

# Green Line Extension



## Expanded Environmental Notification Form

*October 2006*

Submitted by



Prepared by



# ENF Environmental Notification Form

*For Office Use Only*  
*Executive Office of Environmental Affairs*

EOEA No.:  
MEPA Analyst:  
Phone: 617-626-

The information requested on this form must be completed to begin MEPA Review in accordance with the provisions of the Massachusetts Environmental Policy Act, 301 CMR 11.00.

Project Name: <b>Green Line Extension</b>		
Street:		
Municipality: <b>Cambridge, Somerville, Medford</b>	Watershed: <b>Boston Harbor</b>	
Universal Transverse Mercator Coordinates: <b>(See Attachment 3 for location)</b>	Latitude: <b>(See Attachment 3 for location)</b> Longitude:	
Estimated commencement date: <b>2011</b>	Estimated completion date: <b>2014</b>	
Approximate cost: <b>\$550 million</b>	Status of project design: <b>0</b> %complete	
Proponent: <b>Executive Office of Transportation (EOT)</b>		
Street: <b>10 Park Plaza Suite 4150</b>		
Municipality: <b>Boston</b>	State: <b>MA</b>	Zip Code: <b>02116</b>
Name of Contact Person From Whom Copies of this ENF May Be Obtained: <b>Stephen Woelfel</b>		
Firm/Agency: <b>EOT Office of Transportation Planning</b>	Street: <b>10 Park Plaza Suite 4150</b>	
Municipality: <b>Boston</b>	State: <b>MA</b>	Zip Code: <b>02116</b>
Phone: <b>617-973-7474</b>	Fax: <b>617-973-8035</b>	E-mail: <b>steve.woelfel@state.ma.us</b>

Does this project meet or exceed a mandatory EIR threshold (see 301 CMR 11.03)?

☒ Yes

☐ No

Has this project been filed with MEPA before?

☐ Yes (EOEA No. \_\_\_\_\_)

☒ No

Has any project on this site been filed with MEPA before?

☐ Yes (EOEA No. \_\_\_\_\_)

☒ No

Is this an Expanded ENF (see 301 CMR 11.05(7)) requesting:

a Single EIR? (see 301 CMR 11.06(8))

☒ Yes

☐ No

a Special Review Procedure? (see 301 CMR 11.09)

☐ Yes

☒ No

a Waiver of mandatory EIR? (see 301 CMR 11.11)

☐ Yes

☒ No

a Phase I Waiver? (see 301 CMR 11.11)

☐ Yes

☒ No

Identify any financial assistance or land transfer from an agency of the Commonwealth, including the agency name and the amount of funding or land area (in acres):

Any state financial assistance and/or land transfer will be further defined in the EIR. Funding is expected to come from state and local funds. All land to be used by the project is owned by the MBTA or private land owners. There are no land transfers expected from any agencies of the Commonwealth.

Are you requesting coordinated review with any other federal, state, regional, or local agency?

☐ Yes (Specify) ☒ No

## List Local or Federal Permits and Approvals:

While the Executive Office of Transportation is the project proponent, the MBTA will own and operate the project. As an entity of the Commonwealth of Massachusetts, the MBTA is generally exempt from the requirements of municipal permitting programs.

The federal and state permits and approvals anticipated to be required are listed below:

Determination of No Adverse Effect to Historic or Archaeological Resources, Section 106 of the National Historic Preservation Act – Commonwealth of Massachusetts Historical Preservation Officer - for the Susan Russell House which is listed on the National Register of Historical Places.

National Pollution Discharge Elimination System General Permit, Section 402, Federal Clean Water Act – U.S. Environmental Protection Agency, Massachusetts Department of Environmental Protection.

Massachusetts Highway Department access permits – numerous locations

Department of Conservation Resources (DCR) access permits – for work affecting DCR bridges

EOT and the MBTA will continue to hold extensive public meetings in the affected communities to discuss local issues and concerns, and will take these into consideration in the process of refining the project.

Which ENF or EIR review threshold(s) does the project meet or exceed (see 301 CMR 11.03):

- |  |                                       |   |
|--|---------------------------------------|---|
| <input checked="" type="checkbox"/> Land | <input type="checkbox"/> Rare Species | <input type="checkbox"/> Wetlands, Waterways, & Tidelands                 |
| <input type="checkbox"/> Water           | <input type="checkbox"/> Wastewater   | <input checked="" type="checkbox"/> Transportation                        |
| <input type="checkbox"/> Energy          | <input type="checkbox"/> Air          | <input type="checkbox"/> Solid & Hazardous Waste                          |
| <input type="checkbox"/> ACEC            | <input type="checkbox"/> Regulations  | <input checked="" type="checkbox"/> Historical & Archaeological Resources |

Summary of Project Size & Environmental Impacts	Existing	Change	Total	State Permits & Approvals	
<b>LAND</b>				<input type="checkbox"/> Order of Conditions <input type="checkbox"/> Superseding Order of Conditions <input type="checkbox"/> Chapter 91 License <input type="checkbox"/> 401 Water Quality Certification <input checked="" type="checkbox"/> MHD or MDC Access Permit <input type="checkbox"/> Water Management Act Permit <input type="checkbox"/> New Source Approval <input type="checkbox"/> DEP or MWRA Sewer Connection/Extension Permit <input type="checkbox"/> Other Permits <i>(including Legislative Approvals) – Specify:</i>	
Total site acreage	<b>54</b>				
New acres of land altered*		<b>0</b>			
Acres of impervious area	<b>0</b>	<b>0</b>	<b>0</b>		
Square feet of new bordering vegetated wetlands alteration		<b>0</b>			
Square feet of new other wetland alteration		<b>0</b>			
Acres of new non-water dependent use of tidelands or waterways		<b>0</b>			
<b>STRUCTURES</b>					
Gross square footage**	TBD	TBD	TBD		
Number of housing units	NA	NA	NA		
Maximum height (in feet)**	NA	TBD	TBD		
<b>TRANSPORTATION</b>					
Vehicle trips per day	NA	Up to -13,000	Up to -13,000		
Parking spaces***	0	TBD	TBD		
<b>WATER/WASTEWATER</b>					
Gallons/day (GPD) of water use	TBD	TBD	TBD		
GPD water withdrawal	NA	NA	NA		
GPD wastewater generation/treatment	TBD	TBD	TBD		
Length of water/sewer mains (in miles)	NA	NA	NA		

\* It is assumed that all work will be conducted within areas that were previously altered.

\*\* "TBD" indicates that impacts will be determined at a later date when design plans are further advanced.

\*\*\* No additional parking spaces are proposed for stations. The maintenance and storage facility will have some MBTA employee parking.

**CONSERVATION LAND:** Will the project involve the conversion of public parkland or other Article 97 public natural resources to any purpose not in accordance with Article 97?

☐ Yes (Specify \_\_\_\_\_) ☒ No

Will it involve the release of any conservation restriction, preservation restriction, agricultural preservation restriction, or watershed preservation restriction?

☐ Yes (Specify \_\_\_\_\_) ☒ No

**RARE SPECIES:** Does the project site include Estimated Habitat of Rare Species, Vernal Pools, Priority Sites of Rare Species, or Exemplary Natural Communities?

☐ Yes (Specify \_\_\_\_\_) ☒ No

**HISTORICAL /ARCHAEOLOGICAL RESOURCES:** Does the project site include any structure, site or district listed in the State Register of Historic Place or the inventory of Historic and Archaeological Assets of the Commonwealth?

☒ Yes (Specify: Susan Russell House, 58 Sycamore St. Somerville ) ☐ No

The Susan Russell House is listed on the National Register of Historic Places and is located adjacent to the rail right of way for the existing Lowell Commuter Rail. The commuter rail tracks will be moved closer to the house but within the rail right of way. No alterations to this structure are anticipated.

If yes, does the project involve any demolition or destruction of any listed or inventoried historic or archaeological resources?

☐ Yes (Specify \_\_\_\_\_) ☒ No

**AREAS OF CRITICAL ENVIRONMENTAL CONCERN:** Is the project in or adjacent to an Area of Critical Environmental Concern?

☐ Yes (Specify \_\_\_\_\_) ☒ No

**PROJECT DESCRIPTION:** The project description should include **(a)** a description of the project site, **(b)** a description of both on-site and off-site alternatives and the impacts associated with each alternative, and **(c)** potential on-site and off-site mitigation measures for each alternative (*You may attach one additional page, if necessary.*)

The Green Line Extension Project is an initiative of the Executive Office of Transportation (EOT) and the Massachusetts Bay Transportation Authority (MBTA) to implement enhancements to transit services that will improve mobility and regional access for residents in the northwest corridor communities of Somerville, Medford, and Cambridge. Traffic congestion, mode transfer, and service delays hamper access from the study area to downtown Boston, and to employment and services in the study area. The purpose of the project is to improve corridor mobility, boost transit ridership, improve regional air quality, ensure equitable distribution of transit services, and support opportunities for smart growth initiatives and sustainable development. The project would extend from the outer limit of the relocated Lechmere Station project along the Lowell commuter rail line to the Medford Hillside section of Medford and along the Fitchburg commuter rail line to the vicinity of Union Square in Somerville.

The corridor has been the subject of numerous studies dating back to 1962. Most recently, the Beyond Lechmere Northwest Corridor Study conducted a Major Investment Study/Alternatives Analysis (MIS/AA) that evaluated a wide range and mixture of technologies and operating plans. The study area for the MIS/AA was generally bounded by Interstate 93 and the Orange Line to the east, the Red Line and the Fitchburg Commuter Rail Line to the west and south, and the West Medford Commuter Rail Station to the north. This area includes East Cambridge, Somerville and sections of Medford. The area consists of densely settled urban corridors with a large base of commuters and transit users. The study area was defined, based on community input, as the area that is currently underserved by fixed-guideway transit. In the study, a tiered analysis of alternatives began with nine build alternatives. The nine alternatives encompassed several different single transit modes and some included multiple modes. Six of the alternatives included Green Line extensions, four included Bus Rapid Transit (BRT), and three included commuter rail enhancements. The nine alternatives were narrowed down to five build alternatives – two Green Line, two commuter rail and one combination of

Green Line and Bus Rapid Transit – that were subjected to additional evaluation. A Transportation Systems Management Alternative was also considered.

The Beyond Lechmere Northwest Corridor Study did not identify a preferred alternative. However, the State Implementation Plan (SIP), as well as a draft amendment to the SIP, identify an extension of the Green Line as the preferred alternative for the corridor. EOT, the MBTA and the Boston Region Metropolitan Planning Organization (MPO) have received hundreds of comments over the last several years, both during the generation of MPO certification documents and the SIP reevaluation and subsequent amendment process, in support of the project.

As currently envisioned by EOT, the project would consist of two branches – an extension of the main line to Medford and a spur line to Union Square in Somerville. The extension of the main line would begin at the end of the proposed tail tracks of the relocated Lechmere Station and extend along the west side of the Lowell Line right-of-way ending in Medford Hillside. The Union Square Branch would diverge off the tail tracks where they cross the Fitchburg Line and extend along the north side of the Fitchburg Line ending in the vicinity of Union Square. Stations are currently proposed to be located in the vicinity of:

- College Avenue/Medford Hillside (Medford Hillside Branch)
- Broadway/Ball Square, Somerville (Medford Hillside Branch)
- Lowell Street, Somerville (Medford Hillside Branch)
- Medford Street/Gilman Square, Somerville (Medford Hillside Branch)
- Washington Street, Somerville (Medford Hillside Branch)
- Union Square, Somerville (Union Square Branch)

In addition to these stations, EOT will also examine the feasibility of extending the line beyond Medford Hillside to a station to be located in the vicinity of Winthrop Street in Medford.

This EENF addresses only the preferred alternative that has been identified in the SIP. Other alternatives may have additional impacts. This information is based on the analyses in the MIS/AA, supplemented by additional information.

The Single Environmental Impact Report (SEIR) for the project will consider the following alternatives:

1. No Action
2. Green Line to Medford Hillside (with possible extension to Winthrop Street) via Lowell Line and Union Square via Fitchburg Line

The SEIR will be prepared in accordance with the Secretary's Certificate on the Expanded Environmental Notification Form. The SEIR will be built on the EENF framework that responds to the Secretary's EENF Certificate. The SEIR will contain the following:

- Table of Contents
- Executive Summary
- Project History
- Description of the proposed action
  - The proposed Green Line extension will be documented in greater detail including specific station locations, track relocations, and bridge replacement needs, as well as documentation of any need for expansion of the rail right-of-way.
- Summary of the Alternatives considered and rationale for selection of the Preferred Alternative
  - Only two alternatives will be considered: No Action and Extension of the Green Line to Medford via the Lowell Line and to Union Square via the Fitchburg Line. The rationale for selection of the preferred alternative will be documented, including the prior studies and the extensive public involvement process.
- Description of the existing environment
  - This will include the existing land use, transportation systems, and social, economic, and cultural environment
- Description of project impacts due to construction and operations
  - The SEIR will document the expected improvements in traffic congestion and air quality resulting from the operation of the Green Line Extension, while also documenting any

localized traffic impacts around the stations resulting from bus traffic and passenger drop-offs and mitigation measures to reduce these impacts. With the refinement of the station locations, track relocations and bridge improvement needs, the SEIR will be able to address the impacts that would result from replacement of several bridges including any specific localized land takings. Any impacts on access to businesses and residences, during or after construction, will be documented. Impacts on freight railroad operations will be addressed and mitigation measures will be identified. Impacts on noise, vibration, and the visual environment will also be documented. Mitigation measures for any hazardous sites affected by construction will be identified.

- Proposed Section 61 Findings (mitigation commitments)
- Comment letters on the EENF and responses to comments
- Supporting graphics, including project location, existing conditions (sensitive receptors, environmental impacts including visual environment, cultural resources, traffic volumes and patterns), conceptual design (cross-sections, platforms and stations, streetscape), and mitigation elements.
- Technical Appendix, noise and vibration analyses
- Technical Appendix, air quality analysis
- Technical Appendix, traffic analysis

This EENF will be filed in October 2006 with the SEIR completed by November 2008. Construction is expected to start 36 months after completion of the SEIR (November 2011 if the SEIR is completed as planned). Service is anticipated to begin in December 2014.

Additional descriptions of the project are contained in Attachments 2, 5.1, and 5.2. Attachment 2 describes the preferred alternative in more detail. Attachment 5.1 summarizes the analyses conducted for the alternatives considered in the MIS/AA. Attachment 5.2 presents additional environmental information developed for the preferred alternative since completion of the MIS/AA.

## **LAND SECTION – all proponents must fill out this section**

### **I. Thresholds / Permits**

- A. Does the project meet or exceed any review thresholds related to land (see 301 CMR 11.03(1))  
  X   Yes      No; if yes, specify each threshold:

A Mandatory EIR is required for this project pursuant to 11.03 (1) (a) 1 and potentially 11.03 (1) (a) 2.  
The project would alter approximately 54 acres of previously altered land.

### **II. Impacts and Permits**

- A. Describe, in acres, the current and proposed character of the project site, as follows:

	<u>Existing</u>	<u>Change</u>	<u>Total</u>
Footprint of buildings	<u>0</u>	<u>+2</u>	<u>          </u>
Roadways, parking, and other paved areas	<u>0</u>	<u>          </u>	<u>          </u>
Other altered areas (describe)*	<u>54</u>	<u>-2</u>	<u>          </u>
Undeveloped areas	<u>0</u>	<u>          </u>	<u>          </u>

\* Existing railroad alignments and altered land adjacent to alignment.

- B. Has any part of the project site been in active agricultural use in the last three years?  
     Yes   X   No; if yes, how many acres of land in agricultural use (with agricultural soils) will be converted to nonagricultural use?
- C. Is any part of the project site currently or proposed to be in active forestry use?  
     Yes   X   No; if yes, please describe current and proposed forestry activities and indicate whether any part of the site is the subject of a DEM-approved forest management plan:
- D. Does any part of the project involve conversion of land held for natural resources purposes in accordance with Article 97 of the Amendments to the Constitution of the Commonwealth to any purpose not in accordance with Article 97?      Yes   X   No; if yes, describe:
- E. Is any part of the project site currently subject to a conservation restriction, preservation restriction, agricultural preservation restriction or watershed preservation restriction?   Yes    
  X   No; if yes, does the project involve the release or modification of such restriction?      Yes  
     No; if yes, describe:
- F. Does the project require approval of a new urban redevelopment project or a fundamental change in an existing urban redevelopment project under M.G.L.c.121A?      Yes   X   No; if yes, describe:
- G. Does the project require approval of a new urban renewal plan or a major modification of an existing urban renewal plan under M.G.L.c.121B?      Yes   X   No ; if yes, describe:
- H. Describe the project's stormwater impacts and, if applicable, measures that the project will take to comply with the standards found in DEP's Stormwater Management Policy:

The construction of station platforms under the preferred alternative will result in a small increase in impervious surfaces. In the design phase, predevelopment conditions will be assessed and post development conditions will be designed to meet or improve the predevelopment conditions. A Stormwater management plan will be developed in accordance with DEP's Stormwater Management Policy. Currently stormwater is handled in both closed and open systems in the project area. Any modifications will need to consider DEP's best management practices including offline systems, oil water separators, drainage channels, catch basin sumps, water quality swales, detention, and other means of reducing total suspended solids in the proposed system. In the Medford Hillside area there is some concern relating to potential retaining wall construction and the impact of stormwater in this

area. The design of this area will consider the stormwater runoff from the Medford Hillside area and its impacts to the railroad right-of-way and the retaining walls.

- I. Is the project site currently being regulated under M.G.L.c.21E or the Massachusetts Contingency Plan? \_\_\_Yes **X** No ; if yes, what is the Release Tracking Number (RTN)?

Implementation of the Green Line Extension project is not expected to involve land alterations that could affect sites regulated under M.G.L. c.21E. As described in the Project Plan and Description in Attachment 2, the Preferred Alternative would involve construction of light rail track, relocation of commuter rail track, reconstruction of bridges, and construction of a light rail maintenance/storage facility. A review of M.G.L. c.21E sites conducted during the preparation of the Expanded Environmental Notification Form found a number of regulated sites less than a mile from the project corridor (see Hazardous Sites map in Attachment 5.2). Due to the limited extent of land alteration that will be required beyond existing railroad rights-of-way, it appears unlikely that sites regulated under M.G.L. c.21E will be affected. However, new reviews of M.G.L. c.21E sites will need to be conducted as project design progresses and take into account new site detection and remediation of existing sites.

- J. Is the project site within the Chicopee or Nashua watershed, is it within the Quabbin, Ware, or Wachusett subwatershed? \_\_\_ Yes **X** No; if yes, is the project site subject to regulation under the Watershed Protection Act? \_\_\_ Yes \_\_\_ No

- K. Describe the project's other impacts on land:

Refer to Attachments 2 and 5 for additional information

### III.. Consistency

- A. Identify the current municipal comprehensive land use plan and the open space plan and describe the consistency of the project and its impacts with that plan(s):

The three communities in the Green Line Extension study area – Somerville, Medford, and Cambridge – have enacted land use plans, area plans, and open space plans intended to foster compact development and revitalization of lands around the study corridor. The following is a list of land use and open space planning documents relevant to the Green Line Extension project:

- Somerville Community Development Plan, City of Somerville Office of Housing and Community Development, June 2004
- Somerville Open Space and Recreation Plan, 2002-2007, City of Somerville Office of Housing and Community Development, 2002
- Assembly Square Mixed-Use District, City of Somerville Office of Housing and Community Development, 2004
- Inner Belt Planning Study – Technical Memorandum I: Existing Conditions, City of Somerville Office of Housing and Community Development, 2001
- McGrath Highway Corridor – Technical Memorandum I: Existing Conditions, City of Somerville Office of Housing and Community Development, 2001
- North Point Somerville – Planning Study, ICON Architects/FMX Associates/Bruce Campbell and Associates/City of Somerville Office of Housing and Community Development, 2003
- Somerville Community Path Feasibility Study, Rizzo Associates/ICON Architecture, 2001
- Union Square Master Plan, Bluestone Planning Group, 2003
- Medford Open Space Plan/Medford Recovery Action Plan, City of Medford Office of Community Development, 2001
- Medford Community Development Plan, City of Medford Office of Community Development, July 2004
- Medford Consolidated Plan for Housing and Community Development, City of Medford Office of Community Development, 2005

- Tufts University Master Plan, Tufts University, ongoing
- Medford Square Master Plan, Sasaki Associates/Abramsom & Associates/Howard Stein Hudson/Todreas Hanley Associates, June 2005
- City of Cambridge Open Space and Recreation Plan 2003-2008, City of Cambridge Community Development Department, March 2005
- Eastern Cambridge Planning Study, City of Cambridge Community Development Department, October 2001

Further detail on many of these plans and documents is included in the Beyond Lechmere Northwest Corridor Study MIS/AA, a summary of which is provided in Attachment 5.1.

