

# **Public meeting notes and procedures**

### Notification of video recording

- <u>This public meeting will be recorded</u>. The Massachusetts Department of Transportation may choose to retain and distribute the video, images, audio, and/or chat transcript.
- All parts of this meeting are considered public record.
- By continuing attendance with this public meeting, you are consenting to participate in a recorded event.
- If you are not comfortable being recorded, you may choose to excuse yourself from the meeting.

### Important notes

• The meeting will be open to questions and answers at the end of the formal presentation.

All questions and comments are welcome and appreciated, however we do request that you refrain from any disrespectful comments.



# Notice of MassDOT's policy on diversity and civil rights

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- MassDOT complies with all federal and state civil rights requirements preventing discrimination based on sex, race, color, ancestry, national origin (limited English proficiency), religion, creed, gender, sexual orientation, gender identity or expression, or veteran's status.
- We welcome the diversity from across our entire service area. If you have any questions or concerns, please visit https://www.mass.gov/nondiscrimination-in-transportation-program to reach the Office of **Diversity and Civil Rights.**

### Thank you for joining our meeting. We appreciate your participation!



# Agenda

- 01 Welcome
- 02 Project Background
- 03 Purpose and Need
- 04 Traffic and Safety
- **05** Intersection Type Education
- **06** Alternative Options
- 07 Next Steps
- 08 Discussion



# **Presentation Participants**

- MassDOT Project Manager
  - Joseph Breen, P.E.
- MassDOT District 6 Transportation Planner
  - Ben Muller
- Howard Stein Hudson, Design Consultant
  - Matthew Jasmin, P.E., PTOE
- Howard Stein Hudson, Traffic Lead
  - Mike Pompili
- Howard Stein Hudson, Community Engagement Lead
  - Erin Reed



# How did we get here?

### 2023 October

K-Circle & Columbia Road Interchange Project Initiation 2023 November

Morrissey Blvd Study PIM #1

### 2023 December

K-Circle & Columbia Road Interchange Data Collection

### 2024 March

K-Circle & Columbia Road Interchange Project Scoping & Preliminary Project Area Analysis

