



# Mass Ave Partial Construction Project



*Working Group Meeting #3  
September 28, 2023*

# Remote Participation Instructions

## Working Group Members

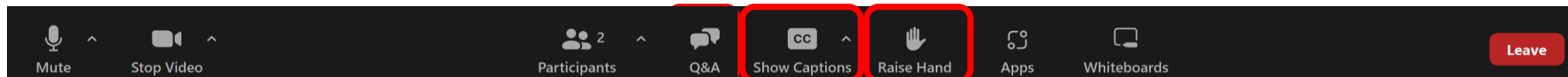
- Participants may speak and show webcam video
- Use "Raise Hand" button during discussion or press \*9 if you are joining by phone only
- Mute your microphone when others are speaking
- Screen-share will be turned off during discussion to allow for more of a virtual meeting room

## Members of the Public

- Attendees are muted and cannot show video
- Written questions and comments will be accepted through the Q&A feature and verbal responses will be provided, time permitting, during the public comment period.
- Verbal questions and comments will be heard during a public comment period at the end of the meeting.

You can enable live captions using the button pictured below.

**Technical Support:** [MassAve4@Cambridgema.gov](mailto:MassAve4@Cambridgema.gov)



# Agenda

- Project Status
  - Update on Business Engagement
  - Update on Stakeholder Engagement
  - Project Recap
- Focus on South of Porter
  - Design Direction
  - Working Group Site Walk Themes
  - Focused Discussion
- Public Comment
- Next Steps

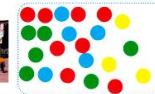


## Partial Build Opportunities\*

What would you like to see on Mass Ave?  
Place a sticker next to the opportunities that interest you.

### Separated Bike Lanes and Floating Parking

Separated bike lanes will be implemented as required by ordinance. In a partial build scenario, moving parking away from the curb can help create a buffer between cars and cyclists.



### Bus Stop Improvements

Bus stop improvements, such as installing transit shelters or seating.



### Crossing Islands

Enhanced crossing islands can provide more comfortable and accessible places of refuge for pedestrians crossing Mass Ave.



### Center Median Removal

Removing the center median in certain places can allow space to be reallocated to other uses.



### Upgrading Existing Utilities

Some utilities along Mass Ave may have to be addressed in a partial build scenario.



# Project Status



# Project Updates

WE ARE HERE



ENGAGEMENT

**APR 2022**  
City Council Approval

50% DESIGN

90% DESIGN

100% DESIGN

Project Milestone



# Update on Business Outreach



# Recent Flyering Initiative

- The City has been going door to door to business owners
- Providing contact information and option for a follow up one-one conversation
- We've heard:
  - Concerns
    - On-street parking removal
    - Pedestrian signal timing
  - Desire
    - Increased assistance and support for small businesses

Massachusetts Avenue Partial Construction Project  
**Separated Bike Lanes Coming in 2024**  
**Some Parking Will Be Removed**

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**Project Website**



Since 2022, the City has been planning for separated bike lanes and other safety improvements on Massachusetts Avenue between Waterhouse Street and Alewife Brook Parkway. The project will include:

- separated bicycle facilities
- improved and additional crosswalks
- bus priority treatments
- specific areas for short-term parking, loading and deliveries
- removal of median at most locations

**Sign Up for Project Updates**



The City is committed to working with businesses and neighbors to accommodate separated bike lanes on Mass Ave while retaining as much parking and loading as possible. In 2022, after initial public and stakeholder engagement, the City Council approved a "partial construction" approach, mixing quick build elements with limited amounts of physical construction. In 2023, the City convened a Working Group to help guide the design, and is performing analysis and developing initial concepts for Working Group and public review.

City of Cambridge

Stay tuned for events and more ways to give input in the Fall!



*Flyer distributed to Mass Ave businesses*



# Update on Stakeholder Engagement





# Stakeholder Engagement (In Progress)

## Recent Comments to Email

- Request for traffic calming on Rice Street
- Request for improvement to bike left turns at Rindge Ave
- Concern that loss of parking will result in business closure
- General support for improved biking on the corridor



## Upcoming Meetings with Businesses

- 1-1 with business owners - inform about the project and hear concerns
  - 7 businesses have requested
- Discussion points
  - Study Area
  - Project Goals
  - Partial Construction Overview
  - Timeline
  - Answer Questions



# Stakeholder Engagement (Next Steps)

## Community Meetings

- Meetings to share conceptual design
- Timing – TBD



## Upcoming Stakeholder Meetings

- In-person meetings with relevant stakeholders in the Fall
  - 2 meetings have been requested – Burns Apartments, Senior Center – and other suggestions have come from the Working Group
- Discussion points
  - Similar to Business 1-1



# Opportunity for Working Group Questions



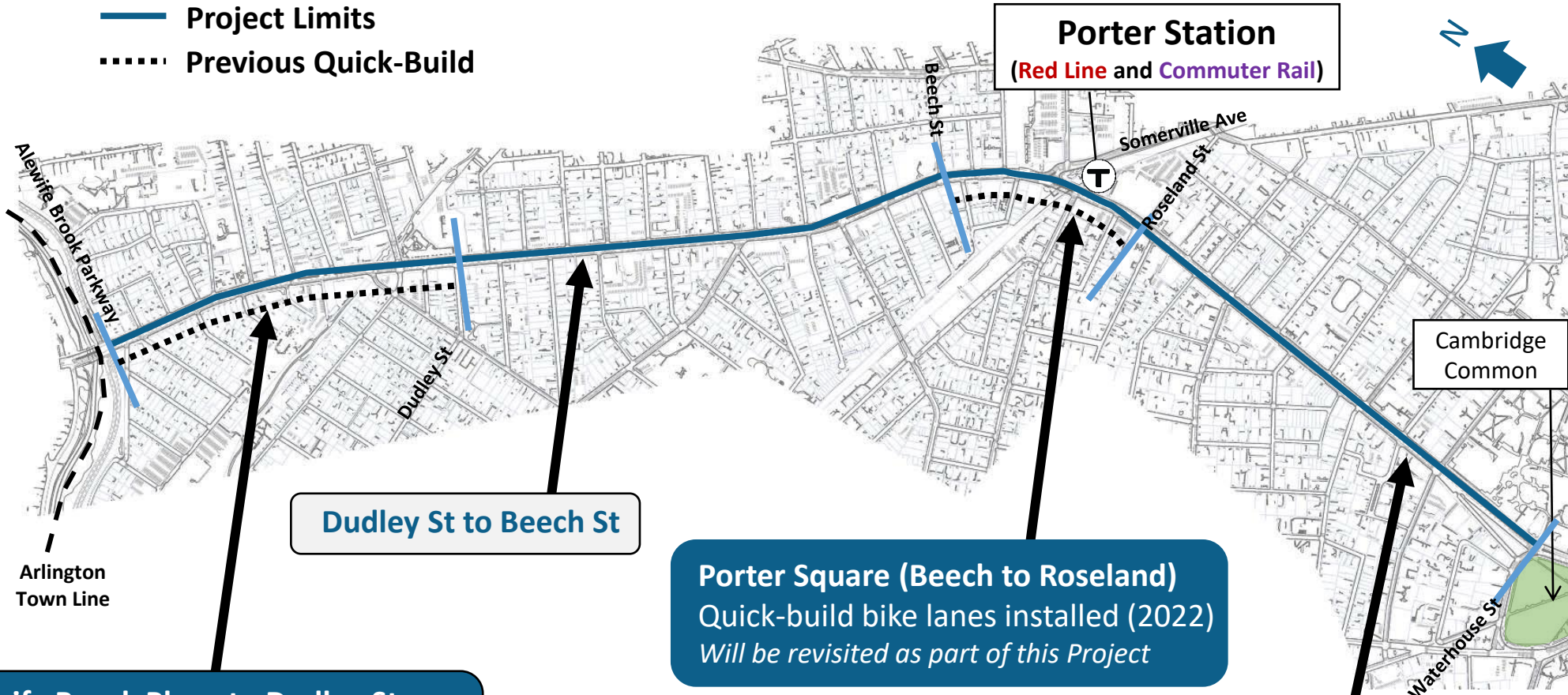
# Project Recap



# Partial Construction Project Limits

Massachusetts Ave from Waterhouse Street to Alewife Brook Parkway

- Project Limits
- ..... Previous Quick-Build



**Alewife Brook Pkwy to Dudley St**  
Quick-build bike lanes installed (2021)  
*Will be revisited as part of this Project*

**Dudley St to Beech St**

**Porter Square (Beech to Roseland)**  
Quick-build bike lanes installed (2022)  
*Will be revisited as part of this Project*

**Roseland St to Waterhouse St**



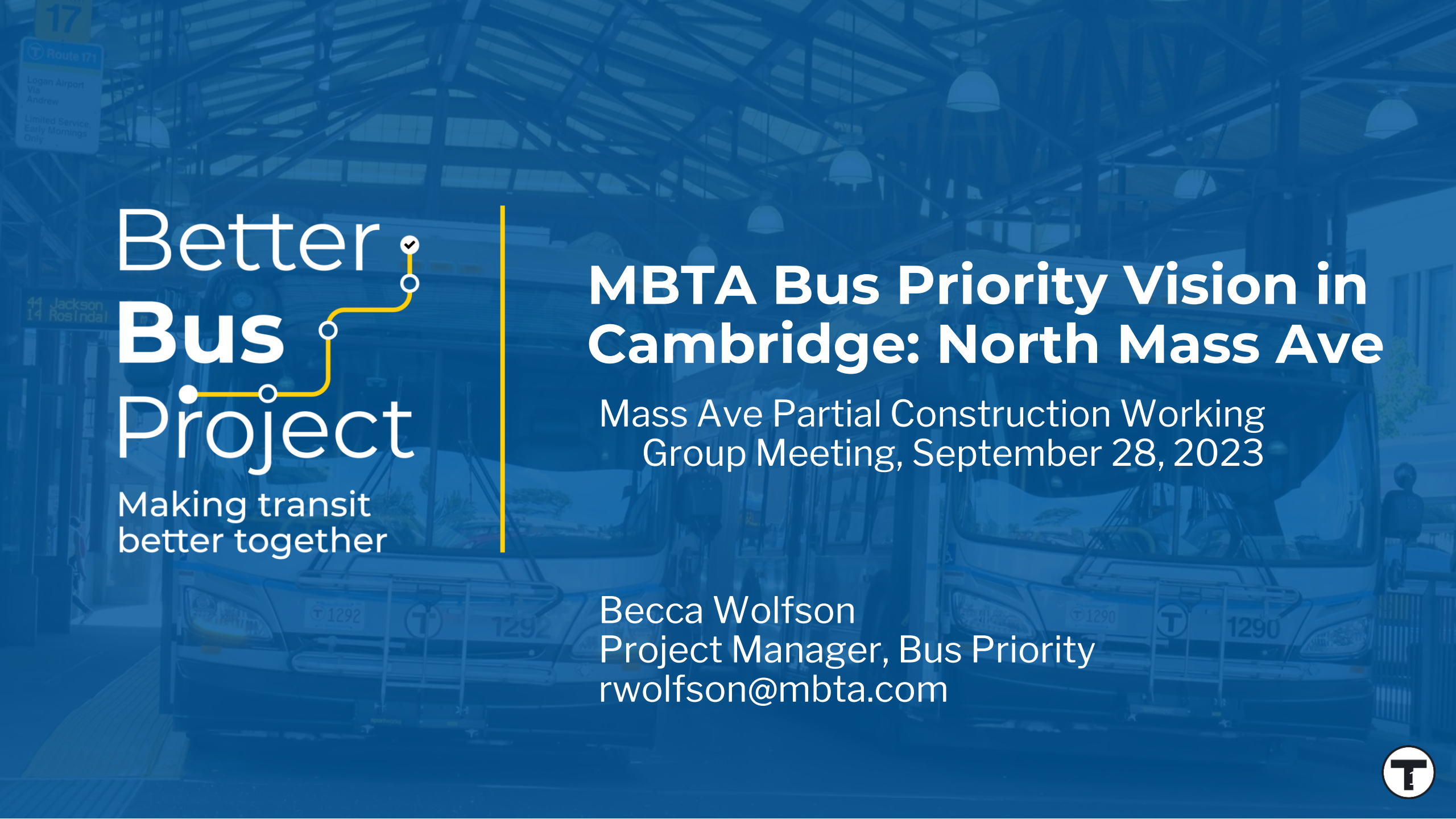
# Recap of Working Group Discussions So Far