Together, the plans developed by the study area municipalities promote compact growth and redevelopment. In targeted areas, new economic development is encouraged on underutilized properties. The study area communities also wish to promote residential growth in the corridor, revitalize the neighborhood commercial centers that serve these residential communities, and preserve and expand open spaces and recreational opportunities.

The purpose of the Green Line Extension project is to improve corridor mobility, boost transit ridership, improve regional air quality, ensure equitable distribution of transit services, and support opportunities for smart growth initiatives and sustainable development. The proposed Green Line Extension project is consistent with, and highly supportive of, the land use and open space plans of municipalities in the study area. The proposed impacts of the Green Line Extension project are highly beneficial in terms of transportation access and mobility, air quality and the environment, and land use and economic development, and are all consistent with municipal plans and policies.

- B. Identify the current Regional Policy Plan of the applicable Regional Planning Agency and describe the consistency of the project and its impacts with that plan:

The most recent regional policy plan for the Boston region is MetroPlan 2000, which was completed in 1990 by the Metropolitan Area Planning Council (MAPC). The basic tenet of the plan is that concentrating development is economically and environmentally more practical than the current model of scattered growth. MetroPlan 2000 emphasized that concentrated development encourages and enhances transit use, ride sharing and pedestrian traffic with a resultant reduction in auto travel, traffic congestion, air pollution and fuel consumption, and in addition, reduces the pressure to develop open space and environmentally sensitive lands. MAPC is currently in the process of updating the regional policy plan through MetroFuture, an extensive participatory initiative to develop a vision for the metropolitan Boston region's growth through 2030. Several MetroFuture working sessions were held in June 2006, and it is anticipated that project participants will select their preferred path for the region's future in the Fall of 2006, and will implement that strategy in the Spring of 2007. The MetroFuture project has already contributed significantly to the Boston Region MPO's ongoing development of its new regional transportation plan. The work associated with MetroFuture has provided the MPO with the population and employment data needed for it to select its land use for the upcoming plan, which again proposes smart growth strategies.

The proposed Green Line Extension project is consistent with, and highly supportive of, the policies in MetroPlan 2000, as well as the direction of the ongoing MetroFuture planning process. The proposed impacts of the Green Line Extension project are all consistent with the regional land use policy plan.

- C. Will the project require any approvals under the local zoning by-law or ordinance (i.e. text or map amendment, special permit, or variance)? Yes ☐ No ☒ ; if yes, describe:
- D. Will the project require local site plan or project impact review?  
☐ Yes ☒ No; if yes, describe:

## **RARE SPECIES SECTION**

### **I. Thresholds / Permits**

- A. Will the project meet or exceed any review thresholds related to rare species or habitat (see 301 CMR 11.03(2))? \_\_\_ Yes   X   No; if yes, specify, in quantitative terms:
- B. Does the project require any state permits related to rare species or habitat? \_\_\_ Yes   X   No
- C. If you answered "No" to both questions A and B, proceed to the Wetlands, Waterways, and Tidelands Section. If you answered "Yes" to either question A or question B, fill out the remainder of the Rare Species section below.

### **II. Impacts and Permits**

- A. Does the project site fall within Priority or Estimated Habitat in the current Massachusetts Natural Heritage Atlas (attach relevant page)? \_\_\_ Yes \_\_\_ No. If yes,
1. Which rare species are known to occur within the Priority or Estimated Habitat (contact: Environmental Review, Natural Heritage and Endangered Species Program, Route 135, Westborough, MA 01581, allowing 30 days for receipt of information):
  2. Have you surveyed the site for rare species? \_\_\_ Yes \_\_\_ No; if yes, please include the results of your survey.
  3. If your project is within Estimated Habitat, have you filed a Notice of Intent or received an Order of Conditions for this project? \_\_\_ Yes \_\_\_ No; if yes, did you send a copy of the Notice of Intent to the Natural Heritage and Endangered Species Program, in accordance with the Wetlands Protection Act regulations? \_\_\_ Yes \_\_\_ No
- B. Will the project "take" an endangered, threatened, and/or species of special concern in accordance with M.G.L. c.131A (see also 321 CMR 10.04)? \_\_\_ Yes \_\_\_ No; if yes, describe:
- C. Will the project alter "significant habitat" as designated by the Massachusetts Division of Fisheries and Wildlife in accordance with M.G.L. c.131A (see also 321 CMR 10.30)? \_\_\_ Yes \_\_\_ No; if yes, describe:
- D. Describe the project's other impacts on rare species including indirect impacts (for example, stormwater runoff into a wetland known to contain rare species or lighting impacts on rare moth habitat):

## **WETLANDS, WATERWAYS, AND TIDELANDS SECTION**

### **I. Thresholds / Permits**

- A. Will the project meet or exceed any review thresholds related to wetlands, waterways, and tidelands (see 301 CMR 11.03(3))? \_\_\_\_ Yes   X   No; if yes, specify, in quantitative terms:

In June 2006, there was some water along an easterly section of a ditch-line along the rail approximately 5 feet wide and about 800 feet long near Cedar St. This was likely created by the unusually heavy rainfall this area experienced in May and June 2006. There is a wet area on the southwest side of the Lowell Street bridge approximately 150 feet long and 30 feet wide. This wet area is far enough away from the rail line that it will not be affected by the rail alignment but could be affected by a portion of the Lowell St. Station. (Refer to the map of this area in Attachment 5.2).

- B. Does the project require any state permits (or a local Order of Conditions) related to wetlands, waterways, or tidelands? \_\_\_\_ Yes   X   No; if yes, specify which permit:
- C. If you answered "No" to both questions A and B, proceed to the Water Supply Section. If you answered "Yes" to either question A or question B, fill out the remainder of the Wetlands, Waterways, and Tidelands Section below.

### **II. Wetlands Impacts and Permits**

- A. Describe any wetland resource areas currently existing on the project site and indicate them on the site plan:
- B. Estimate the extent and type of impact that the project will have on wetland resources, and indicate whether the impacts are temporary or permanent:

<u>Coastal Wetlands</u>	<u>Area (in square feet) or Length (in linear feet)</u>
Land Under the Ocean	_____
Designated Port Areas	_____
Coastal Beaches	_____
Coastal Dunes	_____
Barrier Beaches	_____
Coastal Banks	_____
Rocky Intertidal Shores	_____
Salt Marshes	_____
Land Under Salt Ponds	_____
Land Containing Shellfish	_____
Fish Runs	_____
Land Subject to Coastal Storm Flowage	_____

#### Inland Wetlands

Bank	_____
Bordering Vegetated Wetlands	_____
Land under Water	_____
Isolated Land Subject to Flooding	_____
Bordering Land Subject to Flooding	_____
Riverfront Area	_____

- C. Is any part of the project
1. a limited project? \_\_\_\_ Yes \_\_\_\_ No
  2. the construction or alteration of a dam? \_\_\_\_ Yes \_\_\_\_ No; if yes, describe:
  3. fill or structure in a velocity zone or regulatory floodway? \_\_\_\_ Yes \_\_\_\_ No
  4. dredging or disposal of dredged material? \_\_\_\_ Yes \_\_\_\_ No; if yes, describe the volume of dredged material and the proposed disposal site:
  5. a discharge to Outstanding Resource Waters? \_\_\_\_ Yes \_\_\_\_ No

6. subject to a wetlands restriction order? ☐ Yes ☐ No; if yes, identify the area (in square feet):

D. Does the project require a new or amended Order of Conditions under the Wetlands Protection Act (M.G.L. c.131A)? ☐ Yes ☐ No; if yes, has a Notice of Intent been filed or a local Order of Conditions issued? ☐ Yes ☐ No; if yes, list the date and DEP file number:\_\_\_\_\_. Was the Order of Conditions appealed? ☐ Yes ☐ No. Will the project require a variance from the Wetlands regulations? ☐ Yes ☐ No.

E. Will the project:

1. be subject to a local wetlands ordinance or bylaw? ☐ Yes ☐ No
2. alter any federally-protected wetlands not regulated under state or local law?  
☐ Yes ☐ No; if yes, what is the area (in s.f.)?

F. Describe the project's other impacts on wetlands (including new shading of wetland areas or removal of tree canopy from forested wetlands):

### III. Waterways and Tidelands Impacts and Permits

A. Is any part of the project site waterways or tidelands (including filled former tidelands) that are subject to the Waterways Act, M.G.L.c.91? ☐ Yes ☐ No; if yes, is there a current Chapter 91 license or permit affecting the project site? ☐ Yes ☐ No; if yes, list the date and number:

B. Does the project require a new or modified license under M.G.L.c.91? ☐ Yes ☐ No; if yes, how many acres of the project site subject to M.G.L.c.91 will be for non-water dependent use?  
Current  Change  Total

C. Is any part of the project

1. a roadway, bridge, or utility line to or on a barrier beach? ☐ Yes ☐ No; if yes, describe:
2. dredging or disposal of dredged material? ☐ Yes ☐ No; if yes, volume of dredged material \_\_\_\_\_
3. a solid fill, pile-supported, or bottom-anchored structure in flowed tidelands or other waterways? ☐ Yes ☐ No; if yes, what is the base area? \_\_\_\_\_
4. within a Designated Port Area? ☐ Yes ☐ No

D. Describe the project's other impacts on waterways and tidelands:

### IV. Consistency:

A. Is the project located within the Coastal Zone? ☐ Yes ☐ No; if yes, describe the project's consistency with policies of the Office of Coastal Zone Management:

B. Is the project located within an area subject to a Municipal Harbor Plan? ☐ Yes ☐ No; if yes, identify the Municipal Harbor Plan and describe the project's consistency with that plan:

## **WATER SUPPLY SECTION**

### **I. Thresholds / Permits**

- A. Will the project meet or exceed any review thresholds related to water supply (see 301 CMR 11.03(4))? \_\_\_\_ Yes   X   No; if yes, specify, in quantitative terms:
- B. Does the project require any state permits related to water supply? \_\_\_\_ Yes   X   No; if yes, specify which permit:
- C. If you answered "No" to both questions A and B, proceed to the Wastewater Section. If you answered "Yes" to either question A or question B, fill out the remainder of the Section below.

### **II. Impacts and Permits**

- A. Describe, in gallons/day, the volume and source of water use for existing and proposed activities at the project site:

	<u>Existing</u>	<u>Change</u>	<u>Total</u>
Withdrawal from groundwater	_____	_____	_____
Withdrawal from surface water	_____	_____	_____
Interbasin transfer	_____	_____	_____
Municipal or regional water supply	_____	_____	_____

- B. If the source is a municipal or regional supply, has the municipality or region indicated that there is adequate capacity in the system to accommodate the project? \_\_\_\_ Yes \_\_\_\_ No
- C. If the project involves a new or expanded withdrawal from a groundwater or surface water source,
1. have you submitted a permit application? \_\_\_\_ Yes \_\_\_\_ No; if yes, attach the application
  2. have you conducted a pump test? \_\_\_\_ Yes \_\_\_\_ No; if yes, attach the pump test report
- D. What is the currently permitted withdrawal at the proposed water supply source (in gallons/day)?  
Will the project require an increase in that withdrawal? \_\_\_\_ Yes \_\_\_\_ No
- E. Does the project site currently contain a water supply well, a drinking water treatment facility, water main, or other water supply facility, or will the project involve construction of a new facility? \_\_\_\_ Yes \_\_\_\_ No. If yes, describe existing and proposed water supply facilities at the project site:

	<u>Existing</u>	<u>Change</u>	<u>Total</u>
Water supply well(s) (capacity, in gpd)	_____	_____	_____
Drinking water treatment plant (capacity, in gpd)	_____	_____	_____
Water mains (length, in miles)	_____	_____	_____

- F. If the project involves any inter-basin transfer of water, which basins are involved, what is the direction of the transfer, and is the inter-basin transfer existing or proposed?
- G. Does the project involve
1. new water service by a state agency to a municipality or water district? \_\_\_\_ Yes \_\_\_\_ No
  2. a Watershed Protection Act variance? \_\_\_\_ Yes \_\_\_\_ No; if yes, how many acres of alteration?
  3. a non-bridged stream crossing 1,000 or less feet upstream of a public surface drinking water supply for purpose of forest harvesting activities? \_\_\_\_ Yes \_\_\_\_ No
- H. Describe the project's other impacts (including indirect impacts) on water resources, quality, facilities and services:

**III. Consistency** - Describe the project's consistency with water conservation plans or other plans to enhance water resources, quality, facilities and services:

## **WASTEWATER SECTION**

### **I. Thresholds / Permits**

- A. Will the project meet or exceed any review thresholds related to wastewater (see 301 CMR 11.03(5))? \_\_\_\_ Yes **X** No; if yes, specify, in quantitative terms:
- B. Does the project require any state permits related to wastewater? \_\_\_\_ Yes **X** No; if yes, specify which permit:
- C. If you answered "No" to both questions A and B, proceed to the **Transportation -- Traffic Generation Section**. If you answered "Yes" to either question A or question B, fill out the remainder of the Wastewater Section below.

### **II. Impacts and Permits**

- A. Describe, in gallons/day, the volume and disposal of wastewater generation for existing and proposed activities at the project site (calculate according to 310 CMR 15.00):

	<u>Existing</u>	<u>Change</u>	<u>Total</u>
Discharge to groundwater (Title 5)	_____	_____	_____
Discharge to groundwater (non-Title 5)	_____	_____	_____
Discharge to outstanding resource water	_____	_____	_____
Discharge to surface water	_____	_____	_____
Municipal or regional wastewater facility	_____	_____	_____
<b>TOTAL</b>	_____	_____	_____

- B. Is there sufficient capacity in the existing collection system to accommodate the project?  
\_\_\_\_ Yes \_\_\_\_ No; if no, describe where capacity will be found:
- C. Is there sufficient existing capacity at the proposed wastewater disposal facility?  
\_\_\_\_ Yes \_\_\_\_ No; if no, describe how capacity will be increased:
- D. Does the project site currently contain a wastewater treatment facility, sewer main, or other wastewater disposal facility, or will the project involve construction of a new facility?  
\_\_\_\_ Yes \_\_\_\_ No. If yes, describe as follows:

	<u>Existing</u>	<u>Change</u>	<u>Total</u>
Wastewater treatment plant (capacity, in gpd)	_____	_____	_____
Sewer mains (length, in miles)	_____	_____	_____
Title 5 systems (capacity, in gpd)	_____	_____	_____

- E. If the project involves any inter-basin transfer of wastewater, which basins are involved, what is the direction of the transfer, and is the inter-basin transfer existing or proposed?
- F. Does the project involve new sewer service by an Agency of the Commonwealth to a municipality or sewer district? \_\_\_\_ Yes \_\_\_\_ No
- G. Is there any current or proposed facility at the project site for the storage, treatment, processing, combustion or disposal of sewage sludge, sludge ash, grit, screenings, or other sewage residual materials? \_\_\_\_ Yes \_\_\_\_ No; if yes, what is the capacity (in tons per day):

	<u>Existing</u>	<u>Change</u>	<u>Total</u>
Storage	_____	_____	_____
Treatment, processing	_____	_____	_____
Combustion	_____	_____	_____
Disposal	_____	_____	_____

- H. Describe the project's other impacts (including indirect impacts) on wastewater generation and treatment facilities:

**III. Consistency** -- Describe measures that the proponent will take to comply with federal, state, regional, and local plans and policies related to wastewater management:

- A. If the project requires a sewer extension permit, is that extension included in a comprehensive wastewater management plan? \_\_\_\_ Yes \_\_\_\_ No; if yes, indicate the EOE number for the plan and describe the relationship of the project to the plan

## **TRANSPORTATION -- TRAFFIC GENERATION SECTION**

### **I. Thresholds / Permits**

- A. Will the project meet or exceed any review thresholds related to traffic generation (see 301 CMR 11.03(6))?   X   Yes      No; if yes, specify, in quantitative terms:

A Mandatory EIR is required for this project pursuant to 11.03 (6) (a) (5). This project requires the construction of a new passenger rail line along existing rail right-of-way. The right-of-way will be shared with the existing Lowell and Fitchburg commuter rail lines. This includes approximately 3.8 miles along the Lowell Commuter Rail line and 0.6 miles along the Fitchburg Commuter Rail line. The project would result in a net reduction in the number of person-trips by automobile and the number of vehicle-miles traveled (VMT) when compared to the No Build Alternative.

- B. Does the project require any state permits related to state-controlled roadways?   X   Yes      No; if yes, specify which permit:

Massachusetts Highway Department Access Permit; Department of Conservation and Recreation (DCR) Access and Construction Permit.

- C. If you answered "No" to both questions A and B, proceed to the **Roadways and Other Transportation Facilities** Section. If you answered "Yes" to either question A or question B, fill out the remainder of the Traffic Generation Section below.

### **II. Traffic Impacts and Permits**

- A. Describe existing and proposed vehicular traffic generated by activities at the project site:

The project will result in a net reduction of vehicle trips in comparison to the No Build Alternative. As summarized in Attachment 5.1, the MIS/AA estimated a range of 1,390-13,320 auto person trips diverted to transit for the range of alternatives.

The project will result in an undetermined change in the number of buses operating on local streets. The Green Line extension could result in a reduction in the number of buses required to serve radial transit trips. Conversely, the increase in transit usage could result in an increase in the number of buses required to provide feeder service to the stations. The net effect is unknown, but is likely to be insignificant relative to the background traffic volume on the roadways on which the buses would travel.

The primary mode of access to the Green Line would be by walking or by bus. There would be some access by automobile drop-off. No parking would be provided at stations. Impacts on the utilization of existing on-street resident and general parking spaces will be determined as the project progresses.

It will be necessary to provide MBTA employee parking spaces at the storage and maintenance facility for first and last shift operators and maintenance personnel to get to and from work when the transit system is not in service.

	<u>Existing</u>	<u>Change</u>	<u>Total</u>
Number of parking spaces	0	<u>TBD*</u>	<u>TBD*</u>
Number of vehicle trips per day	<u>TBD</u>	-9,660 <u>person trips **</u>	<u>TBD</u>

\* A limited number of employee spaces will be provided at the storage and maintenance facility. There will be no parking at stations.

\*\* This figure represents Alternative 1C of the MIS/AA, which most closely reflects the preferred alternative.

B. What is the estimated average daily traffic on roadways serving the site?

	<u>Roadway</u>	<u>Existing</u>	<u>Change</u>	<u>Total</u>
1	NA*			
2	NA*			
3	NA*			

\* Numerous state and local roadways serve the project area. Refer to Section 3.5 of the MIS/AA for a discussion of roadway volumes

C. Describe how the project will affect transit, pedestrian and bicycle transportation facilities and services:

The project will expand transit facilities and increase transit usage in the study area. Access to the regional rapid transit system will be improved through the elimination of transfers to and from buses. This will increase the number of users in the Green Line central subway. The impact on capacity of the central subway will be evaluated as the project progresses.

No existing pedestrian or bicycle facilities will be disrupted by the project. New rail transit stations will provide new opportunities to access transit on foot or by bicycle. The project will be coordinated with the Somerville Community Path project such that development of Phase 1 and future phases of the path will not be precluded, if at all possible, by the Green Line extension. Pedestrian connections and bicycle facilities will be considered in the development of station plans.

**III. Consistency** -- Describe measures that the proponent will take to comply with municipal, regional, state, and federal plans and policies related to traffic, transit, pedestrian and bicycle transportation facilities and services:

The three communities in the Green Line Extension study area – Somerville, Medford, and Cambridge – have enacted transportation plans that are intended to reduce reliance on single-occupant automobiles and increase transit use. These plans include the transportation elements of municipal comprehensive plans as well as more specific plans such as the Union Square Transportation Plan developed by the City of Somerville; the Eastern Cambridge Planning Study developed by the City of Cambridge; and the Climate Action Plan developed by the City of Medford. The latter plan specifically encouraged transit use and automobile trip reduction as a way of reducing greenhouse gas emissions associated with transportation in the City of Medford.

The current Regional Transportation Plan being developed by the Boston Region Metropolitan Planning Organization encourages transportation investments that improve mobility by providing transportation options; integrate and connect components of the transportation system, across and between modes; and promote the integration of transportation and land use policies.

The proposed Green Line Extension project is consistent with and highly supportive of plans at all levels relating to transportation, traffic, mobility, integration of modes, and integration of transportation and land use policies. The proposed project would result in a substantial reduction of automobile trips and an increase in transit ridership, and would improve mobility and connectivity between modes. The planning process for the Green Line Extension project has encouraged local involvement and coordination with municipal and regional transportation and land use policies.

