Town of Kittery
Department of Public Works

PAVEMENT MANAGEMENT PROGRAM
OVERVIEW AND SUMMARY OF FINDINGS

BETA
ENGINEERING SUCCESS TOGETHER

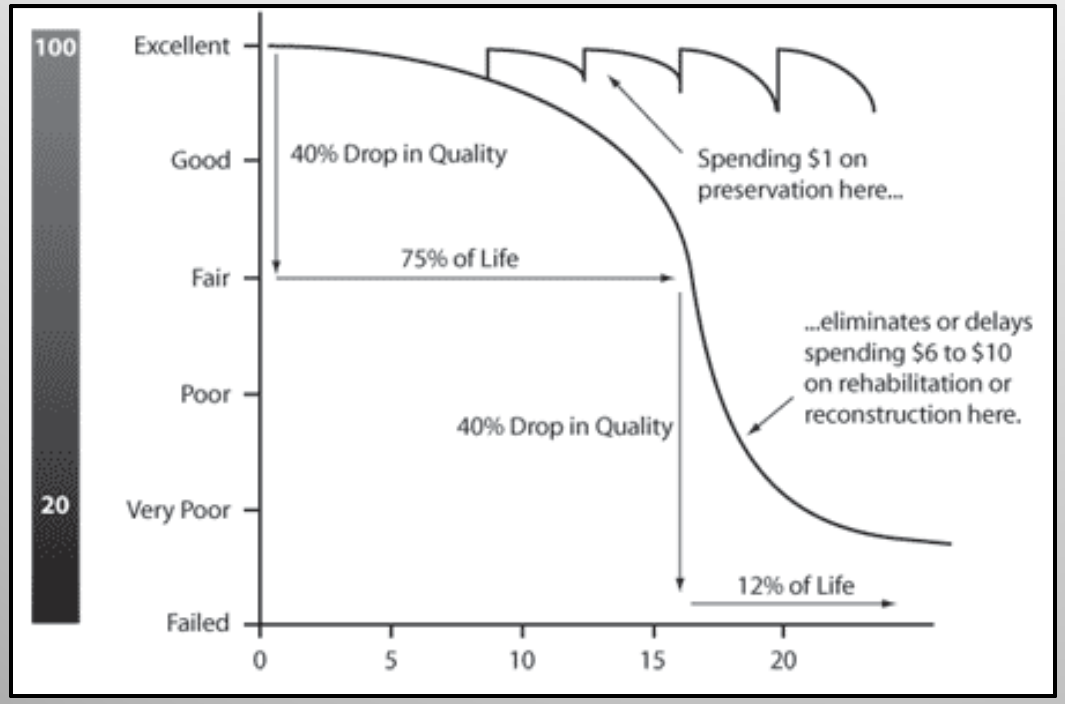
August, 2015

Pavement Management

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

- ***The right repair at the right time!***

Pavement Management



Source: Federal Highway Administration

- Asset Management & Forecasting Tool
- It is more cost effective to keep good roads in good condition

