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TOWN OF DEDHAM

Commonwealth of Massachusetts

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DEPARTMENT OF INFRASTRUCTURE ENGINEERING

MEMORANDUM

TO: James Kern, Town Manager

Board of Selectmen

FROM: Jason L. Mammone, P.E., Director of Engineering

Joseph M. Flanagan, Director of Public Works

DATE: March 22, 2018

SUBJECT: Recommended Pavement Improvements for FY2019-FY2021

As part of the annual pavement management program, please find an analysis of the costs associated with the FY2018 Pavement Management road improvements which are currently being undertaken this contract year along with the recommended FY2019-FY2021 pavement improvements for review and consideration.

The FY2018 Recommended Pavement Improvements were presented to the Board and approved on June 15, 2017 as part of the continuing three year FY2018-FY2020 Recommended Pavement Management Improvements. A summary of the work as originally proposed and approved can be found in Table 1.

Table 1 – FY2018 Approved Road Improvements

Repair Type	Length in Feet	Cost
Reclamation	23,601	\$2,471,418.26
Mill and Overlay	234	\$14,910.91
Overlay	0	\$0
Preventative Maintenance	0	\$0
Routine Maintenance	16,050	\$47,319.50
Totals	39,885	\$2,533,648.67

Construction of the planned improvements began in April of 2017. Those roadways that were not completed by the end of 2017 were incorporated into the FY2018 improvements. The routine maintenance work was completed by Crack-Sealing, Inc. and the reclamation work was completed by Lorusso Corporation under the FY2016 Paving Contract.

We completed approximately 70 percent of the FY2018 roadwork during the first half of the contract year and will continue working on the remainder of the roadwork starting in April. There is approximately \$940,000 worth of roadwork remaining for FY2018. These roads are to be rehabilitated by reclamation. Any FY2018 roads not completed by June 30th will be added to the FY2019 Road Program.

A summary of the completed work to date can be found below in Table 2.

Table 2 – FY2018 Completed Improvements To Date

Repair Type	Length in Feet	Cost
Reclamation	14,969	\$1,678,936.51
Mill and Overlay	0	\$0
Overlay	0	\$0
Preventative Maintenance	0	\$0
Routine Maintenance	12,576	\$18,202.31
Totals	27,545	\$1,697,138.82

A summary of the estimated versus actual unit costs for FY2017 to date is shown below in Table 3.

Table 3 – FY2018 Units Costs To Date (Estimated vs. Actual)

Repair Type	Estimated Unit Cost (per SY)	Actual Unit Cost (per SY)
Reclamation (Major Collector)	\$40.00	-
Reclamation (Minor Collector & Residential)	\$35.00	\$33.55
Mill and Overlay	\$20.00	-
Overlay	\$15.00	-
Preventative Maintenance	\$12.00	-
Routine Maintenance	\$0.75	\$0.40

Based upon our favorable contract prices and oversight of the contract with in-house personnel, the Town was also able to complete the wholesale sidewalk replacement for a majority of the roads that have been reclaimed to date in FY2018. In total, the Town replaced approximately 17,850 linear feet of asphalt sidewalk.

The Town is now entering into our twelfth year of Pavement Management and as a continuation of last year's FY2018-FY2020 Pavement Management Plan we have prepared new recommendations for FY2021.

As of December 31, 2016 our overall roadway network pavement condition index (PCI) was 88 which is up significantly from our initial PCI of 70 from eleven years ago. If the

proposed improvements are approved and implemented we can anticipate maintaining the roadway PCI at 88 by the end of FY2021.

The funding scenario for the recommended FY2019 – FY2021 pavement improvements is based on the assumption of a local funding level of \$900,000 and utilizing approximately \$650,000 from State Chapter 90 funds for years 1 & 2 and a local funding level of \$700,000 and utilizing approximately \$650,000 from State Chapter 90 funds for year 3. As always, if the Town receives more than the assumed State Chapter 90 funding, we will utilize that money during the current construction season to rehabilitate roads indentified in the following year's program. As of 12/31/17, the Town's current backlog of repairs is \$7,243,642.

