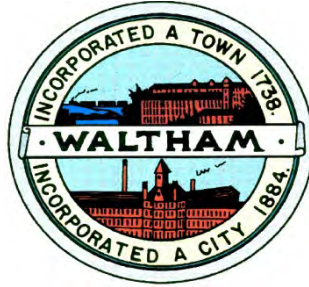


The City of Waltham



**Invites
Interested Parties
To propose the best offer and or bid
For the service or product herewith described:**

DESIGN, WALTHAM COMPONENT OF THE WAYSIDE TRAIL.

The bid opening will be held: 10:00AM Friday April 21, 2017

Pre-bid Meeting and Site Visit: 10:00AM Thursday April 13, 2017

(Meet at in the Purchasing Office, 610 Main Street Waltham)

Last Day for Written Questions: 12 Noon Friday April 14, 2017

Via E-Mail Only to jpedulla@city.waltham.ma.us

Phone: 781-314-3244, Fax: 781-314-3245

CITY OF WALTHAM

REQUEST FOR PROFESSIONAL SERVICES “WALTHAM COMPONENT OF THE WAYSIDE TRAIL”

The City of Waltham requests Design Services Proposals from experienced and qualified design and engineering firms to design and prepare construction documents for the Waltham component of the Wayside Trail which extends from the Weston line to the Watertown/Belmont line.

The City of Waltham acknowledges that the State Department of Conservation and Recreation (DCR) and State Department of Transportation (DOT) have the property rights to the Trail Rail within the Waltham limits. Neither DCR nor DOT have identified a funding source for either the design or construction. In order to advance the project (Wayside Trail within Waltham limits) we look to cooperate with DCR and DOT to have the Wayside Trail within Waltham limits surveyed and designed. However, since the City is appropriating the funds for the design of the project (not DCR and/or DOT) the City reserves any and all of its right to approve any final design and approve any money to effectuate the design.

Proposals will be received at the Office of the Purchasing Agent, 610 Main Street, Waltham, MA 02452, **until 10:00 AM, Friday April 21, 2017.**

A Pre bid meeting will be held: **10:00 AM Thursday April 13, 2017.** *(Meet in the purchasing Department, 610 Main Street, Waltham)*

Six (6) copies of the Design Services Proposals shall be submitted in sealed envelopes with Proposer’s name and clearly labeled “Design Services Proposals for Waltham component of the Wayside Trail.”

The Proposals will be evaluated base upon price. Draft contract attached.

All designs must meet ADA requirements and industry standards for rail trails or recreational facilities. The designer must work closely with City departments including the City’s Purchasing Agent, Engineering/Water/Sewer, Wires, CPW, Traffic and Recreation Departments and with the Wayside Trail Review Committee (WTRC) comprised of a DCR representative, Mayor and or the Mayor’s Designee, a Member of the City Council, Planning Director and a member of the waltham land Trust Commission

All proposals must comply with Chapter 30B of Massachusetts General Laws. All proposals are subject to funding. The City reserves the right to accept or reject any or all proposals and to make awards as it determines to be in the best interest of the City.

Any questions pertaining to this Request for Proposal are to be directed to Joseph Pedulla, MCPPO, CPM, Purchasing Agent, City of Waltham, City Hall, 610 Main St., Waltham, MA 02452, Tel. 781-314-3244, Email: ipedulla@city.waltham.ma.us.

I. INTRODUCTION

DCR conducted a Phase I Environmental Site Assessment of the Mass Central Rail Trail – Wayside Branch from Berlin to Waltham in 2009, including a soil sample program.

DCR submitted an Expanded Environmental Notification Form (EENF) to MEPA in 2013.

DCR received a Waiver in 2014 (Exhibit A attached hereto and incorporated herein by reference.)

See also Central Massachusetts Rail Trail Feasibility Study 1997 attached hereto. (Exhibit B)

Waltham component includes: 3 Bridges (128/95, Lyman Brook and Linden Street) and 9 at grade crossings.

Base bid will be Design of Section in Waltham and crossings from the Watertown/Belmont Line to (Excluding the Rt. 117 Bridge over Rt. 128), Stow, Main, Hillside Road, Prospect Hill Road, Hammond, Bacon, Lexington, Lyman and Linden Streets.

Alternative bid will be design of the bridge rehabilitation. (Exhibit C) (Excluding the Rt. 117 Bridge over Rt. 128)

A PORTION OF THE TRAIL AT 1265 MAIN STREET was completed by 1265 Main Street, LLC as part of its Phase I Project. Crossing of the 128 bridge is subject to EEA# 13952 (Exhibit A) (See attached Assessors and GIS maps. Exhibits D & E)

II. SCOPE OF SERVICES

A. DCR has a lease with the MBTA along the Right-of-Way (ROW) that allows it to construct, manage and maintain a rail trail within a 19-foot corridor (Exhibit A). The City desires to collaborate with DCR on this portion of the ROW that extends through the City of Waltham.

The former Mass Central ROW connects residential, educational, commercial and recreational land uses with an off-road, paved multi-use path, and is part of the Commonwealth's Bay State Greenway Vision and Mass Central Corridor.

B. The scope of work will include:

Task 1: Registered Land Survey and Mapping. The successful bidder will be responsible for obtaining a survey by a registered land surveyor for the entire Waltham component from the Weston line to Watertown/Belmont line. DCR has some existing survey information as part of its MEPA filing. Mass DOT's design standards must be met. Printed mylars with the registered land surveyor's seal and signature are required in addition to the survey files.

Task 2: Public Engagement Plan and Preliminary Design

The designer will be required to prepare preliminary designs to improve the identified former rail trail below, including cost estimates. Preliminary plans must be submitted, for review, by the Planning Dept., other City Officials, the Wayside Trail Review Committee (WTRC) and presented to the public for community input. After such meetings, final design can be developed including final cost estimates. Preliminary plan concepts should be presented graphically for discussion and interpretation purposes. The use of sketches and photographs is helpful when presenting to city officials and the general public.

The designer's plans must include the following improvements/replacements to the items listed below:

- Multi-use path for recreational activities including, but not limited to, walking, running, biking, etc.
- Design/engineering for multiple street crossings, including, but not limited to, those at Hillside Road, Prospect Hill Road, Hammond Street, Bacon Street, Lexington Street, Lyman Street and Linden Street.
- Landscaping and site amenities.
- Bicycle racks.
- Emergency phones.

The successful bidder will be required:

- To have multiple meetings with the City of Waltham Planning Dept. and the WTRC.
- To consult various Waltham Boards/Commissions/Departments including, but not limited to, Waltham Historical Commission, Traffic Commission, Consolidated Public Works, Engineering Department and Conservation Commission, prior to any filings.
- To have 2 City meetings with various neighbors/citizens/abutters.
- To design in accordance with the MA DEP best management practices for controlling exposure to soil during the development of Rail Trails.
- Work with DOT and DCR on design within Waltham. Prepare and identify all filings necessary with all local, state and federal governments.

Task 3: Construction Drawings/Specifications/Final Cost Estimates

Upon approval by the City of Waltham, the designer shall prepare construction documents including working drawings, technical specifications, bid documents, and a final cost

estimate. The drawings shall be stamped by the required professionals. The Designer shall provide the City with a set of stamped mylars, reproducible specifications, and electronic files of drawings and specifications. A duplicate set of electronic files must be submitted to the City's Engineering Department. The cost of (6) sets of plans and specifications should be included in this task figure amount.

Task 4: Regulatory Permits and Approvals

The designer shall be responsible for identifying, preparing and filing all necessary permits and preparing and obtaining approvals from local, state and federal governments, regulatory agencies boards and commissions. The designer shall revise and/or clarify drawings necessitated by changes that arise in the field and are required to complete the construction. The designer shall review all submittals/shop drawings and invoices plus the final inspection, punch list and recommendations on final acceptance of the project.

Task 5. Bid Procedure

The designer shall attend a pre-construction bid meeting with all GCs to answer any questions, assist with issuing any and all addendum(s) as necessary to clarify the project scope or bid documents. The designer will assist the City in identifying and accepting the responsible low bidder by checking references and bid for math accuracy.

III. QUALIFICATIONS

Qualified Professional Design and Engineering Firm.

IV. REQUIRED SUBMISSION

1. Proposals must be submitted by **10 AM April 21, 2017**. The City will select a designer within (30) days.
2. Proposals shall be submitted to: Joseph Pedulla, Purchasing Agent, City of Waltham, City Hall, 610 Main St., Waltham, MA 02452.
3. Proposals submitted should include the following information for final reviews:
 - i. Scope of Services: A brief summary of the work to be performed for each of the tasks identified in the scope of work.
 - ii. Time Line for the Project: The timeline must provide the estimated number of weeks that each task identified in the scope of work is expected to take. The timeline must also provide an estimated schedule for bidding and construction.

- iii. Cost for Services: Use the attached form to submit your costs by task and project total. Any reimbursable expenses must be included in your task cost. Reimbursable expenses will NOT be billed above and beyond each task cost.
 - iv. Information on Project Manager, Team Members, and Firm:
Proposals must include resumes of the project manager, and team members identifying each participant's role and responsibilities to the project with examples of relevant project experiences of the individuals and firm.
- 4. Professional liability insurance in the amount of \$2,000,000.00 worker's comp and automobile insurance.
 - 5. Name, address and contact information of all MA governmental units to which the Proposer has provided similar consulting.
 - 6. The name, address, contact person's name and telephone number of all private sector clients to which the proposer has provided similar design consulting services and a brief synopsis of the services provided, including contract dates.
 - 7. Resumes of key personnel who will be interacting with the City including a statement of professional experience, qualifications and education together with a report of specific experience related to the scope of services.
 - 8. A Plan of Services detailing specifically how the proposer will complete the scope of work.
 - 9. A completed Certificate of Non-Collusion.
 - 10. A complete Certificate of Tax Compliance.

Questions regarding this Request for Professional Services should be directed to Joseph Pedulla, Purchasing Agent via e-mail only at jp pedulla@city.waltham.ma.us

Design – Waltham Component of the Wayside Trail

PRICE SHEET

Scope of Work	# of Hours	Task Cost
Task 1 – Registered Survey and Mapping	-----	-----
Task 2 – Preliminary Design/ Cost Estimates	-----	-----
Task 3 – Construction Drawings/ Specifications/Final Cost Estimates	-----	-----
Task 4 – Regulatory Permitting and Approvals. <i>Prepare and obtain all necessary filings to Implement the design within Waltham's Limits</i>	-----	-----
Task 5 – Bid Procedures <i>Limited to reviewing bids, checking references, making recommendation for award, answer Questions and attend a Pre-bid meeting.</i>	-----	-----
Project Total: hrs.	<u> </u>	<u> </u> \$
Alternative 1. <i>Design of the Bridge rehabilitation. (Exhibit C) Exclusive of the Rt. 117 Bridge</i>	<u> </u>	<u> </u>

Company: ----- Date: -----

My Company Acknowledges Receipt of Addendum #: ____, ____, ____, ____, ____.

Please Note. The calculation to determine the low cost bidder is determined by the lowest hourly rate by dividing the total cost into the number of hours (*total cost/total hours*)

**AGREEMENT
CITY OF WALTHAM**

ARTICLE 1. This agreement, made this _____ day of _____, 2017 by and between the CITY OF WALTHAM, party of the first part, hereinafter called the CITY, by its MAYOR, and

hereinafter called the CONTRACTOR.

ARTICLE 2. Witnesseth, that the parties to this agreement, each in consideration of the agreement on the part of the others herein contained, do hereby agree, the CITY OF WALTHAM for itself, and said contractor for his heirs, executors, administrators and assigns as follows:

To furnish all equipment, machinery, tools and labor, to furnish and deliver all materials required to be furnished (except as otherwise specified) and deliver in and about the project and to do and perform all work in strict conformity with the provisions of this Contract and of the Notice to Bidders, bid, Project Manual, and Drawings hereto annexed. The said Notice to Bidders, bid, Project Manual, and Drawings are hereby made a part of this contract as fully and to the same effect as if the same had been set forth at length and incorporated in the contracts.

ARTICLE 3. In consideration of the foregoing premises the CITY agrees to pay and the CONTRACTOR agrees to receive as full compensation for everything furnished and done by the CONTRACTOR under this contract, including all work required by not included in the items herein mentioned, and also for all loss or damage arising out of the nature of the work aforesaid, or from the action of the elements, or from any unforeseen obstruction or difficulty encountered in the prosecution of the work, and for all expenses incurred by or in consequence of the suspension or discontinuance of the work specified, and for well and faithfully completing the work, and the whole thereof, as herein provided, such prices as are set forth in the accompanying bid.

This Agreement entered into as of the day and year first written above.

COMPLIANCE FORMS

(PLEASE COMPLETE AND SUBMIT THESE FORMS WITH YOUR RESPONSE)

NON-COLLUSION FORM AND TAX COMPLIANCE FORM

CERTIFICATE OF NON-COLLUSION

The undersigned certifies under penalties of perjury that this bid or proposal has been made and submitted in good faith and without collusion or fraud with any other person. As used in this certification, the word “person” shall mean any natural person, business, partnership, corporation, union, committee, club, or other organization, entity or group of individuals. The undersigned certifies that no representations made by any City officials, employees, entity, or group of individuals other than the Purchasing Agent of the City of Waltham was relied upon in the making of this bid

_____, _____
(Signature of person signing bid or proposal) Date

(Name of business)

TAX COMPLIANCE CERTIFICATION

Pursuant to M.G.L. c. 62C, & 49A, I certify under the penalties of perjury that, to the best of my knowledge and belief, I am in compliance with all laws of the Commonwealth relating to taxes, reporting of employees and contractors, and withholding and remitting child support.

_____, _____
Signature of person submitting bid or proposal Date

Name of business

NOTE

Failure to submit any of the required documents, in this or in other sections, with your bid response package may cause the disqualification of your proposal.

CERTIFICATE OF VOTE AUTHORIZATION

Date:

I _____, Clerk of _____ hereby certify that at a meeting of the Board of Directors of said Corporation duly held on the _____ day of _____ at which time a quorum was present and voting throughout, the following vote was duly passed and is now in full force and effect:

VOTED: That _____ (*name*) is hereby, authorized, directed and empowered for the name and on behalf of this Corporation to sign, seal with the corporate seal, execute, acknowledge and deliver all contracts and other obligations of this Corporation; the execution of any such contract to be valid and binding upon this Corporation for all purposes, and that this vote shall remain in full force and effect unless and until the same has been altered, amended or revoked by a subsequent vote of such directors and a certificate of such later vote attested by the Clerk of this Corporation.

I further certify that _____ is duly elected/appointed _____ of said Corporation whose signature appears below as an officer

Signature of Officer

SIGNED:

Clerk of the Corporation: (Corporate Seal)

Print Name: _____

COMMONWEALTH OF MASSACHUSETTS

County of _____

Date:

Then personally appeared the above named and acknowledged the foregoing instrument to be his/her free act and deed before me, and provided to me through satisfactory evidence of identification which were _____ to be the person whose name is signed on the preceding or attached document in my presence.

Notary Public;

My Commission expires: _____

CORPORATION IDENTIFICATION

The bidder for the information of the Awarding Authority furnishes the following information.

If a Corporation:

Incorporated in what state _____

President _____

Treasurer _____

Secretary _____

Federal ID Number _____

If a foreign (out of State) Corporation – Are you registered to do business in Massachusetts?

Yes _____, No _____

If you are selected for this work you are required under M.G.L.ch. 30S, 39L to obtain from the Secretary of State, Foreign Corp. Section, State House, Boston, a certificate stating that you Corporation is registered, and furnish said certificate to the Awarding Authority prior to the award.

If a Partnership: (Name all partners)

Name of partner _____

Residence _____

Name of partner _____

Residence _____

If an Individual:

Name _____

Residence _____

If an Individual doing business under a firm's name:

Name of Firm _____

Name of Individual _____

Business Address _____

Residence _____

Date _____

Name of Bidder _____

By _____

Signature _____

Title _____

Business Address _____ (POST OFFICE BOX NUMBER NOT ACCEPTABLE)

City _____ State _____ Telephone Number _____ Today's Date _____

DEBARMENT CERTIFICATION

In connection with this bid and all procurement transactions, by signature thereon, the respondent certifies that neither the company nor its principals are suspended, debarred, proposed for debarment, declared ineligible, or voluntarily excluded from the award of contracts, procurement or non procurement programs from the Commonwealth of Massachusetts, the US Federal Government and /or the City of Waltham. "Principals" means officers, directors, owners, partners and persons having primary interest, management or supervisory responsibilities with the business entity. Vendors shall provide immediate written notification to the Purchasing Agent of the City of Waltham at any time during the period of the contract or prior to the contract award if the vendor learns of any changed condition with regards to the debarment of the company or its officers. This certification is a material representation of fact upon which reliance will be placed when making the business award. If at any time it is determined that the vendor knowingly misrepresented this certification, in addition to other legal remedies available to the City of Waltham, the contract will be cancelled and the award revoked.

Company Name _____

Address _____

City _____, State _____, Zip Code _____

Phone Number (____) _____

E-Mail Address _____

Signed by Authorized Company Representative: _____

_____ Print name. Date _____

**Request for Taxpayer
Identification Number and Certification**

Give Form to the
requester. Do not
send to the IRS.

Print or type
See Specific Instructions on page 2.

Name (as shown on your income tax return)

Business name/disregarded entity name, if different from above

Check appropriate box for federal tax classification:

☐ Individual/sole proprietor ☐ C Corporation ☐ S Corporation ☐ Partnership ☐ Trust/estate

☐ Limited liability company. Enter the tax classification (C=C corporation, S=S corporation, P=partnership) ▶

☐ Other (see instructions) ▶

Address (number, street, and apt. or suite no.)

City, state, and ZIP code

List account number(s) here (optional)

Requester's name and address (optional)
Chief Procurement Officer
Purchasing Department, City of
610 Main
Waltham, MA

☐ Exempt payee

Part I Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. The TIN provided must match the name given on the "Name" line to avoid backup withholding. For individuals, this is your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the Part I instructions on page 3. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN* on page 3.

Note. If the account is in more than one name, see the chart on page 4 for guidelines on whose number to enter.

Social security number

			-			-			
--	--	--	---	--	--	---	--	--	--

Employer identification number

			-						
--	--	--	---	--	--	--	--	--	--

Fill out this
either SS or

Part II Certification

Under penalties of perjury, I certify that:

- The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me), and
- I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding, and
- I am a U.S. citizen or other U.S. person (defined below).

Certification instructions. You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions on page 4.

**Sign
Here**

Signature of
U.S. person ▶

Date ▶

Sign &

General Instructions

Section references are to the Internal Revenue Code unless otherwise noted.

Purpose of Form

A person who is required to file an information return with the IRS must obtain your correct taxpayer identification number (TIN) to report, for example, income paid to you, real estate transactions, mortgage interest you paid, acquisition or abandonment of secured property, cancellation of debt, or contributions you made to an IRA.

Use Form W-9 only if you are a U.S. person (including a resident alien), to provide your correct TIN to the person requesting it (the requester) and, when applicable, to:

- Certify that the TIN you are giving is correct (or you are waiting for a number to be issued),
- Certify that you are not subject to backup withholding, or
- Claim exemption from backup withholding if you are a U.S. exempt payee. If applicable, you are also certifying that as a U.S. person, your allocable share of any partnership income from a U.S. trade or business is not subject to the withholding tax on foreign partners' share of effectively connected income.

Note. If a requester gives you a form other than Form W-9 to request your TIN, you must use the requester's form if it is substantially similar to this Form W-9.

Definition of a U.S. person. For federal tax purposes, you are considered a U.S. person if you are:

- An individual who is a U.S. citizen or U.S. resident alien,
- A partnership, corporation, company, or association created or organized in the United States or under the laws of the United States,
- An estate (other than a foreign estate), or
- A domestic trust (as defined in Regulations section 301.7701-7).

Special rules for partnerships. Partnerships that conduct a trade or business in the United States are generally required to pay a withholding tax on any foreign partners' share of income from such business. Further, in certain cases where a Form W-9 has not been received, a partnership is required to presume that a partner is a foreign person, and pay the withholding tax. Therefore, if you are a U.S. person that is a partner in a partnership conducting a trade or business in the United States, provide Form W-9 to the partnership to establish your U.S. status and avoid withholding on your share of partnership income.

Complete only if your company is an LLC

CERTIFICATE OF AUTHORITY LIMITED LIABILITY COMPANY

The undersigned, being (a/the) duly elected, qualified and active (member / manager) of _____,
a Massachusetts limited Liability Company (hereinafter "the Company")

Does Hereby Certify that

1. The Articles of Organization of the Company were duly filed with the Office of the Secretary of State of the State of Massachusetts on _____, and the Articles of Organization have not been (further) amended.
2. The Company has complied with the publication requirements contained in Section 67 of the Limited Liability Company Law.
3. There exists an Operating Agreement of the Company and that the said Operating Agreement has not been amended or repealed and that the said Operating Agreement remains in full force and effect as of this date.
4. Neither the Articles of Organization nor the Operating Agreement (as amended) require any further act to be taken or a meeting to be held by its members other than as follows:
5. All said requirements, whether as contained in the Articles of Organization or in the Operating Agreement or by operation of law as to the transaction of _____, 20____ have been met.
6. The following person or persons has/have been duly authorized by the Company to execute all documents in connection with said transaction and that the signature appearing to the right of their name(s) is his/her genuine signature.

NAME	OFFICE HELD	SIGNATURE
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

IN Witness Whereof, the undersigned has executed this Certificate of Authority this _____ day of _____, 20____.

(Signature)

STATE OF MASSACHUSETTS, COUNTY OF _____

On the ____ day of _____, 20____, before me, the undersigned personally appeared _____, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name(s) is (are) subscribed to the within instrument and acknowledged to me that he/she/ they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument.

Notary Public: _____

My Commission Expires: _____

Notary Stamp:

CITY OF WALTHAM, MASSACHUSETTS

FOR THE CITY

Jeannette A. McCarthy, MAYOR,
City of Waltham
Date: _____

John B. Cervone, City Solicitor
Date: _____
APPROVED AS TO FORM ONLY

Catherine Cagle, Director, Planning
Date: _____

Joseph Pedulla, Purchasing Agent
Date: _____

Paul Centofanti, Auditor
Date: _____

I CERTIFY THAT SUFFICIENT FUNDS
ARE AVAILABLE FOR THIS CONTRACT

FOR THE COMPANY

CONTRACTOR (Signature),
Date: _____

Company

Address

**Massachusetts
Department of
Conservation and
Recreation (DCR)
Required Information
follows**

Rail Trail

Pedulla, Joseph

From: Jahnige, Paul (DCR) <Paul.Jahnige@MASSMAIL.State.MA.US>
Sent: Friday, October 07, 2016 10:02 AM
To: Pedulla, Joseph
Cc: Driscoll, Dan (DCR)
Subject: City of Waltham's RFP for MCRT-Wayside Design
Attachments: DCR MBTA Lease Mass Central ATC 99 year lease.pdf

Dear Joe;

Please find below comments and suggestions from the Massachusetts Department of Conservation and Recreation's (DCR) Recreational Facilities Planning group concerning the City of Waltham's RFP for Design of the Waltham Component of the Mass Central Rail Trail (MCRT) – Wayside.

As I hope I conveyed earlier, we are thrilled that the City of Waltham seeks to partner with the DCR in designing and developing this multi-use rail trail, and that the City is able to bring financial resources to the table to move our shared goals forward. We certainly look forward to partnering with you in this effort.

We do have several comments and suggestions about the City's RFP as currently written. Below I have discussed a number of items (in no particular order) that we believe should be reviewed or amended, and we look forward to working with you further on this.

Please let me know if you have any questions or if I can provide additional information.

Sincerely, Paul Jahnige
DCR Greenways and Trails

Cc: Dan Driscoll
DCR Recreational Facilities Planning

Nomenclature: As DCR holds the lease to develop the trail on a 23-mile corridor from Waltham to Berlin, we believe it will be valuable to have both consistent design standards, but also consistent name for the trail. We have been using the term “Mass Central Rail Trail (MCRT) – Wayside” as our preferred term, and believe it would be valuable for the RFP to reflect this.

DCR Rights and Partnership: The introduction to the RFP should clearly and accurately describe the MBTA ownership of the corridor and DCR’s rights to develop the multi-use pathway in partnership with the City. I suggest adding:

“The former Central Massachusetts Railroad Right of Way corridor in Waltham between the Belmont town line and the Weston town line is currently owned by the Massachusetts Bay Transit Authority (MBTA), excepting a portion at 1265 Main Street (former Polaroid site). In 2010, the Massachusetts DCR entered into a 99-year agreement with the MBTA to lease the rights to design and construct (including in partnership with municipalities) the Mass Central Rail Trail – Wayside, as a multi-use pathway to serve as an alternative transportation and recreation corridor.”

We believe that it would be valuable to include the MBTA-DCR Lease as an attachment to the RFP (attached).

Design Standards: The RFP should clearly describe DCR’s role in identifying, guiding, reviewing and approving preliminary and final trail design guidelines. It may also be valuable to reference DCR materials that we have posted on line at <http://www.mass.gov/eea/agencies/dcr/conservation/planning-and-resource-protection/projects/mass-central-rail-trail-wayside-branch.html>. Ultimately, our design standards for this multi-use pathway call for a 10-foot wide asphalt multi-use trail with 2-foot shoulders and meet AASHTO and MUTCD standards.

You might also consider whether or not the consultants will be expected to develop design plans to meet the full MassDOT standards for federal funding including full environmental plans and permitting, 25% / 75% / 100% design plan submissions, right-of-way, geo-technical, final bridge designs, full PS&E, etc. We don’t necessarily think the RFP needs to require this, however, if the City hopes to seek MassDOT funding for construction, these standards will likely be necessary.

Signage and Parking Plans: The RFP does not currently include any discussion of parking for the trail or trail signage standards or wayfinding. We believe these would be valuable components to include.

Permitting: Regardless of the design plan standards, the project will require a number of permits that are not currently identified in the RFP, including Wetlands Protection Act Order of Conditions, Mass Historic Commission concurrence, DCR Construction and Access Permit, MBTA concurrence, and potentially additional consultation and permits.

128 / I-95 Crossing: It may be premature to include the design of the trail between the current 1265 Main St development and west side of I-95. This is a complex area and our understanding is that there are various pending plans and proposals for this location, including potential changes to the I-95 crossings here. We expect the trail to be included in these future plans and developments, but it may be inefficient for this design project to address this area.

Clematis / Lyman Brook and Linden Street Bridges: These two bridge will both be in need of repair or replacement, and these could be more complex design and permitting efforts. It might also be helpful to reference DCR’s preliminary “Evaluation of Existing Bridges. MCRT – Wayside.”

Encroachments: There are various encroachments and licenses along the MBTA-owned corridor that could impact the design and construction of the rail trail, including especially at Lexington Street involving the City’s Police and DWP. Will the consultant be expected to identify and work to resolve these encroachments, or will the City work with the MBTA to resolve these separately?

Construction Engineering and Oversight: Given the number of uncertainties over the final design and funding of construction, it may be premature to include construction engineering in this RFP. Perhaps it could be included as an add alternate with a rate schedule.

ALTERNATIVE TRANSPORTATION CORRIDOR LEASE AGREEMENT
BY AND BETWEEN THE
MASSACHUSETTS BAY TRANSPORTATION AUTHORITY
AND
COMMONWEALTH OF MASSACHUSETTS BY AND THROUGH ITS
DEPARTMENT OF CONSERVATION AND RECREATION
DECEMBER 30, 2010

[ONLY FOR RIGHTS-OF-WAY NOT IN ACTIVE USE]

**ALTERNATIVE TRANSPORTATION CORRIDOR
LEASE AGREEMENT BETWEEN
MASSACHUSETTS BAY TRANSPORTATION AUTHORITY
AND
COMMONWEALTH OF MASSACHUSETTS**

This Lease Agreement (hereinafter referred to as the "Lease" or the "Agreement") entered into as of the 30th day of December 2010 by and between the Massachusetts Bay Transportation Authority, a body politic and corporate and a political subdivision of the Commonwealth of Massachusetts, having its usual place of business at Ten Park Plaza, Boston, Massachusetts 02116 (hereinafter referred to as the "MBTA") and the Commonwealth of Massachusetts, acting by through its Department of Conservation and Recreation, having its usual place of business at 251 Causeway Street, Suite 600, Boston, Massachusetts 02114 (hereinafter referred to as the "DCR").

WITNESSETH THAT:

1. Agreement

In consideration of the mutual covenants and agreements herein contained, and subject to appropriation or availability of funds to DCR, the parties hereto agree as follows:

2. Premises

The Premises consist of the parcel or parcels of land described in Exhibit A attached hereto, consisting generally of that certain railroad right of way known as the portion of the Central Massachusetts Branch extending from Waltham to Berlin starting at or about the Belmont/Waltham/Weston town line (Right-of-Way Track Map, Boston and Maine R.R. V-5, 4/30 dated June 30, 1914) running approximately twenty-six miles ending at or about Station 1478+40 in Berlin (Right-of-Way Track Map, Boston and Maine R.R. V-5, 30/30 dated June 30, 1914).

MBTA acquired the portion of the Premises located in Worcester County on or about February 1977 pursuant to an Order of Taking recorded in the Worcester South District Registry of Deeds in Book 6145, Page 377; and the portion of the Premises located in Middlesex County on or about December 1979 pursuant to an Order of Taking recorded in the Middlesex South District Registry of Deeds in Book 13156, Page 34. Under both Orders of Taking, the Boston and Maine Corporation ("B&M") retained freight service rights pursuant to an agreement between the MBTA and Robert W. Meserve and Benjamin H. Lacey, Trustees of the B&M, dated December 27, 1976, and recorded in the Worcester South District Registry of Deeds in Book 6096, Page 140, and in the Middlesex South District Registry of Deeds in Book 13117, Page 113. B&M filed an application in August 1979 for a certificate of public necessity and convenience to permit the abandonment of the line. Following a report from the Interstate Commerce Commission, dated March 26, 1980, recommending approval of B&M's discontinuance application (I.C.C. Docket No. AB-32 (Sub-No. 7F)), approval of discontinuance was

granted by the United States District Court, as found in the Memorandum and Order of Senior District Judge Frank J. Murray, In the Matter of Boston and Maine Corporation, Debtor, No. 70-250-M (D. Mass., Oct. 3, 1980). (A copy attached hereto as Exhibit B). The parties agree that, with that action, B&M no longer retains any right or interest in this line.

Within the Premises there shall exist a contiguous corridor ("Corridor") to be designated by DCR, with the consent of the MBTA, said Corridor shall generally consist of a path that is 15' wide with 2' shoulders on either side. Said corridor shall not interfere in any way with the MBTA's ability to lease, license or otherwise encumber the Premises for revenue purposes consistent with the right of the MBTA's authority detailed in Section 9. *Infra*. The MBTA will notify with DCR of its revenue plans, but any portion of the Corridor so utilized in connection with any third party transactions will continue to provide for continuity of the Rail Trail Corridor and DCR shall work cooperatively with the MBTA and any third party grantees, lessees or licensees for this purpose. The MBTA shall be consulted on the construction of the Corridor and be provided with as-built plans of said Corridor.

3. Use of Premises

Subject to the terms and conditions herein, the MBTA hereby leases the Premises to the DCR for use as follows:

- (a) The Corridor is to be used for purposes of the installation, operation, maintenance and use of a rail-trail as defined M.G.L. C.82 §35A and in the definition of Owner or Operator in M.G.L.C. 21E§2, and as amended from time to time, and as further defined under M.G.L.C.21E§2(d)(1), as a property converted from a former use as a railroad right-of-way to a revitalized use as a publicly owned, improved and maintained corridor for bicycle, pedestrian and other non-motorized public transportation, recreation and associated purposes and
- (b) The remainder of the Premises may further be used by the DCR, subject to MBTA approval, to access, construct and maintain the Corridor and maintain, including landscaping, the Premises, for ancillary uses which provide no revenue or other tangible benefit, for such other uses as MBTA may permit by prior written consent provided however that the MBTA shall maintain the right to utilize the Premises for revenue purposes consistent with the right of the MBTA's authority detailed in Section 9. *infra*. DCR acknowledges the MBTA's right to generate revenue in and on the Premises, but any portion of the Corridor so utilized in connection with any third party transactions will continue to provide for continuity of the Rail Trail Corridor and DCR shall work cooperatively with the MBTA and any third party grantees, lessees or licensees for this purpose. MBTA will notify DCR of its revenue plans in advance as necessary.

Notwithstanding the preceding, this Lease is not intended to transfer land or

easements to create a perpetual right to any use, or a right to use longer than the term of the lease or lesser term if terminated sooner, that may be subject to protection by Article XCVII (97), as amended, of the Amendments to the Constitution of the Commonwealth of Massachusetts or by legislation enacted to pursuant thereto.

The Premises shall be open to the public, and no fee or other consideration shall be charged for use of the Premises.

The DCR will diligently act to secure funds necessary to fulfill its obligations under the Lease for the design, bidding and the construction of the rail-trail project.

DCR also agrees that it will provide its plans for the use of the site sixty (60) days prior to the bidding to the MBTA for its approval, said approval which shall not be unreasonably withheld provided that the use is consistent with paragraph 3(a) and (3(b), above. If the plans for the site are not consistent with paragraph 3(a) and 3(b), above, the MBTA reserves the right, subject to the notice and cure provisions of paragraph 11, to terminate the lease and demand return of the property. Said use shall also comply with the current (as of the commencement of construction) MA DEP Best Management Practices:

The DCR shall be responsible for all costs associated with any soil testing. The MBTA will allow DCR to enter upon the Premises's for testing purposes provided DCR receives a License from the MBTA in the normal course prior to entry on the Premises.

4. Term

The Term of this Lease shall be for a period of ninety-nine (99) years beginning on the date hereof; except that the MBTA may terminate this Lease upon two (2) years' written notice to DCR for the greater public good. DCR acknowledges that that the Premises or a major portion thereof may be necessary for active railroad or other transportation purposes in the future. The MBTA may terminate this Agreement for the greater public good within the meaning of Federal Highway Administration requirements other than the Transportation Enhancement (the defined ATC) and the MBTA will not be required to provide any reimbursement whatsoever for said termination. MBTA does not impose a fee for the lease of this property. Additionally, The MBTA may terminate this Lease with respect to any part of the non-Corridor portion of the Premises with ninety - (90) days written notice for any reason or the balance of the Premises, consistent with the right of the MBTA's authority detailed in Section 9. *infra* and for the uses stated above. The MBTA may continue to utilize the Premises for revenue purposes but any portion of the Corridor so utilized in connection with any third party transactions will continue to provide for continuity of the Rail Trail Corridor and DCR shall work cooperatively with the MBTA and any third party grantees, lessees or licensees for this purpose.

5. Condition of the Premises

The DCR has inspected the Premises, accepts the Premises "as is", and agrees the Premises are suitable for DCR's intended use. The MBTA makes no warranty of any kind, express or implied, as to the condition of the Premises or its suitability for the above uses. The DCR assumes all risk of entry on the Premises for the intended

development and use of the Premises as a Rail Trail, including, but not limited to the presence of oil or hazardous material on the Premises, if any, as defined in M.G.L.C. 21E, as amended from time to time, but in accordance with Best Management Practice of the Department of Environmental Protection. DCR acknowledges that it will avail itself of the M.G.L.c. 21E§5J defense if necessary and appropriate.

6. Terms and Conditions of Lease

This Lease is subject to the following terms and conditions:

6.1 Liability for Personal Injury, Death, and Property Damage

All issues regarding liability for personal injury, death or property damage shall be governed by the provisions of Chapter 258 of the General Laws, as amended. The Parties acknowledge the intention that this Lease, and the recreational activities planned for the general public, are at no charge and are to be subject to the limited liability protections of G.L. c. 21, s. 17C (the, so called, "Recreational Use Statute").

6.2 Remediation Obligation of the DCR

During the design, construction and operation of the rail trail, the DCR shall follow the provisions of BMP's for Controlling Exposure to Soil during the Development or Rail Trails promulgated by the Massachusetts Department of Environmental protection in March 2004.

Whenever the DCR is responsible for the remediation of Hazardous Materials on or below the Premises by law or pursuant to this Lease, the DCR, upon written demand of the MBTA, shall conduct at its sole cost and expense, all response actions required by Chapter 21E and the MCP with respect to the Hazardous Materials (including the hiring of a Licensed Site Professional).

Any such response action on the Premises, if performed by the DCR, shall be performed in accordance with Chapter 21E, the MCP, any other applicable statutes and regulations, and in accordance with plans and specifications approved by the MBTA, shall be completed in a timely manner to the reasonable satisfaction of the MBTA, and shall allow the MBTA to use the Premises, for its active railroad or other transportation purposes.

For purposes of this Section, the term "MBTA" shall include the MBTA, and its directors, officers, employees, agents and any legislatively approved entity that may succeed the MBTA. Additionally, for purposes of this Section the "MBTA" does not include easement holders, MBTA lessees, or licensees or successors to any real property of the MBTA through sale, assignment, pledge, mortgage, exchange or gift.

6.3 Insurance of Contractors

DCR shall cause its contractors and agents to maintain sufficient liability insurance, and general insurance, with coverage for bodily injury, wrongful death, and property damage, consistent with MBTA insurance requirements as enumerated below, naming the MBTA

as an additional insured, and indemnifying the Commonwealth of Massachusetts and the MBTA. DCR shall require its contractors and consultants to take out and maintain sufficient Commercial General Liability insurance (with coverage for bodily injury, wrongful death, and property damage to cover loss arising from all work whether above or below ground), Workers Compensation Insurance (with coverage in the amount required by DCR in such contract, but no less than the statutory minimum under G.L. c. 152, as amended), and Vehicle Liability Insurance under any Public Works contract under G.L. c. 30, vertical construction contract under G.L. c. 149, or Goods and Service contract under G.L. c.7, as applicable, for work performed by any consultant or contractor on the Premises. All insurance shall be provided at the contractor's expense and shall be in full force and effect for the full term of the contract or for such longer period as the contract would require. The MBTA insurance requirements are as follows:

(a) Commercial General Liability Insurance

For Public Works projects with a minimum liability coverage for personal injury, bodily injury and property damage with limits not less than One Million (\$1,000,000.00) Dollars per occurrence and Three Million (\$3,000,000.00) Dollars in aggregate. Umbrella liability coverage with limits of not less than Two Million (\$2,000,000.00) Dollars covering all work performed must also be provided; and minimum liability coverages for goods and services contracts in accordance with DCR requirements. Such insurance shall be written on an occurrence basis (as opposed to a claims-made basis) and name the Commonwealth of Massachusetts, MBTA and others hereinafter designated as additional insureds as their interests may appear. Such insurance may be subject to standard exclusions found in property and general liability insurance policies.

(b) Worker's Compensation Insurance

(i) For all DCR contractors, insuring all persons employed by the DCR in connection with any work done on or about the Premises with respect to which claims for death or bodily injury could be asserted against the MBTA or the Premises with limits of liability of not less than those required by Massachusetts General Laws Chapter 152 as amended. The policy shall contain a clause waiving the company's right to subrogation against the MBTA if such a policy is commercial available, and

(ii) For all DCR contractors and agents by providing evidence of an active workmen's compensation program for DCR contractors agent funded by DCR, a copy of which is attached.

(c) Automobile Liability Insurance

Automobile liability insurance with limits of not less than One Million (\$1,000,000.00) Dollars covering all owned, non-owned, hired, rented or leased vehicles of the contractors or agents of DCR.

The required insurance coverage's herein specified shall be placed with insurance companies licensed by the Massachusetts Division of Insurance to do business in the Commonwealth of Massachusetts and having a Best's rating of B+ or better;

The DCR shall be responsible for seeing that its contractors and consultants are properly covered by insurance. MBTA must be provided evidence of same.

Notwithstanding any other provision of this section 6.3, DCR reserves the right to propose to meet the requirement by adding such insurance coverage to existing policies subject to the terms and conditions of those existing policies or to obtain new policies containing terms and conditions generally included in policies provided to state agencies in Massachusetts.

6.4. Compliance with Laws

The DCR shall comply with, and shall cause all work performed to comply with, all applicable Federal and state governmental statutes, laws, rules, orders and regulations. The DCR shall also be responsible for obtaining any and all applicable permits and/or approvals under Federal or state law necessary to carry out the activities permitted hereunder.

7. Maintenance

During the Term hereof, the DCR shall keep, repair, manage, operate, and maintain the entire Premises in good and clean order, operation, condition and repair. Except for any claim of damage arising from the exercise by the MBTA of the rights reserved to it, the MBTA shall have no responsibility whatsoever for the maintenance, repair or the condition of the Premises.

8. Utilities

Except as reasonably necessary for the operation of the alternative transportation use of the Corridor, no utilities shall be installed on the Premises by the DCR without the written approval of the MBTA.