- Discussed **user behavior**
  - What works well and what could be improved
  - Early design thoughts
- Reviewed **project goals** and cross section elements
- Reviewed the **types of data** we have used to inform the design
- Examined Rindge to Beech to demonstrate typical interaction of **design elements** such as turn lanes, bus lanes, curbside access, signal phasing, and crosswalks.
- Looked at potential **cross-sections and the trade offs**
- Talked about **stakeholder and business engagement**



# MBTA Update





17  
Route 171  
Logan Airport  
Via  
Andrew  
Limited Service  
Early Mornings  
Only

44 Jackson  
14 Rosindal

# Better Bus Project

Making transit  
better together

## MBTA Bus Priority Vision in Cambridge: North Mass Ave

Mass Ave Partial Construction Working  
Group Meeting, September 28, 2023

Becca Wolfson  
Project Manager, Bus Priority  
[rwolfson@mbta.com](mailto:rwolfson@mbta.com)





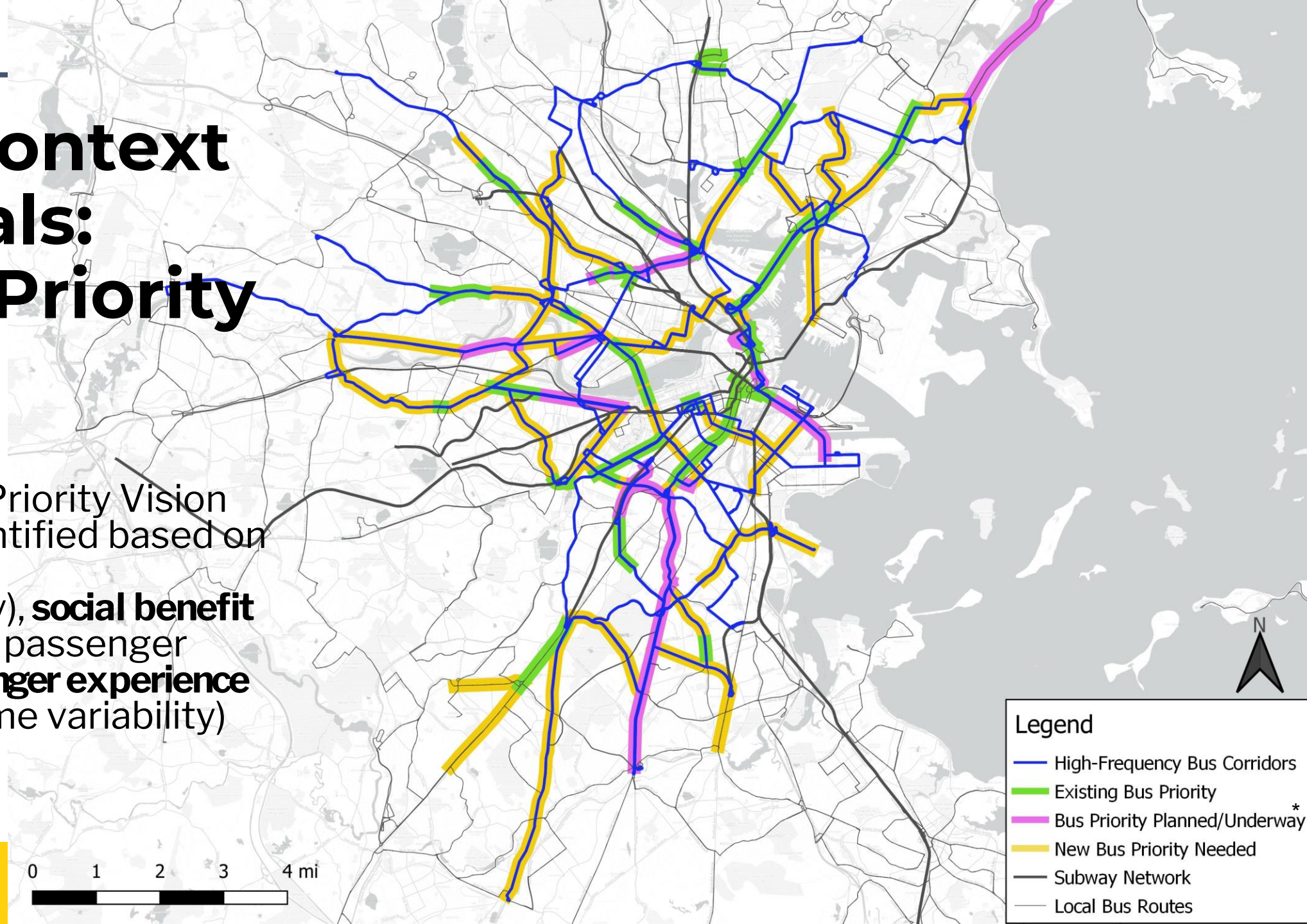
# Background



- The **Better Bus Project** tries to make the bus an easy first choice for more riders
- **Bus Priority** team builds infrastructure proven to make buses faster and more reliable
- **Bus Network Redesign** shows us where service will be over the next 5 years to serve the region

# MBTA context and Goals: Transit Priority Vision

MBTA's Transit Priority Vision corridors are identified based on **service offering** (BNRD frequency), **social benefit** (existing bus and passenger delay), and **passenger experience** (speed and runtime variability)



## Legend

- High-Frequency Bus Corridors
- Existing Bus Priority
- Bus Priority Planned/Underway\*
- New Bus Priority Needed
- Subway Network
- Local Bus Routes

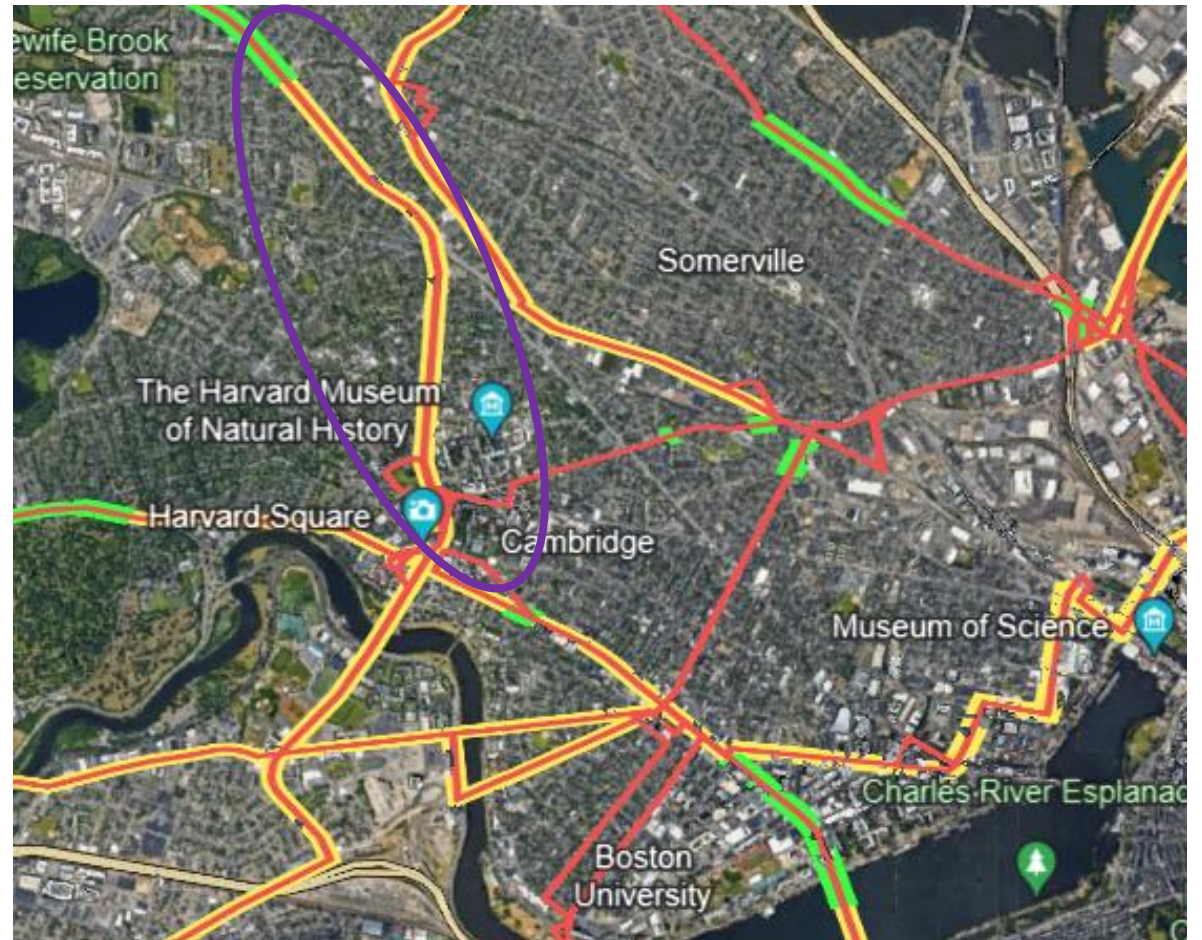
\* Includes projects sponsored by the MBTA or others

# Cambridge Transit Priority Vision

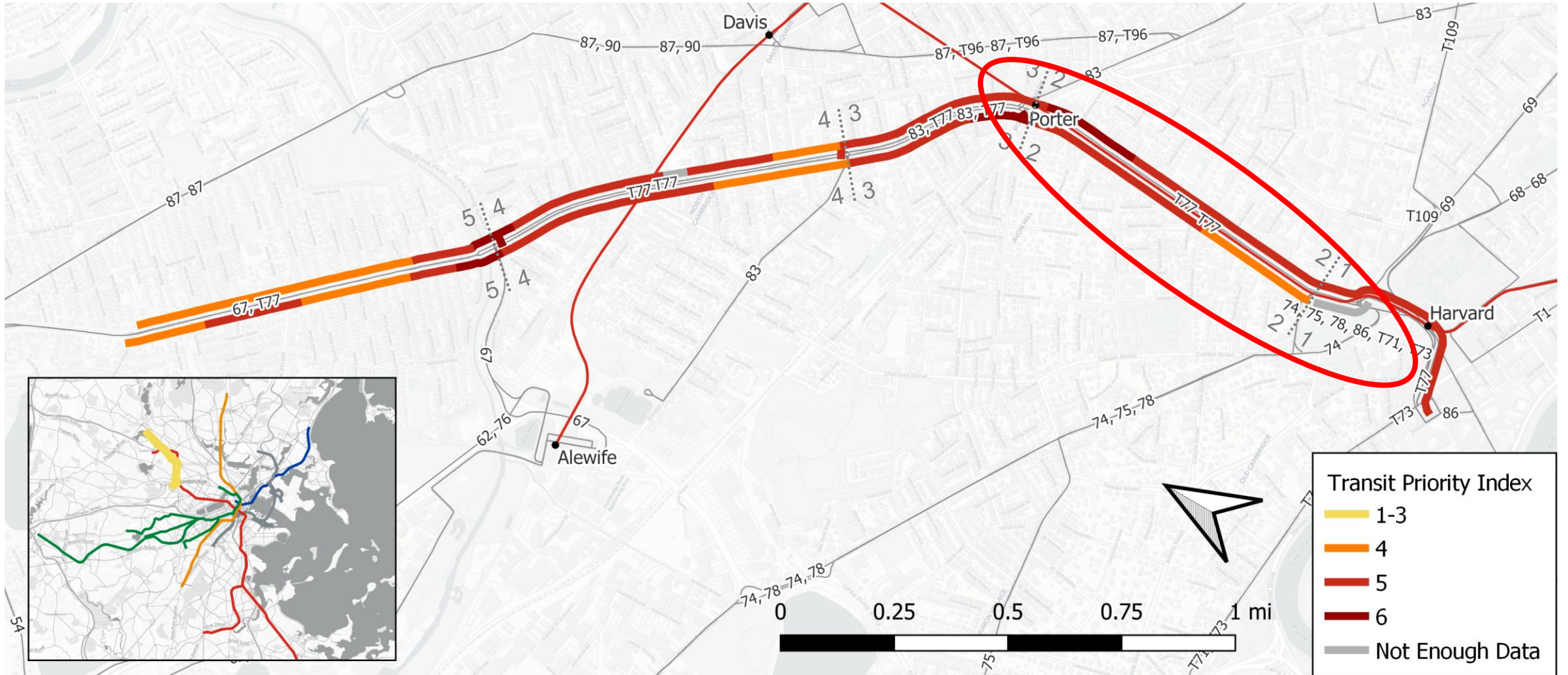
The MBTA desires robust transit priority on all of Massachusetts Avenue (Mass Ave) to support existing service and Bus Network Redesign (BNRD) routes



