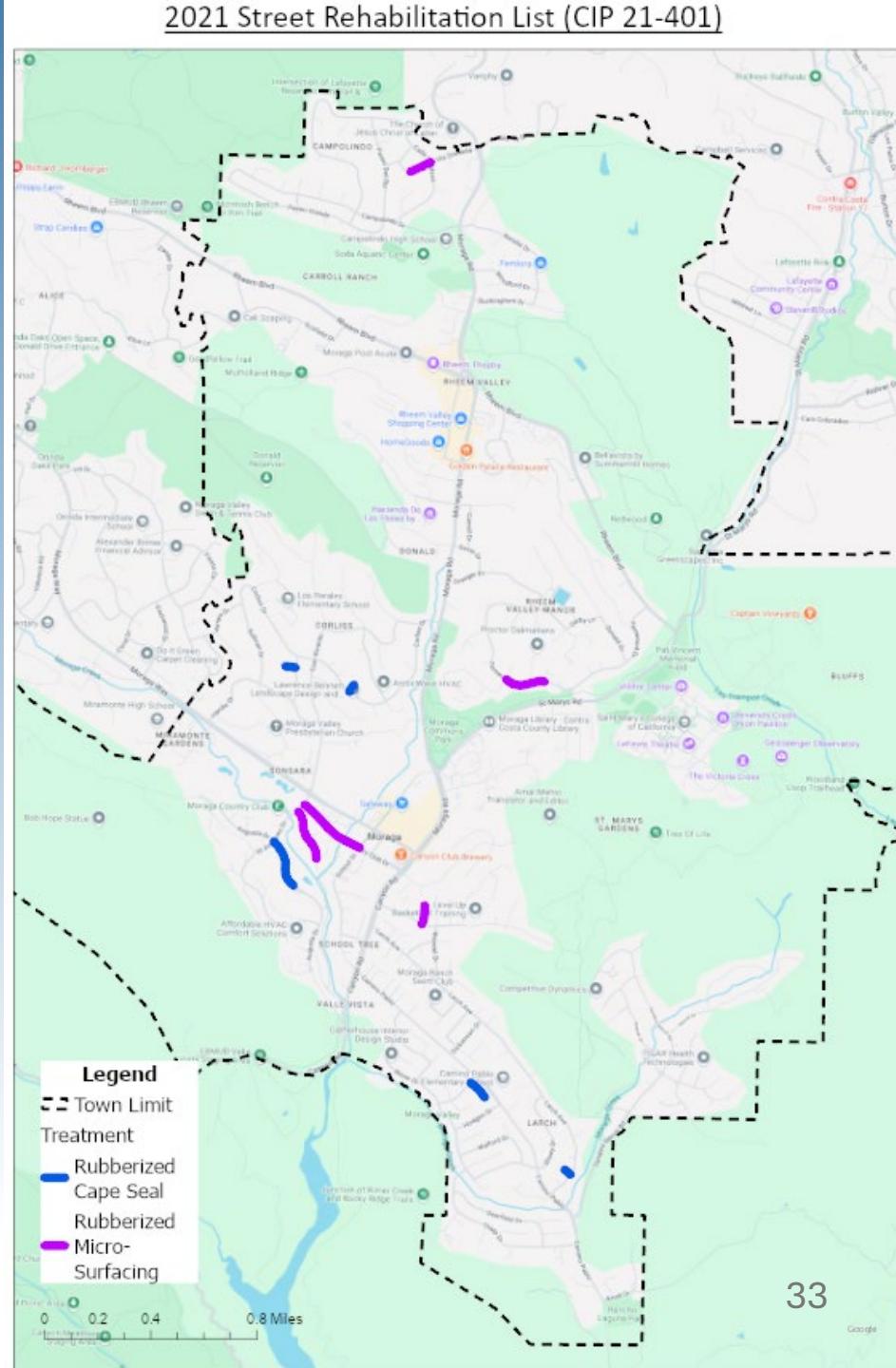
Ascot Dr



2021 Pavement Rehabilitation Project

The project focuses on pavement rehabilitation techniques including

- Seal Cracks
- Spot Base Failure Repairs
- Reconstruct Surface (AC)
- Microsurfacing





