

SELECT BOARD

November 12, 2019

Needham Town Hall

Agenda

Note: Agenda subject to revision, start times are approximate and agenda items may be discussed at earlier or later times.

	6:45	Informal Meeting with Citizens <i>One or more members of the Select Board will be available between 6:45 and 7:00 p.m. for informal discussion with citizens. While not required, citizens are encouraged to call the Select Board's Office at (781) 455-7500 extension 204 in advance to arrange for an appointment. This enables the Board to better assure opportunities for participation and respond to citizen concerns.</i>
1.	7:00	Introduce Public Information Officer Kate Fitzpatrick, Town Manager
2.	7:00	Public Hearing for the removal of (1) Public Shade Tree at 66 Otis Street, Needham MA Ed Olsen, Parks & Forestry Superintendent
3.	7:15	MWRA Grant/Loan Approval - David Davison, Assistant Town Manager/Finance - Evelyn Poness, Town Treasurer/Collector
4.	7:30	Pedestrian Safety Audit Public Hearing - Kate Fitzpatrick, Town Manager - Rick Merson, Director of DPW - John Diaz, Greenmann-Pedersen
5.	8:30	Town Manager - Green Communities Designation Application - Town Manager Report
6.	9:00	Board Discussion Committee Reports

APPOINTMENTS

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CONSENT AGENDA *=Backup attached

1.	Approve the following donations made to the Needham Park and Recreation Commission: \$784.61 from Cricket Field Neighbors for a donation to Cricket Field; \$1,000 from Middlesex Savings Bank for Arts in the Parks/Children's Theatre Performances; \$50 from Magomed Imakaev for a donation to Rosemary Pool; \$25 from Evelyn Wall for a donation to the Trust Fund for Parks; and \$50 from Claire Blum for a donation to the Trust Fund for Parks.
2.	Approve the following donations made to Needham Youth & Family Services to be used towards future programs in the Youth & Family Services Department: \$100 from

	the Purrington family; \$25 from the Farse Family; and 60 from the Schneiderman family.					
3.	Accept the following donations made to the Needham Community Revitalization Trust Fund: \$250 from Ms. MaryRuth Perras, \$400 from Edward and Carol De Lemos, and \$3000 from JMS Family Foundation, Inc.					
4.	Accept a \$200 donation made to the Needham Health Division’s Substance Prevention Alliance of Needham (SPAN) from the Needham Golf Club.					
5.*	Approve a One Day Special Wines & Malt Beverages License for Jennifer Howard Schroeder, of the Needham Human Rights Committee, to host an event called “Free At Last Wrongful Convictions” on Friday, November 15, 2019 from 6:00 p.m. to 10:00 p.m. The event will be held at the Center at the Heights located at 300 Hillside Avenue, Needham, MA.					
6.	Accept a donation of an AED (automated external defibrillator) at Memorial Park from Needham Flag Football. The defibrillator is valued at \$1,408.88.					
7.	Accept a donation of \$1,100 from Rockland Trust Bank for the Needham Lights event on December 7, 2019.					
8.*	Ratify Veterans’ Day Proclamation					
9.*	Approve SolarizeMass Plus Banner for use in the Chapel Street Banner Showcase program as administered by the Needham Community Revitalization Trust Fund. These (5) five banners will be displayed as soon as possible from November through March 2020.					
10.*	Water & Sewer Abatement Order #1283					
11.	Grant permission for the following residents to hold block parties:					
	Name	Address	Party Location	Party Date	Party Rain Date	Party Time
	Ratify – Emily Roach	24 Ellicott St.	Hatfield Park	10/20/19	10/27/19	3pm-6pm
	Ratify – Kelly Allen	103 Sylvan Rd	Oak Crest / Sylvan	10/20/19	N/A	2pm-6pm



**Select Board
TOWN OF NEEDHAM
AGENDA FACT SHEET**

MEETING DATE: 11/12/2019

Agenda Item	Introduce Public Information Officer
Presenter(s)	Kate Fitzpatrick, Town Manager

1.	BRIEF DESCRIPTION OF TOPIC TO BE DISCUSSED
The Town Manager will introduce Cyndi Roy Gonzalez, the newly appointed Public Information Officer.	
2.	VOTE REQUIRED BY SELECT BOARD
Introduction Only	
3.	BACK UP INFORMATION ATTACHED
(Describe backup below)	
a. Resume for Cyndi Roy Gonzalez	



**Select Board
TOWN OF NEEDHAM
AGENDA FACT SHEET**

MEETING DATE: 11/12/2019

Agenda Item	Public Hearing for the removal of one (1) Public Shade Tree at 66 Otis Street.
Presenter(s)	Edward Olsen, Tree Warden, Parks & Forestry Superintendent

1.	BRIEF DESCRIPTION OF TOPIC TO BE DISCUSSED
	Karen Langsner has respectfully requested to remove one Public Shade Tree. This tree has been negatively impacted by the demolition of the previous dwelling and the new construction of a home on this property address. This Public Shade tree sustained serious and direct root damage as a result of these construction activities for this new home construction. Over the past year this tree has begun to show signs of this damage and stress. This once healthy and thriving tree is now showing signs of crown decline and dieback. I am concerned that these are signs of its' impending slow death. The Tree Warden does not object to the removal of the tree requested for these reasons, at the Owner's expense. I would also recommend a donation be made in the amount of \$500, to cover the expense of purchasing two trees to replace the loss of this tree.
2.	VOTE REQUIRED BY SELECT BOARD
	Under M.G.L. Ch. 87, Requires a Vote by the Select Board Suggested Motion: 1. "That the Board vote to approve and sign the Public Shade Tree Hearing form for the removal of one 26.5-inch Sugar Maple tree in front berm of 66 Otis Street."
3.	BACK UP INFORMATION ATTACHED
	1. Request email from Karen Langsner to E. Olsen dated 10/10/19 2. Legal Ad published in Needham Times, issues 10/31/19, 11/7/19 3. List of Notified Abutters 4. Photos of tree under consideration 5. Approval letter from Tree Warden, E. Olsen to B.O.S., 11/8/19 6. Public Shade Tree Hearing Approval Form 7. Aerial Maps/Plot Plans

Edward Olsen

From: Karen Langsner <kblangsner@gmail.com>
Sent: Thursday, October 10, 2019 11:13 AM
To: Edward Olsen
Cc: Alan Langsner; Jbulian@rcn.com; ruth langsner
Subject: Request to remove public shade tree 66 Otis

Dear Mr. Olsen,

Commensurate with Massachusetts general law Chapter 87, I am requesting a hearing for the removal of the public shade tree in front of 66 Otis Street. The tree presents a danger both from falling limbs as well as sidewalk obstruction.

My mother-in-law Ruth Langsner (who resides in the house) and my husband Alan Langsner who are co-owners of the house can be available to speak at the hearing. My husband and I are long-time residents of Needham.

Thank you,

Karen and Alan Langsner
30 Windsor Road
Needham
617-359-3234

Ruth and Rudolph Langsner
66 Otis Street
Needham

Needham Times Paper

Legal Ad

Date: 10/31/19

SHADE TREE REMOVAL/66 OTIS ST.
LEGAL NOTICE
NOTICE
TOWN OF NEEDHAM
PUBLIC WORKS DEPARTMENT

NOTICE is hereby given that Karen and Alan Langsner have petitioned for the removal of one (1) PUBLIC SHADE TREE at 66 Otis St. on the front grass berm of the property.

SPECIES DIAMETER CONDITION
Sugar Maple 26.5 inches Fair

Permission is respectfully requested to remove one (1) Public Shade Tree.

A PUBLIC HEARING will be held in the Office of the Select Board, Town Hall, 1471 Highland Ave., Needham, Massachusetts at 7:00 P.M., Tuesday, the 12th day of November, 2019, at which time and place all interested persons may appear and be heard.

Needham Select Board

AD#13844203
Needham Times 10/31, 11/7/19

Needham Times Paper

Legal Ad

11/7/19

SHADE TREE REMOVAL/66 OTIS ST.
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NOTICE
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Needham Select Board

AD#13844203
Needham Times 10/31, 11/7/19

LANGSNER, ALAN T. &
LANGSNER, RUTH
30 WINDSOR RD
NEEDHAM, MA 02492

TICKTIN, ROBERT SCOTT &
TICKTIN, TRISHA
369 MANNING ST
NEEDHAM, MA 02492

GODDARD, E. BROOKS +
GODDARD, JEAN E.
59 OTIS ST
NEEDHAM, MA 02492

PICCUIRRO, MARC &
PICCUIRRO, CAITLIN
65 OTIS ST
NEEDHAM, MA 02492

WILLETT, DAVID
75 OTIS ST
NEEDHAM, MA 02492

SCHMIDT, CHARLES B. &
LIANG, MARYBETH L.
776 WEBSTER ST
NEEDHAM, MA 02492

HALFORD, SHAWN &
HALFORD, JOAN
780 WEBSTER ST
NEEDHAM, MA 02492

ERNST, ROBERT A. +
DANDRATA, SYLVIA T.
786 WEBSTER ST
NEEDHAM, MA 02492

ABBOTT, DIANE W. TR.
THE ABBOTT FAMILY
60 OTIS ST
NEEDHAM, MA 02492

LOUGHRAN, THOMAS M. &
LOUGHRAN, CYNTHIA B.
377 MANNING ST
NEEDHAM, MA 02492

STEVENSON, ELIZABETH
383 MANNING ST
NEEDHAM, MA 02492

DEELEY, PAUL J. +
DEELEY, MAUREEN P.
755 GREAT PLAIN AVE
NEEDHAM, MA 02492

BLAKE, ROBERT R. &
BLAKE, JULIA C.H.
763 GREAT PLAIN AVE
NEEDHAM, MA 02492

RODENHISER, PAUL M +
RODENHISER, DIANE
773 GREAT PLAIN AVE
NEEDHAM, MA 02492



**Town of Needham-DPW
Parks and Forestry Division**

500 Dedham Ave.
Needham, MA 02492
781-455-7550, ext. 316

ABUTTER'S NOTICE

**TOWN OF NEEDHAM
PUBLIC WORKS DEPARTMENT**

NOTICE is hereby given that Karen and Alan Langsner have petitioned for the removal of one
(1)

PUBLIC SHADE TREE

as follows: At 66 Otis Street, on the front berm of the property

<u>SPECIES</u>	<u>DIAMETER</u>	<u>CONDITION</u>
<u>Sugar Maple</u>	<u>26.5 inches</u>	<u>Fair</u>

Permission is respectfully requested to remove one (1) Public Shade Tree.

A PUBLIC HEARING will be held in the Office of the Board of Selectmen, Town Hall, Needham, Massachusetts at 7:00 P.M., Tuesday the 12th day of November 2019, at which time and place all interested persons may appear and be heard.

If you have any questions, please call Edward Olsen at 781-455-7550 ext 316.







© 2019 Go...



© 2019 Go.





**Town of Needham-DPW
Parks and Forestry Division**

500 Dedham Ave.
Needham, MA 02492
781-455-7550, ext. 316

November 08, 2019

Needham Select Board
Town Hall
Needham, MA 02492

RE: TREE REMOVAL AT 66 Otis Street

Dear Members of the Board:

Karen and Alan Langsner of 66 Otis Street have petitioned for the removal of one Public Shade tree located on Town Property. The construction of the new home on this property address has detrimentally impacted this tree on Town property. This tree is located within the Town layout along the grass berm of the roadway. Since I found the tree in Fair condition, not being a hazard to the public, a Public Shade Tree Hearing is required.

I feel Mrs. Langsner is justified in her request seeking permission to remove this Sugar Maple tree. I have met on site to look at this tree and truly see no way that this tree could survive and flourish now that most adventitious roots were severed during construction work. Presently most of all this tree's critical roots exist on 2 sides, east and west as the grass berm travels. This finished construction work has determinedly impacted this tree's critical roots on one side and thus significantly decrease the likelihood of its survival long term.

In keeping with previous Town policy on the removal of live trees, and in accordance with Massachusetts General Laws Chapter 87 Section 3, and after a public hearing, I recommend granting permission for the removal of one Public Shade tree. The construction activities were the major cause in this trees' decline and given that no tree protections were put in place during this construction by the contractor, I recommend that this tree is removed at the Owners' expense.

There is adequate space for future tree replacements in the berm in near proximity to this property. If this request is approved the Town will plant two additional berm trees near this property location.

Sincerely,

Edward J. Olsen
Tree Warden / Superintendent, Parks and Forestry Division

NOTICE

TOWN OF NEEDHAM PUBLIC WORKS DEPARTMENT

NOTICE is hereby given that Karen and Alan Langsner have petitioned for the removal of one (1)

PUBLIC SHADE TREE

As follows: At 66 Otis St., on the front grass berm of the property

<u>SPECIES</u>	<u>DIAMETER</u>	<u>CONDITION</u>
<u>Sugar Maple</u>	<u>26.5 inches</u>	<u>Fair</u>

Permission is respectfully requested to remove one (1) Public Shade Tree.

A PUBLIC HEARING will be held in the Office of the Board of Selectmen, Town Hall, 1471 Highland Ave., Needham, Massachusetts at 7:00P.M. Tuesday the 12th day of November, 2019, at which time and place all interested persons may appear and be heard.

Needham Board of Selectmen





**Select Board
TOWN OF NEEDHAM
AGENDA FACT SHEET**

MEETING DATE: 11/12/2019

Agenda Item	MWRA Grant/Loan Approval												
Presenter(s)	David Davison, Assistant Town Manager/Finance Evelyn Poness, Town Treasurer/Collector												
1.	BRIEF DESCRIPTION OF TOPIC TO BE DISCUSSED												
	The Massachusetts Water Resources Authority offers member communities zero interest loans for certain sewer system improvements. The program also provides a grant. The grant is for \$360,000 and the loan is for \$440,000. The Board will be asked to approve the Bond and the financial assistance agreement with the MWRA												
2.	VOTE REQUIRED BY SELECT BOARD												
	Suggested Motions: (please note there are two (2) motions to be acted upon by the Board) Motion A Move that the sale of the \$440,000 Sewer Bond of the Town dated November 18, 2019, to Massachusetts Water Resources Authority (the "Authority") is hereby approved and the Town Treasurer or other appropriate Town official is authorized to execute on behalf of the Town a Loan Agreement and a Financial Assistance Agreement with the Authority with respect to the bond. The bond shall be payable without interest on November 15 of the years and in the principal amounts as follows: <table style="margin-left: 40px;"><tr><td>Year</td><td>Installment</td></tr><tr><td>2020</td><td>\$88,000</td></tr><tr><td>2021</td><td>88,000</td></tr><tr><td>2022</td><td>88,000</td></tr><tr><td>2023</td><td>88,000</td></tr><tr><td>2024</td><td>88,000</td></tr></table> Motion B Move that each member of the Select Board, the Town Clerk and the Town Treasurer be and hereby are, authorized to take any and all such actions, and execute and deliver such certificates, receipts or other documents as may be determined by them, or any of them, to be necessary or convenient to carry into effect the provisions of the foregoing vote.	Year	Installment	2020	\$88,000	2021	88,000	2022	88,000	2023	88,000	2024	88,000
Year	Installment												
2020	\$88,000												
2021	88,000												
2022	88,000												
2023	88,000												
2024	88,000												
	BACK UP INFORMATION ATTACHED												
	1.) Memo from Assistant Town Manager/Director of Finance dated November 5, 2019												

Memorandum

To: Select Board
From: David Davison, Assistant Town Manager/Director of Finance
CC: Kate Fitzpatrick, Town Manager; Evelyn Poness, Treasurer/Collector; Rick Merson, Director of Public Works; Michelle Vaillancourt, Town Accountant
Date: November 5, 2019
Re: Massachusetts Water Resources Authority (MWRA) Financial Assistance

The Town is under Administrative Order from the State to identify and remove Infiltration and Inflow (I/I) from the sewer system. Infiltration is defined as groundwater or storm water runoff that enters the system through deteriorated pipe or manhole structures. Inflow is defined as clean, non-septic water, which enters the system. This water is generally produced by residential sump pumps that drain basements.

