



## Green Line Extension to Medford

### Proposed Medford Green Line Station Study - Draft

10 October 2006

Prepared by Medford Green Line Neighborhood Alliance (MGNA)



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## Executive Summary

The Medford Green Line Neighborhood Alliance (MGNA) is a group of citizens who support the proposed Green Line extension to Medford, and who advocate for proactive involvement from the city, its residents and all stakeholders to ensure that the extension is completed in a manner that is most beneficial to the community. MGNA has written this document, *Proposed Medford Green Line Station Study*, to fill the void we see in the planning process by state transportation agencies and the City of Medford.

For more than a year since the Enhanced Green Line Extension Project was endorsed by state transportation officials and publicly announced, there has been little specific information and a lot of speculation and mis-information about where a potential Green Line extension to Medford might go, how it might look and what its impact might be on our neighborhoods and businesses. Taking these concerns into account and studying how to maximize the extension's benefits, MGNA spent several weeks independently analyzing and evaluating potential Green Line stops in Medford so they would achieve the following objectives:

- Provide the maximum number of Medford residents an alternative means of transportation
- Retain the character, look and feel of neighborhoods the extension will service – South Medford, Tufts University, Hillside and West Medford.
- Do no harm; the Green Line Extension Project must be a net benefit to the city as a whole and improve – not worsen - existing problems such as parking and traffic.

Guided by these objectives, MGNA now proposes the following (**See MGNA Drawing 1**):

- Extend the Green Line only as far as Route 16. This way the terminating station would be situated south of the Mystic River and the Green Line would *not* cross the river and into West Medford Square.
- Connect West Medford Square to the terminating station by a path for pedestrians and bicyclists.
- Combine the MBTA's two proposed stations at the intersection of Boston Avenue / Winthrop Street and Boston Avenue / College Avenue into a *single* station located approximately halfway between the two points. The resulting station would be located opposite the Tufts parking garage so as to avoid existing congestion at either the Winthrop Street or College Avenue intersections, resolve safety issues and provide commuters with direct access to the Tufts campus.
- Take *no* Medford house or business by eminent domain.
- Build *no* parking garage for MBTA commuters. Medford does not have the capacity or the infrastructure to accommodate an Alewife-type parking garage or the traffic it would attract.
- Do *not* design a system that would encourage the use of cars. Instead construct all stations so they serve Medford neighborhoods well and attract pedestrians, bicyclists and passengers of existing buses.

An important final point: this proposal is a draft. MGNA fully understands that our recommendations will be just one component considered once an extensive design process begins. This proposal will evolve as more information becomes available and more input is attained from city officials, neighborhood residents, abutters, businesses and the MBTA. We welcome and encourage this input.

MGNA believes in bringing the Green Line as far as possible into Medford so that it benefits the maximum number of people without compromising the character of our neighborhoods. We believe the system envisioned by this proposal strikes that delicate balance.

### **Medford Green Line Neighborhood Alliance**

Melissa B. Bennett  
Roberta Cameron  
Doug Carr  
Stacy Colella  
Robert Feigin  
Jared Ingersoll  
Joseph Jaquinta  
Jim Kiely  
Ken Krause

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## **A. INTRODUCTION**

The Green Line extension to Medford represents a once-in-a-generation opportunity for Medford residents to gain a major piece of transportation infrastructure. If executed properly, the Green Line would provide thousands of Medford residents with an environmentally friendly alternative to automobile use; provide better access to Somerville, Cambridge, Boston and beyond; raise property values; and make Medford overall a better place to live, work and visit.

However, as Medford residents, we cannot passively wait for the MBTA, the state's Executive Office of Transportation or any other group to present us with a finished design for the Green Line extension. We must get ahead of the process and decide for ourselves what we want the extension to be. This raises important questions, particularly on where stations should be located, how they should look and what their impact should be on surrounding neighborhoods.

The Green Line project is just at the beginning of a multi-year planning process. It is still early enough in the process for local residents to have a significant effect on major project decisions. For a summary of the MBTA's planning process to date, please refer to Section C of this study.