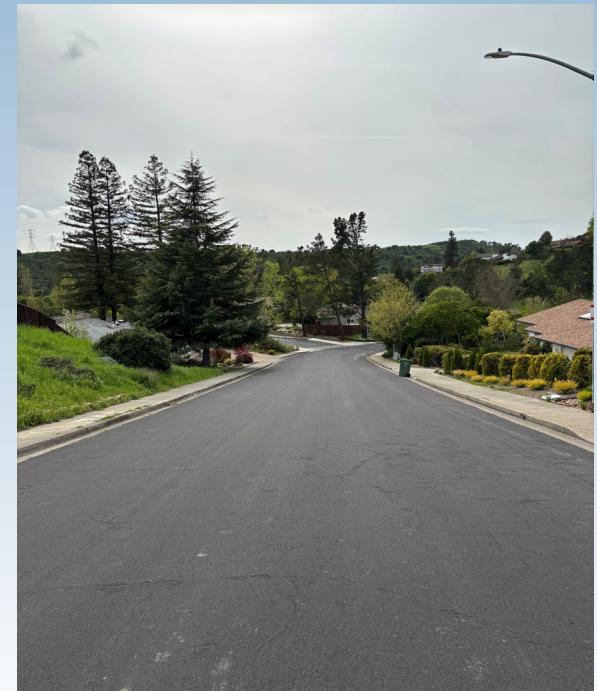
2021 Pavement Rehabilitation Project

Fernwood Dr



Ashford Pl

Via Granada





2021 Pavement Rehabilitation Project

- 14 Street Segments paved.
- 2,458 YD paved
- 462 SY of concrete repaired



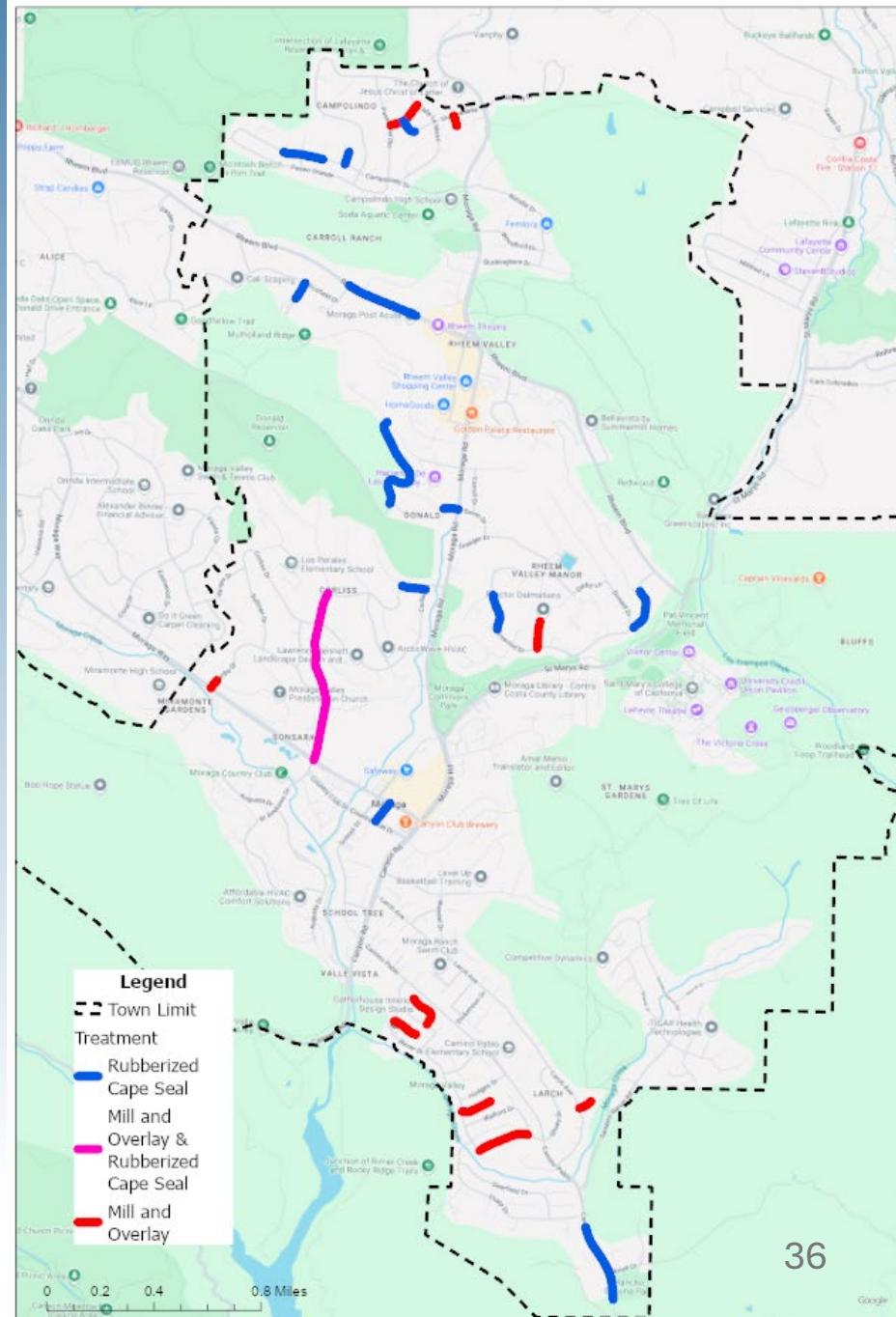
Flueti Dr



2022 Pavement Rehabilitation Project

The project focuses on pavement rehabilitation techniques including

- Rubberized Chip Seal and Microsurfacing
- Mill and Fill Overlays
- Seal Cracks





2022 Pavement Rehabilitation Project



Camino Ricardo



Camino Pablo



2022 Pavement Rehabilitation Project



