

# North Station Area Mobility Action Plan

*Photo: Landslides Aerial Photography*

**BULFINCH DESIGN CHARRETTE**

March 21, 2017



**boston planning &  
development agency**



Office of the Mayor  
Martin J. Walsh

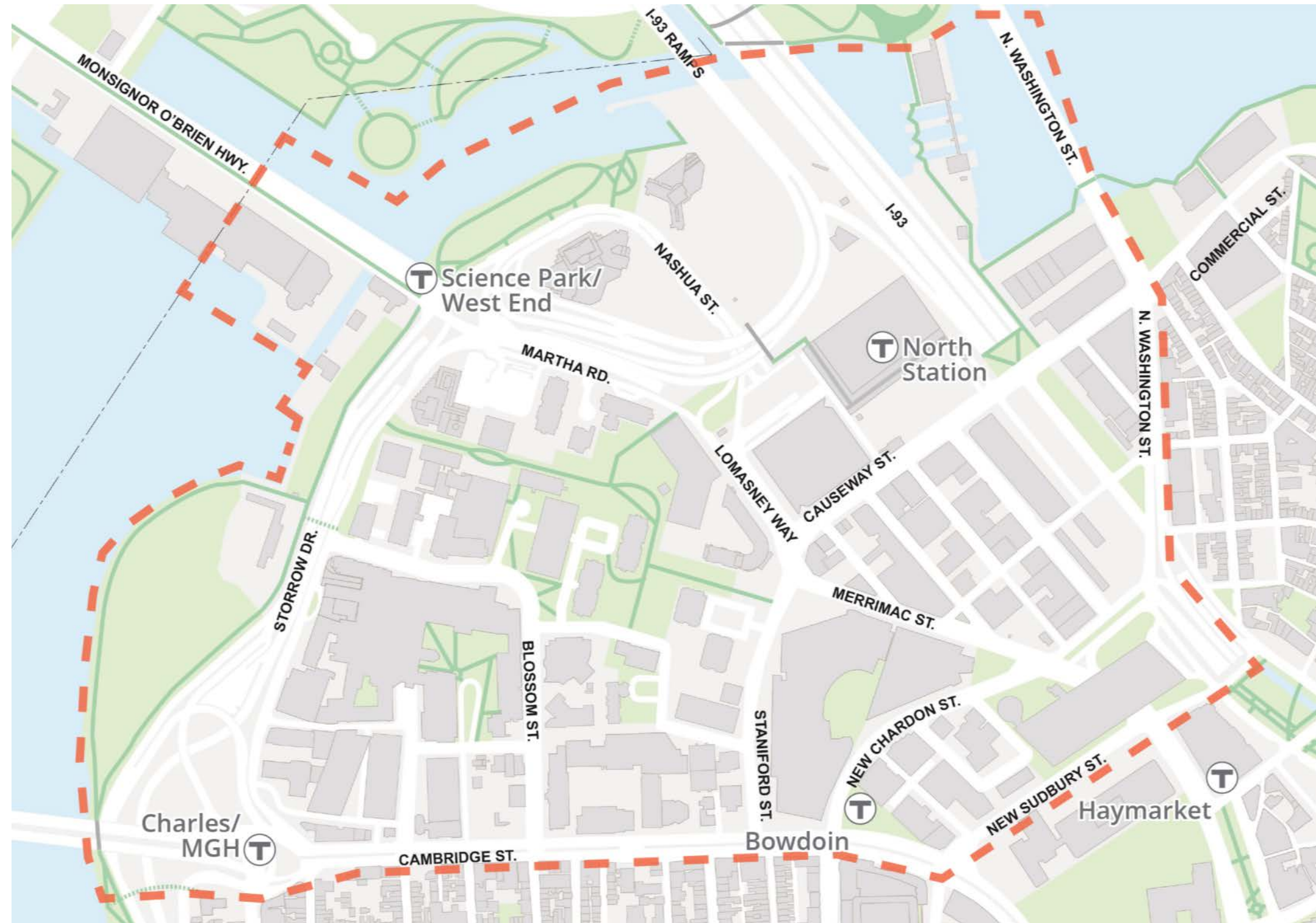
# Agenda



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- NSAMAP Overview
- Bulfinch Triangle Goals
- Breakout Sessions





# Project Timeline (Adjusted)



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**JUNE – JULY**

**Existing Conditions and First Public Meeting**

**JULY – SEPTEMBER**

**Goals and Vision**

**SEPTEMBER – NOVEMBER**

**Develop and Analyze Potential Improvements**

**OCTOBER – MARCH**

**Incorporating Public Feedback into Action Plan, including design for top 1 to 3**

**APRIL**

**Draft Action Plan for Public Comment**

**MAY**

**Final Action Plan**

# Development and Infrastructure Projects



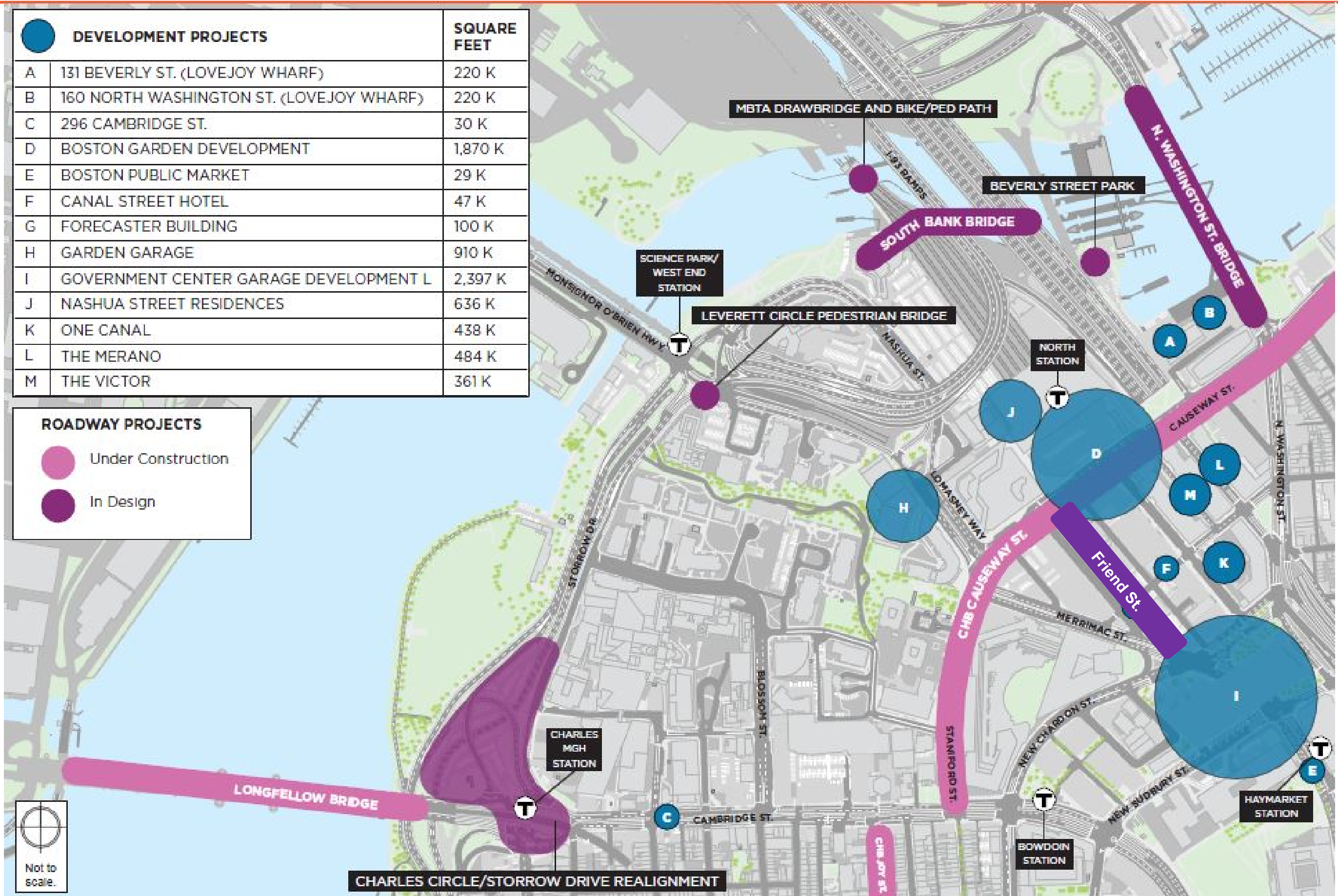
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DEVELOPMENT PROJECTS		SQUARE FEET
A	131 BEVERLY ST. (LOVEJOY WHARF)	220 K
B	160 NORTH WASHINGTON ST. (LOVEJOY WHARF)	220 K
C	296 CAMBRIDGE ST.	30 K
D	BOSTON GARDEN DEVELOPMENT	1,870 K
E	BOSTON PUBLIC MARKET	29 K
F	CANAL STREET HOTEL	47 K
G	FORECASTER BUILDING	100 K
H	GARDEN GARAGE	910 K
I	GOVERNMENT CENTER GARAGE DEVELOPMENT L	2,397 K
J	NASHUA STREET RESIDENCES	636 K
K	ONE CANAL	438 K
L	THE MERANO	484 K
M	THE VICTOR	361 K

**ROADWAY PROJECTS**

- Under Construction
- In Design



Not to scale.







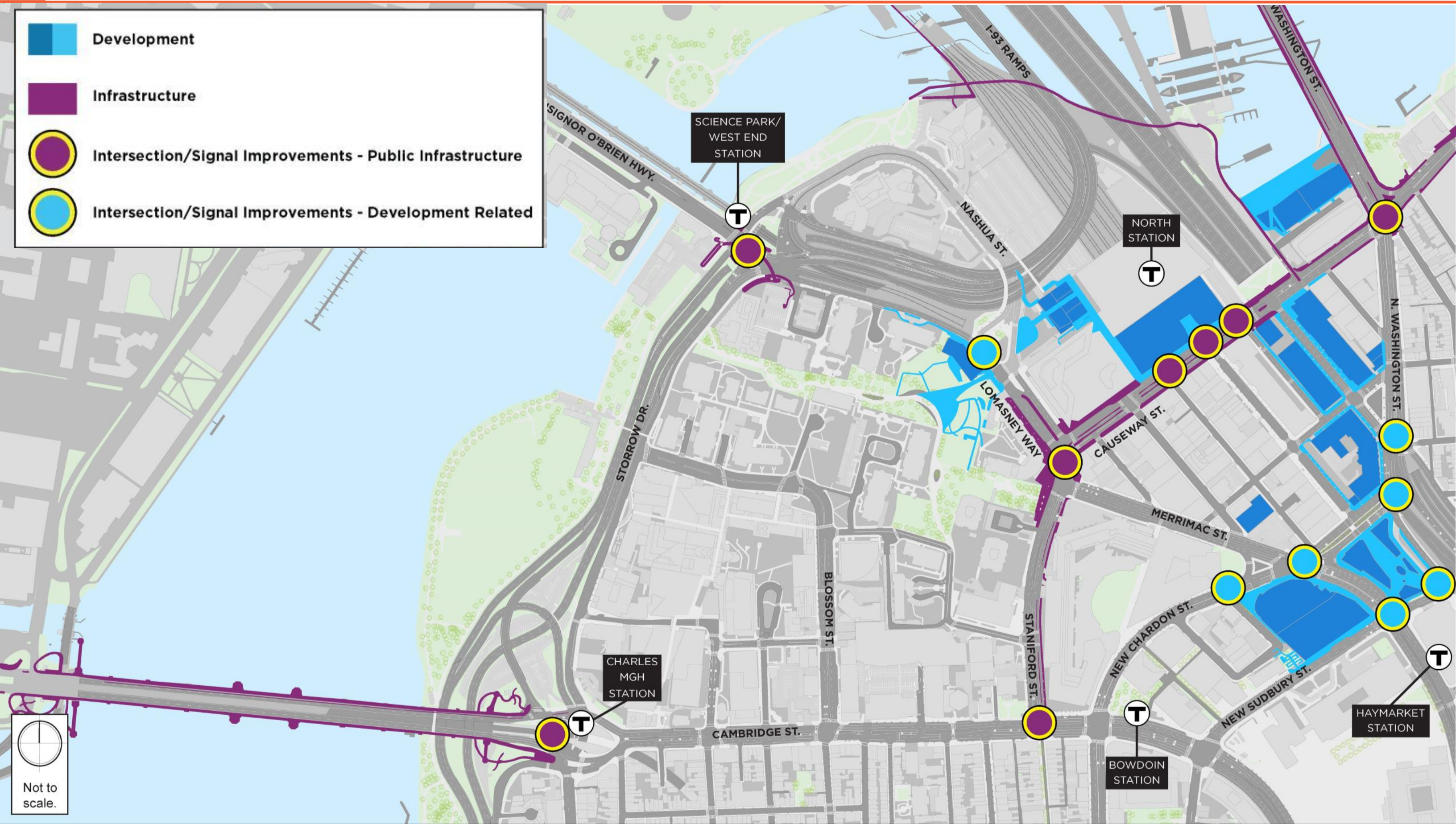
# Infrastructure Improvement Commitments



