

Town of East Hampton



Pavement Management Program

Summary of Findings

December 8, 2020



North Main Street

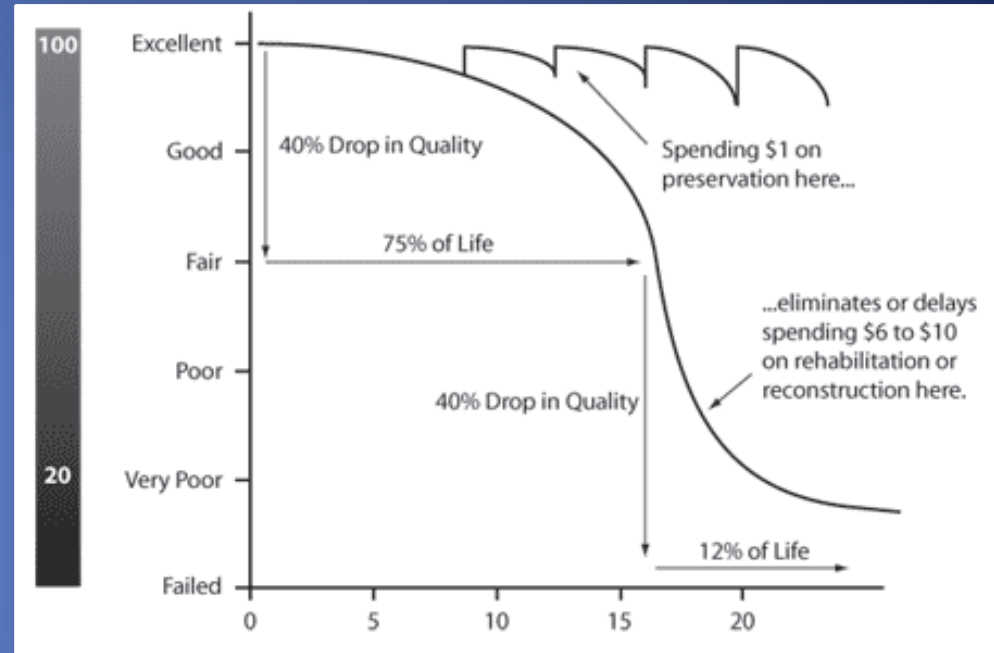
Benefits of Pavement Management



- The practice of planning for pavement maintenance and rehabilitation with the goal of maximizing the value and life of a pavement network
- It is more cost effective to keep good roads in good condition
- ***Proactive*** vs. ***Reactive***

Program Goals & Objectives

- ✓ Conduct Pavement Condition Assessment
- ✓ Evaluate Repair Strategies & Benefits
- ✓ Establish Backlog
- ✓ Develop Prioritized Plan
- *Provide Foundation for Decision Making*



CIP Tool

Five Step Project Approach

1. System Configuration & Mapping
2. Pavement Inspection Program
3. Existing Conditions Analysis
4. Capital Planning & Prioritization
5. System Deployment & Training

System Configuration & Mapping

GIS Centric Approach



System Configuration & Mapping

Roadway Profile

| Roadway Type | Miles |
|---------------|--------------------------------|
| Town Accepted | Asphalt: 84.13 Gravel: 7.95 |
| Private | Asphalt: 3.99 Gravel: 0.00 |
| State | Asphalt: 21.71 Gravel: 0.00 |
| Total | 117.77 |

