

Town of Exeter, NH

SIDEWALK MANAGEMENT PROGRAM

Public Works Department
Engineering & Highway

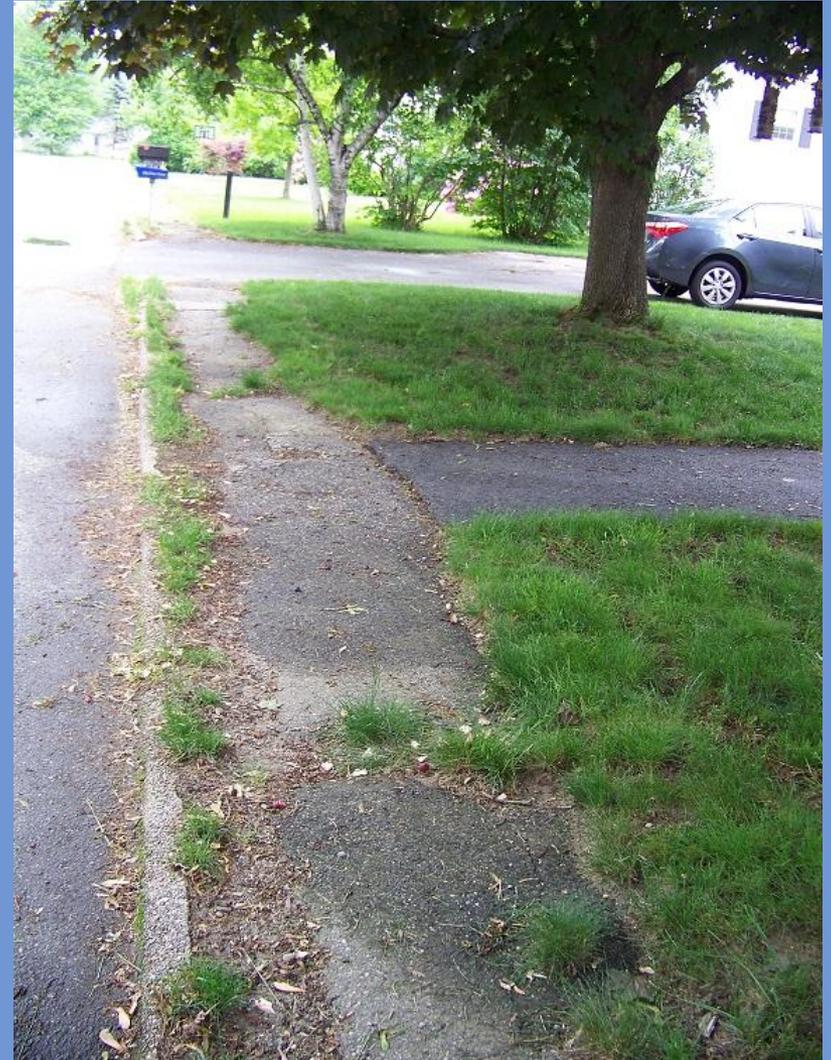
June 30, 2014

Sidewalk Management Program

- 1. Inventory**
- 2. Inspections**
- 3. GIS Interface**
- 4. Prioritization**
- 5. Projects**

Inventory/Inspections

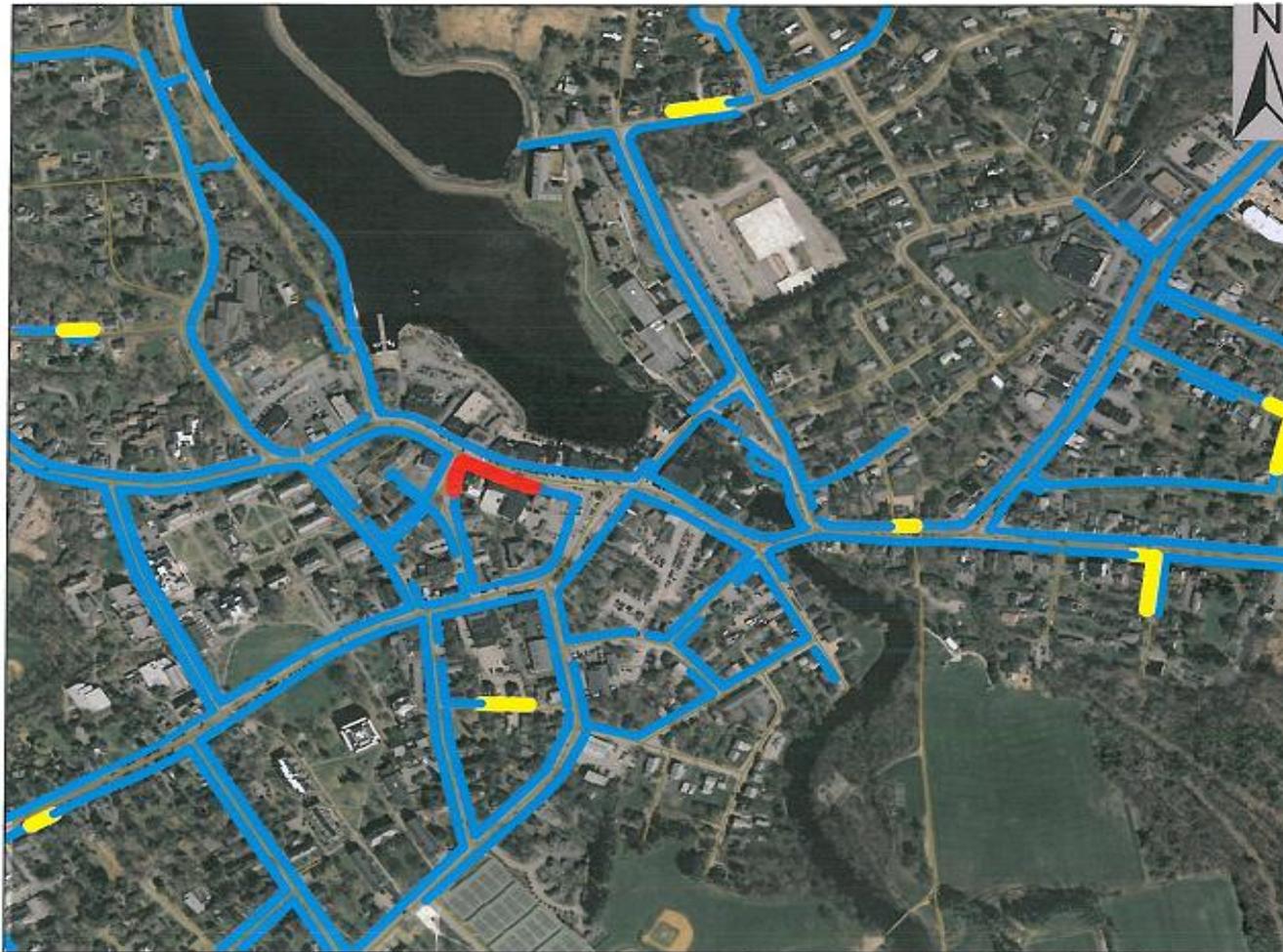
- **Sidewalk**
 - **Material**
 - **Length/Width**
 - **Condition-**
Cracks/Roughness
- **Curb**
 - **Material**
 - **Condition**
 - **Reveal**
- **Grass Strip**
 - **Width**
 - **Condition**



