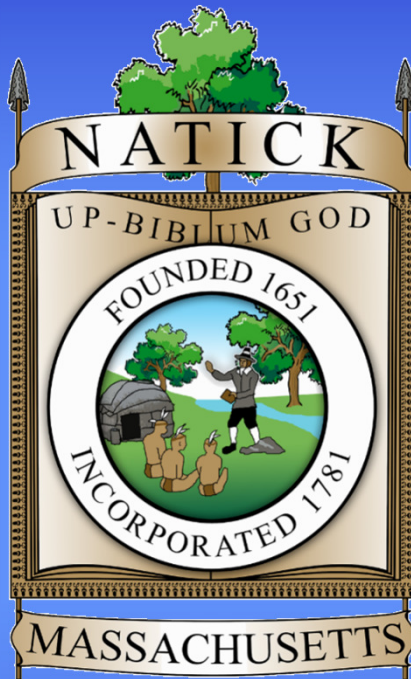


Town of Natick

Department of Public Works



Pavement Management

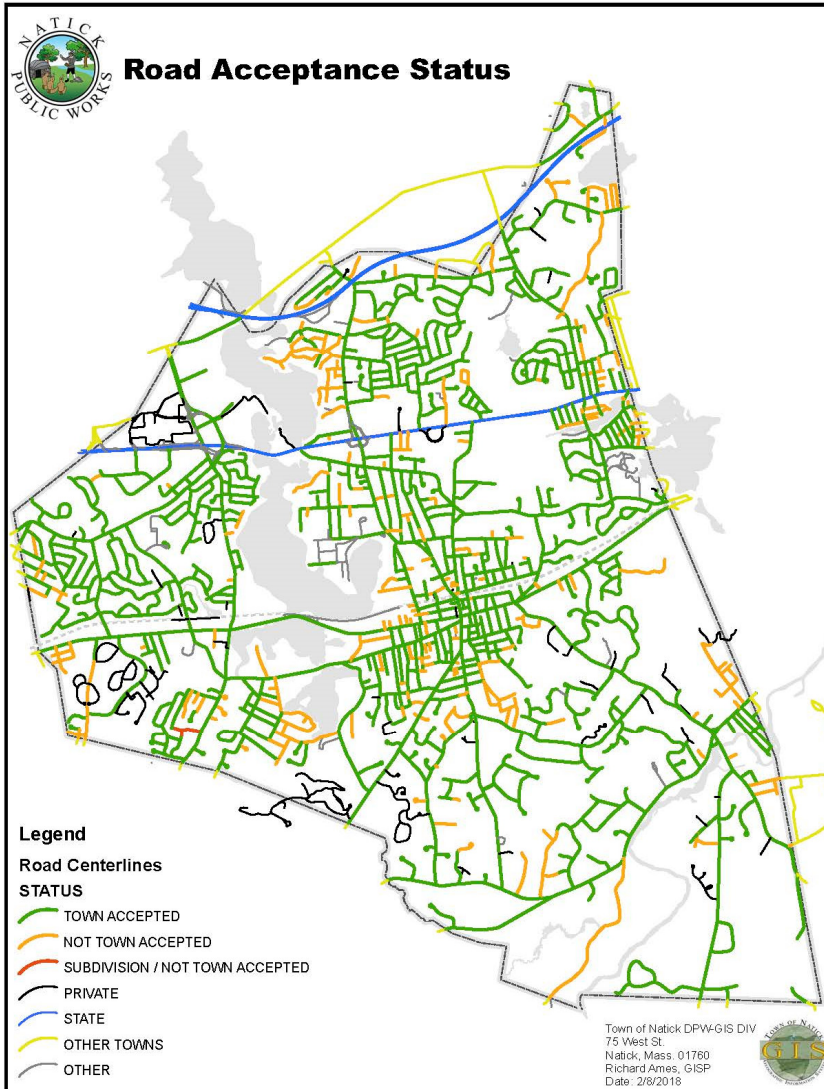
Five Year Roadway Improvement Plan

April 5, 2018



Pavement Management Program

Roadway Profile



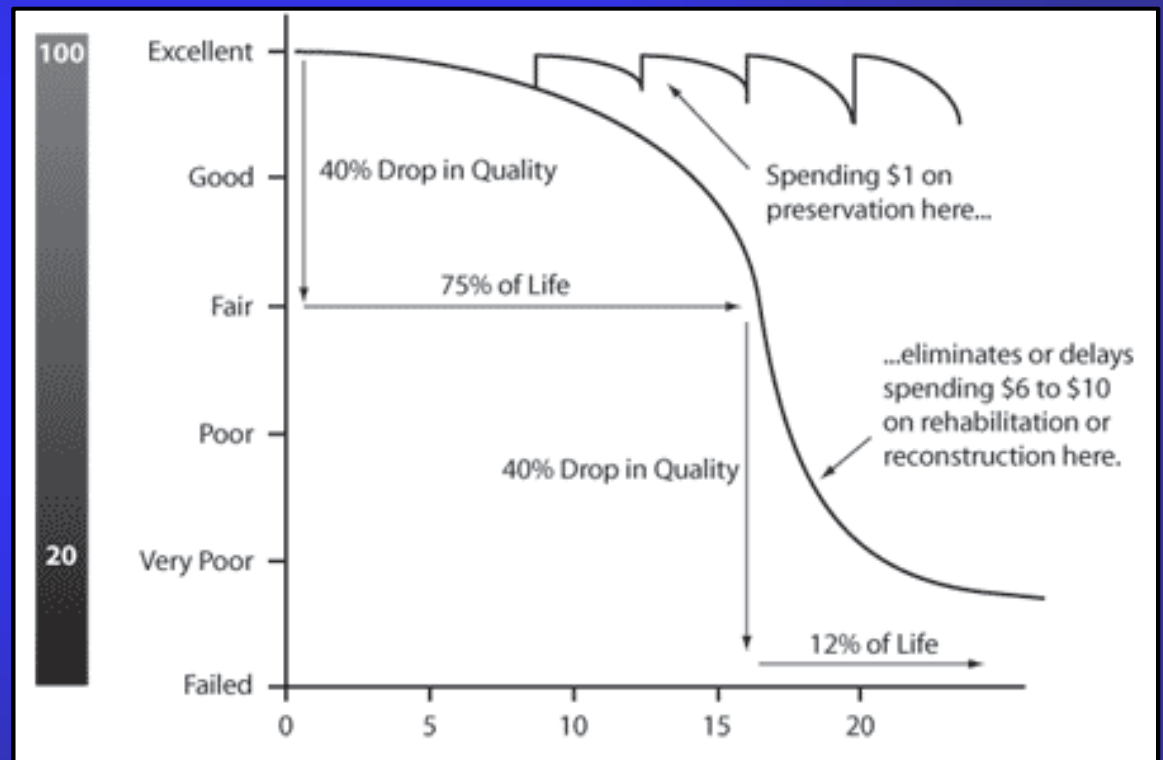
Type	Miles
Town – Accepted	128.07
Town - Unaccepted	25.98*
Total	154.05

- * Unaccepted Amount includes:
- 24.89 miles Paved Roads
 - 1.09 miles Gravel Roads



Pavement Management Program Overview

- 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!**
- It is more cost effective to keep good roads in good condition.
- Asset Management & Forecasting Tool
- Roadway Surface Rating (RSR) from 0 to 100 (worst to best)