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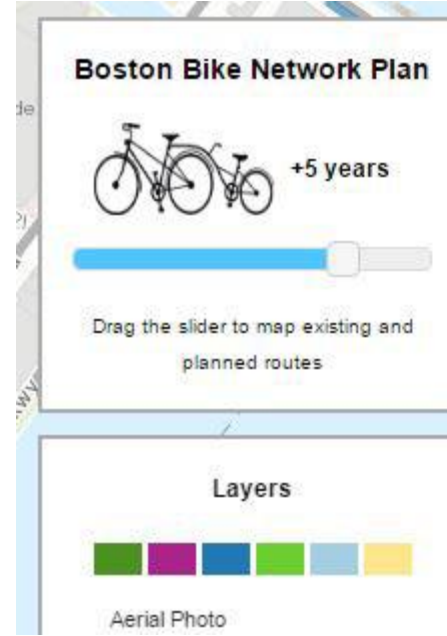
-  **Development**
-  **Infrastructure**
-  **Intersection/Signal Improvements - Public Infrastructure**
-  **Intersection/Signal Improvements - Development Related**



Not to scale.



# Action Plan



Develop a variety of improvements for all modes, identify community priorities, and prioritize projects for implementation based on vision, feasibility, and cost





## ■ City Team

- Boston Planning and Development Agency
- Boston Transportation Department
- Office of Neighborhood Services
- Public Works Department

## ■ Consultant Team

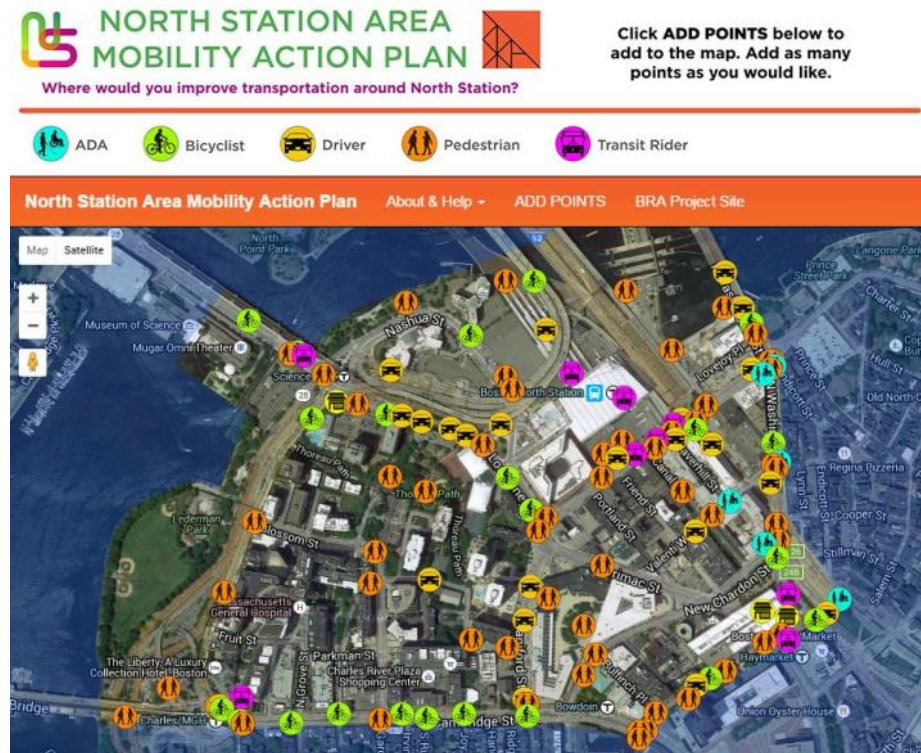
- Howard Stein Hudson – Transportation Engineering
- NBBJ – Urban Design and Visioning
- Marlene Connor Associates - Transit

An aerial photograph of a city, likely New York City, showing a complex highway interchange in the foreground with multiple lanes of traffic. In the middle ground, there is a large stadium with a distinctive white, ribbed roof. The background is filled with dense urban buildings and skyscrapers, with a body of water visible in the distance. A semi-transparent grey banner with an orange triangle on the left side is overlaid across the middle of the image, containing the text 'NSAMAP Overview' in white.

# NSAMAP Overview



# Multiple Methods of Outreach





# Shared Goals



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**Safety**



**More Understandable**



**More Choices**



**Less Congestion**



# Concept – Change Behavior and Reduce Congestion



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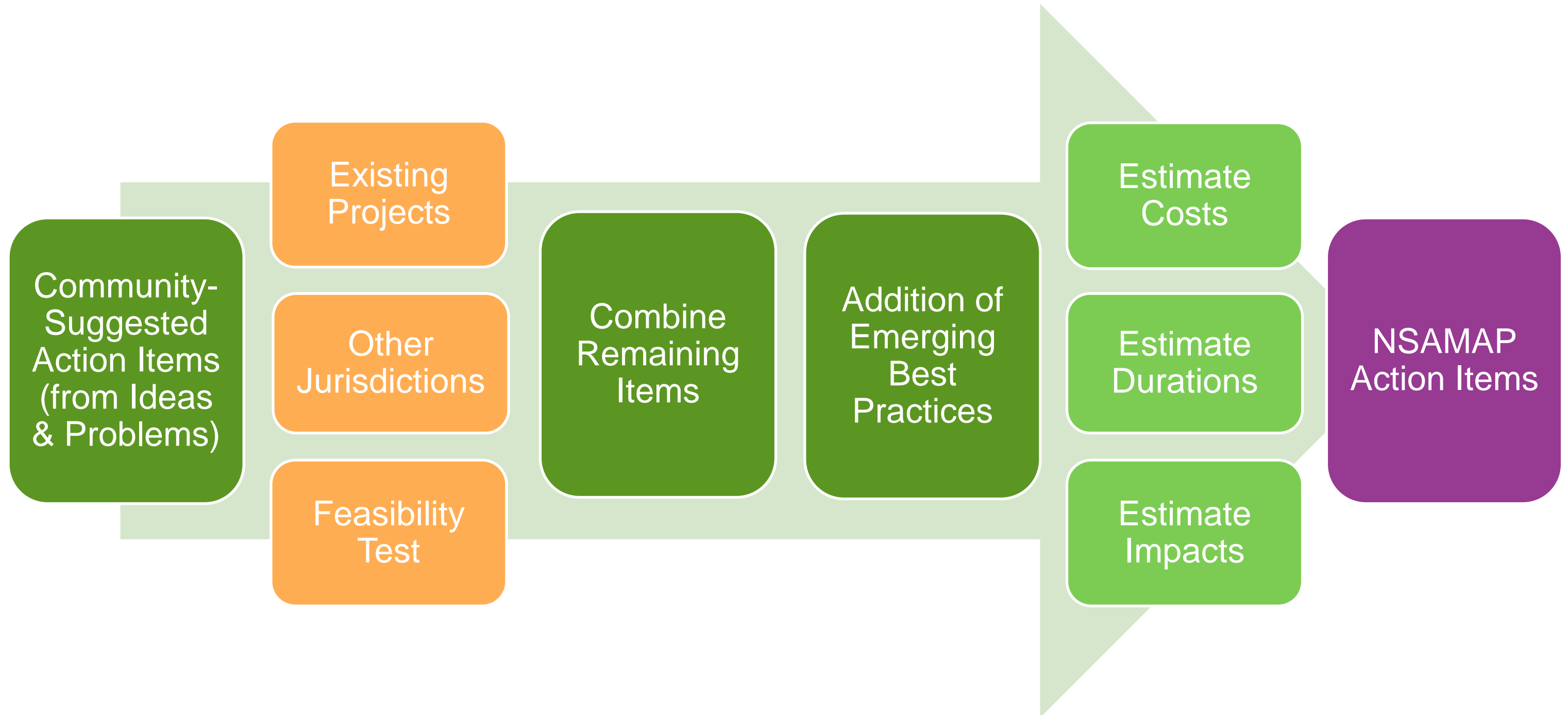


- Fix Local Circulation Problems
- Offer More Choices
- Make Other Choices **More** Attractive
- Make Driving **Less** Necessary

# Action Items Process



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# Polling on Action Items



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## Pedestrian Environment

ALL PEDESTRIAN ENVIRONMENT ACTION ITEMS WILL BE COMPLETED BY THE YEAR 2030. ALL PROJECTS WILL BE COMPLETED BY THE YEAR 2030.



### 1.1 Canal Street Full or Partial Pedestrianization with Commercial Delivery

- Estimated Cost: High
- Estimated Duration: 1.5 years design + 2 construction seasons
- Estimated Impact: High
- Shared Goals: More Choices

Some ADA improvements are already underway on Canal Street, but Pedestrian volumes on the Corridor will increase significantly to more than 3,000 in the peak hour due to the Boston Garden and Government Center Garage developments, which are both designed to funnel pedestrians onto Canal St. Pedestrians already outnumber motor vehicles on the street, and the space could be made more flexible for inviting for holding events to support local businesses and provide services for a more 24/7 residential neighborhood.

### 1.2 Cardinal O'Connell Way Shared Street

- Estimated Cost: High
- Estimated Duration: 1.5 years + 2 construction seasons
- Estimated Impact: High
- Shared Goals: Safety, More Choices, Less Congestion

While plans are underway to resolve curbside pickup and drop-off issues at the corner of Stanford and O'Connell Way (also addressed by Action Item 3.5 West End/Bulfinch Triangle Curb Use Reorganization), many other conflicts happen between vehicles, pedestrians, and bicycles along O'Connell Way. The side street is a common cut-through for trucks and shuttles, and has very narrow sidewalks that are difficult for people with disabilities. A larger project could make the street safer for pedestrians by slowing down traffic and providing a better surface to walk on, while still accommodating truck and other traffic.

### 1.3 West End Pedestrian Crossing Improvements Project

- Estimated Cost: Low to Medium
- Estimated Duration: 1 year design + construction
- Estimated Impact: High
- Shared Goals: Safety, More Choices, New Infrastructure

Some existing pedestrian crossings already exist at several locations, but many are not well maintained, and some locations where pedestrians cross the street have no crossing infrastructure whatsoever. The project could include installing new crossings, including pedestrian crossings, and/or new crossings at several locations.

## Pedestrian Environment

ALL PEDESTRIAN ENVIRONMENT ACTION ITEMS WILL BE COMPLETED BY THE YEAR 2030. ALL PROJECTS WILL BE COMPLETED BY THE YEAR 2030.



### 1.4 West End Signal Timing Improvement Project

- Estimated Cost: High
- Estimated Duration: 6 months design + 1 year construction season
- Estimated Impact: Low
- Shared Goals: Safety, More Choices, Less Congestion

Some improvements to make while on pedestrian ally could be made through adjustments to the timing of traffic signals. Some signals may not have accessibility improvements, other signals could include emergency pedestrian traffic, emergency crossings, and/or other improvements. Studies of signals in the area are being completed by the transportation department. The following signals could be included in the improvement project.

- Cambridge Street at Boston Street, New Chatham Street
- Cambridge Street at Somerset Street
- Leavenworth Circle
- Office of Boston Street Signal Timing of signals to be reviewed.

Note: See the transportation department website for more information on the West End signal timing improvement project.