### 2025 April

K-Circle & Columbia Road Interchange Public Information Meeting #1



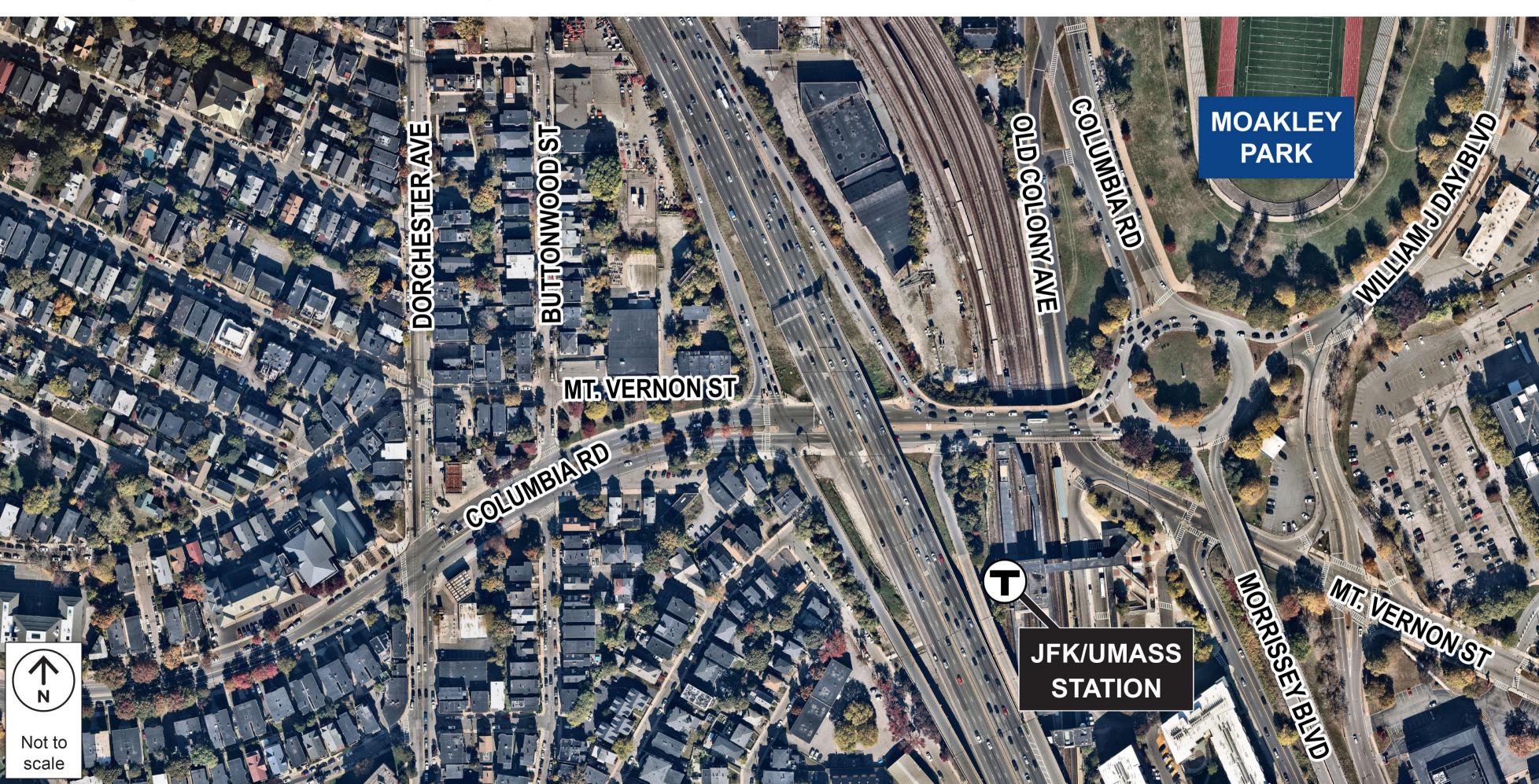


# **O** Site History

### **Project Location – 1980's**



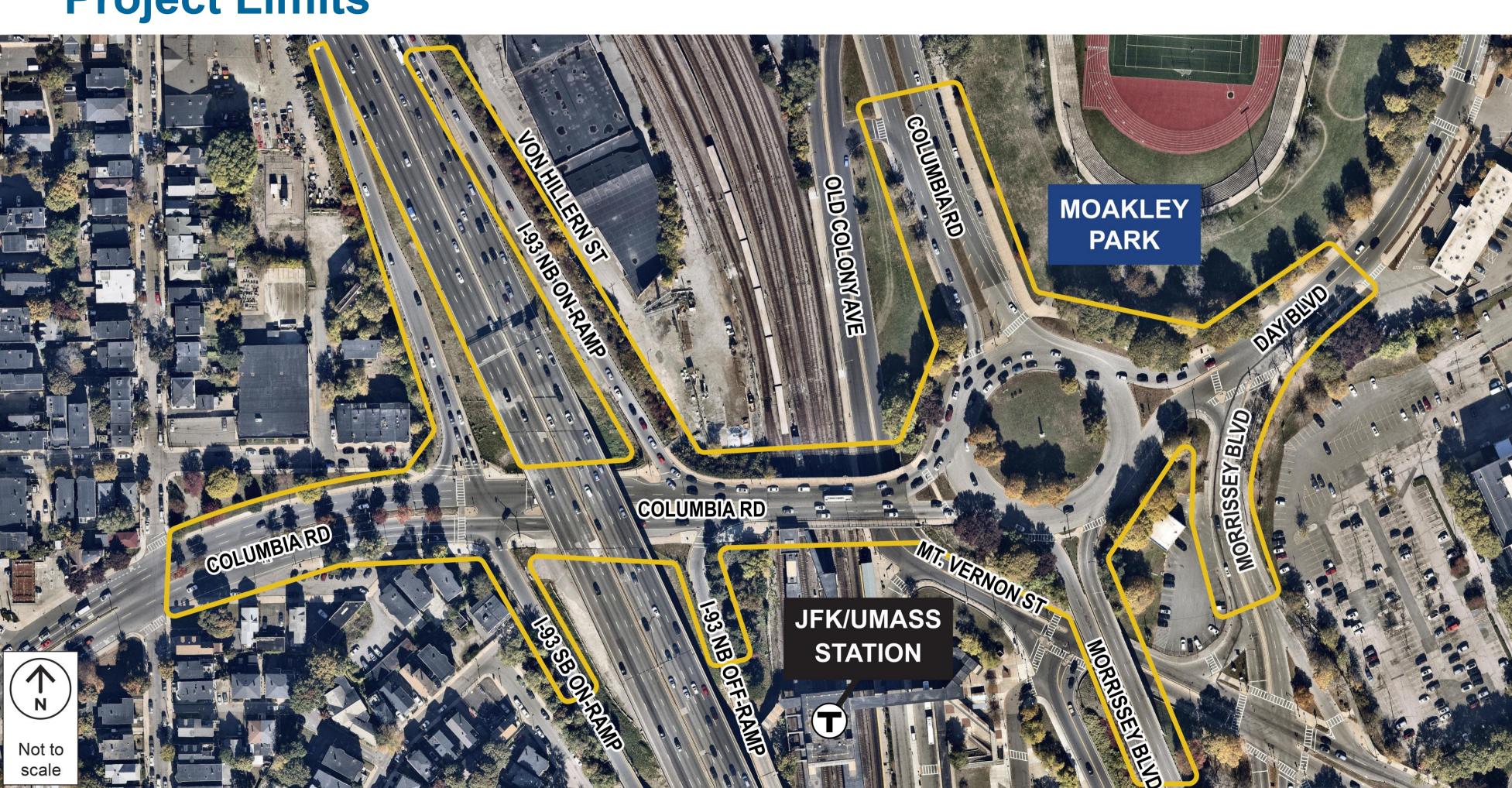
### **Project Location - Today**



# KOSCIUSZKO CIRCLE

Why was this project initiated?

# **Project Limits**



### **Site Conditions**

- Safety High Crash Locations
- Barriers to multimodal mobility and access •
- Deficient & Obsolete Structures lacksquare
- **Congestion & Frustration** ullet
- Integrated & cohesive multimodal transportation network improvements needed lacksquare
- Existing and projected future congestion •
- Projected adjacent land use changes ullet



