


Town of Hull

Department of Public Works

Pavement Management Program Update



September 5, 2019

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Pavement Management

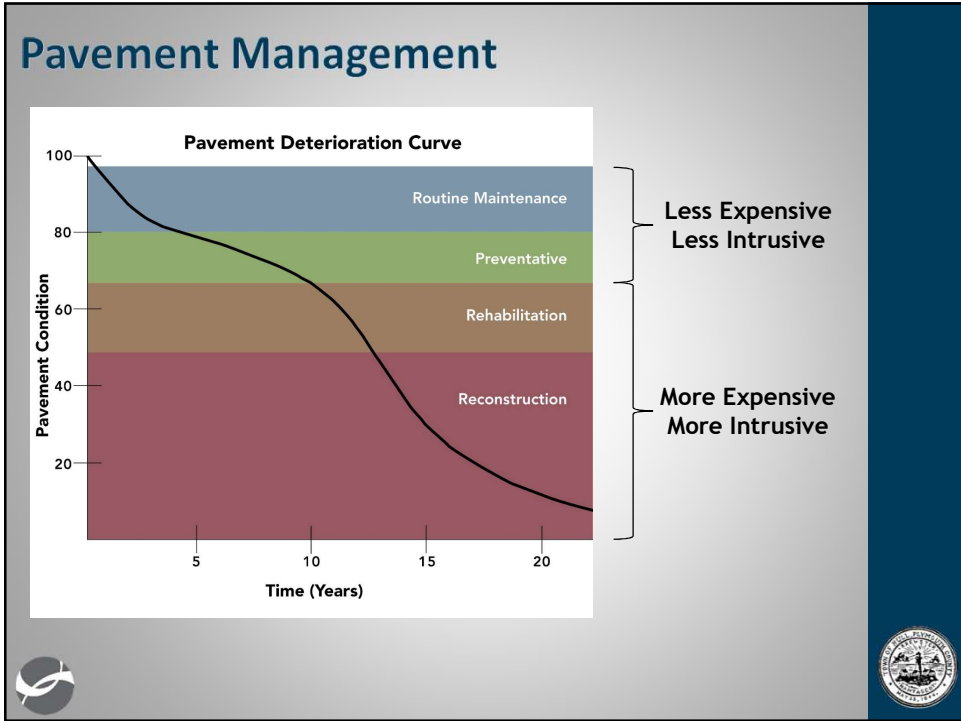


- The practice of planning for pavement maintenance and rehabilitation with the goal of maximizing the value and life of a pavement network

Perform the right repair at the right time!



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Year	Treatment	Cost per sy
2004	2" Mill & Overlay	\$12
2010	Crack Sealing & Microsurfacing	\$4.50
2017	2" Mill & Overlay Reclamation	\$24-\$44
2017	Crack Sealing & Microsurfacing	\$4.50
Total		\$21



Preservation Success!

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Roads Program - Overview

Yearly Process

1. Refresh pavement management program (inspections or construction history)
2. Coordinate utility and roadway projects
3. Communication to the community
4. Preparation of bid documents and Construction Management
5. Select Roadways for Pavement Maintenance



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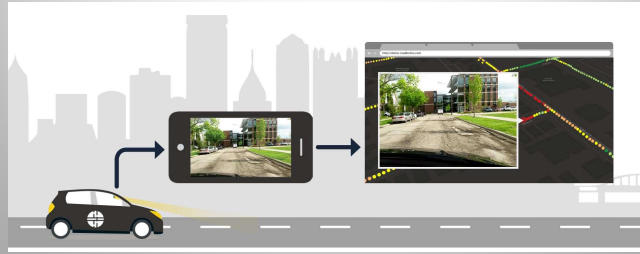
Latest Survey – New Technology

RoadBotics (Oct. 2018)

- ◉ Uses Machine-Learning Technology to extract information every 10'
- ◉ Non-biased
- ◉ Extremely cost effective
- ◉ High Resolution photographs



Photograph from Inspections



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2018 Survey Results

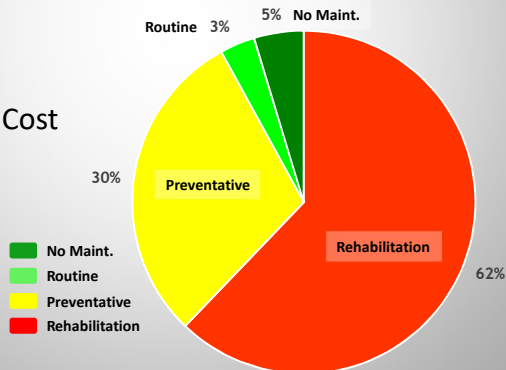
Current Roadway Status

Repair Method	Length (Miles)	Square Yards	Percent Repair
Rehabilitation	31.46	439,477	62%
Preventative Maintenance	15.12	233,832	30%
Routine Maintenance	1.67	25,867	3%
No Maintenance Required	2.37	28,468	5%
Total	50.62	727,644	
AVERAGE RSR by Segment:	57.3		