Sidewalk Data

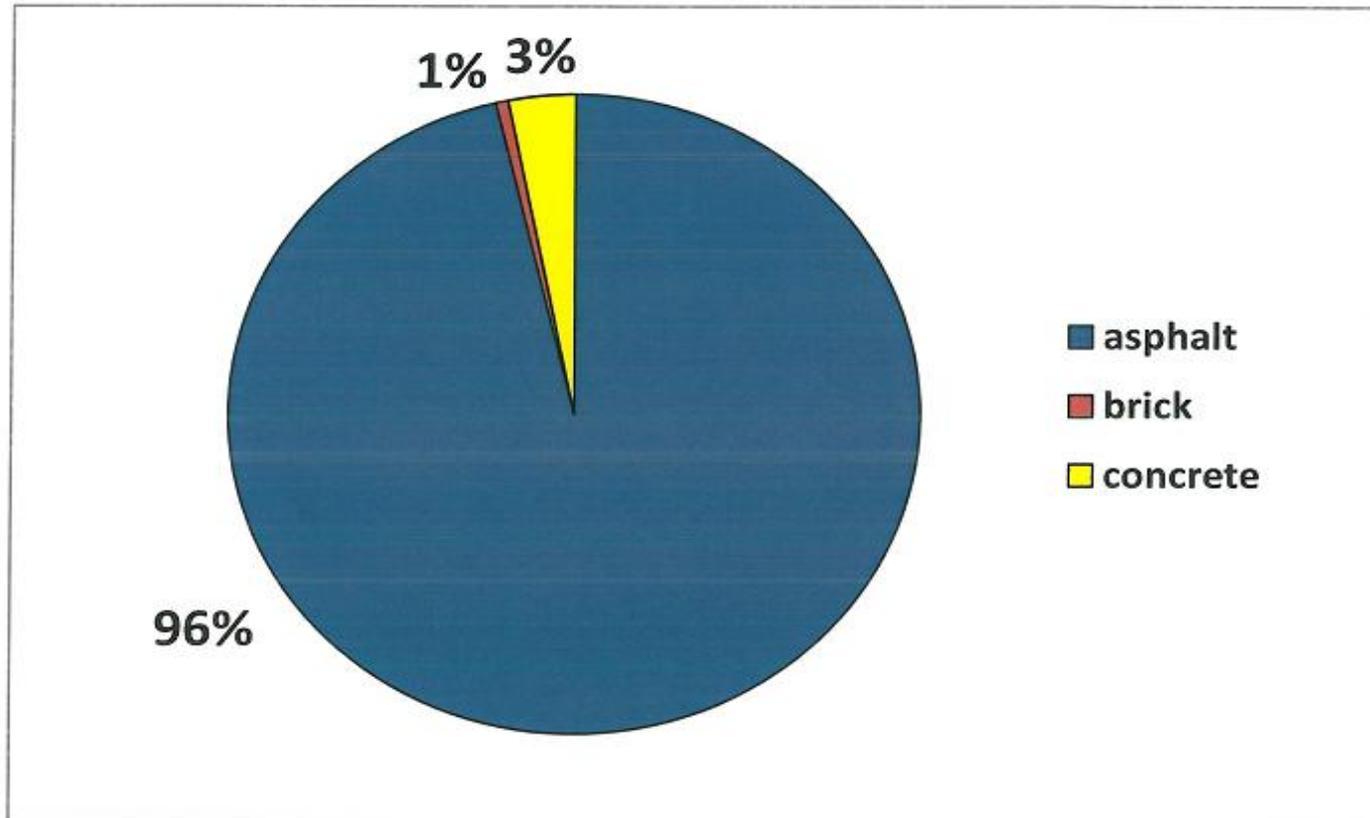
Map	Lot	Street	Mat'l	W	L	Cond.	Mat'l	Wd.	Ld.	Cond.	Mat'l	Reveal	Cond.	Wg	Cond.	COND SCORE	HIGH USE {1,0}	CONCUR. {1,0}	HIGH USE Y/N	CONCUR. Y/N	RN
SIDEWALK						DRIVEWAY				CURB			GRASS STRIP								
73	226	Garfield	C	5.5	54	P	NA	NA	NA	NA	G	0	F	NA	NA	2.1	0	1	N	Y	1.09
73	232	Union	A	5.5	49	P	NA	NA	NA	NA	NA	NA	NA	5.5	F	2.1	0	1	N	Y	1.09
73	241	Union	A	5	127	P	A	17	10	G	NA	NA	NA	5.5	F	2.1	0	1	N	Y	1.09
73	243	Union	A	5	52	P	A	25	11	G	NA	NA	NA	NA	NA	2.1	0	1	N	Y	1.09
73	245	Union	A	4.5	93	P	A	11	12	P	NA	NA	NA	8	F	2.1	0	1	N	Y	1.09
73	250	Union	A	5	47	P	NA	NA	NA	NA	NA	NA	NA	7	F	2.1	0	1	N	Y	1.09
73	252	Union	A	4.5	40	P	A	27	12	P	NA	NA	NA	7.5	F	2.1	0	1	N	Y	1.09
73	254	Union	A	4.5	50	P	A	23	11	F	NA	NA	NA	6	F	2.1	0	1	N	Y	1.09
73	255	Union	A	5	54	P	A	13	10	F	NA	NA	NA	6	F	2.1	0	1	N	Y	1.09
73	257	Union	A	5	44	P	A	22	10	P	NA	NA	NA	4	F	2.1	0	1	N	Y	1.09
73	258	Union	A	5.5	183	P	A	16	9.5	G	NA	NA	NA	3	P	2.1	0	1	N	Y	1.09
73	290	Daniel	C	4	58	P	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.1	0	1	N	Y	1.09
73	291	Daniel	C	4	58	P	C	17	7.5	F	NA	NA	NA	NA	NA	2.1	0	1	N	Y	1.09
82	18	Linden	A	5.5	60	P	A	40	5.5	G	A	2	VP	NA	NA	2.1	0	1	N	Y	1.09
91	27	Exeter Falls	A	5	184	P	A	16	9	P	A	3	G	5	G	2.1	0	1	N	Y	1.09
21	31	CAPTAINS WAY	A	5	115	P	A	38	7.5	G	A	8	F	NA	NA	2.1	0	0	N	N	0.84
21	32	CAPTAINS WAY	A	5	163	P	A	18	6.5	P	A	8	F	NA	NA	2.1	0	0	N	N	0.84