Under Article 40 of the May 2019 Annual Town Meeting \$1,600,000 was appropriated for the purpose of infiltration and inflow removal. A portion of this work has been approved by the MWRA for financial assistance under its grant/loan program. The grant/loan program is offered to help communities remove I/I from existing sewer systems. The Town executed a Financial Assistance Agreement with the MWRA for \$800,000 of which \$360,000 is a direct grant and \$440,000 is in the form of a loan. The loan is to be repaid over five years without interest.

The Board will be asked to approve the issuance of a five-year zero interest Bond with MWRA. Upon approval, the Board will need to execute the certificate and the Bond. The documents will be brought to the meeting by the Town Treasurer.

Please do not hesitate to contact me if you have any questions prior to the meeting.



**Select Board
TOWN OF NEEDHAM
AGENDA FACT SHEET**

MEETING DATE: 11/12/2019

Agenda Item	Pedestrian Safety Audit Public Hearing
Presenter(s)	Kate Fitzpatrick, Town Manager Rick Merson, Director of Public Works John Diaz, Greenmann-Pedersen

1.	BRIEF DESCRIPTION OF TOPIC TO BE DISCUSSED
The Town Manager and Director of Public Works will update the Board on progress toward the implementation of the preliminary high-risk crosswalk location recommendations. Mr. Diaz will provide a summary of the Pedestrian Safety Audit findings and recommendations.	
2.	VOTE REQUIRED BY SELECT BOARD
Public Hearing – Discussion Only	
3.	BACK UP INFORMATION ATTACHED
(Describe backup below) a. Town-wide Pedestrian Safety Audit b. Needham Town-wide Pedestrian Safety Audit PowerPoint c. Notice of Public Hearing	



NEEDHAM TOWNWIDE PEDESTRIAN SAFETY AUDIT

SELECT BOARD PRESENTATION Tuesday, November 12, 2019

GPI

Engineering | Design | Planning | Construction Management

MEETING AGENDA

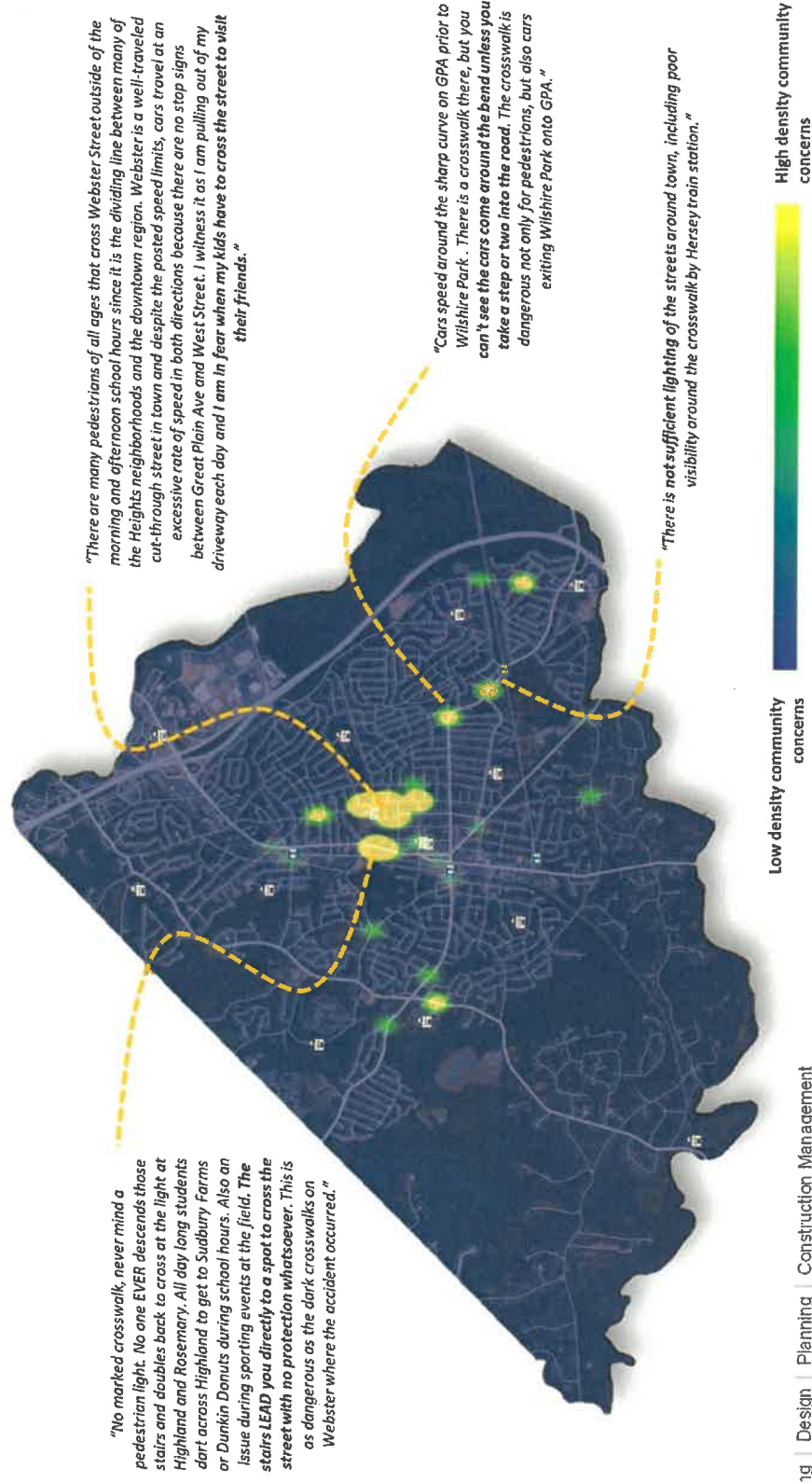
- 1 Project Background & Purpose
- 2 Policy Recommendations
- 3 Townwide Crosswalk Audit
- 4 Recommended Implementation Efforts
- 5 Toolkit for Future Design
- 6 Questions & Discussion
- 7 Project Background & Purpose



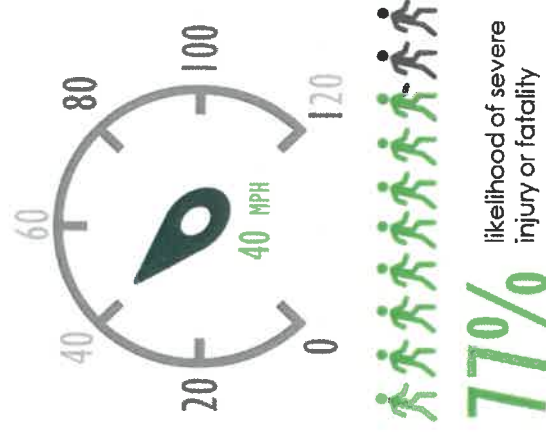
WHY INVEST IN PEDESTRIAN SAFETY?

PUBLIC PERCEPTION

"A town that values the health and safety of its citizens can take small but important steps for pedestrians and the community as a whole."

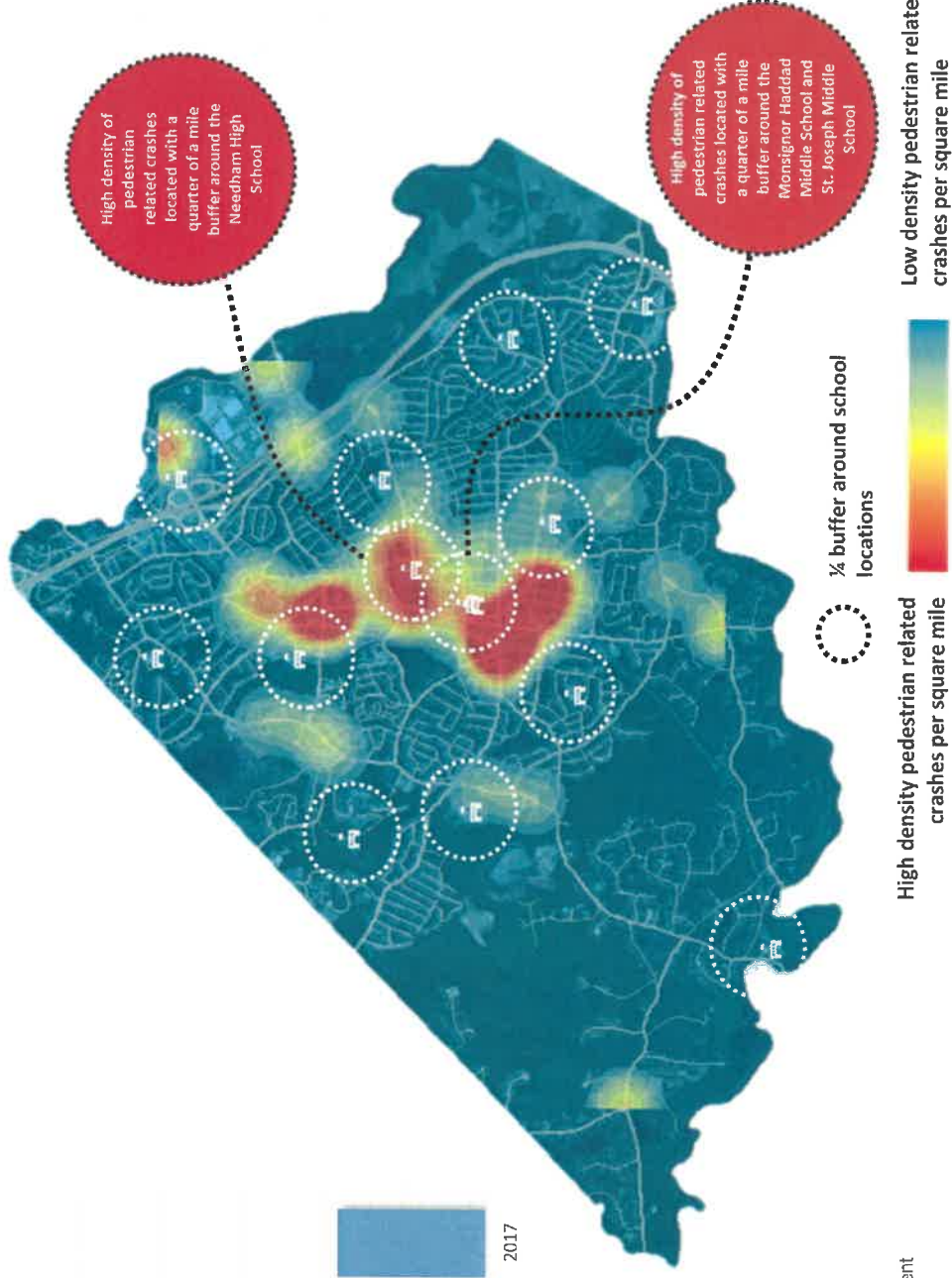
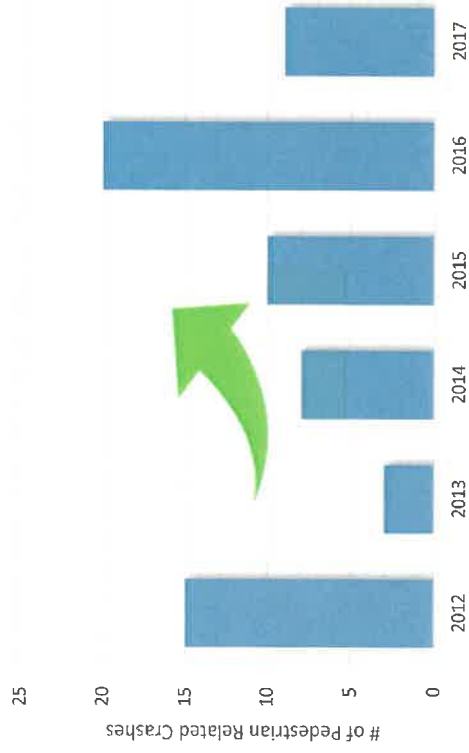


LIKELIHOOD TO SEVERE INJURY OR FATALITY

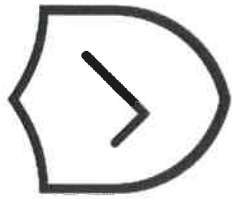


Data source: Impact Speed and a Pedestrian's Risk of Severe Injury or Death, Brain Tefft, AAA Foundation for Traffic Safety, 2011.

PEDESTRIAN RELATED COLLISIONS TOWNWIDE: ON THE RISE



DESIRED GOALS THROUGH IMPELEMENTATION



SAFETY

Reduce the number and severity of pedestrian related collisions and decrease vehicle speeds within high priority locations.



HEALTH

Promote walking and thus an increase in mobility and health especially within young children and the elderly community.



EQUITY

Improve walkability and accessibility throughout Town for all users regardless of age, race, or socioeconomic status.



COMMUNITY

Foster a sustainable community by increasing alternative transportation modes, stimulating human interaction and supporting the economy.

POLICY RECOMMENDATIONS

POLICY RECOMMENDATION: TOWNWIDE SPEED LIMIT

Should the Town of Needham lower the statutory speed limit townwide from 30 mph to 25 mph?

SUPPORTING FACTORS:

- Community level support
- Adjacent city opt-in
- Increased pedestrian survival rates at lower speeds in the event of vehicle-pedestrian collisions

OPPOSING FACTORS:

- Very minor effects on vehicle speeds
- Decrease in driver compliance
- Enforcement required
- Greater disparity in vehicle travel speeds
- False sense of security for bicyclists and pedestrians



POLICY RECOMMENDATION: TOWNWIDE SPEED LIMIT

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OPPOSING FACTORS:

- Very minor effects on vehicle speeds
- Decrease in driver compliance
- Enforcement required
- Greater disparity in vehicle travel speeds
- False sense of security for bicyclists and pedestrians

At this time, GPI recommends no change to the town-wide statutory speed limit of 30 miles per hour, but rather to focus on implementing 20-mph speed safety zones in areas where vulnerable users may be present and enforcement efforts can be targeted.

