



Public Facilities Committee Report

City of Newton In City Council

Wednesday, March 9, 2016

Present: Councilors Crossley (Chair), Albright, Brousal-Glaser, Gentile, Danberg, Laredo, and Lappin

Absent: Councilor Lennon

Also present: Councilor Fuller and Leary

City staff present: Maureen Lemieux (Chief Financial Officer/Chief of Staff), James McGonagle (Commissioner of Public Works), Shane Mark (Public Works Director of Operations), Ted Jerdee (Director of Utilities), Lou Taverna (City Engineer), John Cowell (Public Works Financial Analyst), Robert Symanski (Public Works Business Manager), Josh Morse (Public Buildings Commissioner), William Ferguson (Public Buildings Project Manager) and Phil McNulty (Library Director)

#81-16 Eversource petition for a Grant of Location for Parkview Avenue

EVERSOURCE ENERGY petitioning for a grant of location to install a new pole and anchor on the easterly side of PARKVIEW AVENUE 35' east of Norwood Avenue. (Ward 2)
[02/10/16 @ 3:17 PM]

Action: Public Facilities Approved 6-0 (Laredo not voting)

Note: Eversource Permit Representative Maureen Carroll presented the petition to install a new pole and anchor on Parkview Avenue near the corner of Norwood Avenue. The City requested the installation in order to remove poles on Parkview Avenue in preparation for the reconstruction of Cabot Elementary School. Public Buildings Commissioner Morse stated that Eversource coordinated with the Cabot School design team to locate the new pole where it will not conflict with the construction of the new school.

The Department of Public Works reviewed the petition and commented that the new pole and anchor is to be placed in the grassy berm. The public hearing was opened and no one spoke for or against the petition. Councilor Albright moved approval of the petition, which carried unanimously.

#82-16 Eversource petition for a Grant of Location for Crescent Street

EVERSOURCE ENERGY petitioning for a grant of location to install a new pole and anchor on the southeasterly side of Crescent Street 8' east of Rowe Street. (Ward 4) [02/10/16 @ 3:17 PM]

Action: Public Facilities Approved 6-0 (Laredo not voting)

Note: Eversource Permit Representative Maureen Carroll presented the petition to install a new pole and anchor on Crescent Street to provide support to a sagging pole line. The wires attached to the poles are drooping and the new pole and guy wire would pull the wires up. The proposed pole and anchor would be located in the grassy area across from the corner of Crescent and Rowe Streets.

There is no sidewalk or house near the proposed location; therefore, it is unlikely that the guy wire would pose a hazard to pedestrians.

Committee members asked that the pole and guy wire be located in an area of the grass where no sidewalk would be located in the future. City Engineer Lou Taverna stated that the Engineering Division would work with Eversource to determine the best location for the pole and guy. The public hearing was opened and no one spoke for or against the petition. Councilor Gentile moved approval, which carried by a vote of six in favor and none opposed.

Referred to Public Facilities and Finance Committees

#455-14 Ordinance Amendment to create a storm water rate fee structure
HIS HONOR THE MAYOR recommending amendment to Chapter 29, Section 80
Sewer/Stormwater use charge. of the City of Newton Ordinances to create a storm water rate fee structure based upon square footage of impervious surface area.

Action: **Public Facilities Approved 5-1-1 (Lappin opposed; Albright abstaining)**

Note: Chief of Staff Maureen Lemieux joined the Committee to continue discussion on creating a tiered storm water fee structure for non-residential properties. The Committee held a public hearing on the proposed rate structure and possible fees on February 3, 2016. There were a couple of questions that were raised at the hearing that it would be helpful to respond to questions raised at the hearing before taking action on the item.

Questions included what assumptions were made, such as the percent of parcels whose owners would take advantage of a storm water credit, in determining the impact of the proposed 25% storm water mitigation credit on revenue. What impact would increasing to 50% have on revenue? Ms. Lemieux explained that she did not know the impact of an up to 25% storm water mitigation credit on the proposed rate structure. Most non-residential property owners have never applied for the storm water credit, as the current storm water fee is very low. She projected that 25% of the large non-residential properties have some type of storm water mitigation and she estimated that the City would lose \$100,000 in revenue with the proposed up to 25% storm water mitigation credit. The Administration is comfortable proposing an up to 25% credit for now in order to get a true sense of the impact of the mitigation credit on revenue.

There was some concern that since several commercial properties had invested in storm water mitigation systems that it would be more equitable for the City to offer up to a 50% storm water mitigation credit. It was pointed out that by using a tiered fee structure, larger properties are not seeing as large an increase than if the City went with a linear model. The smaller storm water mitigation credit provides a balance with the tiered structure.

The model for the proposed fee structure results in slightly over \$1.1 million less a projected \$100,000 to in storm water mitigation credit. If the City moves to a 50% mitigation credit, the

expected loss in revenue would be \$200,000. Less revenue would mean less work would be done on the storm water infrastructure.

The third question was related to the determination to go with a tiered rate structure instead of a purely linear rate model that is based on per square foot of impervious surface. Ms. Lemieux responded that she does not believe that the linear model is the best way to charge a storm water fee. Some small properties contribute more to the City's storm water infrastructure than larger properties due to the way they drain storm water. The site configuration of a property determines how much storm water goes into the City's system. The Administration continues to recommend that for right now the City move to a tiered system.

The City is expected to pay over \$80,000 in storm water fees for municipal parcels, which would increase sharply if the City were to use a linear model. It was suggested that it might make sense to consider exempting the City from the storm water fee, as the \$80,000 could go towards funding something else. The taxpayers are paying the City's storm water fee; therefore, they are essentially paying for storm water twice; once for their property and once for the City's properties. The City Councilors on the Storm Water Working Group discussed the pros and cons of exempting the City, and as well discussed in Committee last fall. In the end, the consensus was that the City should be paying the storm water fee. In addition, all property owners are sharing the costs for storm water on public property like roads and parking lots, which are not included as part of the City's property for the purposes of assessing a storm water fee.

There was also concern that small properties appear to be paying much more for storm water per square foot compared to larger properties which is not equitable. Ms. Lemieux agreed but pointed out that some of the larger properties are going from a \$200 fee to a \$5,000 fee. It is going to be a real shock to non-residential properties with large amounts of impervious surface area. The current plan moves the City in the right direction. The proposed fee structure is a nice transition between a flat fee and a fee based on square footage of impervious surface and provides the City with additional funds to begin to address the deferred maintenance on its storm water infrastructure.

In the next few years, the National Pollutant Discharge Elimination System (NPDES) permit program is expected to change. The permit requirements are going to be more stringent in terms of the quality of the storm water that enters into bodies of water. As the permitting changes take effect, the City will need to provide incentives to property owners to add storm water mitigation systems and it can do that by moving to a storm water fee based on square footage and significantly increasing the storm water credit.

Councilor Albright proposed looking at a two tiered fee system for residential properties based on the amount of impervious surface. Some residential properties have a significant amount of impervious area and should pay a higher fee than properties with a limited amount of impervious surface. The Administration and City Council could look at Councilor Albright's proposal but may not be ready to move forward with any suggestions until the next fiscal year.

There was concern that the draft ordinance included rates that are not usually set until the annual water, sewer and storm water rate public hearing. Councilor Gentile made a motion to approve the tiered storm water rate structure without any rates and pointed out that there is still time to modify the rate structure before the rates are set. It was suggested that if anyone wanted modifications to the fee structure, they should submit them as soon as possible to give the Administration time to respond. The motion carried by a vote of five in favor, one opposed and one abstention. Councilor Lappin is opposed to the rate structure because she feels there are other more equitable ways to charge a storm water fee to commercial properties. Councilor Albright abstained in order to submit possible modifications to the rate structure.