Pavement Management

Maintenance

- *Crack Seal*
- *Pothole/Utility Patching*

Surface Treatment

- *Chip Seal*
- *Microsurfacing*
- *Asphalt Overlay*

Structural Repair

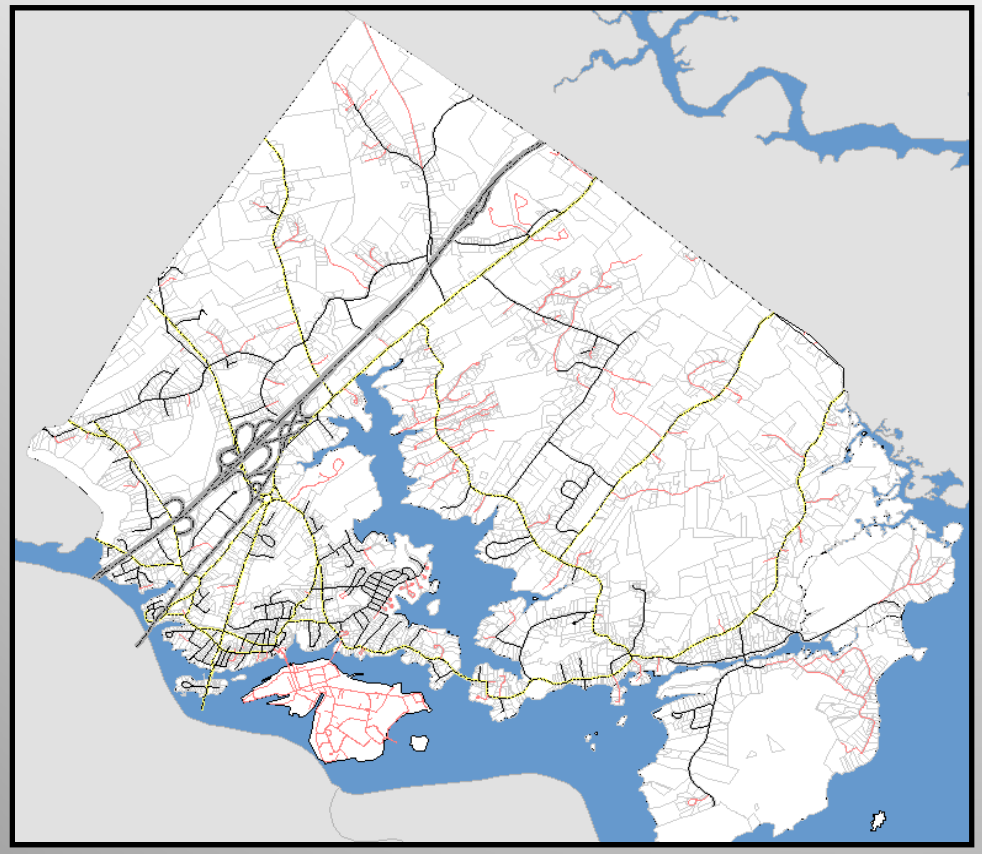
- *Mill and Overlay*
- *Reclamation*
- *Reconstruction*

Scope of Work

- Roadway Inventory & GIS Mapping
- Field Inspection Program
- Existing Conditions Summary
- Capital Improvement Planning
- System Maintenance