The recommended improvements proposed in this document are associated with asphalt pavement only. Sidewalks, curbing, drainage, and other geometric changes are not included in this proposal, however if during the design process these improvements are found to be necessary or desirable we will work to incorporate those items within the available budget(s).

In summary, the DPW and Engineering Departments are pleased to report that we are on target to successfully complete the FY2018 Pavement Management Plan approved last year within the available budget. Through the diligent efforts of both departments we believe we are able to deliver these improvements in an efficient and cost effective manner. All oversight of the design, bidding, contract administration, field engineering, and inspection was performed using in-house resources. Through these efforts we have been able to raise the Town's PCI to 88 from the initial rating of 70 eleven years ago.

The proposed work throughout Town over the course of FY2019-FY2021 is summarized in the attached table and maps. Please review the attached information and provide us with any questions or comments.

Cc: Nancy A. Baker, Assistant Town Administrator Nathan S. Buttermore, P.E., Infrastructure Engineer Ronald I. Lawrence, Project Engineer

Town of Dedham - Pavement Management Road Progra
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	Name	From	То	PCI	Length (ft)	Area (sy)	Cost
7/1/2	2018						
Repail	r Type: Mill/Over	rlay					
	CURVE STREET	COLBURN ST	MAVERICK ST	89	1,170	3,120	\$62,400.00
	CURVE STREET	MAVERICK ST	100' E OF WASHINGTON ST	87	1,690	3,755	\$75,106.60
	MCDONALD STREET	SPRAGUE ST	DEAD END	66	959	2,345	\$46,899.20
	QUAKER LANE	WALNUT ST	DEAD END	67	382	890	\$17,808.00
	SANDERSON AVENUE	MT VERNON ST	EAST ST	70	1,127	3,005	\$65,855.98
	SANDERSON AVENUE	RIVER ST	MT VERNON ST	94	1,534	5,112	\$102,246.60
			Repair	Type Sum	6,862	18,229	\$370,316.38
Repair	r Type: Preventa	tive Maintenance					
	BRIDGE STREET	COMMON STREET	HIGH STREET	90	463	1,542	\$18,504.00
	BRIDGE STREET	COMMON STREET	462' N OF BRIDGE STREET	82	462	1,541	\$18,496.00
	COMMON STREET	HIGH ST	BRIDGE ST	95	409	1,452	\$17,429.28
	HIGH STREET	716' W OF WESTFIELD ST	STATE SECTION	82	1,814	5,642	\$74,182.33
	HIGH STREET	AMES ST	BULLARD ST	95	395	1,493	\$17,915.76
	HIGH STREET	BRIDGE ST	WESTFIELD ST	89	1,138	3,541	\$42,489.12
	HIGH STREET	BULLARD ST	COMMON ST	95	1,637	4,547	\$54,560.04
	HIGH STREET	COMMON ST	BRIDGE ST	89	685	1,903	\$22,833.36
	HIGH STREET	WESTFIELD ST	716' W OF WESTFIELD ST	83	716	1,910	\$25,118.38
			Repair	Type Sum	7,719	23,571	\$291,528.27
Repai	r Type: Reclamat	tion Minor Collector and Lo	ocal				
	ALTOONA ROAD	SHERMAN RD	TRENTON RD	56	1,091	3,152	\$121,516.34
	ARDMORE ROAD	SHERMAN RD	TRENTON RD	51	858	2,289	\$88,236.27
	ASHCROFT STREET	DEAD END (N)	CUL DE SAC (S)	44	1,565	4,291	\$150,172.75
	BELOIT ROAD	SHERMAN RD	TRENTON RD	58	594	1,716	\$66,142.93