Gaywood Pl



Shuey Dr



2022 Pavement Rehabilitation Project

- 40 Street Segments paved.
- 4,524 YD paved
- 886 SY of concrete repaired



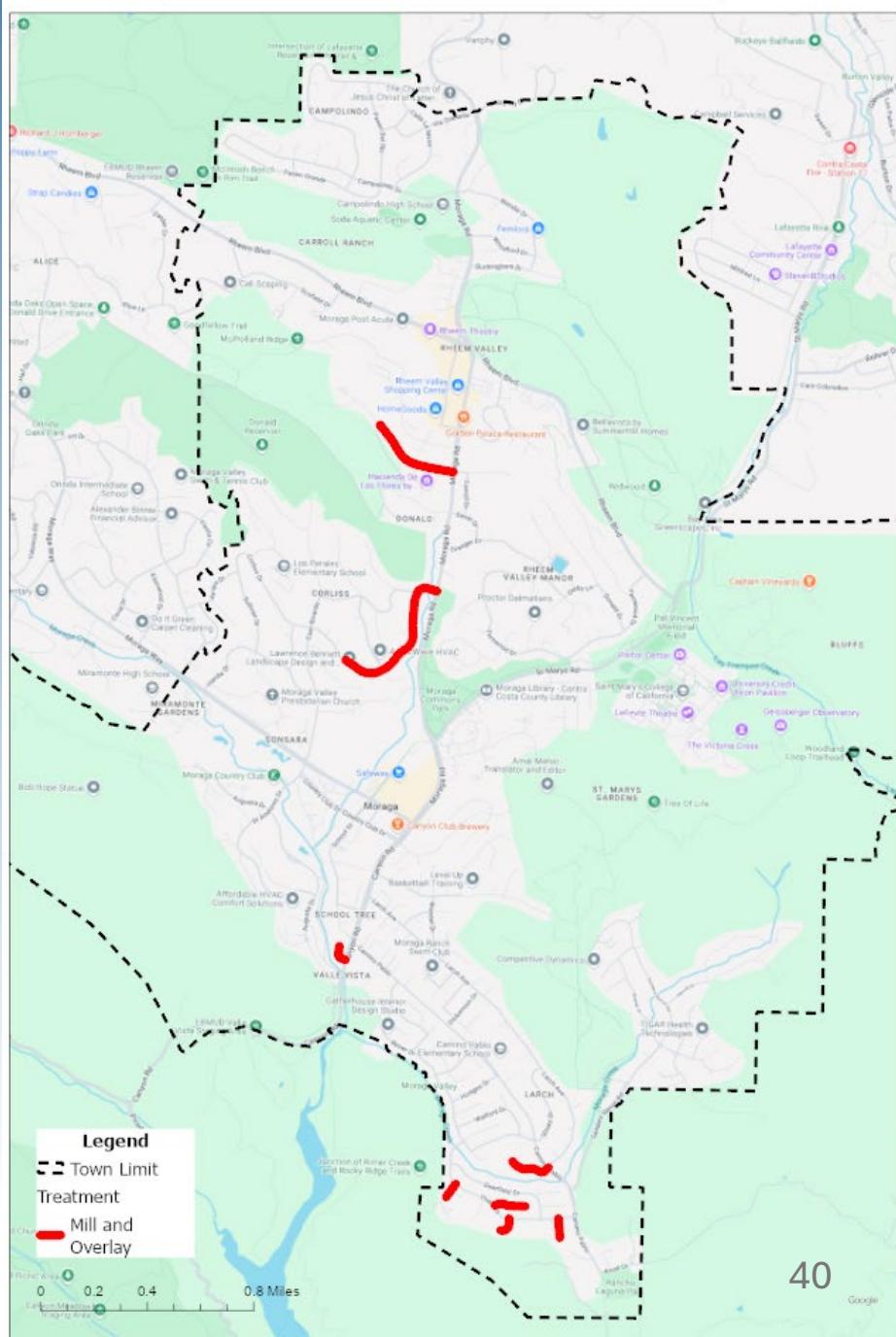
Hardie Dr



2023 Pavement Rehabilitation Project

The project focuses on pavement rehabilitation techniques including

- Rubberized Chip Seal and Microsurfacing
- Mill and Fill Overlays
- Seal Cracks





2023 Pavement Rehabilitation Project



Corliss Dr



Springfield Pl



2023 Pavement Rehabilitation Project



Redfield Pl



Butterfield Pl



2023 Pavement Rehabilitation Project