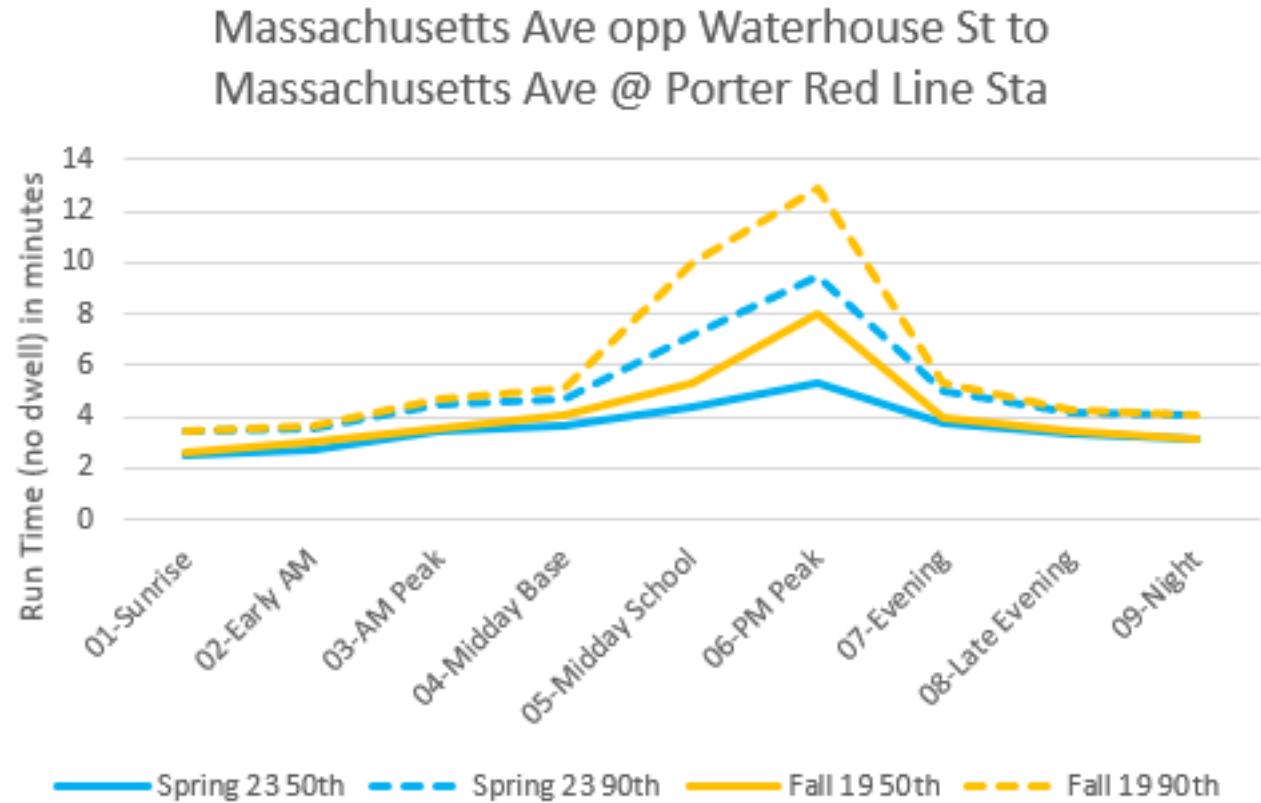
Image source: Nelson\Nygaard



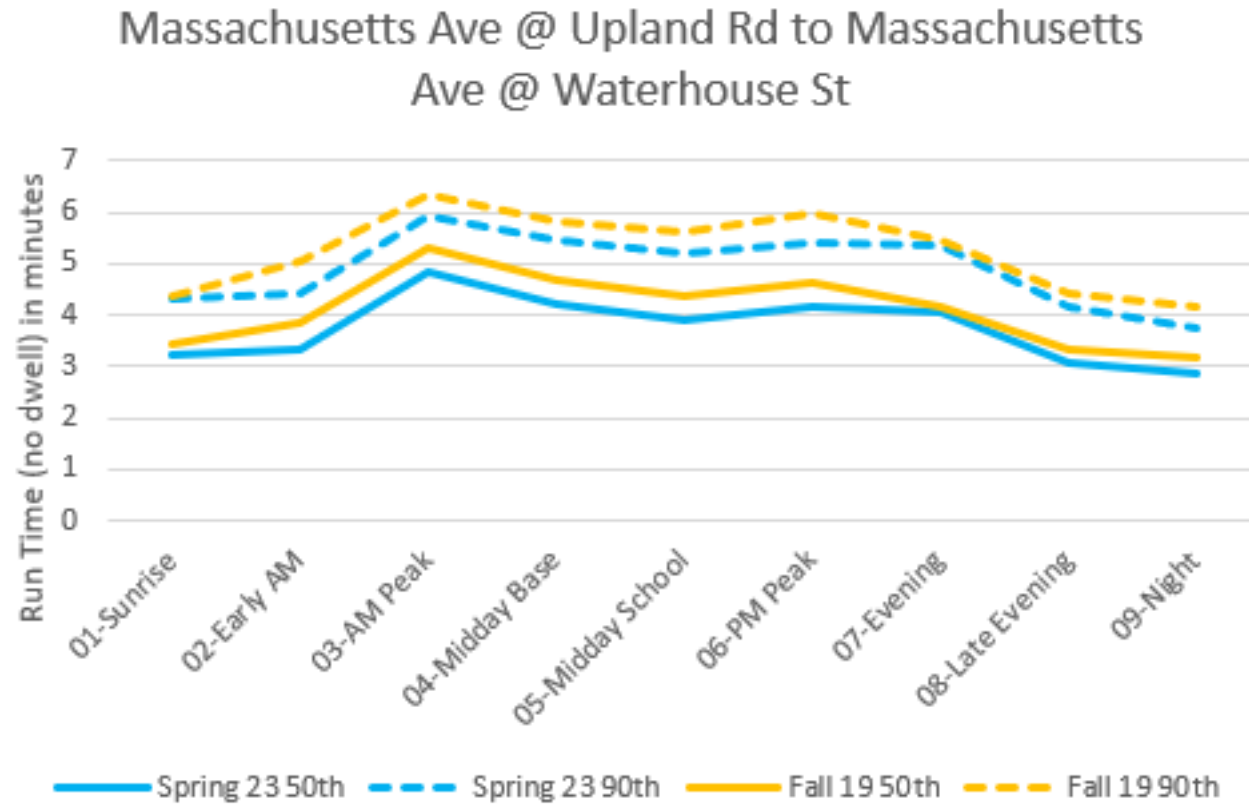
# Harvard Sq to Linwood St (via Mass Ave)



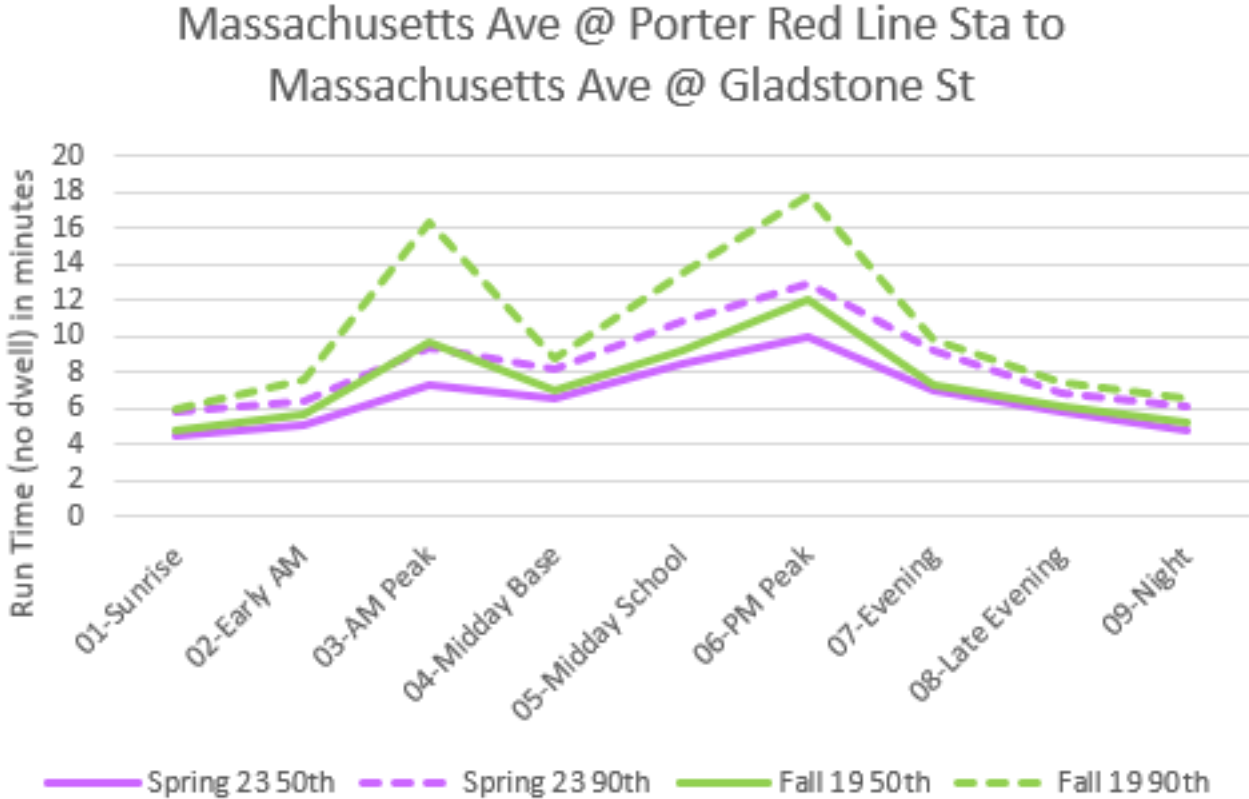
## Existing delay – Harvard to Porter Square, NB



