



Wakefield Public Works

Joseph Conway
Public Works Director

William Renault, Jr., P.E.
Town Engineer

Article 6 - Strategic Road Repair & Maintenance Plan

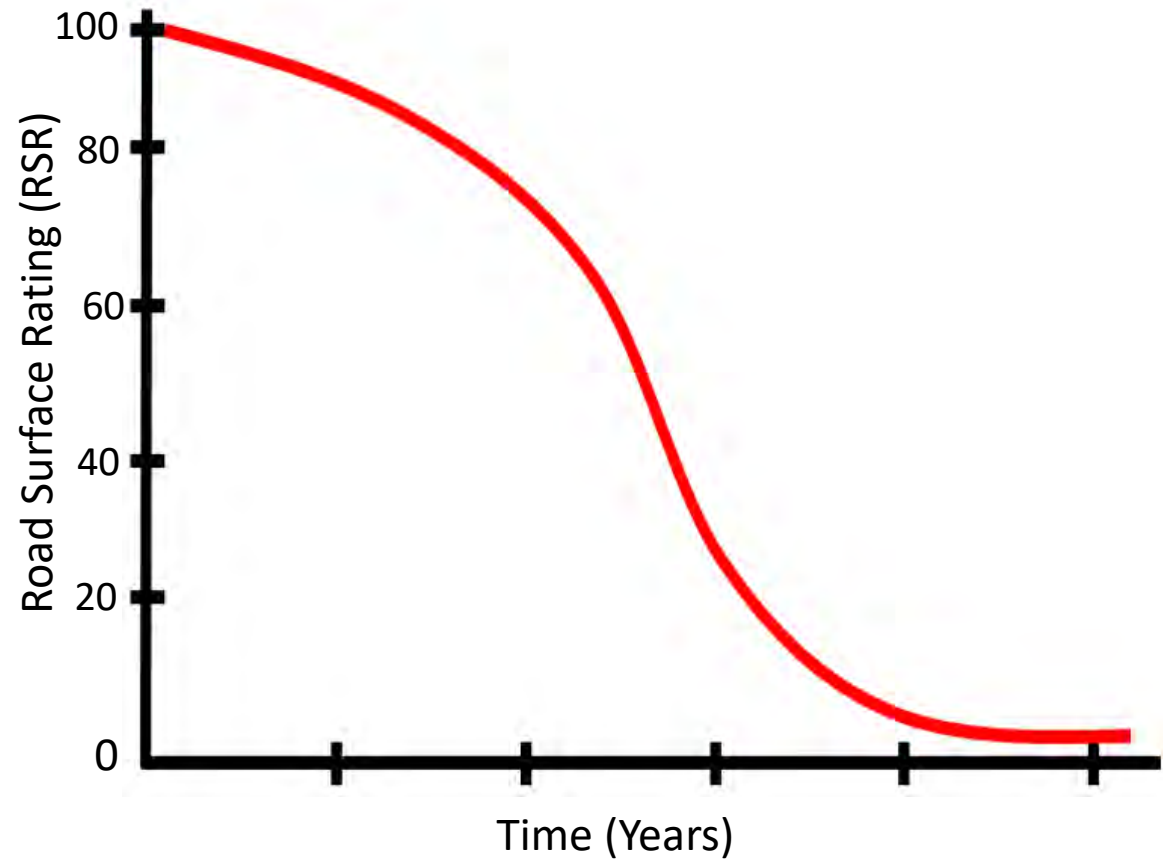
Annual Town Meeting | June 20, 2020

Article 6 - Program Goals

- **Systematically** improve 88 mile road network to an acceptable standard.
- Request funding to allow for **consistent investments** so roadway network does not deteriorate to point that would result in more costly repairs.
- **Coordinate** roadway projects with planned utility work by:
 - WMLGD, DPW Water & Sewer, National Grid/Eversource, etc.
- **Implement improvements** when appropriate:
 - Drainage, Sidewalks, Safety, Accessibility

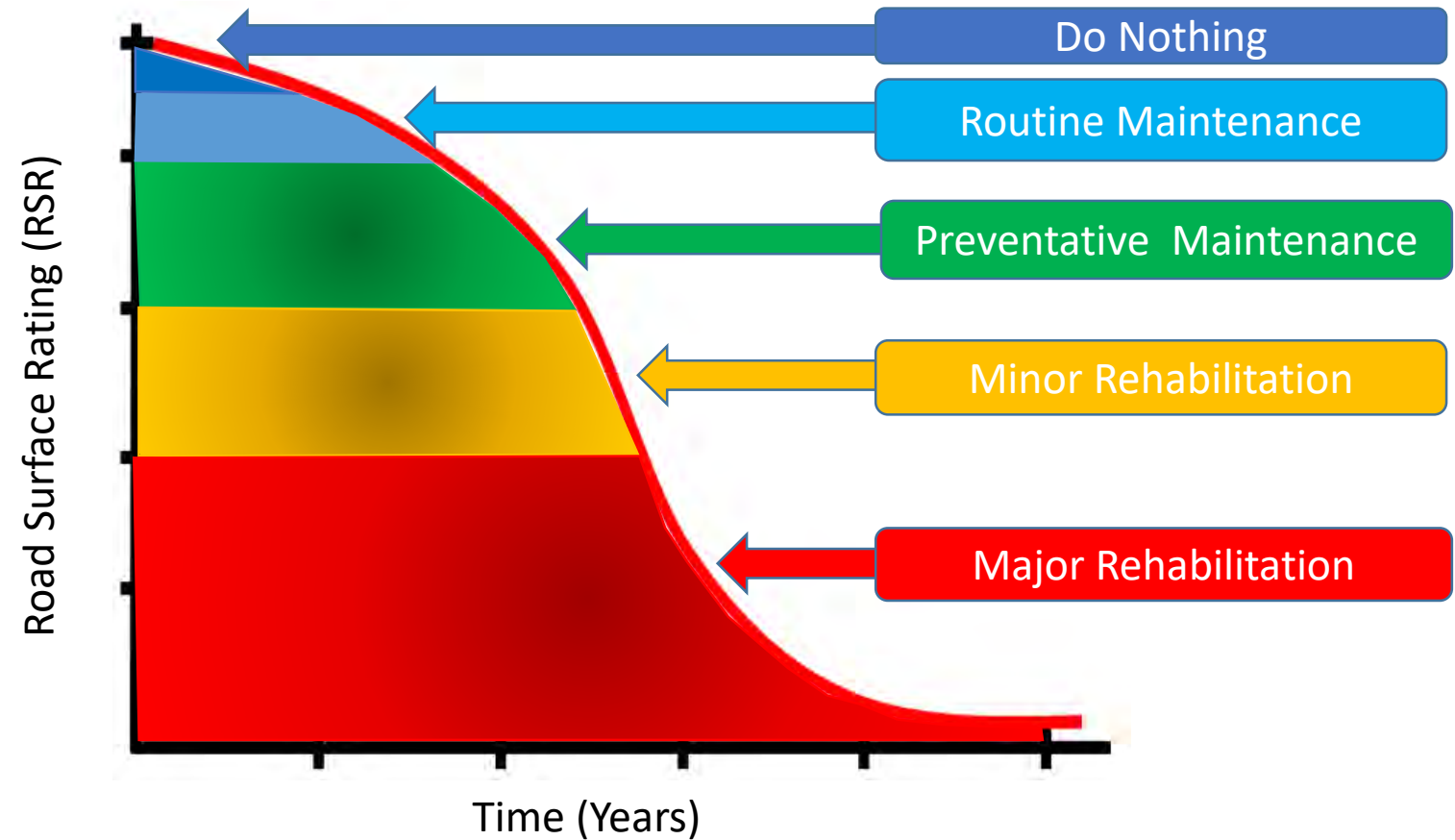
Article 6 - Roads Program Development

- Town-wide Pavement Condition Inventory
 - All Roadway segments in town are provided a Road Surface Rating (1-100 Score)



