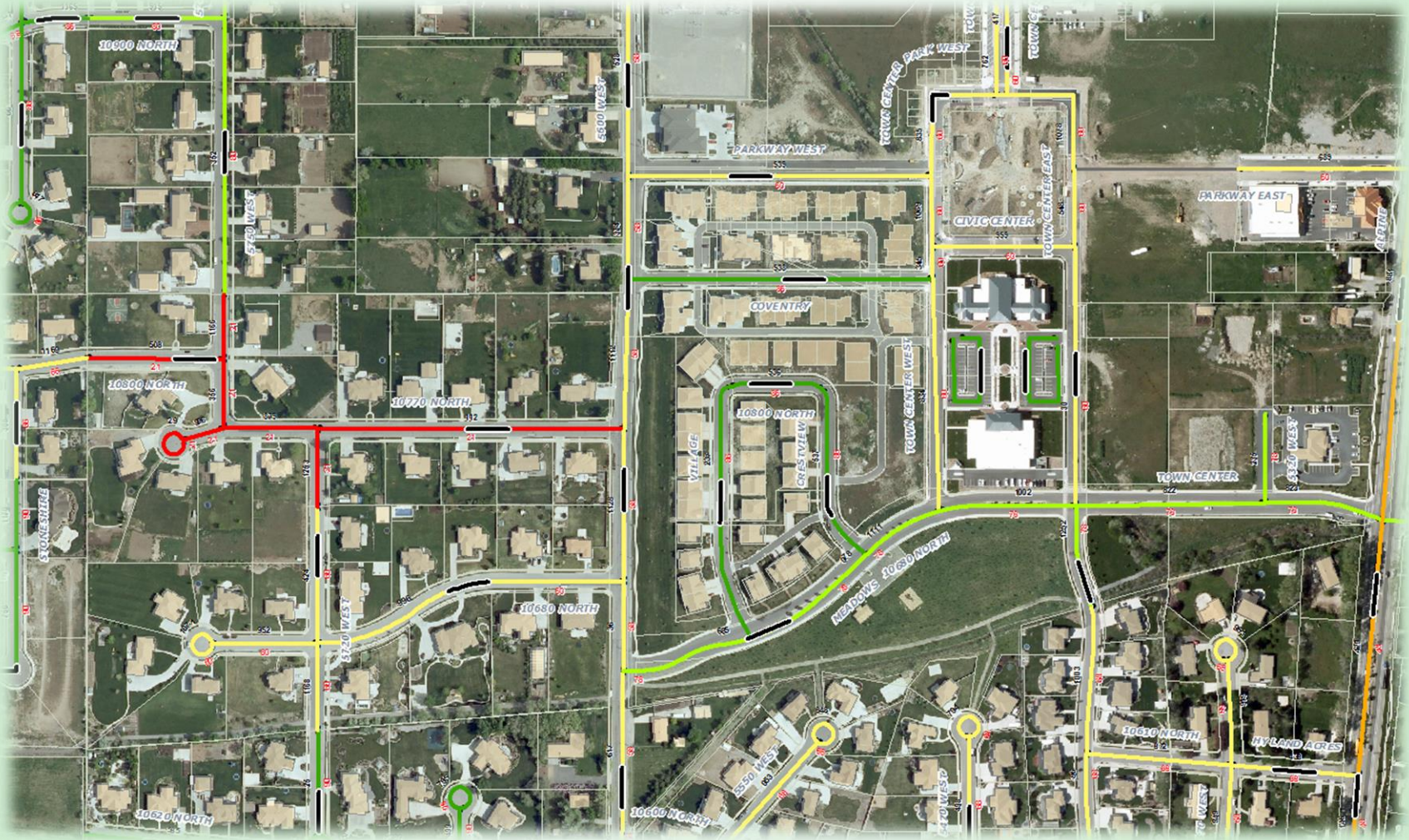
Pavement Preservation Planning

The Process

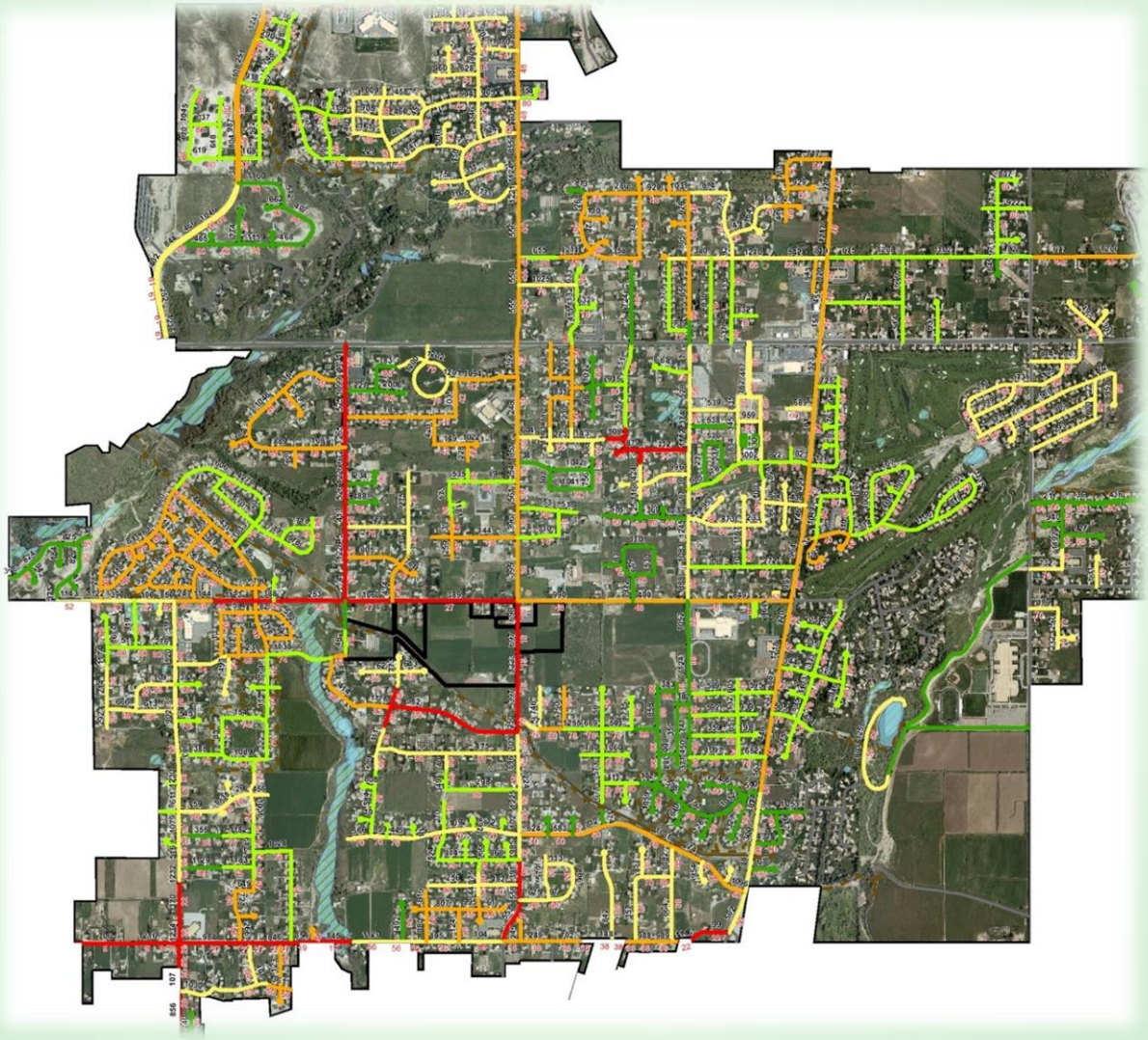
- ASTM (American Society for Testing and Materials) Standard Practice for Roads and Parking Lots Pavement Condition Index Surveys (D 6433-03)
- Inventory the pavement in the field (170 sections and 550+ inventory locations)
- GIS performs analysis (calculations) and provides visual results