9. Reservation of Rights

9.1 Non-Exclusivity

- (a) The MBTA makes no representations or warranty, express or implied, that the DCR shall have sole or exclusive use of the Premises. In the event other licenses, leases or easements have been or are granted or exist by reservations in deeds, the DCR shall be responsible for coordinating its work and activities with that of other licensees, grantees and other parties with interests in the Premises. The MBTA shall not be liable for delays, obstructions, or like occurrences affecting the DCR, arising out of the work of the MBTA or other licensees, grantees or parties in interest; provided, however, that the MBTA shall make reasonable efforts to mitigate impacts on the Use of the Premises. The MBTA will make a list available to the DCR of any and all leases or licenses along the Corridor designated under this Lease.

- (b) The DCR'S rights herein are granted subject to existing, easements, and rights of record to the extent that such easements rights and takings are still in effect and applicable. The MBTA explicitly reserves the right to all uses of the Premises not herein granted to the DCR, including the right to lease, license, grant easements and reserve encroachments relative to portions of the Premises to third parties, except that the MBTA shall not (and shall not grant to others the right to) do anything on the Premises that shall materially impede the permitted Use of the Premises, as defined in Section 3 ,supra, except temporarily (e.g. while a pipe line is being installed or repaired) The MBTA may continue to utilize the Premises for revenue purposes but any portion of the Corridor so utilized in connection with any third party transactions will continue to provide for continuity of the Rail Trail Corridor and DCR shall work cooperatively with the MBTA and any third party grantees, lessees or licensees for this purpose. The MBTA agrees to minimize any potential impact to the DCR maintained Corridor including consultation with DCR on public safety, rail trail use and operations, and proposed mitigation measure considerations. The MBTA shall retain the right to authorize subsurface or bridge crossings, provided sufficient clearance is maintained to allow for passage of public safety vehicles along the Corridor. If the MBTA shall create after the date of this Agreement an "at grade" easement, right of way or allow a permitted crossing of the Corridor with a new third party, the new third-party recipient of said easement, right of way or permitted crossing shall be responsible for providing sufficient liability insurance, and general insurance, with coverage for bodily injury, wrongful death, and property damage, consistent with MBTA insurance requirements as enumerated below, naming the MBTA and the Commonwealth of Massachusetts as an additional insured, and indemnifying the Commonwealth of Massachusetts and the MBTA. Notwithstanding language in Section 6.1, 6.2, 6.3, and 7, DCR shall bear no responsibility for such easement, right of way or permitted crossing or for the acts or omissions of the said new third-party or the general public on such easement, right of way or permitted crossing.

The DCR's rights herein are granted subject to existing leases, licenses easements and encroachments, now existing or granted in the future, to the extent that such rights are still in effect and applicable. The MBTA hereby agrees to provide the DCR with copies of the documents that establish the location and term of existing licenses, leases, easements or encroachments, if any. Upon completing a 25% design of the proposed rail trail, the DCR may request that the MBTA exercise any rights it may have to modify or terminate an existing lease or license that would prevent the creation of a contiguous Corridor. The MBTA shall make all reasonable attempts to fulfill such requests to create a contiguous corridor.

- (c) The DCR expressly agrees that any revenues obtained from the leasing, licensing, or the granting of rights for any use of the Premises to any utility or

other entity shall belong solely to the MBTA.

The DCR shall not be entitled to impose any fees, charges, requirements for betterments, linkage payments or other benefits to the DCR on any lessee, licensee or grantee of the MBTA or any other party either for installations on the Premises or on public way crossings along the Premises (except those fees normally charged by the DCR for engineering and environmental review, if any). If despite this section the DCR does receive some such benefit, then the MBTA shall be paid the fair market value of that benefit by the DCR.

- (d) The DCR expressly agrees that if there is any encroachment onto the Premises by a third-party, the MBTA will have the sole right to cure said encroachment and to obtain revenue from such cure or to permit such encroachment, provided that such cure does not materially interfere with the DCR's use of the Corridor. Notwithstanding the preceding, to the extent that the encroachment is on the Corridor, then the DCR shall have the right to expel such encroacher.

9.2 Utility and Communication Lines and Emergency Access

The MBTA expressly reserves all of its rights in the Premises for itself, its successors and assigns, to install, maintain, repair, replace and remove aerial, surface and subsurface utility and communication lines, wires, antennas and conduits in, on, under or above the Premises as well as the right to lease, license and/or grant easements for such utility and communication rights to third parties; except that the DCR shall have the rights specifically granted herein. The MBTA shall take all necessary safety measures including, but not by way of limitation, notification to the DCR of its intention to perform (or have performed) such installation and/or maintenance, the erection of barricades, as shall be reasonably required to protect persons performing such work and construction, as well as members of the public, from injury or damage caused by, or resulting from, any entry, work or construction performed by the MBTA or its contractors, licensees, lessees, grantees (and their contractors) pursuant to this Section. The MBTA shall, at its cost and expense, return the Premises to a condition in which the Premises can be used for the purposes for which they were used before the work pursuant to this paragraph, if its contractors, licensee, lessees, or grantees, as the case may be, fail to do so.

Prior to entry, the MBTA shall require that any contractor, licensee, lessee or grantees provide the DCR, during the Term thereof, insurance of the activities permitted by the MBTA, to the same extent and on the same terms that the MBTA is insured. The DCR shall be named as an additional insured on any general liability policy. All policies shall waive the right of subrogation for any claim that may be made against the DCR.

10. Security and Operations

The MBTA shall have no obligation to provide security services or lighting for the

Premises. DCR may implement public safety and emergency services for the Corridor under the DCR's usage, and may address providing public safety services through municipal public safety departments, as well as police services with the State Police and municipal police departments. DCR, its agents or assignees, may install lighting and adopt time of use and other restrictions applicable to the public. Provided such are not inconsistent with the provisions of this Lease, the Premises shall be subject to DCR regulations regarding the public's use and conduct of activities on DCR property. Any portion of the Corridor that is utilized by a third party shall not be subject to any DCR regulation which would interfere with the third party's ability to operate said portion of the Corridor.

11. Default

In the event the DCR shall have failed or refused to take a required action or to observe any covenant or undertaking herein on its part to be performed and/or observed and such failure or refusal has continued for at least thirty (30) days after written notice from the MBTA of the breach of such covenant(s) by the DCR, which notice shall specify the nature of the breach in reasonable detail, the MBTA may, immediately or at any time thereafter (notwithstanding any license or waiver of the benefit hereof, or consent in a former instance) and without any further demand or notice, in person or by agent or attorney, enter the Premises or any part thereof and block access to the Premises by the public; and/or the MBTA may terminate this Lease by written notice to the DCR and, in either event, expel the DCR and those claiming through or under it and remove their effects without being deemed guilty of any manner of trespass and without prejudice to any remedy which otherwise might be used for breach of covenant and upon entry or notice as aforesaid this Lease shall terminate.

12. Condition of the Premises at Termination

The DCR agrees to deliver up the Premises to the MBTA at the expiration of the Term or termination by the MBTA hereof in as good condition as the Premises were after the DCR installed improvements were made, reasonable wear and tear excepted. DCR shall have no obligation to remove or reimburse the MBTA for costs of removal of any of the DCR installed improvements; and such improvements shall not be considered a change to the grade existing at the commencement of this Lease.

13. Existing Utilities

The DCR acknowledges that there may be surface and subsurface utilities on and adjacent to the Premises and agrees to exercise extreme caution in performance of the scope of work. The DCR shall comply with Massachusetts General Laws, Chapter 82, Section 40 (said statute also known as the "Dig Safe" law) and the regulations promulgated pursuant thereto including but not limited to the Code of Massachusetts Regulations, more particularly, 220 CMR 99.00 et seq. To the extent the MBTA, or parties acting in behalf of the MBTA, locate and mark railroad utilities in the railroad rights of way and appurtenant thereto, the DCR shall be responsible for payment to such parties for such services which may include, but not be limited to, locating and

marking utilities, facilities and appurtenances thereto serving the railroad line(s) or used in connection with services or operations of the MBTA. Any damage to such utilities caused by the DCR shall be the sole responsibility of the DCR. If the DCR does not immediately repair any utilities it has damaged, the MBTA, without being under any obligation to do so and without waiving the DCR's obligation hereunder, may repair any utilities damaged by the DCR immediately and without notice in case of emergency. In the event the MBTA exercises such right, the DCR shall pay to the MBTA immediately upon demand all of the MBTA's cost of performing such repairs plus a fee equal to twenty-five percent of the MBTA's cost of performing such repairs to reimburse the MBTA for its administrative costs.

The MBTA reserves the right to remove the rail infrastructure and agrees that if it chooses to do so, said removal shall be within 180 days of the date the DCR notifies the MBTA to be the date of the trail construction commencement. The DCR shall be responsible for removal and disposal of all other rail infrastructure, after the said 180 days, and may retain any revenue from DCR's removal and disposal of such.

14. Notice of Project Completion and Record Drawings

Upon completion of its work, the DCR shall provide written notice ("Notice of Project Completion") to the MBTA Railroad Operations Department of the date of project completion. The DCR shall also provide the MBTA Railroad Operations Department with one reproducible "As-Built" copy of each approved construction drawing marked to indicate all changes and deviations from the original approved plans and recording the final conditions of the Premises ("Record Drawings") upon completion of the work authorized hereunder. All Record Drawings shall be received and accepted by the MBTA prior to final inspection. The Notice of Project Completion and the Record Drawings shall be delivered to:

Section Chief, Engineering and Maintenance
MBTA Railroad Operations Department
32 Cobble Hill Road
Somerville, MA 02143

15. Results

If the DCR conducts certain investigations on MBTA owned land, then the DCR agrees to provide to the MBTA, at no cost, a copy of the results of such investigations (including data and analysis) and all other work conducted under this Lease in both hard copy form and in a digital format specified by the MBTA regardless of whether the report was prepared by the DCR, its agent, consultant or contractor, or prepared on behalf of the DCR. All results and reports shall be provided to the MBTA within ten (10) days of receipt by the DCR. The DCR agrees to consult with the MBTA prior to contacting any governmental entity, regarding any information, results of analysis or reports regarding the Premises. The DCR shall give the MBTA a copy of any reports or notifications, including but not limited to release notifications, prior to submitting the same to any governmental entity.

16. Construction and Access Plan

The DCR shall submit a plan and detailed specifications (including the materials to be used) and the proposed methods of performing the work, or any part thereof (the "Plan") to the MBTA. The DCR shall not enter the Premises to undertake construction until the Plan has been approved by the MBTA, which approval shall not be unreasonably withheld. The scope of work for said construction, installation, and/or replacement will be more fully defined in the approved Plan, which approved Plan will automatically be incorporated herein by reference and made part of this Lease. The DCR shall also provide the MBTA with a detailed schedule of times when the DCR, its employees, contractors, subcontractors, or agents would like to be on the Premises to undertake the construction and installation of the rail trail improvements (the "Access Plan").

17. Contracts for Improvements

All contracts for the construction or installation of the improvements at the Premises shall require:

- (a) that all contractors and subcontractors provide labor that can work in harmony with other elements of labor employed or to be employed at or near the Premises.
- (b) insurance coverage and suretyship reasonably satisfactory to the MBTA, provide that customary coverage's used by DCR in its public contracting shall be considered reasonably customary, provided said coverage's are in accord with the then current MBTA insurance requirements.
- (c) that all contractors or subcontractors comply with all applicable provisions of this Lease; and

performance bonds and payment bonds in form and substance satisfactory to the MBTA, each of which shall name the MBTA, as an additional obligee, provide that customary coverage's used by DCR in its public contracting shall be considered reasonably customary, provided said coverage's are in accord with the then current MBTA insurance requirements.

18. Notices

All notices required or permitted to be given hereunder shall be in writing and addressed as follows:

In the case of the MBTA to:
Massachusetts Bay Transportation Authority
10 Park Plaza, Room 5750

Boston, Massachusetts 02116
Attn: Director of Real Estate

With a copy to:
MBTA Railroad Operations Directorate
Section Chief, Engineering and Maintenance
32 Cobble Hill Road
Somerville, Massachusetts 02143

With a copy to:
DESIGNATED REPRESENTATIVE
Transit Realty Associates, LLC
77 Franklin Street
Boston, Massachusetts 02110
Attn: General Counsel

And in the case of the DCR to:

Department of Conservation and Recreation
251 Causeway Street, Suite 600
Boston, MA 02114
Attn: General Counsel

All notices, demands, requests, consents, approvals and other instruments required or permitted to be given pursuant to the terms hereof (hereinafter "Notice"), shall be in writing and shall be deemed to have been properly given when deposited in registered or certified United States mail, postage prepaid, return receipt requested, addressed, as described above or when delivered by messenger or overnight mail service to the correct addressee. Notice shall be deemed received when actually received or when the proffered Notice has been refused by the Addressee. The signature of an employee, servant or agent of the Addressee shall be determinative on the issue of actual receipt.

The DCR and the MBTA shall, at any time and from time to time, have the right to specify as their proper addresses for purposes of this Lease any other address or addresses giving fifteen (15) days' written notice thereof to the other party.

19. Nondiscrimination

With respect to its exercise of all rights and privileges herein granted, the DCR shall undertake affirmative action as required by Federal and State laws, rules and regulations pertinent to Civil Rights and Equal Opportunity unless otherwise exempted therefrom. The DCR agrees that it shall comply with any and all required affirmative action plans submitted pursuant to the directives of any Federal agency and in accordance with applicable Federal law and applicable state laws, rules and regulations.

The DCR shall use reasonable efforts to contact, encourage and utilize minority and female business enterprises in the procurements of materials and services under this

Lease.

The DCR shall not discriminate against any person, employee or applicant for employment because of race, color, religion, creed, national origin, age, sex, sexual orientation, disability/handicap or veteran status in its activities at the Premises, including without limitation, the hiring and discharging of employees, the provision or use of services and the selection of suppliers, contractors or subcontractors.

20. Work In Harmony

The DCR agrees that in any work performed in or about the Premises, it will employ only labor which can work in harmony with all elements of labor being employed by the MBTA on or adjacent to the Premises.

21. Assignment

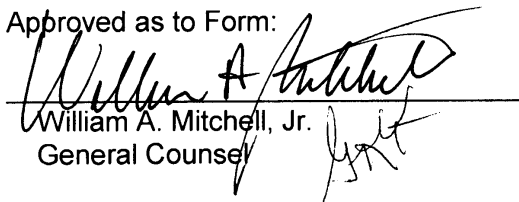
The DCR shall not, without the prior written consent of the MBTA, transfer or assign this Lease or any part hereof. Such consent may be withheld in the sole discretion of the MBTA.

22. Entire Agreement

This Lease contains the entire agreement of the parties hereto with respect to the subject matter hereof, and no representations, inducements, promises, or agreements, oral or otherwise, between the parties hereto with respect to the subject matter hereof not embodied herein shall be of any force or effect.

IN WITNESS WHEREOF, the parties hereto, each for itself, its successors and assigns, have caused these presents to be executed, as a sealed instrument, by its officers, thereunto duly authorized.

Approved as to Form:


William A. Mitchell, Jr.
General Counsel

**MASSACHUSETTS BAY
TRANSPORTATION AUTHORITY**

BY:


Richard A. Davey
General Manager

**DEPARTMENT OF CONSERVATION AND
RECREATION**

BY:



Richard K. Sullivan, Jr.
Commissioner

EXHIBIT A
PLAN OF PROPERTY
RIGHT-OF-WAY AND TRACK MAP
BOSTON AND MAINE R.R.
SHEETS V-5/4 THROUGH V-5/30

EXHIBIT B

**COPY OF ORDER OF
MEMORANDUM AND ORDER OF
THE U.S. DISTRICT COURT
FOR THE DISTRICT OF MASSACHUSETTS**

UNITED STATES DISTRICT COURT
DISTRICT OF MASSACHUSETTS

In the Matter of

BOSTON AND MAINE CORPORATION,
Debtor

No. 70-250-M

MEMORANDUM AND ORDER

on

Motion of Debtor's Trustees for Authority to
Abandon the Central Massachusetts Branch Line
and the Marlboro Branch Line of Railroad in
Massachusetts

MURRAY, Senior District Judge

The motion of Debtor's Trustees for an order authorizing the Trustees, pursuant to Rule 8-512(b) of the Bankruptcy Rules, to abandon the Central Massachusetts Branch and the Marlboro Branch (the Branches) came on to be heard on September 17, 1980, after notice given by order of the court in accordance with 11 U.S.C. § 1170(c) (Supp. III 1979) of the time and the place of the hearing. The Trustees presented evidence to the court which was uncontroverted.

By Order No. 475 entered June 21, 1979, this court authorized the Trustees to initiate proceedings before the Interstate Commerce Commission (ICC) for a certificate of public convenience and necessity permitting the abandonment of the Branches. 49 U.S.C. § 10903 (Supp. II 1978); 49 C.F.R. § 1121 (1979). With the subsequent transfer of jurisdiction to the court over abandonments and discontinuance of service, 45 U.S.C. § 915(a), Pub.L. No. 96-101 § 17(a), 93 Stat. 744-45, the ICC, after reviewing documentary evidence and comments submitted to it, issued a report dated March 26, 1980. Before the ICC, the Trustees' petition to abandon the Branches was vigorously opposed. Several freight receivers¹ along the Central Massachusetts

1. The service provided by Debtor along the Branches is almost exclusively that of delivering goods to customers. During 1979, Debtor carried only two rail-car shipments outbound along this line.

Branch, together with various public figures, submitted evidence or comments attempting to persuade the ICC to refuse the Trustees' request. The Trustees had not such opposition in the proceedings before the court; their petition was uncontested.

The Central Massachusetts Branch is a line of railroad in Middlesex and Worcester Counties, Massachusetts extending approximately 21.68 miles. It runs from milepost B 10.50 at Waltham North through Weston, Wayland, South Sudbury and Hudson into Berlin ending at milepost B 32.18. The Marlboro Branch is essentially a spur leaving the Central Massachusetts Branch at milepost B 32.75 in Gleasondale and running south to Marlboro terminating at B 37.49. Debtor does not own the right of way, the track, structures or other materials on the lines, having sold them and the right to transport passengers over the right of way to the Massachusetts Bay Transportation Authority (MBTA) in December of 1976. The Debtor reserved an easement to haul freight on the lines, and has the burden of maintaining the track. Because MBTA now owns the property on the line the Trustees may not abandon the Branches but only discontinue service. See In the Matter of Boston and Maine Corporation, 596 F.2d 2, 6 (1st Cir. 1979).

The Trustees considered taking formal steps to abandon the Branches at their meeting on May 11, 1979. For a period of years there had been no customers on the Marlboro Branch and the customers in Berlin took delivery of their occasional shipments at a public delivery facility in Clinton. Debtor ceased serving its customers in Hudson after February 1980 although it did not place an embargo on the line until August. Despite lack of authority from the court, Debtor had ceased operating over the Marlboro Branch and the western end of the Central Massachusetts Branch some time ago. In effect, Debtor had de facto discontinued service on the line prior to the hearing on the Trustees' petition in this court and prior to the report from the ICC.

Before it discontinued service on the line, Debtor served several customers in South Sudbury, primarily Saxonville Wholesale Lumber Warehouse Company (Saxonville) and Mullen Lumber Company,

and Saxonville accounted for more rail traffic than all of Debtor's other customers on this line combined in the last full year of accounting. In addition, Debtor served Koro Corporation of Hudson which had relied on Debtor for the transportation of plastic pellets necessary to its business. Debtor also had several other customers in Hudson, but these receivers only accounted for limited traffic on an occasional basis.

The Trustees presented evidence to the court that the lumber companies in South Sudbury are currently receiving all their materials via Conrail. Conrail operates a line that intersects the Central Massachusetts Branch in South Sudbury. There was evidence before the court that Conrail will consider providing limited service along the Central Mass. Branch to the east of the junction in South Sudbury but will not serve customers to the west in Hudson. However, there was evidence that Koro Corporation is currently receiving its shipments of plastic pellets in Fitchburg and trucking the material from there to its plant in Hudson. The Trustees also presented evidence that while this method of transporting goods may be more expensive for Koro Corporation it is not an unreasonable cost increase.

The proposed discontinuance would seem to be in the best interests of the Debtor's estate. The number of customers and the amount of traffic on the line may be viewed, at best, as remaining stable. There is no indication that these gauges of economic viability will increase in the foreseeable future. On the other hand, there is considerable maintenance and rehabilitation needed on the line. Currently the line is deemed to be a Class I track under Federal Railroad Administration Track Safety Standards. See 49 C.F.R. § 213 (1979). However, there is evidence that the line has fallen below that level, the lowest category under these standards. The Trustees have deferred maintenance on the line in an attempt to limit expenses, and the burden to the estate of making the necessary improvements is not justified in light of the current and expected revenues.


There is little evidence that discontinuance of service over the lines would be inconsistent with the public interest. At the hearing

before the court no one appeared to oppose the Trustees' petition. The evidence that the Trustees presented showed that the adverse impact of discontinuance of service has dissipated over time. When the Trustees went before the ICC there was considerable agitation among the businesses and communities served by Debtor; however, most freight receivers seemed to have adjusted to the loss of service. Moreover, there was testimony that although the MBTA has ownership rights in the line it does not presently or within the near future intend to use the line for passenger transportation. There was nothing offered to show that the right of way would be suited for other public use purposes. The Executive Office of Transportation and Construction of the Commonwealth of Massachusetts would, in its role as consultant to MBTA, urge that the right of way of the Branches be preserved as a rail transportation corridor for the indefinite future.

Accordingly, it is hereby Ordered that:

In the best interests of Debtor's estate and consistent with the public interest the Trustees are permitted to discontinue freight service over the Central Massachusetts Branch Line and the Marlboro Branch Line, as described in this Memorandum, between Waltham North and Berlin, and between Hudson and Marlboro, in the counties of Middlesex and Worcester, Massachusetts.

Dated October 3, 1980


Senior District Judge

EXHIBITS (a, b, c, d & e.)



Deval L. Patrick
GOVERNOR

Richard K. Sullivan, Jr.
SECRETARY

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January 10, 2014

CERTIFICATE OF THE SECRETARY OF ENERGY AND ENVIRONMENTAL AFFAIRS
ON THE
EXPANDED ENVIRONMENTAL NOTIFICATION FORM

PROJECT NAME : Mass Central Rail Trail – Wayside Branch
PROJECT MUNICIPALITY : Berlin, Bolton, Hudson, Stow, Sudbury, Waltham,
Wayland, and Weston
PROJECT WATERSHED : Charles, Sudbury, and Assabet Rivers
EOEA NUMBER : 15123
PROJECT PROPONENT : Massachusetts Department of Conservation and
Recreation
DATE NOTICED IN MONITOR : November 20, 2013

Pursuant to the Massachusetts Environmental Policy Act (MEPA, M.G. L. c. 30, ss. 61-62I) and Sections 11.06 and 11.11 of the MEPA regulations (301 CMR 11.00), I have reviewed this project and hereby determine that it **does not require** further MEPA review. In a separate Draft Record of Decision (DROD) also issued today, I have proposed to grant a Waiver from the requirement to prepare a mandatory Environmental Impact Report (EIR) for the project. This Certificate sets forth the issues that must be addressed by the Massachusetts Department of Conservation and Recreation (DCR) during permitting and discusses recommendations that were submitted on the project during the MEPA review period.

Project Description

As described in the Expanded Environmental Notification Form (EENF), the proposed project consists of the construction of the Mass Central Rail Trail – Wayside Branch (MCRT-WB) through the municipalities of Berlin, Bolton, Hudson, Stow, Sudbury, Wayland, Weston, and Waltham. It will consist of a 23-mile long shared-use path, 10 feet wide with two-foot vegetated shoulders. It will be constructed within a 19-foot wide corridor within the existing 50- to 100-foot wide former Massachusetts Central Railroad right-of-way (ROW) owned by the Massachusetts Bay Transportation Authority (MBTA). DCR has secured a lease with the MBTA along the ROW that allows it to construct, manage and maintain a rail trail within a 19-foot delineated corridor and develop additional amenities outside of this corridor provided they do not conflict with other MBTA uses.

The project is a priority for DCR and will contribute to the development of an extensive multi-use pathway traversing the state from west to east, specifically connecting Northampton (where the current Norwottuck Rail Trail is heavily used) to Boston. Portions of the MCRT in the central part of the corridor, between Oakham and Sterling, have already been constructed. DCR delineated the corridor within the existing ROW and received approval from the MBTA for its use for the project. This corridor largely follows and is centered on the existing single wide track, ties and ballast. Construction phasing of the various segments of the project is dependent on several factors, such as design, resolution of encroachment issues, environmental permitting, and availability of funds. Once completed, the project will be managed by DCR and maintained by either DCR, municipalities through which it crosses, or through a cooperative agreement between DCR and the municipalities.

Project Site

The project will be located within the former Massachusetts Central Railroad ROW, a passenger and freight service rail line originally extending from Boston to Northampton. The EENF describes the project alignment in each municipality.

Berlin (2.3 miles) – Beginning at Coburn Road, approximately 182 feet north of the Coburn Road/West Street intersection, extending east along the existing ROW track alignment to the Berlin/Hudson town line. The Berlin segment crosses two roads at-grade (Highland Street, and Sawyer Hill Road) and under Interstate 495 (I-495).

Bolton (100 feet) – The path crosses over the Berlin/Bolton town line for a very brief distance before crossing into Hudson. The Bolton segment crosses one road at-grade (Stone Road).

Hudson (6.9 miles) – From the Bolton/Hudson town line, extending east to the Hudson/Sudbury town line. The Hudson segment crosses 17 roads at-grade, over, or under the existing roadway. The at-grade crossing streets are: Central Street (at two locations), Cottage Street, Warner Street, Lincoln Street, Felton Street, Pope Street, Church Street, Manning Street, Priest Street, Cox Street, Main Street, Parmenter Road, and White Pond Road. The path will travel under High Street and Chestnut Street (via a box culvert underpass), and will travel over Wilkins Street and Tower Street (via a replacement bridge). The project will intersect the existing Town of Hudson segment of the Assabet River Rail Trail east of Wilkins Street.

Stow (327 feet) – The path crosses over the Hudson/Stow town line for a very brief distance before crossing back into Hudson east of Wilkins Street.

Sudbury (4.6 miles) – From the Hudson/Sudbury town line, extending east to the Sudbury/Wayland town line. The Sudbury segment crosses five roads at-grade (Dutton Road, Peakham Road, Horse Pond Road, Union Avenue, and Boston Post Road). The path will travel under (via an underpass) Landham Road.

Wayland (3.0 miles) – From the Sudbury/Wayland town line, extending east to the Wayland/Weston town line. The Wayland segment crosses six roads at-grade (Boston Post Road, Old Sudbury Road, Concord Road, Millbrook Road, Glen Road, and Plain Road).

Weston (3.0 miles) – From the Wayland/Weston town line, extending east to the Weston/Waltham town line. The Weston segment crosses Gun Club Lane at-grade, and will cross under three roads via underpasses (Concord Road, Conant Road and Church Street).

Waltham (3.0 miles) – From the Weston/Waltham town line, extending east to the end point at the intersection of Beaver Street and Waverley Oaks Road (Route 60). The Waltham segment crosses eight roads: seven at-grade, and one (I-95) along an overpass (Jones Road, Interstate 95, Stow Street, Main Street, Hillside Road, Prospect Hill Road, Hammond Street, Bacon Street, Lexington Street, Lyman Street, and Linden Street).

The rail trail will be constructed as an off-road multi-use path. As with other multi-use paths in Massachusetts, the project will have trail heads at adjacent intersecting streets and will use existing parking facilities along its corridor to the greatest extent feasible.

Environmental Impacts

Potential environmental impacts associated with the project include the creation of approximately 28 acres of new impervious surface area, the likely removal of trees of 14-inch or more diameter at breast height (DBH), and permanent and temporary wetlands impacts that include the alteration of 4,150 square feet (sf) of Bordering Vegetated Wetlands (BVW), 475,504 sf of Bordering Land Subject to Flooding (BLSF), 466,599 sf of Riverfront Area, and 2,140 linear feet (lf) of Bank. The project requires the temporary alteration of Land Under Water and Waterways (LUWW), although the EENF does not disclose the amount at this conceptual stage of project design. The project corridor contains mapped habitat for rare or endangered species and is within and near numerous National Register Historic Districts, individually listed National Register properties, and inventoried historic properties. Construction impacts will include the removal of the existing railroad ties and rails, rehabilitation or replacement of 11 bridges, paving, grading, landscaping, and installation of new stormwater drainage system.

MEPA Jurisdiction and Permitting

The project is subject to MEPA review and requires the preparation of a mandatory EIR pursuant to 301 CMR 11.03(1)(a)(2) and 11.03(3)(a)(1)(b) because it requires State Agency Actions and will result in the creation of ten or more acres of new impervious area and will alter more than ten acres of other wetlands. The project also exceeds the ENF threshold at 301 CMR 11.03(3)(b)(1)(b)(2) because it will alter 500 or more lf of inland bank. Additionally, the project will likely exceed the ENF threshold at 301 CMR 11.03(6)(b)(2)(b) because it will require the cutting of five or more living public shade trees of 14 or more inches DBH. The project will require a Chapter 91 (c.91) Waterways License from the Massachusetts Department of Environmental Protection (MassDEP), an Access Permit from the Massachusetts Department of Transportation (MassDOT), Section 106 review by the Massachusetts Historical Commission (MHC), and review under the Massachusetts Endangered Species Act (MESA) by the Natural Heritage and Endangered Species Program (NHESP). The project is also subject to the MEPA Greenhouse Gas Emissions Policy and Protocol (GHG Policy).

The project also requires: Orders of Conditions from each of the eight municipal Conservation Commissions (and, on appeal only, Superseding Orders of Conditions (SOCs) from MassDEP), a National Pollution Discharge Elimination System (NPDES) Construction General Permit (CGP) from the United States Environmental Protection Agency (EPA), and an individual Section 404 Permit from the United States Army Corps of Engineers (ACOE).

The project will be undertaken by DCR, a State Agency. Therefore, MEPA jurisdiction for this project is broad and extends to all aspects of the project that are likely, directly or indirectly, to cause Damage to the Environment as defined in the MEPA regulations.

Waiver Request

In accordance with Section 11.05(7) of the MEPA regulations, DCR has submitted an EENF with a request that I grant a Waiver of the Mandatory EIR requirement. The EENF and additional information provided by DCR to the MEPA Office identifies the project's consistency with the criteria for a Waiver. The EENF was subject to an extended public comment period pursuant to Section 11.06(1) of the MEPA regulations. DCR requested a second extension which extended the comment period an additional 11 days.

I have received many comments which indicate strong support for a Waiver. While I acknowledge the comments from the Sudbury and Wayland Conservation Commissions that outline concerns regarding wetlands, stormwater and water quality, I am confident that these issues can be resolved during the state and local permitting processes. These processes provide additional avenues for public review and comment. I note that State Agencies did not identify alternatives that should be analyzed in an EIR.

I have reviewed the EENF and the Waiver request and I hereby find that the project meets the standards for a Waiver. These findings are addressed in the DROD which will be published in the January 22, 2014 edition of the Environmental Monitor. DCR submitted a letter of clarification to the MEPA Office on January 8, 2014 that responds to concerns identified in comment letter.¹

Project Alternatives

The EENF provides an analysis of the No-Build Alternative and the Preferred Alternative. The No-Build Alternative assumes that the project will not be developed and the existing MBTA-owned ROW will continue to be used as an informal trail that is not designed consistent with the Americans with Disability Act (ADA). The No-Build Alternative will not impact any environmental resources, however, it will not further state, regional, and local trail initiatives and connections, promote public health and exercise, increase recreational opportunities, provide an alternative transportation option, and improve air quality. In addition, the No-Build Alternative will not discourage unwanted activities such as dumping, all terrain vehicle (ATV) use, and encroachment of the ROW.

¹ Massachusetts Department of Conservation and Recreation Letter of Clarification submitted to the MEPA Office on January 8, 2014

According to the EENF, the Preferred Alternative is based on: connection to other trails as part of a more extensive trail network, the available space throughout the ROW, environmental resources, accessibility, and roadway crossings. The general location of the project corridor (from Berlin to Waltham) was chosen due to its potential for connections to other trails in the region, the absence of a trail traversing west to east in this vicinity, and the role the MCRT plays as a segment to enhance the statewide trail networks such as the Bay State Greenway network, East Coast Greenway System, and the overall cross-state rail trail vision.

For the majority of its alignment, the project will follow the original Massachusetts Central Railroad ROW. Since the cessation of railroad activities in the 1980s, wetlands and other environmental resources have developed in the ROW. Also, encroachments by abutters and leased development have occurred throughout the corridor. The EENF indicates that throughout the development of the Preferred Alternative, these obstructions and conflicts have been considered and environmental resources were avoided to the maximum extent possible. Wetland resource areas were avoided to the extent practicable. Access points along the proposed trail and safe roadway crossings were also considered for the development of the Preferred Alternative.

DCR identified three road crossings that may require deviations from the current alignment or use of additional ROW in Wayland at Routes 20 and 27/126; and in Waltham at Stowe Street/Route 117. The Town of Wayland has already addressed problematic crossings and developed safe bicycle and pedestrian crossings. Just east of the I-95 bridge in Waltham, a bank parking lot has been constructed entirely in the ROW (permitted by the MBTA), but the bank is obligated in its easement to allow the project to be developed through this area. The proponent of the former Polaroid Site in Waltham (1265 Main Street LLC), has satisfied the commitment identified in its Section 61 Findings (EEA#13952 Certificate on the Final EIR) to develop bicycle and pedestrian accommodations from its site entrance on Route 117 across Route 95/128 to Green Street. The proponent of the former Polaroid site intends to work with DCR to coordinate long-term development plans, alternatives, and potential off-site mitigation measures, as they relate to the project. Potential alternatives may include use of the existing ROW and railroad bridge over I-95, or working with private developers and MassDOT to add a multi-use pathway along Green Street and the Route 117 bridge to connect to the existing pathway at the Polaroid site entrance. DCR will continue to work with the bank, 1265 Main Street LLC, and MassDOT to evaluate, design and develop project connections through this area.

As described elsewhere in this Certificate, the project requires compliance with the Wetlands Protection Act (WPA) and c.91 regulations. I note that the WPA and c.91 review processes require an alternatives analysis that considers additional practicable alternatives to avoid, minimize, and mitigate impacts to wetland resource areas. I note that the project is being proposed along an existing rail corridor to provide recreational benefits and alternatives to driving. DCR indicates that it has considered practical alternatives within its project purpose. To the extent that additional analysis of alternatives is necessary to further reduce impacts, it can be addressed during permitting.

Wetlands

The project requires review by the eight Conservation Commissions with jurisdiction along the corridor for consistency with the WPA and its implementing regulations (310 CMR 10.00). The EENF describes the methodology used to estimate wetland impacts associated with the project based on a 19-foot corridor superimposed on the ROW. Wetlands impacts associated with the project include the alteration of 4,150 sf of BVW, 16.7 acres of wetlands including areas of BLSF overlapping Riverfront Area, and 2,140 lf of Bank. The EENF identifies wetland impacts by municipality. The largest impacts to BVW and Riverfront Area will occur in Hudson (1,164 sf and 148,495 sf (3.4 acres), respectively), and the largest impacts to BLSF will occur in Wayland (190,011 sf (4.3 acres). The EENF indicates that the corridor may be shifted in order to avoid potential environmental impacts. According to DCR's letter of clarification, as part of the Notice of Intent (NOI) filings, base mapping, resource area delineation, trail and bridge design will be completed to a level that supports more accurate assessment of impacts (if any) to BVW, BLSF, and Riverfront.

The EENF indicates that that project does not require a 401 Water Quality Certification (WQC) because it will alter less than 5,000 sf of BVW. Comments from MassDEP Northeast Regional Office (NERO) indicate that if there are any BVW impacts within Outstanding Resource Waters (ORW) or the total permanent or temporary impacts to BVW or LUWW exceed 5,000 sf, then a 401 WQC will be required. As described in greater detail below, DCR's letter of clarification maintains that a 401 WQC is not required. Wetlands replication and mitigation will be developed consistent with the BVW performance standards in 310 CMR 10.55(4) and the MassDEP Massachusetts Inland Wetland Replication Guidelines, March 2002.

Riverfront Area within the project corridor consists of previously-developed railroad embankment that is altered with rails and ties, other developed area and roadways, and some areas of wetland and upland vegetation. The project alignment will impact Riverfront Area resulting from path construction, grading, vegetation clearing and landscaping. The EENF indicates that the portions of the project that are in Riverfront Area alone are proposed as a limited project (310 CMR 40.53(6)). I refer DCR to MassDEP NERO's comments regarding compliance with limited project provisions.

According to the EENF, the elevated railroad embankment may indicate that the corridor is above the 100-year floodplain elevation. If subsequent analysis demonstrates flood elevations to be higher than presumed, the embankment will be kept at its current elevation to minimize any potential impacts to the 100-year floodplain and retain current floodplain storage. In addition, the affected area consists of former railroad track and ballast material, and does not provide important wildlife habitat.

DCR's letter of clarification indicates that it will work with local Conservation Commissions, MBTA and MHC to develop appropriate specifications for access and laydown areas, limits of work, and will identify sensitive areas where construction laydown and staging will not be allowed. DCR should ensure that it includes additional, if any, resource area impacts due to the construction access and staging.

While I acknowledge the issues raised by the Sudbury and Wayland Conservation Commissions, I believe that they can be addressed in the permitting processes. DCR has committed to work with various municipal boards and commissions and other key stakeholders to design the project to avoid or minimize resource area impacts and reasonably mitigate any unavoidable impacts.

Stormwater and Drainage

According to the EENF, the project will result in the creation of 28 acres of new impervious area. All stormwater design will meet the MassDEP's Stormwater guidelines to the greatest extent possible. The stormwater design for the trail will vary, depending on surrounding land uses. In more urban settings, a closed drainage system consisting of deep sump catch basins, manholes, and pipes may be used to collect stormwater from the trail and surrounding lands that may cause additional runoff and runoff sheeting along the trail or potential flooding of adjacent properties. Where applicable, the drainage will be connected to existing town or state-owned drainage systems. In more rural or undeveloped areas, country drainage will be used rather than piped drainage systems. DCR's letter of clarification indicates that the trail design will include an open stormwater system, with the use of water quality swales with checkdams adjacent to the trail in locations where warranted. Stormwater will generally be shed off the trail directly onto the adjacent vegetated shoulder and areas. A variety of native landscaping materials will be implemented into the design at road crossings, trailheads, and areas with steep embankment slopes that exceed a 3:1 slope. Shrubs will be planted at the tops of embankments, overlook areas, and stream crossings outside of the trail clear zone, to treat stormwater runoff.

I refer DCR to the comments and guidance provided by MassDEP NERO to ensure the project is designed in compliance with the Stormwater Management standards. The comments also note DCR's commitment to meet the standards in its NPDES General Permit for Storm Water Discharges from Small Municipal Separate Storm Sewer (MS4s – Permit No. MAR 43001). While I acknowledge MassDEP NERO's concerns regarding the lack of a complete evaluation of the stormwater management system and a demonstration of compliance with applicable stormwater standards in the EENF, I am confident that DCR will incorporate a high level of stormwater management along the corridor. Specifically, stormwater must be appropriately managed in sensitive environmental areas such as ORWs, vernal pools, and rare and endangered species habitat. DCR's letter of clarification indicates that because pollutants associated with vehicles, sanding, de-icing and other treatment for winter use will not be present along the corridor, the project will not result in a discharge of pollutants in stormwater. As a condition of the DROD, I am requiring DCR to provide supplemental stormwater information to MEPA and commenters by February 5, 2014.

I strongly encourage DCR to incorporate commitments to sustainable design elements such as solar powered lighting and signage. Because the project is at a conceptual design stage, there are ample opportunities to incorporate renewable energy technology, energy efficiency and Low Impact Development (LID) techniques into the site design. LID techniques incorporate stormwater best management practices (BMPs) and can reduce impacts to land and water resources by conserving natural systems and hydrologic functions. The primary tools of LID are landscaping features and naturally vegetated areas such as bioretention/raingardens, which

encourage detention, infiltration and filtration of stormwater on-site. DCR should consider measures to reduce the amount of new impervious area through the use of porous paving materials on some portions of the trail.

Bridge Rehabilitation

DCR prepared a study, the Mass Central Rail Trail Evaluation of Existing Bridges, Wayside Branch – Waltham to Berlin (2013), to determine the structural integrity of 10 existing bridges along the project corridor. Based on this evaluation, the bridges were recommended for rehabilitation or replacement. The EENF describes proposed bridge rehabilitation. The EENF indicates that five timber bridges were recommended for rehabilitation or replacement.

