

STATE OF THE STREETS

Pavement Management Program

May 6, 2024



Presentation Purpose

- City's overall pavement condition.
- Overview of pavement management program.
- Summary of projected pavement condition under current program funding.

Pavement Infrastructure City's Largest Asset

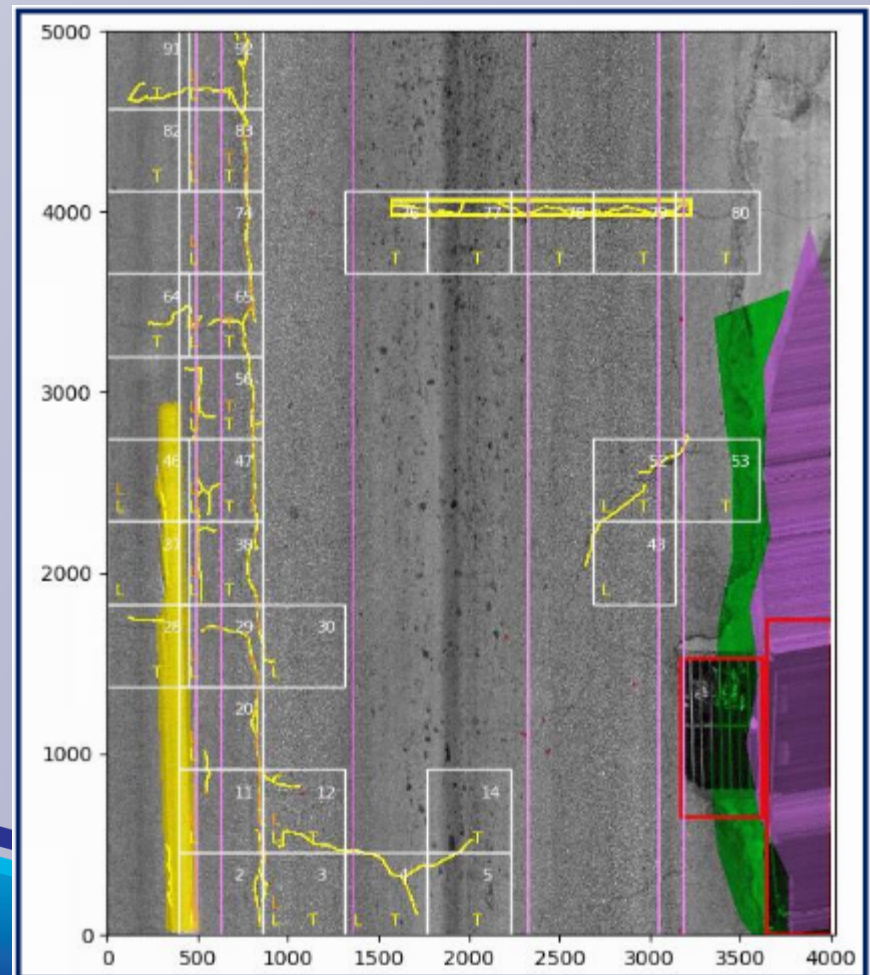
- Pavement Infrastructure:
 - 241 centerline miles
 - 548 lane miles
 - Approximately \$350,000,000 (FY 2023\$) to replace all the City's street pavement
 - City's streets are rated on a bi-annual basis
 - **Current overall Pavement Condition Index (PCI) rating is 75**
 - compared to 78 in 2021, and compared to 86 in 2007

Pavement Condition Index and Rating Process

- Pavement Condition Index (0 to 100)
- Every other year.