21	33	CAPTAINS WAY	A	5	266	P	A	17	6.5	F	A	8	F	NA	NA	2.1	0	0	N	N	0.84
24	16	CAPTAINS WAY	A	5	205	P	A	18	6.5	P	A	8	F	NA	NA	2.1	0	0	N	N	0.84
24	17	CAPTAINS WAY	A	5	294	P	A	14.5	6	G	A	8	F	NA	NA	2.1	0	0	N	N	0.84
24	18	CAPTAINS WAY	A	5	436	P	A	18	6.5	F	A	8	F	NA	NA	2.1	0	0	N	N	0.84
24	20	CAPTAINS WAY	A	5	366	P	A	16	6	F	A	8	F	NA	NA	2.1	0	0	N	N	0.84
24	21	CAPTAINS WAY	A	5	181	P	A	14	6	F	A	8	F	NA	NA	2.1	0	0	N	N	0.84
26	1	KELBY SCOTT	A	4	250	P	A	14	6	G	A	8	F	2	F	2.1	0	0	N	N	0.84
27	15	KELBY SCOTT	A	4	177	P	A	12	6.5	F	NA	NA	NA	2	F	2.1	0	0	N	N	0.84
32	18	CRAGMERE HTS	A	3.5	109	P	A	29.5	7.5	P	NA	NA	NA	4	F	2.1	0	0	N	N	0.84
32	19	CRAGMERE HTS	A	3.5	104	P	NA	NA	NA	NA	NA	NA	NA	4	F	2.1	0	0	N	N	0.84
32	37	KELBY SCOTT	A	4	115	P	A	22	6	G	NA	NA	NA	2	F	2.1	0	0	N	N	0.84
32	39	KELBY SCOTT	A	4	186	P	A	16	7	F	NA	NA	NA	2	F	2.1	0	0	N	N	0.84
33	6	DEER RUN	A	3	427	P	A	26	6.5	F	NA	NA	NA	3	F	2.1	0	0	N	N	0.84
33	7	DEER RUN	A	3	303	P	NA	NA	NA	NA	NA	NA	NA	3	F	2.1	0	0	N	N	0.84
33	8	DEER RUN	A	3	223	P	A	23	5.5	P	NA	NA	NA	3	F	2.1	0	0	N	N	0.84
33	9	DEER RUN	A	3	11	P	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.1	0	0	N	N	0.84
33	17	KELBY SCOTT	A	4	416	P	NA	NA	NA	NA	A	6	F	2	F	2.1	0	0	N	N	0.84
63	3	ASH	A	5	50	P	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.1	0	0	N	N	0.84
63	15	HARVARD	A	4.5	42.5	P	A	12.5	10	P	NA	NA	NA	5	P	2.1	0	0	N	N	0.84

