bpda

A-B MOBILITY

ALLSTON-BRIGHTON MOBILITY PLAN

MAY 2021

boston planning & development agency

May 2021

Dear Allston-Brighton Community Members:

After nearly three years of collaboration with community residents, businesses, stakeholders, advocates, and state agencies—and reflecting on 1,600 public comments received--I am proud to present this blueprint for a safer, more sustainable, and more equitable mobility future for the Allston-Brighton neighborhood.

With several million square feet of new development that has been approved, is under review, or under construction, Allston-Brighton is currently one of the fastest growing neighborhoods in Boston. While we welcome the opportunity that development can create in the form of new jobs, new housing, economic development, and neighborhood vibrancy, we also understand the very real concerns around how the neighborhood's multimodal transportation will support this development, sustainability and equitably.

The A-B Mobility Plan addresses these concerns by presenting recommendations that will:

- Build the transit network by adding two miles of dedicated transit lanes
- Complete the bike network by adding four miles of east-west bicycle facilities
- Increase walkability
- Enhance and maintain street and neighborhood experience
- Implement area-specific improvements across Allston-Brighton

Recognizing that an attractive public realm invites more walking and bicycling, the Plan also calls for beautification of public spaces, including tactical placemaking projects and a pilot street tree program.

Finally, understanding that our plans must yield tangible results, the A-B Mobility "Action Plan" identifies nearly a dozen plan recommendations to be implemented by 2025.

I am grateful to all community members who have dedicated time to create this plan, and I look forward to working with our partners in other City departments and the neighborhood as we turn our attention now to translating this Plan into action.

Sincerely,

Brian P. Golden
Director

ACKNOWLEDGMENTS

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Priscilla Rojas, *Chair*
Michael P. Monahan, *Vice Chair*
Carol Downs, *Treasurer*
Dr. Theodore C. Landsmark, *Member*
Brian Miller, *Member*

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We especially want to thank the members of the interdepartmental Working Group who devoted hundreds of hours to providing input and guidance in the development of the plan.

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We also appreciate the time, energy and leadership dedicated to this project on behalf of

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State Representative Kevin Honan
State Representative Michael J. Moran

Community Organizations
Allston Board of Trade
Allston Brighton Health Collaborative
Allston Civic Association
Allston Village Main Streets
Brighton Allston Improvement Association
Brighton Board of Trade
Brighton Main Streets
Charlesview, Inc.
Friends of Oak Square
Jackson Mann Community Center

Navigating this Document

This document when viewed electronically contains various interactive elements to assist you in navigating information. Following are descriptions of the interactive options.

Items listed under the Contents, when clicked, will lead to the corresponding section.

References are provided throughout the document to figures, tables, and page numbers for sections containing further information. Each of these, when clicked, will lead to the item.

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EXECUTIVE SUMMARY

1

EXECUTIVE SUMMARY

People who live, work, and visit Allston-Brighton deserve access to safe and comfortable travel options. Allston-Brighton's transportation network should continue to evolve to meet the changing needs of its diverse, growing communities.

An increasing number and variety of people use Allston-Brighton's streets for safe, non-motorized travel. Sidewalks, bicycle facilities, and curbside space are vital infrastructure.

Boston's Allston-Brighton neighborhood is experiencing substantial growth and development. People have historically been drawn to the diverse, affordable residential neighborhoods and lively commercial and cultural centers in Allston-Brighton. Approximately 11 million square feet of new development has been approved, is pending approval, or is under construction as of this writing. Along with existing community members, the people who will move to, work in, or visit Allston-Brighton in response to this new development will all need access to streets, sidewalks, and the curbside.

Many of today's residents are concerned that ongoing land use changes in Allston-Brighton are exceeding the transportation network's ability to accommodate new growth.

Ongoing community engagement has highlighted concerns about the connection between ongoing development and increased traffic congestion. A more mobile future depends on taking pressure off the streets by making it easier to get around by multiple modes. Increased numbers of people traveling to and through Allston-Brighton by foot, bike, or transit could lead to conflicts between modes and safety issues if the transportation network does not evolve to meet their needs. As Allston-Brighton's population and economy continue to grow, how the transportation network evolves will determine how people move safely, comfortably, and efficiently.

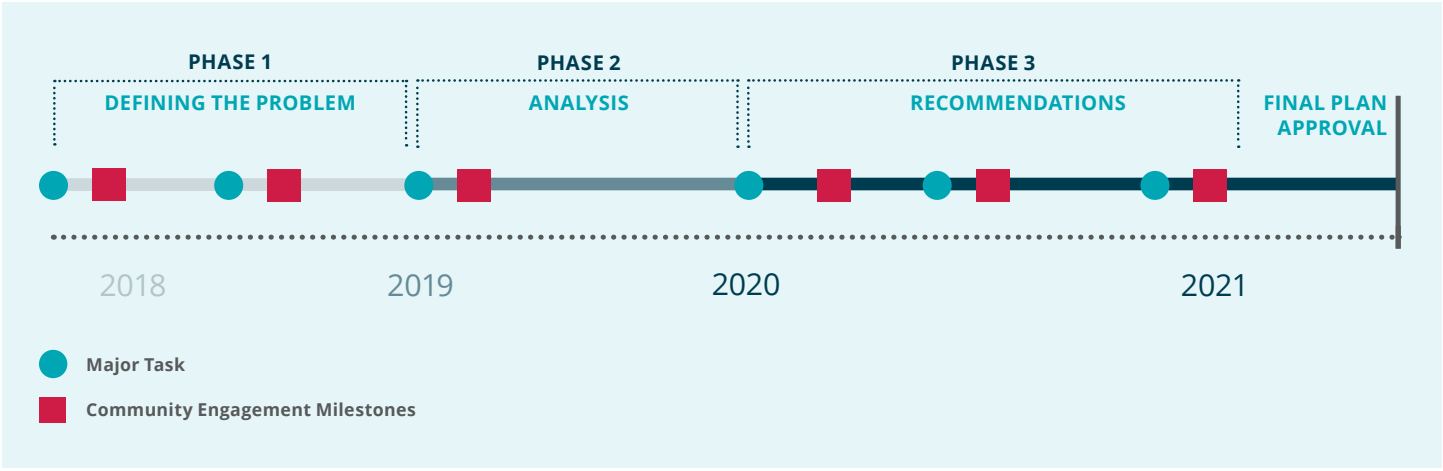
Commonwealth Avenue includes space for all modes

Source: BPDA

Community engagement with residents of Oak Square

Source: Kittelson & Associates, Inc.

Allston-Brighton Mobility Study Schedule and Community Engagement Milestones



The Allston-Brighton Mobility Plan was developed to increase safety, comfort, and access for all users.

Building on community feedback, the Boston Planning & Development Agency (BPDA) developed the Allston-Brighton Mobility Plan's Vision to make Allston-Brighton safer and more comfortable for all modes while making way for a more sustainable future in the face of climate change.

The Allston-Brighton Mobility Plan establishes **nine goals** in support of the study's Vision.

1. Increase safety for all modes
2. Allocate space in streets to accommodate diverse users
3. Increase the sustainability of the transportation system
4. Improve equity in transportation
5. Provide priority accommodations for buses
6. Create a more attractive and comfortable walking and bicycling environment
7. Enhance parking and permit regulations
8. Accommodate local and regional growth
9. Identify opportunities for new development to mitigate its transportation impacts

The BPDA took a community-oriented approach to developing the study. Public feedback informed each step of the process.

The BPDA reached out to Allston-Brighton using a mix of online and in-person community engagement platforms between fall 2018 and fall 2020 to gather input. More than 1,200 comments were received during one or more of the study's three phases:

Phase 1: Defining the Problem

Phase 2: Analysis

Phase 3: Recommendations

An interdepartmental working group used community feedback to refine the study.

The BPDA convened an interdepartmental working group to represent City partners and serve as a sounding board for each step of the study:

- boston planning & development agency
- City of Boston Disabilities Commission
- City of Boston Public Works
- City of Boston Transportation
- City of Boston Neighborhood Services

The working group guided the study and helped identify and evaluate the alternatives that would best serve people traveling in Allston-Brighton.

The study will serve as a guide for planners in City Hall and community members in Allston-Brighton.

The Planning Process section outlines how the plan was developed, including study background, study area, and schedule.

The Community Engagement section provides additional detail on public outreach efforts, including summaries of in-person and online community engagement events.

The Planning Context section summarizes transportation and land use trends identified in existing plans. It includes the study vision and goals, and relevant development trends identified during Phase 1 of the study ("Defining the Problem").

The Areawide & Network Recommendations section presents the study's overarching recommendations.

The Area-Specific Recommendations section presents the study's location-specific recommendations.

The Action Plan section presents priority projects for implementation, addressing timing and costs.

Periodic Updates on Plan Implementation

Working in close coordination with the Boston Transportation Department and the Public Works Department, the BPDA will track implementation of the Action Plan (Chapter 7) and post periodic updates at the A-B Mobility project web page at bit.ly/ABMobility.

The Plan presents recommendations to:

- **Build a transit network**
- **Complete the bike network**
- **Increase walkability**
- **Enhance the main street and neighborhood street experience**
- **Simplify intersections for all users**

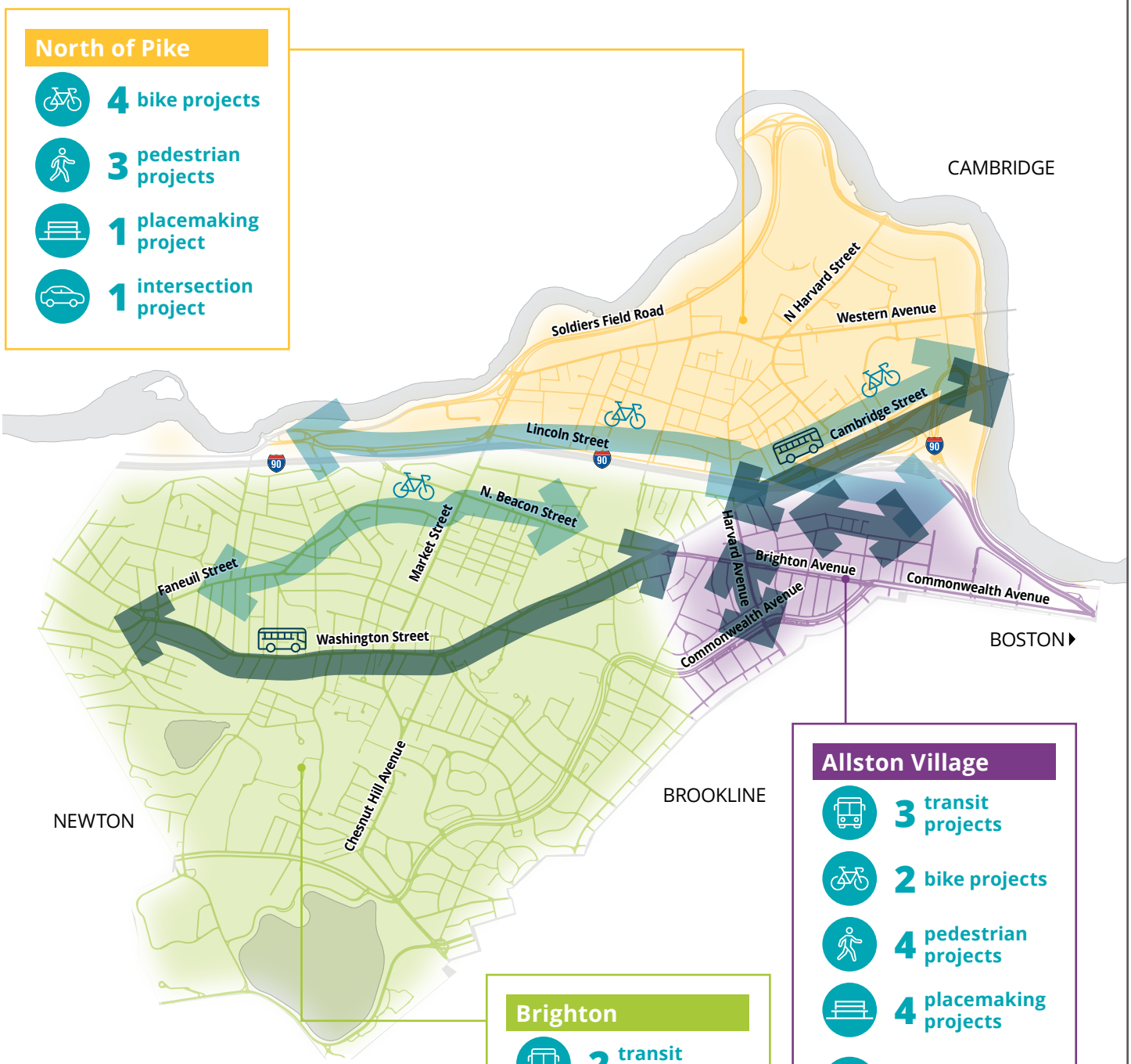
These recommendations comprise the following:

Building the transit network to add two miles of dedicated transit facilities

Completing the bicycle network with four miles of east-west bicycle facilities

Implementing area-specific interventions across Allston-Brighton

For easy reference, Appendix A contains a summary list of all plan recommendations.


North of Pike
4 bike projects
3 pedestrian projects
1 placemaking project
1 intersection project
CAMBRIDGE
Soldiers Field Road
N Harvard Street
Western Avenue
Cambridge Street
Lincoln Street
N. Beacon Street
Market Street
Faneuil Street
Washington Street
Harvard Avenue
Brighton Avenue
Commonwealth Avenue
Commonwealth Avenue
BOSTON
NEWTON
Chesnut Hill Avenue
BROOKLINE
Allston Village
3 transit projects
2 bike projects
4 pedestrian projects
4 placemaking projects
2 parking projects
Brighton
2 transit projects
4 bike projects
8 pedestrian projects
2 placemaking projects
4 intersection projects
2 parking projects

PLANNING PROCESS

2

PLANNING PROCESS

Hundreds of community members helped shape this plan, informing a menu of recommendations to improve mobility in their neighborhoods.

Study Background

The Allston-Brighton Mobility Plan provides a road map to a safer, more accessible, more connected transportation network in one of Boston's fastest growing areas. Informed by community priorities, its goal is to improve mobility and quality of life for all neighborhood residents.

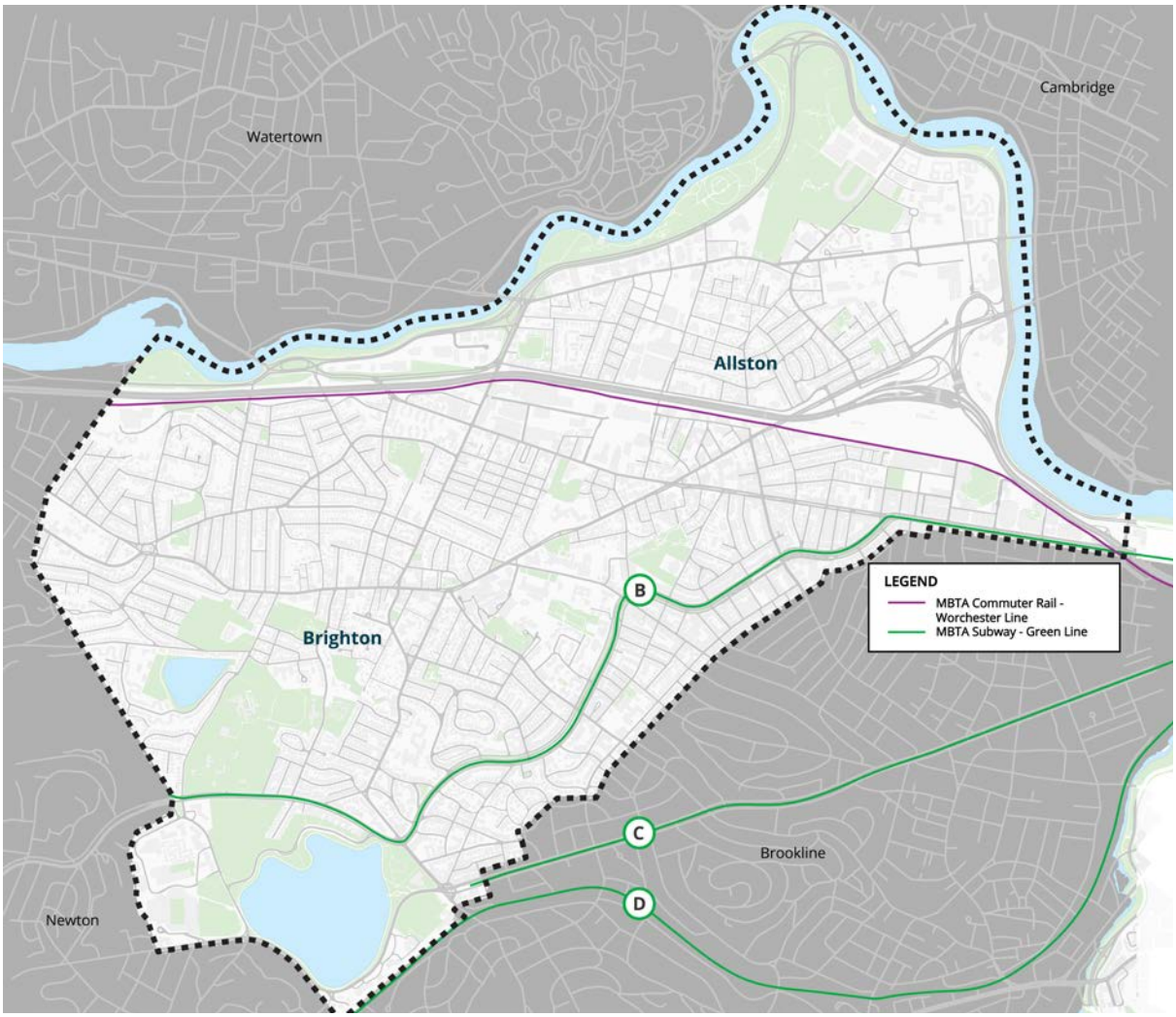
In coordination with other City departments, the Boston Planning & Development Agency (BPDA) led a two-year planning process for the Allston-Brighton neighborhood. Through this study, the planning team analyzed issues, opportunities, and community needs and evaluated a variety of ways to improve mobility, access, and safety for people traveling the area by all modes. The completed study provides a clear understanding of:

- a detailed assessment of transportation needs in Allston-Brighton, and
- a preferred set of recommendations to improve safety and mobility for all modes.

Study Area

The plan area encompasses the Allston and Brighton neighborhoods, which are bounded by the communities of Cambridge, Brookline, Newton, and Watertown, as shown in Figure 01. Boston's Allston and Brighton neighborhoods face unique challenges in balancing the needs of residential communities, local businesses, and recent, significant growth and new development. While growth brings economic opportunity and vibrancy, it also raises questions and concerns about how the existing and future multimodal transportation network will accommodate new development.

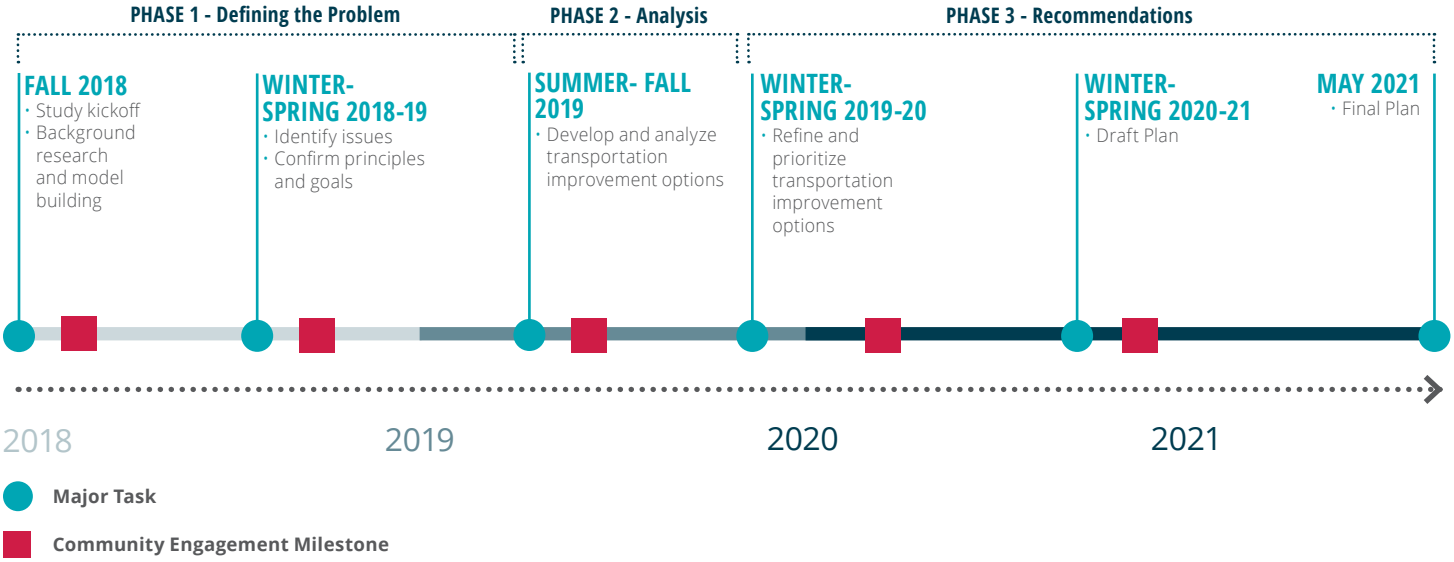
FIGURE 01 ALLSTON-BRIGHTON MOBILITY PLAN AREA



Study Schedule

The BPDA carried out the study in three phases between September 2018 and Spring 2021 (see Figure 02). The tasks associated with each project phase are summarized below and described in greater detail throughout this report.

FIGURE 02 ALLSTON-BRIGHTON MOBILITY PLAN SCHEDULE



Phase 1: Defining the Problem

The BPDA reached out to the community to learn more about their needs and reviewed existing plans and data. Findings from Phase 1 were used to establish goals for the study.

Phase 2: Analysis

Data were collected and the issues and opportunities identified in Phase 1 were analyzed. Findings from the analysis were used to develop an initial list of potential improvements throughout the plan area. A work plan was then created to evaluate the merits and feasibility of the initial list of potential improvements. The work plan was vetted through additional community outreach. The key outcome of this phase was a series of transportation options throughout the plan area. The options identified in Phase 2 were presented to the public at a public meeting in December 2019.

Phase 3: Recommendations

The options identified in Phase 2 were presented at multiple meetings with community groups. The interdepartmental working group used the community's feedback to refine the options, which were again presented to the public through a second series of community meetings and online engagement. The interdepartmental working group used feedback on the refined alternatives to further refine and recommend preferred options. The outcome of Phase 3 was the final set of recommendations for the study area, which are presented in this plan.

Winter 2019 Open House

Source: BPDA

Community Engagement

Public opinion was solicited early and continuously throughout each phase of the study. A variety of forums, means and tools were employed to hear from diverse voices and meet people where they were. The study's community engagement efforts are described in the next section of this report.

KEY TAKEAWAYS

- The study comprised three phases: defining the problem, analysis, and recommendations.
- Community input informed each step of the process.

> Bike lanes are often blocked by delivery trucks, pulled-over cars, and other traffic, so that as a bike rider I am forced to ride on the sidewalk or over into mainstream traffic.
>
> —Community Member Comment, 01/28/2020

COMMUNITY ENGAGEMENT

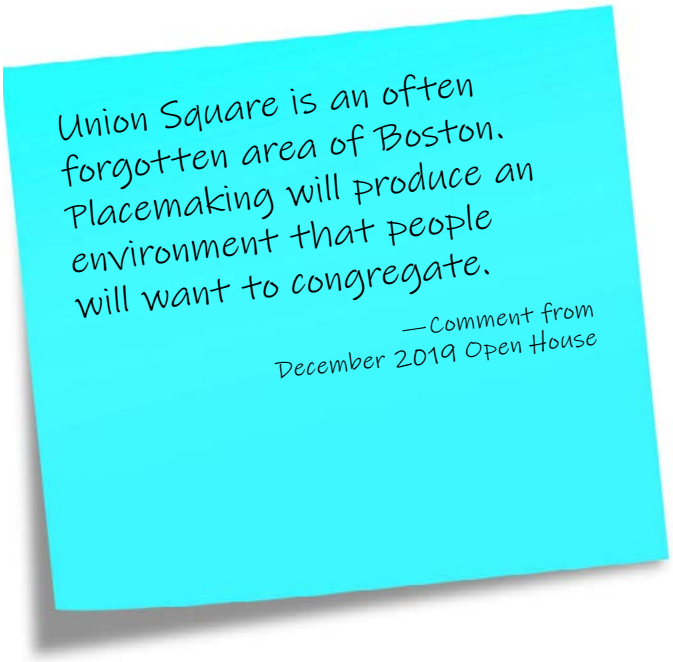
3

COMMUNITY ENGAGEMENT

The creation of this Plan is guided by more than 1,600 public comments, the result of nearly 30 opportunities for input.

The experiences of residents, business owners, and community groups played an integral role in the development of the Allston-Brighton Mobility Plan. The comments and suggestions related to mobility, safety, and access helped shape study goals and identify transportation-related safety concerns throughout the planning process. Community members submitted over 1,600 comments related to transportation challenges, observations, and preferences through public meetings, areawide workshops, community events, an interactive online mapping tool, and emails to the abmobility@boston.gov email address.

This section describes the community engagement efforts that accompanied each phase of the study. For a complete record of public comments received during the community engagement process, visit the Allston-Brighton Mobility Plan's web page at bit.ly/ABMobility.



Open House September 2018

The planning process officially kicked off at an open house on September 12, 2018. The BPDA and partner agencies, including the Massachusetts Department of Transportation (MassDOT), the Massachusetts Bay Transportation Authority (MBTA), the Metropolitan Area Planning Council (MAPC), the Central Transportation Planning Staff (CTPS), the Boston Public Works Department (PWD), the Office of Neighborhood Services (ONS), and Boston Transportation Department (BTD), were on hand to discuss the scope and type of improvements the mobility study would be examining. More than 100 community members attended and provided over 200 comments related to all transportation modes. Common themes identified during the meeting included safe street crossings, frequent and reliable transit, better bicycle infrastructure, effective parking capacity management, and connectivity to green and open space.

FIGURE 03 OUTREACH TIMELINE

COMMUNITY ENGAGEMENT

OPEN HOUSES	4
AREA WORKSHOPS	6
CIVIC GROUPS	10
ONLINE TOOLS	3
INDIVIDUAL EVENT ATTENDEES	313
COMMENTS RECEIVED	1,600

Open House January 2019

The BPDA study team reviewed the comments received during the initial September 2018 open house and analyzed existing data from Vision Zero Boston to identify priority locations for possible improvements in Allston-Brighton. On January 30, 2019, the BPDA held a second community meeting to seek public input on the preliminary list of priority locations for further analysis and to solicit feedback on the draft goals for the study. The study team also presented the community with a toolbox of potential improvements based on observed transportation challenges and encouraged them to visit the project's interactive online mapping tool to either confirm existing priority locations or identify new opportunities. More than 50 community members attended the January 30, 2019 community meeting and provided over 50 comments related to all modes of transportation.

> It can take up to an hour to travel the four miles to Kenmore Square. We are in favor of rush hour bus lanes in Oak Square and Brighton Center to help make bus travel more efficient.
>
> —Comment from Online Map

Allston Village Area Community Workshop

Source: Kittelson & Associates, Inc.

Area Workshops February/March 2019

Following the January public meeting, the BPDA held workshops in February and March 2019 in three targeted locations of Allston-Brighton: Fiorentino Community Center, Tavern Allston, and Brighton Public Library. The purpose of these workshops was to identify transportation challenges and brainstorm mobility solutions. Over 300 comments were provided by workshop participants.

Area Workshops July 2019

The BPDA engaged the Allston-Brighton community in a second round of area workshops in July 2019. These workshops focused on sharing the work plan and confirming that the areas being studied matched community member priorities. The workshops were held at the Fiorentino Community Center, Jackson/Mann School, and Brighton Public Library.

Open House December 2019

The BPDA presented preliminary draft recommendations for mobility improvements throughout Allston-Brighton on December 16, 2019. Many of the recommendations included multiple options for each specific location. Meeting participants were encouraged to indicate their preferences. The draft recommendations were also made available for public review and comment in an online interactive map. Nearly 50 community members attended the meeting and submitted close to 100 comment cards relating to the proposed recommendations.

Civic Group Engagement January/February 2020

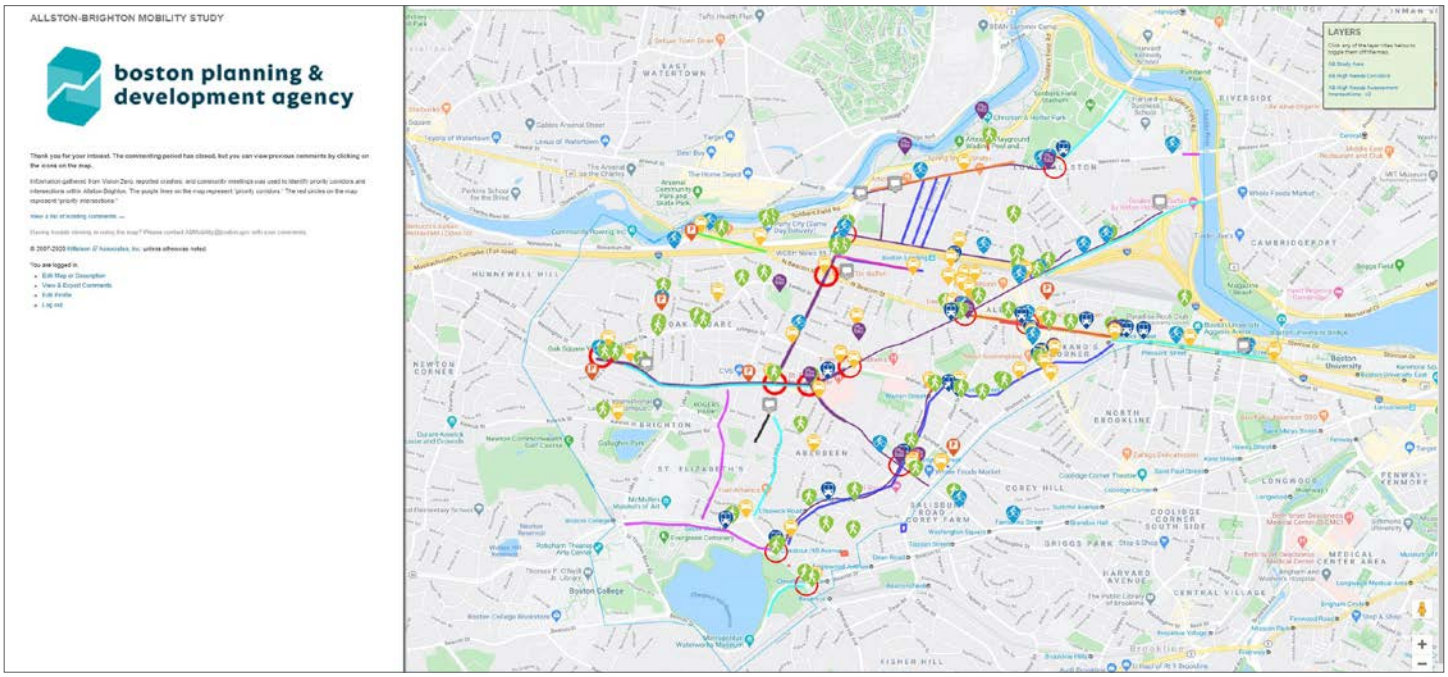
The study team attended various civic group meetings to present the preliminary draft recommendations. The groups included:

- Allston Brighton Health Collaborative (ABHC);
- Allston Board of Trade;
- Brighton Board of Trade;
- Brighton Main Streets;
- Allston Village Main Streets;
- Allston Civic Association; and
- Brighton Allston Improvement Association (BAIA).

Oak Square Area Workshop March 2020

Based on preliminary feedback from the community, the BPDA decided to set aside the prior draft recommendations for Oak Square and begin anew. This meeting included a presentation followed by breakout groups to discuss what currently works well in Oak Square and what, if anything, should change to improve mobility. From this workshop, a consensus emerged that no major changes were desired for Oak Square's plaza, that there should be a focus on improved, safer crosswalks and more fine-tuned curbside parking and loading strategies to support businesses.

FIGURE 04 INTERACTIVE ONLINE MAPPING TOOL



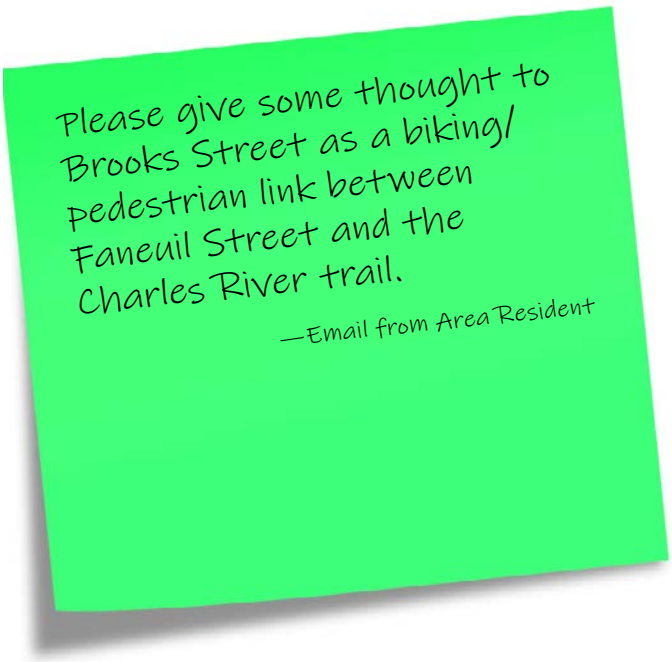
Source: Kittelson & Associates, Inc. (http://maps.kittelson.com/allston-brighton-public-meeting)

Winter 2019 Open House

Source: BPDA

Draft Plan Engagement November 2020-February 2021

Following the release of the Draft A-B Mobility Plan on November 11th, 2020, the BPDA conducted a series of virtual public meetings to receive feedback. This included two informal "Online Chats with a Planner", a virtual open house, meetings with the Allston Village and Brighton Main Streets groups, a meeting with the Brighton Allston Improvement Association, and an online feedback tool. Additionally, the BPDA put copies of the Draft A-B Mobility Plan in the Honan-Allston Branch and the Brighton Branch of the Boston Public Library. Over 400 comments were received throughout this engagement.



Interactive Online Tools

Three interactive online tools were launched during the study. The first tool was a map made available after the January 2019 public meeting to give the community an opportunity to identify and confirm the initial priority locations within Allston-Brighton. This tool was available for approximately two months and garnered over 200 comments related to pedestrians, bicyclists, transit, motor vehicles, parking, and placemaking. A second map was released after the December 2019 public meeting. It identified the preferred draft options proposed for the priority locations and allowed the community to review and provide comments. The second mapping tool was available for approximately three months and resulted in close to 100 detailed comments about the proposed options at the priority locations. The third tool was an online feedback tool for community members to comment directly on the Draft Plan. This feedback tool was made available for 4 months starting in November of 2020 and resulted in nearly 70 comments about the Draft Plan.

KEY TAKEAWAYS

- The public was invited to comment through public events, email, and the interactive online mapping tool.
- Over 1,600 comments were received.
- More than 300 individual community members participated in one or more engagement events.

PLANNING CONTEXT

4

PLANNING CONTEXT

Allston-Brighton is one of Boston's fastest growing neighborhoods. Understanding the area as it is now and goals already guiding its growth is the key to understanding its future transportation needs.

Plan Purpose

The Allston-Brighton Mobility Plan provides a roadmap to improve mobility and quality of life for all neighborhood residents. The plan's actionable recommendations target enhanced mobility, access, and safety for people traveling the area by all modes.

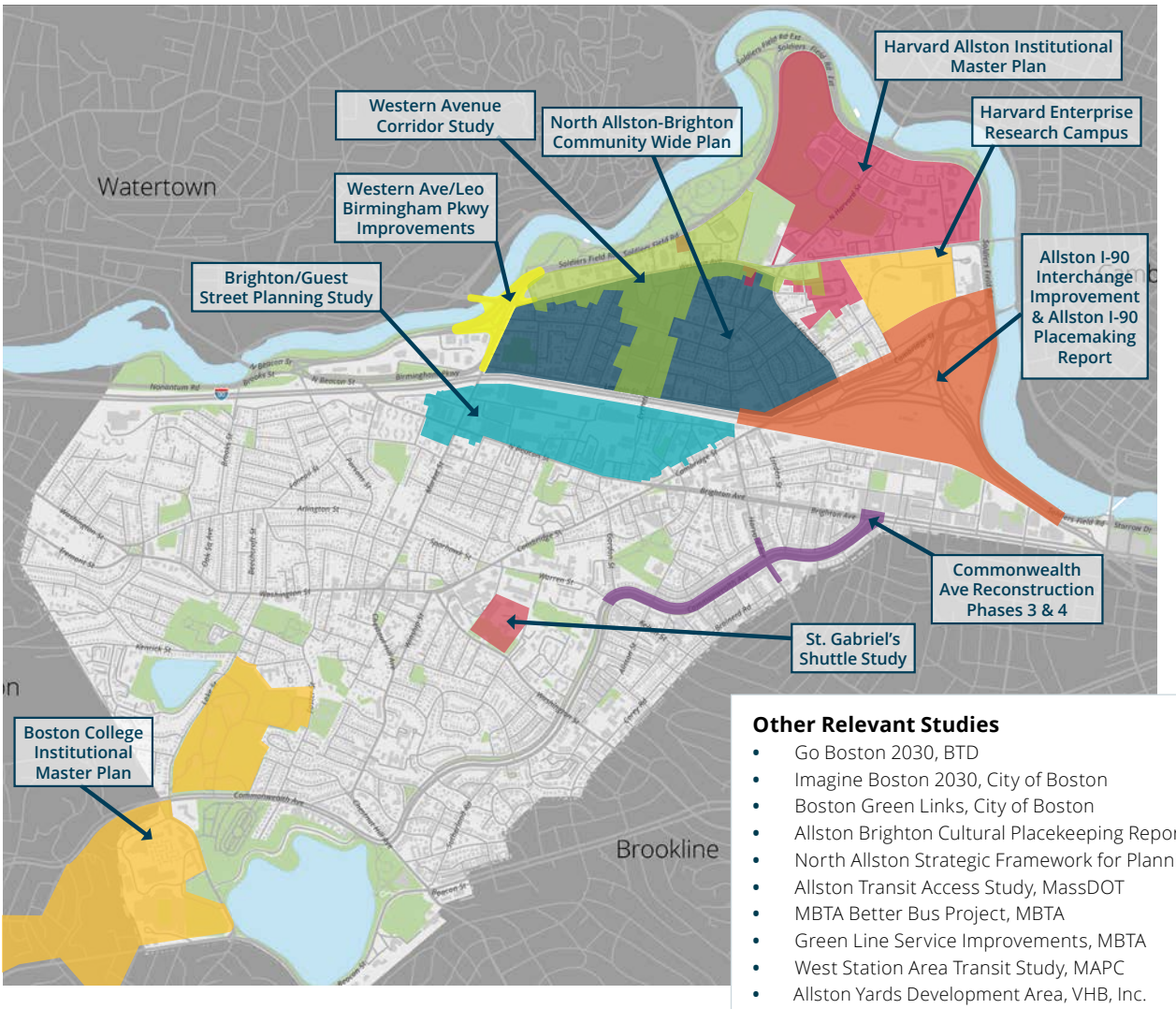
During the initial stage of the AB Mobility Study, an Existing Conditions Report was prepared. The report provides a snapshot in time of mobility related conditions and trends in Allston-Brighton, including multimodal transportation data. The Existing Conditions report can be viewed at bit.ly/ABMobilityExisting.

Existing Plans

There are numerous other planning initiatives that guide transportation development in Allston-Brighton (shown in Figure 05). The planning process for the Allston-Brighton Mobility Plan began with a thorough review of these plans, which served as a point of departure for this Plan.

Two of the strongest influences on the Allston-Brighton Mobility Plan were Go Boston 2030 and Imagine Boston 2030. Their goals include making Boston neighborhoods safe for people traveling by all modes, increasing the predictability of transit and roadway travel, reallocating space for more efficient street use, and accommodating more diverse, sustainable modes of travel. Together, these plans envision a city where growth and new transportation investment bring residents better, more equitable travel choices, economic opportunity, and a more livable community.

FIGURE 05 PAST AND ONGOING PLANNING INITIATIVES IN ALLSTON-BRIGHTON



Other Relevant Studies

- Go Boston 2030, BTD
- Imagine Boston 2030, City of Boston
- Boston Green Links, City of Boston
- Allston Brighton Cultural Placekeeping Report
- North Allston Strategic Framework for Planning, BPDA (f/ BRA)
- Allston Transit Access Study, MassDOT
- MBTA Better Bus Project, MBTA
- Green Line Service Improvements, MBTA
- West Station Area Transit Study, MAPC
- Allston Yards Development Area, VHB, Inc.

The mode share goals in Go Boston 2030 and Imagine Boston 2030 call for increasing public transit by a third, increasing walking by almost half, increasing bicycling fourfold, and reducing driving alone by half.

Some specific recommendations for Allston-Brighton contained in Go Boston 2030 include:

- Walking- and biking-friendly main streets, specifically:
  - Brighton Main Streets: along Washington Avenue through Oak Square and through Brighton Center.
  - Allston Village Main Streets: along Cambridge Street, Brighton Avenue, and Harvard Avenue (south toward Brookline).
- Mobility GoHubs! at prominent access points to share transit and a range of travel choice options: these should be located along Commonwealth Avenue at the T Stops and at major crossroads, including Oak Square, Brighton Center, Market Street/N Beacon Street, Faneuil Street/Parsons Street,
- Better bike corridors with protected and low-stress bicycle facilities.

The North Allston Strategic Framework Plan also included strategies to reduce traffic through neighborhoods and increase mobility options through new transit, bicycle, and pedestrian options in order to accommodate new growth, including Harvard's expansion plans.

To realize transit improvements in the plan area, the BPDA will collaborate with the agencies that generated the relevant plans, including the City of Boston, MassDOT, MBTA, and DCR.

Western Avenue Corridor Study

The BPDA is currently also developing a plan for the Western Avenue Corridor area called the Western Avenue Corridor Study and Rezoning ("Western Avenue Corridor Study", bit.ly/westerncorridor). The boundaries of the study area are shown in Figure 5. The Western Avenue Corridor Study will inform recommendations for new zoning for the study area while also recommending public realm and transportation improvements. Transportation recommendations will focus on Western Avenue between Market Street and Barry's Corner, and Telford Street and Everett Street between Western Avenue and Lincoln Street. Accordingly, the Allston Brighton Mobility Plan will defer to the Western Avenue Corridor Study for the transportation recommendations for these locations. It is anticipated that the Western Avenue Corridor Study will be completed by mid-2021.

Development Trends

Why Allston-Brighton and Why Now?

Allston-Brighton is one of the fastest growing neighborhoods in Boston. Approximately 10 million square feet of new development has been approved, is pending approval, or is under construction at time of writing. As shown in Figure 06, the development that is planned would mostly bring new housing to the neighborhood.

Figure 07 shows where these new development projects are happening. Most are concentrated in the Guest Street area around Boston Landing Station, around the Warren Street and Washington Street T stops on the Green Line, near St. Elizabeth's Hospital and the Brighton Marine Health Center, and in the vicinity of Barry's Corner.

Goals

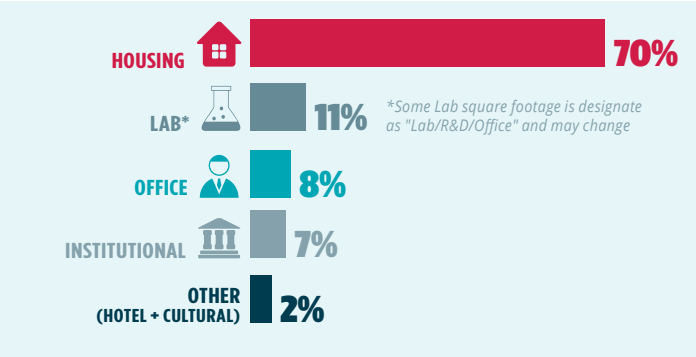
The plan's goals informed by community member comments, suggestions from the public engagement process, by a review of existing citywide and neighborhood plans. They were designed to ensure that the plan's multimodal transportation infrastructure improvement options would match the principles that guide Allston-Brighton's growth. The goals target increased **safety for all modes**—pedestrian, bicycle, transit, and passenger vehicles—while working towards a Vision Zero Boston.[1]

- Guided by Boston Complete Streets,[2] **allocate space in streets** to accommodate diverse users safely and comfortably.
- Increase the **sustainability** of the transportation system by emphasizing walking, biking, and transit.
- Improve **equity** in transportation by increasing opportunities for affordable transportation.
- Identify corridors and intersections for **priority accommodations for buses**, based on where demand is greatest.
- Create a more attractive and comfortable walking and bicycling environment by **improving streetscapes** and establishing active spaces.
- **Enhance parking and permit regulations** to preserve space for existing residential and commercial needs and to encourage alternative travel modes within the Allston-Brighton neighborhood.
- Create a transportation system that enhances mobility while **accommodating local and regional growth**.
- Identify strategic opportunities where proposed **new development can mitigate its transportation impacts** by funding, building, or otherwise providing appropriate mobility and accessibility improvements.