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Name	From	То	PCI	Length (ft)	Area (sy)	Cos
CASS AVENUE	206' E OF HAVELNUT PL	WALNUT ST	63	610	1,695	\$59,330.95
COACH LANE	GREENLODGE ST	CUL DE SAC	57	309	1,478	\$51,716.00
COLBURN STREET	HYDE PARK ST	100' E OF BUSSEY ST	48	1,566	5,918	\$228,127.89
CRANE STREET	ETNA RD	DEAD END	51	1,045	2,903	\$101,596.6
CRANE STREET	TURNER ST	SAVIN ST	50	693	1,926	\$74,243.4
DALE STREET	RIVER ST	BORDER STREET	58	2,107	7,022	\$245,781.5
FILLMORE ROAD	277' E OF GREENLODGE ST	DEAD END	56	414	1,149	\$40,230.4
FLINTLOCKE LANE	GREENLODGE ST	CUL DE SAC	41	932	3,646	\$127,610.0
GOSHEN ROAD	TRENTON RD	LORAIN RD	51	850	2,078	\$80,119.9
GREENLODGE STREET	200' S OF FLINTLOCKE LA	TRUMAN RD	52	321	713	\$24,943.4
HYDE PARK STREET	200' S OF BISMARK ST	COLBURN ST	31	794	1,765	\$61,763.3
LANCASTER ROAD	SPRAGUE ST	DEAD END	50	1,104	2,943	\$103,021.4
MYRTLE STREET	MILTON ST	WALNUT ST	53	531	1,415	\$54,557.8
PATTY LEE LANE	GREENLODGE ST	DEAD END	52	361	963	\$33,693.4
ROOSEVELT ROAD	FILLMORE RD	DEAD ED	51	400	1,066	\$37,207.4
		_	Repair Type Sum	16,146	48,127	\$1,750,012.0
pair Type: Routine M	1aintenance					
BINGHAM AVENUE	56' E OF CREST AVENUE	MAYNARD ROAD	89	760	2,026	\$1,519.4
BINGHAM AVENUE	BRIDGE STREET	56' E OF CREST AVE	88	298	794	\$595.6
CALVIN ROAD	SCOTT CIR	DEAD END	87	318	884	\$663.3
CIRCUIT ROAD	MADISON ST	CEDAR ST	93	1,187	3,165	\$2,374.0
COLWELL DRIVE	GREENLODGE ST	100' N OF SCOTT CIR	87	1,852	5,143	\$3,199.1
COMMON STREET	1155' E OF WEST ST	WEST ST	95	1,157	3,729	\$2,796.5
COMMON STREET	DEXTER ST	HAVEN STREET	95	1,984	6,392	\$4,794.1
CRESTON AVENUE	VINCENT RD	DEAD END	88	976	2,712	\$2,034.1
DEERPATH ROAD	HIGH STREET	CUL-DE-SAC	88	827	2,219	\$1,663.8