#133-15 Authorization to negotiate leases for install of solar panels on city properties
HIS HONOR THE MAYOR requesting authorization to enter into negotiations for the potential lease on city properties for purposes of third-party construction, ownership, and operation of on-site renewable solar energy generation from which the City will purchase electric output and/or net metering credits. [05/11/15 @ 5:00 PM]
ITEM SPLIT INTO PART A AND PART B; PART A – APPROVED on 11/16/15
PART B – *Solar panels mounted on new carport structures at Newton South High School and solar panels mounted on new carport structures at the Library.*
Public Facilities split Part B into Part B1 (Newton South High School) and Part B2 (Library)
Action: Public Facilities Approved Part B1 6-0-1 (Gentile abstaining)
Public Facilities Approved Part B2 5-1-1 (Gentile opposed, Laredo abstaining)

Note: Public Buildings Project Manager Bill Ferguson joined the Committee for the continued discussion of Part B of the item. Mr. Ferguson gave the attached PowerPoint presentation on the proposed carports with mounted solar panels at Newton South High School and the Main Library. The Committee held the item at its last meeting on February 17, 2016 because a few Committee members still had concerns and questions regarding the aesthetics of the two proposed carports at the library. They asked that the Library Director and representatives of the Library Board of Trustees attend the next discussion, and the School committee had not yet voted on the Newton South High School carports. There were also some questions about the possible impact of the proposed carports on the library parking lot drainage at the last meeting.

The School Committee submitted a letter stating that they voted to approve the installation of solar panels mounted on carport structures at Newton South High School. The Library Board of Trustees also submitted a letter stating that the trustees unanimously approved the installation of carports with solar panels in the library parking. Both letters of support were attached to the Committee agenda. The Library Director and representatives of the Board of Trustees were present and voiced their support of the solar canopies in the library parking lot as configured. Library Director Phil McNulty stated that the carports are not of character with the library building and the benefits of the both the carports and solar power generation outweigh any concerns related to aesthetics. The Library Board of Trustees did not have any issues with the aesthetics and felt that patrons would not

either. There were still concerns amongst the Committee members that the carports were not appropriate for the site.

Committee members asked if the addition of carports could exacerbate the flooding issue at library. A representative of Ameresco (the company that would be leasing the properties for on-site solar energy generation) explained that the solar canopies would not change how rainfall currently affects the library parking lot. The supports for the carports would be installed on the existing berms in the parking lot. The carports are designed to let rainwater runoff in lines where the two sections join through a 3/8" gap and at the ends of the structure. He added that the carports could include a water collection system that brings the rainwater either to ground level or underground. Both options would result in additional costs.

There was a suggestion that it may be possible to use the existing abandoned library ice storage cistern to collect storm water. It was pointed out that it may make sense to look more closely at this and the parking lot drainage as part of the larger library renovation. Committee members requested that the Public Buildings Department find out if the carports can be retrofitted with storm water collection systems. Mr. McNulty added that the last time the parking lot flooded two years ago he learned that regularly dredging the City Hall ponds is the best way to avoid the flooding. Five drainage outlets release storm water and associated silt into the ponds. The ponds were dredged in 2014 and the next planned dredging is in 2020. The Department of Public Works plans to keep to a regular dredging schedule.

The L-shaped carports are designed to retain snow and have a load bearing rating of 45 pounds per square foot. Public Building Commissioner provided a point reference by explaining that the snow load during last year's exceptional winter never exceeded 15 pounds per square foot. The carports also have a clearance of over 13', which accommodates City plows and fire engines. There was request from the Committee that the Administration talk to Lincoln-Sudbury regarding any issues that they may have had with their carports related to snow operations. Members also asked for addresses of places that have installed similar carports with solar panels in order to do site visits to get a sense of what the carports would look like. Ameresco representatives stated that the Lincoln-Sudbury carports are much higher than the ones proposed for Newton and the carports at the REI site in Framingham are the right height but not the L-shaped model that would be used in Newton. The Walnut Hill School in Natick has one L-shaped carport but it is higher due to the fact it is on a hill. Ameresco will provide photos of sites with the same carports as proposed for the library and Newton South High School.

The Administration would like to move forward with the carports at these two locations because the solar panel tax credits and incentives may be evaporating at the State level. Right now, the City would expect to see \$17,000 reduction in electricity costs from the proposed solar panels at the library, which would increase each year. If, as proposed, the State legislation passes to reduce net metering payments and solar renewable energy credits, it would cost the City to install the carports with solar panels and installing rooftop solar panels would become cost neutral. Therefore, the City would not move forward with the projects.

The projects are in the pipeline to secure net metering credits. The applications for all of the solar power generation projects included in the original docket item were submitted to the utility companies and the State. The City and Ameresco are waiting for the interconnection agreements from the utility companies and State, which are likely to take a couple of months. Ameresco has completed all of the design work for each of the solar panel installations.

At the request of Committee members Part B of the item was split into Part B1 for the Newton South High School carports and Part B2 for the library carports. Councilor Lappin moved approval of Part B1 (Newton South High School), which carried by a vote of six in favor and one abstention. Councilor Albright moved approval of Part B2 (Library), which carried by a vote of five in favor, one opposed, and one abstention.

Referred to Public Facilities and Finance Committees

#89-16

Request for \$3,400,000 for the Fire Station 3/Headquarters Project

HIS HONOR THE MAYOR requesting authorization to appropriate three million four hundred thousand dollars (\$3,400,000) from bonded indebtedness for the purpose of funding the completion of the next phase of construction of the Fire Station 3/Headquarters Project. [02/29/16 @ 4:03PM]

Action:

Public Facilities Approved 6-0 (Brousal-Glaser not voting)

Note: Commissioner of Public Buildings Josh Morse presented the request for \$3.4 million to proceed to the next phase of the Fire Station 3/Headquarters project. The total project was estimated to cost \$18.5 million, when it received site plan and schematic design approval in May 2015, which was increased which is a substantial increase over the original estimate of \$15.5 million. Chief of Staff/Chief Financial Officer Maureen Lemieux forewarned the Committee that even the new estimate could be low. She explained that the Administration does not want to cut anything that would be detrimental to the functioning of the Fire Department or the Emergency Operations Center.

The Council approved \$275,000 and \$3.6 million for the feasibility study, schematic design and associated site work. The requested \$3.4 million would fund early bid packages for demolition, foundations, and steel, as well as bring the construction documents to 100% completion. Commissioner Morse stated that the next phase would provide sufficient information to develop firm costs for the whole project and achieve the final guaranteed Maximum Price (GMP).

The design team will continue to look at ways to value engineer the project but Commissioner Morse and Fire Chief Proia want to end up with a durable building that works well and includes all the necessary public safety aspects. Commissioner Morse added that it is very difficult to estimate costs for this type of project, which includes a number of different technical aspects such as the communications tower, backup dispatch equipment, and Emergency Operations Center equipment. The Commissioner expects to come back to the Committee in four to six weeks to discuss the project costs in detail.

There may be saving opportunities related to the exterior materials. Brick costs about \$33 per square foot versus glass, which is approximately \$200 per square foot. The design team and Fire

Station Working Group are currently looking at metal panels for portions of the exterior to see if using that material would offer savings. It was difficult to create appropriate transitions between the historic Fire Headquarters, the Emergency Operations Center and Fire Station 3 buildings and the use of different exterior materials was important to create those transitions. The Design Review Committee reviewed the project and voted to approve the release of the early packages. With that, Ald. Danberg moved approval, which carried by a vote of six in favor and none opposed.

Referred to Finance and Appropriate Committees

#288-15 **Submittal by the Mayor of the FY17 Capital Improvement Plan**
HIS HONOR THE MAYOR submitting the FY 2017-FY 2021 Capital Improvement Plan pursuant to section 5-3 of the Newton City Charter. [10/01/15 @ 1:53 PM]

Action: **Public Facilities Held 7-0**

Note: Commissioner of Public Works Jim McGonagle joined the Committee and provided the attached PowerPoint presentation, which details the Public Works Department's Capital Improvement Plan. The presentation includes Fiscal Year 2016 accomplishments and Fiscal Year 2017 – 2021 planned projects and equipment purchases in the Highway Division, Transportation Division, and Utilities Division.