### 1.5 West End Sidewalk Improvements Project

- Estimated Cost: High
- Estimated Duration: 1 year design + 2 construction seasons
- Estimated Impact: High
- Shared Goals: Safety, More Choices, Less Congestion

Some improvements to make while on pedestrian ally could be made through adjustments to the timing of traffic signals. Some signals may not have accessibility improvements, other signals could include emergency pedestrian traffic, emergency crossings, and/or other improvements. Studies of signals in the area are being completed by the transportation department. The following signals could be included in the improvement project.

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- Leavenworth Circle
- Office of Boston Street Signal Timing of signals to be reviewed.

Note: See the transportation department website for more information on the West End signal timing improvement project.

### 1.6 West End Sidewalk Improvements Project

- Estimated Cost: High
- Estimated Duration: 1 year design + 2 construction seasons
- Estimated Impact: High
- Shared Goals: Safety, More Choices, Less Congestion

Some improvements to make while on pedestrian ally could be made through adjustments to the timing of traffic signals. Some signals may not have accessibility improvements, other signals could include emergency pedestrian traffic, emergency crossings, and/or other improvements. Studies of signals in the area are being completed by the transportation department. The following signals could be included in the improvement project.

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Note: See the transportation department website for more information on the West End signal timing improvement project.



## North Station Area Mobility Action Plan



Welcome to the North Station Area Mobility Action Plan (NSAMAP) poll. NSAMAP is City of Boston project conducted through the Boston Planning and Development Agency (BPDA) that seeks to create a list of implementable action items to improve mobility in the area surrounding North Station.

Please rank the projects based on your priority for the area. Projects are separated into seven categories, (1) Pedestrian Improvements, (2) Placemaking Improvements, (3) Flex Zone (Curb Space) and Parking Improvements, (4) Bicycle Improvements, (5) Transit Improvements, (6) Shared Mobility Improvements and (7) Motorized Improvements. Answers are randomized and may appear out of order.

Select your top priority using the drop down bar to the left of each image until a response is selected for each answer. Your responses will help create priorities as projects move forward. Answers are required for all seven categories.

For background and further information, please visit the project website, available [here](#).

- \* 1. Rank (from 1-7) the following Pedestrian related improvements from most desired (#1) to least desired (#7).



Charles Circle Pedestrian Improvements

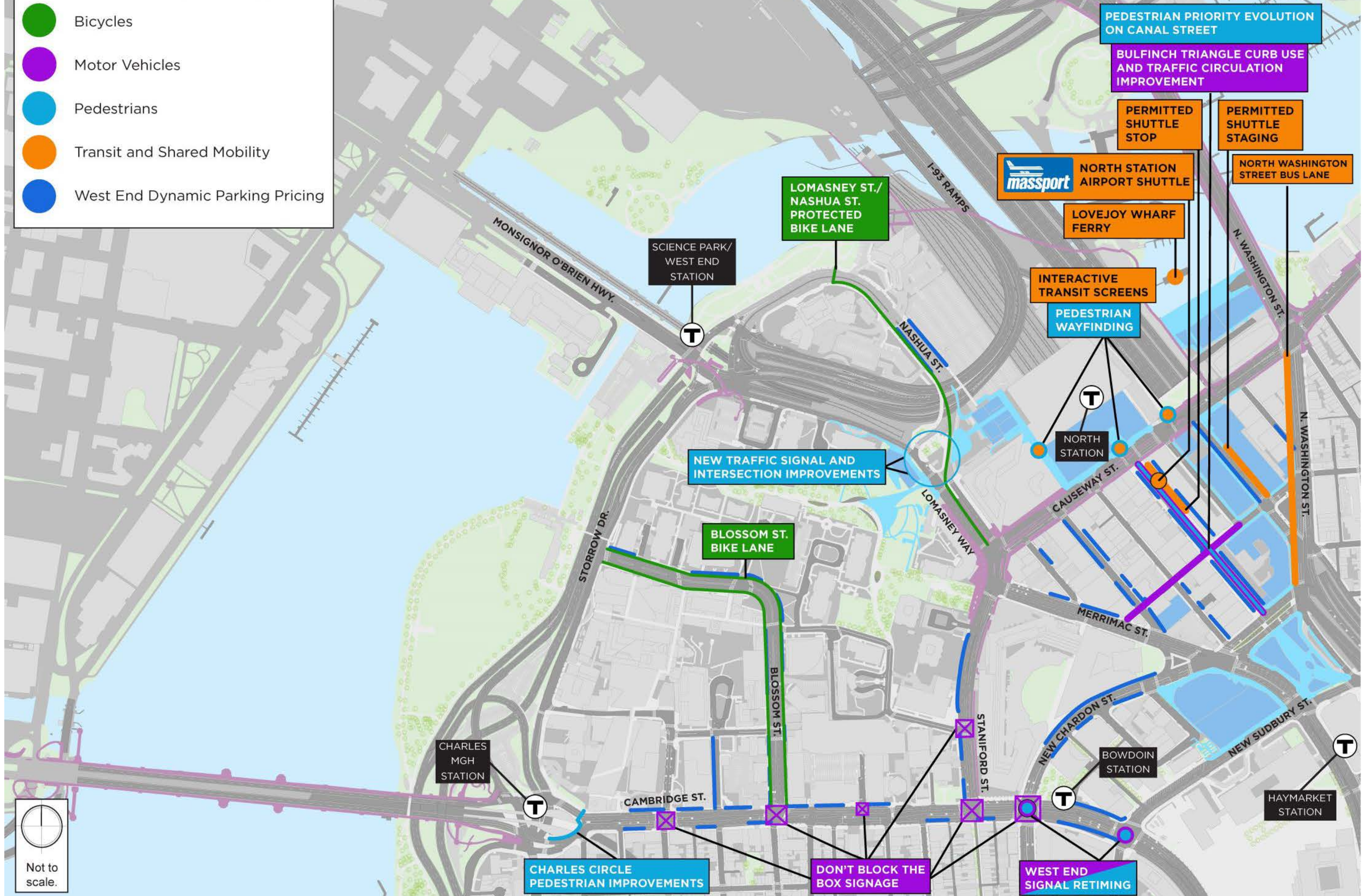
Access to the Charles/MGH MBTA Station in the middle of Charles Circle is described as difficult to dangerous by pedestrians of all ages.

An aerial photograph of a city, likely New York City, showing a complex highway interchange in the foreground. A large construction site is visible in the middle ground, featuring a tall, lattice-structured tower under construction. The background shows a dense urban landscape with numerous skyscrapers and a body of water in the distance. A semi-transparent grey banner with a white text overlay is positioned across the middle of the image. An orange triangle is on the left side of the banner.

# Action Plan – Short Term



- Bicycles
- Motor Vehicles
- Pedestrians
- Transit and Shared Mobility
- West End Dynamic Parking Pricing



PEDESTRIAN PRIORITY EVOLUTION ON CANAL STREET

BULFINCH TRIANGLE CURB USE AND TRAFFIC CIRCULATION IMPROVEMENT

PERMITTED SHUTTLE STOP

PERMITTED SHUTTLE STAGING

**massport** NORTH STATION AIRPORT SHUTTLE

NORTH WASHINGTON STREET BUS LANE

LOVEJOY WHARF FERRY

INTERACTIVE TRANSIT SCREENS

PEDESTRIAN WAYFINDING

NORTH STATION

NEW TRAFFIC SIGNAL AND INTERSECTION IMPROVEMENTS

BLOSSOM ST. BIKE LANE

LOMASNEY ST./ NASHUA ST. PROTECTED BIKE LANE

CHARLES MGH STATION

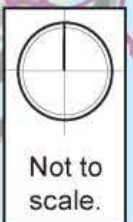
BOWDOIN STATION

HAYMARKET STATION

CHARLES CIRCLE PEDESTRIAN IMPROVEMENTS

DON'T BLOCK THE BOX SIGNAGE

WEST END SIGNAL RETIMING





# Performance-Based Meter Pricing



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- Studies have shown that managing parking supply (reducing the number of spaces) can significantly lower Single Occupancy Vehicle (SOV) use.
- To a lesser degree, adjusting parking pricing also has a significant effect on SOV use.

Source: FHWA





# Shuttle Overload – Seaport



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# Shuttle Consolidation – EZ Ride



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**MORNING** 6:20 AM to 10:50 AM





# Bulfinch Triangle Shuttle Stop



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MBT WORLDWIDE  
USDOT 1331951  
MC 306168  
CAP 29



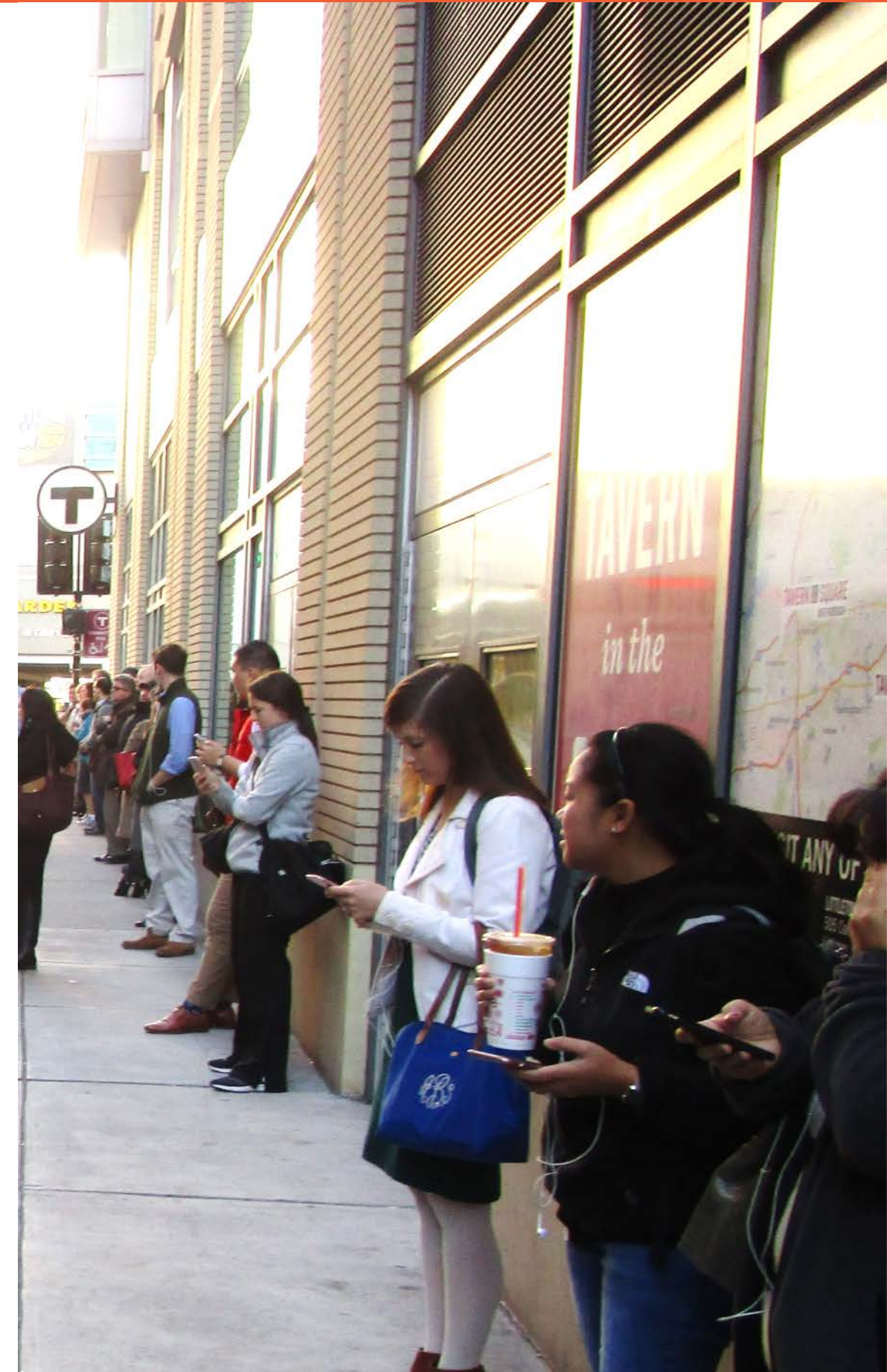
# Shuttle Stop Permitting – SF Example



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- **Citywide formalization of shuttle stops. Permits are required for their use by operators (these may or may not also be MBTA stops).**
- **To get a permit, shuttle operator must give the city access to GPS tracking for monitoring.**
- **A cost is set for each stop a shuttle operator makes at a designated shuttle stop, and this cost supports the monitoring of shuttles at the city.**
  - Operator estimates frequency, monitoring is used to make adjustments annually.