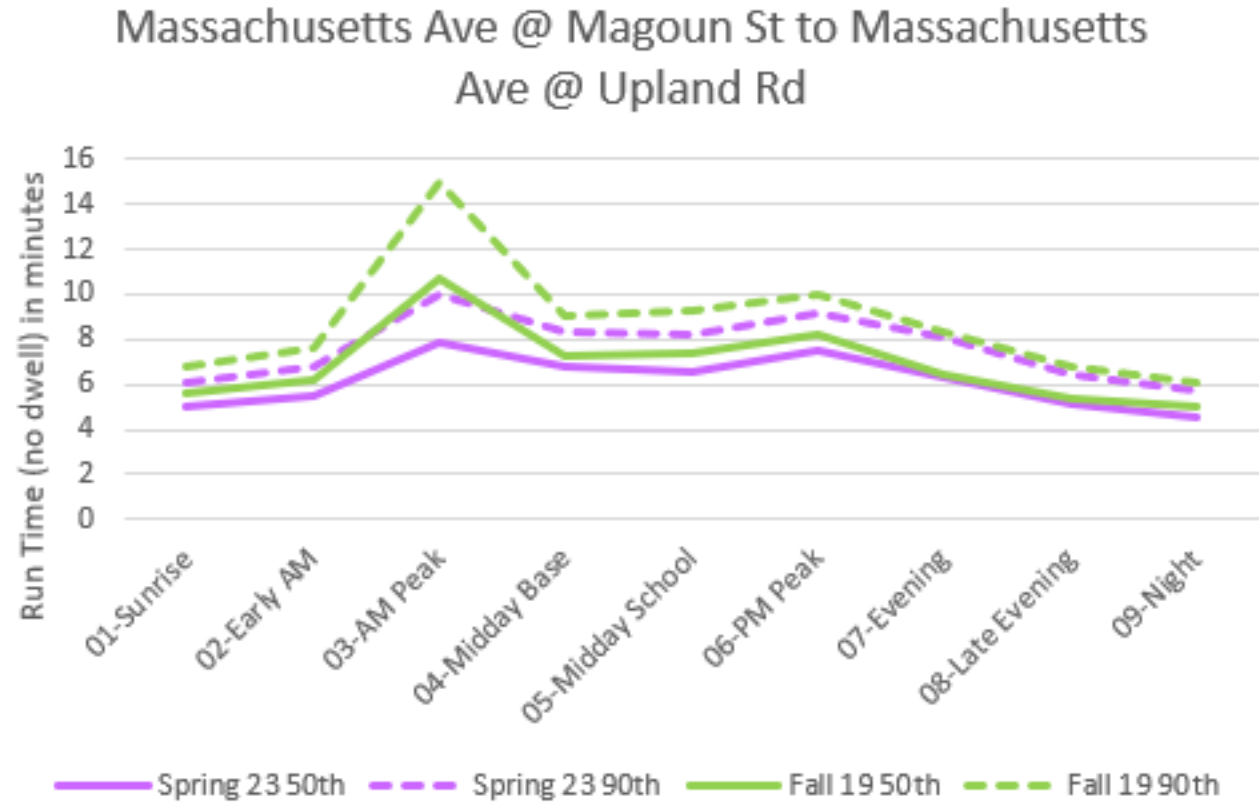
# Existing Delay – Porter to Harvard Square, SB



# Existing Delay – Porter to Alewife Brook Parkway, NB



# Existing delay – Alewife Brook Parkway to Porter Square, SB





# South of Porter Square Design Direction



# Working Group Site Walk August 2023

## Alternatives to Street Parking on Mass Ave

- Side Street Meters
- Shared Parking in Private Lots

## Crosswalks

- Wendell, Lancaster

## Flashing Beacon Alternatives

- Compliance is low
- Full Signals?

## Bike Parking

- Clustered and Individual
- For different types of bicycles

## Transit Priority

- Particularly near Porter Square

## Shade and Seating

- Particularly by bus stops

## Turns out of side streets

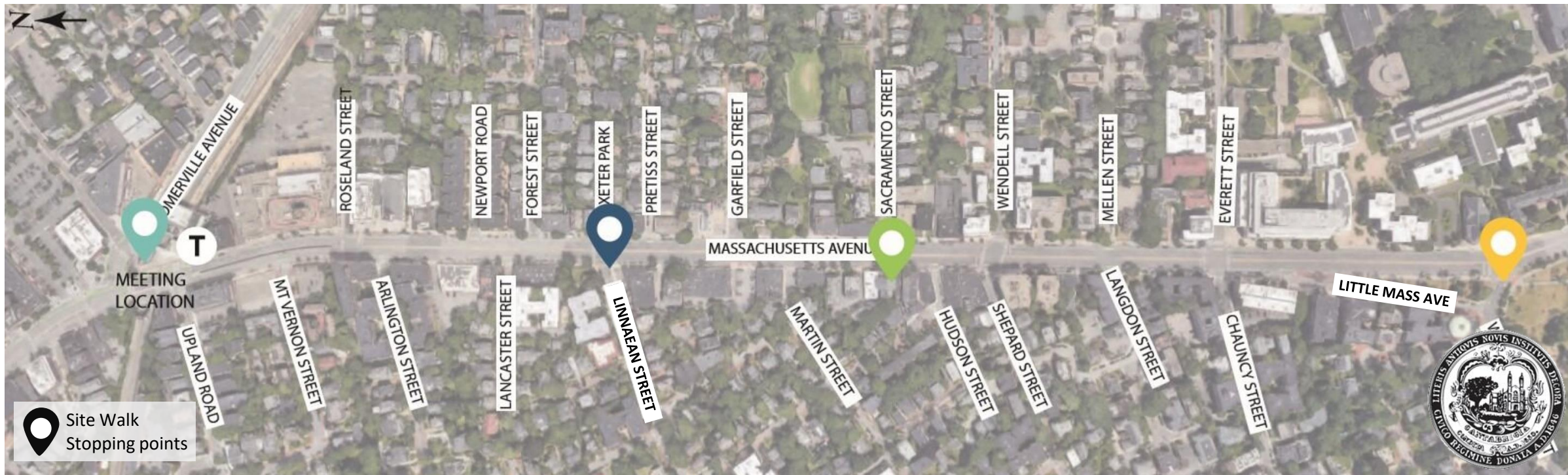
- Raised Crosswalks
- Signals

## Outdoor Dining

- Opposite Sacramento
- In curb extensions

## Green Space by Little Mass Ave

- Activate



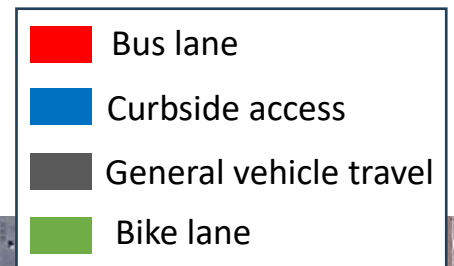


# Design Considerations Overview

*South of Porter Square Segment has lower traffic demands than North of Porter Square*

- Less overall bus delay – bus delay is concentrated around Porter Square
- Fewer locations with conflicting turning movements
- Higher levels of commercial activity on both sides of the street

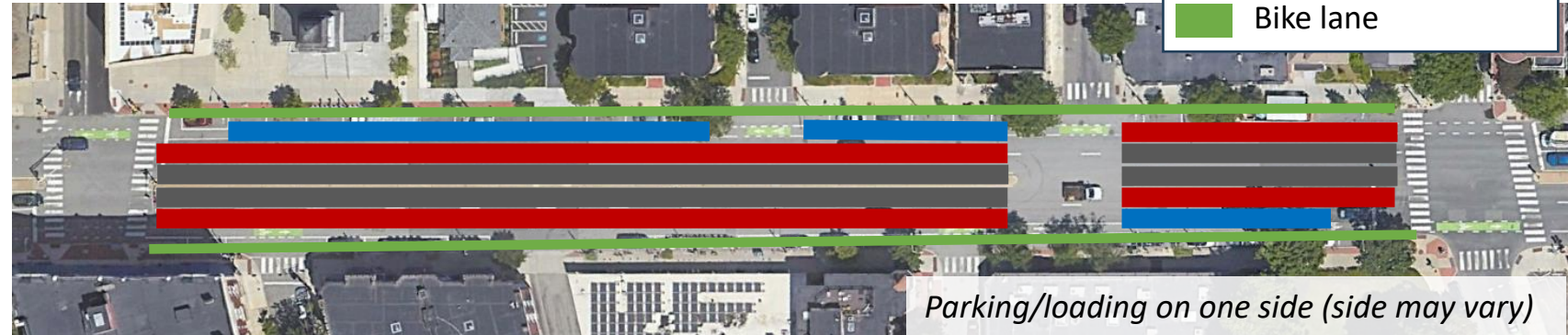
# Potential Options to Balance Curbside Uses and Bus Operations



← Northbound- Alewife Brook Parkway      Southbound - Harvard Square →

## Full time bus lanes

- Curbside access on one side at a time
- Benefits to bus operations



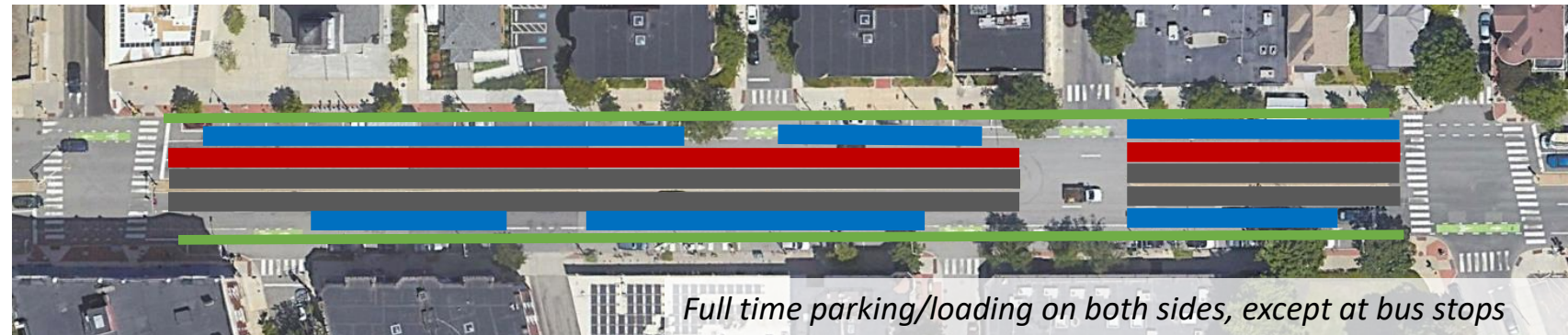
## Part time bus lane on one side

- Continuous curbside access on one side, off-peak access on other
- Benefits to buses during peak periods