Consistency with the Transportation Improvement Program (TIP), the State Implementation Plan (SIP), and other state plans regarding transportation facilities is discussed in the following section on Roadways and other Transportation Facilities.

## **ROADWAYS AND OTHER TRANSPORTATION FACILITIES SECTION**

### **I. Thresholds**

- A. Will the project meet or exceed any review thresholds related to **roadways or other transportation facilities** (see 301 CMR 11.03(6))? X Yes \_\_\_ No; if yes, specify, in quantitative terms:

A Mandatory EIR is required for this project pursuant to 11.03 (6) (a) (5). This project requires the construction of a new passenger rail line along existing rail right-of-way. The right-of-way will be shared with the existing Lowell and Fitchburg commuter rail lines. This includes approximately 3.8 miles along the Lowell Commuter Rail line and 0.6 miles along the Fitchburg Commuter Rail line.

- B. Does the project require any state permits related to **roadways or other transportation facilities**? X Yes \_\_\_ No; if yes, specify which permit:

MassHighway Access permit and Department of Conservation and Recreation (DCR) Access and Construction permit

- C. If you answered "No" to both questions A and B, proceed to the **Energy Section**. If you answered "Yes" to either question A or question B, fill out the remainder of the Roadways Section below.

### **II. Transportation Facility Impacts**

- A. Describe existing and proposed transportation facilities at the project site:

	Existing	Change	Total
Length (in linear feet) of new or widened roadway	<u>0</u>	<u>0</u>	<u>0</u>
Width (in feet) of new or widened roadway		<u>0</u>	

Other transportation facilities:

The project will make use of 4.4 miles of active railroad right-of-way. The right-of-way includes two to four tracks currently used by commuter rail and freight traffic. The project will result in the removal or relocation of freight rail trackage and/or elimination of freight trackage rights owned by others. Negotiations with the owners, Guilford Transportation Industries and CSX Corporation, will be necessary to resolve these issues.

The double-track Lowell Line will need to be relocated within the right-of-way to make room for two Green Line tracks between Walnut St. and Mystic Valley Parkway. The third track, which is used for freight, will need to be eliminated between Cedar St. and Washington St.

Access between the Lowell Line and freight facilities in Yard 8 will be impacted. Access would be maintained either by providing a freight track diverging from the southbound Lowell Line track just south of Washington St. through the Yard 8 Green Line storage area, or by providing a freight track diverging from the northbound Lowell Line track at Washington St. through the Inner Belt area.

The freight track along the Fitchburg Line connecting from Yard 8 to the Grand Junction and the tail track extending to Union Square will need to be eliminated. An alternative connection from the Grand Junction to Yard 8 will be required.

- B. Will the project involve any

- |  |                      |
|--|----------------------|
| 1. Alteration of bank or terrain (in linear feet)? | <u>Up to 23,400*</u> |
| 2. Cutting of living public shade trees (number)?  | <u>No</u>            |
| 3. Elimination of stone wall (in linear feet)?     | <u>No</u>            |

\* The project will involve modifications to railroad embankments and open cuts to widen them within the existing right-of-way to accommodate four tracks. This will involve extensive replacement and/or construction of retaining walls near the outer limits of the right-of-way. Additional survey and track design work will be necessary to determine the extent of such modifications.

**III. Consistency --** Describe the project's consistency with other federal, state, regional, and local plans and policies related to traffic, transit, pedestrian and bicycle transportation facilities and services, including consistency with the applicable regional transportation plan and the Transportation Improvements Plan (TIP), the State Bicycle Plan, and the State Pedestrian Plan:

The Commonwealth of Massachusetts, the Boston Region Metropolitan Planning Organization, and the three communities in the Green Line Extension corridor have developed a number of planning and policy documents in recent years regarding transportation facilities, including roadways, transit, pedestrian and bicycle facilities and services. The following is a list of local, regional and state transportation planning efforts regarding transportation facilities that are relevant to the Green Line Extension project:

- Transportation Improvement Program and Air Quality Conformity Determination Fiscal Years 2007-2010, Boston Region Metropolitan Planning Organization, August 2006
- Massachusetts State Implementation Plan for Carbon Monoxide, Massachusetts State Implementation Plan for Nitrogen Oxide, and Massachusetts State Implementation Plan for Ozone, Massachusetts Department of Environmental Protection
- Regional Transportation Plan 2004-2025 of the Boston MPO, Boston Region Metropolitan Planning Organization, September 2003
- Program for Mass Transportation, Massachusetts Bay Transportation Authority, January 2004
- Service Delivery Policy, Massachusetts Bay Transportation Authority, September 1996
- Massachusetts Pedestrian Transportation Plan, Massachusetts Highway Department, 1998
- Massachusetts Statewide Bicycle Transportation Plan, Massachusetts Highway Department, 1998
- Somerville Community Path Feasibility Study, Rizzo Associates/ICON Architecture, 2001
- Assembly Square Orange Line Study, City of Somerville, ongoing
- Lechmere Station Relocation Environmental Assessment (EA), ongoing

The proposed Green Line Extension project is consistent with the State Implementation Plan and highly supportive of local, regional, state and federal policies related to transportation facilities including transit, pedestrian and bicycle facilities and services. The proposed project would improve corridor mobility, boost transit ridership, improve regional air quality, ensure equitable distribution of transit services, and support opportunities for smart growth initiatives and sustainable development. The Green Line Extension project will also support walking and cycling within the study corridor through coordination with other efforts such as the development of the Somerville Community Path and the North Point Development project which includes a number of pedestrian and bicycle enhancements.

In addition to the above municipal and regional transportation plans, another initiative relevant to the Green Line Extension project is the Urban Ring. This project would provide circumferential transit improvements in a corridor including parts of Boston, Chelsea, Everett, Medford, Somerville, Cambridge and Brookline. Relevant planning documents include the Major Investment Study of Circumferential Transportation Improvements in the Urban Ring Corridor – MIS Final Report, 2001, Circumferential Transportation Improvements in the Urban Ring Corridor – Expanded Environmental Notification Form (EENF), 2001; the Circumferential Transportation Improvements in the Urban Ring Corridor – Phase Two Draft Environmental Impact Report/Statement (DEIR/S) Scoping Summary Report, 2001; and the Circumferential Transportation Improvements in the Urban Ring Corridor – Urban Ring Phase 2 Draft Environmental Impact Report (DEIR), 2004, by the Massachusetts Bay Transportation Authority. The Circumferential Transportation Improvements in the Urban Ring Corridor – Urban Ring Phase 2 Revised Draft Environmental Impact Report and Draft Environmental

Impact Statement (RDEIR/DEIS) is ongoing. The proposed Green Line Extension project goals are consistent with and supportive of the goals of the Urban Ring project, and the Green Line Extension project will be designed in such a way as to coordinate with the Urban Ring project.

## **ENERGY SECTION**

### **I. Thresholds / Permits**

- A. Will the project meet or exceed any review thresholds related to energy (see 301 CMR 11.03(7))? \_\_\_\_ Yes   X   No; if yes, specify, in quantitative terms:
- B. Does the project require any state permits related to energy? \_\_\_\_ Yes   X   No; if yes, specify which permit:
- C. If you answered "No" to both questions A and B, proceed to the **Air Quality Section**. If you answered "Yes" to either question A or question B, fill out the remainder of the Energy Section below.

### **II. Impacts and Permits**

- A. Describe existing and proposed energy generation and transmission facilities at the project site:

	<u>Existing</u>	<u>Change</u>	<u>Total</u>
Capacity of electric generating facility (megawatts)	_____	_____	_____
Length of fuel line (in miles)	_____	_____	_____
Length of transmission lines (in miles)	_____	_____	_____
Capacity of transmission lines (in kilovolts)	_____	_____	_____

- B. If the project involves construction or expansion of an electric generating facility, what are
1. the facility's current and proposed fuel source(s)?
  2. the facility's current and proposed cooling source(s)?
- C. If the project involves construction of an electrical transmission line, will it be located on a new, unused, or abandoned right of way? \_\_\_\_ Yes \_\_\_\_ No; if yes, please describe:
- D. Describe the project's other impacts on energy facilities and services:

**III. Consistency** -- Describe the project's consistency with state, municipal, regional, and federal plans and policies for enhancing energy facilities and services:

## **AIR QUALITY SECTION**

### **I. Thresholds**

- A. Will the project meet or exceed any review thresholds related to **air quality** (see 301 CMR 11.03(8))? \_\_\_\_ Yes **X** No; if yes, specify, in quantitative terms:
- B. Does the project require any state permits related to **air quality**? Yes **X** No; if yes, specify which permit:
- C. If you answered "No" to both questions A and B, proceed to the **Solid and Hazardous Waste** Section. If you answered "Yes" to either question A or question B, fill out the remainder of the Air Quality Section below.

### **II. Impacts and Permits**

- A. Does the project involve construction or modification of a major stationary source (see 310 CMR 7.00, Appendix A)? \_\_\_\_ Yes \_\_\_\_ No; if yes, describe existing and proposed emissions (in tons per day) of:

	<u>Existing</u>	<u>Change</u>	<u>Total</u>
Particulate matter	_____	_____	_____
Carbon monoxide	_____	_____	_____
Sulfur dioxide	_____	_____	_____
Volatile organic compounds	_____	_____	_____
Oxides of nitrogen	_____	_____	_____
Lead	_____	_____	_____
Any hazardous air pollutant	_____	_____	_____
Carbon dioxide	_____	_____	_____

- B. Describe the project's other impacts on air resources and air quality, including noise impacts:

The proposed Green Line Extension project would result in a net improvement to air quality compared to the No-Build case due to the diversion of automobile trips to transit. Estimates of air quality benefits due to the project were included in the Beyond Lechmere Northwest Corridor MIS/AA (see Attachment 5.1). Air quality impacts during construction will be determined during subsequent stages of the environmental review process.

Construction and operational noise impacts of the proposed project will be determined during subsequent stages of the environmental review process.

### **III. Consistency**

- A. Describe the project's consistency with the State Implementation Plan:

The Commonwealth's existing State Implementation Plan (SIP) includes a Green Line extension to Ball Square that would serve the Cities of Somerville and Medford. This EENF proposes a project, which represents an evolution from the current SIP requirement. It still provides service to the corridor that is called for in the existing SIP; however, it will expand service to Union Square and an area north of Ball Square. This project has evolved into a larger extension to respond to the strong public support that has been demonstrated over the last several years.

- B. Describe measures that the proponent will take to comply with other federal, state, regional, and local plans and policies related to air resources and air quality:

## **SOLID AND HAZARDOUS WASTE SECTION**

### **I. Thresholds / Permits**

- A. Will the project meet or exceed any review thresholds related to **solid or hazardous waste** (see 301 CMR 11.03(9))? ☐ Yes ☒ No; if yes, specify, in quantitative terms:
- B. Does the project require any state permits related to **solid and hazardous waste**? ☐ Yes ☒ No; if yes, specify which permit:
- C. If you answered "No" to both questions A and B, proceed to the **Historical and Archaeological Resources Section**. If you answered "Yes" to either question A or question B, fill out the remainder of the Solid and Hazardous Waste Section below.

### **II. Impacts and Permits**

- A. Is there any current or proposed facility at the project site for the storage, treatment, processing, combustion or disposal of solid waste? ☐ Yes ☐ No; if yes, what is the volume (in tons per day) of the capacity:

	<u>Existing</u>	<u>Change</u>	<u>Total</u>
Storage	_____	_____	_____
Treatment, processing	_____	_____	_____
Combustion	_____	_____	_____
Disposal	_____	_____	_____

- B. Is there any current or proposed facility at the project site for the storage, recycling, treatment or disposal of hazardous waste? ☐ Yes ☐ No; if yes, what is the volume (in tons or gallons per day) of the capacity:

	<u>Existing</u>	<u>Change</u>	<u>Total</u>
Storage	_____	_____	_____
Recycling	_____	_____	_____
Treatment	_____	_____	_____
Disposal	_____	_____	_____

- C. If the project will generate solid waste (for example, during demolition or construction), describe alternatives considered for re-use, recycling, and disposal:
- D. If the project involves demolition, do any buildings to be demolished contain asbestos?  
☐ Yes ☐ No
- E. Describe the project's other solid and hazardous waste impacts (including indirect impacts):

**III. Consistency**--Describe measures that the proponent will take to comply with the State Solid Waste Master Plan:

## **HISTORICAL AND ARCHAEOLOGICAL RESOURCES SECTION**

### **I. Thresholds / Impacts**

- A. Is any part of the project site a historic structure, or a structure within a historic district, in either case listed in the State Register of Historic Places or the Inventory of Historic and Archaeological Assets of the Commonwealth?   X   Yes      No; if yes, does the project involve the demolition of all or any exterior part of such historic structure?      Yes   X   No; if yes, please describe:

A review of MassGIS files revealed that the Susan Russell House at 58 Sycamore St. in Somerville is listed on the National Register of Historic Places. The architectural style is Greek Revival and the period of significance is from 1825- 1849. The Susan Russell House is adjacent to the rail right of way and the commuter rail tracks will be moved closer to the house but within the rail right of way. No alterations to this structure are anticipated.

- B. Is any part of the project site an archaeological site listed in the State Register of Historic Places or the Inventory of Historic and Archaeological Assets of the Commonwealth?      Yes      No; if yes, does the project involve the destruction of all or any part of such archaeological site?   X   No; if yes, please describe:
- C. If you answered "No" to all parts of both questions A and B, proceed to the Attachments and Certifications Sections. If you answered "Yes" to any part of either question A or question B, fill out the remainder of the Historical and Archaeological Resources Section below.
- D. Have you consulted with the Massachusetts Historical Commission?      Yes   X   No; if yes, attach correspondence
- E. Describe and assess the project's other impacts, direct and indirect, on listed or inventoried historical and archaeological resources:

None

**II. Consistency** -- Describe measures that the proponent will take to comply with federal, state, regional, and local plans and policies related to preserving historical and archaeological resources:

EOT will provide field survey, research, analysis, and documentation services in order to comply with the appropriate federal and state regulations concerning the protection of historic and/or archeological resources. Applicable laws and regulations may include: the National Historic Preservation Act of 1966 (PL 89-665, 16 USC 470), as amended by Ch. 254, Acts of 1988.

## **ATTACHMENTS:**

1. Plan, at an appropriate scale, of existing conditions of the project site and its immediate context, showing all known structures, roadways and parking lots, rail rights-of-way, wetlands and water bodies, wooded areas, farmland, steep slopes, public open spaces, and major utilities.
2. Plan of proposed conditions upon completion of project (if construction of the project is proposed to be phased, there should be a site plan showing conditions upon the completion of each phase).
3. Original U.S.G.S. map or good quality color copy (8-½ x 11 inches or larger) indicating the project location and boundaries
- 4 List of all agencies and persons to whom the proponent circulated the EENF, in accordance with 301 CMR 11.16(2).
- 5.1 Summary of the Beyond Lechmere Northwest Corridor Major Investment Study/Alternatives Analysis
- 5.2 Supplemental Information Developed Since Completion of the MIS/AA

**CERTIFICATIONS:**

The Public Notice of Environmental Review has been/will be published in the following newspapers in accordance with 301 CMR 11.15(1):

(Name)	(Date)
<u>Boston Herald</u>	<u>On or before October 10, 2006</u>
<u>Boston Globe</u>	<u>On or before October 10, 2006</u>
<u>The Metro</u>	<u>On or before October 10, 2006</u>
<u>Medford Daily Mercury</u>	<u>On or before October 10, 2006</u>
<u>Cambridge Chronicle</u>	<u>On or before October 10, 2006</u>
<u>Cambridge Tab</u>	<u>On or before October 10, 2006</u>
<u>Somerville Journal</u>	<u>On or before October 10, 2006</u>
<u>Somerville News</u>	<u>On or before October 10, 2006</u>
<u>La Semana</u>	<u>On or before October 10, 2006</u>
<u>El Mundo</u>	<u>On or before October 10, 2006</u>

2. This form has been circulated to Agencies and Persons in accordance with 301 CMR 11.16(2).

Date	Signature of Responsible Officer Or Proponent
	Name : <b>Kenneth S. Miller</b> Deputy Secretary, Executive Office of Transportation Executive Director, Office of Transportation Planning
	Firm/Agency: Executive Office of Transportation
	Street: Ten Park Plaza, Room 4150
	Municipality/State/Zip: Boston, MA 02116
	Phone: 617-973-8064

Date	Signature of person preparing EENF (if different from above)
	Name: James A. Wensley
	Firm/Agency: TranSystems Corporation
	Street: One Cabot Road
	Municipality/State/Zip: Medford, MA 02155
	Phone: 781-396-7775

# **Attachment 1**

## **Existing Conditions**

- Sheet 1: Lowell Line from Mystic River to near Winthrop St., Medford**
- Sheet 2: Lowell Line from near Winthrop St. to College Avenue, Medford**
- Sheet 3: Lowell Line from College Avenue, Medford to Ball Square, Somerville**
- Sheet 4: Lowell Line from Ball Square to Lowell St., Somerville**
- Sheet 5; Lowell Line from Lowell St. to Medford St., Somerville**
- Sheet 6: Lowell Line from Medford St. to Washington St. Somerville**
- Sheet 7: Lowell Line/Yard 8 from Washington St. to Fitchburg Line and  
Fitchburg Line from Yard 8 to Medford St., Somerville**
- Sheet 8: Lechmere Station Area, Somerville and Cambridge**
- Sheet 9: Fitchburg Line from Medford St. to Prospect St.**



MATCH LINE - SEE SHEET 2 OF 9

GREEN LINE EXTENSION  
EXISTING CONDITIONS

PREPARED FOR



SCALE: 1" = 200'

PREPARED BY



SHEET 1 OF 9

MATCH LINE - SEE SHEET 1 OF 9

MATCH LINE - SEE SHEET 3 OF 9

EMERY ST

WINTHROP ST

LOWELL COMMUTER RAIL

BOSTON AVE

CAPEN ST

COLLEGE AVE

Tufts  
University  
Medford

Tufts  
University  
Medford

GREEN LINE EXTENSION  
EXISTING CONDITIONS

PREPARED FOR

**EOT**

SCALE: 1" = 200'

PREPARED BY

**Tran** Systems

SHEET 2 OF 9

Tufts  
University  
Medford  
Alumni Fields

LOWELL COMMUTER RAIL

HARVARD ST

BOSTON AVE

WARNER ST

COLLEGE AVE

BROADWAY

GREEN LINE EXTENSION  
EXISTING CONDITIONS

PREPARED FOR



SCALE: 1" = 200'

PREPARED BY



SHEET 3 OF 9



GREEN LINE EXTENSION  
EXISTING CONDITIONS

PREPARED FOR



SCALE: 1" = 200'

PREPARED BY



SHEET 4 OF 9



GREEN LINE EXTENSION  
EXISTING CONDITIONS

PREPARED FOR



SCALE: 1" = 200'

PREPARED BY



SHEET 5 OF 9



MATCH LINE - SEE SHEET 5 OF 9

MATCH LINE - SEE SHEET 7 OF 9

GREEN LINE EXTENSION  
EXISTING CONDITIONS

PREPARED FOR



SCALE: 1" = 200'

PREPARED BY



SHEET 6 OF 9



GREEN LINE EXTENSION  
EXISTING CONDITIONS

PREPARED FOR



SCALE: 1" = 200'

PREPARED BY



SHEET 7 OF 9

MATCH LINE - SEE SHEET 7 OF 9



GREEN LINE EXTENSION  
EXISTING CONDITIONS

PREPARED FOR



SCALE: 1" = 200'

PREPARED BY



SHEET 8 OF 9



GREEN LINE EXTENSION  
EXISTING CONDITIONS

PREPARED FOR



SCALE: 1" = 200'

PREPARED BY



SHEET 9 OF 9

## **Attachment 2**

### **Project Plan and Description**

## **Project Plan and Description**

The Green Line Extension Project is an initiative of the Executive Office of Transportation (EOT) and the Massachusetts Bay Transportation Authority (MBTA) to implement enhancements to transit services that will improve mobility and regional access for residents in the northwest corridor communities of Somerville, Medford, and Cambridge. The preferred alternative is shown in Figure 1 and consists of the extension of the MBTA's Green Line along two branches. One branch would begin at the end of the proposed tail tracks of the relocated Lechmere Station and extend along the west side of the Lowell commuter rail line right-of-way ending in Medford Hillside. The second branch would diverge off the Lechmere tail tracks where they cross the Fitchburg Line and extend along the north side of the Fitchburg commuter rail line right-of-way ending in the vicinity of Union Square, Somerville.