Paved
Roadways
Inspected
By BETA



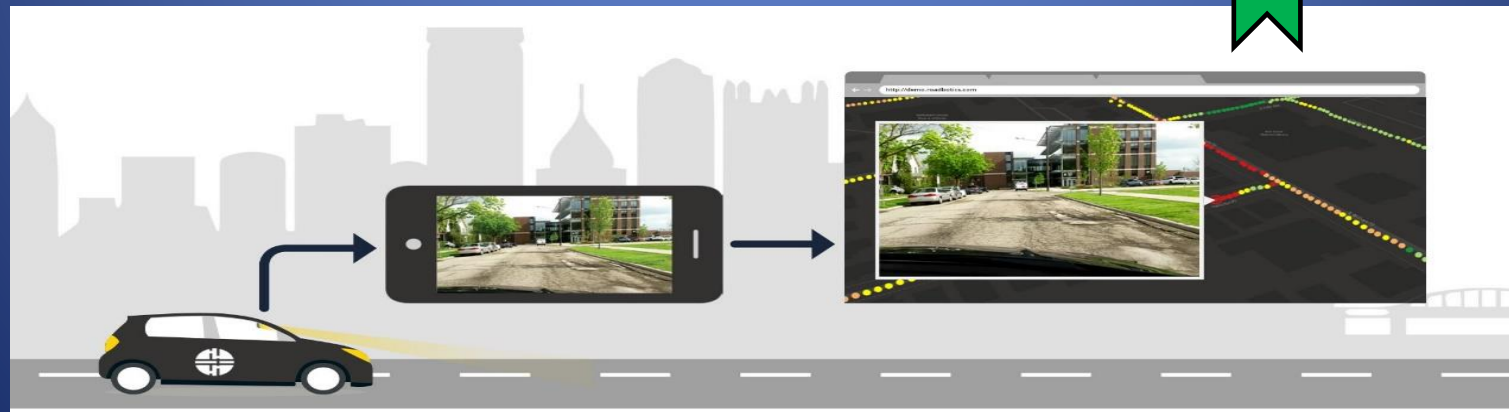
Pavement Inspection Program

Automated Approach

Uses Machine-Learning Technology to extract information every 10'

- Non-biased
- Extremely cost effective
- High Resolution photographs

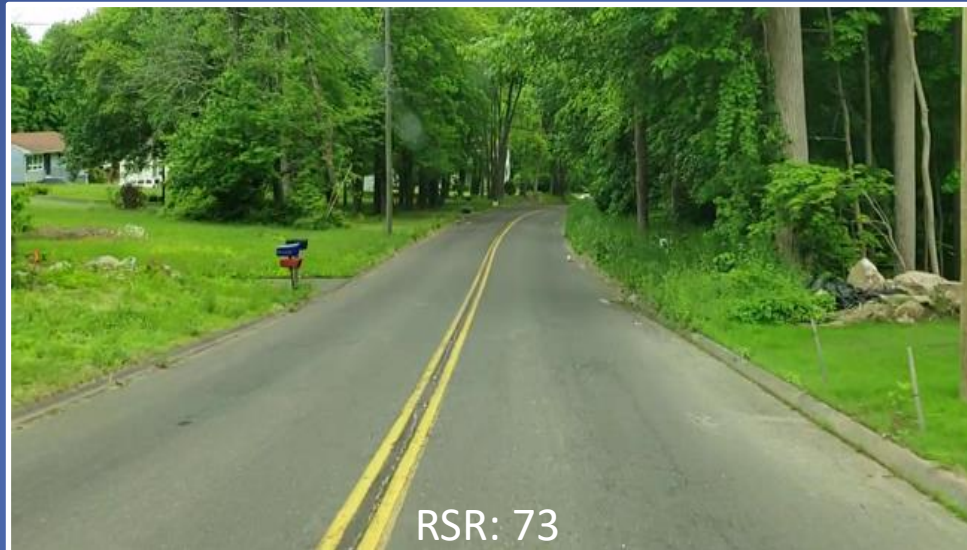
Calculate RSR
Road Surface Rating
(0-100 Scale)



RSR– Representative Examples (Good)



RSR– Representative Examples (Fair)

