

Town of Southington, CT Pavement Management Study



Presented by: Vanasse Hangen Brustlin, Inc.
March 12, 2012





Presentation Overview

- Pavement Management Concepts
- Pavement Management in Southington
 - ❖ Current Conditions & Backlog
 - ❖ Budget Analysis
- Recommendations

Pavement Management Concepts



What is Pavement Management?

- The practice of planning for pavement maintenance and rehabilitation with the goal of maximizing the value and life of a pavement network.

Otherwise known as
“Getting the Biggest Bang for Your Buck”

Pavement Management Concepts



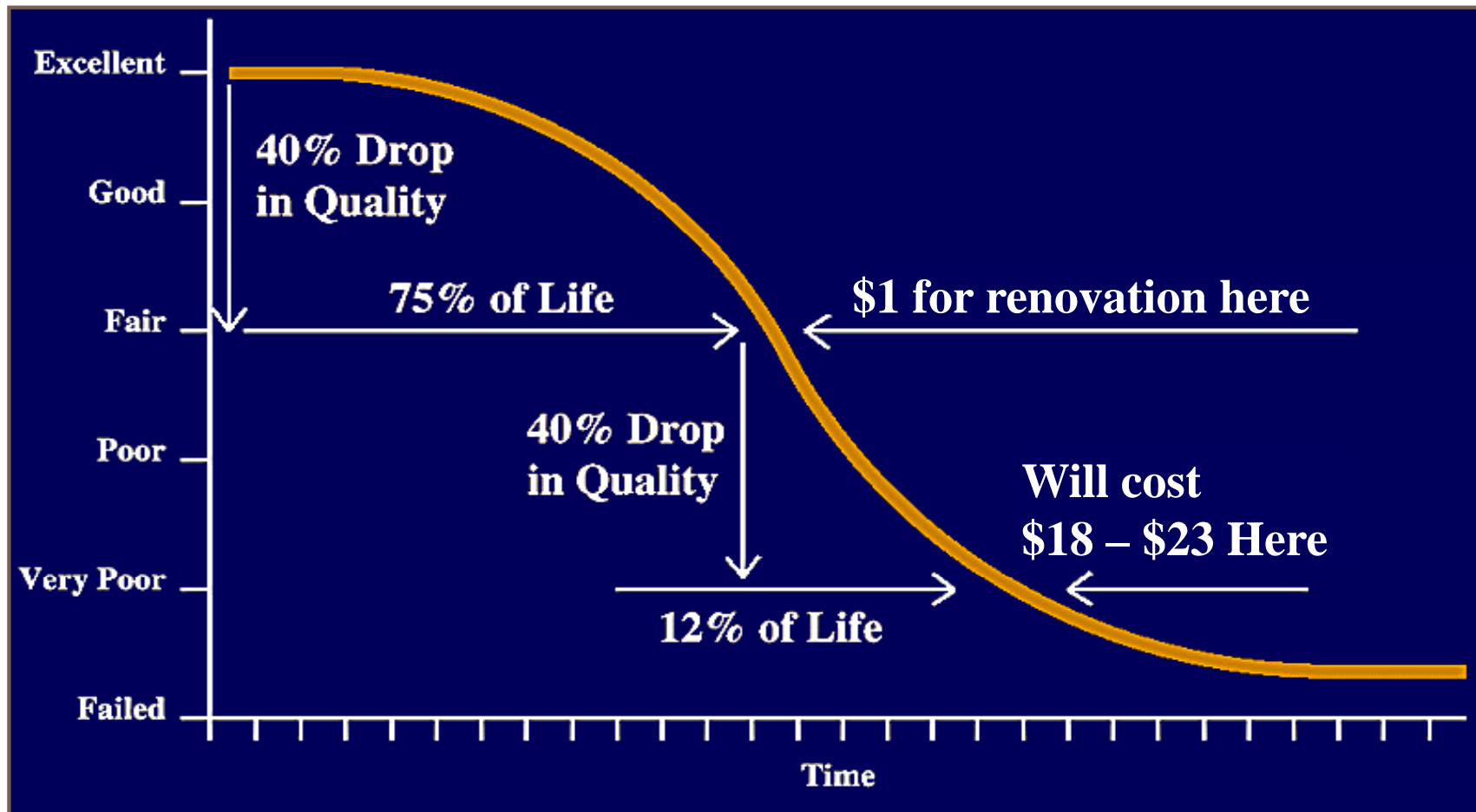
The Process

- Pavement Section Inventory
- Pavement distress identification and quantification
(*Visual Inspection Only*)
- Pavement Condition Index (PCI) calculation on a 0 - 100 scale
- Define Treatment Options and Costs
- Test various Budget Scenarios
- Develop list of candidate projects
- Apply engineering and local judgment to define annual road program



Pavement Management Concepts

Pavement Deterioration Curve





Pavement Management Concepts

No Immediate Maintenance (PCI 93-100)

Mount Vernon Road



Pavement Management Concepts

Routine Maintenance Condition (PCI 86-92)

Saddlebrook Path

Treatment options – Crack sealing, patching



Pavement Management Concepts

Preventive Maintenance Condition (PCI 75-85)

Town of Southington - Pavement Management



Westbrook Road

Treatment options – Crack sealing, surface seal, thin overlay



Pavement Management Concepts

Structural Improvement Condition (PCI 57-74)

Sun Valley Drive

Treatment options – Overlay or Mill & Overlay



Pavement Management Concepts

Base Rehabilitation Condition (PCI 0-56)

