



Town of Upton Department of Public Works

Asset Management Program Summary

July 2013

Department of Public Works Asset Management Program Summary

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Asset Management – A Definition

“Asset Management...goes beyond the traditional management practice of examining singular systems within the road networks, i.e., pavements, bridges, etc., and looks at the universal system of a network of roads and all of its components to allow comprehensive management of limited resources. Through proper asset management, government can improve program and infrastructure quality, increase information accessibility and use, enhance and sharpen decision-making, make more effective investments and decrease overall costs”

- APWA, Asset Management Task Force



Department of Public Works Asset Management Program Summary

Overview

- Pavement Management Program - \$8.8 Million



Glen Avenue



Department of Public Works Asset Management Program

Overview

- Sidewalks & Ramps - \$2.76 Million



Department of Public Works Asset Management Program

Overview

- Guardrails - \$1.37 Million



Department of Public Works Asset Management Program

Overview

- Bridges \$1,580,000* & Culverts \$400,000



*Estimate only. Bridge analysis needs to be conducted



Department of Public Works Asset Management Program

Overview

- Dams - \$817,000



Department of Public Works Asset Management Program

Overview

- Parking Lots - \$770,000



Department of Public Works Asset Management Program

Overview

- MUTCD Compliance Plan - \$80,000



Department of Public Works Asset Management Program

Overview

- Stormwater Management Compliance - \$45,000



Department of Public Works Asset Management Program Summary

Summary

- Pavement Management Program - \$8.8 Million
- Sidewalks & Ramps - \$2.76 Million
- Guardrails - \$1.37 Million
- Bridges & Culverts - \$1,980,000
- Dams - \$817,000
- Parking Lots - \$770,000
- MUTCD Compliance Plan - \$80,000
- Stormwater Management Compliance - \$45,000
- **Approximate Total = 16.6 Million**



Quote

“The crisis is not in the system of public works, but in the lack of public insight which would allow and demand that our political institutions apply long term solutions.”

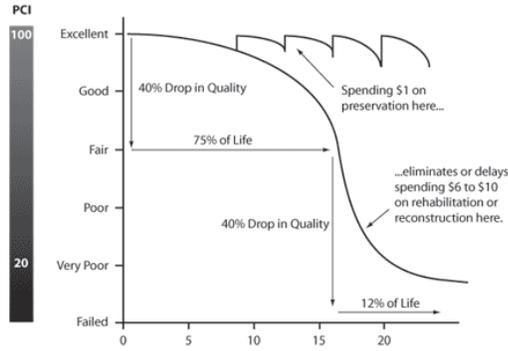
**Mr. Krempel
Director of Public Works
Fort Collins, Colorado**



Any Questions?



Pavement Management Program

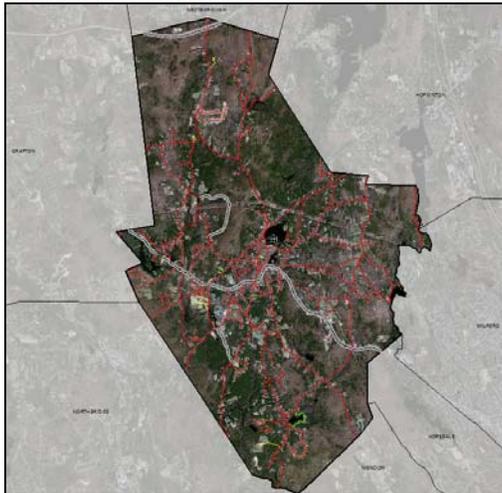


Source: Federal Highway Administration

- Asset management tool
- It is more cost effective to keep good roads in good condition



Pavement Management Program



Type	Miles
Town – Accepted	69.34
Town – Unaccepted	0.87
Town - Total	70.21
Private	1.49
State	9.47
Total	81.17

2013 MASSDOT Ch. 90 Roadway Mileage = 64.53



Pavement Management Program

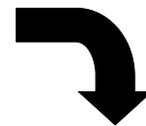
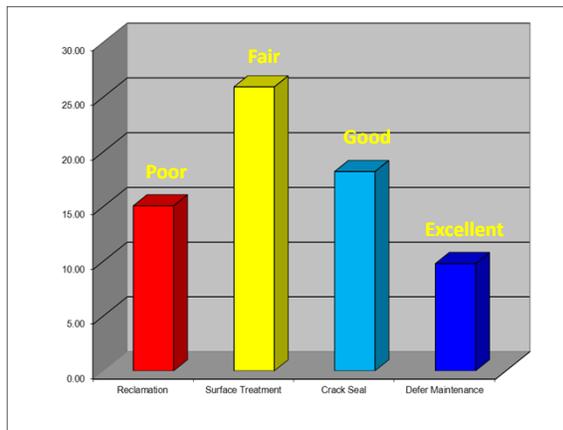
Road Surface Rating