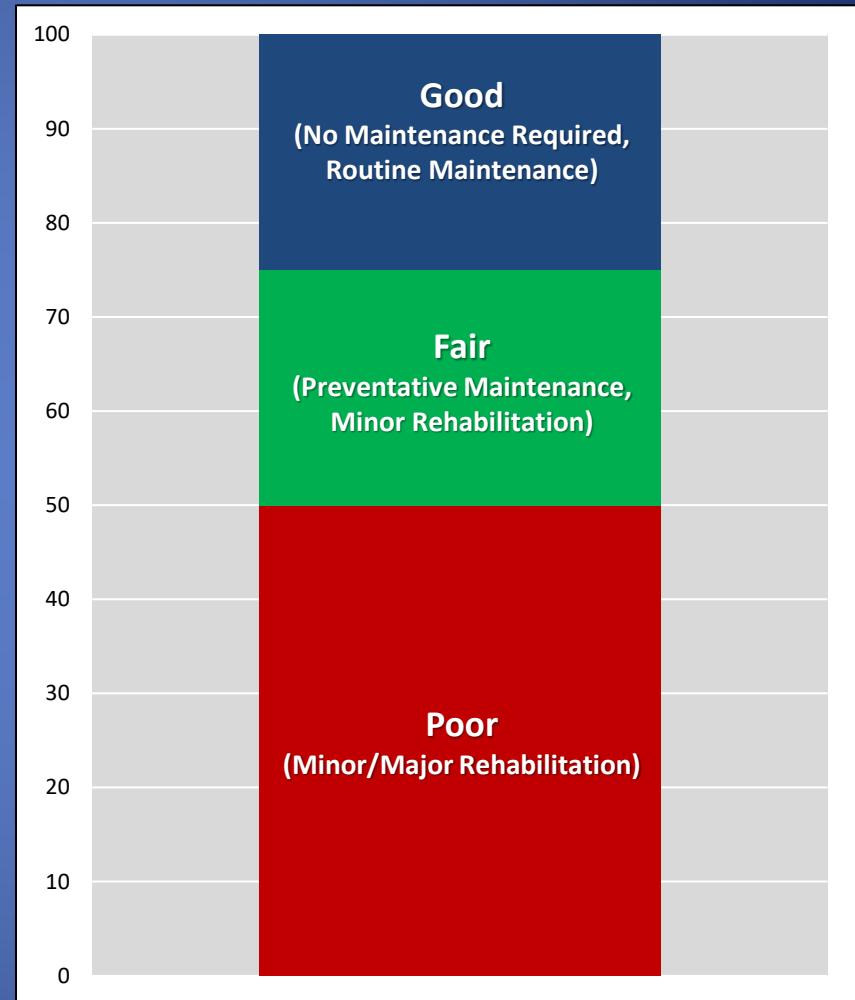


RSR– Representative Examples (Poor)



Repair Bands & Conditions

- No Maintenance Required
- Routine Maintenance
 - Crack Sealing
 - Fog Seal
- Preventative Maintenance
 - Chip Seal
 - Microsurface
 - Shim & Overlay
- Minor Rehabilitation
 - Mill & Overlay
 - Cold In-Place Recycling (CIR)
- Major Rehabilitation
 - Reclamation
 - Reconstruction



ManageMyRoads Platform

Road Network Rating

69.96

Road Miles
84.13

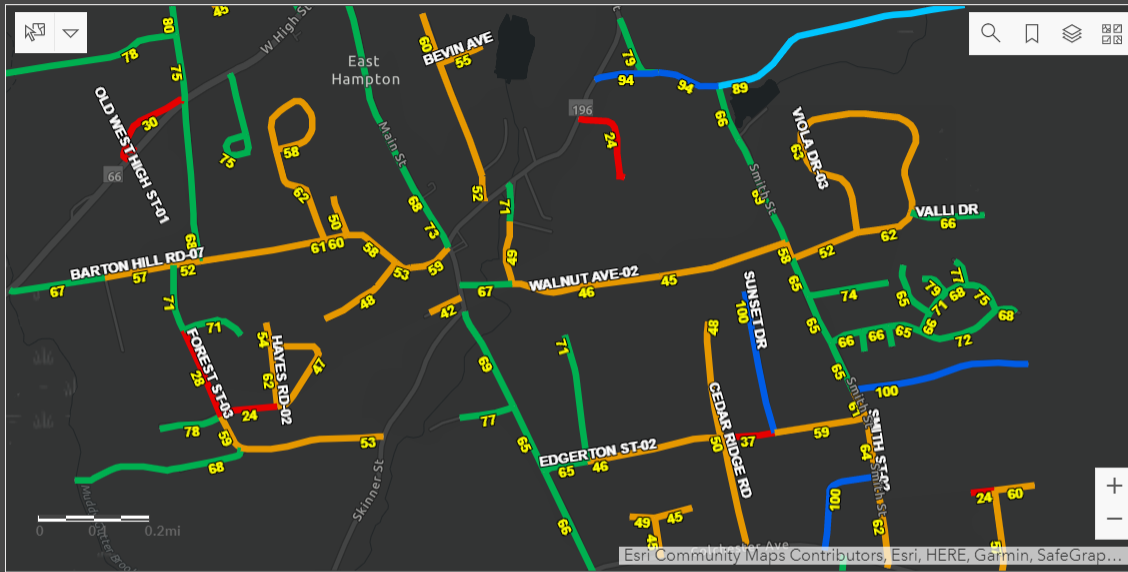
Repair Category (Miles)



| | |
|-------------------------|------|
| Major Rehabilitation | 2.2 |
| Minor Rehabilitation | 30.9 |
| No Maintenance Required | 9.7 |

Web Links:

- Pavement Portal
- Pavement Resource Center
- BETA Group, Inc.