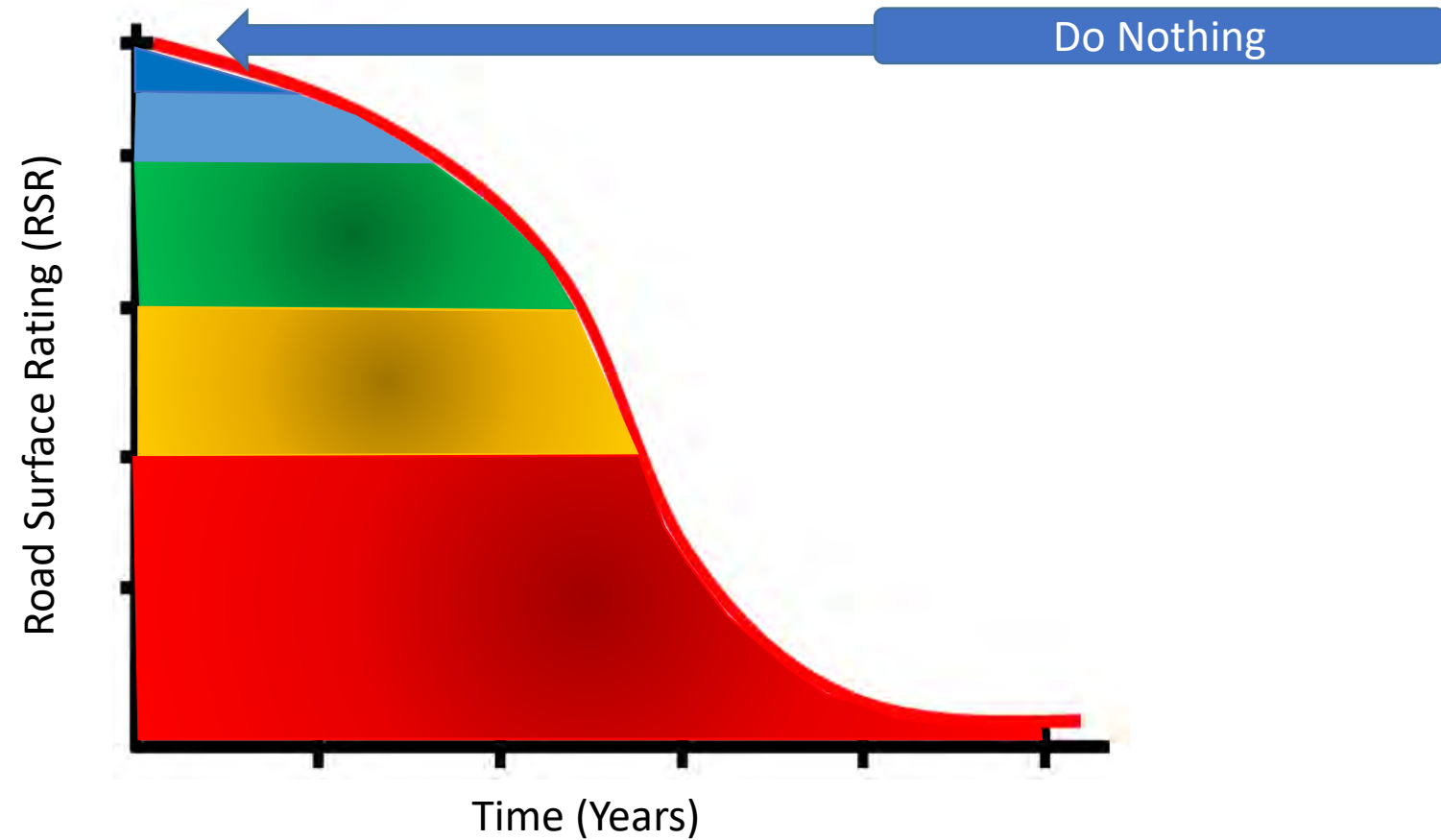
Article 6 - Roads Program Development

- Set up:
“Treatment Bands”