Roadway Inventory and GIS

Kittery Roadway Profile

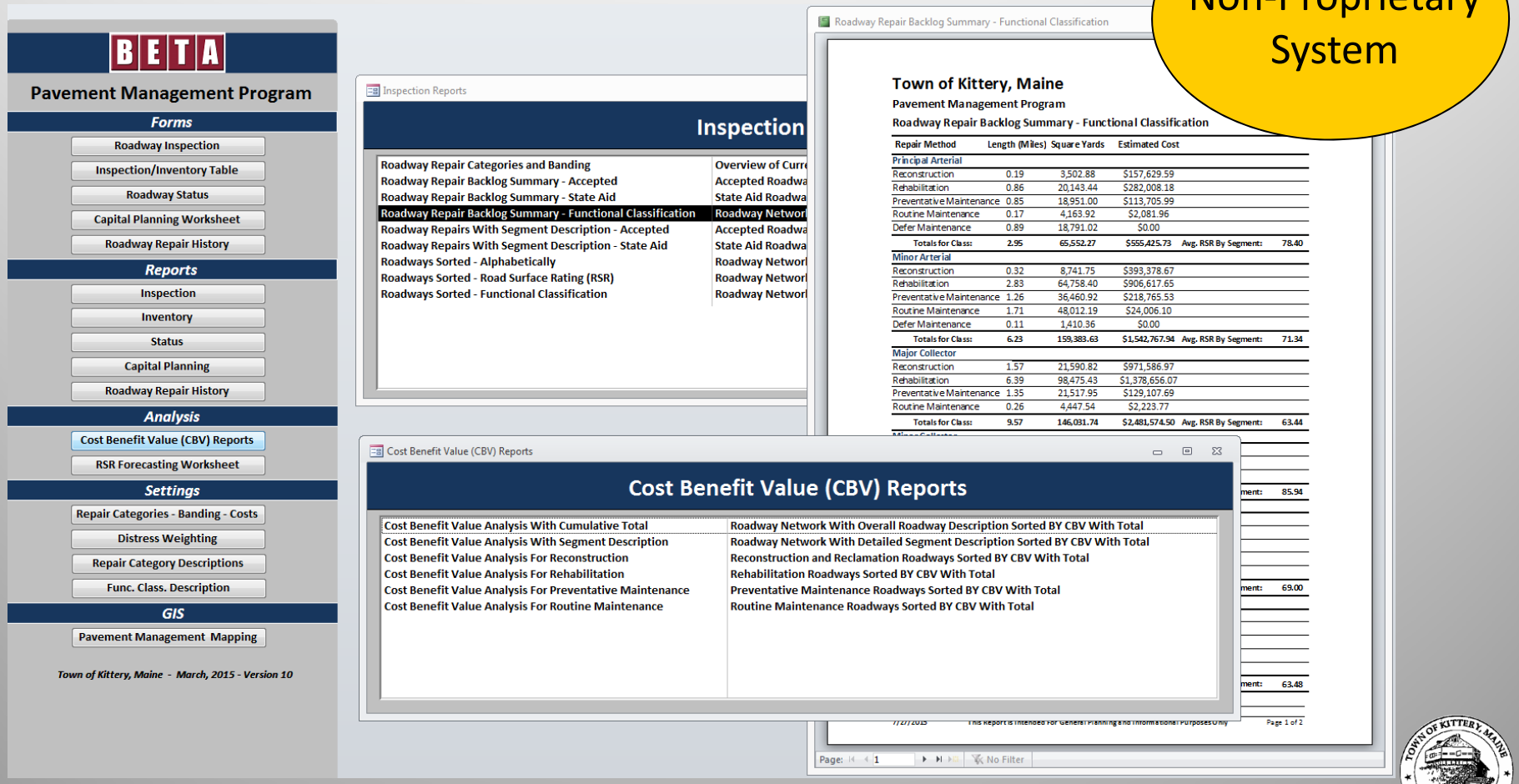


Type	Miles
Town – Accepted	38.36
State Aid	26.18
State	15.69
Private	34.34
Total	**114.57**
Total Inspected	**64.54**

System Interface (MS Access)