Map Legend:

Repair Category

- No Maintenance Required
- Routine Maintenance
- Preventative Maintenance
- Minor Rehabilitation
- Major Rehabilitation

Non-Inspected Roadways

Street Segment: AARON'S WAY

From Street: STAETH RD
To Street: CUL DE SAC
Length: 889.2 Ft.
Width: 25 Ft.
Square Yards: 2,470
RSR: 45
Repair Method: Minor Rehabilitation
Estimated Cost: \$34,580.05

Street Segment: ABBEY RD-01

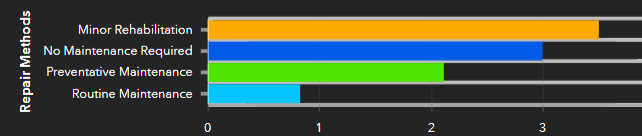
From Street: CHAMPION HILL RD
To Street: SERAFIN TER
Length: 2,262.65 Ft.

Roadway Segments Ranked by CBV (Major Rehabilitation)

| |
|-----------------|
| BRACK FARM RD |
| LONG HILL RD-02 |
| ABBEY RD-03 |
| HAYES RD-01 |
| CHILDS RD-02 |

- Major
- Minor
- Preventative
- Routine

Backlog Summary by Functional Class (Collectors)



- Collectors
- Local

Existing Conditions Analysis

Roadway Repair Backlog Summary (Accepted)

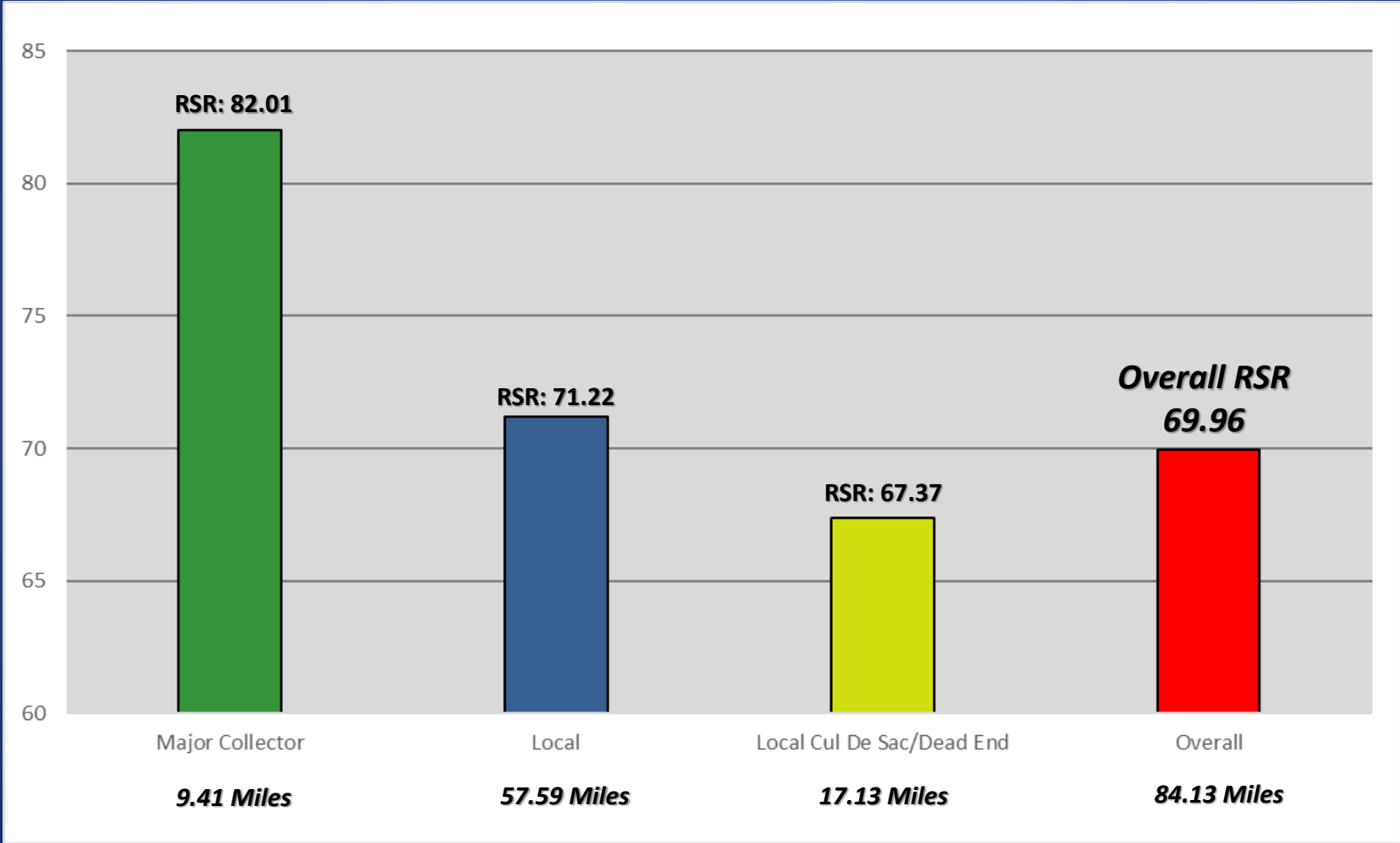
| <i>Repair Method</i> | <i>Average Unit Cost (\$/SY)</i> | <i>Length (Miles)</i> | <i>Square Yards</i> | <i>Percent Repair</i> | <i>Estimated Cost</i> |
|--------------------------|----------------------------------|-----------------------|---------------------|-----------------------|-------------------------|
| Major Rehabilitation | \$40.00 | 2.24 | 26,812.92 | 2.66% | \$1,072,516.64 |
| Minor Rehabilitation | \$14.00 | 30.92 | 416,598.60 | 36.75% | \$5,832,380.39 |
| Preventative Maintenance | \$8.00 | 34.02 | 461,041.13 | 40.44% | \$3,688,329.07 |
| Routine Maintenance | \$0.50 | 7.24 | 100,171.28 | 8.61% | \$50,085.64 |
| No Maintenance | \$0.00 | 9.71 | 131,445.66 | 11.54% | \$0.00 |
| Total | | 84.13 | 1,136,069.59 | 100% | *\$10,643,311.73 |