MassDEP NERO comments indicate that floodway and floodway encroachment, and hydraulic impacts within wetland resource areas were not considered in the EENF. DCR's letter of clarification indicates that while bridge designs have not yet been developed, the general approach for bridges over water is to replace the superstructure with a 14-foot wide deck, retaining the existing timber pilings. In some cases, individual pilings will require removal and new pilings will be driven. DCR claims that driving pilings does not constitute "fill" with respect to Sections 404 or 401 of the federal Clean Water Act and does not require Water Quality Certification. If the bridge pilings are severely deteriorated, a new bridge may be required with a clear span across the waterway. The bridges would also all require reconstruction of the backwall and wingwall of the abutments to support the new superstructure. New abutments will be set back from the edge of water and this reconstruction will not affect Bank or LUWW. During bridge design, DCR should consider the impacts of the bridges within the 100-year floodplain and regulatory floodway to address potential deficiencies and remove hydraulic restrictions.

I strongly encourage DCR to consult with MassDEP to identify mitigation measures for adverse impacts resulting from bridge-related construction activities. MassDEP NERO advises DCR that replaced stream crossings should be designed to conform to the Massachusetts Stream Crossing Standards.

Chapter 91

According to the EENF, a c.91 Waterways License is required for the rehabilitation and reuse of bridges located over navigable waters. Potential navigable waters the project will cross include: Hogg Brook in Berlin/Hudson; Assabet River and Fort Meadow Brook in Hudson; Hop Brook, Wash Brook, and Dudley Brook in Sudbury; Sudbury River, Mill Brook, and Hayward Brook in Wayland; Cherry Brook and Stony Brook in Weston; Chester Brook and Beaver Brook in Waltham. These waterways are either bridged or conveyed in a culvert beneath the existing railroad embankment. Waterways regulations (310 CMR 9.04 and 9.05) require a c.91 license for any maintenance or repair of structures, and any change in use of structures in non-tidal navigable rivers or streams. Several of the navigable river and stream crossings will require c.91 Licenses, in particular, the Sudbury and Assabet River crossings for reuse and change of use from a railroad bridge to a public rail trail use.

Public Shade Tree Removal

The project will include removal of trees that are more than 14 inches in diameter at breast height (DBH), as well as the selective removal of trees at bridge and culvert locations, and other areas along the project corridor. DCR should explore options to retain as many healthy trees as practicable. DCR should work with the MBTA and the municipalities to evaluate additional tree protection using tree wells and other protective measures. I encourage DCR to minimize vegetation removal and, where feasible, to replace trees on-site. Where mitigation on-site is not feasible, DCR should consult with the Conservation Commissions to identify other areas where tree planting may be beneficial, and identify appropriate mitigation for vegetation removal in resource areas. DCR should continue to modify the project design where feasible to maintain as many mature healthy trees as possible along the route.

DCR indicates that a Vegetation Management Plan (VMP) will be developed and implemented. The VMP should include a maintenance and monitoring plan to ensure that tree planting efforts are successful. I expect that issues relating to vegetation removal in wetlands resource area, as well as replanting and other mitigation measures will be addressed during local review and permitting by the Conservation Commissions. The VMP will discuss the control of invasive species. DCR will use only native species for revegetation and enhancement.

Rare Species

As described in the EENF, according to the most recent addition of the Massachusetts NHESP atlas (2008), segments of the project corridor are located within three areas of *Priority* and *Estimated Habitat* for eight state-listed rare species. The state-listed species known to occur in the vicinity of the project corridor include the Blandings Turtle (Threatened), Wood Turtle (Special Concern), Eastern Box Turtle (Special Concern), Blue-Spotted Salamander (Special Concern), American Bittern (Endangered bird), Common Moorhen (bird of Special Concern), Least Bittern (Endangered bird), and Pied-Billed Grebe (Endangered bird). The rare species and their habitats are regulated pursuant to the implementing regulations of MESA (MGL c131A, 321 CMR 10.00).

The EENF indicates that the project is not anticipated to affect the habitat of the four bird species, that occupy deep-water marshes and open water habitats, as the project will not alter these wetland types. The former railroad ROW has the potential to provide nesting habitat for the three listed turtle species. DCR will continue to coordinate with NHESP to avoid and minimize impacts to these habitats, and mitigate any potential unavoidable impacts during construction and operation of the project.

Comments from NHESP indicate that the project will require review for compliance with MESA and its implementing regulations (321 CMR 10.14 and 10.18) and/or the rare species provisions of the WPA regulations (310 CMR 10.37 and 10.59) for activities that are not otherwise exempt. While NHESP supports the removal and proper disposal of the existing rail road tracks and ties, it notes that the effects of increased human use, impervious surface, and potential clearing/grading of rare species habitats should also be considered during the planning process and avoided and minimized to the greatest extent possible. As a condition of the Waiver,

DCR will provide an assessment of potential impacts to state-listed species in filings for review pursuant to MESA, will initiate pre-filing consultations with NHESP as soon as possible in order to inform this assessment.

Greenhouse Gas (GHG) Emissions

The project is subject to the MEPA GHG Policy (revised May 5, 2010) because it exceeds thresholds for a mandatory EIR. The Policy contains a de minimus exemption for projects that will produce minimal amounts of GHG emissions. This is a rail trail project promoting bicycle and pedestrian uses. It does not include construction of buildings nor will it generate a significant number of vehicle trips. GHG emissions are associated primarily with the construction period of the project. Because it does not appear that this project will create a significant source of emissions, I am declining to require a quantitative GHG analysis and mitigation plan. However, I encourage DCR to incorporate measures to avoid and minimize GHG emissions (and other air pollutants) during the construction period such as limiting idling and using bio-fuels in off-road construction equipment.

Water Resources

According to comments from MassDEP NERO, the project will cross Cherry Brook in Weston and Stony Brook in Weston/Waltham which are both designated as Class A ORWs because they are tributaries to the active public water supplies of Stony Brook Reservoir and Cambridge Reservoir. The project also passes through the Zone A associated with both surface waters. DCR should ensure the project is designed to protect public water supplies and ORWs including vernal pools. Because DCR is applying for coverage under the NPDES CGP, it also requires compliance with Massachusetts' statutory and regulatory provisions that protect and control pollutant discharges to ORWs. Comments from MassDEP indicate that it must determine whether the activities taking place during construction near Cherry and Stony Brooks have adequate stormwater pollution prevention measures and controls that will avoid or minimize stormwater discharge of pollutants to the protected resources. DCR is required to submit an application of BRP WM 09 – Approval of NPDES Stormwater Pollution Prevention Plan (SWPPP) for Construction or Industrial General Permits Discharging to ORWs to MassDEP. The review of this information will assist MassDEP in determining whether additional stormwater measures will be required to protect ORWs during construction.

According to the EENF, the project will cross five impaired waterbodies listed in MassDEP's 2012 Integrated List of Waters as Category 5, which are waters where a total maximum daily load (TMDL) has been developed for listed pollutants. Phosphorus is a pollutant of concern for four of the five waterbodies including the Assabet River, Hop Brook, Hop Brook/Wash Brook, and Beaver Brook. MassDEP advises DCR to include in its SWPPP the CGP requirements for discharges of stormwater to sediment or nutrient-impaired waters.

According to comments from the MWRA, Section 8 (m) of Chapter 372 of the Acts of 1984, MWRA's Enabling Legislation, allows it to issue permits to build, construct, excavate, or cross within or near an easement or other property interest held by the MWRA. The project likely requires a Section 8 (m) Permit from the MWRA because it will cross its water line

Section W10 at Beaver Street and Linden Street in Waltham. I encourage DCR to consult with MWRA for permitting assistance early in the design process. I refer DCR to MWRA's comment letter for more permitting information on the MWRA Aqueducts Program, which is a new policy authorizing public access along certain ROW at four inactive water supply aqueducts including the Sudbury, Weston, Cochituate, and Wachusett Aqueducts.

Transportation

The project requires an Access Permit from MassDOT because it will cross state highways including Route 20, I-495, and I-95. The project will cross over 40 roadways and the Assabet River Rail Trail. The EENF describes potential improvements for the roadway crossings. DCR should work with the eight municipalities and the Metropolitan Area Planning Council (MAPC) to design these improvements and investigate additional mitigation. No parking is proposed; however, parking areas adjacent to the corridor are identified.

Historic and Archaeological Resources

According to the EENF, a cultural resources assessment (*Proposed Mass Central Rail Trail: Cultural Resources Assessment*) was performed in order to assess historic and archaeological resources within 0.25 miles of the MCRT corridor (the Area of Potential Affect (APE)). The assessment identified seven individual resources listed in the State and National Registers of Historic Places (except where noted) including: the Goodale Homestead in Hudson; the Boston and Maine (B&M) Railroad Section Tool House in Sudbury (only State Register-listed); the First Free Public Library Marker, the Wayland Railroad Station, and the Central Massachusetts Railroad Freight House (only State Register-listed) in Wayland; and the Theodore Lyman House, Vale Estate and the Linden Street Railroad Bridge in Waltham. The assessment identified 23 resources in the Inventory of Historic and Archaeological Assets of the Commonwealth including ten previously inventoried railroad bridges that will be reused by the project. Potential impacts to State Register-listed individual properties and inventoried resources are anticipated to be minimal as the construction of the project will not physically alter the resources, with the exception of the 11 bridges that are recommended for rehabilitation based on their deteriorated condition.

The assessment identified six districts listed in the State and National Registers (except where noted) including: the Wayside Inn Historic District, the Peakham-Southwest District (local historic district and State-Register listed), and the George Pitts Tavern Historic District (local historic district and State-Register listed) in Sudbury; the Wayland Center Historic District and the Wayland Center Local Historic District (local district and State-Register listed) in Wayland; and the Boston Post Road Historic District in Weston. Construction of the project is not expected to alter the historic character of the historic districts. The project will serve to educate the public about these historic districts such as the use of interpretive signage, as they are potential destinations and access points for the shared-use path.

The assessment identified 16 previously reported archaeological sites within 0.25 miles of the centerline of the ROW. DCR prepared a preliminary determination of additional areas of sensitivity for both ancient Native American and historic period archaeological sites adjacent to

the corridor. Construction of the project will not affect any identified areas of archaeological sensitivity due to the shallow depth of construction entirely within the old railroad ballast and subgrade areas.

The comment letter submitted by MHC on the EENF requested additional information to allow MHC to comment on the APE, eligibility opinions, and to determine what effect, if any, the proposed project may have on any significant historic or archaeological resources to assist in compliance with Section 106 of the National Historic Preservation Act of 1966, as amended (36 CFR 800) and M.G.L. c.9, Sections 26-27C (950 CMR 71.00). The MHC comment letter also provided comment and guidance to assist DCR with MHC review including the consideration of additional resources in the project APE, compliance with the Secretary of the Interior's Standards and Guidelines for Rehabilitation as it relates to the repair/rehabilitation of significant bridges, and extant railroad-related historic archaeological resources. DCR should consult with MHC early during project design to ensure that the project does not result in adverse impacts to state-listed historic and archeological resources. Additional information should be sent concurrently to MHC, ACOE, the local historical commissions, and the local historic district commissions. DCR should coordinate with MHC to respond to its request for an archaeological reconnaissance survey and associated survey parameters as outlined in the EENF comment letter. The results of surveys and other related data should be provided in a manner consistent with the MHC comment letter.

I acknowledge comments from the Wayland Historical Commission and the Wayland Historic District Commission that outline concerns regarding the historical significance of the rails within each railroad center (historical districts). I expect DCR will consider their requests to preserve certain railroad components such as rails (e.g. side rails) and other track features, and to ensure the protection of individual items directly adjacent to the rails during project construction.

Construction Period

The project must comply with MassDEP Solid Waste and Air Pollution Control regulations, pursuant to M.G.L. c.40, s.54 during construction and demolition. All construction and demolition activities should be undertaken in compliance with the conditions of all State and local permits. DCR should evaluate construction period impacts, including erosion and sedimentation, air quality and solid waste disposal, and strive to minimize construction impacts (including but not limited to land disturbance, noise, dust, odor nuisance, vehicle emissions, construction and demolition debris, and construction-related traffic) and consider feasible measures that can be implemented to eliminate or minimize these impacts. The project requires the preparation of a SWPPP in accordance with the NPDES CGP to control erosion and sedimentation during the construction period.

DCR should seek guidance from MassDEP on how to limit the impacts of demolition and construction activities through waste management and recycling efforts. I strongly encourage DCR to consult with MassDEP and review its recommendations and adopt practices to the maximum extent practicable. The former railroad ties and rails along the majority of the alignment will be removed before trail construction. The existing steel rail will be recovered and

recycled. The ties are impregnated with creosote and cannot be recycled and will be properly disposed.

DCR construction specifications will stipulate the use the ultra-low sulfur fuel in construction equipment with necessary engine modifications in accordance with the MassCleanDiesel Program. DCR is advised that if oil and/or hazardous material are identified during the implementation of this project, notification pursuant to the Massachusetts Contingency Plan (310 CMR 40.0000) must be made to MassDEP, if necessary.

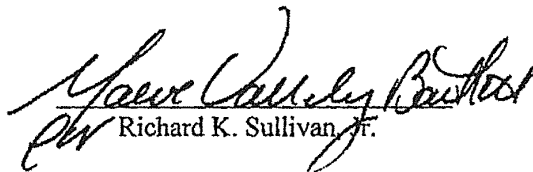
Conclusion

Based on a review of the information provided by DCR and after consultation with the relevant public agencies, I find that the potential impacts of this project do not warrant further MEPA review. Outstanding issues may be addressed during permitting.

I have also issued today a DROD proposing to grant a Waiver from the requirement to prepare an EIR for the project. The DROD will be published in the next edition of the Environmental Monitor on January 22, 2014 in accordance with 301 CMR 11.15(2), which begins the public comment period. The public comment period lasts for 14 days and will end on February 5, 2014. Based on written comments received concerning the DROD, I shall issue a Final Record of Decision or a Scope within seven days after the close of the public comment period, in accordance with 301 CMR 11.15(6). If the Waiver is not approved, based on comments received on the DROD, then this Certificate will be re-issued with a Scope for an EIR.

January 10, 2014

Date


Richard K. Sullivan, Jr.

Comments Received

12/06/2013	Massachusetts Natural Heritage and Endangered Species Program
12/06/2013	Massachusetts Historical Commission
12/13/2013	Massachusetts Department of Environmental Protection – CERO
12/31/2013	Massachusetts Department of Environmental Protection – NERO
12/20/2013	Massachusetts Water Resources Authority
12/31/2013	Metropolitan Area Planning Council
12/27/2013	Bolton Conservation Commission
12/06/2013	Stow Conservation Commission
12/17/2013	Sudbury Conservation Commission
12/17/2013	Wayland Board of Selectmen (submitted from three separate commenters)
12/26/2013	Wayland Historic District Commission
12/30/2013	Wayland Historical Commission
12/30/2013	Wayland Conservation Commission
12/27/2013	Weston Conservation Commission
12/13/2013	Larry Kiernan, Wayland Representative – Mass Central Rail Trail Coalition
12/18/2013	WalkBoston

EEA# 15123

EENF Certificate

January 10, 2014

12/27/2013	Mass Centrail Rail Trail Coalition
12/31/2013	Friends of the Community Path
12/05/2013	Eli Horowitz
12/18/2013	Lydia Rogers
12/19/2013	Leonard Simon (1)
12/28/2013	Linda Segal
12/31/2013	Alice Boelter
12/31/2013	Richard Williamson
01/07/2014	Leonard Simon (2)
01/09/2014	Massachusetts Department of Conservation Letter of Clarification

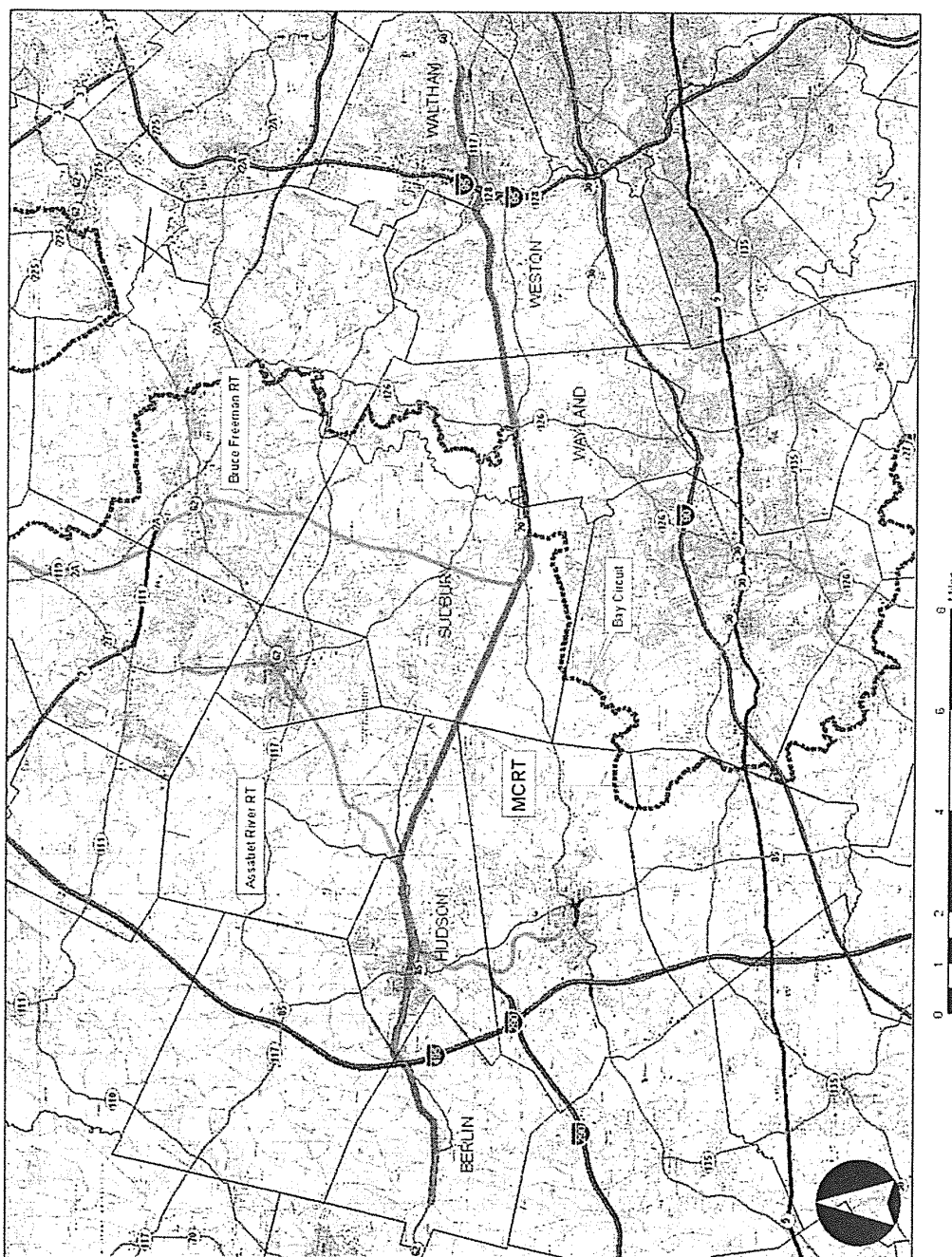
RKS/PPP/ppp

Mass Central Rail Trail - Waltham to Berlin Section

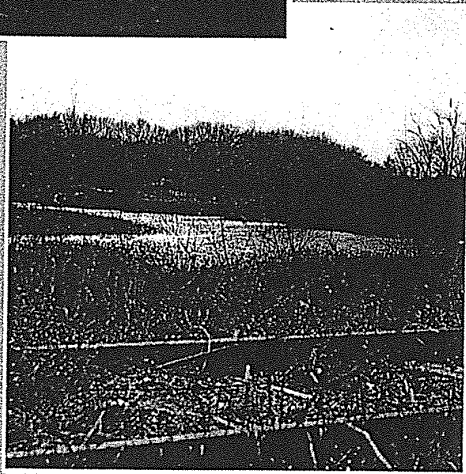
- Legend**
- IMA Towns, Solid Outline
 - Major Roads**
 - Road Classification**
 - Limited Access Highway
 - Multi-lane Hwy, not limited access
 - Other Numbered Highway
 - Bay Circuit Trail
 - Buze Freeman RT
 - Assabet River RT
 - MCRT - MBTA Corridor



For planning purposes only
Data from MASSGIS, DCR, EOT Val Maps,



Central Massachusetts Rail Trail Feasibility Study



A report produced by the Central Transportation Planning Staff for the Massachusetts Turnpike Authority

Central Massachusetts Rail Trail Feasibility Study

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Cover photographs, top to bottom:

- 1. Walkway over Bruce Pond, Hudson.*
- 2. Looking east to Union Avenue, former Sudbury Station on the right, Lowell-Sudbury junction in foreground.*
- 3. View of Great Meadows National Wildlife Refuge, southwest of Central Mass. crossing of Route 20, Wayland.*

Background photo: Central Mass. bridge over Linden Street (Route 60), Waltham.

Photographs by C. Lewis.

The preparation of this document was supported by the Massachusetts Turnpike Authority through MTA Contract #96-13.

Central Transportation Planning Staff

Directed by the Boston Metropolitan Planning Organization. The MPO is composed of state and regional agencies and authorities, and local governments.

April 1997

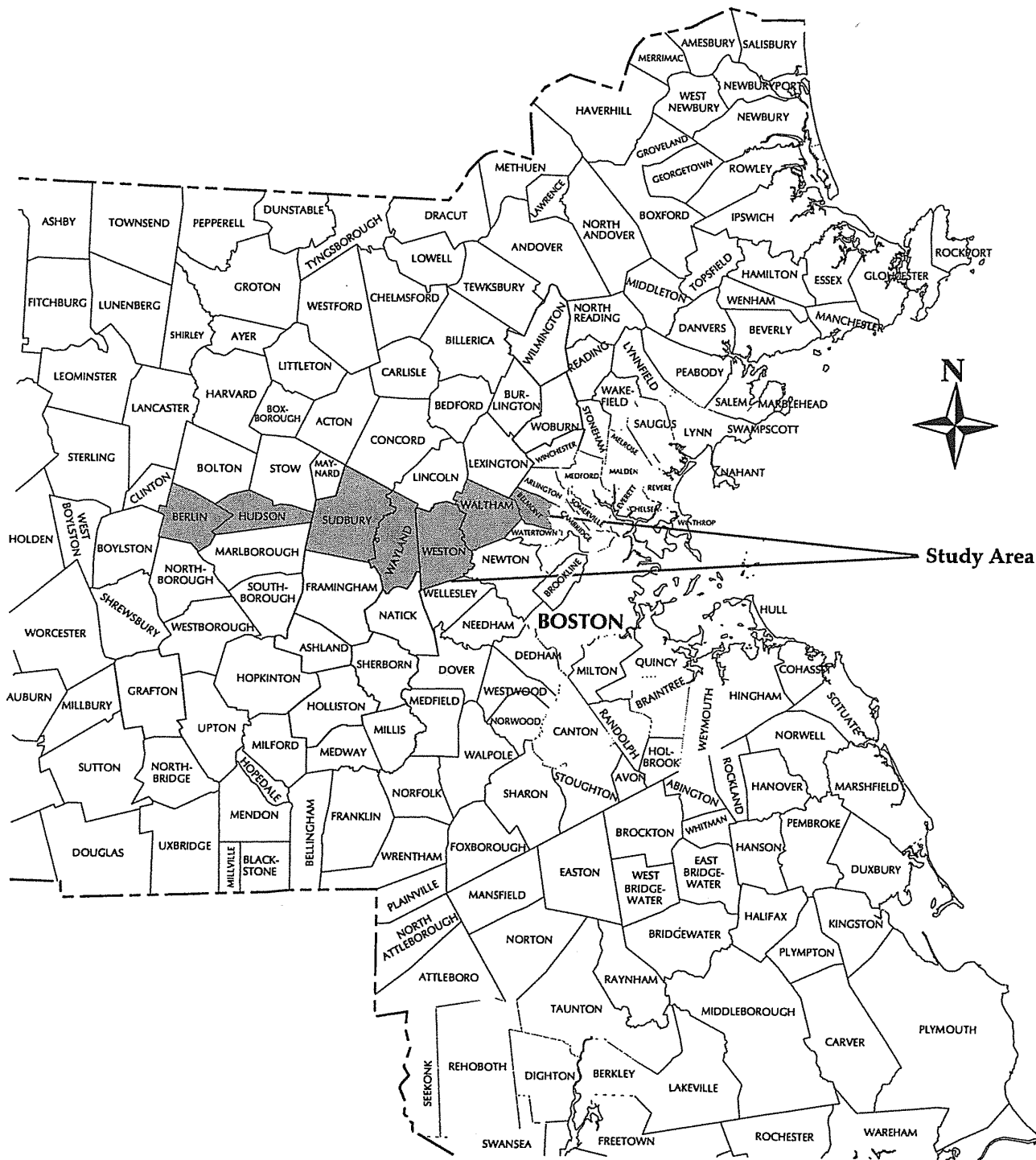


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Executive Summary

This is a study to determine if it is feasible to build a trail on the Central Massachusetts (Mass.) Railroad right-of-way. The conclusion of the study is that it is feasible to build this facility.

The Central Mass. right-of-way, located west of Boston, is owned by the Massachusetts Bay Transportation Authority (MBTA) from Beaver Street in Waltham to just east of Coburn Road in Berlin, a length of 23 miles. Originally extending from Boston to Northampton, the rail line carried both passenger and freight service and is now abandoned. The western end in Northampton is owned by the Department of Environmental Management (DEM) and has become the Norwottuck Rail Trail.

This rail trail would be a major asset for the seven communities involved, as well as for surrounding towns. It provides access to many schools, residential, employment, and recreation areas. The Central Mass. right-of-way crosses two other proposed trails: (1) the Assabet River Rail Trail in Hudson and (2) the Lowell-Sudbury Rail Trail in Sudbury. With connections through Belmont, users could reach the Minuteman Commuter Bicycle Path. Work is underway to connect the Minuteman to the Charles River path system.

The Central Mass. Rail Trail would pass near several commuter rail stations on the Fitchburg/Gardner line, including Hastings, Brandeis/Roberts, Waltham, and Waverley. The trail would also pass near the proposed Weston station on the Framingham/Worcester line, as well as provide access to express bus stops of private companies.

The character of the trail varies along the twenty-three mile right-of-way. It is of a more urban character in Waltham and Hudson, passing just north of both downtowns. It is more rural in the other communities, with adjacent land uses varying from sparse residential and commercial to vast open spaces such as the Great Meadows National Wildlife Refuge in Wayland and Sudbury. Some sections of the trail would attract more pedestrians, bicyclists and skaters than other sections. It is apparent that equestrian use would be popular in some of the more rural sections of the trail. The design of the trail would reflect these expected uses.

Preliminary estimates of costs are about \$50,000 a year for policing and maintenance. This maintenance and policing cost would be shared among

the seven study area communities and works out to an estimated per capita cost of about \$0.35. The estimated design cost is \$700,000 to one million dollars; the estimated construction cost is seven to ten million dollars. The design and construction costs are anticipated to be state or a combination of state and federal funds.

The next step is for each community to decide whether or not to support a trail by agreeing to police and maintain it within its boundaries. Lease arrangements would then be established with the right-of-way owner, the MBTA, and applications for design funds would be made.

There is extensive public review by state, regional, and local officials, and citizens in the design stage. It is during the design stage that detailed decisions on the trail are made. The outcome of the design process would be an engineering plan showing the entire proposed trail, including width, sign locations, benches, etc. A detailed construction estimate would be included, although the actual construction cost would be determined when the project is bid. The lowest responsible bidder would be awarded the construction contract.

Introduction

This study of a potential trail on the Central Massachusetts railroad right-of-way (commonly referred to as the Central Mass.) was requested by the seven study-area communities through the Metropolitan Area Planning Council (MAPC) and the Central Massachusetts Regional Planning Commission (CMRPC). The study was funded by the Massachusetts Turnpike Authority (MTA) through its Public Works and Tourism Grant Program. The section of the Central Mass. examined in this study is an abandoned rail line between Berlin and Waltham that is owned by the Massachusetts Bay Transportation Authority (MBTA).

An advisory committee composed of representatives from communities, agencies, and organizations met during this study. The communities through which the proposed trail passes are Berlin, Hudson, Sudbury, Wayland, Weston, Waltham, and Belmont. Communities close to the proposed trail and having an interest in the outcome also appointed representatives (Marlborough and Stow). Agencies that appointed representatives included the Executive Office of Transportation and Construction (EOTC)/Bureau of Transportation Planning and Development (BTP&D), CMRPC, MAPC, and MBTA. The Sudbury Valley Trustees (SVT) also appointed a representative. The following individuals were appointed to the advisory committee:

Berlin	Preston Turner
Hudson	Michael Volk
Sudbury	Dan Buttner
Wayland	Ed Wallner
Weston	Ken Hablow
Waltham	Ron Vokey, Dana Burghdoff
Belmont	Jeffrey Wheeler
Marlborough	Mark Geoffrey
Stow	Roger Duchesneau
EOTC/BTP&D	Josh Lehman
CMRPC	Richard Rydant
MAPC	Joan Blaustein
MBTA	Erik Scheier
SVT	Whitney Beales

Individuals who helped with various aspects of this study include Daniel O'Brien and Leslie Luchonek of the Department of Environmental Management and Sergeant Eric Anderson of the Massachusetts State Police. Input was also received from citizens attending five public meetings, held in October 1996-February 1997 in Wayland (October 9), Waltham (November 6), Sudbury (December 4), Weston (January 30), and Hudson (February 12). It is estimated that over 400 citizens attended these meetings.

Chapter 1 of this report presents background information on the study area, including demographics, travel patterns, public transportation services, and bicycle and pedestrian accident data. Chapter 2 provides information regarding the Central Mass. right-of-way, including history of rail service, description of the right-of-way, details on width, environmental issues, and current uses of the right-of-way. Chapter 3 discusses the proposed trail, including types of users and estimated demand, street crossings, potential destinations, possible Belmont connections, parking, and costs. The final chapter includes recommendations.

This study is the first step towards the construction of a Central Mass. trail. Copies of the study are being sent to state, regional, and local officials and staff in the study area communities. Multiple copies are being sent to area libraries as well.

1 Existing Conditions

This chapter gives background information about the study area, including population and population density, transportation modes used to go to work by area residents, public transportation services, and bicycle and pedestrian accident data. The study area is indicated in Figure 1.

A Demographics

Table 1 indicates the 1990 population of the seven study-area communities. Also included in the table are the land area of each community, its resultant population density, and the number of people who are employed in each town (some of whom may live elsewhere).

Table 1
Population, Land Area, Population Density,
and Employment by Community, 1990

	1990 Population	Land Area (sq. mi.)	Pop. Density	1990 Employment
Berlin	2,293	12.93	177	478
Hudson	17,233	11.50	1,498	9,364
Sudbury	14,358	24.37	589	6,111
Wayland	11,874	15.23	780	8,389
Weston	10,200	17.02	599	8,364
Waltham	57,878	12.70	4,559	57,749
Belmont	24,720	4.66	5,310	7,275
Total	138,556	98.41	1,408	97,730

Source: 1990 U.S. Census

The study area ranges from urban to rural, with the highest population densities in the east towards Boston and the lowest at the western end of the right-of-way. The two most densely populated communities are Belmont and Waltham, with over 4,500 residents per square mile. Hudson has about 1,500 people per square mile, and Sudbury, Wayland, and Weston are all around 600-800 people per square mile. Berlin is by far the most sparsely populated town in the study area, at less than 200 people per square mile.

**Figure 1
Study Area**

**Central Massachusetts
Rail Trail Feasibility Study**

Legend

- Central Massachusetts Right-of-Way
- Minuteman Commuter Bikeway
- Proposed Trails
- Railroads

Scale

1 inch = 17,664 feet (3.31 miles)

Miles 1 2 3 4 5

Waltham has by far the largest number of employees, with about 60 percent of the total employment of the study area. The number who live in Waltham is about the same as the number who work there. Only Wayland and Weston have almost as many people who work there as who reside there.

Table 2 indicates the modes of transportation that residents of the study area use for commuting. As can be seen, of the almost 75,000 resident workers, the overwhelming majority drive alone. Almost 7,000, or less than 10 percent, carpool. Less than 5,000 use some type of transit. Interestingly, about the same volume who use transit are walking or bicycling. These numbers underline the fact that workers in the study area are very dependent on the motor vehicle.

Table 2
Transportation Modes Used to Get to Work,
by Community, 1990

	All Workers: 16+	Drive Alone	Carpool	Transit*	Bicycle/Walk	Other**
Berlin	1,282	1,062	110	3	26	4
Hudson	9,602	7,956	1,157	56	209	51
Sudbury	7,813	6,629	445	148	140	41
Wayland	6,282	5,223	381	226	96	14
Weston	5,049	3,734	252	331	236	27
Waltham	31,830	22,740	3,425	1,828	3,078	268
Belmont	12,915	9,079	1,198	1,642	446	84
Total	74,773	56,423	6,968	4,234	4,231	489

Source: 1990 U.S. Census

*Includes: bus, streetcar, subway, commuter rail

**Includes: taxi, motorbike, "other"

It should be noted that these census numbers are estimates based on a sample questionnaire. Only workers over 16 years of age are included. All students, including those over 16, are excluded. Inclusion of students would increase the overall bicycle share. These are census data which are collected in early spring, when, according to metropolitan Boston counts, bicycle volumes are about one quarter of the peak volumes. It is not known what the seasonal variations are for pedestrians, but pedestrian volumes are assumed to be less variable than bicycle volumes. Also, the census questionnaire asks for the mode used for the longest part of the trip to work. A trip involving a two-mile bicycle trip to a rail station, a five-mile train trip, and a half-mile walk to the office would be classified as a rail trip.

Table 3 indicates both the number and percentage of resident workers over the age of 16 who bicycle and walk to work. The percentage of those who

walk to work is between 1.3 percent and 4.7 percent, except in Waltham, where 9.2 percent of the residents walk to work. In each community, many more people walk than bicycle to work. The percentage bicycling to work varies from zero in Weston¹ to 0.62 in Waltham and 0.63 in Belmont.

Table 3
Number and Percentage Bicycling and Walking to Work,
by Community, 1990

	Bicycling		Walking	
	#	%	#	%
Berlin	2	0.16	24	1.9
Hudson	18	0.19	191	2.0
Sudbury	6	0.01	134	1.7
Wayland	16	0.25	80	1.3
Weston	0	0.00	236	4.7
Waltham	140	0.62	2,938	9.2
Belmont	81	0.63	365	2.8
Total/Average	263	0.27	3,968	3.4

Source: 1990 U.S. Census Journey-to-Work Data

It is clear that the Waltham and Belmont portions of the proposed trail would be more heavily used for commuting purposes than the other sections, due to the population density, the concentration of employment, and the number of people who already walk or bicycle to work.

The fact that few people bicycle to work does not mean that a trail in this area would not be used. This trail would be expected to attract many bicyclists, walkers, and skaters. Furthermore, one of the reasons people do not bicycle to work is that many people fear sharing the street system with motor vehicles. It is expected that if this trail were built, there would not only be commuters using it to reach their workplace or transit connection, but others who, by using the trail for other purposes, would become more experienced bicyclists and more apt to venture onto the streets for utilitarian trips.

The fact that few people bicycle to work could mean many things. First, many roads in communities such as Weston, Wayland, and Sudbury are narrow, winding, and heavily used by motorists. Data collected in this study indicate that motorists often exceed speed limits, increasing the potential for accidents.² While there are many people who do bicycle exclusively on the

¹ There are probably people in Weston who bicycle to work. Either none of them received the longer form of the census, or none of them bicycled to work the day they filled in the questionnaire.

² Actual motor-vehicle speeds were measured at many intersections along the right-of-way. Results are shown in Table E-1.

road system, many others find our transportation system daunting without an automobile.

B Public Transportation

One way that a Central Mass. trail could be used would be to provide access to public transportation. The MBTA and two private carriers serve the study area. MBTA service is provided on the Fitchburg/South Acton commuter rail line, trackless trolley, and express and local bus services. Public transportation service by community is as follows:

Berlin: There is no public transit.

Hudson: There is private-carrier bus service to Boston. Gulbankian Bus Lines has three round-trips that leave from the library and go into Boston, weekdays only. Bicycles are not allowed on the buses.

Sudbury: A Cavalier bus makes two stops on Route 20 in Sudbury. The one daily round-trip leaves at about 7:10 A.M. and returns around 6:20 P.M. Bicycles may be allowed in the luggage compartment, if there is room, at the discretion of the driver.

Wayland: The same Cavalier bus makes one stop in Wayland on Route 20 (about 7:15 A.M. heading to Boston and returning about 6:15 P.M.).

Weston: The Fitchburg/South Acton commuter rail line has two stops in Weston: Kendall Green and (limited service) Hastings. The commuter rail runs about every 45 minutes during peak periods and every two hours during midday and evening hours. There is limited service on weekends and holidays. A Cavalier bus is scheduled to stop at the old Weston Library at 7:25 A.M. and to return at 6:05 P.M.

Waltham: The Fitchburg/South Acton commuter rail line has two stops in Waltham: Waltham (Central Square) and Brandeis/Roberts. The frequency of stops is higher in Waltham than in Weston. There are also express MBTA buses from Central Square to Boston. There is local MBTA bus service that leaves Central Square and goes to Waverley, Waltham Highlands, and Newton Corner.

Belmont: The Fitchburg/South Acton commuter rail line makes two stops in Belmont: Waverley and Belmont Center. There is no express bus from Belmont, but there are a number of local routes. There are two MBTA bus routes from Belmont Center to Harvard Square in Cambridge, as well as frequent trolley service from Waverley to Harvard Square. There is also bus service from Waverley to Central Square in Waltham.

Bicycles are allowed during off-peak hours on all commuter rail lines, provided the bicyclist has obtained a permit from the MBTA. This permit allows bicycle access on all inbound commuter rail trains after the morning peak and on all outbound trains except during the evening peak. Bicycles are allowed on three rapid transit lines (no access on the Green Line) on weekdays between 10:00 A.M. and 2:00 P.M., and after 7:30 P.M., and all day Saturdays and Sundays. There is no bicycle access on MBTA buses.

C Accident Data

Accident data discussed here include crashes that have occurred between motor vehicles and either bicyclists or pedestrians. These accidents have occurred on the road system, on sidewalks, or in parking lots. There are two primary reasons to include these data in this study. The first reason is to determine whether there are high-accident locations that would be affected by the construction of a Central Mass. trail. (The construction of the Central Mass. rail trail would result in some bicycle and pedestrian trips switching to the trail from the local roads.) The second reason is to provide an overview so that elected officials and staff and citizens can use this information for their community planning.

The accident data discussed in this report were obtained from MassHighway, which in turn obtained the data from the Massachusetts Registry of Motor Vehicles. These 1988 through 1991 data are the most recent that have bicycle and pedestrian accidents separate from crashes involving motor vehicles only. The data are limited in two important ways. First, for many of the reported accidents there is not complete information, especially regarding location. Second, many accidents are not reported, especially bicycle accidents that involve falls but do not involve impact with a motor vehicle.

Table 4 shows the number of bicycle and pedestrian accidents over the four year period, by community, and the rate per thousand residents. The largest number of bicycle as well as pedestrian accidents occurs in Waltham. The total 107 bicycle accidents in Waltham is more than twice that in Belmont, more than three times that in Hudson, five times that in Sudbury and in Wayland, and ten times that in Weston. With respect to population, Waltham has the highest accident rate involving bicycles, at 1.84 accidents per thousand residents. Hudson and Belmont are close behind with 1.68 and 1.62, respectively. Wayland, Sudbury, and Weston had 1.43, 1.18, and 0.98, respectively. Berlin was the lowest, at 0.44 bicycle accidents per 1,000 residents.

In regard to pedestrian accidents, Waltham had 163, with Belmont at a distant second with 30. Hudson had 19 pedestrian accidents and Weston, Wayland, and Sudbury had 13, 8, and 7, respectively. In Berlin there was only one bicycle accident and zero pedestrian accidents. In the entire study area, for these four years, there were 7 pedestrian fatalities and 1 bicycle fatality.

Table 4
Number of Bicycle and Pedestrian Accidents,
by Community, per One Thousand Residents,
1988-1991 Inclusive

	1990 Population	# Bicycle Accidents	Bicycle Accidents per 1,000	# Pedestrian Accidents	Pedestrian Accidents per 1,000	Fatalities	
						Bicycle	Pedestrian
Berlin	2,293	1	0.44	0	0.00	0	0
Hudson	17,233	29	1.68	19	1.10	1	2
Sudbury	14,358	17	1.18	7	0.49	0	0
Wayland	11,874	17	1.43	8	0.67	0	0
Weston	10,200	10	0.98	13	1.27	0	0
Waltham	57,878	107	1.84	163	2.82	0	3
Belmont	24,720	40	1.62	30	1.21	0	2
Total	138,556	221	1.60	240	1.73	1	7
Massachusetts	6,016,425	5,761	0.96	10,632	1.77	34	376

Sources: 1990 U.S. Census (population); Mass. Registry of Motor Vehicles (accidents).