The Public Works Department also conducted a pilot of a program called StreetScan this fiscal year. StreetScan inspected 40 miles of roadway in the City as part of the pilot and provided a Pavement Condition Index (PCI), a prioritized list of repairs, recommended repair type for each street, and projections on the future PCI of the roadways based on what the City invests in improving the streets. The pilot was very successful and the Public Works Department is contracting with StreetScan to do an inspection of every street in the City. The inspection should be complete in the next three to four months at a cost of \$145,000, which includes the associated software. The Public Works Department anticipates using StreetScan for road surveys every three years. Commissioner McGonagle expects that StreetScan will show an average PCI for Newton streets lower than earlier assessments by about 2.5 points. StreetScan uses penetrating radar to scan conditions under the roadway. The Commissioner will report the StreetScan results to the Committee in September.

The budget for next year's street paving is \$3.3 million but that figure includes sidewalk construction and ADA ramp construction. The Commissioner expects that the department will pave approximately 5 miles of roadway in the upcoming year. This is a conservative estimate and may change as the paving contract is currently out to bid. Commissioner McGonagle added that the Public Works Department is coordinating its future roadwork with National Grid to make sure gas mains are replaced before a roadway is repaved. The Public Works Department is also starting to meet with Eversource Energy to coordinate roadwork.

The upcoming paving schedule is prioritized based on coordination with National Grid, the PCI, PCI, and roadways that need repair because they were opened for sewer and water work. The paving methods include mill and overlay, crack sealing, micro surfacing, and full-depth road reclamations in the upcoming paving season. The type of repair recommended by StreetScan depends upon the condition revealed.

Committee members expressed concerned that roadways will continue to deteriorate at a faster rate than they are being repaired by continuing this limited amount of investment, and feel strongly, that more money needs to be dedicated to repair our deteriorating roads. It is important that the Public Works Department work on developing a multi-year plan that includes funding to address need roadway repairs. Commissioner McGonagle expects that by the time the next five-year Capital Improvement Plan is complete there will be a plan. The Chair encouraged the Commissioner to include councilors in developing a road plan.

The Committee discussed the equipment purchases, particularly the street sweeper. It may make sense to consider purchasing two sweepers because most of the City's sweepers are well past their useful life, requiring increasing expense to maintain and the plan is to ramp up the street cleaning schedule, in part to reduce contaminants entering the storm drains. The Commissioner responded that he is looking at the Public Works Department's fleet to develop a fleet replacement plan. He expects to present the plan in late summer or early fall. There is a possibility that a second sweeper could be purchased.

The Committee will have further opportunity to discuss the Capital Improvement Plan during budget discussion. Councilor Lappin moved hold on the item, which carried unanimously.

Referred to Public Facilities and Finance Committees

#224-15(2) Inter-municipal agreement with Needham for repair of Elliot St Bridge
HIS HONOR THE MAYOR requesting authorization to enter into an Inter-Municipal Agreement with the Town of Needham detailing Needham's obligation to fund half of the construction contract costs associated with repairs to the jointly owned Elliot Street/Central Avenue Bridge and to potentially authorize additional funds for an additional scope of work required by the Newton Upper Falls Historic Commission, which is excluded from the agreement. [03/03/16 @ 1:48 PM]
Action: Public Facilities Approved Subject to Second Call 4-0-2 (Gentile, Lappin abstaining; Danberg not voting)

Note: Commissioner of Public Works Jim McGonagle presented the request to authorize an agreement between the City and the Town of Needham for the repair of the jointly owned Elliot Street/Central Avenue Bridge. The agreement states that Needham's total obligation shall not exceed \$2 million. The bridge repair is estimated to cost \$3.3 million and Newton and Needham are to share costs.

The docket item also includes a request to authorize the use of additional funds for stone facing on the new concrete piers. The Newton Upper Falls Historic District Commission is requiring the stone facing. The stone facing reflects a compromise with the Historic District Commission, who originally wanted the piers built using only stone. The Town of Needham is not willing to share in the cost of that portion of the project. The additional work is anticipated to cost \$100,000. The Massachusetts Historic District is supporting the Upper Falls Historic District Commission's requirement. The City could appeal the requirement but it would stop the project from moving forward, which could result in

the State taking over the project because the bridge is a safety hazard. The benches planned for the bridge have been eliminated to generate savings.

The Committee was not pleased that the Historic District Commission is forcing the City to expend additional money without knowing the finances of the project. Some members were also upset that the Town of Needham was not contributing, as it is a joint project. It was pointed out that it is the Newton's Historic Commission that is requiring the stone facing not Needham's Historic Commission. In addition, it is important that the work on the bridge start very soon because the bridge could fail.

Concern was raised about the statement that the Town of Needham is only responsible for up to \$2 million of the project costs. The Committee members felt that the language needed to be clear that if the project exceeds \$4 million, Needham would share in 50% of the additional costs, with the exception of the stone facing only. The Committee requested that the Law Department look at the agreement again and amend the language to include that stipulation.

Councilor Albright moved the item subject to second call to clarify that Needham is responsible for 50% of the construction costs excluding the stone facing, even if the project exceeds \$4 million. The Committee supported the motion by a vote of four in favor and two abstentions.

All other items before the Committee were held without discussion and the Committee adjourned at 10:15 PM.

Respectfully submitted,
Deborah J. Crossley, Chair



Solar Car Canopies on City Properties

Presentation by the Department of
Public Buildings
March, 2016

Phase 2 Solar Projects

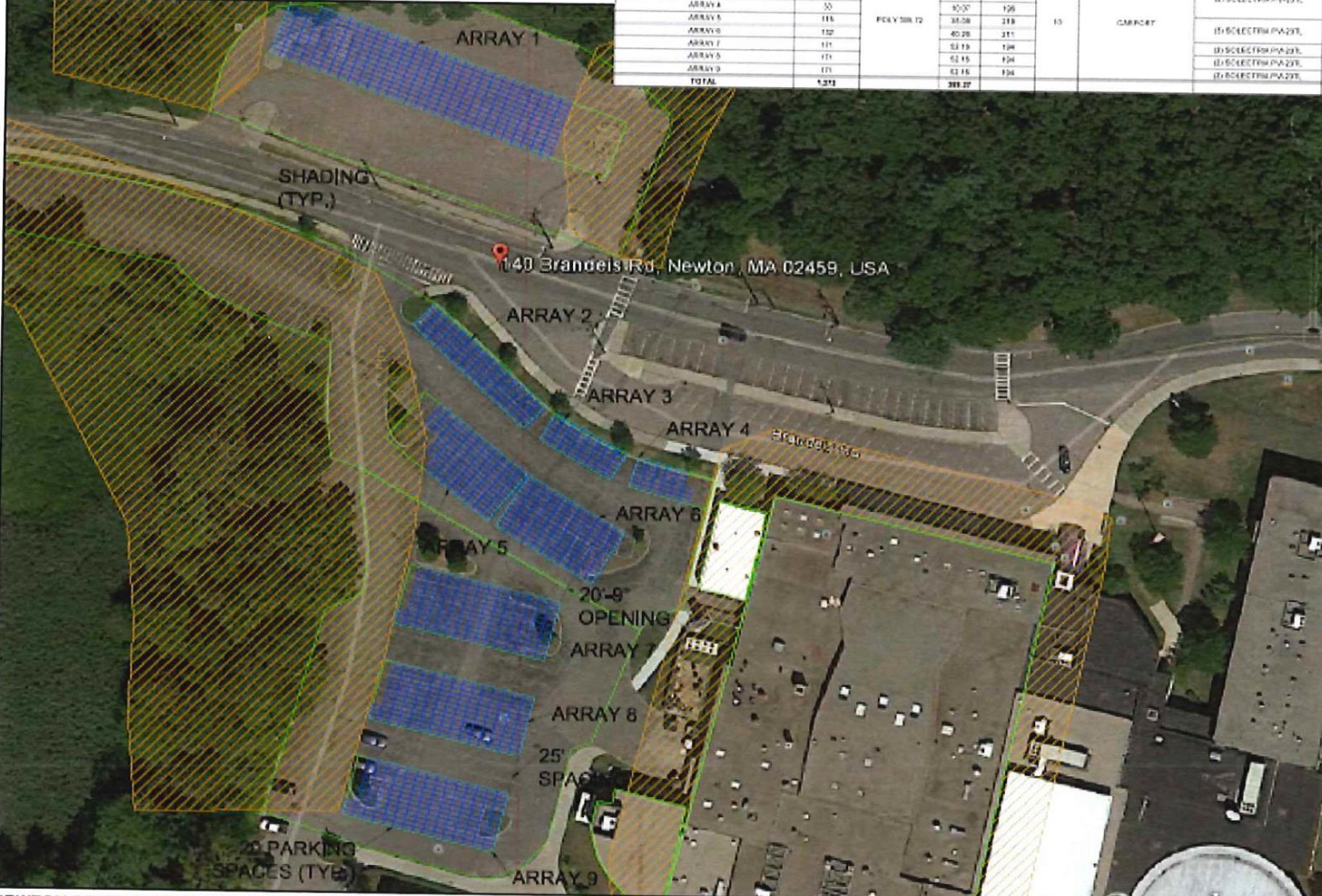
	<u>LOCATION</u>	<u>PROJECT DESCRIPTION</u>
1	Dept of Public Buildings: 52 Elliot Street, 02461	roof mounted
2	DPW: 60 Elliot Street, 02461	roof mounted and car ports
3	DPW: 70 Elliot Street, 02461	roof mounted and car ports
4	Newton South High School: 140 Brandeis Rd, 02549	roof mounted and car ports
5	Library Parking lot : 330 Homer St, 02459	car ports
6	Angier School: 1697 Beacon St., 02468	roof mounted
7	Oak Hill School: 130 Wheeler Rd, 02459	roof mounted
8	Lower Falls Com. Center : 545 Grove St, 02453	roof mounted
9	Bowen School: 280 Cypress St., 02459	roof mounted
10	Fire Station 10 and wires Building: 755 Dedham St., 02459	roof mounted
11	Zervas School (new construction): 30 Beethoven Avenue, 02469	car ports and roof mounted
12	Landfill: Rumford Ave, 02466	ground mounted