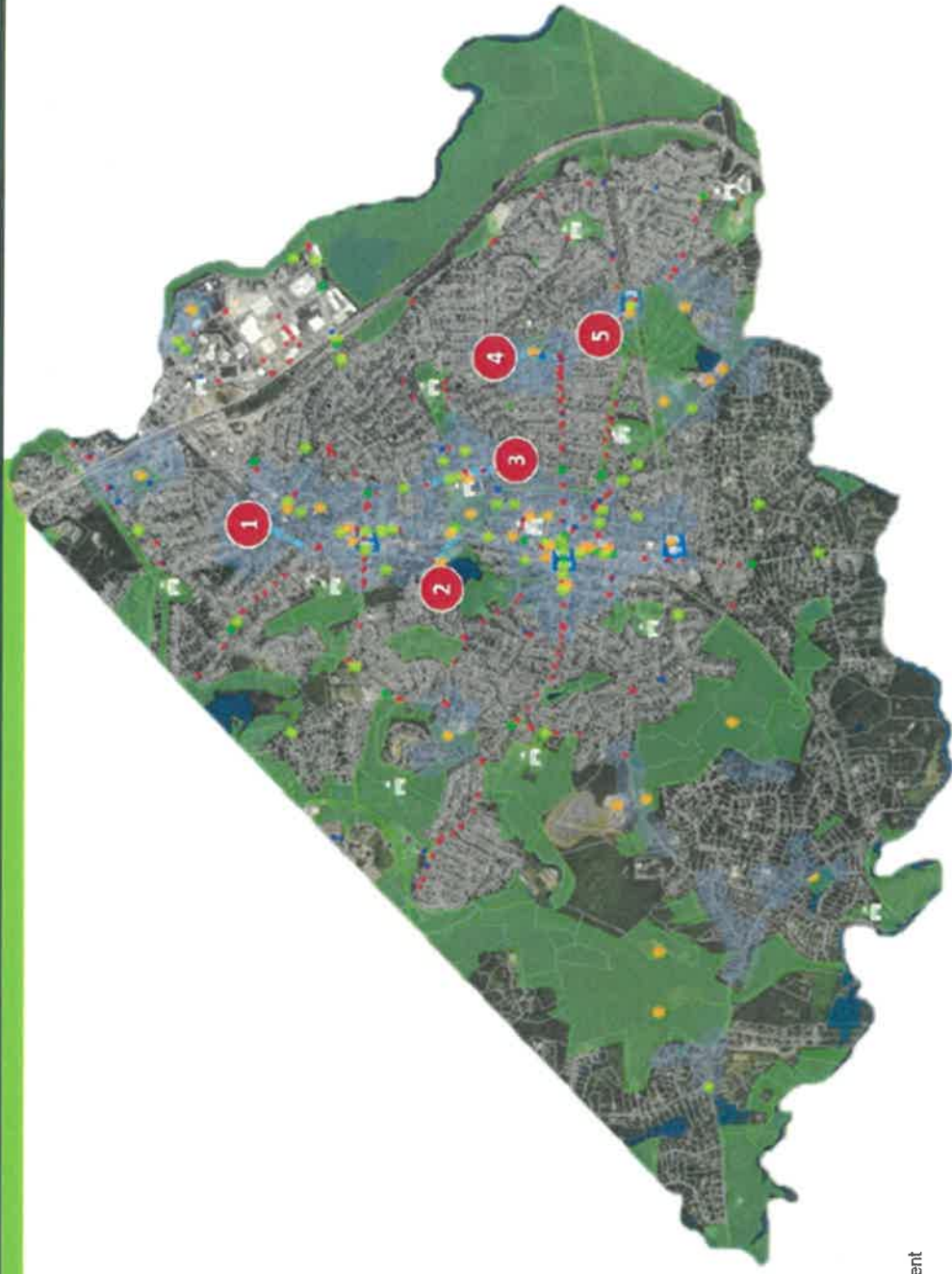
POLICY RECOMMENDATION: SAFETY ZONE IMPLEMENTATION

WHAT IS A SAFETY ZONE?

Regulatory speed limit set at 20 miles per hour intend to be used in areas where vulnerable road users are likely to be present

WHERE SHOULD NEEDHAM IMPLEMENT SAFETY ZONES?

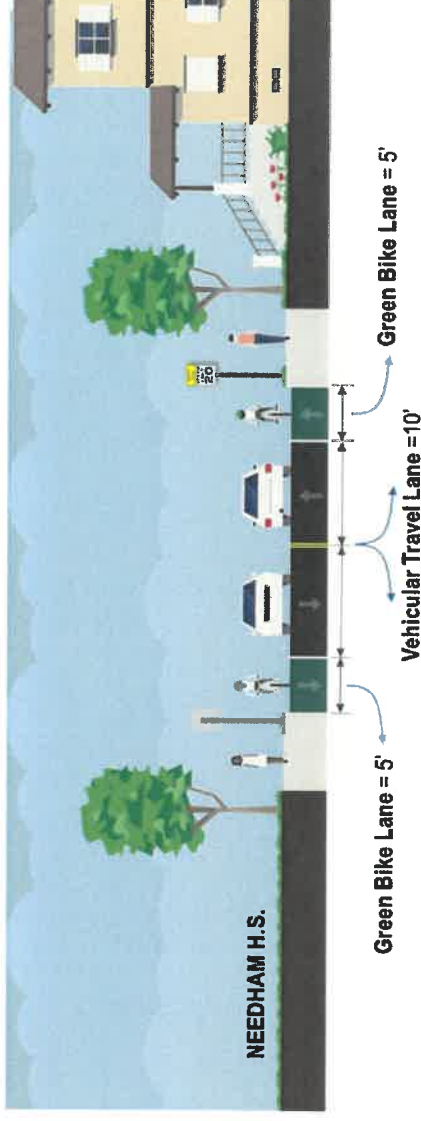
1. Hillside Avenue near Cricket Field
2. Rosemary Street near the Rosemary Recreation Complex and Library
3. Webster Street near Needham High School
4. Beaufort Street near Perry Park
5. Great Plain Avenue near Hersey MBTA Train Station



POLICY RECOMMENDATION: SAFETY ZONE IMPLEMENTATION

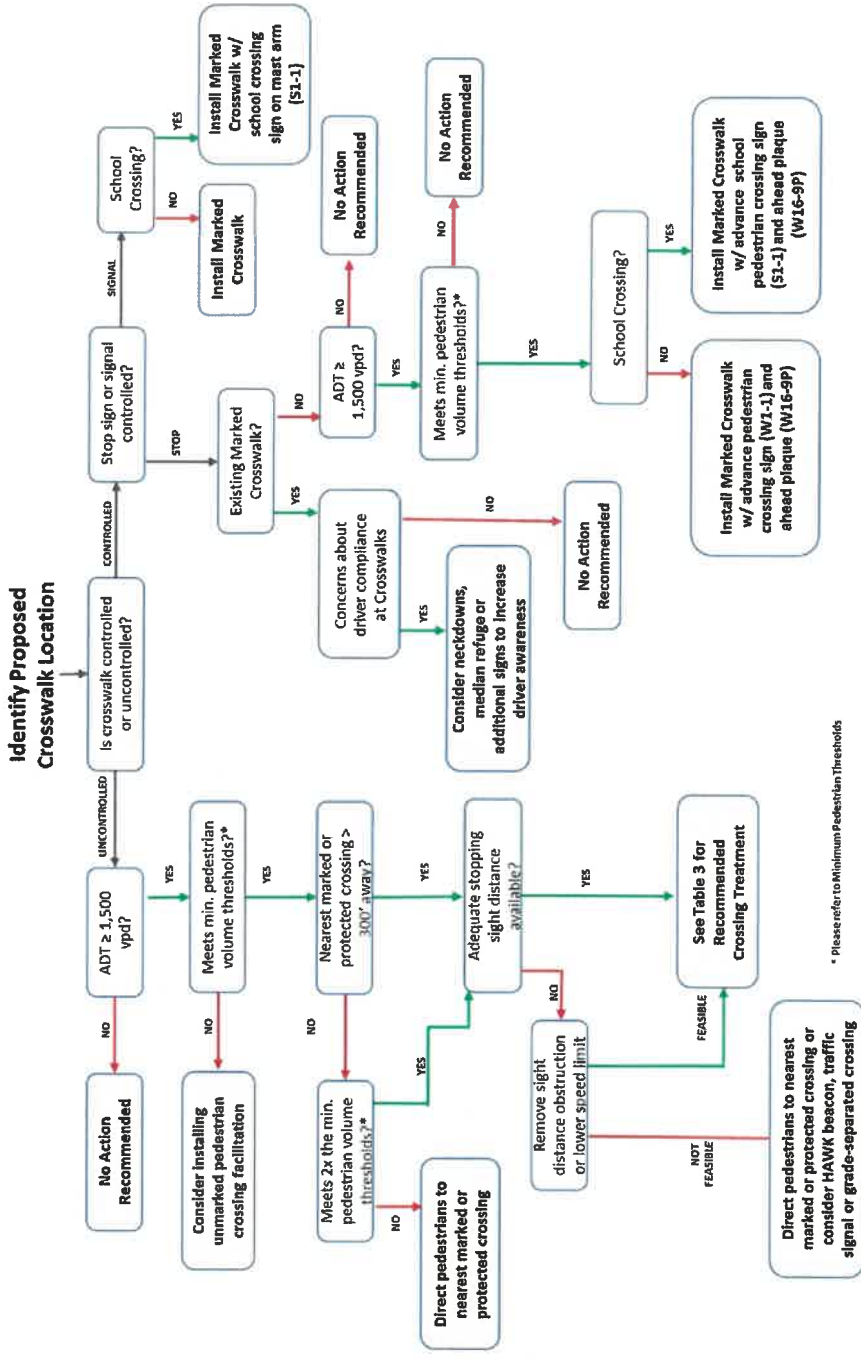
WHAT DESIGNATES A SAFETY ZONE?

- Appropriate signage to lawfully designate the safety zone
- Uncontrolled crosswalks falling within a safety zone are recommended to be enhanced with a RRFB and be marked with a high visibility continental crosswalk for greater visibility
- Roadway segments within a Safety Zone with sufficient pavement width are recommended to be striped to include 3-foot minimum green painted shoulders for bicycle travel

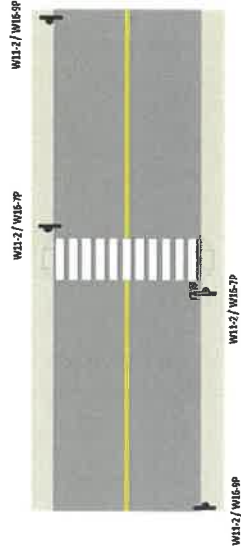


POLICY RECOMMENDATION: CROSSWALK INSTALLATIONS

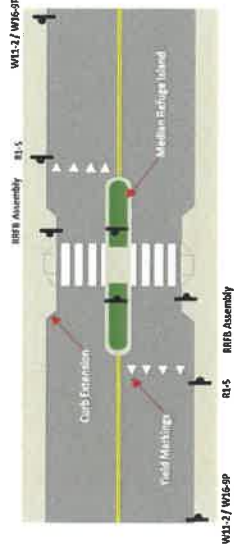
A critical component of pedestrian safety is implementing crossing treatments that foster sustainable safety and are appropriate for a location given the roadway context and surrounding land use.



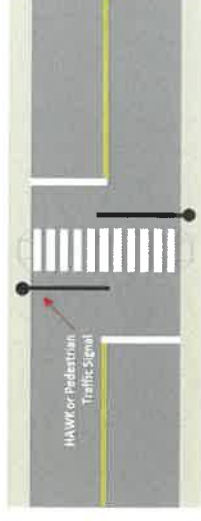
POLICY RECOMMENDATION: CROSSWALK INSTALLATIONS



Low volume & speed



High volume & speed



Pedestrian Crossing Signs— Needham, MA



RRFB with Raised Median Island & Curb Extensions – Urbana, IL



HAWK Signal – Needham, MA

TOWNWIDE CROSSWALK AUDIT

CROSSWALK AUDIT: METHODOLOGY



3:38 PM 100% 73%

My Survey

Needham Crosswalk Inventory

Crosswalk ID

Public Concern Raised

☐ Yes

☐ No

Within a School Zone?

☐ Yes

☐ No

Speed Regulation

☐ 20 mph

☐ 25 mph

☐ 30 mph

☐ 35 mph

☐ 40 mph

☐ 45 mph

☐ Thickly Settled

☐ Safety Zone

Is a supplemental device present?

☐ Yes

☐ No

CROSSWALK AUDIT: RESULTS



Faded pavement markings at Hunnewell/Hillside



Lack of wheelchair ramps at Harris Avenue/Dedham Avenue



Non-MUTCD Compliant school crossing signage, also blocked by utility pole



Non-MUTCD Compliant school crossing signage in poor condition on Greendale Avenue near St. Sebastian's School

- ✓ Pavement Markings
- ✓ Accessibility
- ✓ Street Lighting
- ✓ Pedestrian Crossing Signage
- ✓ Sight Distance

RECOMMENDED IMPLEMENTATION EFFORTS

IMPLEMENTATION: HIGH RISK CROSSWALK LOCATIONS

TOWN OF NEEDHAM, MASSACHUSETTS DEPARTMENT OF PUBLIC WORKS RECTANGULAR RAPID FLASHING BEACON INSTALLATION - MULTIPLE LOCATIONS CONTRACT NO. 20DPW055C

AUGUST 14, 2019

SUBJECT BOARD

ZHUO BUI IAN, CHAIR
 MARCELO BANDELL, VICE-CHAIR
 MATTHEW BRIGHELLI, CLERK
 MARIANNE COOLEY, MEMBER
 DANIEL F. McARTHUR, MEMBER

TOWN MANAGER

KATHLEEN P. FITZPATRICK

DEPARTMENT OF PUBLIC WORKS

RICARDO P. ARNONE, DIRECTOR
 ANTHONY S. BIANCHI, SUPERVISOR
 BRIAN J. DUNN, HIGHWAY SUPERINTENDENT
 EDWARD J. GUSTIN, PARK & RECREATION SUPERINTENDENT
 KEVIN WASHINGTON, ACTING WATER AND SEWER SUPERINTENDENT