# MBTA Ferry at Lovejoy Wharf



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An aerial photograph of a city, likely New York City, showing a complex highway interchange in the foreground. A large stadium with a white, ribbed roof is under construction. In the background, a dense urban landscape with numerous skyscrapers and a body of water is visible. A semi-transparent grey banner with an orange triangle on the left side is overlaid on the image, containing the text "Action Plan – Long Term".

# Action Plan – Long Term






# Long-Term Action Items



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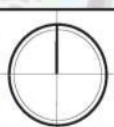
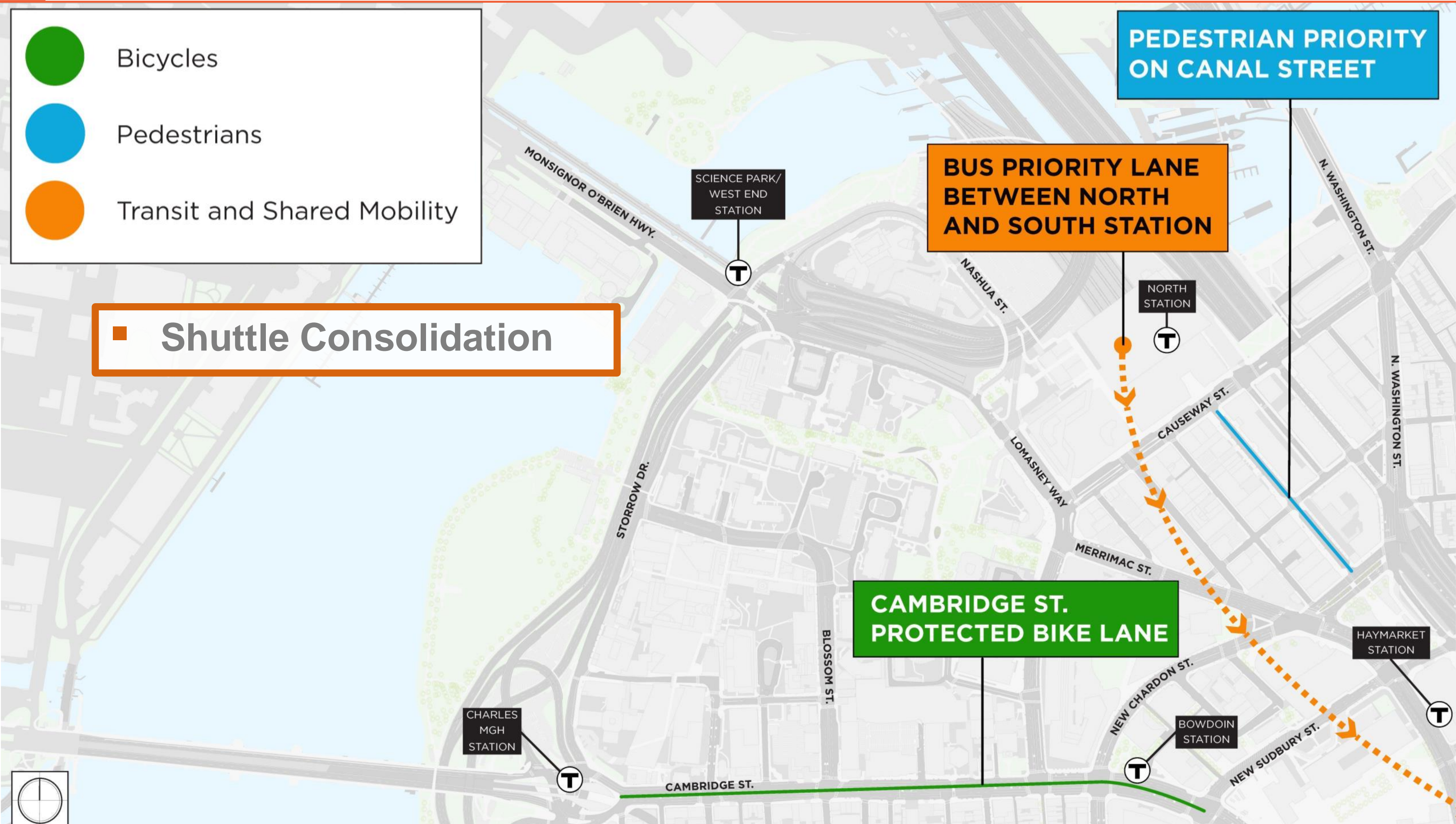
-  Bicycles
-  Pedestrians
-  Transit and Shared Mobility

## Shuttle Consolidation

**PEDESTRIAN PRIORITY ON CANAL STREET**

**BUS PRIORITY LANE BETWEEN NORTH AND SOUTH STATION**

**CAMBRIDGE ST. PROTECTED BIKE LANE**







# Design Charrette: Bulfinch Triangle



# Feedback – Motorized Traffic



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Public Meeting Poll Results	Pts
<b>Lomasney Way/Nashua St/Martha Rd Intersection Improvements – Near, Long Term</b>	<b>1275</b>
<b>Don't Block the Box Markings and Signage at Key Locations</b>	<b>825</b>
<b>Bulfinch Triangle Traffic Circulation Improvements</b>	<b>650</b>
West End Signal timing Improvement Project	600
Adaptive Signal Technology Study	425
Residential Permit for Neighborhood Access During TD Garden Events	425
Encourage Employers to form Partnerships for TDM, Perform Annual TDM Reporting	425
New Signal for Left Hand Turn into Charles River Plaza	150

Online Ranking Poll Results	Rank
<b>Adaptive Signal Technology Study</b>	<b>3.79</b>
<b>West End Signal Timing Improvement Project</b>	<b>3.83</b>
<b>Encourage Employers to form Partnerships for TDM, Perform Annual TDM Reporting</b>	<b>4.11</b>
Don't Block the Box Markings and Signage at Key Locations	4.22
Lomasney Way/Nashua St/Martha Rd Intersection Improvements – Near, Long Term	4.23
New Signal for Left Hand Turn into Charles River Plaza	5.36
Bulfinch Triangle Traffic Circulation Improvements	4.64
Residential Permit for Neighborhood Access During TD Garden Events	5.83



# Feedback – Transit



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Public Meeting Poll Results	Total Points
Lovejoy Wharf Ferry	2100
Consolidation of local MBTA routes, shuttles, tourist bus loop/shuttle stop consolidation study	950
North Washington Street Inbound Transit Lane to Haymarket	900
Airport Shuttle from North Station	600
Bus Priority Lane Connections N. Station Area to S. Boston	575
North Washington Bus Stop Improvements Project	450
Create Public Transit App Kiosks at Major MBTA Stations	375

Online Ranking Poll Results	Avg. Rank
-----------------------------	-----------

Bus Priority Lane Connections N. Station Area to S. Boston	2.77
Airport Shuttle from North Station	3.55
North Washington Street Inbound Transit Lane to Haymarket	3.57
Consolidation of local MBTA routes, shuttles, tourist bus loop/shuttle stop consolidation study	3.97
Lovejoy Wharf Ferry	4.52
North Washington Bus Stop Improvements Project	4.53
Create Public Transit App Kiosks at Major MBTA Stations	5.08

\* 4. Rank (most des

ents from



# Feedback – Pedestrian Environment



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Public Meeting Poll Results	Total Points
<b>Canal Street Pedestrianization</b>	<b>2100</b>
<b>Charles Circle Pedestrian Improvements</b>	<b>950</b>
West End Sidewalk Improvement Project	675
West End Signal Timing Improvement Project	450
West End Pedestrian Crossing Improvements	350
West End Wayfinding Project	325
Cardinal O’Connell Way Shared Street	200

Online Ranking Poll Results	Avg. Rank
<b>Charles Circle Pedestrian Improvements</b>	<b>2.74</b>
<b>Canal Street Pedestrianization</b>	<b>3.05</b>
West End Pedestrian Crossing Improvements	3.19
West End Sidewalk Improvement Project	4.15
West End Signal Timing Improvement Project	4.59
Cardinal O’Connell Way Shared Street	4.81
West End Wayfinding Project	5.48

\* 4. Rank (from most desired

vements from



# Overall Goals



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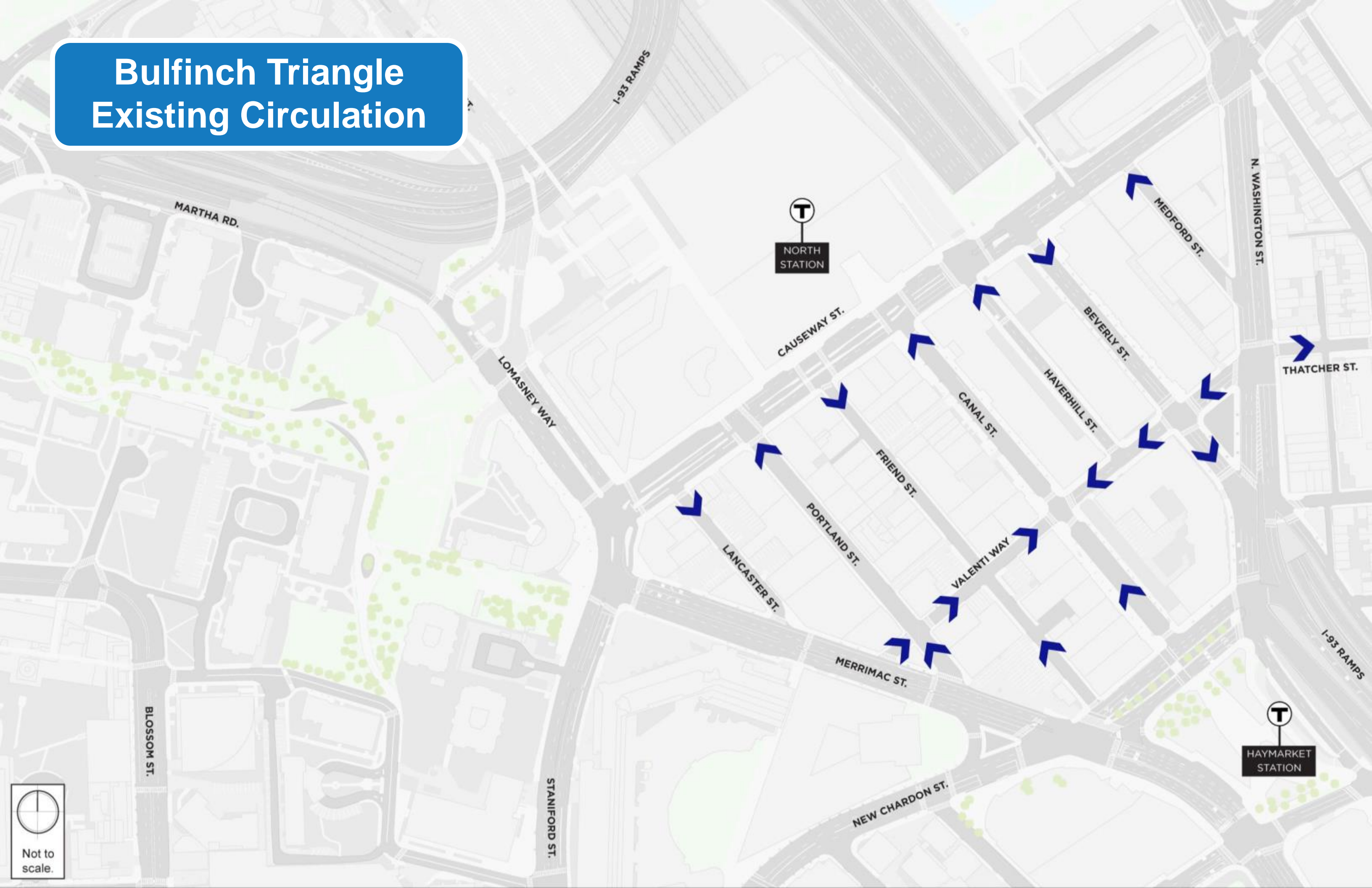
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- **Easier Vehicle Access**
- **Pedestrian Priority on Canal**
- **Organize Shuttles**
- **More services for residents**
- **More customers for local businesses**