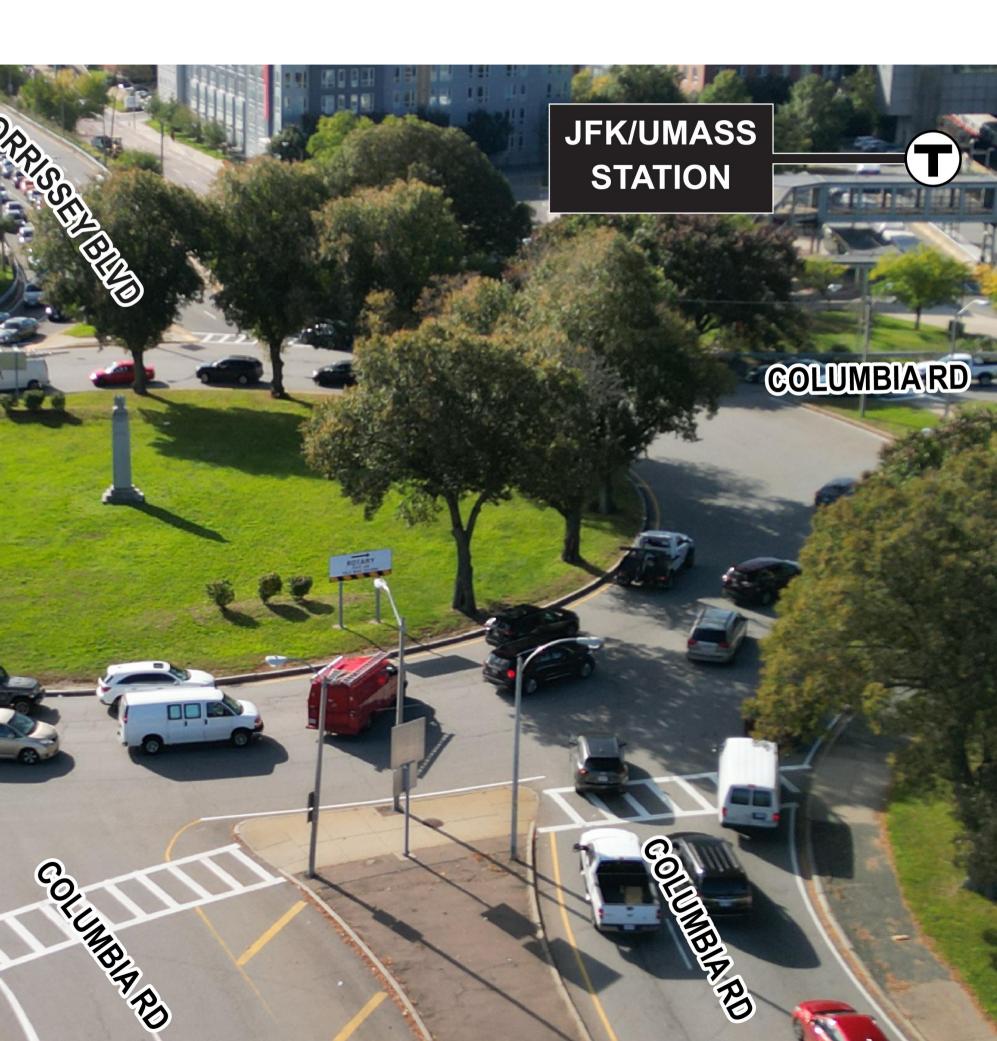
# **Existing K-Circle**





Not to scale

MOAKLEY PARK



# **Existing Columbia Road Bridge**



15

## **I-93 SB Ramp Intersection**



### MOAKLEY PARK



### JFK/UMASS STATION

GOLUMEARD



# What do we want to accomplish?

### **Project Objectives**

- Improve safety for all users/modes (Drivers, walkers, cyclists, transit/rail users) ullet
- Modernize multimodal connections in the neighborhood (People walking & biking) ullet
- Support East-West Connectivity for all modes  $\bullet$
- Mitigate congestion ullet
- Accommodate projected area growth •
- Rehabilitate the Columbia Road Bridge over MBTA Rail lacksquare
- Coordinate with MBTA development & transit improvements •
- Provide opportunities to enhance public realm (lighting, landscape, surface) • treatments, public art)