### **Rail Alignment and Right-of-Way**

On the Medford Hillside branch, the commuter rail tracks would be relocated to the east side of the right-of-way between Walnut St., Somerville, and Mystic Valley Parkway to make room for the Green Line tracks. The Green Line would consist of two tracks on the west side of the right-of-way. A minimum right-of-way width of 61' is required at the most constrained locations (see Figure S-7 in Attachment 5.1), such as under bridges. This width increases to 81'6" (see Figure S-8 in Attachment 5.1) at or adjacent to Green Line station platforms. At other than the most constrained locations, MBTA standards indicate that a right-of-way width of 81' is desired to ensure efficient maintenance of the track. This would increase to 101'6" at stations.

In the project area, most of the Lowell Line, right-of-way is at least 80' wide. However, some strip takings of land may be required in areas where the right-of-way narrows, or where stations are required. On the east (northbound commuter rail) side of the right-of-way, strip takings due to reductions in the existing right-of-way width may be necessary in at least three locations:

- between Medford St. and School St.
- between Central St. and Lowell St.
- between Broadway and Winchester Place

On the west (Green Line) side of the Lowell Line right-of-way, strip takings are likely along the tail tracks and in the vicinity of Green Line stations at:

- Winthrop St.
- College Ave./Medford Hillside
- Broadway/Ball Square
- Lowell St.
- Medford St./Gilman Square

On the Fitchburg Line between the Lechmere tail track and Union Square, no changes would be made to commuter rail tracks. The Green Line would consist of two tracks on the north side of the commuter rail right-of-way. Some strip takings may be necessary on the north side between McGrath Highway and Prospect Street. Land takings are likely to be necessary for the station and tail tracks in the vicinity of Union Square.

### **Ancillary Support Facilities**

Removal of embankments and the construction of retaining walls will be necessary at numerous locations throughout the project. Storm water drainage systems will need to be designed according to DEP regulations considering best management practices to handle runoff. Fencing will need to be constructed along the entire right-of-way. A concrete intrusion barrier will be constructed between the Green Line and commuter rail tracks throughout the project. The Green Line will be powered using overhead catenary requiring supporting structures throughout the right-of-way. Electrical systems, including substations, will be required along the corridor. Signals and communications systems will also be necessary.

### **Stations**

Stations are currently proposed in the vicinity of the following locations:

- College Avenue/Medford Hillside (Medford Hillside Branch)
- Broadway/Ball Square, Somerville (Medford Hillside Branch)
- Lowell Street, Somerville (Medford Hillside Branch)
- Medford Street/Gilman Square, Somerville (Medford Hillside Branch)
- Washington Street, Somerville (Medford Hillside Branch)
- Union Square, Somerville (Union Square Branch)

In addition to these stations, EOT will also examine the feasibility of extending the line beyond Medford Hillside to a station to be located in the vicinity of Winthrop Street in Medford.

Exact station locations have not been identified. Therefore, the amount and location of any additional right-of-way that may be required at these location has not been determined. Stations would consist of 225' long by 24' wide center platforms. Due to the center platform configuration, additional right-of-way would be required both before and after stations on the west side of the Lowell Line right-of-way to allow the southbound Green Line track to pass around the platforms. The area adjacent to the right-of-way that could be impacted by each station would be at least 600, and possibly as much as 800, linear feet. The northbound track will parallel the commuter rail intrusion barrier and commuter rail tracks. Stations will be unstaffed with fares paid on board, with provisions for Automatic Fare Collection (AFC) equipment in the stations. In most cases, access to the stations will be provided from existing nearby overhead bridges via a stairway and accessible switchback ramp. At Washington St. station, the tracks will pass over the street and there is no nearby bridge over the tracks. This station will require either a stairway and ramp up to the platform from under the railroad bridge or a pedestrian overpass from the adjacent neighborhood.

None of the stations would have parking facilities. However, on-street locations for passenger drop-off and pick-up, as well as bus stops, will need to be identified as design progresses.

### **Bridges**

There are 16 highway bridges over the rail right-of-way and three railroad bridges over city streets. The following highway bridges are known to have inadequate horizontal clearance to accommodate four rail tracks and will have to be replaced as part of the project:

- Medford St. (Somerville)
- Lowell St. (Somerville)
- Broadway (Somerville)
- Winthrop St. (Medford)

- Prospect St. (Somerville)
- Webster Ave. (Somerville) (currently under design)

The remaining highway bridges appear to have adequate clearance but should be evaluated as design of the project progresses to ensure that they are consistent with the necessary track alignment. Those with adequate clearance but near station locations may require replacement to accommodate station platforms and/or approaches. The bridges that must be evaluated include:

- College Ave. (Medford) – near College Ave. Station
- Central St. (Somerville)
- Sycamore St. (Somerville)
- School St. (Somerville) – near Gilman Square station
- Walnut St. (Somerville) – near Gilman Square station

Finally, bridges that appear to have adequate clearance and would not need replacement, but that should be evaluated in more detail, include:

- North St. (Medford)
- Cedar St. (Somerville)
- McGrath Highway over Lowell Line (Somerville)
- Cross Street (Somerville)
- McGrath Highway over Fitchburg Line (Somerville)

Of the railroad bridges, the bridge over Washington St. can accommodate six tracks, but the condition of this bridge will need to be evaluated to determine if replacement is necessary. The bridge over Harvard St. is two tracks wide but has abutments that can accommodate a four track structure. Two tracks will need to be added to the bridge. The bridge over Medford St. is three tracks wide but has abutments that can accommodate a five track structure. One track will need to be added to the bridge.

Each bridge replacement could potentially involve land takings to allow for the additional length of the span. Bridge replacements may also require modifications to approaches and adjacent intersections which might affect access to adjacent properties and might trigger requirements to improve accessibility at those intersections.

### **Storage and Maintenance Facility**

This project will expand the Green Line vehicle storage facility to be constructed as part of the Lechmere Station relocation to accommodate additional Green Line vehicles. The project will also include the construction of a Green Line maintenance building adjacent to the storage facility. The storage and maintenance facility is proposed to be located at Yard 8 in Somerville entirely on land owned by the MBTA and by Guilford Transportation Industries. Yard 8 is located parallel to the O'Brien Highway on the northeast side, extending south from the Washington Street bridge.

### **Green Line Operations**

The operating parameters of the proposed Green Line extension are discussed in Attachment 5.1 (the MIS/AA). Service will be operated on both branches that is sufficient to serve the projected ridership demand on the line. The expanded storage area and new maintenance facility will provide more flexibility and greater efficiency in Green Line operations. The extension of the Green Line may have other impacts

on Green Line operations, including impacts on central subway capacity, signal systems, and power systems.

### **Freight Facilities and Operations**

The project will result in the removal or relocation of freight rail trackage and/or elimination of freight trackage rights owned by others. There is a third track, known as the 4<sup>th</sup> Iron, on the west side of the Lowell Line right-of-way beginning between Cedar and Lowell Streets and continuing south along the commuter rail line to Washington Street and then through Yard 8 past the Boston Engine Terminal. There is a crossover to access this track from the southbound commuter rail track near McGrath Highway. From McGrath Highway through Yard 8, this track is used by Guilford Transportation Industries. On the outer segment between Cedar St. and McGrath Highway the track is unused and overgrown but Guilford retains operating rights. As part of this project, freight access from the Lowell Line to Yard 8 will be maintained. This will be done either by providing a freight track diverging from the southbound Lowell Line track just south of Washington St. through the Green Line storage area, or by providing a freight track diverging from the northbound Lowell Line track at the same point through the Inner Belt area.

On the Union Square branch, there is a third track for freight on the north side of the commuter rail tracks between Yard 8 and Union Square. This track connects to the Grand Junction under the McGrath Highway bridge and ends at Union Square without joining the main line. This track will need to be eliminated if the taking of structures for the Green Line right-of-way is to be avoided. The rail connection between the Grand Junction and Yard 8 will need to be maintained, probably by using a segment of the commuter rail tracks.

The project will need to ensure that regular and special freight operations are maintained and that the secondary impacts of relocating freight operations are identified. The extent of project impacts on the operations of others may affect environments that are removed from the immediate project area. (For example, when the freight corridor between Somerville and Alewife was eliminated, vertical clearance improvements were required on bridges along the New Hampshire Main Line far from the project area.)

### **Utilities**

Several of the bridges in the corridor carry electrical, water, and sewer utilities. These utilities would need to be modified as part of any bridge replacements. There are electrical substations adjacent to the right-of-way at station locations at Gilman Square (behind Somerville High School) and at Union Square (between Prospect St. and Webster Ave.). Modifications or relocations of these facilities could be required.

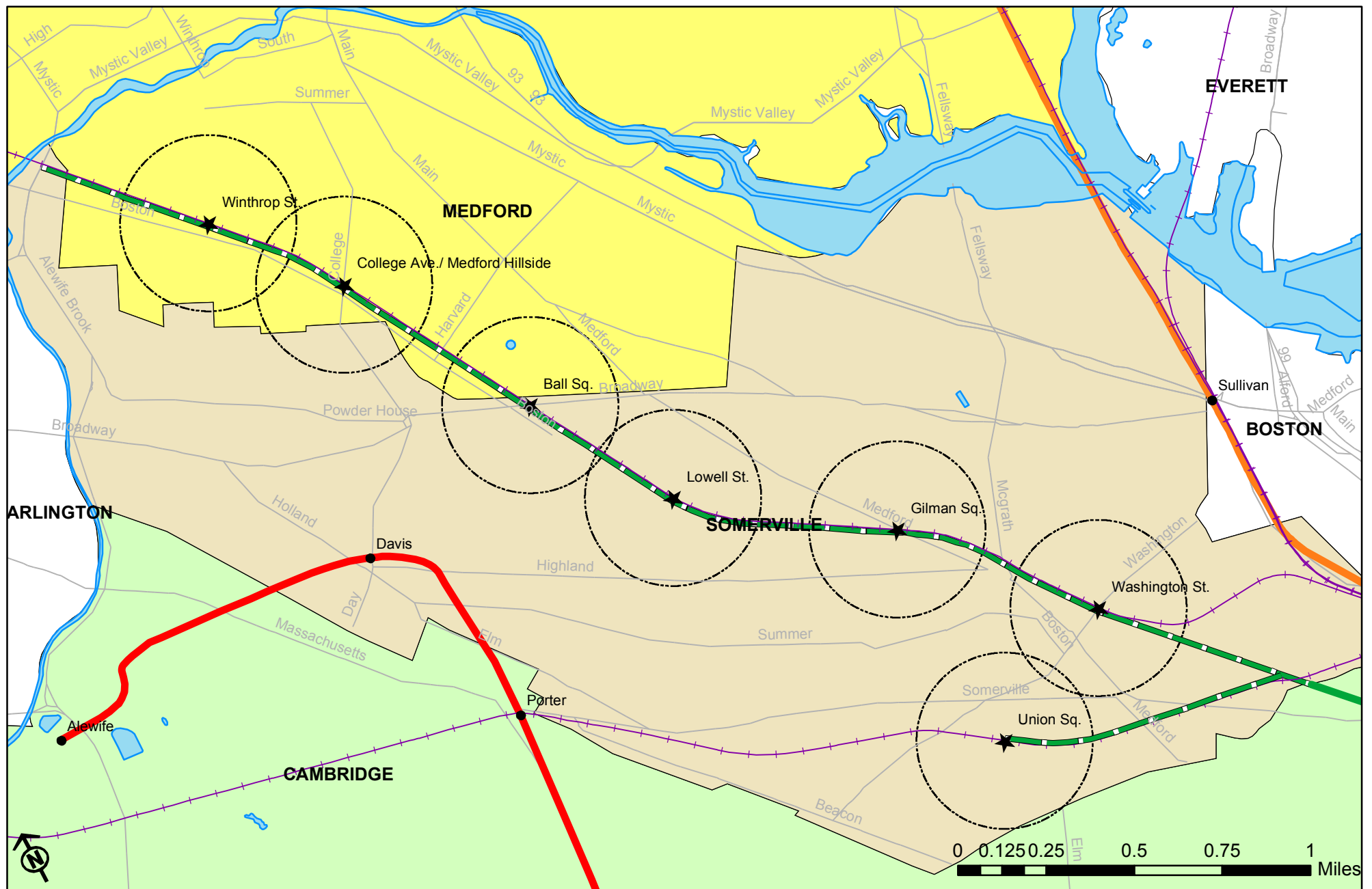
### **Coordination with Other Transportation Projects in Planning or Under Design**

The project is consistent with numerous transportation and land use plans as outlined in the appropriate sections of the EENF. As the project is developed, there will be a need for close coordination with several ongoing transportation projects. These include:

- Lechmere Station Relocation (EA currently underway)
- Urban Ring (RDEIR/DEIS currently underway)
- Somerville Community Path (design currently underway)

### **Construction Impacts**

Throughout the project area, the need to construct retaining walls, replace bridge abutments, relocate utilities, construct ancillary facilities, and make modifications to other facilities will result in temporary construction impacts that extend beyond the project area. These impacts may include temporary and permanent construction easements on adjacent properties.



### MBTA Subway

GREEN

ORANGE

RED

EXTEND

MBTA Commuter Rail



MBTA Stations



Proposed MBTA Stations



1/4 Mile Proposed MBTA Station Buffer



Mystic River and Related Waters



Major Roadways

### GREEN LINE EXTENSION FIGURE 1

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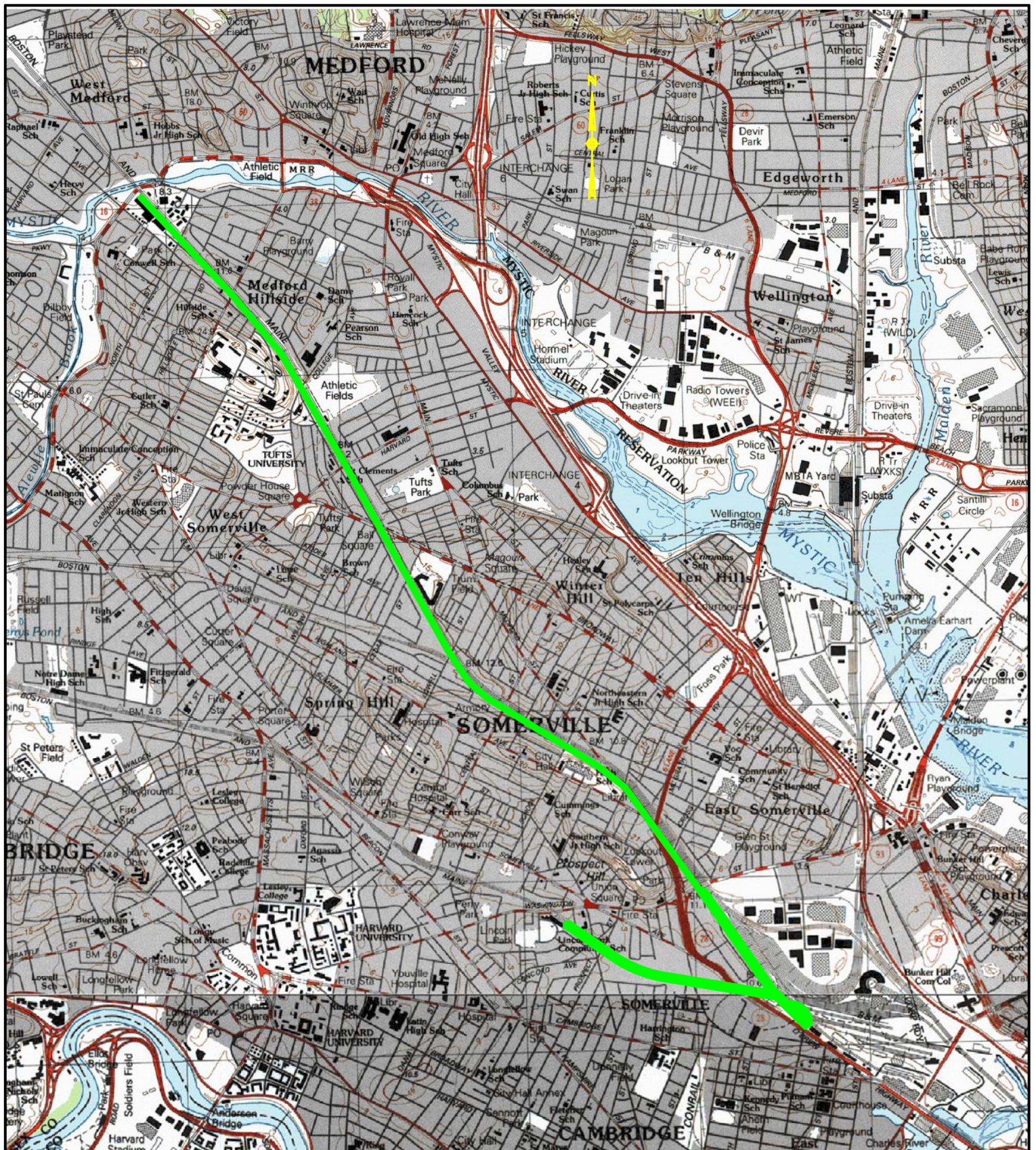
PREPARED BY



Data Source: MassGIS

## **Attachment 3**

### **Project Location**



## GREEN LINE EXTENSION LOCATION MAP

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SCALE: 1" = 2500'

## **Attachment 4**

### **List of All Agencies and Persons Receiving the EENF**

U.S. Department of Transportation  
Federal Transit Administration  
Kendall Square  
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Attn: Donna Laidley

U.S. Department of Transportation  
Federal Highway Administration  
Transportation Systems Center  
Kendall Square  
55 Broadway, Suite 910  
Cambridge, MA 02142-1093  
Attn: Thomas Janikula

Executive Office of Transportation  
10 Park Plaza  
Room 3170  
Boston, MA 02116  
Attn: John Cogliano, Secretary

Executive Office of Environmental Affairs  
MEPA Office  
100 Cambridge Street, Suite 900  
Boston, MA 02114  
Attn: Robert Golledge, Secretary

Department of Environmental Protection  
Commissioner's Office  
One Winter Street  
Boston, MA 02108  
Attn: Steven G. Lipman

Massachusetts Historical Commission  
The MA Archives Building  
220 Morrissey Boulevard  
Boston, MA 02125  
Attn: Cara Metz

Massachusetts Turnpike Authority  
Central Artery/Tunnel Project  
185 Kneeland Street  
Boston, MA 02111  
Attn: Michael P. Lewis

Massachusetts Water Resources Authority  
Charlestown Navy Yard  
100 First Avenue  
Boston, MA 02129  
Attn: Marianne Connolly

Boston Region Metropolitan Planning  
Organization  
c/o Central Transportation Planning Staff  
10 Park Plaza  
Room 2150  
Boston, MA 02116  
Attn: Pam Wolfe

Metropolitan Area Planning Council  
60 Temple Place, 6<sup>th</sup> Floor  
Boston, MA 02111  
Attn: Jim Gallagher

Department of Conservation & Recreation  
251 Causeway Street  
Boston, MA 02114  
Attn: Stephen H. Burrington, Commissioner

City of Boston  
The Environmental Department  
One City Hall Square  
Room 805  
Boston, MA 02201  
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City of Somerville  
Somerville City Hall  
93 Highland Avenue  
Somerville, MA 02143  
Attn: Honorable Joseph A. Curtatone

City of Medford  
Medford City Hall  
85 George Hassett Dr.  
Medford, MA 02155  
Attn: Honorable Michael A. McGlynn

City of Cambridge  
Public Library, Central Branch  
449 Broadway  
Cambridge, MA 02139  
Attn: Susan Flannery

City of Cambridge  
Public Library, East Cambridge Branch  
48 Sixth Street  
Cambridge, MA 02139  
Attn: Reference Desk

City of Somerville  
Public Library, Central Branch  
79 Highland Avenue  
Somerville, MA 02143  
Attn: Paul DeAngelis

City of Medford  
Public Library  
111 High Street  
Medford., MA 02155

City of Cambridge  
Office of the Mayor  
City Hall  
795 Massachusetts Avenue  
Cambridge, MA 02139  
Attn: Honorable Kenneth E. Reeves

Cambridge Historical Commission  
Lombardi Building  
831 Massachusetts Ave., 2<sup>nd</sup> Floor  
Cambridge, MA 02139  
Attn: Charles Sullivan

City of Cambridge  
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238 Broadway  
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Attn: Beth Rubenstein

City of Cambridge  
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Boston, MA 02116  
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Boston City Hall  
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Honorable Paul J. Donato  
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Boston, MA 02133

Honorable Timothy J. Toomey, Jr.  
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Office of Senator Patricia Jehlen  
State House, Room 213  
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Office of Representative J. James Marzilli  
State House, Room 443  
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Office of Representative Denise Provost  
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## **Attachment 5.1**

### **Summary of the Beyond Lechmere Northwest Corridor Major Investment Study/Alternatives Analysis**

# **Summary of the Beyond Lechmere Northwest Corridor Major Investment Study/Alternatives Analysis**

## **MIS/AA Overview**

The purpose of the Massachusetts Bay Transportation Authority's (MBTA's) Beyond Lechmere Northwest Corridor Major Investment Study/Alternatives Analysis (MIS/AA) was to define the most appropriate transit investment strategy for improving mobility and regional access for residents in the northwest corridor communities of Cambridge, Somerville, and Medford. The Beyond Lechmere Northwest Corridor Study investigated cost-effective transit solutions that would increase transit accessibility, improve corridor mobility, increase transit services, and support opportunities for smart growth initiatives and sustainable development. The MIS/AA offered the opportunity to evaluate the various modes of transit services and alternative alignments that would meet the needs of the study area. It was the goal of the MIS/AA to identify conceptual routing options, operational characteristics, environmental issues, costs, and design constraints. Additionally, the MIS/AA allowed an opportunity for stakeholders to participate in an open and collaborative planning process.