There is not enough information to determine why certain communities have higher rates of accidents than others. Possible explanations are higher levels of motor-vehicle traffic and more walking and bicycling. "Exposure rates," which take these volumes into account and indicate the number of accidents per given level of traffic, are not determined for this study. If available, they would highlight areas that have particularly high numbers of accidents due to factors other than high levels of traffic. These other factors include, but are not limited to, excessive speed, disregard of traffic controls, lack of space for pedestrians and bicyclists, and poor sight distance.

To determine specific areas where accidents were concentrated, the accidents for the years 1988 through 1991 were mapped by community. These are shown in Appendix A. The reader is reminded that many accidents are not shown on the maps because insufficient information was provided in the accident report regarding location.

There were no at-grade crossings of the Central Mass. right-of-way that had a high number of accidents. There are two areas with high numbers of accidents where diversion of trips to the Central Mass. might have a beneficial effect. These are in Hudson and in Waltham. There are many accidents along Main Street in Hudson and on Main Street in Waltham. These roads are both close to and parallel with the Central Mass. Counts taken in Lexington after the Minuteman was built found that bicycle volumes were much lower on Massachusetts Avenue than they had been before the bikeway was there, implying that many bicycle trips had been diverted to the bikeway.

2 The Central Mass. Right-of-Way

This chapter includes a brief history of rail service, followed by a physical description of the corridor including adjacent land use and the width of the right-of-way. The chapter ends with a discussion of environmental issues and current uses.

A History of Rail Service

In 1869, the Massachusetts Central Railroad began construction of the Central Mass. line. Service began between Hudson and Boston in 1881, and a year later was extended west through Berlin and Clinton to Holden. In 1887, the line reached its maximum length, extending from Boston to Northampton.³ As a result of corporate mergers and leases, by 1900 the Central Mass. had become part of the Boston & Maine Railroad.

Passenger service on the Central Mass. peaked in 1903 with fourteen round trips per day. A series of cutbacks on passenger service ensued. By 1958, the outer limit of passenger service was cut back to Hudson and frequency was reduced to two round-trips a day. By 1959, service was reduced to a single round-trip per day, and by 1965, service only went as far west as South Sudbury. In 1968, passenger counts averaged 77 riders a day (weekday inbound). In 1971, passenger service ended, due to deteriorating tracks, low ridership, and budgetary constraints. An experimental increase of frequency to four round-trips per day in the final weeks failed to attract substantial numbers of additional passengers.

The majority of freight service ended by 1981. A number of industrial parks and lumber yards kept freight service open as late as 1994 in parts of Waltham.

The idea of reinstituting rail service on the Central Mass. has been brought up many times. Studies, including one completed last year, indicate that such service is not feasible at the present time due to low ridership and high capital and operating costs.⁴ The MBTA Planning Department, however, recently expressed interest in studying the possibility of a dedicated busway facility on the Central Mass.

³ The western end of the right-of-way, between Amherst and Northampton, has been converted to the Norwottuck Rail Trail, a DEM facility.

⁴ CTPS, Central Mass. Commuter Rail Feasibility Study, December 1996.

B Description of the Right-of-Way

The following is a physical description of the right-of-way.

Berlin

MBTA ownership of the right-of-way begins just east of Coburn Road. Heading east, the embankment is quite high and the right-of-way remains clear. Between the Highland Street and Sawyer Hill Road intersections (at-grade), the right-of-way runs on a high embankment over a stream valley, then passes through an opening cut through rock.

East of Sawyer Hill Road, the right-of-way passes on an intact embankment through the southern part of Hog Swamp, an extensive partly wooded and partly open wetland. West of I-495 is a commuter parking lot on the north side of Route 62, adjacent to the Central Mass. At I-495, there are two underpasses (for the north and south barrels of I-495), both about 20 feet wide, in good condition, and adequate for a trail. The right-of-way passes over a small stream that runs along the median of I-495.

Hudson

Proceeding into Hudson, the right-of-way is clear for two hundred yards and then becomes overgrown with brush. There are a few houses to the north that are close to the right-of-way. Further east a contractor has used much of the right-of-way for storing large piles of rubble, trucks, and heavy machinery. Still further east, a trucking company is using the right-of-way to park trucks and store dumpsters. East of Central Street, houses to the south are very close. A large warehouse is to the north.

Through the center of town, the right-of-way is unobstructed. Just west of Felton Street, part of the right-of-way has been paved for church parking. There is a section between Manning Street and Church Street where the walkway over Bruce Pond has been maintained for pedestrian use (top photo on cover). This bridge provides one of the most beautiful views on the corridor. Sections between Priest Street and Cox Street have been cleared recently by volunteer crews. The bridge over the Assabet River is in good condition. There is a culvert east of Cox Street and a high embankment.

The Marlborough Branch rail line merges with the Central Mass. just west of Wilkins Street. The Wilkins Street bridge has been removed and the Chestnut Street tunnel is filled. The eastern part of Hudson is very picturesque, in particular the bridge that goes over the Fort Meadow Brook. A cement company is very close to both sides of the right-of-way just west of the Main Street crossing.

Sudbury

Entering Sudbury, the right-of-way is very clear. To the north is posted federal land (an old Army base). Further east, conservation land abuts the right-of-way, with signs prohibiting motorized vehicles. The first bridge over Hop Brook in Sudbury affords spectacular views of wetlands and meadows. Just across the Dutton Road intersection a new housing development is under construction. The right-of-way is passable to Union Avenue. The Lowell-Sudbury line crosses the Central Mass. at the former South Sudbury Station just before Union Avenue (see middle photo on cover). The section that parallels Station Road is quite overgrown.

At the Route 20 intersection there is a handcar shed that has been maintained by the Sudbury Valley Trustees and serves as a picturesque remnant of the Central Mass. line. Here, Hop Brook parallels the right-of-way for a few hundred feet. The right-of-way passes below Landham Road (which used to be the location of East Sudbury Station) under a large overpass. For the next mile, the right-of-way is very overgrown. Just before the Wayland town line, power lines begin to run along the right-of-way and do so through Wayland, Weston, and into Waltham.

Wayland

Upon entering Wayland the right-of-way enters the Great Meadows National Wildlife Refuge (see bottom photo on cover). It passes through the vast scenic area on an intact embankment. There is a wide bridge over the Sudbury River. After crossing to the north side of Route 20, the right-of-way runs along the former Raytheon site. Just before Route 27 is the former Wayland Station, now owned by the town. After crossing Routes 27 and 126, the corridor is wide and there are indications of substantial use by walkers, runners, mountain bicyclists, and equestrians.

Weston

The right-of-way in Weston remains open for the first couple of miles. It goes under Concord Road and then becomes impassable due to trees and brush. The Conant Road intersection was filled in during a bridge reconstruction and is surrounded by extremely dense brush. Further east to Church Street, the right-of-way is very wide and unobstructed. East of Church Street, wood chips on the tracks and a worn path indicate significant use of the right-of-way. Further east there is a new development on the north side of the right-of-way. To the south is a steep embankment that abuts land belonging to a sand and gravel company. Before entering Waltham, the right-of-way crosses the Fitchburg commuter rail line on a wide, high bridge.

Waltham

After the Fitchburg commuter rail bridge, the right-of-way enters the City of Waltham. There is a fenced-in gravel pit to the south and an abandoned office building to the north. Further east, the right-of-way goes through an auto-parts yard. The bridge over Route 128 (I-95) is intact. After the first two intersections in Waltham, the right-of-way is impassable for a short distance. The right-of-way then opens up with abutters to the south and condominiums on a hill to the north. There is a very high chain-link fence on the south side that separates an office building from the right-of-way. Further east, the right-of-way passes through an apartment complex, in the middle of which is a spectacular view of Lyman Pond. There are high bridges over Beaver Brook and over Route 60 (Linden Street), then a high embankment. For the next 200 feet, Beaver Brook winds back and forth beneath the right-of-way under three culverts and bridges while the Fitchburg commuter rail parallels the right-of-way on the south. The two corridors merge near the Beaver Street intersection. MBTA ownership ends at Beaver Street in Waltham.

Belmont

A private company bought the right-of-way from Beaver Street to the Belmont border. The Central Mass. originally extended through Belmont and into Cambridge and Boston, parallel to the Fitchburg line. It appears that the right-of-way is wide enough to allow a trail. Such construction would require either purchase of private sections or easements from private owners. A section east of Belmont Center, from Brighton Street to Alewife Station, is owned by the MDC.

There are extremely short sections of the right-of-way in Bolton, Stow and Marlborough. If a trail is built, these sections would be taken care of by the adjacent communities. That is, rather than Bolton maintaining a slice of the trail, Berlin and Hudson would jointly decide where their respective segments meet. Likewise, Hudson would take the extra feet in Stow and the Marlborough section would be handled by Hudson and/or Sudbury.

C Right-of-Way Width

According to the American Association of State Highway and Transportation Officials (AASHTO), the preferred width for a trail is 12 feet. In addition to this, another 3 feet on each side is recommended for clearance, yielding a total width of 18 feet.

As a whole, the Central Mass. line has ample space for a trail; a high percentage of the right-of-way is more than 80 feet wide.

From Coburn Road in Berlin to the Hudson line, the right-of-way is at least 80 feet wide. There are a few short sections just west of Highland Road where the right-of-way juts out to over 200 feet (each about one hundred feet long).

At the Hudson-Berlin line, the right-of-way is about 80 feet wide. A few hundred yards west of the Central Street intersection in Hudson, it briefly widens in two places to 130 and 190 feet. East of Central Street (downtown Hudson), the right-of-way varies in width from 100 feet to 40 feet, with a high percentage between 65 and 40 feet. From Tower Street east to the Sudbury line, the right-of-way fluctuates between 70 and 85 feet, with the majority around 80 feet wide.

Continuing into Sudbury at about 80 feet, the right-of-way crosses Hop Brook on a small bridge. The 80-foot-width is maintained through most of Sudbury, with a few short 60-foot sections. The right-of-way width going under Landham Road is about 40 feet.

The right-of-way is 80 feet wide as it enters Wayland and crosses the Sudbury River. Near Wayland center, just west of the fork at Routes 27 and 126, the right-of-way narrows to 25 feet for about one hundred feet.

Entering Weston, the right-of-way is about 80 feet wide. It narrows to about 60 feet on the east side of Conant Street. Within fifty yards, it broadens back out to about 80 feet. East of Church Street there are significant portions of the right-of-way that are 115 to 120 feet wide.

In Waltham the right-of-way decreases back to about 80 feet, with a couple of areas that flare out to about 100 feet. It fluctuates quite a bit between 60 and 80 feet. On the east side of Lexington Street, the right-of-way is 20 feet wide and gradually widens to 60 feet over a length of five hundred feet. The right-of-way then fluctuates between 60 and 80 feet, ending at Beaver Street with a width of about 70 feet.

D Environmental Issues

According to Federal Highway Administration (FHWA) regulations, bicycle facilities are categorical exemptions, which means they are exempt from requiring environmental impact statements. They are subject to the provisions of the Massachusetts Environmental Policy Act (MEPA). All of the provisions of this act would be followed during the design and construction phases, with oversight by the local conservation commissions. (A brief listing of potential regulatory permits and approvals is found in Appendix B.)

The noise levels from the trail would be minimal, as no motor vehicles would be allowed (police and other service vehicles excepted). The

overall air quality effect would be positive because the trail is expected to eliminate some motor vehicle trips, especially short trips or so-called "cold starts," which on a per mile basis contribute disproportionately to air quality degradation.

To assess flood plain issues, Flood Insurance Rate Maps were obtained from the Department of Environmental Management, Office of Water Resources. These maps divide land into three categories: Zone C (areas of minimal flooding), Zone B (areas between limits of 500-year flood and 100-year flood), and Zone A (areas of 100-year flood).

Zone C is considered land not subject to floods. Zone B would be considered land subject to flooding in extreme circumstances and are given a 0.2 to 1.0 percent chance of flooding in a given year.⁵ Zone A is land given a 1.0 percent chance of flooding in a given year.

Over 80 percent of the right-of-way passes through Zone C land and is not of concern in terms of flooding. Seven percent is in or adjacent to Zone B land and 11 percent is in or adjacent to Zone A land. Locations and lengths of Zone A and B segments are indicated in Appendix B (Tables B-2 and B-3). In some cases, the right-of-way embankment is high and wide enough that trail construction would have no impact on the adjacent lands that are zoned A or B. It might also be assumed that the original rail-bed embankment was designed and constructed to avoid flood hazard.

Requirements for these areas would be worked out in the design phase, through orders of conditions issued by the local conservation commissions. Possibilities include compensatory storage (for increases in fill), a narrowing of the trail, or alternative construction methods.

E Current Uses

The MBTA has neither posted "No Trespassing" signs nor in any known way attempted to prohibit trespassing on the right-of-way. Present uses include hiking, mountain biking, snowmobiling, and horseback riding. In addition, there are encroachments and occasional instances of dumping.

A number of businesses have leased portions of the right-of-way from the MBTA. Some of the leases are very minor (water pipes and transmission lines), while others are more significant. Some of the notable leases include a trucking company's parking and storage facility, a parking lot for a bank, and a driveway crossing for a cement company. All leases have a thirty-day

⁵ Zone B also includes: certain areas subject to 100-year flooding with depths of less than one foot or where the contributing drainage area is less than one square mile; areas protected by levies from the base flood.

termination clause. It is possible that, if a trail is built, the MBTA would continue leases that are compatible with trail construction.

The Boston Edison Company has erected power lines along 7.2 miles of the right-of-way between eastern Sudbury and Waltham. The company has a permanent easement for this use, originally acquired in 1951 from the Boston and Maine Corporation and extended in 1984 with the MBTA takeover of the line. According to Boston Edison, it mows and clears vegetation every three to five years to maintain access to its facilities.

The electric and magnetic field (EMF) reading of this power line is the third lowest in the Boston Edison system.⁶ It has a maximum reading of 20 milligauss (mG) within the right-of-way. Fifty feet from the south side of the right-of-way the EMF reading is 3.8 mG, and 0.7 mG on the north side. The allowable state standard is 85 mG at the edge of a right-of-way.

There has been concern for many years that EMF's can harm people. The National Research Council (NRC) completed a study last year which concluded, "The findings to date do not support claims that electromagnetic fields are harmful to a person's health."⁷ The NRC study examined over 500 studies done since 1979.

⁶ Information provided by Boston Edison letter; December 30, 1996.

⁷ Charles F. Stevens, Chair, Committee on the Possible Effects of Electromagnetic Fields on Biologic Systems, study sponsored by U.S. Department of Energy.

3 Proposed Rail Trail

This chapter examines various aspects of using the right-of-way as a trail. It discusses types and numbers of users, at-grade crossings, potential connections provided by a trail, possible Belmont connections, parking alternatives, and costs.

A Users

Mode of Travel

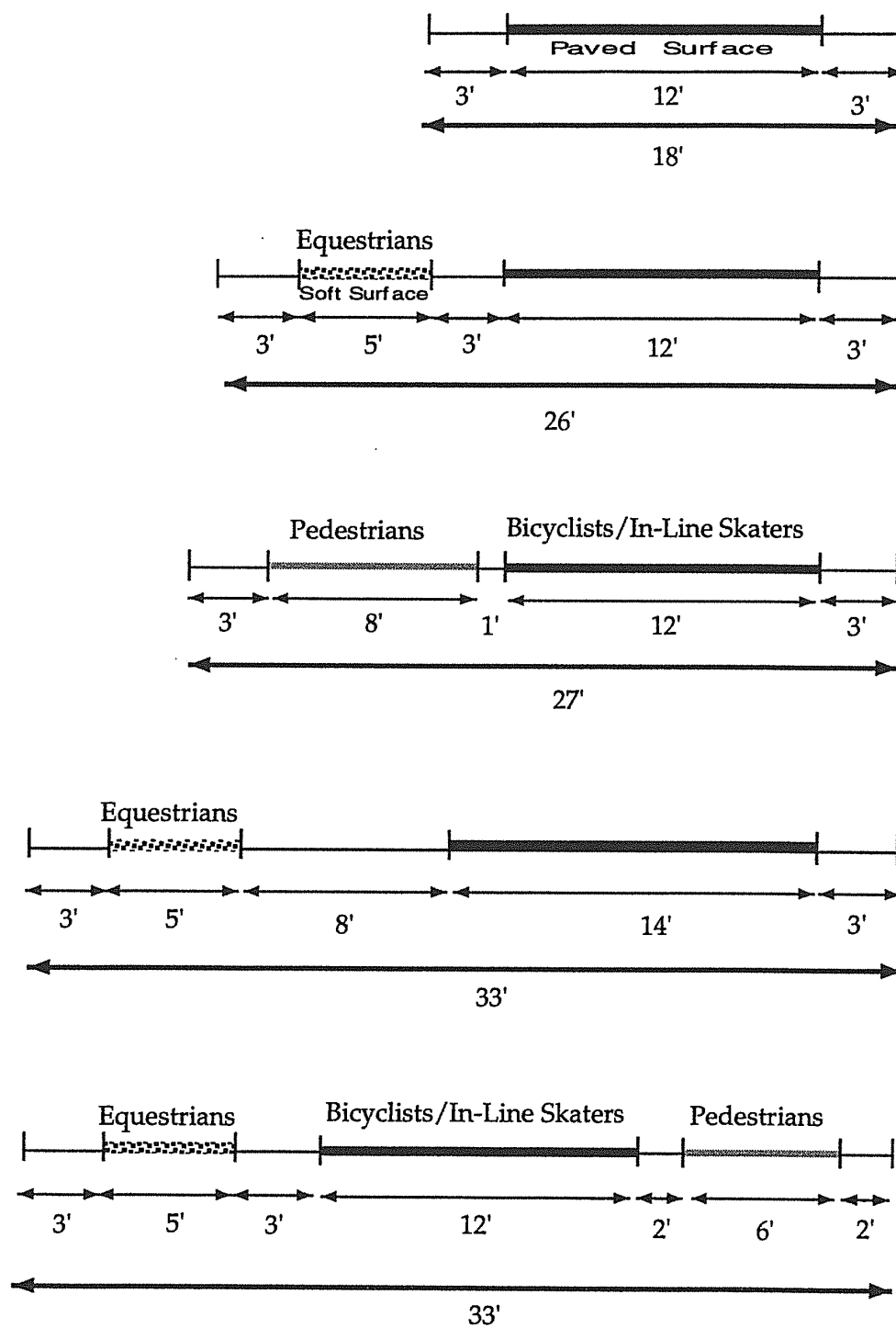
Like other rail trails, the Central Mass. would be open to all non-motorized users (and to motorized wheelchairs). Bicyclists, walkers, skaters, joggers, and people pushing baby carriages are common users of multi-use trails.

Comments at the public meetings indicated that there is some equestrian use on the existing right-of-way and that there is a desire to maintain that use if a trail is built. (See Appendix C for attendance figures and minutes of the public meetings.) The major area of present equestrian use is between Route 27 in Wayland and Gun Club Lane in Weston. Gun Club Lane provides access to an area known as the Weston trails, popular for horseback riding. Equestrians also use the right-of-way from the east side of Conant Road to east of Church Street (but not as far as the bridge going over the Fitchburg commuter rail line). It is assumed that if the Conant Road bridge is opened, the entire stretch from Routes 27 and 126 to east of Church Street would be of interest to equestrians. There is also interest in equestrian access in Berlin. There may be other areas of interest to riders that could come up during the design process. There would also need to be consideration given to points where equestrians might cross the rail trail to access adjacent bridle paths.

There is some flexibility as to how the trail could be designed in terms of users. For example, an equestrian trail makes little sense in areas where it probably would not be used, such as Waltham. There are some areas where high pedestrian use might call for a separate section for walkers and joggers. This could be a hard-packed surface. Figure 2 shows a few possible cross sections to accommodate a variety of users.

If the trail is constructed, individual communities decide whether or not to plow. The three Minuteman Commuter Bikeway communities have all opted not to plow and thereby leave the path available to snowshoers and cross-country skiers.

Figure 2
Possible Rail Trail Cross-Sections



Trip Purpose

Users can be characterized not only by travel mode, but by trip purpose. Commuters would be on the trail on weekdays, usually during regular commuter hours. School children would use the trail to get to and from school, to and from organized activities, and for a variety of purposes. Retirees, stay-at-home parents, and those with flexible work hours may use it from mid-morning to mid-afternoon, when other users are at work and school. Such midday users might be getting doctor-prescribed exercise, running errands, visiting friends, or simply getting some fresh air.

Whatever the trip purpose, the travel mode, or the time of travel, one thing trail users would have in common is the use of human-powered transport. Reasons for this choice are many. At the societal level, these modes conserve energy, are non-polluting, and are renewable. At the individual level, they are healthy, inexpensive, and fun, and can be the quickest way to get from one place to another.

Estimated Demand

The request was made at several of the public meetings to present an idea of how many would use the Central Mass. rail trail. It is very difficult to accurately estimate the demand for a rail trail. There have been years and years of experience estimating the usage of highways and transit systems, and even those predictions can be quite far from the mark. There is no widely accepted method for estimating future demand for trails. In this section, four different methods are utilized to derive estimates for a Central Mass. rail trail.

-- Minuteman Counts

A facility for which we have actual counts is the Minuteman Commuter Bikeway. One way to estimate use of the proposed Central Mass. is to compare the populations served by the Minuteman and by the Central Mass. The Minuteman counts then can be adjusted to reflect the differences in populations served. The details used to derive estimates using this method are included in Appendix D.

The results of this method yield the following weekday totals: Berlin - 700; Hudson - 1,200; Sudbury - 1,100; Wayland - 1,000; Weston - 1,000; Waltham - 2,600; Belmont - 1,400. The weekend/holiday estimates would be as follows: Berlin - 1,500; Hudson - 2,600; Sudbury - 2,300; Wayland - 2,100; Weston - 2,000; Waltham - 5,400; Belmont - 3,000.

-- Before/After Counts

Another way to estimate use of a trail would be to compare before/after counts from the Minuteman corridor to before counts in the Central Mass.

corridor. Counts done in the Minuteman corridor in September 1980 yielded a peak-hour count of 220 bicyclists.⁸ This would translate to an all-day count of about 2,200. A count done in the Central Mass. corridor in October 1996 yielded a peak-hour volume of 30 bicyclists.⁹ Increasing this count by 20 percent to compensate for seasonal variations (September to October) yields a peak-hour count of 36.¹⁰ This count would translate to about 360 daily bicyclists. Both the Minuteman and Central Mass. counts include four locations, spaced along the length of the corridor. The Minuteman corridor count (2,200) is about six times higher than the Central Mass. corridor count (360).

-- *Work Trips*

The number of people in the two corridors who bicycle or walk to work also can be compared. In the Minuteman corridor, of the 142,840 resident workers, 18,623, or 13.0 percent, walk to work. Those who bicycle to work number 2,604, or 1.8 percent of the work force. In the Central Mass. communities (breakdown shown in Table 3), 3,968, or 3.4 percent, walk to work and 263, or 0.3 percent, bicycle to work. The ratio of the percentage of walkers in the two corridors is 13.0 percent to 3.4 percent, or 3.8 times higher in the Minuteman corridor. The ratio of bicyclists is 1.8 percent to 0.3 percent, or 6.0 times higher in the Minuteman corridor. It is important to note that these numbers were collected in 1990, several years before the Minuteman Commuter Bikeway was completed.

For bicyclists, the ratio of six-to-one for comparing the Minuteman to the Central Mass. came up using these latter two methods. Using these two methods would yield lower totals than those indicated using the first method. No before/after counts of pedestrians are available. The ratio of about four-to-one (Minuteman to Central Mass.) is yielded for walkers from the journey-to-work data.

-- *Norwottuck Counts*

Counts were done on the Norwottuck Rail Trail, at the western end of the Central Mass. right-of-way in Northampton, by the Pioneer Valley Planning Commission. Those counts, collected by a mechanical counter, indicate weekday two-way volumes of about 700 bicyclists and weekend volumes of 1,900. The Norwottuck joins Amherst, Hadley and Northampton, which have a combined population of about 69,000. This is

⁸This number includes 68 bicyclists at the Alewife end, 79 at Arlington Center, 49 at Massachusetts Avenue and Marrett Road in Lexington, and 24 at Hartwell Avenue and Routes 4-225 in Bedford.

⁹This number includes 18 at Routes 20 and 117 in Waltham, 4 at Routes 20 and 27/126 in Wayland, 4 at Route 20 and Concord Road in Sudbury, and 4 at Route 62 and Pleasant Street in Berlin.

¹⁰Based on bicycle counts done in the Boston metropolitan area since 1975.

one half of the Central Mass. study area population. If the Norwottuck numbers are multiplied by two, an average daily estimate of 1,400 and an average weekend/holiday estimate of 3,800 result for the Central Mass.

The estimates presented above for the Central Mass. are best guesses, based on available data. Qualitatively, it is reasonable to expect the Central Mass. to attract more than the Norwottuck and less than the Minuteman. How much more and how much less are difficult to predict.

B At-Grade Crossings

A major advantage of an off-road trail is that it provides a place for users to travel that is separate from motor vehicles. Trail users share road space with motor vehicles only at the road crossings. On the Central Mass. right-of-way, bridges and tunnels further reduce interaction between trail users and motor vehicles. It is essential that the at-grade intersections be designed as safely as possible, keeping in mind the need to minimize the impact on roadway traffic flow. Figure 3 indicates the location of bridges and at-grade crossings.

Table 5 indicates the number of at-grade crossings on the proposed Central Mass. trail and on existing rail trails in Massachusetts. These are intersections with paved roads used by motor vehicles. Not included in these counts are driveways or trail crossings.

Table 5
Comparison of Rate of Occurrence of At-Grade Intersections
on Central Mass. and on Major Massachusetts Rail Trails

	Length (mi.)	At-Grade Intersections	Miles per At-Grade Crossing
Cape Cod Rail Trail	25	25	1.0
Minuteman	11	17	0.7
Norwottuck	8	8	1.0
Central Mass.	23	36	0.6

As indicated, the Central Mass. is similar to the Minuteman, both of which have higher crossing densities than the Norwottuck (Northampton-Amherst) or Cape Cod rail trails. Both of the latter trails are in more rural parts of Massachusetts.

The average distance between intersections in the corridor is six tenths of a mile, although the intersections are not evenly spaced along the right-of-way, as indicated in Table 6.

Table 6
Number of At-Grade Intersections,
Number per Mile, by Community

	# At-Grade Intersections	Number of Trail Miles	Average Miles between Intersections
Berlin	3	1.9	0.6
Hudson	14	6.7	0.5
Sudbury	5	4.5	0.8
Wayland	5	3.0	0.5
Weston	0	2.9	2.9
Waltham	9	4.2	0.5
Total	36	23.2	0.6

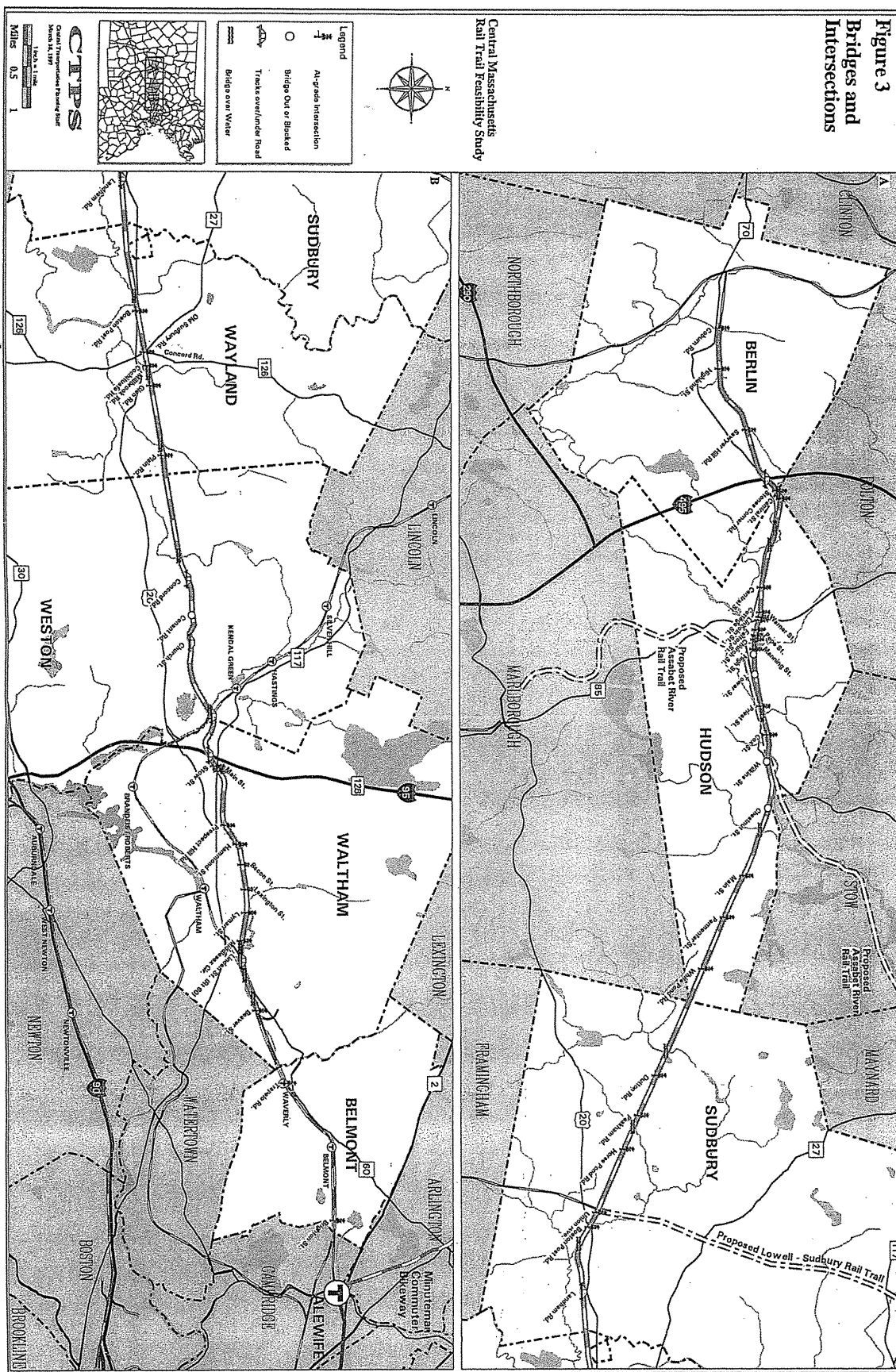
In downtown Hudson and Waltham, for example, there are at-grade intersections only a block apart. In some of the more rural sections of Hudson, Sudbury, and Wayland, there are sections of the right-of-way that extend over a mile between intersections. There are no at-grade crossings in Weston; trail users could travel between Stow Street in Waltham and Plain Road in Wayland, a distance of 3.8 miles, without encountering an intersection.

A rail trail allows a user to decrease the number of at-grade intersections required for a given trip. For example, one possible on-road route from Berlin to Belmont would require going through about 145 at-grade intersections.¹¹ The rail trail would reduce this by 75 percent to 36 at-grade crossings.

If one adds to the 36 at-grade crossings the 11 bridges and tunnels, one still arrives at a number much lower than 145. The presence of a railroad right-of-way in and of itself discourages crossings. That is, once the railroad is in place a road crossing must be a bridge or tunnel, which are expensive, or an at-grade crossing, which requires road users to stop for trains. As a result, a railroad becomes a de facto barrier to crossings.

Important factors that must be considered in designing at-grade crossings are traffic volume, sight distance, speed of traffic, gaps in traffic, width of intersection, and angle of crossing. These factors pertain to both the roadway and the trail.

¹¹ From Berlin, follow Route 62 east into Hudson; go left on Main Street and right on Hudson Road, to Route 27 in Sudbury. Follow 27 south into Wayland; go east on Route 20 (Boston Post Road) into Weston and Waltham. Bear left onto Route 60 (Linden Street); bear right onto Waverley Oaks. There are many possible routes between Berlin and Belmont. This one was selected as a fairly direct one, using major roads that would be relatively easy to follow. More minor streets would likely have more intersections.

Central Massachusetts
Rail Trail Feasibility Study

Low roadway volumes allow trail users to cross more easily and frequently. Very high roadway volumes can also be advantageous in that cars in slow-moving traffic are more willing to let others cross in front of them. Traffic counts were done on at-grade crossings of the Central Mass. and are shown in Figure 4 and listed in Table E-2.

Sight distance refers to the distance the trail user or roadway user is from the intersection when it is sighted. Fast-moving traffic clearly needs greater sight distances than slow-moving traffic. Trail users also need adequate warning of an upcoming intersection. The width of an intersection and the trail's angle of crossing determine the distance over which the trail user will be exposed to potential conflicts.

Information on traffic volumes, speed limits, and observed speeds is included in Appendix E. All of these factors would be considered in designing trail crossings.

C Potential Destinations

A rail trail can be used for commuting and for other trips with specific destinations. The number who would use a trail for these types of trips is affected by how close the various destinations are to the trail. This section indicates travel generators located near the Central Mass. right-of-way. These locations are indicated in Figure 5.

Use of the trail will also be affected by how many people live close to it. Those living on or near the trail would be more likely to use it than those who have to travel on the local road system, especially if the roads are perceived as unsafe.

At the regional level, a Central Mass. trail would provide direct connections to two other proposed trails, the Assabet River Rail Trail in Hudson and the Lowell-Sudbury in Sudbury (actual junction shown in middle photo of cover). The Central Mass. also provides a needed link in the Bay Circuit Trail, from Wayland Center to the Nobscot Boy Scout Reservation in Sudbury. Efforts to establish this walking trail are being led by the Sudbury Valley Trustees and the Bay Circuit Alliance.

Berlin

The Central Mass. line passes through the middle of Berlin. The center of town, with the library and town buildings, is located a quarter mile south of the right-of-way. Memorial School, on Linden Street, is also south of the right-of-way, about one half mile. The town common with tennis courts and a variety of recreational fields, is located one half mile south, between South and Pleasant streets.

Hudson

The right-of-way passes one block north of Hudson Center and its commercial activities. There are also a number of schools, all within very close proximity to the right-of-way. From west to east they are as follows: the Carmela A. Farley School, Christ the King School, Hudson Catholic High School, St. Michael's Grammar School, and Joseph L. Mulready School.

A number of parks and fields are also adjacent to the right-of-way, including Moulton Field, Farina Field, Liberty Park, and Cherry Street playground. The crossing at Church Street allows ready access to the Senior Citizens Center, Hudson Post Office, Boys and Girls Club, the town hall, and to the remainder of downtown Hudson.

Sudbury

The right-of-way traverses two miles of wilderness/conservation land with few intersections in the western section of Sudbury. The Curtis Middle School is about a half mile from the Peakham Road and Horse Pond Road intersections. The Sudbury Crossing shopping plaza is about two blocks from the Union Street intersection. About 100 yards north of the right-of-way is the Goodnow Library. There are also a number of shops nearby at Mill Village. There is a health and fitness center at the Wayland line.

Wayland

In Wayland, the right-of-way enters Great Meadows National Wildlife Refuge, Wayland's major open-space area. The Sudbury River, very popular for fishing, also crosses there. On the south side of Route 20 there is a shopping plaza. At the intersection of Routes 27 and 126 is the Wayland Public Library. Also, on the south side of Route 20, at the intersection of Routes 20 and 27, is the town hall. Just beyond the library is the Mill Pond Parcel, a popular fishing and skating facility. Further east and to the north is the Claypit Hill School.

Weston

There are no at-grade intersections in Weston. Just south of the right-of-way is Weston Center, with the town hall, parks, and stores and shops. There is also a network of nature trails in Weston that cross the right-of-way. Regis College is a little over a mile to the south. The Weston Public Library and Weston's three elementary schools are all less than a mile to the south. There is senior citizen housing on School Street south of the right-of-way. Most of the land adjacent to the right-of-way is rural/residential.

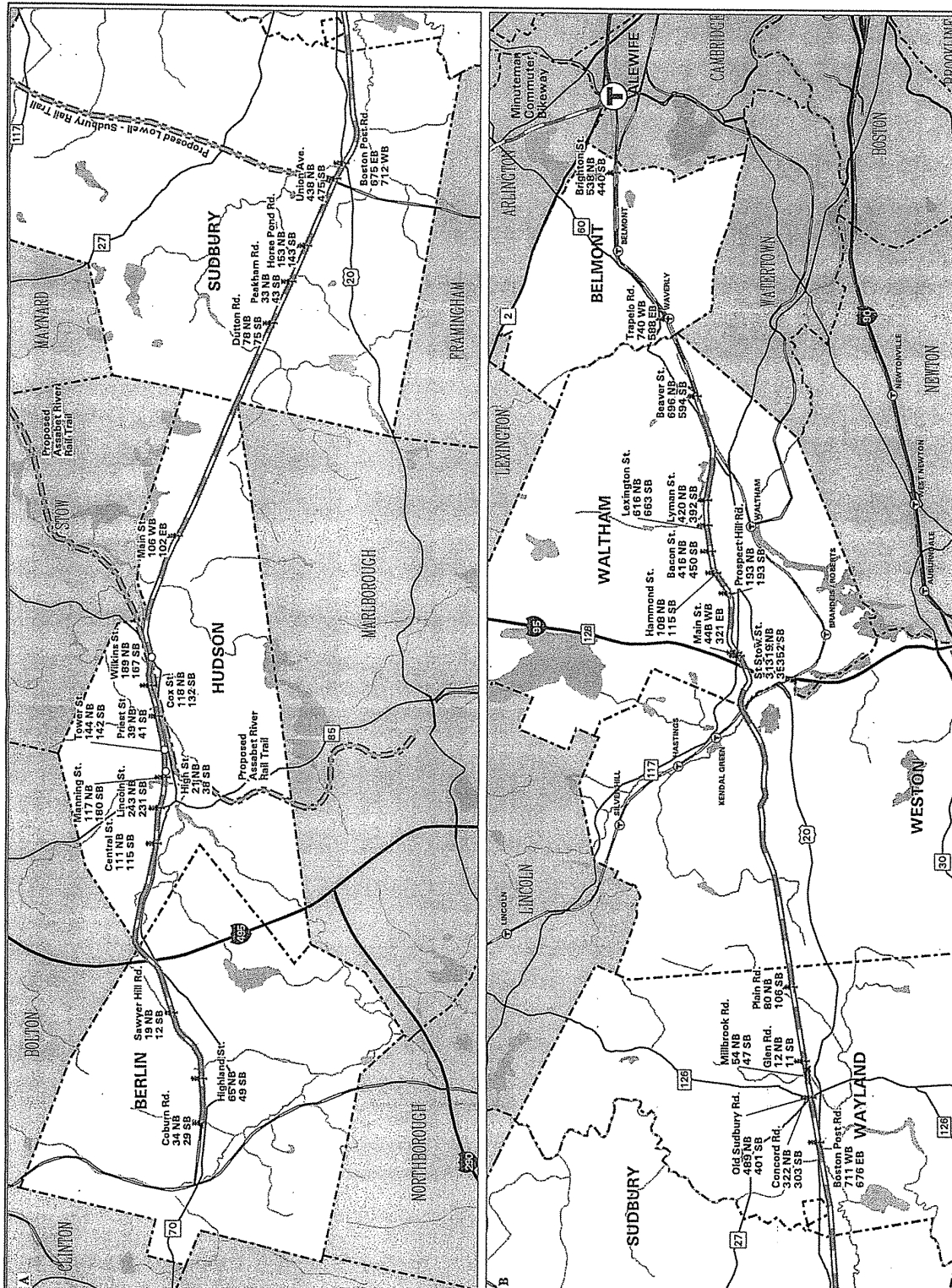
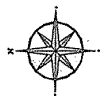
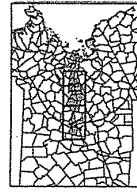


Figure 4
Motor - Vehicle
Traffic Volumes,
One Hour,
Midday Saturday

Central Massachusetts
Rail Trail Feasibility Study



Legend	
	At-grade Intersection
	Bridge Out or Blocked
	Tracks over/under Road
	Bridge over Water



CTPS
Central Transportation Planning Study
March 24, 1997

Scale: 1 inch = 1 mile
Miles 0.5 1

Waltham

The right-of-way enters Waltham just after crossing the Fitchburg commuter rail line. There is an abandoned industrial site on both sides of the right-of-way and an auto parts yard just west of the Route 128 (I-95) crossing. The right-of-way bisects a private company and then passes by Prospect Hill Park, 252 acres of open land. Further east is Drake Playground on the western end of Leary Field, followed by a shopping area, the police and fire stations, and, further east, the Lyman Estate and the Lyman Pond Athletic Field of Bentley College. Lowell Playground is about a half mile south of the right-of-way. Warren Field and the Beaver Brook Reservation are further east and close to the right-of-way.