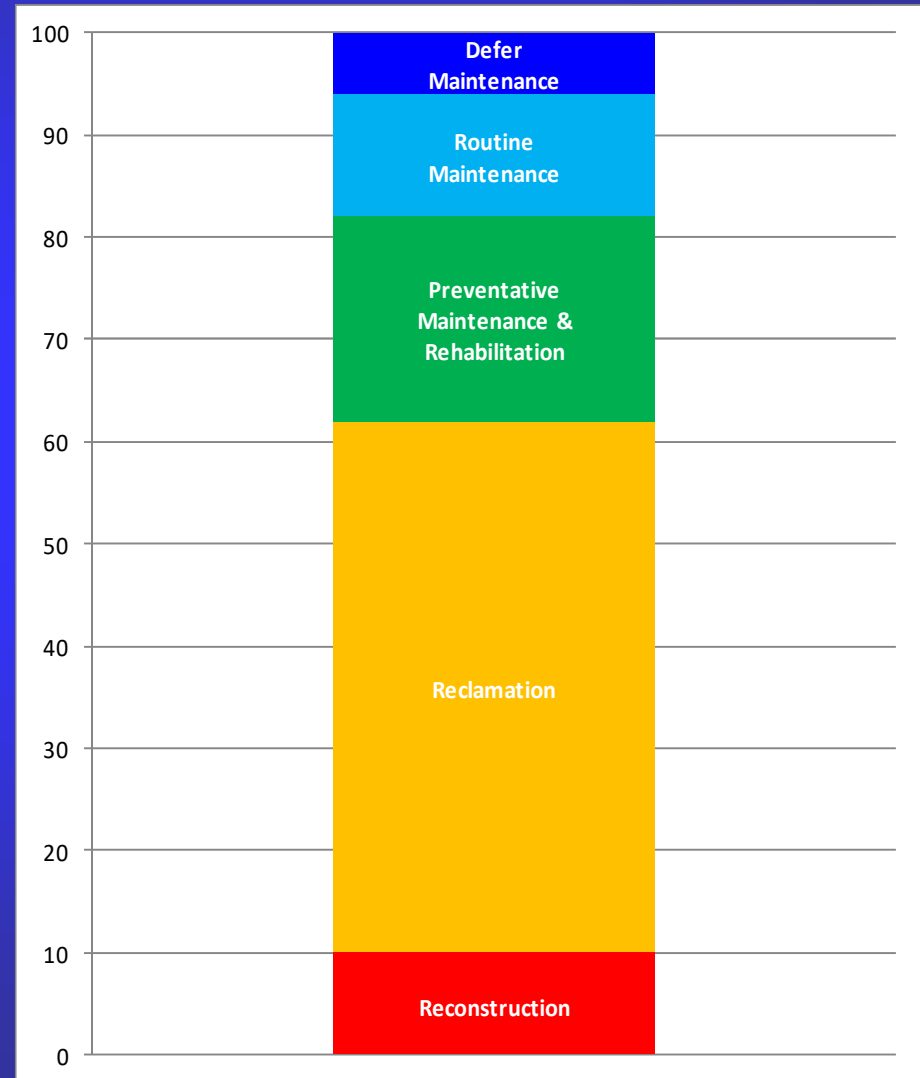




Pavement Management Program

Maintenance & Repair Methods

- Defer Maintenance - \$0.00 SY
- Routine Maintenance - \$3.35 SY
 - Crack Sealing
 - Patching
- Preventative Maintenance - \$9.63 SY
 - Patch, Level and Chip Seal
- Rehabilitation - \$21.71 SY
 - Mill and Overlay
 - Level and Overlay
- Reclamation - \$40.74 SY
- Reconstruction - \$47.64 SY