LOCAL FIRE MAP

PLAN INDEX

SHEET NO.	DESCRIPTION
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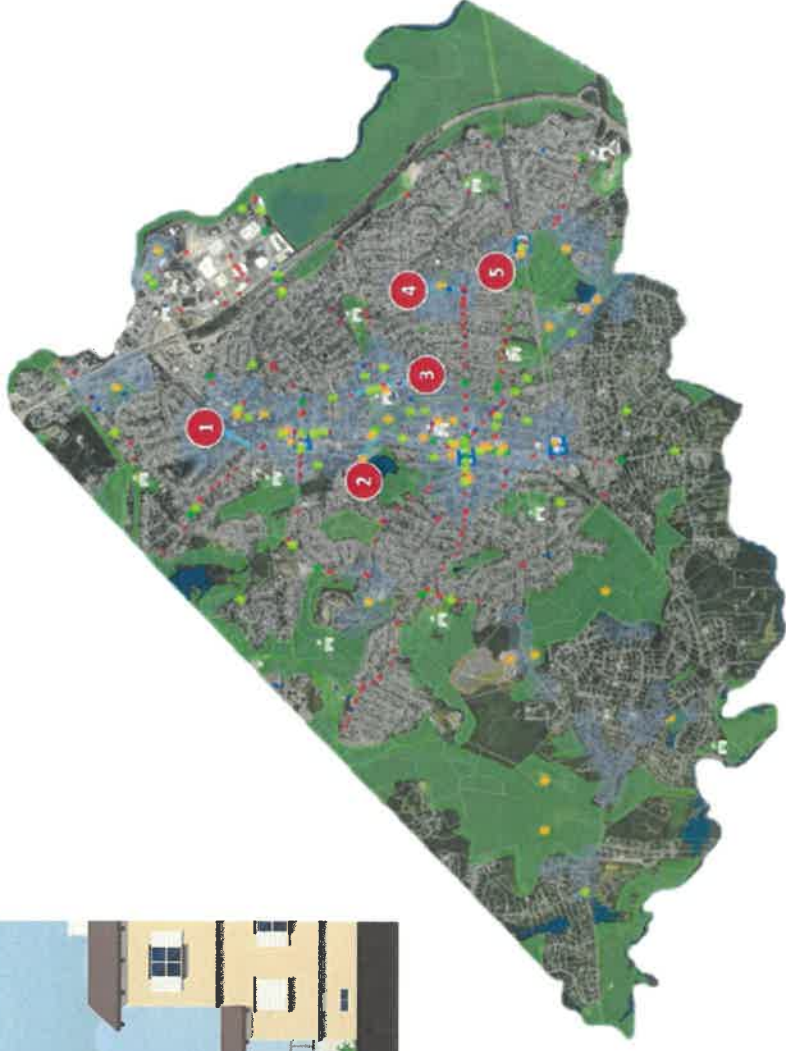
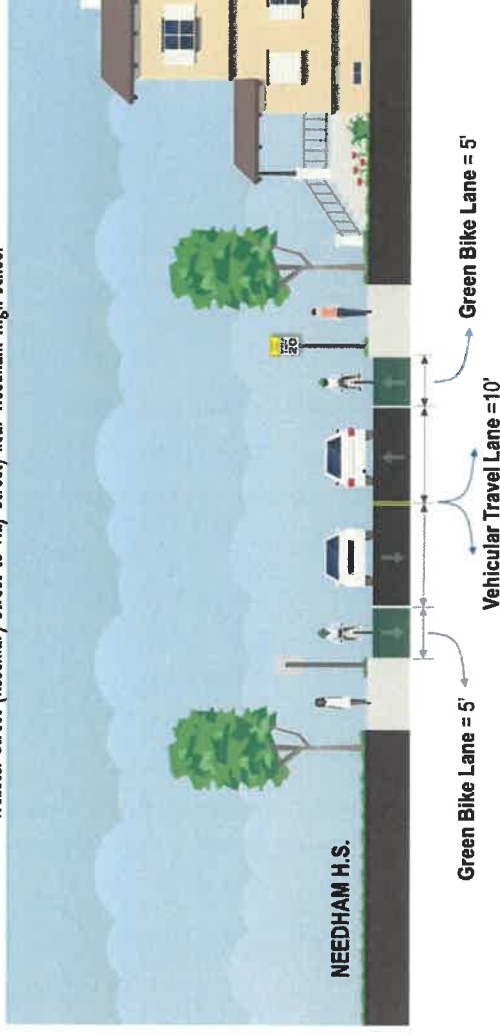
1-6	CIVIL DISTRICT
7	TRAFFIC SIGNAL, FLASHING BEACON, AND PAINT MARKING REPAIRS
8	TRAFFIC SIGNAL, FLASHING BEACON, AND PAINT MARKING REPAIRS

Location 8- Great Plan Avenue at Broad Meadow Road

GPI Engineering | Design | Planning | Construction Management

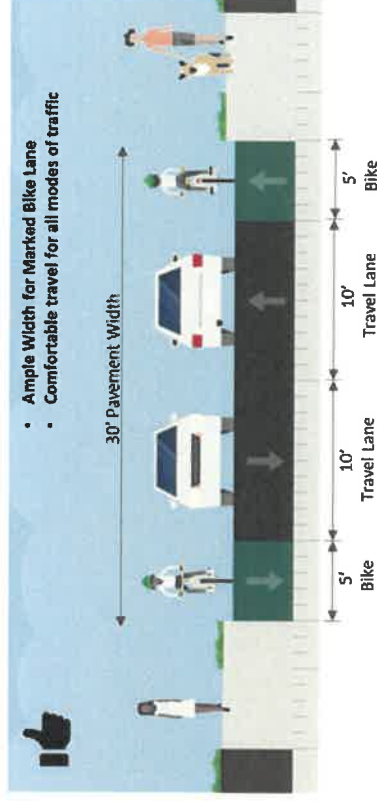
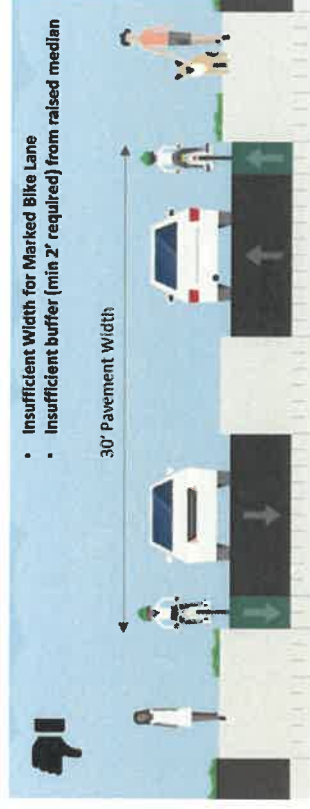
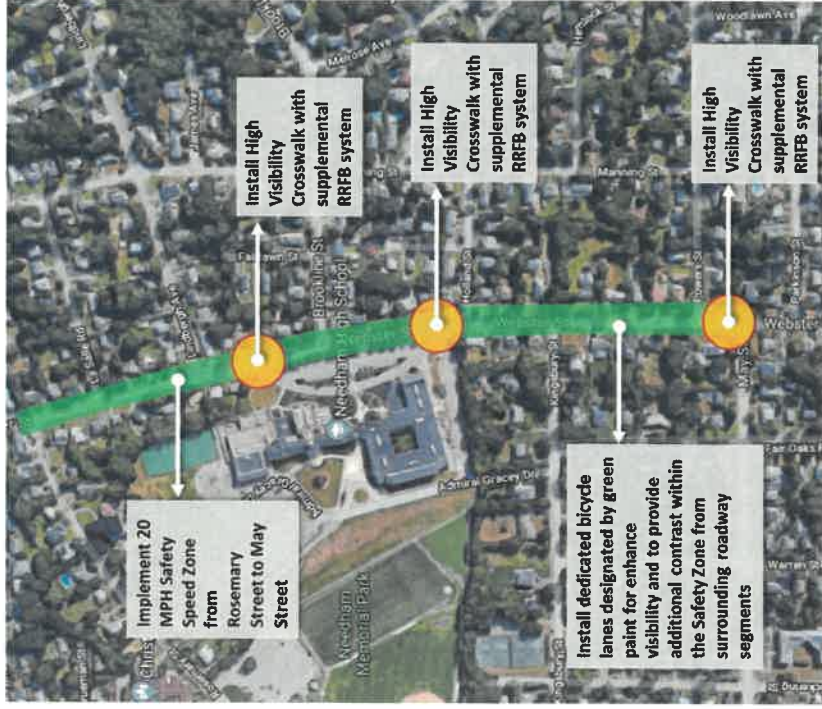
IMPLEMENTATION: SAFETY ZONE IMPLEMENTATION

Webster Street (Rosemary Street to May Street) near Needham High School

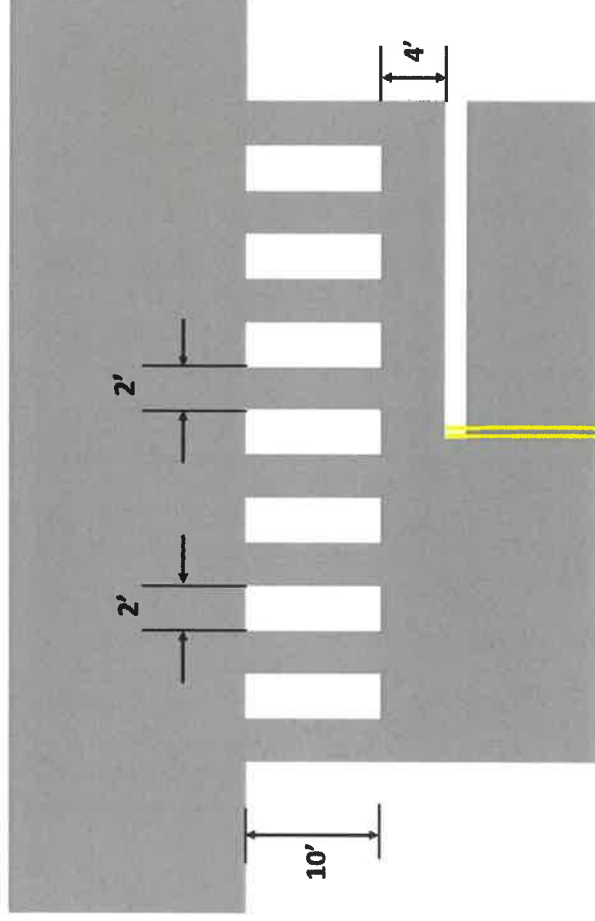


1. Hillside Avenue near Cricket Field
2. Rosemary Street near the Rosemary Recreation Complex and Library
3. Webster Street near Needham High School
4. Beaufort Street near Perry Park
5. Great Plain Avenue near Hersey MBTA Train Station

IMPLEMENTATION: WEBSTER STREET SAFETY CORRIDOR

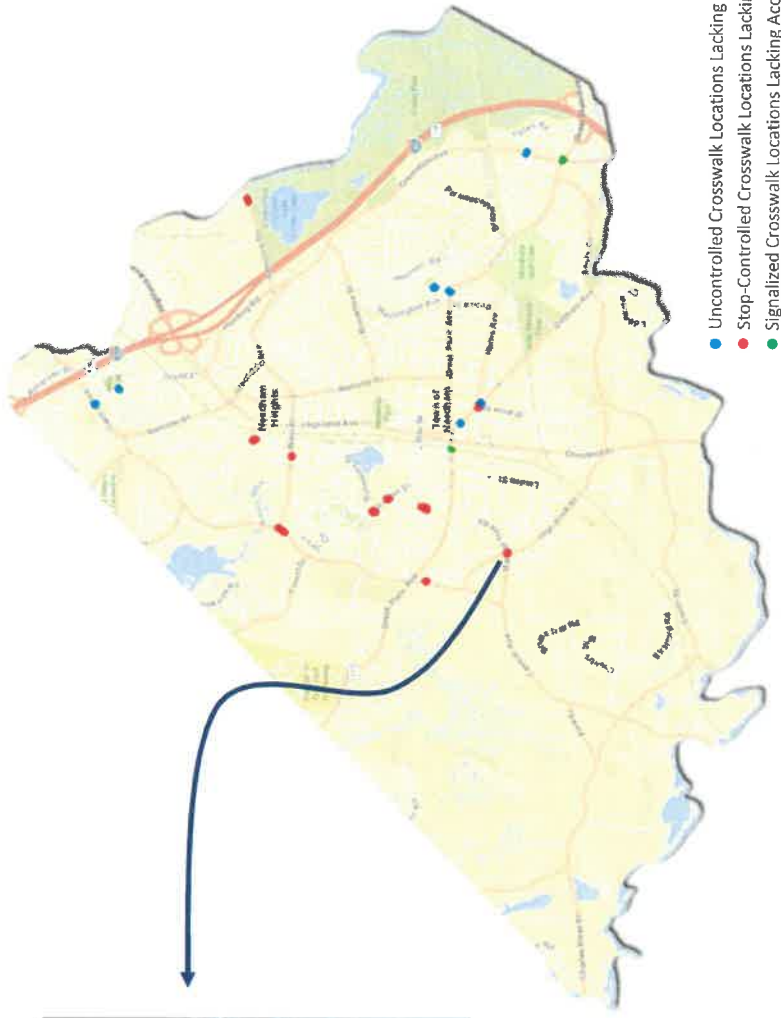


IMPLEMENTATION: PAVEMENT MARKING ANNUAL PROGRAM

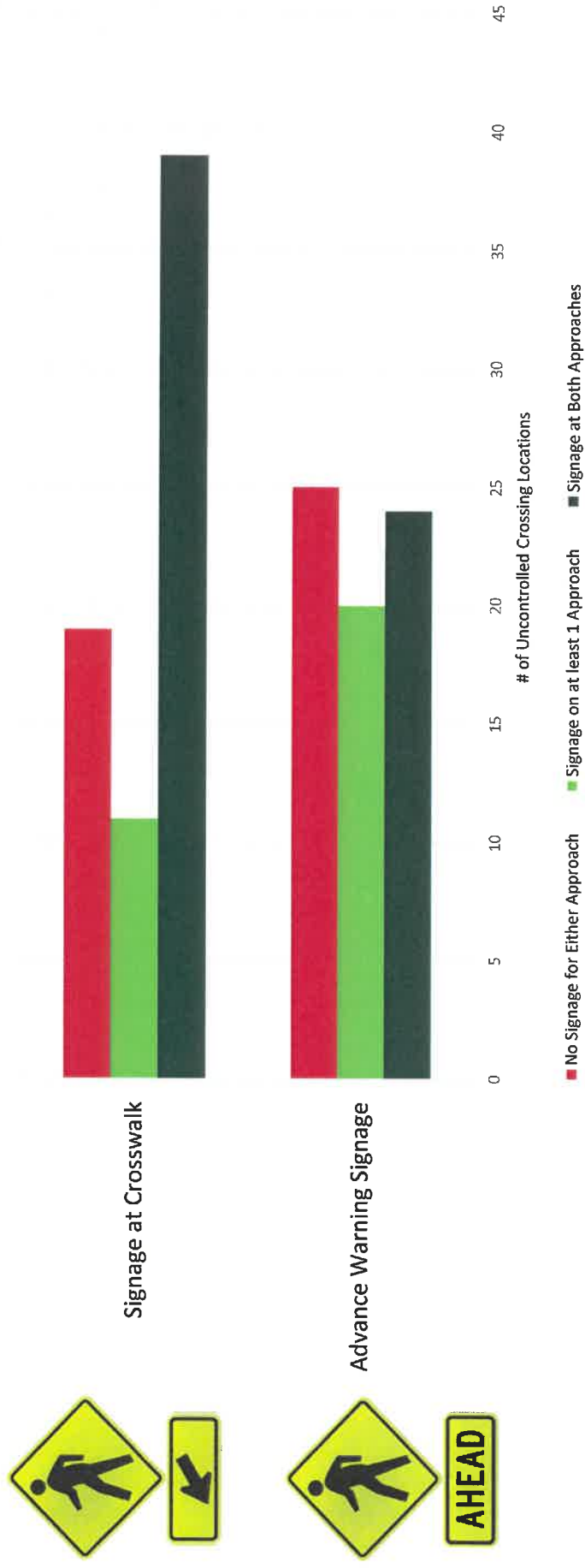


Continental crosswalks are generally considered safer because they are more visible to drivers as reported by the Federal Highway Administration (FHWA). A typical crosswalk/stop bar placing layout is depicted in the image to the left and can be adopted by the Town of Needham.