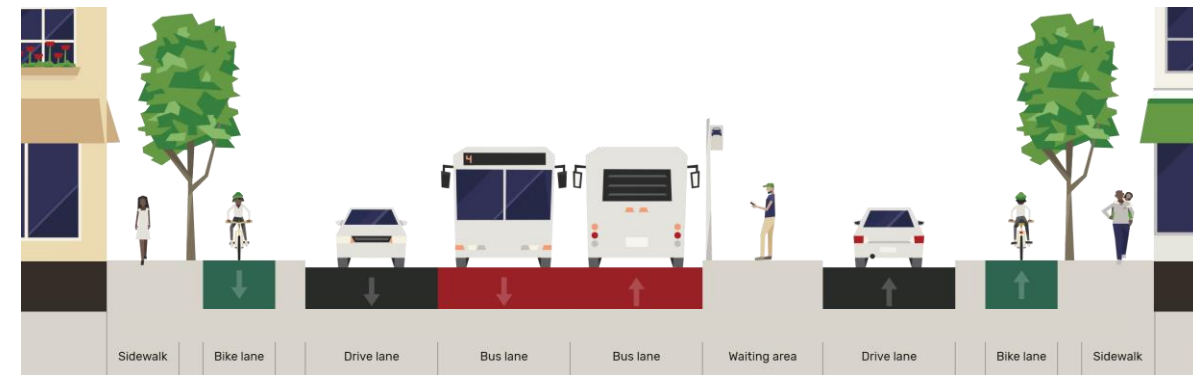
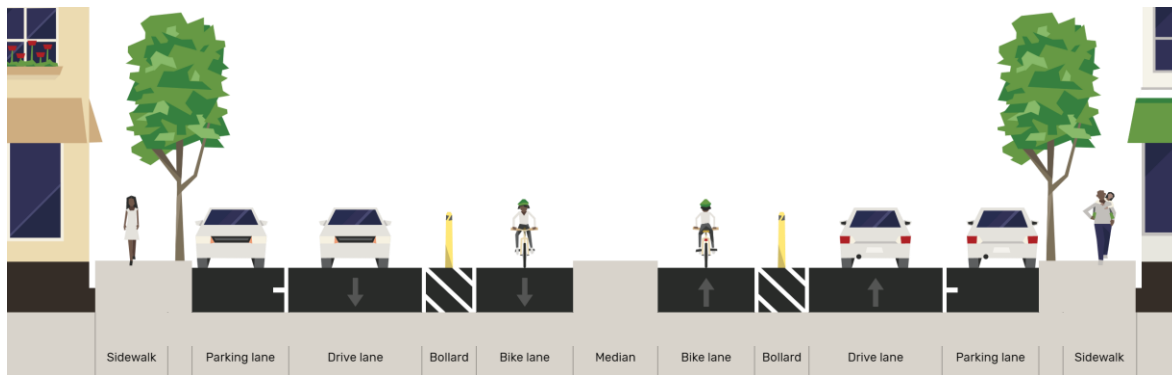
## Bus lane on one side only

- Continuous curbside access on both sides
- Southbound bus in mixed traffic



# Other Cross Section Strategies Considered

During the 2022 Feasibility Study, other configurations were considered, but not advanced for safety and operational reasons



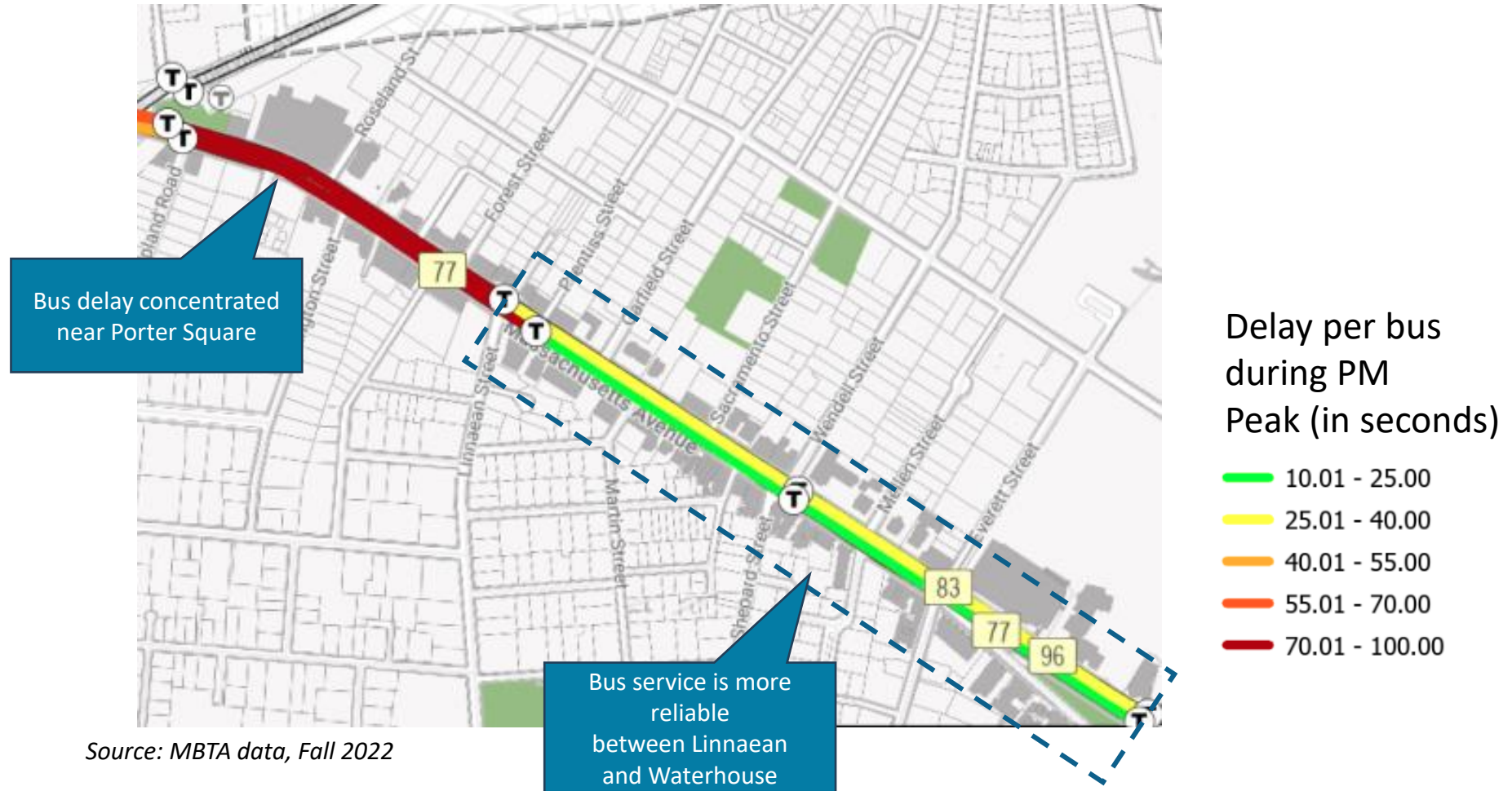
## Center-running Bike Lanes

- Does not allow access to destinations along the street for bikes
- Increases conflict points for bikes entering and exiting bike lanes
- Added delay for cars/bikes at intersections as all turns must be signal separated

## Center-running Bus Lanes

- Requires full reconstruction of street to allow for bus stop islands and amenities – beyond scope of this "partial-construction" project
- Limited space for turning lanes at intersections
- Increased conflicts for transit users to access center bus islands

# Bus Delay during the PM Peak (weekdays in 2022)



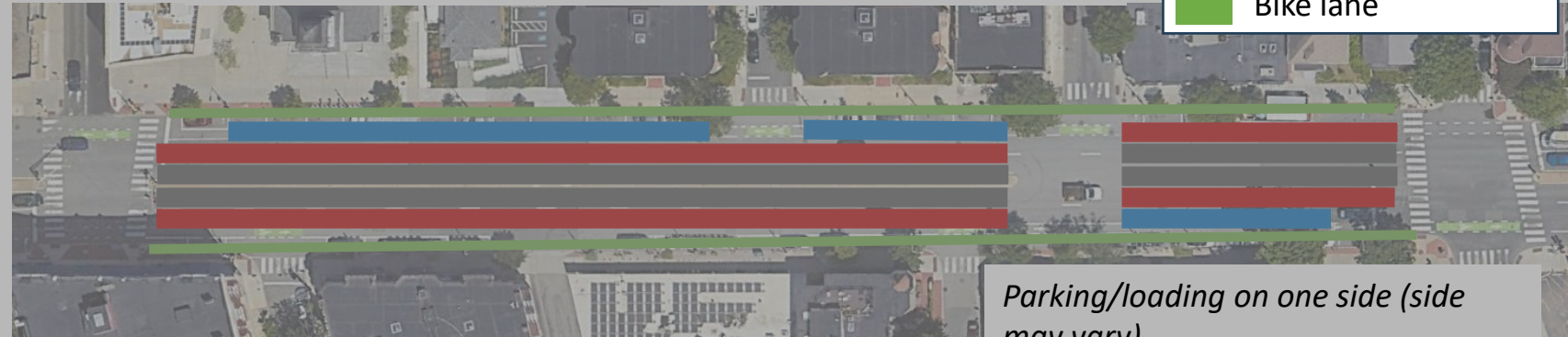
# Potential Options to Balance Curbside Uses and Bus Operations

- Bus lane
- Curbside access
- General vehicle travel
- Bike lane

← Northbound- Alewife Brook Parkway      Southbound - Harvard Square →

## Full time bus lanes

- Curbside access on one side at a time
- Benefits to bus operations



## Part time bus lane on one side

- Continuous curbside access on one side, off-peak access on other
- Benefits to buses during peak periods

