

# MBTA Bus Stop Accessibility and Safety Improvement Project

## *Plan for Accessible Transit Infrastructure (PATI) - Phase 2*

City of Medford  
City Council Meeting

February 20, 2024



# Agenda Items

- PATI Project Overview
- City Council Meeting (March 23, 2023)
  - Rapid Rectangular Flashing Beacons (RRFBs)  
Location Requests
    - Six requested Locations
  - Eliminated Stops



# Better Bus Project Overview



## MBTA Bus Transformation

Network  
Redesign

Battery-  
Electric Fleet

Accessible Bus  
Stops and  
Amenities

Transit Priority

BNRD is one  
piece of Bus  
Transformation

All-Door  
Boarding

Modern  
Workplace and  
Environment

Internal  
Processes and  
People



# Project Scope Overview

- Improve:
  - Safety
  - Accessibility and ADA compliance
  - Rider Experience
- High-priority bus stops with major access barriers
- Enhance bus operations:
  - Speed and reliability through stop optimization
- Design and construction



# City Council Meeting (March 2023)

## Locations Presented for Improvements

- Medford G-1: Winthrop Street at Robinson Road
- Medford G-3: Boston Avenue at High Street
- Medford G-4: Boston Avenue at Arlington Street
- Medford G-5: High Street at Canal Street
- Medford G-6: High Street at Woburn Street
- Medford G-7: Salem Street at Hadley Place
- Medford G-8: Highland Avenue at Middlesex Avenue
- Medford G-9: Highland Avenue at Tucker Street
- Medford G-10: Fellsway W at Foss



# City Council Meeting (March 2023)

## Bus Stops Presented for Elimination

- Main Street at South Gateway
- Main Street at Town Way
- Main Street at Windsor Rd
- Boston Avenue at Holton Street
- Playstead Rd opposite Chardon Rd
- Playstead Rd at Chardon Rd
- Fellsway W at Cherry Street
- 205 Fellsway W
- Fellsway W at Fulton Springs Rd
- High Street at Monument Street
- High Street at Pitcher Avenue
- High Street at Hillside Avenue
- 163 Riverside Avenue
- Riverside Avenue at Pleasant Street
- Fellsway at Central Avenue
- Fellsway at Medford Street



# RRFB Location Requests





# RRFB Location Requests

## Guide for Selecting Countermeasures at Uncontrolled Pedestrian Crossing Locations

Table 1. Application of pedestrian crash countermeasures by roadway feature.

Roadway Configuration	Posted Speed Limit and AADT								
	Vehicle AADT <9,000			Vehicle AADT 9,000–15,000			Vehicle AADT >15,000		
	≤30 mph	35 mph	≥40 mph	≤30 mph	35 mph	≥40 mph	≤30 mph	35 mph	≥40 mph
<b>2 lanes</b> (1 lane in each direction)	① 2 4 5 6 7 9	① 5 6 7 9	① 5 6 7 9	① 4 5 6 7 9	① 5 6 7 9	① 5 6 7 9	① 4 5 6 7 9	① 5 6 7 9	① 5 6 7 9
<b>3 lanes with raised median</b> (1 lane in each direction)	① 2 3 4 5 7 9	① ③ 5 7 9	① ③ 5 7 9	① 3 4 5 7 9	① ③ 5 7 9	① ③ 5 7 9	① ③ 4 5 7 9	① ③ 5 7 9	① ③ 5 7 9
<b>3 lanes w/o raised median</b> (1 lane in each direction with a two-way left-turn lane)	① 2 3 4 5 6 7 9	① ③ 5 6 7 9	① ③ 5 6 7 9	① 3 4 5 6 7 9	① ③ 5 6 7 9	① ③ 5 6 7 9	① ③ 4 5 6 7 9	① ③ 5 6 7 9	① ③ 5 6 7 9
<b>4+ lanes with raised median</b> (2 or more lanes in each direction)	① ③ 5 7 8 9	① ③ 5 7 8 9	① ③ 5 7 8 9	① ③ 5 7 8 9	① ③ 5 7 8 9	① ③ 5 7 8 9	① ③ 5 7 8 9	① ③ 5 7 8 9	① ③ 5 7 8 9
<b>4+ lanes w/o raised median</b> (2 or more lanes in each direction)	① ③ 5 6 7 8 9	① ③ 5 6 7 8 9	① ③ 5 6 7 8 9	① ③ 5 6 7 8 9	① ③ 5 6 7 8 9	① ③ 5 6 7 8 9	① ③ 5 6 7 8 9	① ③ 5 6 7 8 9	① ③ 5 6 7 8 9
<p>Given the set of conditions in a cell,</p> <ul style="list-style-type: none"> <li># Signifies that the countermeasure is a candidate treatment at a marked uncontrolled crossing location.</li> <li>● Signifies that the countermeasure should always be considered, but not mandated or required, based upon engineering judgment at a marked uncontrolled crossing location.</li> <li>○ Signifies that crosswalk visibility enhancements should always occur in conjunction with other identified countermeasures.*</li> </ul> <p>The absence of a number signifies that the countermeasure is generally not an appropriate treatment, but exceptions may be considered following engineering judgment.</p> <ul style="list-style-type: none"> <li>1 High-visibility crosswalk markings, parking restrictions on crosswalk approach, adequate nighttime lighting levels, and crossing warning signs</li> <li>2 Raised crosswalk</li> <li>3 Advance Yield Here To (Stop Here For) Pedestrians sign and yield (stop) line</li> <li>4 In-Street Pedestrian Crossing sign</li> <li>5 Curb extension</li> <li>6 Pedestrian refuge island</li> <li>7 Rectangular Rapid-Flashing Beacon (RRFB)**</li> <li>8 Road Diet</li> <li>9 Pedestrian Hybrid Beacon (PHB)**</li> </ul>									