Existing Sidewalk Materials



LEGEND	
SIDEWALK MATERIALS	
ASPHALT	
BRICK	
CONCRETE	

Existing Sidewalk Materials

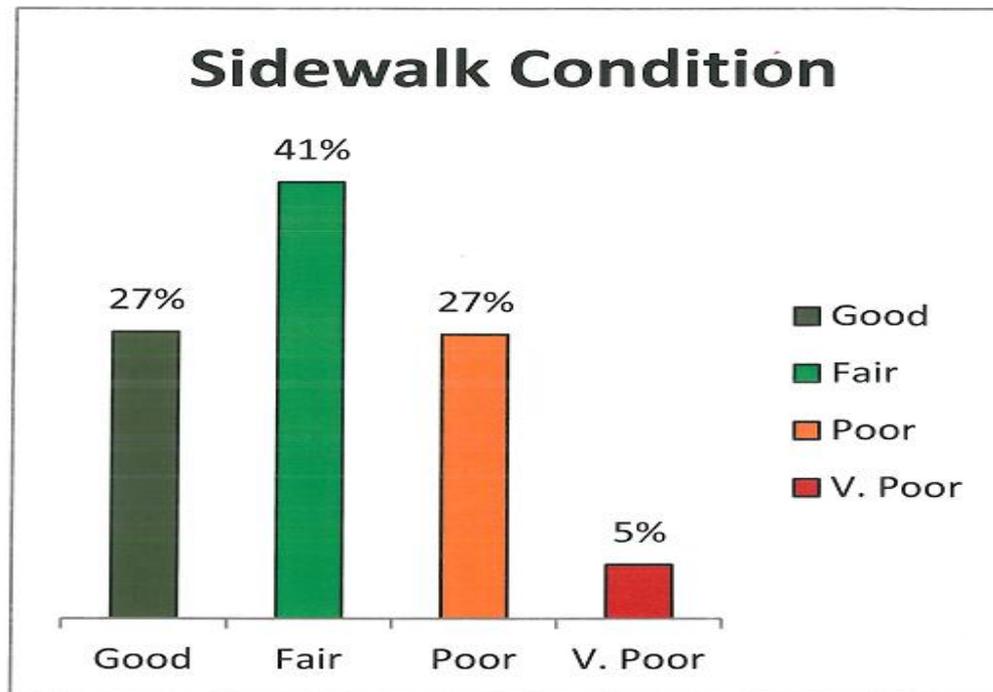


Useful Life Span

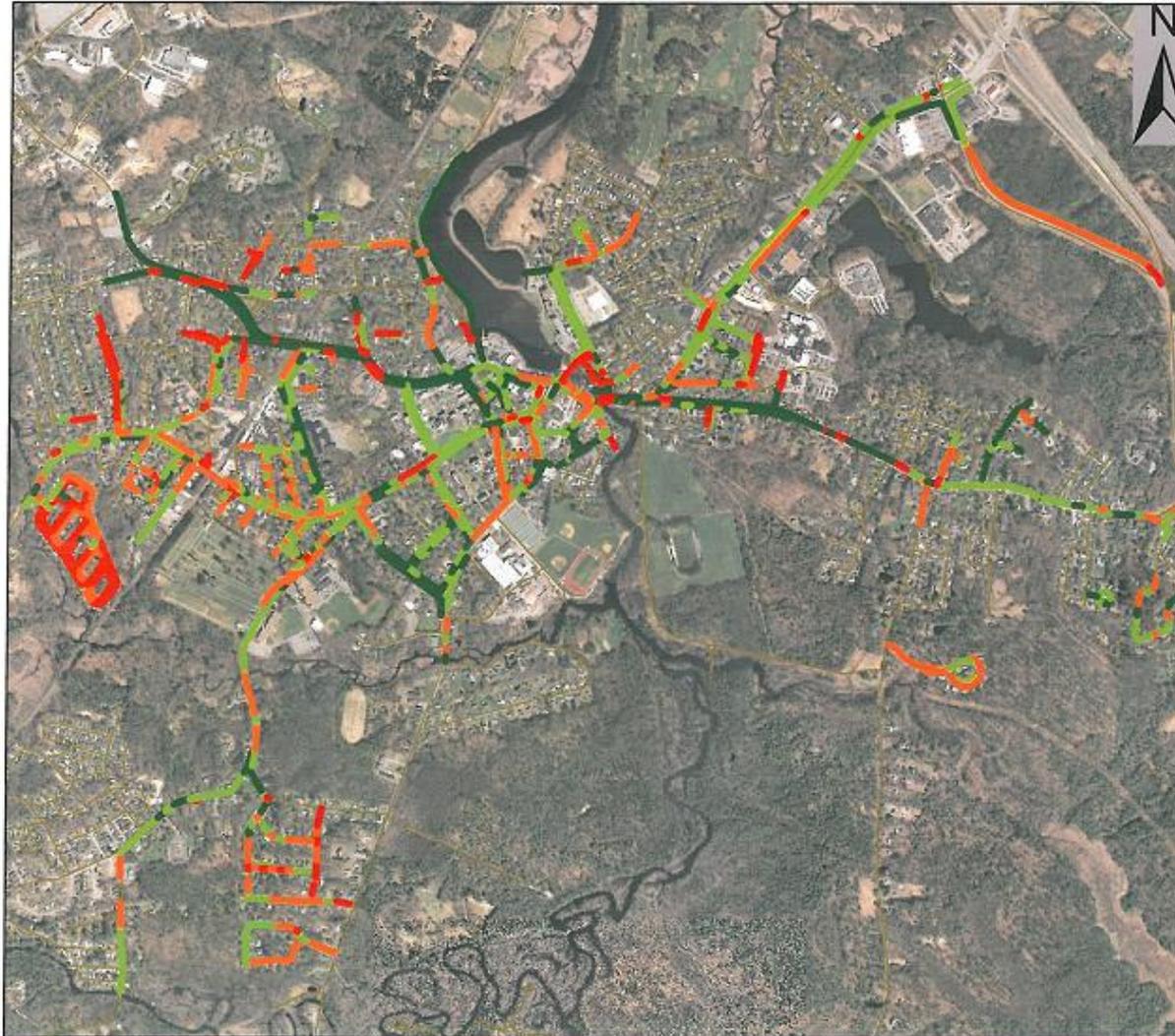
- **Asphalt** **20 years**
- **Concrete** **35 years**
- **Brick** **30 years**

Sidewalk Prioritization

- Condition
 - cracking & roughness



Sidewalk Condition



Sidewalk Prioritization

- **Condition**
 - cracking & roughness
- **High Use**
 - schools, parks, elderly,
downtown, high traffic roads