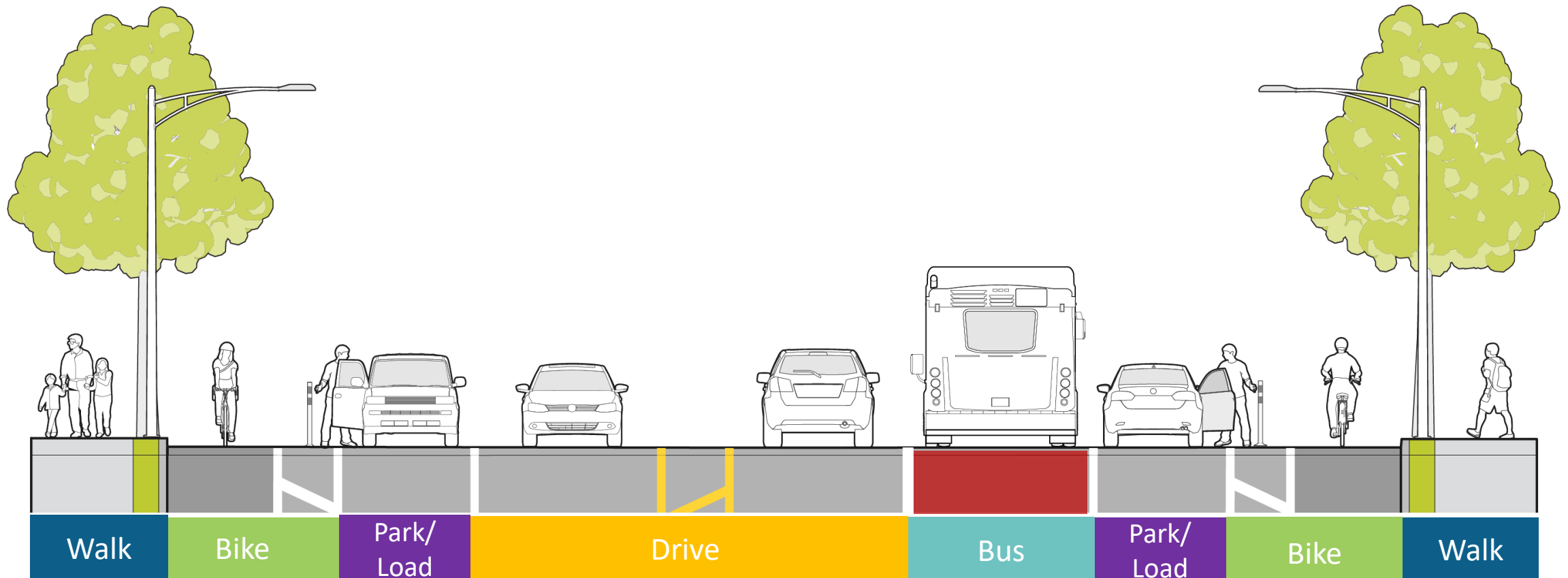


## Bus lane on one side only

- Continuous curbside access on both sides
- Southbound bus in mixed traffic



# Typical Proposed Cross Section: Linnaean Street to Waterhouse Street



*Mass Ave Looking North*





# Working Group Input Needed For Waterhouse - South of Linnaean Segment



*Crosswalk locations*



*Curb Uses*



*Bus stops*



# Concept Design Overview – Linnaean Street to Waterhouse Street



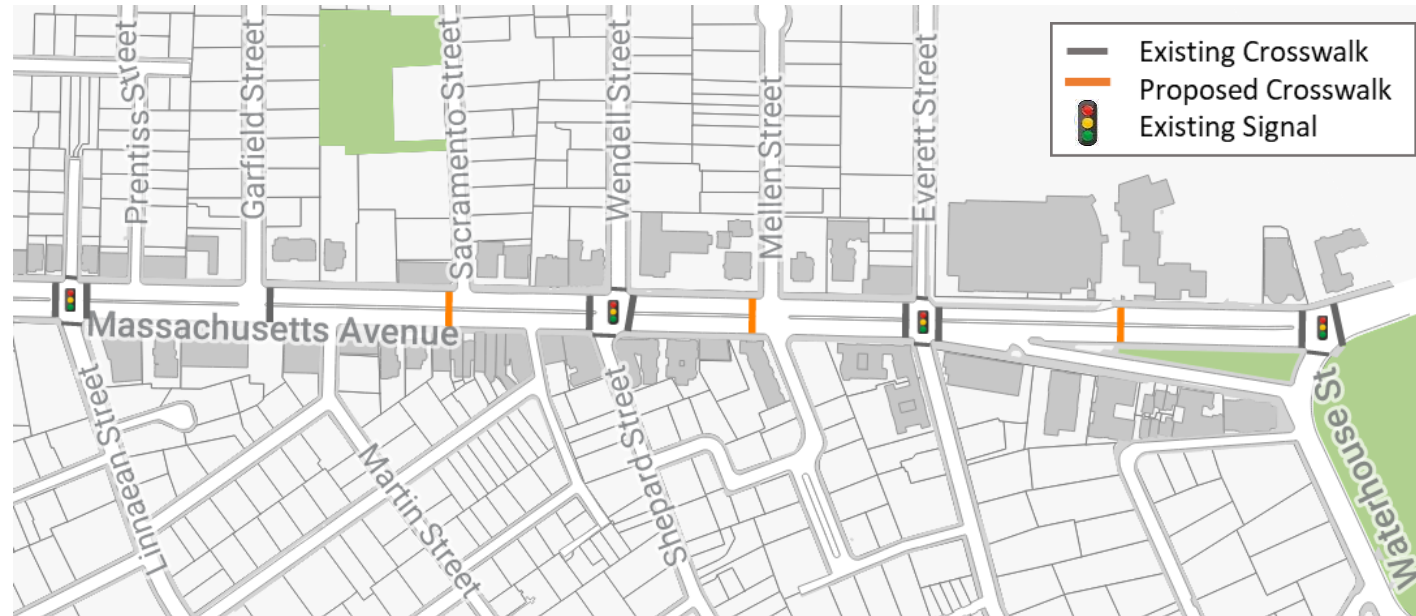
# Key Features of the Draft Concept

- Between Linnaean Street and Waterhouse Street, the following are proposed:
  - Separated bike lanes
  - Northbound bus lane
  - Floating bus stop islands
  - Crosswalk signal timing improvements
  - New crosswalk locations
  - New accessible parking spaces
  - Loading zones maintained/relocated
- Parking/loading can be provided on both sides in this segment as the median will be removed with a 3-lane cross-section



# Crosswalks

- Existing crosswalks will be enhanced with pedestrian islands and/or signal timing adjustments
- New crosswalk locations proposed based on existing crosswalk spacing and suggestions from Working Group/Public
  - Additional crosswalk locations require reduction in curbside access/parking



# Curb Use Elements



Floating Parking



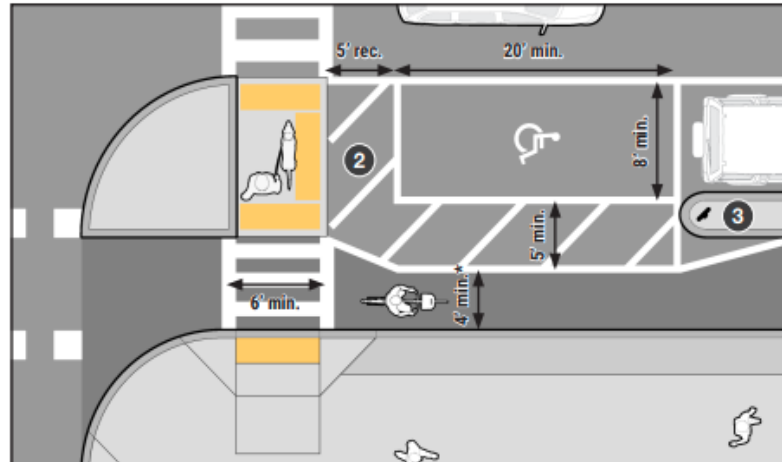
Side street curb regulations



Loading Zone



Curbside Accessible Space



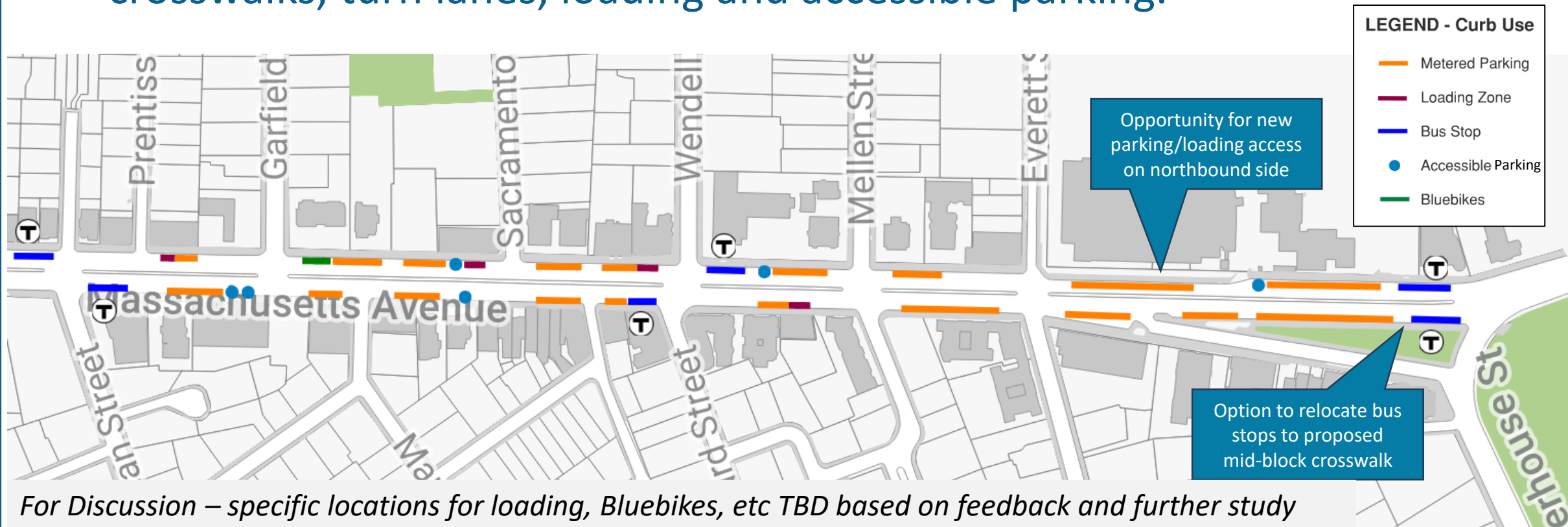
"Floating" Accessible Space  
(MassDOT Separated Bike Lane Design Guide)



Floating Bus Stop

# Draft Curbside Use Allocation Proposal

- With the median removed and a 3-lane cross-section proposed in this segment, curbside activity can be maintained on both sides.
- Some on-street metered parking will be converted to space for new crosswalks, turn lanes, loading and accessible parking.



# Working Group Discussion



# Focus Areas



*Full draft concept for this segment to be shared at future meeting*





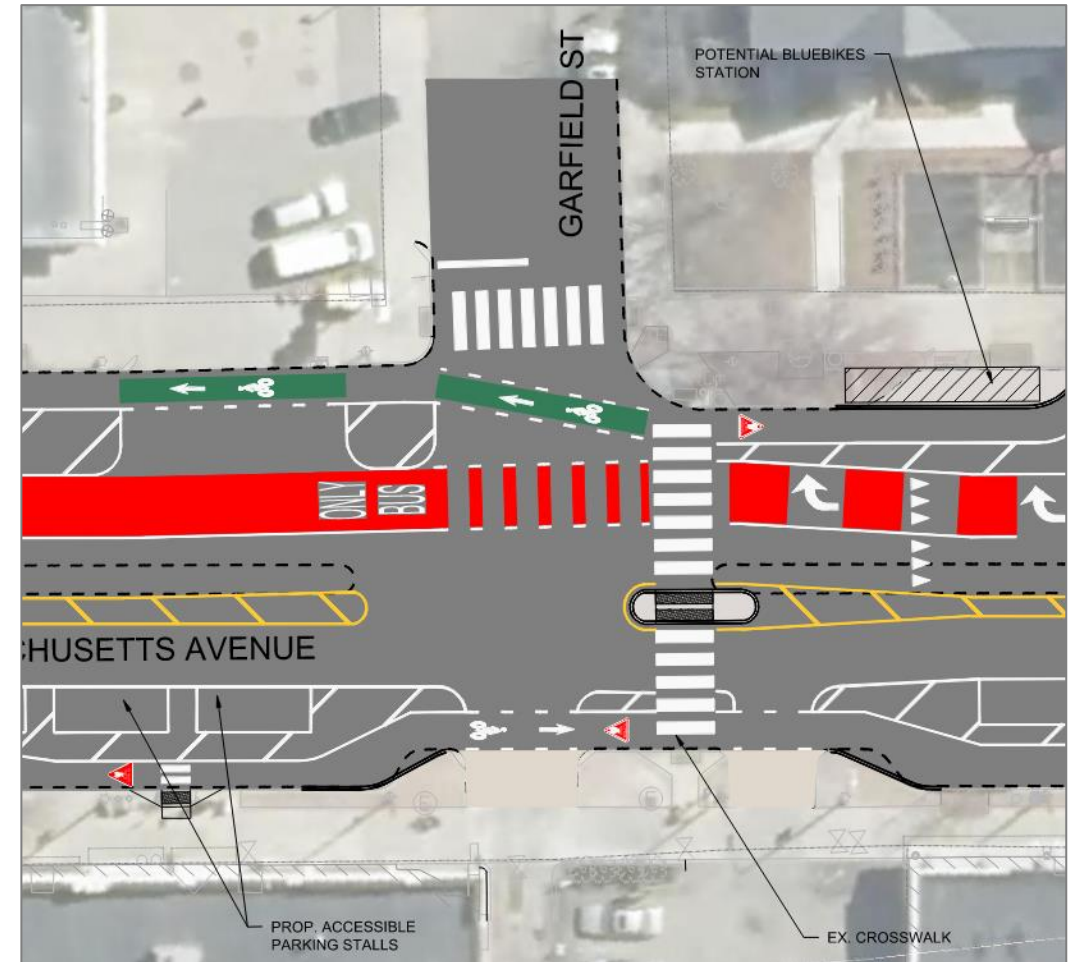
# Garfield Street Intersection

## Issues

- Hard for pedestrians to cross Mass Ave
- Challenging turns

## Potential Solutions

- Include pedestrian crossing island
- Upgrade to RRFB at crosswalk
  - Signal warrants are not met