## **B. WHY DO WE NEED THE GREEN LINE TO MEDFORD?**

The question is vital, and it deserves a thorough answer. According to the MBTA's 2005 *Beyond Lechmere Northwest Corridor Study*, the purpose of the extension is:

“to develop the most appropriate transit strategy for improving mobility and regional access for residents in the Northwest Corridor communities of Cambridge, Somerville and Medford. Traffic congestion, mode transfer and service delays hamper access from the study area to Downtown Boston and to employment and services from the study area.”

In addition, the MBTA's study mentions five specific factors that create the need for transportation improvement. They are:

- enhanced transit access and citizen mobility
- increased transit capacity
- improved air quality
- implementation of sustainable development goals (Smart Growth)
- service to Environmental Justice target communities

It is clear from the MBTA's study that Medford's traffic woes are part of a larger regional problem that requires a regional solution. Looking at the study's demographics, which were derived from the 2000 census, a few key Medford commuting facts are noteworthy:

- 25% of Medford's resident labor force works in Boston
- 11% of Medford's resident labor force works in Cambridge
- 6% of Medford's resident labor force works in Somerville
- 17% of Medford's resident labor force works in Medford

According to the MBTA's study, 58% of Medford residents work within the study area, yet only 20% of Medford residents rely on public transit to get to work. Because a whopping 62% of Medford

residents now rely on the automobile for commuting trips, the city's potential for Green Line ridership is enormous. Extending the Green Line to Medford will give residents an alternative to driving and actually take cars *off* of our streets. Existing modes of transit are *not* doing the job. Traffic and congestion prevent buses from operating on schedule, reducing their reliability and thus demand. In fact, according to the MBTA, only *one* of the 15 bus lines that run in the study area currently meets the MBTA's own performance requirements. Commuter rail service from West Medford to Boston is too infrequent – other than during peak weekday hours – to make it convenient for many riders, and it also does not service Somerville or Cambridge, as the Green Line would. The solution is to get people out of their cars and into rapid transit trains. The Green Line extension would do exactly that.

Environmental Justice is another important factor in the Green Line project. The MBTA's 2005 study focuses on improving the environment in underserved communities, specifically minority and low-income communities, by providing access to higher-quality transportation and job opportunities. Medford's diverse demographics and population density along the Green Line corridor means the Green Line extension would have a significant, positive effect on the quality of life of many Medford residents.

### **C. EXISTING PROCESS TO DATE**

The origin of the Green Line extension project came in the early 1990s when a series of legal commitments were made by state policy makers to improve the regional transit system as mitigation for the Central Artery project commonly known as the Big Dig. This was the result of a lawsuit brought by the Conservation Law Foundation. One of these mitigation commitments was extending the Green Line through Somerville to Medford by 2011.

In 2004, the MBTA created an Advisory Committee made up of appointed citizens from Medford, Somerville and Cambridge to advise the MBTA on the planning process and establish the study area for a Green Line Extension. In late 2004, the MBTA released a publication titled *Beyond Lechmere Northwest Corridor Major Improvement Study/Alternatives Analysis* "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." After studying all possible modes of transit and ridership, traffic mitigation, pollution reduction, construction costs and costs per rider, the MBTA concluded that a Green Line extension through Somerville to Medford would have the greatest overall positive impact on the region's transportation system.

In May 2005, the MBTA and the Commonwealth of Massachusetts announced their endorsement of enhancing Green Line access through Somerville to West Medford with a spur line in Somerville to Union Square. The announcement, replete with front-page newspaper graphics showing possible station locations in Medford, caught many people in the community by surprise and sparked wild speculation about the project's detrimental effects to local neighborhoods. The MBTA proposal siting Medford stations on College Avenue and Winthrop Street and in West Medford was written without first getting input from the community at large or discussing any potential problems that the stations could create. This error was the source of much of the criticism the project initially received in Medford.

In August 2005, the MBTA officially issued its Draft *Beyond Lechmere Northwest Corridor Study*. Subsequently, the Boston Metropolitan Planning Organization announced its support for enhancing the Green Line, but it proposed pushing the target completion date out to 2014 in order to address the many complex issues related to the project. This timeframe was based on an aggressive but realistic schedule for the planning, design and construction of the extension.