- Spatial IM Software
- Cartégraph Software

Select Inventory Sample Locations



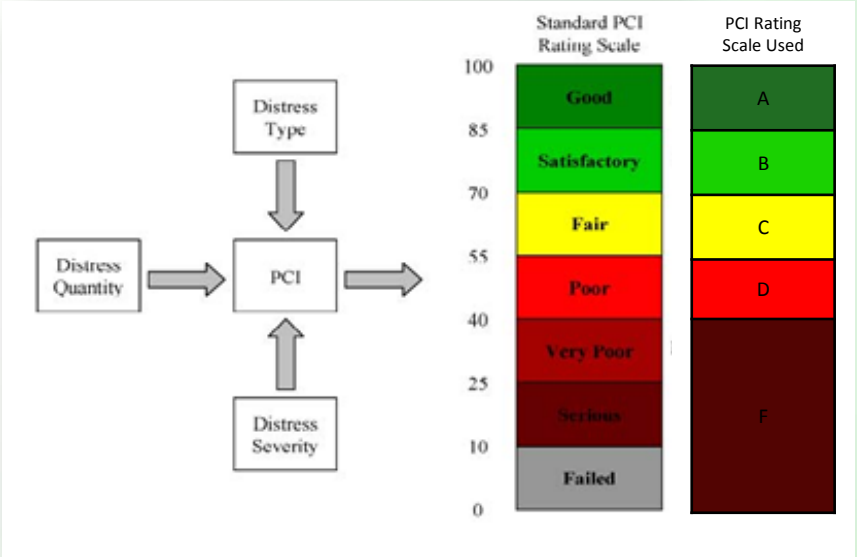
Visualize the Conditions

HIGHLAND CITY



PCI Value

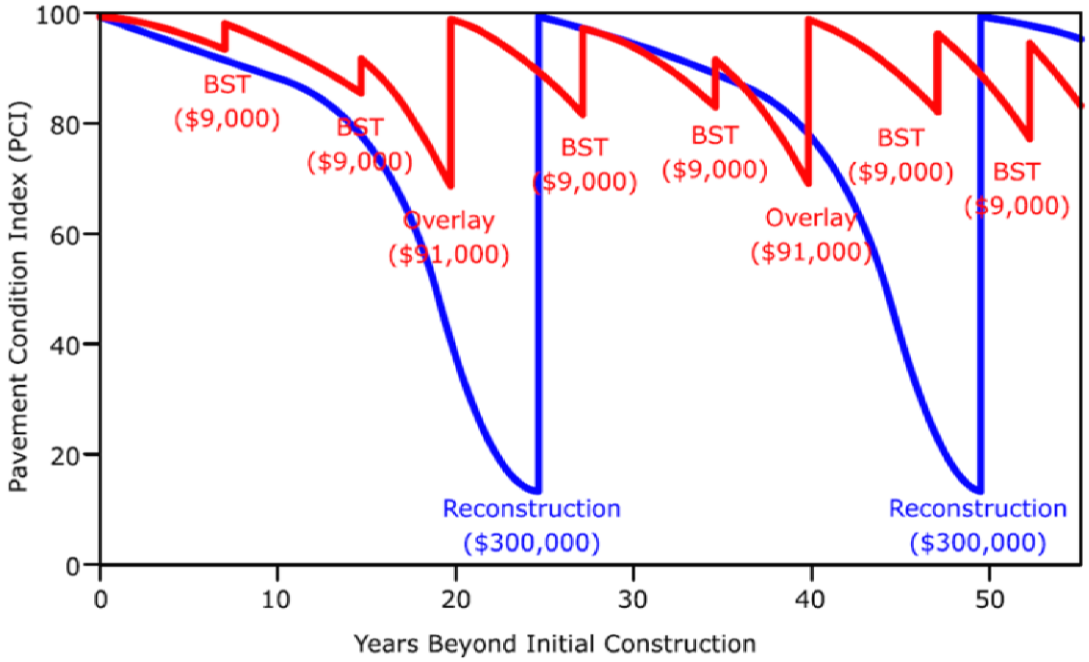
- Pavement Condition Index – a numerical rating of the pavement condition that ranges from 0 – 100 with 0 being the worst possible condition and 100 being the best possible condition.