Laser Crack Measurement System



Pavement Management

Excellent Pavement Condition



1st Ave S – S 301st St to City
Limit
PCI = 100



SW 356th St – 15th Ave SW
to 4th Ave SW
PCI = 100

Pavement Management

Poor Pavement Condition



21st Ave SW
PCI = 42



7th Way SW –
SW Campus Dr to 7th Pl SW
PCI = 54

Pavement Management

Very Poor Pavement Condition



47th PI SW –
SW 314th PI to SW 315th PI
PCI = 37



50th Ave SW –
SW 314th PI to Cul-de-sac
PCI = 30

Annual Street Overlay Selection Criteria

- Current overall (PCI) rating of the street
- Street classifications
 - Arterial – 102 Fund
 - Collector – 116 Fund (Solid Waste Excise Tax)
 - Residential – 116 Fund (Solid Waste Excise Tax)
- Traffic Volume
- Available Program Budget
- Staff selects and recommends overlay list
- Council approves of selection

PCI vs. Annual Budget

*Pavement rated every year

** Pavement rated bi-annually

Overlay program budget reduced by \$500,000/year

^Solid Waste Excise Tax for residential overlays implemented

¹ Annual budget does not include grant funds. City has been averaging \$1.5 M in grants annually.

Year	Annual Budget ¹	Dollar Per Ton	Lane Miles Overlaid	PCI
2007*	\$2,039,000	\$62.35	13.17	86
2008*	\$2,024,000	\$67.06	12.94	83
2009*	\$2,025,000	\$67.20	10.01	79
2010*	\$1,900,000	\$63.00	11.15	78
2011*	\$1,513,500 [#]	\$60.76	13.68	79
2012*	\$1,573,000	\$67.16	10.71	79
2013**	\$1,484,000	\$65.75	8.85	77
2014	\$1,484,000	\$71.17	6.86	77
2015**	\$1,515,000	\$70.00	8.78	78
2016	\$1,515,000	\$61.75	7.31	78
2017**	\$1,515,000	\$75.00	5.35	76
2018	\$1,517,000	\$73.00	3.98	76
2019**	\$1,514,000	\$82.95	4.63	74
2020	\$1,514,000	\$83.25	3.17	74
2021**^	\$2,100,000	\$78.00	7.90	78
2022	\$3,700,000	\$82.50	9.10	78
2023**	\$3,700,000	\$96.00	10.60	75

Pavement Management

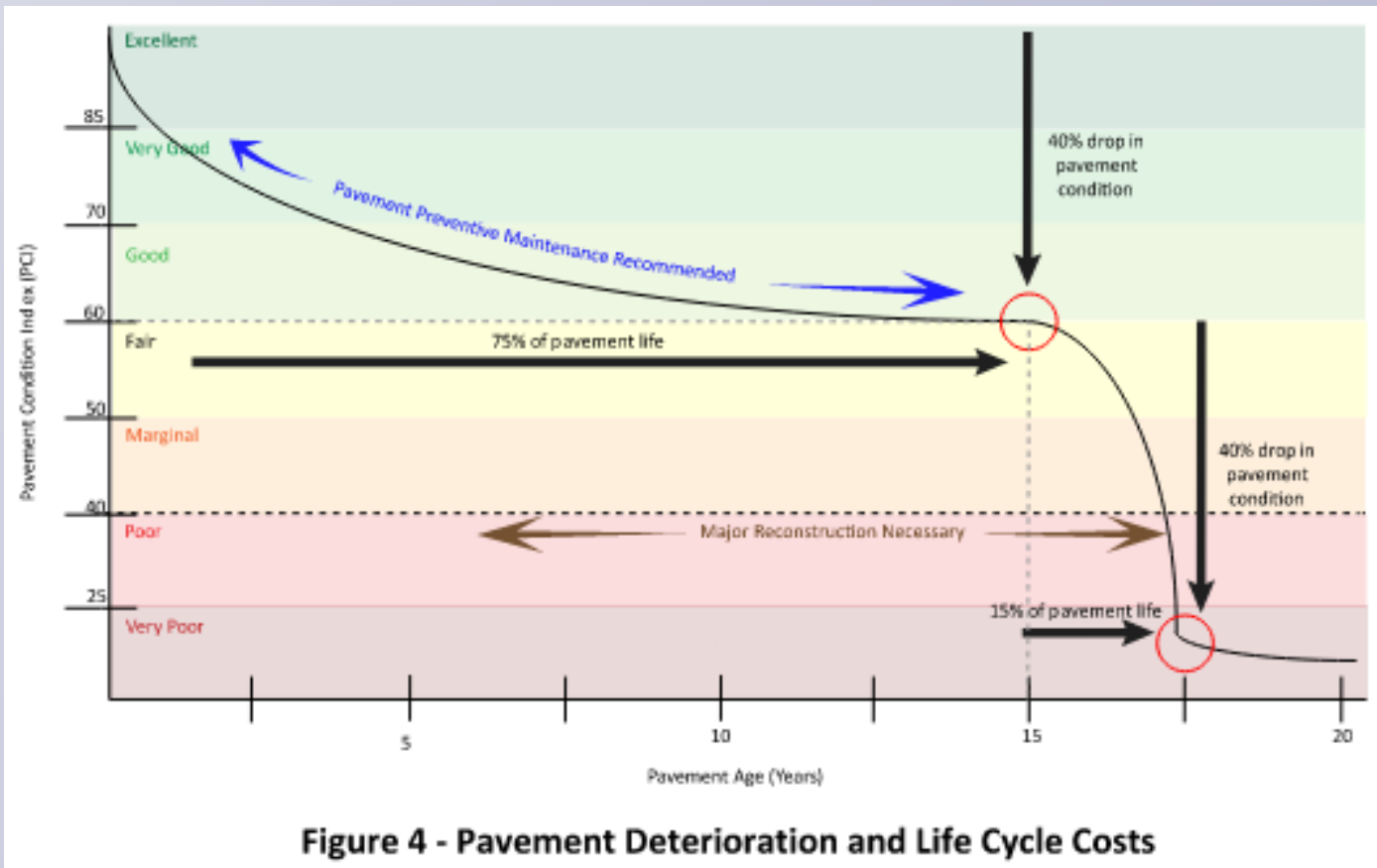
2021-2023 Network and Funding Comparison by City