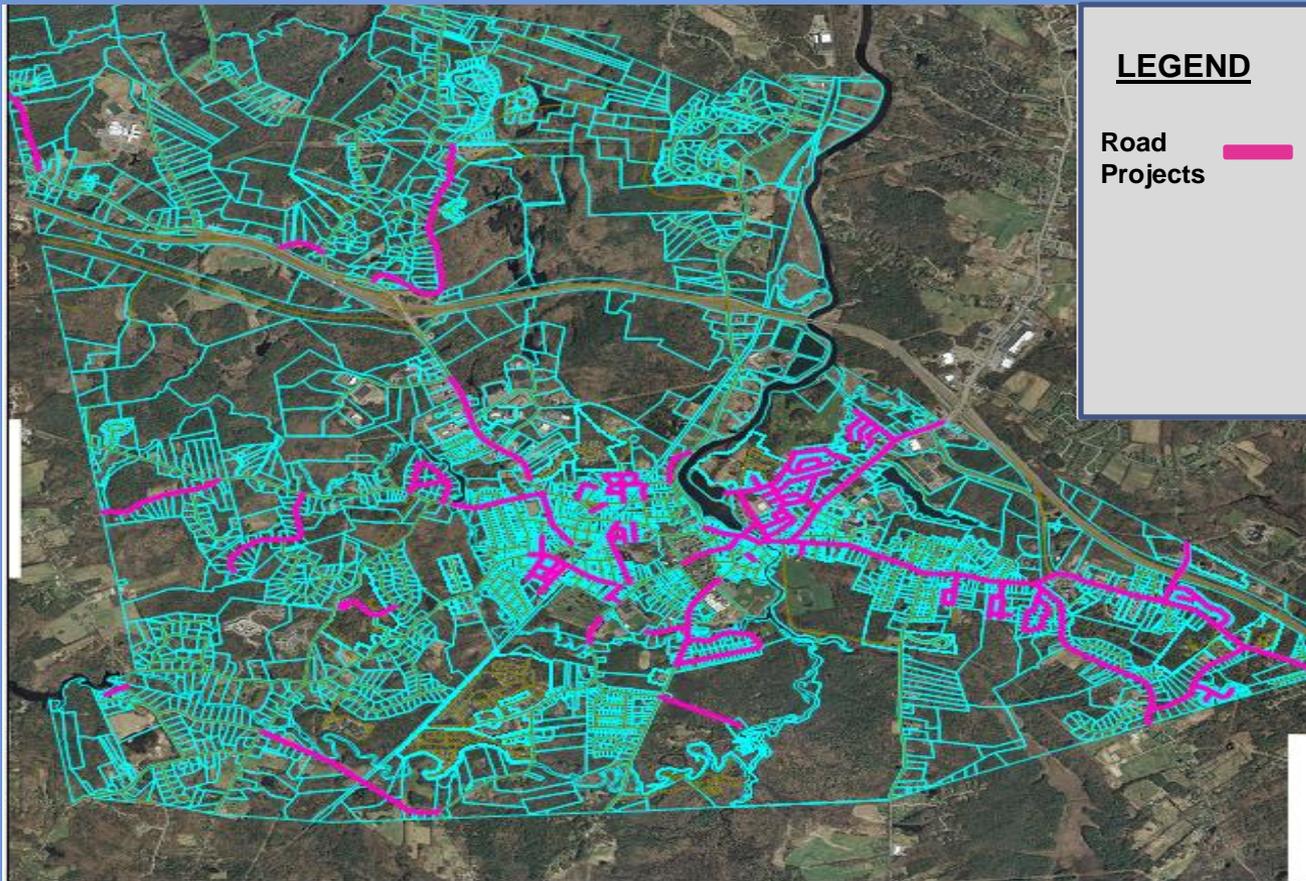
Sidewalk High Use



Sidewalk Prioritization

- **Condition**
 - cracking & roughness
- **High Use**
 - schools, doctors, parks, elderly, high traffic
- **Concurrent Road Projects**
 - future road projects