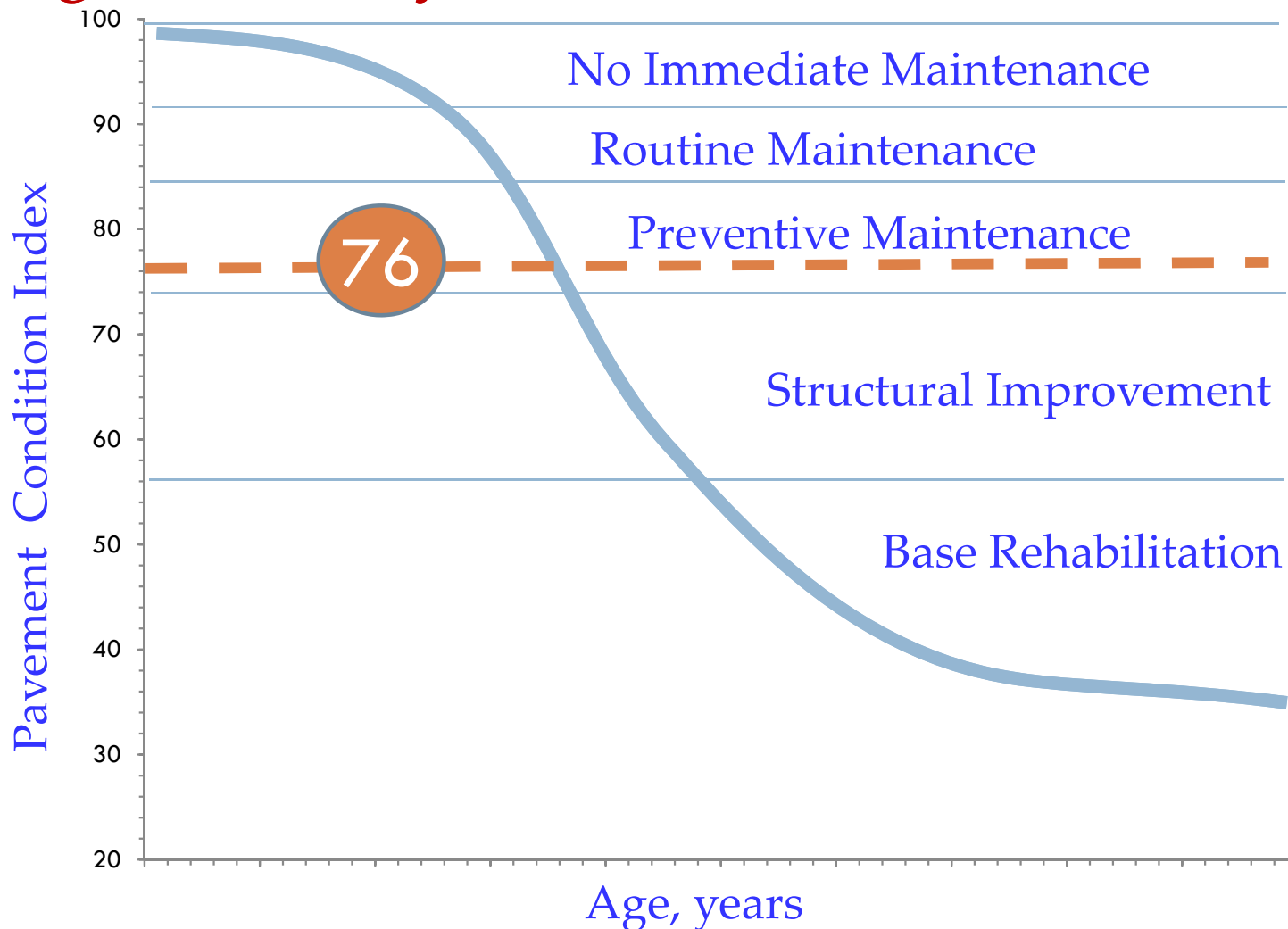
School Street

Treatment options – Reclamation, Reconstruction