Newton South High School Canopy

NOTES:

1. SHADING PATTERN IS CALCULATED BASED ON FEBRUARY 21ST FROM 6AM TO 3PM AND DECEMBER 21ST AT NOONTIME. IT TAKES INTO ACCOUNT SITE LATITUDE AND LONGITUDE.
2. SHADING FOR OBJECTS NOT IMPACTING THE PV SYSTEM IS NOT SHOWN

ARRAY		POWER TABLE									
NEWTON SOUTH HIGH SCHOOL	# OF MODULES	MODULE TYPE	HAZETO	ABSOLUTE	PITCH	HEIGHT	TYPE	TYPE	INVERTER	EFFICIENCY	MW AC
ARRAY 1	542		104.31	221				(E) SOLLECTRA PVA27L			24.29
ARRAY 2	90		21.45	222				(E) SOLLECTRA PVA27L			45.39
ARRAY 3	45		14.54	213				(E) SOLLECTRA PVA27L			45.39
ARRAY 4	33		9.07	126				(E) SOLLECTRA PVA27L			45.39
ARRAY 5	181	PEVLY SBR 12	35.58	219	15	CANOPY		(E) SOLLECTRA PVA27L	68.2%		45.39
ARRAY 6	122		40.28	211				(E) SOLLECTRA PVA27L			45.39
ARRAY 7	121		42.19	124				(E) SOLLECTRA PVA27L			45.39
ARRAY 8	171		42.15	124				(E) SOLLECTRA PVA27L			45.39
ARRAY 9	171		42.15	124				(E) SOLLECTRA PVA27L			45.39
TOTAL	1,311		388.27								317.28



NEWTON SOUTH HIGH SCHOOL PARKING LOT - OVERALL ARRAY LAYOUT
SCALE: 1" = 30'-0"

NOT FOR CONSTRUCTION

SCALE: 1" = 30'-0"
DATE: 10/28/13
REVISIONS:

NEWTON SOUTH HIGH SCHOOL
140 BRANDEIS RD.
NEWTON, MA 02459
SOLAR PV ARRAY LOCATION
388.27 MW DC STC PV ARRAY INSTALLATION
PHOTOVOLTAIC ARRAY LAYOUT

AMERESCO
11119 New York Ave, Suite 100
West Chester, OH 45387
www.ameresco.com
PHOTOVOLTAIC ARRAY LAYOUT

Renderings: Car Canopies at South HS



South High School



Main Library Canopies



#133-15

ARRAY 1

SHADING
(TYP.)

ARRAY 2

MAIN LIBRARY - OVERALL ARRAY LAYOUT
SCALE: 1" = 16' 0"



Main Library Canopy



© 2015 Google

[Report a problem](#)

Main Library Canopy



Solar Canopy Design Features

- L-shaped design catches snow and ice
- 13'6" canopy clearance does not interfere with snow plowing
- LED lights under canopy light up parking area for safety



Current Design Status

Rooftop Solar PV Arrays	Number of Panels	Square Footage of Panels	Capacity (kW DC)	System Production (kWh in year 1)
Newton South High School	237	4,900	75.84	93,600
Angier Elementary School	144	2,977	46.08	56,800
Oak Hill Middle School	424	8,766	135.68	171,000
Lower Falls Community Center	38	786	12.16	14,800
Fire Station 10	35	724	11.20	13,800
Bowen Elementary School	247	5,107	79.04	97,600
Zervas Elementary School	423	8,670	130.00	160,550
70 Elliot Street	161	3,335	50.00	61,750
Subtotal	1,709	35,265	540.00	669,900
Parking Lot Canopy Solar PV Arrays		Square Footage of Panels	Capacity (kW DC)	System Production (kWh in year 1)
Elliot Street DPW Canopy	2,304	47,635	737.28	892,500
Newton South High School	1,213	25,086	388.27	476,796
Main Library	4,144	12,939	200.26	245,919
Subtotal	7,661	85,660	1,325.81	1,615,215
Total	9,370	120,925	1,865.81	2,285,115