- 28 Street Segments paved.
- 3,020 YD paved
- 2,648 SY of concrete repaired



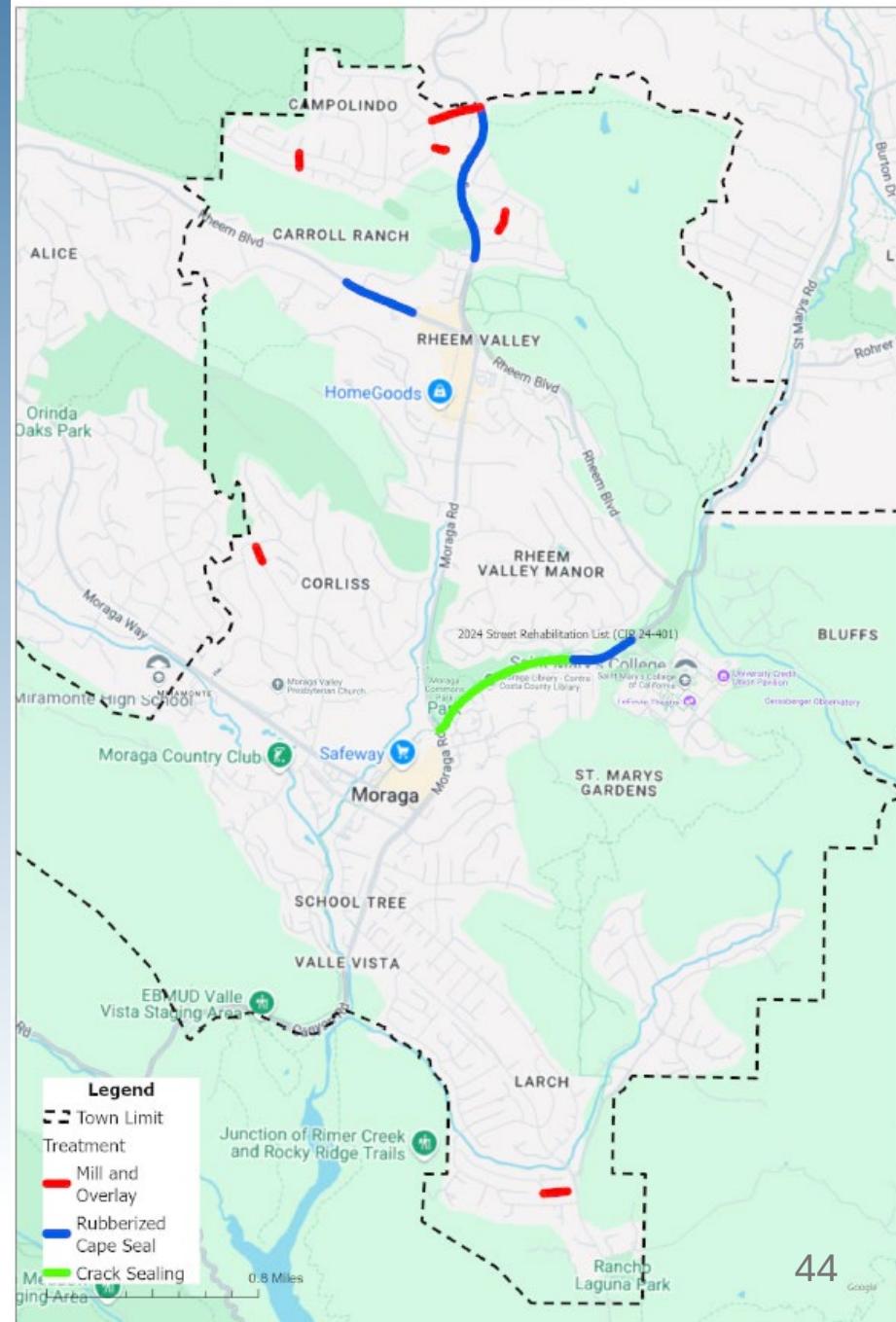
Donald Dr



2024 Pavement Rehabilitation Project

The project focuses on pavement rehabilitation techniques including

- Rubberized Chip Seal and Microsurfacing
- Mill and Fill Pavement Overlays
- Seal Cracks





2024 Pavement Rehabilitation Project



St. Mary's Rd



Wimpole St



2024 Pavement Rehabilitation Project



Sep 19, 2024 at 11:34 AM

Moraga Rd

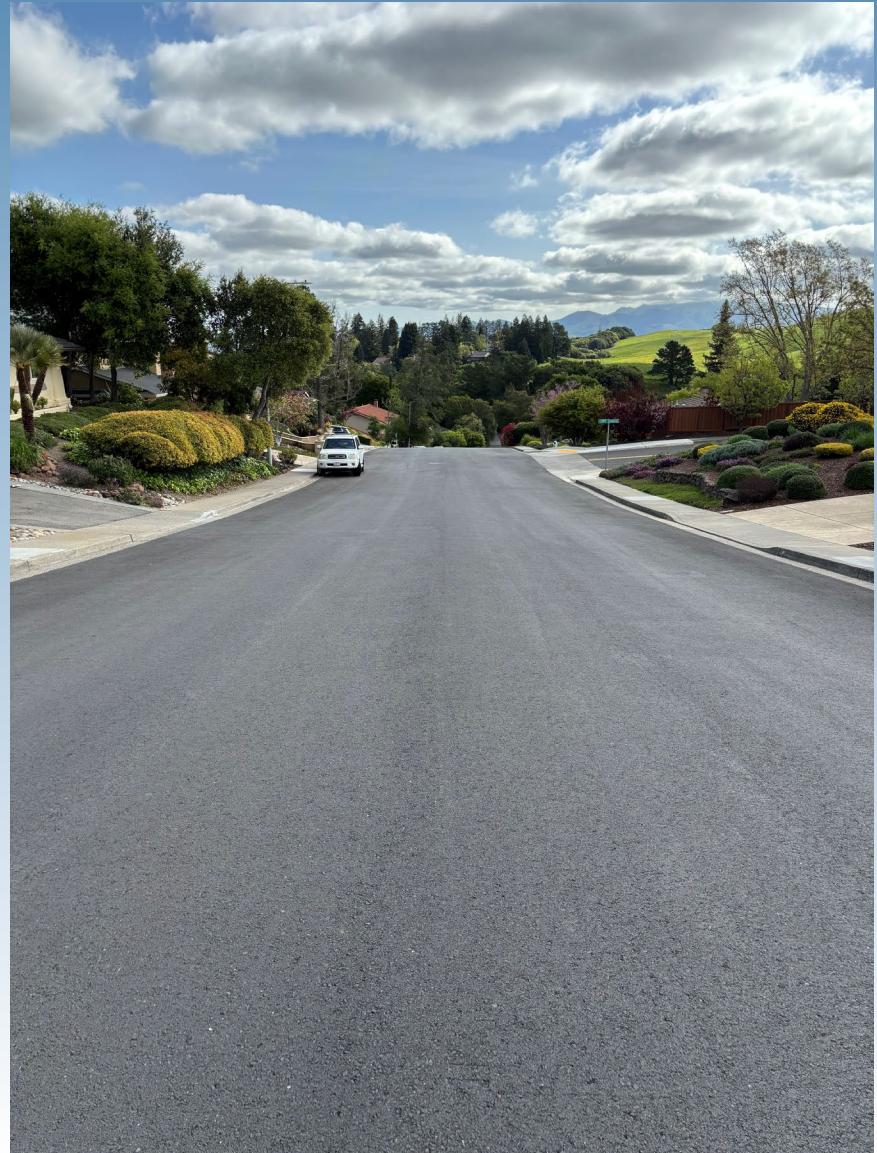


Paseo del Rio



2024 Pavement Rehabilitation Project

- 24 Street Segments paved.
- 2,640 YD paved
- 1,764 SY of concrete repaired



Via Granada



Street Management Program 2025 - 2044



Town Council Goals and Priorities

Traffic Safety Enhancements Update



Complete Streets Improvements Projects



Completed	
Project	Status
Moraga Rd Buffered Bike Lanes	Completed in 2024
Moraga Road Safety Study	Completed in 2024
Corliss Dr Safe Routes (Phase 1)	Completed in 2025
Ongoing	
Project	Status
HSIP Cycle 10 & 11 – Townwide	Under Construction Est. Completion Fall 2025
ADA Signal Push Button (Moraga Rd & Donald)	Under Construction Est. Completion Fall 2025