The study area for the MIS/AA was generally bounded by Interstate 93 and the Orange Line to the east, the Red Line and the Fitchburg Commuter Rail Line to the west and south, and the West Medford Commuter Rail Station to the north. This area includes East Cambridge, Somerville and sections of Medford. The area consists of densely settled urban corridors with a large base of commuters and transit users. Figure S-1 shows the study area for the Beyond Lechmere Northwest Corridor Study.

An extensive community involvement process was conducted as part of the Beyond Lechmere Northwest Corridor Study. An Advisory Group was established to work with the Study Team and met regularly throughout the study period. The Advisory Group consisted of project stakeholders, including elected officials, businesses, and residents, as well as representatives from the fields of education, environment, labor, social services, and transportation. In addition, the MBTA hosted a series of community meetings in October and November 2004 to update residents on the progress of the study and to receive input on alternatives under consideration. A meeting was held in each community – Cambridge, Somerville, and Medford – and was coordinated with city officials.

## **Purpose and Need**

The purpose of the Beyond Lechmere Northwest Corridor Study was to develop the most appropriate transit strategy for improving mobility and regional access for residents in the northwest corridor communities of Somerville, Medford, and Cambridge. Traffic congestion, mode transfer, and service delays hamper access from the study area to downtown Boston, and to employment and services in the study area. The project was intended to improve corridor mobility, boost transit ridership, improve regional air quality, ensure equitable distribution of transit services, and support opportunities for smart growth initiatives and sustainable development.

The study area neighborhoods are among the densest in the Boston region. Two commuter rail lines pass through the study area, yet there is only one rail station, and that is at the outer edge of the study area. Transit service consists largely of local bus services on congested roadways and trips to nearby Boston require a transfer to the rail system. There is a need for greater mobility in the study area and better

access to jobs in Boston, but that access is constrained by the congested roadways, slow bus services and mode transfers. There is a need to reduce automobile use and increase transit ridership to improve air quality, but the capacity of the local bus network is severely limited by congestion, narrow streets and other physical constraints, and the network suffers from poor reliability and overcrowding. The roadway and bus network congestion and the impacts of through rail services negatively impact the significant number of Environmental Justice (EJ) communities in the area resulting in a need for a more equitable distribution of transit service benefits and impacts. Development in the study area is constrained by congestion and poor access. New transit infrastructure in the study area could help advance sustainable development and smart growth by focusing development around transit stations.

## **Existing Conditions**

As noted above, the study area for the Beyond Lechmere Northwest Corridor Study was bounded by Interstate 93 and the Orange Line to the east, the Red Line and the Fitchburg Commuter Rail Line to the west and south, and the West Medford Commuter Rail Station to the north. Many of these areas in East Cambridge, Somerville, and Medford are focused on neighborhoods or “squares,” where commercial activity serving surrounding residential areas is concentrated. Residents often walk to and from these commercial areas to meet their daily commerce needs.

Travel in the study area is oriented towards downtown Boston and neighboring urban centers. On the southern end of the study area, transit markets are served by the Green Line Light Rail Transit service at Lechmere Station. On the eastern and western edges of the study area, transit markets are served by rapid transit facilities (Red and Orange Lines). The Red Line also serves intermediate stations at Porter Square in Cambridge and Davis Square in Somerville. Within the study area, local buses provide connections to the Red, Orange and Green Lines. The MBTA operates fifteen bus routes that serve the study area. Fourteen of the fifteen services require passengers destined to/from Boston employment centers to transfer at least once during their trip.

Commuter rail service in the study area is provided in West Medford via the MBTA's Lowell Line, also known as the New Hampshire Main Line. There are no commuter rail stops in Somerville on the Lowell Line. Commuter rail service is provided on the western edge of the area via the MBTA's Fitchburg Line at Porter Square. Guilford Rail System (GRS) operates freight service over both the Fitchburg and Lowell Lines.

The study area for the Beyond Lechmere Northwest Corridor Study included a number of Environmental Justice populations. There are a number of different criteria for defining EJ populations at the federal, state, and local levels. These criteria include concentrations of minority residents; low-income residents; foreign-born residents; residents lacking English language proficiency; and households without an automobile. One of the goals of the study is that improvements to transit services not burden and, to the greatest extent possible, provide benefits to these EJ populations in terms of air quality, mobility, and improved regional access.

There are a number of economic development initiatives, transportation projects, and planning studies taking place in the vicinity of the study area that were considered in the Beyond Lechmere Northwest Corridor Study. These include the North Point project in Cambridge, Somerville and Boston; the relocation of Lechmere Station; the Somerville Community Path; the Union Square Master Plan; the Urban Ring

project; the Inner Belt Planning Study; the McGrath Highway Corridor Study; and the Tufts University Master Plan.

### **Identification and Evaluation of Alternatives**

In the Beyond Lechmere Northwest Corridor Study, a two-tiered process was used to identify and screen the proposed alternatives. The process began with an initial pool of alternatives identified from a review of existing conditions, plans and previous studies and designed to respond to the Purpose and Need for the project. Nine Build alternatives, as well as a Transportation Systems Management (TSM) Alternative, were identified in the Tier 1 process. The nine alternatives encompassed several different single transit modes and some included multiple modes. Six of the alternatives included Green Line extensions, four included Bus Rapid Transit (BRT), and three included commuter rail enhancements. Once the alternatives were selected, the Tier 1 screening was performed to evaluate the ability of the alternatives to meet broad transportation objectives established for the study, and to narrow the range of alternatives to a smaller set to be evaluated further in Tier 2. The summary of the Tier 1 screening is shown in Table S-1.

Five Build alternatives, a TSM Alternative, and a No-Build Alternative were evaluated in Tier 2. The Build alternatives included the following:

- Alternative 1A: Green Line Extension to West Medford
- Alternative 1C: Green Line Extension to West Medford and Union Square
- Alternative 2B: BRT to West Medford, Green Line to Union Square
- Alternative 3A: Commuter Rail Shuttle Service to West Medford
- Alternative 3B: Commuter Rail Shuttle Service to Anderson Regional Transportation Center (RTC)

Figures S-2 through S-6 show the conceptual alignments of these alternatives. Figures S-7 through S-12 show typical cross-sections along the right-of-way and at station locations.

In the Tier 2 alternatives identification and evaluation phase, the initial alternatives were further developed to provide a basis for more detailed evaluation and comparison. Conceptual operating plans, capital improvement requirements, and operating & maintenance (O&M) costs were developed for each alternative. In addition, the Tier 2 alternatives were modeled using the Boston Region MPO's eastern Massachusetts transportation model, providing quantitative results on the performance of each alternative in terms of ridership, highway/vehicular travel, air quality, environmental justice, and user benefit. The quantitative indicators developed in the Tier 2 screening process allowed an analysis to be conducted of the merits of the Tier 2 alternatives and their ability to meet the Purpose and Need of the project.

Table S-2 presents the quantitative indicators for the Tier 2 alternatives. Except where noted, the results in the table show the difference between each alternative and the No-Build Alternative. These results demonstrate how well each alternative meets the Purpose and Need for the proposed project.

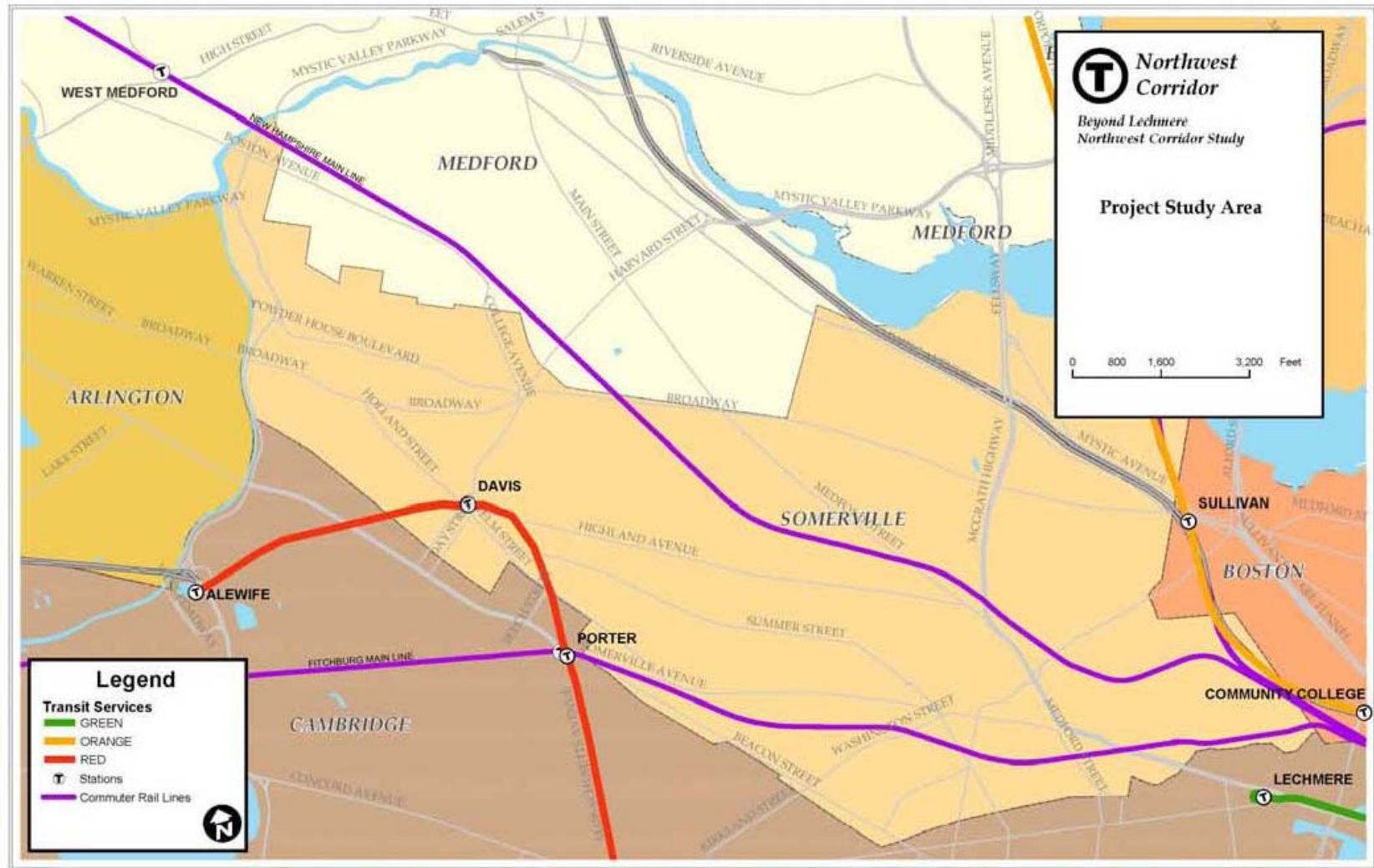
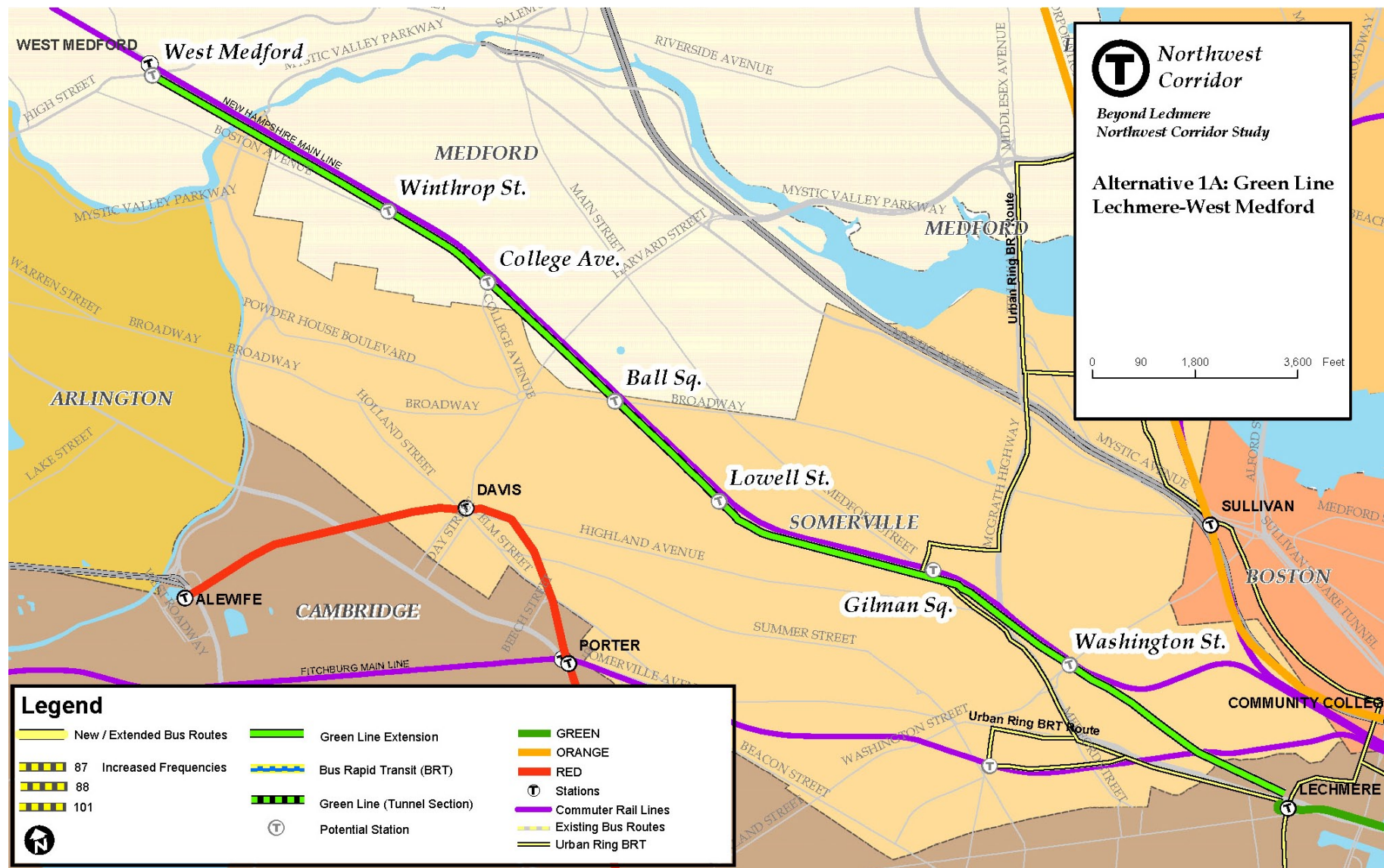


Figure S-1  
Project Study Area

**Table S-1 – Summary of Tier 1 Screening**

		Tier 1 Evaluation Criteria								
Alternative No.	Description	Environmental	Regional Transit System Capacity	Access to Opportunity	Mobility/Connectivity	Comptability with Land Use/Economic Development	Environmental Justice	Cost	Constructability	Totals
Green Line Alternatives										
1A	Green Line Extension to West Medford	1	1	2	1	1	2	0	1	9
1B	Green Line Extension to West Medford via Union Square	-1	1	2	2	2	1	-2	-2	3
1C	Green Line Extension to West Medford and to Union Square	1	0	2	2	2	2	0	1	10
1D	Green Line to Union Square with Commuter Rail Station Stops to West Medford	1	0	2	1	2	1	1	-2	6
Bus Rapid Transit Alternatives										
2A	BRT Lechmere to West Medford	0	0	2	0	1	1	1	1	6
2B	BRT Lechmere to West Medford with Green Line to Union Square	0	1	2	1	2	2	1	1	10
2C	BRT Lechmere to West Medford (via Union Square) with Green Line to Yard 8	0	1	2	0	1	0	1	1	6
2D	BRT Lechmere to Union Square with Commuter Rail Station Stops to West Medford	0	-1	1	1	1	1	2	-2	3
Commuter Rail Alternatives										
3	Commuter Rail Shuttle Service with Third Track to West Medford	1	1	1	1	1	1	1	2	9



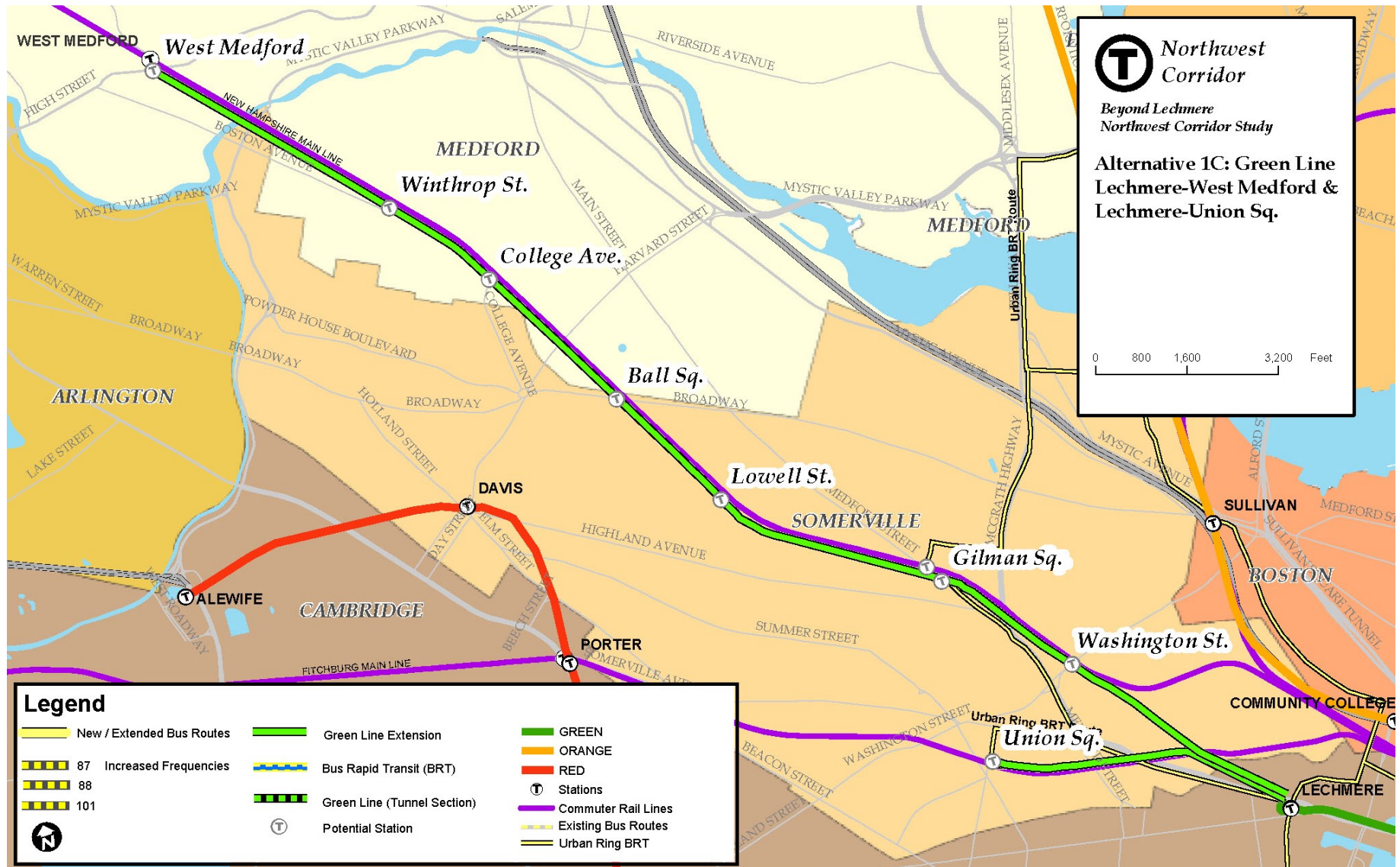
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Figure S-2