1 Vision Zero Boston is our commitment to focus the City's resources on proven strategies to eliminate fatal and serious traffic crashes in the City by 2030. https://www.boston.gov/transportation/vision-zero

2 Adopted by the City of Boston in 2013, Boston Complete Streets Design Guidelines offer detailed guidance on making our streets more engaging, sustainable, and safe for all users. https://bostoncompletestreets.org/

FIGURE 06 SOURCES OF NEW GROWTH IN ALLSTON-BRIGHTON (BY SQUARE FOOTAGE)



Source: bostonplans.org

Approximately 70 percent of this new development is residential, showing the strong demand for housing in this neighborhood (see Figure 06). The demand is largely explained by two factors: proximity and affordability. Allston-Brighton is near major employment centers such as downtown Boston, Kendall Square, Harvard University, Boston University, and the Longwood Medical Area. Its housing prices are more affordable than other neighborhoods close to downtown.

Growth has brought opportunities to the area, but it has also increased housing prices and placed a strain on the transportation infrastructure. Growth in surrounding communities, like Cambridge, Watertown, and Brookline, also contributes to congestion in Allston-Brighton.

Until recently, the MBTA's Green Line was the only rail-based transit service in the area. Recent transit investments, like the Boston Landing commuter rail station and the Brighton Avenue bus lanes add premium service to the neighborhood. Despite these investments, most of Allston-Brighton still lacks frequent, convenient transit access.

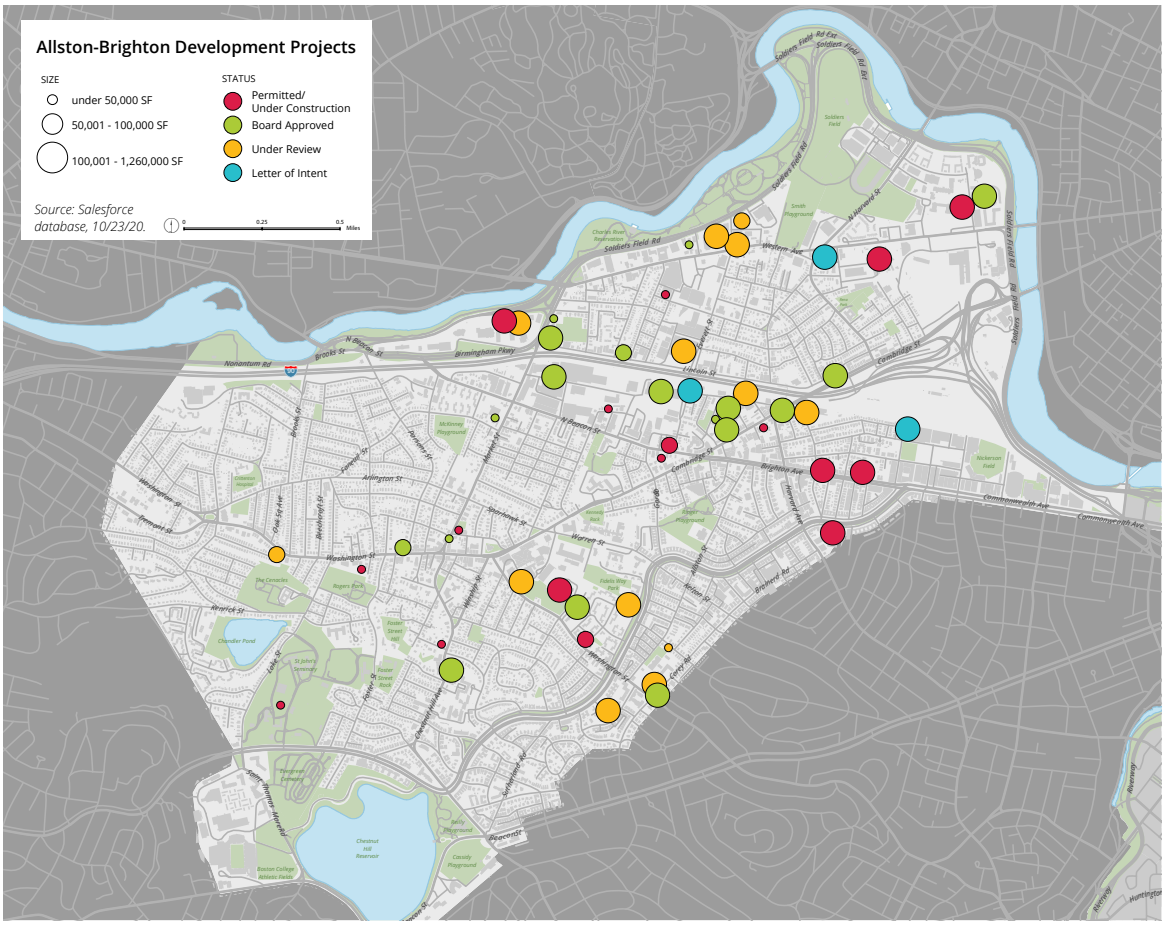
Reshaping Allston-Brighton through Transportation Investment

Allston-Brighton has seen significant new transportation infrastructure investments recently.

In 2017, the new Boston Landing train station opened on the Framingham Worcester-Commuter Rail Line in the Guest Street area. New Balance, whose new campus the station serves, contributed $20 million to its development.

Not only has the new station increased travel options for employees and commuters, it has spurred other major development in the area (see Figure 05) and provided new transportation options for people living, working and shopping in the Boston Landing campus and neighboring businesses. By opening up a new travel option along the Worcester-Framingham Line that connects people with Downtown Boston and points west, Boston Landing Station demonstrates the significant impact new transit service can have on transit use and real estate investment.

FIGURE 07 DEVELOPMENT PROJECTS UNDER ARTICLE 80 REVIEW, APPROVED, OR UNDER CONSTRUCTION



Source: bostonplans.org (http://www.bostonplans.org/projects/development-projects?mapview=1&type=dev)

Route 66 on Cambridge Street

Source: BPDA

The neighborhood has also seen shorter and more reliable travel times from the recently installed bus rapid transit lanes on Brighton Avenue.

MassDOT has worked closely with the Allston I-90 Community Task Force over the last several years to develop a new design for the Allston I-90 interchange. The reimagined interchange sets the stage for a new walkable, sustainable, mixed-use, transit-oriented neighborhood in Beacon Yards.

A new multimodal transit station at Beacon Yards and West Station, will serve as a hub for local and regional commuter rail, urban rail, and bus travel serving the Worcester-Framingham Line and local employment centers, such as Downtown Boston, Kendall Square, and the Longwood Medical Area.

The new Allston I-90 Interchange is expected to take approximately 10 years to construct. If all goes as planned, the new multimodal West Station will facilitate walkable, transit-oriented development in Beacon Yards.

The BPDA's Article 80 development review process offers potential funding opportunities through mitigation for transportation improvements that will offset the impacts of new development.

Several recently approved Article 80 development projects have been mandated to either build or provide funding for transportation improvements. The St. Gabriel's development project, for example, was required to begin operating a shuttle service in early 2020 from their project to Boston Landing Station. Other developments must contribute funding to expand the shuttle service and/or join the Allston-Brighton Transportation Management Association (ABTMA), which will eventually be responsible for operating and expanding it.

Still other projects have been required to construct or fund new bus shelters, crosswalks, Bluebikes stations, traffic signal improvements, bike lanes, and a host of other transportation improvements. The Allston Square project has designated several open spaces for public art, and included a series of pedestrian passageways that utilize murals and specialty lighting to highlight new connections, making them as attractive as they are functional. Many of the improvements recommended in the Allston-Brighton Mobility Plan will also be funded wholly or in part by Article 80 development projects.

Planned Transportation Improvements

Many transportation improvements are already in the works for Allston-Brighton, as shown in Figure 10 of the Existing Conditions Report (bit.ly/ABMobilityExisting). City and State agencies—including BTD, PWD, and MassDOT—are working to modify signal operations, add pedestrian and bicycle accommodations, create new roadway connections, better manage the limited supply of curb space, and introduce priority treatments for transit vehicles. The following projects were recently completed.

- Western Avenue: roadway reconstruction and bicycle improvements between Barry's Corner and Soldier's Field Road to the east
- Cambridge Street: intersection signal upgrades and bicycle improvements
- Brighton Avenue: bus priority lane
- Commonwealth Avenue: cycle track and signal improvements

Projects already in final design and under construction are considered to be part of the existing condition in the neighborhood. Planned projects and studies provided ideas and inspiration for the Plan.

KEY TAKEAWAYS

- The Allston-Brighton Mobility Plan builds on previous planning initiatives. It was drafted with community input.
- Growth in Allston-Brighton presents an opportunity to further this plan's goals through transportation investment.
- Other long-term plans and studies (e.g., Go Boston 2030) help guide the vision for this Plan.

AREAWIDE & NETWORK RECOMMENDATIONS

5

AREAWIDE & NETWORK RECOMMENDATIONS

The following network recommendations will expand the multimodal transportation network in Allston-Brighton to meet the study goals and improve the quality of life for the residents of Allston-Brighton.

The planning team used feedback from the community engagement process and its understanding of Allston-Brighton's planning context to develop overarching network recommendations for this plan. Network recommendations apply to important, interconnecting streets located throughout Allston-Brighton.

This section describes the foundational recommendation for the Allston-Brighton Mobility Plan: using a pilot project to transform Washington Street and Cambridge Street between Oak Square and Union Square into a bus priority corridor that will improve safety and enhance multimodal access and connectivity. This section outlines other network recommendations by mode. The planning team developed network recommendations for transit and bicycle modes, and for the pedestrian realm through placemaking, greening, and traffic calming.

> Greening - I very much support any effort to add trees to our streets where possible.
>
> —E-mail from Area Resident

The A-B Transit Corridor

The A-B Transit Corridor will connect Oak Square, Brighton Center, and Union Square by way of Washington Street and Cambridge Street. The corridor plays many key roles within the Allston-Brighton community. It serves as the regional gateway between Boston and communities west of the city, the main street for Allston-Brighton's neighborhoods, and the commercial hub for many of its businesses. It connects community members with parks, schools, health care, and community resources such as the Oak Square YMCA, St. Elizabeth's Medical Center, and multiple schools. The A-B Transit Corridor's importance within the broader transportation network is underscored by the fact that it is the only major east-west connecting corridor running through the heart of Allston-Brighton. A map of the A-B Transit Corridor can be seen on page 29.

Shared Bus/Bicycle Lanes on Brighton Avenue

Source: City of Boston

A-B Transit Corridor

The A-B Transit Corridor can and should evolve to better serve the needs of community members. The Allston-Brighton Mobility Plan recommends conducting a three-year pilot to transform Washington Street and Cambridge Street into a transit-priority corridor that will improve transit travel time and reliability and maintain access for local businesses. Complementary bicycle-priority routes of the A-B Transit Corridor are essential components of this network recommendation.

How to Transform the A-B Transit Corridor

Among the most effective ways to increase capacity to handle more person-trips more efficiently—that is, to increase person throughput—along Washington Street and Cambridge Street is by establishing a transit priority corridor with peak period bus lanes.

Prioritize Transit

As part of a three-year pilot, the existing on-street parking and bike lanes on the A-B Transit Corridor will be converted to a shared bus and bicycle lane during the AM and PM peak periods between Parsons Street and Union Square. These peak period bus/bicycle lanes will connect to existing bus/bicycle lanes on Brighton Avenue and possible future bus lanes on Cambridge Street, providing a direct, reliable transit connection into Cambridge, to a future West Station, and to downtown Boston. Transit vehicles will be able to travel more quickly and consistently along the A-B Transit Corridor during peak hours, which will in turn increase the attractiveness of bus service and the potential for additional transit riders that can traverse the corridor during peak hours. The long-term roadway configuration for Washington Street and Cambridge Street will be dependent on the outcomes and success of the three-year pilot. Figure 08 shows a plan-view depiction and a typical mid-block cross-section of the peak period bus lanes.

Enhance the Pedestrian Realm

Intersections play a key role in the travel experiences of pedestrians. In general, compact intersections with clearly marked crosswalks, short crossing distances, small corner radii, accessible ramps, and level landings at the top and bottom of each ramp are safer and more comfortable for pedestrians. The City will include pedestrian enhancements at select corridor intersections as part of the A-B Transit Corridor permanent phase.

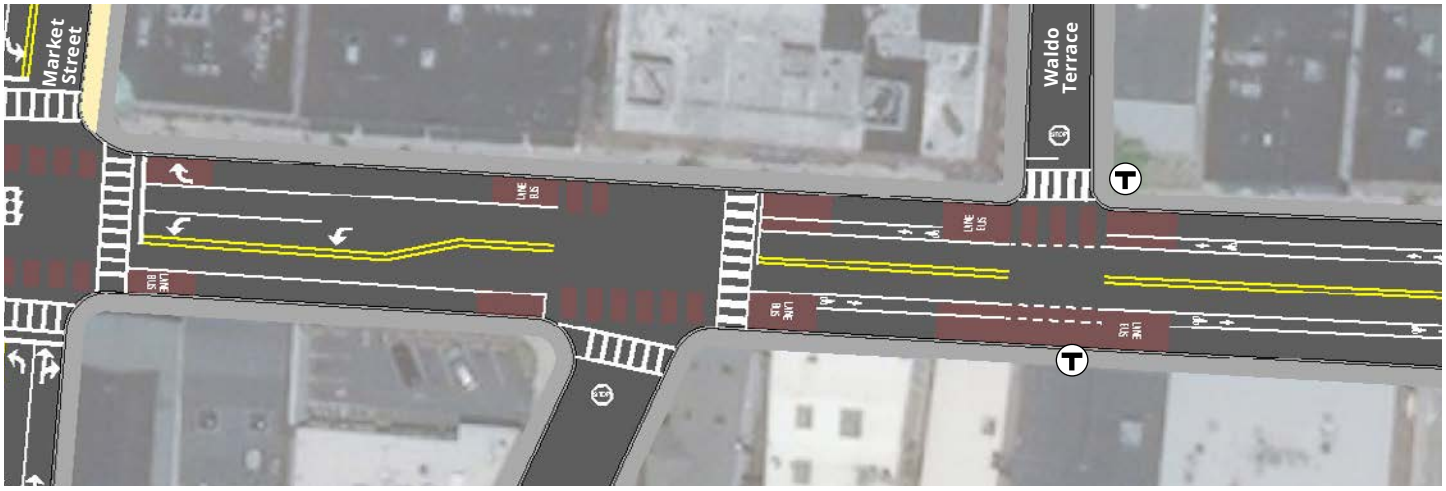
Provide a Parallel Bicycle-Priority Route

While some people may feel comfortable biking within the shared bus/bike lane on the A-B Transit Corridor, the addition of a low-stress, complementary bicycle-priority route will ensure that the Allston-Brighton transportation network serves users of all ages and abilities. Based on the outcome of a parking utilization study, two bicycle-priority routes are recommended, as shown in Figure 10. The first route travels along Faneuil Street, Market Street, and N. Beacon Street between Oak Square and Union Square. This bicycle priority route would include separated bicycle facilities on Faneuil Street and Market Street, and six-foot bicycle lanes on N. Beacon Street.

The second parallel bicycle-priority route would be a neighborway along Arlington, Sparhawk, Warren, and Kelton Streets between Faneuil Street and the Boston/Brookline city limits. Neighborway designs use traffic calming elements to slow vehicle speeds and discourage unnecessary through-traffic by drivers. See Figure 09 for example traffic calming elements that could be implemented on a neighborway.

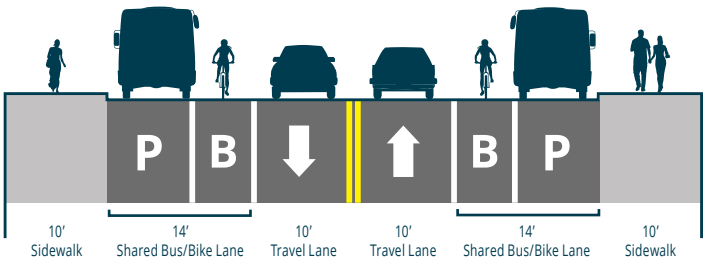
FIGURE 08 PEAK PERIOD BUS LANES

Recommended between Parsons Street and Union Square



Existing Bus Stop

Recommended Peak Period Bus Lanes



Recommended Off-Peak - Existing Conditions

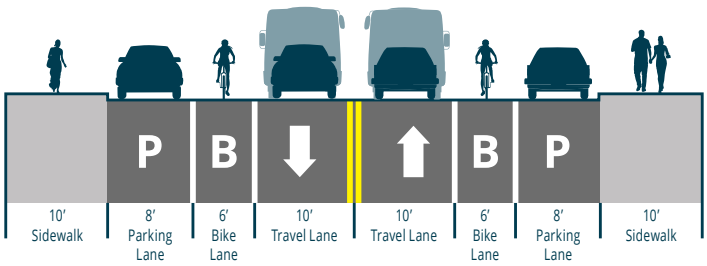


FIGURE 09 EXAMPLE TRAFFIC CALMING ELEMENTS - RADAR SPEED SIGNS (LEFT); CLEARLY MARKED, RAISED CROSSWALK (MIDDLE); CHICANES (RIGHT)

Source: BTD

Source: BTD

Source: BPDA

Bicycle Network

Wherever possible, the recommendations of this plan fill gaps in the existing bicycle network. New proposed bicycle facilities (see Figure 10) in Allston-Brighton include separated bicycle lanes, bicycle lanes, and neighborways. Neighborways are low-speed, low-volume residential streets with added traffic calming to give priority to bicyclists and pedestrians.

Together with specific bicycle corridor improvement recommendations from Go Boston 2030, the study's bicycle network recommendations increase biking connections within and between Allston-Brighton and surrounding neighborhoods.

People who feel uncomfortable biking in shared bus/bike lanes in the A-B Transit Corridor will need to access destinations on this major east-west corridor by way of side streets.

Presented in this plan also is the concept for a new Allston-Brighton Bikeway, traversing the heart of the neighborhood and extending from the North Beacon Street Bridge along Leo Birmingham Parkway and Lincoln Street to a new West Station in Beacon Yards.

Figure 10 also reflects the separated bike lanes proposed as part of MassDOT's Allston I-90 Intermodal Project in Beacon Yards and as part of the City's Commonwealth Avenue Phase 3 and 4 project between Warren Street and Packards Corner.

Detailed recommendations for new proposed bicycle facilities and routes may be reviewed in the following locations.

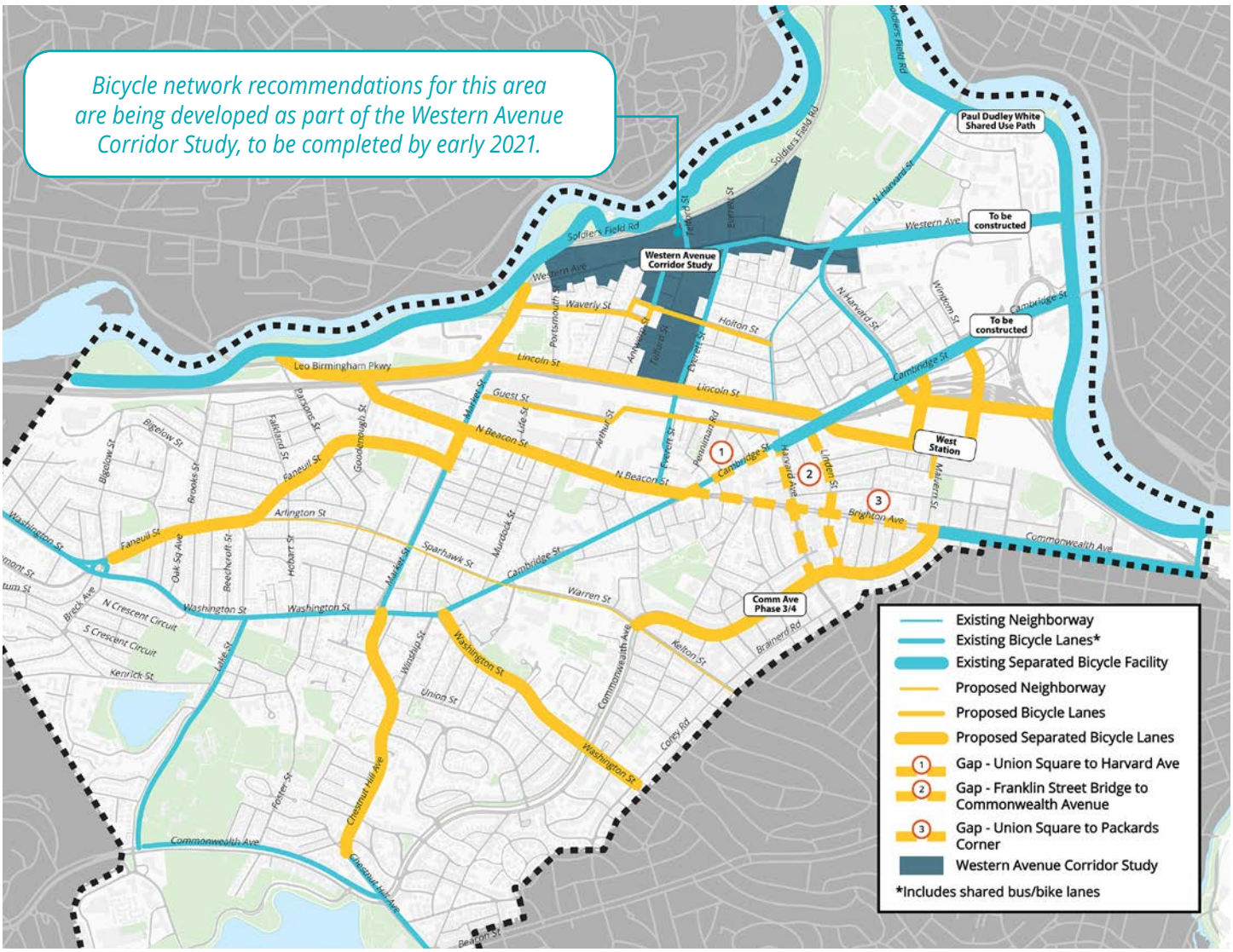
- "A-B Bikeway" on page 105
- "Waverly Street & Holton Street" on page 100
- "Chestnut Hill Avenue" on page 150
- "Washington Street" on page 144

Bicycle Network Gaps

As shown in Figure 10, there are currently gaps in the proposed bicycle network at these locations: between Union Square and Harvard Avenue; between the Franklin Street Bridge and Commonwealth Avenue; and between Union Square and Packard's Corner.

BTD will be leading public processes during 2021/2022 to determine how these bicycle network gaps can be completed. In the instances of the gaps along Cambridge Street and Brighton Avenue, these conversations and decisions will be closely coordinated with bus priority planning. The public processes will include a localized community engagement to ensure participation of abutters and stakeholders.

FIGURE 10 BICYCLE NETWORK RECOMMENDATIONS



Transit Network

The A-B Transit Corridor represents one key component of a broader transit network in Allston-Brighton. Additional changes to the transit network include:

Transit Network Gap

As shown in Figure 11, there is currently a gap in the proposed transit network between Union Square and the Cambridge Street Bridge. On this segment of Cambridge Street, the right of way is currently allocated to two travel lanes with parking on both sides of the street. BTD will be leading a process during 2021/2022 to evaluate the type of bus priority facility that would be feasible on this segment of Cambridge Street while ensuring that a facility that completes the bicycle network can also be accommodated. The public process will ensure participation of abutters and neighborhood stakeholders.

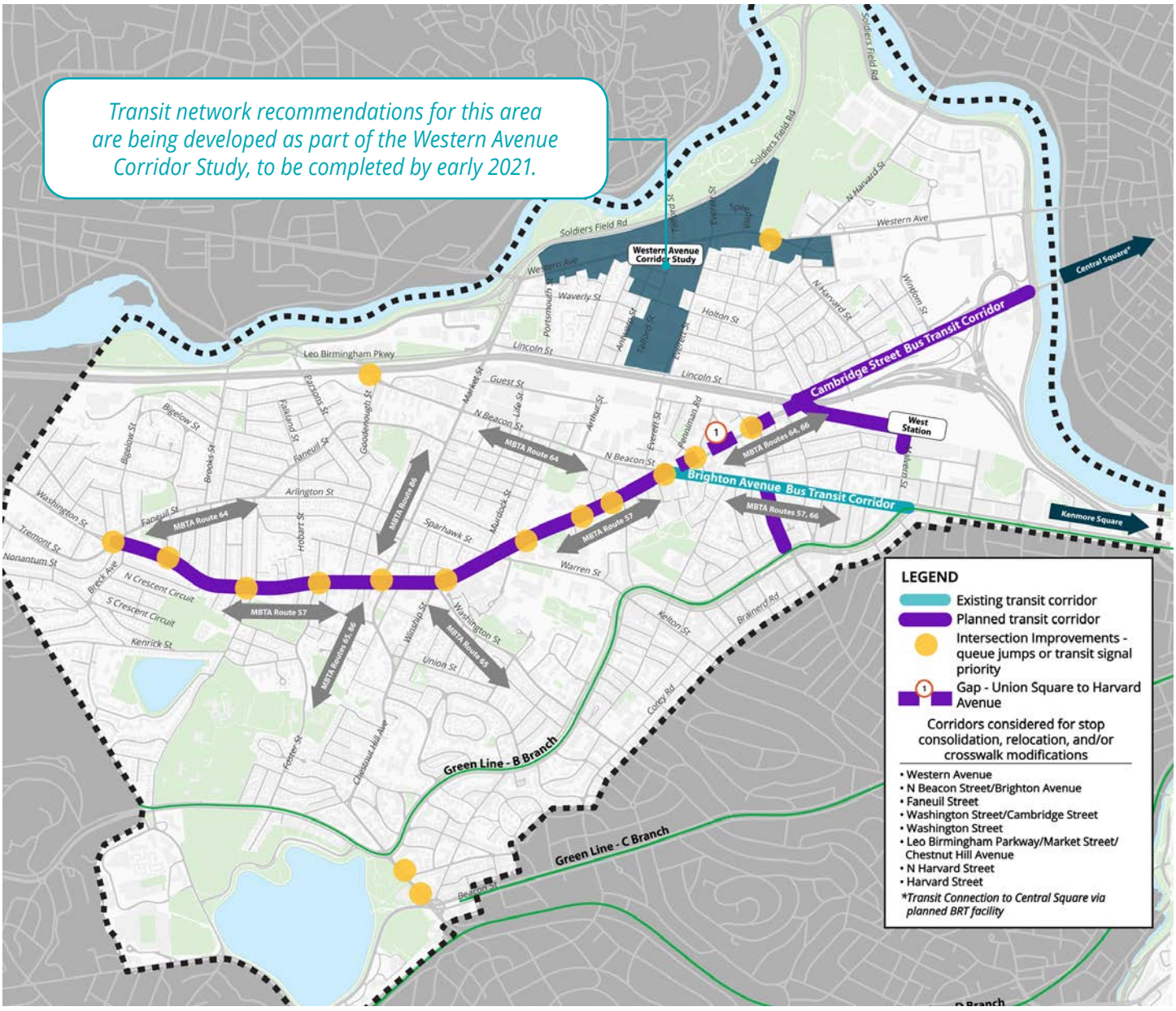
Bus Stop Modifications

The location and quality of bus stops directly influences the speed, reliability, and accessibility of transit service. Closely spaced bus stops increase access but also result in slower, less reliable service, while bus stops that are spaced further apart reduce access and result in faster, more reliable service. Appropriately located crosswalks provide people walking to transit with access to bus stops. This plan recommends consolidating, relocating, and/or upgrading crosswalks along several corridors in Allston-Brighton (Figure 11).

Intersection Modifications

Delay at congested traffic signals can reduce travel times for transit vehicles and motorists alike. Transit treatments such as transit signal priority (TSP) and queue jumps, while most effective when paired with bus-only lanes, can provide some travel time savings in mixed traffic scenarios. TSP modifies traffic

FIGURE 11 TRANSIT NETWORK RECOMMENDATIONS



signal timing or phasing at intersections when transit vehicles are present. Queue jumps at signalized intersections use right-turn only lanes and signal timing to give transit vehicles a head start at intersections. This plan recommends implementing queue jumps or TSP at multiple intersections in Allston-Brighton (Figure 11).

Potential Additional Priority Bus Improvements

The Plan also recommends exploring the potential for bus priority improvements along Faneuil Street and Chestnut Hill Avenue/Market Street for the #64 and #86, as well as along Washington Street between Cambridge Street and the Brookline Border for the #65 bus. Bus projects are not a one size fits all approach. There is a toolkit of parts that can support high quality bus transit services and can be applied depending on the characteristics and needs of a given street. These toolkit items include bus lanes (center running or side running), bus queue jumps, improved bus stops, transit signal priority, and off-board fare payment - all of which help to speed up service, improve bus reliability, and improve customer experience and access. Detailed research on bus travel delay must be conducted prior to determining whether bus priority improvements are warranted; any bus priority improvements must be carefully considered as part of detailed design of the expanded bicycle network (see "Bicycle Network", preceding page). Wherever bus priority improvements are considered where this plan proposes separated bike lanes, bicycle facilities will be prioritized.

Detailed transit network recommendations may be reviewed in Section 6 | Area-Specific Recommendations. Appendix B provides detailed transit stop and intersection recommendations.

Transit Policy

Transit policy investments and pilot projects complement the area-specific recommendations to further improve the quality of transit.

Within the study area, transit provides a significant portion of the trips and connections around Greater Boston. Improving the flow and effectiveness of transit helps to speed up both those trips and also those via other modes. The study process noted that residents would like to see more transit connections and to improve the speed and reliability of the existing connections. Improving transit ensures a more equitable neighborhood with cleaner air and access for all.

Transit changes and improvements must be completed in a partnership with the MBTA and the City in order to provide a combination of services and physical investments. The study recommends a series of policy investments and pilot projects to help further improve the quality of transit.

Prepared during the initial stages of the A-B Mobility Plan, the Existing Conditions Report documents existing transit service in significant detail. The data reveal that the western half of the planning area, along with North Allston and North Brighton are currently not well served by transit. The Existing Conditions Report can be viewed at bit.ly/ABMobilityExisting.

Providing Space

Transit can be a space-intensive activity. Ensuring that transit can operate quickly and reliably means dedicating space to it. The City of Boston has been implementing more bus lanes around Boston, with lanes now gracing both sides of Brighton Avenue east of Union Square. Bus lanes and other dedicated spaces such as queue jumps will help to speed service across the neighborhoods, as will ensuring that buses can always get in and out of their stops. This also applies to rail services, where adding new service alongside I-90 may require new access routes, station sites, and railway widening.

Improving Information

Transit users in Boston are often savvy customers who have many choices of travel options. Increasing the rider information and allowing for informed choices can both make existing journeys easier and bring more people to mass transit. This is especially true in Allston-Brighton, as multiple routes lead to the same destination from similar locations. Giving bus passengers the tools to help make better decisions across an entire trip will help to ensure that vital time on commutes is not wasted.

Increased Connections

Allston-Brighton sits at a unique intersection where significant regional travel comes through the neighborhood, but access to those routes is limited. The neighborhood is close to major job centers in Cambridge and the Longwood Medical Area, however connections to those places are limited, slow, or infrequent. Better connecting the neighborhood to new emerging centers such as Boston Landing and a future West Station can help to improve access for longer distance trips, while new connections to important regional centers will help to shift people out of cars. Future premium bus connections, planned as part of the Allston I-90 Interchange Project, will extend bus-only lanes to West Station and the Charles along Cambridge Street. Each is an important element of future economic development.

As part of the Allston-Brighton Mobility Plan, a series of policies and projects are proposed for implementation related to transit improvements. The Allston-Brighton Mobility Plan recommends that each of these actions be advanced in partnership with the appropriate parties.

Outbound Route 57 toward Watertown

Source: BPDA

Bus Lane Enforcement

Education, Policy Proposal, and Pilot Program

Shared Bus/Bike Lanes Adjacent to Parking, Brighton Avenue

Source: City of Boston

Why?

- **Reduce transit delays**
- **Ensure multimodal connections**
- **Protect the investments in key infrastructure**
- **Ensure safe stopping**
- **Reduce automobile delay**

Research Findings

- Dedicated lanes provide significant benefits for bus riders, but are only effective when properly enforced
- Parking in bus stops and bus lanes delays riders and creates an unsafe environment for all
- There are many means of enforcement, including in-person oversight and camera-based ticketing
- Exploration of different enforcement models needs to be conducted
- A study by National Capital Region Transportation Planning Board showed that costs of cameras and bus lanes was surpassed by benefits to riders by over 3 times if cameras were used to enforce.
- Peer cities that have enabled camera enforcement
  - San Francisco uses bus-mounted cameras. Pilot program began in 2007, expanded in 2011, and became permanent in 2015.
  - New York uses fixed, on-street cameras. Pilot program began in 2010, expanded in 2015, and became permanent in 2019.

Pilot Program: Enforcement Test

This recommendation proposes a pilot program to test the current impact of bus stop parking and bus lane travel on the speed of transit riders. It would serve to conduct research on the current state of enforcement and provide the City with meaningful data in order to further evaluate the need City-wide. The City will work with the MBTA to determine the impact of bus lane violations, and evaluate potential enforcement models.

Recommended

- Pilot would begin with a monitoring period to determine the impact, volume and severity of bus lane infractions along Brighton Ave at different times of day, day of week and weather conditions
- The City would then engage in an experimentation period in which different models would be implemented along Brighton Ave for a set period of time. Options could include working with BTD's Office of the Parking Clerk enforcement staff to establish appropriate monitoring and oversight.
- Camera footage would be reviewed to determine current impact on transit riders, following a similar standard as New York City. No tickets would be issued.
- Continue to work with MBTA and surrounding communities to advocate legislatively for camera enforcement to be permanently enabled for bus lanes and stops

Curbside Dedicated Bus Lanes, Boston, MA

Camera pilots on New York's M15 bus service showed 1,529 drivers blocking bus lanes in the first two weeks. Drivers were issued warnings under a 60 day grace period before tickets began.

Source: Matt Moran | BTD Transit

Improved Bus Information

Policy Proposal and Pilot Project

Real-Time Passenger Information

Source: MBTA

Why?

- **Improved multimodal connection**
- **Give riders better information for their trip**

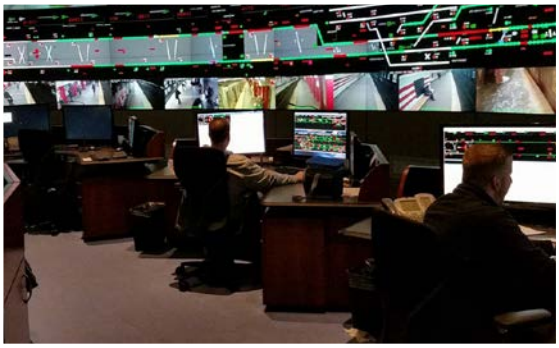
Research Findings

- 43% of all MBTA riders use more than one service on a trip
- Many common trips in Allston-Brighton have the capability of being made via multiple different routes
  - For example, trips to Downtown can be made via the Green Line or Express Buses
- Current passenger information informs riders how long until a vehicle arrives, but does not estimate the time to the destination
- The data does exist to make an estimate of travel time via various modes
- Information is not currently made available on-board vehicles in Boston
- Passenger transfers from buses to the Green Line are often judged by rider through looking out the front window of the bus to determine if a vehicle is approaching
- Boarding times are often slow boarding buses at busy stops which increases bus dwell times

Real-Time Information

Source: MBTA

Real-Time Monitoring of Bus Service



Source: MBTA

Shared Bus/Bicycle Lanes on Brighton Avenue

Source: City of Boston

Pilot

1

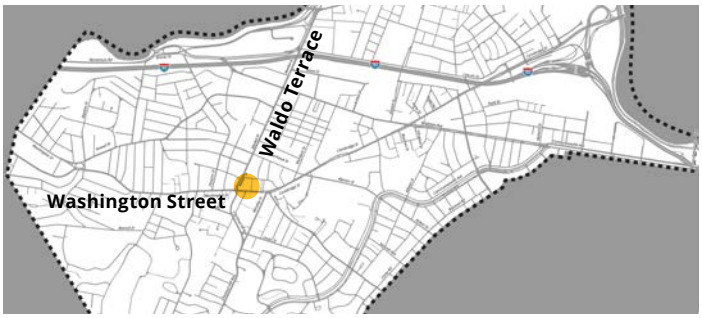
Brighton Center Information

Install a fixed-location E-Ink screen in Brighton Center solely to show the trip durations to Downtown Boston by various trip combinations:

- next available Express Bus;
- next available Local Bus to Kenmore, transferring to the Green Line; and
- next available Local Bus to Commonwealth Avenue, transferring to the Green Line B Branch.

Work with the MBTA's Customer Technology Division to implement E-Ink screens.

Recommended Location



Leverage these pilots to develop active curbside management in both locations, ensuring that traffic continues to flow while curbs are utilized for designated purposes.

Pilot

2

Green Line Transfer Pilot

- As part of this pilot, work with the MBTA to install signage on specific buses in Allston-Brighton to alert passengers on current travel times to Downtown Boston
  - Route 86 at Chestnut Hill Avenue at Commonwealth Avenue – riders have the choice to transfer to B, C and D branches
  - Route 65 at Washington Street at Commonwealth Avenue – riders have the choice to transfer to the B branch or remain on bus to reach Kenmore Square
- Provide a method for feedback from riders as to whether the information is helping to improve trip choice
- If effective, work with the MBTA to install signage on other Allston-Brighton bus routes which can perform announcements in an automated fashion
- Work with the MBTA Operations Technology Division to develop the appropriate app and algorithms to produce this customer-facing data
- Fund this initiative through Article 80 development mitigation

Recommended Locations

Pilot

3

New Off-Board Fare Collection Pilot

Work with City and State agencies to pilot an off-board fare collection program. Install fare machines at key stops allowing passengers to pre-pay and receive a receipt. When boarding buses, passengers can show receipts to drivers rather than tapping or paying onboard the bus. This will help to speed bus boarding times and, thus, dwell times at high ridership stops. This is similar to the SBS routes in New York City and the Green Line D Branch process.

New and Improved Transit Connections

Policy Proposal

Bus Service in Brighton Center

Source: ARUP

Provide New Transit Options

- **Ensure multimodal connections**
- **Encourage mode shift away from private vehicles**

Research Findings

- Allston-Brighton has efficient, yet oftentimes slow transit connections to Downtown Boston. Allston-Brighton lacks convenient transit connections to jobs centers other than Downtown
- The MBTA is currently undergoing an effort to re-imagine the bus system, with a consideration for new connections
- New transit connections would improve access to jobs for many in the neighborhood, meeting a primary City objective
- Demand has been seen to areas such as the Seaport, Longwood Medical Area, Assembly Square, Kendall Square, and Nubian Square
- Enhance connections to downtown Boston by advocating for expanded commuter rail service and urban rail

Policy Proposal

- Advocate for direct connections to five high-demand destinations as part of the ongoing MBTA process: Seaport, Longwood Medical Area, Assembly Square, Kendall Square, and Nubian Square.
- Advocate for improved Urban Rail service on the Worcester Line with 15-minute or less frequencies to improve travel times to Downtown Boston and the Seaport
- Advocate for early construction on West Station to serve existing residents and commuters in Allston
- Advocate for a study to create a new infill station between Boston Landing Station and Newtonville Station in order to better serve commuters in western Brighton
- Advocate for improvements to the Green Line, specifically the B Branch, to improve speed and reliability, reduce crowding, enhance station stops, and improve physical accessibility to stations

Neighborhood Transit Connector

Policy Proposal

The Boston College Shuttle

Source: ARUP

Many Private Shuttles Currently Circulate the Neighborhood

- **Access to these shuttles could improve numerous commutes**
- **Local connections can be difficult with existing services**
- **Models exist for a Neighborhood Transit Connector**

Research Findings

- Approximately a dozen shuttle routes exist in Allston-Brighton, serving a mix of employers, developers, and universities
- These shuttles connect key destinations and sometimes have excess capacity
- New rail services in the community (providing a quick direct link to Downtown) could be better served by additional shuttle bus service
- The Allston-Brighton Transportation Management Association (TMA) consists of dozens of local employers, and is poised to be a key player in a future Neighborhood Transit Connector, as TMAs are elsewhere in the region
- Individual shuttle routes to serve one specific development or institution will only add to roadway and transit stop congestion
- A consolidated Neighborhood Transit Connector system in Allston-Brighton to connect with transit service would serve future development, both residential and commercial, as well as current shuttle operators and residents

As new development continues to occur in areas underserved by the existing MBTA system, supplementary transit services are needed to provide convenient connections to existing transit stops and hubs, such as Boston Landing and Harvard Square. While several shuttle services already exist to provide such connections, they are often uncoordinated and serve only private companies and developments. A Neighborhood Connector Transit Service would support sustainable transportation options and provide opportunities for collaboration with employers and developers to enhance mobility and air quality.

Focus of the Neighborhood Transit Connector should be to improve transit access to the Red Line, commuter rail, and a future West Station. Neighborhood access is an integral component of this service.

With the recent expansion of transit service at Boston Landing Station and a substantial pipeline of new development throughout Allston-Brighton, there is both an opportunity and a desire to increase access to transit as a way to increase transportation choices.

The ABTMA is a private, nonprofit organization of employers, institutions, and building owners working together to advance neighborhood transportation options, improve air quality, and reduce traffic congestion. ABTMA provides commuting programs, incentives, and advocacy to its members to help employees, commercial tenants and residents commute more sustainably. Current ABTMA members include Boston University, DoubleTree Suites, St. Elizabeth's Medical Center, Waterstone at the Circle, Boston Landing, Brighton Landing, Harvard Real Estate, Continuum and the Overlook at St. Gabriels. The ABTMA in partnership with the City of Boston, and its members will manage the Neighborhood Transit Connector as one of its TDM services in an effort to maximize efficiency and areawide coordination.

RECOMMENDATIONS

Participation in ABTMA Neighborhood Transit Connector

- Ensure that new and pending development agreements require that developers join the ABTMA and participate in the Neighborhood Transit Connector that complements and provides critical connections to existing MBTA service.
- The purpose of the service is to mitigate the trips created by such developments and to offer service that will allow residents and tenants to access major transit lines with a one seat, high frequency neighborhood transit service, thereby reducing drive alone trips.
- This Neighborhood Transit Connector will eliminate the last mile gap that often deters transit ridership. In some instances, developers have been assigned a $20 per unit per month fee for 5 years to fund this transportation service.

Coordinate & Consolidate

- Cabot, Cabot and Forbes, owners of The Overlook at St. Gabriel's, were the first development project required by their Transportation Access Plan Agreement to initiate such a shuttle service, which extends from St. Gabriel's property, located at 185 Washington Street to Boston Landing Station and Harvard Square. The ABTMA is prepared to lead a study to assess the existing shuttle routes operated by the Overlook at St. Gabriel's and other TMA members who operate similar services, to include future development and existing TMA members and potential changes or additions to the overall route, hours and vehicle type.
- Further conduct a study through the ABTMA to consolidate current shuttle routes, and transfer operation of the shuttles to the TMA – with the ultimate aim of reducing redundancy and improving neighborhood congestion.
- Coordinating with, building on, and expanding existing institutional shuttle services could help increase efficiencies and avoid duplication of service.
- Informed by the results of the study, the ABTMA will work with private sector companies, existing institutions (such as universities and hospitals), and future developments to explore consolidation of current shuttle routes, and provide management of the Neighborhood Transit Connector service for future development – with the ultimate aim of reducing redundancy and helping mitigate neighborhood congestion.