Pavement Management Theory

Effects of Maintenance on a Pavement Life Cycle

Comparisons based on the cost per mile of a 2-lane county road



Click a Yellow Button to View the Associated Graph

- **PCI over time for the No Maintenance Option**
- **PCI over time for the Maintenance Option**
- **Comparison of PCI over time for both options**
- **Comparison of BPR over time for both options**

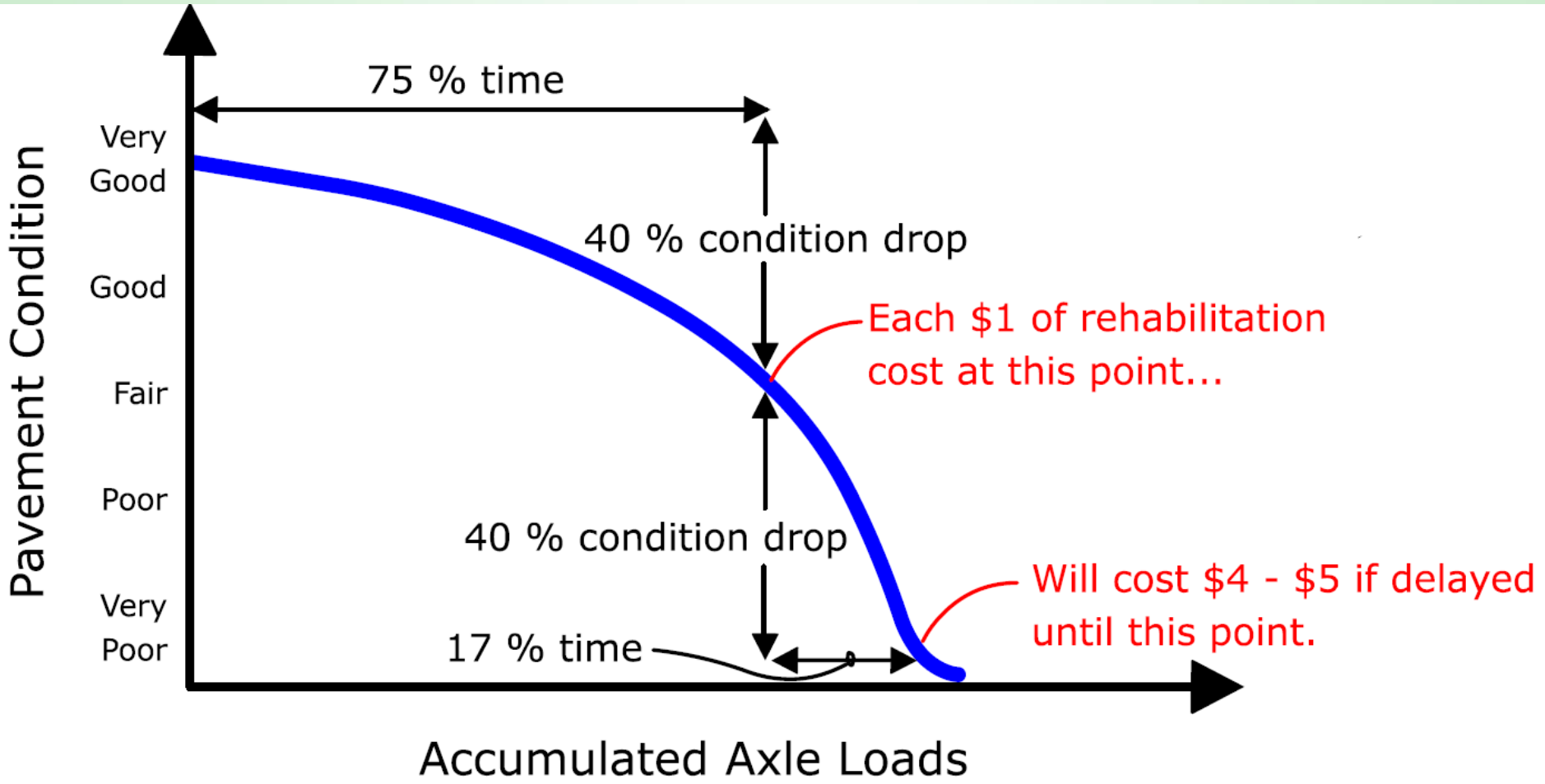
No Maintenance
Total cost = $600,000 per lane mile