Department of Public Works Capital Improvement Plan

March 9, 2016
City of Newton, Massachusetts
Setti D. Warren, Mayor

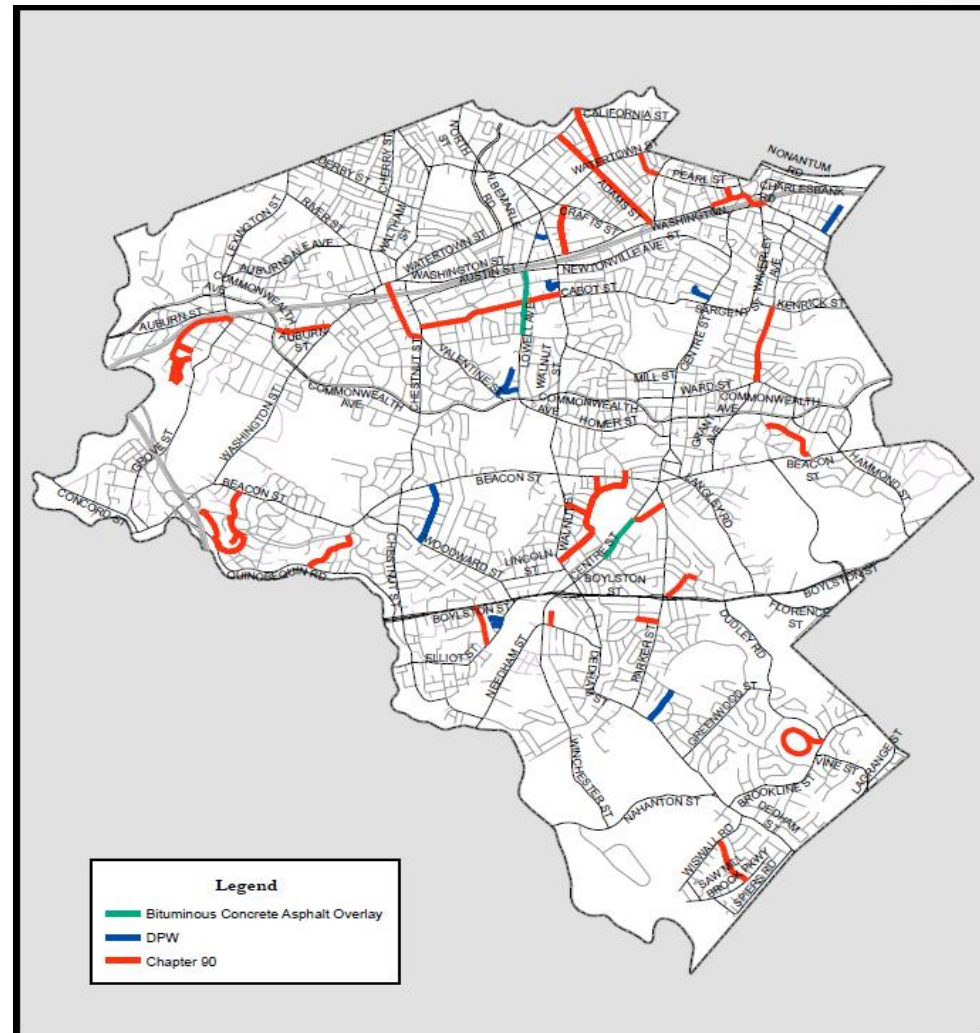


Complete Streets- FY16

Accomplishments

Paving Data

Miles of street paving projects conducted through outside contractors	9.5
Miles of street paving projects conducted in-house by city staff	1.7
Miles of concrete overlay projects	0.75
Miles of street micro-surfacing projects	2.2
Number of ADA ramps excavated and installed	202
Miles of new sidewalk constructed	1.8
Number of curb betterments installed	78
Miles of existing sidewalk repaired	3.1

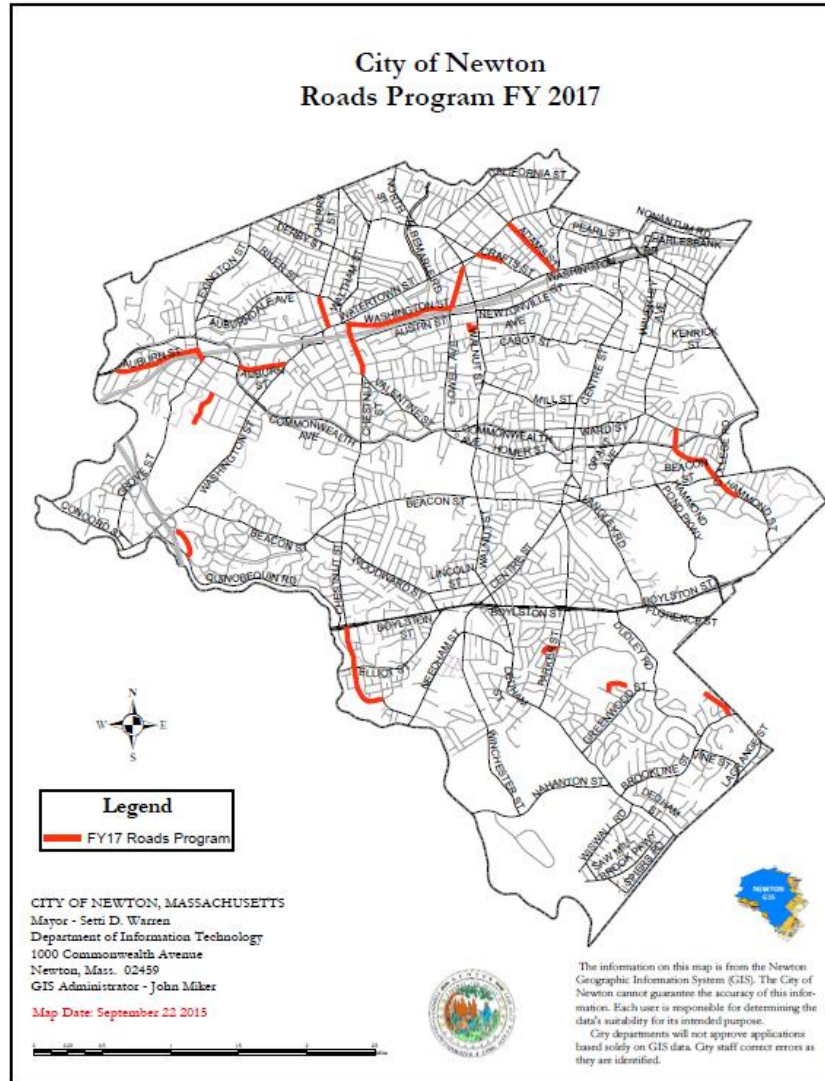


Streets Scheduled for Pavement

FY17

- 5 Miles of Paving
- Funding
 - \$2.3 Million from Chapter 90 Funds
 - \$1 Million from City Override Funds

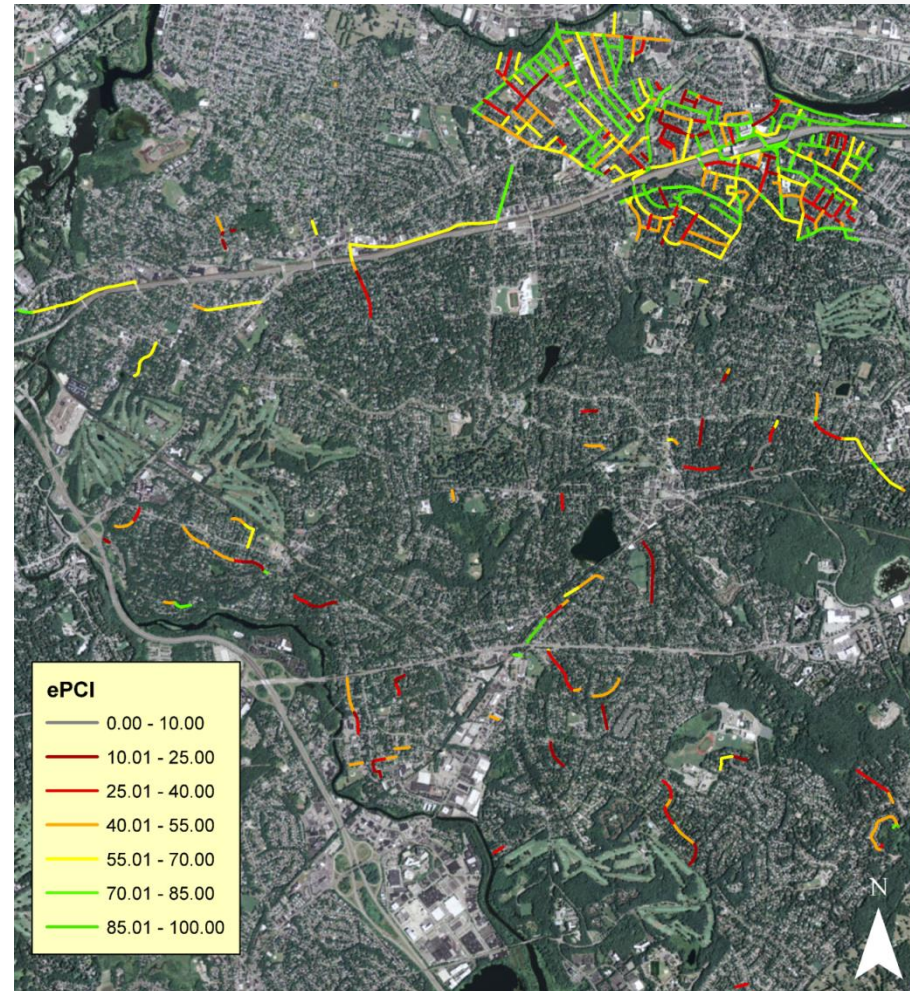
<u>Street Name</u>	<u>PCI</u>
CHESTNUT ST	20-42
HAMMOND ST	31-67
CRAFTS ST	46-57
E. QUINOBEQUIN RD	10
HAWTHORNE AVE	55
WASHINGTON ST (EB)	57-63
ADAMS ST	39-63
AUBURN ST	42-56
WALNUT PLACE	45
WINSTON RD	48
AUDUBON DR	30-44



Street Scan

- Conducted a Pilot program consisting of 40 miles of city roads.
- E Pavement Condition Index: overall pavement condition from 0 (worst) to 100 (best)
- Provides in-depth and objective pavement condition for data driven maintenance and repair decisions.