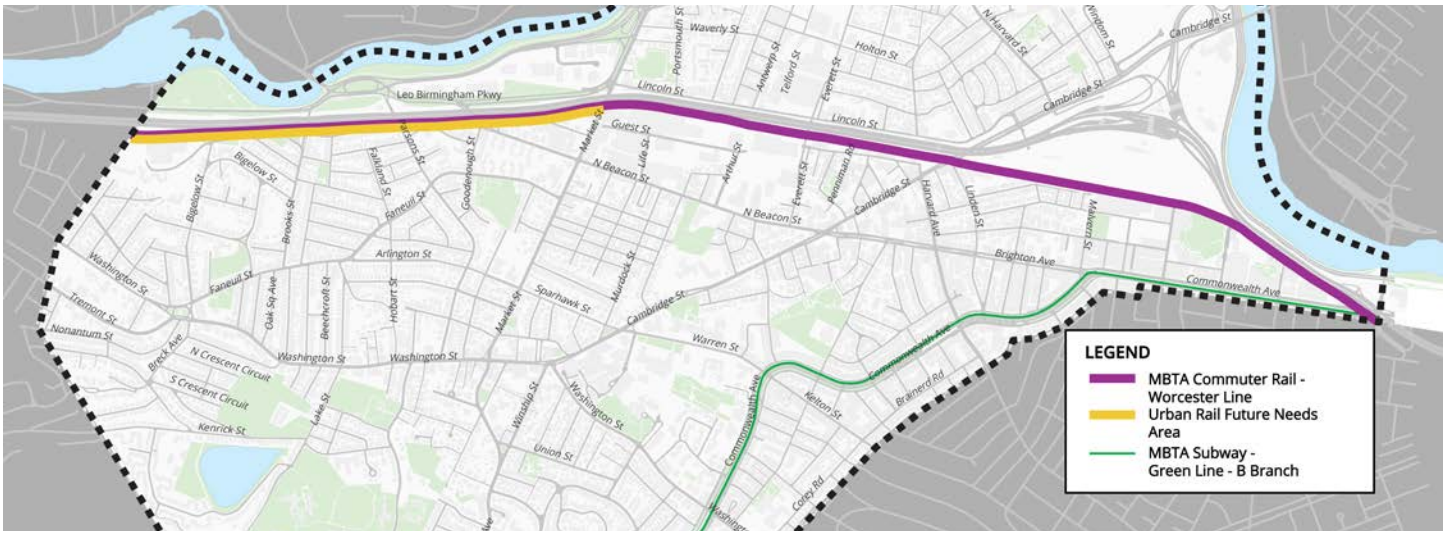
Provide Public Access

- Identify and examine other peer operators in Massachusetts who operate shuttles with public access. These may include but would not be limited to the Mission Hill Link, Alewife TMA, Route 128 Business Council and Charles River TMA.
- Examine key issues for public access, including:
  - service management, planning & communication;
  - funding;
  - permitting;
  - physical accessibility;
  - fare collection;
  - security; and
  - operations.
- Based on the technical analysis and stakeholder engagement, develop a recommended alternative with an implementation phasing plan that includes scheduling, vehicle requirements, routing, and fare structure, including expanding on existing institutional shuttles.
- Develop a marketing and branding strategy to advertise the new service and promote public access.

Protecting Urban Rail Right of Way

Policy Proposal

Rail Service in Allston-Brighton



Preserve Options for Urban Rail

- **Ensure future needs are protected**
- **Improve quality of service within Boston**
- **Remain vigilant for potential future impacts**

Research Findings

- The MBTA is pushing forward with an ambitious Rail Vision to provide rapid-transit-like service on existing commuter rail corridors
- The rail corridor running through Allston-Brighton alongside I-90 could be a key portion of this network
- Multiple tracks through are being planned for the West Station area
- Running additional services may require more tracks in the corridor - potentially an additional two tracks for frequent service
- The right-of-way has only two tracks from the Newton border to Boston Landing Station
- This stretch includes 3 rail-over-road bridges, and one road-over-rail bridge, as well as multiple potential development sites

Policy Proposal

- Establish a mechanism through the development review process to ensure that future development takes into account the rail needs of the area
- This review process should consider land within 100 feet of the current railroad tracks in all directions, and the structures above and below the rail
- Coordinate with other inner-core communities to protect land around rail corridors, including Cambridge, Somerville, Newton, Everett and Chelsea
- Bear in mind key bridges which would need to be widened include MBTA bridges at Brooks Street, Parsons Street and North Beacon Street; and the City-owned bridge at Market Street
- Coordinate with both City of Newton and planning efforts in the Back Bay to continue to corridor protection

Greening & Placemaking

The public realm in Allston-Brighton can and should be enhanced to serve all residents through programmatic greening and placemaking.

Greening - Street Trees

A neighborhood wide review of the street tree canopy through Allston and Brighton revealed a dearth of streets trees in many areas, even where sidewalks are wide enough to accommodate street trees and still meet our Complete Streets accessibility standards. The opportunity to employ new and innovative planting methods would allow us to address a wide variety of the concerns we heard from the public throughout this planning process, including concerns related to accessibility and making sure trees receive sufficient water.

This Plan recommends a pilot Allston-Brighton tree trench program would not only facilitate improved watering and irrigation but also address the following environmental challenges that exist in the area:

- Heat island impacts from a lack of shade which raises local temperatures
- Resiliency around storm water management
- Lack of shaded streets/sidewalks to encourage more pedestrian & bicycle usage
- Increased energy demands for cooling during the summer
- Increased carbon emissions from vehicles and buildings

There can be many challenges to planting trees and achieving a successful outcome. With hotter summers, longer and more frequent periods of drought, and limited space for tree roots in traditional tree pits, it's more difficult than ever for trees to survive, much less thrive and grow to the significant sizes necessary to realize their full potential for shade and carbon sequestration. It should be noted that installations such as street trees will require ongoing maintenance, which in turn will require partnerships with nearby locals merchants, institutions, nonprofits, and/or Main Streets organizations. The Boston Parks and Recreation department provides some guidance for street tree maintenance in their guide: Caring for Street Trees. In an effort to address these challenges and serve as a pilot project for the city as a whole, the concept of a tree trench, illustrated in the diagrams in Figure 14, will be utilized to address these issues and ensure better results.

Unlike tree pits, tree trenches are continuous planting strips that run between the sidewalk and curb. The longer length of these planting beds provides more room for tree roots to grow, more surface area from which they can gather water, and more space to capture stormwater, reducing the burden on city sewers and retaining water where trees need it most. The utilization of special soils within the trench and beneath adjacent sidewalks will encourage root growth beyond the tree trenches themselves, providing even more space for roots and more nutrient rich soils, beyond that which exists in a tree pit.

The following criteria were used to help determine which streets would make for good candidate streets and provide the best conditions for tree trench installations.

- Minimum sidewalk width of 5' to meet City requirements for accessibility
- Minimum 3' wide width for trench planting strips in accordance with Boston Parks Dept. standards (Overall Sidewalk minimum of at least 8'-6")
- Priority for wider and more heavily used arterial streets in order to maximize public visibility and shading opportunities over paved surfaced
- Priority for streets that currently have very few streets trees in place today. According to the Climate Ready Boston Daytime Land Surface Temperature Map[3], many of these streets are partially or substantially located in areas with "High" or "Very High" heat.
- Avoidance of heavily used Main Streets districts where competition for sidewalk and curbside space is high and business owners have concerns around visibility
- Priority for areas without future plans for public realm investment

Recommendation

Implement a pilot tree trench program on the following streets:

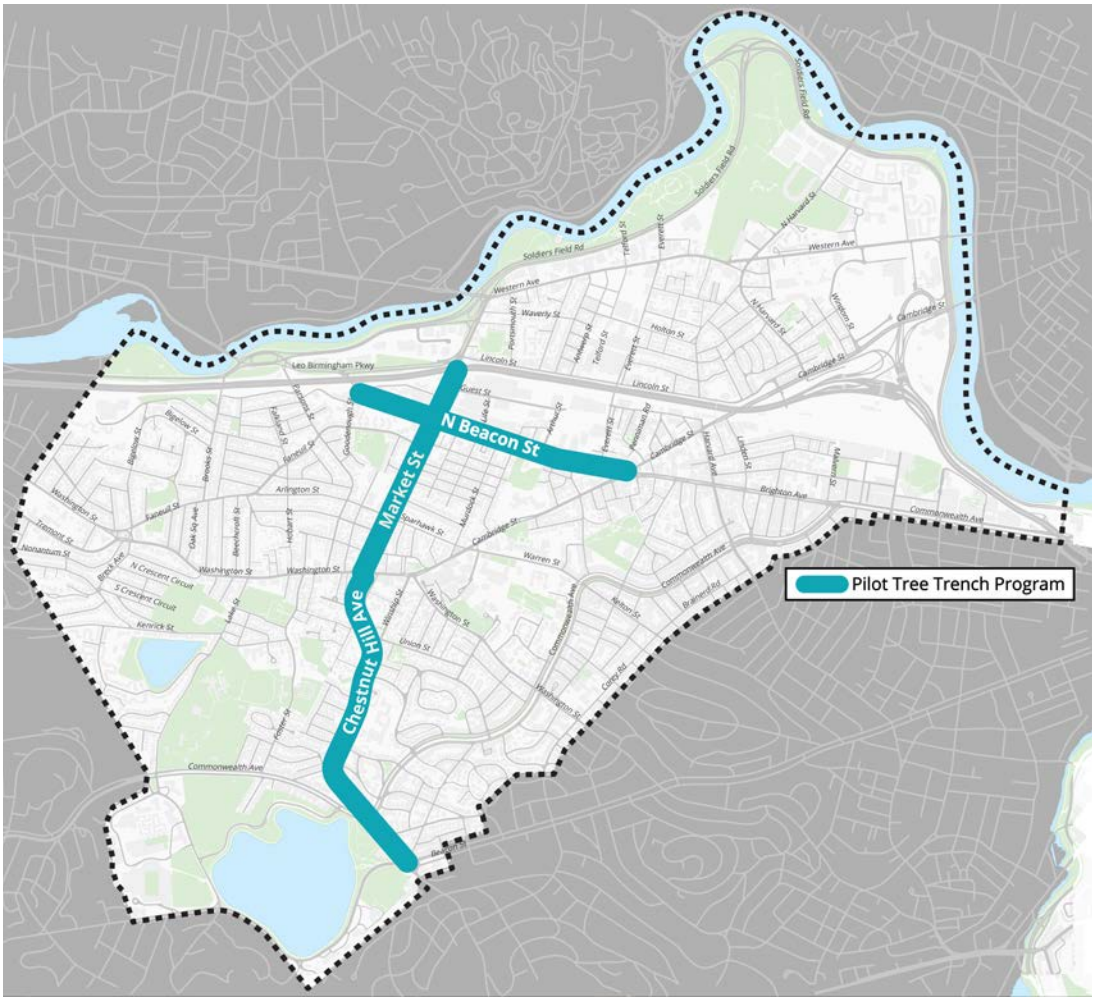
- North Beacon Street - From Cambridge street intersection to intersection below Mass Turnpike
- Chestnut Hill Avenue - From Washington street to Cleveland Circle
- Market Street - From Mass Turnpike bridge to Washington Street

Based on the successes and what is learned from this pilot, extend the tree trench program to other streets in Allston-Brighton.

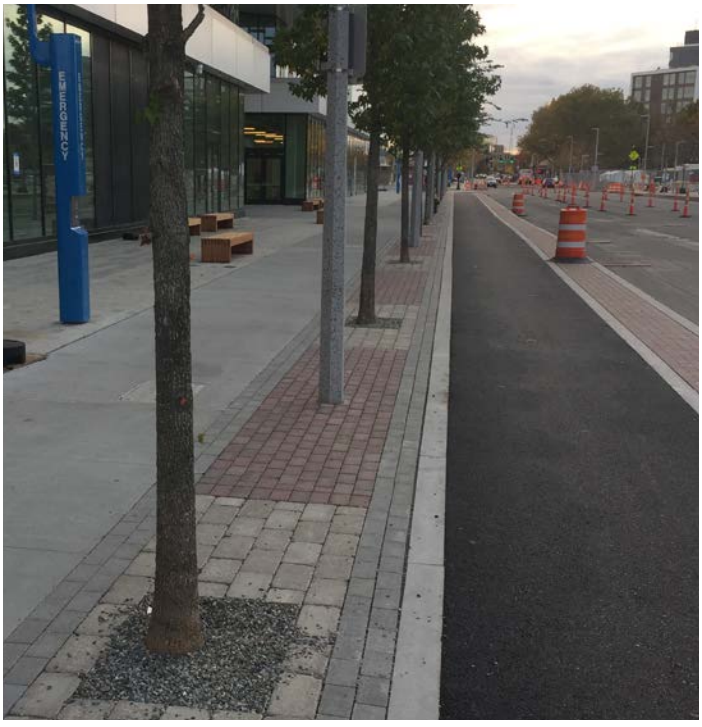
Street trees on Guest Street

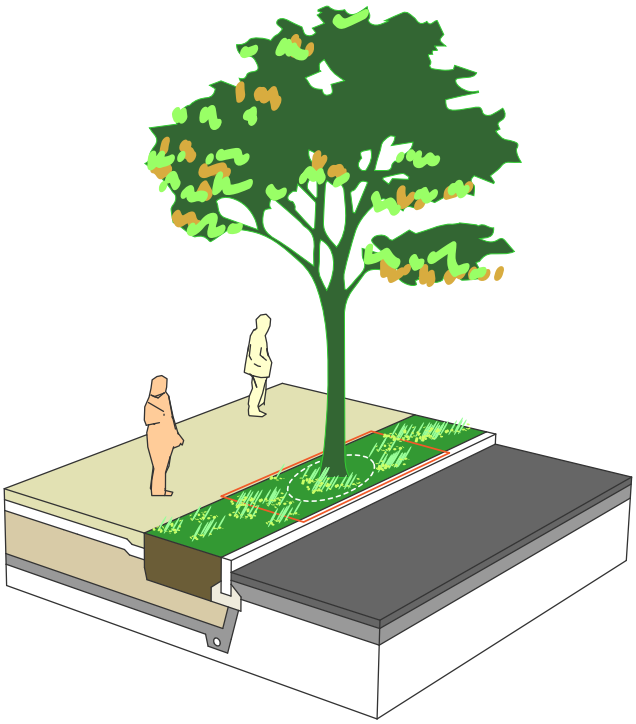
3 Climate Ready Boston Daytime Land Surface Temperature Map - http://boston.maps.arcgis.com/apps/View/index.html?appid=7a599ab2ebad43d68adabc9a9ebea0e6&extent=-71.1583,42.2897,-70.9309,42.4060html?appid=7a599ab2ebad43d68adabc9a9ebea0e6&extent=-71.1583,42.2897,-70.9309,42.4060

FIGURE 12 PILOT TREE TRENCH PROGRAM LOCATIONS



Example tree trench from in front of the Rajen Kilachand Center for Integrated Life Sciences and Engineering on Western Avenue in North Allston. Permeable bricks allow rainwater to seep into the soil along the entire length of the trench. (Below left); Illustration of Tree Trench (Below right)





Source: BPDA

Placemaking

Placemaking is an approach to the planning, design, and programming of the public realm that focuses on the users and their experience of a place, aiming to enhance the experience of living, working, playing in, or just passing through a place through creating memorable, engaging, and useful public spaces.

One advantage of placemaking is that its strategies can be deployed and tested temporarily to assess the performance of the spaces in terms of activations, functionality, and appeal. Temporary "pop-up" placemaking, sometimes referred to as tactical urbanism, can help identify implementation opportunities and challenges.

Public art in many forms can play an important role in programming and activating these placemaking opportunities. Places with space to gather, access to electricity and water can offer functionality as performance venues. Sculptural, landscape and Eco art, murals, are all examples that will be identified further in the Boston Arts Commission Place Keeping Plan. Incorporating art into bus stop shelters, cross walks and streetscape can all enhance the public transportation experience and make it more attractive. It should be noted that installations such as tactical plazas, furnishings, landscaping, and the like will require ongoing maintenance, which in turn will require partnerships with nearby locals merchants, institutions, nonprofits, and/or Main Streets organizations.

The images shown below include examples of the different ways that placemaking can increase the diversity of public spaces, reinforce community identity, and activate the public realm. Placemaking improvements are recommended at the following locations.

- Brighton Center
- Cleveland Circle
- Franklin Street Bridge
- Harvard Avenue
- Leo M. Birmingham Parkway
- Union Square

Detailed recommendations for placemaking may be reviewed in Section 6 | Area-Specific Recommendations.

Parklet

Source: Cogito Urbanus, Philadelphia, Pennsylvania

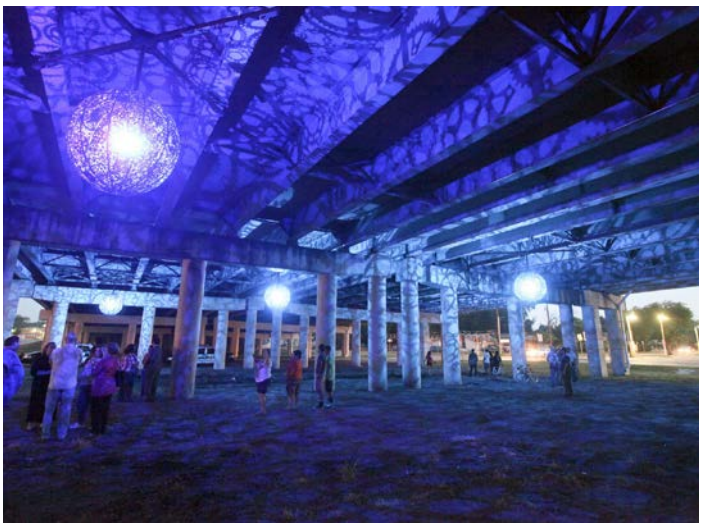
Public Art

Source: Beyond Walls, Lynn, Massachusetts

Activation and Programming

Source: Marcus Mitanis, Toronto, Canada

Lighting



Source: Fred Gonzalez, San Antonio, Texas

AREA-SPECIFIC RECOMMENDATIONS

6

AREA-SPECIFIC RECOMMENDATIONS

This chapter presents the research findings and preferred recommendations for specific areas of Allston-Brighton.

Draft Recommendations

The preliminary draft recommendations for the study area's priority locations were presented to the community at the winter public meeting in December 2019. The public was encouraged to provide input on their preferences during the public meeting or via an online interactive map.

Preferred Recommendations

After the December 2019 public meeting, the study team reviewed the input received, revisited the analysis, and coordinated with the interdepartmental stakeholder working group to refine and identify preferred recommendations. The following sections present the area-specific recommendations and provide information related to the access, mobility, and safety needs, research findings from the analysis, and preferred recommendations.

While detailed cost estimates and implementation timeframes for each improvement will need to be prepared by a professional engineer, the Area-Specific Recommendation section provides preliminary order-of-magnitude cost ranges.

Recommendation categories include:

- Pedestrian Improvements
- Traffic & Safety Improvements
- Bicycle Improvements
- Placemaking Improvements
- Transit Improvements
- Parking & Curbside Improvements

Cost categories include:

- $ <$100,000
- $$ $100,000 - $500,000
- $$$ $500,000 - $2,000,000
- $$$$ >$2,000,000

The implementation timeframes include:

- 2021
- 2022 - 2025
- TBD Subject to COB Streets Cabinet Selection Criteria

Refer to the Section 7 | Action Plan of this report for additional details on the prioritized recommendations, costs, lead agency, and implementation years.

Analysis

As part of the study's initial phases, the study team reviewed existing and proposed plans and studies, evaluated Vision Zero Boston crash data, and engaged the community to identify and refine a list of priority locations for analysis within Allston-Brighton. Once consensus was reached on a comprehensive list of priority locations, the study team collected and analyzed additional data for each of the categories listed below to understand the specific mobility, access, and safety concerns at the priority locations. Not all of the categories identified were analyzed at each priority location; instead, the analysis categories were assessed where appropriate. These included:

- Bicycle Comfort
- Crashes
- Parking Utilization
- Pedestrian Delay
- Transit
- Vehicle Delay
- Vehicle Speeds

Bicycle Comfort

Bicycle comfort was measured using the Level of Traffic Stress (LTS) method. LTS is a four-point scoring system that indicates how comfortable a road is for different types of bicyclists, including: bicyclists of all ages and abilities, most adult bicyclists, experienced bicyclists, and strong and fearless bicyclists. A bicycle comfort score of LTS 1 indicates that a facility is comfortable for most bicyclists, including children and adults, while a bicycle comfort score of LTS 4 indicates that a facility is uncomfortable for most bicyclists. Bicycle comfort is calculated based primarily on speed limit, daily vehicle volumes, and street width. The worst performing (i.e., most stressful) roadway characteristic (i.e., speed limits, vehicle volumes, roadway width) dictates the bicycle comfort score for roadways and intersections.

Crashes

Crash data highlights locations with potential safety issues by providing information on the number, type, and severity of crashes. A central and comprehensive data source for crashes does not exist for Boston. For the review of existing conditions, including the crash heat maps, the study team relied on crash data from Vision Zero Boston. This dataset accounts for crashes where a response from an Emergency Medical Service (EMS) was required. However, it does not indicate the crash severity, whether medical care was provided, or whether the crashes resulted in property damage only. The limited information provided underrepresents crashes, especially in instances where motorists conflict with vulnerable roadway users like pedestrians and bicyclists.

To provide a more holistic representation of crashes and roadway conflicts for the development of the preliminary draft recommendations, the study team reviewed crash data from the Boston Police Department (BPD). BPD maintains a record of Crime Incident Reports for crashes that result in a call to the BPD. Similar to the Vision Zero Boston data, the Crime Incident Reports do not paint a complete picture of every crash that occurs on Boston streets, since the police are not called to respond to all crashes (particularly property damage only crashes). However, this data provided more incidents for the years of analysis than the Vision Zero Boston crash data. Further, it can be used to understand where the crashes occurred, as well as how many of those crashes involved a vulnerable user like a pedestrian or bicyclist. For the sake of this analysis, using both Vision Zero Boston and BPD crash data was not feasible because it would result in double counting.

Parking Utilization

On-street parking provides motorists with easy access to shopping, employment, and entertainment destinations. However, the curb space that has traditionally been reserved for on-street parking is not always optimized for its highest and best use. In addition to serving car parking and loading, curb space can serve as a sidewalk café, transit hub, pick-up/drop-off zone, taxi stand, separated bicycle facility, and more. Parking utilization studies present a snapshot of existing demand for on-street parking and can help communities and decision-makers make informed decisions about how to allocate curb space.

Pedestrian Delay

Intersections play a key role in the travel experiences of pedestrians. In general, compact intersections with clearly marked crosswalks, short crossing distances, small corner radii, ADA accessible ramps and landings are safer and more comfortable for pedestrians. Signal timing also contributes to the pedestrian experience at intersections. Pedestrian delay is a measure of how long pedestrians have to wait to cross at signalized intersections and is calculated using cycle length and the effective green time for pedestrians.[4] The likelihood of pedestrian noncompliance at signalized intersections (i.e., crossing against the light) increases if the intersection has over 30 seconds of pedestrian delay.[5]

Transit

Public transit serves as an alternative to automobile travel and provides direct access to both local and regional destinations. Existing public transit use can be measured in a couple of ways. Boardings and alightings at bus stops provide a measure of daily ridership at specific locations along transit routes. Average daily ridership (ADR) provides a summary of the total number of daily transit riders entering an area of interest (e.g., Oak Square) and all boardings at subsequent stops within the area of interest. ADR does not report the total number of people on the bus for its full trip through the area of interest because some people will exit (i.e., alight from) the bus within the area.

Vehicle Delay

Intersections play a key role in the travel experiences of motorists. Vehicle delay at intersections dictates trip travel times for motor vehicles (e.g., single occupancy vehicles, transit vehicles). Factors that influence vehicle delay at intersections include the number of motor vehicles traveling through intersections at set points in time and the specific signal timing settings, among other factors.

Vehicle Speed

Vehicle speeds present one of the top challenges to achieving safe streets for people walking, driving, and bicycling on Boston's streets. The likelihood that a pedestrian survives being struck by a vehicle decreases if the vehicle is traveling at higher speeds. The pedestrian fatality percentage rises to about 40% for vehicles traveling 30 mph, about 80% for vehicles traveling 40 mph, and nearly 100% for speeds over 50 mph.[6] When traveling at faster speeds, a driver can only focus on things that are further away and fall within a reduced cone of vision. The City of Boston has lowered the default speed limit from 30 mph to 25 mph to make City streets safer. In addition to the speed limit, roadway design plays a role in managing vehicle speeds.

4 Highway Capacity Manual (HCM). 2000.

5 Boston Complete Streets Design Guidelines. 2013. https://bostoncompletestreets.org/

6 Pasanen, E. Driving Speeds and Pedestrian Safety; a mathematical model. Technical Report No. REPT-77, and Nordisk Kabel- og Traadfabriker, Copenhagen, Denmark, 41 pp., 1992. Helsinki University of Technology, Laboratory of Traffic and Transportation Engineering, Espoo, Finland.

A-B TRANSIT CORRIDOR

WASHINGTON STREET AND CAMBRIDGE STREET BETWEEN OAK SQUARE AND UNION SQUARE (2.5 MILES LONG)

Why?

The A-B Transit Corridor connects Oak Square, Brighton Center, and Union Square by way of Washington Street and Cambridge Street. This corridor plays many key roles within the Allston-Brighton neighborhoods. It serves as the regional gateway between Boston and communities west of the city, the main street for Allston-Brighton, and the commercial hub for many of its businesses. It connects community members with parks, schools, health care, and community resources such as the Oak Square YMCA, St. Elizabeth's Medical Center, and multiple schools. This corridor's importance within the broader transportation network is underscored by the fact that it is the only major east-west connecting corridor running through the heart of Allston-Brighton.

Goals for A-B Transit Corridor between Oak Square and Union Square include:

- reduce transit delays;
- provide comfortable and safe bicycle facilities;
- add comfortable pedestrian crossings; and
- encourage placemaking throughout the corridor.

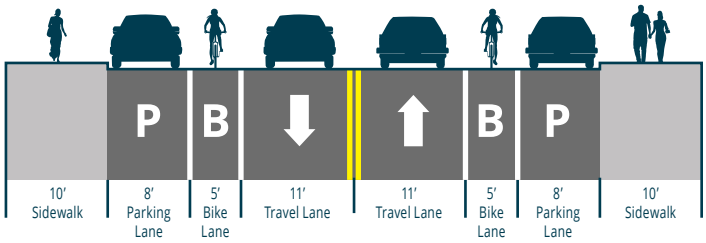
Existing

Source: Google

Washington Street looking West Towards Market Street

Source: Google Streetview

Existing Typical Cross-section



Research Findings

The BPDA gathered information on the following topics for the A-B Transit Corridor:

- Bicycle Comfort
- Pedestrian Delay
- Crashes
- Vehicle Delay
- Transit

The following section details the research findings for the A-B Transit Corridor.

Bicycle Comfort

The A-B Transit Corridor is a two-lane roadway with bicycle lanes adjacent to on-street parking, a speed limit of 25 mph, and daily vehicle volumes between 10,000 and 15,900. Based on the worst performing roadway characteristics (daily vehicle volumes and the narrow width of bicycle lanes adjacent to on-street parking), the A-B Transit Corridor has bicycle comfort scores that range from LTS 2 to LTS 3. LTS 2 roads are comfortable for most bicyclists, while LTS 3 roads are tolerable for confident cyclists. Since most people will not use a bicycle for transportation unless they feel safe for their entire trip from start to finish, it is important to improve the high stress segments along the A-B Transit Corridor.

LTS 1 (Low Stress)
LTS 2
LTS 3
LTS 4 (High Stress)

Level of traffic stress is calculated based on speed limit, daily vehicle volumes, and street width.

LTS (from Breck Avenue to N Beacon Street)

LTS 2

Comfortable for most bicyclists

LTS 3

Tolerable for confident bicyclists

Pedestrian Delay

Pedestrian delay was calculated at the five signalized intersections along the A-B Transit Corridor during the AM and PM peak hour. The maximum pedestrian delay observed along the A-B Transit Corridor is 39 seconds during the PM peak at the intersection of Washington Street and Champney Street. The signalized intersections along the A-B Transit Corridor exceed the 30 second pedestrian delay threshold. Any future modifications to the signal timing for these signalized intersections should seek to decrease or maintain existing pedestrian delay.

X / X — AM Peak Hour Delay / PM Peak Hour Delay

Pedestrian delay is calculated using cycle length and the effective green time for pedestrians

(Source: HCM 2000)

Pedestrian Delay (at key Signalized Intersections)

39 Seconds Maximum Delay

Pedestrian noncompliance likely after 30 seconds of delay

Crashes

The BPD responded to 135 crashes along the A-B Transit Corridor between 2015 and 2017. Of all reported cases, 86% (116) involved only motorists, 8% (11) involved bicyclists, and 6% (8) involved pedestrians. A section of the A-B Transit Corridor between Eleanor Street and Brighton Avenue was part of the Boston High Crash Network for bicycle crashes between 2015 and 2017. Being part of the High Crash Network means that it is among the top 3% of streets Citywide for crashes resulting in bicyclist injury.

Boston Police Department Crime Incident Reports (2015-2017)

Motor Vehicle Crashes

- 1
- 2 - 4
- > 4

Pedestrian Crash

Bicyclist Crash

Crashes (from Breck Avenue to N Beacon Street)

116 Motor Vehicle

11 Bicycle

8 Pedestrian

Vehicle Delay

Five major signalized intersections influence motor vehicle travel along the A-B Transit Corridor. Vehicle delay at these intersections ranges from seven seconds of delay during the AM and PM peak hour at the intersection of Washington Street and Faneuil Street to 48 seconds of AM peak hour delay at the intersection of Washington Street and Winship Street and 84 seconds of PM peak hour delay at the intersection of Cambridge Street and Brighton Avenue. During off-peak time periods, it can take motorists between four to eight minutes to traverse the A-B Transit Corridor. During peak period, it can take motorists between six to eighteen minutes to traverse the A-B Transit Corridor. Average daily traffic along the A-B Transit Corridor ranges from 10,000 to 15,900 daily vehicles.

X / X AM Peak Hour Delay / PM Peak Hour Delay

Existing Vehicle Delay*, Volumes**, and Peak/Off-Peak Travel Times

** Delay reported in seconds*

*** Volumes rounded to the nearest 100*

Travel Times (from Breck Avenue to N Beacon Street)

4-8 Minutes Off-Peak Travel Time

6-18 Minutes Peak Period Travel Time

Transit

The 57, 65, 501, and 503[7] bus routes provide service along the A-B Transit Corridor. These routes serve twenty-four bus stops along the A-B Transit Corridor, fifteen of which have daily ridership that falls within the top 25% of all stops in the study area. The bus routes that traverse the A-B Transit Corridor between Breck Avenue and Brighton Avenue have an ADR of 20,400. Approximately 32% of daily bus riders along the A-B Transit Corridor travel during the AM and PM peak periods.

- Bus Stops
- Bus Stops w/ Top 25% Daily Ridership

32% of the daily bus riders travel during peak periods

4 Number of Bus Routes (57, 65, 501, 503)

15 Bus Stops with Daily Ridership in Top 25% of Allston-Brighton Mobility Plan Area

(Source: MBTA 2017)

7 MBTA Bus 503 was suspended as a result of the COVID-19 pandemic. The City is working to restore this service and expects it to return.

Recommendations

The recommendation for the A-B Transit Corridor is to prioritize bus service by installing peak hour shared bus/bike lanes, consolidating and/or relocating bus stops, and adding intersection improvements (e.g., queue jumps, transit signal priority). To complement the peak hour bus lanes, the recommendation proposes two distinct bicycle corridors. (Refer to Section 5 | Areawide & Network Recommendations for additional details on the complementary bicycle corridors.) The first consists of a separated bicycle facility between Oak Square and Union Square along Faneuil Street, Market Street, and North Beacon Street. The second consists of a neighborway from Oak Square to the Boston/Brookline border along Faneuil, Arlington, Sparhawk, and Warren Streets. To enhance passenger connections and pedestrian safety, new standard crosswalks are also recommended.

1

Cost $$$$

Implementation

TBD

Pilot Peak Hour Bus Lanes

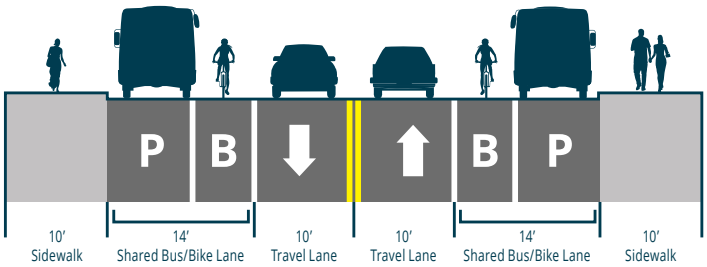
The recommendation proposes a 3 year peak period bus lane pilot on the A-B Transit Corridor between Parsons Street and Union Square. Dedicated bus lanes make it possible to increase the frequency and reliability of bus service. Additionally, dedicated bus lanes can increase bus ridership and help reduce congestion on adjacent travel lanes.

A parking utilization study along the entire corridor will precede and inform the implementation of the pilot bus priority corridor. Key considerations for the parking study will include the number of existing parking spaces (along the street as well as in adjacent public and private lots), parking occupancy and turnover, identification of users, and curbside parking and loading patterns associated with businesses and institutions along Washington Street and Cambridge Street. The parking study will also propose strategies for addressing the parking needs of residents and businesses during the peak hour bus lane operations.

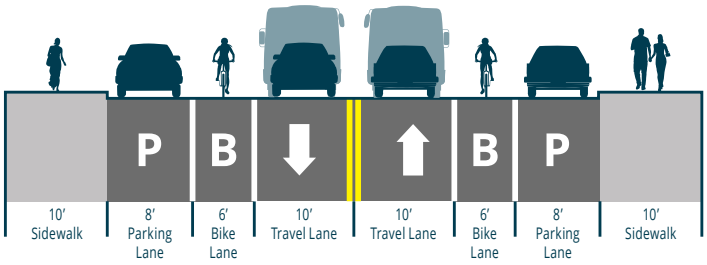
Recommended

Existing Bus Stop

Recommended Peak Period Bus Lanes



Recommended Off Peak - Existing Conditions



Recommended Pilot Bus Lane between Parsons Street and Union Square

2

Cost $$$$

Implementation

TBD

Permanent Bus Priority Corridor

Following an evaluation of the pilot implementation of the peak period bus lanes, create a permanent implementation of the peak period lanes. Upgrades would include high-quality, epoxy gravel red bus lane pavement markings, enhanced crosswalks for pedestrians at key locations, and transit signal priority implementation at selected traffic signals.

Roslindale Bus Lane

Source: Matt Moran - BTD

HARVARD AVENUE

BETWEEN CAMBRIDGE STREET AND COMMONWEALTH AVENUE

Why?

Harvard Avenue between Cambridge Street and Commonwealth Avenue is a major north-south transportation and commercial corridor. It is a direct route that intersects three major east-west corridors (Cambridge Street, Brighton Avenue, and Commonwealth Avenue) and experiences congestion and double parking associated with commercial and retail uses.

Goals for Harvard Avenue between Cambridge Street and Commonwealth Avenue include:

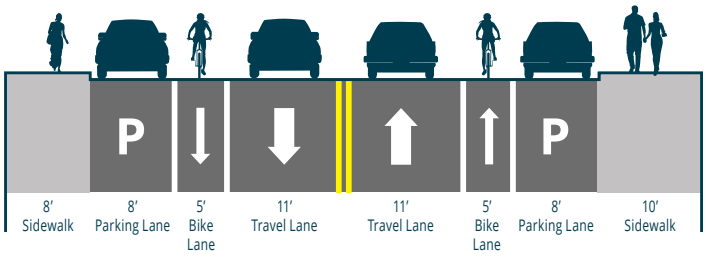
- reallocate curbside parking to provide space for other uses (e.g., short-term parking, loading/unloading, deliveries, etc.);
- reduce transit delays;
- provide comfortable and safe pedestrian facilities; and
- provide comfortable and safe bicycle facilities.

Existing

Harvard Avenue looking North

Source: Google Streetview

Existing Typical Cross-section



Research Findings

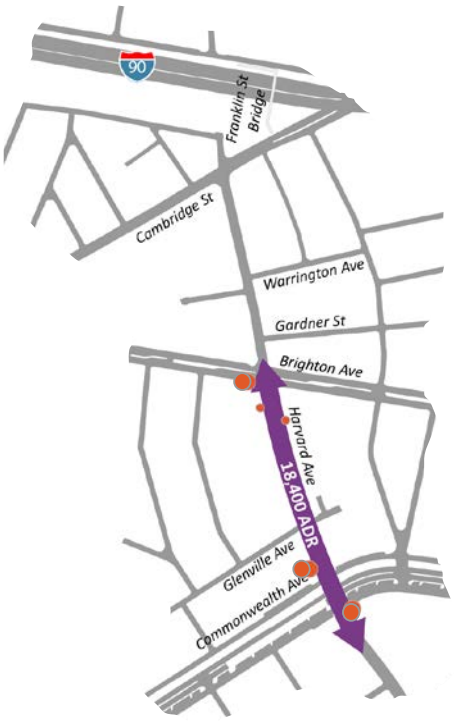
The BPDA gathered information on the following topics for Harvard Avenue:

- Transit
- Parking Utilization

The following section details the research findings for Harvard Avenue.

Transit

The 66 MBTA bus route provides service along Harvard Avenue. This route serves four bus stops along Harvard Avenue, three of which have daily ridership that falls within the top 25% of all stops in the Allston-Brighton Mobility Plan area. The bus route that traverses Harvard Avenue between Brighton Avenue and Commonwealth Avenue has an ADR of 18,400. Approximately 28% of daily bus riders along Harvard Avenue travel during the AM and PM peak periods. When compared to average daily traffic volumes, 40% more average daily bus riders than motorists travel along Harvard Avenue.



Bus Stops

Bus Stops w/ Top 25% Daily Ridership

40% more average daily bus riders than motorists on Harvard Avenue

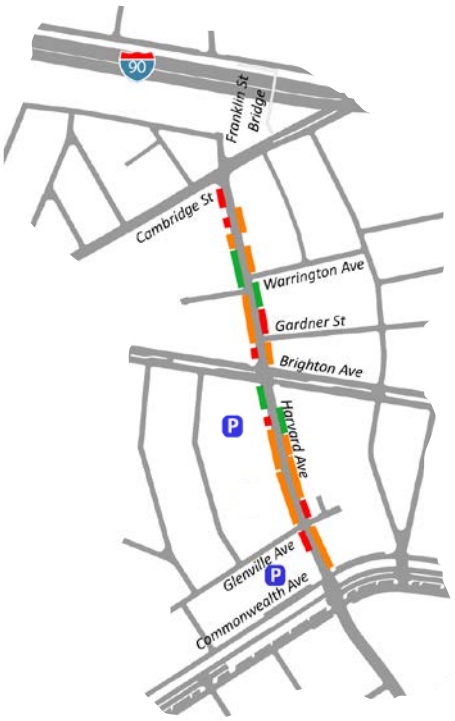
28% of the daily bus riders travel during peak periods

1	Number of Bus Routes (66)
3	Bus Stops with Daily Ridership in Top 25% of Allston-Brighton Mobility Plan Area

(Source: MBTA 2017)

Parking Utilization

A parking utilization study was conducted along Harvard Avenue on a weekday evening in July 2019. Most block faces along Harvard Avenue had one to two parking spaces available during the evening peak period (4:00 PM – 8:30 PM). Seven block faces were full and four block faces had more than two parking spaces available. Two off-street parking lots are located in close proximity to Harvard Avenue. A surface parking lot is located off of Harvard Avenue south of Brighton Avenue, and a surface parking lot is located off of Glenville Avenue west of Harvard Avenue.



PM Peak Parking Utilization

Spaces Available

- > 2
- 1 - 2
- Full/Over Capacity

- Public Parking
- Municipal Parking

Parking utilization observed July 25, 2019 from 4-8:30 PM

Parking Utilization PM Peak

1-2 Parking Spaces Available

Recommendations

The recommendations for Harvard Avenue reinforce the corridor's prominent role as a A-B Transit Corridor. This recommendation proposes relocating existing bus stops, adding curb extensions, and re-purposing existing on-street parking spaces (e.g., parklets). The recommendation also proposes quick-build and long-term placemaking opportunities to activate the commercial district. Additionally, the Allston-Brighton Mobility Plan recommends further analysis to understand parking implications.

1

Cost $$$$

Implementation

TBD

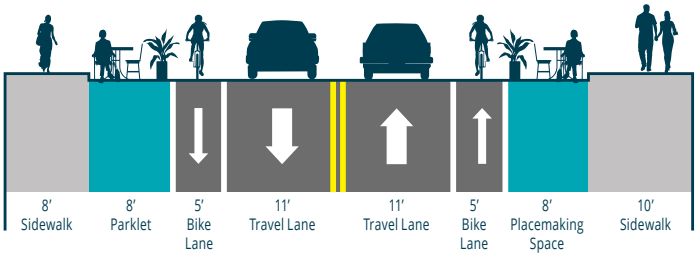
Bus Stop Relocation and Curb Extensions

The recommendation is to relocate the existing bus stop pair on Harvard Avenue south of Brighton Avenue and re-purposing the space with curb extensions. Curb extensions are created by extending the sidewalk at corners to increase safety, calm traffic, and provide space for placemaking. In the near-term, curbside parking regulations should be updated to consider demand pricing and the hours of operation extended to 8 PM to increase vehicle turnover. Short and long-term placemaking options are discussed in greater detail in Recommendation 2. The existing bus stop pair would be relocated to the corner of Harvard Avenue and Commonwealth Avenue.

Recommended

Existing Bus Stop

Recommended Cross-section



2

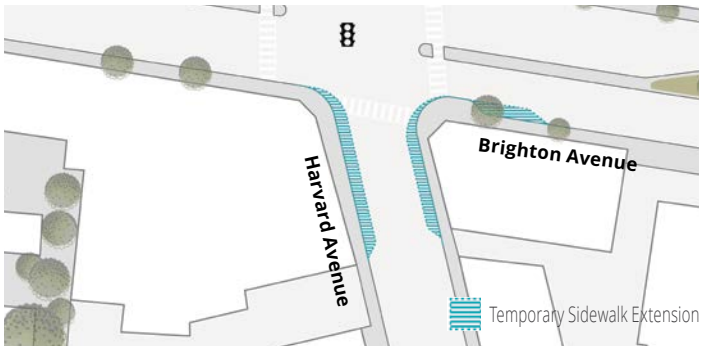
Cost $$$$

Implementation

Placemaking

To complement the curb extensions, quick-build and long-term placemaking strategies are recommended for Harvard Avenue. Using paint, the recommendation is to develop temporary curb extensions to improve safety, create more pedestrian areas, and provide more places for people to stop and sit along this busy corridor. Temporary interventions would serve to inform more permanent, long-term investments. New curb extensions would provide space for wayfinding, greening of the space, seating, or flex zones.

Quick-Build Placemaking



Short-Term Placemaking Examples

Source: Kittelson, Charles Street in Baltimore

3

Cost $$$$

Implementation

TBD

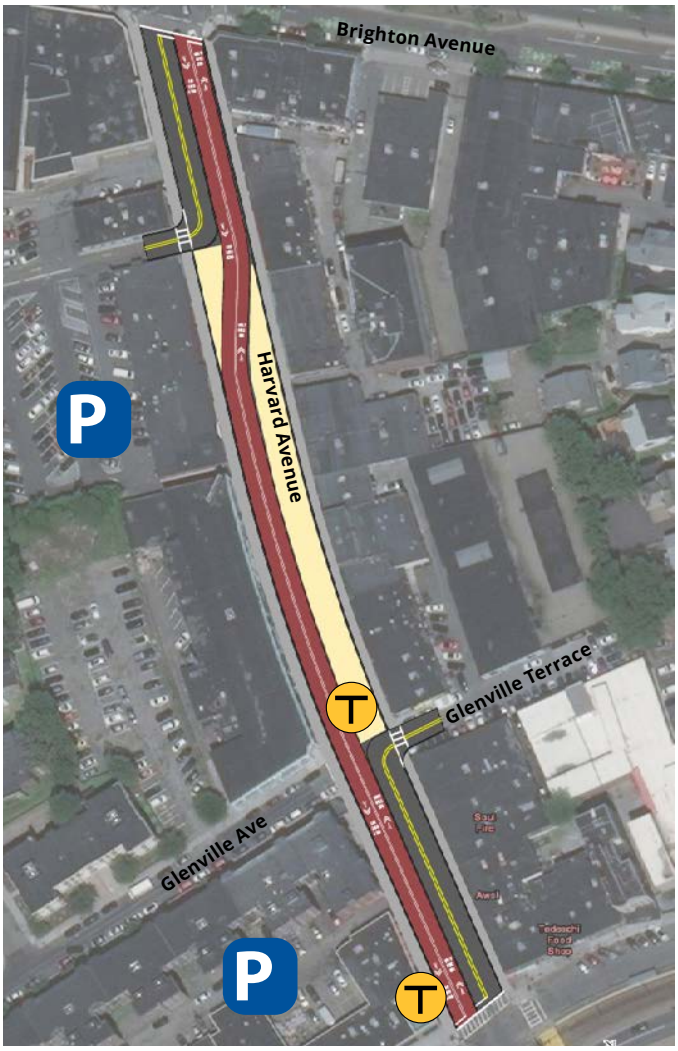
Long-term Recommendation

There are various long term options for Harvard Avenue. One option is to close Harvard Avenue to vehicular traffic between Commonwealth Avenue and Brighton Avenue, except to allow vehicular access to the public parking lots behind Blanchards and off of Glenville Terrace, while creating a new shared bus/bike lane and pedestrian plaza. A temporary, pilot version of this option could provide a dedicated peak hour, shared bus/bike lane in the northbound direction.

A second option is to maintain vehicular travel lanes and introduce priority bus lanes only during peak hours, to be replaced by curbside parking during the remainder of the day. Ultimately, the decision among options should be made in consultation with local merchants and stakeholders as part of the localized planning process. Any option that involves reducing or eliminating on street parking should be preceded by a parking utilization study to assess parking demand and the optimal parking management strategies.