# OLD COLONY AVE

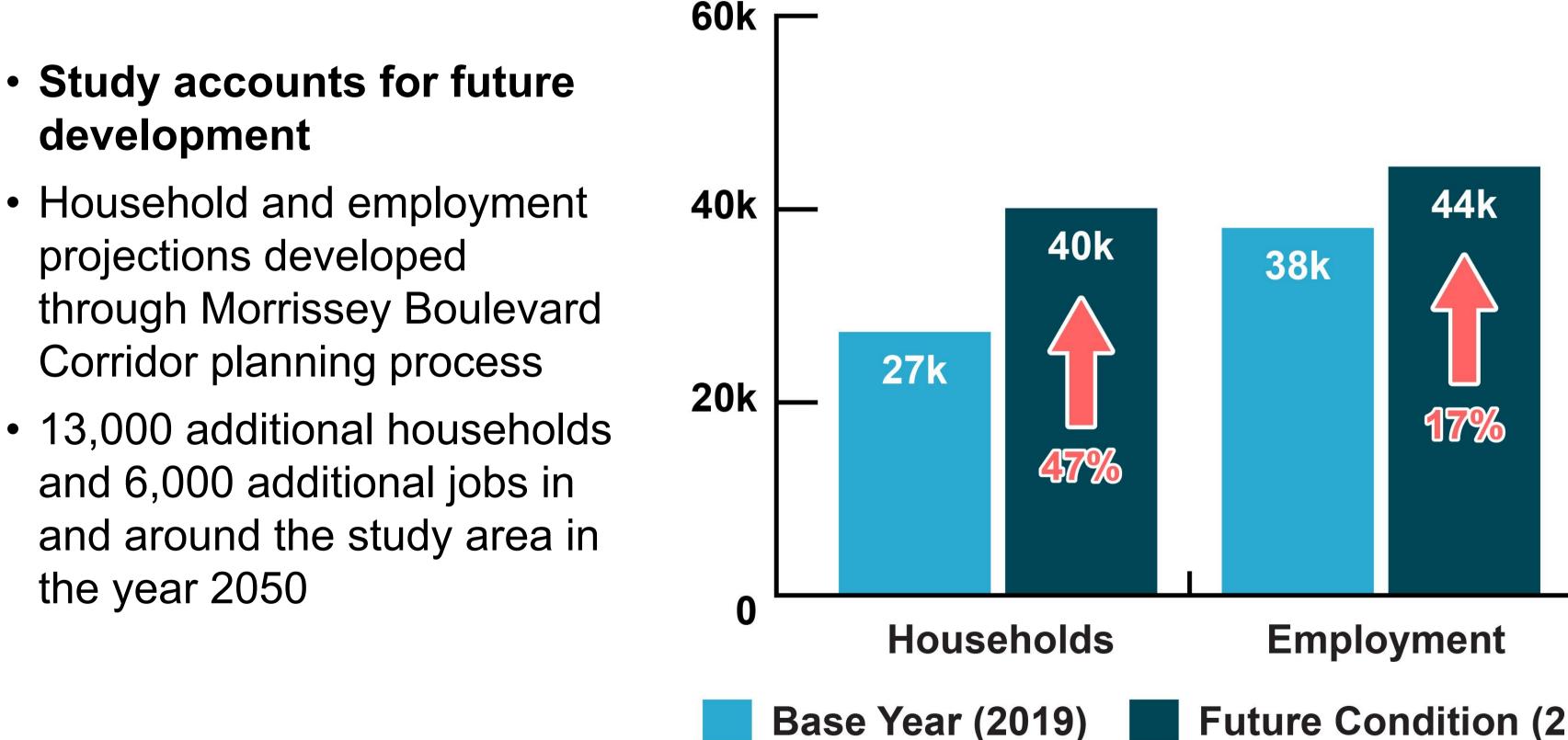
### JFK/UMASS STATION

GOLUMBIARD



# Traffic and Safety

# **Future Traffic Volume Projection (Forecast Year 2050)**

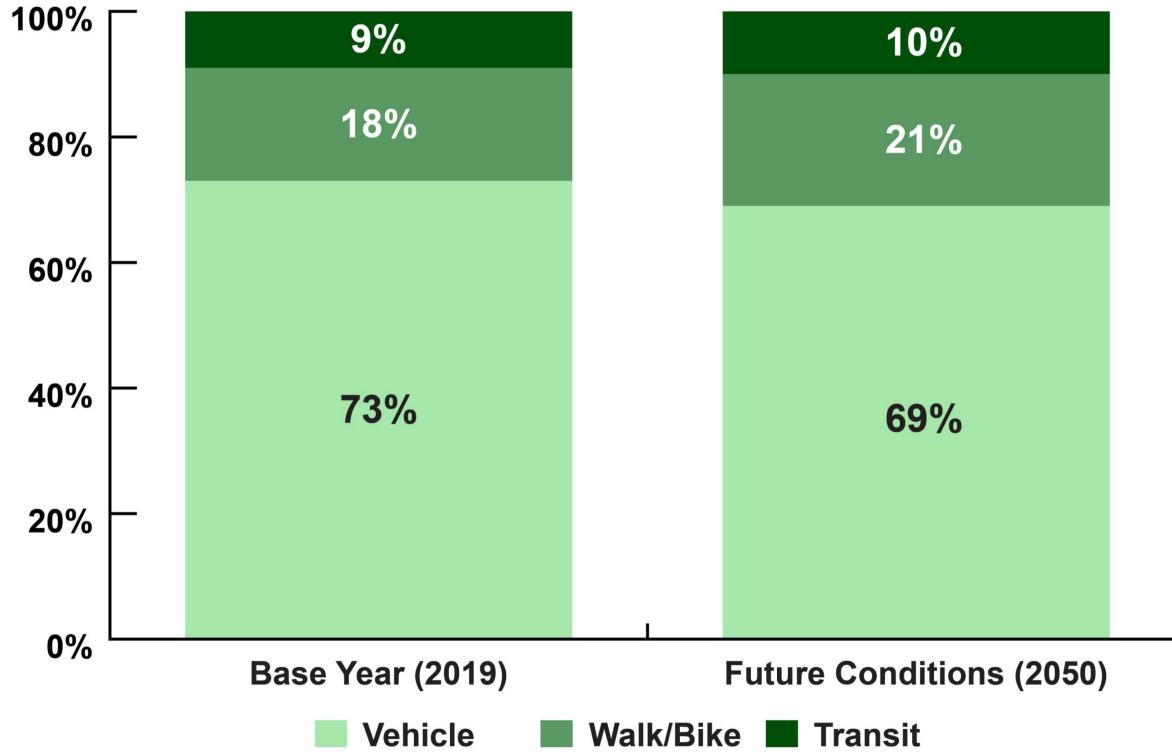


**Future Condition (2050)** 



# **Future Travel Mode Projection (Forecast Year 2050)**

 Anticipated increase in walking, biking, and transit trips in the year 2050





**JORCHESTER AVE** 

**BUTTONWOOD ST** 

### Future Traffic Operations – Weekday a.m. Peak (No Improvements)

YON HILLERN ST

1.93 NB ON RAMP

193 SB ON RAMP

JFK/UMASS

**STATION** 

1-93 SB OFF-RAMP

OLD COLONY AVE