Alternative 1A Conceptual Alignment



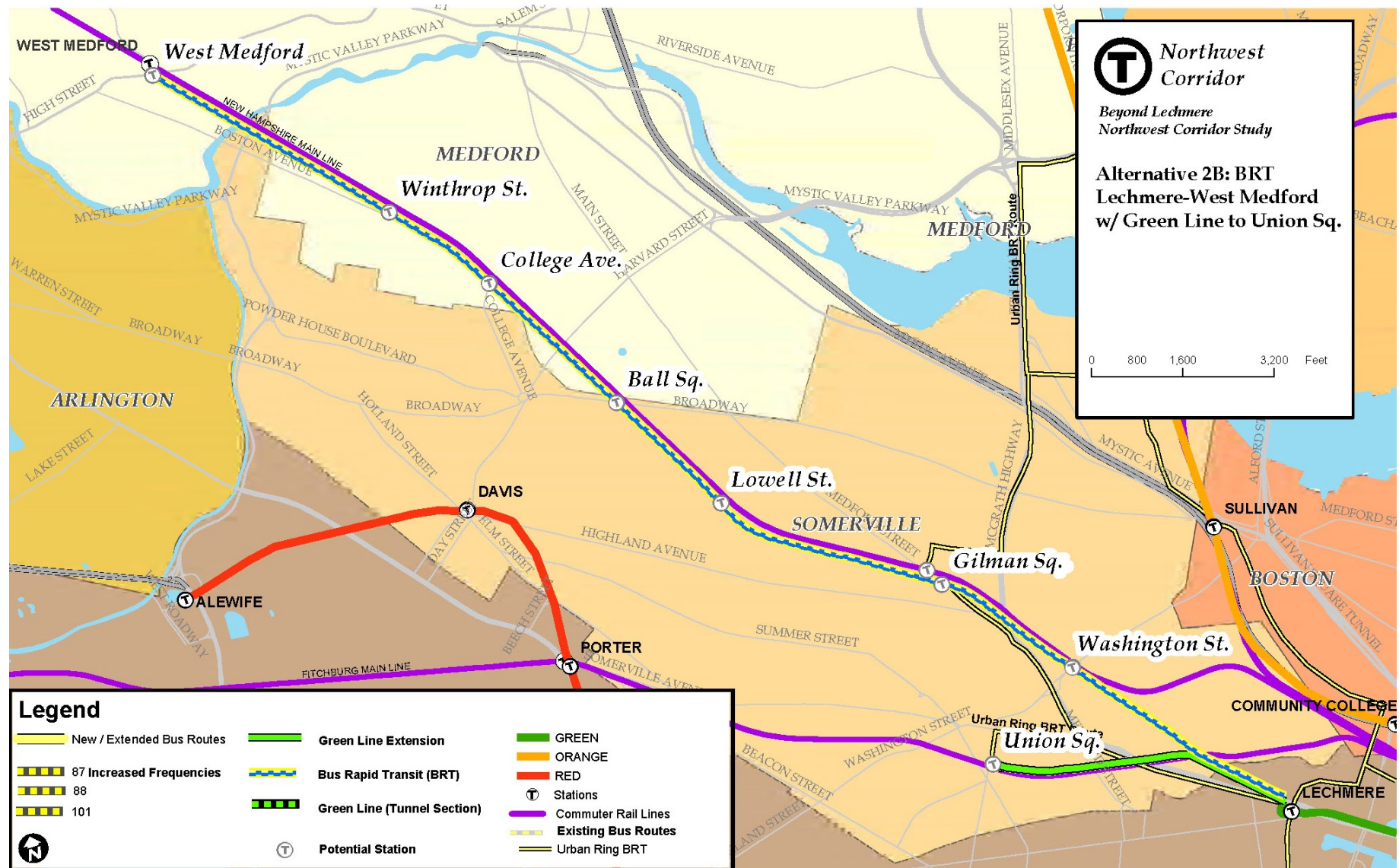
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Figure S-3

Alternative 1C Conceptual Alignment



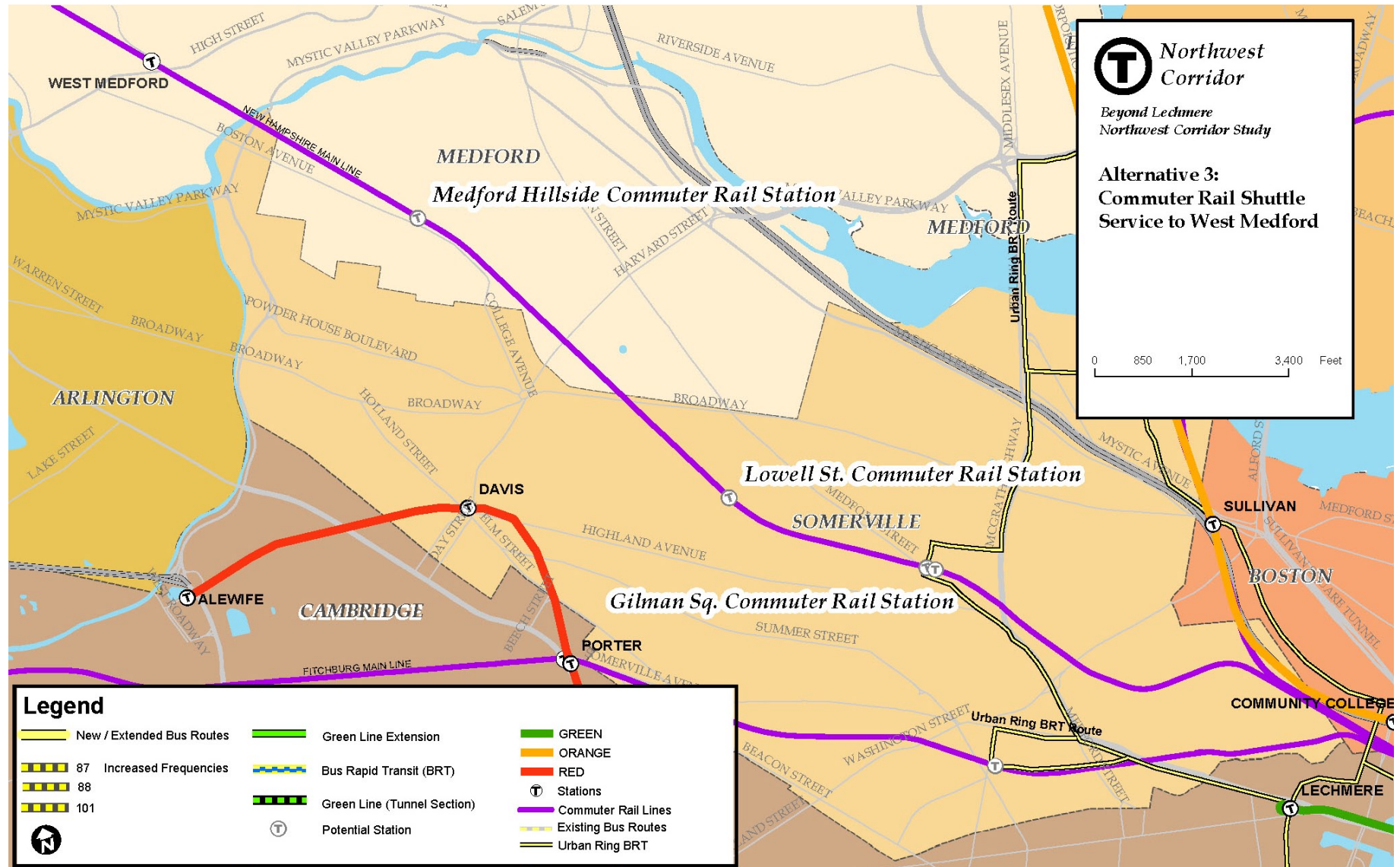
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Figure S-4

Alternative 2B Conceptual Alignment



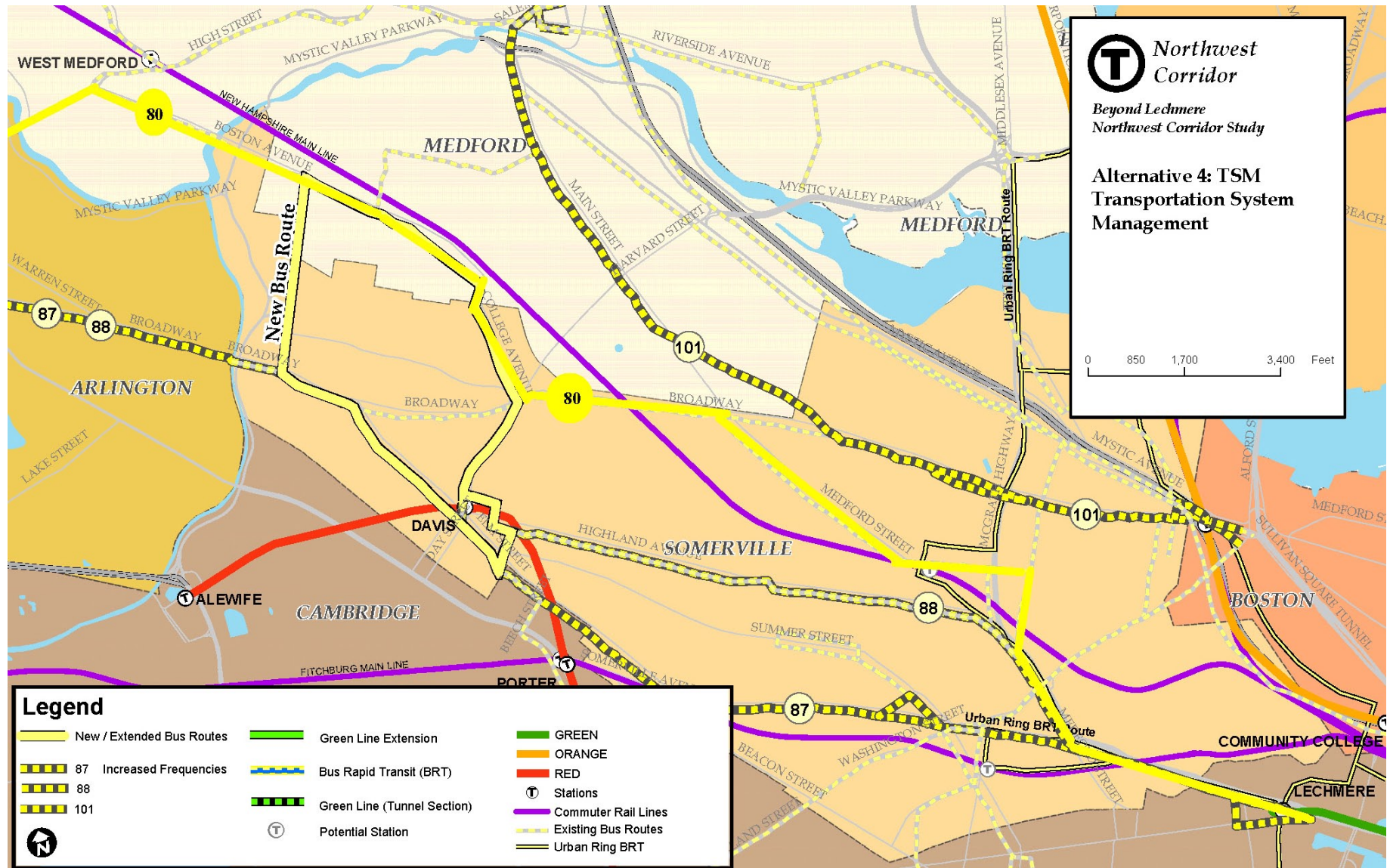
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Figure S-5

Alternative 3 Conceptual Alignment



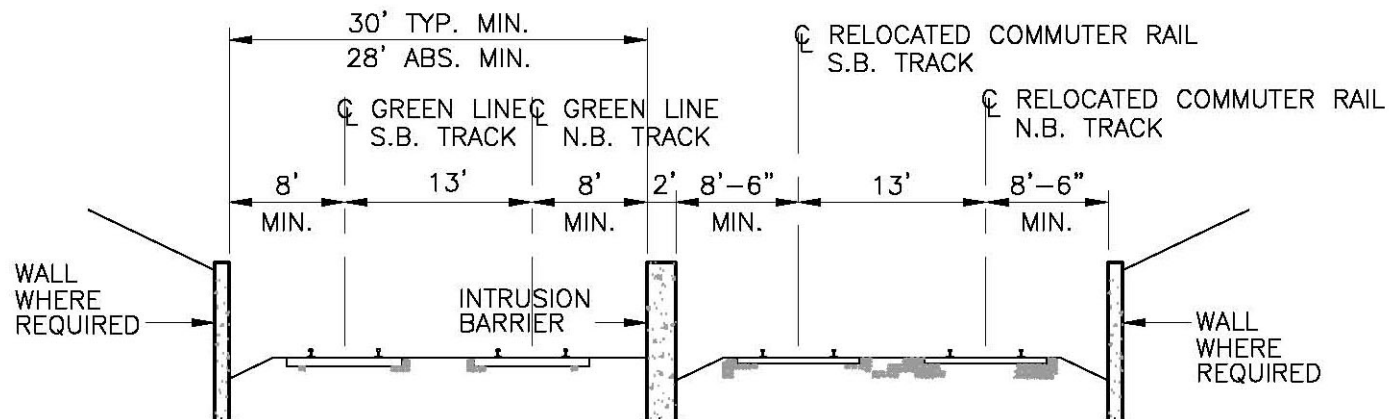
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Figure S-6