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To

From

Name

HAVEN STREET	WESTFIELD STREET	COMMON STREET	83	2,179	4,358	\$3,268.65
HILLSIDE ROAD	NEEDHAM STREET	VINE ROCK STREET	93	1,271	3,389	\$2,541.80
LOWDER STREET	570' N OF HIGHLAND ST	SAWYER DR	88	1,073	2,146	\$1,609.50
LOWDER STREET	SAWYER DR	HIGH ST	83	1,605	3,210	\$2,407.20
STONEY LEA ROAD	SANDY VALLEY RD	709' E OF STONEY LEA RD	89	3,557	7,508	\$2,627.86
VINCENT ROAD	EAST ST	379' S OF CRANBERRY LA	94	3,012	8,033	\$6,024.80
WASHINGTON STREET	PROVIDENCE HWY	BOSTON LINE	87	3,810	25,401	\$19,050.50
WESTFIELD STREET	HAVEN STREET	3060' W OF HAVEN STREET	89	3,060	6,799	\$5,099.33
WESTFIELD STREET	HIGH STREET	HAVEN STREET	86	475	1,056	\$791.67
		Repair T	Type Sum	29,400	88,964	\$63,061.61
		Year Gra	and Total	60,126	178,891	\$2,474,918.31
7/1/2019						
	erlay					
	erlay 1786' N OF GROVE STREET	330' N OF SCHOOL MASTER	65	2,283	5,582	\$111,632.89
Repair Type: Mill/Ov		330' N OF SCHOOL MASTER 1786' N OF GROVE STREET	65 71	2,283 1,786	5,582 4,764	\$111,632.89 \$95,274.67
Repair Type: Mill/Ov	1786' N OF GROVE STREET					
Repair Type: Mill/Ov COUNTRY CLUB ROAD COUNTRY CLUB ROAD	1786' N OF GROVE STREET GROVE STREET	1786' N OF GROVE STREET	71	1,786	4,764	\$95,274.67
Repair Type: Mill/Ov COUNTRY CLUB ROAD COUNTRY CLUB ROAD LOWER EAST STREET	1786' N OF GROVE STREET GROVE STREET TOWNLINE	1786' N OF GROVE STREET 255' W OF WASHINGTON ST	71 69	1,786 1,329	4,764 3,691	\$95,274.67 \$73,827.78
COUNTRY CLUB ROAD COUNTRY CLUB ROAD LOWER EAST STREET RIVER STREET	1786' N OF GROVE STREET GROVE STREET TOWNLINE 180' W OF MILTON ST	1786' N OF GROVE STREET 255' W OF WASHINGTON ST CEDAR ST GREENLODGE ST	71 69 69	1,786 1,329 1,838	4,764 3,691 5,310	\$95,274.67 \$73,827.78 \$106,200.73
Repair Type: Mill/Ov COUNTRY CLUB ROAD COUNTRY CLUB ROAD LOWER EAST STREET RIVER STREET STOUGHTON ROAD	1786' N OF GROVE STREET GROVE STREET TOWNLINE 180' W OF MILTON ST	1786' N OF GROVE STREET 255' W OF WASHINGTON ST CEDAR ST GREENLODGE ST Repair T	71 69 69 69	1,786 1,329 1,838 1,251	4,764 3,691 5,310 3,615	\$95,274.67 \$73,827.78 \$106,200.73 \$72,303.11
Repair Type: Mill/Ov COUNTRY CLUB ROAD COUNTRY CLUB ROAD LOWER EAST STREET RIVER STREET STOUGHTON ROAD	1786' N OF GROVE STREET GROVE STREET TOWNLINE 180' W OF MILTON ST SPRAGUE ST	1786' N OF GROVE STREET 255' W OF WASHINGTON ST CEDAR ST GREENLODGE ST Repair T	71 69 69 69	1,786 1,329 1,838 1,251	4,764 3,691 5,310 3,615	\$95,274.67 \$73,827.78 \$106,200.73 \$72,303.11
Repair Type: Mill/Ov COUNTRY CLUB ROAD COUNTRY CLUB ROAD LOWER EAST STREET RIVER STREET STOUGHTON ROAD Repair Type: Reclama	1786' N OF GROVE STREET GROVE STREET TOWNLINE 180' W OF MILTON ST SPRAGUE ST	1786' N OF GROVE STREET 255' W OF WASHINGTON ST CEDAR ST GREENLODGE ST Repair T	71 69 69 69 Type Sum	1,786 1,329 1,838 1,251 <i>8,488</i>	4,764 3,691 5,310 3,615 22,962	\$95,274.67 \$73,827.78 \$106,200.73 \$72,303.11 \$459,239.18
COUNTRY CLUB ROAD COUNTRY CLUB ROAD LOWER EAST STREET RIVER STREET STOUGHTON ROAD Repair Type: Reclamation ARROWHEAD LANE	1786' N OF GROVE STREET GROVE STREET TOWNLINE 180' W OF MILTON ST SPRAGUE ST ation Minor Collector and Lo CENTRAL AV	1786' N OF GROVE STREET 255' W OF WASHINGTON ST CEDAR ST GREENLODGE ST Repair T CCAI DEAD END	71 69 69 69 Type Sum	1,786 1,329 1,838 1,251 8,488	4,764 3,691 5,310 3,615 22,962	\$95,274.67 \$73,827.78 \$106,200.73 \$72,303.11 \$459,239.18
Repair Type: Mill/Ov COUNTRY CLUB ROAD COUNTRY CLUB ROAD LOWER EAST STREET RIVER STREET STOUGHTON ROAD Repair Type: Reclama ARROWHEAD LANE BEECH STREET	1786' N OF GROVE STREET GROVE STREET TOWNLINE 180' W OF MILTON ST SPRAGUE ST ation Minor Collector and Lo CENTRAL AV CEDAR ST	1786' N OF GROVE STREET 255' W OF WASHINGTON ST CEDAR ST GREENLODGE ST Repair T CCAl DEAD END DRESSER AV	71 69 69 69 Type Sum	1,786 1,329 1,838 1,251 8,488 405 667	4,764 3,691 5,310 3,615 22,962 1,125 1,854	\$95,274.67 \$73,827.78 \$106,200.73 \$72,303.11 \$459,239.18 \$39,375.00 \$64,876.39