- Calculate Road Surface Rating (RSR) based on existing distresses
- Ratings are 0 to 100 (Worst to Best)
- Add newly accepted streets accordingly



Pavement Management Program

Existing Conditions Summary – By Mileage



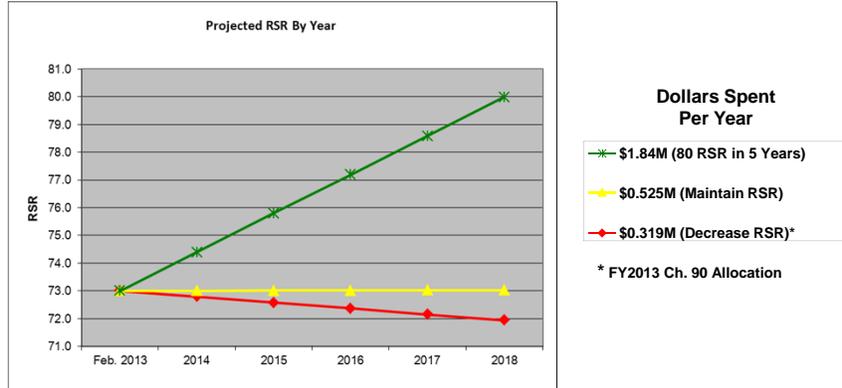
Approx. 69
Road Miles
RSR = 73
\$8.8 Million

*Town Accepted Roadways Only



Pavement Management Program

5 Year RSR Forecast



*Curb to Curb Pavement Improvements Only



Pavement Management Program

Crocket Road



Sidewalk & Ramp Improvement Needs

Priority Projects & Limits

R & R Granite					
Street	From	To	Length	HC Ramps	Est. Total
Rt 140 N	Rose Garden	Williams St	9,000	13	\$732,600
Rt 140 S	Williams St	Brooks St	9,900	20	\$818,400
Install Granite, Concrete					
Street	From	To	Length	HC Ramps	Est. Total
Pleasant St	Mendon St	Rt 140	2,150	2	\$172,580
N Main	T Common	Cemetery	1,700	4	\$141,780
School St	Cross St	Rt 140	3,225	7	\$267,670
Fiske Ave	Rt 140	Hart Ave N	1,850	7	\$160,100
Fiske Ave	Pleasant St	Rt 140	450	0	\$35,200
Maple Ave	Rt 140	#23	975	0	\$76,270
New Construction					
Street	From	To	Length	HC Ramps	Est. Total
School St	Cross St	N Main St	825	1	\$66,730
Maple Ave	#23	Pleasant St	2,640	2	\$210,910
Mendon St	Pleasant St	Rt 140	1,050	0	\$82,130
Est. Totals			33,765	56	\$2,764,370

*Sidewalks assume 5 ft. width = 168,825 sq. ft.
 ** Each Ramp = \$2,200 and assumes 5 ft. width



Guardrail Improvement Needs

Location	Linear Feet	Estimated Cost
Priority 1 - Pond Street	670	\$27,470
Miscellaneous Locations*	32,760	\$1,343,160
Est. Total	33,430	\$1,370,630