IMPLEMENTATION: WHEELCHAIR RAMP ACCESSIBILITY



IMPLEMENTATION: TRAFFIC SIGN UPGRADE



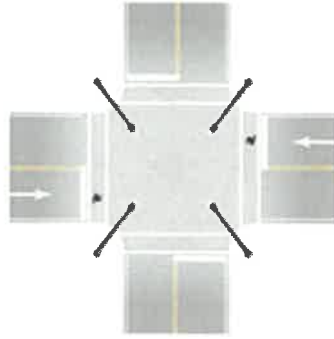
IMPLEMENTATION: STREETLIGHTING UPGRADES



Traditional Design for Midblock Crossing Lighting Layout



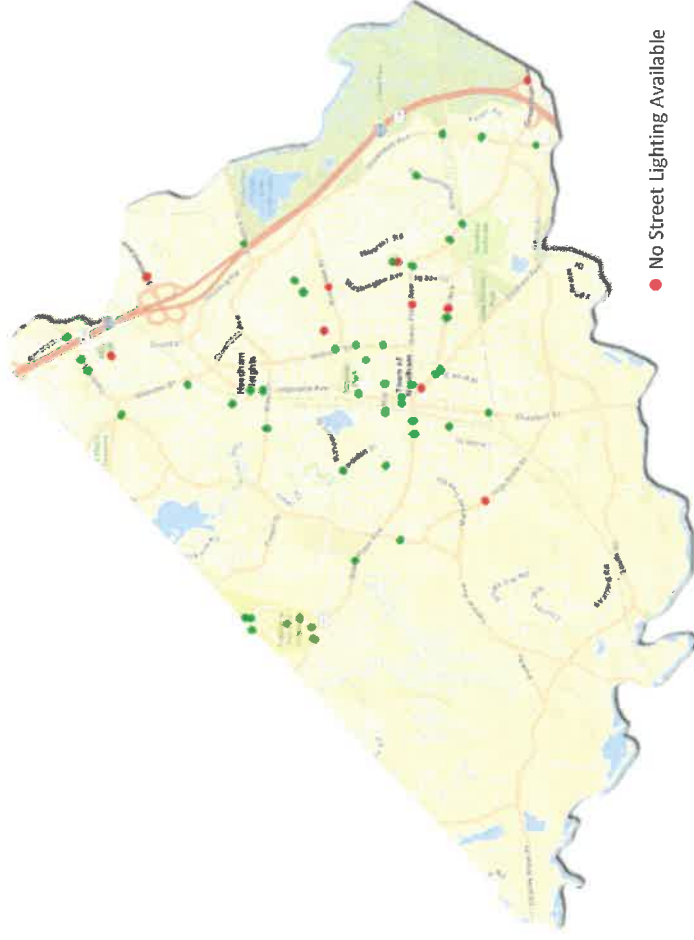
Preferred Design for Midblock Crossing Lighting Layout



Traditional Design for Intersection Lighting Layout for Crosswalks



Preferred Design for Intersection Lighting Layout for Crosswalks



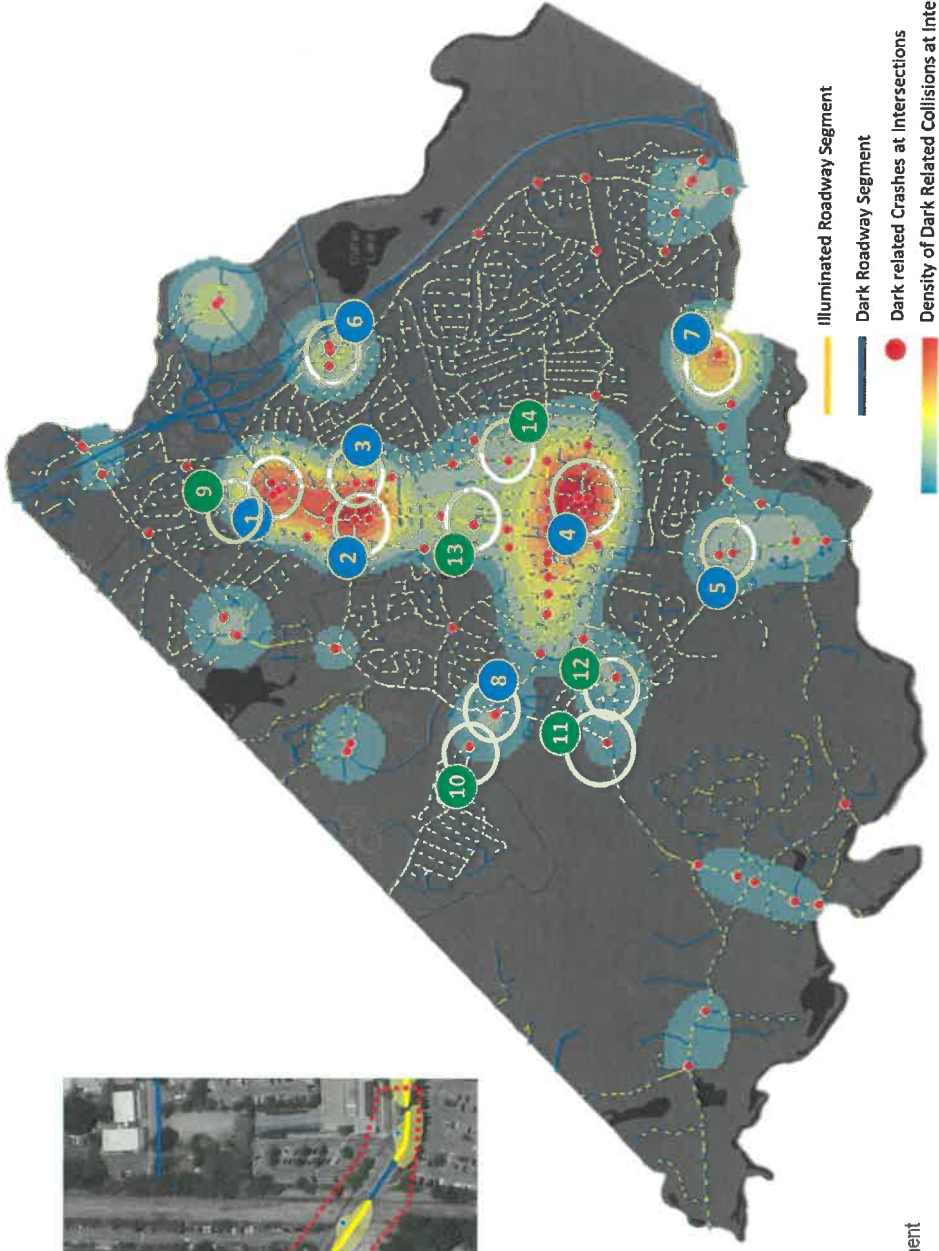
● No Street Lighting Available

● Street Lighting Available but does not conform to FHWA Recommendations

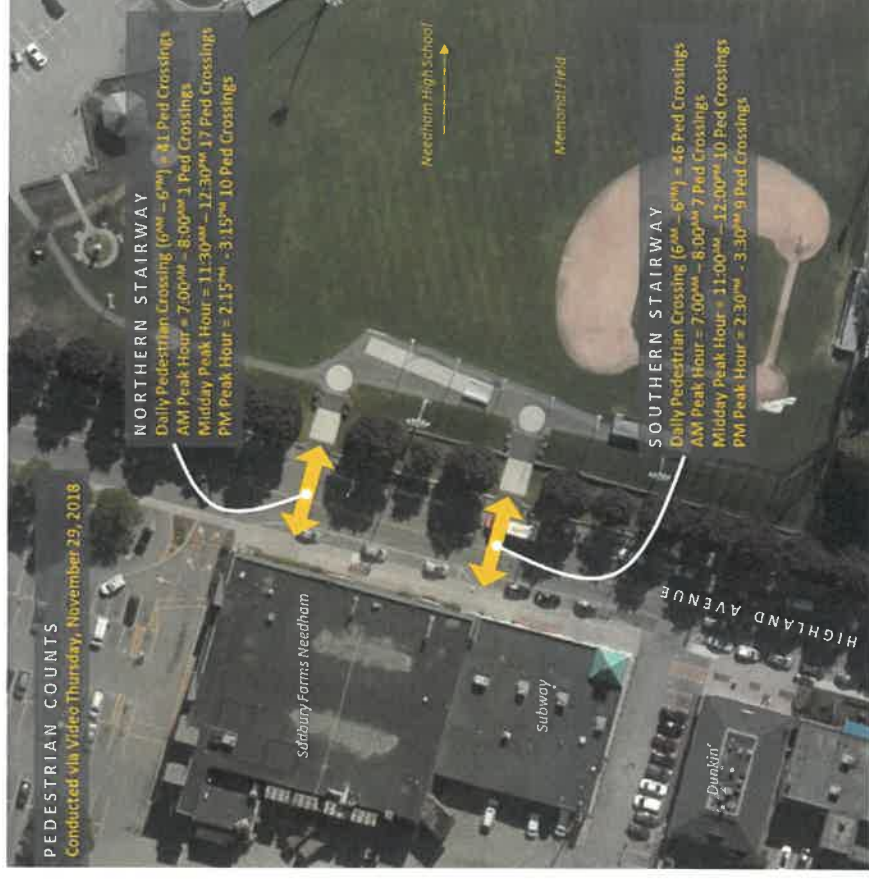
IMPLEMENTATION: STREETLIGHTING REPORT

SAFETY ZONE

Rosemary Street



IMPLEMENTATION: CROSSWALK INSTALLATION AT HIGHLAND AVENUE / MEMORIAL FIELD



An expected combined 27 pedestrian crossings would satisfy the MUTCD pedestrian volume threshold of 20 pedestrians per peak hour to install a consolidated crosswalk along Highland Avenue.

IMPLEMENTATION: CROSSWALK INSTALLATION AT HIGHLAND AVENUE / MEMORIAL FIELD



IMPLEMENTATION: DEDHAM AVE. AT HARRIS AVE. INTERIM IMPROVEMENTS

- ✓ Long crossing distances
- ✓ Uncontrolled crosswalks on Dedham
- ✓ Sight Distance/ poor placement of crossings (right turning vehicles)
- ✓ High-density pedestrian related crash cluster
- ✓ Residual Speeding



IMPLEMENTATION: COST ESTIMATE

Safety Zones

5 Roadway Segments identified for implementation based on adjacent land use, number of access points along a given segment (including crosswalks, driveways and side streets), and segment length. Safety zones will be designated with painted green buffers, new lane pavement markings, new high visibility continental crosswalks, new safety zone signage and RRFB Crossing Beacons at crosswalks located within the designated Safety Zones.	Location #1 Total =	\$ 82,795.00
	Location #2 Total =	\$ 77,705.00
	Location #3 Total =	\$ 131,420.00
	Location #4 Total =	\$ 183,565.00
	Location #5 Total =	\$ 83,315.00
	Safety Zone Total =	\$ 558,800.00

Crosswalk Signs

At Crosswalk Signage: A total of 19 uncontrolled crosswalks were lacking at crosswalk (W11-2 / W16-7P) signage assemblies for both approaches. A total of 11 uncontrolled crosswalks were lacking at crosswalk (W11-2 / W16-7P) signage assemblies for one approach. There were 11 at crosswalk signs existing in poor condition. TOTAL 60 W11-2/W16-7P ASSEMBLIES.		
Advance Crosswalk Signage: A total of 25 uncontrolled crosswalks were lacking at crosswalk (W11-2 / W16-7P) signage assemblies for both approaches. A total of 20 uncontrolled crosswalks were lacking at crosswalk (W11-2 / W16-7P) signage assemblies for one approach. There were 12 at crosswalk signs existing in poor condition. TOTAL 82 W11-2/W16-7P ASSEMBLIES.		
	Crosswalk Signage Total =	\$ 34,776.50

Wheelchair Ramps

Crosswalk audit found a total of 68 missing wheelchair ramps.	Wheelchair Ramp Total =	\$ 578,000.00
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Streetlighting

Crosswalk audit found a total of 12 uncontrolled crosswalk locations lacking streetlighting. Utilizing the recommended FHWA lighting placement, this equates to two street lights per location.		
	Streetlighting Total =	\$ 240,000.00

Highland Avenue Crosswalk

Includes a marked crosswalk along Highland Avenue inclusive of curb extensions, a RRFB system, appropriate pavement markings and advance warning signage.	Highland Ave. Total =	\$ 68,317.50
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Dedham Avenue at Harris Avenue Interim Improvements

Includes crosswalk consolidation, a RRFB system, advance warning signage, and curb reconfiguration.	Highland Ave. Total =	\$ 139,306.50
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TOTAL

\$1,619,200.50



Engineering | Design | Planning | Construction Management

TOOLKIT FOR FUTURE USE

PEDESTRIAN CROSSING DESIGN GUIDANCE



PAVEMENT MARKINGS



SUPPLEMENTAL TRAFFIC CALMING



HAWK SIGNAL



STREET LIGHTING



PEDESTRIAN SIGNAGE



RRFB INSTALLATIONS



ACCESSIBILITY



ENFORCEMENT & EDUCATION

QUESTIONS & DISCUSSION



GPI

Many Talents One Firm



GPI Engineering | Design | Planning | Construction Management



TOWN OF NEEDHAM

**TOWN HALL
1471 Highland Avenue
Needham, MA 02492-2669**

***Office of the*
SELECT BOARD**

**TEL: (781) 455-7500
FAX: (781) 449-4569
TDD: (781) 455-7558**

Select Board Notice of Public Hearing Pedestrian Safety Audit

The Town of Needham commissioned a pedestrian safety audit in 2018 to identify high risk pedestrian crossing locations in Needham, provide recommendations for potential pedestrian crossing improvements, and develop an implementation plan for future planning, design and construction.

The Select Board has invited the Department of Public Works and representatives from the engineering firm of Greenman-Pedersen, Inc. (GPI) to provide a report on the findings of the audit at 7:30 p.m. on Tuesday, November 12, 2019 in Powers Hall, Needham Town Hall. The report is available at NeedhamMA.gov/pedsafety. The findings of this report will help the Town address critical pedestrian safety issues throughout Needham.

The Board invites all residents and interested parties to attend and provide input regarding this subject. Written comments may also be submitted to the Select Board, c/o Needham Town Hall, 1471 Highland Avenue, Needham, MA 02492 or by email to selectboard@needhamma.gov.



**Select Board
TOWN OF NEEDHAM
AGENDA FACT SHEET**

MEETING DATE: 11/12/2019

Agenda Item	Green Communities Designation
Presenter(s)	Kate Fitzpatrick, Town Manager

1.	BRIEF DESCRIPTION OF TOPIC TO BE DISCUSSED
	The Select Board held a public hearing on October 16, 2019 to receive public input as to whether the Town should see Green Communities Designation. The Town Manager will recommend that the Select Board adopt the Energy Reduction Plan and Fuel-Efficient Vehicle Policy (SB-ADMIN.006) and to submit an application for Green Communities Designation.
2.	VOTE REQUIRED BY SELECT BOARD
	<i>Suggested Motion:</i> That the Board vote to adopt the Energy Reduction Plan and Fuel-Efficient Vehicle Policy and to submit an application for Green Communities Designation.
3.	BACK UP INFORMATION ATTACHED
	a. Fuel-Efficient Vehicle Policy b. Energy Reduction Plan

Select Board of Needham

Policy Number:	SB – ADMIN.006
Policy:	Fuel Efficient Vehicle Policy
Date Approved/Select Board:	November 12, 2019
Date Approved/School Committee:	November 5, 2019

1. INTRODUCTION

The Select Board of Needham and the Needham School Committee have approved the following fuel-efficient vehicle policy to govern the replacement of all non-exempt municipal vehicles with fuel-efficient vehicles, as defined below.

2. POLICY STATEMENT

To reduce the Town of Needham's fuel consumption and energy costs, the Select Board and the School Committee adopt a policy to purchase only fuel-efficient vehicles to meet this goal, except as expressly set forth below.

3. APPLICABILITY

This policy applies to all divisions and departments of the Town of Needham.

4. DEFINITIONS

Combined City and Highway MPG (EPA Combined fuel economy) – Combined Fuel Economy means the fuel economy from driving a combination of 43 percent city and 57 percent highway miles and is calculated as follows:

$$\text{Combined City and highway MPG} = \frac{1}{\left(\frac{0.43}{\text{CityMPG}}\right) + \left(\frac{0.57}{\text{HighwayMPG}}\right)}$$

Drive System – The manner in which mechanical power is directly transmitted from the drive shaft to the wheels. The following codes are used in the drive field:

- AWD: All Wheel Drive: four-wheel drive automatically controlled by the vehicle power train system
- 4WD: 4 Wheel Drive: driver selectable four-wheel drive with 2-wheel drive option
- 2WD: 2-wheel Drive.