Length (ft)

PCI

Area (sy)

Cost

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Cos	Area (sy)	Length (ft)	PCI	То	From	Name
\$24,344.44	696	250	33	DEAD END	VINCENT RD	CRANSTON AVENUE
\$70,175.00	2,005	722	41	722' S of EAST ST	EAST ST	ENDICOTT STREET
\$29,876.00	854	320	44	DEAD END	GREENBORO RD	FRESNO ROAD
\$15,098.22	431	169	54	68' W OF GLEN RD	100' E OF GLEN RD	GREENSBORO ROAD
\$16,359.39	467	183	45	603' N OF GAINSVILLE RD	68' W OF GLEN RD	GREENSBORO ROAD
\$31,788.56	908	355	45	100' E OF GLEN RD	FRESNO RD	GREENSBORO ROAD
\$21,962.50	628	226	43	DEAD END	96' E OF EAST ST	LAMOINE STREET
\$9,411.11	269	97	62	96' E OF EAST ST	EAST ST	LAMOINE STREET
\$67,287.50	1,923	692	44	DEAD END	EAST ST	MADISON STREET
\$28,240.33	807	279	46	DEAD END	GREENLODGE ST	MARGARET ROAD
\$32,407.67	926	439	27	DEAD END	UPLAND RD	PINE GROVE AVENUE
\$56,544.44	1,616	582	36	DEAD END	75' E OF EAST ST	PRESTON STREET
\$66,694.44	2,053	686	32	CUL DE SAC	EAST ST	PURITAN LANE
\$36,661.33	1,636	295	43	CUL DE SAC	GREENLODGE ST	SMITH CIRCLE
\$41,251.39	1,773	424	46	CUL DE SAC	GREENLODGE ST	STEPHEN LANE
\$76,094.67	2,174	815	39	DEAD END	EAST ST	THOMPSON STREET
\$61,415.28	1,755	632	38	DEAD END	CENTRAL AV	WEST JERSEY STREET
\$73,713.89	2,106	758	40	DEAD END	RIDGEWAY ST	WINSTEAD AVENUE
\$1,037,671.44	30,979	10,491	ir Type Sum	Repai		
					laintenance	pair Type: Routine M
\$2,905.70	3,874	1,245	95	LEONARD ST	BIRCH ST	CLEVELAND STREET
\$2,584.11	3,445	1,292	86	MAVERICK ST	CURVE ST	COLBURN STREET
\$1,953.25	2,604	781	84	96' N OF HYDE PARK ST	DEAD END	COLBURN STREET
\$822.45	1,097	581	86	THOMAS ST	537' N OF BUSSEY ST	COLONIAL DRIVE
\$1,164.37	1,552	537	90	537' N OF BUSSEY ST	BUSSEY ST	COLONIAL DRIVE
\$1,003.95	1,339	669	95	670' N OF BUSSEY ST	BUSSEY ST	CONGRESS PLACE