Complete Streets Improvements Projects



Scheduled/Future	
Project	Status
Smart Signals	In Design Est. Construction Winter 2026
Moraga Rd/Canyon Rd Complete Streets	In Design Est. Construction Winter 2026
Campolindo Access Improvements "HAWK Signal"	Seeking Funding Est. Construction Summer 2027
HSIP Cycle 12 – Sign Upgrades NEW	In Design Est. Construction 2026/2027
Corliss Dr Safe Routes (Phase 2)	Seeking Funding Est. Construction Summer 2027
School Street Study	Est. Study Completion Winter 2025



Parking Lots and Pathways Needs

Street Name	Begin Location	End Location	Length (ft)	Width (ft)	Area (sf)	Current PCI
HACIENDA DE LAS FLORES N PARK	DONALD DR	HACIENDA DE LAS FLORES S PARK	120	160	19,200	58
HACIENDA DE LAS FLORES SERVICE	HACIENDA DE LAS FLORES S PARK	MORAGA RD	1,050	18	18,900	17
HACIENDA DE LAS FLORES S PARK	HACIENDA DE LAS FLORES N PARK	SOUTH END	390	52	20,280	41
MORAGA COMMONS INTERIOR PATH	ST MARYS RD	ST MARYS RD	1,266	9	11,394	91
MORAGA COMMONS PARKING LOT	ST MARYS RD	ST MARY'S RD	135	120	16,200	74
MORAGA COMMONS EXTERIOR PATH	ST MARYS RD	CORLISS DR	2,985	9	26,865	42
MORAGA COMMONS SKATEPARK PARKI	MORAGA RD	MORAGA RD	200	35	7,000	77
MORAGA COMMONS WEST PATH	MORAGA RD	FOOT BRIDGE	852	11	9,372	65
MORAGA LIBRARY PARKING	ST MARYS RD	SOUTH END	455	46	20,930	9
MULHOLLAND RIDGE SERVICE ROAD	DONALD DR / MULHOLLAND RIDGE OPEN SPACE	CITY LIMIT	5,185	14	72,590	33
RANCHO LAGUNA PATH	CAMINO PABLO	CAMINO PABLO	786	4	3,144	53
RANCHO LAGUNA PARKING	CAMINO PABLO	RANCHO LAGUNA PATH	285	60	17,100	75
TOWN HALL PARKING LOT	RHEEM BLVD	RHEEM BLVD	256	50	12,800	35

Storm Drain Repair Needs

Location	Size, Length	Description	Est. Cost
Enhanced O&M Program	various	Additional pipe cleaning, CCTV inspections, repairs based on inspections, and ongoing GIS mapping and asset management. <u>Cost is annual.</u>	\$420,000
Moraga Rd. at Woodford Dr.	42" RCP x 402 ft.	Remove scale buildup and install CIPP liner	\$255,000
Rheem Blvd. at Redwood Ln.	24" CMP x 236 ft.	Install CIPP liner	\$75,000
SE corner of Donald Dr. and Moraga Rd.	12" CMP x 55 ft.	Remove and replace. Requires private property owner participation of \$15,000.	\$69,000
Thune Ave. at Freitas Dr.	30" RCP x 630 ft.	Install CIPP liner	\$295,000
End of Camino Ricardo		Sedimentation basin study	\$20,000
Moraga Rd. across from Dolores Ct.	Proposed 18" PVC x 215 ft.	Install pipe, inlets, and slope stabilization	\$450,000
Ascot Dr. and Moraga Rd.	Proposed 24" RCP x 250 ft.	Install pipe and inlets	\$250,000
Bollinger Cn. at Joseph Dr.	18" RCP x 40 ft., 18" RCP x 44 ft. 15" RCP x 55 ft.	Clean and inspect pipes. Repair/replace damaged pipes.	\$85,000
St. Mary's Rd. at Laguna Creek	Proposed 60"x36" RCP x 40 ft.	Culvert replacement	\$385,000
Update hydraulic modeling			\$50,000
Corliss Dr. at Laguna Creek	Existing 144" CMP	Rehabilitate culvert and headwalls	\$1,000,000
Canyon Rd. at Town limit	60" RCP x 40 ft.	Replace pipe, rock slope protection	\$820,000
Rheem Blvd. (Fronteras Dr. to Trail at St. Mary's Rd.)	3,100 ft.	Install curb and gutter in conjunction with sidewalk improvements	\$450,000
			\$4,624,000

* This slide has been updated since 4/9/2025 Town Council presentation.