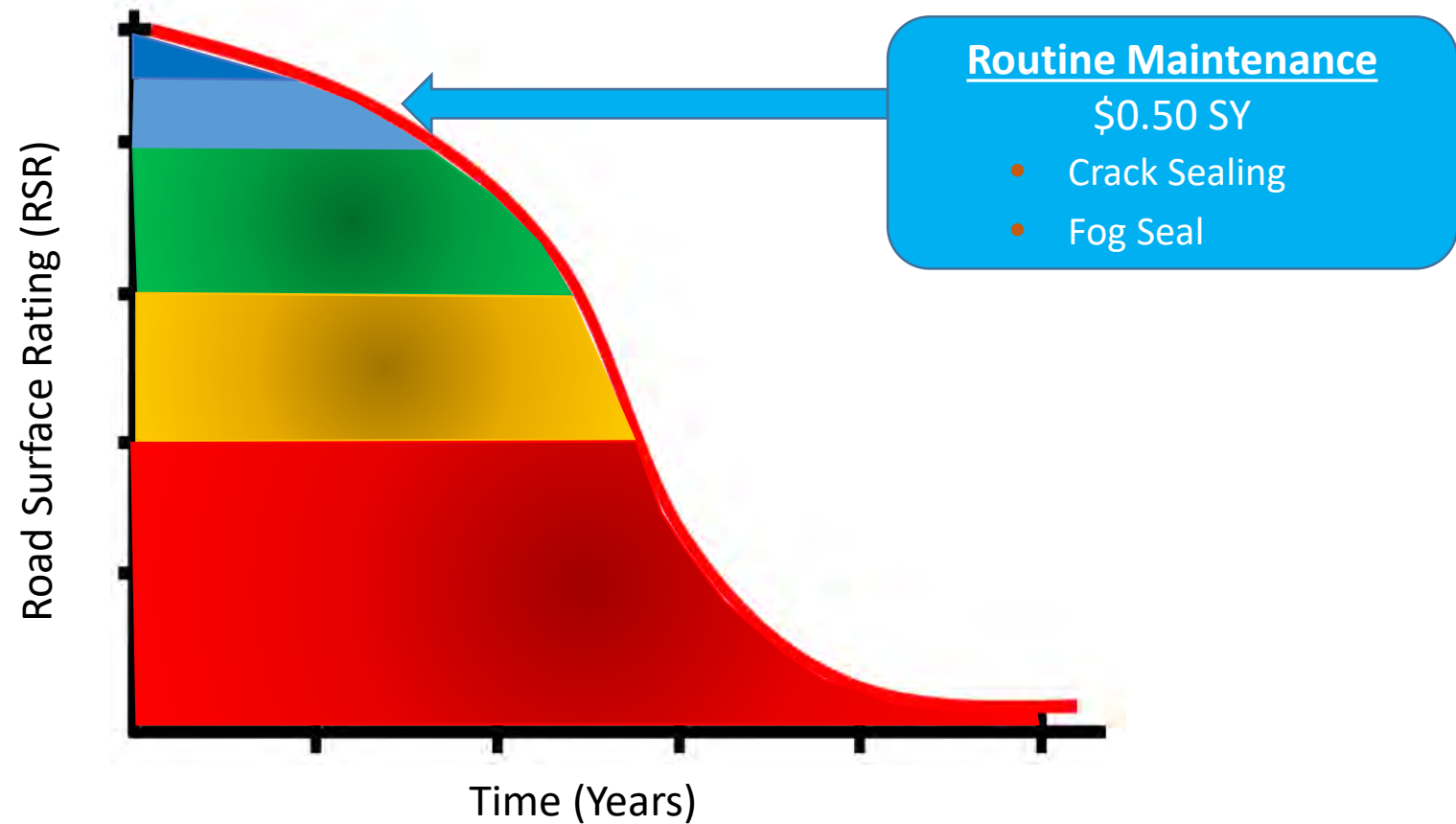
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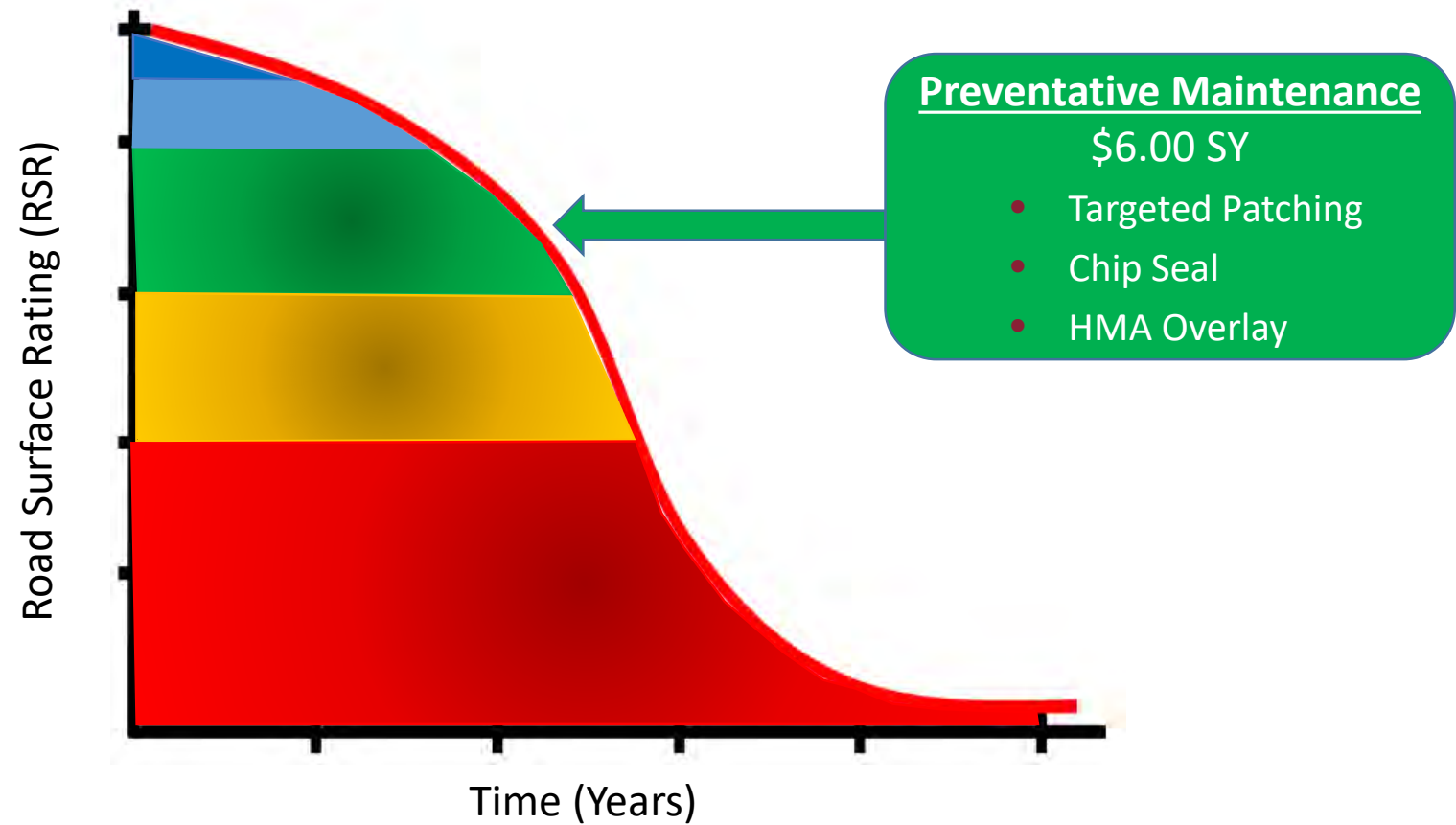
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