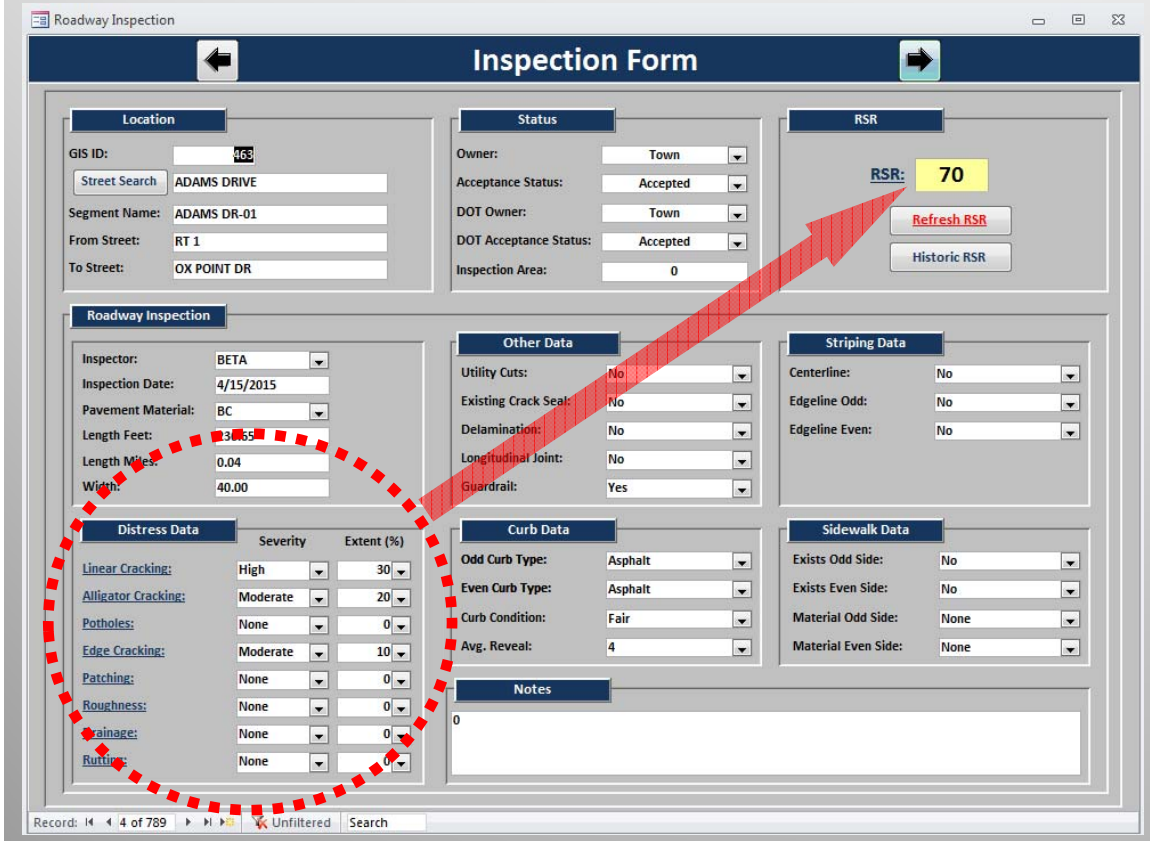
ESRI ArcMap/ArcReader

Non-Proprietary System



Road Surface Rating

Pavement Inspection Form

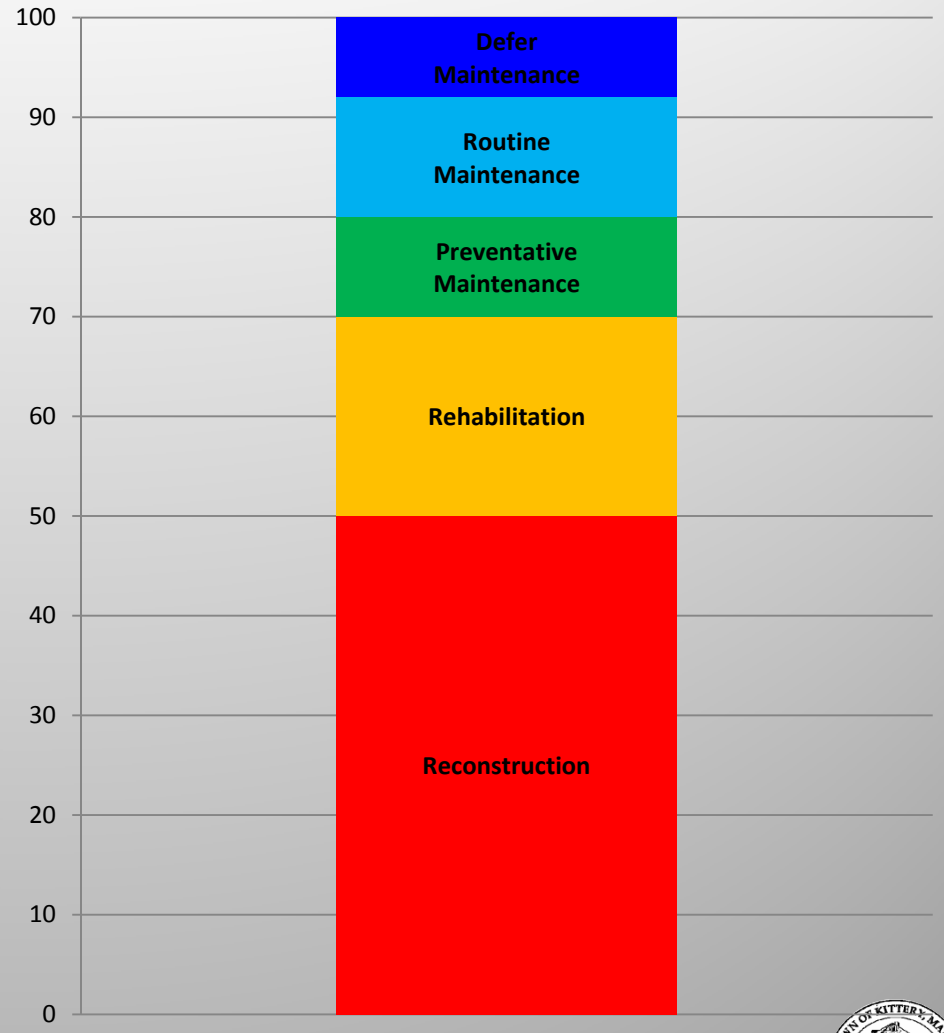


- Calculate Road Surface Rating (RSR) based on existing distresses
- Ratings are 0 to 100 (Worst to Best)
- Line striping and curb information identified