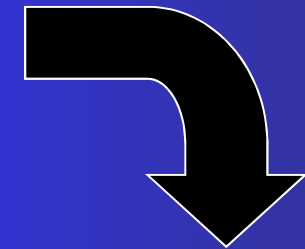
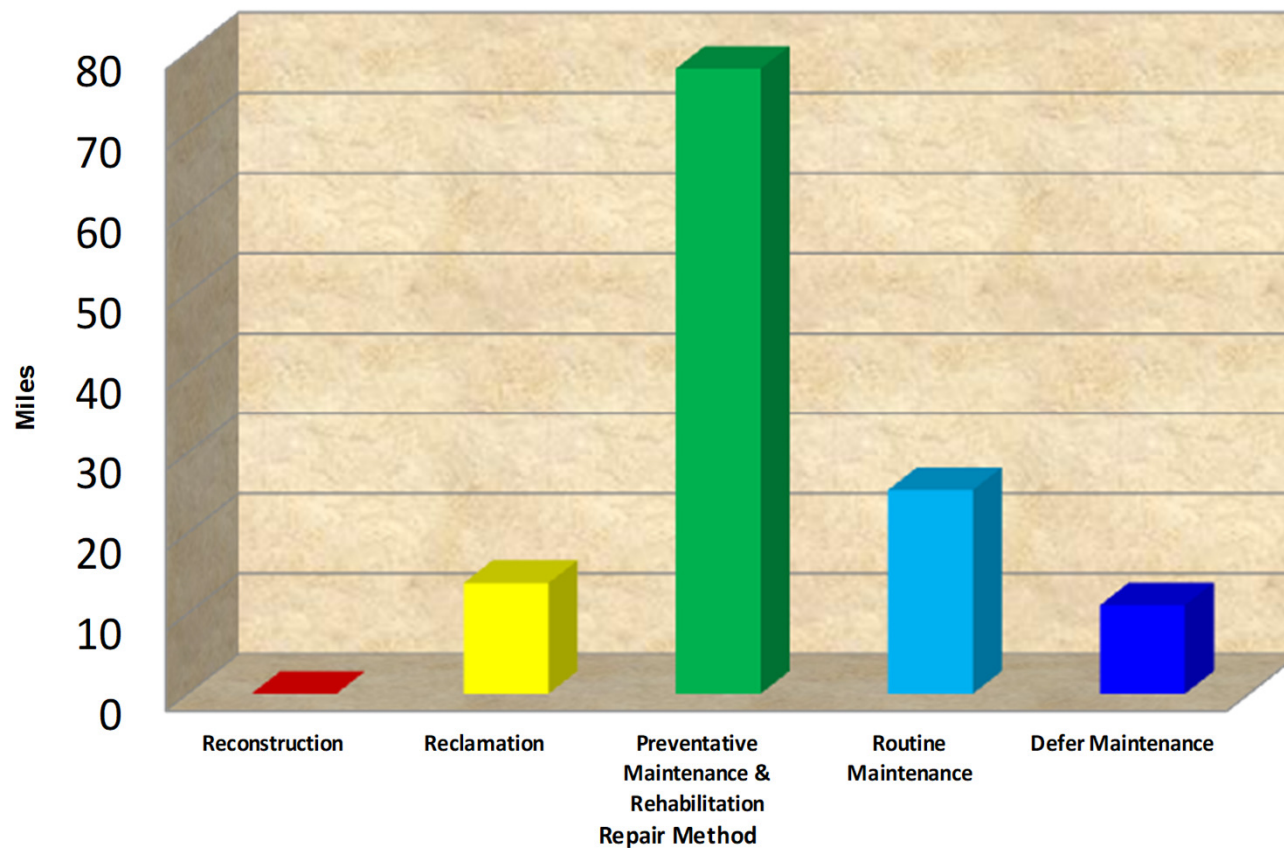




Pavement Management Program

Existing Conditions Summary

General Rating by Mile (Town Accepted Roadways)