Schools in the area include Banks Elementary School, the Vocational High School, and Plympton Elementary School. Near Lowell Playground is the Bright Elementary School and further east is the Fitzgerald Elementary School.

Belmont

Belmont is a densely developed inner suburban community with the highest population density in the study area. In Belmont there are a number of schools and recreation sites in close proximity to the former right-of-way. The Beaver Brook Reservation is to the north and the Butler School is to the south. There is also a town field south of the line. Coming into Belmont Center, the former right-of-way passes near the town hall, library, a playground and pool, the Wellington School, and an athletic field. To the east is Belmont High School and Clay Pit Pond.

D Belmont Connection

The MBTA-owned portion of the Central Mass. ends at Beaver Street in Waltham. The town of Belmont requested to be part of this study, in the hopes that a connection could be made through Belmont to Alewife Station in Cambridge, thereby connecting to the Minuteman Commuter Bikeway. The Central Mass. at one time did extend through Belmont.

East of Beaver Street, in Waltham, the former Central Mass. right-of-way is privately owned and occupied by an industrial building and driveway. The right-of-way beyond this development is privately owned (by the same company) to the Belmont line. To build the trail beyond Beaver Street to Belmont would require an easement from the private owner.

It may be possible to continue the trail through Belmont as a primarily off-road facility. This would require the trail to be built within the Fitchburg right-of-way, which is an active rail line. There appears to be room on the embankment north of the Fitchburg line to build a trail almost to Waverley

Station. East of Waverley, it might be possible to place a trail by cutting into the embankment south of the tracks and then proceeding to the town yards. The end of Pearson Road backs up to the town yards and could serve as an on-road section of the trail. On the other side of Clark Street, the trail could return to the town-owned embankment adjacent to the Fitchburg line, or take an on-road route on Royal Road.

If cutting a trail into the embankment east of Waverley Station proved to be infeasible, then an on-road route using White Street, Grant Avenue, and B or C Street could substitute. From there, one could pass through the town yards to Pearson Road.

At Belmont Center, the underpass for Concord Avenue could be used to get back to the north side of the tracks. East of Belmont Center, the trail could return to the privately owned right-of-way (north of the Fitchburg line) to Brighton Street. Another alternative is to use town-owned land south of and parallel to the Fitchburg line. The connection to the south side could be via a new tunnel, built at Alexander Avenue off Channing Road. Users then could reach Brighton Street via Hittinger Street.

Across Brighton Street, the Metropolitan District Commission (MDC) owns a section leading to Alewife which is slated for construction as part of a 1997 MassHighway contract.

A major question is whether it might be possible to build a facility above the waiting platform at Waverley Station that would not interfere with railroad operations. This would allow trail users to avoid crossing Trapelo Road in an area with high traffic volumes and many turning vehicles. If this proves infeasible or too costly, an at-grade crossing could be worked out in conjunction with the existing traffic signals.

E Parking

An issue brought up in public meetings is where those who drive to the trail will park. Very little weekday demand for trail parking is expected. Even on weekends, it is expected that most users would reach the trail either by bicycling or walking or by public transit. For those who would drive, it is hoped that existing facilities can be used to minimize the need to build new parking facilities.

Parking on streets that intersect the right-of-way is often not a viable option. The only areas where on-street parking is an option is in the downtown areas of Belmont, Waltham, Weston, and Hudson, and many of these are metered or otherwise time-limited, except on Sundays.

There are existing public and private lots near and adjacent to the right-of-way that may be willing to share their parking facilities on weekends. An

estimate of the number of these parking lot spaces are indicated in Table 7. It must be remembered that these are potential spaces. If the trail goes forward, then the owners of these lots could be asked about accommodating trail users. Clearly some of the lots would be available on Sundays but not Saturdays.

Table 7
Estimated Number of Parking Spaces
Within One-half Mile of the Right-of-Way

	Number of Spaces	
	Public	Private
Berlin	50	--
Hudson	50	100
Sudbury	--	100
Wayland	100	250
Weston	25	50
Waltham	350	550
Belmont	700	600
Total	1,275	1,650

In Berlin, there is a town-owned carpool lot between Route 62 and the right-of-way west of I-495. This lot has 50 spaces and would be ideal for weekend trail users. In Hudson, there are several stores, businesses, schools, and churches that might be willing to share their parking facilities with trail users. There is also on-street parking on Main Street, which runs parallel to the right-of-way, and on some side streets.

In Sudbury, west of the landfill, on the south side of Route 20, is the former site of the Linde Air Products Company. This site has been abandoned and could provide a large parking facility near a very picturesque section of the trail easily accessible from Route 20. There are other commercial and office sites that might be available, as well.

In Wayland, there is an abandoned Raytheon plant where the right-of-way crosses Route 20. This large site on the north side of Route 20 and immediately adjacent to the right-of-way also has a driveway from Route 27. Even if the site becomes occupied, it might be possible for part of the lot to be used by weekend trail users. Old Wayland Station, which stands at the intersection of Routes 126 and 27, has a large parking lot. The gift shop business there is closed in the summer, which would be the time of peak trail use.

In Weston Center, there is limited on-street parking on Boston Post Road, which runs parallel to the right-of-way. Waltham has some on-street parking on Main Street, and there are some businesses with parking lots that

may be willing to share on weekends. There is limited on-street parking as well as municipal lots in Belmont. The high school is a good site for summer and all-year weekend use.

As occurs on other trails, most users would bicycle, skate, or walk to the trail, not drive. Given population densities, most of those who do drive will be coming from the east and looking for spaces in Belmont and Waltham. A survey of users of the Norwottuck Rail Trail found that, on average, there were four people per vehicle that were driven to the trail. This is a very high vehicle occupancy rate; fewer cars and fewer parking spaces are required.

Where to allow trail users to park is a community decision. The provision of additional parking for trail users is not a requirement. If there are commercial or residential areas where a town does not wish trail parking to occur, those streets could be posted for limited or no parking. Likewise, any private driveways or roads that users might want to park on would need to be posted to inform people either that parking is not permitted or is time-limited.

If a trail is built, then a trail map could be made to inform users of the location of parking, as well as public transit connections and points of interest.

F Cost

If the trail is built, it would be the responsibility of each town to maintain and police it. The town would be responsible for policing, maintenance, and liability, as is the case for town-owned facilities such as streets, sidewalks, parks, playgrounds, etc. To obtain information on such costs, police, fire/rescue, and public works departments in Bedford, Lexington, and Arlington were asked about the costs associated with the Minuteman Commuter Bikeway. Design and construction costs are discussed in the concluding section of this chapter.

The local responsibility for operating the trail would begin once construction is completed.

Policing/Safety

The police departments in Bedford, Lexington, and Arlington were contacted to determine costs of servicing the Minuteman Commuter Bikeway.

-- Bedford

According to Officer McNeany of the Bedford Police Department, the bikeway is patrolled on summer weekends an average of four hours a day.

There have been very few problems; an occasional snowmobile or dirt bike has been reported on the trail. There have been no increases in the police budget attributed to the Minuteman. If an incident requires an ambulance, the individual is billed. Emergency calls from the Minuteman have been minimal, about 5 a year.¹²

-- *Lexington*

In the town of Lexington, bicycles were purchased for police patrol of the Minuteman Bikeway. The bicycle officers are scheduled to patrol the bikeway 150 hours, from March to November. The staff cost is about \$4,500.

Patrolling on bicycles has spread to other areas in Lexington. Talking about police bicycle patrols, Lexington Police Chief Casey stated, "It's a great way to bridge the gap between the people and the police. You see people talking to bicycle police officers on the bikeway and around town. How many times do you see someone holding a conversation with an officer in a police cruiser?" Chief Casey also added, "Success breeds success. People using the bikeway police it themselves. It has not been a significant drain on the responsibilities of the staff."¹³

Fire Chief John Quinlan estimated that there were about 60 incidents in the past two years that required medical response. Most of the incidents were scrapes and bruises but a few were more serious. He added that no additional personnel have been hired as a result of the bikeway. Also, incidents that require emergency response do not cost the town money. When an ambulance is sent out to a person in need, the individual is charged, not the town.¹⁴

-- *Arlington*

In Arlington, no specifics could be obtained on the cost of policing. The trail is policed routinely within patrols, as are the roads in town. A police officer travels the trail as part of his/her normal beat. Four bicycles and two motorcycles are available for trail patrols. There was no tally of hours spent on the trail and therefore no cost estimates. There were no additions to the police budget as a result of the Minuteman.

The Planning Director in Arlington indicated that the Minuteman Commuter Bikeway is a positive from a security point of view. Before the path was built, the MBTA had jurisdiction of the right-of-way, although no

¹² Lieutenant Dick Albany, 2-24-97.

¹³ Interview with Chief Casey, Lexington Police Department, 1-7-97.

¹⁴ Chief John Quinlan, 2-21-97.

presence. The construction of the path allowed local jurisdiction and made police patrolling much easier.¹⁵

Maintenance

Maintenance of the Minuteman includes mowing the three-foot shoulders a few times a year, sweeping the trail a few times a year, cleaning up fallen leaves and branches, and restriping the center line once every few years. There have been a few instances where the pavement needed patching and some erosion on the embankment needed to be controlled.

No specifics could be obtained from the towns of Bedford or Arlington, other than that there were no increases in the budget as a result of the Minuteman.

In the town of Lexington, according to the "Division Report & Costs for FY96," the amount of money spent last year on the Minuteman Commuter Bikeway was \$6,690, or 0.08% of the Department of Public Work's annual budget (excluding water and sewer maintenance). The annual maintenance cost per mile was about \$1,220. There were no departmental budget increases due to the Minuteman.

Total Local Costs

Specific costs attributed to maintenance of the Minuteman come from Lexington. Both Bedford and Lexington had specifics on hours of police patrols assigned to the Minuteman: 8 hours a week during summer months in Bedford, 6 hours a week for about half the year in Lexington. The per mile cost in Lexington for both policing and maintenance is \$2,040.¹⁶

A community may choose to provide more or less policing and maintenance than Lexington does. If a community, for example, provided policing and maintenance at the same levels as Lexington (and at the same costs per hour), the following community costs would be encumbered: Berlin - \$3,900; Hudson - \$13,700; Sudbury - \$9,200; Wayland - \$6,100; Weston - \$5,900; Waltham - \$8,600.¹⁷ It should be noted that the actual cost will be determined by the local community. It is anticipated that after many years, the communities would apply for state/federal funds to reconstruct the path.

¹⁵ Conversation with Alan McClennan, January 7, 1997.

¹⁶ \$4,500 (policing) plus \$6,690 (maintenance), divided by 5.5 miles.

¹⁷ Numbers obtained by multiplying Lexington's cost per mile (\$2,040) by the mileage of the Central Mass. in each community. For mileages, see Table 6.

Design and Construction

Assuming \$250,000¹⁸ per mile, the construction of a twelve-foot-wide, paved path along the 23-mile right-of-way would cost about \$6,000,000; this includes such things as signing and pavement markings at intersections, but not all of the possible costs. Additional costs would be special treatments at some of the 37 at-grade crossings, including traffic signals or even newly constructed grade separations. These special intersection treatments could cost on the order of hundreds of thousands of dollars for a bridge or tunnel. Another unknown is how much would be needed to improve the existing bridges, replace missing bridges, and to open up the three filled bridges. There are also many unknowns in regard to how the connection through Belmont will be done. Fencing would be necessary along some embankments, on all bridges, and to protect the privacy of some abutters. Finally, detailed engineering would be necessary to determine the cost of any new culverts and drainage systems. It is likely that the total construction cost would be in the range of \$7,000,000 to \$10,000,000.

A general rule of thumb is that design costs for a project are about 10 percent of construction costs. If the above construction estimate is valid, then a design cost of about \$700,000 to \$1,000,000 is implied.¹⁹

¹⁸ The \$250,000-per-mile cost is based on recent costs of trail construction in Massachusetts. The Minuteman Bikeway, built from 1992 to 1993, cost approximately \$190,000 per mile. This included bridge work and intersection treatments.

¹⁹ The cost of this feasibility study was about \$30,000. It was provided by the Massachusetts Turnpike Authority through its Public Works and Tourism Grant Program. This program is "for the support of local public works and tourism projects carried out for the benefit of cities and towns west of state highway Route 128 that are along or contiguous to the Massachusetts Turnpike." (St. 1995, Chapter 102, Section 22; 730 CMR X.00.) Issues that are mentioned in this phase would receive much more detailed attention in the design phase.

4 Recommendations

Constructing a rail trail on the Central Mass. right-of-way is feasible. The trail could be built on the MBTA-owned section from Berlin to Waltham. Connections could be made into Belmont to connect to the MBTA's Alewife Station and thereby to the Minuteman Commuter Bikeway.

Grade Crossings

The main design concern on the trail would be at-grade crossings. All trail users would probably be required to stop at all intersections, except perhaps where trail traffic is heavier than road traffic. Some additional traffic controls on the motor vehicle traffic ought to be considered. Traffic control would need to be designed on an intersection-by-intersection basis. There is the tendency in our culture to minimize motor vehicle delays at the expense of the time and convenience of pedestrians and other nonmotorized users. It is important to remember that our children and our elderly are disproportionate segments of nonmotorized users.

The communities would need to focus during the design stage on safety issues. Discussions would need to be held with local police departments, with town engineers and planners, and with community groups to gather information and to help ensure the safety of the future users of the trail. The engineering issues that would be covered in the design phase include traffic control devices and geometrics. The actual design of intersections would need to comply with guidance provided by the American Association of State Highway and Transportation Officials (AASHTO) and with the Manual on Uniform Traffic Control Devices (MUTCD).

Enforcement

The planning for safety would need to go beyond engineering issues to include enforcement and education. Selected spot enforcement of speed limits at cross streets could help reduce speeding. Also, the presence of safety personnel during periods of heavy use or at times when use by schoolchildren is particularly high is recommended. The assignment of police to the trail would be handled by each local department.

Education

Education is important for both motorists who will cross the trail and for trail users. Parents, perhaps through parent-teacher organizations, would need to be told that this trail, although separated from traffic for most of its length, does have intersections that require their children to be cautious. The fact that the trail would be "separated" from traffic may give some people, especially those who have had no experience using trails, the false idea that it is appropriate for use by youngsters, as well as some novice adults, who have insufficient experience with traffic. These less experienced cyclists must learn to stop at all cross streets and proceed only when safe to do so.

Environment

The design contractors, through the Massachusetts Environmental Policy Act (MEPA) process, would work closely with local conservation commissions and other concerned citizens to ensure that environmental impacts are minimized. Issues to be addressed would include the clearing of trees, the design of the trail through flood plain areas, and the construction of parking spaces (if any).

Local Jurisdiction

While no formal arrangements have been made, the local communities would most likely be the entities responsible for trail maintenance and policing. The trail would be part of the community's overall responsibility, much as occurs when a new street is added. Community-based organizations were formed along the Minuteman Bikeway to take on some general maintenance and to provide a forum for discussion of issues. Such organizations could be formed in each community to help local officials. On the Norwottuck Rail Trail, many businesses have signed on to the "Adopt-a-Trail" program, and there is a waiting list.

The next formal steps toward construction are an application for design funds and community leases with the MBTA for use of the right-of-way. These leases would spell out commitments for policing and maintaining the proposed trail. These arrangements are necessary to allow the release of design funds. (A copy of a lease allowing use of the Lexington Branch for the Minuteman is included in Appendix F.)

As the owner of the right-of-way, the MBTA could decide to build a trail. While the MBTA would work with the local communities, it would not require local permission. The MBTA, however, is interested in focusing its resources on providing public transportation; but it is amenable to the use of its rights-of-way for trails if it has no other present use for the corridors and if other responsible entities assume liability, maintenance, and policing. The most suitable entities for this task are the local communities.

Likewise, MassHighway is supportive of trail projects and has funded the design and construction of the major trails in Massachusetts. MassHighway, however, would not commit design and construction money to a project unless right-of-way issues, including maintenance and policing responsibilities, had been spelled out.

If this project proceeds, then many years would lapse before a trail would be in place. The design phase would take between one and two years, as would the construction. Allowing for time spent securing funds and awarding contracts, it would be a minimum of five years before a trail could be in place.

APPENDICES

- A Bicycle-Pedestrian Accidents**
- B Environmental Issues**
- C Public Meetings**
- D Estimated Demand**
- E Information about Crossings**
- F Sample Lease**

Appendix A

Bicycle-Pedestrian Accidents

Bicycle-Pedestrian Accidents

The following is a description of bicycle and pedestrian accidents at the community level. Accidents are mapped in Figures A-1 through A-7.

In some cases, no accident concentrations will be seen. In other cases, specific intersections or roads will be the location of many accidents. The location of accidents may be a reflection of volumes of pedestrian and bicycle traffic more than an indication of hazardous conditions. An intersection with a large number of accidents may be as safe from a traffic design point of view as another with no accidents: one is a location where many bicyclists and pedestrians travel; the other is one where little such traffic occurs. Likewise, lack of accidents cannot be taken as a measure of safety. Perceived hazardous conditions might discourage bicycling and walking almost entirely in a given area, resulting in few or no accidents.

A more detailed, community-wide study could determine if additional measures need to be taken to reduce these accident rates. It would be determined what type of measures -- special signs, targeted police enforcement, traffic control design changes -- would be most effective. These types of analysis are best performed by a local bicycle committee and local staff.

Berlin

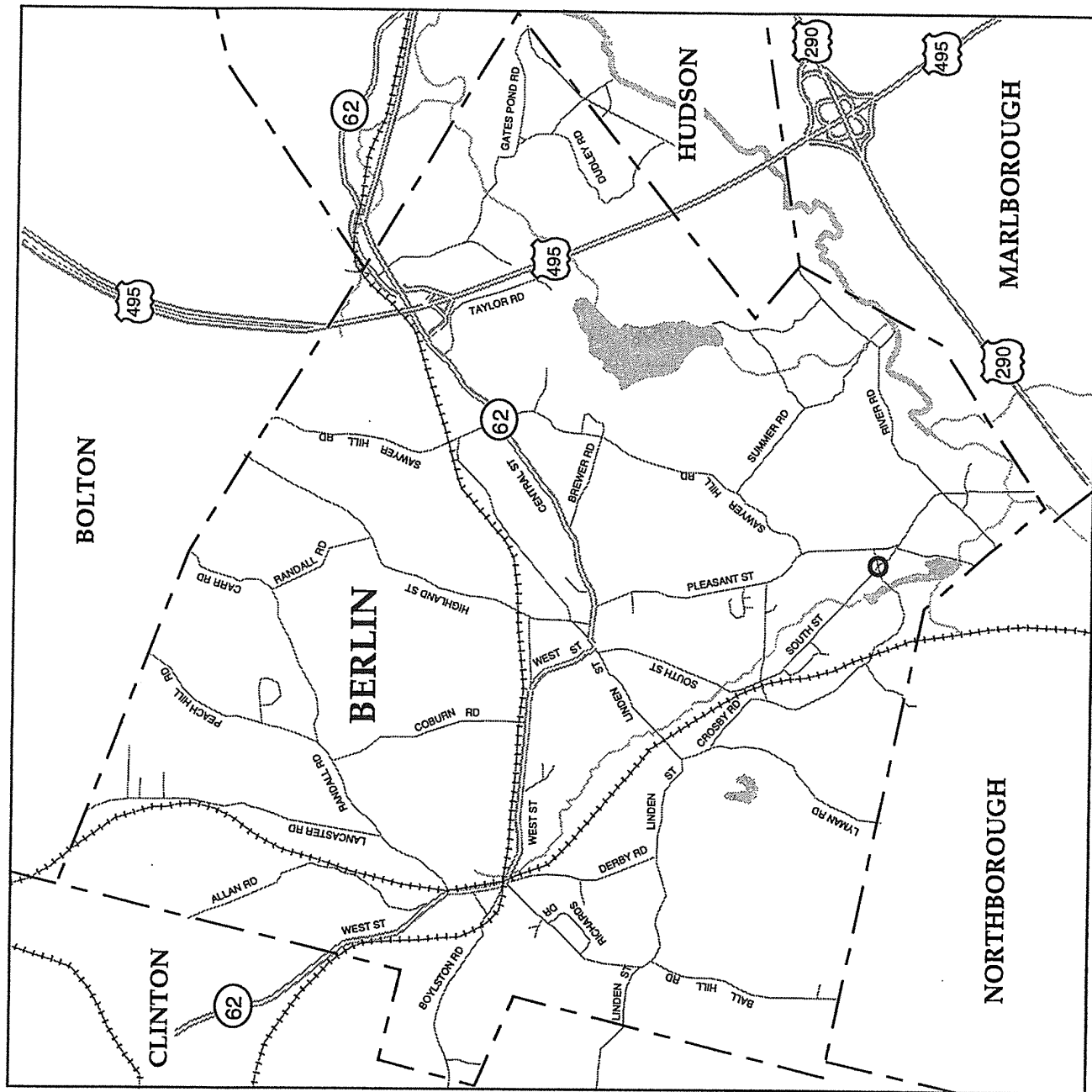
In Berlin (see figure A-1), there was one accident involving a bicyclist at the intersection of South Street and Crosby Road. There were no reported accidents involving pedestrians between the years 1988 and 1991.

Hudson

As can be seen in Figure A-2, the majority of the accidents occurring in Hudson were in the center of town, with the highest concentration of accidents on Main Street. The Central Mass. line would likely divert many pedestrians and bicyclists from the Main Street corridor.

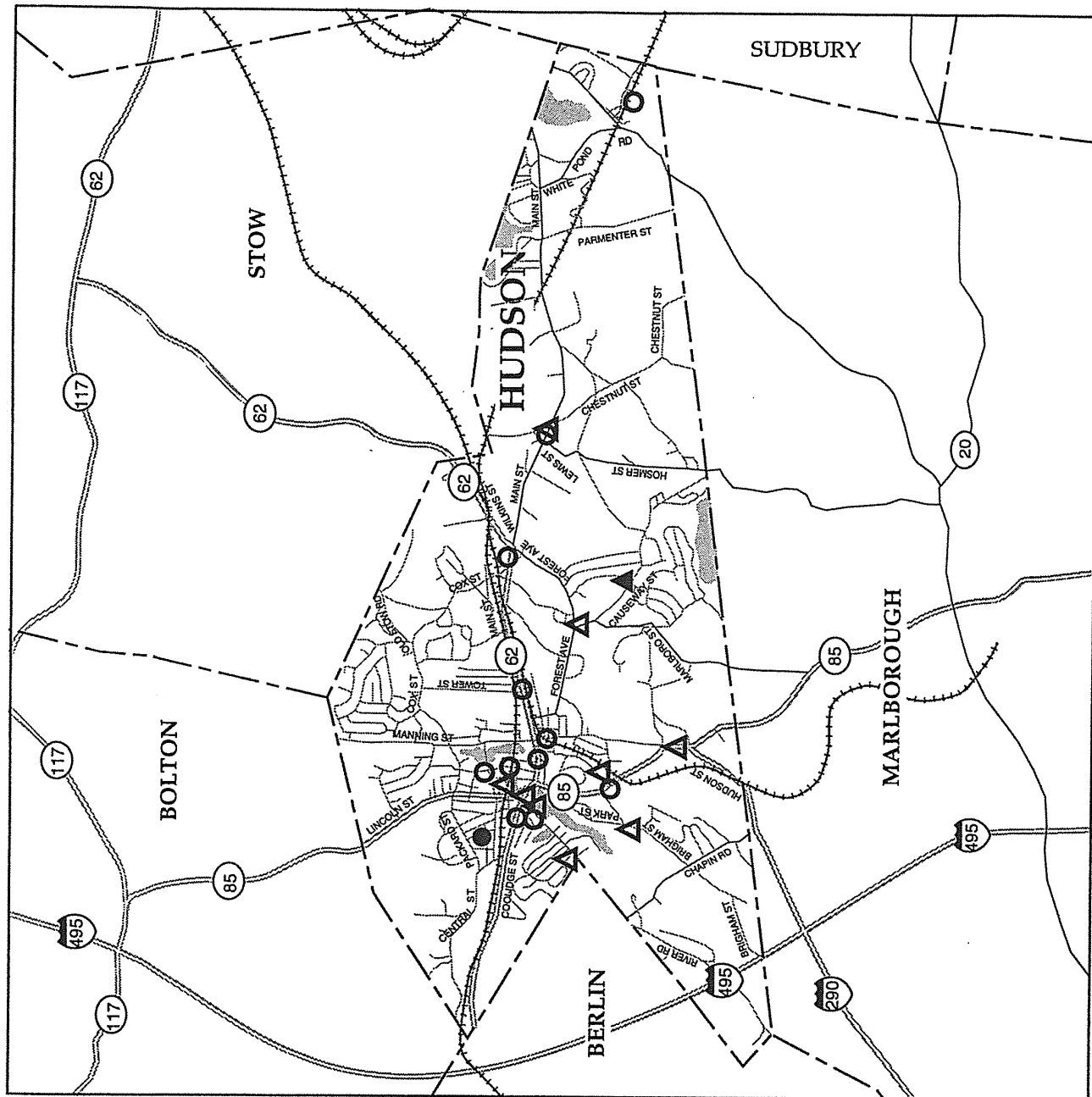
The 19 pedestrian accidents were more spread out than the 29 bicycle accidents. Ten of them were mapped. Two pedestrian accidents occurred on Main Street; one in the center of town, and the other further east at Lewis Street. Two others occurred near the rotary in the center of town, two on Route 85, one on Brigham Street, one at the intersection of Forest Avenue and Marlboro Street, and one on River Street at the Berlin line. Two fatal accidents occurred: one on Causeway Street between Marlboro Street and Robinson Road, the other at an unknown location.

FIGURE A-1
Locations of Collisions
of Motor Vehicles
with
Bicyclists and Pedestrians,
Berlin 1988-1991



Source: Registry of Motor Vehicles data,
processed by Massachusetts Highway Department

FIGURE A-2
Locations of Collisions
of Motor Vehicles
with
Bicyclists and Pedestrians,
Hudson, 1988-1991



Source: Registry of Motor Vehicles data,
 processed by Massachusetts Highway Department

Of the 29 bicycle accidents, 12 were mapped. With the exception of an accident at the Main Street and Lewis Street intersection and one on the right-of-way east of White Pond Road, the bicycle accidents were concentrated around the center of town. The one bicycle fatality occurred at the intersection of Blaine Street and Howe Street.

Sudbury

As Figure A-3 shows, the two roads where most of the accidents occurred were Concord Road and Route 20. There were no fatal accidents in Sudbury between 1988 and 1991.

Of the 7 pedestrian accidents, only 3 could be mapped; these 3 occurred in South Sudbury. One was on Route 27 just before the Wayland town line, one at the intersection of Union Avenue and Route 20, and one at the intersection of Woodside and Alta roads.

Of the 17 bicycle accidents, 11 were mapped. There were 5 bicycle accidents on Route 20. There were 3 on Concord Road, and 1 each on Union Avenue, on Haynes Road, and at the Candy Hill/Plympton Road intersection.

Wayland

Wayland had 25 accidents in the study time period. All of them occurred around the perimeter of the town (see figure A-4).

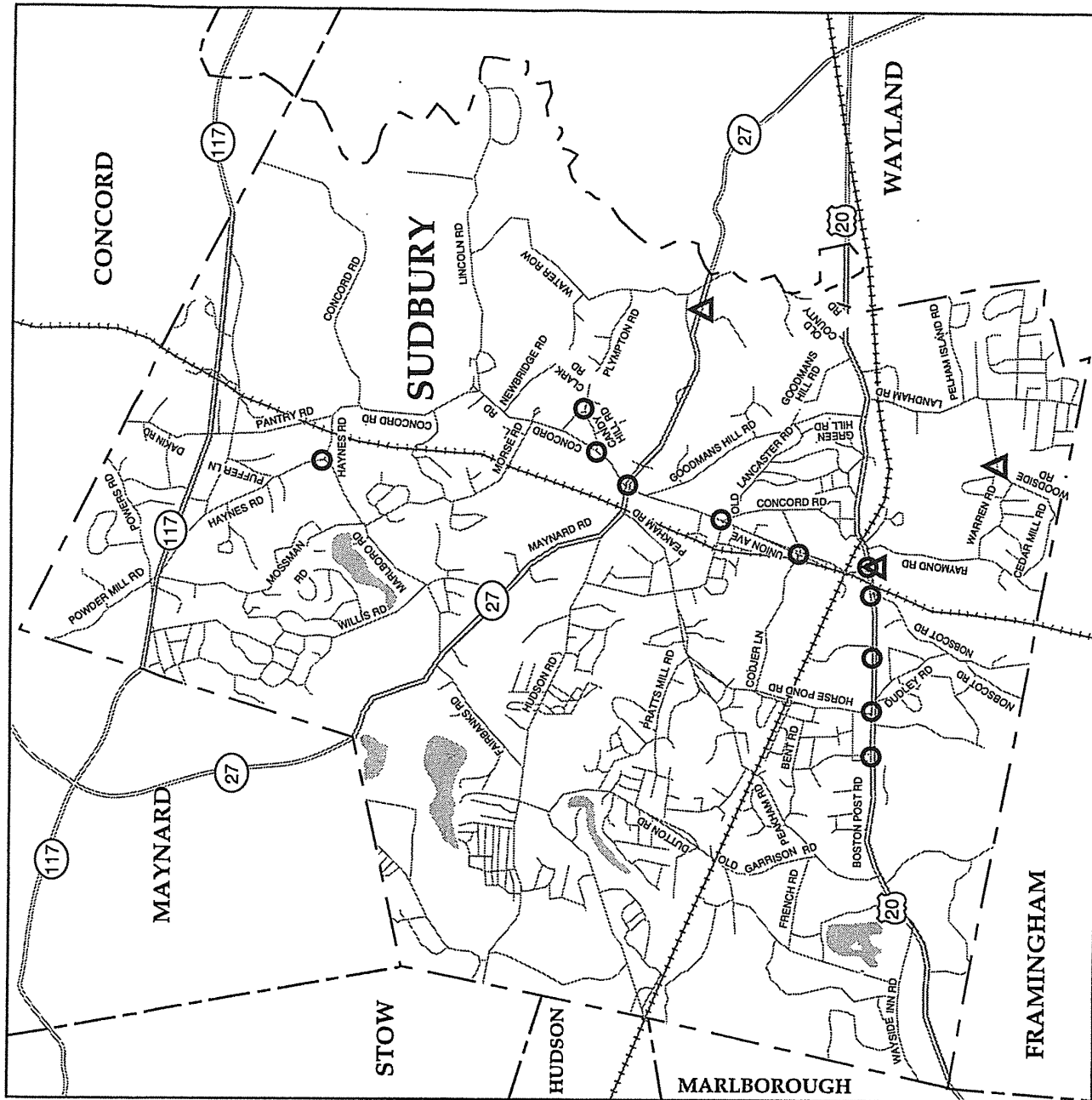
Three of the 8 pedestrian accidents were mapped. One occurred on Route 20 at the Plain Road intersection. Two were on Route 30: one at Rice Road and another east of the Route 27 intersection.

Of the 17 bicycle accidents, 8 were mapped. Two were on Route 126 south of Stonebridge Road, 2 on West Plain Street, 2 on Winter Street (1 at the intersection of Route 30), 1 at the Rice Road/Route 30 intersection, and 1 on Route 20 at the Weston line.

Weston

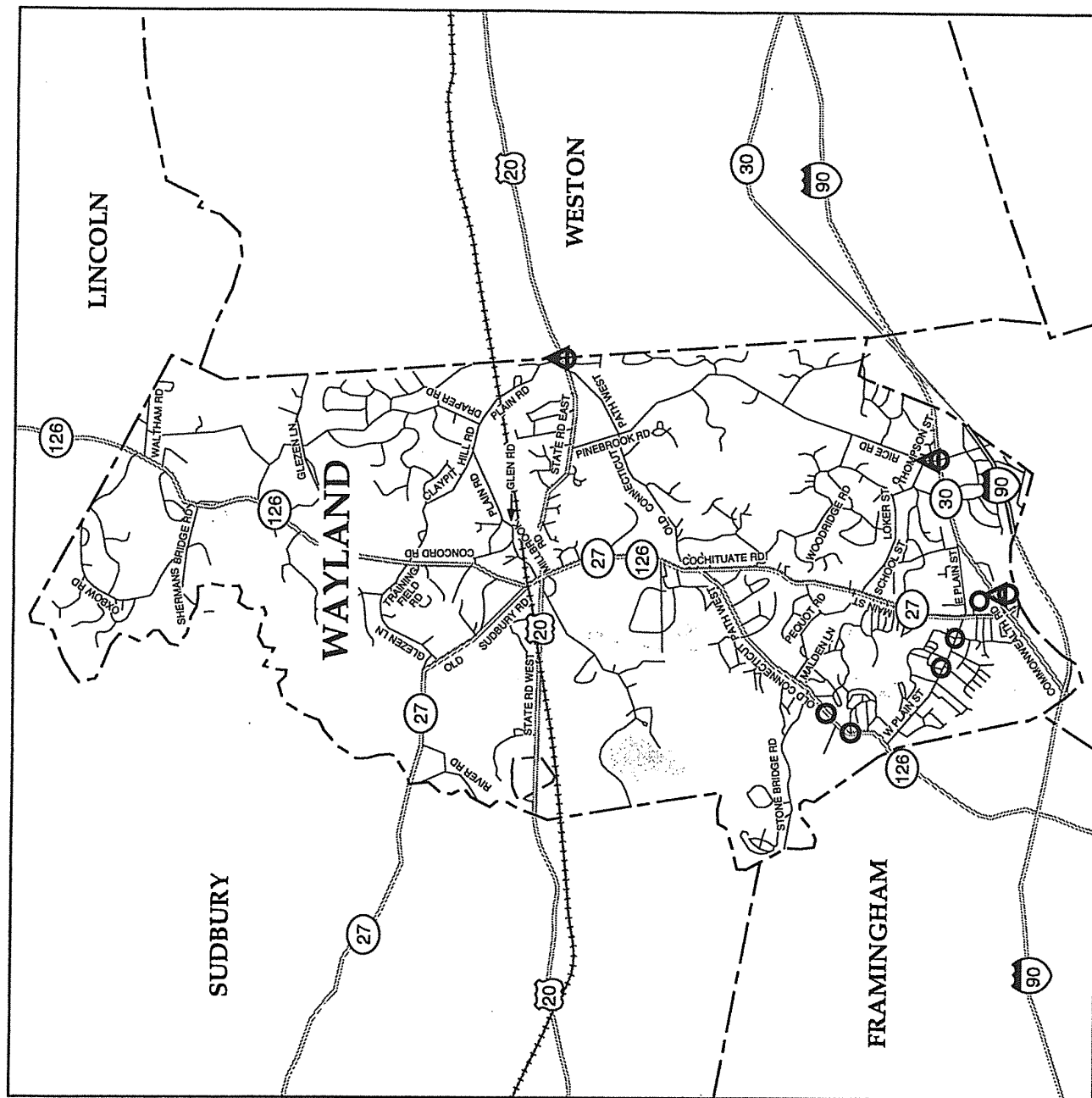
Of the 10 bicycle accidents in Weston, 9 were mapped in Figure A-5, as were 7 of the 13 pedestrian accidents. Most of the accidents reported in Weston occurred on the south side of town. Three accidents involving pedestrians occurred on Route 30, 1 at the intersection of Route 117 and Church Street, another on Route 20 on the Wayland line, 1 south of where River Road splits into Summer Street and South Street, and 1 at the end of Wildflower Lane.

FIGURE A-3
Locations of Collisions
of Motor Vehicles
with
Bicyclists and Pedestrians,
Sudbury, 1988-1991



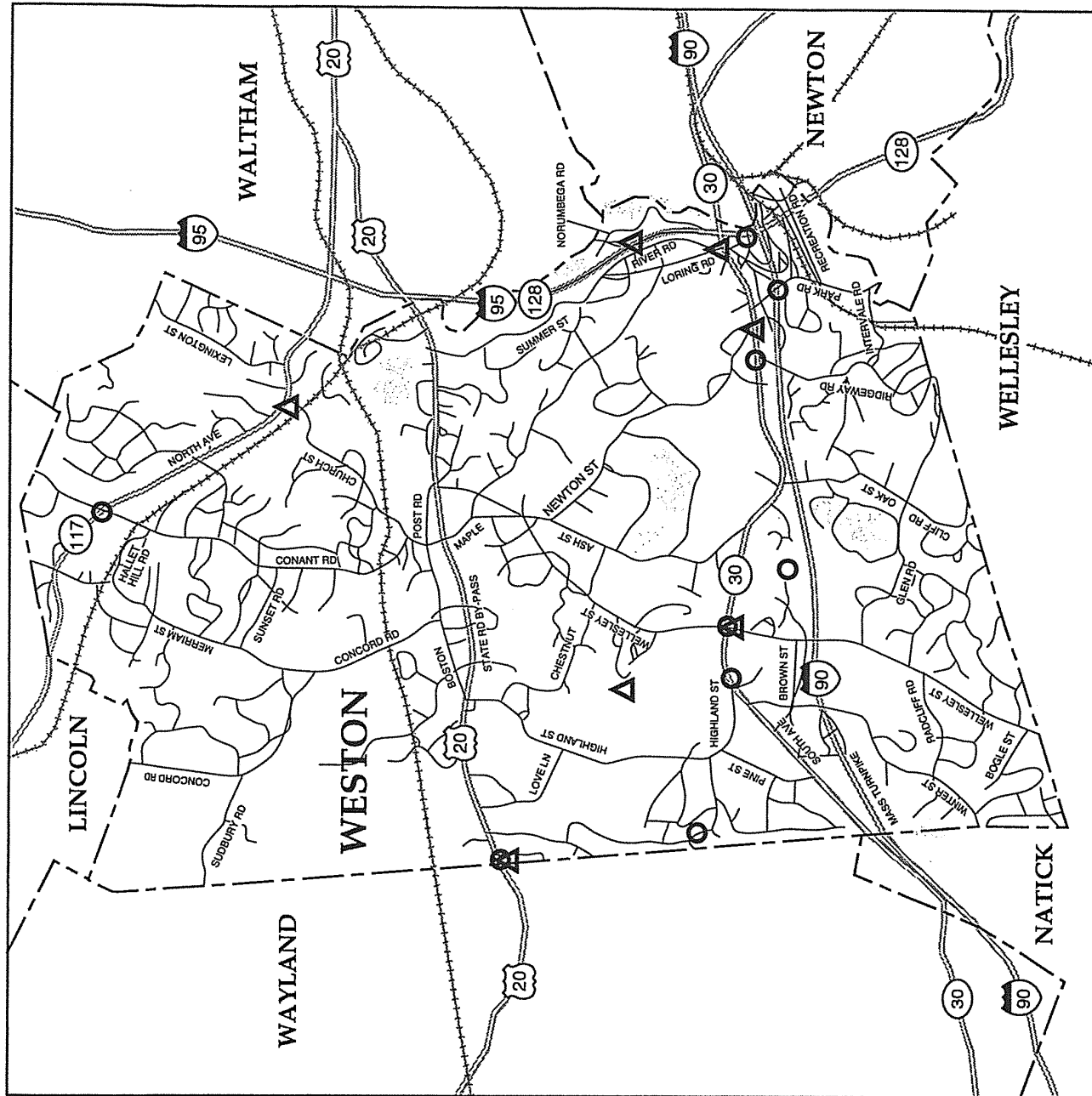
Source: Registry of Motor Vehicles data,
 processed by Massachusetts Highway Department

FIGURE A-4
Locations of Collisions
of Motor Vehicles
with
Bicyclists and Pedestrians,
Wayland, 1988-1991



Source: Registry of Motor Vehicles data,
 processed by Massachusetts Highway Department

FIGURE A-5
Locations of Collisions
of Motor Vehicles
with
Bicyclists and Pedestrians,
Weston, 1988-1991



LEGEND	
○	Bicycle Accident
●	Bicycle Fatality
△	Pedestrian Accident
▲	Pedestrian Fatality

Source: Registry of Motor Vehicles data,
processed by Massachusetts Highway Department

There were 3 bicycle accidents on Route 30. There was one accident at each of the following locations: Westerly Road, Weston Middle School, Route 20 at the Wayland line, Park Road, the intersection of Conant Road and Route 117, and near I-90 at the Newton line.

Waltham

Waltham had 107 bicycle accidents, of which about 80 percent were mapped (see Figure A-6), and 163 pedestrian accidents, of which about 50 percent were mapped. The accident concentrations in Waltham were in the center of the city on Main Street and on Moody Street. The Central Mass. right-of-way parallels Main Street.