Field Surveys



Highest Priority Maintenance Projects

#288-15

4) MURRAY RD

ePCI < 10
Minor



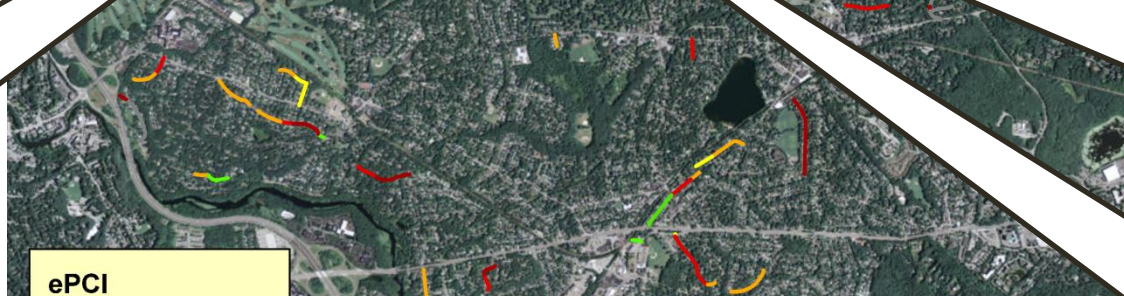
2) CHESTNUT ST

ePCI = 20
Major



5) BISHOPSGATE RD

ePCI < 10
Minor



1) CHESTNUT ST

ePCI = 20
Major



ePCI

—	0.00 - 10.00
—	10.01 - 25.00
—	25.01 - 40.00
—	40.01 - 55.00
—	55.01 - 70.00
—	70.01 - 85.00
—	85.01 - 100.00

3) CHESTNUT ST

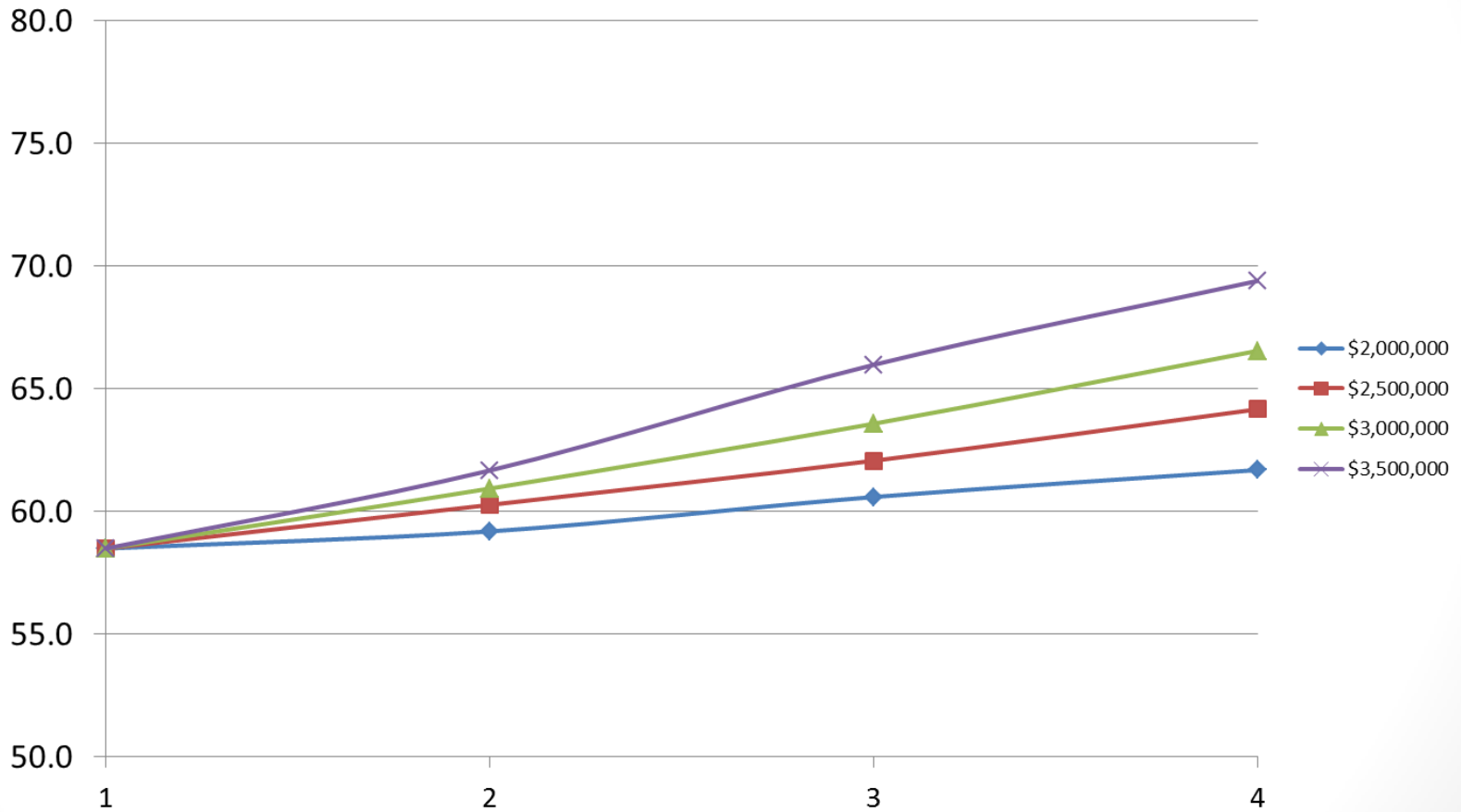
ePCI = 20
Major



Street Scan Pilot Results

Repair Type	Length (Miles)	Percentage of Total (%)
Reclamation	10.4	25%
Rehabilitation (Mill & Overlay)	16.6	40%
Preventive (Crack Seal, Microsurfing)	4.8	11%
Defer Maintenance	8.8	21%
TOTALS	40.7	100%