# RRFB Location Requests

## Intersection Data Used for Analysis

SHEET NUMBER	INTERSECTION		REQUESTED RRFB STREET DATA			
	RRFB STREET LOCATION	INTERSECTION STREET	2023 RRFB STREET AADT	SPEED LIMIT	NUMBER OF LANES	MEDIAN
MED-G-1	WINTHROP ST	ROBINSON RD	12341	25	2	NO
MED-G-3	ON HIGH ST	BOSTON AVE	19579	25	2	NO
MED-G-3	ON BOSTON AVE	HIGH ST	N/A	25	2	YES (1)
MED-G-7	SALEM ST	HADLEY PL	14187	25	2	NO
MED-G-8	MIDDLESEX AVE NEAR DUNKIN DONUTS		21380	25	2	NO
MED-G-9	HIGHLAND AVE	TUCKER ST	15954	30	2	NO

(1) Under stop control



# RRFB Location Requests

## 1. Winthrop St at Robinson Rd

(Bus Stop 6960/9102; MED-G-1)

- ***Location has been eliminated***
- Roadway is under local jurisdiction
- The nearest stop is Winthrop Street at Robinson Road/Winford Way (Bus Stop 6961/9101)
  - ***This stop is not currently in the project design scope***

## 2a. Boston Avenue at High Street

## 2b. High Street at Boston Avenue

(Bus stops 3513/2418; MED-G-3)

- ***Location is not part of the current scope***
- New curb ramps, crosswalks, and pedestrian refuge island



# RRFB Location Requests cont.

## 3. Middlesex Ave (MassDOT) at Dunkin Donuts

(Bus Stop # 9050/9037; MED-G-8)

- ***Location is not part of the current scope***
- Stop relocation to the far side
- New curb ramps and crosswalks