A majority of the accidents on Main Street occurred on the west side of Lexington Street. There is an even distribution of pedestrian accidents throughout the city. There were 3 fatal pedestrian accidents (only one is shown on the map, on Main Street just west of Lyman Road).

The location of bicycle accidents is similar to that of the pedestrian accidents: a cluster in the center and a scattering on the outskirts of the city. There were no reported fatal accidents involving bicyclists in the 1988-1991 time period.

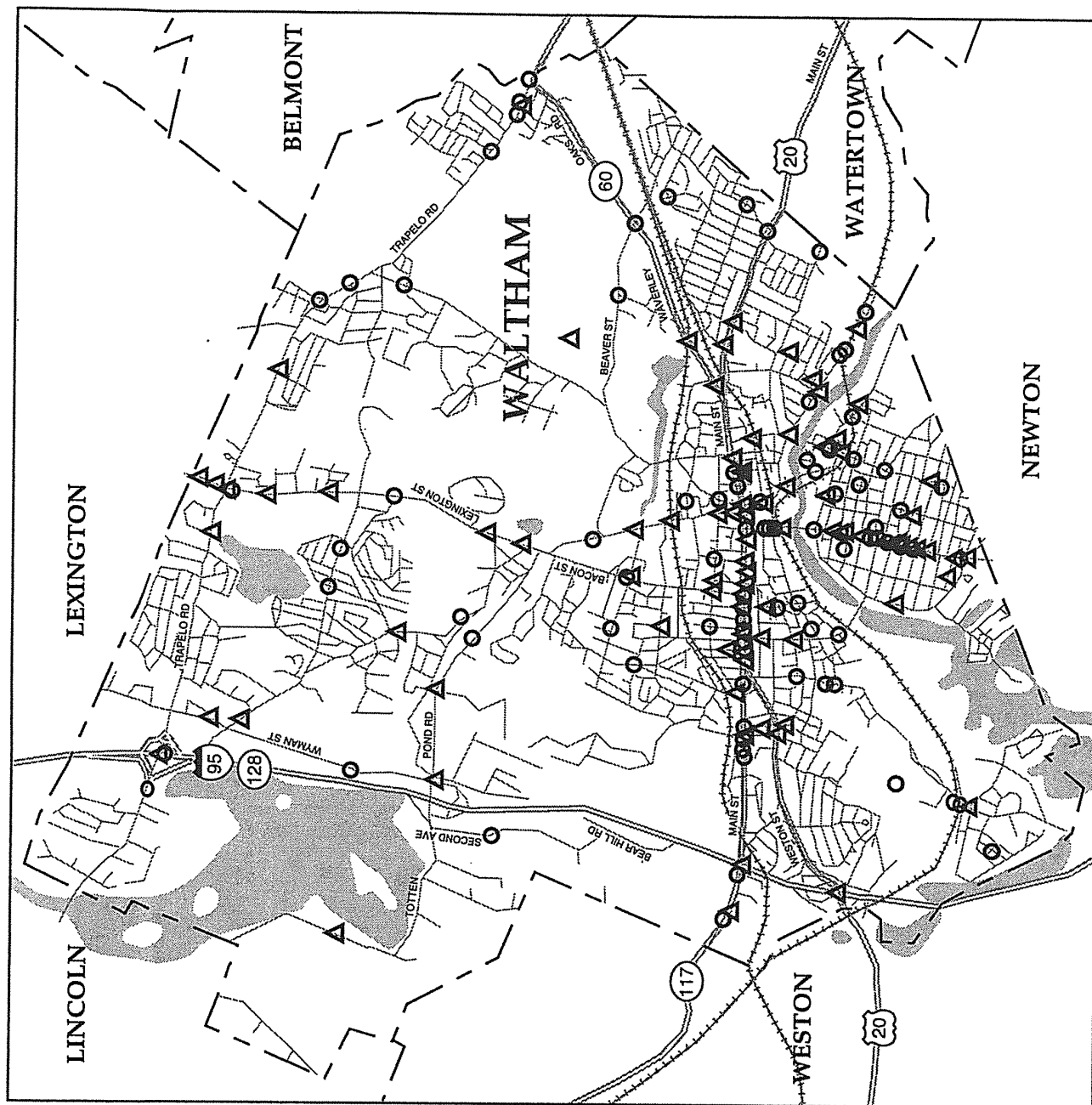
Belmont

As can be seen in Figure A-7, there were 40 bicycle accidents in Belmont, of which 26 were mapped, and 30 pedestrian accidents, of which 23 were mapped. Most of the bicycle and pedestrian accidents took place on Belmont Street, which is the border between Belmont and Watertown. There were also many on Trapelo Road.

There were 2 fatal pedestrian accidents, both on Trapelo Road: one at Belmont Street and the other at Beech Street. The rest of the pedestrian accidents were mostly on these two roads, with a few in the center of town and a couple in the northern section of town.

The distribution of bicycle accidents was similar to that of the pedestrian accidents. There were no bicyclist fatalities.

FIGURE A-6
Locations of Collisions
of Motor Vehicles
with
Bicyclists and Pedestrians,
Waltham 1988-1991



LEGEND	
○	Bicycle Accident
●	Bicycle Fatality
△	Pedestrian Accident
▲	Pedestrian Fatality

Source: Registry of Motor Vehicles data,
 processed by Massachusetts Highway Department

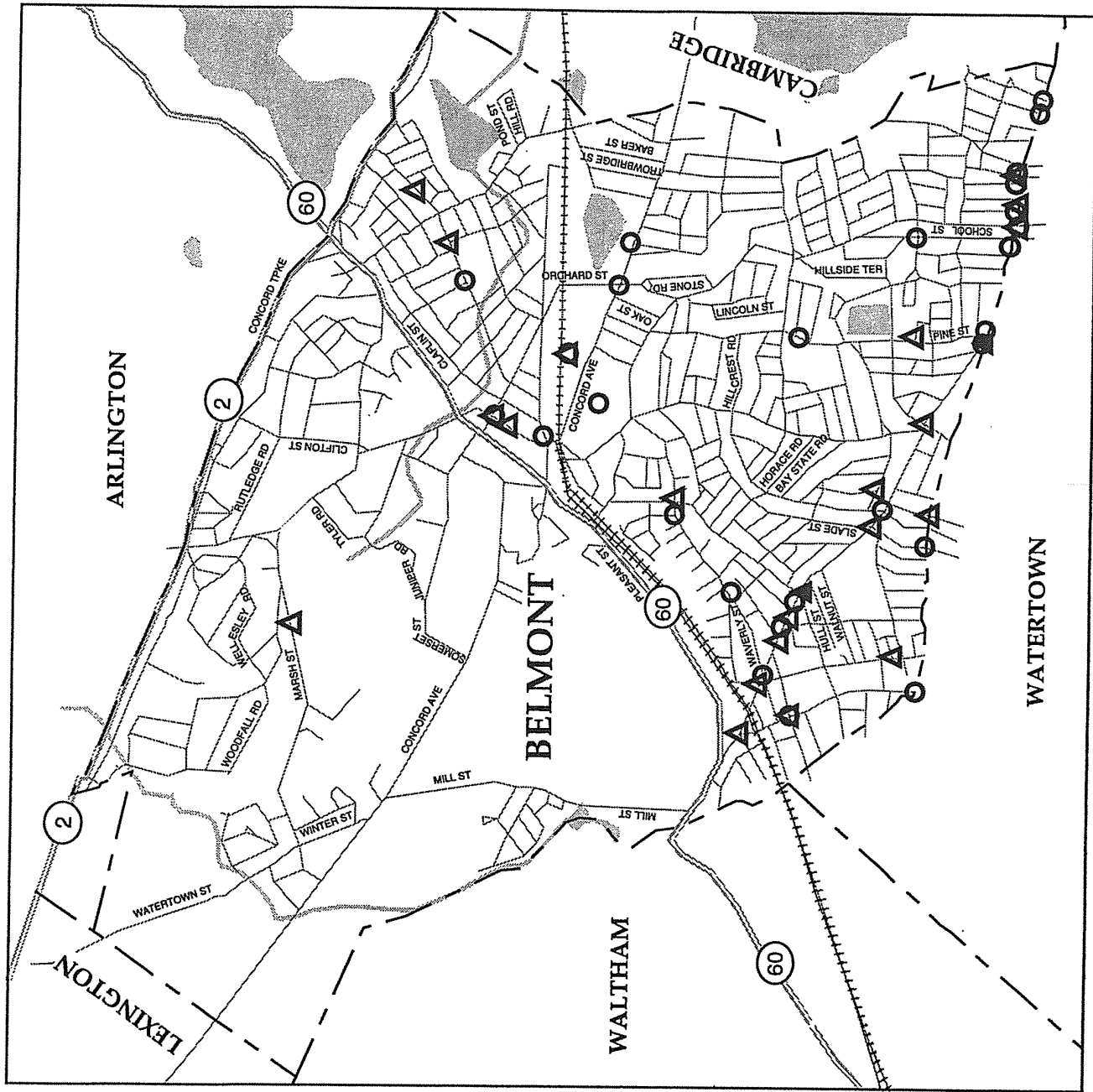


FIGURE A-7
Locations of Collisions
of Motor Vehicles
with
Bicyclists and Pedestrians,
Belmont, 1988-1991

Source: Registry of Motor Vehicles data,
 processed by Massachusetts Highway Department

Appendix B

Environmental Issues

Regulatory Permits and Approvals

The following reviews are likely to be required for the construction of a trail. This is a summary of a list developed and provided by the Department of Environmental Management.

Federal

US Army Corps of Engineers, Section 404

Area: Culverts, and/or repairing the walls banking the streams leading to and from the culverts.

State Executive Office of Environmental Affairs (EOEA)

Division of Environmental Protection (DEP)

A) Division of Waterways, Chapter 91

Area: 1) Maintenance or replacement of any fill or structures not previously licensed.
2) Any river on which public funds have been expended.

B) Division of Water Pollution, Water Quality Certification

Area: Discharge of pollutants into the waters of the Commonwealth. (Mass. General Laws, Chapter 131, Section 40.)

Massachusetts Environmental Policy Act (MEPA) Unit,
Environmental Notification Form

Area: Construction project over \$500,000.

Local

Conservation Commission, Notice of Intent

Area: Filling and altering wetlands.
(Guidelines are now being developed for the Rivers Protection Act.)

Table B-1
Flood Zones on the Right-of-Way

	Length (ft.)	Percent of Trail
Zone C	100,226	82
Zone B	8,100	7
Zone A	14,170	11
Total	122,496	100

Table B-2
Flood Plain: Zone A

	Location	Length (ft.)
Berlin	None	
Hudson	Hog Brook	1,000
	Bruce Pond	350
	Assabet River	700
	600 ft. east of Wilkins Rd.	60
	Fort Meadow Brook	300
Sudbury	Hop Brook	400
	Dudley Brook	400
	Hop Brook South of Route 20	500
	Sudbury River	600
Wayland	Sudbury River	4,500
	Mill Brook	200
	Hayward Brook	800
Weston	Cherry Brook	600
	Stony Brook	60
Waltham	Lyman Pond outlet dam	100
	Linden St. --> Beaver St.	3,600
		14,170

Table B-3
Zone B

	Location (west terminus)	Length (ft.)
Berlin	600 ft. west of Highland Rd.	200
	50 ft. east of Sawyer Hill Rd.	900
	1,900 ft. east of Sawyer Hill Rd.	900
Hudson	300 ft. east of Cox St.	1,000
Sudbury	Union Ave. --> Route 20	1,200
	2,000 ft. west of Landham Rd.	1,400
Wayland	Route 20	1,600
	700 ft. east of Plain Rd.	900
Weston	None	
Waltham	None	
		8,100

In some areas, the right-of-way is near Zone A and B flood plain:

- West of Priest Street, Hudson, 1,000 feet of Zone A, north side of right-of-way
- 500 ft. west of White Pond Road, Hudson, right-of-way splits 900-foot Zone A section but is in Zone C
- West of Concord Road, Weston, 500 feet of Zone A, south side of right-of-way
- Between Concord Road and Conant Road, Weston, areas of Zone A to the north and Zone B to the south
- East of Lyman Pond, Waltham, right-of-way divides a Zone A flood plain

Appendix C

Public Meetings

Public Meetings

Five public meetings were held. The original intention was to have only two or three, as is usually done for this type of study. The additional meetings were scheduled for two main reasons: (1) the high level of interest shown in the project and (2) the fact that attendance at the individual meetings was strongly affected by where the meeting was held. That is, it was found from the sign-in sheets (see Table C) that a large portion of the attendees came from the specific community where the meeting was held. It was decided that having two or three regional meetings might not attract many people who would only attend a meeting in their own community.

Table C
Geographic Origin of those Attending Central Mass. Rail Trail
Public Information Meetings*

Public Meetings	Central Mass. Communities							Other Communities			
	Berlin	Hudson	Sudbury	Wayland	Weston	Waltham	Belmont	West	Central	East	Total
Oct. 3 Wayland	3	1	9	23	7	6	3	4	5	4	65
Nov. 6 Waltham		1	4	7	7	55	4	1	4	13	96
Dec. 4 Sudbury	1	2	44	8	3	2	1	9	5	4	79
Jan. 30 Weston			4	15	74	3		1	3	8	108
Feb. 12 Hudson	6	6		1	1		1	7	2	3	27
Totals	10	10	61	54	92	66	9	22	19	32	375

*These totals are based on sign-in sheets. Based on head counts done at these meetings, it is estimated that 20 to 40 percent of those in attendance did not sign in.

The publicity for these meetings was done by advisory committee members. They sent press releases to local papers, contacted people directly, and in some cases distributed flyers.

Following are the minutes of these public meetings. The minutes were written by Dana Burghdoff, of the Waltham Planning Department, and reviewed by CTPS and members of the advisory committee.

Central Mass. Rail-to-Trail Feasibility Study

PUBLIC MEETING #1

Wayland Town Hall

10/3/96

Cathy Buckley Lewis of the Central Transportation Planning Staff (CTPS) explained the purpose of the Central Mass. feasibility study, which is to determine whether the existing railroad right-of-way can be converted to a recreational bicycle/pedestrian trail. She also introduced the regional Advisory Committee, which is made up of representatives from each of the seven Central Mass. communities (Belmont, Waltham, Weston, Wayland, Sudbury, Hudson, Berlin).

Cathy explained two maps of the Central Mass. communities. The first map showed the location of bicycle and pedestrian accidents for 1988-1991. The second map showed the Central Mass. branch, and Cathy asked that people write on the map to give suggestions or express concerns about the right-of-way.

Cathy estimated that a draft of the feasibility study report would be available by March 1997. The feasibility study will consider the physical impediments to constructing a trail: sight distances at intersections, traffic volume, bridge conditions, drainage/water issues, etc. Then a preliminary cost estimate will be prepared, based on a general 12' paved path, with 3' of shoulder on either side. If other widths or surfaces are desired, they can be incorporated into the design.

If the report is positive, the next step is for the communities to decide to request state funds for a design contract. The Boards of Selectmen and City Council for each community would have to vote for the request. The State will not pay for design without local support. The design would probably take 18-24 months.

The next step is for the communities to request funds for a construction contract. The construction would be executed by the Mass. Highway Department. The construction would probably take two construction seasons.

The likely time frame for completion of the trail would be 6-8 years.

Discussion (Most answers given by Cathy Buckley Lewis of CTPS)

Q: People currently ride their horses along the right-of-way from Wayland to Weston. I am concerned that equestrians would not be able to use the trail if it is paved.

A: It is possible for an adjacent path to be constructed for horse riders. It is a local decision.

Q: Where do people currently ride their horses along the right-of-way?

Audience: In Weston, Wayland, and Sudbury.

Comment: Accommodating horses should not be a problem, since a horse trail would only require about 3 feet in width, and the right-of-way is 40-80 feet wide.

- Q: Would the trail have to be paved?
A: Since the Mass. Highway Department would probably construct the trail, it is likely that it would be paved, so that the greatest variety of users could enjoy it (people with wheelchairs, strollers, etc.) Again, it would be a local decision.
- Q: Are paved trails more dangerous than unpaved?
A: Not necessarily. They are often considered more fun, depending on the user.
- Q: Would the trail be used as a cross-country ski trail in the winter, or be plowed?
A: It is a local decision whether to plow the trail in the winter. The Minuteman Trail is not plowed, and is used as a ski trail.
- Q: How would the trail be policed and maintained?
A: The communities would be responsible for policing and maintenance. The MBTA would require in the lease agreement that the communities do so.
- Q: How will snowmobiles be policed?
A: All motorized vehicles would be prohibited from using the trail, except for motorized wheelchairs. Again, policing would be a local responsibility.
- Q: Is the MBTA likely to support a trail use?
A: Since the MBTA owns the right-of-way, their support was necessary to conduct this feasibility study. MBTA support would become official with lease agreements with each community. Lease agreements for trail use would not necessarily preclude the MBTA from reinstating rail service in the future. However, the recent commuter train feasibility study reports that rail service is not a feasible option.
- Q: Didn't the commuter train issue prompt the trail study?
A: No. The trail study has been discussed for years. Some abutters may support the trail to thwart commuter rail use. But many simply support the trail for itself.
- Q: How can I volunteer to help the trail go forward?
A: Since there are not many active committees in the Central Mass. communities, as there were in the Assabet trail communities, you should put your energy into coalition building.
1. Talk to John Stasik, Chairman of the MetroWest Growth Management-Bicycle Subcommittee. His group has begun meeting to help coordinate coalitions in each MetroWest community. The MetroWest number is (508) 651-7350.
 2. Talk to your Central Mass. Advisory Committee representative.
 3. Talk to the Bicycle Coalition of Massachusetts. They have members in most communities.
- Q: Will the railroad tracks be removed?
A: Yes. The tracks would be removed for the trail. Also, the MBTA could not reuse the tracks, since they are in bad shape.

Q: Could the trail be built in stages, if certain towns, like Weston, don't want the trail?

A: Yes, the trail could be built in segments.

Q: What is the cost/mile?

A: The Minuteman cost \$2,100,000 for 11 miles of trail. A very preliminary cost estimate for the Central Mass. trail is \$5-6,000,000, which would be paid for with state/federal money.

Q: What are the typical concerns of the opposition?

A: In Lexington, people were concerned about theft, since their backyards were abutting the trail. National and local studies show that those problems have not materialized. There is also fear of something new, since the rail line has been abandoned so long.

Q: People using the Minuteman Trail often park illegally, creating traffic jams. How will you handle parking for the Central Mass. line?

A: The Minuteman Trail is an incredibly popular trail. The Central Mass. trail would not be as crowded as the Minuteman. Parking provisions and enforcement is controlled locally. Suggestions regarding parking/traffic should be made to your local representative of the Advisory Committee, and they will be included in the feasibility study.

Q: How much clear cutting will there be?

A: Given a 12-foot path with 3-foot shoulders, there would be at least 18 feet of clear cutting. I do not know how much extra cutting would be necessary during the construction process. The communities and their Conservation Commissions would decide if they are willing to accommodate extra trails (e.g. for horses), which would require additional cutting.

Q: Are mixed use trails dangerous?

A: The Minuteman Trail is a mixed use trail. According to the Bedford Chief of Police, there have been no accidents reported to the police.

Comment: (Jerry VanHook, Lexington Friends of the Minuteman Trail)

Width is an important criteria in determining safety. Multiple types of users can coexist. Also, there has been no increase in crime along the right-of-way. The trail is straight, wide open, and well used.

Q: How would the trail affect property values?

A: I do not have any hard data. Other trail studies have shown a 2-5% increase in property values. Many sellers will advertise their proximity to a trail. There is practically no graffiti or vandalism to deter buyers.

Q: Could parking and bicycle parking be incorporated into the request for State funding?

A: It is a question of cost. A lot of things are possible.

Q: Who do we call if we have design suggestions?

A: Call your Advisory Committee representative or me.

Q: How can we protect adjacent trails leading into conservation lands?

A: It is up to the owners of the conservation lands.

Q: Where is the terminus of the trail in Berlin?

A: Berlin Center

Q: Would a vote for the trail come before Town Meeting?

A: No, only a local referendum would be needed from the Board of Selectmen or City Council, assuming local funds are not used.

Q: Are there environmental benefits of the trail?

A: It is likely that there would be air quality benefits, since people might use the trail instead of their cars. An air quality study is not currently part of the feasibility study, but I will consider it.

Cathy asked that people contact her at (617) 973-7118 to provide information that might be useful to the study.

(Meeting then broke up into informal group discussions.)

Central Mass. Rail-to-Trail Feasibility Study

PUBLIC MEETING #2 Waltham Government Center 11/6/96

Before the meeting, Andy Greene of the Waltham Bicycle Committee showed a 10-minute video from the Rails-to-Trails Conservancy, which documented the experience of other rail-to-trail projects and included interviews with those involved. Cathy Buckley Lewis of the Central Transportation Planning Staff (CTPS) opened the meeting and explained the purpose of the Central Mass. feasibility study, which is to determine whether the existing railroad right-of-way can be converted to a recreational bicycle/pedestrian trail. Cathy showed slides of the Central Mass. right-of-way in Waltham and other trails.

Discussion *(Most answers given by Cathy Buckley Lewis of CTPS unless noted)*

Q: If one town turns down the trail idea, is the trail still viable?

A: Yes. It is likely that the trail could be built in sections.

Q: How can Weston police the trail with such a small police force? Lexington and Arlington have much larger police forces.

A: The addition of a three mile trail in Weston is a marginal increase to the road network that Weston already polices.

Q: When will the abutters be notified? How much weight will be given to their opinions?

A: Abutter notification is up to the individual towns. You should contact your town's Advisory Committee representative for input. Your concerns will be addressed by your community in its decision to support the trail or not.

Q: Is it safe to have a trail next to an active railroad line, as proposed for parts of Belmont?

A: Yes, with the proper barriers.

Q: Will the power lines that run along sections of the right-of-way have to be moved?

A: No, there are no plans to move the power lines.

Q: Is the Minuteman Bikeway plowed? *(The Minuteman Bikeway begins at the Alewife T Station in Cambridge, and continues west through Arlington, Lexington, and Bedford.)*

A: No, the Minuteman Bikeway is not plowed in the winter.

Q: Will parking facilities be considered?

A: Parking was brought up at the last public meeting also. We will consider parking.

Comment: Before the Minuteman Bikeway existed, there was a lot of vandalism along the right-of-way. Now the vandalism has gone way down. It is practically nonexistent. I agree that you should look into parking for the Central Mass. trail.

(former Lexington Bicycle Advisory Committee member)

Q: What is the cost/mile of maintenance of the Minuteman Bikeway?

A: The Town of Arlington has not allocated any additional funds for the maintenance or policing of the Bikeway. The Town mows along the side of the trail four or five times a year, and recently restriped the center line of the trail. The trail is self-policing.
(Arlington Planning Director)

Q: Will the trail increase property values?

A: Studies have shown an increase of 2-5% in property values. Nearness to the Minuteman Bikeway is mentioned as a positive in real estate listings in the area.

Q: Where will the trail end (or begin) in Berlin?

A: Where MBTA ownership ends east of Coburn Road.

Q: Can we hear comments from Minuteman abutters?

A: I am not an abutter, but I have spoken with many abutters. All of the abutters had concerns before the trail was built. Now most of them seem happy with the trail.
(former Lexington Bicycle Advisory Committee member)

Comment: I am an abutter to the Minuteman Bikeway. My wife and I sold our house in Belmont and moved to Arlington to be near the Bikeway. (Arlington Planning Director)

Comment: There is a motorcycle patrol in Waltham that could police the trail.

Comment: The City of Waltham has police officers on bicycles who would also police the trail in Waltham. (Waltham Planning Director)

Comment: People should just use common sense on the trail.

Comment: Common sense doesn't always exist.

Q: Weston has worked very hard to conserve its woodlands. They contain endangered species and wetlands. Also, the railroad tracks are up on embankments in some places. How much clearing will there be? How much of an environmental impact?

A: The construction of a trail is considered to have a very minimal impact, especially when compared to the usage of the right-of-way for a train. Also, the Conservation Commissions in each town would have to approve any construction plans.

Comment: During construction of the Minuteman Bikeway, the embankments were not touched. They were wide enough to support the trail.
(Arlington Planning Director)

Comment: I suggest that you use white striping on the trail and reflective tape on any gates

for nighttime use. I also suggest installation of signs to let you know where you are on the trail, and call boxes for emergencies.

Comment: I think the trail would be a big improvement over dirt bikes that currently use the right-of-way. (Hudson resident)

Comment: We were not informed of the possible use of Channing Road as a connection to the Central Mass. trail. The trail connection would then be in our front yards.

Q: How can we get involved in the trail project?

A: Get together with other interested people and form a group.

Comment: I appreciate the work being done for the trail project. (Wayland resident)

Comment: We need to coordinate a group for the trail. Let's meet up front after the meeting.

People then began discussing the project in smaller groups.

Approximately 100 people attended the meeting.

Central Mass. Rail-to-Trail Feasibility Study

PUBLIC MEETING #3

Sudbury Town Hall

12/4/96

Cathy Buckley Lewis of the Central Transportation Planning Staff (CTPS) opened the meeting and explained the purpose of the Central Mass. feasibility study, which is to determine whether the existing railroad right-of-way can physically be converted to a recreational bicycle/pedestrian trail. Cathy showed slides of the Central Mass. right-of-way and other trails.

If the trail is found to be feasible, the next step is design. Each community would enter into lease agreements with the MBTA, which owns the right-of-way. The communities would then apply to the Mass. Highway Department for design funds and then construction funds. MassHighway would require that each town agree to police and maintain the trail.

Discussion *(Most answers given by Cathy Buckley Lewis of CTPS unless noted)*

Q: Is the feasibility study likely to be positive?

A: Physically, conversion to a trail is straightforward. The right-of-way is publicly owned and wide enough for a trail. It is a question of cost.

Q: Were you involved in the Minuteman Bikeway feasibility study? What happened?

A: The Minuteman is a rail-trail that begins at the Alewife T Station in Cambridge, and runs through Arlington, Lexington, and Bedford. I was involved in the study in the late 1970s. We ran into some opposition in Lexington. People were worried about the unknown. Politically it was also a problem at the State level. The trail was finally opened in 1992. The Dr. Paul Dudley White Trail was dedicated in the early 1970s. We also have the Cape Cod Trail and Norwottuck Trail. Most probably, this project would be like the Minuteman: built by MassHighway and leased to the communities by the MBTA.

Comment: I work for Mitre Corp. in Bedford. I use the Minuteman Bikeway, and have visited other trails. I have a nice vision of what could happen here. Interest in the trails come slow here because there isn't a nucleus of small trails like there were in Bedford. This trail could also help ameliorate the traffic problem.

Q: Would equestrians be allowed to use the trail?

A: There is room along the right-of-way for a parallel trail. It is something to be considered.

Q: Would the trail be wide enough for emergency vehicles?

A: Yes.

Q: Would the towns be liable for accidents along the trail?

A: Liability would be the same as for town roads.

Comment: There is experience on the Old Dominion Trail of equestrians and bicyclists using the same right-of-way.

Q: How is town support rallied for the trail?

A: It is up to the towns. The Boards of Selectmen or the Mayor/City Council will have to support the trail. For the Minuteman process, the Lexington Board of Selectmen held a hearing.

Comment: (Lexington Friends of the Minuteman) No extra police officers were needed for the Minuteman Bikeway. The officers like the duty, because it gives them a chance to interact with people, to get out of their cars. The maintenance costs are minimal. They sweep the path twice a year, and there is no lighting or snow plowing. Lexington DPW handles minor repairs, and I don't hear any complaints.

Comment: (Lexington Friends of the Minuteman and abutter) We have volunteers who help clean and maintain the trail. Also, the trail helps bring people to our commercial areas. It's nice to bring people out into the country. The trail encourages a sense of community.

Q: Has there been any midnight revelry or dumping?

A: Vandalism has not been a problem. There was dumping before the trail went in. There was a murder that some tried to blame on the trail.

Comment: Kids used to throw rocks onto cars from the overpass, but now with so many people on the trail, that activity has stopped. Also property values along the trail have either remained stable or gone up.

Comment: (Cathy Buckley Lewis) There was a study in Seattle showing that property values along trails went up 2-5%.

Q: How long will the project take?

A: Minimum of 5 years.

Q: Are any barriers, such as fencing and landscaping, being considered in the study?

A: There is no set policy by MHD. They would be included as necessary in the design phase. There are houses that probably would warrant barriers.

Q: Could trains run on the right-of-way again? I would rather have roaring rollerbladers than a train.

A: Yes, trains could run again, but not for the time being. MBTA will not give up their right to run trains on the right-of-way, but it is not currently feasible to do so.

Q: How many trail users would there be?

A: It's unknown. There will be fewer users than on the Minuteman. The traffic will be very different on either end of the trail, heavier at the Belmont-Waltham end.

Comment: The Minuteman is heavily used because there are so few trails available. We should be building as many as we can.

Q: How is the funding competition for ISTE A funds?

A: I don't know. I feel optimistic about funding availability, either from ISTE A or the State, because of the historical support for bike trails. Also, trails are cheap compared to highways.

Q: If one town doesn't want the trail, is it still viable?

A: Yes, it's viable. Trails as short as ½ mile have been funded.

Q: Will there be any emergency telephones along the trail?

A: I don't know, but it could definitely be considered.

Q: Are there ever snowmobiles on the Minuteman during the winter?

A: During the first year there were, then they gave up.

Comment: There are cross-country skiers on the trail, which is nice.

Comment: (Member of Rails-to-Trails Conservancy, resident of Sudbury, works in Lexington) There are several trails throughout the region. I hope the experience with the existing rail-trails will help ameliorate concerns.

Comment: (Lincoln resident) We're very slow and conservative in New England. I am a trail advocate because I like to walk. I don't own a bike. The trail is a win/win. It is a healthy option, like a continuous park. Do mothers with children and abutters use these trails?

Comment: (RTC member) Yes, there is very mixed usage.

Comment: (Cathy Buckley Lewis) During commuting hours, 35-40% of the users are bicyclists, 30% are rollerbladers, and the rest are walkers or joggers.

Q: What kind of response have you received in the other towns?

A: The first public meeting was in Wayland in October, and the second meeting was in Waltham in November. People at both meetings were generally supportive. There were a few concerns. The phone calls I have received have been supportive.

Comment: This meeting seems more positive than the Wayland meeting.

Q: What is the biggest obstacle to the trail?

A: Political opposition.

Q: What is your sense of the project?

A: At first, there was not a lot of citizen involvement as there has been for other projects.

But the Central Mass. trail is the most talked about project that I've been involved with, even more so than the Minuteman.

Comment: (Sudbury Valley Trustees representative) We are strong boosters of this project, which is uncommon for our group, since we normally just support conservation projects. We looked at how many conservation lands would be connected by the trail, and it is very exciting. The trail would also be a good link for the Bay Circuit Trail, which would connect the North Shore to Duxbury.

Q: Rollerbladers and bikers might be in conflict on the trail. I know we are still on a learning curve. Is there any discussion of design to correct conflict?

A: We have discussed having a trail wider than the standard 12 feet. The right-of-way is wide enough for a wider trail, but it is a trade off for some who don't want a lot of paving. The trail could be wider in some sections, and narrower in others. The trail could also be split, so that each direction is separated.

Comment: (Stow resident) I have been on several bike paths, and the Minuteman is a very good trail. I would suggest though that the guardrails be moved back so that people resting on them aren't in the way of people using the trail. Also, on a Rhode Island trail, the pedestrians travel in the opposite direction of bikers and rollerbladers, which seems to help avoid conflicts.

Comment: That idea was considered for the Minuteman, but was turned down as possibly dangerous. No people have been run down on the Minuteman. A wider path would help avoid conflicts. The Minuteman was narrowed from 12' to 10' in sensitive areas, which is too narrow.

Q: How has the Cape Cod Trail dealt with conflicts?

A: They haven't.

Comment: The problem is pedestrians that walk two or three abreast.

Q: What is the next step?

A: The feasibility study will be done in March 1997. Then the Boards of Selectmen and City Council must vote to proceed. The towns would enter into lease agreements with the MBTA, and then collectively apply to MassHighway for design funds. For the Minuteman Bikeway, the Department of Environmental Management oversaw the design. The design will take 1-1 1/2 years. There will be lots of public discussion. The Conservation Commissions would have to issue Orders of Conditions. Then the towns would collectively apply for construction funds. Construction would take 1 1/2 -2 years.

Q: After the study, is it up to each town to get the votes from the boards?

A: Yes. It is likely there would be one big design contract and one big construction contract for all the communities involved.

Q: Does the project have to be on the TIP in order to receive ISTEA funding?

A: Yes, when the feasibility study is completed.

Q: Is a Town Meeting necessary?

A: No, I don't think so.

Comment: I want to encourage equestrian use. A separate bridle path would be wonderful. There are lots of equestrian groups to draw on for information for design.

Comment: (Joan Blaustein, MAPC) There is a movement by rollerblading groups to educate rollerbladers on etiquette. Also, the Central Mass. trail would connect to the Assabet River Trail.

Q: What will the permitting process be?

A: An Environmental Impact Report (EIR) was waived for the Minuteman Bikeway.

Q: Is there any indication of the need for an EIR for the Central Mass. trail?

A: Not yet.

Comment: (Lexington Friends of the Minuteman) It is really the responsibility of users to control their speeds in congested areas. It is the liability of people overtaking others to announce their intention to pass. We're opposed to bikers and rollerbladers traveling in groups.

Comment: You'll find that bikers go faster during commuting hours. Most commuters use bells or call out when they are passing.

Comment: (resident of Sudbury) My kids love to ride their bikes, but they can't do it here now. It's not safe. The Central Mass. trail would be a great resource for kids.

Central Mass. Rail-to-Trail Feasibility Study

PUBLIC MEETING #4

Weston Middle School

1/30/97

Cathy Buckley Lewis of the Central Transportation Planning Staff (CTPS) opened the meeting and explained the purpose of the Central Mass. feasibility study, which is to determine whether the existing railroad right-of-way can physically be converted to a recreational bicycle/pedestrian trail. Cathy showed slides of the Central Mass. right-of-way and other trails.

The study will look at the physical issues regarding conversion to a trail: intersections, right-of-way width, embankments, etc. If the trail is found to be feasible, the next step is design. Following the model of the Minuteman Bikeway, each community would enter into lease agreements with the MBTA, which owns the right-of-way. The communities would then apply to MassHighway for design funds and then construction funds. MassHighway would require that each town agree to police and maintain the trail.

Discussion (Most answers given by Cathy Buckley Lewis of CTPS unless noted)

C = Comment Q = Question A = Answer

- C: I have been an abutter of the rail line for 48 years. I am guardedly in favor of the project, but I am concerned about the number of users and access since the trail would go through rural wooded areas.
- Q: How many users would there be? I received an inflammatory letter that said that the Minuteman Bikeway has 10,000 users per day. I am in favor of the project for safety reasons. Weston has very few sidewalks and it is dangerous to ride bikes with children.
- A: The Minuteman Bikeway is the most popular rail-trail in the country. I don't expect the same number of users for this trail.
- C: Opening up the right-of-way will be an invitation for everybody to use it, including the bad guys. Motorcyclists already use it. We don't need any more trails.
- C: I am a middle school student, and I think the trail is a great idea. The roads are not safe to ride on.
- C: The neighborhood would be impacted by the trail. People like the serenity. That's why they move to Weston. Try to imagine living on the right-of-way. We have vandalism and motorbikes. I think it was very interesting that the slides did not show the homes along the right-of-way.
- C: What's more frightening are the campers under the bridge.

- C: (Bob Sawyer - Lexington Friends of the Minuteman) I would like to invite the abutters to visit the Minuteman Bikeway. The Lexington abutters had a lot of the same concerns that you do. Some of the Lexington abutters put up fences when the trail first opened, but now they have put in gates so they can access the trail.
- C: If this trail is built, it will be policed. Many of the existing problems on the right-of-way will go away.
- Q: Who pays for the trail? I'm against our taxes going to pay for it.
- A: The trail design and construction would most likely be paid for with state or federal funds. The policing and maintenance of the trail would be paid for by the towns.
- C: I am a middle school student, and I think it's worth spending taxes for kids' safety. There's no place to in-line skate or bicycle in town. Also, the motorbikes won't use the trail when built.
- Q: How is parking being handled?
- A: It would be nice to avoid building parking lots. Private companies might allow use of their lots on the weekends. There won't be a lot of detail on parking at this stage.
- C: Given the number of people who use the right-of-way now, and that the area is listed in tour books, I am concerned about the lack of parking and public access. Gun Club Lane is already impacted by cars parking on it. Also, I am concerned since the trail would go through wetlands, and there is already road flooding. I do not think that crime and vandalism will increase, however.
- Q: Will there be a town meeting?
- A: It is up to the town. Legally all that is required to request design funds (the next step) is a vote by the Board of Selectmen or City Council.
- Q: How are kids going to get to the path? They would have to ride on the windy roads.
- A: You bring up a good point. This trail is part of a larger effort to improve bicycle and pedestrian safety on streets as well as off-street. John Stasik, recently elected State Representative from Framingham, is chairing a group that has put out the MetroWest Bicycle Map and is trying to get a bicycle committee formed in each town.
- Q: Given the increasing amount of traffic and lack of parking in and around Boston, you should keep open the option for using the right-of-way for public transportation.
- A: The MBTA will keep that option open in their leases with the towns.
- C: I think parking has to be considered in the study. Should have no-parking zones by people's houses.
- Q: I want to know the costs of policing and maintenance.
- A: I am getting info from the Minuteman Bikeway and will put the numbers in the study.

- C: I am a Weston resident and have a daughter in Lexington who was one of the abutters to put a gate in her fence for access to the Minuteman. I think a trail would be a great addition to the community. Parking has to be solved. Properties along the Minuteman are safer, and people on the path are family people. We should keep an open mind.
- C: My niece lives in Arlington and loves the Minuteman Bikeway. I also have relatives in Rhode Island, and they love the bike trail down there too.
- C: I use the right-of-way all the time. It shouldn't be changed. Leave the woodlands alone. We should look into improving the sidewalks before spending money on the trail.
- C: I am on the Department of Public Works Committee. We need detailed info on parking and restrooms in the study.
- C: Perhaps a trail fee could cover the maintenance and policing costs.
- Q: How much support for the trail do we need? There will never be 100% in favor.
A: It's up to the individual towns. In Lexington, many were strongly opposed to the Minuteman, more were in favor. The Board of Selectmen voted in favor of the project.
- C: If you don't hot-top the trail, then people won't drive to use it, and you'll get rid of the parking problem.
- C: Stonedust surfacing should be a compromise.
- C: We should open up the beautiful areas for others to enjoy.
- C: I've heard the concerns of abutters regarding property values and crime. Realtors in Seattle, where there is a similar trail, say that property values have gone up, and crime has not increased.
- C: You should think about the character of each town when designing the trail.
- Q: Do we need this trail?
A: It's subjective. The idea has been around for years.
- C: I have found in other parks that unpaved trails are safer because predatory groups don't use them. Also, people would camp out along the paved trails and start fires. I'm afraid of campers making fires along the trail.
- Q: What is the next step?
A: The next step is for each of the communities to agree to police and maintain the trail and then request design funds from the State.
- Q: Do you have any hard data on the costs?

- A: We are getting the data, and it will be in the study.
- C: (Jerry VanHook, Lexington Friends of the Minuteman) I recently spoke with the Lexington Police Chief to get data on policing the Minuteman Bikeway. Lexington has two bicycles which are used by officers for policing the Bikeway. For 1997, the Police are planning to police the trail with four shifts per week for the busiest six months of the year. There is occasionally some trash along the trail, but our Friends group cleans it up. The Police Chief says that there is no more crime along the trail than any other place in Lexington. The trail does not generate or attract crime.
- C: (Weston Selectman Mullin) This meeting is pivotal. We don't have a policy on the trail yet. We encourage you to communicate with us. We need to know about the Town's liability, parking, and the costs of maintenance and policing. The Weston Police Chief says there will be minimal costs to police the trail, but we need more data. Also, ISTEAF funds and the Paulsen Bill have helped make money available for bicycle projects.
- C: (Senator Susan Fargo) I am here to listen to the issues and provide any information I can. Please feel free to contact me.

Central Mass. Rail-to-Trail Feasibility Study

PUBLIC MEETING #5

Hudson Public Library

2/12/97

Cathy Buckley Lewis of the Central Transportation Planning Staff (CTPS) opened the meeting and explained the purpose of the Central Mass. feasibility study, which is to determine whether the existing railroad right-of-way can physically be converted to a recreational bicycle/pedestrian trail. Cathy showed slides of the Central Mass. right-of-way and other trails. She also showed a map of eastern Massachusetts, highlighting the possible trail connections between the Central Mass. and other existing or proposed trails.