Since December 2005, the Green Line Extension project has been under review by the state Department of Environmental Protection. The project requires approval by the Department of Environmental Protection (DEP), the federal Environmental Protection Agency (EPA) and again by the Boston Metropolitan Planning Organization. Following approval, a detailed planning process would begin with the drafting of an environmental impact statement/report, which would take approximately 18 months to complete. It would be the responsibility of a consortium of state and federal agencies and legislators to take part in the planning process and to obtain funding for an eventual extension of the Green Line.

Clearly several years of planning, environmental review and engineering will pass before anything is built. Now is the time to get involved as a community and determine what we want to get out of the Green Line extension project.

#### **D. PROJECT ASSUMPTIONS AND OBJECTIVES**

In analyzing possible station sites, we have used the MBTA's 2005 *Beyond Lechmere Northwest Corridor Study* as our foundation document. The entire planning document is available online at [www.mbta.com/projects\\_underway/beyond\\_lechmere\\_planning](http://www.mbta.com/projects_underway/beyond_lechmere_planning). Several of the figures from the study are attached as an appendix to this document. We have adopted the basic assumptions of the 2005 MBTA proposal. They are that:

- The Green Line will be extended through Somerville to Medford
- The Green Line will run within the existing Lowell Line Commuter Rail right-of-way (the existing right-of-way appears to be wide enough to fit two additional tracks for the Green Line without takings of land or property - to be confirmed by the MBTA).
- The existing Lowell Line Commuter Rail tracks will be shifted to the north side of the right-of way (Wild Oats side), while the new Green Line tracks and stations will be placed on the south side of the right-of-way (Boston Avenue/Tufts University Main Campus side).

We have *not* considered the 2005 study's proposed Green Line stations on College Avenue and Winthrop Street and in West Medford as foregone conclusions. Instead we have attempted to evaluate them in line with a set of objectives that we believe any proposal extending the Green Line must meet. The objectives are as follows.

- Provide the maximum number of residents with convenient access to the Green Line without the need of a car.
- Accessibility: all new Green Line stations must be fully compliant with the Federal Americans with Disabilities Act (ADA) and Mass. Architectural Access Board (MAAB).
- Respect the character and scale of the surrounding community neighborhoods.
- Feature stations that are pedestrian- and neighborhood-oriented, not car-oriented.
- Provide well-designed and convenient connections to existing bus routes at all stations.

- Connect both sides of any Green Line station with its surrounding neighborhood.
- Create safe, welcoming transportation environments with high-quality station design.
- Connect all stations to existing and planned pedestrian and bike paths.
- Exclude the construction of any parking garage.
- Do no harm. Existing traffic and parking issues must be dealt with and not made worse.
- Take *no* Medford residence or business by eminent domain.
- If new development occurs near the stations, it must be Transit-Oriented Development in line with Massachusetts Smart Growth polices.

Using these guidelines, we now consider the Green Line extension to Medford. To begin we offer a brief discussion of parking and traffic.

#### **E. PARKING AND TRAFFIC**

The MBTA has a history of adhering to citizen demands that no parking structures be erected at neighborhood train stations. When the MBTA decided to extend the Red Line to Porter Square, Davis Square and Alewife in the early 1980s, a large parking garage and high-rise office building were proposed for the heart of Davis Square. Residents vehemently opposed this, believing the structures would wreak havoc in their neighborhood and worsen their own traffic and parking problems. They did not want to become a car-commuter destination. The garage and office tower ideas were ultimately rejected and replaced with a senior housing development, and Davis Square is better for it. The lesson learned from this is that if the community gets involved and makes its wishes heard, a better project will result. The people in Davis Square who opposed parking garages and more traffic did not kill the entire project but guided it in a direction that would mitigate problems and improve their overall quality of life. Medford needs to do the same.