Maintenance
Total cost = $276,000 per lane mile

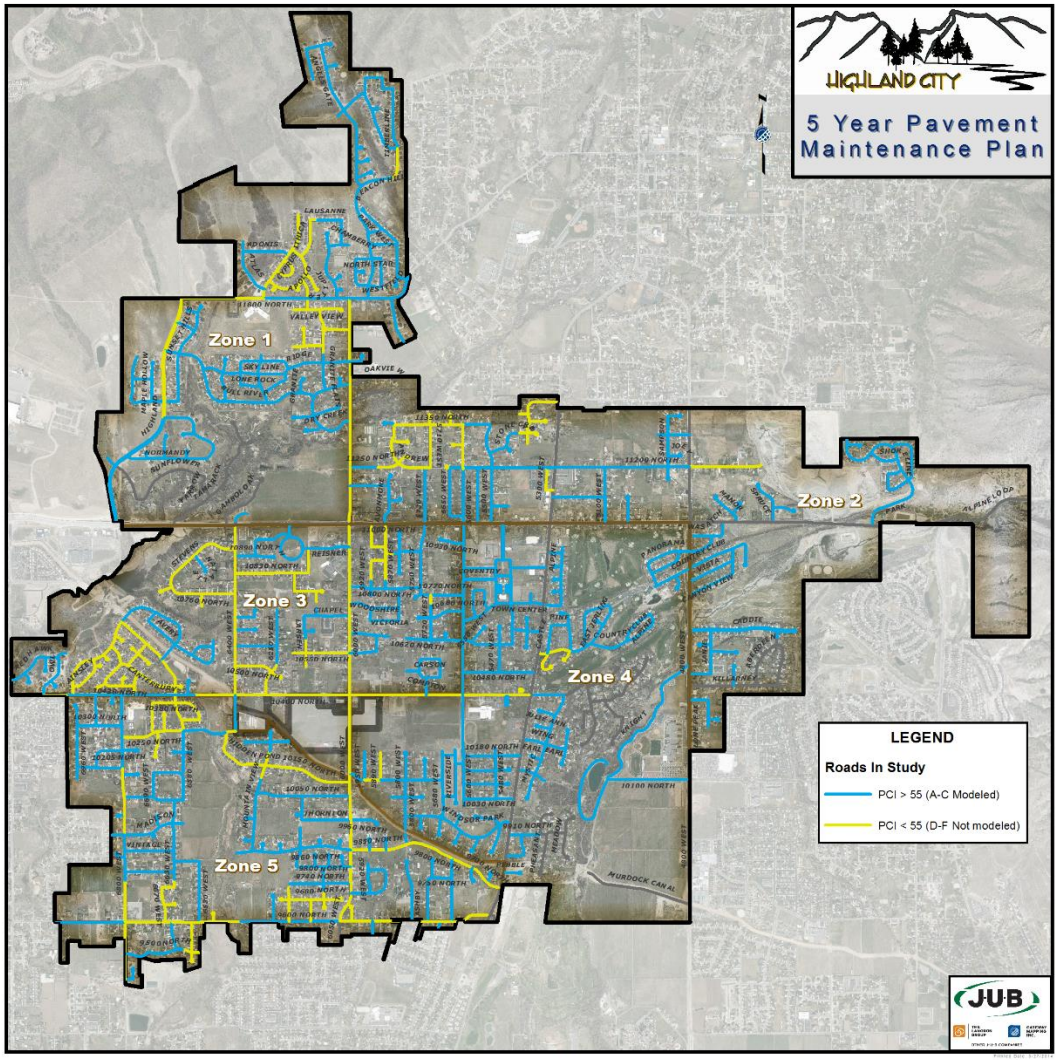
Pavement Condition Index (PCI)
A 100-point scale used to indicate relative pavement condition. Similar to the 5-point present serviceability index (PSI).

Based on a presentation by Don Newell (Multnomah County, OR) at the Spring 2002 Northwest Pavement Management Association Conference, Spokane, WA. April 8-9, 2002.