Maintenance & Repair Methods

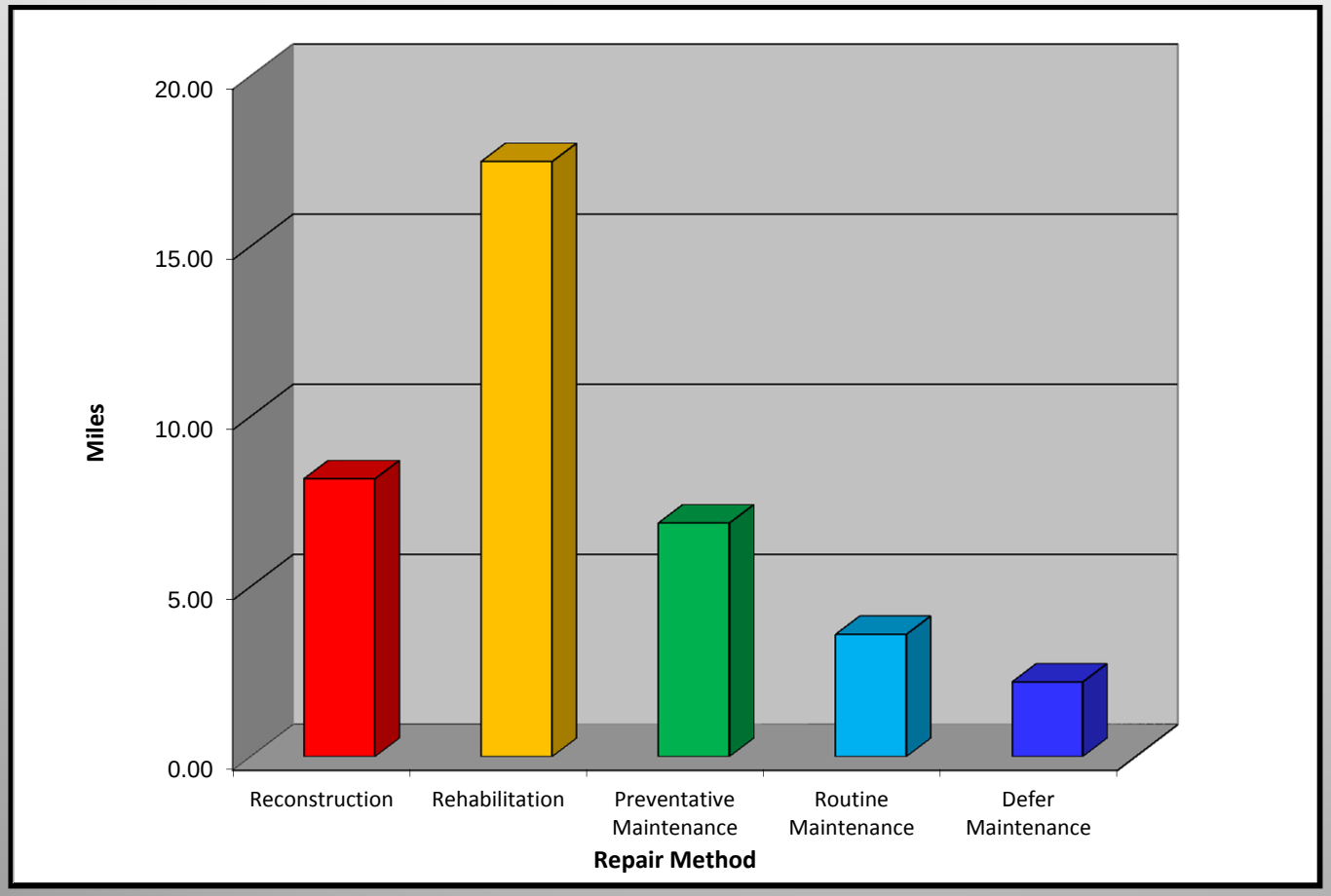
- Defer Maintenance - $0 SY
- Routine Maintenance - $0.50 SY
  - Crack Sealing
  - Patching
- Preventative Maintenance - $6.00 SY
- Rehabilitation - $14.00 SY
- Reconstruction - $45.00 SY