Today our city's parking and traffic problems are acute, and they should be of central concern to any planning process. That is certainly the case here. One of the primary rationales for extending the Green Line to Medford is that it would help improve the city's parking and traffic problems by offering residents an affordable alternative to automobile use. Properly executed, the extension would be the only local transportation project in a generation that has been designed specifically to take cars *off* of Medford's roads. We fully recognize that some Medford residents are opposed or neutral to the Green Line for fear that it would exacerbate parking and traffic problems. However, good site selection and station design can bring the Green Line deep into Medford without that ill result. We therefore support construction of pedestrian-oriented Green Line stations - not stations with garages that would serve as automobile magnets.

Some may argue that, even without garages, the Green Line extension would add to Medford's problems by encouraging people to drive to Medford from surrounding communities and park illegally on the street to gain access to the train. The issue of illegal commuter parking already exists in portions of Medford. If the Green Line were to be extended to Medford, the problem could worsen, but only if the city's ineffective parking rules and lax enforcement were to remain unchanged. The solution to this is not to reject the Green Line; it is to fix the existing problem now with a long-overdue parking enforcement system across the city. Simply put, people will not park their cars illegally in Medford if they are ticketed daily.



## F. PROPOSED GREEN LINE STATION SITES

1. **Mystic River Area** - MGNA reviewed all potential sites along the commuter-rail corridor between the Mystic River and High Street (Route 60) to identify one that would be suitable for constructing a terminating Green Line station. We concluded that no such site exists. For instance, there are many Medford residents on Circuit Road and Canal Street whose front or back yards face that section of the corridor, and their quality of life would be adversely affected if a station were built *anywhere* within it. Furthermore, we concluded, a station in that area would:

- increase traffic and congestion
- provide inadequate bus access due to the relatively small scale of nearby streets
- fail to integrate into any given neighborhood
- raise the specter of eminent domain since a station could not be built without the taking of private land
- create a Green Line surface crossing at Canal Street

Beyond the extreme physical limitations of the area between Mystic River and Route 60, we respected the fact that many people living in that area strongly oppose extending the Green Line through their neighborhoods. They are concerned that the character of their neighborhoods would be compromised if a station were constructed literally in their backyards.

Concluding that there is no justification for extending the Green Line west of the Mystic River does not mean that Medford has no adequate location for a terminating station. We *strongly* recommend that the Green Line extension end before crossing the Mystic River and that a terminating station be constructed in proximity to Wild Oats and existing office buildings (**See MGNA Drawing 2**). Proposed Mystic River Green Line Station.) It is important to note from the outset that this would save tens of millions of dollars that the MBTA would otherwise have to spend to widen bridges leading to West Medford Square so they could accommodate additional train tracks.

Since the MBTA is planning to lay Green Line tracks on the Boston Avenue side of the commuter-rail corridor, we propose that a terminus be built in an open courtyard that exists on the same side of the corridor and adjacent to three existing commercial buildings. Two of the buildings, located at 196 and 200 Boston Avenue, are warehouses that have been renovated into office space; the third building is the U-Haul rental and storage facility. This area is away from all streets, about the size of a football field, underutilized and now pocked by old foundations and an irregular parking area. Unlike any location west of the Mystic River, it could easily accommodate commuter pick-ups and drop-offs by the 80 and 94 buses running along Boston Avenue. There would be no dedicated parking garages for car commuters, no mini-Alewives and no taking of buildings by eminent domain. Establishing bus service to the station would result in the loss of a few dozen parking spaces within the courtyard that could be recovered elsewhere within the existing complex.

Connecting the station to the surrounding area would be critical from all perspectives. We anticipate that additional bike and pedestrian routes along the Mystic River will be constructed, thereby augmenting neighborhood access to the station. This is an integral part of Medford's

official Open Space plan, which envisions continuous pedestrian and bicycle access from Arlington and the Mystic Lakes through Medford Square onward to Medford's new schools, to Station's Landing at Wellington and River's Edge. For the station to fully serve local neighborhoods, additional pedestrian connections would have to be created across the tracks to Wild Oats and the Walking Court housing development. If a direct pedestrian link to West Medford Square were constructed along the Commuter Rail tracks, the West Medford commuter rail stop would be less than a ten-minute walk or bike ride from the Green Line Station for hundreds of daily commuters. In addition, this station location is only a couple of hundred feet from Somerville and is within walking distance of east Arlington.