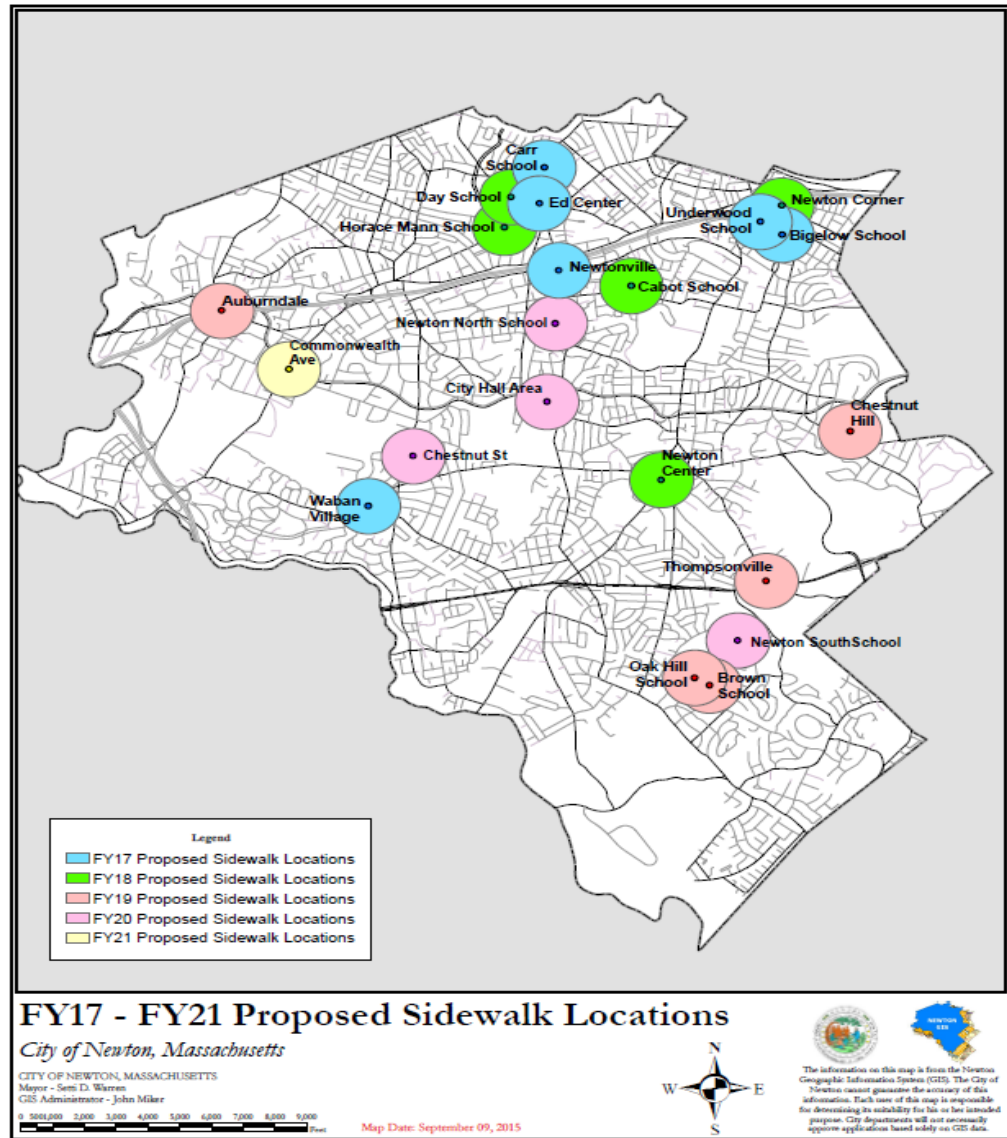
Street Scan Pilot Projections



Sidewalks FY17-FY21

#288-15

- Repair and replace 2 miles of sidewalk city-wide
- Install ADA compliant ramps and repair/convert non-compliant ramps

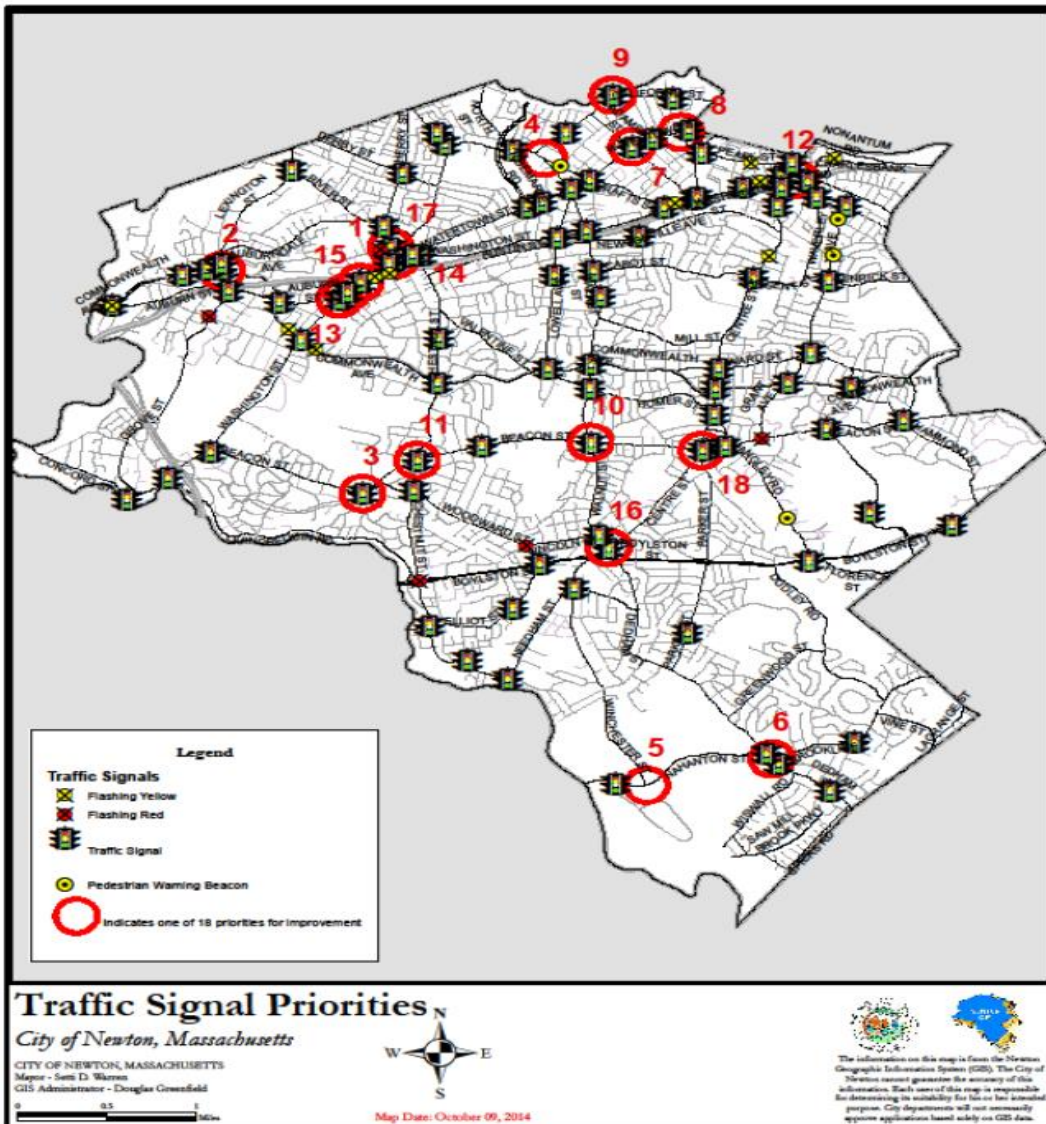


Transportation Division

- Improve Traffic Flow and Vehicular Safety through Traffic Signal Improvement Program
 - Auburndale Square, Angier School, Watertown @ Adams, Watertown @ Pearl, California @ Bridge, Nahanton @ Winchester, Washington @ Auburn/Perkins/Prospect, West Newton Square
- Formalizing our “Complete Streets” policy to allow for safe travel by those walking, bicycling, driving automobiles, or riding public transportation.
 - The Complete Streets policy will allow the City to apply for a \$450,000 state grant.