Network Rating = 69.96

*Based on curb to curb improvements only, does not include sidewalk, curb ramp or utility improvements. Estimated costs as shown are for planning purposes only and do not reflect fluctuations in liquid asphalt or other pavement mix components

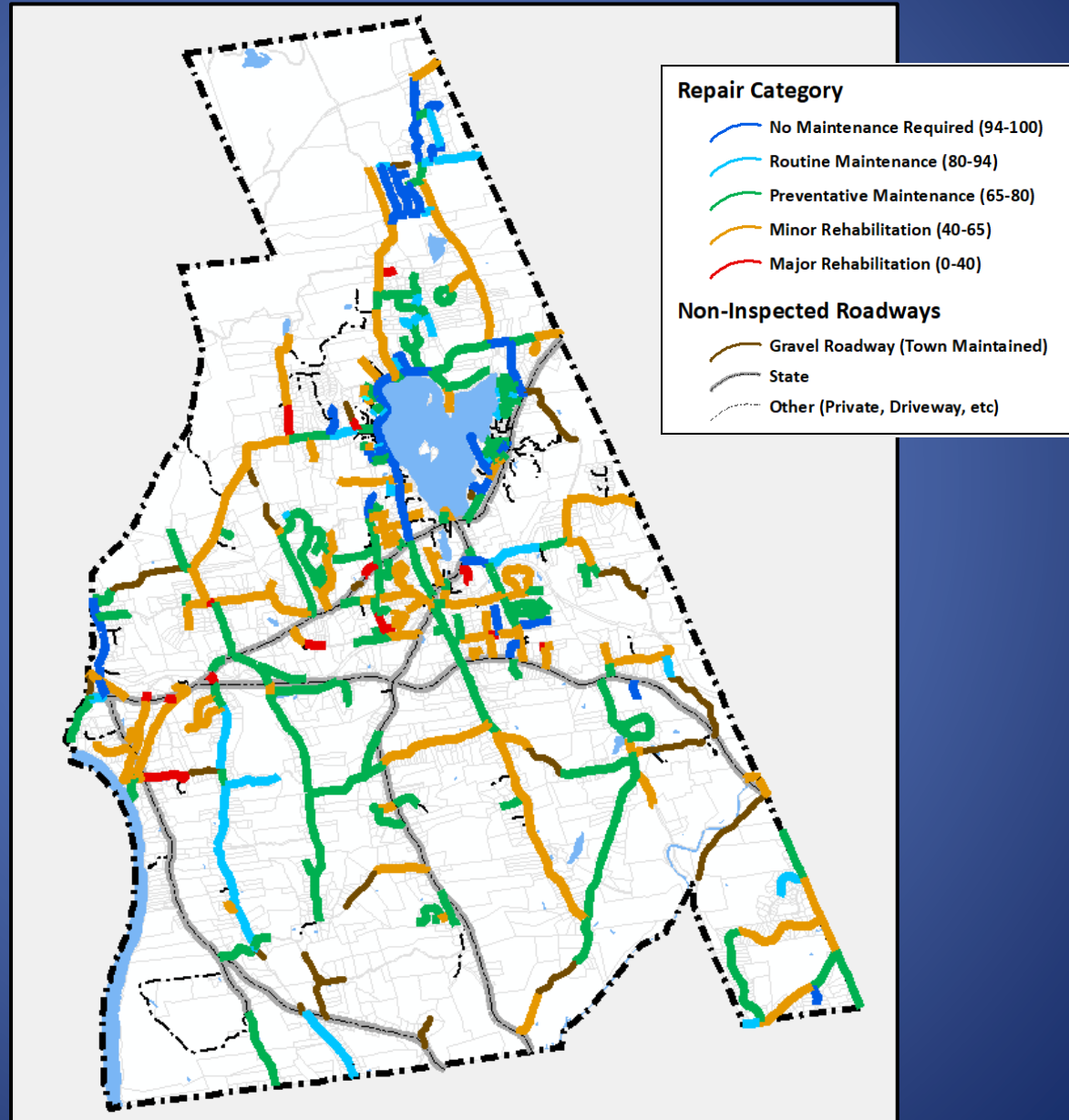
Existing Conditions Analysis

Road Condition by Functional Class



Existing Conditions Analysis

Repair Categories and Road Surface Ratings



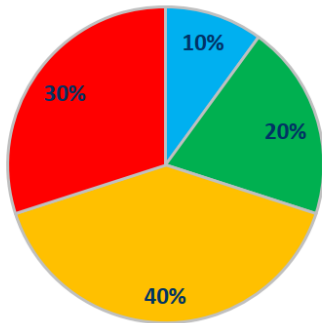
Data Analysis & Planning

5-year Forecast – Balanced Model

Roadway Forecast Model East Hampton, CT

ManageMyRoads by BETA