* Please note that unit prices reflect curb to curb improvements only



Existing Conditions Summary

General Rating by Mile (Town Accepted Roadways)*



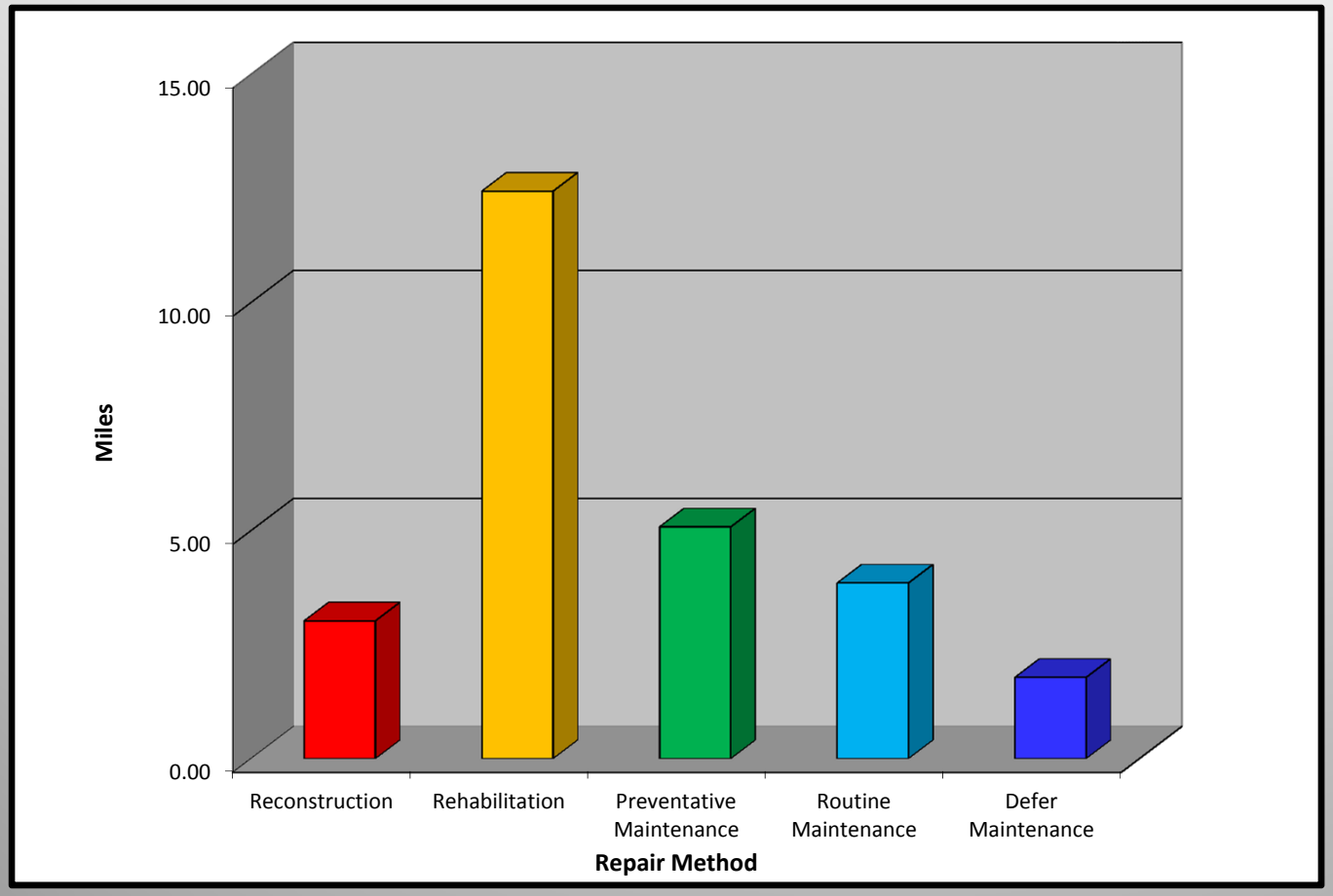
Approx. 38.29 Road Miles

RSR = 67.34

*Town Accepted Paved Roadways Only

Existing Conditions Summary

General Rating by Mile (State Aid Roadways)*



Approx. 26.18 Road Miles

RSR = 70.84

*State Aid Paved Roadways Only

Field Inspection Program

Representative Conditions

Payne Road- 01

RSR = 27

State Road (Rt1/Rt236)

RSR - 35

Field Inspection Program

Representative Conditions

Walker St - 01

RSR = 65

Route 1 - 05

RSR = 72

Field Inspection Program

Representative Conditions

Traip Ave - 01

RSR = 81

Bond Road

RSR = 99

Existing Conditions Summary

Breakdown by Repair Method (State Aid & Town Accepted)*

Repair Method	Length (Miles)	Est. Cost	% By Repair
Pavement Reconstruction	11.18	$7,328,270	17.3%
Pavement Rehabilitation	29.92	$6,428,930	46.5%
Preventative Maintenance	11.94	$1,146,979	18.5%
Routine Maintenance	7.44	$67,319	11.5%
No Maintenance Required	3.97	$0	6.2%
TOTAL:	**64.54**	**$14,971,498**	**100.0%**