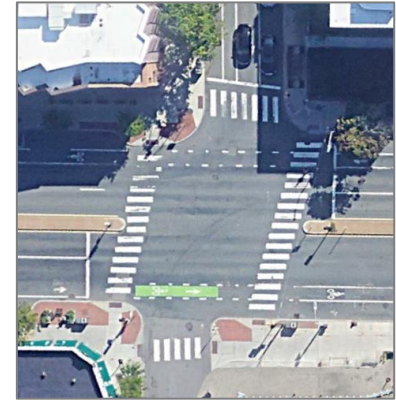
# Wendell/Shepard Intersection

## Issues

- Skewed (angled) crosswalk
- Challenging turns from Wendell
- Bus stops at intersection

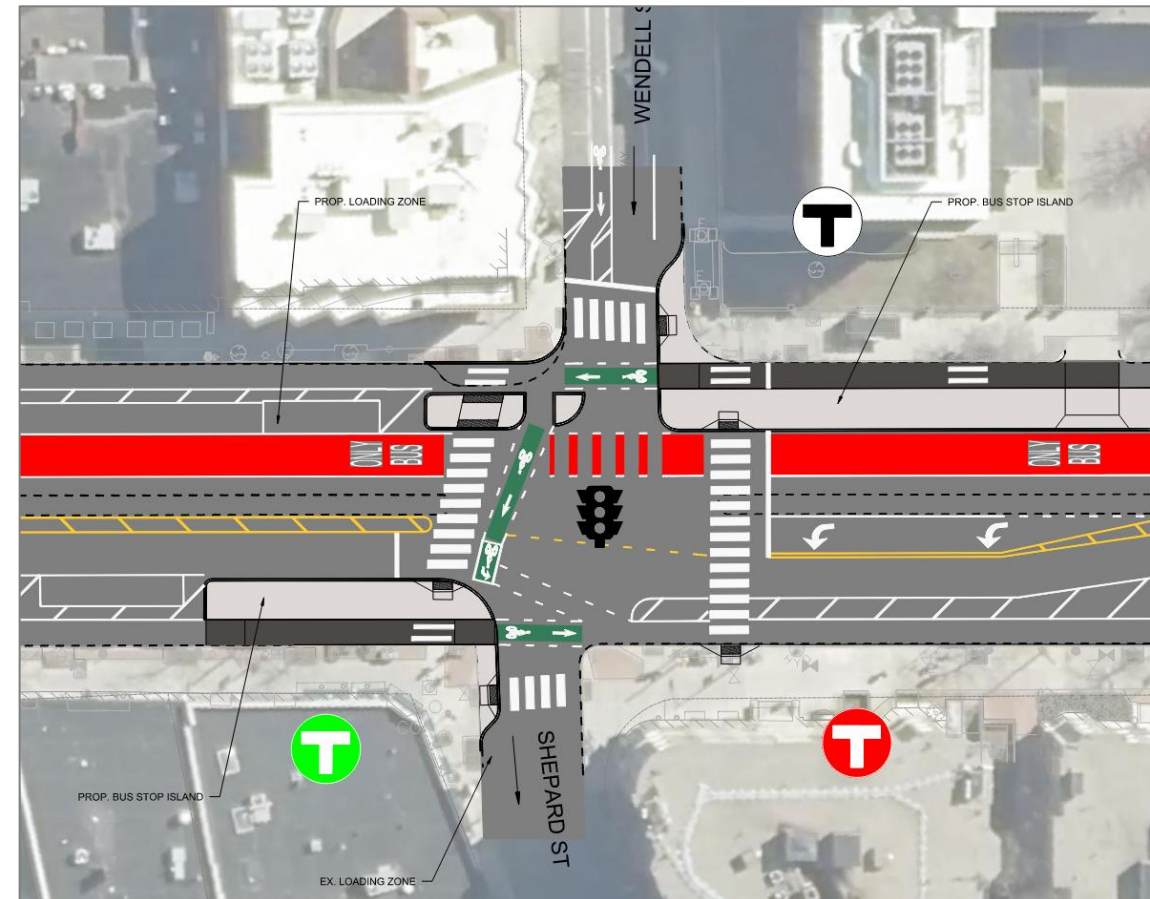
## Potential Solutions

- Single approach lane on Wendell
- Protected corner island for bikes
- Floating bus stops
- Crosswalks straightened and/or shortened



### LEGEND

- ◻ (Red T) REMOVED OR RELOCATED BUS STOP
- ◻ (Green T) PROPOSED BUS STOP
- ◻ (Black T) EXISTING BUS STOP



# Chauncy/Everett to Waterhouse

## Issues

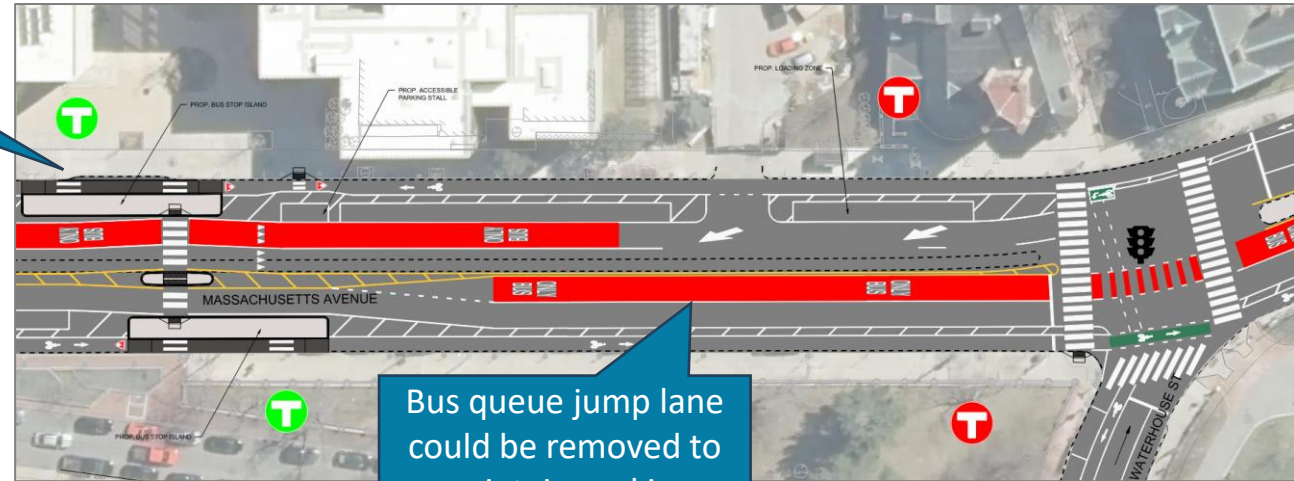
- Long distance between crosswalks
- Bus stop operations

## Draft Recommendations

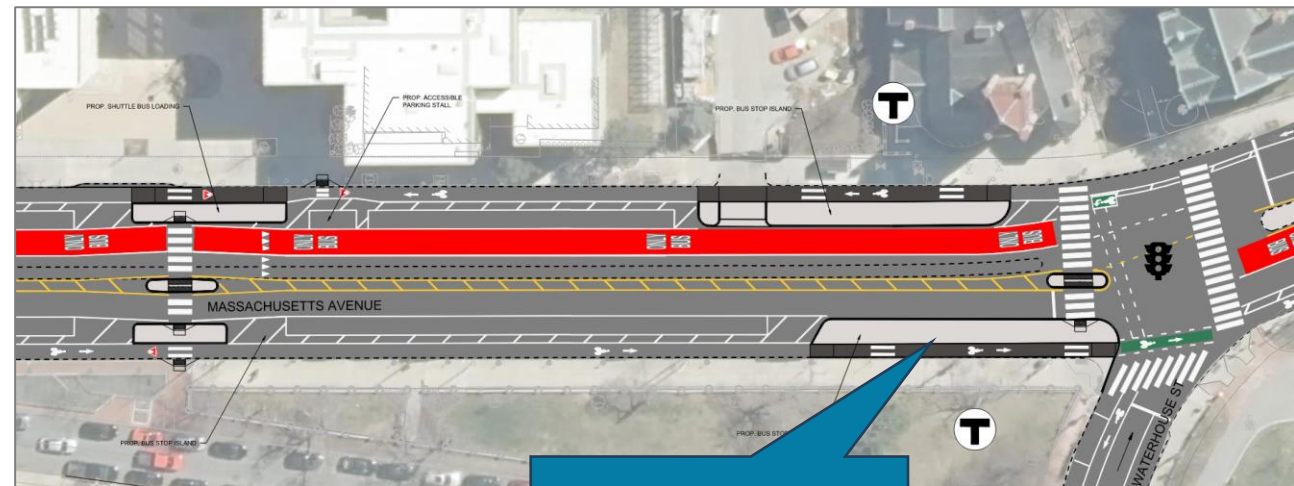
- Potential mid-block crosswalk
- Bus stops near potential mid-block OR closer to Waterhouse?\*
- Potential southbound bus queue jump lane

\*Coordination with MBTA ongoing

Option 1: Bus stops shifted to mid-block

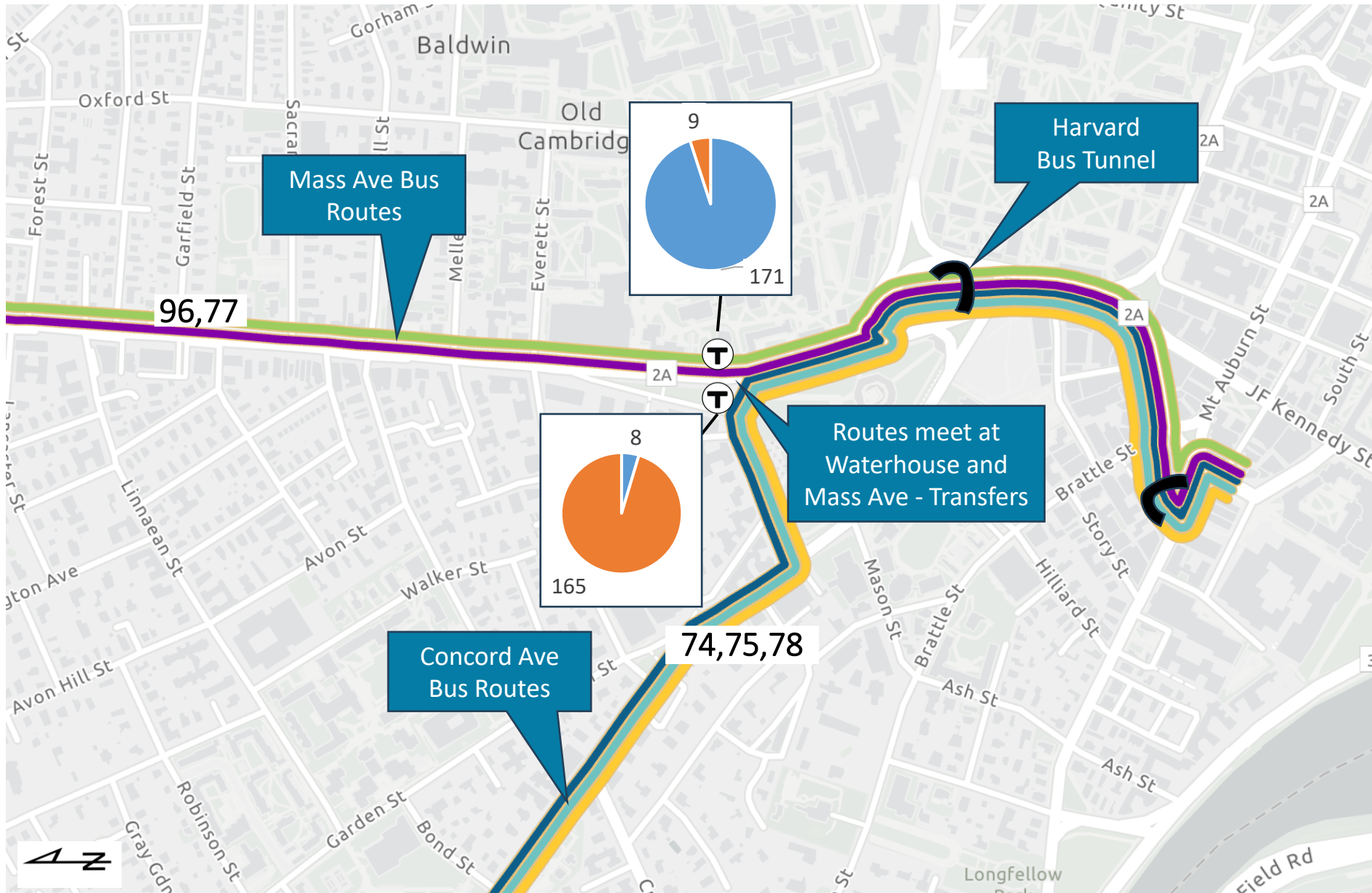


Bus queue jump lane could be removed to maintain parking



Option 2: Bus stops stay near intersection

# Bus Routing - Waterhouse to Bus Tunnel



Daily Weekday Ridership (2022)