The study will look at the physical issues regarding conversion to a trail: intersections, right-of-way width, embankments, etc. If the trail is found to be feasible, the next step is design. Following the model of the Minuteman Bikeway, each community would enter into lease agreements with the MBTA, which owns the right-of-way. The communities would then apply to MassHighway for design funds and then construction funds. MassHighway would require that each town agree to police and maintain the trail.

Discussion (Most answers given by Cathy Buckley Lewis of CTPS unless noted)

C = Comment Q = Question A = Answer

Q: I've heard that portions of the right-of-way have been privatized. Is that true?

A: The MBTA owns the entire right-of-way from Beaver Street in Waltham to just east of Coburn Road in Berlin.

Q: Will users fees be charged?

A: No, I wouldn't expect that.

Q: How will this be financed?

A: I will include the local policing and maintenance costs of the Minuteman Bikeway in the Feasibility Study. Arlington, for example, did not add any staff for policing or maintenance. Maintenance includes mowing the shoulders of the trail about twice a year. The towns have opted not to plow, to allow for cross-country skiing. State and/or federal funds will be used for design and construction.

Q: How wide will the trail be?

A: The standard trail is 12 feet wide, with three-foot shoulders on either side. There could also be a separate equestrian trail.

Q: What is the width of the right-of-way?

A: It is mostly 40-80 feet wide. It narrows to 20 feet in a small section in Waltham, and

expands to over 100 feet near Church Street in Weston. The usable width depends on the embankments.

Q: What will be done to protect the abutters? I already have people on three-wheelers and snowmobiles trespassing on my land in Berlin and Weston.

A: Fencing and/or landscaping are options. That will be decided on a case-by-case basis during the design.

C: In Lexington, the three-wheelers and snowmobilers disappeared once the right-of-way was paved. It becomes more civilized once the trail is built and used.

C: I am a former Berlin resident, and now live in Clinton. The western end of the trail has a different character from the eastern end. The western end abuts a lot of open space. You should consider allowing snowmobiles on the right-of-way.

A: Snowmobiles won't be legal on the trail, but it is up to the towns to enforce it. If many people in town wanted to use snowmobiles, and no one complained, then the local police would probably not enforce it.

C: There is a lot of equestrian use in Weston. There are five places where equestrian trails cross the right-of-way. You should consider a grade separation for these crossings.

A: The usage of the trails would not justify an expensive grade separation.

Q: Will the MBTA reactivate the rail line?

A: Not for the time being. A feasibility study was completed recently that determined it is not feasible to restore rail service at this time.

Q: Will there be a lease with the MBTA?

A: Yes. It will be a 30-day lease, which is the MBTA's standard lease. Even though the lease is short, the MBTA would not endorse the trail feasibility study if they were planning to restore rail service any time soon. Likewise, the MBTA wants to maintain its long-term options.

Q: How much does the lease cost?

A: Arlington, Lexington, and Bedford each pay \$1 per year for the Minuteman lease.

Q: Will there be problems where the trail goes through wetlands?

A: The Minuteman goes through wetlands. In some places, the right-of-way is wet on either side of the embankment. As long as the embankment does not need to be widened for the trail, then the wetlands would not be impacted. The local Conservation Commissions will review the design of the project and decide what will be allowed, such as filling and creation of compensatory wetland storage.

C: (Jerry VanHook, Lexington) There were no wetland impacts in Lexington where the existing grade is used.

- Q: Can you be more specific about the state or federal funding?
- A: Every two years, state funds can be set aside in the Transportation Bond Bill. Congress may reauthorize federal transportation funds this year, which can be applied for on a competitive basis for rail-trail projects. The project will cost between \$5-10 million.
- Q: Will there be restrooms along the trail?
- A: On another trail, restrooms are included as long as the town is willing to maintain them.
- Q: Is there parking for the trail? Will any be put in?
- A: We would want to minimize the construction of new parking spaces. Advisory Committee members are researching the number of both private and public parking spaces that might be available to weekend trail users.
- C: (Michael Volk, Hudson) There is a carpool lot in Berlin that is the same size as parking lots that were created for the Norwottuck Rail-Trail. It should be sufficient.
- Q: Who is liable for the trail?
- A: The towns would be liable, as they are for streets and sidewalks.
- C: (Jerry VanHook, Lexington) There has been one suit against Lexington in the past four years. That suit is for \$500 by a bicyclist who fell trying to avoid a bump in the pavement.
- Q: Will this project go before Town Meeting?
- A: Not necessarily. For the project to go forward, the Boards of Selectmen and City Council have to vote in favor. It is up to each community whether to go to town meeting.
- C: (Preston Turner, Berlin) This trail project will go before Town Meeting in Berlin.
- C: (Michael Volk, Hudson) This will probably not go before Town Meeting in Hudson. I spoke with the Executive Assistant for the Town, who feels that there is enough support in the Town that the Board of Selectmen will vote in favor of the project.

Appendix D

Estimated Demand

Estimated Demand Using Minuteman Counts

The counts used for the demand estimate were administered by CTPS and collected by CTPS staff and by volunteers. Volunteers included members of the Bicycle Coalition of Massachusetts, as well as students from Lexington. The most recent counts, collected in 1995, will be used. Counts were done on weekends and holidays as well as weekdays. The weekday counts were done in the late afternoon peak period, when counts were expected to be highest. Counts were done along the length of the bikeway, as use varied significantly from the Bedford end to the Cambridge/Somerville end.

Peak-hour weekday counts at four points along the Minuteman were selected. The counts were 110 at South Street in Bedford, 138 at Bedford Street in Lexington, 180 at Maple Street and 194 at Mill Street, both in Arlington. Based on bicycle counts collected in the Boston area since 1975, these peak hour counts are estimated to be about 10 percent of daily use. The weekday volumes would therefore be 1,110 at South Street, 1,380 at Bedford Street, 1,800 at Maple Street, and 1,940 at Mill Street.

Weekend and holiday counts are available for South Street in Bedford (138 for the highest hourly count, 966 from 10 AM to 5 PM), Merriam Street in Lexington (398 hourly count), Woburn Street in Lexington (452 hourly volume) and Spy Pond in Arlington (358 hourly volume). It is estimated that all-day volumes are probably close to ten times the hourly counts. If this is true, the all day counts would be: South Street - 1,380, Merriam Street - 3,980, Woburn Street - 4,520, and Spy Pond - 3,580. All of the counts, both weekday and weekend, were taken on days considered very favorable for bicycling - sunny, warm, no forecast of rain.

At this point, the populations and/or population densities could be used to factor the Minuteman volumes to predict Central Mass. volumes. It is not clear how to do that, however, because the volumes on the Minuteman are not directly related to population or population density. One method would be to take an average for the Minuteman, simply by adding the volumes at the various points along it, and factoring that average to arrive at Central Mass. estimates. The factor could be a combination of the overall populations served by the two facilities and the population share of a particular community along the Central Mass.

The average volumes for the Minuteman are about 1,600 for weekdays and 3,400 for weekends and holidays.²⁰ The overall population ratio of the two corridors is 138,556 (Central Mass., from Table 1) divided by 172,606

²⁰Weekday is the average of the four weekday counts: 1,110 at South Street, 1,380 at Bedford Street, 1,800 at Maple Street, and 1,940 at Mill Street. The weekend-holiday volume is an average of 1,380 at South Street, 3,980 at Merriam Street, 4,520 at Woburn Street, and 3,580 at Spy Pond.

(Minuteman),²¹ or 0.80. This would yield for the Central Mass. an average weekday volume of 1,280 and an average weekend/holiday volume of 2,720. If we distribute the volumes along the Central Mass. based half on a common volume throughout and half on population share, the results would be as shown in the text of this report (Chapter 3).²²

²¹ The 1990 populations of the Minuteman communities were the following: Arlington - 44,630, Lexington - 28,974, and Bedford - 12,996. The Minuteman connects to Cambridge and to Davis Square in Somerville via the Linear Park. These are direct off-road connections. It was decided to add only half of the Cambridge and Somerville populations, to be on the conservative side. The 1990 populations for these communities were 95,802 (Cambridge) and 76,210 (Somerville).

²² That is, each community along the right-of-way was assigned half of the average volume as a base. Added to that was a share of the other half based on population share. Berlin, for example has 2 percent of the population along the corridor. The weekday average count of 1,280 is halved to yield 640. To that 640 is added 2 percent of the remaining 640, multiplied by seven for the seven shares along the corridor. The result for Berlin is 640 plus $(0.02 \times 7 \times 640) = 730$. The same method is then applied to the other six communities.

Appendix E

Information About Crossings

Table E-1
Speed Limit, Average Observed Speed, and Highest Observed Speed
of Motor Vehicles on Streets Crossing the Right-of-Way at Grade (m.p.h.)

Intersection	Northbound			Southbound		
	Speed Limit	Avg. Obs. Speed	High. Obs. Speed	Speed Limit	Avg. Obs. Speed	High. Obs. Speed
Beaver St.	30	**	**	30	**	**
Linden St.	Bridge			Bridge		
Lyman St.	30	34	38	30	33	40
Lexington St.	30	29	34	30	26	34
Bacon St.	30	31	35	30	32	43
Hammond St.	30	27	31	30	24	35
Prospect Hill Rd.	30	30	40	30	32	41
Main St.	30	38	41	30	31	42
Stow St.	30	33	36	30	34	37
Route 128	Bridge			Bridge		
Church St.	Bridge			Bridge		
Conant Rd.	Filled-in Bridge			Filled-in Bridge		
Concord Rd.	Bridge			Bridge		
Plain Rd.	25	32	40	25	28	38
Glen Rd.	30	30	32	30	29	*
Millbrook Rd.	30	35	*	30	27	30
Old Sudbury Rd.	25	31	37	25	38	49
Boston Post Rd.	35	37	42	35	47	52
Landham Rd.	Bridge			Bridge		
Boston Post Rd.	35	30	33	30	30	38
Union Av.	30	35	43	30	36	42
Horse Pond Rd.	30	36	41	30	38	43
Peakham Rd.	30	27	35	30	32	39
Dutton Rd.	25	29	37	25	35	37
White Pond Rd.	25	*	*	25	30	35
Parmenter Rd.	25	38	42	25	26	31
Main St.	40	39	48	40	36	41
Chestnut St.	Filled-in Bridge			Filled-in Bridge		
Wilkins St.	Bridge out			Bridge out		
Cox St.	30	32	42	30	38	41
Priest St.	30	18	*	30	36	40
Tower St.	Bridge out			Bridge out		
High St.	Filled-in Bridge			Filled-in Bridge		
Manning St.	30	31	39	30	31	35
Church St.	30	29	35	n/a	n/a	n/a
Pope St.	30	21	24	n/a	n/a	n/a
Felton St.	30	29	*	n/a	n/a	n/a
Lincoln St.	30	32	41	30	33	38
Warner St.	30	**	**	30	**	**
Cottage St.	30	**	**	30	**	**
Central St.	30	26	27	30	26	41
Central St.	30	34	*	30	39	*
Stones Corner Rd.	30	**	**	30	**	**
Route 495	Bridge			Bridge		
Sawyer Hill Rd.	30	37	*	30	37	*
Highland St.	30	*	*	30	34	40

Data collected by CTPS. Speed data collected using equipment supplied by the Massachusetts State Police.

*Not sufficient data collected to determine average observed and/or highest observed speed.

**No speed data collected.

Table E-2
Two-Way Motor Vehicle Traffic Volumes,
Selected Road Crossings

Intersection	Community	Volume (hourly)
Boston Post Rd. (Rt. 20)	Sudbury	1,507
Boston Post Rd. (Rt. 20)	Wayland	1,387
Trapelo Rd.	Belmont	1,328
Beaver St.	Waltham	1,290
Lexington St.	Waltham	1,279
Brighton St.	Belmont	978
Union Av.	Sudbury	912
Old Sudbury Rd. (Rt. 27)	Wayland	890
Bacon St.	Waltham	866
Lyman St.	Waltham	812
Main St.	Waltham	769
Stow St.	Waltham	671
Concord Rd.	Wayland	625
Lincoln St. (Rt. 85)	Hudson	474
Prospect Hill Rd.	Waltham	386
Wilkins St. (Rt. 62)	Hudson	356
Manning St.	Hudson	297
Horse Pond Rd.	Sudbury	296
Tower St.	Hudson	286
Cox St.	Hudson	250
Central St.	Hudson	226
Hammond St.	Waltham	223
Plain Rd.	Wayland	186
Dutton Rd.	Sudbury	153
Highland St.	Berlin	114
Millbrook Rd.	Wayland	104
Priest St.	Hudson	80
Peakham Rd.	Sudbury	76
Coburn Rd.	Berlin	63
High St.	Hudson	59
Sawyer Hill Rd	Berlin	31
Glen Rd.	Wayland	23

All traffic volumes were collected on Saturdays, sometime between 11:00 AM and 3:00 PM. Each intersection was counted for a period of an hour and a half. The volumes in this table are the hourly averages of those 90 minute counts. Data were collected by advisory committee members and volunteers.

Table E-3
Bridges

	Railroad Over Road	Railroad Over Water	Railroad Under Road	Total Bridges
Berlin		1	1	2
Hudson	2	4	2*	8
Sudbury		3	1	4
Wayland		3		3
Weston	1	4	3*	8
Waltham	2	4		6
Total	5	19	7	31

*One bridge in Weston (Conant Street) and two in Hudson (High and Chestnut Streets) are filled in, blocking the right-of-way.

Appendix F

Sample Lease

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY
LICENSE AGREEMENT - LEXINGTON BRANCH SEGMENT
TOWN OF ARLINGTON

1. Parties/
Premises

Subject to prior authorization from appropriate regulatory authority to remove the rail, ties and track appurtenances of a railroad now or formerly subject to the provisions of the Interstate Commerce Act (49 USC, Section 10101 et. seq.), MASSACHUSETTS BAY TRANSPORTATION AUTHORITY, a body politic and corporate and a political subdivision of the Commonwealth of Massachusetts, with a usual place of business at Ten Park Plaza, Boston, Massachusetts 02116 ("MBTA"), does hereby agree to license the TOWN OF ARLINGTON, a Town established under Massachusetts law with a mailing address at Town Hall, Arlington, MA 02174 ("Arlington") and Arlington hereby agrees to accept such license, subject to the terms and conditions hereof, in the right and privilege to use a segment in Arlington of the line of railroad of MBTA known as the Lexington Branch, approximately 3.58 miles in length, extending between Milepost 4.91 at the Cambridge/Arlington boundary line and Milepost 8.32 at the Arlington/Lexington boundary line (the line segment).

2. Term

The foregoing license shall commence upon a date stated in a notice not less than thirty (30) days and not more than sixty (60) days from the date of such notice stating that the prior authorization described hereinabove has been received, but subject to the prior approval by MBTA of construction within the premises as hereinafter described, and shall continue unless and until MBTA shall give notice to Arlington that it intends and elects to terminate the within license on a date stated in such notice sixty (60) or more days from the date of such notice on the grounds that the line segment is required by MBTA for mass transit extension or that regulations or orders of appropriate regulatory authority require such termination.

(2)

3. Use of Licensed Premises Arlington agrees that it will use the line segment as a "bikeway", a way established for the passage of bicycles without motive power.
4. Construction
 - (1) (a) The within agreement shall become effective as a grant by MBTA and acceptance by Arlington of license when Arlington has caused construction of a bikeway within the premises to be completed and accepted by the Chief Engineer of Railroad Operations of MBTA (C.E.R.O.) in writing as completed in accordance with plans for such construction previously approved by C.E.R.O. Construction of such bikeway and the plans and approvals thereof shall include removal of rails, ties, track and track appurtenances from the premises and the storage thereof at a location within Massachusetts as designated by C.E.R.O.
 - (b) No construction shall be done in the line segment without the prior written approval by C.E.R.O. to plans submitted to MBTA by Arlington. Arlington may be required to remove any construction not so approved.
5. Maintenance

Arlington shall at all times maintain the line segment in good and safe condition and appearance, free from rubbish and obstructions. During the license term, MBTA shall have no responsibility whatsoever for maintenance repair, or the condition of the line segment and Arlington agrees that it will occupy the premises at its own expense and risk.
6. Condition of Line Segment

MBTA hereby expressly disclaims any warranties of any nature, express or implied, as to the line segment, and any other warranties of any nature, express, implied or otherwise, except as expressly set forth herein. Lessee accepts the line segment "as is".
7. Indemnification of MBTA

Arlington shall indemnify and save MBTA harmless from and against any and all loss, costs, damage and expense (including reasonable attorneys' expenses and fees), causes of action, suits, claims, demands or judgments of any nature whatsoever that may be imposed upon or incurred by or asserted against MBTA by reason of any of the following occurrences during the term of this License:

(3)

- (a) any accident, injury to, or death of any person or any damage to property occurring on the line segment or any part thereof; or
- (b) any use, nonuse, condition, or occupation by Arlington of the line segment or any part thereof; or
- (c) any failure of Arlington to perform or comply with any of the terms hereof or of any contracts, agreements or restrictions, statutes, laws, ordinances or regulations affecting the line segment or any part thereof or the ownership, occupancy or use thereof.

8. Security

Arlington shall provide security and fire protection in the line segment during the term hereof. Arlington shall not be required to provide lighting in the premises.

9. Bridge Maintenance

Arlington shall maintain the surfaces of any and all overpasses or bridges, if any, over the line segment which MBTA was required to maintain prior to the date of the within license, including, without limiting, general cleanliness and appearance and alterations required for use as part of the bikeway. MBTA shall maintain the structural integrity of all such overpasses or bridges. MBTA reserves the right to withdraw any overpass or bridge from use under the within license if, in its sole determination, it determines that such overpass or bridge is unsafe.

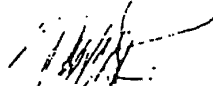
10. MBTA agrees to apprise Arlington of any statutes, laws, enactments or regulations which do or may affect Arlington in the undertakings which it has assumed under this license.

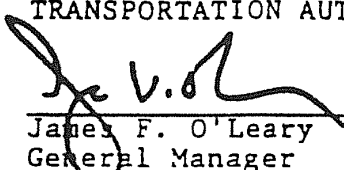
(4)

IN WITNESS WHEREOF, the parties hereto, each for itself its successors and assigns, have caused these presents to be executed by its officers, thereunto duly authorized on the _____ day of _____, 1987.

MASSACHUSETTS BAY
TRANSPORTATION AUTHORITY

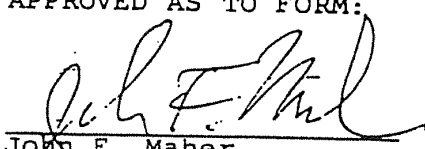
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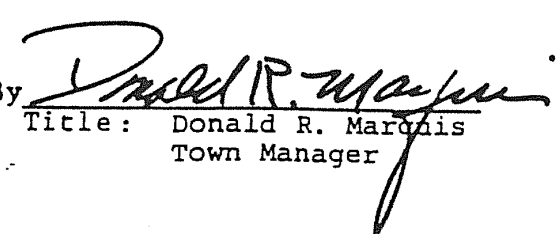

Walter B. Prince
General Counsel


James F. O'Leary
General Manager

TOWN OF ARLINGTON

APPROVED AS TO FORM:


John F. Maher
Town Counsel

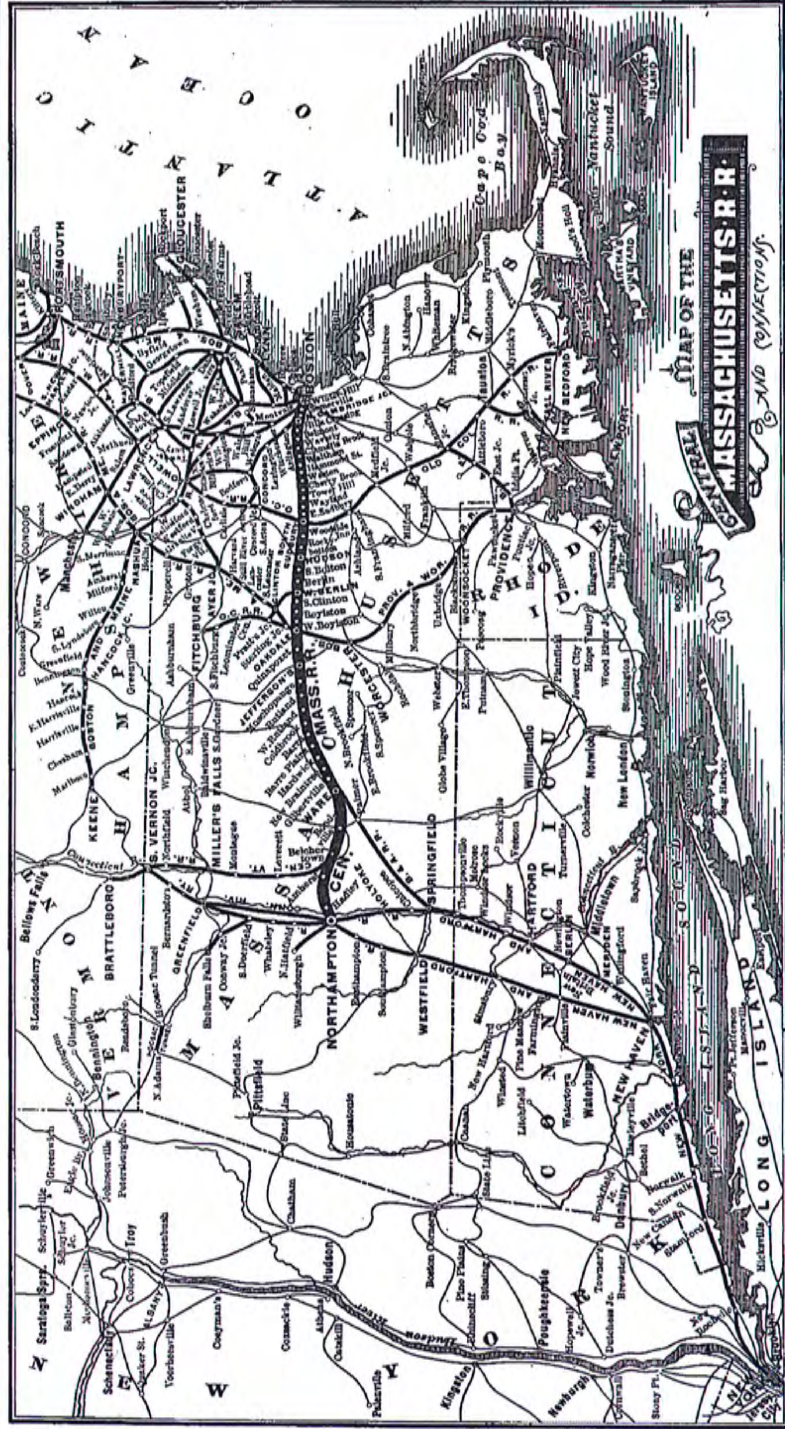
By 
Title: Donald R. Marquis
Town Manager

Wayside Trail Update Bay State Greenway: MassCentral Corridor

April 7, 2014

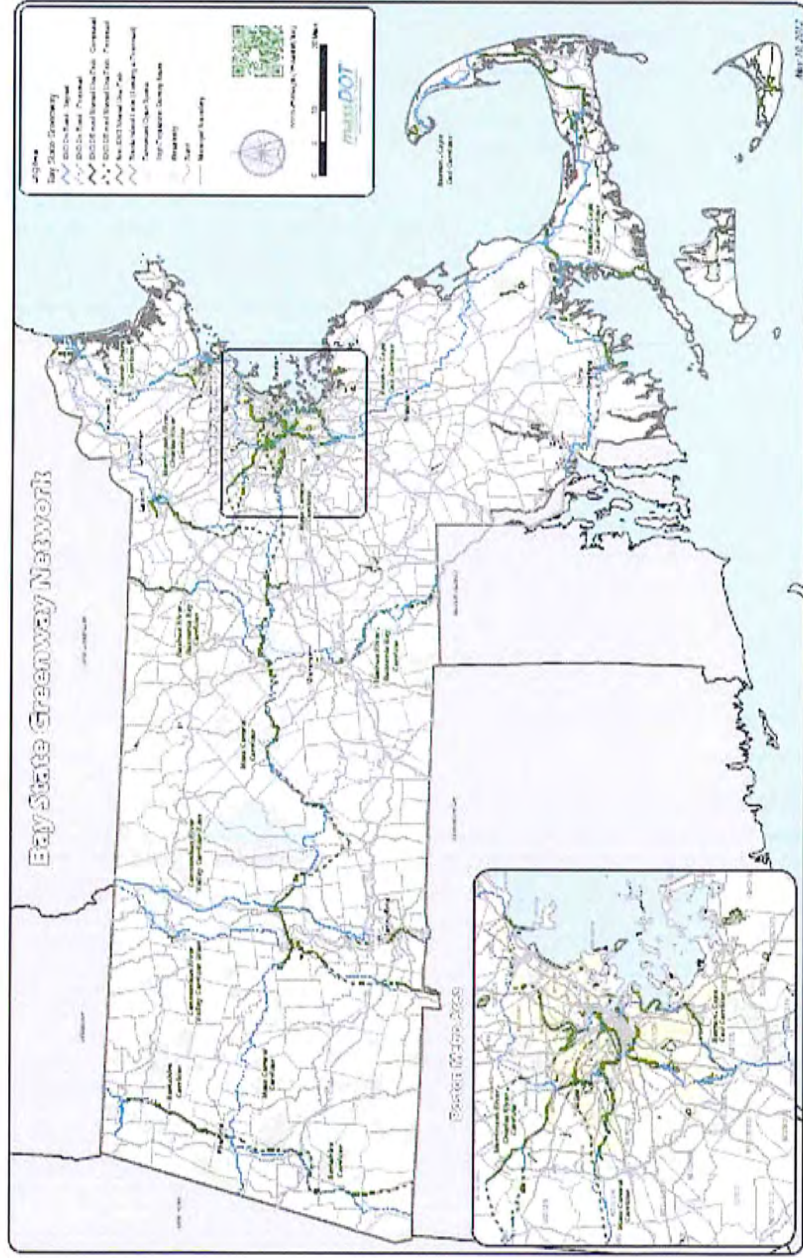
Update to City Council

Waltham Planning Department / Maps DCR & MassDOT



Wayside Trail Part of Bay State Greenway

- Transportation connections to population centers, recreational resources and neighboring states
- 788 miles / 7 corridors
- Shared-use paths & on-road facilities
- Over 30 shared use paths totaling 152 miles/ another 60 miles in construction and focus on BSG Priority 100



Bay State Greenway Vision

- MassCentral/Wayside Trail in BSG Priority 100
- Key shared-use path projects: focused on urban centers, extending existing paths and maximizing transportation utility of the network

The BSG Priority 100

The BSG Priority 100 (BSG 100) comprises key shared use path projects that will increase the existing BSG network by approximately 100 miles. The focus of the BSG 100 is on maximizing transportation utility of the network by connecting existing paths, and maximizing the transportation utility of the network. The map and table below summarize the projects in the BSG 100.

BSG Customer Information

Collaboration between MassDOT, regional and local officials is allowing placement of route identification signs and pavement markings along the entire BSG network at intervals frequent enough to assist with route finding. MassDOT is also developing BSG maps and a website with information on the BSG network, including the vision, current routes, and implementation progress.

Bicycling in Massachusetts

The Bay State Greenway

To create a cohesive network of bicycle facilities, the Bicycle Plan proposed a Bay State Greenway (BSG) system of 700 miles of facilities in seven corridors, crossing the Commonwealth, in tandem with a secondary network of feeder routes. Utilizing both shared use paths and on-road facilities, the BSG provides transportation connections to population centers, recreational resources, and neighboring states along these seven corridors:

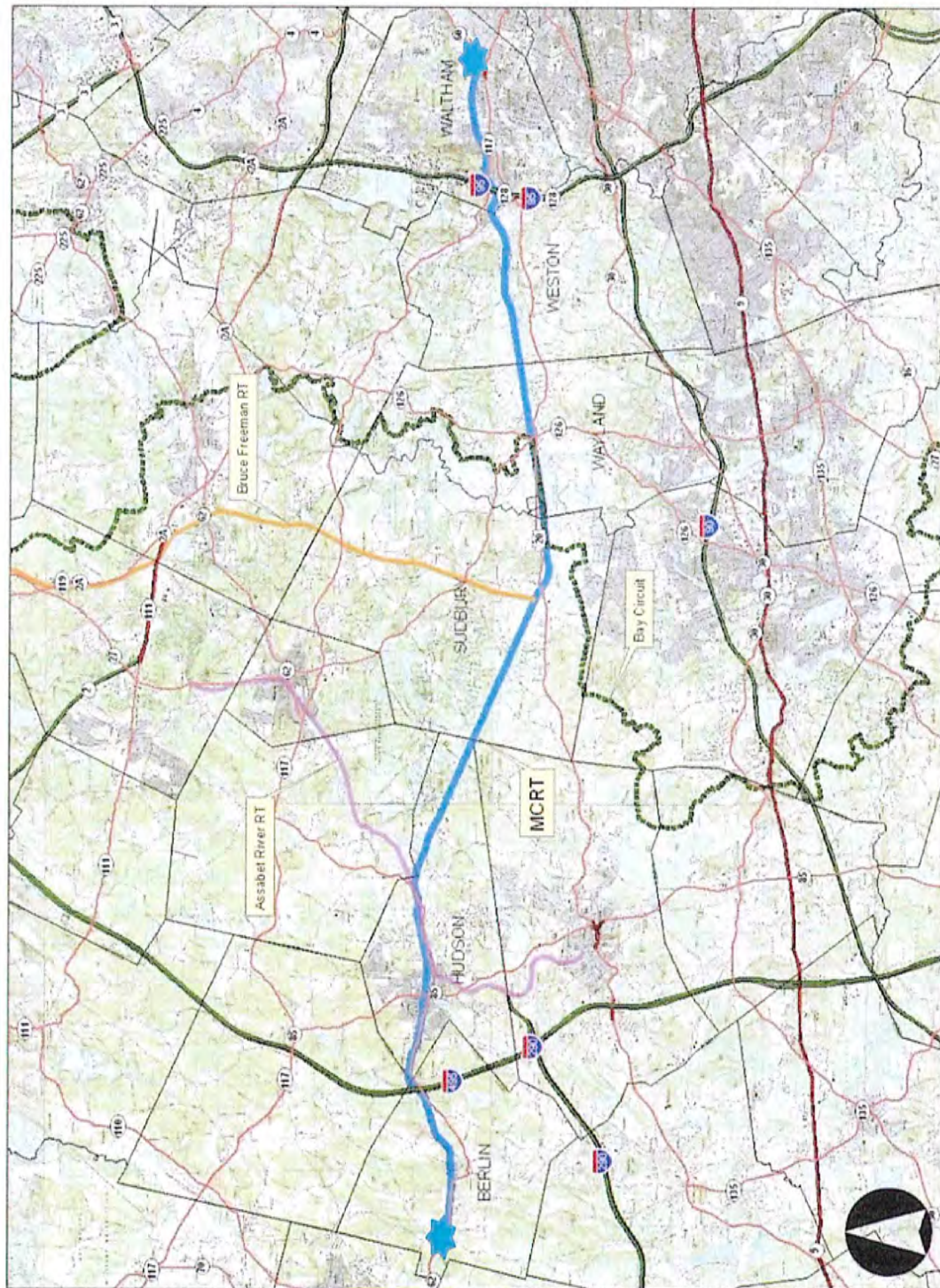
Corridor	Length (mi)
Mass Central (NY to Boston)	157
Berkshires	66
Connecticut River Valley (to NH)	122
Northeast River (to New York)	122
Northeast River (to New York)	96
North Shore	54
Seacoast (to Cape Cod)	126
Total	700

The BSG currently includes more than 30 different shared use paths totaling 157 miles. More than 15 projects (covering an additional 60 miles) are in construction or final design, and MassDOT has launched an effort to build another 100 miles, the BSG Priority 100.

BSG Priority 100 Wayside Trail

City	Corridor	Project Name	Length (mi)	Completed Mileage
1	Berkshires	MassCentral/Wayside Trail	2.6	2.6
2	CT River Valley	Southwestern Greenway	2.1	2.1
3	Mass Central	Worcester Trail	24.1	24.1
4	Mass Central	Southwestern Greenway	24.1	24.1
5	Mass Central	Northwestern Greenway	4.1	4.1
6	Mass Central	Northwestern Greenway	4.1	4.1
7	Mass Central	Northwestern Greenway	4.1	4.1
8	Mass Central	Northwestern Greenway	4.1	4.1
9	Mass Central	Northwestern Greenway	4.1	4.1
10	Mass Central	Northwestern Greenway	4.1	4.1
11	Mass Central	Northwestern Greenway	4.1	4.1
12	Mass Central	Northwestern Greenway	4.1	4.1
13	Mass Central	Northwestern Greenway	4.1	4.1
14	Mass Central	Northwestern Greenway	4.1	4.1
15	Mass Central	Northwestern Greenway	4.1	4.1
Total			100.0	100.0

23 Mile Corridor: Berlin to Waltham



Mass Central
Rail Trail -
Waltham to
Berlin Section

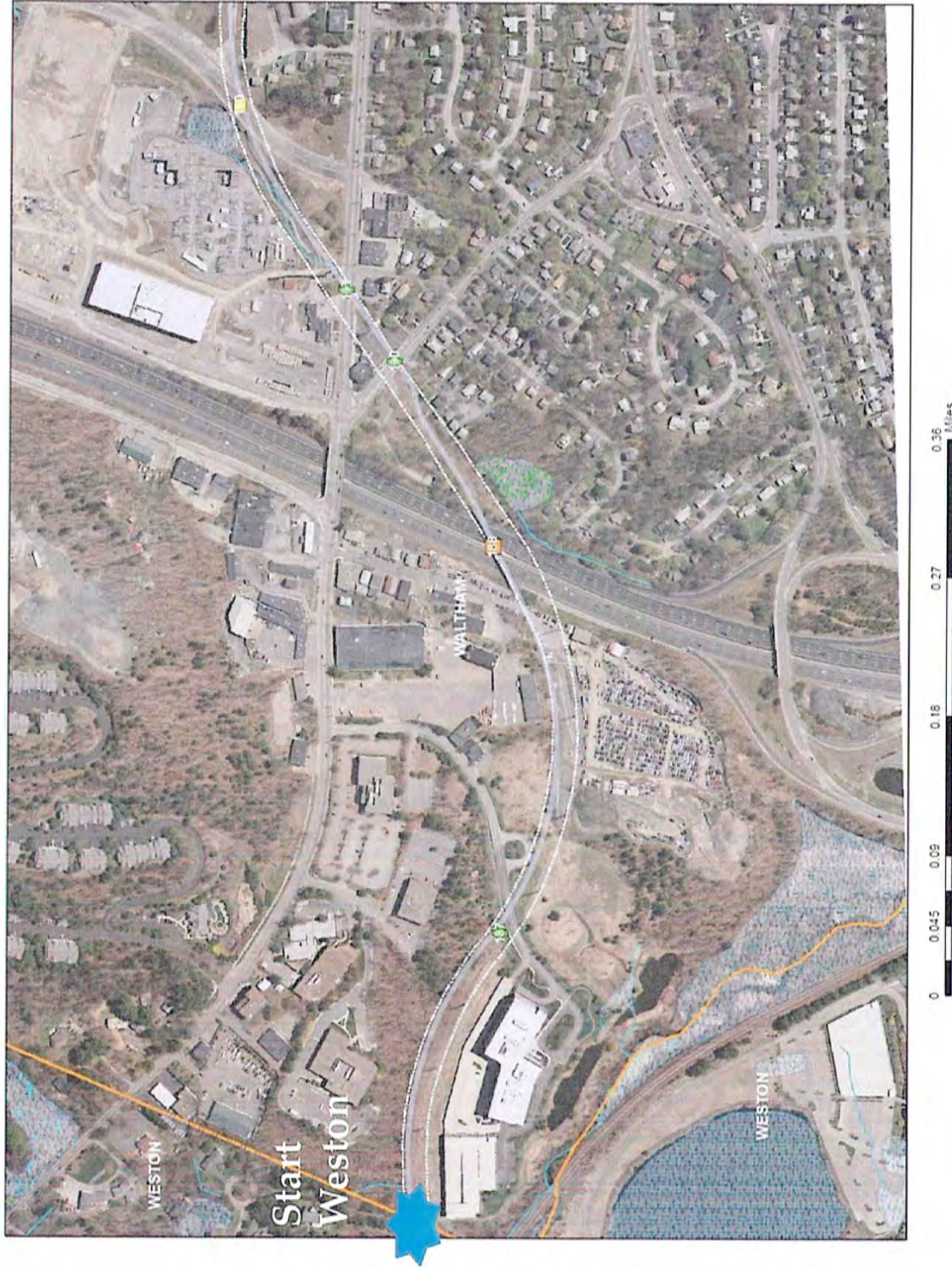


For planning purposes only.
Data from MassGIS, DCR, EOT and Maps.



Bay State Greenway: Wayside Trail

Mass Central
Rail Trail -
Wayside Branch
Waltham, MA



Waltham 128 Bridge



1960 2 span Thru Plate Girder
Recommended NOT NR eligible

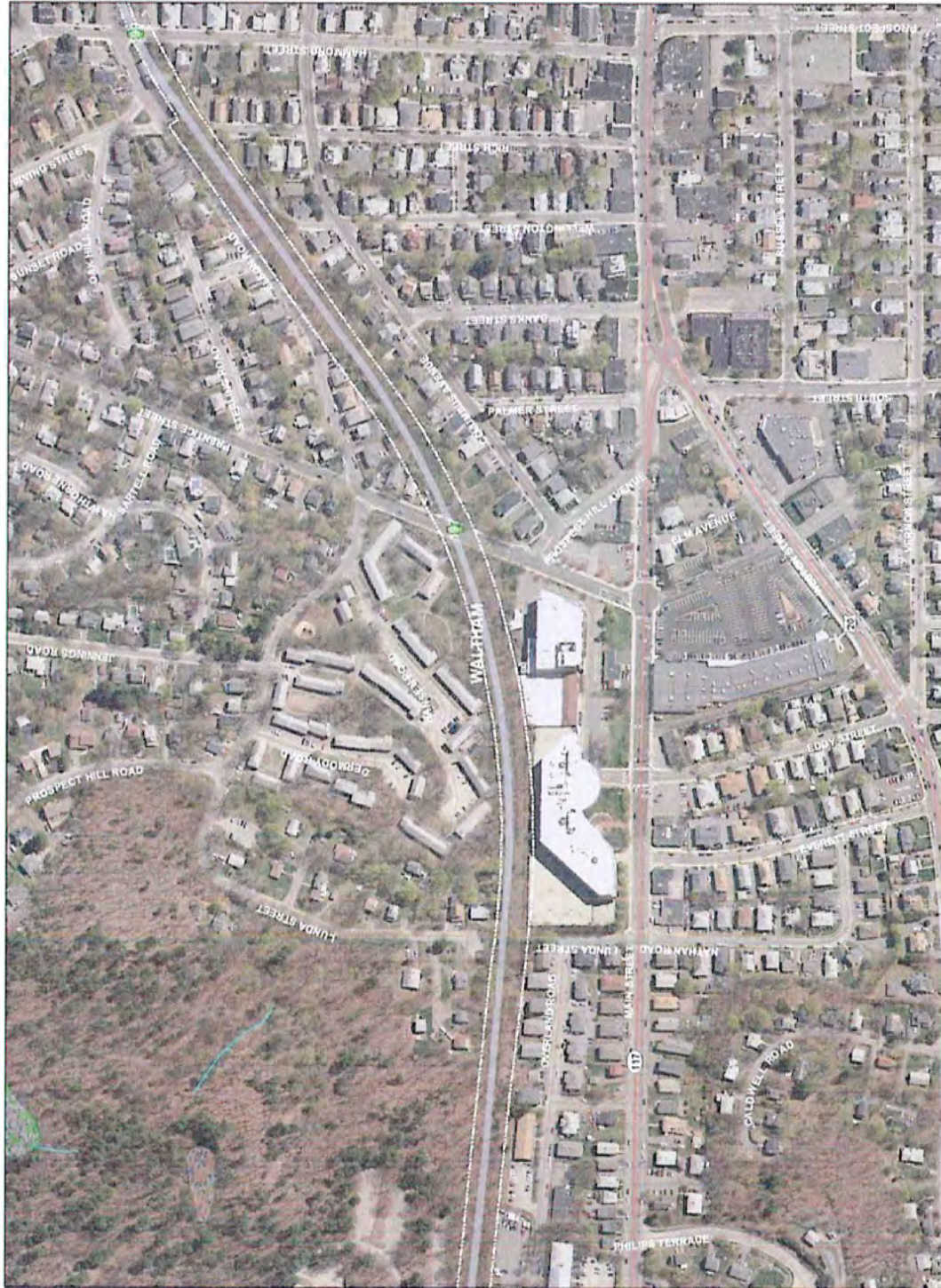
Westerly Waltham Cross Sections



Bay State Greenway: Wayside Trail

Mass Central
Rail Trail -
Wayside Branch

Waltham, MA



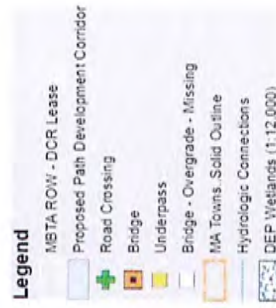
For planning purposes only.
Data from MassGIS, DCR, EOT Vail Maps.