The new open space could create more pedestrian areas and provide places for people to stop and sit along this busy corridor. The many restaurants would benefit from outdoor seating that would enhance business and the pedestrian experience. This recommendation would build upon the PWD's plan to design and construct a pedestrian plaza at the intersection of Commonwealth Avenue/Harvard Avenue.

Shared Bus/Bike Lane & Pedestrian Plaza



P Public Parking T Recommended Bus Stop Relocation

4

Cost $$$$

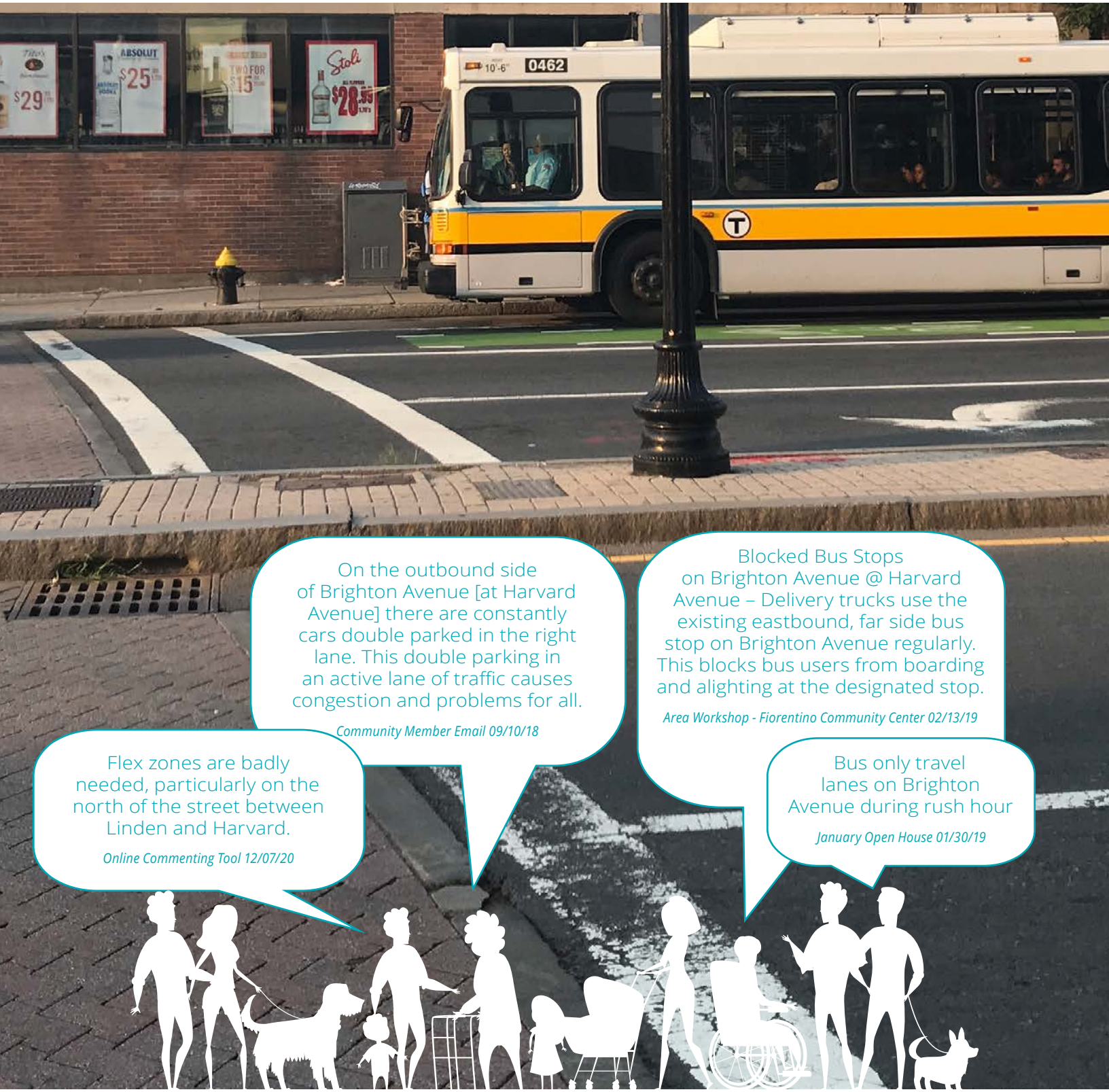
Implementation

Parking Utilization and Management Strategy

Parking opportunities on Harvard Avenue are not immediately obvious to visitors. Supply can seem limited, and double parking occurs frequently--including double parking for loading/unloading. A parking utilization study and management strategy are needed to better understand the supply, demand, and appropriate strategies for managing parking along Harvard Avenue. In addition, wayfinding strategies should be developed and deployed to help direct visitors to available parking spaces. If parking demand exceeds supply, parking management and pricing strategies should be developed to more effectively utilize available parking.

BRIGHTON AVENUE

BETWEEN UNION SQUARE AND LINDEN STREET



Why?

Brighton Avenue between Union Square and Linden Street is a key connection for bus passengers and motorists heading into Allston-Brighton and toward downtown Boston. Brighton Avenue's significance is underscored by the area's irregular street network and inconsistent grid. Allston-Brighton has few streets like Brighton Avenue that span the entire study area and extend into the surrounding neighborhoods. In addition to being an important transportation corridor, Brighton Avenue is also a commercial and retail district with diverse uses that utilize curbside space.

Goals for Brighton Avenue between Union Square and Linden Street include:

- reallocate curbside parking to provide space for other uses (e.g., short-term parking, loading/unloading, deliveries, etc.); and
- reduce transit delays.

Existing

Brighton Avenue looking West

Source: Google Streetview

Brighton Avenue looking East towards Downtown

Source: Kittelson & Associates, Inc.

Research Findings

The BPDA gathered information on the following topics for Brighton Avenue:

- Parking Utilization

The following section details the research findings for Brighton Avenue.

Parking Utilization

A parking utilization study was conducted on Brighton Avenue on a weekday evening in September 2019. Medium to high rates of illegal parking were observed along the block faces adjoining the intersection of Harvard Avenue and Brighton Avenue during the evening peak period (5:15 PM – 7:15 PM). Bus stop violations (i.e., private vehicles stopped or parked in bus stops) were observed at three bus stops on Brighton Avenue. A surface parking lot for CVS Pharmacy is located on the north side of Brighton Avenue at Quint Avenue and the Allston Public Parking surface lot is located off of Harvard Avenue south of Brighton Avenue.

Bus Stop Violation
No Illegal Parking
Low Rate of Illegal Parking
Medium Rate of Illegal Parking
High Rate of Illegal Parking

Observations were made on September 12, 2019 during the PM Peak Period (5:15 – 7:15 PM)

Highest Rate of Illegal Parking

On Brighton Avenue between Harvard Avenue & Quint Street

Recommendations

The recommendations on Brighton Avenue focus on improving bus reliability and increasing the diversity of curbside uses. Prior to the Allston-Brighton Mobility Study, bus service on Brighton Avenue operated in mixed traffic. Shortly thereafter, BTD developed plans and subsequently implemented dedicated bus lanes on Brighton Avenue. In addition, BTD recommended metered parking locations to convert to flex zones. While the recommendations are independent, the concepts complement each other to improve access, mobility, and safety. Finally, the feasibility of center-running dedicated bus lanes on Brighton Avenue should be analyzed to determine if additional roadway space can be repurposed for other uses (e.g., separated bike lanes).

1

Cost $$$$

Implementation

Flex Zones

This recommendation proposes re-purposing existing parking spaces to develop flexible curb zones. Rather than designating fixed uses for all portions of the curbside, flex zones accommodate different functions along segments of the road. Flex zones can serve short-term parking, loading/unloading, deliveries, or TNC drop-off/pick-up. The flex zones highlighted on the next page in yellow have been identified by BTD as loading/TNC zones. The existing near side eastbound bus stop was recently relocated far side. As part of BTD's plans, a bus bulb out is proposed to improve bus operations.

2

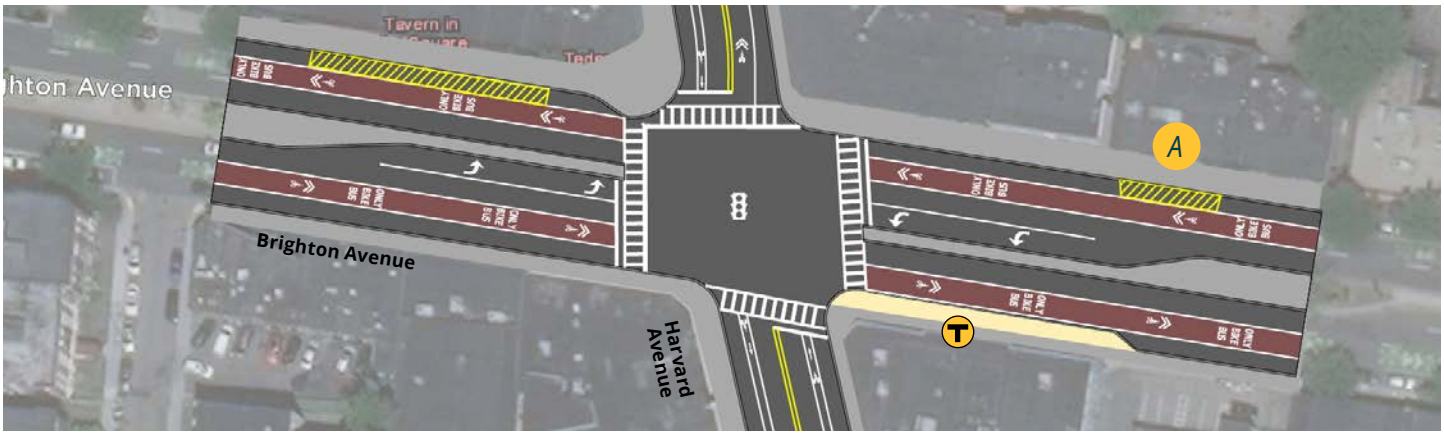
Cost $$$$

Implementation

Long Term Bus Lanes

A long term recommendation is to assess the feasibility of replacing the center median with center running dedicated bus lanes and/or repurposing right of way for separated bike lanes. Center running bus lanes would also allow for fully accessible bus stops. Any decisions about reallocating space for center running bus lanes and/or bicycle lanes would involve a localized community engagement process, and would necessarily include a discussion about the trade-offs of preserving street trees in the center median.

Recommended Flex Zones



Relocated Bus Stop

Pick Up/Drop Off Flex Zone

Source: BTD

Dedicated Bus Lane Adjacent to Parking

Source: Kittelson & Associates, Inc.

UNION SQUARE

CAMBRIDGE STREET/BRIGHTON AVENUE/N. BEACON STREET

Why?

Cambridge Street, Brighton Avenue, and N. Beacon Street intersect at Union Square in Allston Village. The intersection forms part of the proposed A-B Transit Corridor, which serves as a major route for east-west travel for all modes in the study area. The configuration and sharp skew of the intersection at Union Square results in long crossing distances and increased exposure for pedestrians. Five bus routes provide service to and from Union Square. Dedicated bus lanes currently exist on Brighton Avenue, but they currently do not extend beyond Union Square. The intersection is surrounded by commercial, retail, and institutional (e.g., Jackson/Mann School) land uses.

Goals for Union Square include:

- improve pedestrian safety at existing crossing locations;
- enhance pedestrian access to transit;
- activate public spaces; and
- improve vehicle traffic safety and reduce delay.

Existing

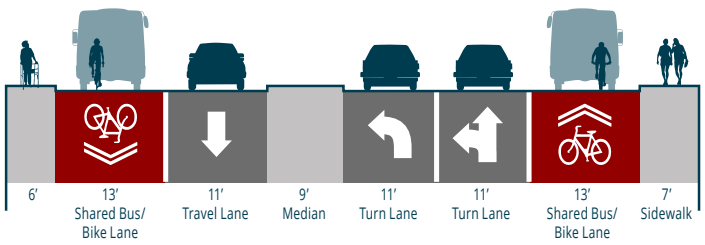
Source: Google

Existing Bus Stop

Brighton Avenue looking West

Source: Google Streetview

Existing Cross-section – Brighton Avenue looking West



Research Findings

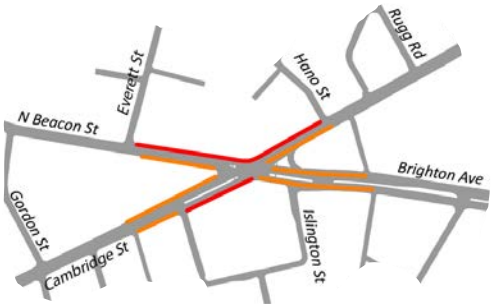
The BPDA gathered information on the following topics for Union Square:

- Bicycle Comfort
- Pedestrian Delay
- Crashes
- Vehicle Delay
- Transit

The following section details the research findings for Union Square.

Bicycle Comfort

Union Square is the intersection of two four-lane roadways with no dedicated bicycle facilities, speed limits of 25 mph, and daily vehicle volumes between 10,200 and 13,100. Based on the worst performing roadway characteristic (street width, separate right-turn lanes at intersections), Union Square has bicycle comfort scores ranging from LTS 3 to LTS 4. LTS 3 roads are tolerable for confident bicyclists and LTS 4 roads are uncomfortable for most bicyclists.



LTS 1 (Low Stress)
LTS 2
LTS 3
LTS 4 (High Stress)

Level of traffic stress is calculated based on speed limit, daily vehicle volumes, and street width.

LTS (Union Square)

LTS 3

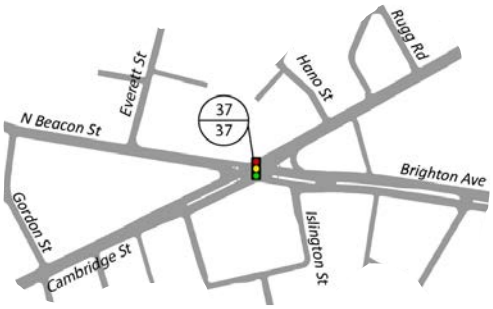
Tolerable for confident bicyclists

LTS 4

Uncomfortable for most bicyclists

Pedestrian Delay

Pedestrian delay was calculated at the one signalized intersection in Union Square during the AM and the PM peak hour. The maximum pedestrian delay observed in Union Square at the intersection of Cambridge Street and Brighton Avenue is 37 seconds during the AM and PM peak. The signalized intersection in Union Square exceeds the 30 second pedestrian delay threshold for compliance. Noncompliance is further exacerbated by the fact that pedestrians are required to cross North Beacon Street and Brighton Avenue in two stages. After completing the first stage, pedestrians must wait in center median islands that have a width of approximately 7 feet. Any future modifications to the signal timing for this signalized intersection should seek to decrease the existing pedestrian delay.



X / X — AM Peak Hour Delay / PM Peak Hour Delay

Pedestrian delay is calculated using cycle length and the effective green time for pedestrians

(Source: HCM 2000)

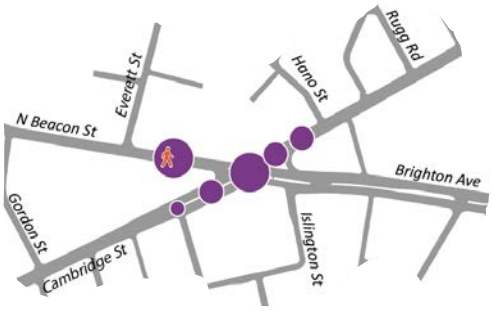
Pedestrian Delay (at key Signalized Intersections)

37 Seconds Maximum Delay

Pedestrian noncompliance likely after 30 seconds of delay

Crashes

The BPD responded to twenty-three crashes in Union Square between 2015 and 2017. Of all reported cases, 96% (22) involved only motorists and 4% (1) involved a pedestrian. Crashes were reported at most intersections and segments in Union Square, with the exception of Brighton Avenue east of Cambridge Street. Areas in Union Square with a higher number of reported crashes (i.e., 5 or more crashes) include the intersection of Cambridge Street and Brighton Avenue, and N Beacon Street between Everett Street and Cambridge Street.



Boston Police Department Crime Incident Reports (2015-2017)

Motor Vehicle Crashes
- 1
- 2 - 4
- > 4

Pedestrian Crash

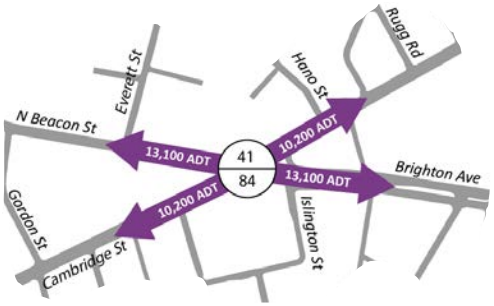
Bicyclist Crash

Crashes (Union Square)

22	Motor Vehicle
0	Bicycle
1	Pedestrian

Vehicle Delay

One major signalized intersection influences motor vehicle travel in Union Square: Cambridge Street, Brighton Avenue, and N. Beacon Street. Vehicle delay at this intersections ranges from 41 seconds of AM peak hour delay to 84 seconds of PM peak hour delay. Average daily traffic in Union Square includes 10,200 daily vehicles on Cambridge Street and 13,100 daily vehicles on N. Beacon Street and Brighton Avenue.



X
X
AM Peak Hour Delay
PM Peak Hour Delay

Existing Vehicle Delay*, Volumes**, and Peak/Off-Peak Travel Times

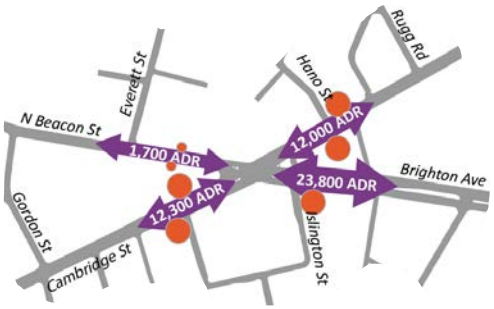
** Delay reported in seconds*

*** Volumes rounded to the nearest 100*

(Source: HCM 2000)

Transit

MBTA bus routes 57, 64, 66, 501, and 503[8] provide service in Union Square. These routes serve eight bus stops in Union Square, five of which have daily ridership that falls within the top 25% of all stops in the study area. The bus routes that traverse Union Square via Cambridge Street have an ADR of 12,000 to 12,300. The bus routes that traverse Union Square via Brighton Avenue have an ADR of 23,800 and the bus routes that traverse Union Square via N. Beacon Street have an ADR of 1,700. Approximately 32% of daily bus riders in Union Square travel during the AM and PM peak periods. When compared to average daily vehicle volumes, 18% more average daily bus riders than motorists traverse Union Square via Cambridge Street, 80% more average daily bus riders than motorists traverse Union Square via Brighton Avenue, and 87% fewer average daily bus riders than motorists traverse Union Square via N. Beacon Street. Daily bus ridership on Cambridge Street and Brighton Avenue highlight a need for bus priority treatments (e.g., dedicated bus lane, transit signal priority) to facilitate and ease bus travel through the intersection.



Bus Stops

Bus Stops w/ Top 25% Daily Ridership

18% more average daily bus riders than motorists on Cambridge Street

80% more average daily bus riders than motorists on Brighton Avenue

87% fewer average daily bus riders than motorists on N. Beacon Street

32% of the daily bus riders travel during peak periods

5	Number of Bus Route (57, 64, 66, 501, 503)
5	Bus Stops with Daily Ridership in Top 25% of Allston-Brighton Mobility Plan Area

(Source: MBTA 2017)

8 MBTA Bus 503 was suspended as a result of the COVID-19 pandemic. The City is working to restore this service and expects it to return.

Recommendations

The preferred short-term recommendation is to remove the median island on the east leg to realign the intersection. These improvements incorporate placemaking in front of Jackson/Mann School and complement the peak hour bus lane recommendation proposed for the entire A-B Transit Corridor. In addition to the realignment, this recommendation proposes the development of a long term plan for a comprehensive redesign of Union Square.

1

Cost $$$$

Implementation

TBD

Intersection Realignment

This recommendation proposes to redistribute the travel lanes on the east leg of Brighton Avenue. The proposed lane configuration removes the median on the east leg to allow westbound and eastbound left turning motorists to proceed simultaneously. This reconfiguration shortens the crossing distance by both widening the pedestrian island and eliminating the center median, allowing pedestrian to cross each approach in a single stage. The signals would be set to pedestrian recall, which turns the pedestrian walk lights on during every cycle, thereby not requiring pedestrians to push a button. Placemaking elements are proposed to promote a sense of community and activate the existing space in front of Jackson/Mann School. Additionally, this recommendation proposes the removal of the eastbound bus stop as part of the dedicated bus lane installation on Brighton Avenue.

Short-Term Recommendation

Quick-Build Placemaking - Street Art Example

Source: Kaboom Perma-Playstreets, South Chicago, Illinois

2

Cost $$$$

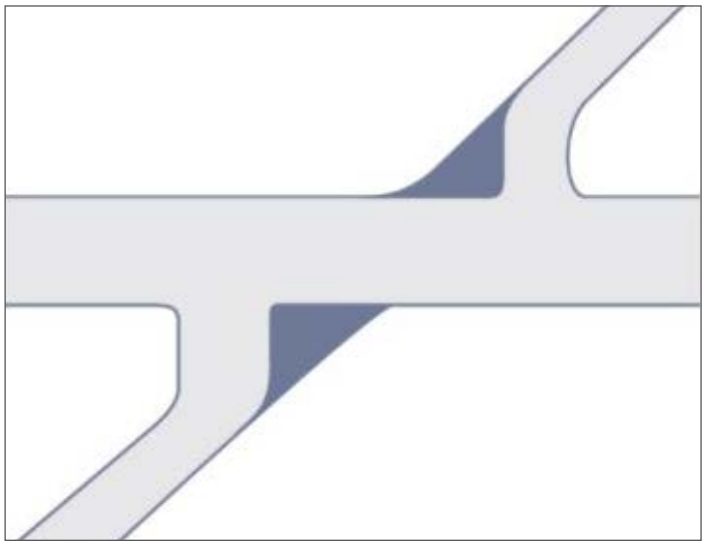
Implementation

TBD

Major Intersection Realignment

For the long term, Union Square should be redesigned and reconstructed to remove the awkward angles, improve operations, and make plaza space more attractive and usable. The intersection could be reconfigured to establish more easily negotiated right angles. Appendix C provides an illustration of one possible redesign of intersection. It should be noted that installations such as plazas, furnishings, landscaping, and the like will require ongoing maintenance, which in turn will require partnerships with nearby locals merchants, institutions, nonprofits, and/or Main Streets organizations.

Conceptual Illustration of Long-Term Realignment



Source: NACTO

Long-Term Placemaking Example

Source: NBBJ

FRANKLIN STREET BRIDGE

BETWEEN CAMBRIDGE STREET AND LINCOLN STREET

Why?

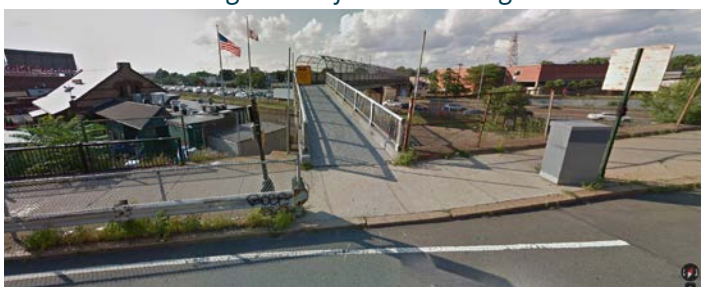
The Franklin Street Bridge between Cambridge Street and Lincoln Street is one of the few connections in the study area across the Pike for pedestrians and bicyclists. However, the Franklin Street Bridge is out of compliance with current accessibility requirements; for instance, it has steep ramps, narrow pathways, and sharp turns. Also, the connections to the bridge on the south side force pedestrians and bicyclists to cross four lanes of traffic and a median at an unmarked crossing at Cambridge Street. Based on 2018 traffic counts, approximately 65 bicyclists and 75 pedestrians were observed at the intersection of Cambridge Street and Linden Street during the evening peak period.

The primary goal for Franklin Street Bridge is to:

- improve comfort; and
- improve accessibility.

Existing

Franklin Street Bridge - View from Cambridge Street



Source: Google Streetview

Pedestrian Waiting on the Median Island on Cambridge Street south of the Franklin Bridge

Source: Google Streetview

Research Findings

The BPDA gathered information on the following topics for Franklin Street Bridge:

- Bicycle Comfort
- Crashes
- Vehicle Volumes

The following section details the research findings for the Franklin Street Bridge.

Bicycle Comfort

The Franklin Street Bridge area includes a four-lane, median-divided roadway (Cambridge Street over I-90), a pedestrian bridge (Franklin Street Bridge), and a two-lane roadway (Lincoln Street from Franklin Street to Mansfield Street). The Franklin Street Bridge area has bicycle comfort scores ranging from LTS 1 (Franklin Street Bridge) to LTS 4 (Cambridge Street west of Linden Street), but the predominant LTS score is LTS 3. LTS 3 roads are tolerable for confident bicyclists. The absence of a safe bicycle crossing on Cambridge Street creates a barrier for bicyclists and pedestrians who want to cross Cambridge Street to access the low-stress Franklin Street Bridge.

LTS 1 (Low Stress)
LTS 2
LTS 3
LTS 4 (High Stress)

Level of traffic stress is calculated based on speed limit, daily vehicle volumes, and street width.

LTS (Franklin Street Bridge, Cambridge Street over I-90, and Lincoln Street from Franklin Street to Mansfield Street)

LTS 3

Tolerable for confident bicyclists

Crashes

The BPD responded to ten crashes near the Franklin Street Bridge between 2015 and 2017. Of the reported cases, 90% (9) involved only motorists and 10% (1) involved a pedestrian. Crashes were reported at most intersections and segments near the Franklin Street Bridge. Areas near the Franklin Street Bridge with a higher number of reported crashes (i.e., 5 or more crashes) include the intersection of Cambridge Street and Linden Street.

Boston Police Department Crime Incident Reports (2015-2017)

Motor Vehicle Crashes

- 1
- 2 - 4
- > 4

Pedestrian Crash

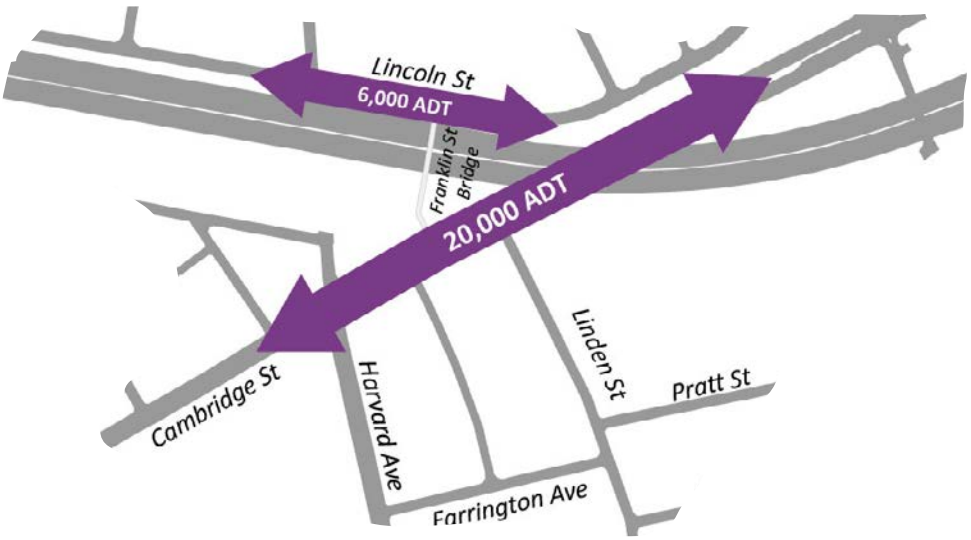
Bicyclist Crash

Crashes (Franklin Street Bridge, Cambridge Street over I-90, and Lincoln Street from Franklin Street to Mansfield Street)

9	Motor Vehicle
0	Bicycle
1	Pedestrian

Vehicle Volumes

Average daily traffic in the Franklin Street Bridge area includes 20,000 daily vehicles on Cambridge Street and 6,000 daily vehicles on Lincoln Street.



Recommendations

The recommendation for the Franklin Street Bridge focuses on pathway illumination and pedestrian lighting to improve safety, facilitate pedestrian access, and reinforce a sense of place. In addition, the recommendation proposes public art to reinforce a sense of identity, community, and place. Finally, this recommendation includes continued advocacy for the redesign and reconstruction of the Franklin Street Bridge.

Additionally, there are recommendations adjacent to the Franklin Street Bridge described in other sections of the Plan. Specifically, the Lincoln Street section recommends safety improvements at the Franklin Street Bridge landing on Lincoln Street, while the Linden Street section recommends a long term study for the intersection of Linden Street, Cambridge Street, and the Franklin Street Bridge landing.

1

Cost $$$$

Implementation

Franklin Street Bridge Placemaking

In consultation and collaboration with MassDOT, which owns the Franklin Street Bridge, and the Mayor's Office of Art and Culture, the BPDA will lead an effort to improve lighting at bridge entrances and along pathways while also working to create a one-time or multi-year art installation on or near the bridge. Any lighting or art attached to the bridge would require approval of MassDOT. It is important to note that the Franklin Street Bridge is expected to be replaced during the next decade or so as part of the Allston I-90 Intermodal Project. Therefore, the scope and costs of any lighting and art installations should appropriately reflect this temporary timeframe. A concerted effort would be made to solicit ideas and proposals from local, Allston-Brighton based lighting designers and artists. It may be possible to develop and implement lighting and/or art installations through existing programs administered by the Mayor's Office of Art and Culture. It should be noted that installations such as art and lighting will require ongoing maintenance, which in turn may require partnerships with nearby locals merchants, institutions, nonprofits, and/or Main Streets organizations.

Placemaking Example - Pedestrian Bridge Lighting

Source: freepik.com

2

Cost $$$$

Implementation

Bridge Redesign and Replacement

Continue to advocate for redesign and reconstruction of the Franklin Street Bridge to address accessibility and design deficiencies.

Short-Term Placemaking Example - Crocheted Flowers Public Art

Source: Natick Patch

LINDEN STREET

BETWEEN CAMBRIDGE STREET AND PRATT STREET

Why?

North of Farrington Avenue, Linden Street is a narrow one-way northbound street with on-street parking on the right side. It is often used as a cut-through street for motorists traveling northeast on Cambridge Street en route to I-90 or Cambridge.

Goals for Linden Street include:

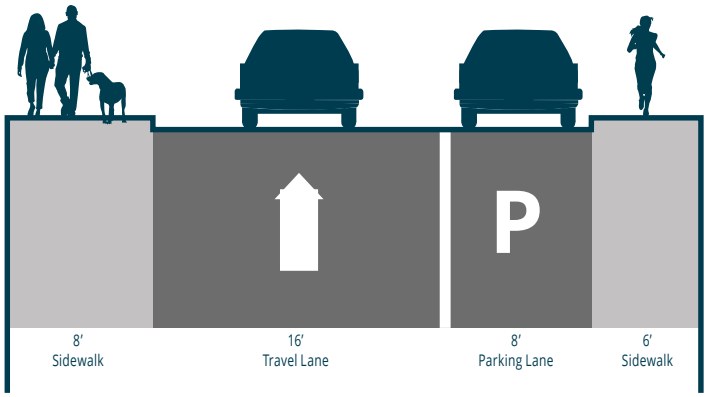
- improve pedestrian and bicycle safety between the Franklin Street Bridge and Linden Street;
- improve pedestrian crossings between the Franklin Street Bridge and Linden Street; and
- improve vehicle circulation.

Existing

Linden Street facing north toward Cambridge Street

Source: Google Streetview

Existing Intersection Cross-section



Research Findings

The BPDA gathered information on the following topics for Linden Street:

- Bicycle Comfort
- Crashes
- Vehicle Volumes

The following section details the research findings for the Linden Street.

Bicycle Comfort

The Linden Street area includes a four-lane, median-divided roadway (Cambridge Street over I-90) and a one-lane, one-way roadway (Linden Street from Pratt Street to Cambridge Street). The Linden Street area has bicycle comfort scores ranging from LTS 2 (Cambridge Street east of Linden Street) to LTS 4 (Cambridge Street west of Linden Street), but the predominant LTS score is LTS 3. LTS 3 roads are tolerable for confident bicyclists. The absence of a safe bicycle crossing at Linden Street creates a barrier for bicyclists and pedestrians who want to cross Cambridge Street to access the low-stress Franklin Street Bridge.

LTS 1 (Low Stress)
LTS 2
LTS 3
LTS 4 (High Stress)

Level of traffic stress is calculated based on speed limit, daily vehicle volumes, and street width.

LTS (Franklin Street Bridge and Cambridge Street over I-90)

LTS 3

Tolerable for confident bicyclists

The absence of a safe bicycle crossing at Linden Street creates a barrier for bicyclists and pedestrians who want to cross Cambridge Street to access the low-stress Franklin Street Bridge.

Crashes

The BPD responded to sixteen crashes near the Linden Street area between 2015 and 2017. Of the reported cases, 88% (14) involved only motorists and 12% (2) involved pedestrians. Crashes were reported at the intersection of Linden Street and Cambridge Street, as well as on the segments near Linden Street. Areas near Linden Street with a higher number of reported crashes (i.e., 5 or more crashes) include the intersection of Cambridge Street and Linden Street and Linden Street between Cambridge Street and Pratt Street.

Boston Police Department Crime Incident Reports (2015-2017)

Motor Vehicle Crashes

- 1
- 2 - 4
- > 4

Pedestrian Crash

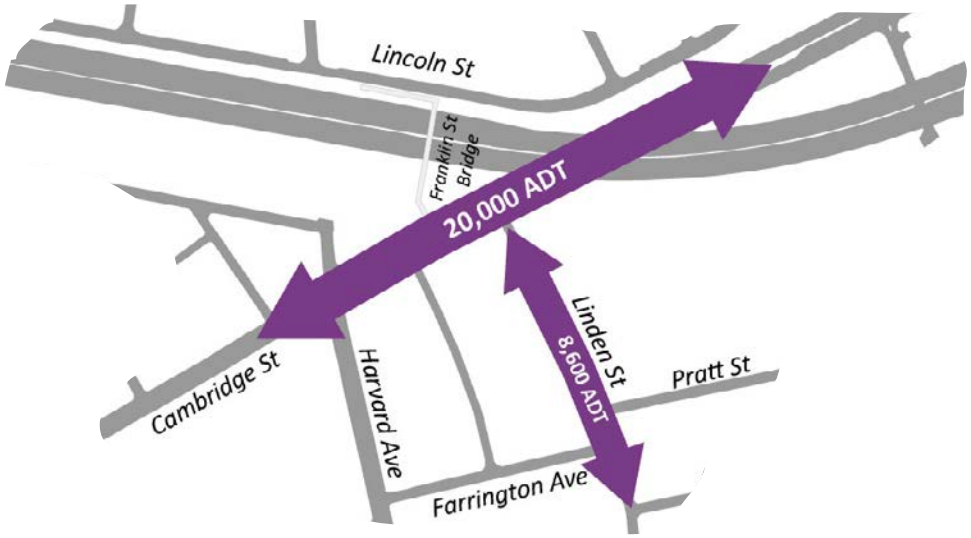
Bicyclist Crash

Crashes (Franklin Street Bridge and Cambridge Street over I-90)

9	Motor Vehicle
0	Bicycle
1	Pedestrian

Vehicle Volumes

Average daily traffic in the Linden Street area includes 20,000 daily vehicles on Cambridge Street and 8,600 daily vehicles on Linden Street.



Recommendations

This recommendation proposes widening Linden Street between Cambridge Street and Pratt Street to preserve future multimodal travel options. Additionally, this plan recommends a feasibility study to investigate traffic control options at Linden Street and Cambridge Street, as well as pedestrian and bicycle facilities across Cambridge Street.

1

Cost $$$$

Implementation

TBD

Preserve Future Multimodal Travel Options on Linden Street

The recommendation is to preserve future multimodal options for Linden Street by expanding the street right of way dimensions between Cambridge Street and Pratt Street. Additional right of way in this segment would facilitate two-way bicycle travel and/or two-way vehicular travel, to be consistent with two-way flow along the rest of Linden Street. The BPDA has coordinated closely with the development at 20 Linden Street to ensure a building setback along Linden Street, therefore providing space to expand the sidewalk and, potentially, the curb-to-curb dimension.

BTD will be leading a public process during 2021/2022 to determine how bicycle network gaps in Allston Village (as described in the Bicycle Network section on Chapter 5) can be resolved. During this public process, consideration will also be given to whether conversion of Linden Street between Pratt Street and Cambridge Street to two-way vehicular and/or bicycle travel may be feasible and advisable. Additionally, this network gaps analysis will include considerations for bus improvements on Cambridge Street.

2

Cost $$$$

Implementation

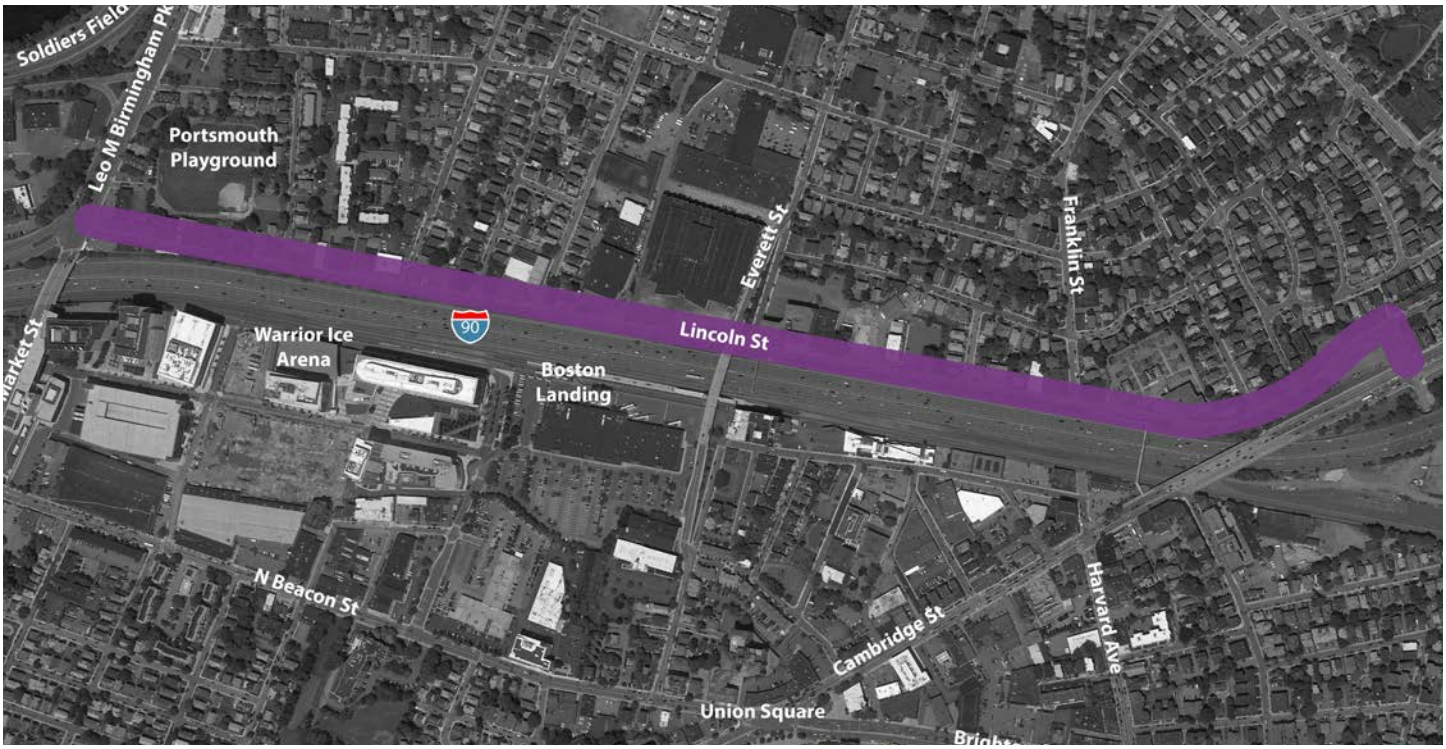
TBD

Improve Pedestrian and Bicycle Access to the Franklin Street Bridge

Long-term plans must consider the feasibility of signalizing the intersection of Linden Street and Cambridge Street and providing pedestrian and bicycle facilities on Linden Street and across Cambridge Street.

LINCOLN STREET

BETWEEN MARKET STREET AND CAMBRIDGE STREET



Why?

Lincoln Street is a two-lane road with a narrow sidewalk on the south side and parking on the north side in North Allston. It is one of the few east-west connections in the study area that forms part of a seamless network for pedestrians. The east-west connection is not seamless for bicyclists given that the roadway segment between Market Street and Portsmouth Street is a one way westbound street. Along this segment bicyclists ride illegally on the street or the sidewalk, or they find an alternate route. Despite running parallel to I-90 to the south and a strip of industrial land uses to the north, Lincoln Street is located in a predominantly residential area.

Goals for Lincoln Street include:

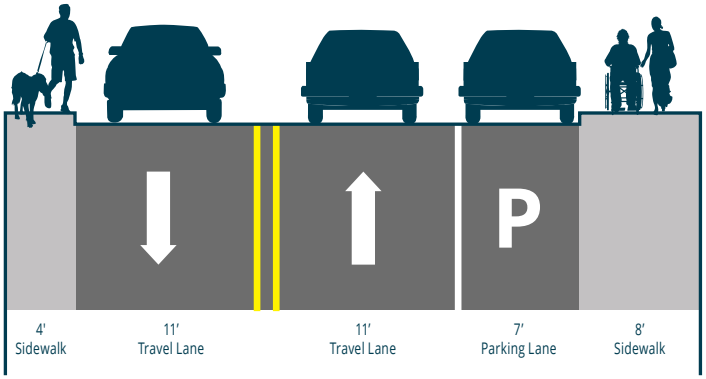
- reduce vehicle speeds;
- increase comfort and safety of pedestrian crossings;
- improve vehicular circulation; and
- reduce cut-through traffic.

Existing

Lincoln Street looking West

Source: Google Streetview

Existing Typical Cross-section



Research Findings

The BPDA gathered information on the following topics for Lincoln Street:

- Bicycle Comfort
- Pedestrian Delay
- Crashes
- Vehicle Delay
- Vehicle Speed

The following section details the research findings for Lincoln Street.

Bicycle Comfort

Lincoln Street, between Market Street and Cambridge Street, is a two-lane roadway with no dedicated bicycle facilities, a speed limit of 25 mph, and daily vehicle volumes of 5,900. Based on the worst performing roadway characteristic, in this case daily vehicle volumes, Lincoln Street has a bicycle comfort score of LTS 3. LTS 3 roads are tolerable for confident, experienced bicyclists.

LTS 1 (Low Stress)
LTS 2
LTS 3
LTS 4 (High Stress)

Level of traffic stress is calculated based on speed limit, daily vehicle volumes, and street width.

LTS (Lincoln Street between Market Street and Cambridge Street)

LTS 3

Tolerable for confident bicyclists

Pedestrian Delay

The maximum pedestrian delay observed along Lincoln Street is 34 seconds during the AM and PM peak hour at the intersection of Lincoln Street and Leo M. Birmingham Parkway. The signalized intersection exceeds the 30 second pedestrian delay threshold. Any future modifications to the signal timing for this signalized intersection should seek to decrease existing pedestrian delay.

X
X

AM Peak Hour Delay
PM Peak Hour Delay

Pedestrian delay is calculated using cycle length and the effective green time for pedestrians

(Source: HCM 2000)

Pedestrian Delay (at key Signalized Intersections)

34 Seconds
Maximum Delay

Pedestrian noncompliance likely after 30 seconds of delay

Crashes

The BPD responded to nineteen crashes along Lincoln Street between 2015 and 2017. All reported crashes involved motorists. Pedestrian and bicycle involved crashes were not reported. Crashes were reported at most intersections and segments along Lincoln Street. Areas along Lincoln Street with a higher number of reported crashes (i.e., 5 or more crashes) include the intersection of Lincoln Street and Portsmouth Street, and the segment of Lincoln Street between Royal Street and Empire Street.

Boston Police Department Crime Incident Reports (2015-2017)

Motor Vehicle Crashes

- 1
- 2 - 4
- > 4

Pedestrian Crash

Bicyclist Crash

Crashes (Lincoln Street between Market Street and Cambridge Street)

19 Motor Vehicle

0 Bicycle

0 Pedestrian

Vehicle Delay

One major signalized intersection influences motor vehicle travel along Lincoln Street: Lincoln Street and Leo M. Birmingham Parkway. This intersection experiences 44 seconds of AM and PM peak hour delay. During off-peak time periods, it can take motorists three minutes to traverse Lincoln Street. During peak period time periods, it can take motorists between three to seven minutes to traverse Lincoln Street. On average, approximately 5,900 vehicles traverse Lincoln Street on a daily basis.