Comparison

- ◉ Estimated Backlog Cost

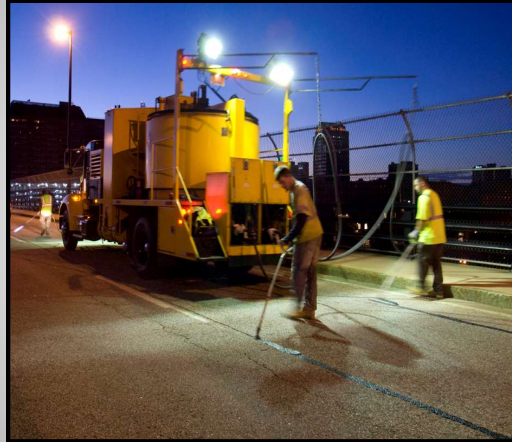
▪ \$11,600,000



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Roadway Repair Treatments

Maintenance



Crack Seal

Life Expectancy = 3 years



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Roadway Repair Treatments

Maintenance



Microsurfacing/Shim & Micro

Life Expectancy = 5-8 years



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Roadway Repair Treatments

Rehabilitation



Mill and Overlay

Life Expectancy = 12 years



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Roadway Repair Treatments

Rehabilitation



Full Depth Reclamation

Life Expectancy = 15+ years



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Nantasket Avenue

Mill and Overlay - Complete Streets Funding



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Nantasket Road

Full Depth Reclamation - Chapter 90 Funding



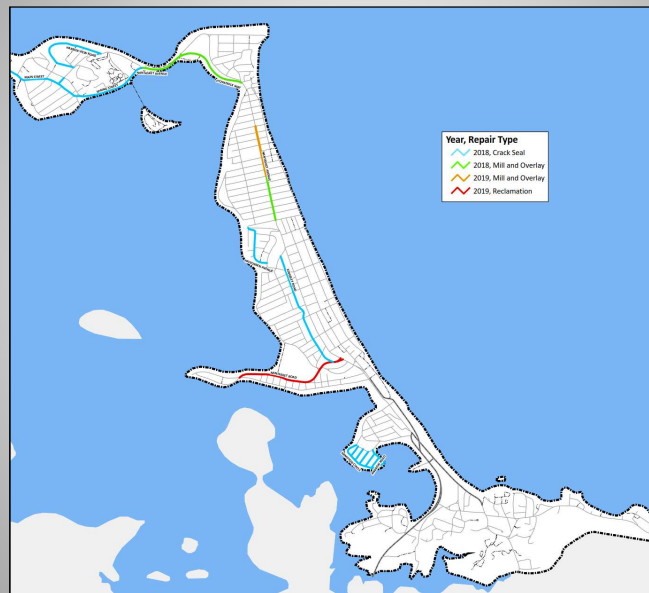
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2018-2019 Construction Completed

2019						
Road	From	To	Length (Feet)	Length (Miles)	Square Yards	Repair
Nantasket Avenue	H Street	Q Street	1,800	0.34	6,300	Mill and Overlay
2019 Totals			1,800	0.34	6,300	
2018						
Road	From	To	Length (Feet)	Length (Miles)	SY	Repair
Nantasket Road	Nantasket Avenue	Clifton Avenue	4,100	0.78	13,800	Reclamation
Nantasket Avenue	A Street	H Street	1,800	0.34	6,500	Mill and Overlay
Nantasket Avenue	Fitzpatrick Way	Spring Street	1,500	0.28	5,000	Mill and Overlay
Fitzpatrick Way	Nantasket Avenue	Nantasket Avenue	2,750	0.52	9,500	Mill and Overlay
Andrew Road	Full	Length	450	0.09	1,000	Crack Seal
Halhorsen Avenue	Full	Length	1,700	0.32	4,000	Crack Seal
Hampton Circle	Full	Length	2,500	0.47	5,600	Crack Seal
Harbor View Road	Full	Length	3,200	0.61	8,700	Crack Seal
Kingsley Road	Full	Length	4,200	0.80	14,000	Crack Seal
Lincoln Avenue	Full	Length	500	0.09	1,050	Crack Seal
Main Street	Full	Length	5,000	0.95	16,000	Crack Seal
Mayflower Avenue	Full	Length	550	0.10	1,200	Crack Seal
Old Colony Road	Full	Length	400	0.08	900	Crack Seal
Spring Street	Full	Length	2,400	0.45	7,700	Crack Seal
Standish Road	Full	Length	500	0.09	1,100	Crack Seal
2020 Totals			31,550	5.98	96,050	