Slide Repair Needs

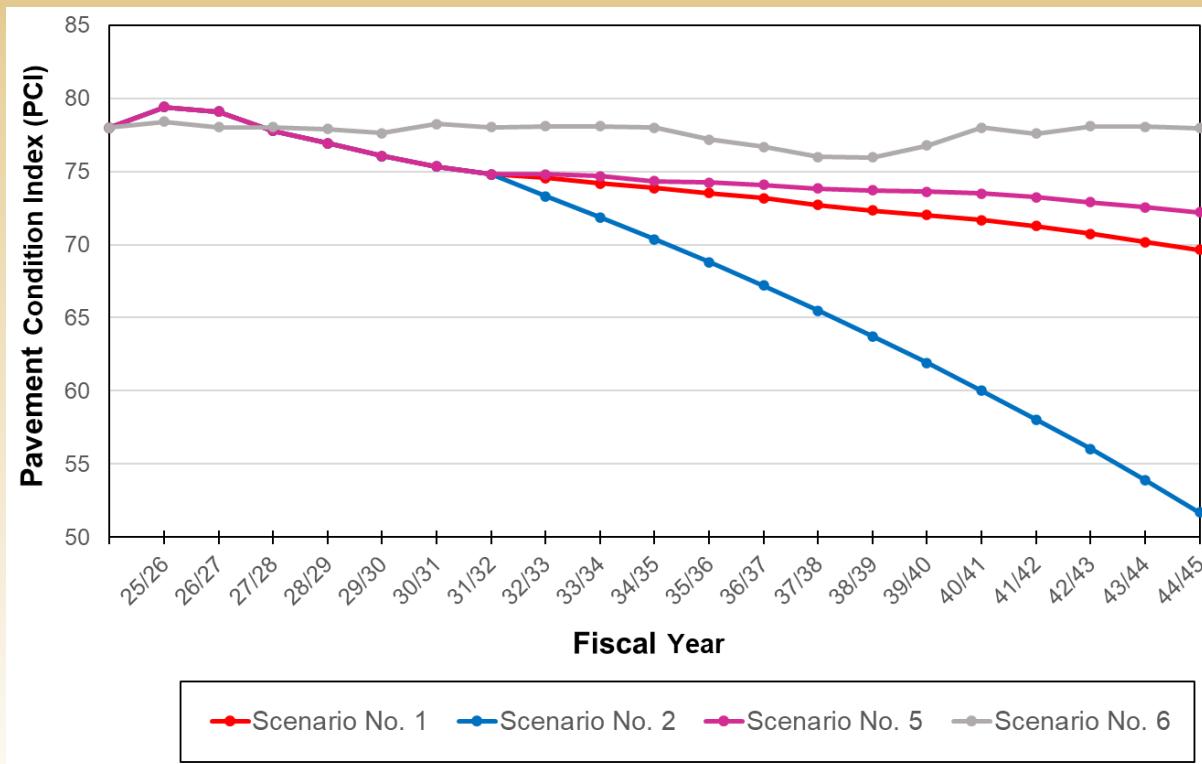


Location	Size	Description	Est. Cost
Rheem Blvd. at Chalda Wy.	220 ft. x 50 ft.	Install geogrid reinforced fill or cast-in-drilled-hole stabilization piles, replace sidewalk	\$850,000
Rheem Blvd. west of Scofield Dr.	localized	Remove and replace asphalt, install geogrid	\$60,000
Canyon Rd. south of the bridge	Several localized locations	Full depth base repairs	\$85,000
			\$995,000

* This slide has been updated since 4/9/2025 Town Council presentation.