## 4. Salem Street at Hadley Place/Allen Court

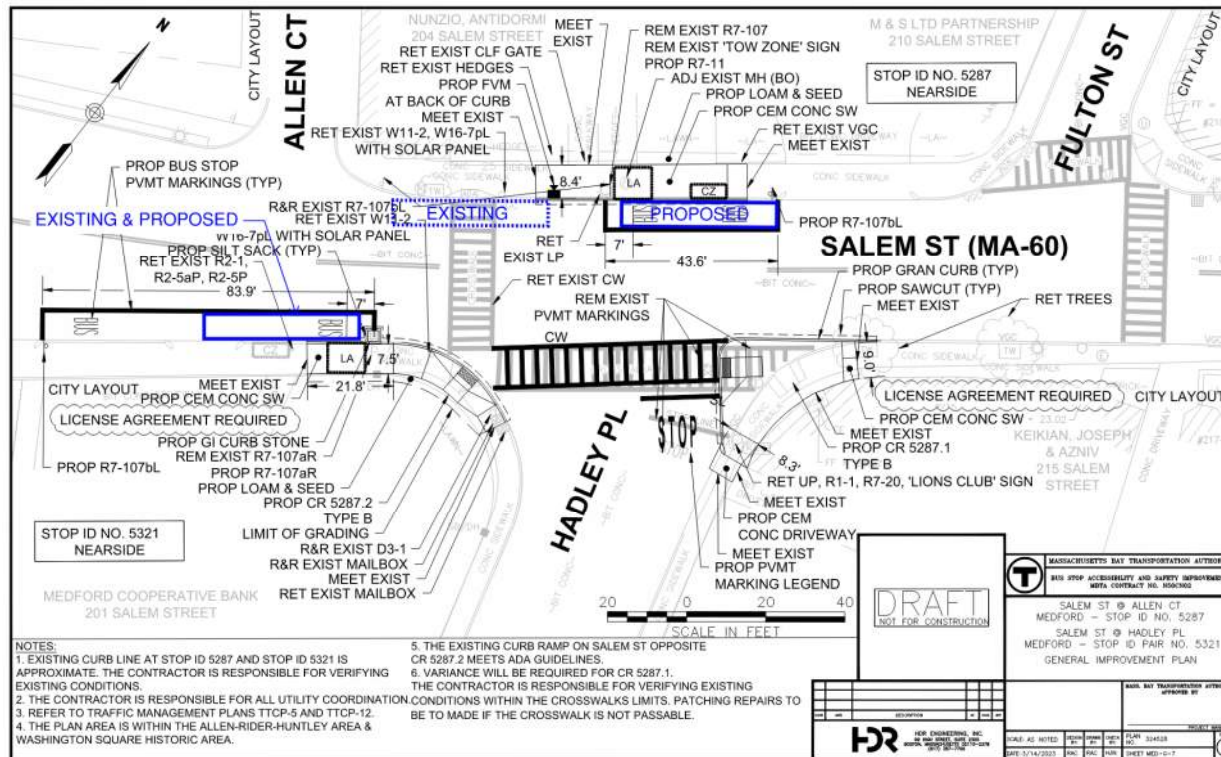
(Bus stop 5287/5321; MED-G-7)

- Location is part of the current scope
- Roadway is under local jurisdiction
- New curb ramps, crosswalks, and pedestrian refuge island