X / X AM Peak Hour Delay / PM Peak Hour Delay

Existing Vehicle Delay*, Volumes**, and Peak/Off-Peak Travel Times

** Delay reported in seconds*

*** Volumes rounded to the nearest 100*

(Source: HCM 2000)

Travel Times (Lincoln Street between Market Street and Cambridge Street)

3 Minutes Off-Peak Travel Time

3-7 Minutes Peak Period Travel Time

Vehicle Speed

Vehicle speed studies were conducted in the Allston-Brighton neighborhoods to understand whether or not motorists are complying with speed limit requirements. Streets where a high percentage of motor vehicles are traveling at or above the speed limit may benefit from design strategies and elements that reinforce operating speeds consistent with the speed limit. Speed data was collected on Lincoln Street east of Portsmouth Street on May 9, 2019 and May 10, 2019. In that time, 71% of observed motor vehicles were traveling at or above 25 mph.

Speed data collected between May 9, 2019 and May 10, 2019

XX%

Percentage of observed motor vehicles traveling at or above 25 mph

*Number of Observed Motor Vehicles Traveling at or above than 25 mph east of Portsmouth Street**

4,200

*Vehicles rounded to the nearest 100

Recommendations

The recommendations on Lincoln Street focus on reducing vehicle speeds, enhancing pedestrian and bicycle access to the Franklin Street Bridge, and improving vehicular circulation. While the three recommendations are independent, the proposed improvements complement each other to enhance access, mobility, and safety.

Long-term recommendations on Lincoln Street should consider the feasibility of using existing MassDOT right-of-way on the south side of the street and adjacent to I-90 for a separated bicycle facility.

1

Cost $$$$

Implementation

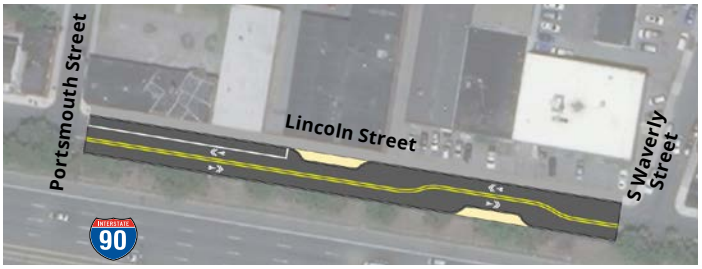
Traffic Calming

The recommendation for Lincoln Street includes traffic calming measures for the entire length of Lincoln Street. Traffic calming measures may include physical barriers, vertical measures (such as speed humps) and horizontal measures (such as medians), signing and striping techniques, and chicanes. A chicane is a horizontal deflection added to the road by offsetting parking spaces or adding offset curb extensions. The specific traffic calming measures utilized will depend in part on an engineering study to be conducted in advance of planning and design to determine measures that are safe, appropriate and feasible.

Existing

Source: Google

Example of Chicanes



Example of Traffic Calming - Chicanes | Brookline, MA

Source: BPDA

2

Cost $$$$

Implementation

Franklin Street Bridge Access Improvements

The Franklin Street Bridge provides pedestrians and bicyclists with one of few ways to cross I-90. The recommendation is to improve safety and access to the Franklin Street Bridge ramps on Lincoln Street. In addition to widening the landing, this recommendation proposes a raised intersection at Lincoln Street and Franklin Street to increase safety and calm traffic. This concept can be implemented in conjunction with the chicanes and the two-way conversion at Market Street.

Existing

Source: Google

Prospective Locations of Potential Raised Crosswalks

Example of Raised Intersection - Arborway in Boston, MA

Source: BPDA

3

Cost $$$$

Implementation TBD

One-way to Two-way Conversion of Lincoln Street & Market Street

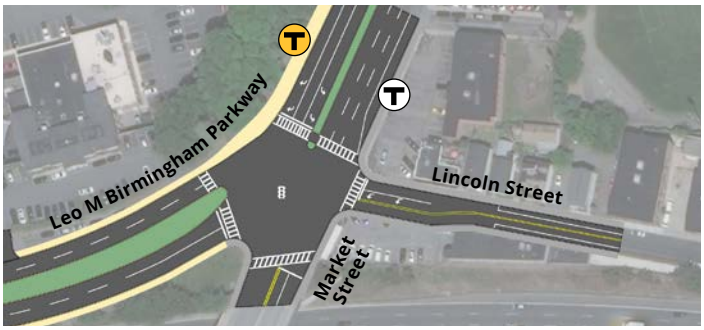
This recommendation converts Lincoln Street between Market Street and Portsmouth Street from one-way to two-way traffic. The recommendation would improve vehicular circulation and potentially reduce neighborhood cut-through traffic. The intersection reconfiguration complements the proposed improvements on Leo Birmingham Parkway and the addition of a new bus stop opposite Lincoln Street.

Existing

Source: Google

Existing Bus Stop

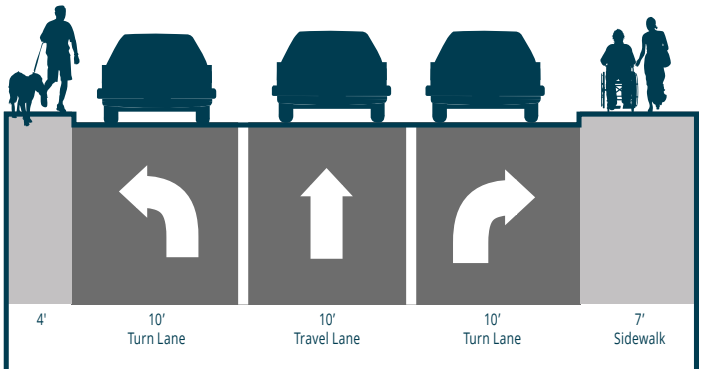
Recommended



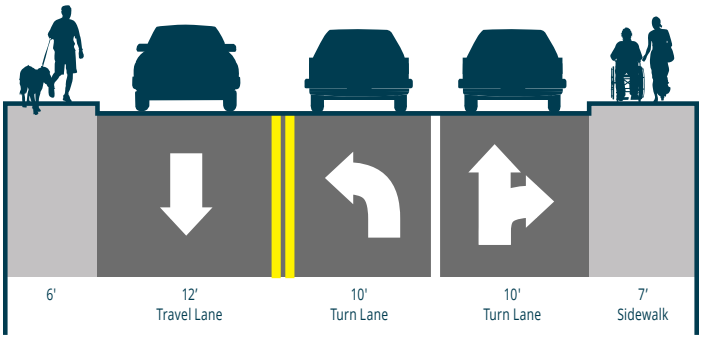
Recommended Bus Stop Relocation

Existing Bus Stop

Existing Cross-section - Looking West at Lincoln Street/Market Street



Recommended Cross-section - Looking West at Lincoln Street/Market Street



LEO M. BIRMINGHAM PARKWAY

BETWEEN N. BEACON STREET & MARKET STREET

Why?

Along this segment, Leo M. Birmingham Parkway is an east-west roadway with four lanes. The travel lanes are separated by a 25-foot wide, tree-lined center-running median. Leo M. Birmingham Parkway is one of the few east-west corridors in the study area, although it currently does not provide a seamless network connection for pedestrians or bicyclists. The existing road is bigger than it needs to be to accommodate the volumes of traffic. To the south of Leo M. Birmingham Parkway is I-90. To the north, Leo M. Birmingham is adjacent to a strip of inaccessible commercial uses - access is only provided to vehicles along Soldiers Field Road. While a small patch of greenspace exists along the north side of Leo M. Birmingham Parkway, the parkway does not have sidewalks or bicycle facilities.

Goals for Leo M. Birmingham Parkway between Market Street and N. Beacon Street include:

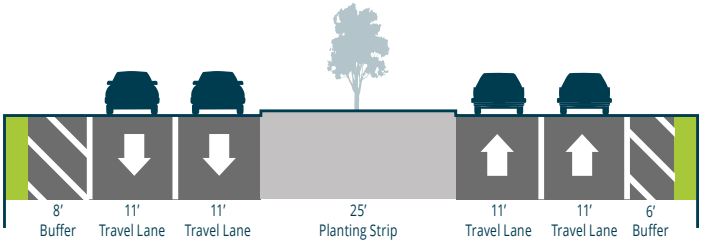
- provide comfortable and safe pedestrian facilities;
- provide comfortable and safe bicycle facilities; and
- improve the comfort and safety of pedestrian crossings.

Existing

Leo M. Birmingham Parkway looking West

Source: Google Streetview

Existing Typical Cross-section



Research Findings

The BPDA gathered information on the following topics for Leo M. Birmingham Parkway:

- Bicycle Comfort
- Crashes

The following section details the research findings for Leo M. Birmingham Parkway.

Bicycle Comfort

Leo M. Birmingham Parkway is a four-lane, median-divided roadway with no dedicated bicycle facilities, a speed limit of 30 mph, and daily vehicle volumes of 6,300. Based on the most stressful roadway characteristic—number of through lanes—Leo M. Birmingham Parkway has a bicycle comfort score of LTS 3. LTS 3 roads are tolerable for confident bicyclists.

LTS 1 (Low Stress)
LTS 2
LTS 3
LTS 4 (High Stress)

Level of traffic stress is calculated based on speed limit, daily vehicle volumes, and street width.

LTS (from N Beacon Street to Market Street)

LTS 3

Tolerable for confident bicyclists

Crashes

The BPD responded to one crash along Leo M. Birmingham Parkway between 2015 and 2017. The reported crash involved motorists. Pedestrian and bicycle involved crashes were not reported. The crash was reported at the intersection of Leo M. Birmingham Parkway and Lincoln Street.

Boston Police Department Crime Incident Reports (2015-2017)

Motor Vehicle Crashes

1
2 - 4
> 4

Pedestrian Crash
Bicyclist Crash

Crashes (from N Beacon Street to Market Street)

1	Motor Vehicle
0	Bicycle
0	Pedestrian

Recommendations

The recommendations on Leo M. Birmingham Parkway focus on a series of improvements geared toward reducing vehicle speeds, providing safe pedestrian and bicycle facilities, and encouraging placemaking opportunities. The recommendation is to redesign the existing right-of-way and introduce pedestrians and bicycles to a built environment with excess roadway capacity and limited vehicular demand. The two remaining travel lanes would provide sufficient capacity to safely and efficiently support the existing vehicular demand.

1

Cost $$$$

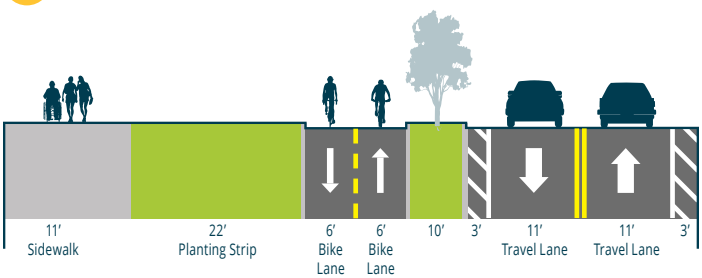
Implementation

Repurpose North Carriageway

A road diet is recommended on Leo M. Birmingham Parkway between Market Street and N. Beacon Street. The recommendation is to close the northernmost carriageway (i.e., two travel lanes) to vehicular traffic and repurpose the space for pedestrians, bicycles, and placemaking. The southern carriageway could be closed instead pending coordination with DCR. A new bus stop is proposed opposite Lincoln Street. A preliminary concept and a cross-section are provided below.

Quick-Build Placemaking & Multi-Use Path

A Recommended Cross-Section



2

Cost $$$$

Implementation

TBD

Redesign Intersection of Leo Birmingham Parkway/Market Street/Lincoln Street

A redesign of the intersection of Leo M. Birmingham Parkway/ Market Street/Lincoln Street would complement the proposed redesign of Leo Birmingham Parkway to the west. With only one carriageway entering the intersection, the redesign would simplify traffic movements and pedestrian crosswalks. The redesign would also solve the skew for southbound vehicles traveling from Leo Birmingham Parkway onto Market Street. Finally, it would accommodate the new two-way traffic pattern on Lincoln Street, proposed later in this section.

Multi-Use Path

Source: NBBJ, Hudson River Greenway, New York

3

Cost $$$$

Implementation

TBD

Placemaking

Using simple traffic barriers, the northernmost carriageway on Leo M. Birmingham Parkway can be closed off to vehicular traffic to create new space for bicyclists and pedestrians. Temporary, quick-build interventions would serve to inform more permanent, long-term investments. The pavement behind the barriers could be replaced with new curb, pedestrian space, a two-way separated bicycle facility, and added green space with seating areas.

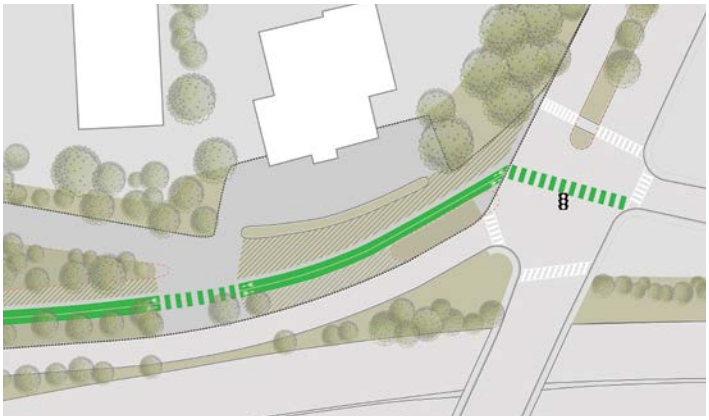
Quick-Build Placemaking

Temporary road closure/pedestrian protections

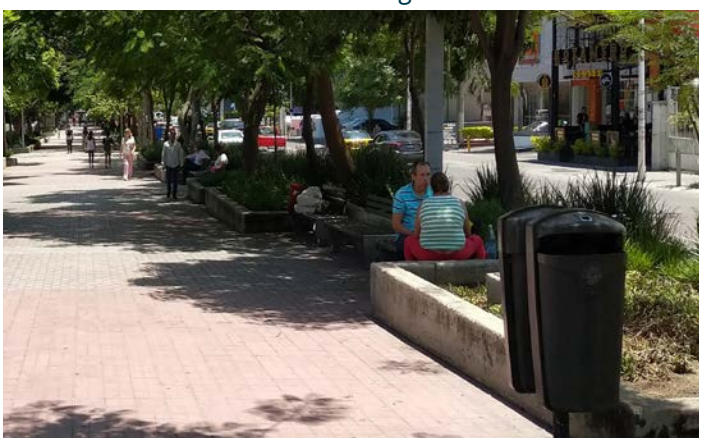
Quick-Build Placemaking Example - Temporary Street Closure

Source: Alek Pochowski, Washington, DC

Long-Term Placemaking



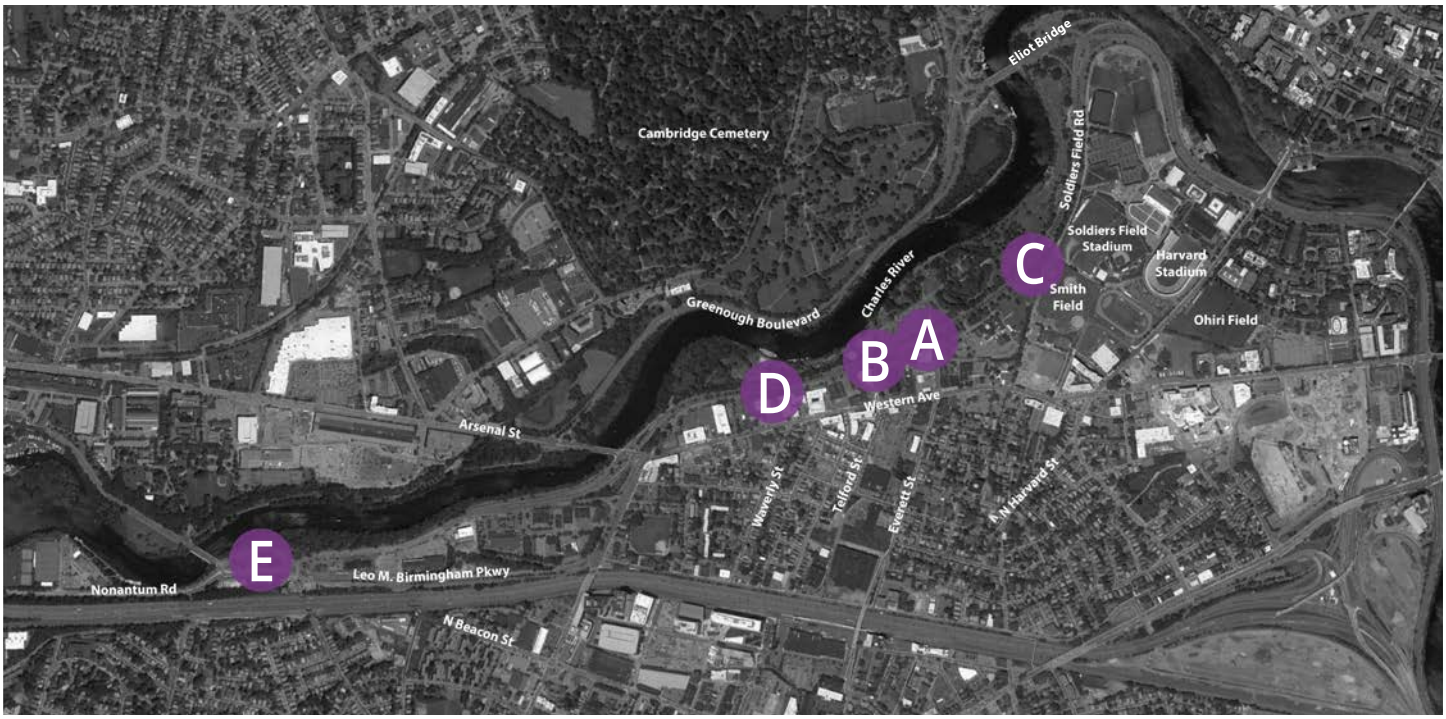
Long-Term Placemaking Example - Multi-use Path with Public Seating



Source: Kittelson & Associates, Inc.

SOLDIERS FIELD ROAD CROSSINGS

BETWEEN NONANTUM ROAD AND ELIOT BRIDGE



Why?

Soldiers Field Road is an east-west parkway with four lanes. North of Arsenal Street/Western Avenue, the travel lanes on Soldiers Field Road are separated by a 14-foot wide, tree-lined center-running median. Soldiers Field Road is adjacent to institutional (Harvard University), commercial, and office uses to the south and the Charles River and its greenway to the north. Access across the two-mile stretch of Soldiers Field Road to the Charles River, the Dr Paul Dudley White Bike Path, and recreational uses, is limited to two crossings at Arsenal Street/Western Avenue and the Msgr. Timothy Gleason Memorial Overpass and North Harvard Street/Anderson Bridge.

In 2015, Harvard University, in coordination with DCR and the City of Boston, completed a feasibility study to evaluate pedestrian and bicycle crossings along Soldiers Field Road. This study is part of a $3.5 million commitment from Harvard to improve one or more crossings across Soldier's Field Road. in coordination with DCR's vision, and where technically and financially feasible, some of these crossings may be elevated. DCR has held a number of community meetings, and has designed a new at-grade crossing at Everett Street, which the agency aspires to build in 2021.

Goals for Soldiers Field Road between Nonantum Road and Eliot Bridge include:

- provide comfortable and safe pedestrian crossings; and
- provide comfortable and safe bicycle crossings.

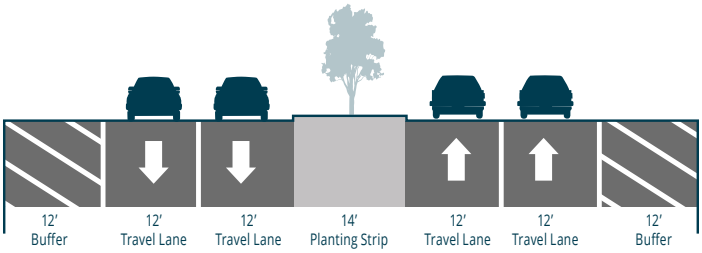
Concepts

The concepts listed in the subsequent page identify potential locations under consideration to complement existing crossing locations across Soldiers Field Road. Concepts A through D were proposed as part of the Harvard University Study. Concept E is proposed as part of the Allston-Brighton Mobility Plan.

Soldier's Field Road looking East

Source: Google Streetview

Existing Typical Cross-section



A

Everett Street Intersection

Cost $$$$ **Implementation**

The Everett Street intersection provides direct access to the Charles River Reservation including the Herter Park Amphitheater and other amenities. The Soldiers Field Road Crossing Study concluded that an at-grade crossing is feasible and recommended treatments (e.g., new pedestrian level lighting, pedestrian signals, ADA ramps, new crosswalks) to ensure safe and visible crossings.

Source: Google

Source: Google Streetview

B

West of Telford Street

Cost $$$$ **Implementation** TBD

A connection to the west of Telford Street and the existing Telford Street Pedestrian Bridge would likely require a footbridge given the additional lane on Soldiers Field Road and the consequent challenge of introducing a signal and an at-grade connection across the center-running median. The West of Telford Street connection is a recommendation of the Harvard University study.

Source: Google

Source: Google Streetview

C

Smith Field

Cost $$$$ **Implementation** TBD

A crossing on Soldiers Field Road near Smith Field would connect two major recreational areas, as well as Harvard University's Athletics Complex, and provide safe and convenient access for pedestrians and bicyclists. Any future developments should consider connecting Smith Field to Herter Park. This crossing is a recommendation of the Harvard University study.

Source: Google

Source: Google Streetview

D

Telford Street Pedestrian Bridge

Cost $$$$ **Implementation** TBD

The existing Telford Street Pedestrian Bridge is one of the few locations that provides pedestrians and bicyclists with safe access across Soldiers Field Road to the Charles River Reservation. Options for Telford Street are still being studied and include an at-grade crossing, rehabilitation of the existing footbridge, and a new pedestrian/bicycle bridge. Additional funding beyond the money granted by Harvard would be necessary for either of the latter two options. Collaboration with the developer of the property at 1234-1240 Soldier's Field Road may facilitate implementation of the preferred design if that development moves forward. The Telford Street Pedestrian Bridge is a recommendation of the Harvard University study.

Source: Google

Source: Google Streetview

E

N Beacon Street/Soldiers Field /Nonantum Road

Cost $$$$ **Implementation** TBD

This section represents the western limit of Soldiers Field Road in the study area. Soldiers Field Road merges with other roadways to form a network of streets that intersect at irregular angles to create inconsistent block patterns. Crossing opportunities are limited and do not connect to the Dr. Paul Dudley White Bike Path adjacent to the Charles River. DCR is developing a study to redesign this intersection to improve traffic flow and pedestrian crossings. The recommendation for a pedestrian crossing as part of the Allston-Brighton Mobility Plan complements the DCR study and is not part of the Harvard University study.

Source: Google

Source: Google Streetview

WAVERLY STREET & HOLTON STREET

HOLTON STREET BETWEEN LITCHFIELD STREET AND FRANKLIN STREET

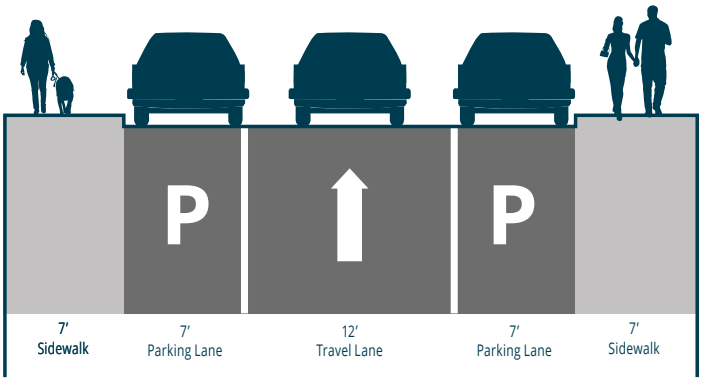
Why?

Waverly Street is a narrow, one-way *eastbound* residential street between Leo M. Birmingham Parkway and S. Waverly Street. Holton Street between Litchfield Street and Everett Street is a one-way *westbound* street surrounded by residential and commercial land uses. Given that Waverly Street and Holton Street are one-way in opposite directions, bicyclists traveling eastbound often travel in the wrong direction on Holton Street to avoid having to travel south to Lincoln Street or north to Western Avenue.

Goals for Waverly Street and Holton Street include:

- improve bicycle comfort, safety, and wayfinding; and
- provide safe eastbound bicycle travel options on Holton Street.

Existing Typical Cross-section on Holton Street



Existing

Source: Google

Holton Street looking West

Source: Google Streetview

Research Findings

The BPDA gathered information on the following topics for Waverly Street and Holton Street:

- Bicycle Comfort
- Crashes

The following section details the research findings for Waverly Street and Holton Street.

Bicycle Comfort

Waverly Street is a one-lane, one-way roadway with no dedicated bicycle facilities, a speed limit of 25 mph, and daily vehicle volumes between 1,800 and 2,800. Based on the worst performing roadway characteristic (daily vehicle volumes), Waverly Street has a bicycle comfort score of LTS 3. LTS 3 roads are tolerable for confident bicyclists.

Holton Street is a one-lane, one-way roadway with no dedicated bicycle facilities, a speed limit of 25 mph, and daily vehicle volumes of 800. Based on the worst performing roadway characteristic (daily vehicle volumes), Holton Street has a bicycle comfort score of LTS 2. LTS 2 roads are comfortable for most bicyclists.

LTS 1 (Low Stress)
LTS 2
LTS 3
LTS 4 (High Stress)

Level of traffic stress is calculated based on speed limit, daily vehicle volumes, and street width.

LTS (Waverly Street from Leo Birmingham Parkway to Antwerp Street and Holton Street from Litchfield Street to Franklin Street)

Waverly Street

LTS 3

Tolerable for confident bicyclists

Holton Street

LTS 2

Comfortable for most bicyclists

Crashes

The BPD responded to six crashes along Waverly Street and Holton Street between 2015 and 2017. All reported crashes (5) involved only motorists. Bicyclists were involved in one crash. Crashes were reported at four intersections and one segment along Waverly Street and Holton Street. The intersection of Holton Street and Antwerp Street was the only intersection with more than one reported crash.

Boston Police Department Crime Incident Reports (2015-2017)

Motor Vehicle Crashes

- 1
- 2 - 4
- > 4

Pedestrian Crash

Bicyclist Crash

Crashes (Waverly Street from Leo Birmingham Parkway to Antwerp Street and Holton Street from Litchfield Street to Franklin Street)

5 Motor Vehicle

1 Bicycle

0 Pedestrian

Recommendations

This recommendation provides separated, contra-flow bicycle facilities and bicycle boulevard treatments on Waverly Street and Holton Street to enhance bicyclist safety, access, and connectivity.

1

Cost $$$$

Implementation

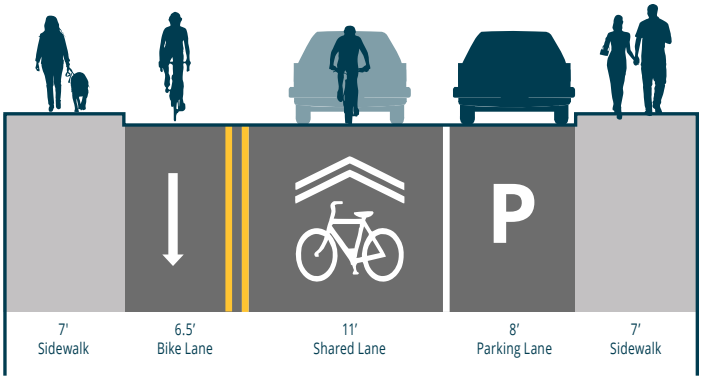
TBD

Holton Street Contra-Flow Bike Lane

This recommendation proposes a contra-flow bike lane on Holton Street between Antwerp Street and Everett Street. Contra-flow bike lanes reduce unexpected wrong-way riding and are designed to allow bicyclists to ride in the opposite direction of motor vehicle traffic. A bicycle facility is not recommended for Waverly Street and Holton Street east of Everett Street because it would require the removal of all on-street parking. Instead, improvements will be designed for these streets to create a neighborway that prioritizes bicycle travel along quiet residential streets.

Recommended

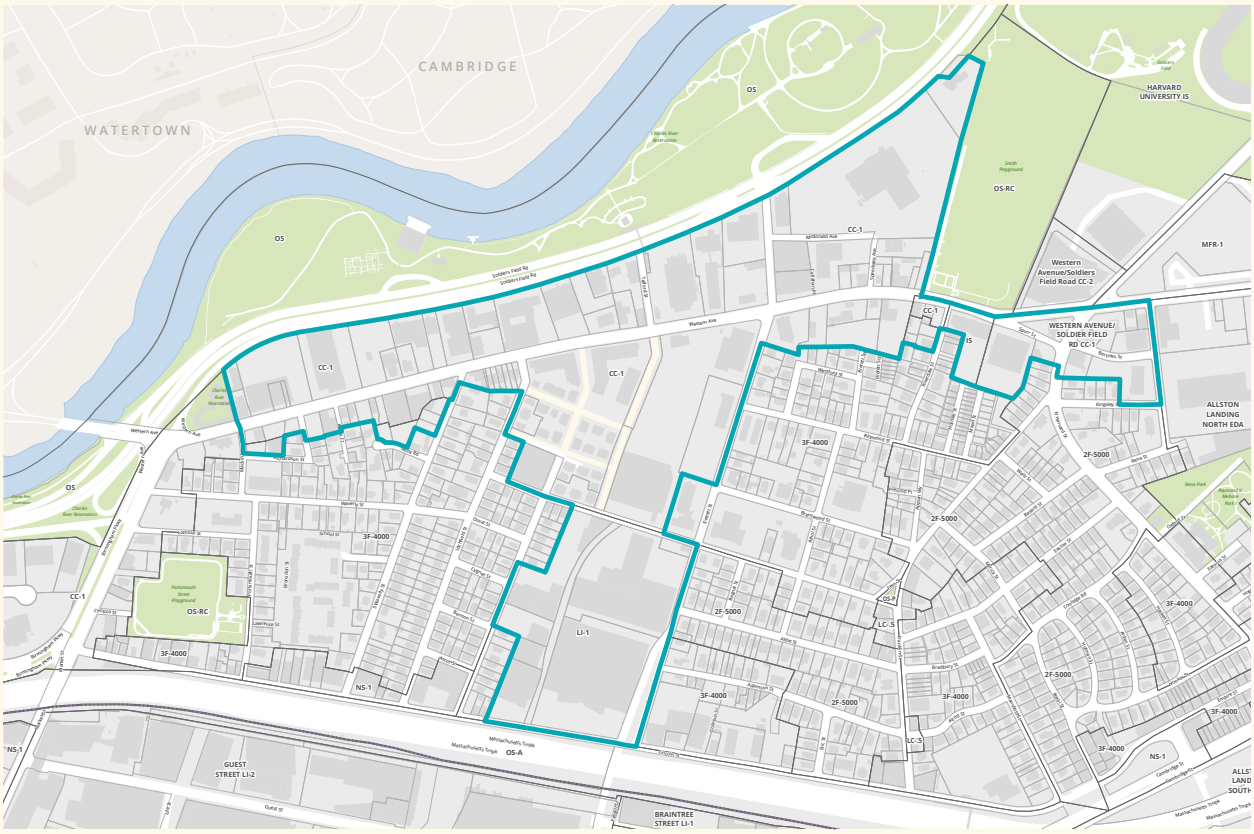
Recommended Cross-section



Contra-Flow Bicycle Lane on Bay State Road, Boston

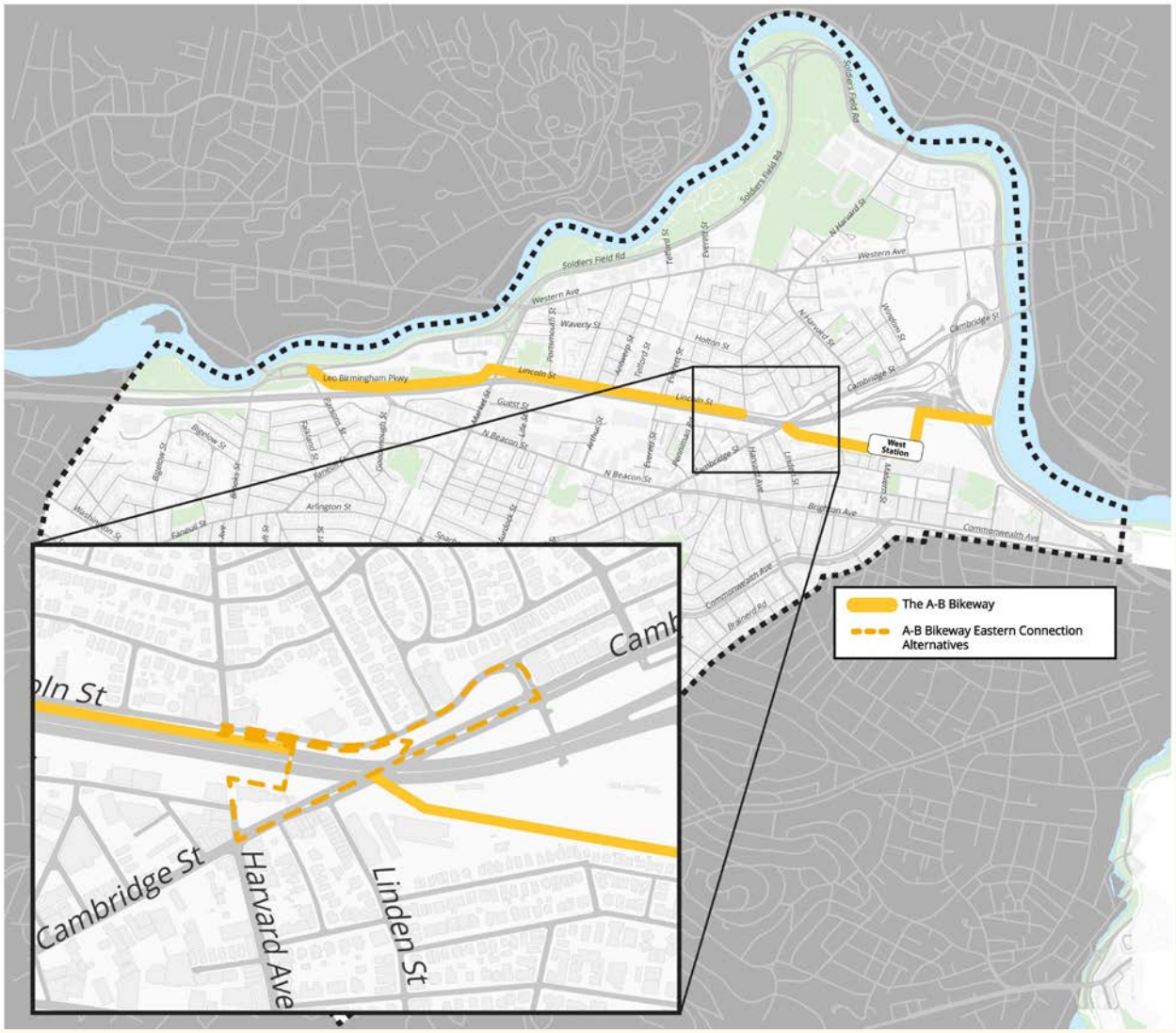
WESTERN AVENUE CORRIDOR STUDY

The BPDA is currently also developing a plan for the Western Avenue Corridor area called the Western Avenue Corridor Study and Rezoning ("Western Avenue Corridor Study" bit.ly/westerncorridor). The boundaries of the study area are shown below. The Western Avenue Corridor Study will inform recommendations for new zoning for the study area while also recommending public realm and transportation improvements. Transportation recommendations will focus on Western Avenue between Market Street and Barry's Corner, and Telford Street and Everett Street between Western Avenue and Lincoln Street. Accordingly, the Allston-Brighton Mobility Plan will defer to the Western Avenue Corridor Study for the transportation recommendations for these locations. It is anticipated that the Western Avenue Corridor Study will be completed by mid 2021.



A-B BIKEWAY

The A-B Bikeway is an aspirational concept to create a separated, two-way, east-west bicycle facility extending from Watertown to a future West Station, traversing the edges of Leo Birmingham Parkway and Lincoln Street. Such a facility would connect to the existing bike lanes on North Beacon Street in Watertown and provide continuous connections to the Charles River, Cambridge, and downtown Boston. With the conversion of one of the two Leo Birmingham Parkway carriageways to allow for the creation of the two-way bike facility from the North Beacon Street Bridge (connecting to Watertown) to Market Street, as called for in this plan; and, assuming the availability of portions of the linear, underdeveloped swath of Commonwealth owned land sandwiched between Lincoln Street and the I-90 Turnpike (and bounded by Market Street on the west and Cambridge Street on the east), there is a possibility to create a continuous two-way, east-west bicycle facility from the border with Watertown to West Station. Additional conversations and formal agreements would need to occur between the City, BPDA, and MassDOT to unlock this opportunity; there are still many steps, decisions, and approvals that would need to occur before this concept could become a reality. The Allston-Brighton Mobility Plan highlights this opportunity in order to set the stage for its incremental realization by the time the I-90 Intermodal project is completed. The approximate path of this bicycle facility is shown below.



OAK SQUARE

WASHINGTON STREET – FANEUIL STREET – TREMONT STREET

Why?

Oak Square is a complex set of intersections with eight unique approaches. Two of the intersections are signalized and one is stop controlled. Marked crossings and median islands exist throughout the square; however, yielding to pedestrians is a major concern, and gradual turns encourage fast speeds. Four MBTA bus routes provide service to Oak Square. The area is surrounded by commercial, retail, and institutional land uses.

Goals for Oak Square include:

- provide short term parking;
- reduce confusion and conflicts between modes;
- improve pedestrian safety at existing crossing locations; and
- add one comfortable pedestrian crossing.

Existing

Washington Street/Tremont Street/Faneuil Street

Source: Google

Existing Bus Stop

Research Findings

The BPDA gathered information on the following topics for Oak Square:

- Bicycle Comfort
- Parking Utilization
- Crashes
- Vehicle Delay
- Transit
- Pedestrian Delay

The following section details the research findings for Oak Square.

Bicycle Comfort

Oak Square is a confluence of primarily two-lane roadways with no dedicated bicycle facilities, a speed limits of 25 mph, and daily vehicle volumes entering Oak Square ranging between 200 (Champney Street) and 6,800 (Faneuil Street). Based on the worst performing roadway characteristic (daily vehicle volumes), most of the roadways in Oak Square have a bicycle comfort score of LTS 3. LTS 3 roads are tolerable for confident bicyclists.

LTS 1 (Low Stress)
LTS 2
LTS 3
LTS 4 (High Stress)

Level of traffic stress is calculated based on speed limit, daily vehicle volumes, and street width.

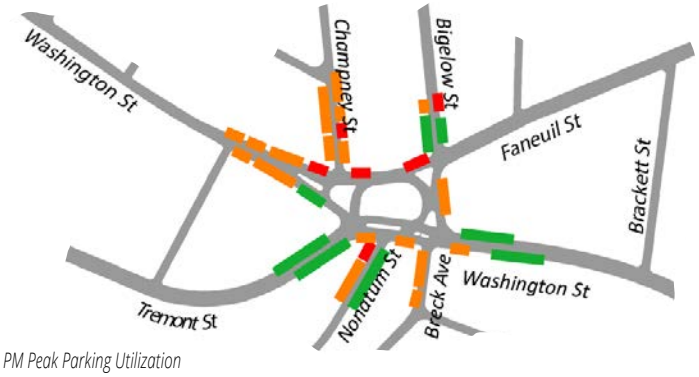
LTS (Oak Square)

LTS 3

Tolerable for confident bicyclists

On-Street Parking Utilization

A parking utilization study was conducted for on-street parking in Oak Square on a weekday evening in July 2019. Most block faces in Oak Square had one to two parking spaces available during the evening peak period (4 PM – 8 PM). Four block faces were full, and eight block faces had more than two parking spaces available. Two off-street parking lots are located in close proximity to Oak Square. A surface parking lot is located off of Tremont Street between Washington Street and Tip Top Street, and a surface parking lot is located off of Washington Street east of the Oak Square YMCA. Utilization of these parking lots was not assessed.



PM Peak Parking Utilization

Spaces Available

> 2
1 - 2
Full/Over Capacity

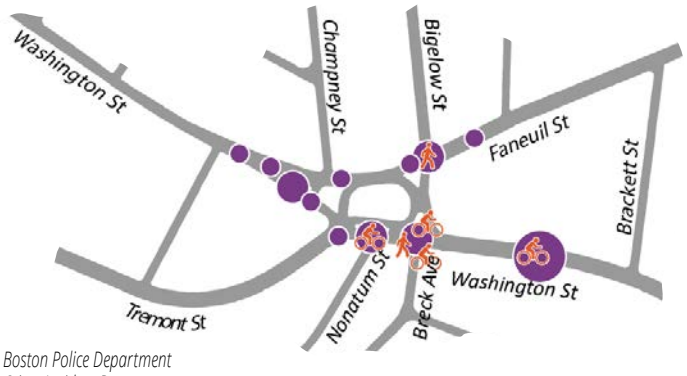
Parking utilization observed July 29, 2019 from 4-8 PM

Parking Utilization PM Peak

1-2 Parking Spaces Available

Crashes

The BPD responded to thirty crashes in Oak Square between 2015 and 2017. Of the reported crashes, 86% (24) involved only motorists, 13% (4) involved bicycles, and 7% (2) involved pedestrians. Crashes were reported at most intersections and segments in Oak Square. Areas in Oak Square with a higher number of reported crashes (i.e., 5 or more crashes) include Washington Street between Breck Avenue and Bracket Street. Most of the bicycle-involved and pedestrian-involved crashes occurred at unsignalized intersections (5 crashes) and one bicycle-involved crash did not occur at an intersection.



Boston Police Department Crime Incident Reports (2015-2017)

Motor Vehicle Crashes

- 1
- 2 - 4
- > 4

Pedestrian Crash

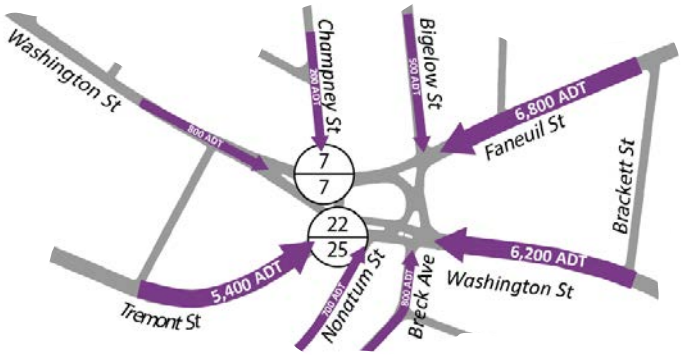
Bicyclist Crash

Crashes (Oak Square)

24	Motor Vehicle
4	Bicycle
2	Pedestrian

Vehicle Delay

Two major signalized intersections influence motor vehicle travel in Oak Square. Vehicle delay at these intersections ranges from 7 seconds of AM and PM peak hour delay at the intersection of Washington Street and Champney Street to 25 seconds of PM peak hour delay at the intersection of Washington Street and Tremont Street. On average, approximately 21,400 vehicles enter Oak Square on a daily basis. Most vehicles enter Oak Square from Tremont Street, Faneuil Street, and Washington Street (east leg).



X / X — AM Peak Hour Delay / PM Peak Hour Delay

Existing Vehicle Delay*, Volumes**, and Peak/Off-Peak Travel Times

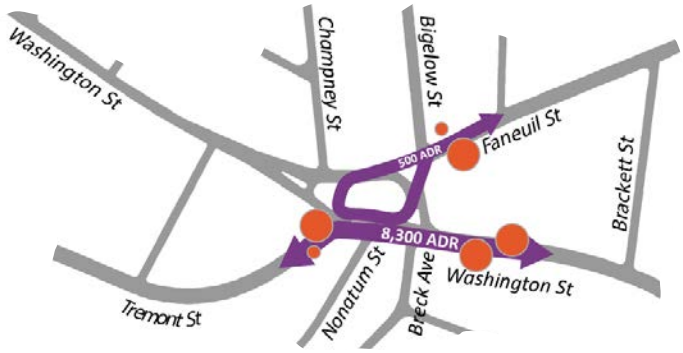
** Delay reported in seconds*

*** Volumes rounded to the nearest 100*

(Source: HCM 2000)

Transit

MBTA bus routes 57, 64, 501, and 503[9] provide service in Oak Square. These routes serve six bus stops in Oak Square, four of which have daily ridership that falls within the top 25% of all stops in the Allston-Brighton Mobility Plan area. The bus routes that traverse Oak Square between Tremont Street and Washington Street have an ADR of 8,300. The bus routes that enter and exit Oak Square from Faneuil Street have an ADR of 500. Approximately 38% of daily bus riders in Oak Square travel during the AM and PM peak periods.