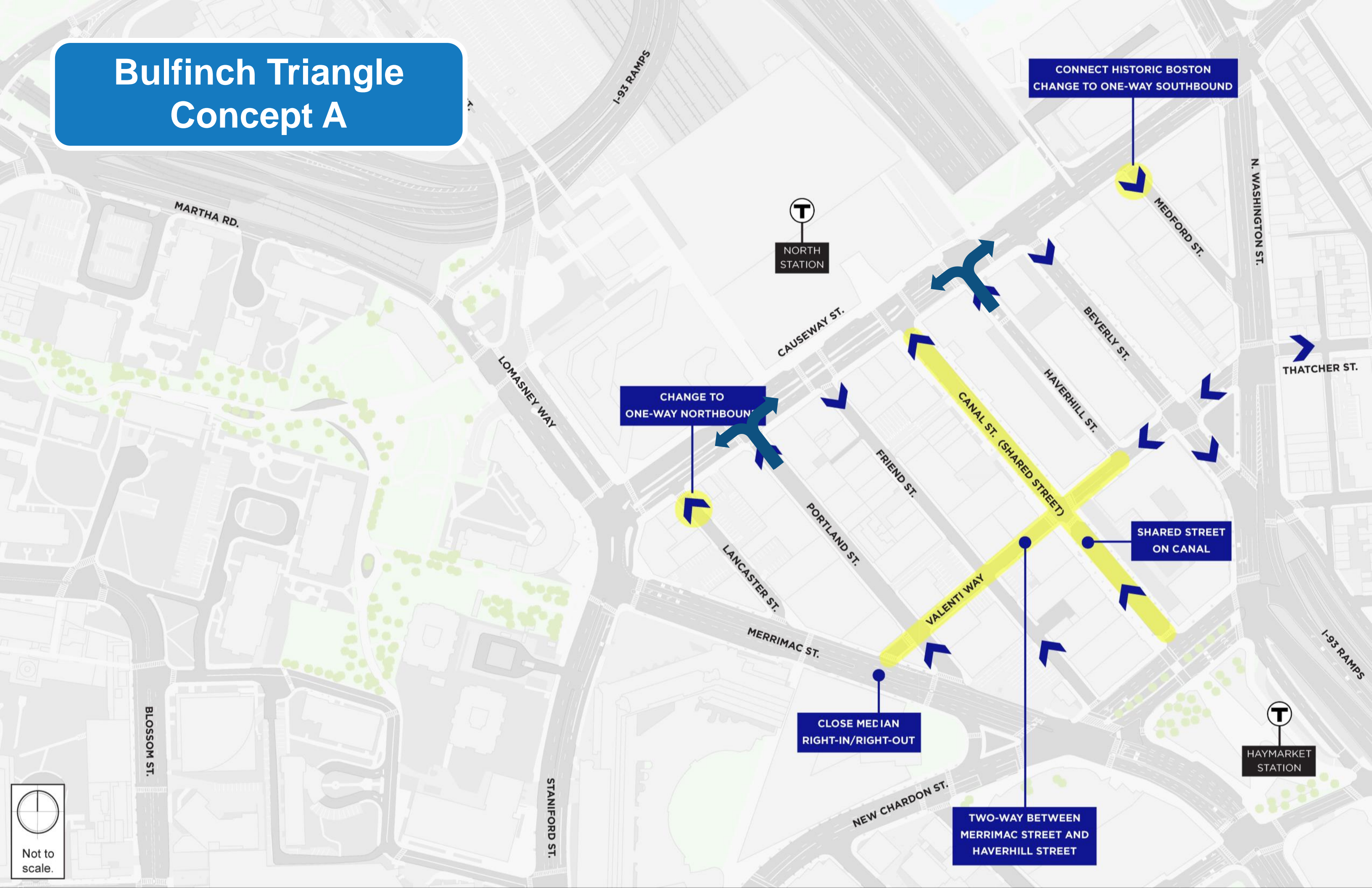


# Bulfinch Triangle Existing Circulation





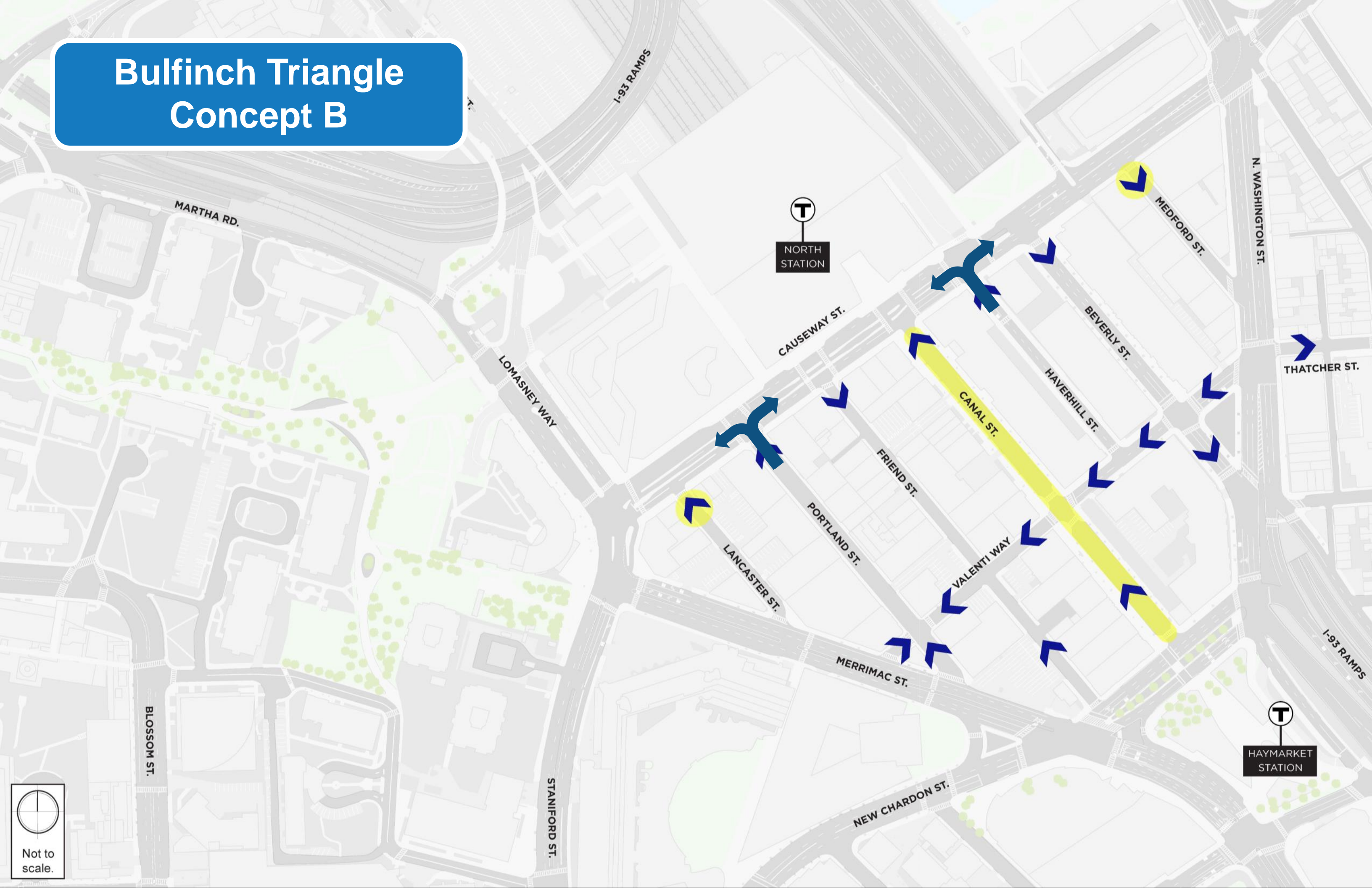
# Bulfinch Triangle Concept A



Not to scale.



# Bulfinch Triangle Concept B



Not to scale.



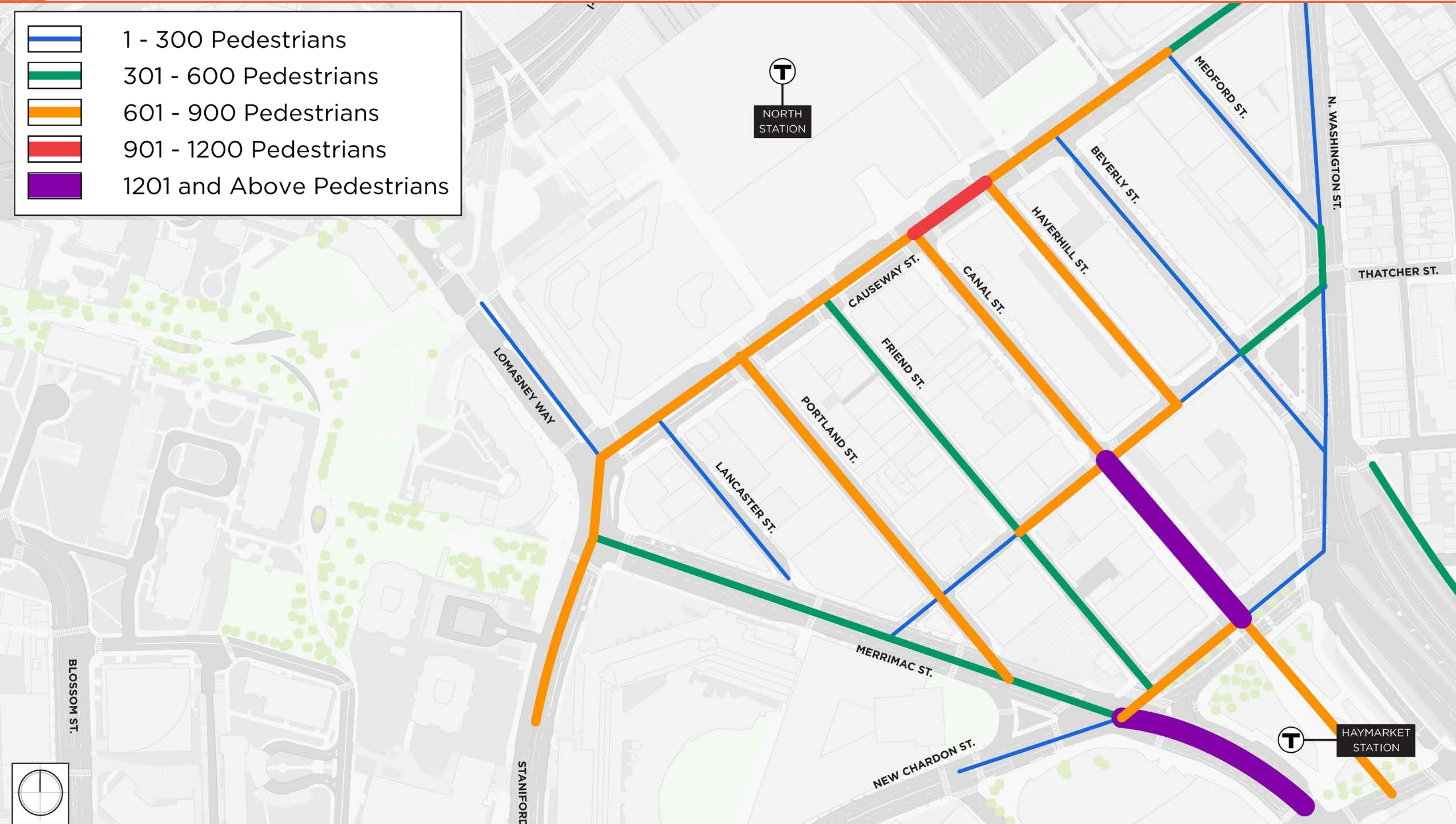
# Pedestrian Volumes AM



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- 1 - 300 Pedestrians
- 301 - 600 Pedestrians
- 601 - 900 Pedestrians
- 901 - 1200 Pedestrians
- 1201 and Above Pedestrians