## 4. Salem Street at Allen Court

### Stop ID No. 5287 & 5321



G-7: Salem St @ Allen Ct, Stop ID 5287

Existing Stop



Proposed Stop



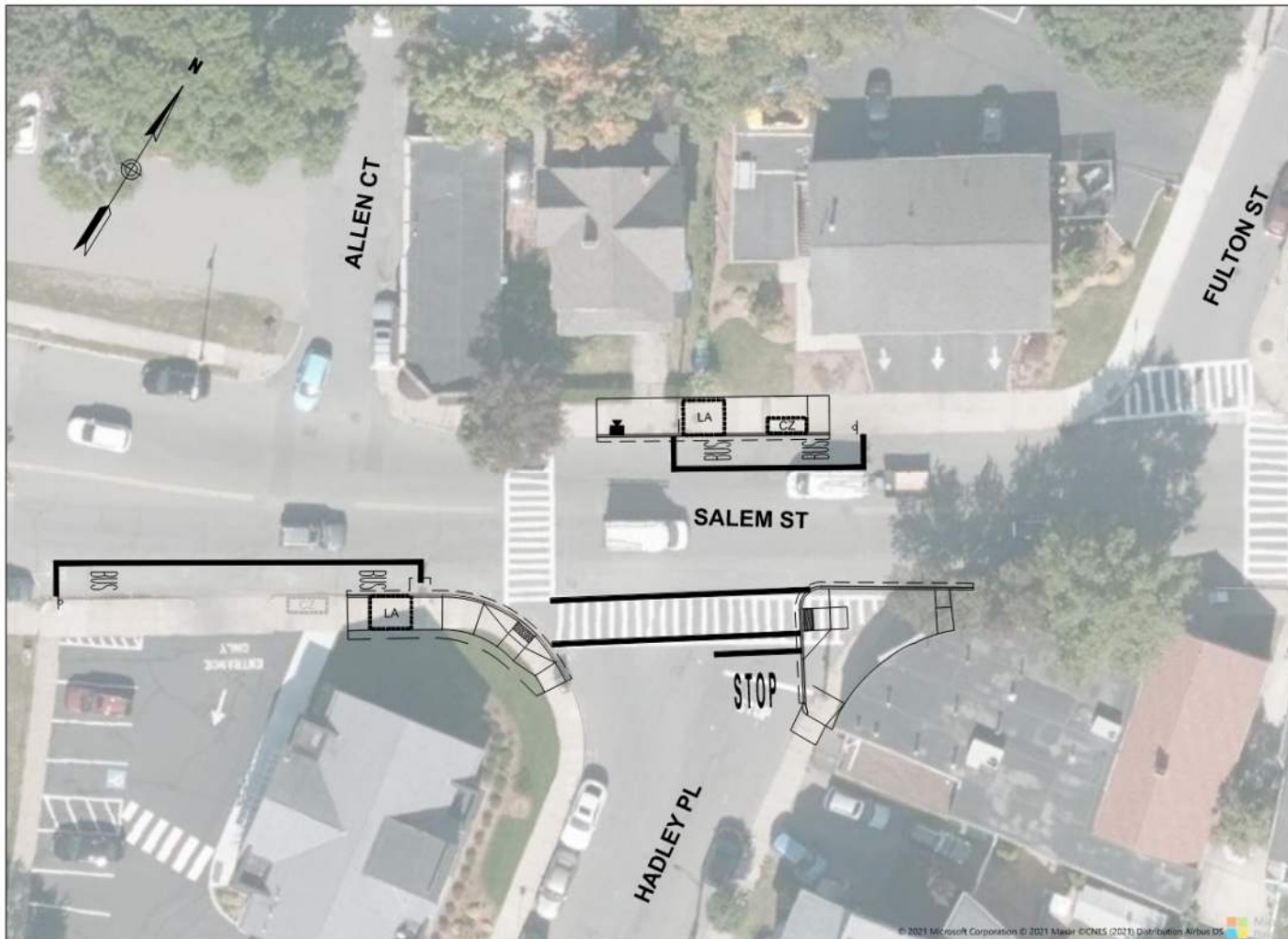
G-7: Salem St @ Hadley Pl, Stop ID 5321

Existing & Proposed Stop





#### 4. Salem Street at Allen Court Stop ID No. 5287 & 5321



# RRFB Location Requests cont.

## 5. Highland Avenue at Waddel Street/Tucker Street

(Bus Stop # 15061/5088; MED-G-9)

- ***Location is part of the current scope***
- Roadway is under DCR jurisdiction
- New curb ramps, crosswalks, and bus stop pavement markings