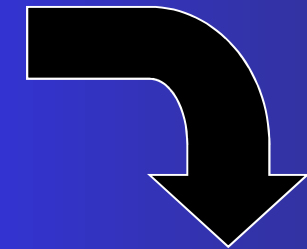
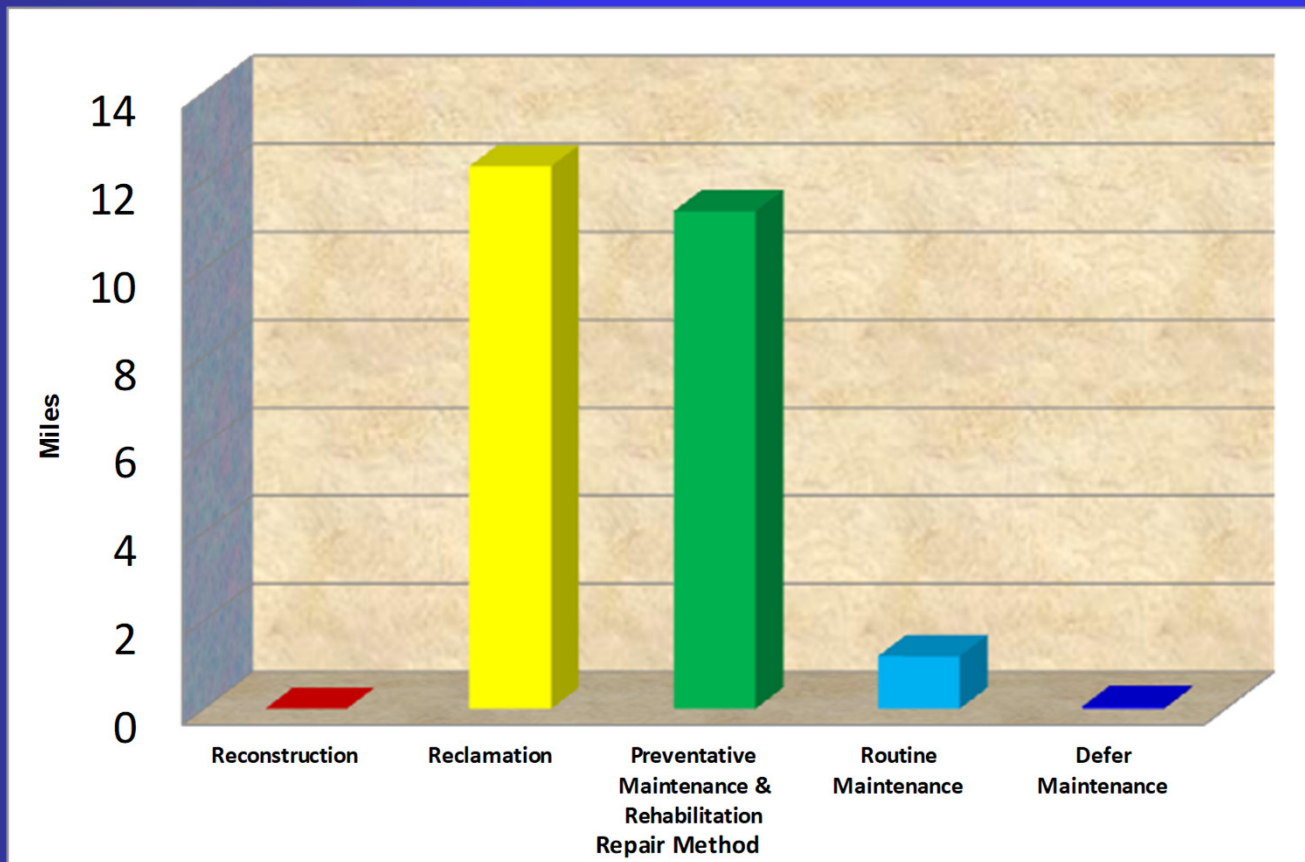
Approx. 128.07
Road Miles
RSR = 76.45
Backlog =
\$33 Million



Pavement Management Program

Existing Conditions Summary

General Rating by Mile (Unaccepted Roadways)



Approx. 24.89
Road Miles
RSR = 63.37
Backlog =
\$8.9 Million



Pavement Management Program

Five Year Roadway Improvement Plan

- Determine target funding levels
- Identify funding sources
- The 5 Year Plan allows the Town to:
 - Coordinate with local utility companies
 - Plan upgrades to town sewer and water services
 - Coordinate with future town capital projects and future private development plans