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Name	From	То	PCI	Length (ft)	Area (sy)	Cost
EMMETT AVENUE	COLBURN ST	ODYSSEY LA	86	844	2,345	\$1,758.96
EMMETT AVENUE	ODYSSEY LA	SAWMILL LA	86	668	1,484	\$1,113.26
GREENHOOD STREET	COLBURN ST	GARFIELD RD	86	748	1,828	\$1,371.33
GREENHOOD STREET	COLONIAL DR	COLBURN ST	95	894	2,284	\$1,712.93
HARDING TERRACE	COLBURN ST	DADHAM BLVD	86	1,123	2,994	\$2,245.60
HARDING TERRACE	DEDHAM BLVD	DEAD END	95	1,167	2,723	\$2,042.40
LEONARD STREET	DEDHAM BLVD	BIRCH SR	95	1,646	5,119	\$3,839.50
LEONARD STREET EXTENSIO	BIRCH ST	195' S of BIRCH ST	95	195	476	\$357.13
SPRAGUE STREET	100' E OF DRESSER AV	50' W OF HOOPER RD	93	3,830	14,045	\$10,533.60
SPRAGUE STREET	167' S OF COVENTRY RD	TOWN LINE	86	941	3,451	\$2,588.54
SPRAGUE STREET	212' W OF CEDAR ST	UPLAND RD	91	605	2,756	\$2,067.08
SPRAGUE STREET	50' W OF HOOPER RD	167' S OF COVENTRY RD	90	468	3,067	\$2,300.51
SPRAGUE STREET	UPLAND RD	100' E OF DRESSER AV	93	286	1,776	\$1,332.33
STAFFORD STREET	HARDING TERR	EMMITT AV	86	375	999	\$749.60
WESTFIELD STREET	HAVEN STREET	3060' W OF HAVEN STREET	76	3,060	6,799	\$5,099.33
WHITEHALL STREET	WARE ST	GREENHOOD ST	95	1,994	5,317	\$3,988.00
		Repa	ir Type Sum	23,949	71,379	\$53,533.93
		Year	Grand Total	42,928	125,319	\$1,550,444.55
/1/2020						
• •	Maintenance					405 100 00
COMMON STREET	36' W OF HAVEN ST	1155' W OF WEST ST	84	2,161	7,202	\$86,428.00
GREENLODGE STREET	MARGARET RD	STOUGHTON RD	81	830	2,860	\$34,314.93
GREENLODGE STREET	SPRAGUE ST	MARGARET RD	81	529	2,056	\$24,672.67
MILTON STREET	140' S OF RIVER ST	TOWNLINE	84	1,067	3,911	\$46,934.80
MILTON STREET	150' S OF MYRTLE ST	200' N OF RIVER ST	84	1,650	6,598	\$79,180.80
MILTON STREET	200' N OF RIVER ST	140' S OF RIVER ST	68	389	2,552	\$30,624.93