City	Centerline Miles	Annual Overlay Budget	Dollar Per Centerline Mile	Average PCI
Federal Way	241	\$3,700,000	\$15,400	75
Bellevue	416	\$8,400,000	\$20,300	75
Redmond	154	\$500,000	\$3,200	66
Lakewood	178	\$700,000	\$3,900	70
Tacoma	710	\$15,000,000*	\$21,100	59
SeaTac	81	\$1,300,000	\$16,000	68
Bainbridge Island	151	\$2,000,000	\$13,200	69
Mercer Island	83	\$1,600,000	\$19,299	73

*from adopted budget docs

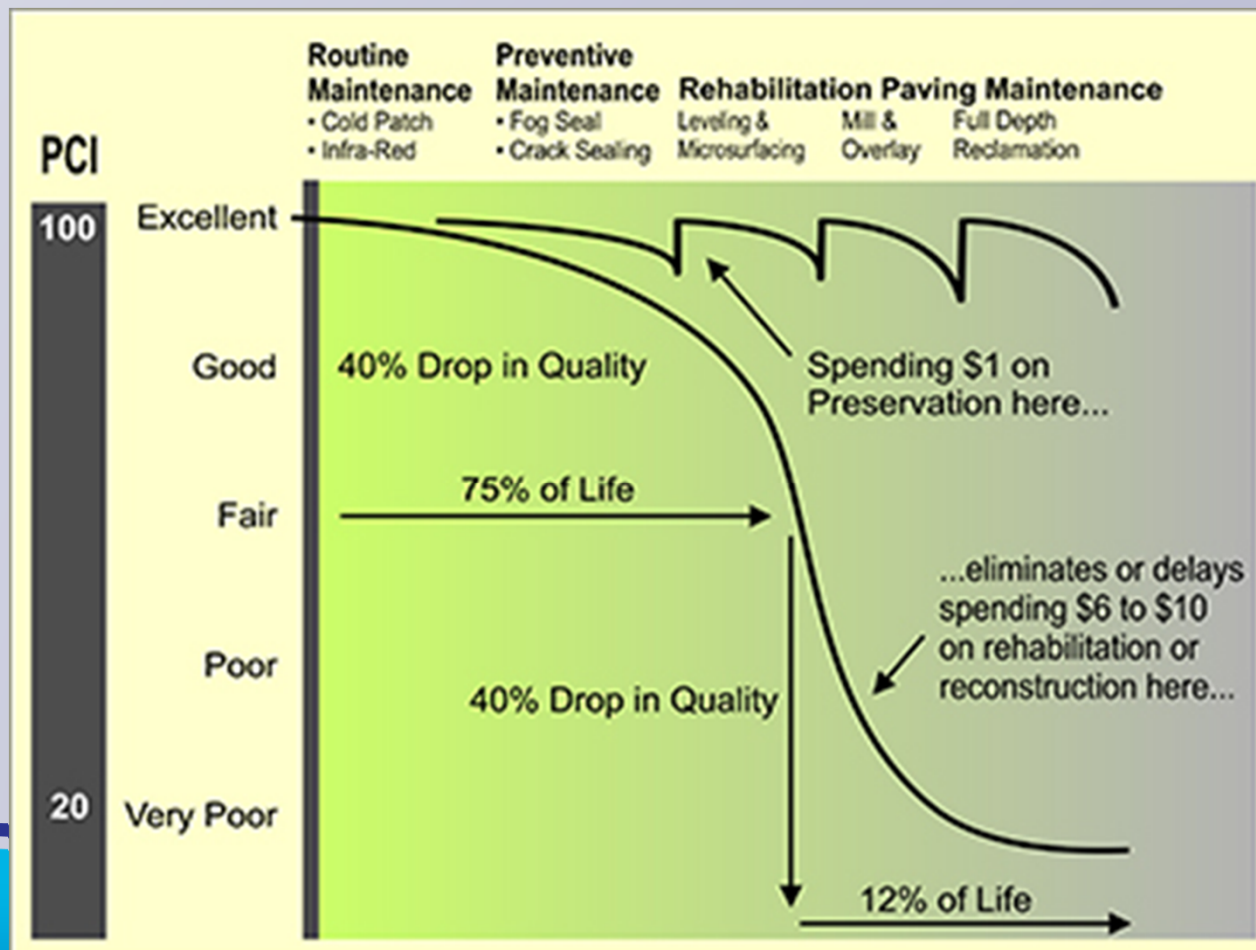
Pavement Management

Cost to Maintain vs. PCI

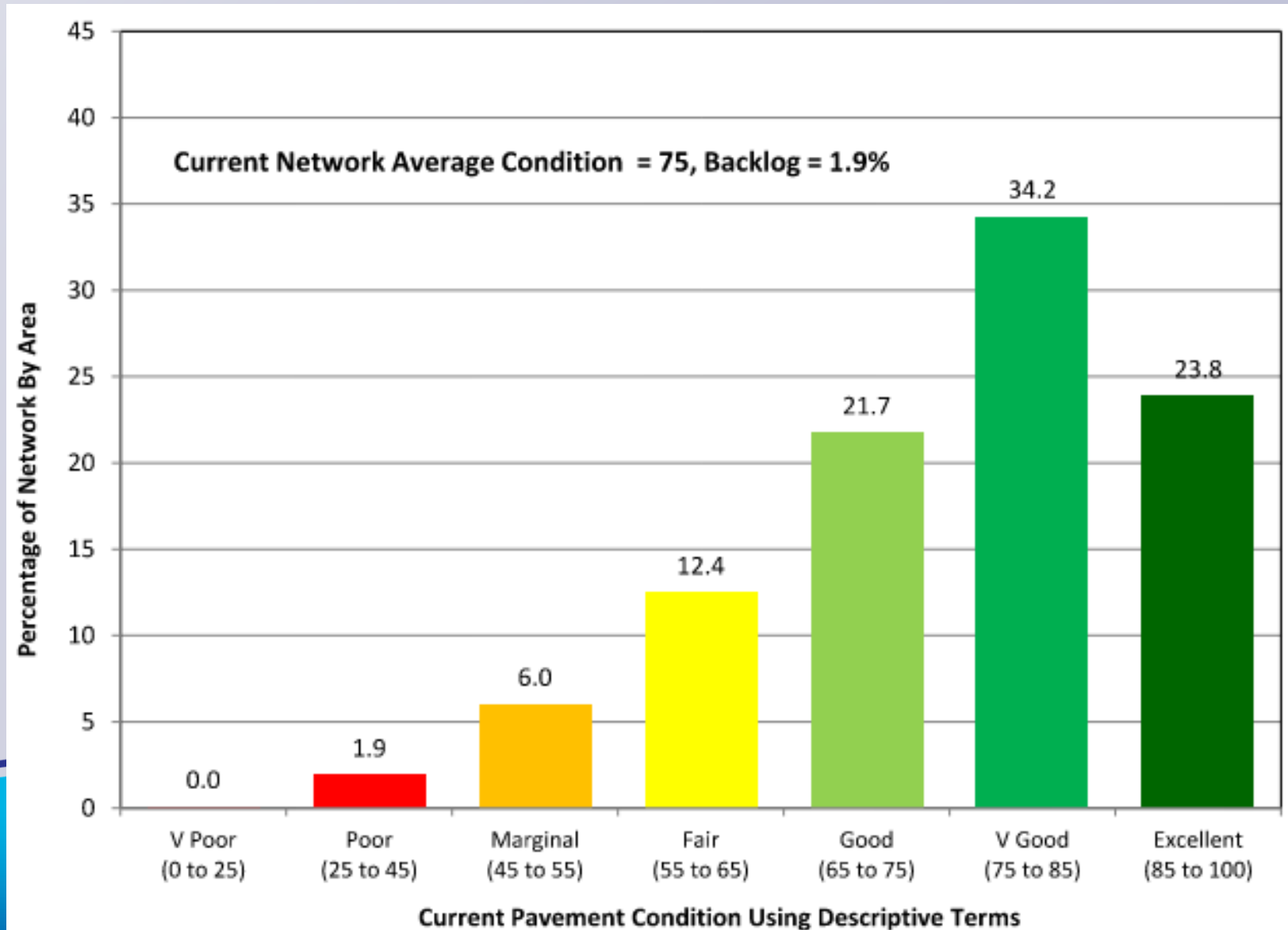


Pavement Management

Cost to Maintain vs. PCI