Pavement Management Program

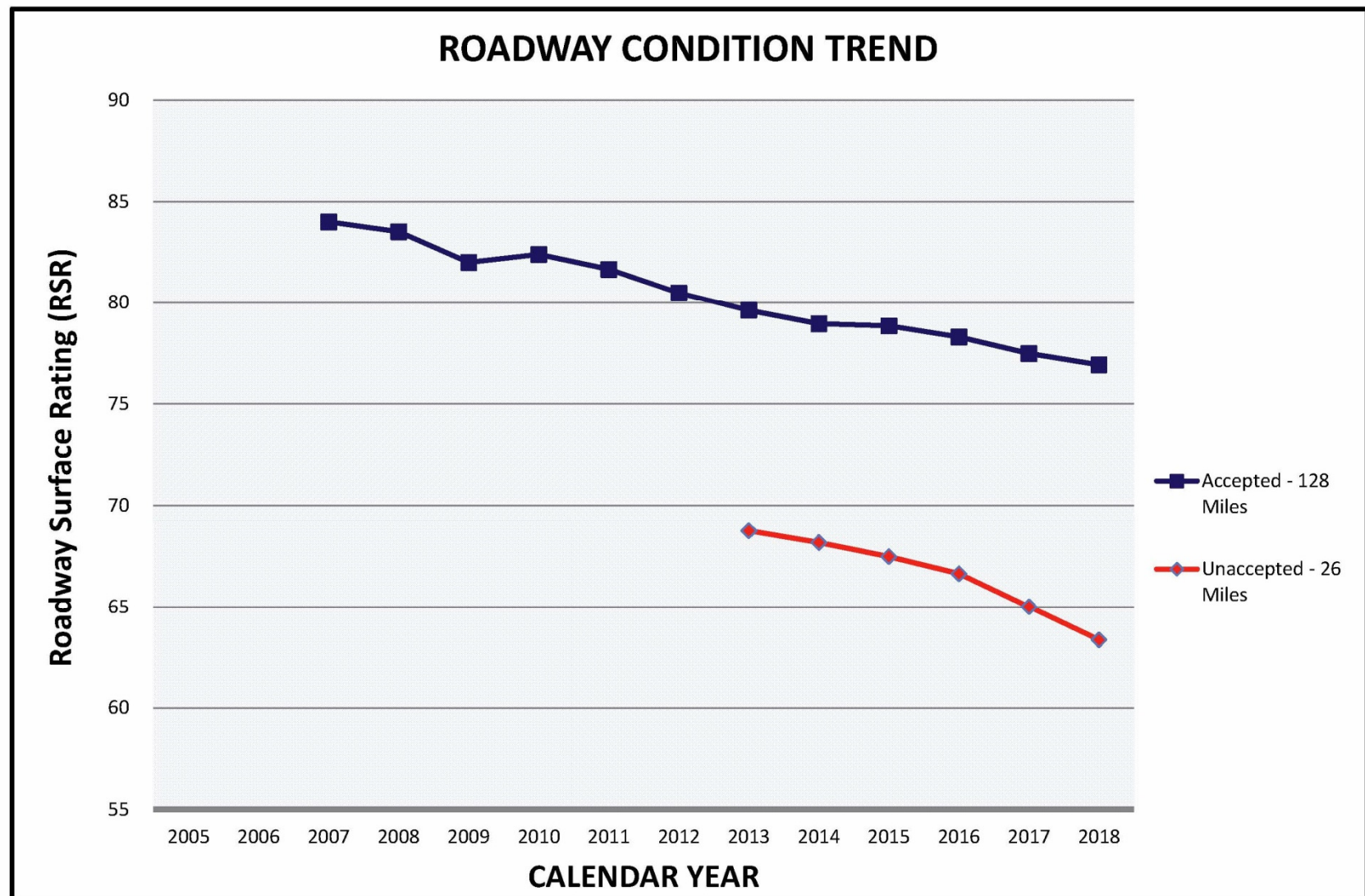
Historical RSR

Year	RSR	Chip Miles	Mill & Overlay	Reclaim	Total	Square Yards	Cost
2007	84					BASELINE	
		2.26	2.7	0.17	5.13	70,300.8	\$1,355,246
2008	83.52						
		0	0.11	0	0.11	1,721.0	\$40,445
2009	82.00						
		1.21	1.92	3.45	6.58	113,356.7	\$4,471,083
2010	82.40						
		0.82	0.17	1.65	2.64	33,279.1	\$886,613
2011	81.66						
		0.93	0.41	0.35	1.69	21,783.3	\$885,534
2012	80.49						
		0	2.84	0	2.84	41,882.8	\$2,229,722
2013	79.62						
		2.64	0.2	1.07	3.91	53,250.5	\$1,689,460
2014	78.95						
		4.29	0.24	1.9	6.43	101,064.8	\$2,839,809
2015	78.85						
		2.65	0.78	1.03	4.46	69,890.2	\$1,724,695
2016	78.30						
		1.57	0.66	0.85	3.08	41,154.0	\$1,968,775
2017	77.48						
		1.13	0.18	2.03	3.34	39,554.0	\$4,141,777
2018	76.93						



Pavement Management Program

Historical RSR





Pavement Management Program

5 Year Forecast

Accepted Roadways

5-Year Forecast Scenarios

Baseline RSR	76.45				
Road Miles	128.07				
Budget (Millions)	1	1.5	2	2.5	3
LYM Added	46.4	63.3	84.4	105.6	126.7
LYM Needed	128.1	128.1	128.1	128.1	128.1
RSR Adjustment	(0.64)	(0.51)	(0.34)	(0.18)	(0.01)

Projected RSR by Year (Graph)

Feb. 2018	76.5				
2019	75.8	75.9	76.1	76.3	76.4
2020	75.2	75.4	75.8	76.1	76.4
2021	74.5	74.9	75.4	75.9	76.4
2022	73.9	74.4	75.1	75.7	76.4
2023	73.3	73.9	74.7	75.6	76.4

Projected RSR By Year