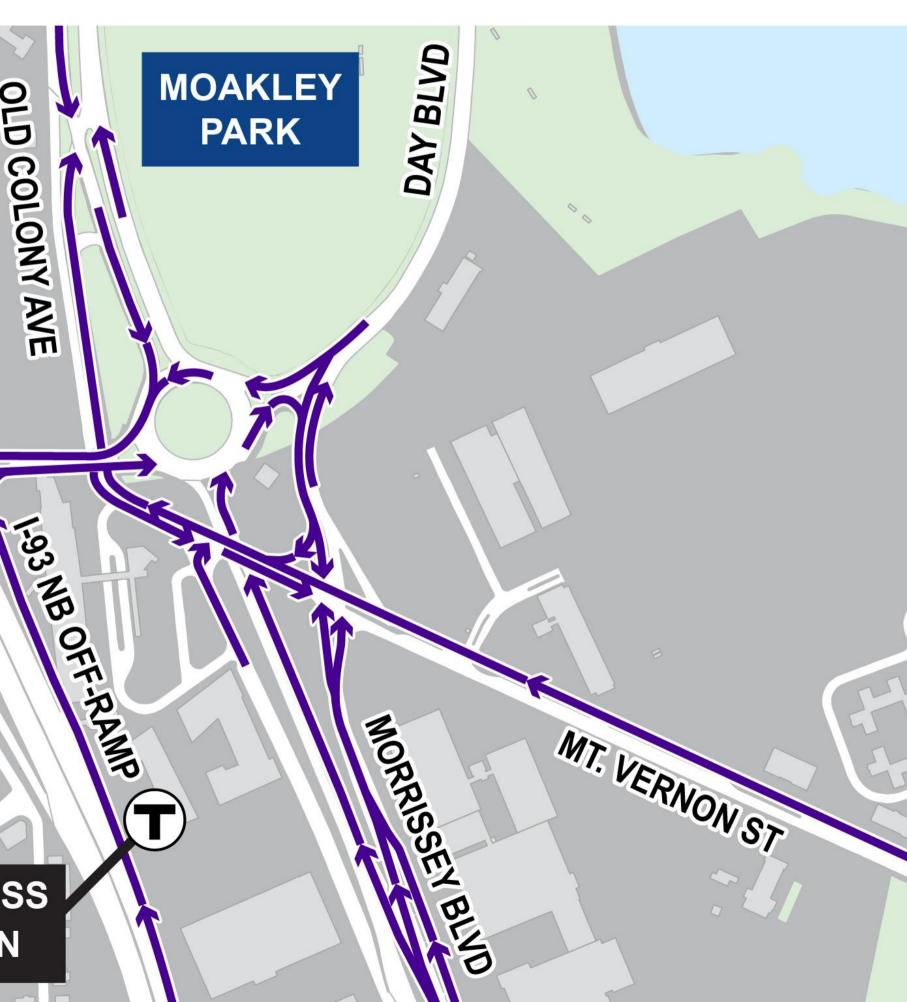
### a.m. Queue

- Delay Entering K Circle
- Queueing on Morrissey Blvd, Old Colony Ave, Mount Vernon St, Columbia Rd
- Traffic Back-ups on I-93 North and South Off-Ramps









### Future Traffic Operations – Weekday p.m. Peak (No Improvements)

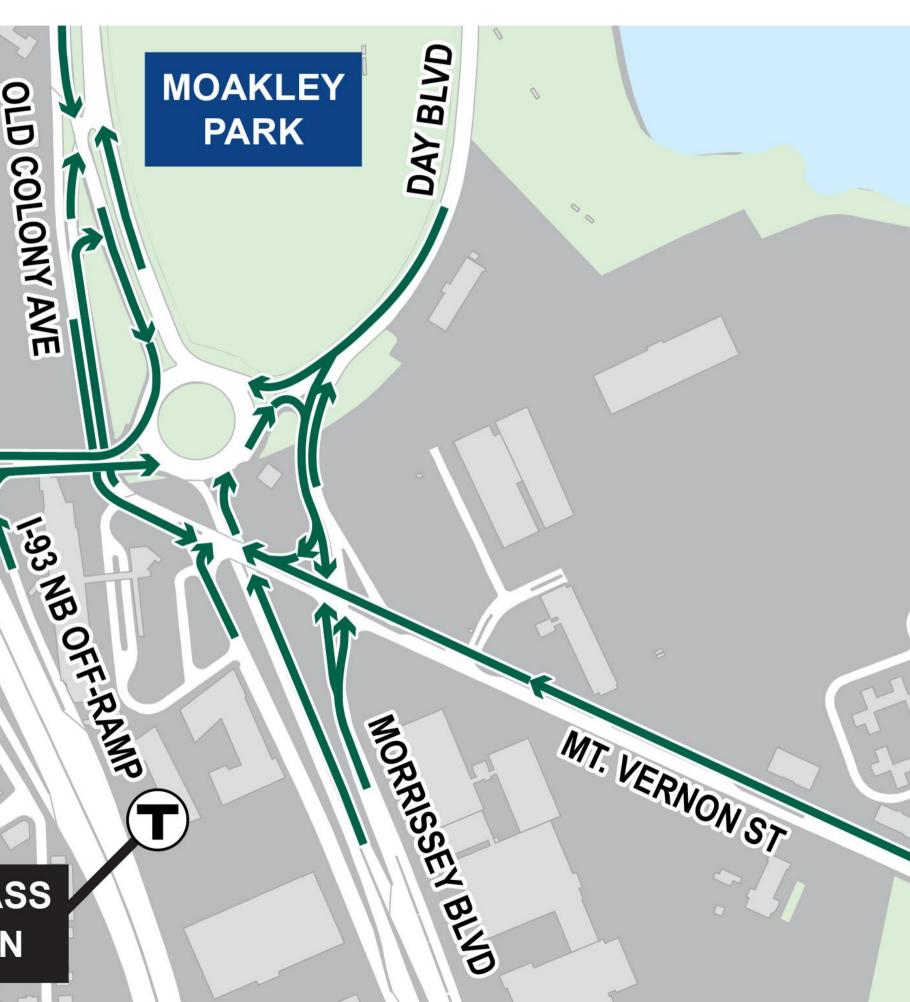
OLD COLONY AVE

**STATION** 

### p.m. Queue YON HILLERN ST • Delay Entering K Circle 1-93 NB ON-RAMP **JORCHESTER AVE** 1-93 SB OFF-RAMP **BUTTONWOOD ST** • Queueing on Old Colony Ave, Mount Vernon St, Columbia Rd • Traffic Back-ups on I-93 South Off-ramp 193 SB ON RAMP COLUMBIA RD ሻ N JFK/UMASS