Network RSR = 68.69

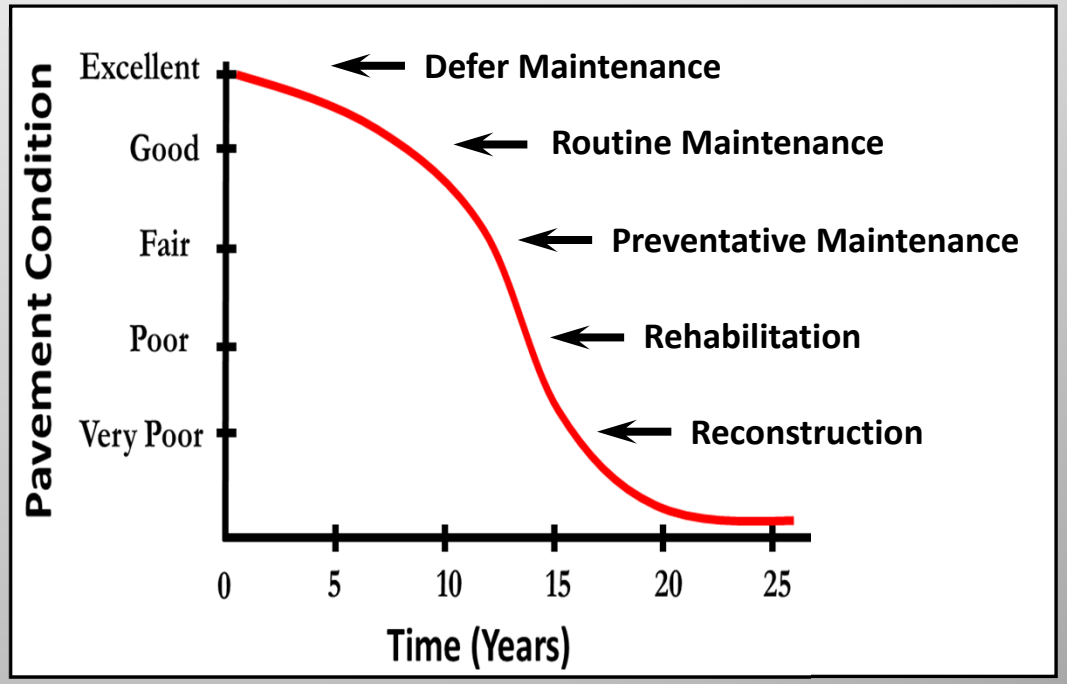
Backlog = Approx. $15 Million

*Curb to Curb Improvements Only
Does Not Include Drainage, Sidewalks, Ramps

CIP Development

Repair Methods and Forecasting

- Budget Requirements
- Refine Repair Methods Unit Costs
- Prioritization Strategies
- Utility Coordination
- Deterioration Rates



Capital Improvement Plan

2015 Projects – Approx. $685,000

- Crocketts Neck Road
- Laurel Avenue
- Sterling Road
- Betty Welch Road
- Bowen Road
- Cutts Road
- Eliot Road
- Remicks Lane
- Tilton Avenue
- Brave Boat Harbor Road
- Pepperrell Road
- Tenney Hill Road
- Old Ferry Lane