Pavement Management in Southington

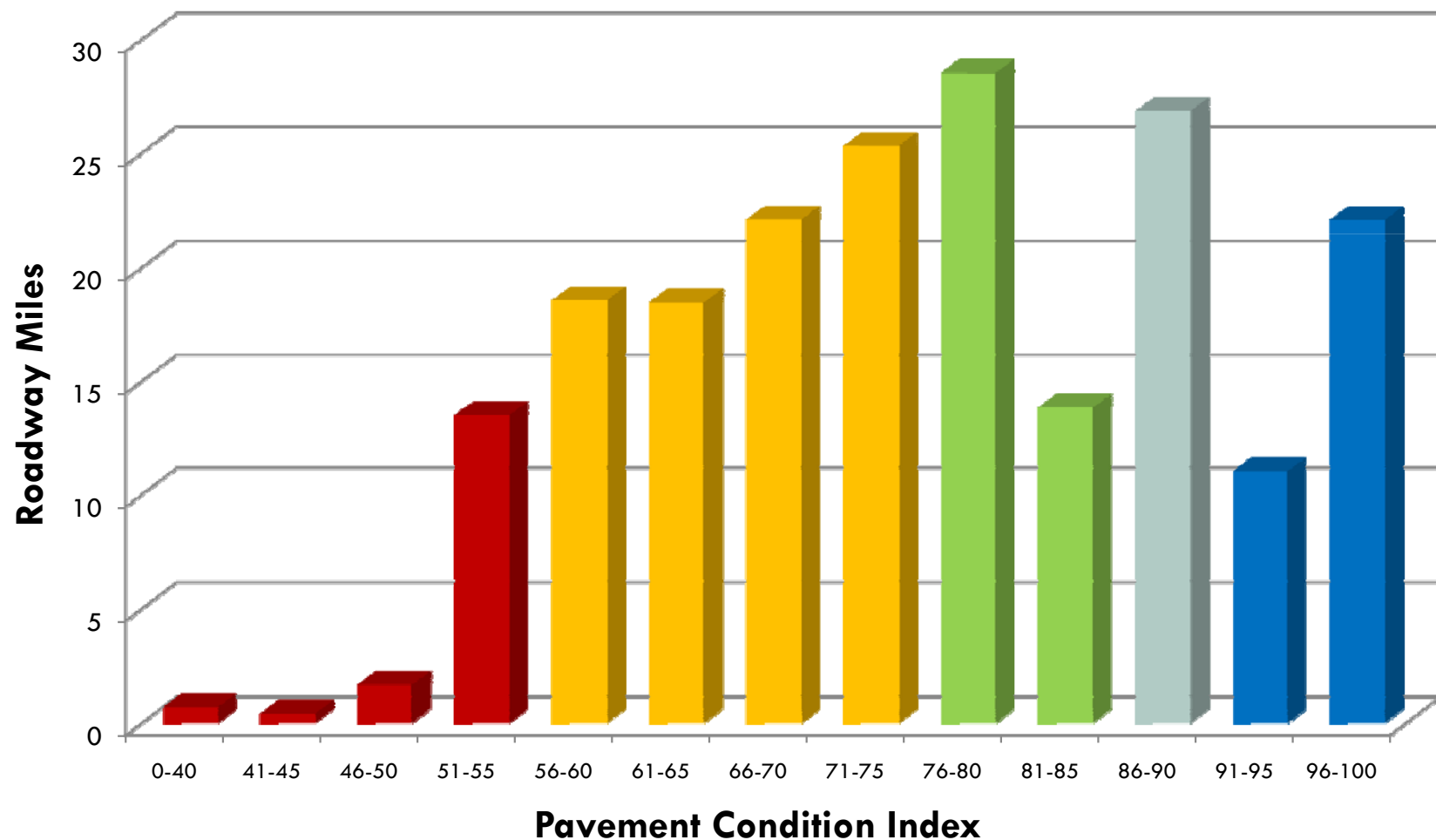
Average Roadway Pavement Condition Index = 76