# Pedestrian Volumes PM



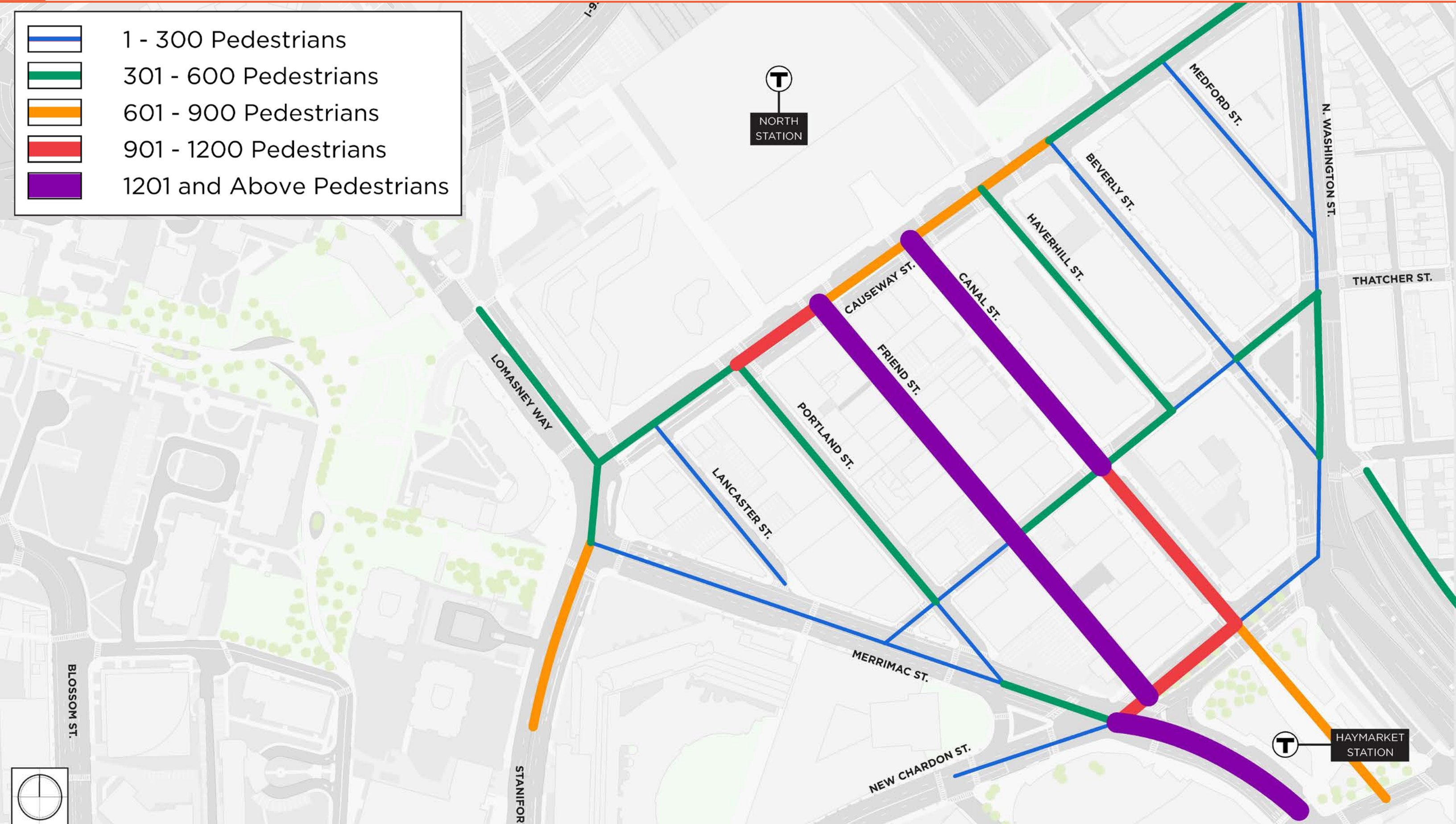
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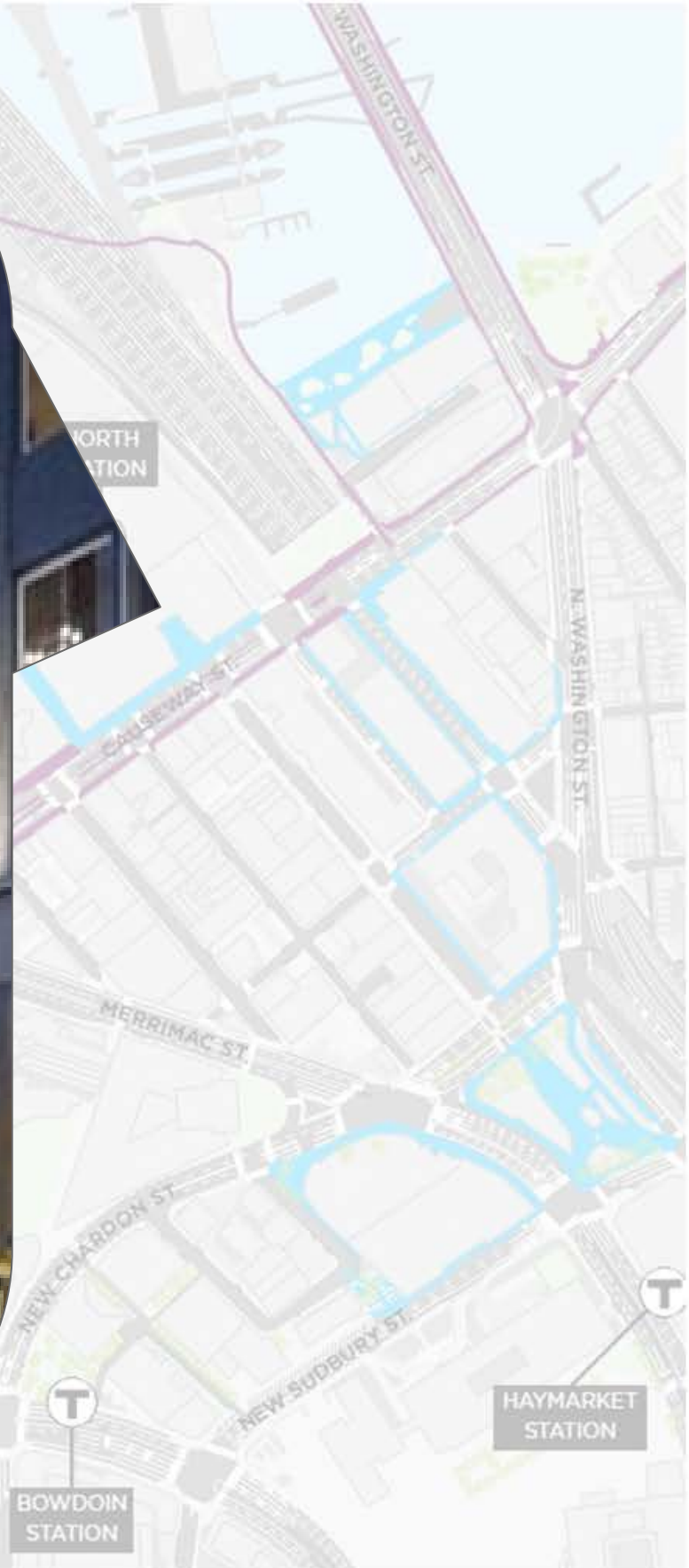




# TD Garden and North Station Entrance



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# Govt. Center Garage and Haymarket MBTA



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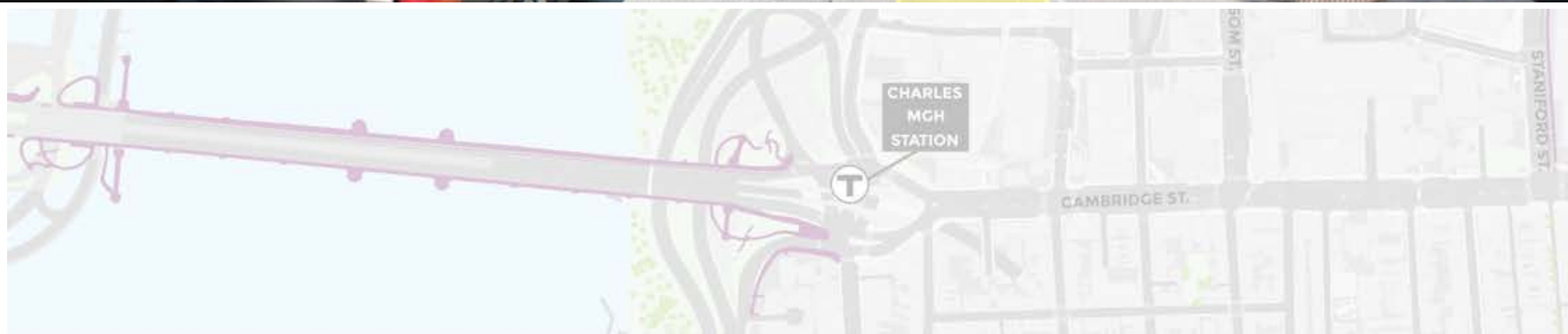
# How will Canal relate?



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● Development  
● Infrastructure





# Causeway Shuttle Stop Relocated



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# Haverhill Street Shuttle Stop



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MBT WORLDWIDE  
USDOT 1331951  
MC 306168  
CAP 29



# Haverhill Street Shuttle Stop



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# Haverhill Street Shuttle Stop



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# Haverhill Street Shuttle Stop



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# Shuttle Stop Space Needs



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- All of Haverhill Street is currently marked for Shuttle use 6am-7pm
- In observations, operations became problematic with < 100 feet of curb space.
- Maximum bus presence was three full-sized buses (120'+ 30'=150', assuming no parallel parking)
- However, space needs could be reduced with scheduling changes and/or shuttle consolidation.
- Staging is minimal at peak times.



# Shuttle Stop Space Needs



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- Delivery trucks compete with shuttles in the morning.
- All of Haverhill becomes police parking during TD Garden Events starting at 5pm.



# Shuttle Stop Space Needs (PM Peak)



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	Full Size Buses (35-40')			Short Buses (25'-30')							
	Partners	Vertex	WTC	Local Motion	Partners	Converse	Tower Point	45D	Channel Center	IDB	Unidentified
4:00 PM	█				█	█	█				
4:05 PM		█									
4:10 PM	2 █								█		
4:15 PM		█								█	
4:20 PM					█				█		█
4:25 PM	█									█	
4:30 PM	█		█		█						
4:35 PM		█		█						█	█
4:40 PM	2 █				█						█
4:45 PM		█			█						
4:50 PM					█	█			█	█	
4:55 PM	2 █	█								█	
5:00 PM	█								█		





# Consolidation Progress



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**Signature Boston (MCCA)  
combined shuttle program:**

- **Price Waterhouse Cooper**
- **Goodwin Procter**
- **Vertex**
- **Beacon Capital**