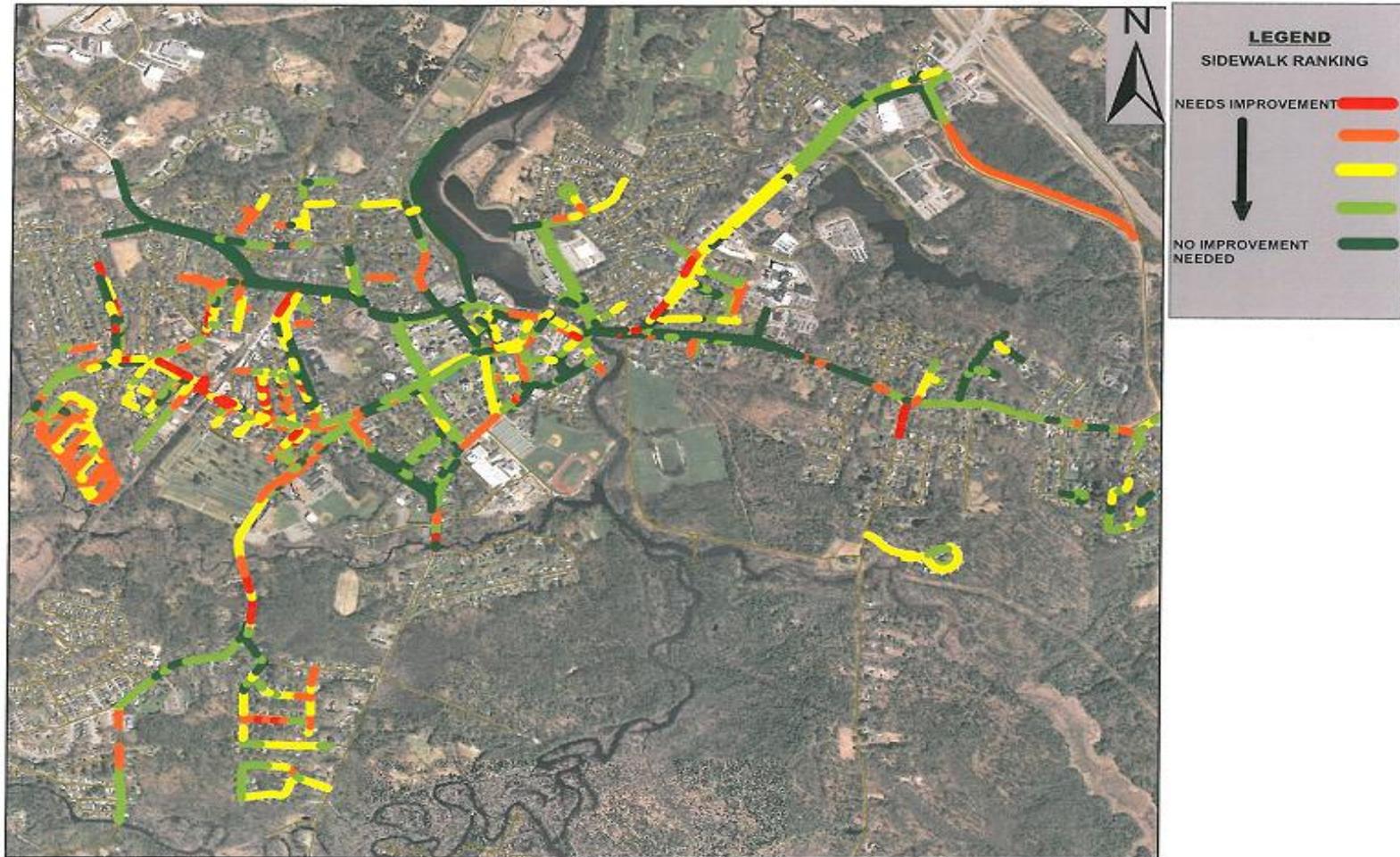
Sidewalk Concurrent Road Projects



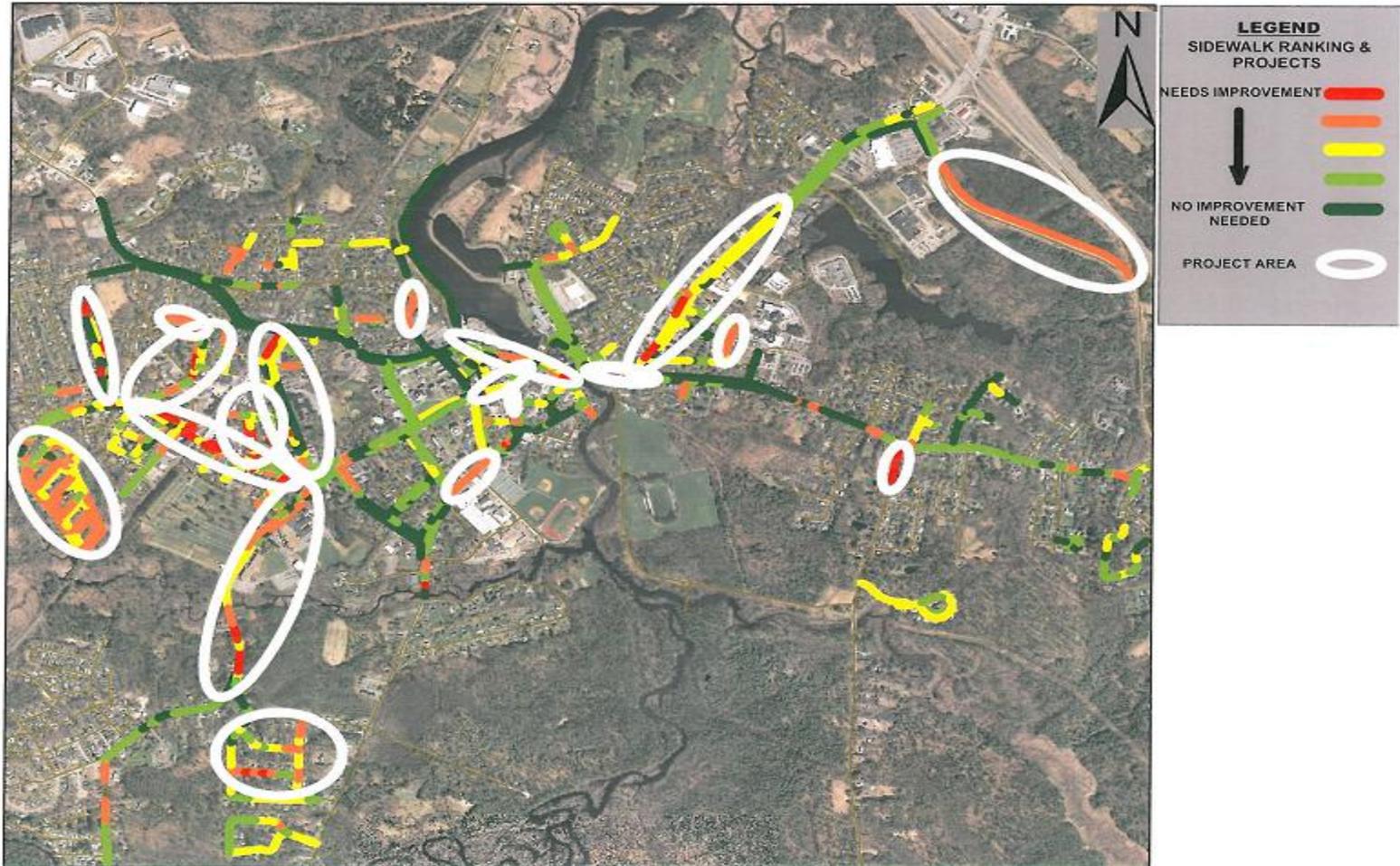
Sidewalk Priority- Weighting

- **Condition** • 40%
- **High Use** • 35%
- **Concurrent Road Projects** • 25%

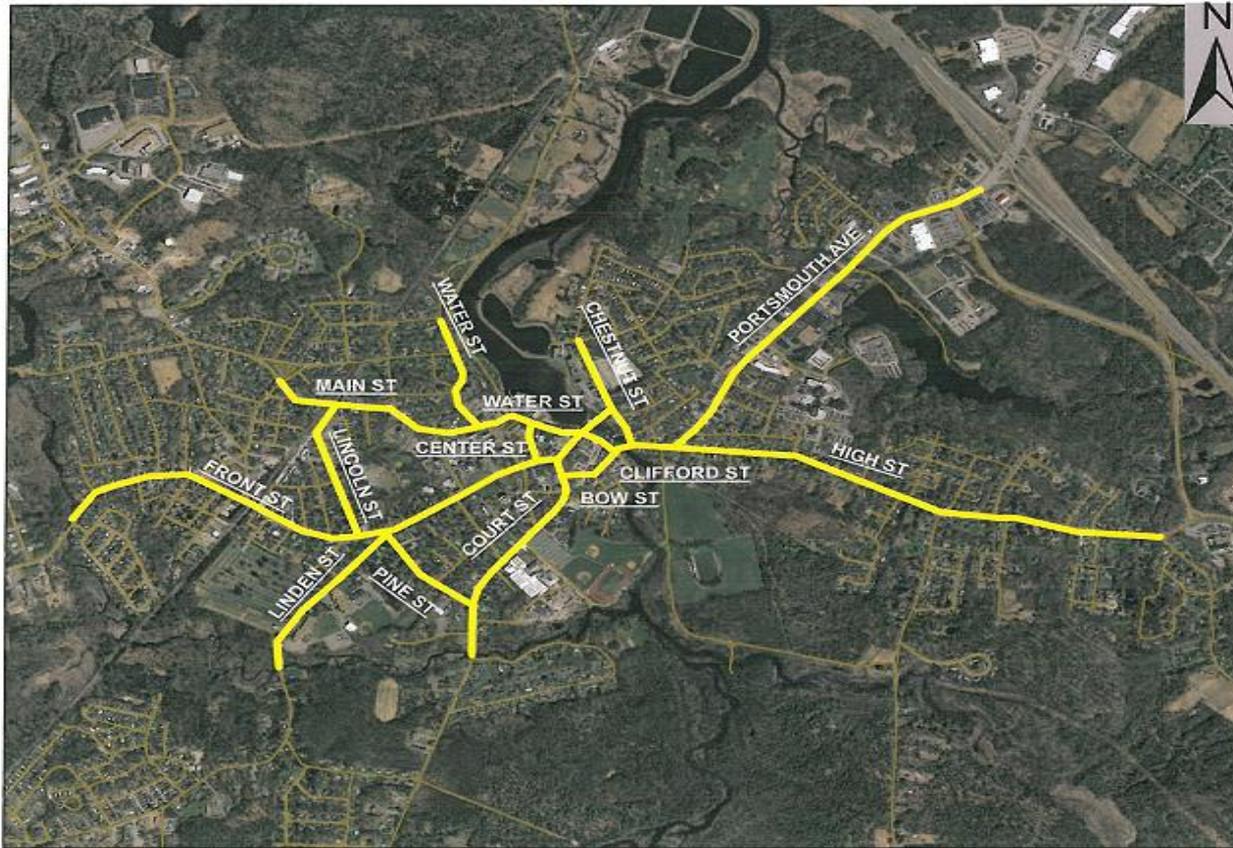
Sidewalk Ranking



Suggested Projects



Proposed Concrete Sidewalks



LEGEND

SIDEWALK MATERIALS

CONCRETE 

Permeable Alternatives

(Something to Consider)

- **Porous Asphalt**
- **Porous Concrete**
- **Permeable Pavers**



Currently these materials and installation costs are typically higher than traditional concrete and asphalt – similar to brick but will depend on project.

Porous asphalt has been used locally in private construction projects and porous concrete was recently installed in a private development. These applications were used as part of the projects' Best Management Practices (BMPs) to reduce stormwater runoff.

Permeable Alternatives

Brick Pavers