Fowler Street

* Based on Town Review of 20+ Locations



Guardrail Improvement Needs

Grove Street – In need of Guardrails

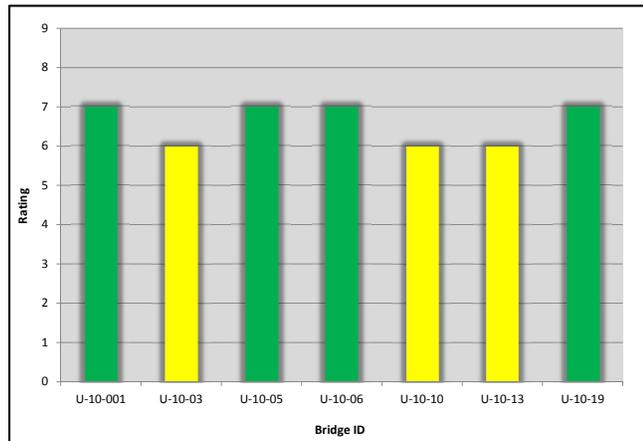


Bridges & Culverts

Bridge Rating Summary

Condition Rating Scale

Condition	Rating
Excellent	9
Good	7,8
Fair	5,6
Poor	4
Serious	2,3
Failed	0,1



Bridges & Culverts

Conditions Assessment Summary

Bridge #	Street	Over	Year Built	Latest Inspection Date	Deck Rating	Super Rating	Sub Rating	Overall Rating
U-10-001	West River St.	West River	1959	8/3/2011	7	6	7	7
U-10-03	Fiske Mill Rd.	Mill River	1956	7/5/2011	5	5	7	6
U-10-05	Pleasant St.	West River	1959	12/12/2011	7	6	7	7
U-10-06	Hartford Ave.	West River	1956	1/20/2011	7	7	6	7
U-10-10	Fowler St.	Warren Brook	1956	8/17/2010	6	6	6	6
U-10-11*	Mendon St.	Center Brook	UNKNOWN	10/6/2011				
U-10-13	Glen Ave.	West River	1937	10/6/2011	6	5	6	6
U-10-14*	Hopkinton Rd.	Pratt Pond Inlet	1939					
U-10-18**	Fowler St.	Warren Brook	UNKNOWN					
U-10-19	Station St.	Center Brook	1956	4/2/2012	7	7	7	7
U-10-21***	Fowler St.	Davidson Pond Outlet	1990					

* Culvert - Not Rated	Ratings
** Bridge Not Found	0 = Worst
*** Bridge Not Inspected	9 = Best



Bridges and Culverts

Fiske Mill Bridge



Dam Improvement Needs

Condition Summary and Estimated Costs

Dam ID #	Name	Class	Size	Last Inspected	Condition	Est. Cost for Compliance
3-14-303-3*	Old Box Shop Pond Dam	3	Small	7/8/2008	Unsafe	\$214,000
3-14-303-4	Wildwood Lake Dam	2	Intermediate	8/4/2012	Fair	\$164,000
3-14-303-5	Old Mill Pond Dam	2	Intermediate	8/4/2012	Fair	\$129,000
3-14-303-6*	Pratt Pond Dam	3	Intermediate	7/8/2008	Fair	\$181,000
3-14-303-7*	Taft Pond Dam	3	Intermediate	7/8/2008	Poor	\$129,000
						\$817,000

Class 2 – Significant Hazard
 Class 3 – Low Hazard
 * 2008 Cost Estimate



Parking Lots & Recreation Areas

Condition Summary of Estimated Costs

Town

Location	Sq Yds	Condition	Action Needed	When	Est. Cost
VFW Playground Parking	2,850	Fair	20% Rubber Chip	< 5 yrs	\$14,250
Board of Health Parking	450	Poor	R & R Asphalt	< 5 yrs	\$36,000
Town Hall Parking	350	Good	Redirect Water, Crackseal	< 5 yrs	\$10,000
Town Hall Roadway Area	550	Poor	R & R Asphalt	< 5 yrs	\$44,000
Highway Dep't Drives	4,000	Fair	Crack Seal	< 2 yrs	\$2,000
			Mill and Overlay	< 10 yrs	\$180,000
SUB TOTAL	8,200				\$286,250

Fire

Location	Sq Yds	Condition	Action Needed	When	Est. Cost
Fire Dep't Rear Parking	2,900	Poor	Mill and Overlay	< 5 yrs	\$174,000
Fire Dep't Front Parking	650	Good	Crack Seal	< 2 yrs	
SUB TOTAL	3,550				\$174,000



Parking Lots & Recreation Areas

Condition Summary of Estimated Costs

Recreation

Location	Sq Yds	Condition	Action Needed	When	Est. Cost
Beach Parking	3,000	Good	Crack Seal	< 2 yrs	\$1,500
Beach Upper Road	800	Fair	Repair and Chip		\$5,000
Courts, 2 Tennis, 1 BB		Poor	R & R Asphalt		\$106,500
New Parking at Upper Field			Clear, Grub, Gravel, Guardrails		\$100,000
Leland Field, 1 Tennis, 1 BB		Excellent	Court Coatings	<3 yrs	\$5,000
SUB TOTAL	3,800				\$218,000

Police

Location	Sq Yds	Condition	Action Needed	When	Est. Cost
Police Dep't Parking	1,500	Good	Crack Seal/Paint every 2 years	< 2 yrs	\$1,500
		Poor	Mill and Overlay	< 10 yrs	\$90,000
SUB TOTAL	1,500				\$91,500

Est. Total: 17,050 Square Yards, \$769,750



MUTCD Compliance Program Needs

- Inventory & Plan Deadline – June 2014
- Field Inventory & Testing (500 Signs) ➔ \$15,000
- Develop Action Plan ➔ \$5,000
- Replacement Program (Assumes DPW Install*) ➔ \$60,000

*Assumes Sign Purchased from Vendor and Installed by DPW. Post Not Included



Stormwater Management & Compliance Needs

- Outfall Inventory and Sampling Program → \$10,000 - \$15,000
- Catch Basin Cleaning & Tracking Program → \$3,000 - \$5,000
- System-wide Mapping & GIS Implementation → \$20,000 - \$25,000



Town of Upton
Department of Public Works

Asset Management Program Summary

Thank You