Bus Stops

Bus Stops w/ Top 25% Daily Ridership

38% of the daily bus riders travel during peak periods

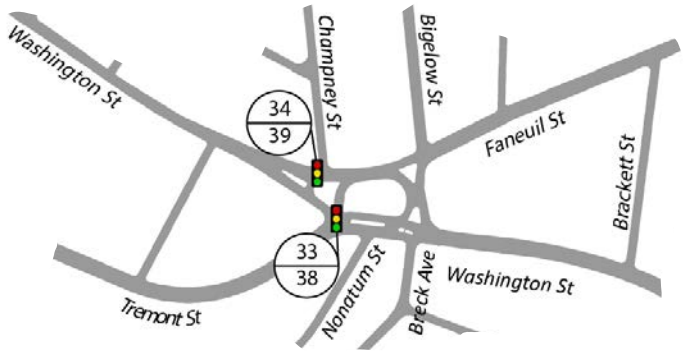
4 Number of Bus Routes (57, 64, 501, 503)

4 Bus Stops with Daily Ridership in Top 25% of Allston-Brighton Mobility Plan Area

(Source: MBTA 2017)

Pedestrian Delay

Pedestrian delay was calculated at the two signalized intersections in Oak Square during the AM and the PM peak hour. The maximum pedestrian delay observed at the intersection of Washington Street and Champney Street in Oak Square is 39 seconds during the PM Peak. The signalized intersections in Oak Square exceed the 30 second pedestrian delay threshold. Any future modifications to the signal timing for these signalized intersections should seek to decrease pedestrian delay.



X / X — AM Peak Hour Delay / PM Peak Hour Delay

Pedestrian delay is calculated using cycle length and the effective green time for pedestrians

Pedestrian Delay (at key Signalized Intersections)

39 Seconds Maximum Delay

Pedestrian noncompliance likely after 30 seconds of delay

(Source: HCM 2000)

9 MBTA Bus 503 was suspended as a result of the COVID-19 pandemic. The City is working to restore this service and expects it to return.

Recommendations

The preferred recommendation focuses on providing additional pedestrian crossings and high turnover, short-term parking zones. These improvements complement the peak hour bus lane recommendation proposed for the A-B Transit Corridor from Union Square in the east toward Oak Square in the west.

1

Cost $$$$

Implementation

Pedestrian Crossings and Short-Term Parking Zones

This recommendation proposes two enhanced crosswalks. Enhanced crosswalks may include raised crosswalks, rectangular rapid flashing beacons (RRFBs), pedestrian refuge islands, curb extensions, or standard crosswalks. The first is proposed across Washington Street at the YMCA, Dunkin', and Sunoco Gas Station. The second is proposed between the northeast crossing island and Oak Square. In addition to enhanced crosswalks, this recommendation proposes diversifying the existing on-street parking to provide two high turnover, short-term parking zones, one in front of the liquor store, restaurant and ATM on the southern side of the square and another in front of the restaurants on the northern side of the square to facilitate takeout. No on-street parking would be removed.

Pedestrian Crossings and Loading Zones

Source: Google

Enhanced Crosswalk with Curb Extension and In-Street Pedestrian Crossing Sign

Source: BTD, Washington Street, South End, Boston, Massachusetts

Enhanced Crosswalk with In-Street Pedestrian Crossing Sign and Flex-Post Median

Source: BPDA, Tremont Street, South End, Boston, Massachusetts

Enhanced Crosswalk with Curb Extension and Pedestrian Crossing Sign

Source: BPDA, Arborway, Jamaica Plain, Boston, Massachusetts

BRIGHTON CENTER

WASHINGTON STREET BETWEEN PARSONS STREET AND SPARHAWK STREET

Why?

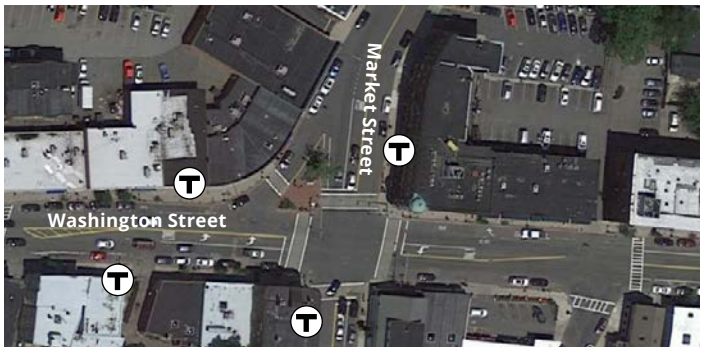
Two main intersections make up Brighton Center - Washington Street, Market Street, and Chestnut Hill Avenue in the west and Cambridge Street, Washington Street, and Winship Street in the east. The intersections are at the center of the proposed A-B Transit Corridor which serves as a major route for east-west travel for all modes between Union Square and Oak Square. The area surrounding the intersections on Washington Street/Cambridge Street is served by commercial, retail, and institutional (e.g., Boston Police Department, St. Elizabeth's Medical Center) land uses.

Goals for Brighton Center include:

- ensure multimodal connections;
- provide comfortable bus stop locations;
- improve bus travel time; and
- improve pedestrian safety at crossing locations.

Existing

Market Street/Washington Street



Source: Google

Existing Bus Stop

Washington Street/Winship Street/Cambridge Street

Source: Google

Existing Bus Stop

Research Findings

The BPDA gathered information on the following topics for Brighton Center:

- Bicycle Comfort
- Parking Utilization
- Crashes
- Vehicle Delay
- Transit

The following section details the research findings for Brighton Center.

Bicycle Comfort

Brighton Center is a confluence of two-lane roadways, some with bicycle facilities (i.e., Washington Street and Cambridge Street) that do not extend beyond the intersection, all with speed limits of 25 mph, and daily vehicle volumes between 8,600 and 11,300. Bicycle counts from September 2017 indicate that approximately 700 bicyclists use the Cambridge Street/ Washington Street corridor on a daily basis. Based on the worst performing roadway characteristic (daily vehicle volumes and the narrow width of bicycle lanes adjacent to on-street parking), most of the roadways in Brighton Center have a bicycle comfort score of LTS 3. LTS 3 roads are tolerable for confident bicyclists. Additional geometric changes would be needed to improve bicyclist comfort at the Washington Street/Market Street intersection, including shorter right-turn lane lengths and tighter curb radii to reduce the speed of right-turning vehicles.

- LTS 1 (Low Stress)
- LTS 2
- LTS 3
- LTS 4 (High Stress)

Level of traffic stress is calculated based on speed limit, daily vehicle volumes, and street width.

LTS (from Parsons Street to Sparhawk Street)

LTS 3

Tolerable for confident bicyclists

Parking Utilization

A parking utilization study was conducted in Brighton Center on a weekday evening in July 2019. Most block faces in Brighton Center had one to two parking spaces available during the evening peak period (4 PM – 8 PM). One block face was full (east side of Academy Hill Road) and six block faces had more than two parking spaces available. Two off-street parking lots are located in close proximity to Brighton Center. A public surface parking lot is located off of Market Street between Washington Street and Henshaw Street, a second public surface lot is adjacent to the Brighton Police Station, and a private surface parking lot (Elks Parking Brighton) is located off of Winship Street between Washington Street and Peaceable Road. Parking utilization at the off-street lots was not assessed.

PM Peak Parking Utilization

Spaces Available

- > 2
- 1 - 2
- Full/Over Capacity

- Public Parking
- Municipal Parking

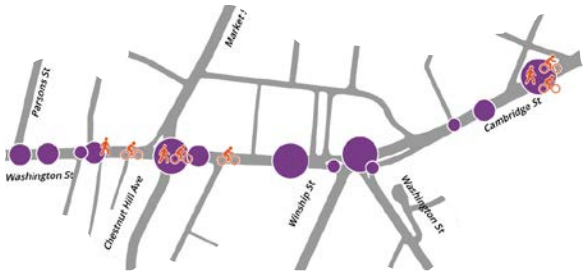
Parking utilization observed July 29, 2019 from 4-8 PM

Parking Utilization PM Peak

1-2 Parking Spaces Available

Crashes

BPD responded to forty-five crashes in Brighton Center between 2015 and 2017. Of the reported crashes, 82% (37) involved only motorists, 11% (5) involved bicyclists, and 7% (3) involved pedestrians. Crashes were reported at most intersections and segments in Brighton Center. Areas in Brighton Center with a higher number of reported crashes (i.e., 5 or more crashes) include: Washington Street from Waldo Terrace to Winship Street, Cambridge Street between Murdock Street and Sparhawk Street, Washington Street at Market Street, and Cambridge Street at Washington Street.



Boston Police Department Crime Incident Reports (2015-2017)

Motor Vehicle Crashes

- 1
- 2 - 4
- > 4

Pedestrian Crash

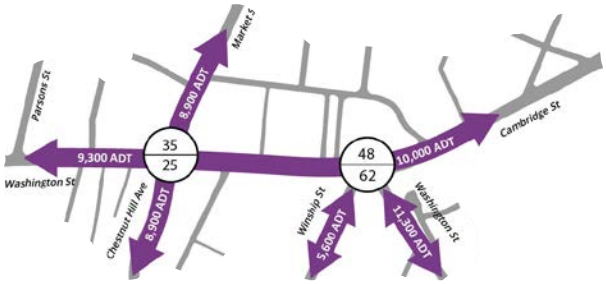
Bicyclist Crash

Crashes (from Parsons Street to Sparhawk Street)

37	Motor Vehicle
5	Bicycle
3	Pedestrian

Vehicle Delay

Two major signalized intersections influence motor vehicle travel in Brighton Center. Vehicle delay at these intersections ranges from 25 seconds during the PM peak hour at the intersection of Washington Street and Market Street to 62 seconds of delay during the PM peak hour at the intersection of Washington Street and Winship Street. During off-peak time periods, it can take motorists three minutes to traverse Brighton Center. During the peak period, it can take motorists between three to seven minutes to traverse Brighton Center. Average daily traffic in Brighton Center ranges between 5,600 and 11,300 depending on the corridor (refer to the vehicle delay figure below).



X / X — AM Peak Hour Delay / PM Peak Hour Delay

Existing Vehicle Delay*, Volumes**, and Peak/Off-Peak Travel Times

** Delay reported in seconds*

*** Volumes rounded to the nearest 100*

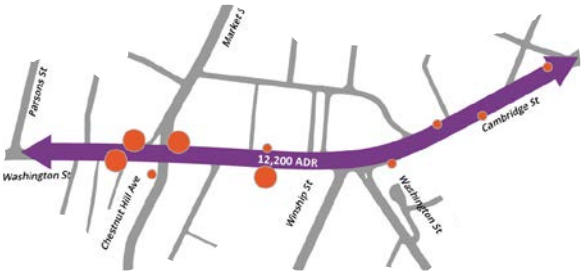
(Source: HCM 2000)

Travel Times (from Parsons Street to Sparhawk Street)

3	Minutes Off-Peak Travel Time
3-7	Minutes Peak Period Travel Time

Transit

The MBTA bus routes 57, 65, 501, and 503[10] provide service in Brighton Center. These routes serve ten bus stops in Brighton Center, four of which have daily ridership that falls within the top 25% of all bus stops in the Allston-Brighton Mobility Plan area. The bus routes that traverse Brighton Center between Parsons Street and Sparhawk Street have 12,200 average daily riders (ADR). Approximately 30% of daily bus riders in Brighton Center travel during the AM and PM peak periods. When compared to average daily traffic volumes, 20% more average daily bus riders than motorists travel through Brighton Center.



- Bus Stops
- Bus Stops w/ Top 25% Daily Ridership

20% more average daily bus riders than motorists on Washington Street in Brighton Center

30% of average daily riders (ADR) access transit in Brighton Center during the peak periods

4	Number of Bus Routes (57, 65, 501, 503)
4	Bus Stops with Daily Ridership in Top 25% of Allston-Brighton Mobility Plan Area

(Source: MBTA 2017)

10 MBTA Bus 503 was suspended as a result of the COVID-19 pandemic. The City is working to restore this service and expects it to return.

Recommendations

The recommendations for Brighton Center focus on re-purposing the existing roadway, providing safe spaces for pedestrians and bus passengers, and clarifying vehicular movements. At the Washington Street/Market Street/Chestnut Hill Avenue intersection, the primary recommendation is to close the existing southbound channelized right turn lane on Market Street. At the Washington Street/Winship Street/Cambridge Street intersection, the recommendation is to provide signage and improve lane markings to clarify vehicle movements. These improvements complement the peak hour bus lane recommendation proposed for the entire A-B Transit Corridor.

1

Cost $$$$

Implementation

Washington Street/Market Street/Chestnut Hill Avenue - Closure of Channelized Right

This recommendation proposes the closure of the existing southbound channelized right turn lane on Market Street to reduce the speed of right turning vehicles and to provide additional space for pedestrians and bus passengers. Southbound right turns will still be permitted in the proposed configuration. The excess roadway space from the channelized right turn will be repurposed to provide additional space for pedestrians, placemaking, and relocated bus stops. On Washington Street, the relocated bus stop serves passengers on Routes 57, 501, and 503. On Market Street, the relocated bus stops serves passengers on Route 86. A bus bulb-out is proposed on the east side of Market Street for northbound buses. A quick build, tactical closure of the slip lane is recommended in advance of the permanent closure. It should be noted that installations such as tactical plazas, furnishings, landscaping, and the like will require ongoing maintenance, which in turn will require partnerships with nearby locals merchants, institutions, nonprofits, and/or Main Streets organizations.

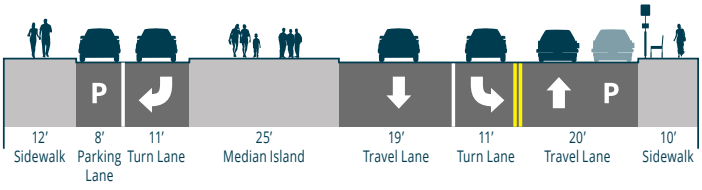
Long-Term Placemaking Example - Public Seating

Source: NBBJ, tactical plaza at Tontine Crescent, Boston

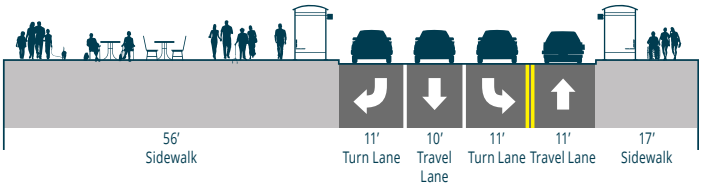
Recommended

Recommended Bus Stop Relocation Existing Bus Stop

Existing Intersection Cross-section - Market Street



Recommended Cross-section - Market Street



2

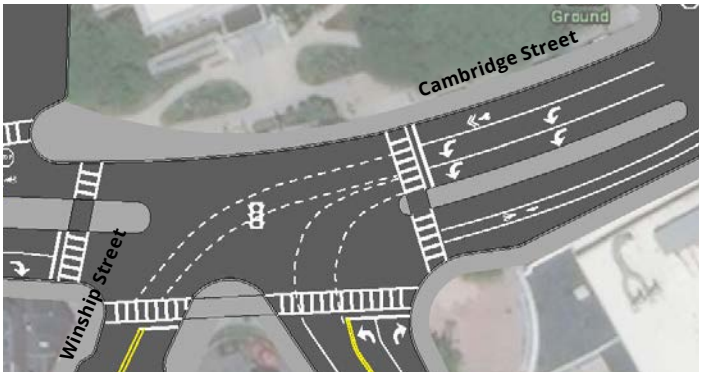
Cost $$$$

Implementation

Washington Street/Winship Street/Cambridge Street

Currently, it is unclear which of the two westbound left turn lanes motorists should follow to turn left onto Washington Street or Winship Street. The recommendation at the Washington Street/ Winship Street/Cambridge Street intersection is to improve vehicular circulation by providing signage in advance of and lane markings at the intersection to ensure motorists are in the appropriate left turn lane. In addition, this recommendation proposes wayfinding signage for public off-street parking.

Recommended



Washington Street/Winship Street/Cambridge Street

Source: Google

Existing Bus Stop

3

Cost $$$$

Implementation

Parking Utilization and Management Strategy

Parking opportunities in Brighton Center are often not well understood by visitors. Supply can seem limited, double parking occurs, and visitors may not always know where to park. A parking utilization study and management strategy are needed to better understand the supply, demand, and appropriate strategies for managing parking in Brighton Center. Much of the data on parking utilization will be collected as part of the parking utilization study to be conducted in advance of the implementation of pilot peak hour bus lanes as described in A-B Transit Corridor section in Chapter 6. In addition, wayfinding strategies should be developed and deployed to help direct visitors to available parking spaces. If parking demand exceeds supply, parking management and pricing strategies should be developed to more effectively utilize parking.

4

Cost $$$$

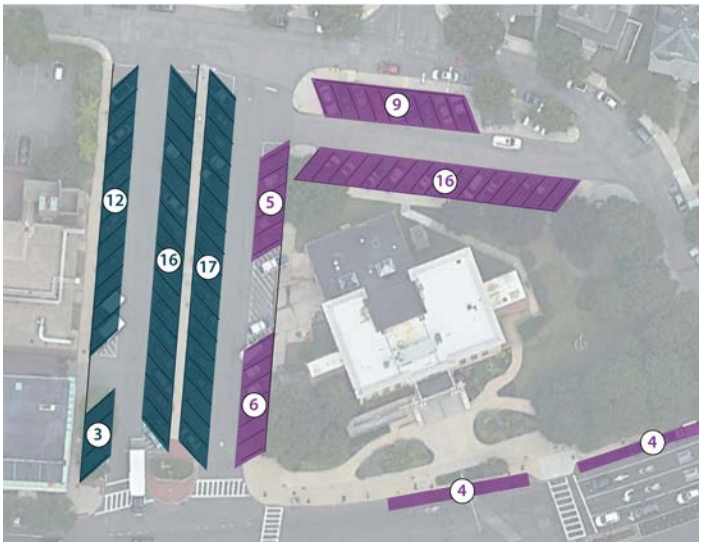
Implementation

TBD

Brighton Center Bus Hub

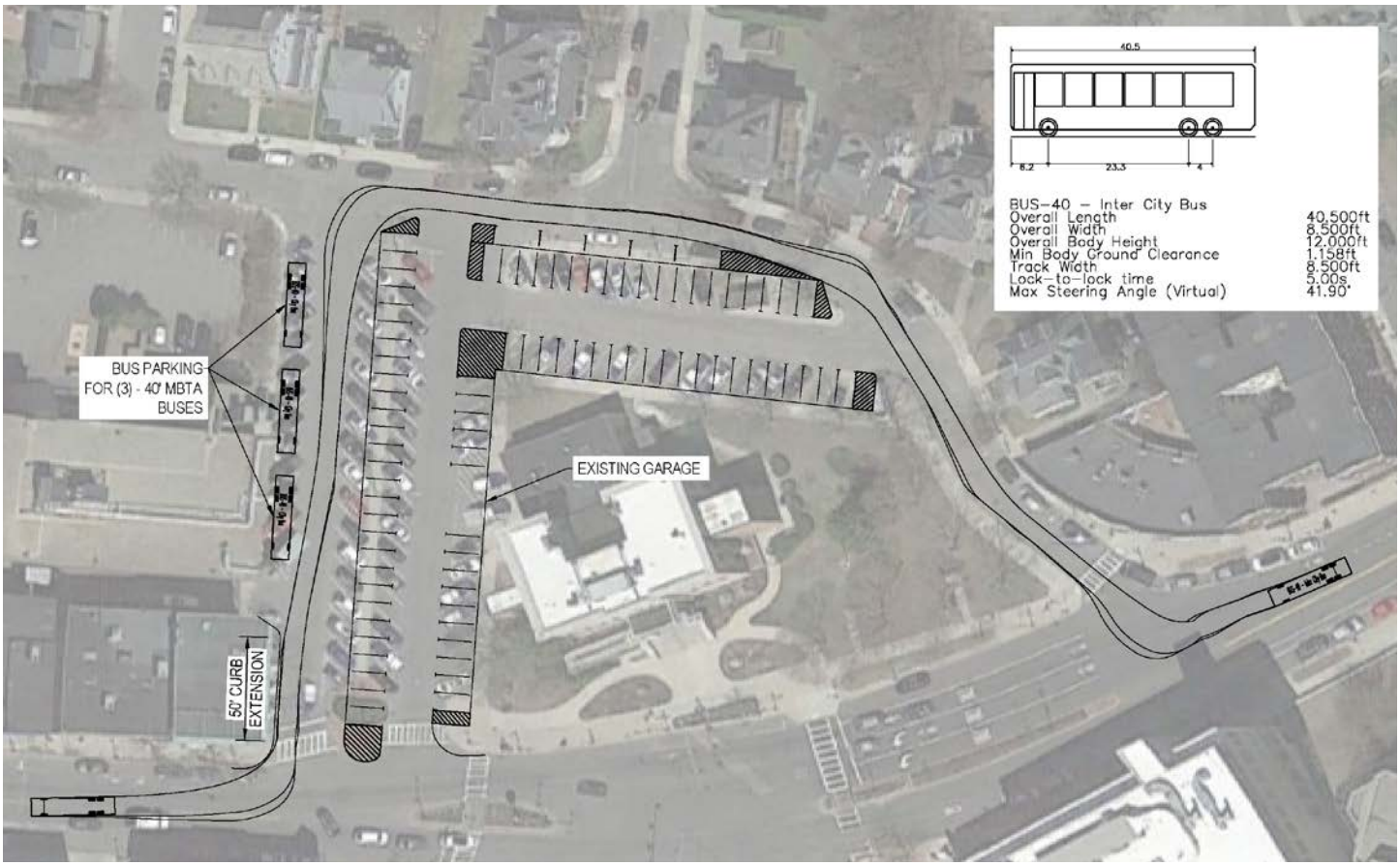
The MBTA bus routes 57, 65, 501, and 503 provide service in Brighton Center. The long-term recommendation is to allocate existing off-street parking spaces adjacent to the Boston Police Department for buses to layover. A preliminary parking analysis indicates a net loss of 5 parking spaces. The Allston-Brighton Mobility Plan recommends a detailed feasibility study prior to implementation. This recommendation complements the peak hour bus lanes on Cambridge Street and Washington Street between Union Square and Oak Square.

Existing Parking Supply



Public Parking
Police Parking

Preliminary Parking Assessment of a Lot Adjacent to the Boston Police Department



TRAFFIC CALMING

Along neighborhood streets and major corridors in the study area, high vehicular speeds are a common safety concern for pedestrians and bicyclists. Design improvements geared toward calming traffic can reduce the speed of vehicles to help make streets safer. In addition to making streets safer, traffic calming encourages a more equitable balance among modes and improves the health of a neighborhood.

Traffic Calming Measures

There is no one-size-fits-all solution to traffic calming because every neighborhood has unique needs. However, the following techniques are common traffic calming approaches currently being implemented in Boston.

- **Repurpose "auto-owned" space.** Medians, curb extensions, and road diets are all techniques that reduce space designated for cars. Curb extensions narrow the overall width of the roadway to increase the visibility of pedestrians and reduce vehicle speeds. Road diets repurpose existing travel lanes to calm traffic and increase safety for all roadway users. This reclaimed space can be used for landscaping, parking, pedestrian amenities, bicycle infrastructure, and more.
- **Limit vehicular access through physical barriers.** In some cases restricting vehicle access can solve problems in other parts of the network.
- **Implement roundabouts at intersections.** Roundabouts can reduce conflict points and create a calm, steady flow of traffic.
- **Install vertical measures (such as speed humps) and horizontal measures (such as medians)** that require vehicles to slow down.
- **Use signing and striping techniques.** Visual cues such as signing and striping can affect driver behavior and educate drivers how to proceed through a neighborhood.
- **Educate community members.** Conversations, meetings, e-mails, handouts, and digital campaigns regarding neighborhood traffic, pedestrian safety issues, and alternate forms of transportation can influence behavior.

Example of Traffic Calming - Speed Humps and Speed Limits Signs on Garland Street, Boston

Source: BTD

Neighborhood Slow Streets

The City of Boston's Neighborhood Slow Streets Program is committed to eliminating all fatal and serious injuries by 2030 and aims to design roadways for the most vulnerable roadway users. The program takes a zone-based approach to reducing speeds in Boston neighborhoods. A zone-based approach considers traffic calming elements and safety improvements along a broader area rather than focusing solely on planning and implementing changes on one street. The program uses low-cost measures with a goal of slowing motorists to 20 mph and making streets feel more inviting to everyone who uses them. Neighborhood associations, community groups, faith-based institutions, and other organized groups of neighbors can submit an application to be considered for the Neighborhood Slow Streets. For more information regarding Boston's Neighborhood Slow Streets Program visit https://www.boston.gov/transportation/neighborhood-slow-streets or email visionzero@boston.gov.

Research Findings

Vehicle speed plays a critical role in the cause and severity of crashes, especially when vulnerable roadways users like pedestrians and bicyclists are involved. As speeds increase, the perception, reaction, and braking times of motorists also increase and result in higher crash and fatality risk. The BPDA collected vehicle speed data on fourteen corridors within Allston-Brighton on May 30, 2019. Four of the fourteen corridors had vehicle volumes where most (approximately 50%) of the motorists were traveling at speeds that exceeded the 25 mph speed limit. For example, on Kenrick Street between Brayton Road and Larch Street 80% (2,801 vehicles) of the motorists were traveling at speeds greater than 25 mph, and 55% (1,921) were traveling at speeds greater than 30 mph.

Street	Extents	Vehicles	>25 mph	% >25 mph
Nonantum Street	between Letitia Way and Cufflin Street	1,293	697	54%
Kenrick Street	between Brayton Road and Larch Street	3,510	2,801	80%
Falkland Street	between Corinne Road and Hobart Street	364	24	7%
Parsons Street	between Brooksdale Road and Converse Street	9,702	1,892	20%
Parsons Street	between Niles Street and Barker Street	8,945	4,035	45%
Murdock Street	between Elmira Street and Mapleton Street	1,799	485	27%
Winship Street	between Peaceable Street and Crossland Place	5,609	3,758	67%
Union Street	between Shannon Street and Snow Street	2,561	884	35%
Corey Road	between Westbourne Terrace and Allston Street	7,315	1,570	21%
Linden Street	between Farrington Avenue and Ashford Street	8,625	55	1%
Penniman Road	between Braintree Street and Hano Street	790	82	10%
Hano Street	between Braintree Street and Hano Street	441	11	2%
Windom Street	between Hopedale Street and Amboy Street	3,619	76	2%
Antwerp Street	between Cygnet Street and Benson Street	879	195	22%

Recommendations

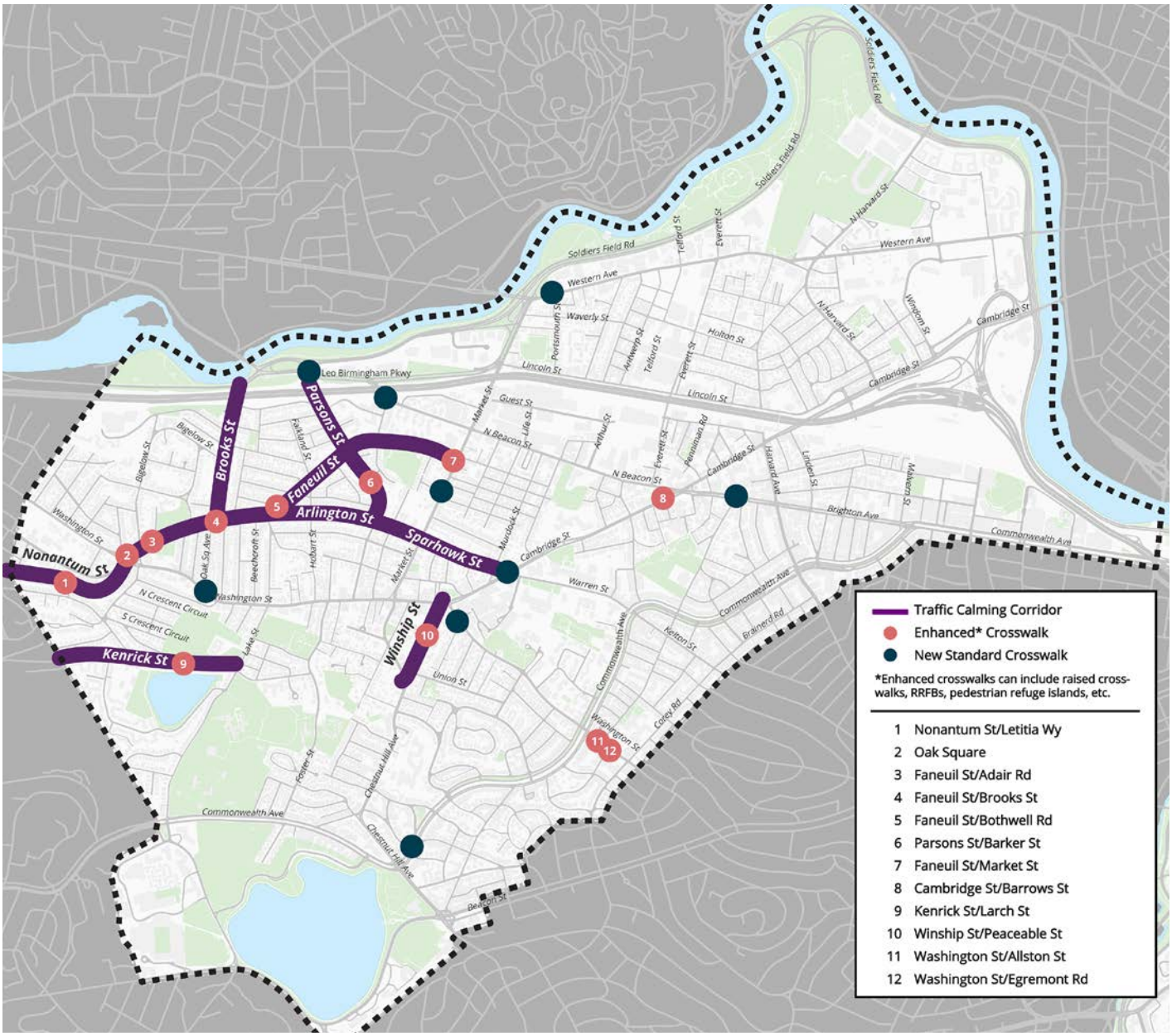
The Allston-Brighton Mobility Plan recommends the streets and street segments shown in Figure 15 for traffic calming treatments. Potential treatments include enhanced crosswalk measures with raised crosswalks, rectangular rapid flashing beacons (RRFBs), pedestrian refuge islands, or standard crosswalks. These traffic calming corridors and enhanced crosswalk locations were identified based on the analysis of the speed data collected. In addition to streets with high vehicle speeds, traffic calming can help on streets with high volumes of pedestrians crossing or walking along narrow sidewalks.

Brooks Street provides a critical connection between Brighton and the Charles River and into Watertown. The hills and very narrow passage beneath I-90 create unsafe and uncomfortable conditions for walking. Finally, a series of locations were identified for new standard crosswalks to provide safe and convenient crossing locations for transit. Additionally, Arlington Street and Sparhawk Street are identified for traffic calming to provide a low-stress bicycle connection in mixed traffic.

Faneuil Street, Arlington Street, and Sparhawk Street are identified as traffic calming streets to support the creation of a low-stress bikeway parallel to Washington Street.

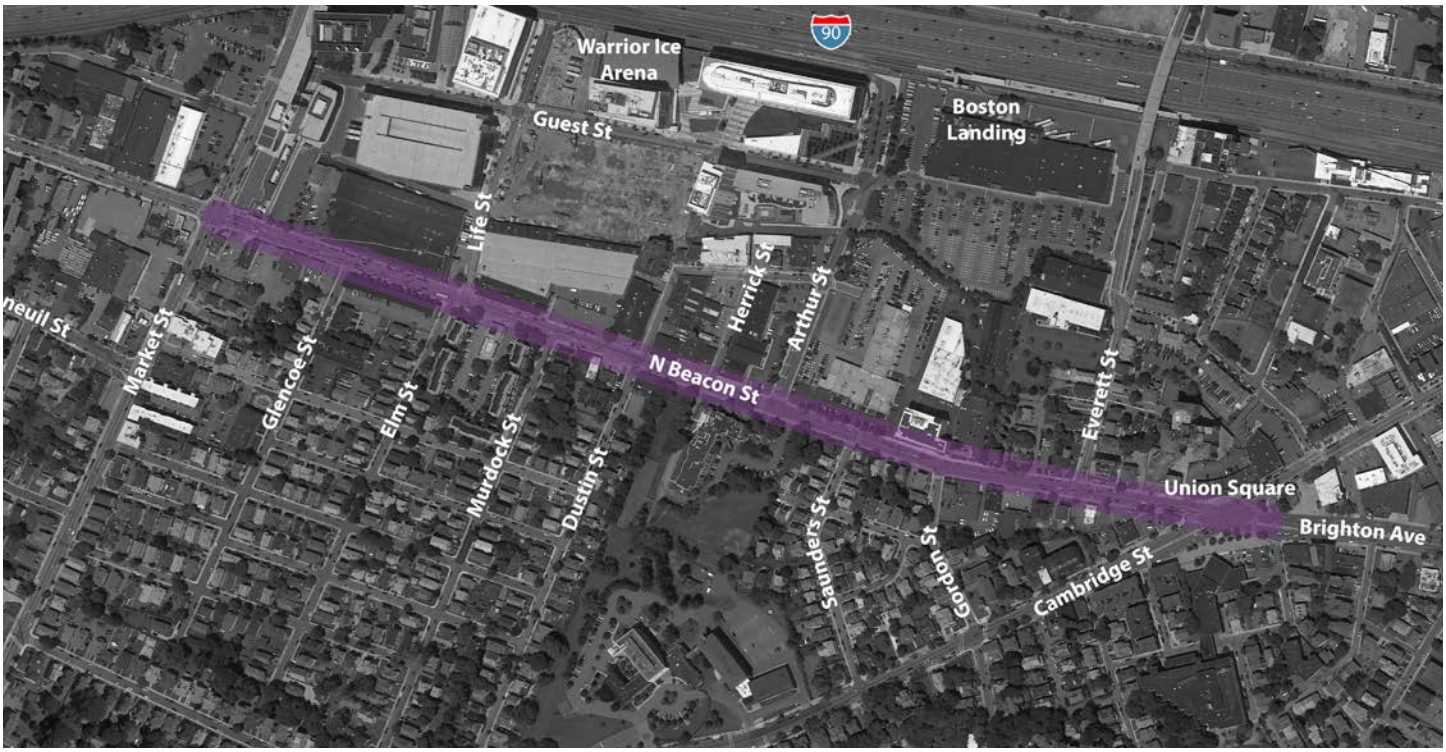
Prior to installing or constructing any traffic calming treatments, the Allston-Brighton Mobility Plan recommends that an engineering study be performed to determine any appropriate traffic calming treatments. BTD will lead a localized public process to engage residents, abutters and stakeholders in the design of the recommended improvements.

FIGURE 13 POTENTIAL TRAFFIC CALMING LOCATIONS



NORTH BEACON STREET

BETWEEN MARKET STREET AND CAMBRIDGE STREET



Why?

North Beacon Street between Market Street and Cambridge Street is a two-lane road with on-street parking and shared use bicycle facilities. Auto-oriented commercial land uses dominate the north side of the street, while the south side has a mix of food retail and residences.

Goals for North Beacon Street between Market Street and Cambridge Street include:

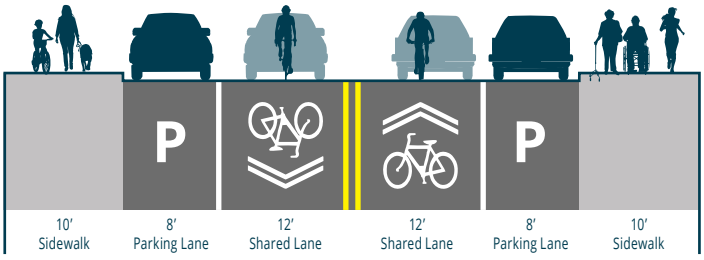
- provide comfortable and safe pedestrian crossings; and
- provide comfortable and safe bicycle facilities.

Existing

North Beacon Street looking West

Source: Google Streetview

Existing Typical Cross-section



Research Findings

The BPDA gathered information on the following topics for North Beacon Street:

- Bicycle Comfort
- Crashes
- Pedestrian Delay

The following section details the research findings for North Beacon Street.

Bicycle Comfort

North Beacon Street is a two-lane roadway with no dedicated bicycle facilities, a speed limit of 25 mph, and daily vehicle volumes of 9,500 to 12,800. Based on the worst performing roadway characteristic (daily vehicle volumes, separate right-turn lanes at intersections), North Beacon Street has a bicycle comfort score of LTS 3, along with two short segments of LTS4. LTS 3 roads are tolerable for confident bicyclists, while a bicycle comfort score of LTS 4 indicates that a facility is uncomfortable for most bicyclists. Bicycle facilities that would improve bicyclist comfort on North Beacon Street include wide bicycle lanes and separated bicycle facilities (e.g., parking-protected bicycle lane, shared use path).

LTS 1 (Low Stress)
LTS 2
LTS 3
LTS 4 (High Stress)

Level of traffic stress is calculated based on speed limit, daily vehicle volumes, and street width.

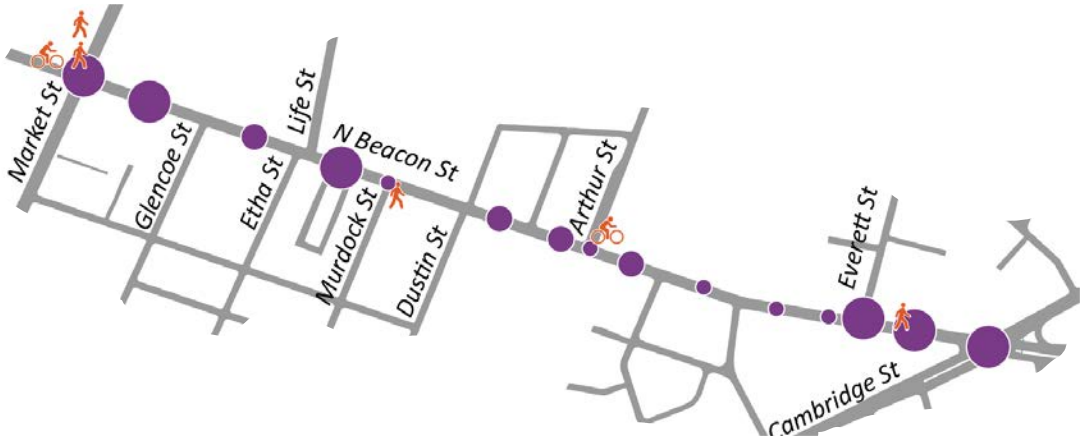
LTS (from Market Street to Cambridge Street)

LTS 3

Tolerable for confident bicyclists

Crashes

The BPD responded to seventy-three crashes along North Beacon Street between 2015 and 2017. Of the reported crashes, 91% (66) involved only motorists, 4% (3) involved bicyclists, and 5% (4) involved pedestrians. Crashes were reported at most intersections and segments along North Beacon Street.



Boston Police Department Crime Incident Reports (2015-2017)

Motor Vehicle Crashes

- 1
- 2 - 4
- > 4

Pedestrian Crash

Bicyclist Crash

Crashes (from Market Street to Cambridge Street)

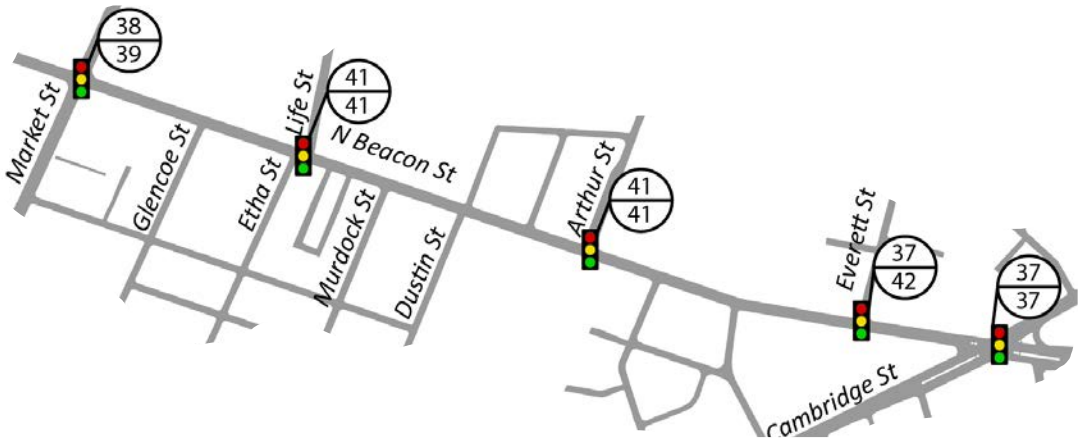
66 Motor Vehicle

3 Bicycle

4 Pedestrian

Pedestrian Delay

Pedestrian delay was calculated at the five signalized intersections along N. Beacon Street during the AM and PM peak hours. The five signalized intersections along N. Beacon Street exceeded the 30 second pedestrian delay threshold. Any future modifications to the signal timing for these signalized intersections should seek to decrease pedestrian delay.



X
X
AM Peak Hour Delay
PM Peak Hour Delay

Pedestrian delay is calculated using cycle length and the effective green time for pedestrians

(Source: HCM 2000)

Pedestrian Delay (at key Signalized Intersections)

42 Seconds
Maximum Delay

Pedestrian noncompliance likely after 30 seconds of delay

Recommendation

This recommendation proposes bike lanes on North Beacon Street between Market Street and Cambridge Street. The bicycle facility is part of the recommendation to provide a continuous bicycle connection between Oak Square and Union Square via Faneuil Street, Market Street, and North Beacon Street. Finally, North Beacon Street between Cambridge Street and the Mass Pike has been identified as a candidate for the street tree planting program described in Section 5 | Areawide & Network Recommendations.

1

Cost $$$$

Implementation

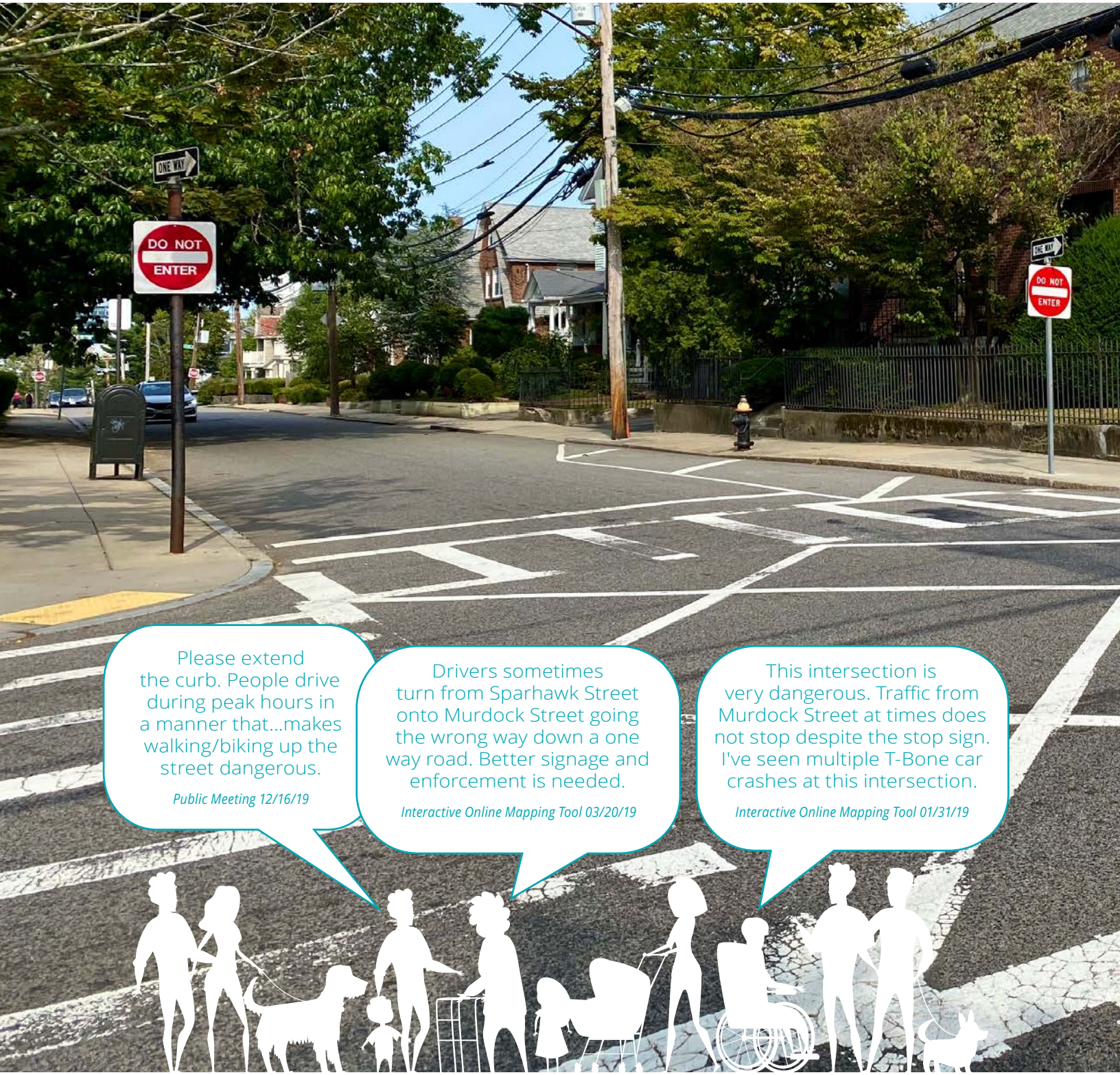
Separated Bike Lanes

This recommendation proposes separated bike lanes on North Beacon Street between Market Street and Cambridge Street. Separated bike lanes are for the exclusive use of bicyclists and enhance safety and comfort for bicyclists. Additionally, separated bike lanes are proven to improve safety for everyone who uses the street, including people walking and those in vehicles. To accommodate such a facility, on-street parking would need to be removed and the width of travel lanes reduced. The narrower travel lanes and proposed bicycle facility reduce the roadway's cross-section and help calm traffic. In addition to the bicycle facility on North Beacon Street, the recommendation supports a parallel bicycle facility on Guest Street/Braintree Street between Market Street and Cambridge Street. Finally, a marked crosswalk is recommended at North Beacon Street and Glencoe Street. Marked crosswalks provide pedestrians with a designated location to safely cross the street. Prior to implementation of this recommendation, BTD will lead a localized public process to engage residents, abutters and stakeholders in the design of the recommended improvements.