Funding Distribution by
Repair Type

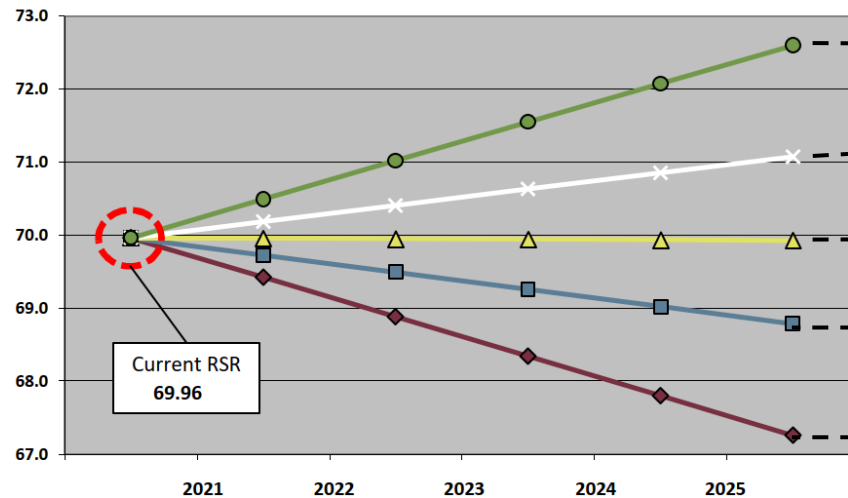


- Routine Maintenance
- Preventative Maintenance
- Minor Rehabilitation
- Major Rehabilitation

Community Profile

Road Miles = 84.13

Paving Budget= \$350,000



Estimated
Amount
Per Year*

\$1.0M

\$800K

\$650K

\$500K

\$300K*

Funding Scenarios

| | |
|-------------|-------------|
| Scenario 1* | \$300,000 |
| Scenario 2 | \$500,000 |
| Scenario 3 | \$650,000 |
| Scenario 4 | \$800,000 |
| Scenario 5 | \$1,000,000 |

*Note: Approximately \$50,000 is used to address drainage and other related improvements prior to paving.