Of course, the owners of the properties in question – particularly Cummings Properties at 196 and 200 Boston Avenue and Wild Oats – need to be players in a formal Green Line planning process. While no property in Somerville or Medford would be taken by eminent domain under our proposal, we fully realize that business potential in the surrounding area could dramatically improve with a new Green Line station in its midst. In short, the extension would bring with it excellent opportunities for smart-growth and transit-oriented projects that we believe should include new housing and mixed-use development.

**2. Winthrop Street / Boston Avenue Area** In its 2005 *Beyond Lechmere Northwest Corridor Study*, the MBTA proposes that a Green Line station be constructed at the intersection of Winthrop Street and Boston Avenue. This is an extremely tight commercial district that is congested with traffic, particularly during the morning and evening rush hours. The area has a healthy small-scale commercial district serving primarily Medford residents and Tufts students. Three bus lines – the 80 to Lechmere/Arlington, the 94 to Davis/Medford Square and the 96 to Harvard/Medford Square rumble through this area several times an hour. Unfortunately the volume of traffic already makes the intersection of Winthrop and Boston unfriendly to pedestrians.

A workable Green Line station in this immediate area is difficult to imagine. Due to the tightness of the area and the narrowness of nearby streets and sidewalks there is no good place to site a station entrance without taking property through eminent domain. Building workable connections to the above-noted bus routes would also be difficult due to a lack of available space for stairs, elevators, bus pick-ups and drop-offs and the basics of sound, accessible station design.

Furthermore, the character of this area is very different on the two sides of the existing commuter-rail corridor. South of the tracks (the Boston Avenue side) the neighborhood is densely commercial with small eateries, a bakery, dry-cleaning establishment, barber shop, florist, hardware, liquor stores and other small-scale businesses. Interspersed is the back edge of Tufts' main campus residential housing units. The neighborhood on the north side of the tracks is exclusively residential. Any Green Line station proposed for the Winthrop Avenue/Boston Avenue area should be located within the Boston Avenue commercial district rather than the residential zone. But, as suggested above, the fundamental physical requirements of a station could not be met here without radically altering or removing existing buildings, re-dividing property and changing street patterns.

For all of these reasons we have concluded against locating a Green Line station directly near the intersection of Winthrop Street and Boston Avenue. In the next section we offer a counterproposal to building a Green Line station in this area of Medford.

**3. College Avenue/Boston Avenue/Tufts Area** The final Medford station location proposed by the MBTA is at the intersection of Boston Avenue and College Avenue. The location has many strong points but as many deficiencies. A direct Green Line link from the Tufts campus to Boston is appealing. Among the benefits would be more-flexible housing opportunities for students and a commuting alternative for the entire university community. Because Tufts owns so much of the surrounding area, there are more options for siting a Green Line station in it than there are in either the Winthrop Street or Mystic River area. Here a Green Line station could be located north or south of College Avenue to serve not just the university but also Medford's surrounding neighborhoods. Hillside and much of South Medford would be less than a 15-minute walk from the station.

It is worth noting that the MBTA's proposed stations at Ball Square and Lowell Street/Magoun Square are within walking distance of significant portions of South Medford. A total of four different Green Line Stations are within walking distance of many Medford residents – Mystic River/Route 16, Tufts/Hillside, Ball Square and Lowell Street/Magoun Square.

The College Ave/Boston Ave. intersection's traffic and pedestrian crossings have historically been very dangerous and were redesigned about five years ago. Though improved, it is still a difficult pedestrian crossing due to road alignments and poor sight lines for pedestrians, bicyclists and drivers. For a College Avenue station to serve a greater portion of Medford, it would have to have excellent connections to the 80, 94 and 96 bus lines that run along Boston and College Avenues. This would make siting the Green Line station south of College Avenue a challenge because no buses run along Boston Avenue south of the College Avenue intersection; they run along College Avenue to Powderhouse Circle and then on to Davis Square and/or Cambridge.