Heavy-Duty Vehicle – A heavy-duty vehicle is defined as a vehicle with a manufacturer's gross vehicle weight rating (GVWR) of more than 8,500 pounds.

5. GUIDELINES

- 5.1 All departments/divisions will purchase the most fuel-efficient vehicles for municipal use (including police, fire and highway) whenever such vehicles are commercially available and practicable.
- 5.2 The Town of Needham will maintain an annual vehicle inventory for all vehicles and a plan for replacing any non-exempt vehicles that meet, at a minimum, the fuel efficiency ratings contained in the most recent guidance for Criterion 4 published by the MA Department of Energy Resources' Green Communities Division. The fuel efficiency ratings contained therein are based on the most recently published US Environmental Protection Agency combined city and highway MPG ratings for vehicles.
- 5.3 It is the responsibility of the Town of Needham to check the Green Communities Division's Guidance for Criterion 4 for updates prior to ordering replacement vehicles.

5.4 Exemptions

- Heavy-duty vehicles such as school busses, fire trucks, ambulances, and heavy-duty trucks
- Motorcycles
- Passenger and cargo vans
- Police cruisers

The Town of Needham commits to purchasing fuel-efficient cruisers, passenger vans and cargo vans when they become commercially available and practicable. Police and Fire Department administrative vehicles must meet fuel-efficient requirements.

- 5.5 **Inventory** An inventory of all Town vehicles is contained in Attachment A and shall be updated on an annual basis.

6. FUEL EFFICIENT VEHICLE REPLACEMENT PLAN

- 6.1 All non-exempt vehicles shall be replaced with fuel-efficient vehicles that meet the fuel efficiency ratings outlined in the Policy.
- 6.2 Vehicles shall be replaced when they are no longer operable and will not be recycled from one municipal department to another unless the recycled replacement vehicle meets the fuel efficiency ratings outlined in the Policy.
- 6.3 When an exempt vehicle is replaced, the function of the vehicle will be reviewed for potential replacement with a more fuel-efficient vehicle, including a fuel-efficient non-exempt vehicle.
- 6.4 The Town of Needham will review the Vehicle Inventory and the Green Communities Criterion 4 Guidance on an annual basis to review new acquisitions during the capital planning process.

7. QUESTIONS AND ENFORCEMENT

All inquiries should be directed to the department/division responsible for fleet management and/or fleet procurement. This Fuel-efficient Vehicle Policy will be enforced by the Town Manager/designee.

SECTION 1. CRITERION 3: ENERGY REDUCTION PLAN ("ERP")

1.1 DOER Requirement

Criterion 3 requires municipality (including both the general government and school district) to accomplish the following:

- I. Establish an Energy Use Baseline
- II. Develop and implement a comprehensive program designed to reduce this baseline by 20% within the 5-year period following the Baseline Year

1.2 Town Compliance

a) Purpose and Acknowledgements

- I. Letters from both General Government and School Department verifying adoption of the ERP.
 - i. Please refer to Needham-CR3-Attachment 1 – Needham Select Board ERP Adoption.
 - ii. Please refer to Needham-CR3-Attachment 2 – Needham School Committee ERP Adoption.

II. List of Contributors that Participated in the Baseline and ERP Process

The Town acknowledges the following individuals that participated in the development of the Energy Use Baseline and the ERP Process:

- i. Kate Fitzpatrick, Town Manager
- ii. Carys Lustig, Director of Finance and Administration for Public Services
- iii. Cecilia Simchak, Acting Director of Finance and Administration for Public Services
- iv. Barry Dulong, Director of Building Maintenance
- v. Nick Hill, Hill Energy Services
- vi. Beth Greenblatt, Beacon Integrated Solutions

b) Executive Summary

I. Narrative Summary of the Town

The Town of Needham is located on rocky uplands within a loop of the Charles River in Eastern Massachusetts. The Town is bordered by Wellesley on the west and northwest, Newton on the north and northeast, the West Roxbury section of Boston on the east, Dedham on the southeast and south, and Westwood and Dover on the south. Needham is

ten miles southwest of Boston, twenty-nine miles east of Worcester, and about 208 miles from New York City. Needham is situated in the greater Boston area, which has excellent rail, air, and highway facilities. Principal highways are State Routes 128 (the inner belt around Boston) and 135, and Interstate Route 95, which shares the same roadway as State Route 128. Commuter rail service is available via four stations to Back Bay Station and South Station in Boston. Needham is a member of the Massachusetts Bay Transportation Authority (MBTA), which provides fixed bus route service between Needham Junction and Watertown Square.

The Town provides full-service police, fire and emergency medical services. It operates its own water treatment and distribution system and provides sewer services through the Massachusetts Water Resources Authority. Other services include a Free Public Library, aging services located at the Center at the Heights, Youth and Family Services, Public Health, Public Works including Building Maintenance, Highway, Parks and Forestry, Engineering, Recycling and Solid Waste (including the recycling and transfer station), Administration, Fleet and Park and Recreation programming and pools at the Rosemary Recreation Complex. The School Department operates five elementary schools, two middle schools, and a high school educating approximately 5,800 students.

Needham at a Glance

Name:	Town of Needham
Incorporated:	1711
Total Area:	12.61
Elevation:	The low elevation is 68 feet above sea level and the high is 298 feet above sea level.
Road Miles:	138
County:	Norfolk
Population:	28,886 (2010 census)
Form of Government:	Representative Town Meeting
School Structure:	K-12
FY2019 Tax Rate:	\$12.39 Residential \$24.42 Commercial
FY2019 Avg. Single Family Home Value:	\$920,256
FY2019 Avg. Single Family Home Tax Bill:	\$11,402
Coordinates:	42° 16' 52" N 71° 14' 11" W

The Town is home to a St. Joseph Elementary School, Monsignor Haddad Middle School, St. Sebastian's Day School, and Olin College of Engineering. The Beth Israel Deaconess Hospital Needham has a strong presence in Needham Center. The Town has a thriving commercial sector along Route 128 including TripAdvisor, Shark Ninja, NBC Universal, WCVB Channel 5, and many others.

II. Commitment to Energy Savings and Management and Renewable Energy

The Town takes a comprehensive approach to energy management. A few examples include:

- Energy Audit of 10 municipal buildings leading to \$467,370 investment in energy reduction over the past 7 years.
- Geo-thermal heating system at the Public Services Administration Building
- LEED certified Library and Sunita Williams Elementary School
- Pilot program of electric vehicles
- Installation of electric vehicle charging stations
- Inclusion of hybrid vehicles in the fleet
- Installation of 155.1 kW DC photovoltaic array on Sunita Williams School installed behind-the-meter
- Construction of 3,593 kW DC Photovoltaic array at the closed landfill generating approximately 4,771,000 kilowatt-hours per year
- Conversion of streetlights from mercury vapor to high pressure sodium (Note: LED conversions substantially complete)
- Participant in the Bike Share program

III. Community Supported Energy Savings and Renewable Energy Programs

In 2014, the Town sponsored Solarize Needham, resulting in ninety-nine residential solar installations. There are currently over 400 residential solar arrays in Needham. During the Fall of 2019, Needham launched Solarize Needham Plus which encourages and facilitates with homeowners the opportunities and benefits of solar photovoltaic installations, promotes the adoption of electric vehicles purchases and offers cost-effective air-source heat pump technologies for home heating and cooling solutions. The Town is currently partnering with Eversource on a residential weatherization and insulation program.

IV. Summary of Municipal Energy Uses

- i. The Town is served by Eversource Energy for both electricity and natural gas delivery. While the Town mainly relies on natural gas for space heating, the Hillside Elementary School also uses heating oil for space heating. The Town further uses both gasoline and ultra-low sulfur diesel for vehicle use.
- ii. Two solar photovoltaic arrays have been installed in the Town. The largest is at the capped landfill, which serves as a fully net metered facility. The second solar photovoltaic array is owned by the Town and directly provides solar generated electricity in a behind-the-meter installation.

The following table presents the Summary of Needham's Energy Uses:

Table 1: Summary of Municipal Energy Users

CATEGORY	TYPE	QUANTITY	OWNERSHIP
Buildings	Natural Gas Heat	5	Town
	Natural Gas Heat	7	Schools
	Fuel Oil Heat	2	Schools
	Electric Heat	1	Town
	Geothermal	1	Town
Vehicles	Exempt	120	Town
	Non-Exempt	37	Town
	Exempt	15	Schools
	Non-Exempt	0	Schools
Streetlights		0	Utility-Owned
		2908	Town
Traffic Signals	Traffic/Hawk/Flashing	25	Town
Water/Sewer	Drinking Water	1	Town
	Pump Stations	11	Town

V. Summary of Energy Use Baseline and Plans for Reductions

Table 2: Summary of Municipal Energy Use Baseline

BASELINE FISCAL YEAR 2018	MMBTU Used in Baseline Year	% of Total MMBTU Baseline Energy Consumption	Projected Planned MMBTU Savings	Savings as % of Total MMBTU Baseline Energy Consumption
Buildings	86,963	76.1%	18,072	20.8%
Vehicles	16,100	14.1%	2,442	2.8%
Street/Traffic Lights	17	0.0%	1,825	2.1%
Water/Sewer	11,137	9.7%	504	0.6%
Open Space	92	0.1%	0	0.0%
TOTAL BASELINE	114,309	100%	22,844	20%

c) Energy Use Baseline Inventory

I. Identification of the Inventory Tool Used

- i. The Town of Needham inventory tool is MassEnergy Insight (MEI).

II. Identification of the Baseline Year and ERP Timeframe

- i. The Town of Needham's Energy Use Baseline Year is fiscal year 2018 (July 2017-June 2018).

III. Municipal Energy Consumption for the Baseline Year

A copy of this table is provided in Excel format in Needham-CR3-Attachment 3 – Needham Baseline Energy Data

Table 3: Annual Municipal Consumption

Please enter "0" for any fuels not used															
Table 3: Annual Municipal Energy Use in Native Units and MMBTU - Fiscal Year 2018															
	Electricity		Natural Gas		#2 Distillate Fuel Oil		Propane		Gasoline		Diesel		Energy		
	kWh	MMBtu	Therms	MMBtu	Gallons	MMBtu	Gallons	MMBtu	Gallons	MMBtu	Gallons	MMBtu	kWh	MMBtu	Therms
Town Buildings	1,942,730	6,629	74,677	7,468	3,959	550	0	0	0	0	0	0	0	0	0
School Buildings	6,771,645	23,105	410,534	41,053	22,450	3,121	0	0	0	0	0	0	0	0	0
Transfer Station	147,613	504	0	0	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL FOR BUILDINGS	8,861,988	30,237	485,211	48,521	26,409	3,671	0	0	0	0	0	0	0	0	0
Drinking Water/Wastewater Treatment Plant	1,909,932	6,517	12,654	1,265	0	0	0	0	0	0	0	0	0	0	0
Pumping in Aggregate	677,639	2,312	10,423	1,042	0	0	0	0	0	0	0	0	0	0	0
Open Space*	123,038	420	7,719	772	0	0	0	0	0	0	0	0	0	0	0
Vehicles in Aggregate	0	0	0	0	0	0	0	0	73,194	9,076	50,535	7,024	0	0	0
Street and Traffic Lights in Aggregate	1,011,532	3,451	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL ENERGY CONSUMPTION	12,584,129	42,937	516,007	51,601	26,409	3,671	0	0	73,194	9,076	50,535	7,024	0	0	0

d) Energy Reduction Plan

I. Narrative

i. Overview of Goals for Years 1-3

With Fiscal Year 2018 as the Town's Baseline Year, the Goals for Years 1-3 are as follows:

Year 1: Fiscal Year 2019:

- Lighting upgrades to LED fixtures in corridors, performance center, auditoriums and media centers.
- Replacing domestic hot water heating system at Broadmeadow Elementary School.
- Replacing the boiler at the Library with a high efficiency boiler.
- Comprehensive street lighting conversion to LEDs (Substantially complete).
- Retro-commissioning.
- Energy efficient motor replacements.
- Variable frequency drive upgrades.
- Utilization of Fleetio, a software program to track vehicle and fuel usage by vehicle and target those higher-use vehicles for reduction.

Year 2-3: Fiscal Years 2020 and 2021:

- Upgrading existing Building Management Software to Struxureware to enable consistent and more comprehensive building and systems control and management. This new software is open architecture, provides a common interface to all users and allows remote monitoring and control of facilities. Additionally, the new software provides alarming features alerting Town staff to system operational problems. The software further supports exception reporting which will allow building maintenance staff to properly maintain required building temperatures and settings designed to increase performance and reduce energy usage.
- Retro-commissioning buildings include studying the existing conditions of the mechanical systems, making a comparison to original design specifications, calculating the difference in performance, and making necessary corrections to return the systems to its original design specifications.
- Comprehensive energy audit on the Charles River Water Treatment Plant to identify energy specific improvements to be made in a building with constant use.
- Replacing the boiler at the DPW garage with high efficiency boiler.

- Conducting a facility assessment for sustainable building management at various Schools will focus on the entire building structure and will recommend additional energy efficiency improvements.
- Replacing diesel mid-size trucks with gasoline trucks.
- LED Streetlighting optimization. The Town has the ability to automatically dim the lights throughout Town. The dimming schedule can be based on time, season, events, or can be a manual change. This allows more control over the amount of energy being used during non-peak hours.
- In addition to the project listed above, the Town will continue to monitor energy consumption and work on behavioral changes to decrease usage. Space temperatures are closely monitored for optimal conditions. Setbacks are designed to decrease cooling and heating needs when buildings are unoccupied by increasing or decreasing temperature setpoints.
- Preventative maintenance will be re-evaluated to improve the efficiency of the mechanical equipment.

ii. Overview of Goals for Years 4-5

- As presented in Needham-CR3-ERP DOER Table 4, the Town has many anticipated projects focused on energy efficiency upgrades, including but not limited to: upgrading classroom lighting to LED, retro-commissioning High Rock Elementary School and Needham High School, conducting a study on potential energy upgrades in buildings throughout Town, replacing the roof and windows at the Emery Grover, replacing the boiler at the Hillside Elementary School, installing anti-idling technology on vehicles, replacing police cruisers with hybrid vehicles, and removing inflow from the sewer system.
- Conducting a study on energy upgrades for buildings town wide will help plan for additional projects the Town may undertake in the upcoming years to continue its commitment to energy reduction. Continuing to retro-commission additional buildings ensures that the mechanical systems perform more efficiently. Installing anti-idling technology will help decrease fuel usage on vehicles that are used daily.

iii. Identify Areas of Least Efficient/Greatest Waste (MEI-Buildings to Target)

- As shown in the following MEI Graphic, the Town's buildings and facilities presenting the greatest opportunity for energy savings are:
 - Needham High School
 - Newman Elementary School
 - Pollard Middle School
 - Mitchell Elementary School
 - Hillside Elementary School
 - Town Hall