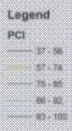
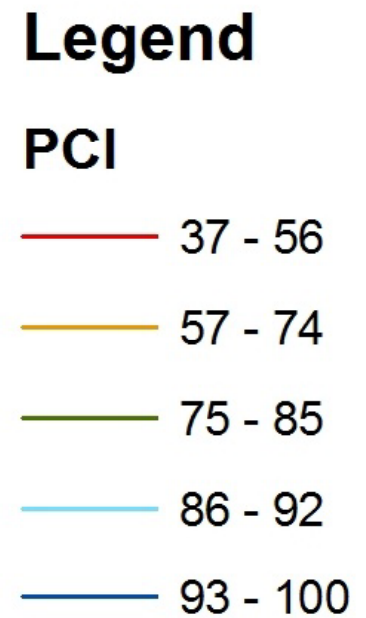
Pavement Management in Southington



Roadway Pavement Condition Index Distribution



© 2014 Pearson Education, Inc. or its affiliate(s). All rights reserved.



Pavement Management in Southington



Current Roadway Pavement Backlog

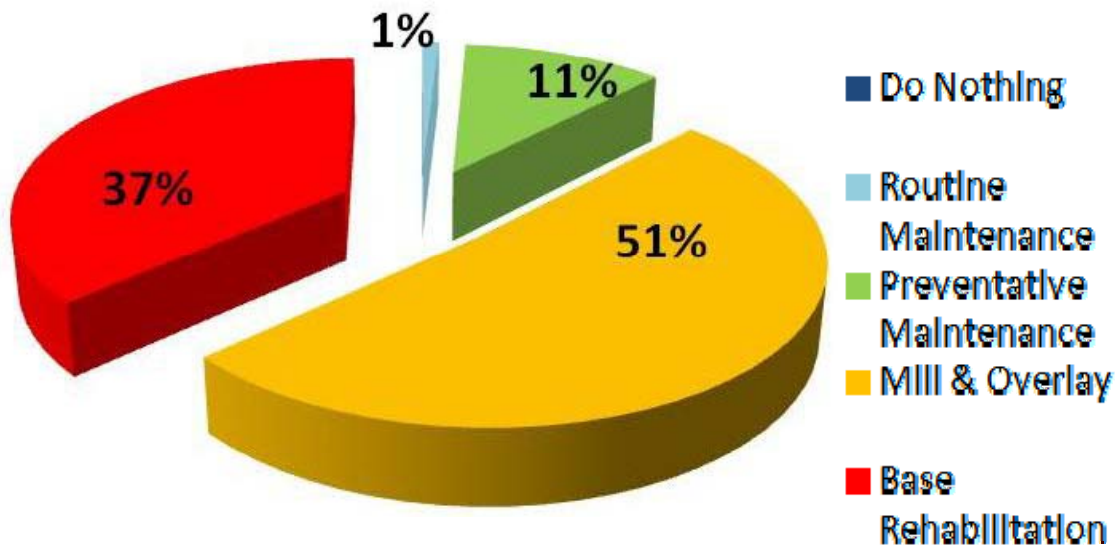
Pavement Treatment Band	Miles	Cost
Do Nothing	33.1	\$0
Routine Maintenance	26.8	\$430,000
Preventative Maintenance	50.7	\$5,280,000
Mill & Overlay	69.8	\$23,690,000
Base Rehabilitation	22.4	\$17,040,000
Pavement totals:	202.8	\$46,440,000