Roadway Network Present Status



Five Year Post Rehabilitation Network Average Pavement Condition Index

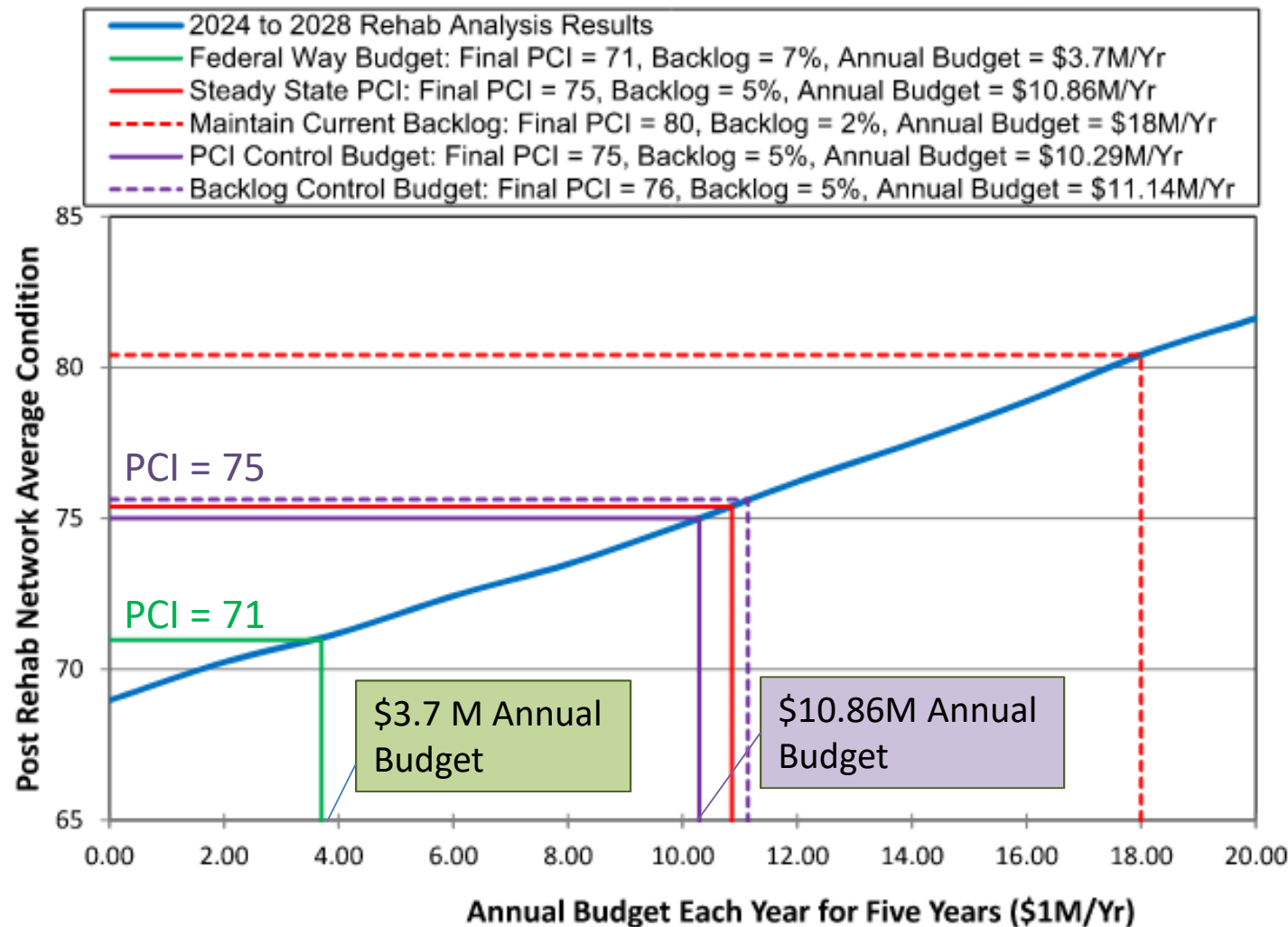
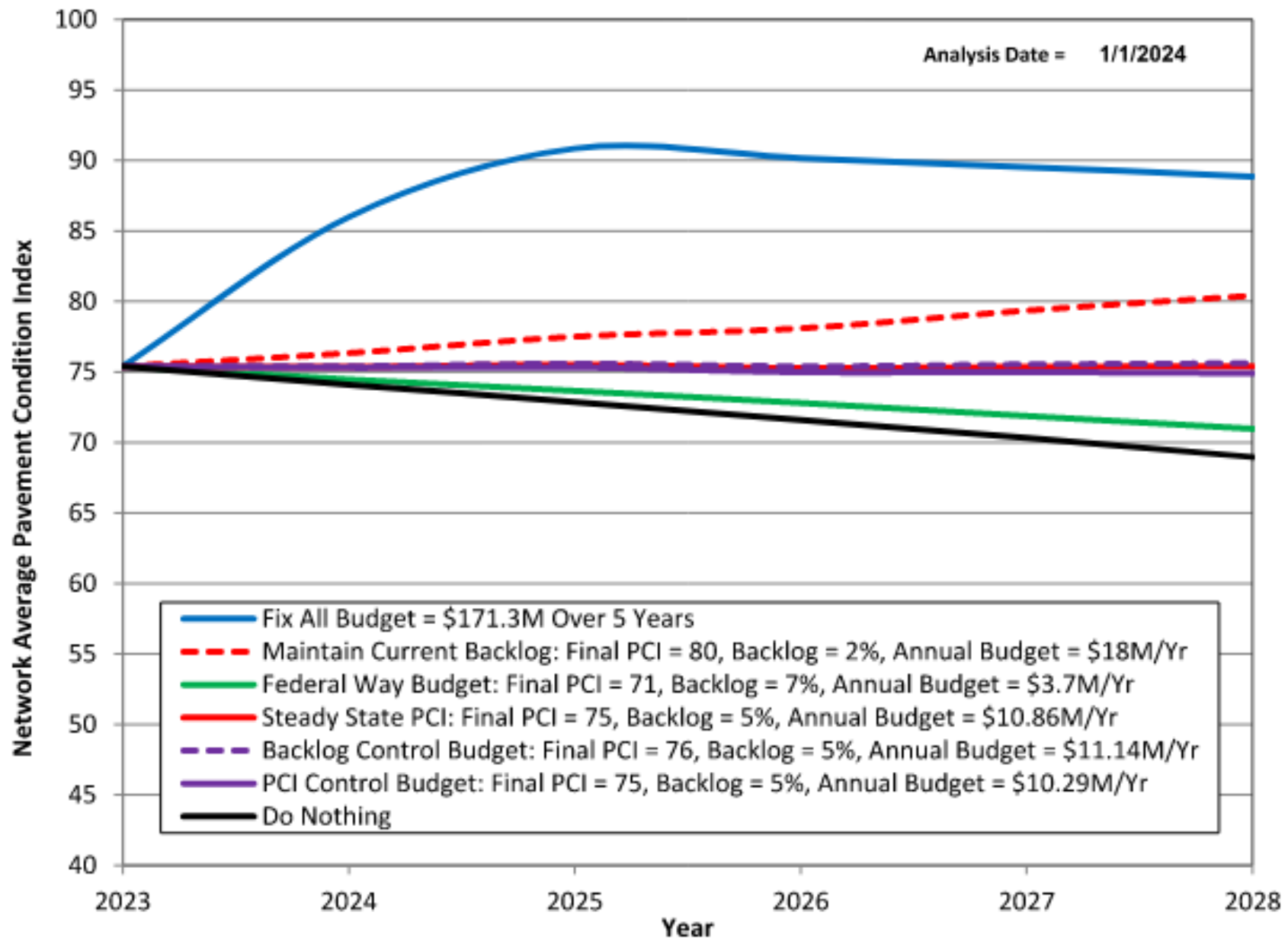