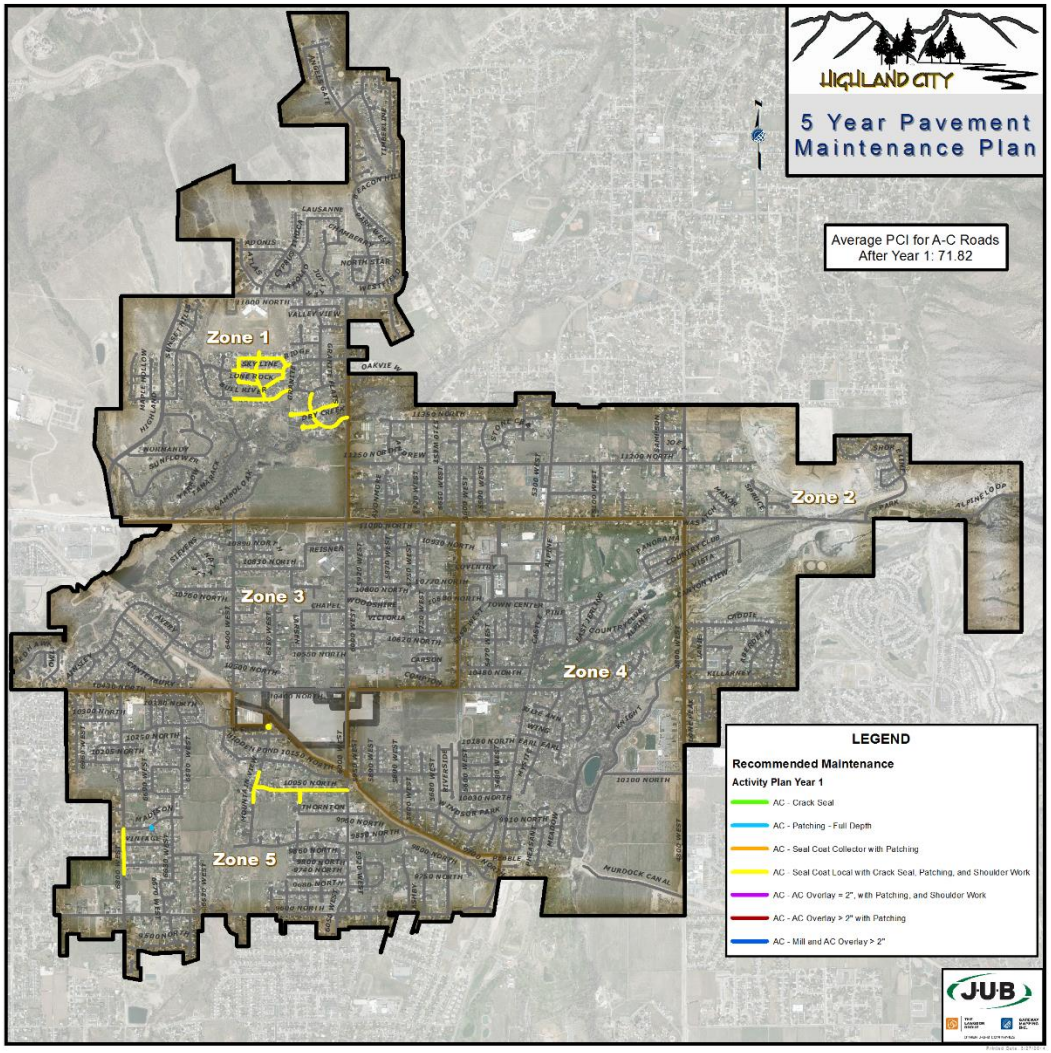
Pavement Management Theory



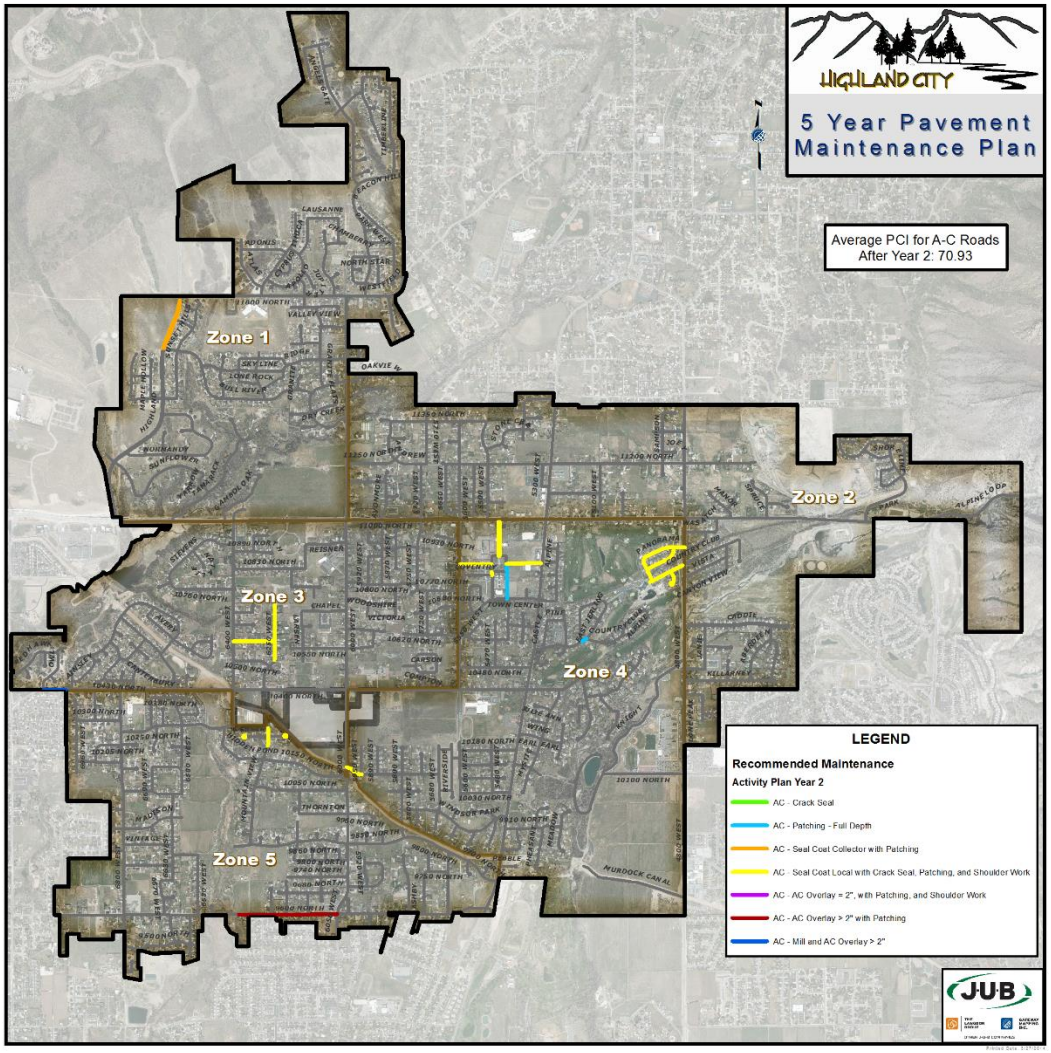
Modeled Roads



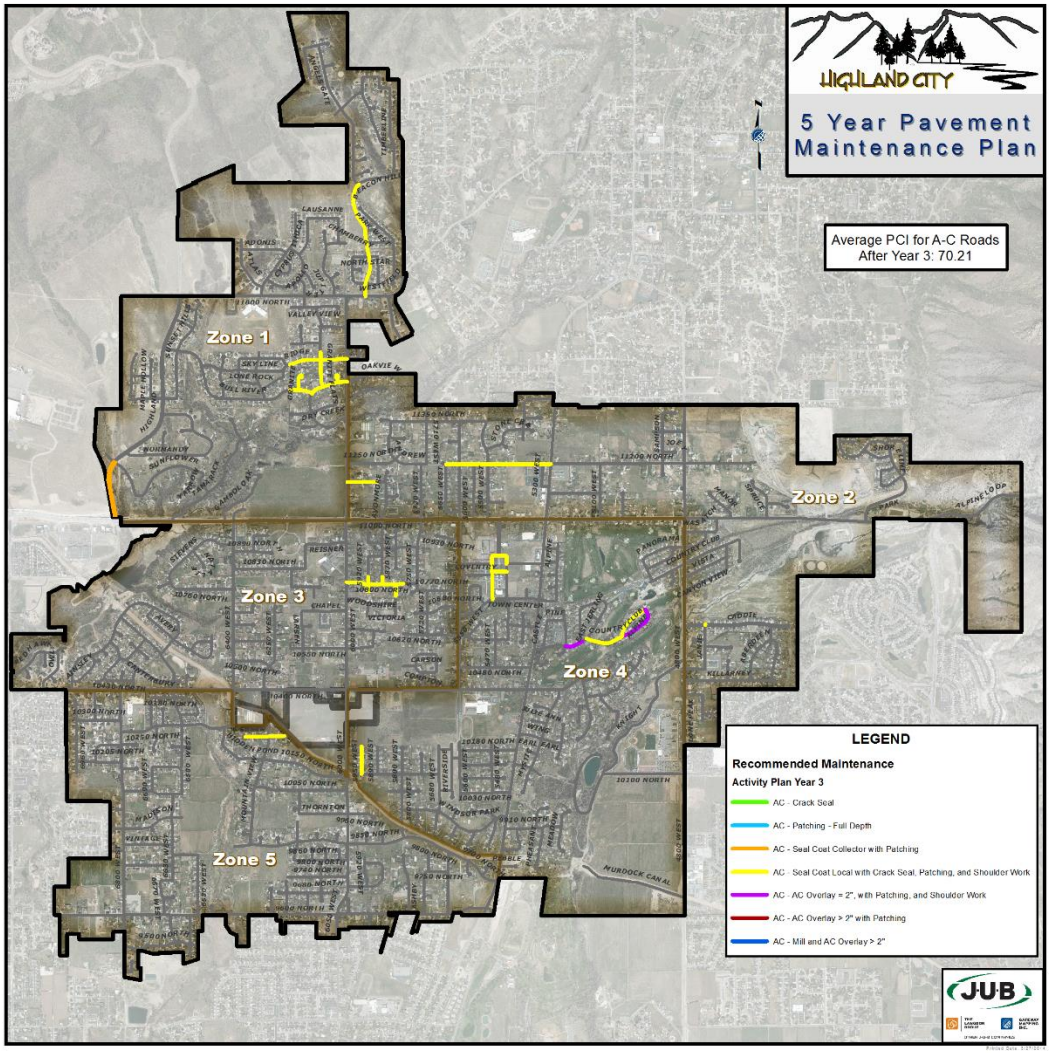