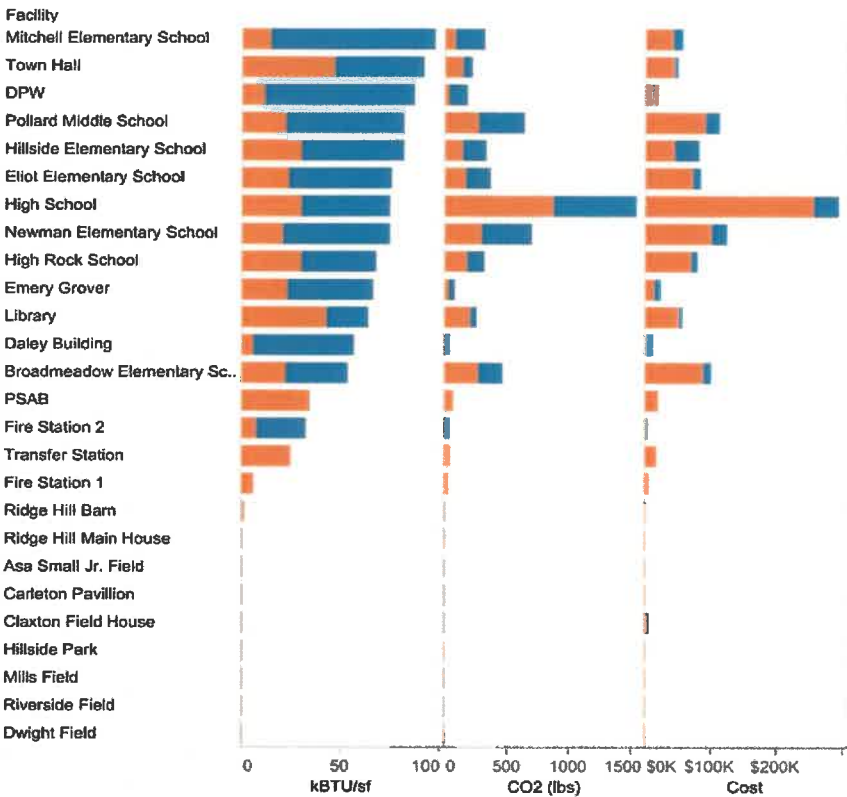
Graphic 1: MEI Buildings to Target

Buildings to Target

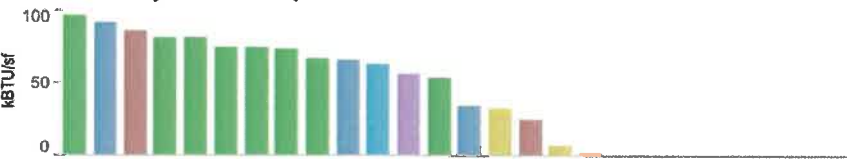
This dashboard compares buildings to one other on an energy use per area metric, measured as kBTU/square foot. In the quadrant chart on the right, buildings with the highest energy compared to other buildings in your portfolio) are in the upper right hand quadrant. Facilities of the types Open Space, Water/Sewer, Street/Traffic Lights, and Vehicles are not display attached to a building are not included in the kBTU/SF calculation.

Building Efficiency, Emissions and Cost

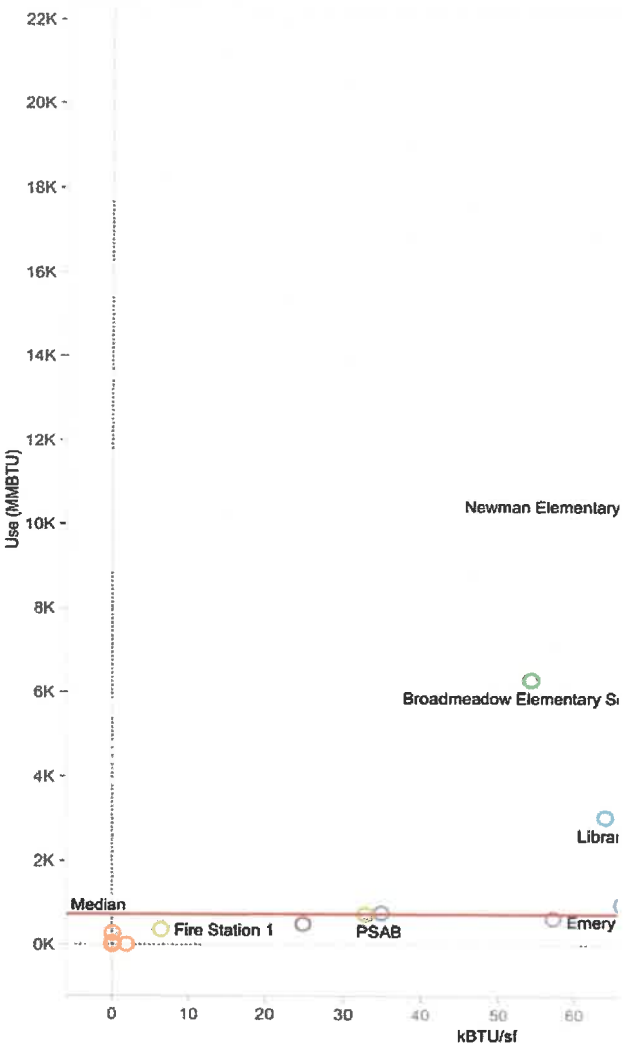
Emissions factors updated 1/4/2012 using Massachusetts-specific greenhouse gas emissions factors.



Select a building name above to see how efficient it is compared to your other buildings. Lower numbers indicate greater efficiency.



Efficiency and Use



II. 20 Percent Energy Reductions:

i. ERP Energy Savings Goals Summary:

A summary of the ERP Goals by ECM category is presented below and has been segmented the data into two categories:

- Calculated energy savings by ECM based on energy audit data, reliable industry data or engineering calculations, and
- Estimated additional savings based on reliable industry data. The Town notes that these estimates are conservative and will be refined at the conclusion of the additional due diligence through the planned audits and studies.

Table 4: Summary of ERP Savings, Costs and Simple Paybacks

CALCULATED ERP SAVINGS					
ENERGY MEASURES	CALCULATED MMBTU SAVINGS	CALCULATED COST SAVINGS	ESTIMATED NET INSTALLED COST **	SIMPLE PAYBACK	PERCENT CONTRIBUTION OF BASELINE CONSUMPTION
Building Control	4,125	\$125,373	\$468,126	3.7	
Exterior Lighting	1,851	\$122,061	\$371,548	3.0	
Hot Water	56	\$990	\$75,049	75.8	
HVAC	2,030	\$69,587	\$876,333	12.6	
Interior Lighting	1,103	\$72,727	\$574,112	7.9	
Retrocommission	7,286	\$260,807	\$646,534	2.5	
Vehicles	663	\$17,931	\$15,000	0.8	
Weatherization	103	\$2,780	\$633,000	227.7	
Comprehensive Audits and Other	2,949	\$123,675	\$9,268	0.1	
SUB-TOTAL	20,165	\$795,932	\$3,668,971	4.6	18%
ADDITIONAL ESTIMATED ERP SAVINGS					
ENERGY MEASURES	ADDITIONAL MMBTU SAVINGS	ADDITIONAL ESTIMATED COST SAVINGS	ESTIMATED NET INSTALLED COST	SIMPLE PAYBACK	PERCENT CONTRIBUTION OF BASELINE CONSUMPTION
Vehicles	1,780	\$44,880	\$70,000	1.6	
Comprehensive Audits	74	\$4,904	\$0	0	
Behavior & Training	824	\$29,483	\$100,000	3.4	
SUB-TOTAL	2,678	\$79,266	\$170,000	2.1	2%
GRAND TOTAL	22,844	\$875,199	\$3,838,971	4.4	20%

** Estimated Net Installed Cost includes a cost offset of \$147,000 for Green Communities Designation grant plus an estimate for utility incentives.

- ii. As shown in the table above, the Town has identified 18 percent calculated energy savings plus an additional estimated 2 percent energy savings. For additional detail, please refer to the provided Excel workbook, Needham-CR3-Attachment 4 – ERP DOER Table 4.

- iii. To achieve the projected 2 percent additional estimated energy savings, the Town will undertake three key efforts:
- Installation of anti-idling technology in its fleet vehicles. These systems are designed to allow vehicles to be parked with equipment operating continuously – radios, warning lights, etc., while minimizing engine idle time and decreasing fuel consumption. The anti-idling technology senses battery condition and turns vehicles on to idle only when necessary. While idling at an emergency or construction scene, a typical police cruiser uses about 0.9 gallons of gasoline per hour. Fuel savings from anti-idling systems vary by vehicle type and usage, though they tend to be greatest for diesel and police vehicles.
 - Conduct comprehensive audits to reduce stormwater Infiltration and Inflow (“SWI/I”) in the existing sewer systems. Infiltration is defined as groundwater or storm water runoff that enters the system through deteriorated pipe or manhole structures that need to be repaired. When sewer flow is reduced, wastewater pumping requirements will also be reduced, thereby reducing energy consumption associated with wastewater pumping.
 - Conduct facility assessments for sustainable building management. It is expected that the assessments will generate recommendations to improve operations and maintenance practices designed to reduce energy consumption and promote best practices for operations.

iv. Program Management Plan for Implementation, Monitoring and Oversight

While the Town utilizes best industry practices and relies on its entire workforce to ensure all investment in physical assets, the following staff will assume lead responsibilities with respect to program management, implementation, monitoring and oversight.

Table 5: Responsibility Matrix

REQUIREMENT	RESPONSIBILITY MATRIX	
	PRIMARY	SECONDARY
Oversight of ERP Implementation	Carys Lustig	Cecilia Simchak
Implementation of ECMs - Town	Barry Dulong	Shift Supervisors
Implementation of ECMs - Schools	Barry Dulong	Shift Supervisors
Implementation of ECMs - WTP	Sean Harrington	Steve Cusick
Annual Green Communities Reporting	Carys Lustig	Cecilia Simchak

v. Identify for each Energy Conservation Measures (ECM”):

Please refer to the provided Needham-CR3-ERP DOER Table 4 Microsoft Excel workbook which includes the following required information:

- Status and projected timeline
- Projected energy savings in native units
- Projected cost savings
- Total cost
- Any utility incentives projected or received
- Any planned use of Green Communities grant funds (if designated)
- Funding source (capital budget, operating budget, debt and type or other grants)
- Source of the calculated energy and cost savings in the reference column

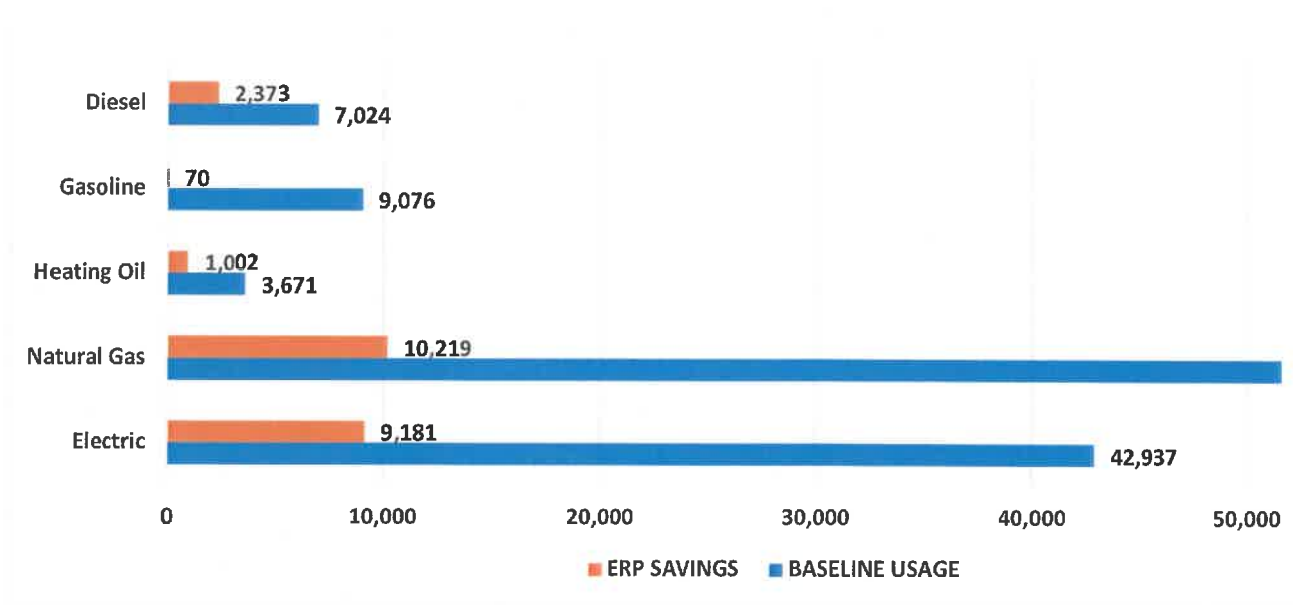
The following Graphics present the ERP as follows:

- Graphic 2: FY2018 Baseline versus Energy Reduction Plan Savings
- Graphic 3: Energy Reduction Plan Goals by ECM Category Percent Contribution
- Graphic 4: Energy Reduction Plan Goals by Energy Type Percent Contribution
- Graphic 5: Energy Reduction Plan Goals by Location Percent Contribution

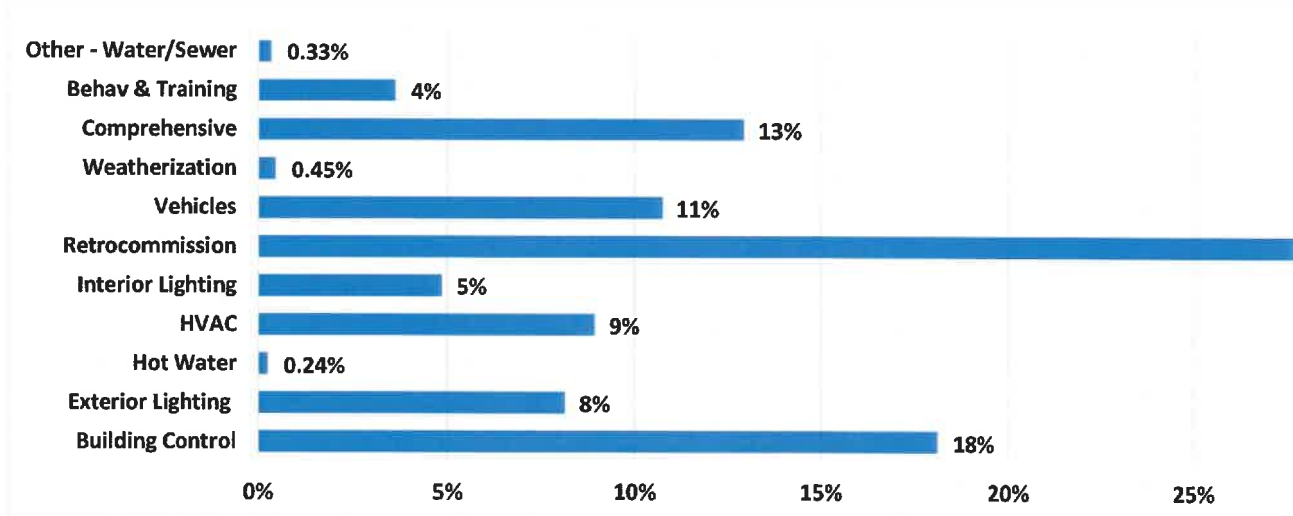
Please refer to the following documentation detailing energy savings reductions methodologies and sources:

- Needham-CR3-Attachment 5 - Energy Savings Reductions: Methodologies and Sources Document.
- Needham-CR3-Attachment 6 – Energy Audit and Other Savings Documentation.