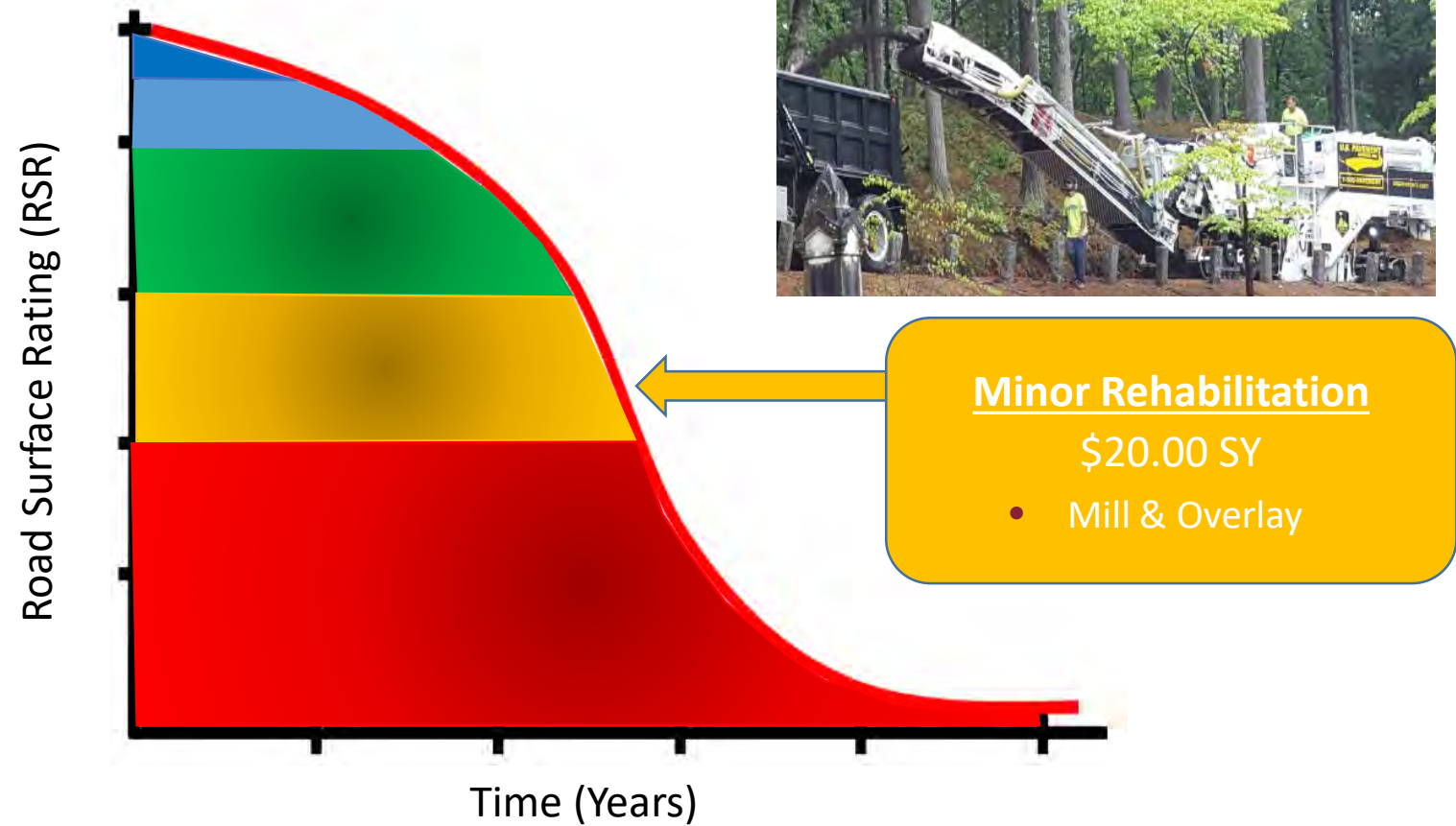
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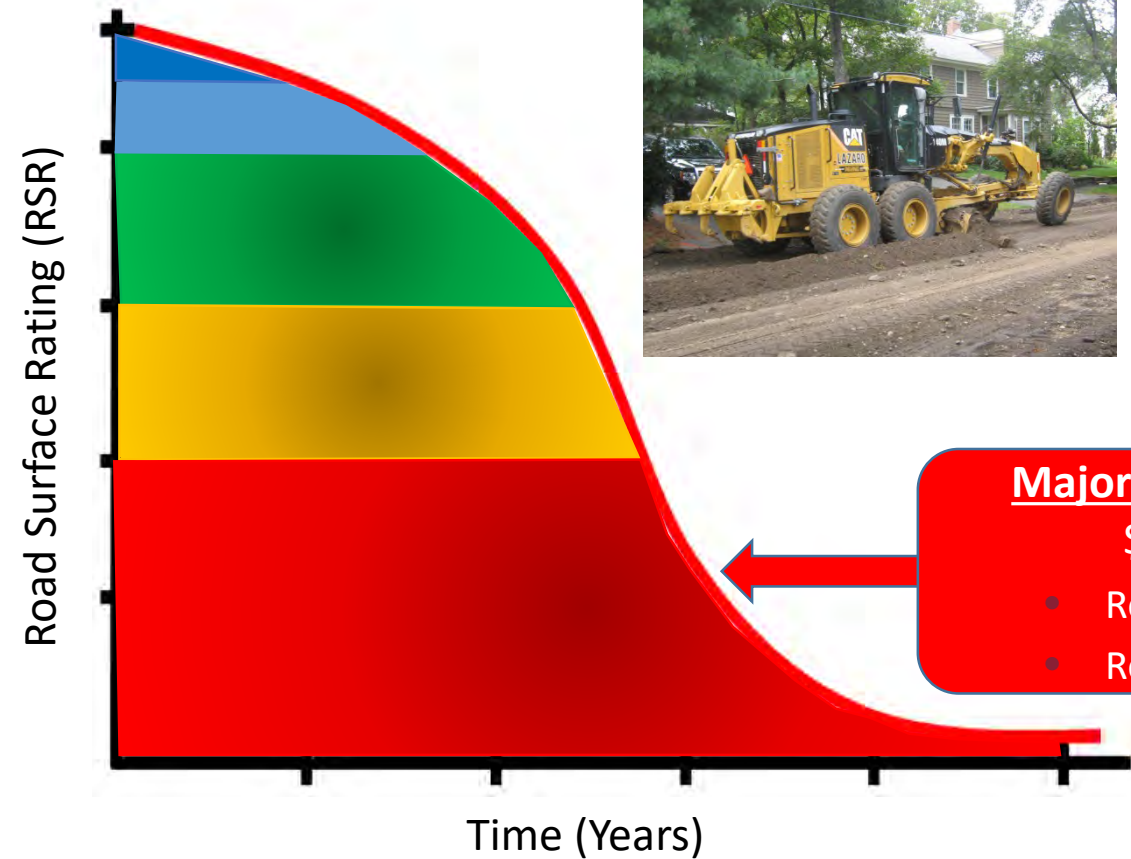
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Major Rehabilitation