Figure 3 - PCI Based on Five-Year Annual Budget Funding Models

**Current Annual
Budget = \$3.7M
Current PCI = 75
5 Year PCI = 71**

**Steady State
Annual Budget =
\$10.86 Million**

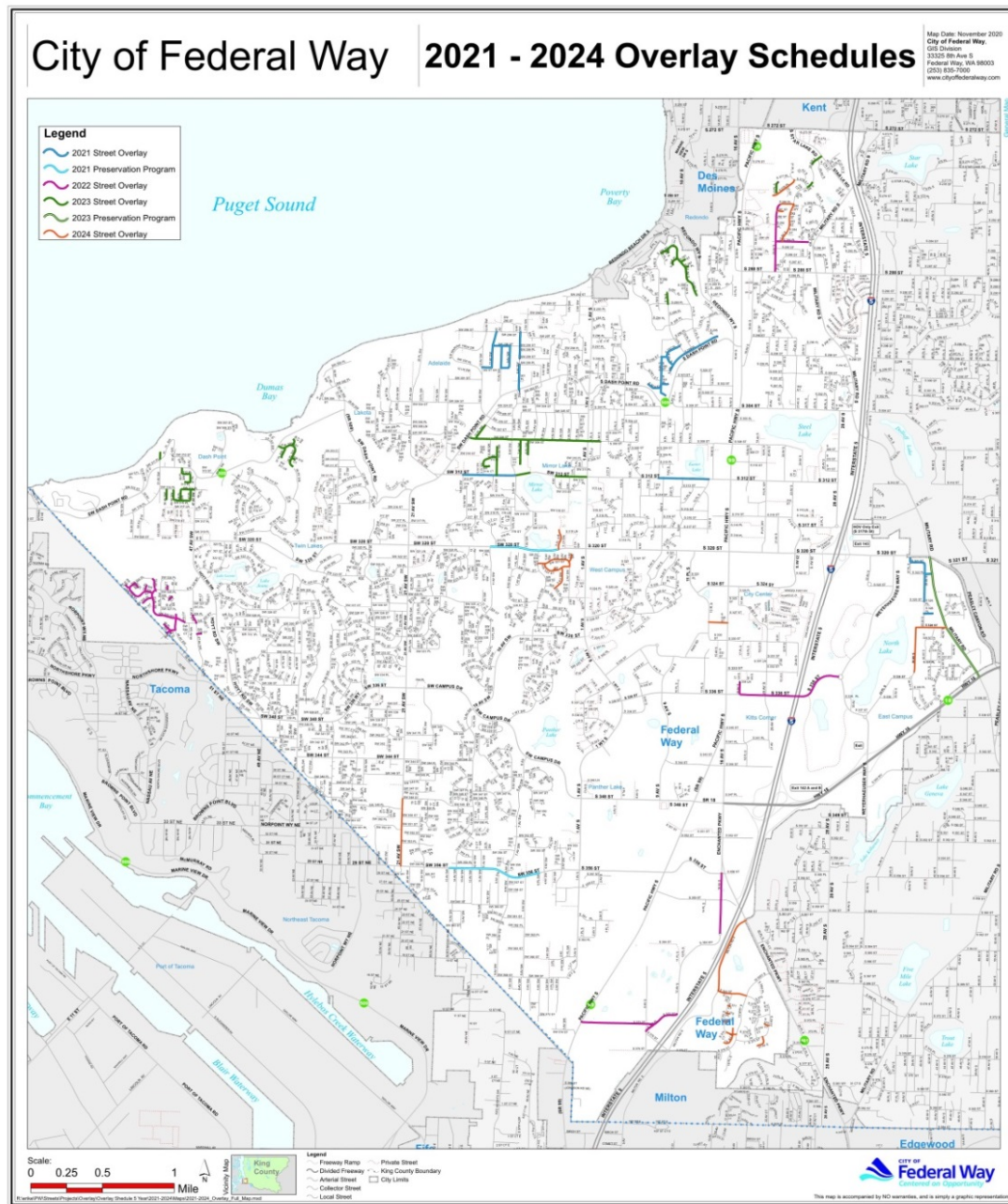
Annual Pavement Condition Index by Year



Residential Overlay Program

- Restarted residential overlay program in 2021.
- Identified areas based on PCI.
- Distribute funding throughout city.
- 2017-2020 = 0 to 2.5 lane miles
- 2021 = 4.8 lane miles
- 2022 = 5.5 lane miles
- 2023 = 6.3 lane miles

<https://www.federalwaywa.gov/page/citywide-overlay-program>



2021 Residential Overlay – Marine Hills



City Crews – Paving Projects



Pavement Repair / Patching



Other Program Improvements

- Larger patching program. (\$150,000 to \$300,000).
- City crew patching.
 - Asphalt zipper – greatly increased productivity.
- City crew paving projects.
 - Pave low volume roads.
 - Gravel road paving program restarted.
- Future
 - Paving equipment (e.g. hot patch unit)

Summary

- Reinstated residential overlay program.
- Current PCI is 75.
- Projected to reduce to 71 in five years under current pavement budget of \$3.7M annually.
- Grant funds help (average \$1.5M per year).
- \$10.8 M annually to maintain PCI 75.
- <https://www.federalwaywa.gov/page/road-stewardship-pavement-management-program>

Questions?