Alternative 4 Conceptual Alignment

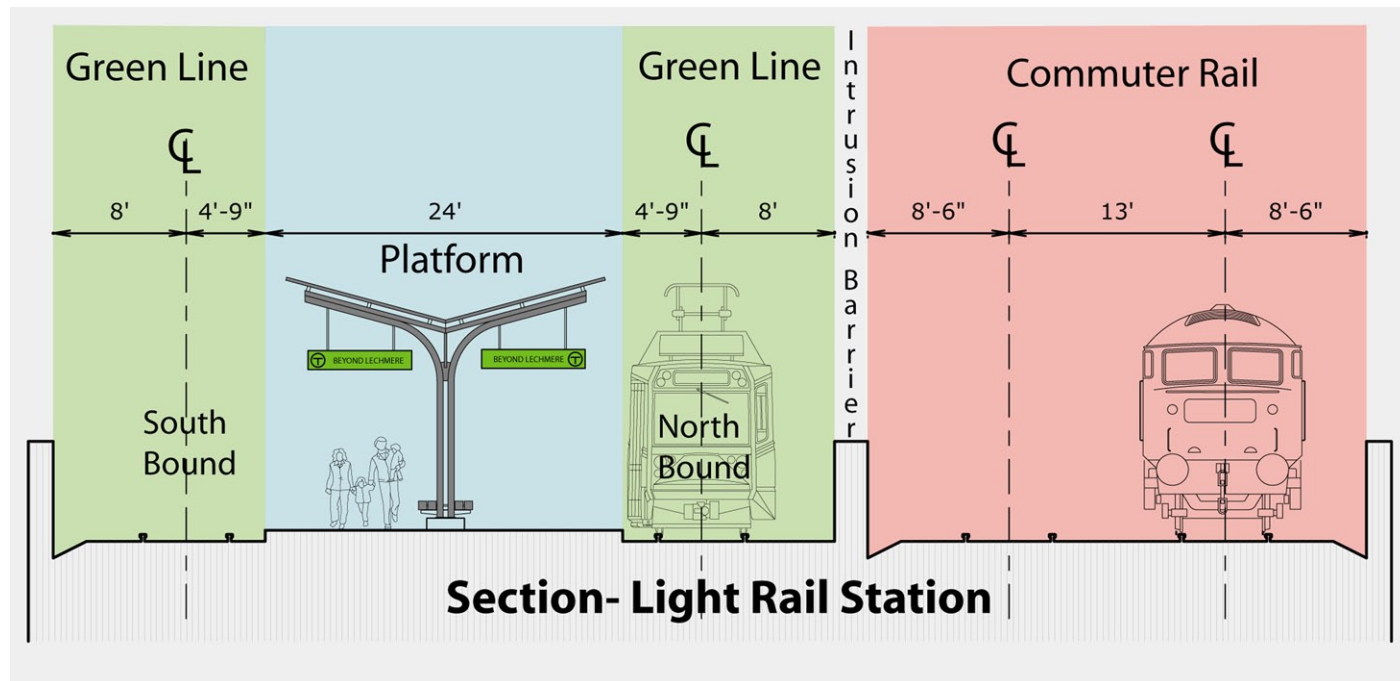


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Figure S-7

Typical Section: Proposed LRT with  
Commuter Rail

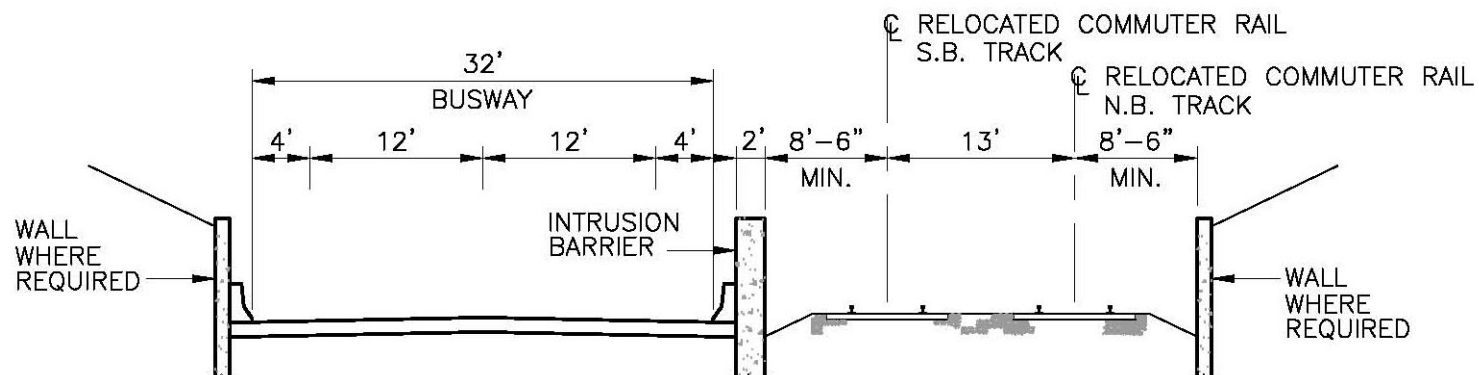


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Figure S-8

Typical LRT Station Section

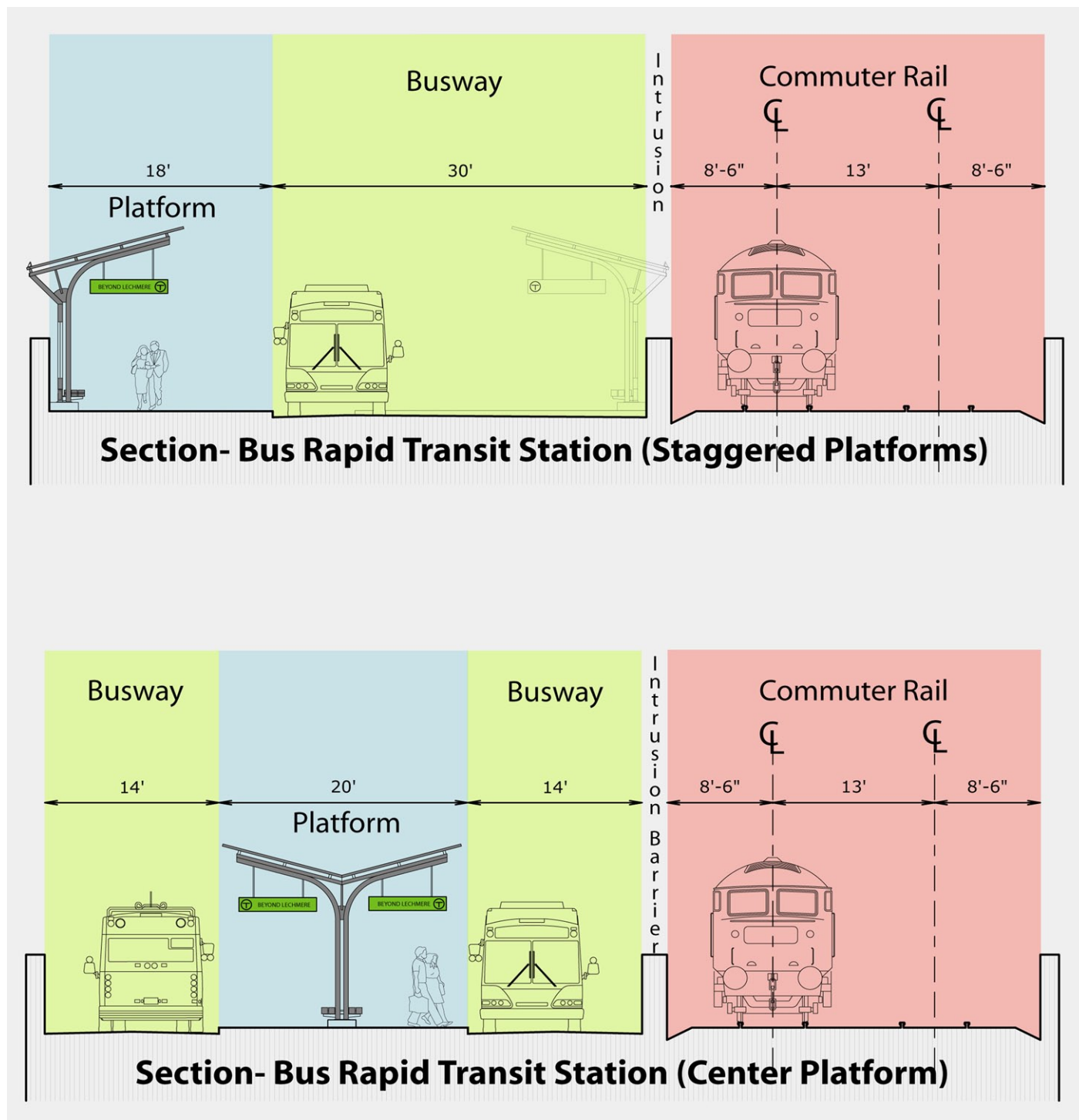


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Figure S-9

Typical Section: Proposed BRT with  
Commuter Rail



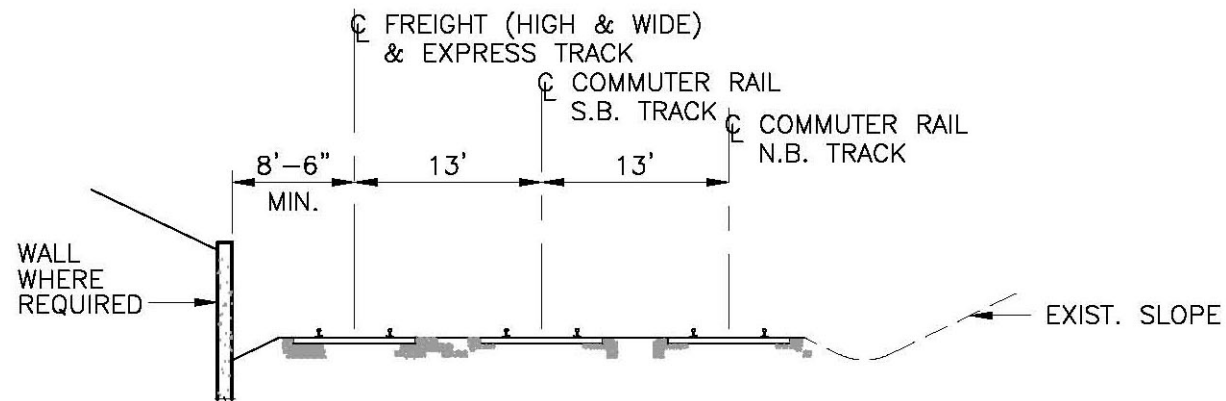
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Figure S-10

Typical BRT Station Sections



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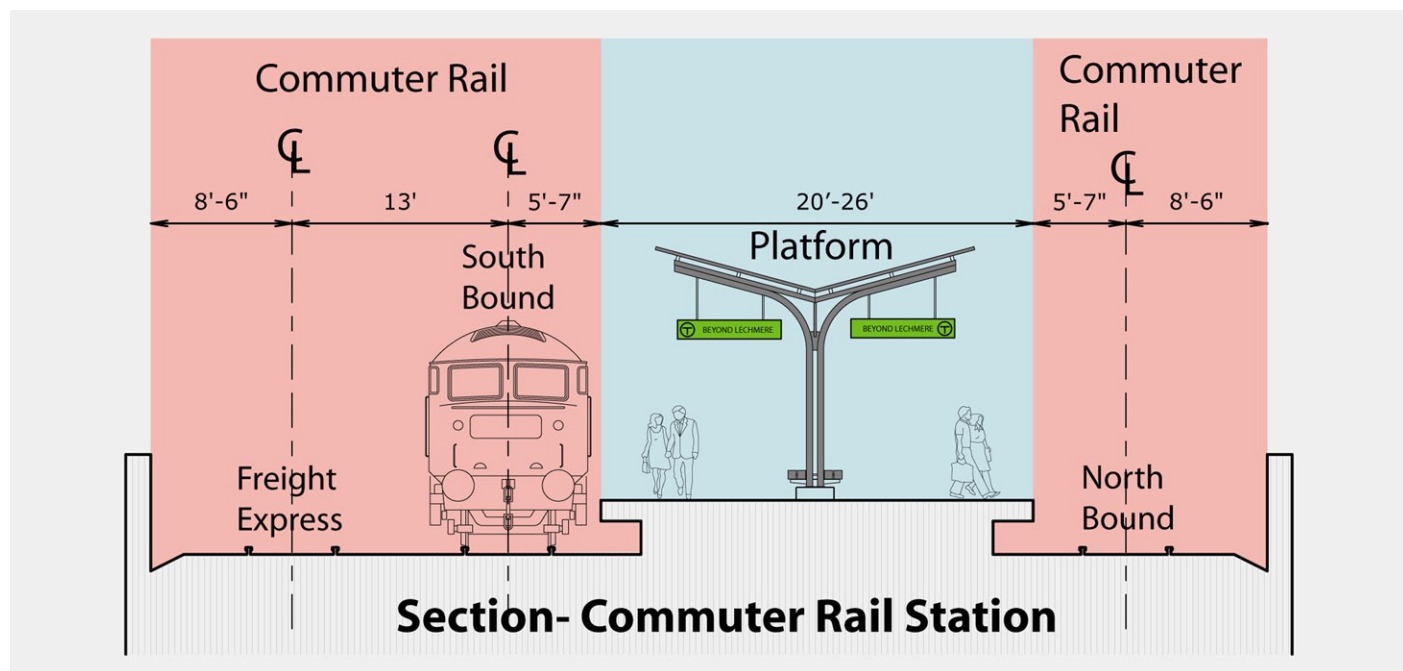


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**Beyond Lechmere Northwest Corridor Study**

Figure S-11

Typical Section: Commuter Rail with  
Proposed Third Track



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Figure S-12

Typical Commuter Rail Station Section



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Table S-2 Comparison of Tier 2 Alternatives - Quantitative Indicators

Indicator	Alt. 1A Green Line to West Medford	Alt. 1C Green Line to West Medford/Union Square	Alt. 2B BRT to West Medford and Green Line to Union Square	Alt. 3A Commuter Rail Shuttle to West Medford	Alt. 3B Commuter Rail Shuttle to Anderson RTC	Alt. 4 Transportation System Management
<b>Operating Characteristics</b>						
A. Headways (Peak Periods)	3 minutes	West Medford Branch: 5 min. Union Square Branch: 7 min.	West Medford Branch: 3 min. Union Square Branch: 3 min.	15 minutes	15 minutes	Medford Hillside Circulator: 20 min. Routes 80, 87, 88, 101: 10 min.
B. Vehicle Requirements	38 Green Line trolleys	32 Green Line trolleys	21 Green Line trolleys; 14 60-foot BRT buses	29 bi-level coaches; 5 locomotives	40 bi-level coaches; 7 locomotives	12 40-foot buses
<b>Environmental</b>						
C. Vehicle Miles of Travel, 2025 (daily, relative to No-Build)	-64,500	-52,800	-50,900	-8,700	-10,000	-6,200
D. Auto Person-Trips Shifted to Transit (daily, relative to No-Build)	13,320	9,660	9,760	1,610	1,830	1,390
<i>Air Quality - Emissions Associated with Highway/Auto Travel</i>						
E. Volatile Organic Compounds (daily kg, relative to No-Build)	-8	-5	-4	-3	-4	-4
F. Nitrous Oxide (daily kg, relative to No-Build)	-18	-14	-2	-3	-3	0
G. Carbon Monoxide (daily kg, relative to No-Build)	-555	-393	-364	-20	-32	-28
<i>Air Quality - Emissions Associated with Added Transit Service</i>						
H. Volatile Organic Compounds (daily kg, relative to No-Build)	Emissions at power plant rather than at vehicle/tailpipe; emissions may vary widely depending on utility fuel mix		0	0	0	0
I. Nitrous Oxide (daily kg, relative to No-Build)			77	19	44	39
J. Carbon Monoxide (daily kg, relative to No-Build)			6	5	9	3
<b>Regional Transit System Capacity</b>						
K. Revenue-Vehicle Hours of Service Added (annual, relative to No-Build)	129,250	101,043	122,281	12,152	18,032	27,612
L. Systwm-Wide Linked Trips, 2025 (daily, relative to No-Build)	14,160	10,060	10,590	1,670	1,890	1,580
M. System-Wide Unlinked Trips, 2025 (daily, relative to No-Build)	9,110	1,600	31,300	2,240	2,560	2,080
<b>Access to Opportunity</b>						
N. Annual Hours of User Benefit, 2025 (relative to TSM)	3,645,600	2,540,160	2,372,580	49,980	67,620	205,800 (relative to No-Build)
O. Transfer Rate, 2025 (System-wide ratio of unlinked trips to linked trips; relative to No-Build)	-0.01	-0.01	0.01	0.00	0.00	0.00
<b>Environmental Justice</b>						
P. Accessibility - Employment Opportunities within 40 minutes by transit (relative to No-Build)						
EJ TAZs in Medford	+6.53%	+5.01%	+3.89%	+1.96%	+2.77%	+1.56%
EJ TAZs in Cambridge	0.00%	0.00%	0.00%	0.00%	0.00%	+2.78%
EJ TAZs in Somerville	+8.43%	+6.24%	+5.65%	+3.07%	+3.50%	+0.94%
<b>Conceptual Costs</b>						
Q. Total Capital Cost (millions of 2005\$)	\$390.0	\$438.0	\$340.0	\$171.0	\$347.0	\$4.6
R. Annualized Capital Cost (millions of 2005\$)	\$29.9	\$33.2	\$25.4	\$13.7	\$26.9	\$0.6
S. Annual O&M Cost (millions of 2005\$)	\$9.9	\$8.7	\$11.1	\$3.7	\$5.4	\$1.8
T. Annual Fare Revenue (millions of 2005\$)	\$4.9	\$3.4	\$4.0	\$0.6	\$1.2	\$0.2
U. Incremental Annual Cost (R+S-T)	\$35.0	\$38.6	\$32.5	\$16.7	\$31.1	\$2.2
<b>User Benefit/Cost-Effectiveness</b>						
V. Cost Per Hour of User Benefit, 2025	\$9.59	\$15.19	\$13.70	\$334.91	\$460.23	\$10.54

## **Attachment 5.2**

### **Supplemental Information Developed Since Completion of the MIS/AA**

**Historic Places**

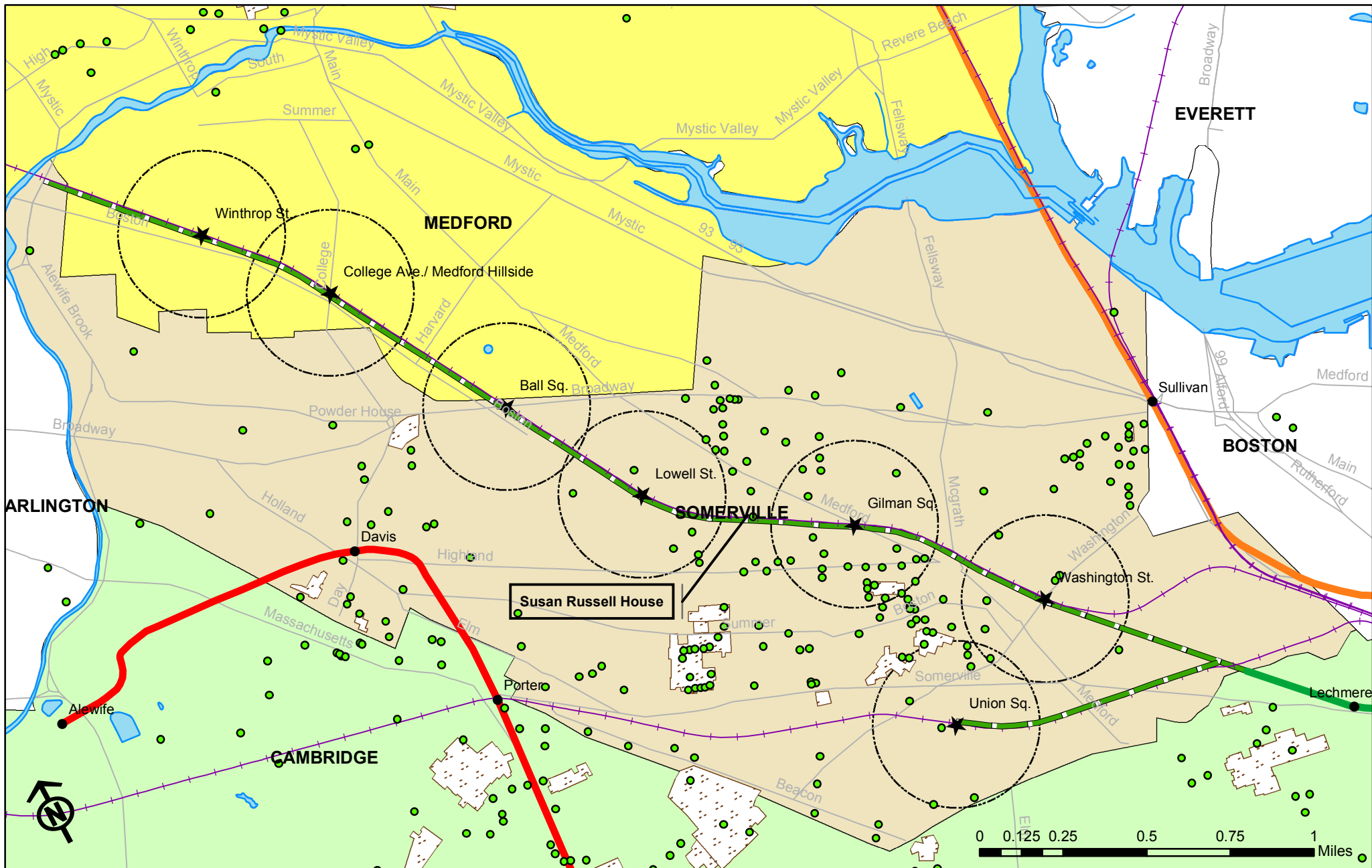
**Recreation and Open Space**

**Environmental Concerns**

**Wet Area for Investigation – Lowell Street**

**Water-Related Sites**

**Hazardous Sites**



## GREEN LINE EXTENSION HISTORIC PLACES

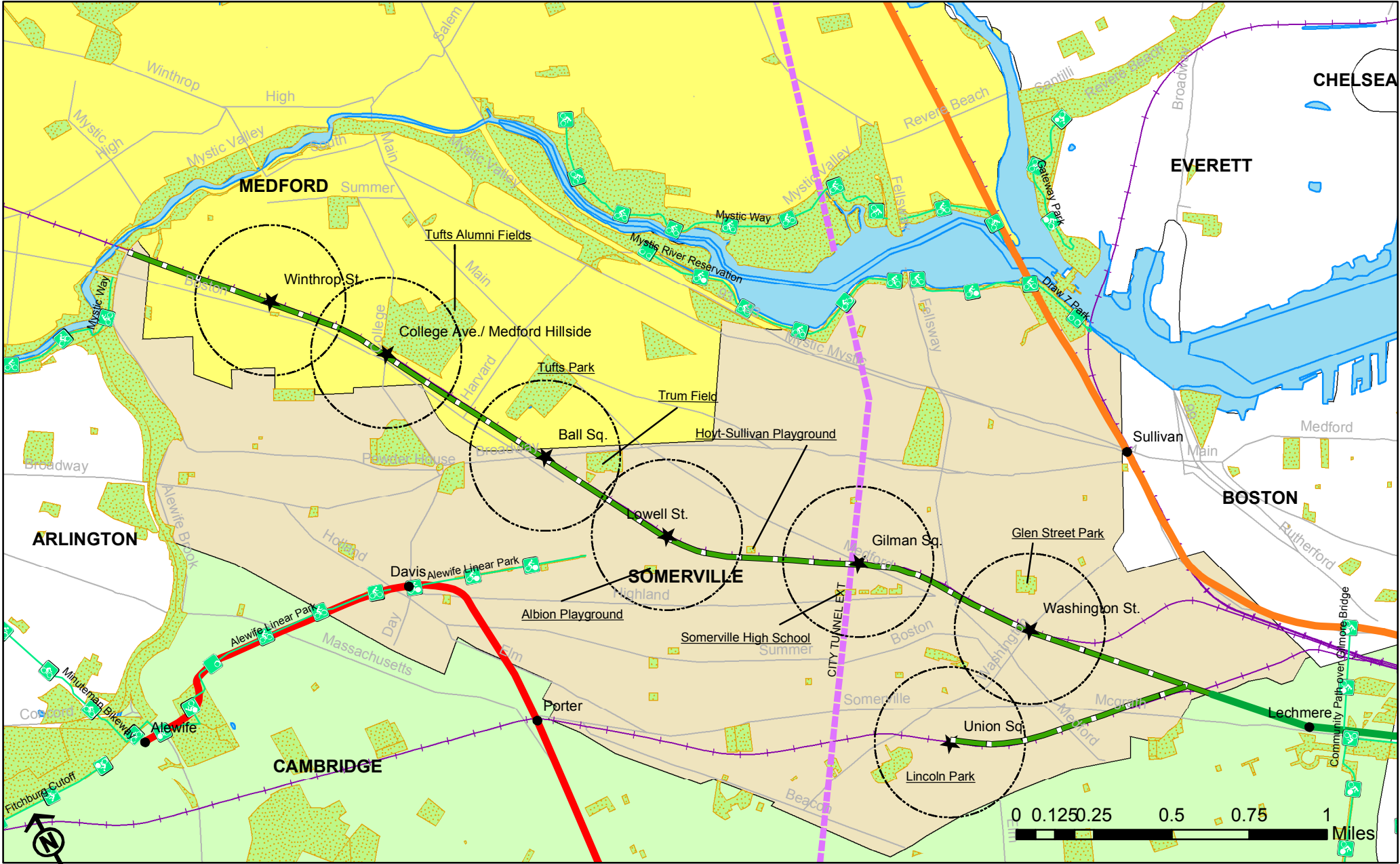
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Data Source: MassGIS



### MBTA Subway

- GREEN
- ORANGE
- RED
- EXTEND
- MBTA Commuter Rail

- MBTA Stations
- ★ Proposed MBTA Stations
- ⬜ 1/4 Mile Proposed MBTA Station Buffer
- ⬜ Long Distance Trails
- ⬜ Protected Open and Recreation Space