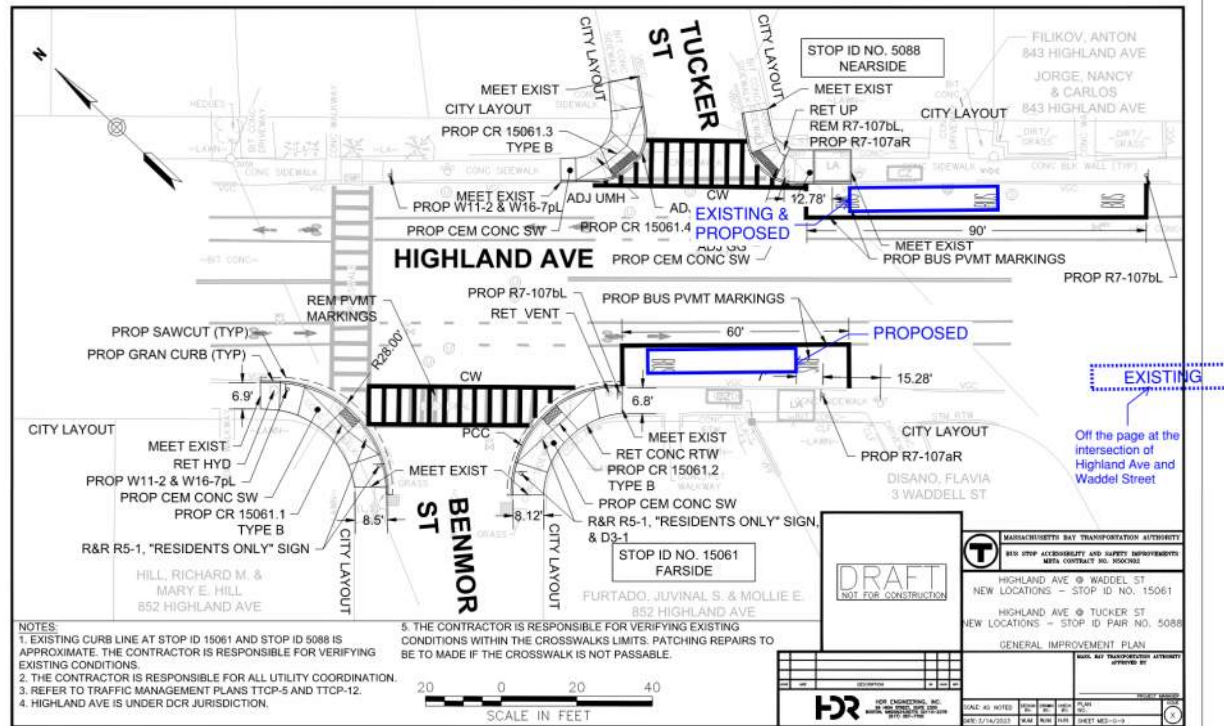




## 5. Highland Avenue at Waddel Street/Tucker Street

Stop No. 15061 & 5088

DCR Jurisdiction



G-9: Highland Ave @ Waddel St, Stop ID 15061

Existing Stop



Proposed Stop



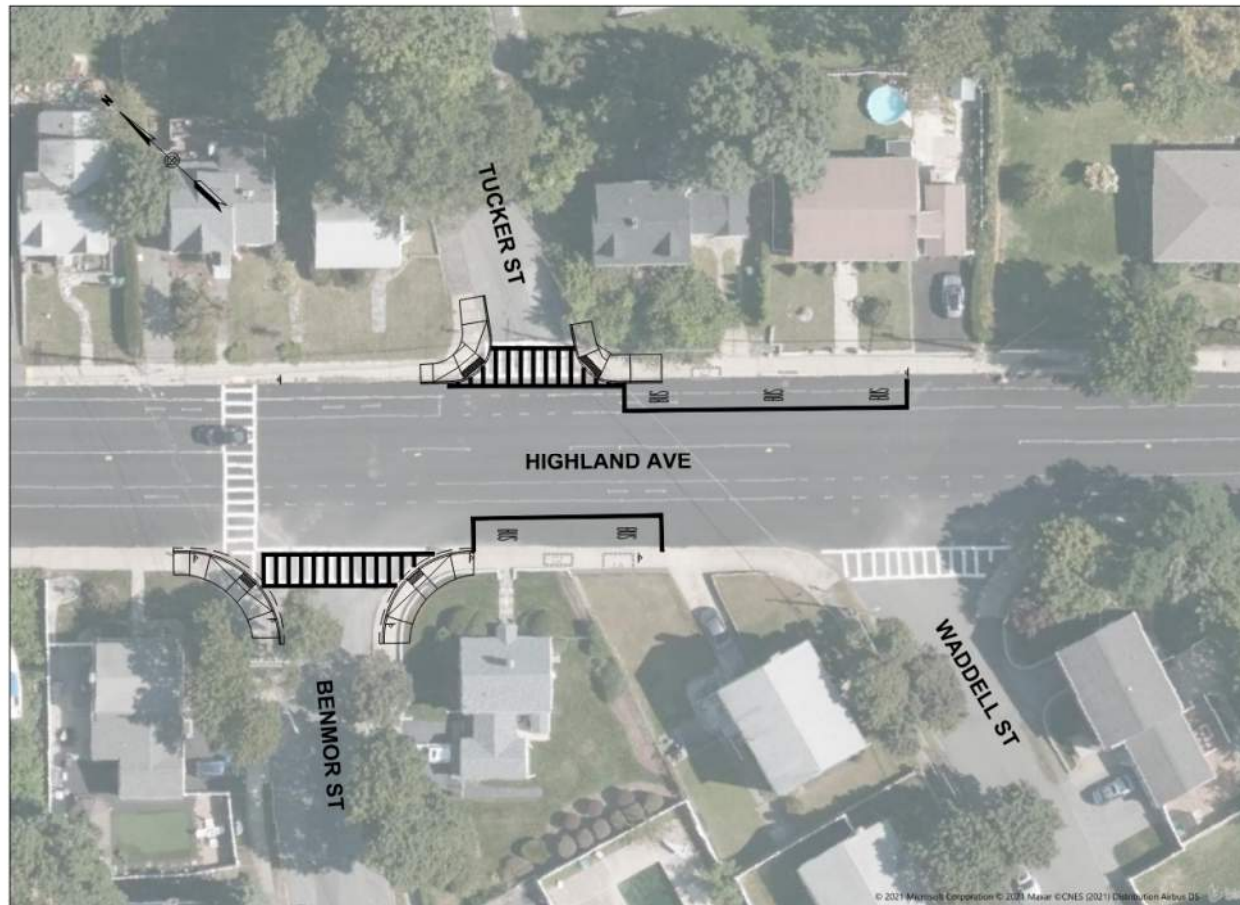
G-9: Highland Ave @ Tucker St, Stop ID 5088