Next Steps

Capital Planning & Prioritization



Next Steps

Capital Planning & Prioritization

Analysis Considerations



Roadway Condition (Good, Fair, Poor)

Roadway Functional Classification

Cost Benefit Value (CBV)

Repair Costs

Life Improvement

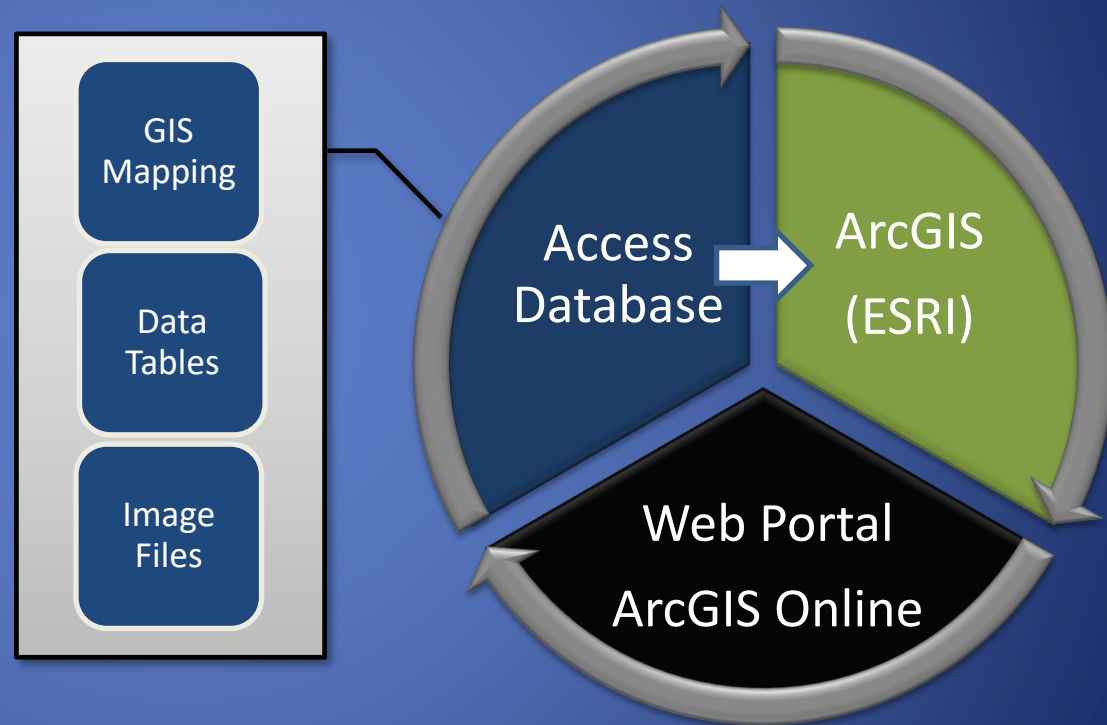
Sub-Surface Utilities (Gas, Water, Sewer)

Sidewalks & Curb Ramps

Next Steps

System Deployment & Maintenance

- Training Program
- Update data as improvements are completed
- Monitor and update actual costs
- Re-assess roadways every 3 years
- **System Support**



ManageMyRoads Platform
(For City Use Only)

Concluding Remarks

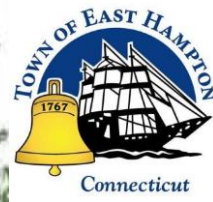
1. Comprehensive Inventory has been created for Town Accepted roads, their condition, & the most effective way to prioritize maintenance and repairs.
2. Designed to better manage limited dollars allocated to road work in Town
3. Capable of assessing the different types of repair strategies necessary to maximize the lifecycle of the roads

Town of East Hampton

Pavement Management Program

Status Summary

Thank You



North Main Street