Street Management Scenarios



- **Scenario 6 – Maintain** 78 PCI @ \$6 million annually
- **Scenario 5 – Balanced Approach with Storm Drains (Years 1 – 7).** Average 72 PCI at 4 million annually (recommended)
- **Scenario 1 – Balanced Approach with Storm Drain (Years 1 - 20).** Average 70 PCI at 3.7 million annually
- **Scenario 2 – No Measure K after 2032.** PCI drops to 52 at \$1.4 million annually



Balanced Approach with Measure K

Balanced approach combining:

1. Preventive maintenance
 - Crack Sealing, Microsurfacing & Slurry Seals
2. Rubberize Cape Seals, and Pavement Overlays
3. Mill and Fill Overlays, and Full Reconstruction

✓ \$600K allocation (Years 1–7) for storm drain and roadway slide repairs

Benefits:

- ✓ Proactively addresses drainage and slope issues
- ✓ Reflects responsible fiscal planning and infrastructure stewardship
- ✓ Builds continued public trust and support



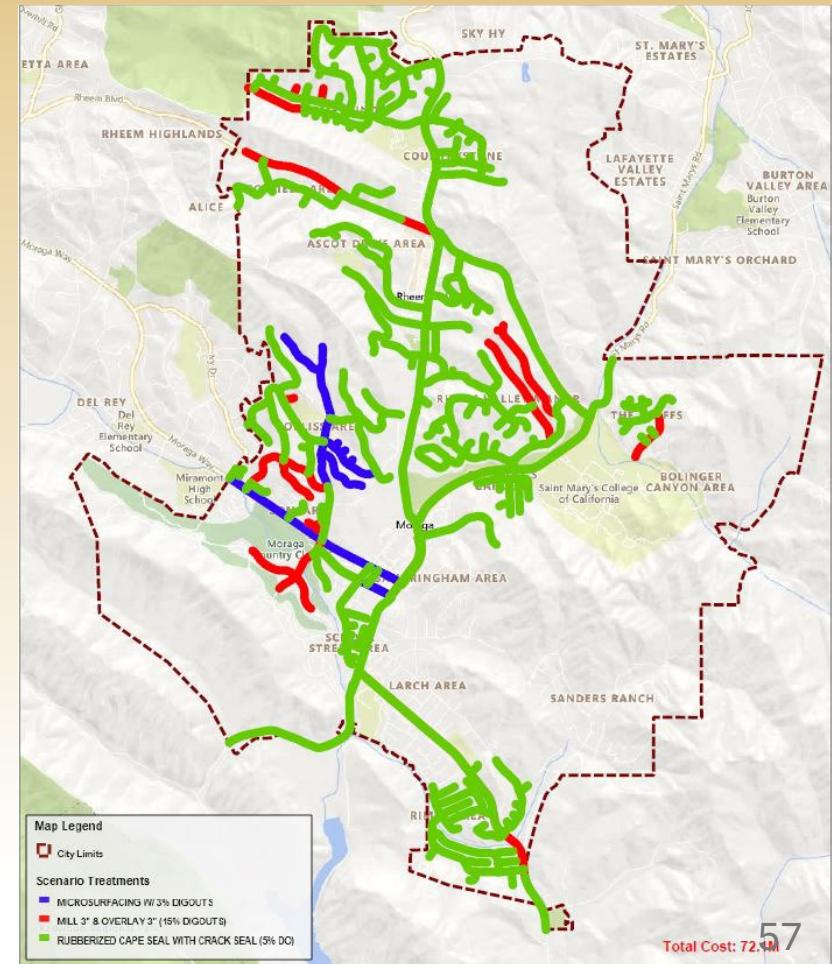
20-Year Street Management Plan

FY 2025-44

Measure K support & 7 years of funding for storm drain and landslide repairs.

The proposed Plan focuses on a Balanced Approach to pavement rehabilitation treatments, including:

- Pavement Repairs
- Crack Sealings
- Rubberized Cape Seal with Crack Seals
- Microsurfacing Seals
- Mill and Fill Pavement Overlays
- Pavement Overlays
- Pavement Reconstructions
- Storm Drain Repairs (Years 1 to 7)





2025 Pavement Rehabilitation Proposed Project Street List

Street Name	Start	End
Augusta Drive	1005 S St Andrews Drive	Spyglass Lane
Whiting Court	Reynolds Court	West End
Whiting Court	Avila Lane	Camino Ricardo
Whiting Court	Reynolds Court	Avila Lane
Wakefield Drive	Corliss Drive	East End
Canyon Road (potholes)	South Town Limit	Constance Place
Rheem Boulevard (stabilization)	West of Scofield Drive	West of Scofield Drive

Questions and Feedback?

MEASURE
K
DOLLARS AT WORK