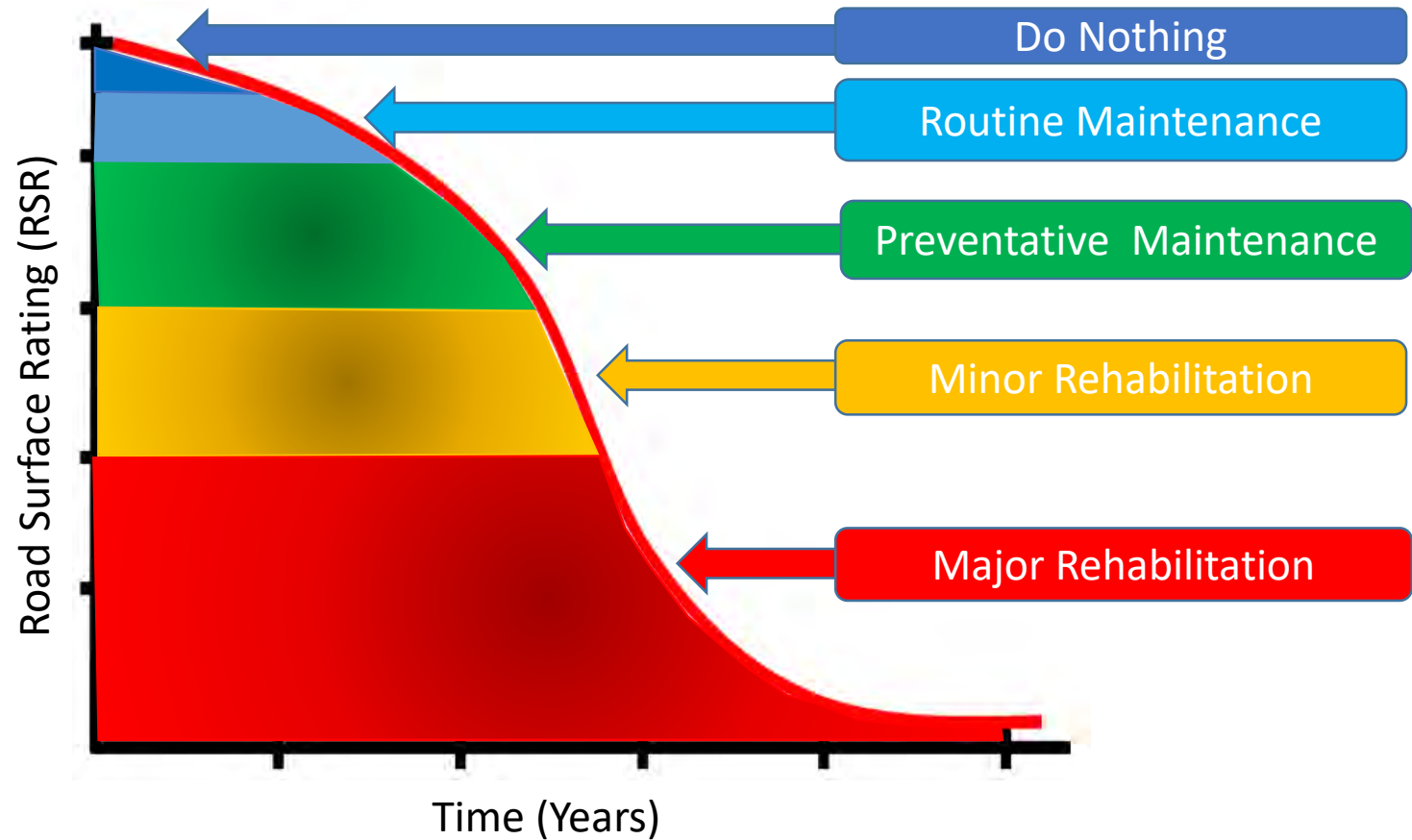
\$45.00 SY

- Reconstruction
- Reclamation

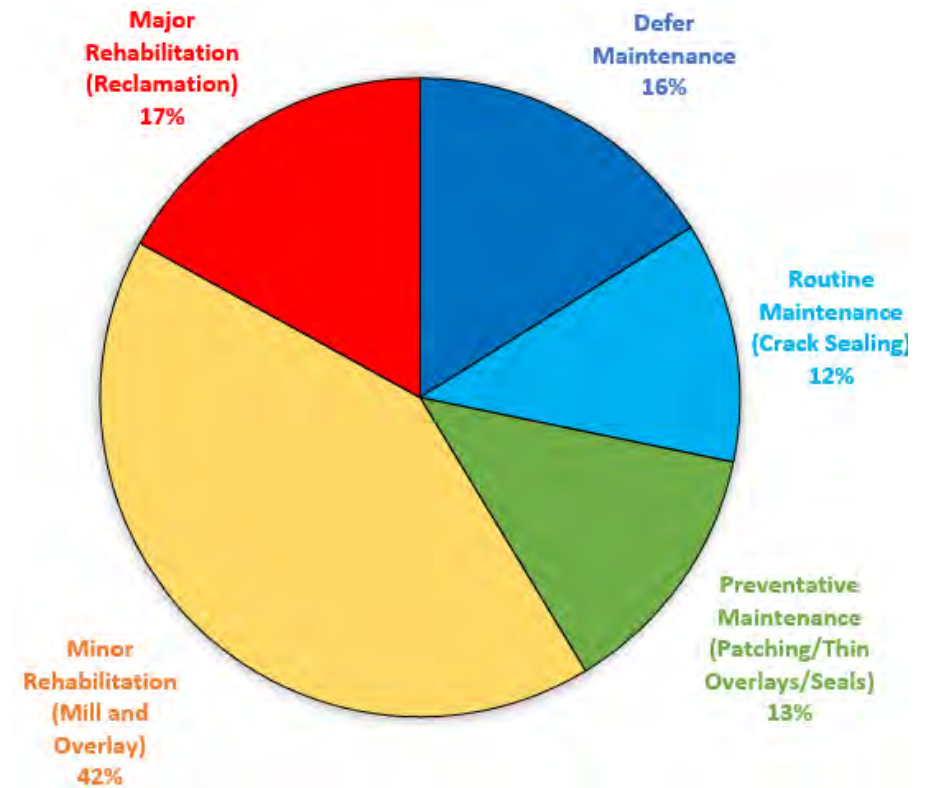
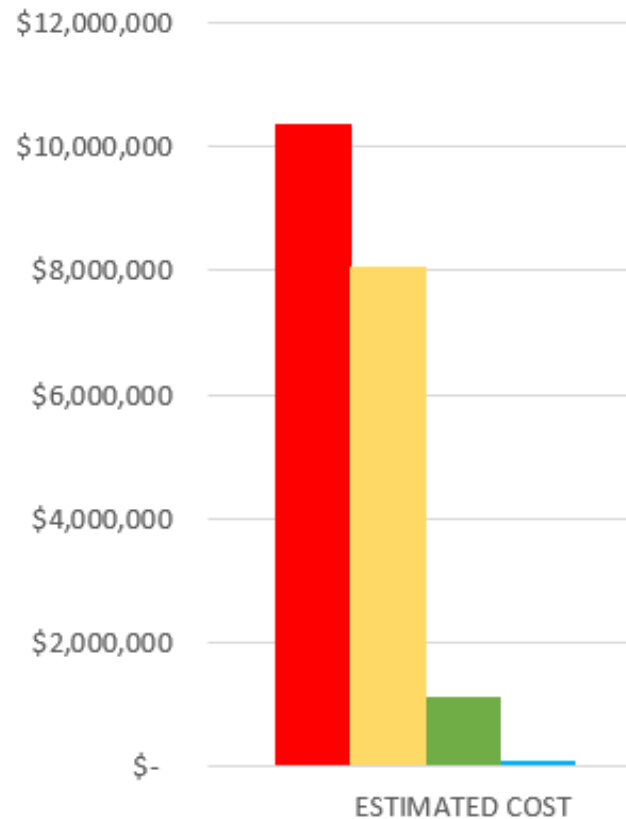


Article 6 - Roads Program Development

- Town-wide Pavement Condition Inventory
- Set up Treatment Bands
- Refine Repair Methods/ Unit Costs Annually
- Prioritization Paving Projects (Cost Benefit Value)
 - Traffic Count
 - Project Cost

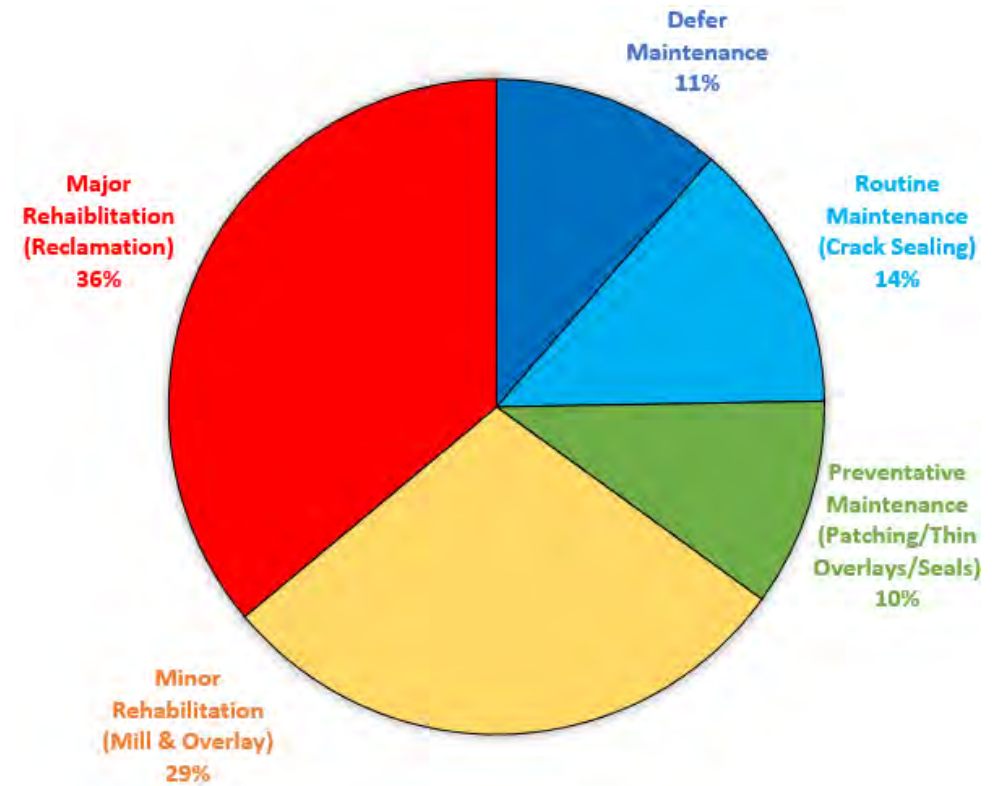
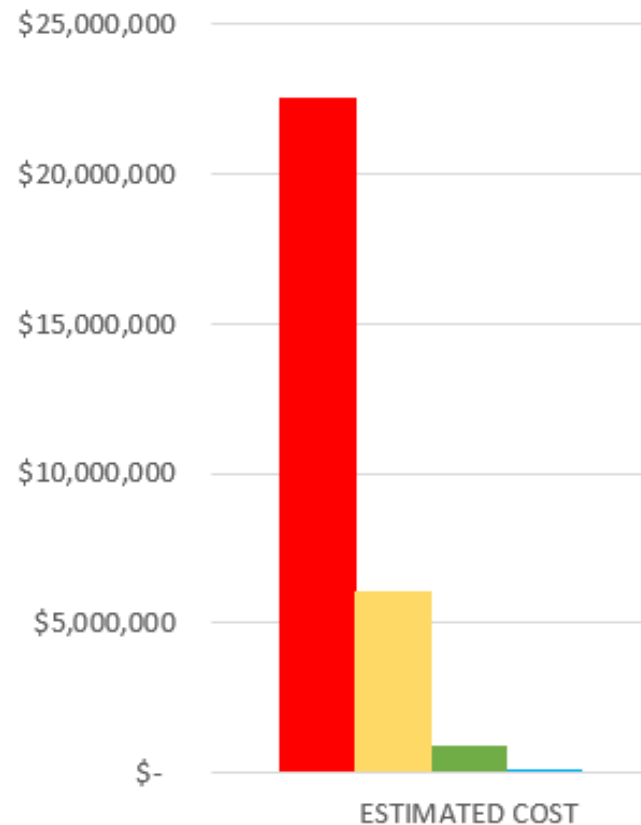