Example: Separated Bike Lane in Boston, MA

Source: BTD

MURDOCK STREET & SPARHAWK STREET



Why?

Murdock Street is a one-way southbound residential street that provides direct access for motorists traveling from N. Beacon Street to Cambridge Street. Although the speed limit is 25 mph, based on speed data measured in May 2019, approximately 30% of the motorists travel at speeds greater than the speed limit. The high vehicle speeds create unsafe conditions vulnerable roadway users like pedestrians and bicyclists. Sparhawk Street joins Faneuil Street, Arlington Street, and Warren Street, to form one of the few continuous east-west corridors that span the entire study area and provide access to the surrounding neighborhoods.

During the peak hours, the intersection of Murdock Street and Sparhawk Street experiences gridlock. Motorists block the intersection and crosswalks creating an environment that is unsafe for pedestrians.

Goals for Murdock Street and Sparhawk Street include:

- calm traffic;
- clarify the existing signage and roadway striping; and
- improve visibility.

Existing

Sparhawk Street looking West toward Murdock Street

Source: Google Streetview

Murdock Street looking North toward Sparhawk Street

Source: Google Streetview

Research Findings

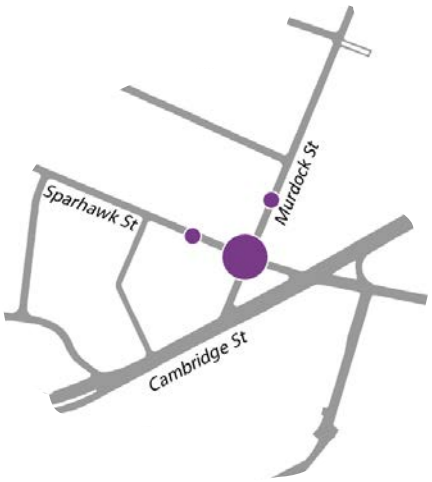
The BPDA gathered information on the following topics for the intersection of Murdock Street and Sparhawk Street:

- Crashes
- Daily Vehicle Volumes
- Vehicle Speed

The following section details the research findings for the intersection of Murdock Street and Sparhawk Street.

Crashes

The BPD responded to eight crashes along Murdock Street and Sparhawk Street between 2015 and 2017. All reported crashes involved motorists. Pedestrian and bicycle involved crashes were not reported. All but two crashes occurred at the intersection of Murdock Street and Sparhawk Street.



Boston Police Department Crime Incident Reports (2015-2017)

Motor Vehicle Crashes

- 1
- 2 - 4
- > 4

Pedestrian Crash

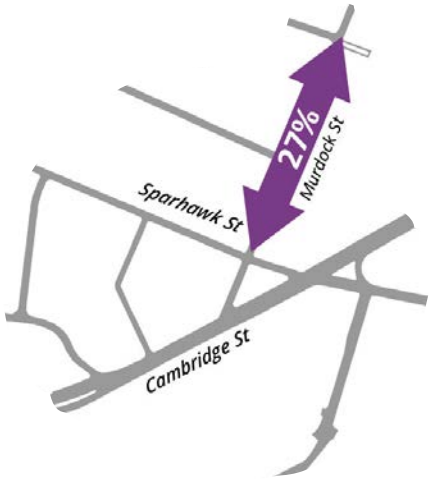
Bicyclist Crash

Crashes (Murdock Street at Sparhawk Street)

8	Motor Vehicle
0	Bicycle
0	Pedestrian

Vehicle Speeds

Streets where a high percentage of motor vehicles are traveling at or above the speed limit may benefit from design strategies and elements that reinforce operating speeds that are consistent with the speed limit. Speed data was collected on Murdock Street between Elmira Street and Mapleton Street on May 30, 2019. During that time, 27% of observed motor vehicles were traveling at or above 25 mph.



Speed data collected on May 30, 2019

XX%

Percentage of observed motor vehicles traveling at or above 25 mph

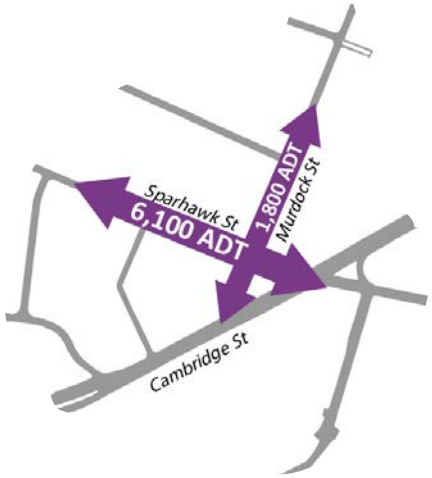
Number of Observed Motor Vehicles Traveling at or above than 25 mph

485

*Vehicles rounded to the nearest 100

Daily Vehicle Volumes

With average daily volumes of 6,100 vehicles, Sparhawk Street is the heavily traveled corridor at the intersection. Murdock Street is the minor approach and has an average of approximately 1,800 daily vehicles.



Recommendation

The recommendation at the intersection of Murdock Street and Sparhawk Street focuses on creating an environment that is safe and comfortable for pedestrians by calming traffic and reducing pedestrian exposure.

1

Cost $$$$

Implementation

TBD

Curb Extensions

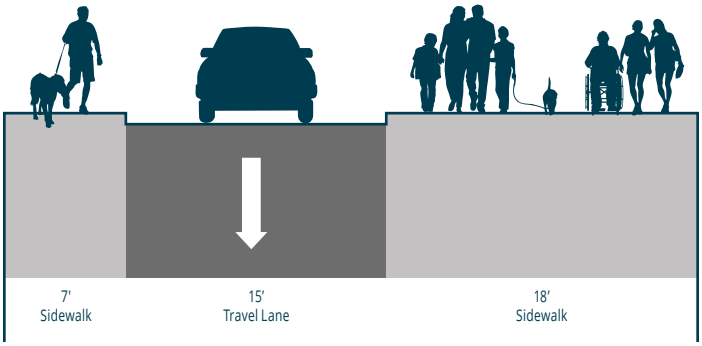
The recommendations proposes formalizing the existing striped curb extension with a vertical element (i.e., flex posts) on the east side of the intersection. As shown in the photograph on the right, curb extensions are created by extending the sidewalk at corners to narrow the roadway. The additional sidewalk space increases safety by reducing pedestrian exposure and calming traffic. Flex posts, as illustrated in the photograph to the right, can be used as a short-term curb extension. This recommendation proposes replacing the Stop signs, Stop Ahead signs, and Do Not Enter sign with larger (30" x 30") signs to BTD and Manual for Uniform Traffic Control Devices standards. Additionally, the intersection improvements would include re-striping, adding signage (e.g., intersection warning signs, turn prohibition signs, pedestrian warning signs), and improvements to visibility (e.g., trimming vegetation).

Example: Flex Posts

Source: MAPC

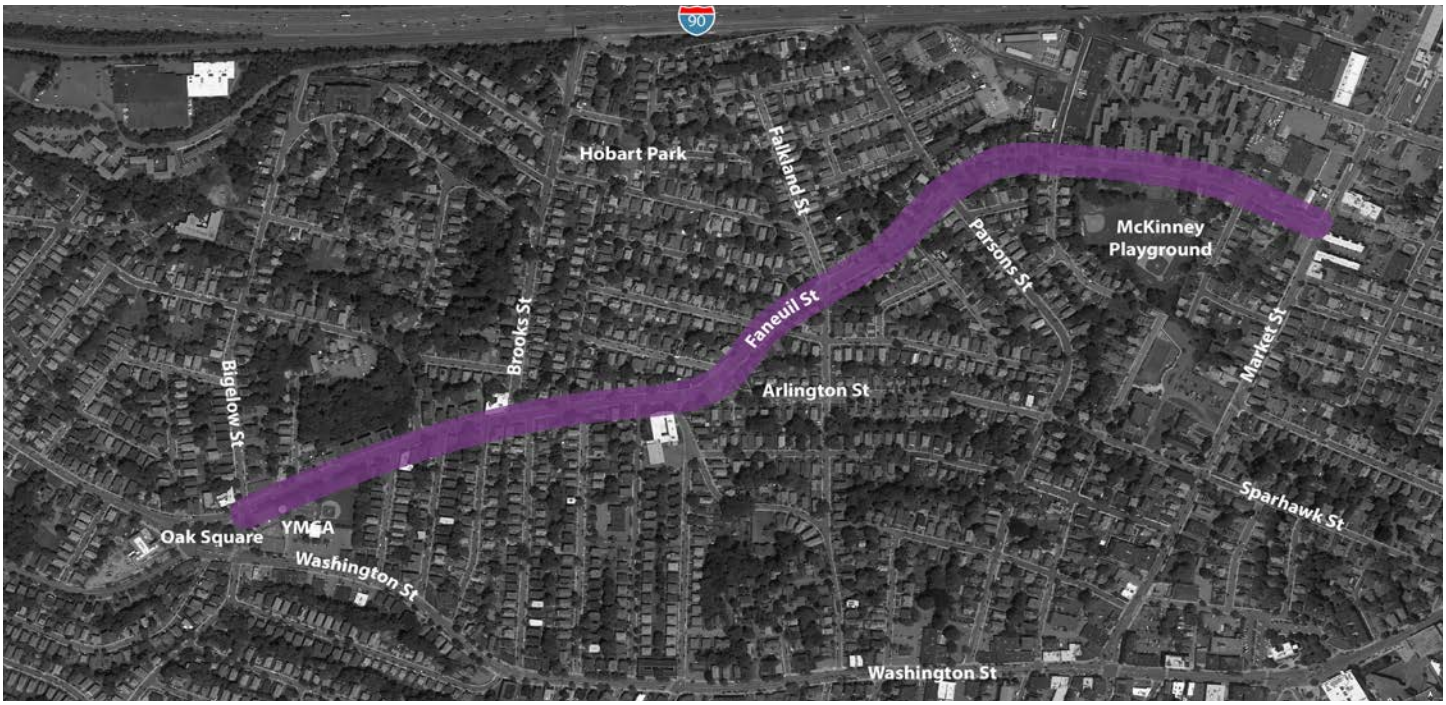
Recommended

Recommended Cross-section



FANEUIL STREET

BETWEEN OAK SQUARE AND MARKET STREET



Why?

Faneuil Street between Oak Square and Market Street is a two-lane road with varying roadway widths, parking on either side, and intermittent bicycle lanes. Despite the residential land uses surrounding Faneuil Street, it serves as an alternative for motorists, bicyclists, and bus passengers otherwise traveling on Washington Street and Cambridge Street from Oak Square en route to Union Square. Its role as a connector contributes to high motorist speeds that create unsafe pedestrian crossings and uncomfortable bicycle conditions. These conditions underscore the importance of calming traffic and providing comfortable bicycle facilities on Faneuil Street.

Goals for Faneuil Street between Oak Square and Market Street include:

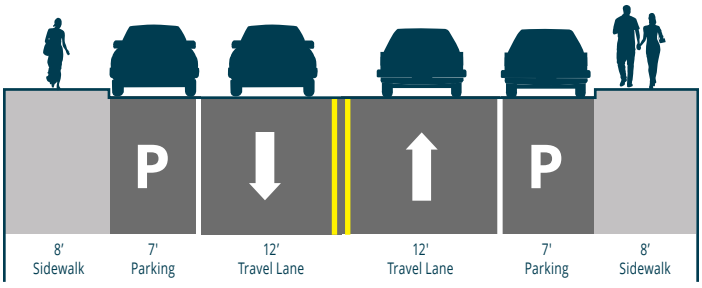
- provide comfortable and safe pedestrian crossings;
- increase the comfort and safety of bicycle facilities;
- reduce transit delay; and
- calm traffic.

Existing

Faneuil Street near McKinney Playground looking West

Source: Google Streetview

Existing Typical Cross-section



Note: Cross-sections on Faneuil Street vary.

Research Findings

The BPDA gathered information on the following topics for Faneuil Street:

- Crashes
- Bicycle Comfort
- Vehicle Speed
- Transit

The following section details the research findings for Faneuil Street.

Crashes

The BPD responded to fifty-eight crashes along Faneuil Street between 2015 and 2017. Of all reported crashes, 93% (54) involved only motorists, 5% (3) involved bicyclists, and 2% (1) involved pedestrians. Crashes were reported at most intersections and segments along Faneuil Street. Areas along Faneuil Street with a higher number of reported crashes (i.e., 5 or more crashes) include the intersection of Faneuil Street and Brooks Street, the intersection of Faneuil Street and Goodenough Street, the intersection of Faneuil Street and Market Street, and Faneuil Street between Goodenough Street and Sanderson Place.

Boston Police Department Crime Incident Reports (2015-2017)

Motor Vehicle Crashes

- 1
- 2 - 4
- > 4

Pedestrian Crash

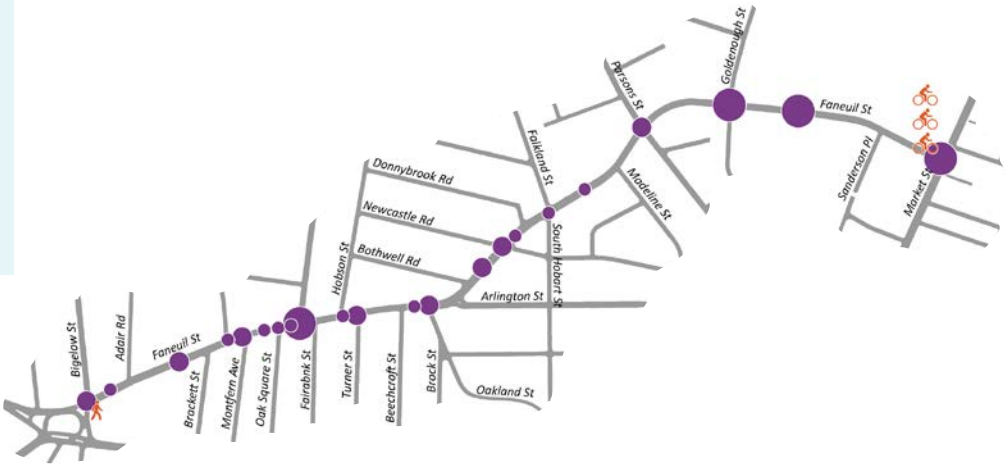
Bicyclist Crash

Crashes (from Bigelow Street to Market Street)

54 Motor Vehicle

3 Bicycle

1 Pedestrian



Bicycle Comfort

Faneuil Street is a two-lane roadway with intermittent bicycle lanes between Bigelow Street and Brackett Street and between Oakland Street and Madeline Street. Faneuil Street has a speed limit of 25 mph and daily vehicle volumes exceeding 3,000. Based on the worst performing roadway characteristic (daily vehicle volumes), Faneuil Street has a bicycle comfort score of LTS 3, with one LTS 2 segment between Oakland Street and Madeline Street. LTS 3 roads are tolerable for confident bicyclists. LTS 2 roads are comfortable for most bicyclists. Bicycle facilities that would improve Bicyclist comfort on Faneuil Street include separated bicycle facilities (e.g., parking-protected bicycle lane, shared use path).

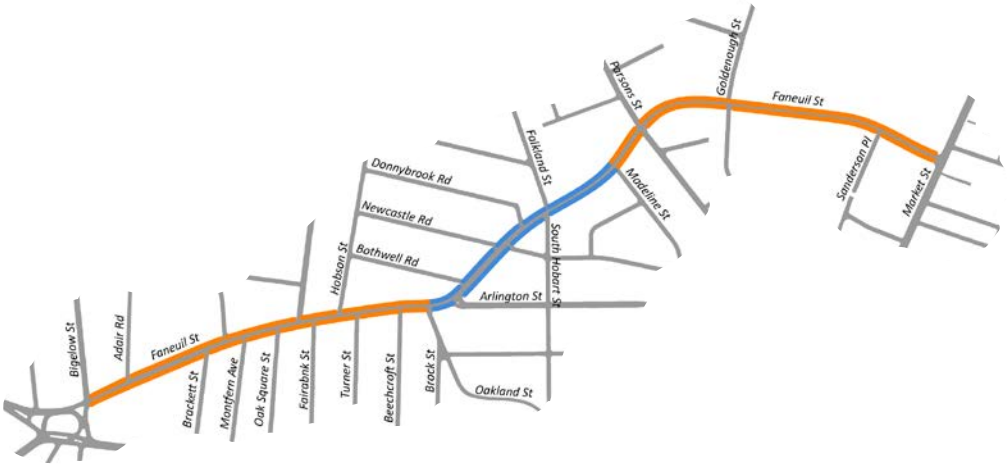
- LTS 1 (Low Stress)
- LTS 2
- LTS 3
- LTS 4 (High Stress)

Level of traffic stress is calculated based on speed limit, daily vehicle volumes, and street width.

LTS (from Bigelow Street to Market Street)

LTS 3

Tolerable for confident bicyclists



Vehicle Speed

Vehicle speed studies were conducted in the Allston-Brighton neighborhood to understand whether or not motorists are complying with speed limit requirements. Streets where a high percentage of motor vehicles are traveling at or above the speed limit may benefit from design strategies and elements that reinforce operating speeds consistent with the speed limit. Speed data was collected on Faneuil Street west of Montfern Avenue and west of Falkland Street on May 9, 2019 and May 10, 2019. In that time, 47% of observed motor vehicles were traveling at or above 25 mph west of Montfern Avenue and 84% of observed motor vehicles were traveling at or above 25 mph west of Falkland Street.

Speed data collected between May 9, 2019 and May 10, 2019

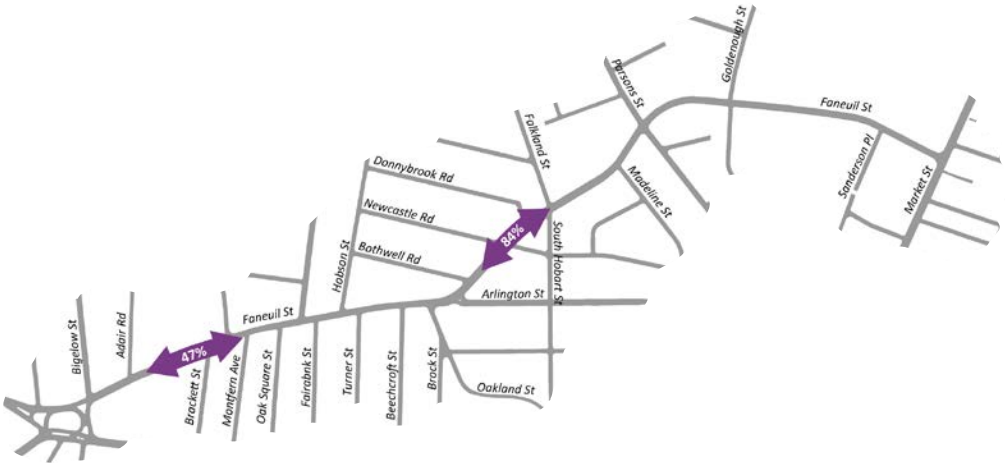
XX%

Percentage of observed motor vehicles traveling at or above 25 mph

*Number of Observed Motor Vehicles Traveling at or above 25 mph west of Falkland Street**

6,500

*Vehicles rounded to the nearest 100



Transit

MBTA bus route 64 provides service along Faneuil Street. This route serves ten bus stops along Faneuil Street, one of which has daily ridership that falls within the top 25% of all stops in the Allston-Brighton Mobility Plan area. The bus route that traverses Faneuil Street between Bigelow Street and Falkland Street has an average daily ridership (ADR) of 800. Approximately 39% of daily bus riders along Faneuil Street travel during the AM and PM peak periods.

Bus Stops

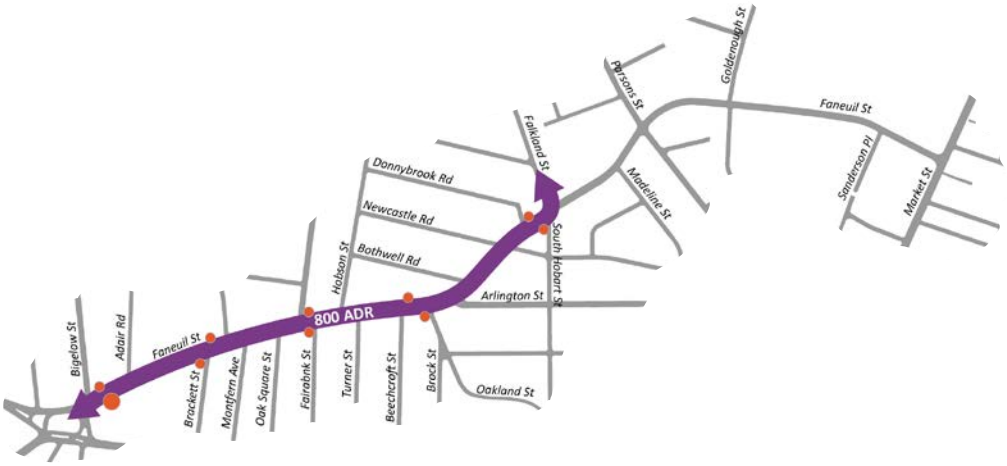
Bus Stops w/ Top 25% Daily Ridership

39% of the daily bus riders travel during peak periods

1 Number of Bus Routes (64)

1 Bus Stops with Daily Ridership in Top 25% of Allston-Brighton Mobility Plan Area

(Source: MBTA 2017)



Recommendations

The recommendations are to provide separated bike lanes on Faneuil Street, as well as a mini roundabout at the intersection of Faneuil Street and Arlington Street. The proposed bicycle facility on Faneuil Street is part of a low-stress, complementary, bicycle-priority route for users of all ages and abilities between Oak Square and Union Square. Effective December 2019, MBTA shifted Route 64 from Faneuil Street to Brooks Street to provide more frequent and reliable service as part of the Better Bus Project. Any previous recommendations to consolidate bus stops along Faneuil Street are no longer relevant. Additional traffic calming recommendations for Faneuil Street are provided in the Traffic Calming section of this chapter. Also proposed are potential bus priority improvements to improve #64 bus service.

1

Cost $$$$

Implementation

TBD

Separated Bike Lanes

Separated bike lanes are for exclusive use of bicyclists and provide added separation that enhance the experience of bicycling on urban streets. The narrower travel lanes and proposed bicycle facility reduce the width of the roadway and help calm traffic. The separated bike lanes on Faneuil Street would connect to a proposed separated bicycle facility on Market Street and bicycle lanes on N. Beacon Street. Prior to implementation of this recommendation, BTD will lead a localized public process to engage residents, abutters and stakeholders in the design of the recommended improvements. The process should include a parking study to fully understand the impacts to on-street parking. Refer to Section 5 | Areawide & Network Recommendations for additional details on the complementary bicycle corridor.

Example: Separated Bike Lane in Boston, MA

Source: BTD

2

Cost $$$$

Implementation

Mini Roundabout

The recommendation at the intersection of Faneuil Street and Arlington Street is to install a mini roundabout. Mini roundabouts calm traffic, improve safety, and reduce delay for motorists. Westbound bicyclists from Arlington Street would yield to other modes before entering the roundabout and proceeding through the intersection. Conceptual planning-level drawings of mini roundabout are presented below. The feasibility of a mini roundabout needs to be analyzed in greater detail.

3

Cost $$$$

Implementation

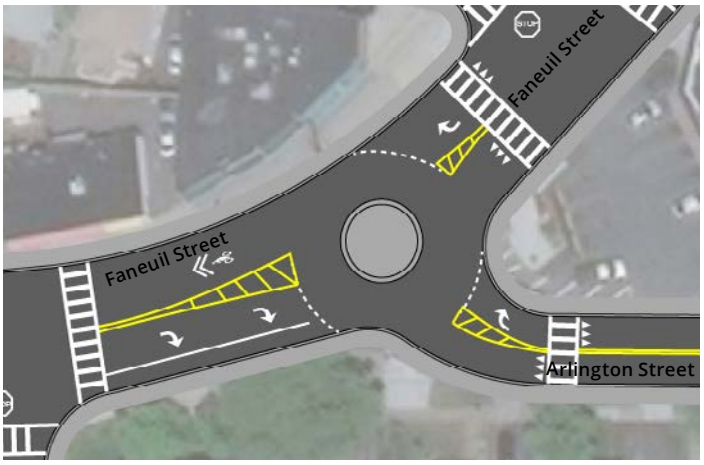
Potential Bus Priority Improvements

The plan also recommends exploring the potential for bus priority improvements along Faneuil Street to improve #64 bus service. Potential bus priority improvements may include queue jump lanes, improved bus stop placement, and bus stop amenities such as shelters, countdown clocks and curb bulbouts. Detailed research on bus travel delay must be conducted prior to determining whether any bus priority improvements are warranted. Individual bus priority improvements must be carefully considered as part of the detailed design of the separated bike lanes in this corridor, bearing in mind that bicycle facilities are prioritized.

Existing

Source: Google

Recommended

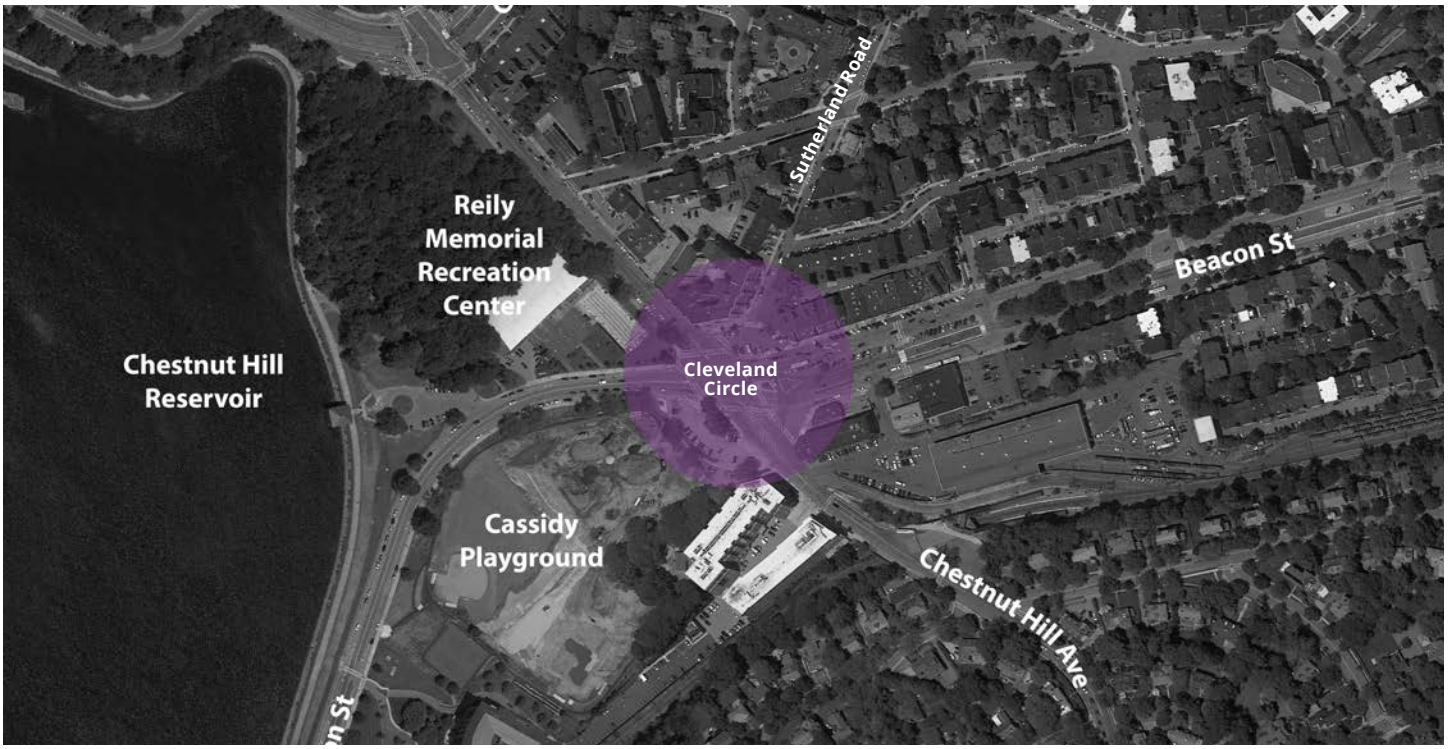


Example of Mini Roundabout

Source: Kittelson & Associates, Inc.

CLEVELAND CIRCLE

CHESTNUT HILL AVENUE AND BEACON STREET



Why?

Chestnut Hill Avenue, Beacon Street, and Sutherland Road intersect to form Cleveland Circle in Brighton. The intersection is surrounded by a variety of commercial and residential uses, the Chestnut Hill Reservoir, and the terminus of MBTA's Green Line C branch. Metered parking near the intersection of Chestnut Hill Avenue and Beacon Street serves the businesses on these streets. While there are multiple crosswalks here, crossings are generally long, require two stages to make it all the way through to the other side, and expose pedestrians to multiple conflict points with motorists. Bicycle lanes and green pavement markings guide bicyclists across Chestnut Hill Avenue, but the lack of physical separation contributes to an uncomfortable experience. Additionally, the heavy presence of train tracks at the Cleveland Circle intersection has the potential to create uncomfortable and dangerous situations for bicyclists, especially when bicyclists are not directed to cross tracks at high angles or when less than three feet is provided between bicycle facilities and train tracks.

Goals for Cleveland Circle include:

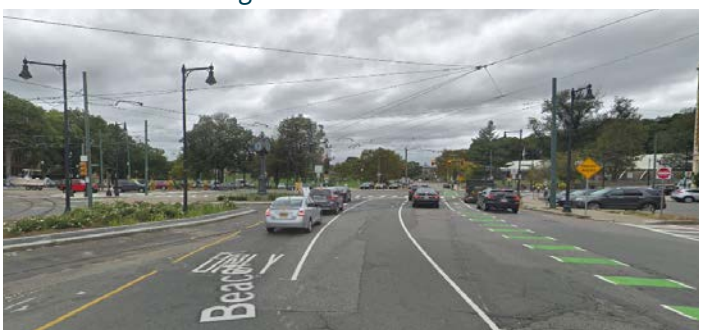
- provide comfortable and safe pedestrian crossings; and
- provide bus stop waiting areas.

Existing

Chestnut Hill Avenue looking South

Source: Google Streetview

Beacon Street looking West



Source: Google Streetview

Research Findings

The BPDA gathered information on the following topics for Cleveland Circle:

- Crashes
- Bicycle Comfort
- Pedestrian Delay

The following section details the research findings for Cleveland Circle.

Crashes

The BPD responded to seventeen crashes in Cleveland Circle between 2015 and 2017. Most reported crashes involved motorists (88% - 15 crashes). Pedestrians and bicyclists were involved in one crash each. Crashes were reported at all street segments entering Cleveland Circle except for the west leg of Beacon Street. Areas in Cleveland Circle with a higher number of reported crashes (i.e., 5 or more crashes) include the east leg of Beacon Street between Cleveland Circle and Ayr Road. The section of Chestnut Hill Avenue north of Cleveland Circle is also identified as a high-crash corridor for bikes (top 3% citywide).[11]

Boston Police Department Crime Incident Reports (2015-2017)

Motor Vehicle Crashes

- 1
- 2 - 4
- > 4

Pedestrian Crash

Bicyclist Crash

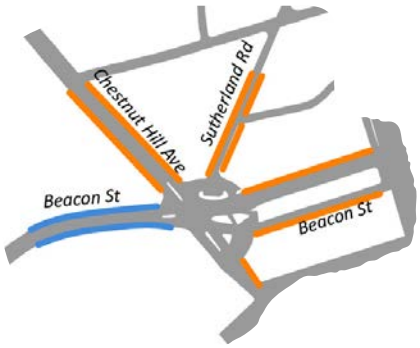
15 Motor Vehicle

1 Bicycle

1 Pedestrian

Bicycle Comfort

Cleveland Circle is a confluence of one-lane, one-way roadways, and two-lane roadways with no separated bicycle facilities or striped bicycle lanes, speed limits of 25 mph, and daily vehicle volumes entering Cleveland Circle ranging between 10,700 (Beacon Street, west) and 13,400 (Beacon Street, east). Based on the worst performing roadway characteristic (daily vehicle volumes), most of the roadways in Cleveland Circle have a bicycle comfort score of LTS 3. LTS 3 roads are tolerable for confident bicyclists.



- LTS 1 (Low Stress)
- LTS 2
- LTS 3
- LTS 4 (High Stress)

Level of traffic stress is calculated based on speed limit, daily vehicle volumes, and street width.

LTS (Beacon Street and Chestnut Hill Avenue)

LTS 3

Tolerable for confident bicyclists

Pedestrian Delay

Pedestrian delay was calculated at the one signalized intersection in Cleveland Circle. The maximum pedestrian delay observed in Cleveland Circle is 49 seconds during the AM and PM peak hours. The signalized intersection in Cleveland Circle exceeds the 30 second pedestrian delay threshold. Any future modifications to the signal timing for this signalized intersection should seek to decrease pedestrian delay.

X / X — AM Peak Hour Delay / PM Peak Hour Delay

Pedestrian delay is calculated using cycle length and the effective green time for pedestrians

(Source: HCM 2000)

Pedestrian Delay (at key Signalized Intersections)

49 Seconds Maximum Delay

Pedestrian noncompliance likely after 30 seconds of delay

11 Boston High Crash Network: top 3% of streets (bicycle crashes): https://www.boston.gov/sites/default/files/embed/2/2019-01-15_3_percent_hcn_bicycle.pdf

Recommendation

The recommendations at Cleveland Circle focus on re-purposing existing parking spaces, restricting access points, and providing curb extensions to reduce pedestrian exposure and improve existing bus stops.

1

Cost $$$$

Implementation

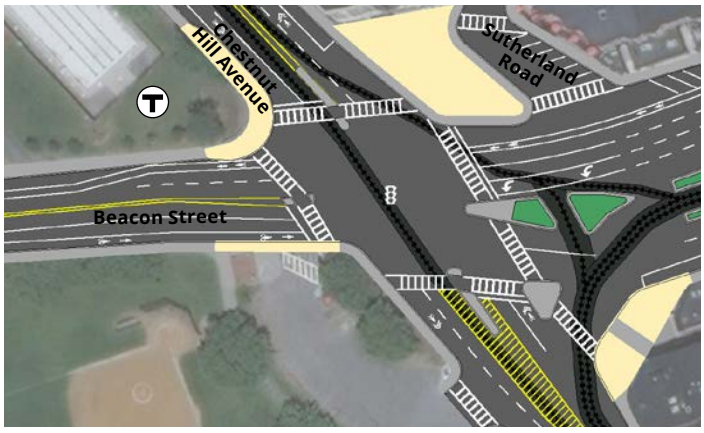
TBD

Curb Extensions and Placemaking

Curb extensions are proposed at key locations in Cleveland Circle. Curb extensions, shown in the image below in yellow, are created by extending the sidewalk at corners or mid-block to increase safety, calm traffic, and provide space for placemaking. At bus stops, curb extensions allow buses to stop in the travel lane and eliminate the need to pull in and out of traffic. In addition, the curb extensions at bus stops provide more space for passengers. Curb extensions can be created using tactical materials in the near term, and upgraded to permanent materials over time.

This recommendation proposes limiting access to the side streets adjacent to Cleveland Circle to eliminate conflict points and create additional placemaking opportunities. The conversion of the parking space on Sutherland Avenue between Beacon Street and Chestnut Hill Avenue into a more meaningful central space would both calm traffic and improve safety. New pedestrian or open space adjacent to Sutherland Road would offer opportunities for green space, wayfinding, public art, and/or seating to activate the space and reinforce Cleveland Circle's identity (see the examples below). It should be noted that installations such as tactical plazas, furnishings, landscaping, and the like will require ongoing maintenance, which in turn will require partnerships with nearby locals merchants, institutions, nonprofits, and/or Main Streets organizations.

Recommended



Ⓣ Existing Bus Stop

2

Cost $$$$

Implementation

TBD

Develop Plan for Redesign

A long-term recommendation is to develop a plan to re-design Cleveland Circle to provide Complete Streets elements that balance the diverse needs of all its roadway users. Design considerations for this long-term plan include improvements for all modes of travel. To be closely coordinated with the MBTA, the study should evaluate how to reduce pedestrian delay and exposure while crossing the roadway and enhance bicyclist comfort with separated bicycle facilities and pavement markings to cross the train tracks at a safe angle. Transit access in Cleveland Circle should be evaluated for potential bus stop relocation to new curb extensions and plaza space as referenced in the short-term recommendation.

Placemaking Example - Flexible Greenspace

Source: Geoff Lyon, Levy Park in Houston, Texas

Placemaking Example - Pop-Up Library

Source: Boston Public Library

WASHINGTON STREET

BETWEEN CAMBRIDGE STREET AND COREY ROAD

Why?

Washington Street between Cambridge Street and Corey Road is a northwest-southeast street with one travel lane per direction and on-street parking. The land uses surrounding Washington Street are primarily residential. St. Elizabeth's Medical Center is a major institutional destination at the corner of Washington Street and Cambridge Street. A Whole Foods Market bookends the opposite end of the segment. Washington Street provides direct, continuous access to and from Brookline and the A-B Transit Corridor. Washington Street reaches a high point in elevation at Monastery Road that has the potential to impact vehicle speeds and bicycle route selection.

Goals for Washington Street between Cambridge Street and Corey Road include:

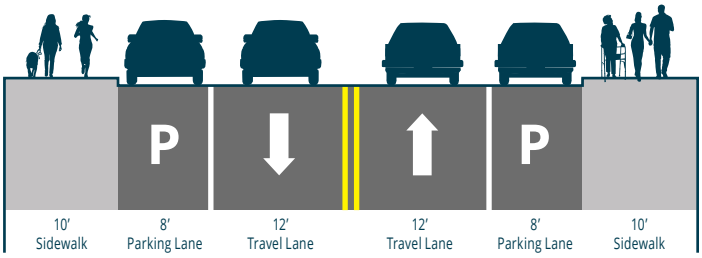
- increase the comfort and safety of bicycle facilities;
- provide comfortable and safe pedestrian crossings;
- improve visibility;
- improve access to bus stops; and
- calm traffic.

Existing

Washington Street looking South towards Commonwealth Avenue

Source: Google Streetview

Existing Typical Cross-section



Research Findings

The BPDA gathered information on the following topics for Washington Street:

- Crashes
- Bicycle Comfort
- Pedestrian Delay
- Transit

The following section details the research findings for Washington Street.

Crashes

The BPD responded to sixty-six crashes along Washington Street between 2015 and 2017. Of the reported crashes, 83% (55) involved only motorists, 14% (9) involved pedestrians, and 3% (2) involved bicyclists. Crashes were reported at most intersections and segments along Washington Street.

Boston Police Department Crime Incident Reports (2015-2017)

Motor Vehicle Crashes

- 1
- 2 - 4
- > 4

Pedestrian Crash

Bicyclist Crash

Crashes (from Cambridge Avenue to Corey Road)

55 Motor Vehicle

2 Bicycle

9 Pedestrian

Bicycle Comfort

Washington Street is a two-lane roadway with no dedicated bicycle facilities, a speed limit of 25 mph, and daily vehicle volumes over 10,000. Based on the worst performing roadway characteristic (daily vehicle volumes), Washington Street has a bicycle comfort score of LTS 3. LTS 3 roads are tolerable for confident bicyclists. Bicycle facilities that would improve bicyclist comfort on Washington Street include wide bicycle lanes and separated bicycle facilities (e.g., parking-protected bicycle lane, shared use path).

- LTS 1 (Low Stress)
- LTS 2
- LTS 3
- LTS 4 (High Stress)

Level of traffic stress is calculated based on speed limit, daily vehicle volumes, and street width.

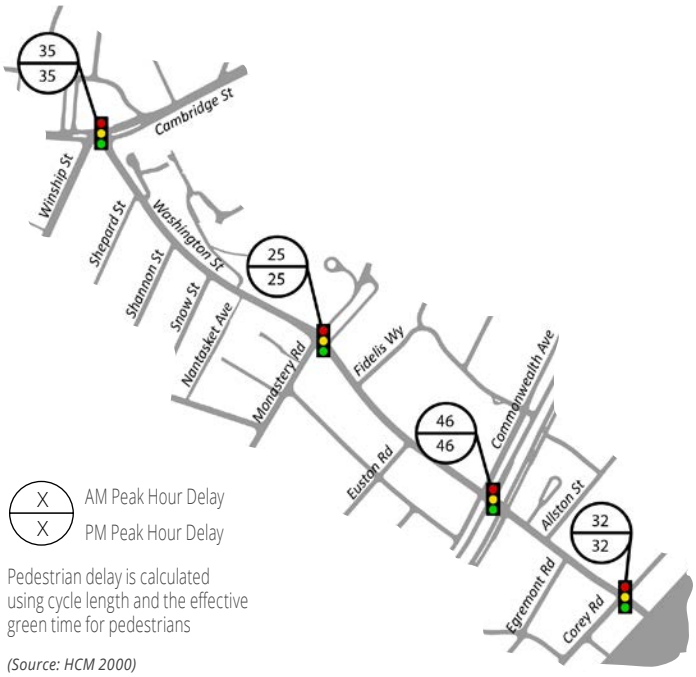
LTS (from Cambridge Street to Corey Road)

LTS 3

Tolerable for confident bicyclists

Pedestrian Delay

Pedestrian delay was calculated at the four signalized intersections along Washington Street during the AM and PM peak hours. The maximum pedestrian delay observed along Washington Street is 46 seconds during the AM and PM peak hours at the intersection of Washington Street and Commonwealth Avenue. This intersection, along with two other locations, exceeds the 30 second pedestrian delay threshold. The remaining intersection falls under the 30 second pedestrian delay threshold. Any potential future modifications to the intersections of Washington Street and Commonwealth Avenue, Cambridge Street, and Corey Road should seek to decrease pedestrian delay. Potential future modifications to the intersections of Washington Street with Monastery Road should seek to decrease or maintain existing pedestrian delay.



X / X — AM Peak Hour Delay / PM Peak Hour Delay

Pedestrian delay is calculated using cycle length and the effective green time for pedestrians

(Source: HCM 2000)

Pedestrian Delay (at key Signalized Intersections)

46 Seconds
Maximum Delay

Pedestrian noncompliance likely after 30 seconds of delay

Transit

MBTA bus route 65 provides service along Washington Street. This route along Washington Street between Brighton Center and Corey Road serves ten bus stops, one of which has daily ridership that falls within the top 25% of all stops in the Allston-Brighton Mobility Plan area. The bus route that traverses Washington Street between Cambridge Street and Corey Road has an ADR of 6,800. Approximately 36% of daily bus riders along Washington Street travel during the AM and PM peak periods.

Bus Stops

Bus Stops w/ Top 25% Daily Ridership

36% of the daily bus riders travel during peak periods

1 Number of Bus Routes (65)

1 Bus Stops with Daily Ridership in Top 25% of Allston-Brighton Mobility Plan Area

(Source: MBTA 2017)

Recommendations

This recommendation proposes separated bike lanes on Washington Street between Cambridge Street and Commonwealth Avenue to enhance bicyclists safety, access, and connectivity. Also proposed are potential bus priority improvements to improve #65 bus service.

1

Cost $$$$

Implementation

Separated Bike Lanes

This recommendation proposes separated bike facilities on Washington Street between Cambridge Street and Commonwealth Avenue. Separated bicycle facilities are for exclusive use of bicyclists and improve safety for bicyclists on urban streets. The narrower travel lanes and proposed bicycle facility reduce the roadway's cross-section and help calm traffic. Transitions at Cambridge Street/Washington Street/Winship Street and Commonwealth Avenue/Washington Street may require bicycle signals and two-stage queue boxes. BTD will lead a localized public process to engage residents, abutters and stakeholders in the design of the recommended improvements. The process should include a parking study to fully understand the impacts to on-street parking.