Results: Recommended Treatments Year 1 - $500,000



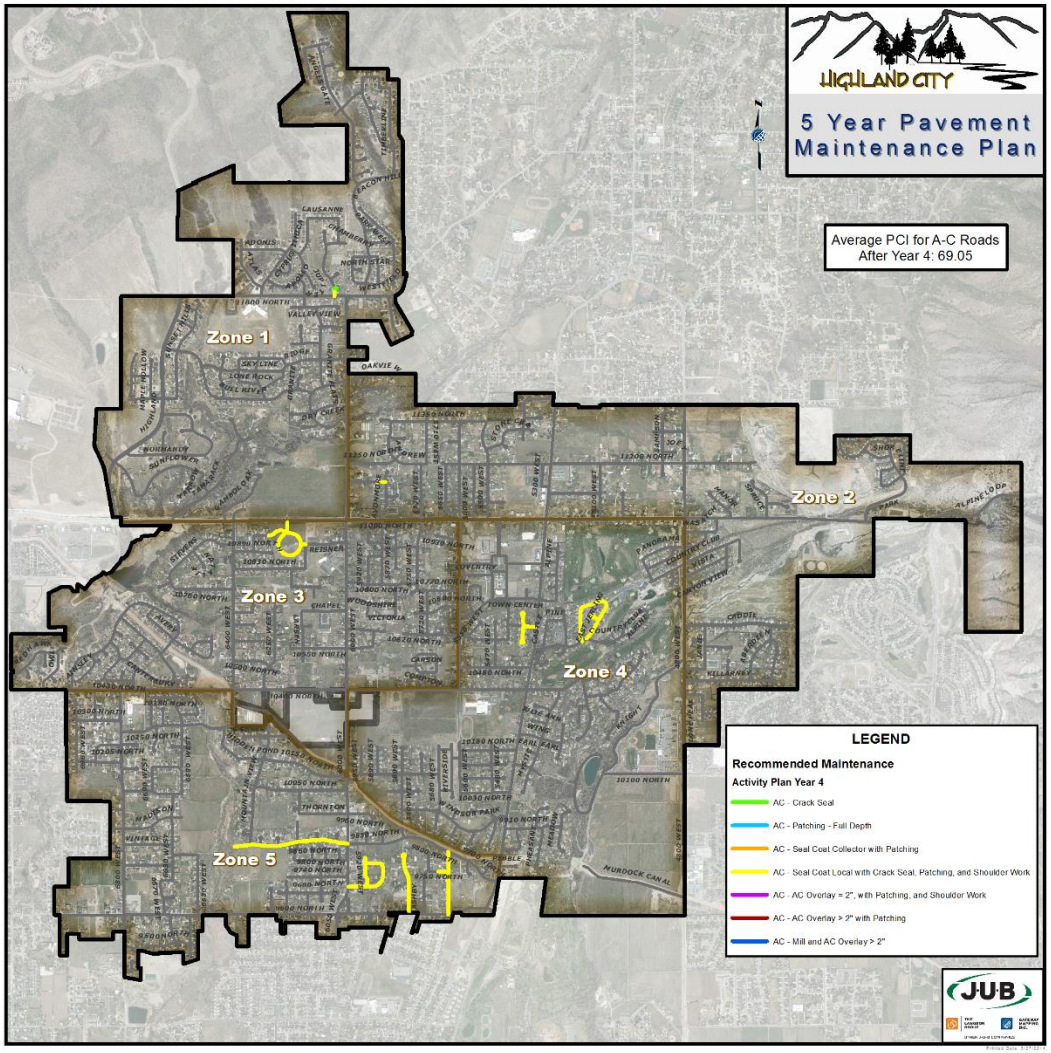
Results: Recommended Treatments Year 2 - $500,000