Article 6 - Current Backlog (2020)



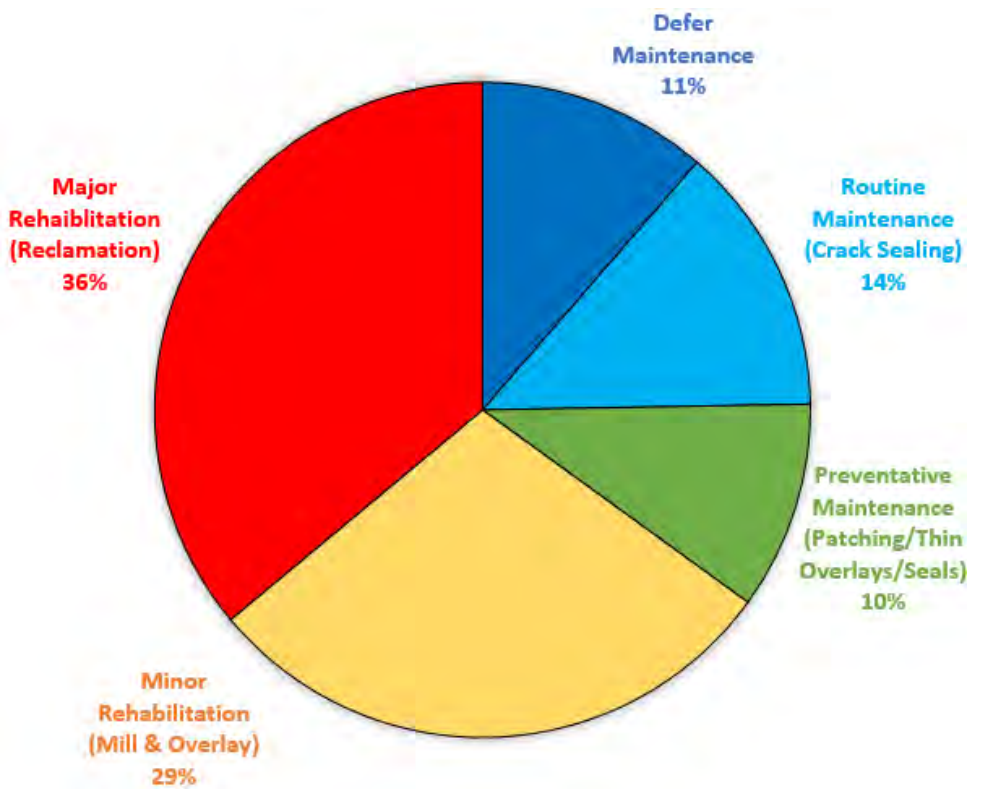
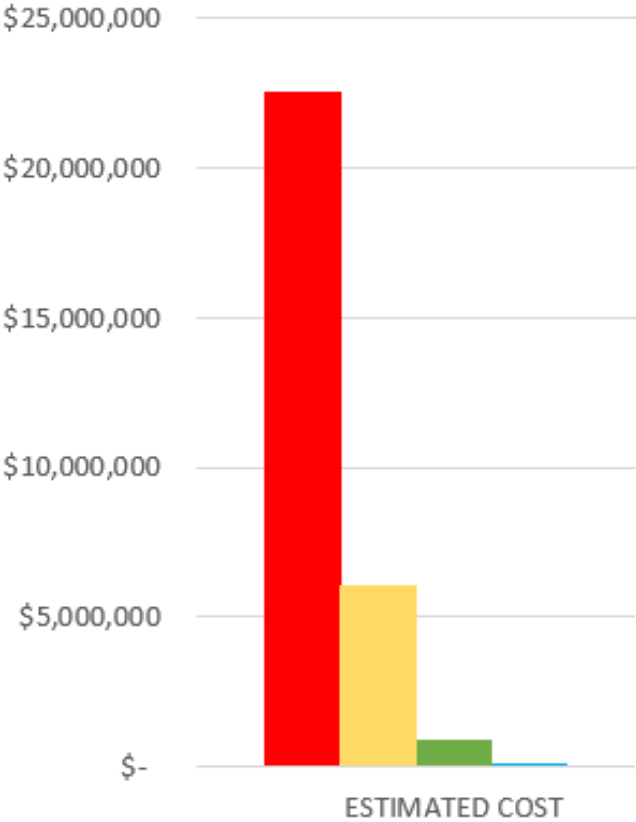
REPAIR METHOD	LENGTH (Miles)	PERCENT of NETWORK	ESTIMATED COST
Defer Maintenance	14.1	16%	\$ -
Routine Maintenance (Crack Sealing)	10.7	12%	\$ 94,779
Preventative Maintenance (Patching/Thin Overlays/Seals)	11.5	13%	\$ 1,129,065
Minor Rehabilitation (Mill and Overlay)	36.6	42%	\$ 8,059,934
Major Rehabilitation (Reclamation)	14.9	17%	\$ 10,370,965
Total Cost =			\$ 19,654,743

Article 6 - Projected Backlog (2025)



REPAIR METHOD	LENGTH (Miles)	PERCENT of NETWORK	ESTIMATED COST
Defer Maintenance	9.96	11%	\$ -
Routine Maintenance (Crack Sealing)	11.72	14%	\$ 104,398
Preventative Maintenance (Patching/Thin Overlays/Seals)	9.01	10%	\$ 898,625
Minor Rehabilitation (Mill & Overlay)	25.39	29%	\$ 6,086,210
Major Rehabilitation (Reclamation)	31.62	36%	\$ 22,524,331
Totals =			\$ 29,613,564