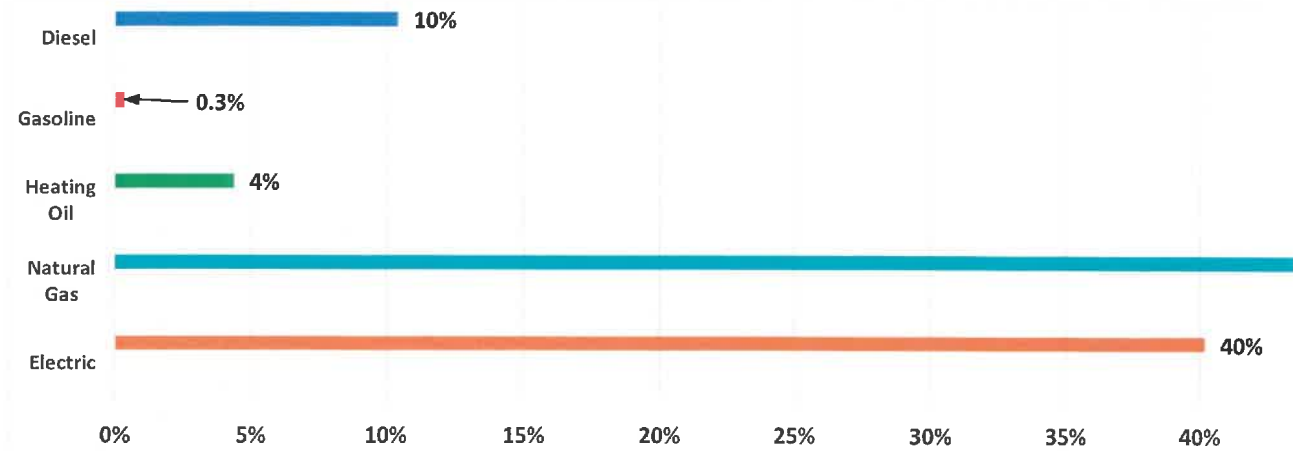
Graphic 2: FY2018 Baseline versus Energy Reduction Plan Savings:



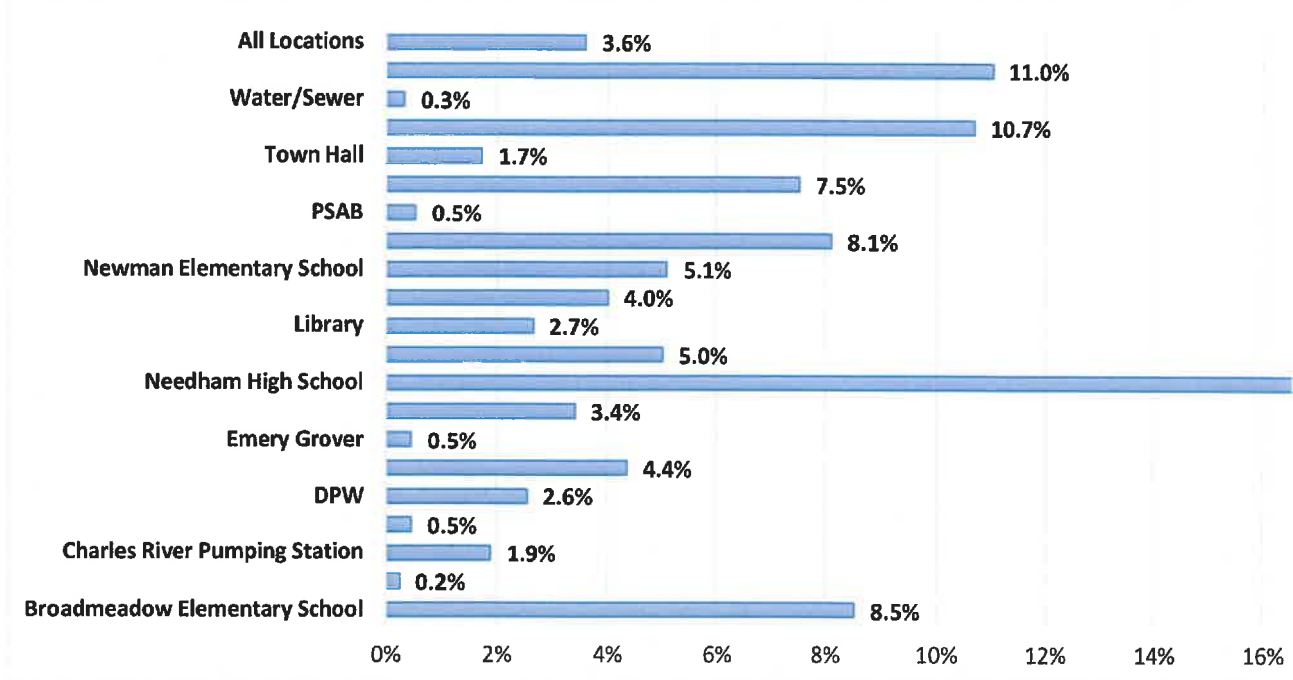
Graphic 3: Energy Reduction Plan Goals by ECM Category - Percent Contribution of ERP Savings:



Graphic 4: Energy Reduction Plan Goals by Energy Type - Percent Contribution of ERP Savings:



Graphic 5: Energy Reduction Plan Goals by Location - Percent Contribution of ERP Savings:



III. ECMs Occurring Before Green Communities Designation

- i. As noted in Needham-CR3-ERP DOER Table 4, the Town has completed a portion of the energy efficiency and capital upgrade projects presented in its ERP. Please refer to column headed "Status". This achievement is further illustrated in Table 6 below.

Of the total 20 percent MMBTU savings of Baseline consumption, the Town expects to realize 2,957 MMBTU savings from energy conservation measures undertaken in fiscal year 2019. These savings represent approximately 13 percent of the overall ERP projected savings.

- ii. The Town is also currently pursuing additional energy conservation measures during this current fiscal year 2020. The Town anticipates an additional 6,599 MMBTU of energy savings resulting from projects in progress. These estimated savings represent approximately 29 percent of the overall ERP projected savings.

Table 6 below provides a summary of completed (in FY 2019), active (in FY 2020) and planned energy conservation/capital improvement projects included in the ERP.

Table 6: Town's Energy Reduction Plan Goals by Achievement Status:

	MMBTU Savings	% Contribution of MMBTU Savings	MMBTU Cost Savings	% Contribution of Cost Savings	Net Installation Cost	% Contribution of Net Installation Cost
Completed	2,957	13%	\$176,572	20%	\$632,510	16%
Active	6,599	29%	\$217,414	25%	\$622,534	16%
Planned	13,287	58%	\$481,213	55%	\$2,583,926	67%
TOTAL	22,844	100%	\$875,199	100%	\$3,838,971	100%

IV. Summary of Long-Term Energy Reduction Goals – Beyond 5 Years

i. Municipal and School Buildings

- The Town will have funded multiple studies during the five-year period post the Fiscal Year 2018 baseline that will help the Building Maintenance Division continue with energy reduction upgrades. These studies will include recommendations for updated technologies and equipment that are more energy efficient.
- The Town has a system in place to continue making energy reduction upgrades for the foreseeable future as noted below. Each year the Town seeks appropriations to fund not only projects to reduce energy consumption, but also to fund studies as needed to evaluate older buildings and systems and replace or repair them to increase their efficiencies.

- Additionally, the Building Maintenance Division plans to request an overall facility assessment on every building as it approaches its 20-year life cycle to determine whether structural and overall improvements can be made to keep the building in use. This process will help maintain healthy buildings longer, reducing the need to major emergency repairs and decrease energy consumption in the process.
- The Town is not only looking to commit to major repairs. Simple behavioral changes can also decrease energy consumption. During the summers, the Town consolidated summer programming into the same buildings to reduce unnecessary use of energy and more efficiently operate fewer buildings. As Needham becomes a Green Community, additional education will be provided to Town employees on simple energy reduction strategies they can use in their offices.

ii. Vehicles

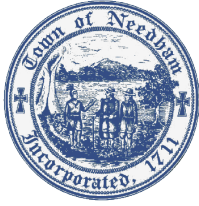
- The Town replaces vehicles on a life cycle basis, as determined by the type of vehicle. Typically, this occurs every seven to twelve years. Energy reduction strategies implemented in the Town's ERP will be continued into the future in order to capture all vehicles in the fleet. As technologies and efficiencies improve, older vehicles will be retired and replaced with newer, more energy efficient vehicles. The Fleet Division has initiated an investigation of available hybrid and electric vehicles for the various types of vehicles used by the Town.

iii. Street and Traffic Lighting

- The Town will continue to analyze energy consumption of street and traffic lighting and adjust based on needs. Upon completion of the effort to systematically and strategically dim streetlights, the Town will support continuous reasonable adjustments to reduce energy consumption while maintaining appropriate streetlighting levels and safety. The Town will evaluate the benefits of replacing traffic signals with more energy efficient models.

iv. Perpetuation Energy Efficiency

- On an annual basis, the Town submits two warrant articles for approval at Town Meeting. Specifically, each year the Town includes an Energy Efficiency Capital Article ("EECA") and a Facility Maintenance Article ("FMA"). These funding sources have enabled the Town to implement comprehensive energy efficiency and infrastructure upgrade improvements since 2006 under the FMA and 2013 under the EECA.



**Select Board
TOWN OF NEEDHAM
AGENDA FACT SHEET**

MEETING DATE: 11/12/2019

Agenda Item	Town Manager's Report
Presenter(s)	Kate Fitzpatrick, Town Manager

1.	BRIEF DESCRIPTION OF TOPIC TO BE DISCUSSED
The Town Manager will update the Board on issues not covered on the agenda.	
2.	VOTE REQUIRED BY SELECT BOARD
3.	BACK UP INFORMATION ATTACHED
none	



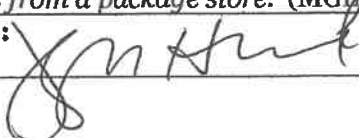
**Select Board
TOWN OF NEEDHAM
AGENDA FACT SHEET**

MEETING DATE: 11/12/2019

Agenda Item	Committee Reports
Presenter(s)	Board Discussion

1.	BRIEF DESCRIPTION OF TOPIC TO BE DISCUSSED
<i>Board members will report on the progress and / or activities of their Committee assignments.</i>	
2.	VOTE REQUIRED BY SELECT BOARD
3.	BACK UP INFORMATION ATTACHED
(Describe backup below)	
None	

ONE DAY SPECIAL LICENSE
TOWN OF NEEDHAM BOARD OF SELECTMEN
EVENT INFORMATION SHEET
(Please complete and attach event flyer or other information.)

Event Manager Name (Name that will appear on license)	Jennifer Howard Schroeder		
Event Manager Address	65 Mt. Vernon Ave., Needham, MA 02492		
Event Manager Phone Number	781.801.0403		
Organization Representing (if applicable)	Needham Human Rights Committee		
Is the organization (if applicable) you are representing non-profit? If so, please attach proof of non-profit status.	☐ Non-profit		☐ For profit
	☐ Proof of non-profit status is attached Form of Proof: _____		
Name of Event	Free At Last Wrongful Convictions		
Date of Event	Friday, November 15, 2019		
License is for Sale of: ☒ Wines & Malt Beverages Only ☐ All Alcoholic Beverages (for non-profit groups only)			
Requested Time for Liquor License	FROM:	6pm	TO: 10pm
Are tickets being sold in advance for this event?	☐ YES \$	/per ticket	☒ NO
Is there an admission fee for this event?	☐ YES \$	/per ticket	☒ NO
Are you using dues collected to purchase alcohol for this event?	☐ YES		☒ NO
How many people are you expecting at this event?	75-100		
Name & address of event location. Please attach proof of permission to use this facility. Center at the Heights, 300 Hillside Ave., Needham, MA 02494			
Who will be serving the alcohol to your guests? Bethanie A. Brann			
Bartenders and/or servers of alcohol, beer and/or wine must have completed in the past three years an appropriate Massachusetts alcoholic beverages server-training program. Please state below who will be serving alcohol, beer and/or wine and attach proof of their training (certificate). Bethanie A. Brann			
Please use the space below to describe the manner in which alcohol will be served to your guests. (For example, will guests be served alcohol or will they need to purchase it from the bar?) Please attach floorplan (can be hand drawn) of the event facility with liquor delivery plan. There will be no charge. Guests will be served individually.			
☒ I understand that the alcohol purchased for this event must be purchased from a licensed wholesaler/importer, manufacturer, farmer-winery, farmer-brewery or special permit holder and that I have received a current list of wholesalers. (A person holding a Section 14 license cannot purchase alcoholic beverages from a package store. (MGL Ch. 138, Sec 14, 23; 204 CMR 7.04))			
Event Manager Signature:			Date: 11/11/19

Proclamation

WHEREAS: On Veterans' Day our Nation comes together to honor our veterans and commemorate their legacy of service and sacrifice; and

WHEREAS: Needham residents have answered the call of duty in every war and expedition in our nation's history to ensure the security of our Country and its ideals; and

WHEREAS: Returning veterans contribute in important ways to the civic life of our Town; and

WHEREAS: Their service, performed with a sense of duty and honor, reflects great credit upon themselves and upon our community;

NOW THEREFORE, The Select Board of the Town of Needham do hereby recognize Monday, November 11, 2019 as Veterans' Day and ask the citizens of the Town to join in appropriate observance of those who have served, preserving the principles of justice, freedom and democracy.

Signed this 12th day of November 2019

John A. Bulian, Chair

Maurice P. Handel, Vice Chair

Matthew D. Borrelli, Clerk

Marianne B. Cooley

Daniel P. Matthews



NEEDHAM



SolarizeNeedham.org

Our Program Partners



BOSTON SOLAR



GREEN
ENERGY
CONSUMERS
ALLIANCE

N.E.T.R. Inc.
HEATING AND COOLING SYSTEMS



Town of Needham
Water Sewer Billing System
Adjustment Form

DEPARTMENT OF PUBLIC WORKS

TO: TOWN TREASURER AND COLLECTOR
cc: TOWN ACCOUNTANT, WATER AND SEWER SUPERINTENDENT

WHEREAS the appropriate divisions of the Department of Public Works have submitted to you the following commitment(s) on the dates listed below for the collection of water, sewer revenue and

WHEREAS certain inadvertent error(s) were made in said commitment(s), it is hereby requested that you abate these particular account(s) in the amount(s) stated below.

Water Sales:	-\$309.15
Water Irrigation:	\$0.00
Water Admin Fees	\$0.00
Sewer Sales:	-\$891.99
Transfer Station Charges:	\$0.00
Total Abatement:	-\$1,201.14

Order #: 1283

Read and Approved:


Assistant Director of Public Works


Director of Public Works

For the Select Board

11/12/19

**Town of Needham
Water Sewer Billing System
Adjustment Form**

Prepared By:	Last Name	First Name	Customer ID#	Location ID#	Street Number	Street Name	Irrigation Water	Domestic Water	Sewer	Total	Reason	Corrected Last Read Y/N
JO	Council on Aging (3)						\$0.00	-\$309.15	-\$891.99	-\$1,201.14	COA	N

Total: -\$1,201.14

ALSO, LET THIS SERVE AS AUTHORIZATION TO ABATE ANY PENALTY OR INTEREST WHICH HAS ACCRUED DUE TO THE NON-PAYMENT OF AMOUNTS AS STATED ABOVE.

Legend:

O.I. = O.I. reading slower than inside meter causing large bill when inside meter is read.

TWN = Town Project caused damage to private property

EC = Extenuating Circumstances

Equip = Equipment Malfunction

UEW = Unexplained water loss

ACC = Accidental Water Loss

BP = Billing Period beyond 100 days

COA - Council on Aging