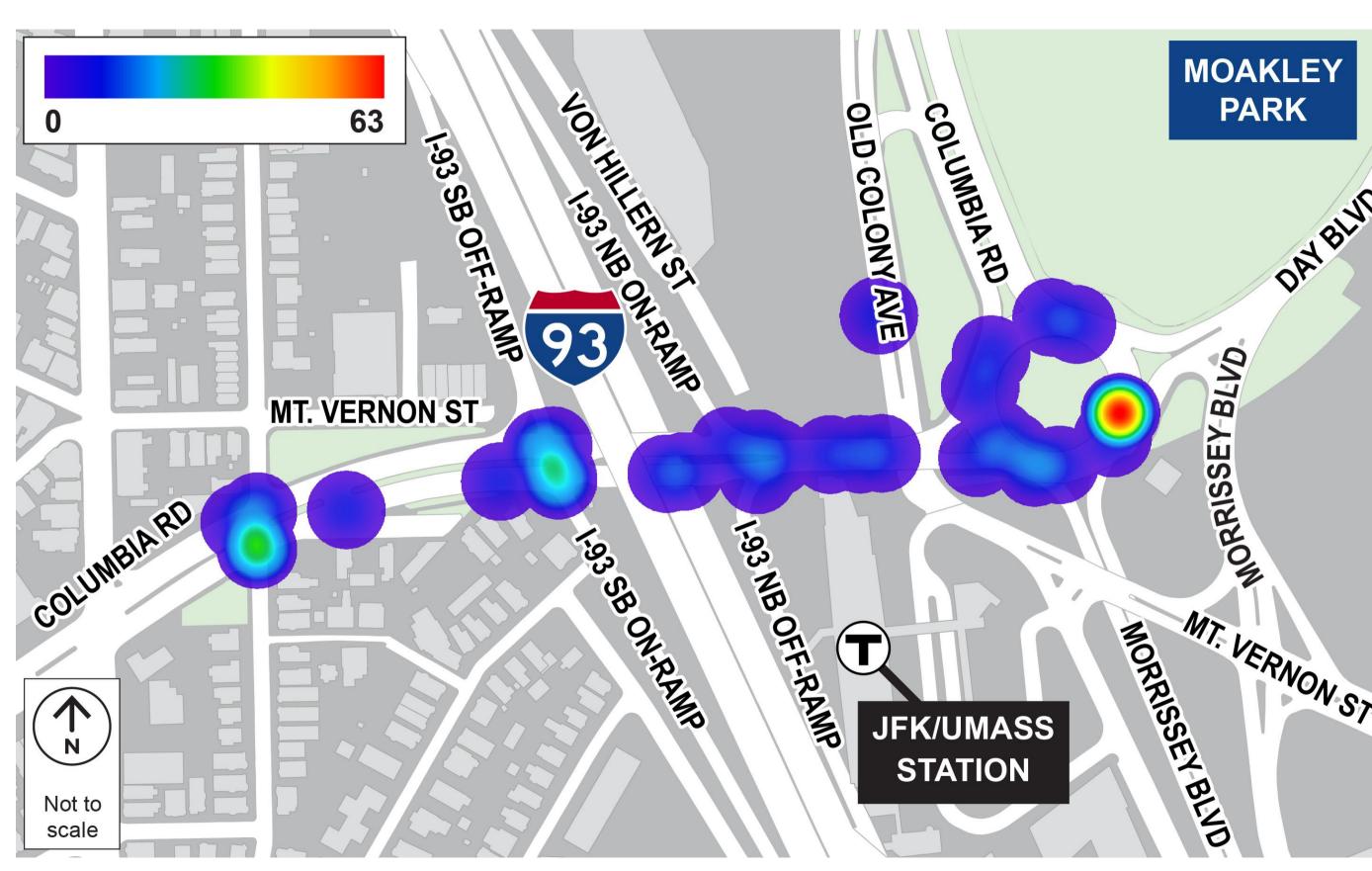
Not to

scale



## Traffic Safety – All Crashes, 2017-2021

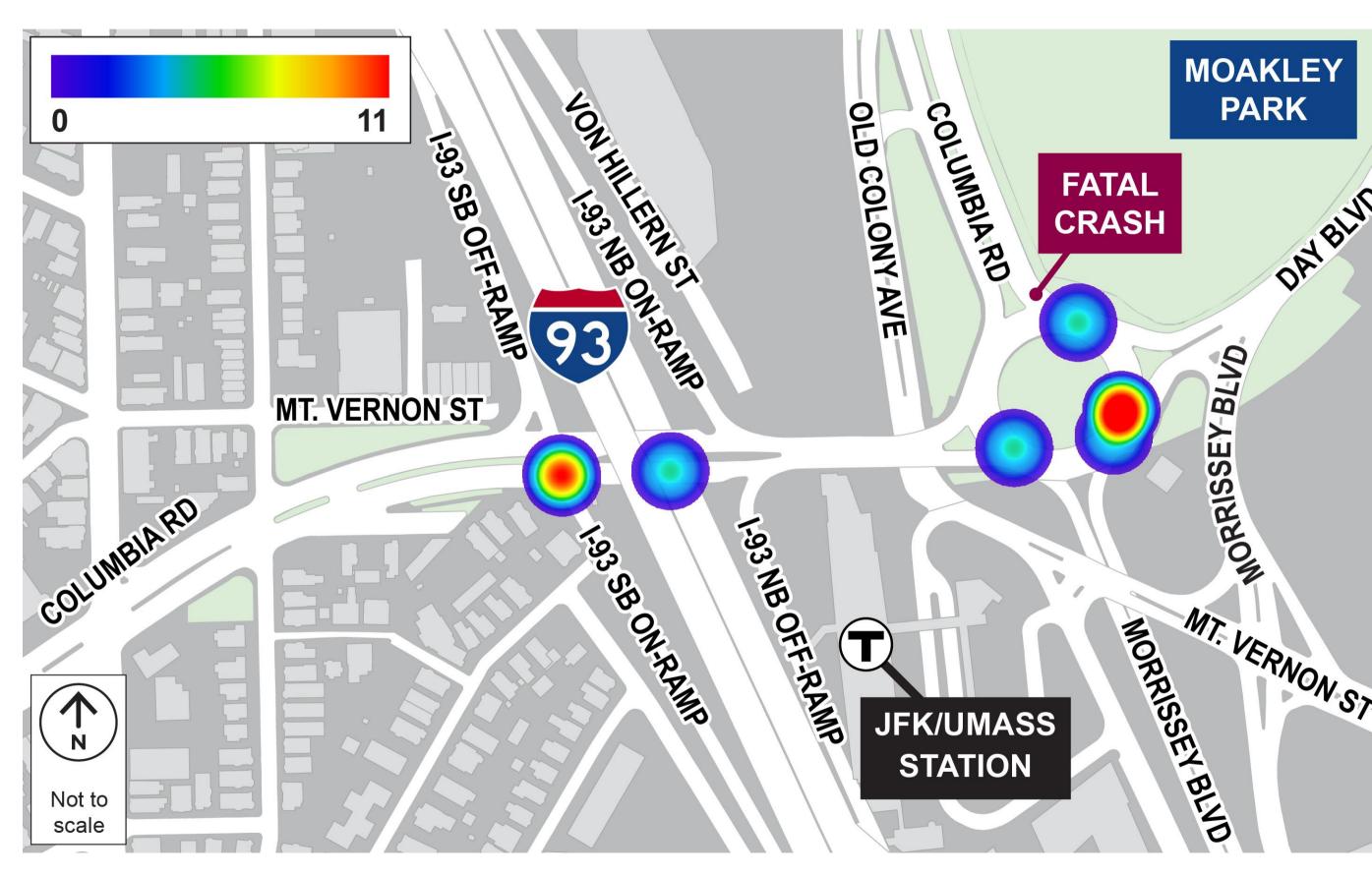
- 299 Crashes
- 32% Angle Crashes
- 26% Sideswipe Crashes
- 22% Rear End Crashes
- 57 Resulting in Injury
- 1 Fatality (Pedestrian)





## **Traffic Safety - Pedestrians and Bicyclists**

- 10 Pedestrian Crashes
  - 1 at Buttonwood St
  - 3 at Southbound Ramps
  - 6 at Kosciuszko Circle
- 6 Bicycle Crashes
  - 2 at Southbound Ramps
  - 3 at Kosciuszko Circle
- 12 resulting in injury
- 1 fatality Pedestrian on Columbia Rd north of Kosciuszko Circle