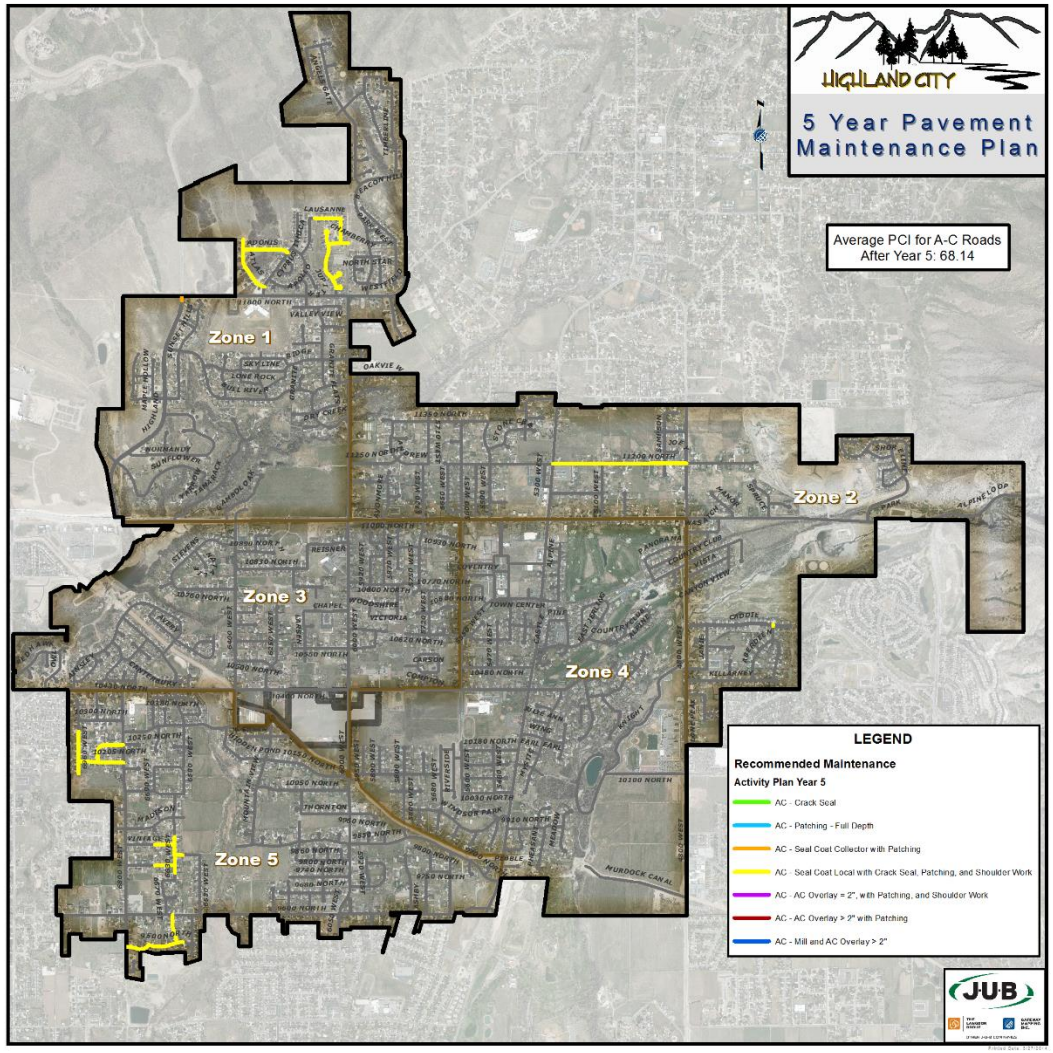
Results: Recommended Treatments Year 3 - $500,000



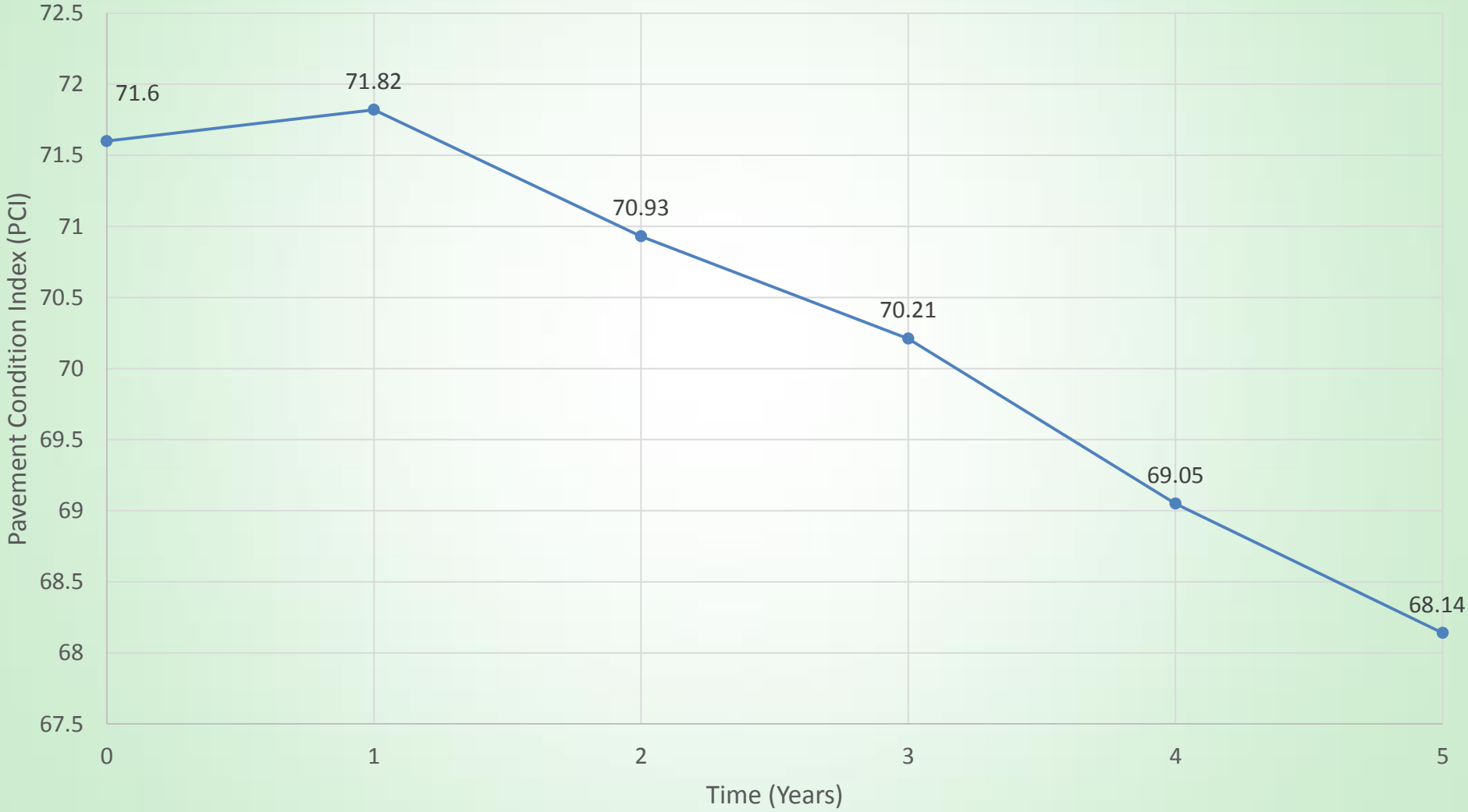
Results: Recommended Treatments Year 4 - $500,000