Typical Waltham Cross Sections



Bay State Greenway: Wayside Trail

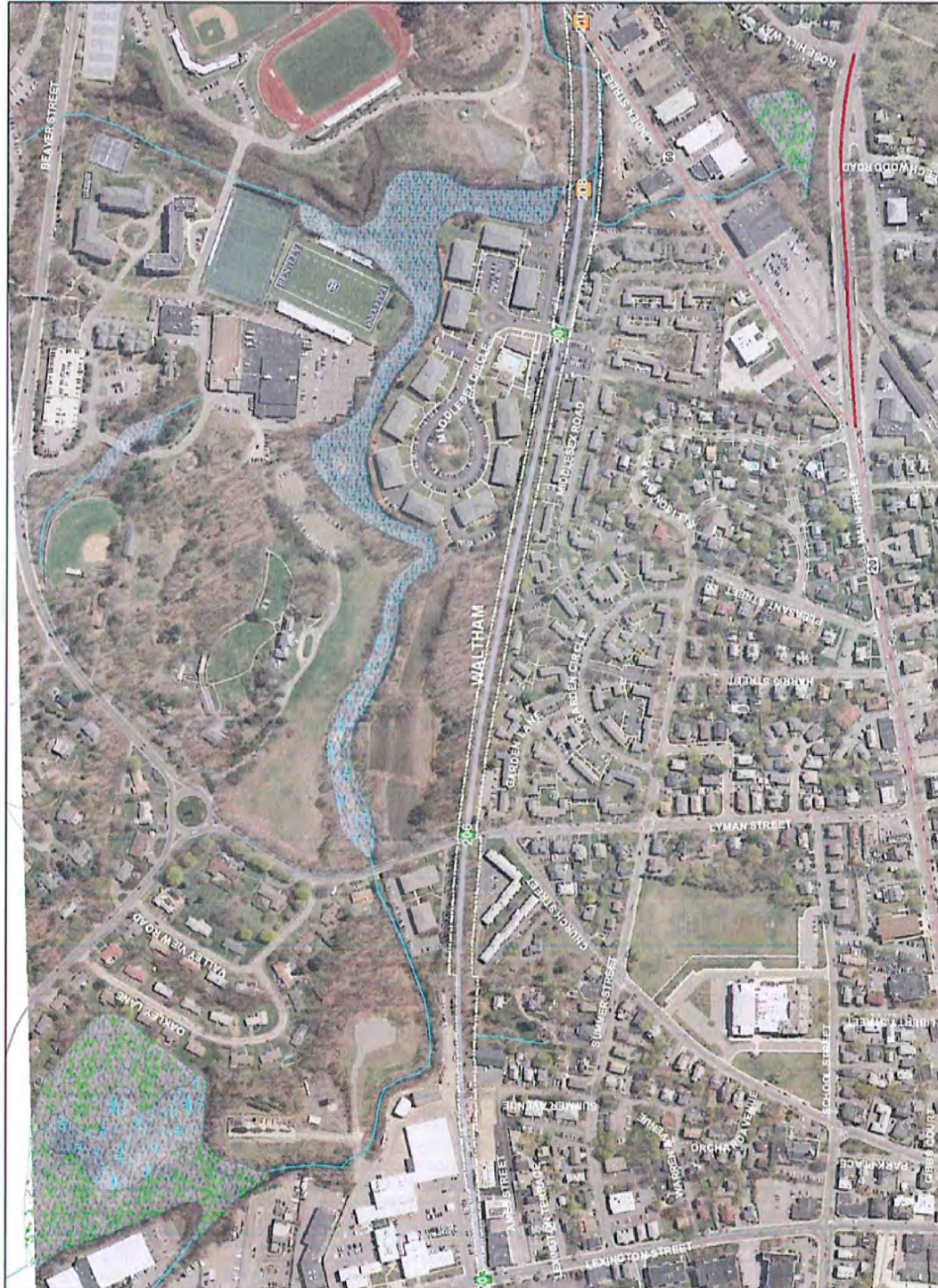
Mass Central
Rail Trail -
Wayside Branch
Waltham, MA



For planning purposes only.
Data from MassGIS, DCR, EOT Val Maps.

Bay State Greenway: Wayside Trail

Mass Central
Rail Trail -
Wayside Branch
Waltham, MA



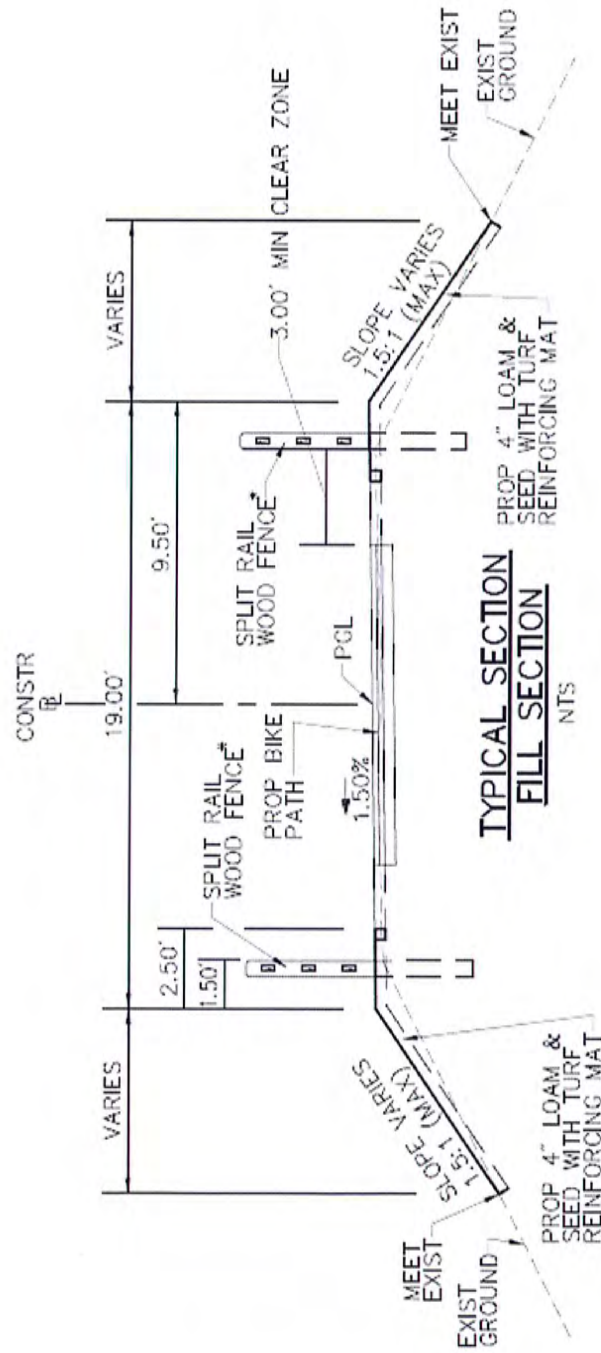
For planning purposes only.
Data from MassGIS, DCR, EOT Val Maps.

Waltham, Linden Street Bridge



1894, Riveted Lattice Thru Truss
Listed on the State Register of Historic Places, Recommended NR eligible

Example- Typical “fill” section

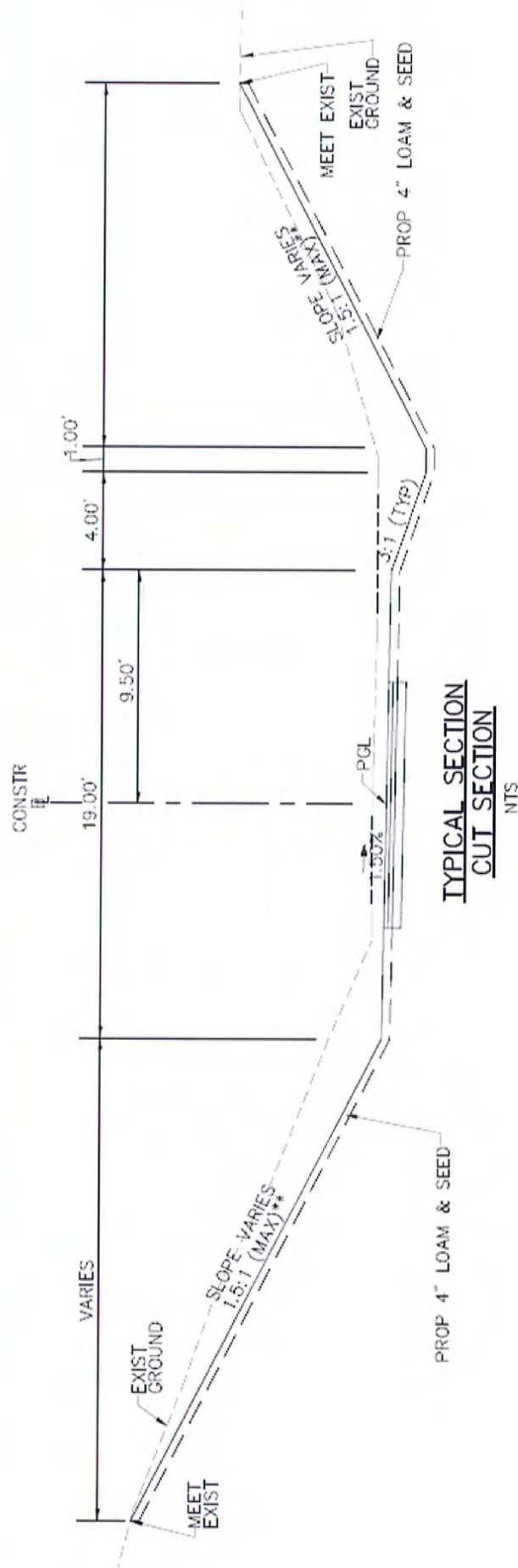


* SPLIT RAIL FENCE TO BE USED ONLY AS NEEDED

CONSTRUCTION DETAILS
1 OF 16

MASS CENTRAL
RAIL TRAIL

Example- Typical "cut" section



CONSTRUCTION DETAILS
2 OF 16
MASS CENTRAL RAIL TRAIL

Figure 9B-7. Examples of Signing and Markings for a Shared-Use Path Crossing

NOTIFICATION: INSIDE, ADVANCE
NORWOTCH RAIL TRAIL RENOVATION

CONSTRUCTION DETAILS

SCALE 1/4" = 1'-0"

SECTION AA
SCALE 2" = 1'-0"

SIDE VIEW
SCALE 3/4" = 1'-0"

DESTINATION SIGN DIMENSIONS
SCALE 1/4" = 1'-0"

DESTINATION SIGN DETAIL
SCALE 3/4" = 1'-0"

NOTES:

1. SIGN SHALL BE MOUNTED ON A 4" X 4" POST.
2. SIGN SHALL BE MOUNTED ON A 4" X 4" POST.
3. SEE SPECIAL PROVISIONS FOR POST AND SIGN MOUNTING DETAILS.

DETAILS:

- 1. SIGN SHALL BE MOUNTED ON A 4" X 4" POST.
- 2. SIGN SHALL BE MOUNTED ON A 4" X 4" POST.
- 3. SEE SPECIAL PROVISIONS FOR POST AND SIGN MOUNTING DETAILS.

SECTION AA:

- 1. SIGN SHALL BE MOUNTED ON A 4" X 4" POST.
- 2. SIGN SHALL BE MOUNTED ON A 4" X 4" POST.
- 3. SEE SPECIAL PROVISIONS FOR POST AND SIGN MOUNTING DETAILS.

SIDE VIEW:

- 1. SIGN SHALL BE MOUNTED ON A 4" X 4" POST.
- 2. SIGN SHALL BE MOUNTED ON A 4" X 4" POST.
- 3. SEE SPECIAL PROVISIONS FOR POST AND SIGN MOUNTING DETAILS.

DESTINATION SIGN DETAIL:

- 1. SIGN SHALL BE MOUNTED ON A 4" X 4" POST.
- 2. SIGN SHALL BE MOUNTED ON A 4" X 4" POST.
- 3. SEE SPECIAL PROVISIONS FOR POST AND SIGN MOUNTING DETAILS.

DCR Environmental Assessments & Permitting Results

- DCR conducted a Phase One Environmental Site Assessment of the entire corridor in 2009
 - Including a soil sample program
- DCR submitted an Expanded Environmental Notification Form (EENF) to MEPA 2013
- DCR received a waiver from an EIR 2014
- DCR seeks to work in partnership with municipalities on Wetland and Historic permitting

Basic Wayside Infrastructure Factors

Wayside Trail Project Total:

- Bridges: 10 Existing Bridges / 4 Missing Bridges
- 5 Existing Underpasses: 4 filled underpasses
- As many as 69 culverts and cattle passes

Waltham Segment:

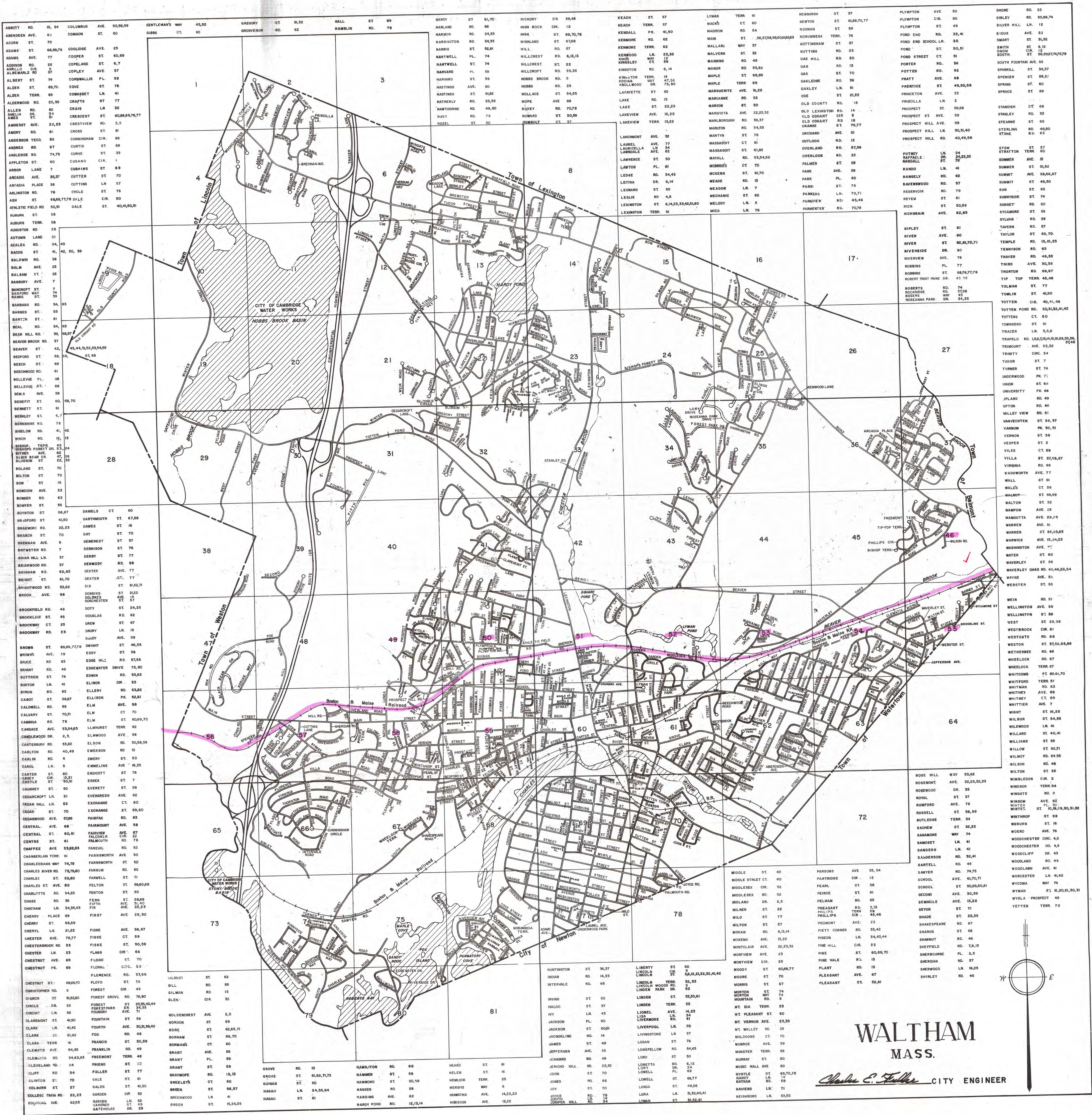
- 3 Bridges (128/95, Lyman Brook and Linden St)
- 1 Existing Underpass (Polaroid site)
- 9 at-grade crossings

Overview Waltham's Wayside Trail

- Waltham 3.0 miles Waltham-Weston
- Crossings at Stow Street, Main Street, Prospect Hill Road, Hammond Street, Bacon Street, Lexington Street, Lyman Street
- Preliminary Construction Estimate \$5,371,000
- Preliminary Bridge Rehabilitations \$1.2 - \$2M

Summary & Next Steps

- 2011 MassDOT/DCR Established a Lease for DCR to Build/Manage Shared-Use Path (19'ROW)
- 2014 DCR Initiated and Granted MEPA Certificate & Waiver from EIR Entire 23 Miles! Allows project to advance
- DCR Coordinating with Communities on Strategies to Advance Design & Construction
- Need to Initiate Local Wetland and Historic Permitting
- Need to Refine Bridge & Overall Cost Estimates
- Need to Identify Funding



CITY OF WALTHAM, MASSACHUSETTS

Prepared by the Office of the City Engineer
Charles E. Fuller, City Engineer



CITY OF WALTHAM, MASSACHUSETTS

MAPPING PREPARED BY:
RAYTHEON Autometric
WAYLAND, MASSACHUSETTS

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AND RAYTHEON COMPANY.
COMPILED BY STEREOPHOTODIAGONAL METHODS.
DATE OF PHOTOGRAPHY, APRIL, 1974

SCALE 1:1200 (1 INCH = 100 FEET)

GRID BASED ON MASSACHUSETTS STATE PLANK COORDINATE SYSTEM

LEGEND
ROADS
RAILROADS
DRAINAGE
POLES
UTILITY
ELECTRIC
TELEPHONE
WATER
GAS
SEWER
CITY BOUNDARY
RIVERS
STREAMS
DITCHES
CULVERTS
SALES PLOTS
WAMP
TREES
UNDER CONSTRUCTION
U/C

SHEET NO. 56



CITY OF WALTHAM, MASSACHUSETTS

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DATE OF PHOTOGRAPHY, APRIL 1974

SCALE 1:1200 (1" = 100' FEET)





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DATE OF PHOTOGRAPHY: APRIL 1974

SCALE 1:12,000 (1" = 100 FEET)
100 0 100 200 300 400 500 600 700 800 900 1000



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SCALE 1:1250, 1 INCH = 100 FEET



GRID 1400 ON MASSACHUSETTS STATE PLANS



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DATE OF PHOTOGRAPHY, APRIL 1974

SCALE 1:1200 (1 INCH = 100 FEET)
100 0 100 200 300 400 FEET

LEGEND:
ROADS
PAVED
UNPAVED
TRAILS
RAILROADS
BRIDGES
RAILROADS
POWERS
WATER
STREETS
DITCHES
CULVERTS
LAKES/PONDS
SWAMPS
TREES
HEDGES
UNDER CONSTRUCTION



CITY OF WALTHAM, MASSACHUSETTS

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SCALE 1:1200 (1 INCH = 100 FEET)

SCALE 1:1200 (1 INCH = 100 FEET)

GRID BASED ON MASSACHUSETTS STATE PLANE COORDINATE

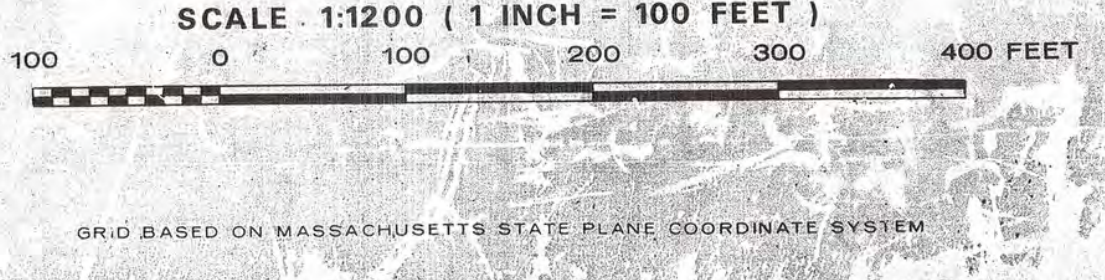
LEGEND:	MOLES
ROAD	UTILITY
GRAVEL	
UNPAVED	
TRAIL OR TRAIL	ON
RAILROADS	FEELS
RIDGES	W/LS
ROAD	CONF
ROAD	

SHEET NO. 51 6150-03



CITY OF WALTHAM, MASSACHUSETTS

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AND RAYTHEON COMPANY
COMPILED BY STEREOGRAPHIC METHODS
DATE OF PHOTOGRAPHY, APRIL 1974



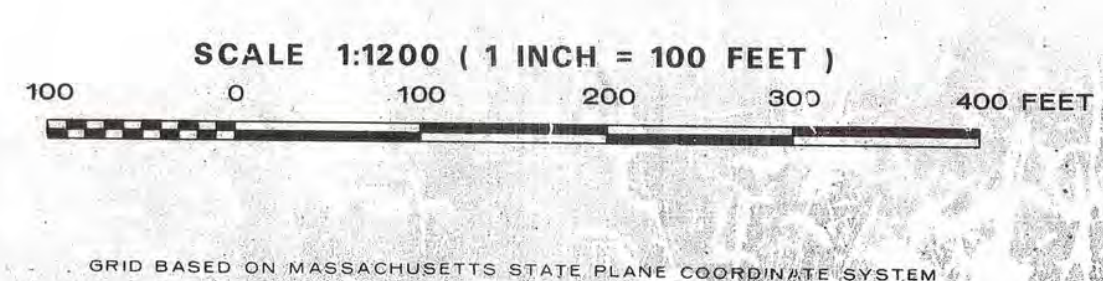
- LEGEND:
- ROADS
 - PAVED
 - UNPAVED
 - TRAILS OR TOWNS
 - RAILROADS
 - LANDS
 - ROAD
 - RAILROAD
- POLES:
- UTILITY
 - CLUTTER
 - BY JON
 - PLACES
 - WALLS
 - STYER
 - RETAINING
 - OTHER
- CITY BOUNDARY
- RIVERS
 - STREAMS, DITCHES
 - CULVERT
 - LAKE, POND
 - SWAMP
 - WATER
 - UNDER CONSTRUCTION



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 DATE OF PHOTOGRAPHY: APRIL, 1974



LEGEND	POLES	CITY BOUNDARY
ROADS	UTILITY	RIVERS
IF PAVED	LIGHT	STREAM DITCHES
IF UNPAVED	FLYON	SWAMP
PRICKS OF TREES	CELS	LAKE WOODS
BRIDGES	STONE	WALLS
ROAD	RETAINING	UNDER CONSTRUCTION
RAILROAD	WALL	



CITY OF WALTHAM, MASSACHUSETTS

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 COMPILED BY STEREOPHOTODIAGRAMMETRIC METHODS
 DATE OF PHOTOGRAPHY, APRIL, 1974

SCALE 1:1200 (1 INCH = 100 FEET)

100 0 100 200 300 400 FEET

GRID BASED ON MASSACHUSETTS STATE PLANE COORDINATE SYSTEM

LEGEND

ROADS PAVED UNPAVED TRACKS OR TRAILS RAILROADS TRAIL ROAD RAILROAD	POLES UTILITY LIGHT FENCE WALL STAKE WATER OTHER	CITY BOUNDARY RIVERS STREAMS DITCHES CULVERT LAKE POND SWAMP TREES WILDERNESS UNDER CONSTRUCTION
---	---	--

SHEET NO. 55

1 ON THIS LINE

POSTION EDGE OF POINT ON THIS LINE

POSTION EDGE OF POINT ON THIS LINE

POSTION EDGE OF P/B



CITY OF WALTHAM, MASSACHUSETTS

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RATHEON Automatic

WALTHAM, MASSACHUSETTS

CONTROL BY SCHOFIELD BROTHERS, REGISTERED LAND SURVEYORS
AND RATHEON COMPANY

SCALE 1:1200 (1 INCH = 100 FEET)

100 0 100 200 300 400 FEET

LEGEND

ROADS

PAVED

UNPAVED

TRACKS OR TRAILS

RAILROADS

BRIDGES

POLES

UTILITY

PIVOT

FENCES

WALLS

STONE

CITY BOUNDARY

RIVERS

STREAMS DITCHES

CULVERTS

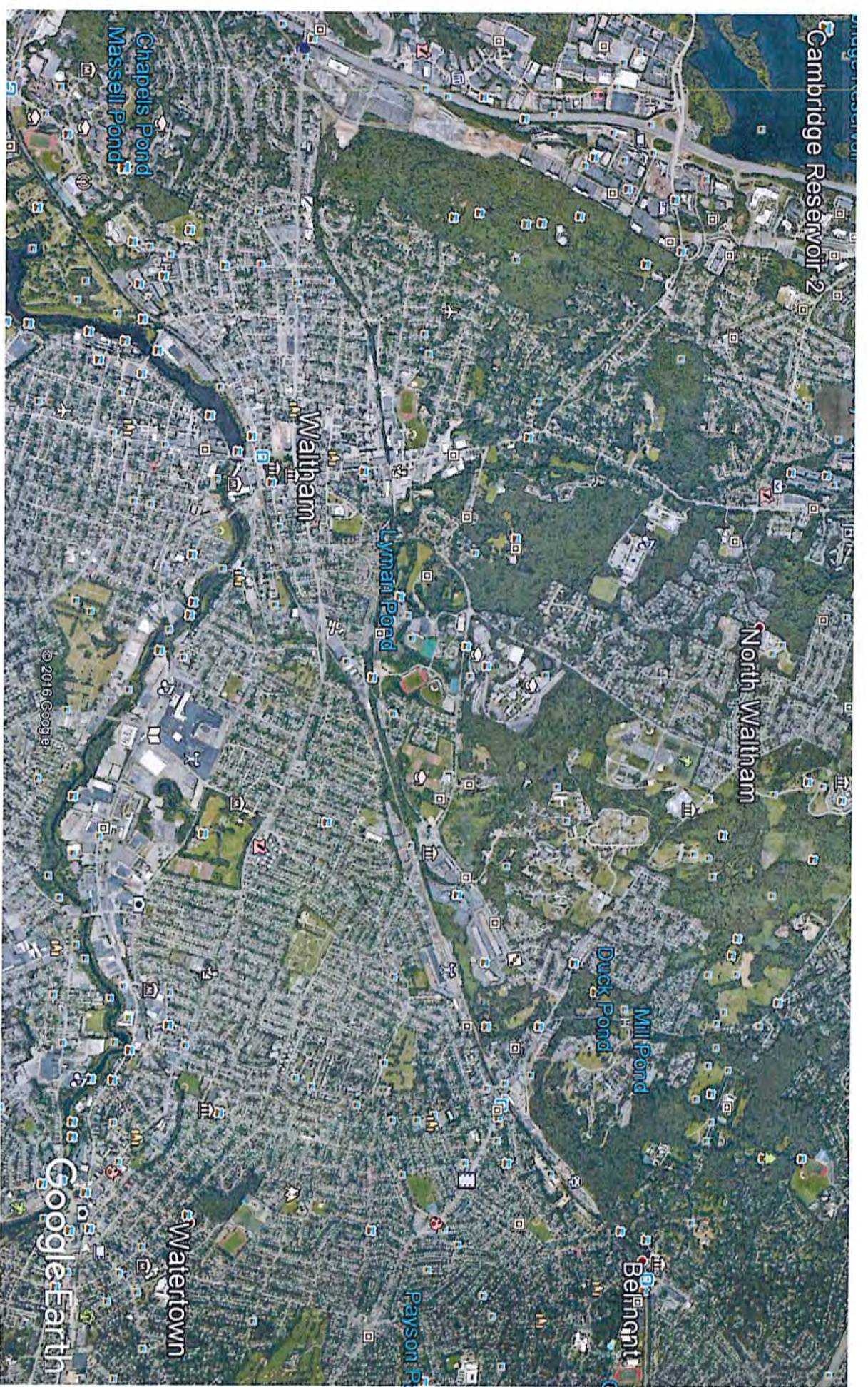
LAKES PONDS

SWAMP

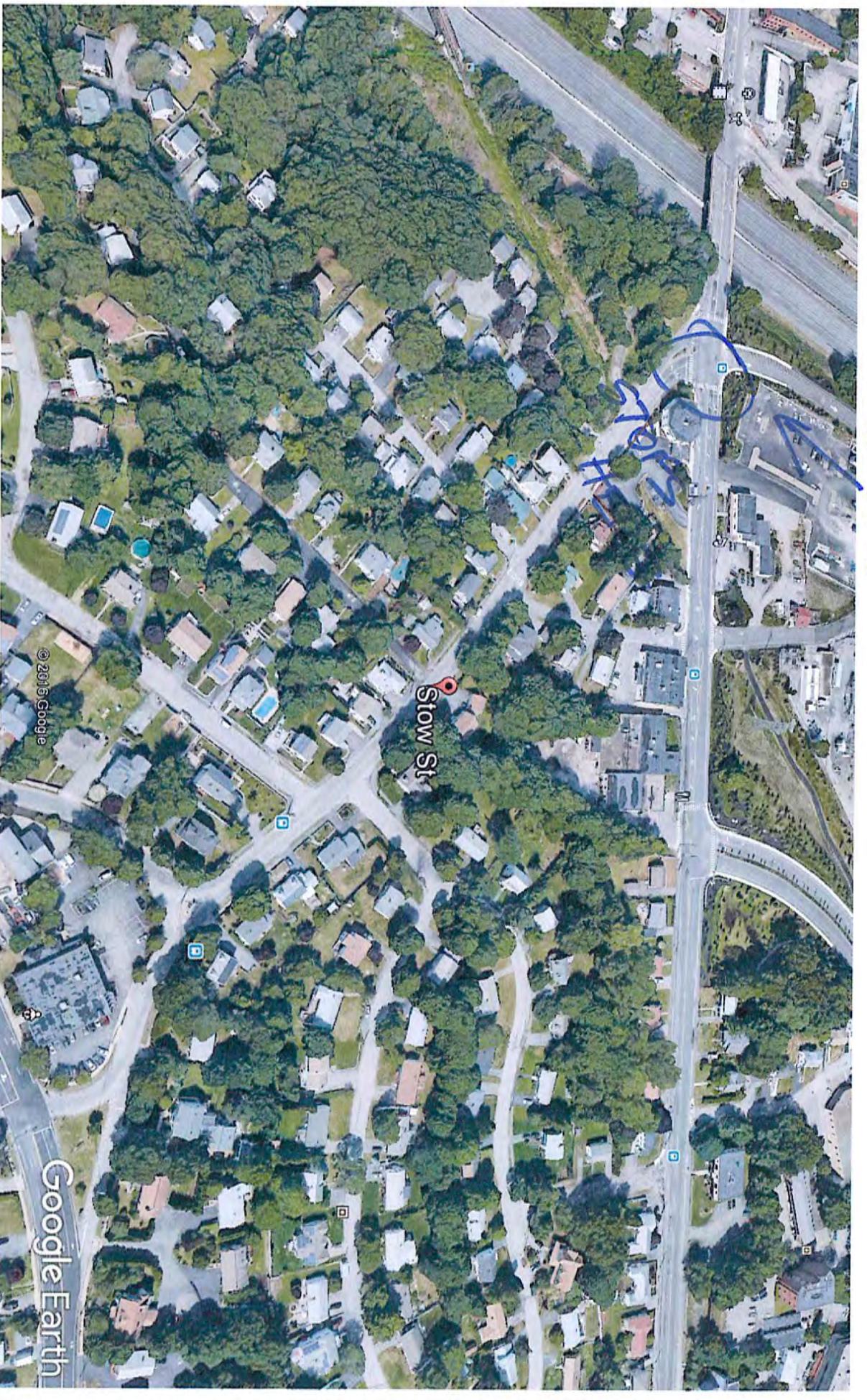
TREES

46





STOPS HERE



Google Earth

feet
meters

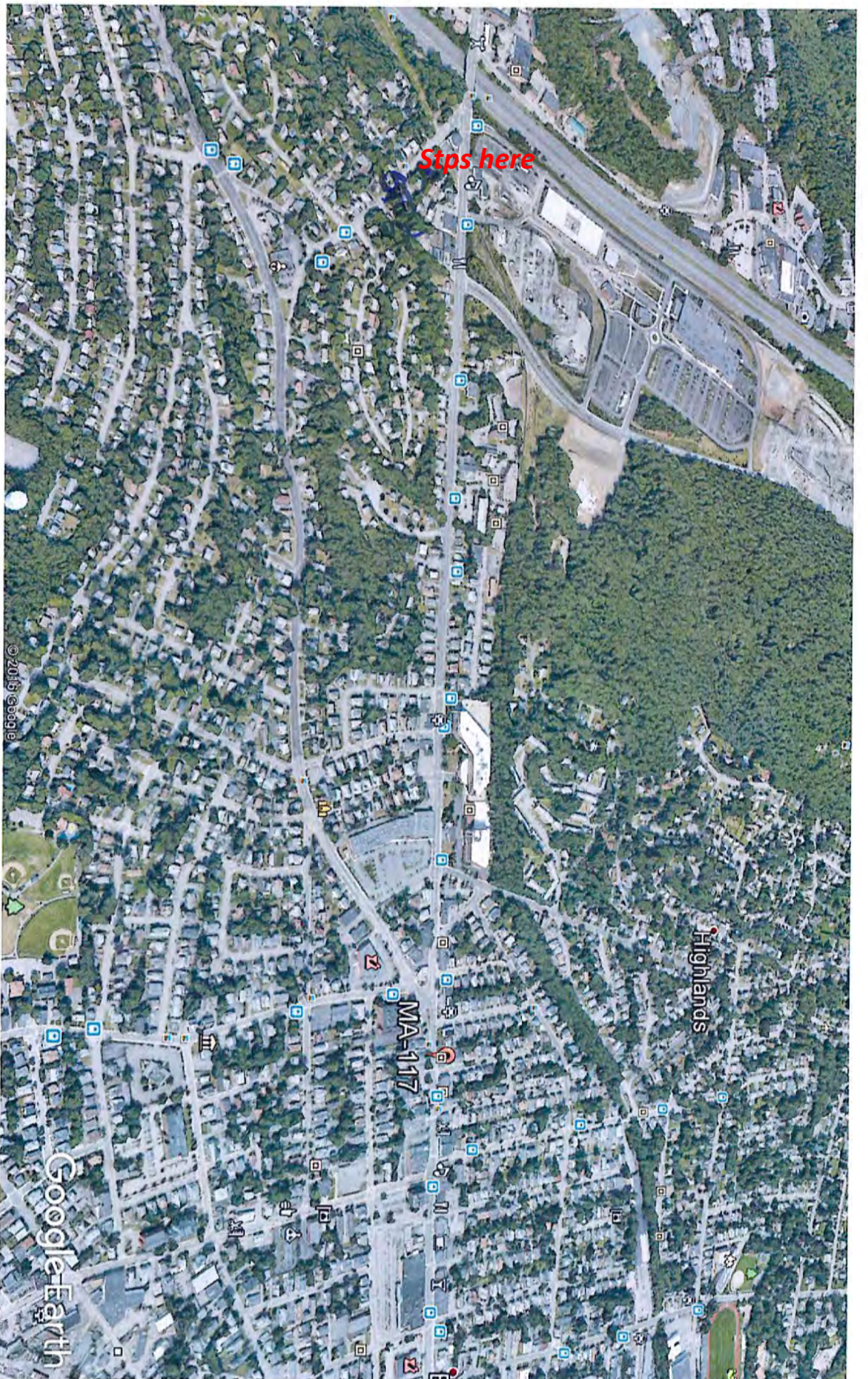


1000
300



Google Earth

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Mass Central Rail Trail - Wayside Waltham Section

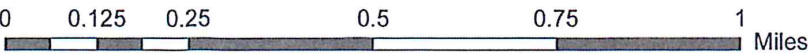
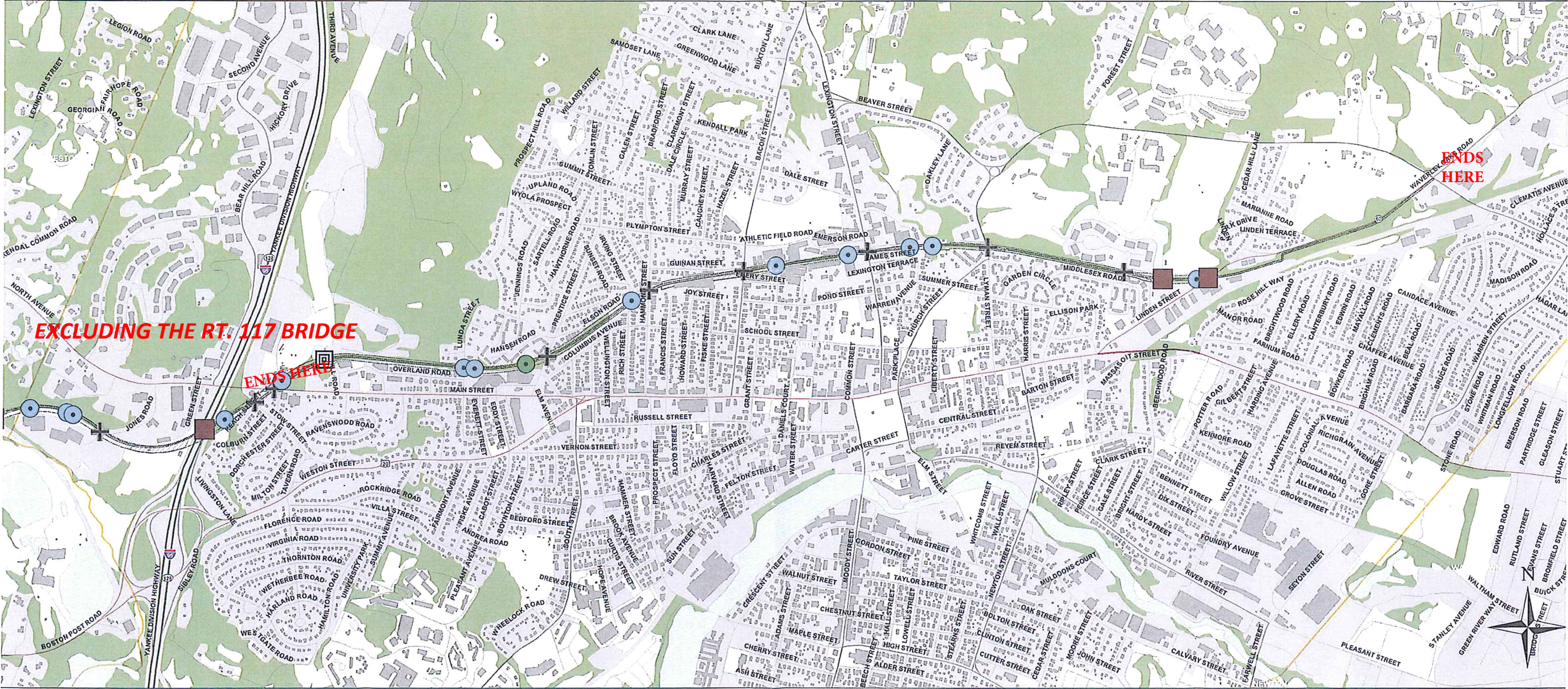


Legend

- MBTA ROW - DCR Lease
- MCRT Construction Limit
- Archaeologically Sensitive Areas
- Archaeological Sites
- MCRT Encroachments

MCRT Infrastructure Land Use (2005)

- At-Grade Crossing
- Underpass
- Underpass - Filled
- Bridge
- Bridge - Missing
- Culvert
- Cattle Pass
- Forest
- Water
- Developed
- MA Towns..Solid Outline
- DEP Wetlands (1:12,000)



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Data from MassGIS, DCR, EOT Val Maps,

11/18/14