Existing & Proposed Stop



## 5. Highland Avenue at Waddel Street/Tucker Street

Stop No. 15061 & 5088  
DCR Jurisdiction



# Stop Eliminations





# Stop Eliminations

## High Street at Hillside Avenue (Bus Stop 5003)

### Elimination of Stop 5003

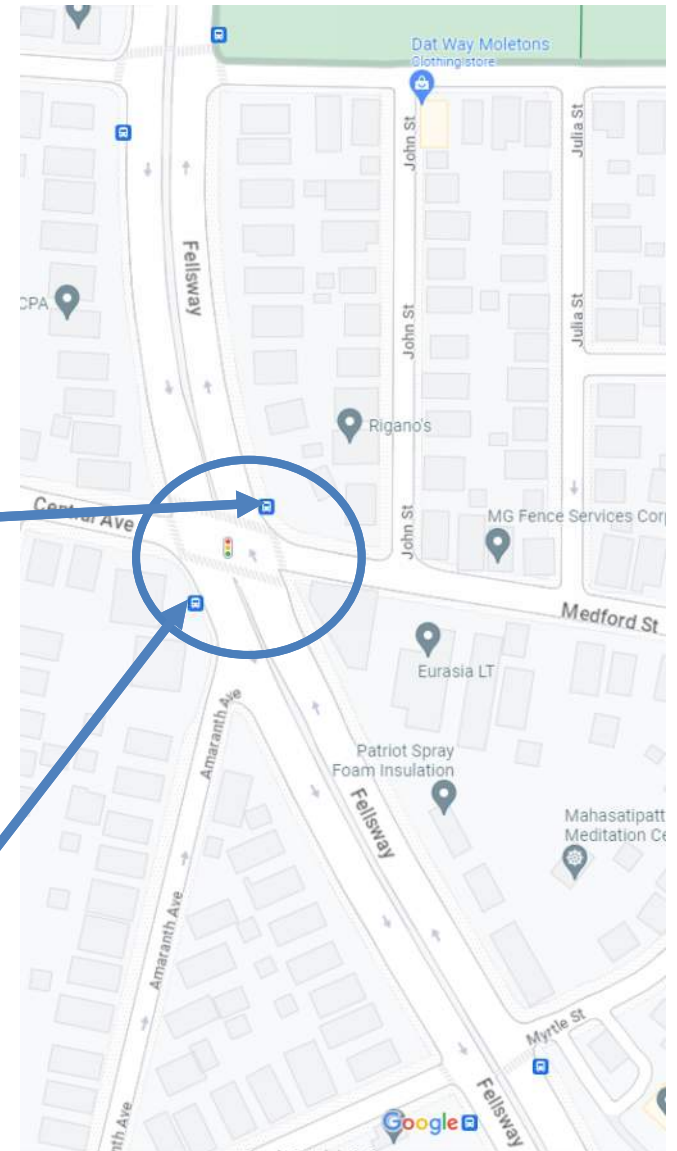
- Discussed with the Traffic Director
- ***MBTA will not eliminate stop***
- Stop 15002 will remain at the existing location and will not be moved to CVS/Governors Avenue
- ADA standards:
  - Others have upgraded curb ramps
  - Landing Pad ADA requirement – 8' wide
    - The existing is 7' wide



# Stop Eliminations

## Fellsway at Central Avenue/Medford Street

- Bus Stop Location has been eliminated



# Schedule



## ■ Schedule

- 100% Design Completed
- Construction Fall 2024
  - No Bid; On-Call Contractor
  - 1-2 weeks per location





Thank you