**Goal: six employers total.**



# Signature Boston Route



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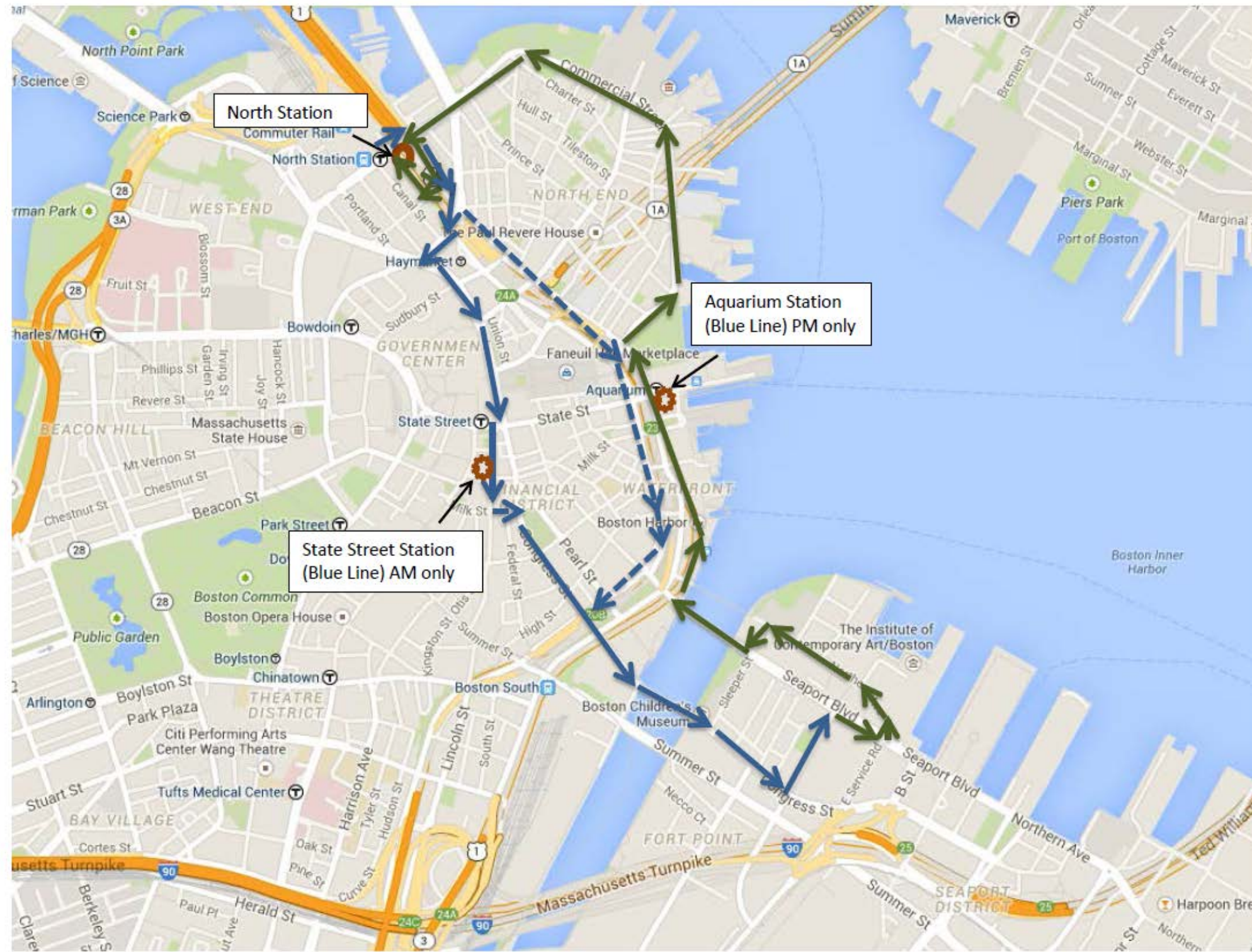


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## North Station to South Boston Waterfront



- PM route to North Station
- AM route to South Boston Waterfront locations
- primary stop
- express route via I-93 South and Exit 23/Purchase Street (not officially implemented yet)
- limited service stop

- Not accessible
- Fare System?



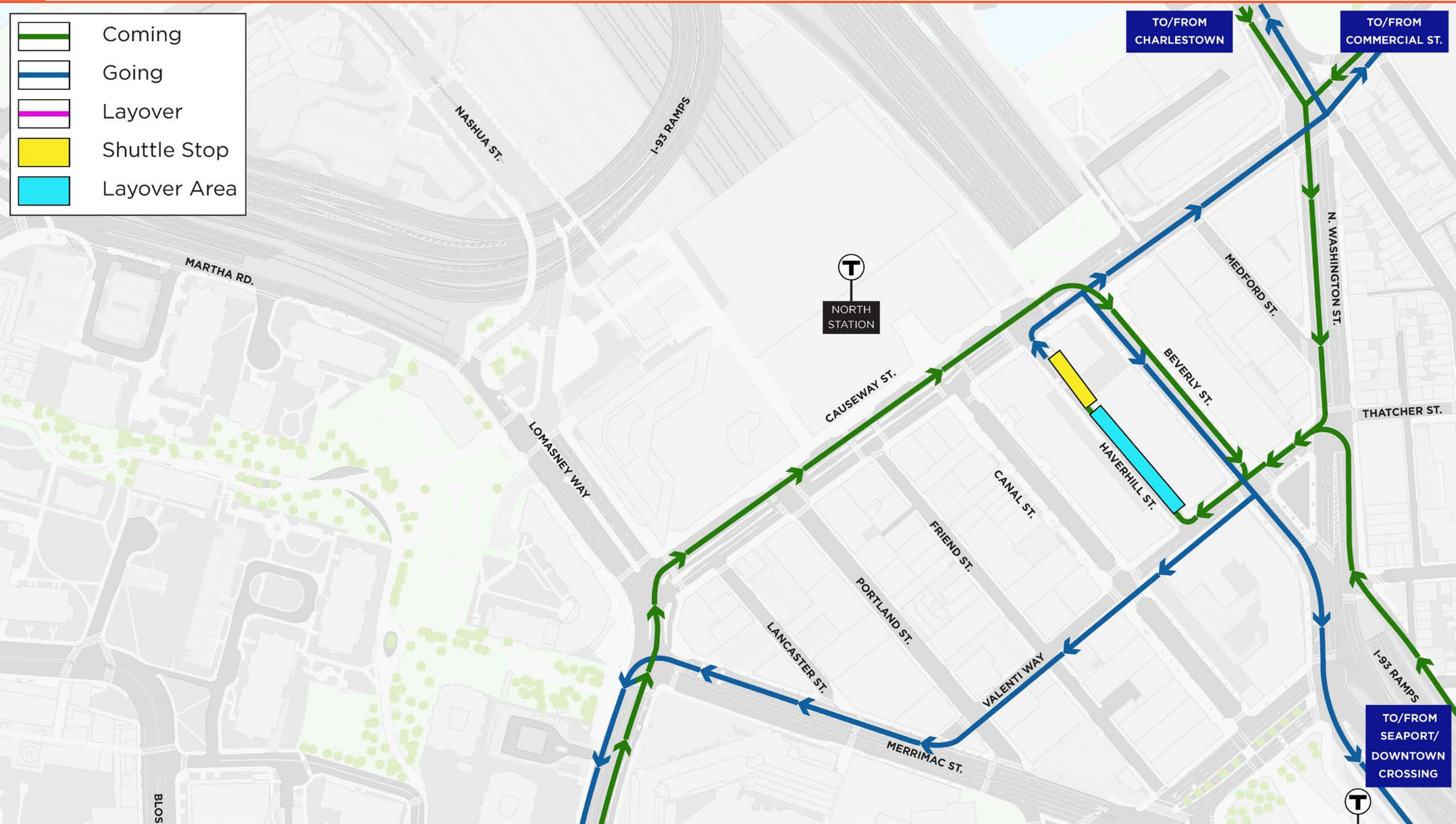
# Existing Shuttle Stop



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- Coming
- Going
- Layover
- Shuttle Stop
- Layover Area









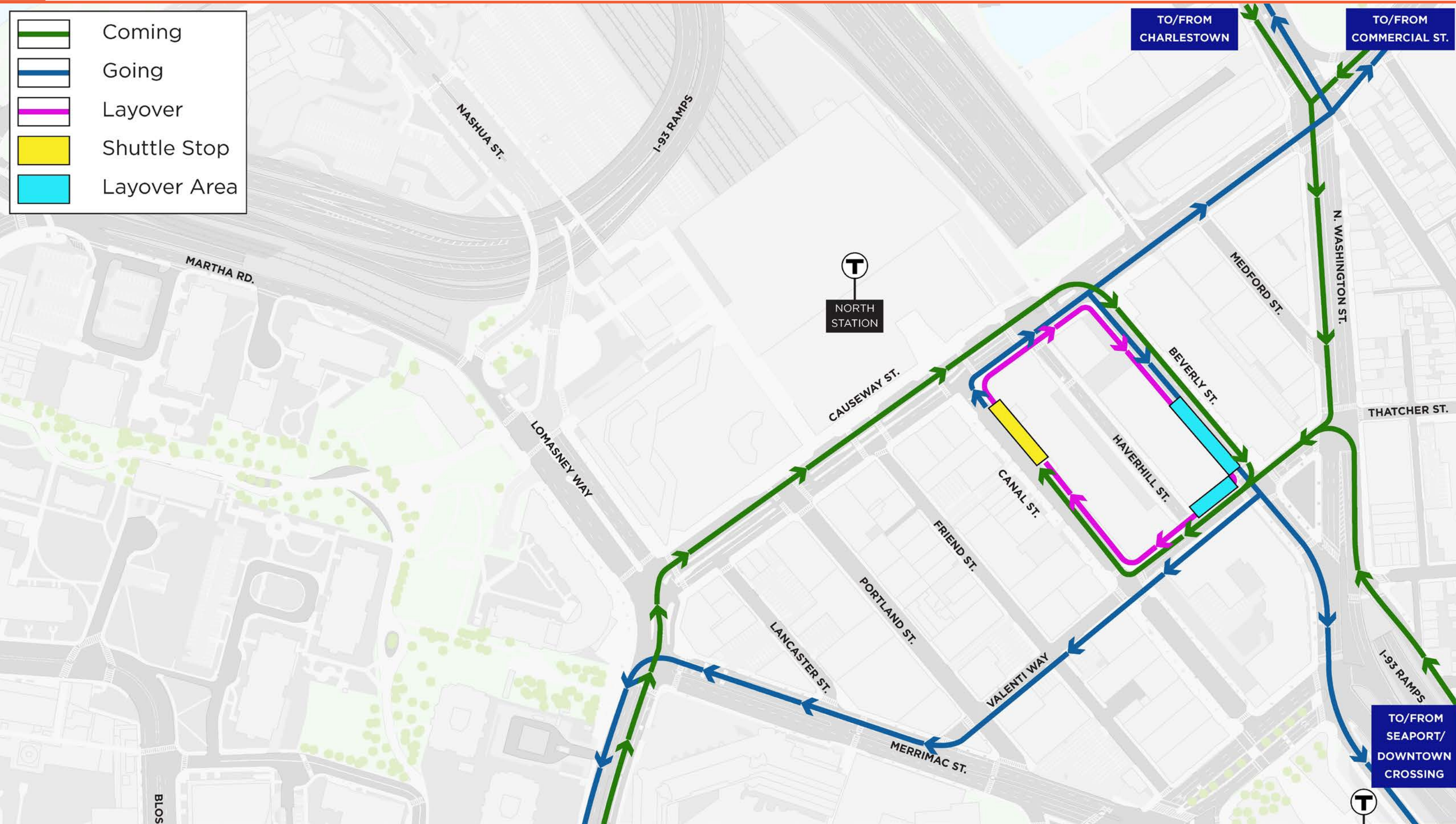
# Idea B: Put Customers on Canal St.