Article 6 – Proposed Plan

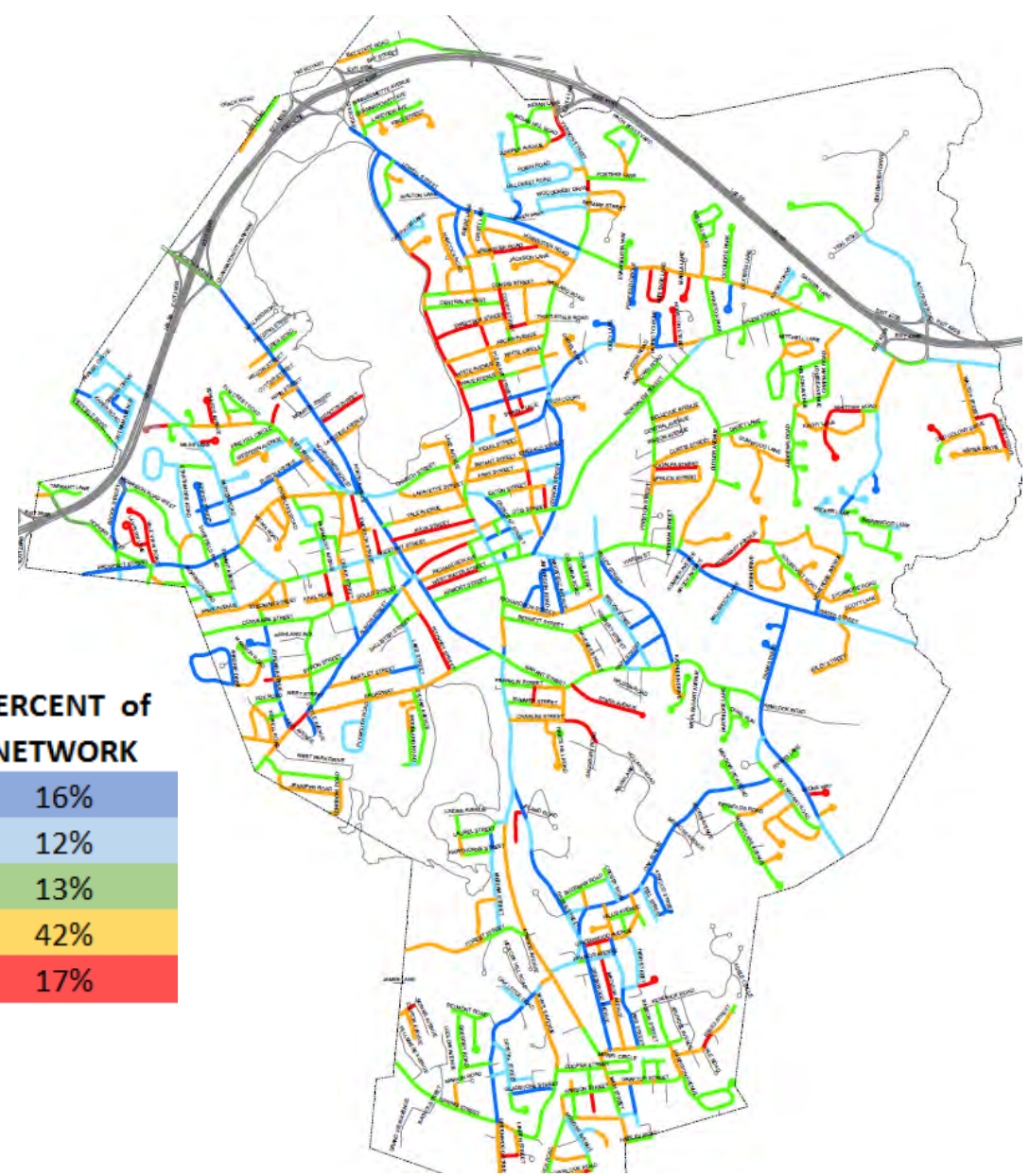


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Townwide Map

Repair Method Status

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Article 6 - Funding Sources (FY21)



Article 6 - Funding Scenarios

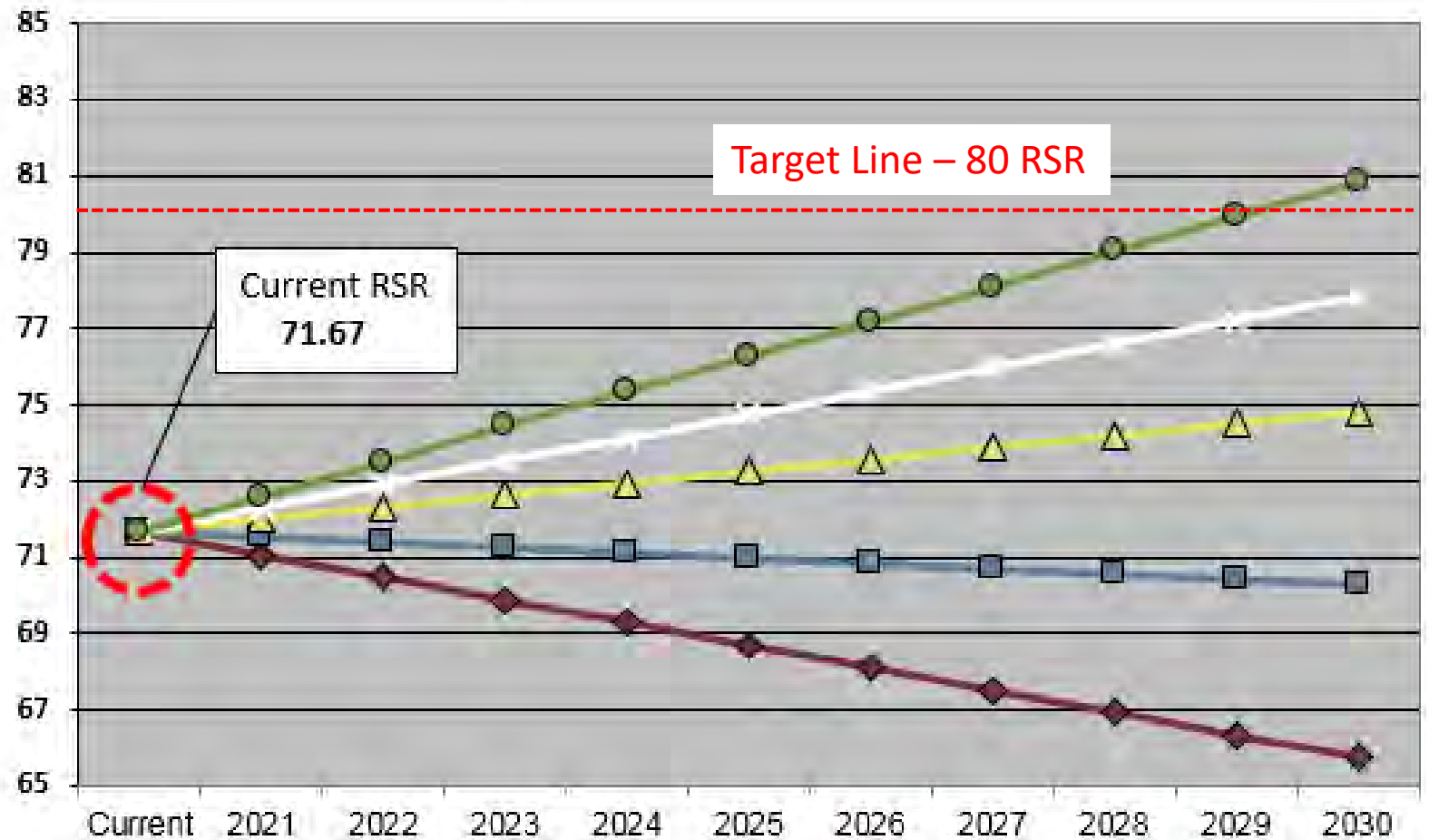
Community Profile

Road Miles = 87.76
Ch. 90 Allotment = \$673,616
Population = 27,000

Funding Scenarios

	Article	Total
Scenario 1*	\$0	\$673,616
Scenario 2	\$750,000	\$1,423,616
Scenario 3	\$1,500,000	\$2,173,616
Scenario 4	\$2,000,000	\$2,673,616
Scenario 5	\$2,500,000	\$3,173,616

*Approximate FY2020 Ch. 90 Allotment



Article 6 - Road Bond

- Proposed \$10 Million road bond expended in \$2.5 Million increments over 4 years.
- Creating a substantially equal effect to the tax levy when compared to FY20.
 - \$750,000 from the Roads Article
 - \$125,000 Sidewalk Capital Article

Article 6 - Conclusions

- This approach could allow for a **reduction in the Annual Debt Service** appropriation in years to come
- This approach could allow for a **gradual build up of the DPW budget** dedicated to roads and sidewalks
- This approach will **build up the debt service fund** for future projects
- This approach will **substantially improve the condition** of the Town's roadway and sidewalk networks and **reduce current project backlog**.