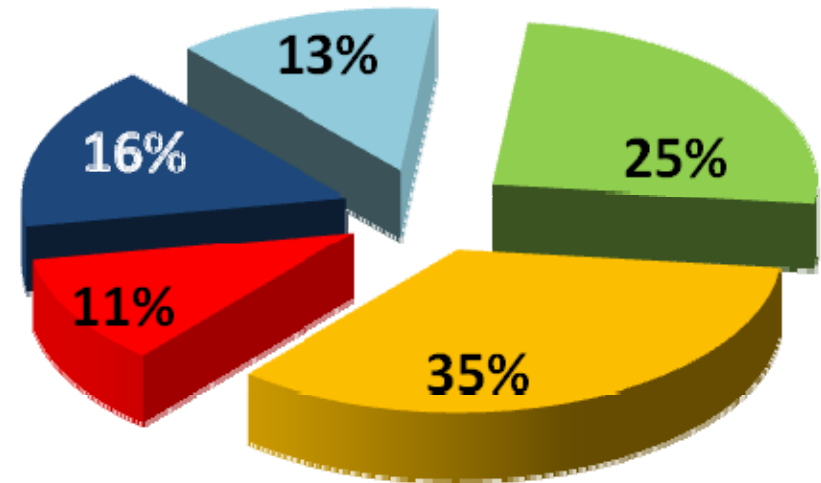
Pavement Management in Southington

Current Roadway Pavement Backlog Summary

COST



MILES



Pavement Management in Southington



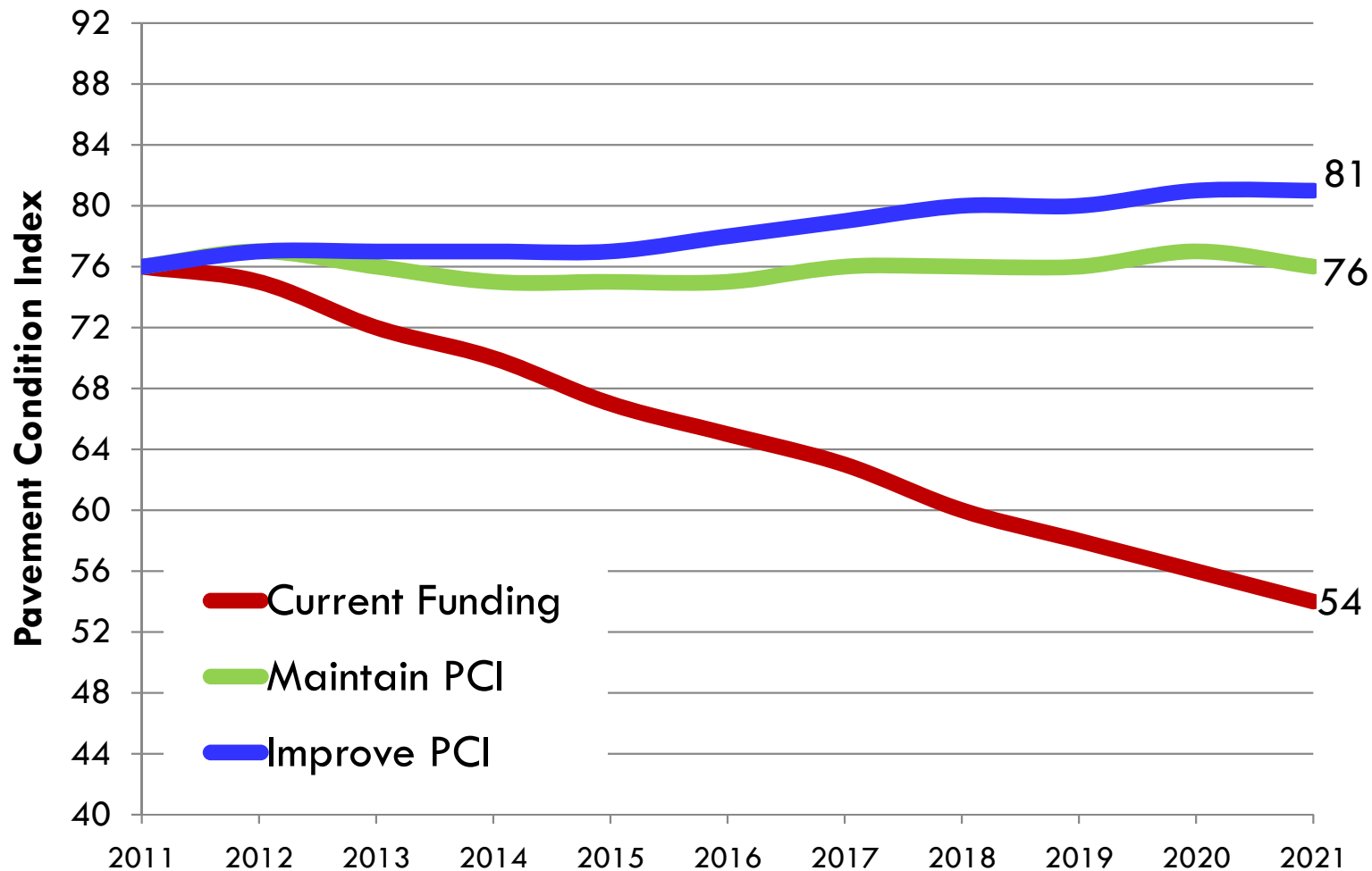
Funding Scenarios

- ❖ Current Funding - \$1.0 M/yr for 10 years
(PCI decreases to 54)
- ❖ Maintain PCI - \$4.5 M/yr for 10 years
(PCI remains at 76)
- ❖ Improve PCI - \$5.5 M/yr for 10 years
(PCI increases to 81)