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2018-2019 Work Completed



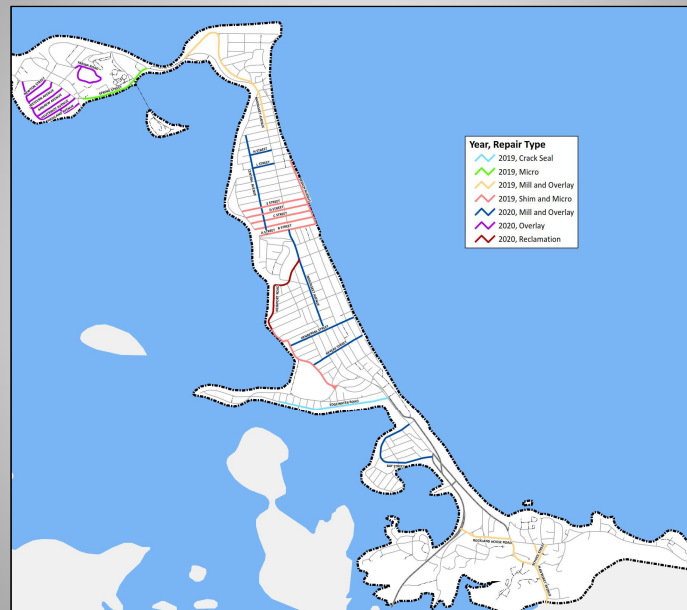
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2019-2020 Road List

2019							
Road	From	To	Length (Feet)	Length (Miles)	Square Yards	RSR	Repair
Spring Street	Nantasket Avenue	Main Street	2,800	0.53	8,100	75	Microsurfacing
Atlantic House Road	Atlantic Avenue	School Street	1,067	0.20	2,370	35	Mill and Overlay
Nantasket Avenue	Fitzpatrick Way	Fitzpatrick Way	3,600	0.68	12,000	65	Mill and Overlay
Nantasket Avenue	Y Street	Q Street	1,600	0.30	6,000	65	Mill and Overlay
Nantasket Avenue	Rockland House Road	Hingham TL	3,032	0.57	11,900	67	Mill and Overlay
Rockland House Road	Nantasket Avenue	G. Washington Blvd	1,731	0.33	5,300	63	Mill and Overlay
School Street	Atlantic Avenue	Nantasket Avenue	1,123	0.21	4,500	70	Mill and Overlay
A Street	Cadish Avenue	Beach Avenue	1,900	0.36	7,660	42	Shim and Micro
B Street	Cadish Avenue	Beach Avenue	2,000	0.38	5,740	43	Shim and Micro
C Street	Nantasket Avenue	Beach Avenue	900	0.17	2,600	63	Shim and Micro
D Street	Cadish Avenue	Beach Avenue	2,100	0.40	6,950	53	Shim and Micro
E Street	Cadish Avenue	Beach Avenue	2,100	0.40	6,500	57	Shim and Micro
Edgewater Road	Nantasket Avenue	Nantasket Road	4,500	0.85	10,000	55	Crack Seal
Beach Avenue	A Street	L Street	2,300	0.44	6,000	59	Shim and Micro
Newport Road	Vernon Avenue	Nantasket Road	3,200	0.61	8,500	58	Shim and Micro
2019 Totals			33,953	6.43	104,120		
2020							
Road	From	To	Length (Feet)	Length (Miles)	SY	RSR	Repair
Central Avenue	Q Street	A Street	3,331	0.63	11,100	49	Mill and Overlay
Kenberma Street	Newport Road	Beach Avenue	2,296	0.43	6,500	45	Mill and Overlay
L Street	Central Avenue	Nantasket Avenue	735	0.14	2,150	47	Mill and Overlay
N Street	Central Avenue	Nantasket Avenue	735	0.14	2,000	68	Mill and Overlay
Nantasket Avenue	A Street	Kenberma Street	3,516	0.67	15,500	68	Mill and Overlay
Revere Street	Beach Avenue	Newport Road	1,900	0.36	6,000	58	Mill and Overlay
Bay Street	Nantasket Avenue	G. Washington Blvd	3,368	0.64	9,450	50	Mill and Overlay
Andrew Avenue	Highland Avenue	Main Street	1,200	0.23	2,935	31	Overlay
Highland Avenue	Main Street	Main Street	2,760	0.52	5,930	11	Overlay
Mount Pleasant Avenue	James Avenue	Highland Avenue	780	0.15	1,560	19	Overlay
Newton Street	Main Street	Highland Avenue	830	0.16	1,850	11	Overlay
Vautrinot Avenue	Main Street	Highland Avenue	1,300	0.25	2,900	12	Overlay
Western Avenue	Highland Avenue	Main Street	1,050	0.20	2,560	24	Overlay
Farina Road	Nantasket Avenue	Farina Road	1,800	0.34	2,800	0	Overlay
Newport Road	Nantasket Avenue	Vernon Avenue	3,000	0.57	8,000	58	Reclamation
2020 Totals			28,601	5.42	81,235		

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2019-2020 Road List




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Results and Next Steps



Results by end of 2020....

- Town-wide rating will reach the mid 60's
- Arterial Roadways will average in the 80's
- Collector Roadways will Average in the 70's




Next Steps....

- Lots of work ahead
- Continue to evaluate road network, roadway deterioration, methods for repairs and funding opportunities




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