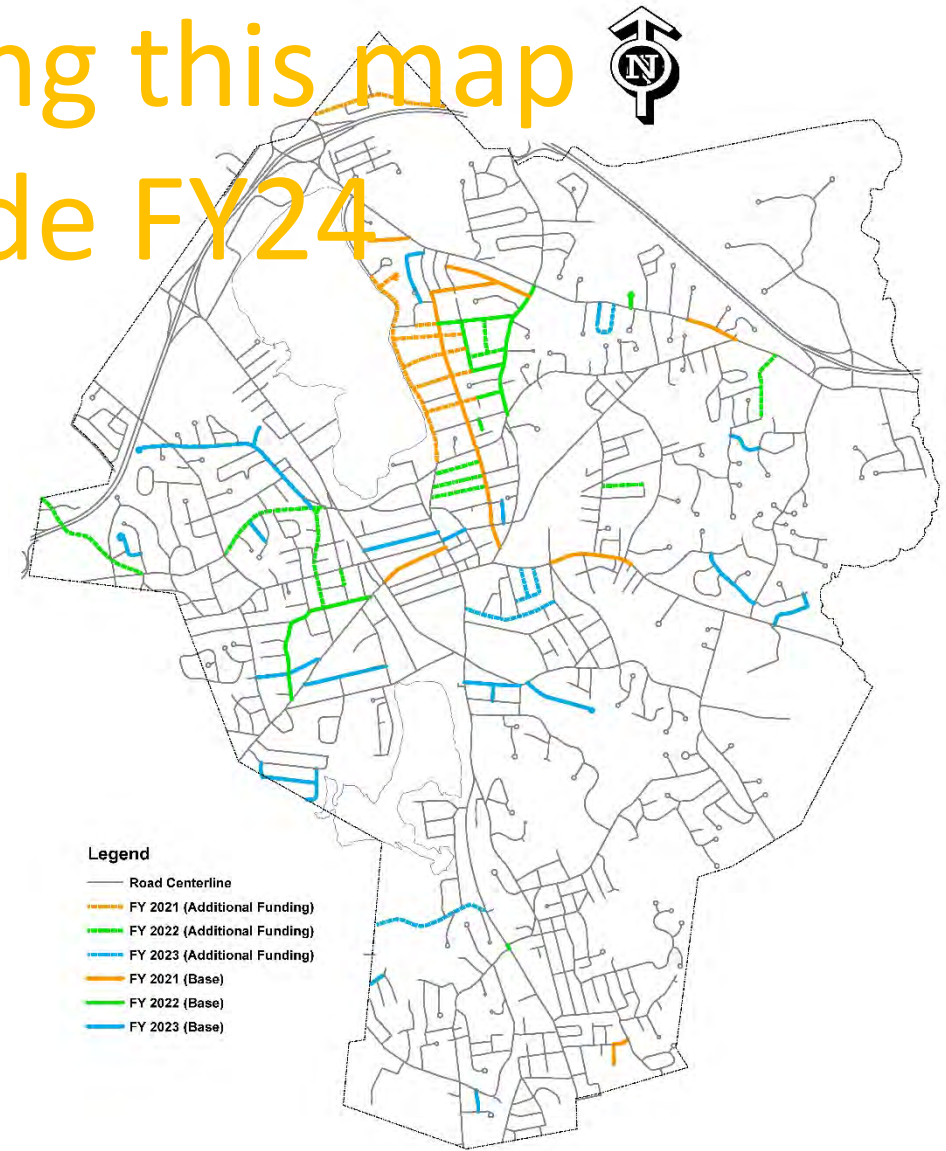
Article 6 I am updating this map

FY21-FY24 to include FY24

Targeted Paving Plan

\$2.5MM Annual Investment

- FY21 – 4.27 miles of road rehabilitated
- FY22 – 5.55 miles of road rehabilitated
- FY23 – 4.26 miles of road rehabilitated

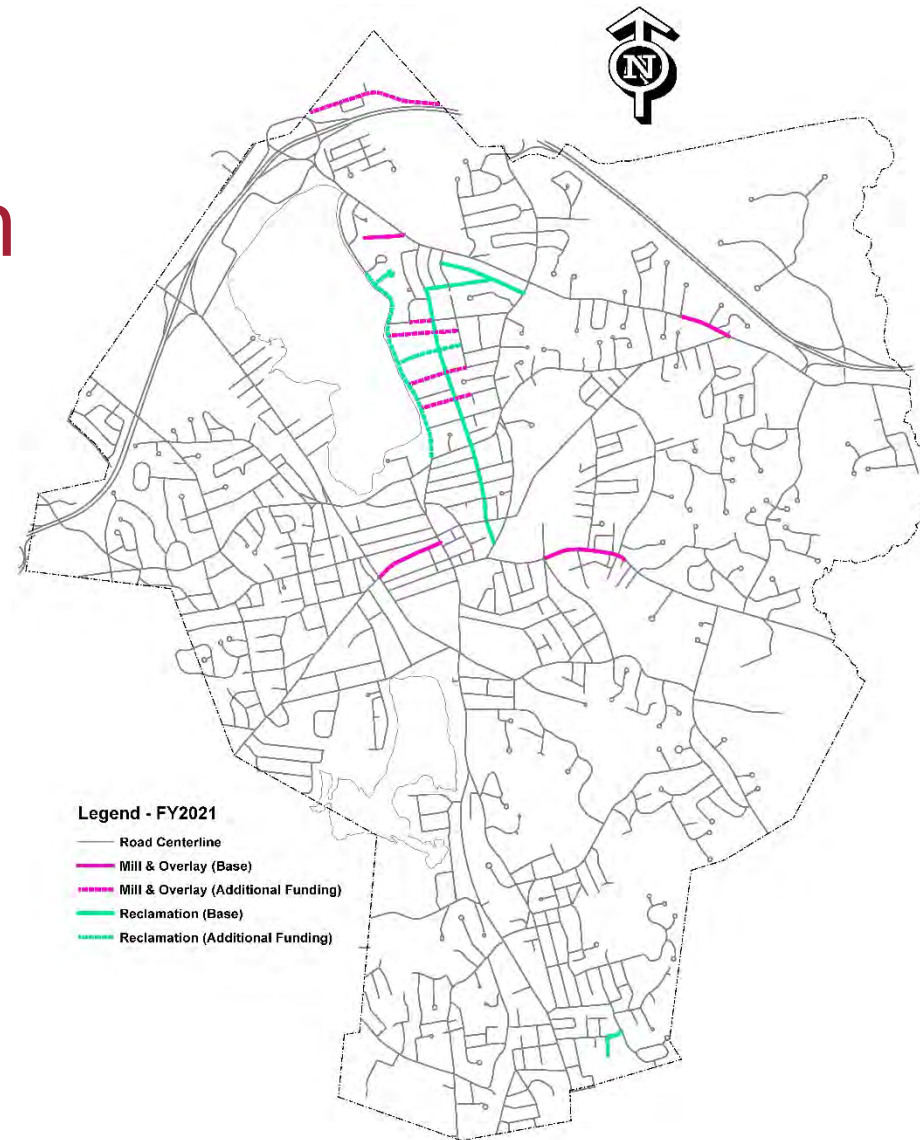


Article 6 - FY21

Preliminary Paving Plan

\$2.5MM Investment

<u>STREET</u>	<u>FROM</u>	<u>TO</u>
PLEASANT STREET	SALEM ST	BREWSTER RD
GRAFTON STREET	MAPLE AVE	HARRISON AVE
MAPLE AVENUE	GRAFTON ST	DEAD END
ALBION STREET	MAIN ST	NORTH AVE
FORRESTER ROAD	DRURY LN	VERNON ST
BREWSTER ROAD	PLEASANT ST	FORRESTER RD
WATER STREET	MELVIN ST	BENTLEY ST
LOWELL STREET	SALEM ST	DEXTERS LN
WALTON LANE	LOWELL ST	DEAD-END
MAIN STREET	CARRIAGE LN	SALEM ST
WAVE AVENUE	MAIN ST	WAVE TER
WHITE AVENUE	MAIN ST	PLEASANT ST
ABORN AVENUE	MAIN ST	COURT ST
SWEETSER STREET	MAIN ST	COURT ST
CENTRAL STREET	MAIN ST	PLEASANT ST
CORDIS STREET	FLANDERS LN	PLEASANT ST
BAY STATE ROAD	READING TL	LYNNFIELD TL
LAKE SHORE DRIVE	MAIN ST	CUL DE SAC



Questions??



Wakefield Public Works

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Town Engineer

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