- Existing Bicycle Trails
- Mystic River and Related Waters
- Major Roadways

## GREEN LINE EXTENSION RECREATION AND OPEN SPACE

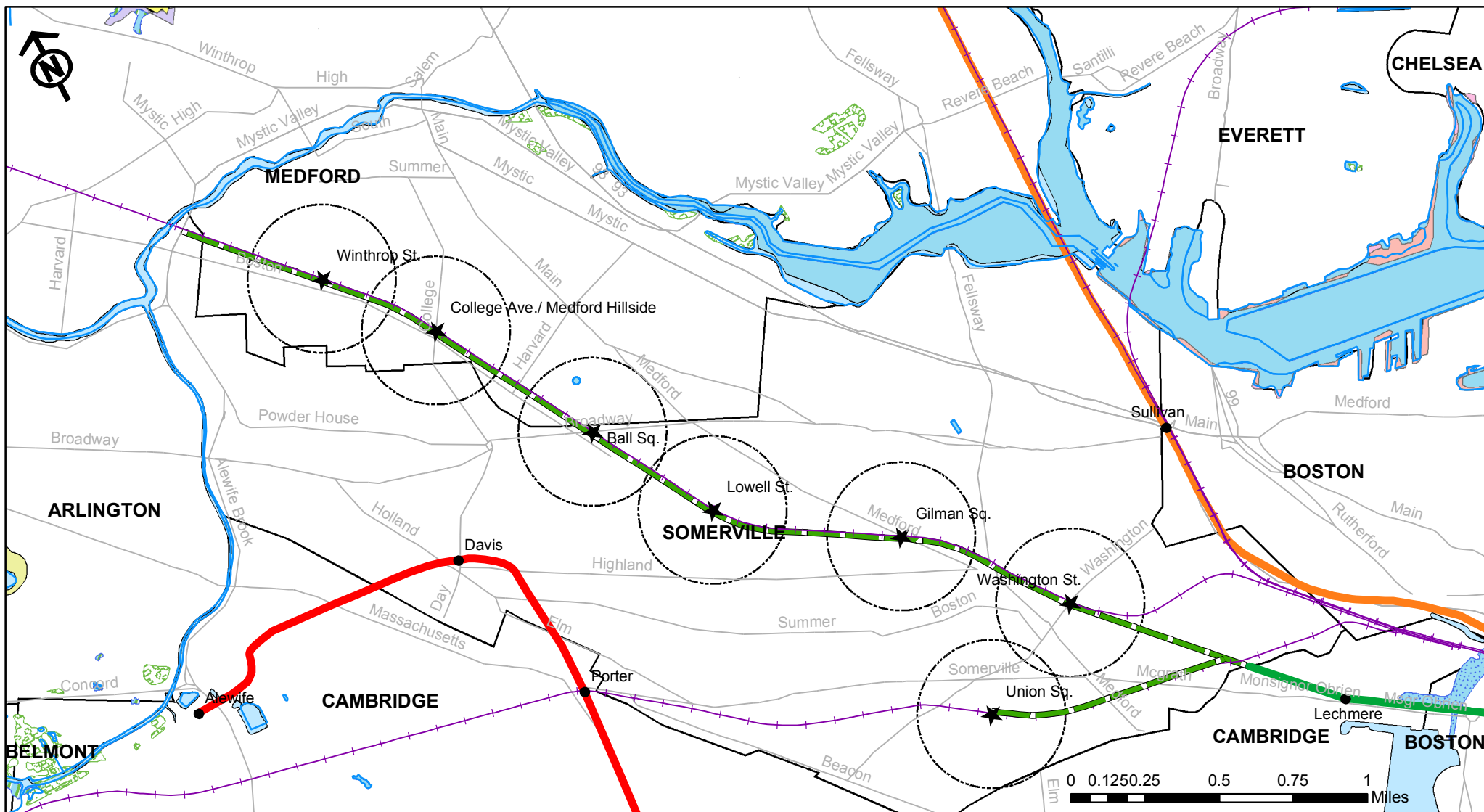
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#### MBTA Subway

- GREEN
- ORANGE
- RED
- EXTEND
- MBTA Commuter Rail
- MBTA Stations
- ★ Proposed MBTA Stations
- 1/4 Mile Proposed MBTA Station Buffer
- Mystic River and Related Waters
- Major Roadways

#### Salt Marsh Restoration sites

- active
- complete
- potential
- Livingwaters Critical Supporting Watersheds
- Areas of Critical Environmental Concern
- Priority Habitats of Rare Species
- Areas Supporting Natural Landscapes
- Core Habitat
- Estimated Habitats of Rare Wildlife

#### Wetland Areas

- Upland
- Tidal, channels
- Non-tidal, scrub-shrub
- Forested Wetlands
- Non-tidal, emergent vegetation
- Estuarine, intertidal
- Estuarine, sub-tidal Marine Systems
- Predominantly Open Water
- Certified Vernal Pools

## GREEN LINE EXTENSION ENVIRONMENTAL CONCERNS

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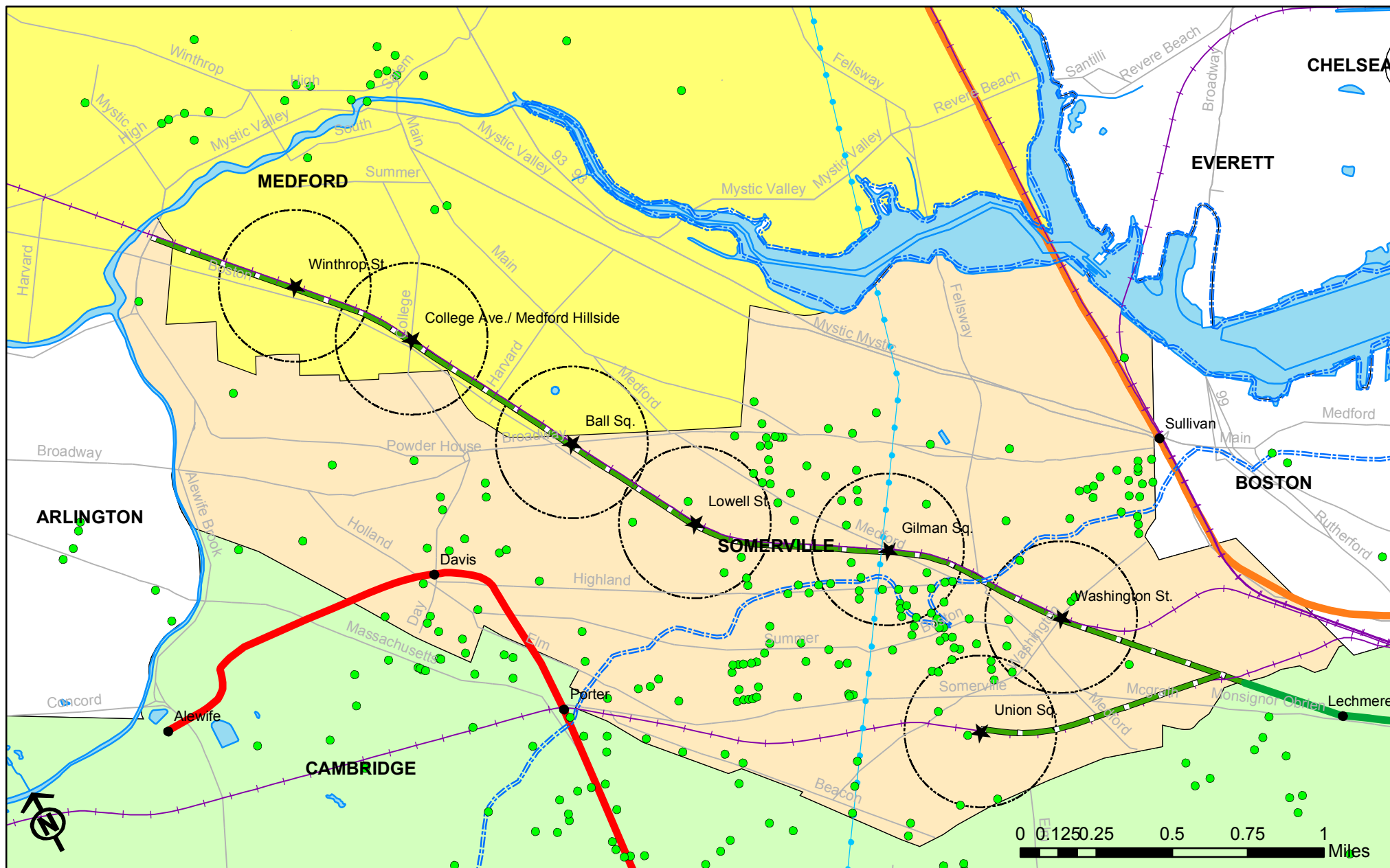


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Data Source: MassGIS





#### MBTA Subway

- GREEN
- ORANGE
- RED
- - - EXTEND
- - - MBTA Commuter Rail

- MBTA Stations
- ★ Proposed MBTA Stations
- 1/4 Mile Proposed MBTA Station Buffer
- Drainage Sub-basins
- Aqueducts

- - - Major Drainage Basin Boundary
- DEP Wellhead Protection Areas
- Mystic River and Related Waters
- Major Roadways

## GREEN LINE EXTENSION WATER-RELATED SITES

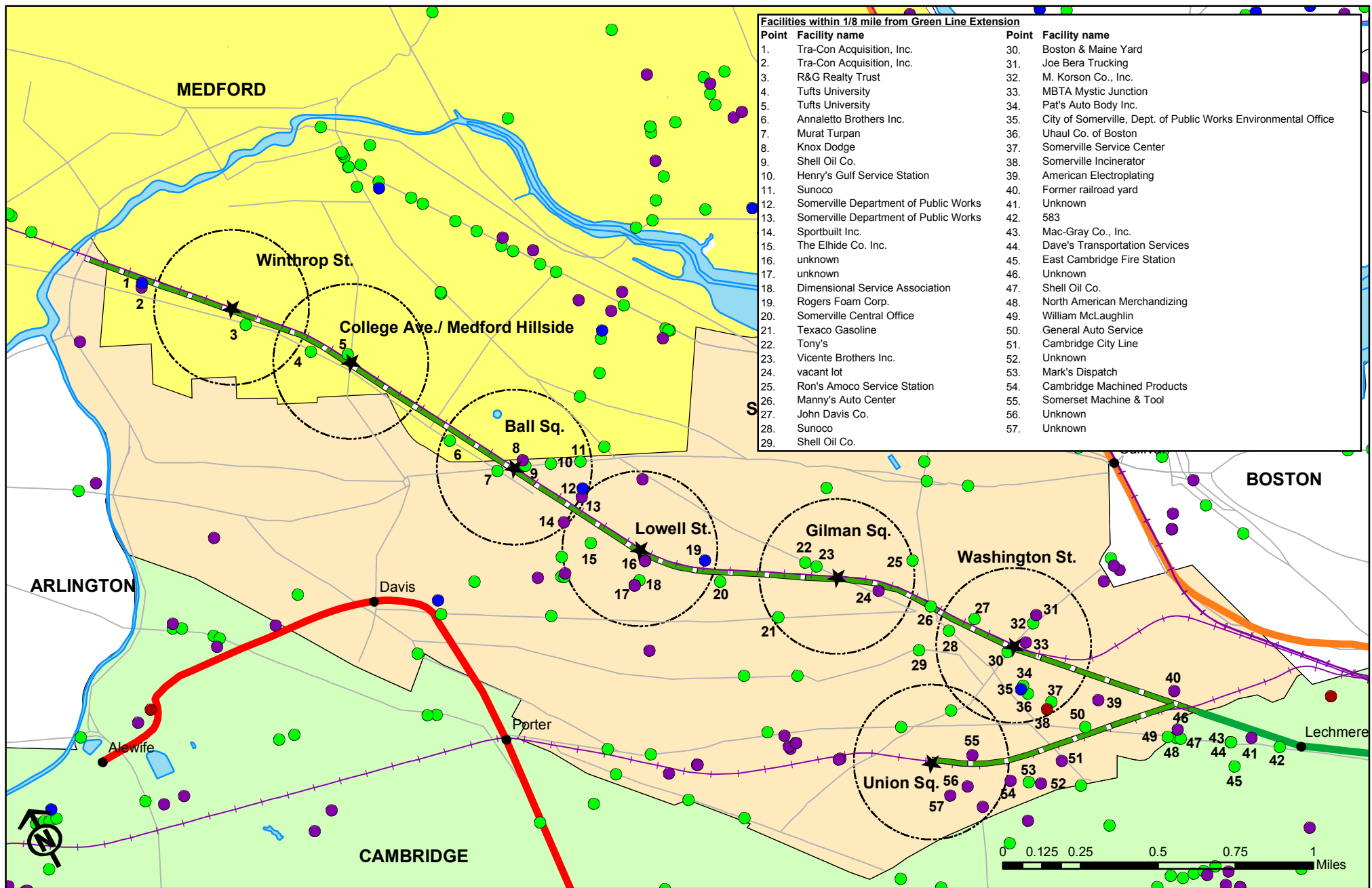
PREPARED FOR



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Data Source: MassGIS



#### MBTA Subway

- GREEN
- ORANGE
- RED
- EXTEND
- MBTA Commuter Rail

- MBTA Stations
- ★ Proposed MBTA Stations
- 1/4 Mile Proposed MBTA Station Buffer
- Solid Waste Facilities
- Groundwater Discharge sites
- BWP Major Facilities

- Active Oil/ Hazardous Materials sites with Activity and Use Limitations
- Underground Storage Tanks
- Mystic River and Related Waters
- Major Roadways
- Green Extension Eighth Mile Buffer 1

## GREEN LINE EXTENSION HAZARDOUS SITES

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Data Source: MassGIS

## Hazardous Sites Map Key

Map Location	FID	Type	Facility name	Location	Description
1	737	BWP Major Facility	Tra-Con Acquisition, Inc.	55 North St., Medford	Large quantity toxic user
2	1551	Active Oil/ Hazardous Material with Activity and Use Limitations	Tra-Con Acquisition, Inc.	55 North St., Medford	A permanent solution has been achieved. Contamination has not been reduced to background.
3	3409	USF	R&G Realty Trust	364 Boston Ave., Medford	3 tanks removed (gasoline)
4	3373	USF	Tufts University	429 Boston Ave., Medford	diesel fuel
5	3401	USF	Tufts University	175 College Ave., Medford	gasoline
6	3399	USF	Annaletto Brothers Inc.	590 Boston Ave., Medford	gasoline (3 tanks)
7	3609	USF	Murat Turpan	166 Boston Ave., Somerville	gasoline (3 tanks), used oil (1 tank)
8	1591	Active Oil/ Hazardous Material with Activity and Use Limitations	Knox Dodge	343-345 Broadway, Somerville	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and Use Limitation has been implemented.
9	3625	USF	Shell Oil Co.	620 Broadway, Somerville	gasoline (3 tanks), fuel oil (1 tank), used oil (1 tank), lubricant (2 tanks)
10	3617	USF	Henry's Gulf Service Station	583 Broadway, Somerville	3 tanks removed (gasoline)
11	3619	USF	Sunoco	541 Broadway, Somerville	used oil (1 tank), gasoline (3 tanks), #2 fuel oil (1 tank)
12	31	BWP Major Facility	Somerville Department of Public Works	1 Franey Rd., Somerville	Large quantity generator of one or more MA regulated hazardous wastes, including but not limited to, waste oil and PCBs.
13	1871	Active Oil/ Hazardous Material with Activity and Use Limitations	Somerville Department of Public Works	1 Franey Rd., Somerville	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and Use Limitation has been implemented.
14	1698	Active Oil/ Hazardous Material with Activity and Use Limitations	Sportbuilt Inc.	227 Cedar St., Somerville	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and Use Limitation has been implemented.
15	3589	USF	The Elhide Co. Inc.	56 Clyde St., Somerville	gasoline (1 tank)
16	1135	Active Oil/ Hazardous Material with Activity and Use Limitations	unknown	259 Lowell St., Somerville	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and Use Limitation has been implemented.
17	1278	Active Oil/ Hazardous Material with Activity and Use Limitations	unknown	226 Lowell St., Somerville	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and Use Limitation has been implemented.
18	3605	USF	Dimensional Service Association	229 Lowell St., Somerville	Unknown
19	668	BWP Major Facility	Rogers Foam Corp.	20 Vernon St., Somerville	Large quantity toxic user
20	3602	USF	Somerville Central Office	111 Central St., Somerville	diesel fuel

## Hazardous Sites Map Key

Map Location	FID	Type	Facility name	Location	Description
21	6873	USF	Texaco Gasoline	112 Highland Ave., Somerville	gasoline (4 tanks), used oil (1 tank)
22	3632	USF	Tony's	360 Medford St., Somerville	gasoline (3 tanks), diesel fuel (1 tank), used oil (1 tank)
23	3621	USF	Vicente Brothers Inc.	345 Medford St., Somerville	gasoline (2 tanks)
24	1555	Active Oil/ Hazardous Material with Activity and Use Limitations	vacant lot	299-303 Medford St., Somerville	A permanent solution has been achieved. Contamination has not been reduced to background.
25	3604	USF	Ron's Amoco Service Station	180 Pearl St., Somerville	gasoline (3 tanks), used oil (1 tank)
26	6872	USF	Manny's Auto Center	463 McGrath Highway, Somerville	fuel oil (1 tank), lubricant (1 tank)
27	3590	USF	John Davis Co.	50 Tufts St., Somerville	1 tank removed (diesel)
28	3629	USF	Sunoco	434 McGrath Highway, Somerville	1 tank removed (used oil)
29	5350	USF	Shell Oil Co.	62 Boston St., Rear, Dorchester	Unknown
30	3595	USF	Boston & Maine Yard	132 Washington St., Somerville	fuel oil
31	1719	Active Oil/ Hazardous Material with Activity and Use Limitations	Joe Bera Trucking	91 Washington St., Somerville	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and Use Limitation has been implemented.
32	3596	USF	M. Korson Co., Inc.	91 Washington St., Somerville	unknown (1 tank), diesel fuel (1 tank)
33	1354	Active Oil/ Hazardous Material with Activity and Use Limitations	MBTA Mystic Junction	Washington St. near Joy St.	Activity use limitations have been implemented, but no significant threat exists and remedial actions have not been taken
34	6875	USF	Pat's Auto Body Inc.	161 Linwood St., Somerville	Unknown
35	672	BWP Major Facility	City of Somerville, Dept. of Public Works Environmental Office	108 Poplar St., Somerville	Large quantity generator of one or more MA regulated hazardous wastes, including but not limited to, waste oil and PCBs.
36	3603	USF	Uhaul Co. of Boston	151 Linwood St., Somerville	gasoline (2 tanks)
37	3620	USF	Somerville Service Center	101 Linwood St., Somerville	propane (1 tank), gasoline (2 tanks), used oil (1 tank)
38	375	Solid Waste Facility	Somerville Incinerator	10 Poplar St., Somerville	Inactive: Not operating, not properly closed. Combustion Facility run by the City of Somerville, owned by Waste Management of Massachusetts
39	668	Active Oil/ Hazardous Material with Activity and Use Limitations	American Electroplating	26 Chestnut St., Somerville	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and Use Limitation has been implemented.
40	570	Active Oil/ Hazardous Material with Activity and Use Limitations	Former railroad yard	100 Innerbelt Rd., Somerville	Remedial actions have not been taken because no significant level of material exists. Activity Use Limitations have been implemented.
41	1084	Active Oil/ Hazardous Material with Activity and Use Limitations	Unknown	169 Mnsgr. O'Brien Hgwy., Cambridge	Remedial actions have not been taken because no significant level of material exists. Activity Use Limitations have been implemented.

## Hazardous Sites Map Key

Map Location	FID	Type	Facility name	Location	Description
42	2857	USF	583	25 East St., Cambridge	6 tanks removed (3 heating oil, 3 gasoline)
43	2806	USF	Mac-Gray Co., Inc.	22 Water St., Cambridge	gasoline (1 tank)
44	2835	USF	Dave's Transportation Services	21 Water St., Cambridge	gasoline (1 tank), #2 fuel oil (2 tanks)
45	2817	USF	East Cambridge Fire Station	173 Cambridge St., Cambridge	diesel fuel (1 tank)
46	1668	Active Oil/ Hazardous Material with Activity and Use Limitations	Unknown	245 Mnsgr. O'Brien Hgwy., Cambridge	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and Use Limitation has been implemented.
47	2897	USF	Shell Oil Co.	239 Mnsgr. O'Brien Hgwy., Cambridge	gasoline (3 tanks), used oil (1 tank), lubricant (2 tanks)
48	2850	USF	North American Merchandizing	245 Mnsgr. O'Brien Hgwy., Cambridge	3 tanks removed (gasoline)
49	2890	USF	William McLaughlin	258 Mnsgr. O'Brien Hgwy., Cambridge	5 tanks removed (3 gasoline, 1 used oil, 1 diesel fuel)
50	3616	USF	General Auto Service	181 McGrath Hgwy., Somerville	gasoline (2 tanks), used oil (1 tank), diesel fuel (1 tank)
51	684	Active Oil/ Hazardous Material with Activity and Use Limitations	Cambridge City Line	30 Medford St., Somerville	Remedial actions have not been taken because no significant level of material exists. Activity Use Limitations have been implemented.
52	1670	Active Oil/ Hazardous Material with Activity and Use Limitations	Unknown	2 Harding St., Somerville	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and Use Limitation has been implemented.
53	3593	USF	Mark's Dispatch	33 Earle St., Somerville	1 tank removed (gasoline)
54	517	Active Oil/ Hazardous Material with Activity and Use Limitations	Cambridge Machined Products	100 Foley St., Somerville	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and Use Limitation has been implemented.
55	542	Active Oil/ Hazardous Material with Activity and Use Limitations	Somerset Machine & Tool	37 Allen St. Somerville	Remedial actions have not been taken because no significant level of material exists.
56	703	Active Oil/ Hazardous Material with Activity and Use Limitations	Unknown	520 Columbia St., Somerville	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and Use Limitation has been implemented.
57	716	Active Oil/ Hazardous Material with Activity and Use Limitations	Unknown	78 Prospect St., Somerville	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and Use Limitation has been implemented.