Porous
Asphalt



Concrete Panels

Unit Costs For Installation

- **Asphalt** **\$ 45.00 SY**
- **Concrete** **\$ 56.00 SY**
- **Brick** **\$150.00 SY**
- **Vertical Curb** **\$ 27.00 LF**
- **Sloped Curb** **\$ 17.00 LF**
- **Reset Curb** **\$ 14.00 LF**
- **Curb Patch** **\$150.00 TN**

Conclusions

- **Asset Management**
- **Economics**
- **Annual Expenditure**
 - **PROGRAM: \$120,000**
 - **2014 Funded: \$ 80,000**

Annual Program Expenditure-

\$120,000/YR

Service Life: \$82,000

Asphalt Overlays 15 YR (G&F)

Reconstructed Asphalt 25 YR

Brick 30 YR

Concrete 35 YR

Driveways:

Poor 25 YR

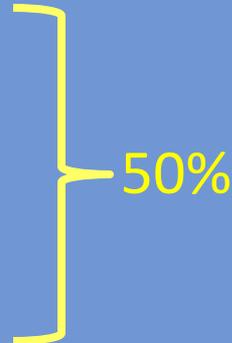
Curb:

Low Reveal & Poor 25 YR

Grass Strip:

Annual Expenditure

\$123,000



\$41,000

Conclusions

- **Asset Management**
- **Economics**
- **Annual Expenditure**
 - **PROGRAM: \$120,000**
 - **2014 Funded: \$ 80,000**
- **Identified Projects**

Sidewalk Projects

(Based on Sidewalk Management Program)