Example: Separated Bike Lane in Boston, MA

Source: BTD

2

Cost $$$$

Implementation

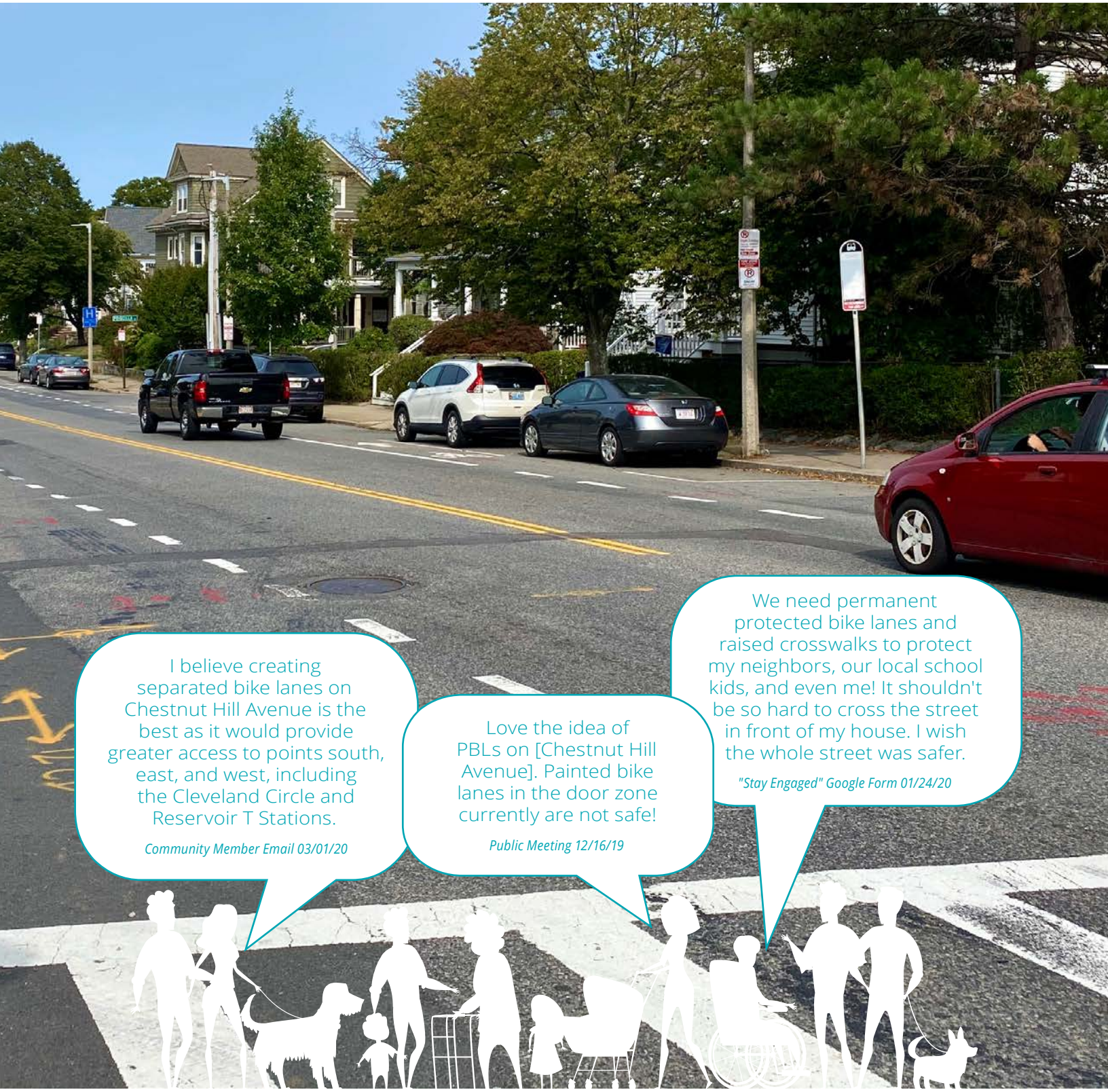
TBD

Potential Bus Priority Improvements

The plan also recommends exploring the potential for bus priority improvements along Washington Street to improve #65 bus service. Potential bus priority improvements may include queue jump lanes, improved bus stop placement, and bus stop amenities such as shelters, countdown clocks and curb bulbouts. Detailed research on bus travel delay must be conducted prior to determining whether any bus priority improvements are warranted. Individual bus priority improvements must be carefully considered as part of the detailed design of the separated bike lanes in this corridor, bearing in mind that bicycle facilities are prioritized.

CHESTNUT HILL AVENUE

BETWEEN WASHINGTON STREET AND COMMONWEALTH AVENUE



Why?

Chestnut Hill Avenue between Washington Street and Commonwealth Avenue is a north-south street with one travel lane per direction, on-street parking on both sides, and striped bicycle lanes on both sides of the street. The segment is primarily residential with some commercial and institutional land uses near Washington Street. Chestnut Hill Avenue is one of the few direct, continuous routes in the study area and connects the Charles River via Market Street on the north to the Chestnut Hill Reservoir and Boston College on the south.

Goals for Chestnut Hill Avenue between Washington Street and Commonwealth Avenue include:

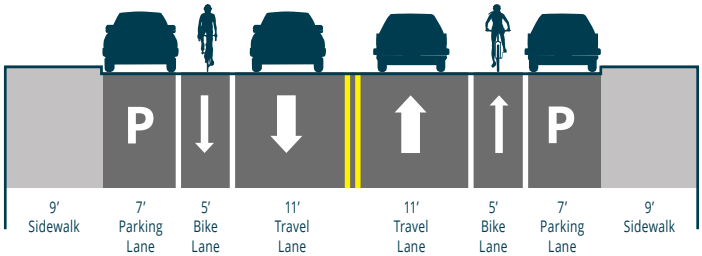
- increase the comfort and safety of bicycle facilities;
- reduce transit delays; and
- calm traffic.

Existing

Chestnut Hill Avenue looking North

Source: Google Streetview

Existing Typical Cross-section



Research Findings

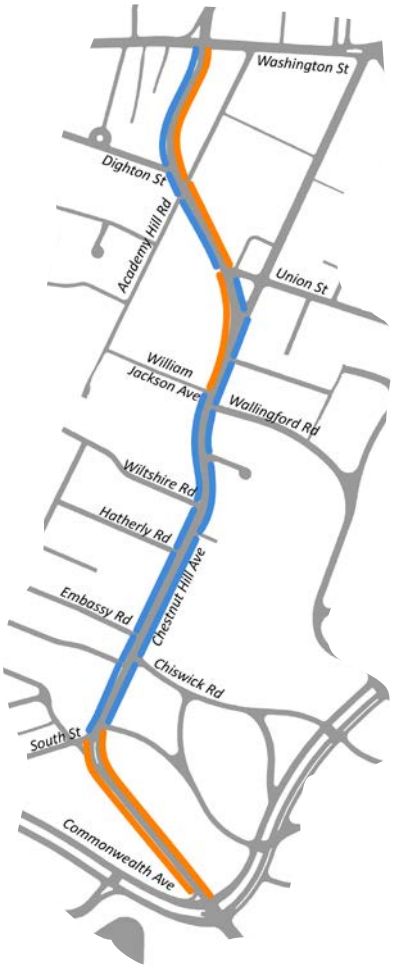
The BPDA gathered information on the following topics for Chestnut Hill Avenue:

- Bicycle Comfort
- Crashes

The following section details the research findings for Chestnut Hill Avenue.

Bicycle Comfort

Chestnut Hill Avenue is a two-lane roadway with a mix of painted bicycle lanes and no dedicated bicycle facilities, a speed limit of 20 to 25 mph, and daily vehicle volumes of 9,300 to 15,500. Based on the worst performing roadway characteristic (daily vehicle volumes, combined width of on-street parking and bicycle lanes), Chestnut Hill Avenue has a bicycle comfort score ranging between LTS 2 and LTS 3. LTS 2 roads are comfortable for most bicyclists and LTS 3 roads are tolerable for confident bicyclists. Bicycle facilities that would improve bicyclist comfort on Chestnut Hill Avenue include wider bicycle lanes and separated bicycle facilities (e.g., parking-protected bicycle lane, shared use path).



LTS 1 (Low Stress)
LTS 2
LTS 3
LTS 4 (High Stress)

Level of traffic stress is calculated based on speed limit, daily vehicle volumes, and street width.

LTS (Chestnut Hill Avenue between Washington Street and Commonwealth Avenue)

LTS 3

Tolerable for confident bicyclists

LTS 2

Comfortable for most bicyclists

Crashes

The BPD responded to fifty crashes along Chestnut Hill Avenue between 2015 and 2017. Of the reported crashes, 86% (43) involved only motorists, 8% (4) involved pedestrians, and 6% (3) involved bicyclists. Crashes were reported at most intersections and segments along Chestnut Hill Avenue. Areas along Chestnut Hill Avenue with a higher number of reported crashes (i.e., 5 or more crashes) include the intersection of Chestnut Hill Avenue and Washington Street, Chestnut Hill Avenue between Washington Street and Dighton Avenue, and Chestnut Hill Avenue between South Street and Commonwealth Avenue.

Boston Police Department Crime Incident Reports (2015-2017)

Motor Vehicle Crashes

- 1
- 2 - 4
- > 4

Pedestrian Crash

Bicyclist Crash

Crashes (Chestnut Hill Avenue between Washington Street and Commonwealth Avenue)

43 Motor Vehicle

3 Bicycle

4 Pedestrian

Recommendations

This recommendation provides separated bicycle facilities on Chestnut Hill Avenue between Washington Street and Commonwealth Avenue to enhance bicycle safety, access, and connectivity. Also proposed are potential bus priority improvements to improve #86 bus service. Additionally, Chestnut Hill Avenue from Washington Street to Cleveland Circle has been identified as a candidate for the street tree planting program described in Section 5 | Areawide & Network Recommendations.

1

Cost $$$$

Implementation

TBD

Separated Bike Lanes

The recommendation for separated bike lanes on Chestnut Hill Avenue is an alternative to the separated bike lane couplet initially proposed for Lake Street and Foster Street. The Chestnut Hill Avenue separated bike lanes recommendation extends from Commonwealth Avenue in the south to Market Street in the north and would require the removal of parking on one side of the street. This recommendation requires a parking study to determine the feasibility of removing parking. Separated bike lanes are for the exclusive use of bicyclists and enhances safety and comfort for bicyclists. Additionally, separated bike lanes are proven to improve safety for everyone who uses the street, including people walking and those in vehicles. Prior to implementation of this recommendation, BTD will lead a localized public process to engage residents, abutters and stakeholders in the design of the recommended improvements.

2

Cost $$$$

Implementation

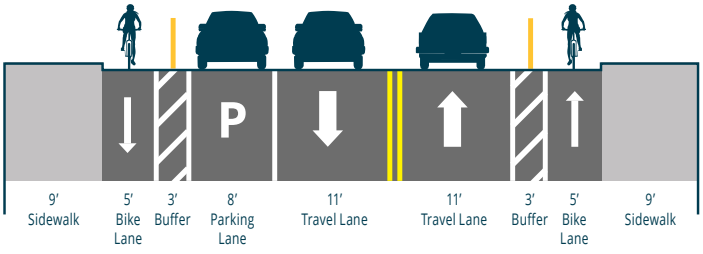
TBD

Potential Bus Priority Improvements

The plan also recommends exploring the potential for bus priority improvements along Chestnut Hill Avenue (and eventually Market Street) to improve #86 bus service. Potential bus priority improvements may include queue jump lanes, improved bus stop placement, and bus stop amenities such as shelters, countdown clocks and curb bulbouts. Detailed research on bus travel delay must be conducted prior to determining whether any bus priority improvements are warranted. Individual bus priority improvements must be carefully considered as part of the detailed design of the separated bike lanes in this corridor, bearing in mind that bicycle facilities are prioritized.

Recommended

A *Recommended Typical Cross-section*



ACTION PLAN 7

ACTION PLAN

The recommendations presented in this Plan will be carried forward by various City agencies with support from State agencies where needed. This chapter will help track the timing, cost, and responsibility for each recommendation.

A number of recommendations contained in this Plan are being prioritized for implementation between 2021 and 2025. The tables at the end of this section list recommendations that will be implemented during 2021, followed by a list of recommendations that will be implemented between 2022 and 2025. The tables include the following information: recommended improvements; cost category; lead agency; developer funding or construction; and implementation year(s).

Among the significant mobility improvements advanced by the Action Plan are the following:

- **Safety related, quick-build improvements in key locations** such as Harvard Avenue, Brighton Avenue, Union Square, Oak Square, Washington Street, Cleveland Circle, and the Franklin Street pedestrian bridge in 2021.
- **The pilot Bus Rapid Transit (BRT)** facility between Oak Square and Union Square, connecting to the existing Brighton Avenue BRT.
- **Separated bike lanes** between Oak Square and Union Square, along Faneuil Street, Market Street and North Beacon Street.
- **Traffic calming and enhanced crosswalks** in along Faneuil Street and all along Lincoln Street.
- **Repurposing of the north carriageway along Leo Birmingham Parkway** for a two-way bike facility.

Many other improvements will also be made between 2021 and 2025 as noted in the tables on the following pages.

Note: Mobility improvements for the Western Avenue Corridor will be addressed in the Western Avenue Corridor Study, anticipated for completion in early 2021.

Cost Categories

The following represents how the implementation costs were broken into categories.

$	<$100,000
$$	$100,000 - $500,000
$$$	$500,000 - $2,000,000
$$$$	>$2,000,000

The categories reflect preliminary, order-of-magnitude cost estimates. For each recommended improvement, more detailed cost estimates will need to be prepared by a professional engineer to determine more precise estimates.

Lead Agency

The lead agency will have primary responsibility to usher recommendations forward to implementation. It should be noted that many recommendations will require involvement of one or more other governmental agencies, or even private developers. For example, while the BPDA will take the lead on implementing recommendations to improve lighting and develop artistic installations on, or near, the Franklin Street Bridge, the BPDA must also work closely with both MassDOT and the Mayor's Office of Arts and Culture to develop and implement the recommendations. Also, in some instances, a private developer may be required to fund, design, and/or build a specific improvement.

Developer Funding or Construction

In some design cases, Article 80 development projects will be required to fund, design, and/or construct certain improvements. Where private developers will have partial or full responsibility for implementing an improvement, it is reflected in the table.

Periodic Updates on Action Plan Implementation

Working in close coordination with the Boston Transportation Department and the Public Works Department, the BPDA will track implementation of the Action Plan and post periodic updates at the A-B Mobility project web page at bit.ly/ABMobility.

Plan Recommendations Not Included in the Action Plan

Recommendations contained in this plan but not explicitly included in this Action Plan will be required to follow BTD's criteria based scoring system for transportation improvement projects citywide. For a complete summary list of all recommendations of the Allston Brighton Mobility Plan, see Appendix A.

2021

Improvement	Timeframe * Subject to COB Streets Cabinet Selection Criteria	Cost	Developer Contribution	Lead Agency
On Harvard Avenue Design and install tactical bus stop relocation, curb extensions, and short term curbside use plan	2021	$ $	X	COB
On Brighton Avenue Plan, design, and install flexible curb zones	2021	$	X	COB
In Union Square Plan and implement pedestrian recall phase	2021	$	X	COB
On the Franklin Street Pedestrian Bridge Develop, design, and install lighting and public art improvements	2021	$	X	BPDA
In Allston Village Conduct a "Network Gaps" process to resolve bus and bike network needs	2021	$		COB
On Linden Street Preserve future multimodal street options for Linden Street	2021	$		BPDA
In Oak Square Evaluate, design, and install 2 crosswalks, 2 short-term parking zones	2021	$$		COB
On Washington Street Design and construct two enhanced crosswalks	2021	$$	X	COB
In Cleveland Circle Design and construct tactical plazas at two driveway openings	2021	$	X	COB
On Leo Birmingham Parkway Design and construct tactical/temporary repurposing of north carriageway for two-way bike path	2021	$$	X	BPDA
On Soldiers Field Road Construct an at-grade crossing at Everett Street/Soldiers Field Road	2021	$$$	X	DCR

COB - City of Boston

BPDA - Boston Planning and Development Agency

DCR - Massachusetts Department of Conservation and Recreation

2022-2025

Improvement	Timeframe * Subject to COB Streets Cabinet Selection Criteria	Cost	Developer Contribution	Lead Agency
A-B Transit Corridor Pilot Conduct a parking utilization study; Design and construct pilot BRT lanes; where feasible and appropriate, include TSP, bus stop relocations, and new crosswalks	2022-2025	$$$	X	COB
In Brighton Center - Washington Street/Market Street/ Chestnut Hill Avenue Design and construct tactical plaza and relocate right turn slip lane	2022-2025	$$	X	COB
In Brighton Center - Washington Street/Winship Street/ Cambridge Street Add left turn lane markings from Cambridge Street; design and install wayfinding for off-street parking	2022-2025	$$	X	COB
Bikeway - Oak Square to Union Square Conduct parking utilization study, design, and construct bicycle facility	2022-2025	$$$		COB
On Faneuil Street - Traffic Calming Analyze, plan, design, and construct traffic calming treatments	2022-2025	$$$		COB
Along Faneuil Street Evaluate, design, and construct enhanced crosswalks	2022-2025	$$		COB
At Faneuil Street/Arlington Street Design and construct mini roundabout	2022-2025	$$		COB
On North Beacon Street Design and construct enhanced crosswalk	2022-2025	$		COB

Improvement	Timeframe * Subject to COB Streets Cabinet Selection Criteria	Cost	Developer Contribution	Lead Agency
Transit (Bus) Install, relocate, or eliminate several bus stops outside of the A-B Transit Corridor	2022-2025	$$$		COB
On Lincoln Street Design and install traffic calming and enhanced crosswalk	2022-2025*	$$	X	COB
On Washington Street - Cambridge Street to Brookline Border Conduct parking utilization study; design and construct bicycle facility	2022-2025*	$$$	X	COB
On Leo Birmingham Parkway Design and construct permanent carriageway conversion to bicycle facility/open space	2022-2025	$	X	BPDA
At Leo Birmingham Parkway/Market Street/Lincoln Street Redesign and reconstruct the intersection	2022-2025	$$		BPDA
A-B Bikeway - Leo Birmingham Parkway to West Station Analyze, coordinate with MassDOT, design, and construct new separated, two-way bicycle facility	2022-2025			BPDA

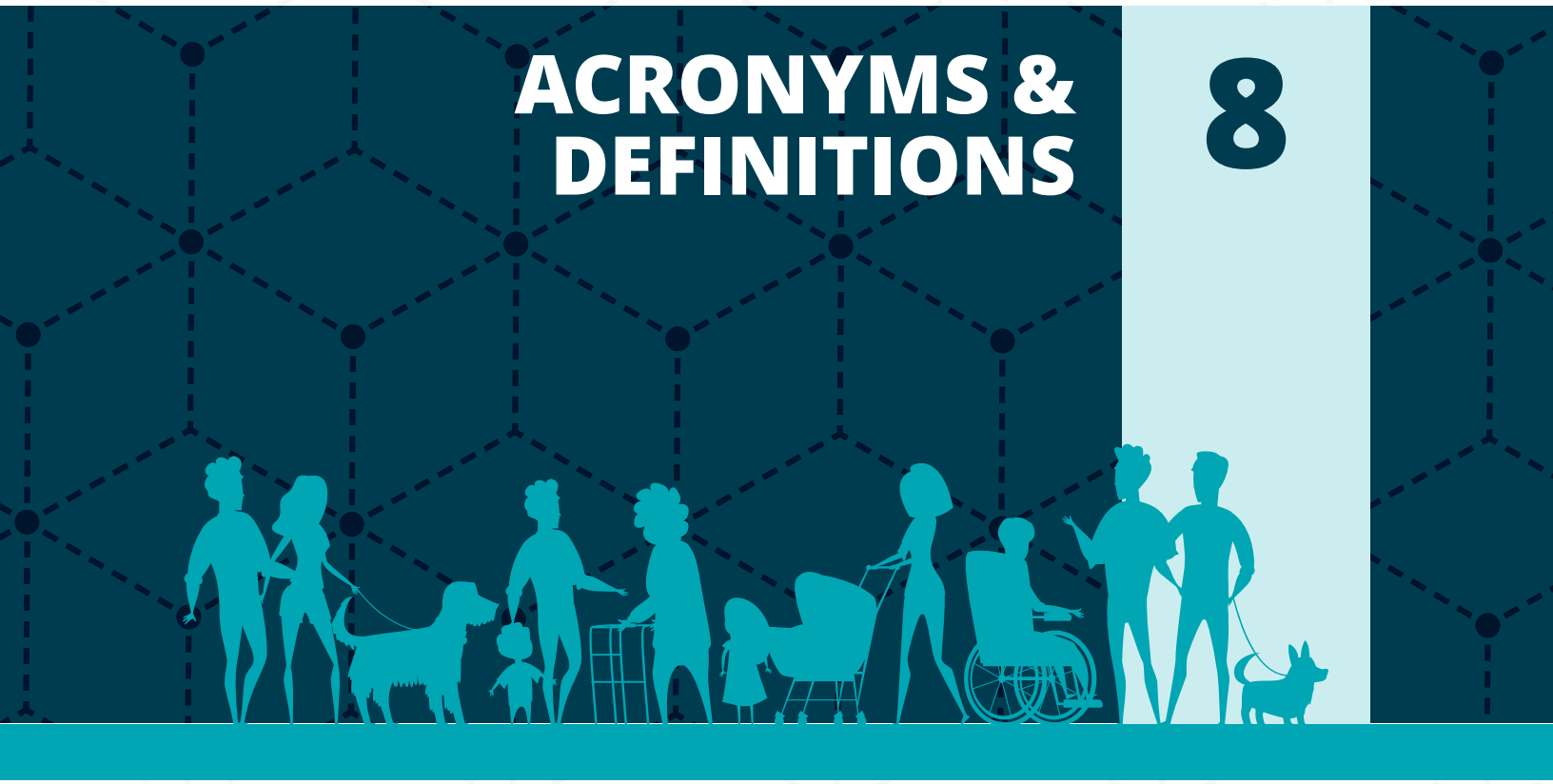
COB - City of Boston

BPDA - Boston Planning and Development Agency

DCR - Massachusetts Department of Conservation and Recreation

ACRONYMS & DEFINITIONS

8



ACRONYMS & DEFINITIONS

Acronyms

ABHC - Allston-Brighton Health Collaborative

ADA - Americans with Disabilities Act

ADR - Average Daily Ridership

BAIA - Brighton Allston Improvement Association

BPD - Boston Police Department

BPDA - Boston Planning & Development Agency

BRT - Bus Rapid Transit

BTD - Boston Transportation Department

CTPS - Central Transportation Planning Staff

DCR - Department of Conservation and Recreation

EMS - Emergency Medical Services

LTS - Level of Traffic Stress

MAPC - Metropolitan Area Planning Council

MassDOT - Massachusetts Department of Transportation

MBTA - Massachusetts Bay Transportation Authority

ONS - Office of Neighborhood Services

PWD - Boston Public Works Department

RRFB - Rectangular Rapid Flashing Beacons

TMA - Transportation Management Association

TNC - Transportation Network Company

TSP - Transit Signal Priority

Definitions

Access - the ability to reach desired goods, services, activities, and destinations.

Article 80 - Article 80 refers to the section of the Boston Zoning Code that sets forth guidelines for the process for reviewing development proposals. Article 80 addresses large projects (larger than 50,000 square feet), small projects (larger than 20,000 square feet and/or 15+ net new residential units), planned development areas, and institutional master plans. The Article 80 process may include, but is not limited to, review of a project's impacts on transportation, public realm, the environment, and historic resources. Public input is encouraged throughout the process.

Connectivity - the density and directness of connections for all modes.

Curb Extension - widening portions of sidewalks into the parking lane to reduce the distance a pedestrian needs to cross the street.

E-Ink screens - an electronic device that is similar to a computer display and projects text and/or images. The devices can provide real-time transit updates, as well as maps and route schedules.

Level of Traffic Stress - a rating given to a road segment or crossing indicating a bicyclist's feeling of stress caused by vehicle traffic.

GoHub! - transportation access points located near T-stations, bus stops, and community destinations that provide real-time traveler information to support multimodal transportation.

Mobility - the movement of people or goods.

Multimodal - applying to multiple transportation modes (namely walking, bicycling, driving, riding transit, or moving freight).

Neighborways - low-speed, low-volume residential streets with added traffic calming to give priority to bicyclists and pedestrians.

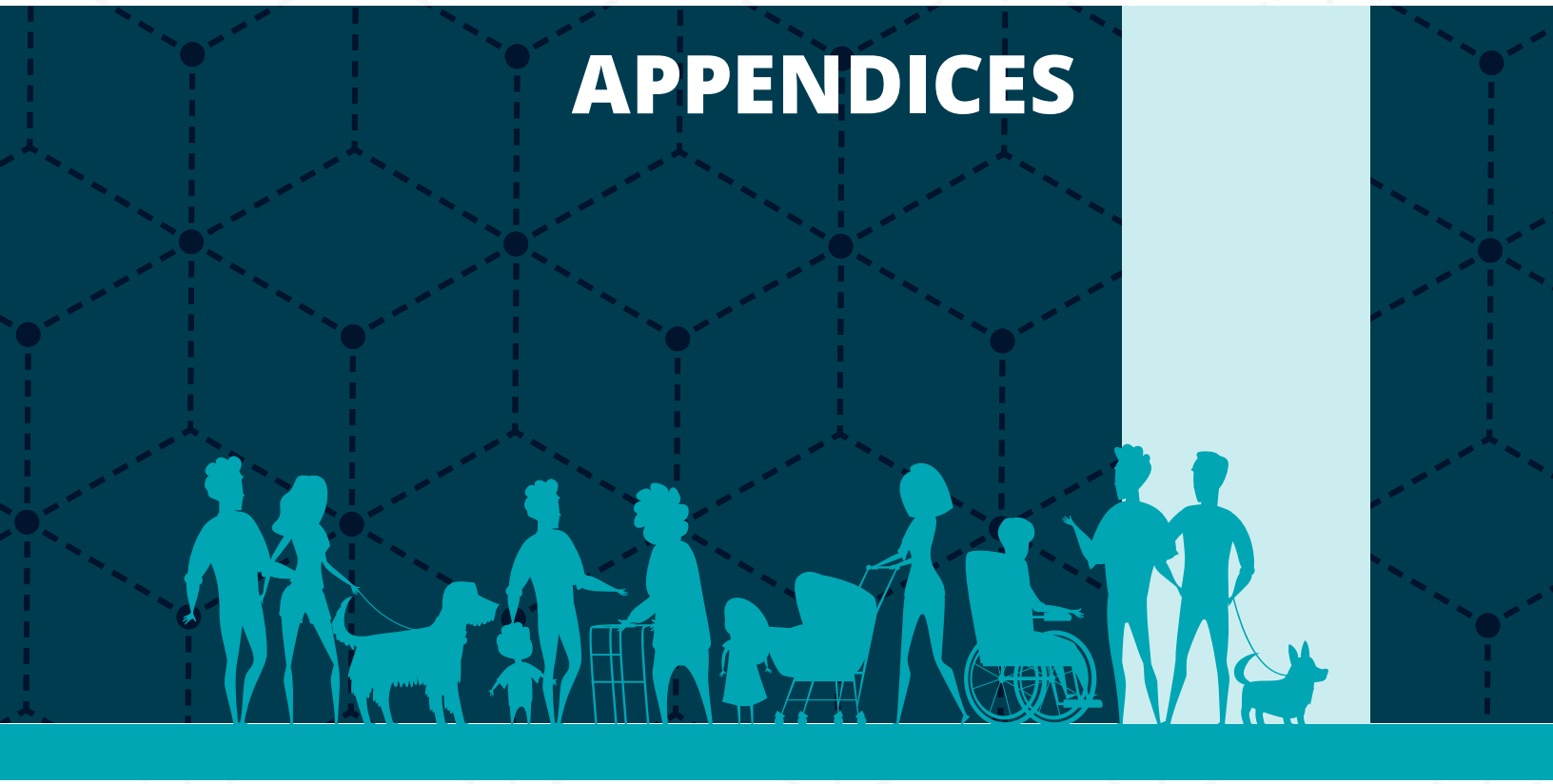
Pedestrian Recall - traffic signal setting in which the pedestrian walk signal comes on automatically (i.e., does not require a push-button).

Queue Jumps - bus lanes designed to allow buses to bypass traffic queues at signalized intersections.

Road Diets - reconfigurations of streets to reduce the number or width of vehicle lanes.

Transit Signal Priority - traffic signal configurations that provide extra green time for buses running behind schedule.

APPENDICES



APPENDIX A

Summary List of All Plan Recommendations

Areawide & Network Recommendations	Cost	Lead Agency	Plan Page Number
TRANSIT NETWORK			
PILOT PHASE			
A-B Transit Corridor Pilot Conduct a parking utilization study; Design and Construct Pilot BRT Lanes; where feasible and appropriate, include TSP, bus stop relocations, and new crosswalks	$$$	COB	page 54
PERMANENT PHASE			
A-B Transit Corridor Install permanent BRT lanes w/ TSP infrastructure	$$$$	COB	page 55
Transit (Bus) Install, relocate, or eliminate several bus stops outside of the A-B Transit Corridor.	$$$	COB	page 166
Transit (BRT) Install queue jumps, TSP, and construct new crosswalks for bus stop access	$$$	COB	page 166
Transit (BRT) Add BRT facility from Union Square to a) Charles River, and b) West Station	$	COB	page 32
BICYCLE NETWORK			
Bikeway: Oak Square to Union Square Study parking utilization; design and construct bicycle facility	$$$	COB	pages 128 and 138
Bikeway: Oak Square to Commonwealth Avenue/Warren Street Study parking utilization; design and construct bicycle facility	$$$	COB	page 123
A-B Bikeway: Leo Birmingham Parkway to West Station Analyze, coordinate with MassDOT, design, and construct new separated, two way bike facility.	$$$$	BPDA	page 105
TRANSIT POLICY			
Bus Lane Enforcement	NA	BPDA	page 36
Improved Bus Information	NA	BPDA	page 38
New Transit Connections	NA	BPDA	page 40
Neighborhood Transit Connector	NA	BPDA	page 41
Protecting Urban Rail Right of Way	NA	BPDA	page 43
GREENING & PLACEMAKING			
Greening/Street Trees Pilot Street Tree/Tree Trench program for Market Street, North Beacon Street & Chestnut Hill Avenue	$$$$	COB	page 44

Area-Specific Recommendations	Cost	Lead Agency	Plan Page Number
ALLSTON VILLAGE			
Allston Village Conduct a "Network Gaps" process to resolve bus and bike network needs	$	COB	page 31
Harvard Avenue Design and install tactical bus stop relocation, curb extensions, short term curbside use plan	$$	COB	page 59

Area-Specific Recommendations

	Cost	Lead Agency	Plan Page Number
Harvard Avenue Conduct a parking utilization study and management strategy	$	COB	page 61
Harvard Avenue Long-term redesign and construction of Harvard Ave	$$$	COB	page 60
Harvard Avenue Depending on outcome of tactical improvements, develop and implement longer term plan for curbside reuse and parklets	$$	COB	page 59
Brighton Avenue Plan, design, and install flexible curb zones	$	COB	page 65
Brighton Avenue Evaluate feasibility, design, and construct center running bus lanes	$$$	COB	page 65
Union Square Plan and implement pedestrian recall phase	$	COB	page 70
Union Square Design and install improvements for lane reconfiguration on Brighton Avenue to facilitate left turns in both directions and shorten pedestrian crossings; Design & install pedestrian signals at Barrows Street crosswalk	$$	COB	page 70
Union Square Design and implement tactical plaza	$	COB	page 70
Union Square Design and implement major intersection redesign with multimodal safety and placemaking improvements.	$$$$	COB	page 70
Franklin Street Pedestrian Bridge Develop, design & install lighting & public art improvements	$	BPDA	page 76
Franklin Street Pedestrian Bridge Advocate for long-term bridge redesign and replacement	$	BPDA	page 76
Linden Street Preserve future multimodal street options for Linden Street	$	BPDA	page 82
Linden Street/Cambridge Street Intersection improvements for pedestrian and bike access to the Franklin Street Bridge	$$	BPDA	page 82
NORTH OF THE PIKE			
Lincoln Street Design and install traffic calming and enhanced crosswalk	$$	COB	page 86
Lincoln Street Design and implement two way traffic flow at western terminus with Market Street	$$$	BPDA	page 89
Leo Birmingham Parkway Design and construct tactical/temporary repurposing of north carriageway for two-way bike path	$$	BPDA	page 93
Leo Birmingham Parkway/Market Street/Lincoln Street Redesign and reconstruct this Intersection.	$$	BPDA	page 93
Leo Birmingham Parkway Design and construct permanent carriageway conversion to bike facility/open space.	$	BPDA	page 94
Soldiers Field Road Construct an at-grade Everett Street/Soldiers Field Road crossing	$$$	DCR	page 98
Soldiers Field Road - New Bridge West of Telford Street Design and construct new bridge.	$$$$	DCR	page 98
Soldiers Field Road Design and construct new pedestrian crossing at Smith Field.	$$$	DCR	page 98

Area-Specific Recommendations	Cost	Lead Agency	Plan Page Number
Soldiers Field Road - Telford Street Bridge Design and construct new bridge.	$$$$	DCR	page 99
Soldiers Field Road Design and construct at-grade crossing near Nonantum Road.	$$$	DCR	page 99
Holton Street/Waverly Street Design and install contraflow bike lanes & directional signage	$$	COB	page 103
BRIGHTON			
Oak Square Evaluate, design and install 2 crosswalks, 2 short-term parking zones	$$	COB	page 111
Brighton Center: Washington Street/Market Street/Chestnut Hill Avenue Design and construct tactical plaza and relocate right turn lane	$	COB	page 116
Brighton Center: Washington Street/Market Street/Chestnut Hill Avenue Pending outcome of tactical improvements, design & construct permanent slip lane closure and plaza	$$$	COB	page 116
Brighton Center: Washington Street/Winship Street/Cambridge Street Add lane markings to left turn from Cambridge Street and design/install wayfinding for off street parking	$	COB	page 117
Brighton Center Conduct a parking utilization study and management strategy	$	COB	page 117
Brighton Center Bus Hub Design and construct bus hub	$$$	COB	page 118
North Beacon Street Design and construct enhanced crosswalk and separated bike lanes	$$$	COB	page 128
Braintree Street Advance design and construct contraflow bike lane	$$	COB	page 128
Murdock Street/Sparhawk Street Design & install stop signs and flex posts	$	COB	page 133
Faneuil Street Conduct parking utilization study; design and construct bicycle facility	$$$	COB	page 138
Faneuil Street Design and construct potential bus priority improvements	$$$	COB	page 139
Faneuil Street/Arlington Street Design and construct mini roundabout	$$	COB	page 139
Cleveland Circle Design and construct tactical plazas at two driveway openings	$	COB	page 143
Cleveland Circle Pending outcome of tactical improvements, design & construct permanent driveway closure and new plaza	$$$	COB	page 143
Cleveland Circle Develop long-term plan to redesign Cleveland Circle	$$	COB	page 143
Washington Street Design and construct two enhanced crosswalks	$$	COB	page 123
Washington Street: Cambridge Street to Brookline border Conduct parking utilization study; design and construct bicycle facility	$$$	COB	page 148
Washington Street: Cambridge Street to Brookline border Design and construct potential bus priority improvements	$$$	COB	page 148
Chestnut Hill Avenue: Washington Street to Commonwealth Avenue Conduct parking utilization study; design and construct bicycle facility	$$$	COB	page 153
Chestnut Hill Avenue: Washington Street to Commonwealth Avenue Design and construct potential bus priority improvements	$$$	COB	page 153

Area-Specific Recommendations

	Cost	Lead Agency	Plan Page Number
TRAFFIC CALMING			
Faneuil Street Analyze, plan, design, and construct traffic calming treatments	$$$	COB	page 123
Brooks Street Analyze, plan, design and install traffic calming treatments	$$$	COB	page 123
Parsons Street Analyze, plan, design and install traffic calming treatments	$$$	COB	page 123
Kenrick Street Analyze, plan, design and install traffic calming treatments	$$$	COB	page 123
Nonantum Street Analyze, plan, design and install traffic calming treatments	$$$	COB	page 123
Winship Street Analyze, plan, design and install traffic calming treatments	$$$	COB	page 123

APPENDIX B

Bus Stop Recommendations

Stop ID	Stop Name	Route #	Recommendation
A-B Transit Corridor			
910	**Tremont Street at Tremont Place**	57, 501, 503	Consider elimination due to proximity to previous stop and low ridership
913	**Washington Street at Breck Avenue**	57, 501, 503	Relocate to opposite Brackett Street to create better spacing, add amenities
914	**Washington Street opposite Montfern Avenue**	57, 501, 503	Previously relocated to Langley Road - rename
918	**Washington Street at Chestnut Hill**	57, 501, 503	Relocate far side and improve amenities, depending on final plan for pedestrian access
919	**Washington Street opposite Waldo Terrace**	57, 65, 501, 503	Eliminate
922	**Cambridge Street opposite Dustin Street**	57, 501, 503	Relocate to far side Warren Street, and provide sidewalk that side of street
924	**Cambridge Street at Gordon Street**	57, 501, 503	Relocate to near side Gordon Street IF bus lanes implemented to take advantage of natural queue jump
969	**Cambridge Street at Dustin Street**	57, 501, 503	Eliminate, crosswalk at Sparhawk Street north side
971	**Cambridge Street at Elko Street**	57, 501, 503	Relocate to police plaza
972	**Washington Street at Waldo Terrace**	57, 501, 503	Eliminate
973	**Washington Street at Market Street**	57, 501, 503	Relocate to new slip lane plaza
975	**Washington Street at Brock Street**	57, 501, 503	Relocate near side of Brock Street to co-locate with Bluebikes
977	**Washington Street at Montfern Avenue**	57, 501, 503	Relocate far side of Fairbanks Street to improve stop spacing
981	**Tremont Street opposite Tremont Place**	57, 501, 503	Consider elimination due to proximity to previous stop and low ridership
994	**Winship Street at Union Street**	501, 503	(A) Eliminate, with 65/501/503 turnaround relocated to police plaza (B) Create dedicated layover space around Jackson Square
1301	**7 Winship Street**	65, 501, 503	Eliminate, with 65/501/503 turnaround relocated to police plaza
1994	**Winship Street at Union Street**	65, 501, 503	Eliminate, with 65/501/503 turnaround relocated to police plaza
9780	**Washington Street at Oak Square**	57, 501, 503	Relocate to far side Brackett Street
19201	**Cambridge Street opposite Elko Street**	57, 501, 503	Eliminate to improve spacing
ADD3	**Cambridge Street at Eleanor Street**	57, 501, 503	NEW STOP: Near side Eleanor Street

Stop ID	Stop Name	Route #	Recommendation
Allston Village			
1112	**Cambridge Street at Harvard Avenue**	64, 66, 501, 503	Relocate to far side of Harvard Avenue to better serve neighborhood
1113	**Cambridge Street at Linden Street**	64, 66, 501, 503	Eliminate - close to relocated Cambridge Street at Harvard Avenue
1114	**Cambridge Street at N Harvard Street**	64, 501, 503	Create queue jump with left turn possible to N Harvard Street to allow 66 to utilize stop
1193	**Cambridge Street at Franklin Street**	64, 66, 501, 503	Lengthen stop by eliminating parking space ahead
2555	**N Harvard Street at Coolidge Road**	66	Create bump-out to improve stop amenities and traffic pull out
2556	**N Harvard Street at Hooker Street**	66	Create bump-out to improve accessibility and start bus lane to intersection
2558	**N Harvard Street at Empire Street**	66	Create bump-out to improve stop amenities and traffic pull out
2560	**N Harvard Street at Kingsley Street**	66	Create bump-out to improve stop amenities and traffic pull out
Brighton			
1026	**Chestnut Hill Avenue at Veronica Smith Senior Center**	65, 86	Eliminate due to proximity of other stops
1028	**Chestnut Hill Avenue at Commonwealth Avenue**	86	Eliminate in deference to #1029 on far side of intersection and add crosswalk from inbound Green Line platform to north side of Commonwealth Avenue
1030	**Chestnut Hill Avenue at Strathmore Road**	86	Create bump-out by removing island
1031	**Chestnut Hill Avenue at Chiswick Road**	86	Relocate to 154 Chestnut Hill Avenue
1032	**Chestnut Hill Avenue opposite Wiltshire Road**	86	Eliminate due to proximity of other stops
1033	**Chestnut Hill Avenue at Wallingford Road**	86	Relocate near side Wallingford Road for stop spacing
1034	**Chestnut Hill Avenue at Union Street**	86	Relocate to near side Academy Hill Road for stop spacing
1035	**Market Street at Washington Street**	86	Create bump-out to improve stop amenities and traffic pull out
1038	**Market Street at Gardena Street**	86	Relocate near side Morrow Road for stop spacing
1079	**Market Street at Vineland Street**	86	Relocate to near side Vineland Street/opposite Guest Street
1081	**Market Street opposite Gardena Street**	86	Relocate to near side Keenan Road for stop spacing, and add crosswalk on Market Street
1084	**Chestnut Hill Avenue at Washington Street**	86	Relocate to near side and close slip lane
1086	**Chestnut Hill Avenue at Jackson Avenue**	86	Relocate far side William Jackson Avenue for stop spacing
1087	**Chestnut Hill Avenue at Wiltshire Road**	86	Eliminate due to proximity of other stops
1088	**Chestnut Hill Avenue at Embassy Road**	86	Relocate to near side Embassy Road for stop spacing

Stop ID	Stop Name	Route #	Recommendation
1089	**Chestnut Hill Avenue at South Street**	86	Relocate to traffic island with floating stop around bike lane
1092	**Chestnut Hill Avenue at Beacon Street**	86	Create bump-out or relocate to avoid obstruction (tree) on sidewalk
1094	**Faneuil Street at Fairbanks Street**	64	Already relocated to Brooks Street at Faneuil Street
1095	**Faneuil Street at Oakland Street**	64	Already eliminated
1097	**Faneuil Street at S Hobart Street**	64	Already eliminated
1098	**Hobart Street at Falkland Street**	64	Already eliminated
1100	**Hobart Street at Brooks Street**	64	Already relocated to Brooks Street at Hobart Street
1102	**N Beacon Street at Parsons Street**	64	Relocate to wherever crosswalk can be created on N Beacon Street
1103	**N Beacon Street at Goodenough Street**	64	Eliminate due to proximity of other stops
1108	**Chestnut Hill Avenue opposite Veronica Smith Senior Center**	86	Eliminate due to proximity of other stops
1202	**N Beacon Street at Vineland Street**	64	Relocate to near side of N Beacon Street crosswalk
1203	**N Beacon Street at Leo Birmingham Parkway**	64	Eliminate due to proximity of other stops
1204	**Leo Birmingham Parkway at Soldiers Field Road**	64	Relocate to wherever crosswalk can be created on N Beacon Street
1206	**Hobart Street at Brooks Street**	64	Already relocated to Brooks Street, near side Gerrish Street
1208	**Hobart Street at Falkland Street**	64	Already eliminated
1210	**Faneuil Street opposite James A. Garfield School**	64	Already eliminated
1211	**Faneuil Street at Brooks Street**	64	Already relocated to far side Faneuil Street
1268	**Washington Street at Shepard Street**	65	Relocate to far side Shepard Street to improve stop spacing
1269	**Washington Street at Snow Street**	65	Eliminate to improve spacing
1270	**Washington Street at Monastery Road**	65	Create bump-out to improve accessibility and reduce parking abuse
1273	**Washington Street at Commonwealth**	65	Improve passenger information and access for Green Line transfer
1295	**Washington Street at Commonwealth**	65	Improve passenger information and access for Green Line transfer
1296	**Washington Street opposite Euston Road**	65	Eliminate to improve spacing
1298	**Washington Street at Monastery Road**	65	Relocate to far side Monastery Road and create bump-out to improve stop spacing and accessibility, and decrease parking abuse
1299	**Washington Street opposite Snow Street**	65	Eliminate to improve spacing

Stop ID	Stop Name	Route #	Recommendation
1300	**Washington Street opposite Shepard Street**	65	Create bump-out to improve accessibility and start bus lane to intersection; relocate crosswalk to near side of driveway
11070	**Life Street at Guest Street**	64	Relocate onto Guest Street
12081	**Faneuil Street at Donnybrook Road**	64	Already eliminated
ADD1	**Market Street at N Beacon Street**	86	NEW STOP: far side of N Beacon Street
ADD2	**Leo Birmingham Parkway opposite Centola Street**	86	NEW STOP: Added, wherever safe

APPENDIX C
Union Square Long Term Redesign

As mentioned in the Union Square section of Chapter 6, the long term recommendation for Union Square is a redesign and reconstruction to remove the awkward angles, improve operations, and make plaza space more attractive and usable. The intersection could be reconfigured to establish more easily negotiated right angles. A conceptual drawing of this recommendation is below:

Existing Configuration of Union Square

Source: Google Maps

Potential Conceptual Illustration of Long-Term Realignment