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	Name	From	То	PCI	Length (ft)	Area (sy)	Cost
	MILTON STREET	WALNUT ST	150' S OF MYRTLE ST	84	588	4,114	\$49,366.80
	PINE STREET	BRIDGE STREET	79' W OF KIELY ROAD	81	1,726	5,369	\$64,422.40
	RIVER STREET	TOWNLINE	180' W OF MILTON ST	84	1,219	4,604	\$55,252.27
,	WEST STREET	COMMON STREET	965' N OF COMMON STREE	T 77	964	3,214	\$38,568.00
			F	epair Type Sum	11,122	42,480	\$509,765.60
Repair	Type: Reclamatio	n Minor Collector and L	ocal				
,	ADAMS STREET	SHIRETOWN RD	50' E OF NETTA RD	42	474	1,263	\$44,221.33
	BENJAMIN STREEET	ASHCROFT ST	DALE ST	48	630	1,819	\$63,659.56
	EDISON AVENUE	FULTON ST	MORSE AV	41	700	2,022	\$70,767.67
	LILLY LANE	ADAMS ST	DEAD END	39	566	1,510	\$52,864.00
	MADISON STREET	CEDAR ST	MT VERNON ST	58	1,631	4,894	\$171,297.00
	MORSE AVENUE	EDISON AV	FENCE	41	186	497	\$17,397.33
	NETTA ROAD	ADAMS ST	DEAD END	39	473	1,261	\$44,146.67
	REED STREET	PRATT AV	BORDER ST	74	1,145	3,052	\$106,829.33
	SHIRETOWN ROAD	CIRCUIT RD	DEAD END	46	1,210	3,226	\$112,905.33
,	WILLIAMS AVENUE	ASHCROFT ST	DALE ST	75	676	1,876	\$65,673.61
			F	epair Type Sum	7,690	21,422	\$749,761.83
Repair	Type: Routine Ma	intenance					
,	ALLINDALE WAY	VILLAGE AV	WAMPATUCK RD	90	407	994	\$745.62
	AMES STREET	333' S OF PLEASANT ST	654' N OF HIGH ST	92	426	1,421	\$1,065.75
	AMES STREET	654' N OF HIGH ST	HIGH ST	92	655	2,328	\$1,746.01
	BEAR HILL	CHUTE RD	DEAD END	91	284	441	\$330.98
	BIRCH STREET	ROWAN ST	DEAD END	36	370	1,152	\$864.02
	CHESTNUT STREET	HIGH ST	MARTIN BATES ST	95	924	2,157	\$1,617.70
	CHICKERING ROAD	WASHINGTON STREET	CUL-DE-SAC	94	1,954	4,483	\$3,255.83
	CHURCH STREET	FRANKLIN SQ	COURT ST	81	522	1,217	\$912.80

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Name	From	То	PCI	Length (ft)	Area (sy)	Cost
CHURCH STREET	HIGH ST	FRANKLIN SQUARE	93	516	1,204	\$903.35
COUNTRY CLUB ROAD	330' N OF SCHOOL MASTER	337' E OF THE TOWN LINE	90	1,201	2,668	\$2,001.17
COUNTRY CLUB ROAD	337' E OF THE TOWN LINE	TOWN LINE	77	337	750	\$562.33
COUNTY STREET	CHESTNUT ST	BULLARD ST	95	642	1,499	\$1,124.20
COURT STREET	BATES CT	CHURCH ST	92	388	1,594	\$1,195.72
COURT STREET	CHURCH ST	MARSH ST	92	913	3,145	\$2,358.84
COURT STREET	HIGH ST	BATES CT	92	331	1,657	\$1,242.75
COURT STREET	MARSH ST	WETHERBEE ST	92	748	2,659	\$1,994.13
ASTERN AVENUE	HIGH ST	50' N OF BRYANT ST	75	342	2,470	\$1,852.50
FAIR OAK ROAD	CHICKERING ROAD	DEAD END	94	449	947	\$710.44
RANKLIN SQUARE	SCHOOL ST	CHURCH ST	84	283	1,256	\$942.00
GARDEN WAY	PACELLA DR	CUL DE SAC	95	310	1,230	\$619.60
GLENRIDGE ROAD	COMMON STREET	HAVEN STREET	93	1,139	2,784	\$2,087.98
IIGH STREET	250' N OF EASTERN AV	EASTERN AV	91	248	1,239	\$928.88
IIGH STREET	EASTERN AV	MAPLE PL	91	505	3,255	\$2,441.32
IIGH STREET	MAPLE PL	AMES ST	91	644	2,434	\$1,825.52
IIGHLAND STREET	RICHARDS ST	WASHINGTON ST	90	4,677	11,433	\$8,574.50
EE TERRACE	ORCHARD ST	DEAD END	94	458	967	\$725.33
OWDER STREET	570' N OF HIGHLAND ST	SAWYER DR	75	1,073	2,146	\$1,609.50
OWDER STREET	HIGHLAND ST	570' N OF HIGHLAND ST	93	569	1,265	\$948.83
MARION STREET	WASHINGTON ST	WILLOW ST	90	377	1,090	\$817.70
MARSH STREET	WASHINGTON ST	COURT ST	82	508	1,130	\$847.17
MARTIN BATES STREET	HIGHLAND ST	CHESTNUT ST	73	1,192	2,385	\$1,788.45
NORFOLK STREET	50' E OF PEARL ST	COURT ST	94	288	641	\$480.62
NORFOLK STREET	CHURCH ST	50' E OF PEARL ST	94	135	571	\$428.13
ORCHARD STREET	ELM ST	WILSON AV	96	806	2,148	\$1,611.00
PACELLA DRIVE	HIGHLAND ST	FAY RD	96	2,042	5,218	\$3,913.45