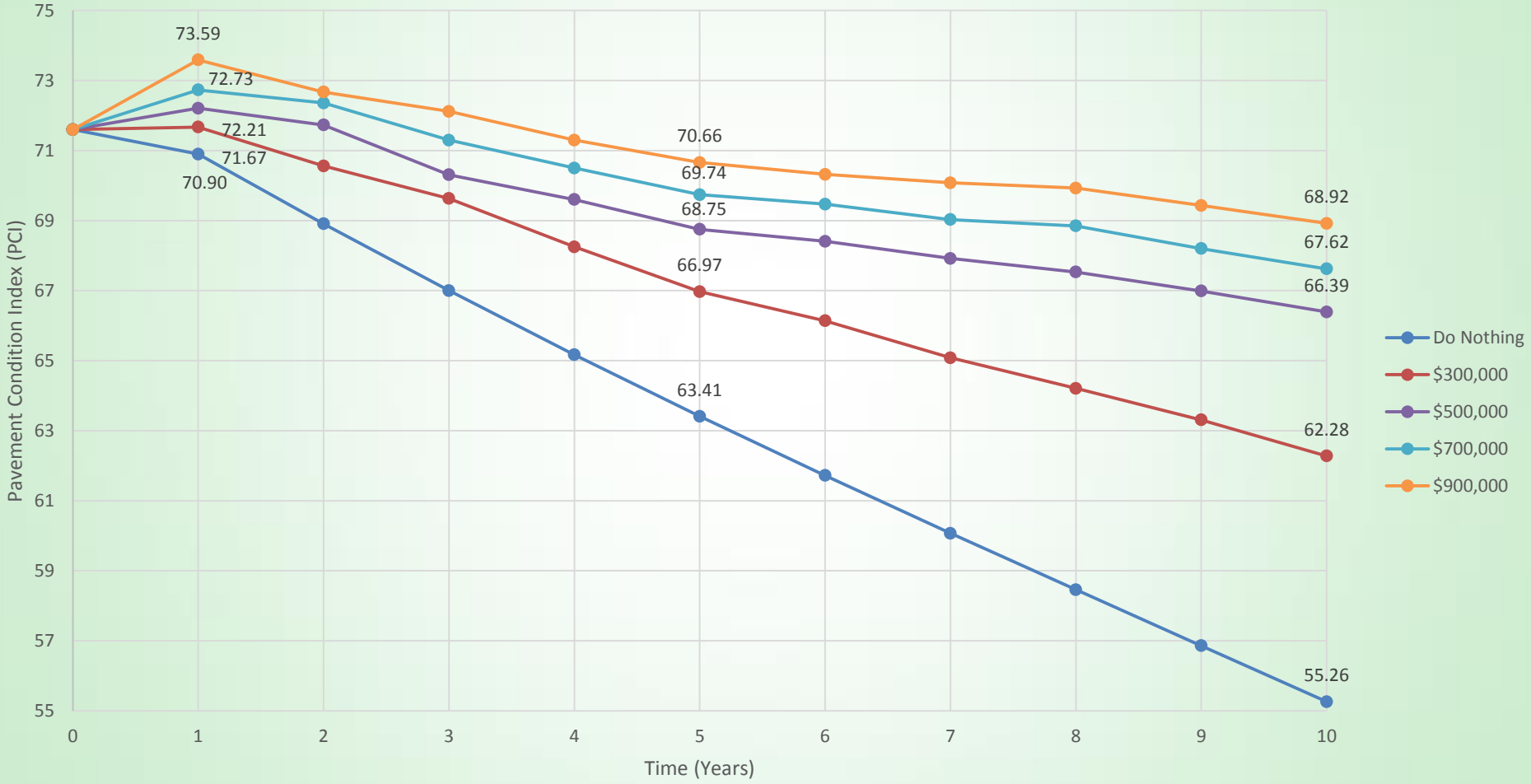
Results: Recommended Treatments Year 5 - $500,000



Results: $500,000/Year For 5 Years



Results: Effect of Budget on PCI Over 10 Years



Questions?