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- Coming
- Going
- Layover
- Shuttle Stop
- Layover Area





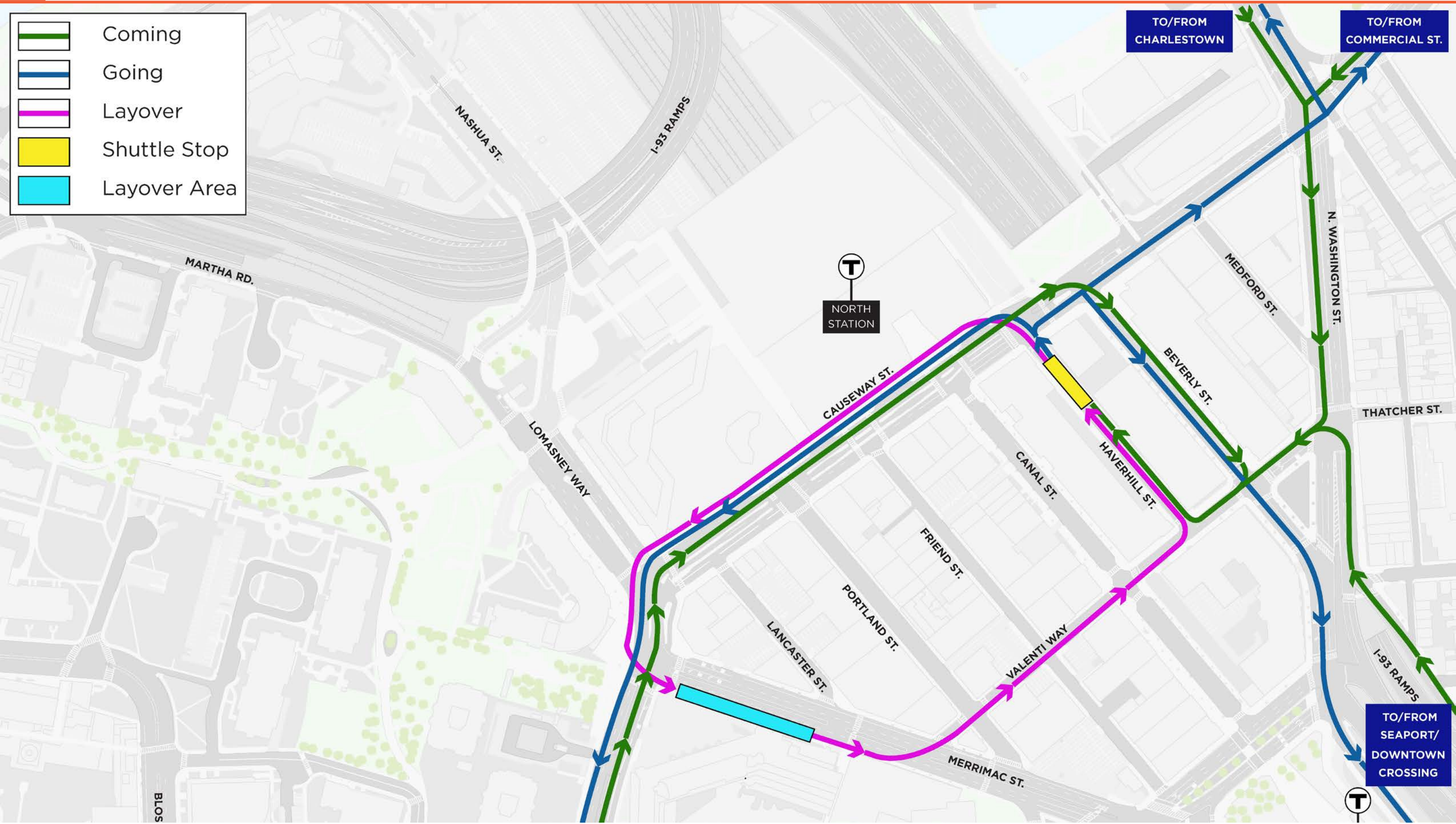
# Idea C: Stage on Merrimac St.



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- Coming
- Going
- Layover
- Shuttle Stop
- Layover Area





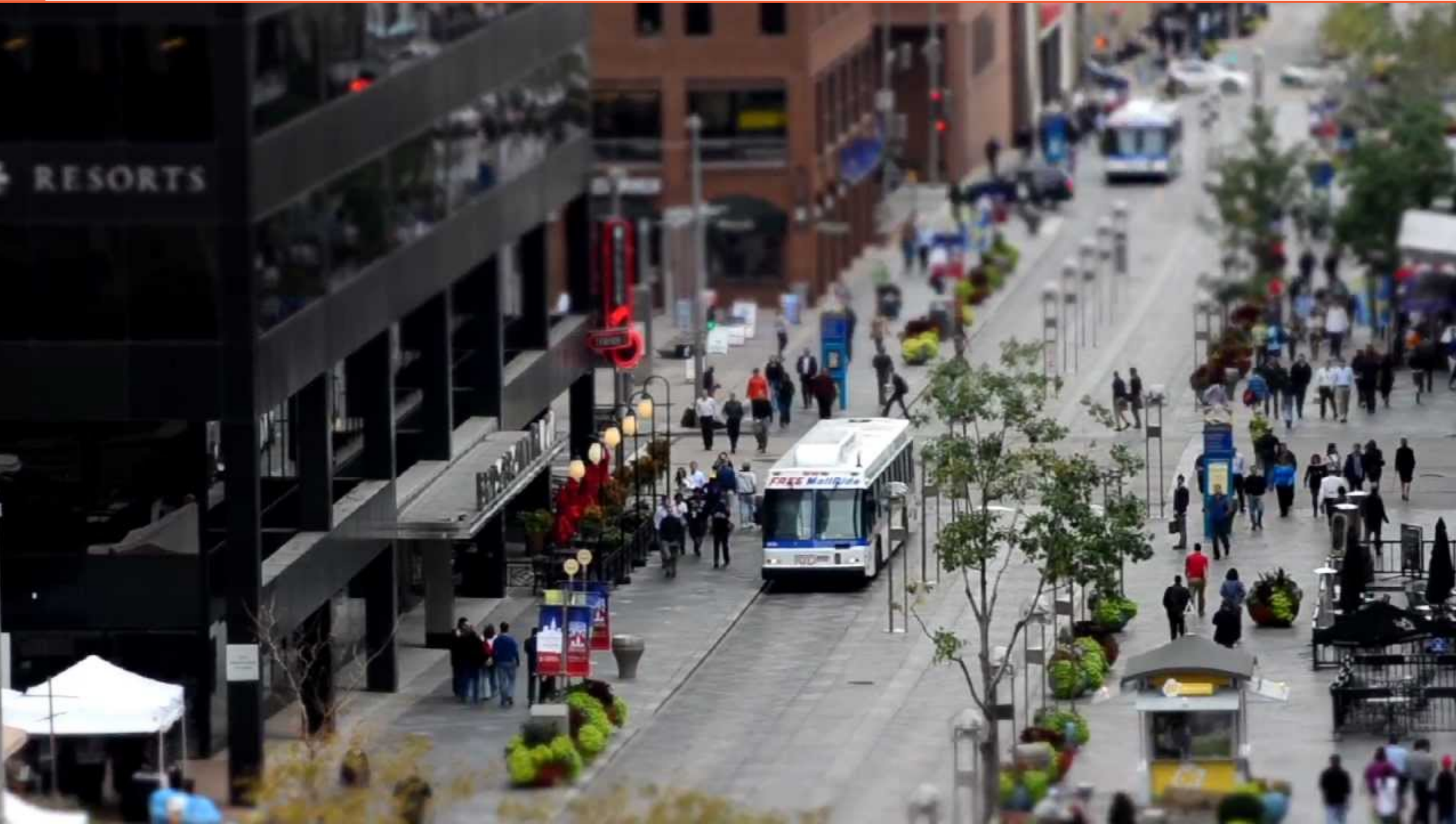
# 16<sup>th</sup> Street Mall – Shuttles and Peds



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# Parklets for Evolving the Streetscape



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conception  
DAVOUST LESTAGE



# Boston Examples — Yawkey Way



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# Boston Examples — North End



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# Ideas for Canal?



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# Ideas for Canal?



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# Ideas for Canal?



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# Parklets for Evolving the Streetscape



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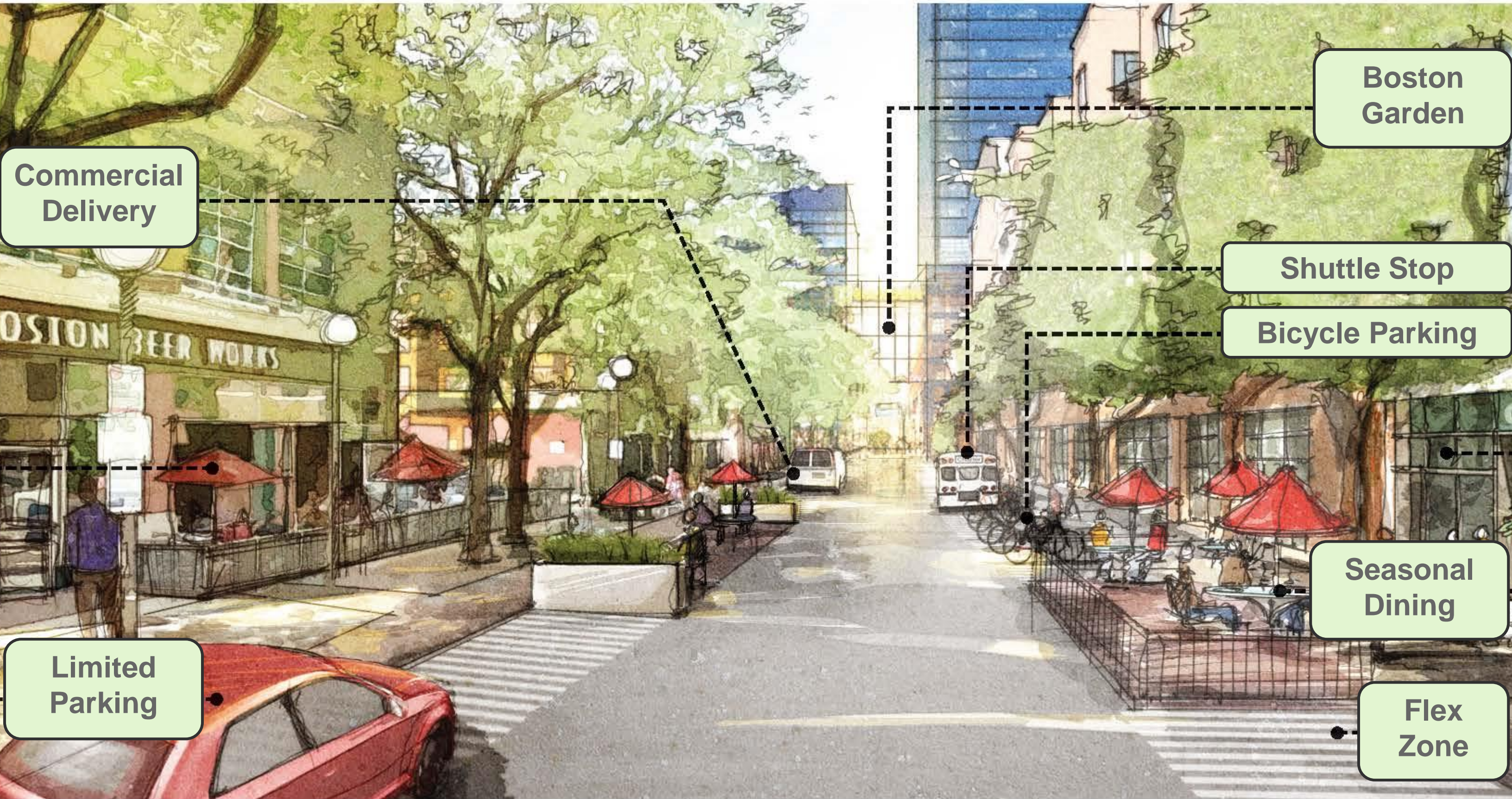




# Parklets for Evolving the Streetscape



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Commercial Delivery

Boston Garden

Shuttle Stop

Bicycle Parking

Limited Parking

Seasonal Dining

Flex Zone



# Open Canal Street



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# The Element of Time



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- **Early Morning:**  
Commercial Delivery and Service Allowed
- **11am to 4pm:**  
Lunch Hour, limited traffic allowed
- **4pm to 9pm:**  
Evening Commute and Events, no traffic allowed





# Exercise #1 Primary Goals



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- **Make the Triangle easier to navigate for vehicles**
  - Change directions Valenti Street and at least one other street
  - Emphasize Portland Street over Haverhill Street for left turns
- **Create a nice shuttle stop & out of the way shuttle staging area**
- **Let us know about curb space and other needs!**



# Exercise #1 Secondary Goals



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- **Prevent cut-through traffic**
- **Minimize shuttle delays**
- **Direct traffic away from Canal Street**



# Exercise #2 Primary Goals



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- **Give Canal Street a pedestrian feel (for at least part of the day)**
- **Slow Traffic Down**
- **Low Volume Curb uses**
- **Include shuttle stop?**



# Exercise #2 Secondary Goal



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- **Allow for Commercial Delivery for at least part of the day**



# Things to Remember



- **We're planning experiments, not permanent conditions!**
- **Without sacrifice there can be no change.**
- **Be creative! Consider & record all ideas (this is a brainstorm).**