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Name	From	То	PCI	Length (ft)	Area (sy)	Cost
PEARL STREET	HIGH ST	NORFOLK ST	94	279	807	\$605.15
POND FARM ROAD	CHICKERING ROAD	DEAD END	94	543	1,388	\$1,041.31
PROSPECT STREET	WILLOW ST	WASHINGTON ST	93	340	832	\$624.07
RICHARDS STREET	COURT ST	HIGHLAND ST	76	1,088	2,901	\$2,175.40
RODMAN PLACE	VILLAGE AV	CUL DE SAC	61	250	582	\$395.20
SANDY VALLEY ROAD	179' S OF DEAD END	CUL DE SAC LOOP	73	524	815	\$611.57
SANDY VALLEY ROAD	300' S OF DAVE WAY	179' S OF DEAD END	74	1,189	1,981	\$1,485.88
SANDY VALLEY ROAD	HIGHLAND ST	300' S OF DAVE WAY	59	1,502	3,171	\$2,378.33
SCHOOL STREET	WASHINGTON ST	COURT ST	93	1,066	2,841	\$2,131.00
SPRUCE STREET	WASHINGTON ST	WILLOW ST	76	506	1,068	\$800.69
STONEY LEA ROAD	SANDY VALLEY RD	709' E OF STONEY LEA RD	76	3,557	7,508	\$5,631.13
VILLAGE AVENUE	CHESTNUT ST	HIGH ST	90	1,894	4,629	\$3,471.60
VILLAGE AVENUE	COURT ST	CHESTNUT ST	90	1,050	2,915	\$2,186.46
WAMPATUCK ROAD	LOWDER ST	LOWDER ST	94	1,203	2,673	\$2,005.00
WASHINGTON STREET	HIGH ST	SCHOOL ST	89	303	2,557	\$1,917.73
WASHINGTON STREET	SCHOOL ST	BRYANT ST	84	356	1,821	\$1,365.82
WEST STREET	BURGESS LANE	NEEDHAM TOWN LINE	76	1,481	4,277	\$3,207.97
WILLOW STREET	SPRUCE ST	PROSPECT ST	84	878	2,537	\$1,902.98
WILSON AVENUE	WASHINGTON ST	DEAD END	79	894	2,384	\$1,788.00
WORTHINGTON STREET	WASHINGTON ST	SCHOOL ST	94	560	1,182	\$886.83
		Repa	ir Type Sum	46,125	122,849	\$91,686.24
		Year	Grand Total	64,936	186,751	\$1,351,213.67
		Grand Total	of All Years	167,990	490,962	\$5,376,576.53

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