- **Court St.** **\$ 70,000**
(Front to Maple)
- **Court St.** **\$ 35,000**
(Parcel 169)
- **Drinkwater Rd.** **\$ 30,000**
- **Front St.** **\$185,000**
(Water to Spring)
- **Front St.** **\$295,000**
(Lincoln to Winter)
- **High St.** **\$130,000**
- **Holland Way** **\$ 25,000**
- **Kathleen Dr. &**
Marilyn Ave **\$ 16,000**
- **Lincoln St.** **\$340,000**
- **Linden St.** **\$290,000**
- **Portsmouth Ave.** **\$365,000**
(High St to Water Treatment Plant)
- **Prospect Ave.** **\$ 5,000**
- **School/Garfield/
Union** **\$ 120,000**
- **Washington St.** **\$130,000**
- **Water St.** **\$305,000**
(Great Bridge to Swasey)
- **Water St.** **\$ 50,000**
(Senior Housing)
- **Westside
Neighborhood** **\$250,000**
- **Whitley Ave.** **\$ 30,000**
- **Winter St.** **\$150,000**

Conclusions

- **Asset Management**
- **Economics**
- **Annual Expenditure**
 - **PROGRAM: \$120,000**
 - **2014 Funded: \$ 80,000**
- **Identified Projects**
- **Capital Improvement Project (CIP)**

Capital Improvement Project (CIP)

Town of Exeter, New Hampshire 2015 - 2020 CIP Project Request

Date Submitted: May 23, 2014
Year Funding is Requested: 2015

Department: Public Works - Highway
Project Title: Sidewalk Program
Contact: Jay Perkins
Phone: 778 - 0591 ext. 163
e-Mail: jperkins@town.exeter.nh.us

Priority (1 of 8, etc.): 1 of 5
Estimated Total Cost: \$ 1,180,000
Estimated Useful Life (Years): 35
Previously Presented? (Yes/No): Yes
When (Please give year): 2014
Growth Related? (Yes/No): No

Request Results from ("√" all that apply)

Reduce Long Term Operating Cost Health or Safety
 Continuation of Existing Project Expand Public Demand
 Reflects Master Plan Reduces Liability

PROJECT DESCRIPTION, RATIONAL & OPERATING BUDGET IMPACT

Proposed ("√" all that apply) Building Renovation, Addition, New Construction Equipment New/Replacement Real Property Acquisition Road Improvements Water/Sewer System Improvements

1. General Project Description: This project provides funding to reconstruct and repair deteriorated sidewalks.

2. Rationale: The sidewalk network in Town consists of about 35 miles and has had little or no funding for years. The Department had inspected the sidewalks in 2011. A sidewalk management program was developed using this data and linked to the Town's GIS for infrastructure management. Sidewalk funds of \$80,000 were approved last year.

3. Operating Budget Impact: For the 2014 CIP, a preliminary annual budget was calculated for a programming approach for sidewalk repairs at \$120,000/YR. This budget utilized sidewalk unit repair costs from 2011 and estimates of service life based on the type of sidewalk. Costs included sidewalk, curbing (if needed) and driveway repairs. A percentage of sidewalks were estimated for asphalt overlay instead of complete replacement.

Another approach is to estimate project specific repairs. Attached is a list of projects suggested by the sidewalk management analysis. Water St and Front St, in the downtown area, have been suggested for paving in 2015. This area has generally been noted as a possible sidewalk section repair or improvement area. To adequately reconstruct the sidewalks and provide appropriate curb reveal, stormwater runoff and entrances to buildings in the noted downtown area substantial roadway grinding will be necessary. The 2015 paving budget will cover the roadway improvements. Concrete sidewalks are suggested.

Concrete walkways:	\$485,000	For comparison excluding stormwater treatment, bond and legal costs
Stormwater treatment:	\$ 90,000	sidewalk costs for other materials are:
Bond & Legal costs:	\$ 5,000	Asphalt: \$430,000
Total:	\$580,000	Brick pavers: \$940,000



Capital Cost:	FY15	FY16	FY17	FY18	FY19	FY20	Total	Proposed Funding Source
Planning/Design/Engineering	-	-	-	-	-	-	-	<input checked="" type="checkbox"/> General Fund (tax rate)
Land/Site Improvements	575,000	120,000	120,000	120,000	120,000	120,000	1,175,000	<input type="checkbox"/> Water Fund
Construction	-	-	-	-	-	-	-	<input type="checkbox"/> Sewer Fund
Equipment Cost	-	-	-	-	-	-	-	<input type="checkbox"/> Capital Reserve Fund
Other Cost	5,000	-	-	-	-	-	5,000	<input type="checkbox"/> Impact Fee Account
Totals	580,000	120,000	120,000	120,000	120,000	120,000	1,180,000	<input type="checkbox"/> Revolving Fund
Operating Budget Impact:								<input type="checkbox"/> Other (Grants, Special Assessment)
Salaries/Wages	-	-	-	-	-	-	-	
Fringe Benefits	-	-	-	-	-	-	-	
Contracted Services	-	-	-	-	-	-	-	
Expenses	-	-	-	-	-	-	-	
Other Cost	-	-	-	-	-	-	-	
Totals	-							

CIP Concrete Walks

Water Street – (Great Bridge to Swasey Parkway)

Concrete Walkways	\$302,000
Stormwater Tree Wells	\$ 60,000
Bonds	<u>\$ 3,000</u>
	\$365,000

Roadway \$150,000

Front Street – (Water Street to Elm Street)

Concrete Walkways	\$183,000
Stormwater Tree Wells	\$ 30,000
Bonds	<u>\$ 2,000</u>
	\$215,000

Roadway \$ 60,000

TOTALS

Concrete Walkways	\$485,000
Stormwater Tree Wells	\$ 90,000
Bonds	<u>\$ 5,000</u>
	\$580,000

Roadway \$210,000

Asphalt/Brick Pavers Sidewalks

Water Street – (Great Bridge to Swasey Parkway)

Concrete	\$365,000	
Asphalt	\$ 331,000	
Brick	\$ 653,000	
Roadway		\$150,000

Front Street – (Water Street to Spring Street)

Concrete	\$215,000	
Asphalt	\$194,000	
Brick	\$ 382,000	
Roadway		\$ 60,000

TOTALS

Concrete	\$ 580,000	
Asphalt	\$ 525,000	
Brick	\$1,035,000	
Roadway		\$210,000