Proposed KACTS Projects

- State Road (Route 1/ Route 236) Rotary
- Walker Street

Excludes $50k In Proposed Crack Seal Roads in 2015

Capital Improvement Plan

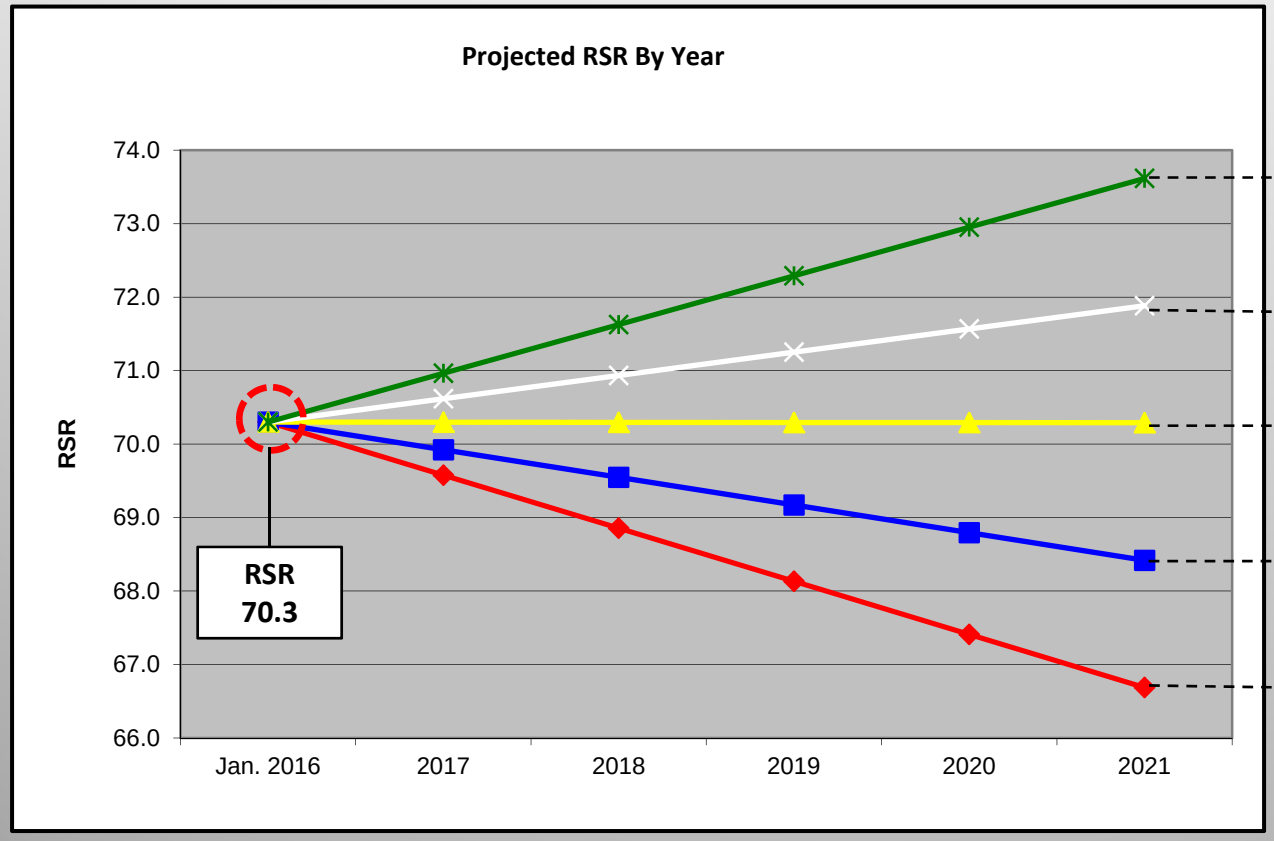
Future Priority Projects

- Picott Road
- Old Post Road
- Haley Road
- Chauncey Creek Road
- Cook Street
- Old Armory Way
- Lewis Road
- Stevenson Road
- Martin Road

Picott Road - Reconstruction

CIP Development

RSR Forecast (5 Years)



Amount Spent Per Year

- **$1.2M**
- **$950k**
- **$720k**
- **$450k**
- **$200k**

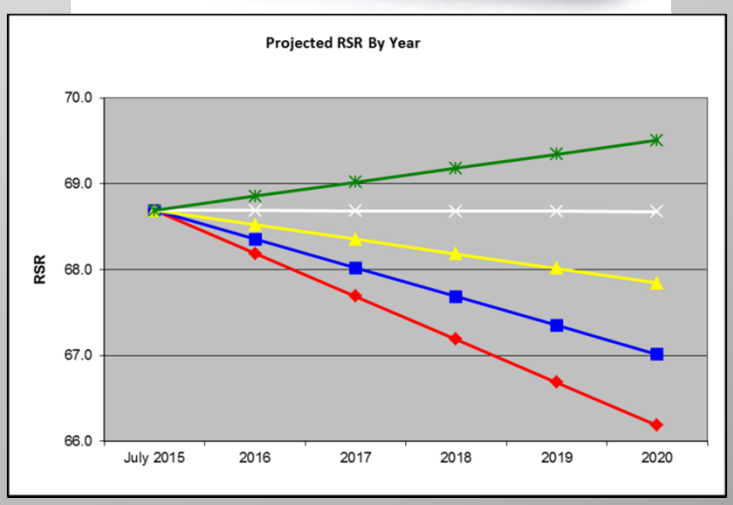
*RSR Expected to rise from current 68.7 to 70.3 with 2015 Improvements

System Maintenance

- Update data as improvements are completed
- Monitor and update actual costs
- Re-assess assets periodically
- Add new subdivisions and newly accepted roads to database

Next Steps

- Determine target funding levels
- Identify funding sources
- 3 Year Plan allows Town to coordinate with utilities and future development plans



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Thank You

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