Signalization Plan

#288-15



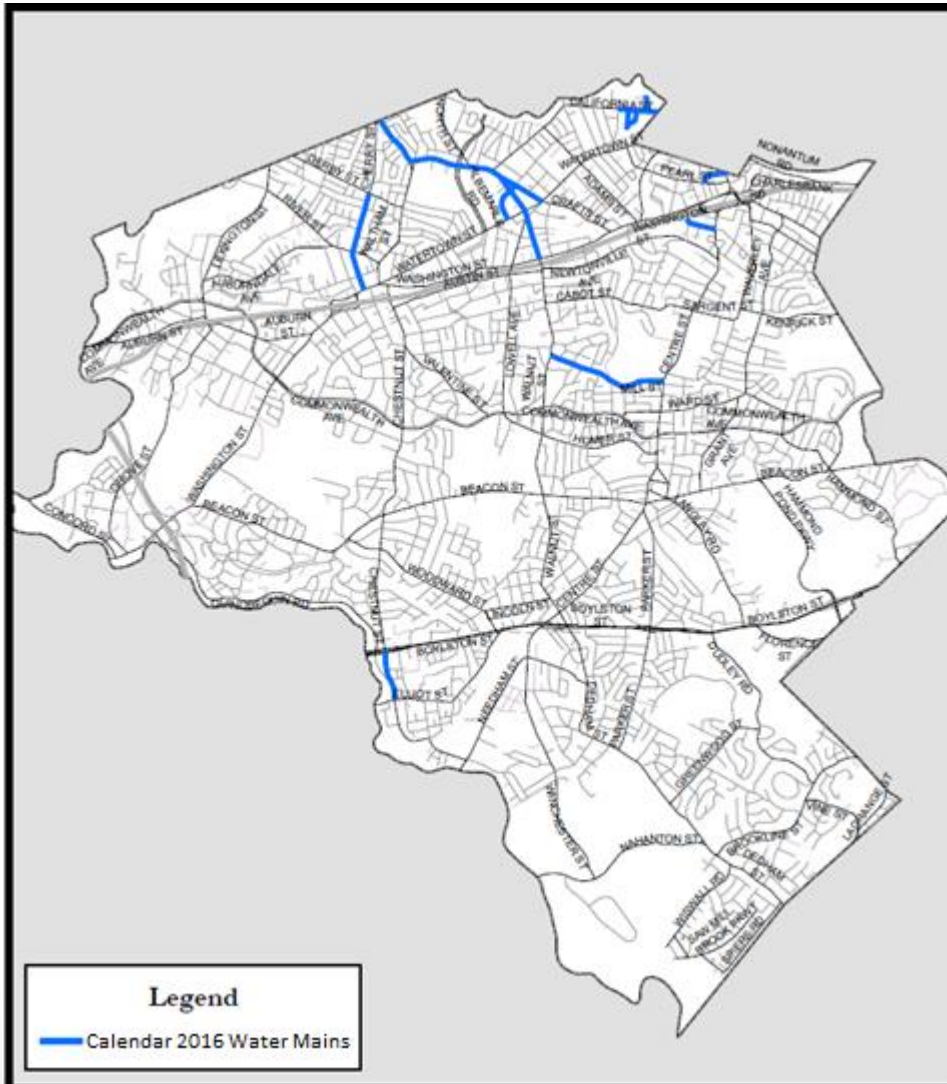
- Angier – Beacon @ Collins
- Beacon @ Grant
- Crafts @ Linwood
- California @ Bridge
- Nahanton @ Winchester
- Watertown @ Adams
- Watertown @ Pearl
- Washington @ Auburn
Prospect & Perkins
- West Newton – Washington
St, @ Chestnut, Watertown,
Cherry & Elm
- Centre @ Walnut
- Cherry @ Webster
- Dedham @ Nahanton
- Dedham @ Brookline
- Beacon @ Walnut
- Beacon @ Chestnut
- Newton Corner
- Auburndale Square

Vehicles FY17

- \$300,000 for Large Utilities Equipment
- \$300,000 for Large DPW Equipment



Water Main Improvements



- Ongoing 20-year plan to investigate, replace, clean and line Water System (\$80M) (FY16 - Year 4)
- Year 3 of 3-Year Plan for Fire Flow improvements
- Fire Flow Improvements - Crafts, Waltham, Walnut, Chestnut, Cherry, Church, California
- Water Quality Improvements - Mill, Los Angeles, Allison, Carleton
- Ongoing Water Audit to identify sources of unaccounted for water loss
- Maintenance to the reservoir along with planned shutdown and leak detection in the fall of 2016

Sewer Capital Plan

#288-15

ACCELERATED SCHEDULE FOR INFLOW / INFILTRATION REMOVAL

Ongoing 11-year plan to investigate, repair, seal, re-line Sewer System (\$49M) (FY16 - Year 4)

PROJECT AREA 2:

ASSESSMENT/INVESTIGATION COMPLETE
ENGINEERING DESIGN COMPLETE
CONSTRUCTION ONGOING
CONSTRUCTION COMPLETE JANUARY 2016

PROJECT AREA 3 & 4:

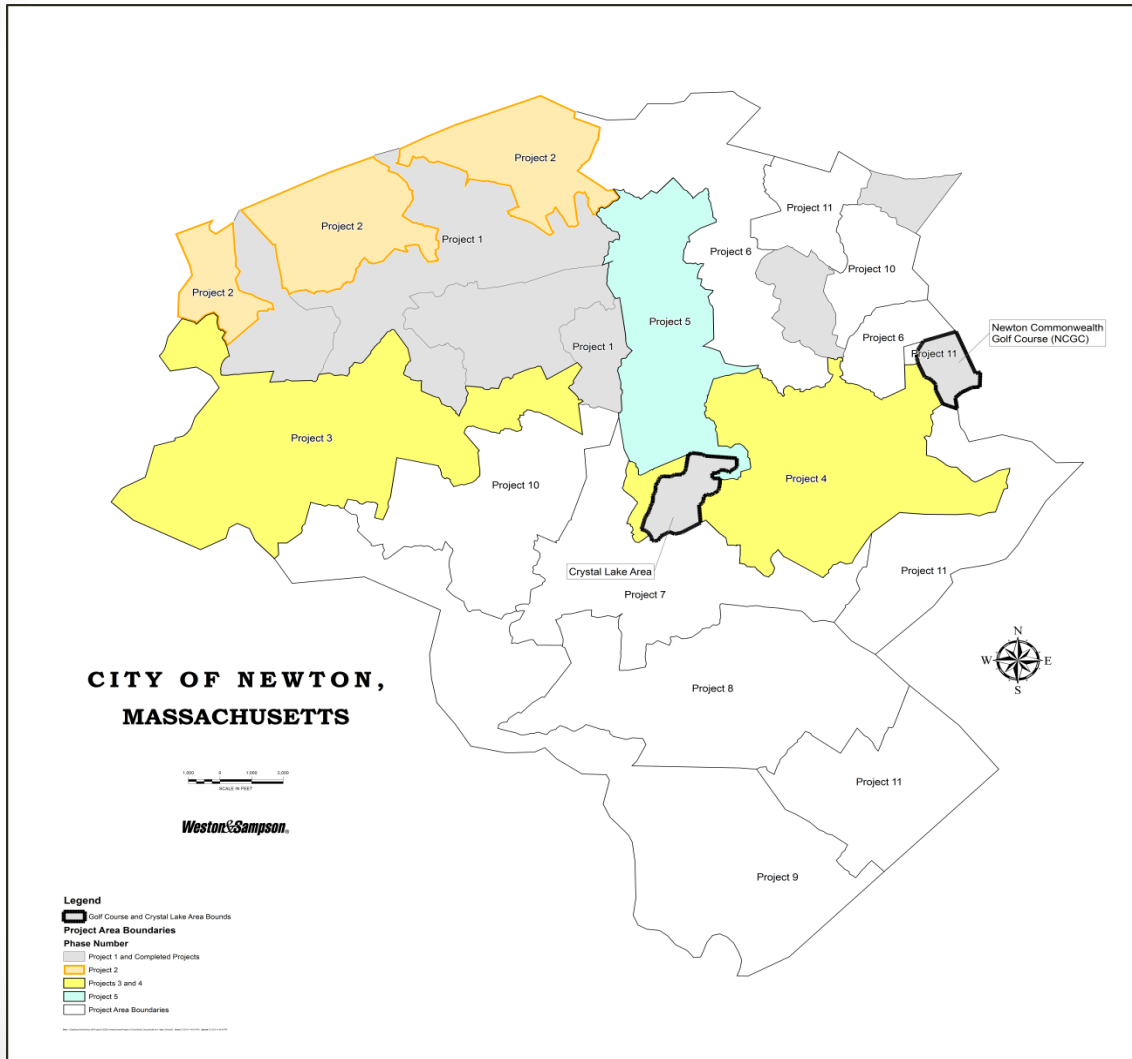
ASSESS/INVESTIGATION NOVEMBER 2014
ENGINEERING DESIGN ONGOING
CONSTRUCTION COMPLETE JANUARY 2017

PROJECT AREA 5:

ASSESS/INVESTIGATION NOVEMBER 2015
ENGINEERING DESIGN APRIL 2016
CONSTRUCTION SEPTEMBER 2017

PROJECT AREA 6:

ASSESS/INVESTIGATION NOVEMBER 2016
ENGINEERING DESIGN APRIL 2017



Stormwater Improvements

#288-15



Stormwater Infrastructure Improvement Plan

- Dedham Street Flooding
- Adams Street failed drain pipe replacement
- Culvert Assessments (Zervas, Cabot)
- Quinobequin underdrain investigation

Hazard Mitigation

- Improvements to Hammond Brook Culvert (FEMA Grant of \$465,000 from 2010 flood)



Questions?