After noting difficulties with locating a station in the Winthrop Street area and after weighing the advantages and disadvantages of the College Avenue intersection, we propose that the two planned stations be combined into a single station located between College Avenue and Winthrop Street (**See MGNA Drawing 3**). As it stands, the MBTA's proposed Winthrop Street and College Avenue stations are only 3/8 of a mile apart, so combining them should not significantly reduce the Green Line's benefits to the area or its potential ridership. The exact location of a station between Winthrop Street and College Avenue can vary by several hundred feet along Boston Avenue since there are no buildings on the track side of Boston Avenue for almost 1,000 feet north of College Avenue. We have proposed to center the Green Line station entrance on the Tufts University parking garage, which also contains Tufts Police offices, a pedestrian link to the main campus and access to administrative offices.

To increase neighborhood connectivity across the commuter-rail corridor, we propose that a pedestrian-only bridge be built at the end of Brookings Street. This is the location of an existing (and dangerous) walking path that residents and students use to get across the tracks to avoid walking an extra half-mile to either Winthrop Street or College Avenue. Building a pedestrian bridge is consistent with the project's objective of integrating the Green Line into the fabric of surrounding neighborhoods.

## **G. CONCLUSION AND NEXT STEPS**

This document is a draft proposal. It is intended to define and respond to important community issues that have arisen since the Green Line extension through Somerville to Medford was proposed. We believe it satisfactorily addresses community concerns that have arisen in the past year and illustrates ways in which the Green Line could be extended into Medford to serve the greatest number of people in the most productive manner.

We fully understand that the proposal is one component of what will be a long design process. It could evolve as more information becomes available and more input is received from city officials, neighborhood residents and the local business and university community – not to mention the MBTA and state agencies. We welcome and encourage this input. An electronic version of this document can be found at <http://medfordgreenline.org/docs/stationstudy>. There is a place on the site for comments on the plan. Any plan can be improved with constructive criticism.

There is still much planning to be done at the MBTA, state and federal levels. We strongly urge the City of Medford to begin to address the Green Line extension and the issues it involves in a proactive manner. We also encourage the mayor to appoint a Green Line committee as soon as possible and with representation from all neighborhoods, businesses, abutters and interested parties.

In closing, we of MGNA would like to reiterate our belief that the Green Line extension to Medford represents a historic opportunity to improve our city's infrastructure without sacrificing anyone's quality of life. Indeed that quality of life would be improved by a well-planned system that would serve thousands of Medford residents, reduce automobile use and offer people an efficient and environmentally friendly mode of transportation.

Thank you for taking the time to read this proposal.

Medford Green Line Neighborhood Alliance

## APPENDIX

The following are selected drawings and diagrams from the MBTA's 2005 *Beyond Lechmere Northwest Corridor Study*.

- **Figure 5-5 – Alternative 1-C Conceptual Alignment.** MGNA Notes: This plan diagram shows the MBTA's original design for extending the Green Line along the existing Commuter Rail right-of-way through Somerville to Medford, with Medford stations at College Avenue, Winthrop Street and West Medford. MGNA proposes different Green Line station locations in Medford.
- **Figure 5-2 – Typical Section: Proposed LRT with Commuter Rail.** MGNA Notes: The new Green Line tracks are on the left-hand side of the diagram (Boston Avenue side) while the relocated Commuter Rail tracks are on the right side (the Wild Oats side), separated by a 2-foot thick concrete wall. This section diagram applies throughout the length of the Green Line Extension except where the Green Line stations are located.
- **Figure 5-3 – Typical LRT Station Plan and Elevation.** MGNA Notes: As you can see the dimensional requirement at a station is wider than the typical right-of-way width because the station platform is in-between the tracks. The diagram calls for a lengthy ramp to access the platform for a pedestrian cross-over. We strongly endorse the use of an elevator to a lengthy ramp system.
- **Figure 5-4 – Typical LRT Station Section.** MGNA Notes: This diagram is a companion to Figure 5-3 showing in more detail the configuration of the Green Line platform in relation to the Commuter Rail tracks that pass by unchanged. It is also worth comparing this figure to Figure 5-2, which shows the same configuration at a typical non-station section of the track.