- Riders getting off the bus
- Riders getting on the bus



# Chauncy/Everett to Waterhouse

## Issues

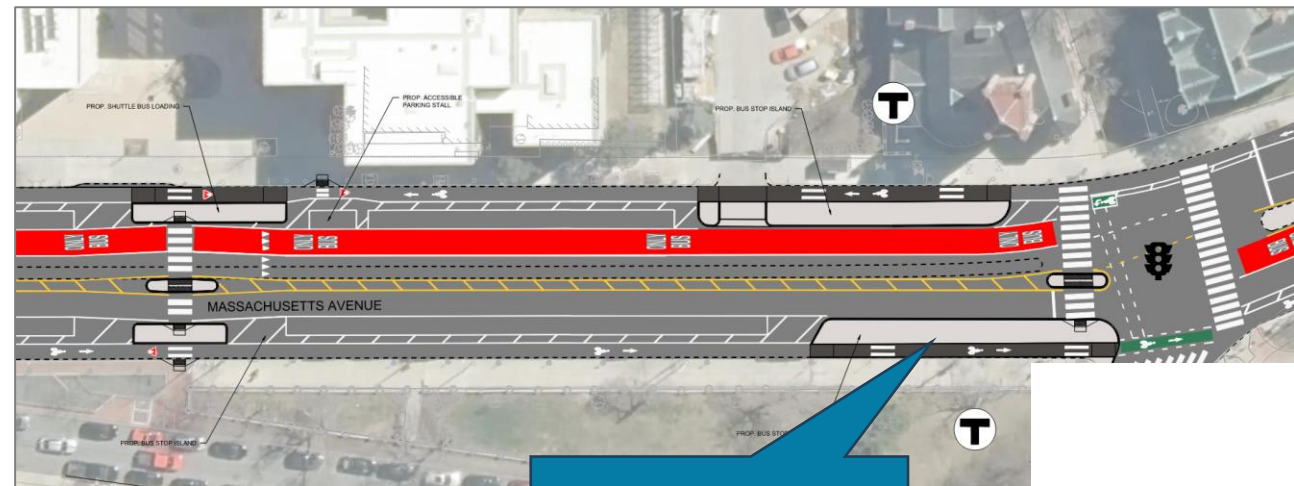
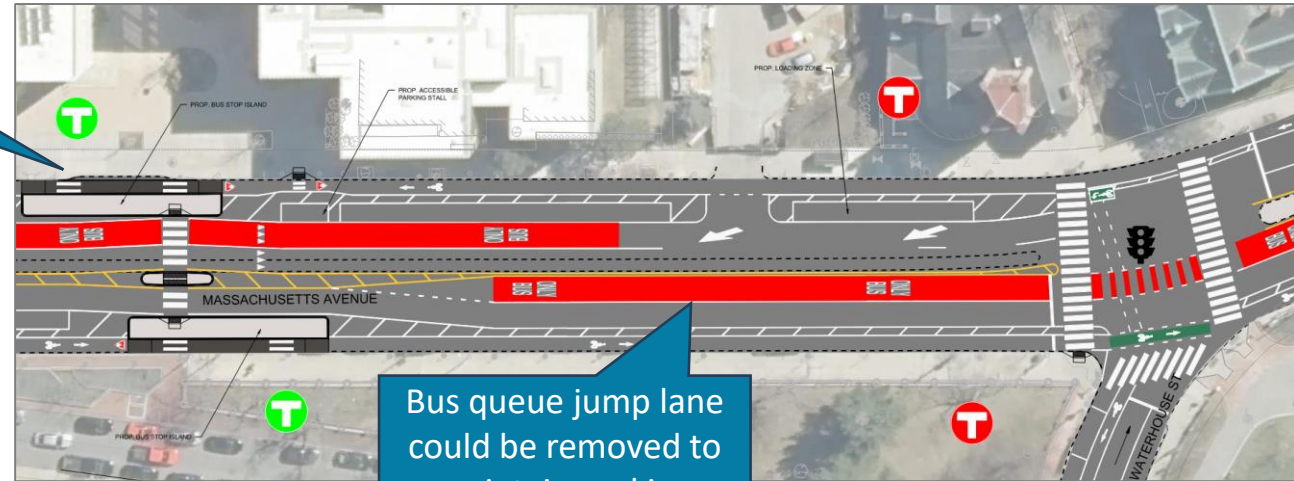
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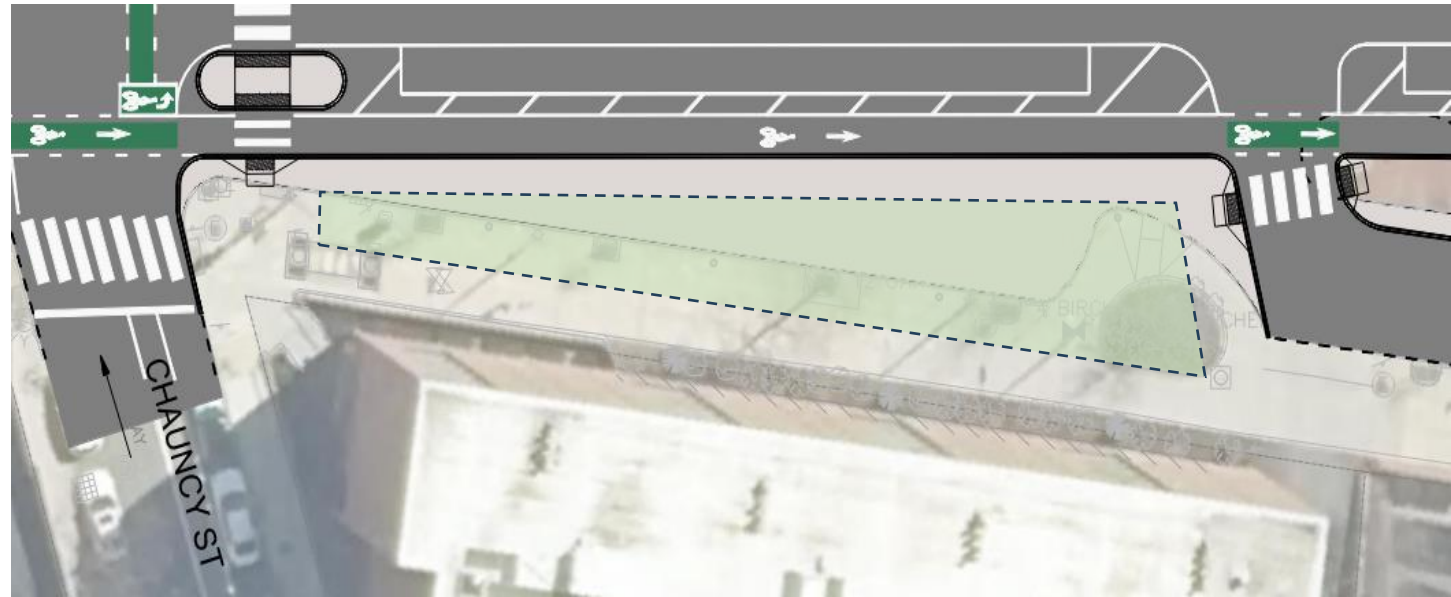
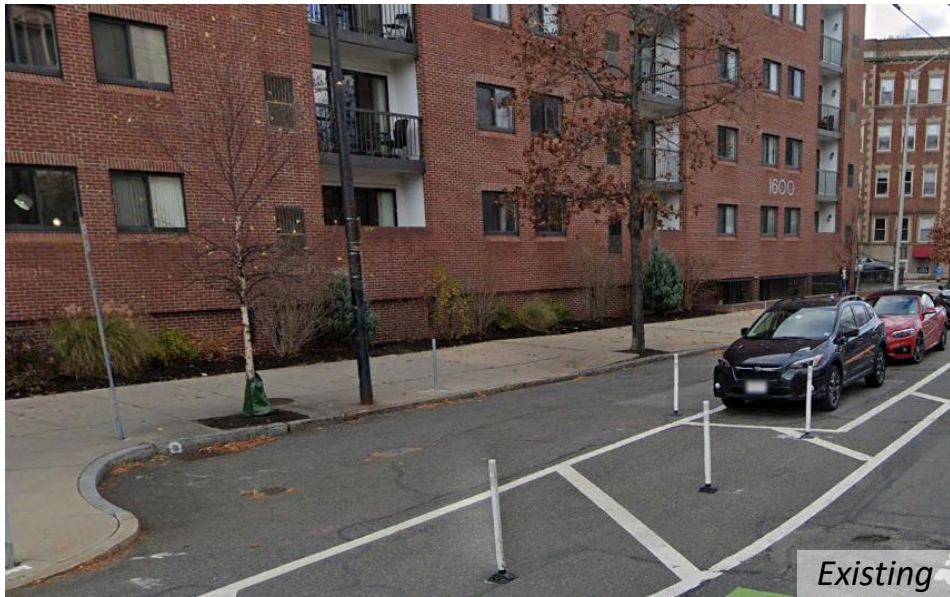
\*Coordination with MBTA ongoing

Option 1: Bus stops shifted to mid-block



# Additional Opportunity: "Little" Mass Ave

Options for this area are under review and will be presented and discussed at a future Working Group meeting



# Working Group Discussion



# Public Comment

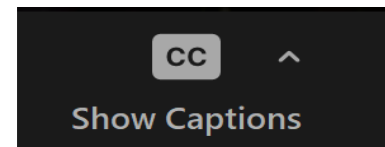
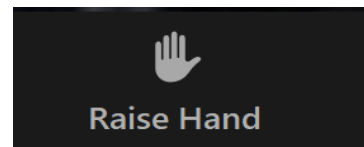




# Public Comment

- Use "Raise Hand" button to signal you have a question or press \*9 if you are joining by phone only
- Please be kind to each other and help us hear from as many people as possible
- Technical support: [MassAve4@Cambridgema.gov](mailto:MassAve4@Cambridgema.gov)

**Bottom Panel  
of Zoom  
Screen**



# Next Steps



# Expected Timeline and Next Steps

## September

- Working Group Meeting #3
- Business outreach

## October

- Project Communications
- Optional Site Walk

## November Onwards

- Working Group #4
- Share draft concepts with City's joint transportation committee
- Public and Stakeholder Meetings
- Pop Up Events



# Questions?

Please reach out to our Project Team at

Email: [MassAve4@Cambridgema.gov](mailto:MassAve4@Cambridgema.gov).

Webpage: [cambridgema.gov/massavepartialconstruction](http://cambridgema.gov/massavepartialconstruction)