Pavement Management in Southington

Future Roadway Pavement Condition Comparison





Pavement Management in Southington

Annual Maintenance Cost Comparison

Annual Road Budget

\$1,000,000

Annual Auto Maintenance \$\$\$

\$125

=

Total Value of Road Network

\$160,000,000

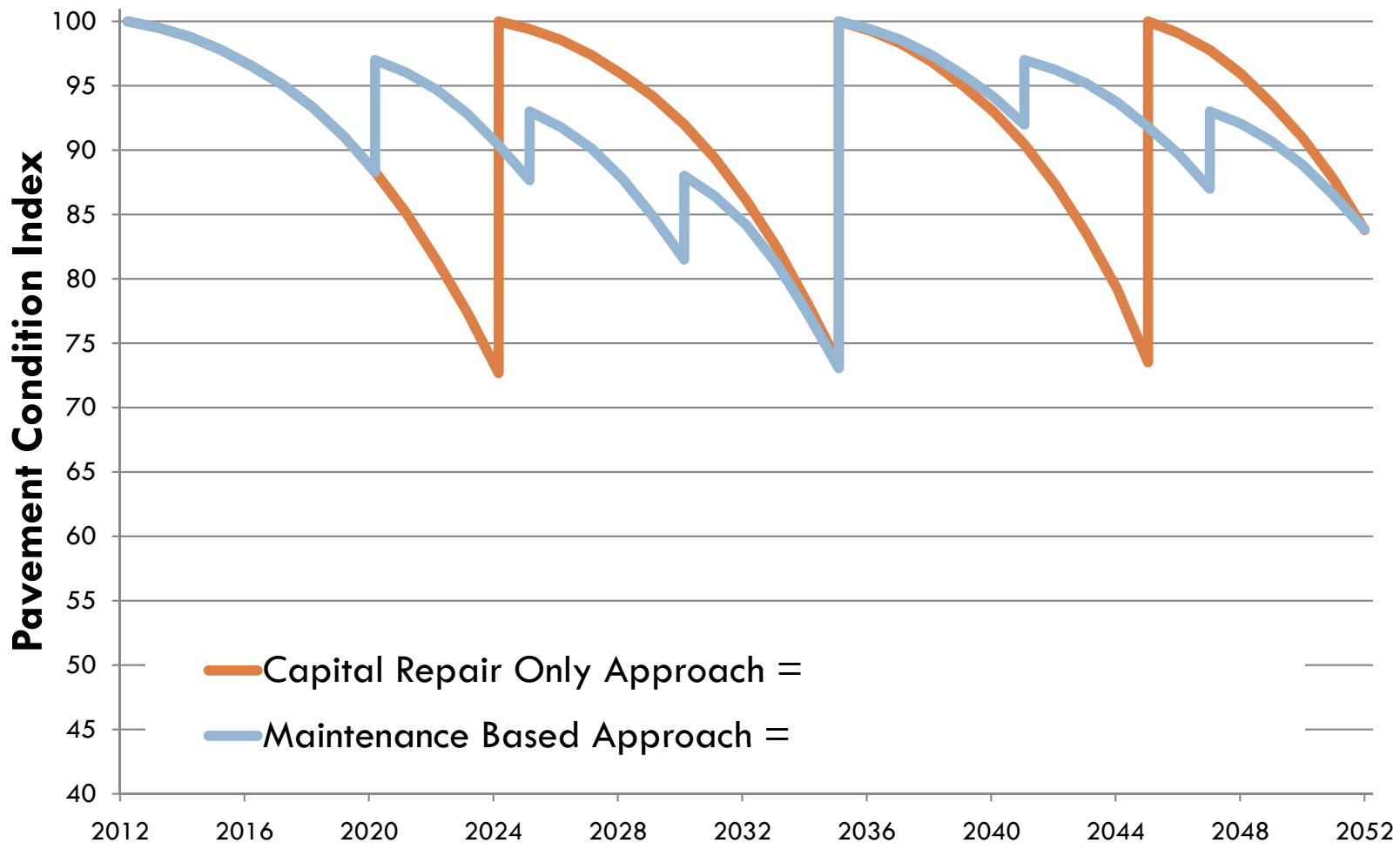
Value of a New Car

\$20,000



Pavement Management in Southington

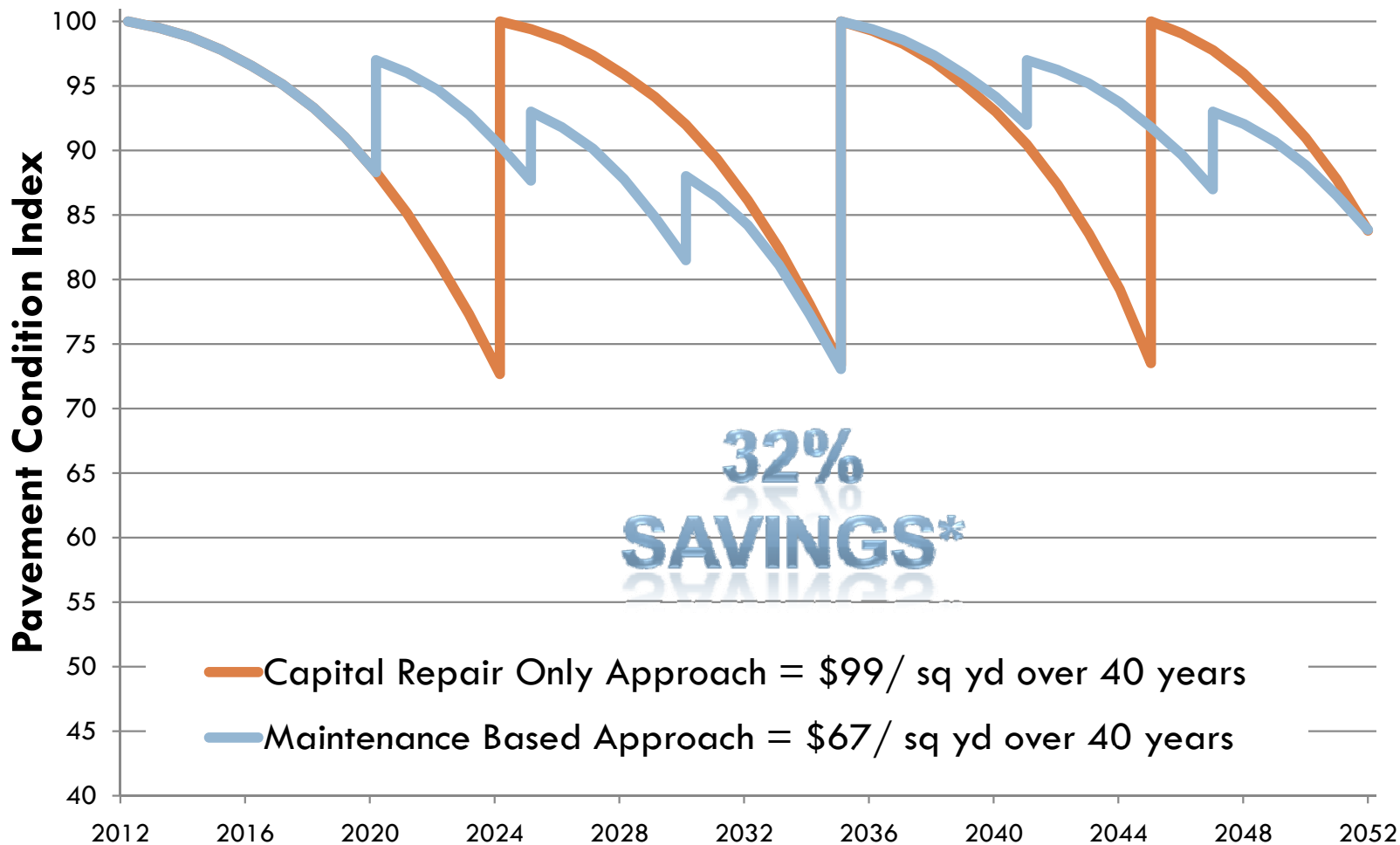
Cost Comparison of 2 Roadway Repair Practices (Example below of a typical street)





Pavement Management in Southington

Cost Comparison of 2 Roadway Repair Practices (Example below of a typical street)



* Costs in today's dollars



Annual Road Program Development

- ❑ Determine effective funding levels
- ❑ System recommends roads of highest benefit to the Town based on:
 - ❖ High Traffic Volume
 - ❖ Lower Repair Cost
 - ❖ Longer Repair Life Expectancy
 - ❖ Poorer Road Conditions
- ❑ The system allocates annual budget to high benefit roads and analyzes the effect on overall town wide conditions.
- ❑ Engineering judgment is used to adjust the program to reflect coordination with other projects, neighborhood programs, mobilization efficiencies, etc.



Recommendations

- Identify pavement condition goals
- Budget adequate funds to achieve those goals
- Use the Right Tool at the Right Time in the Right Place
- Implement full spectrum of pavement treatments
- Continue to maintain updated pavement management data
- Continue to utilize pavement management system to help plan optimal road program

Town of Southington, CT Pavement Management Study

Questions and Answers

Presented by: Vanasse Hangen Brustlin, Inc.
March 12, 2012