# **Pedestrian Origin / Destination Existing Condition**

Destination Residential Neighborhoods

**Community/Recreation Areas** 

New Commercial/ Residential Development

### **Challenging Connections**

- Narrow Sidewalks
- High Volume Crossings

COLUMBIA RD

No Bike Facilities

Not to scale



**COLUMBIA RD** 

93

1-93 NB OFF-RAMP

### MOAKLEY PARK

MORRISSEY BLVD

MT. VERNON ST

JFK/UMASS

STATION

 $(\mathbf{T})$ 

Day Blvd to Carson Beach And Dorchester Bay City

DAY BLVD

BLVD

MORRISSEI

Mt. Vernon St to UMass Campus





# High Quality Multimodal Examples

Shared Use Paths

- Low Stress paths for all users

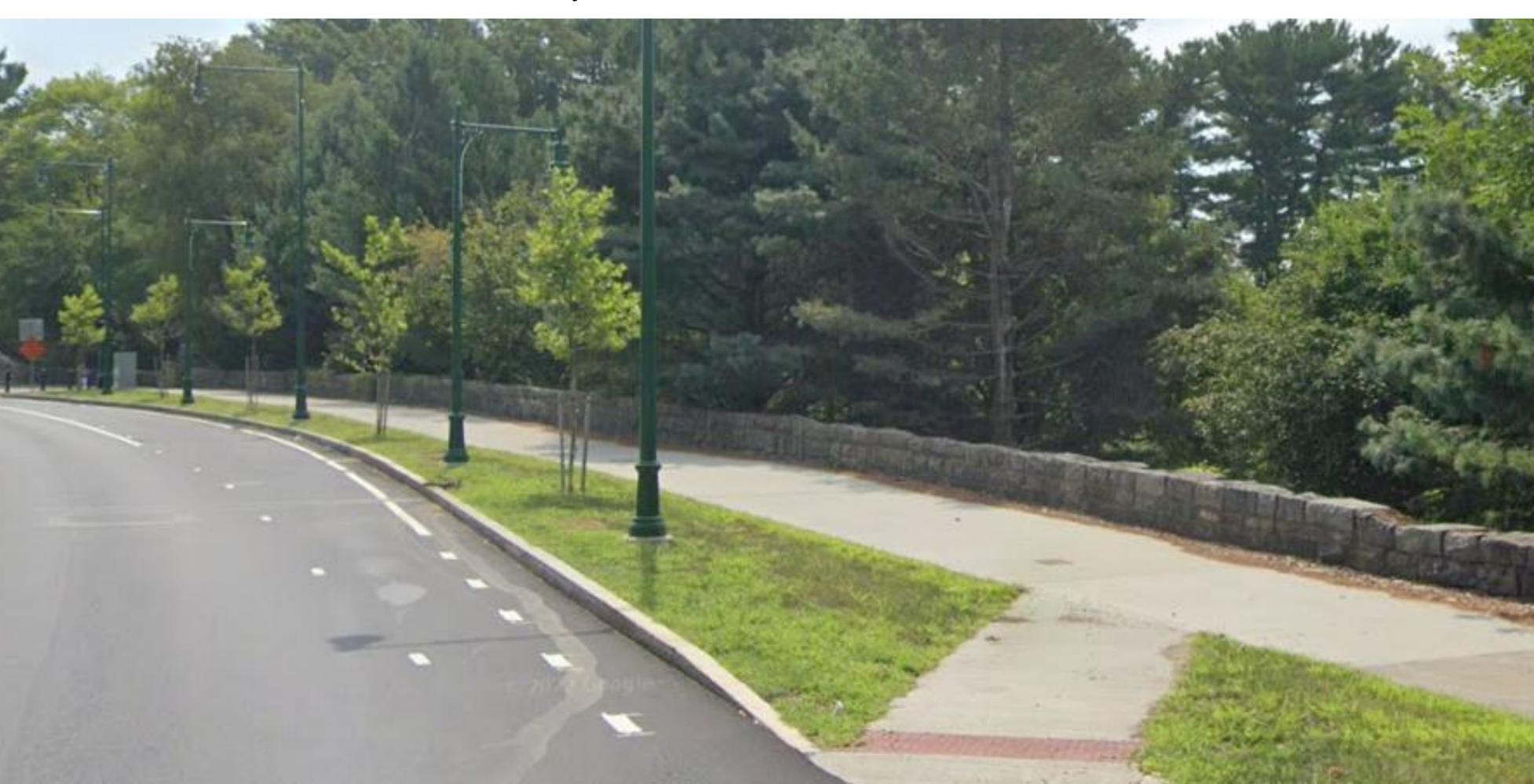
Separated Bike Lane

 Horizontal and Vertical Offset from vehicular travel





### Shared Use Path Arborway, Jamaica Plain, MA



# Separated Bike Lane Cambridge, MA



# Separated Bi-Directional Bike Lane Morton St, Jamaica Plain, MA



# **High Quality Multimodal Access**



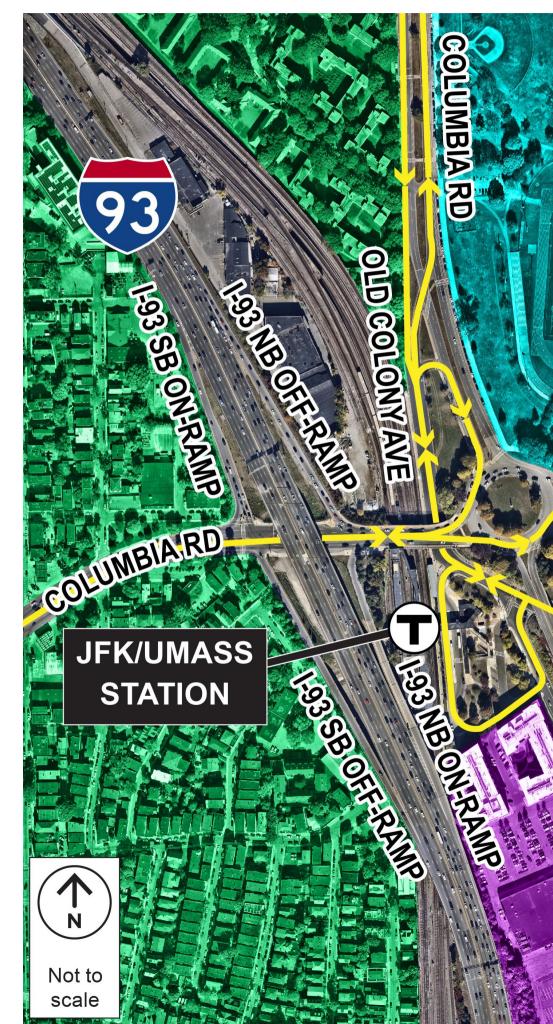




How can transit be accommodated?

# **Transit Access**

- Ongoing and Future Coordination with MBTA and **BTD** Transit
  - MBTA Station Access Study
  - BTD Station Access Study
  - BTD Mount Vernon Street Project
  - BTD Columbia Road Transportation Action Plan
- **Transit Accommodations** • options under Review
  - Signal Priority
  - Bus Queue Jumps
  - Transit Priority











**Bus Routes** 

Neighborhoods

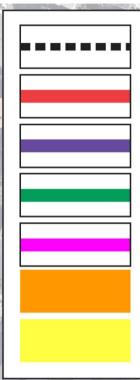
**Commercial Areas** 

Community/ **Recreation** Areas

**Umass Boston** Campus

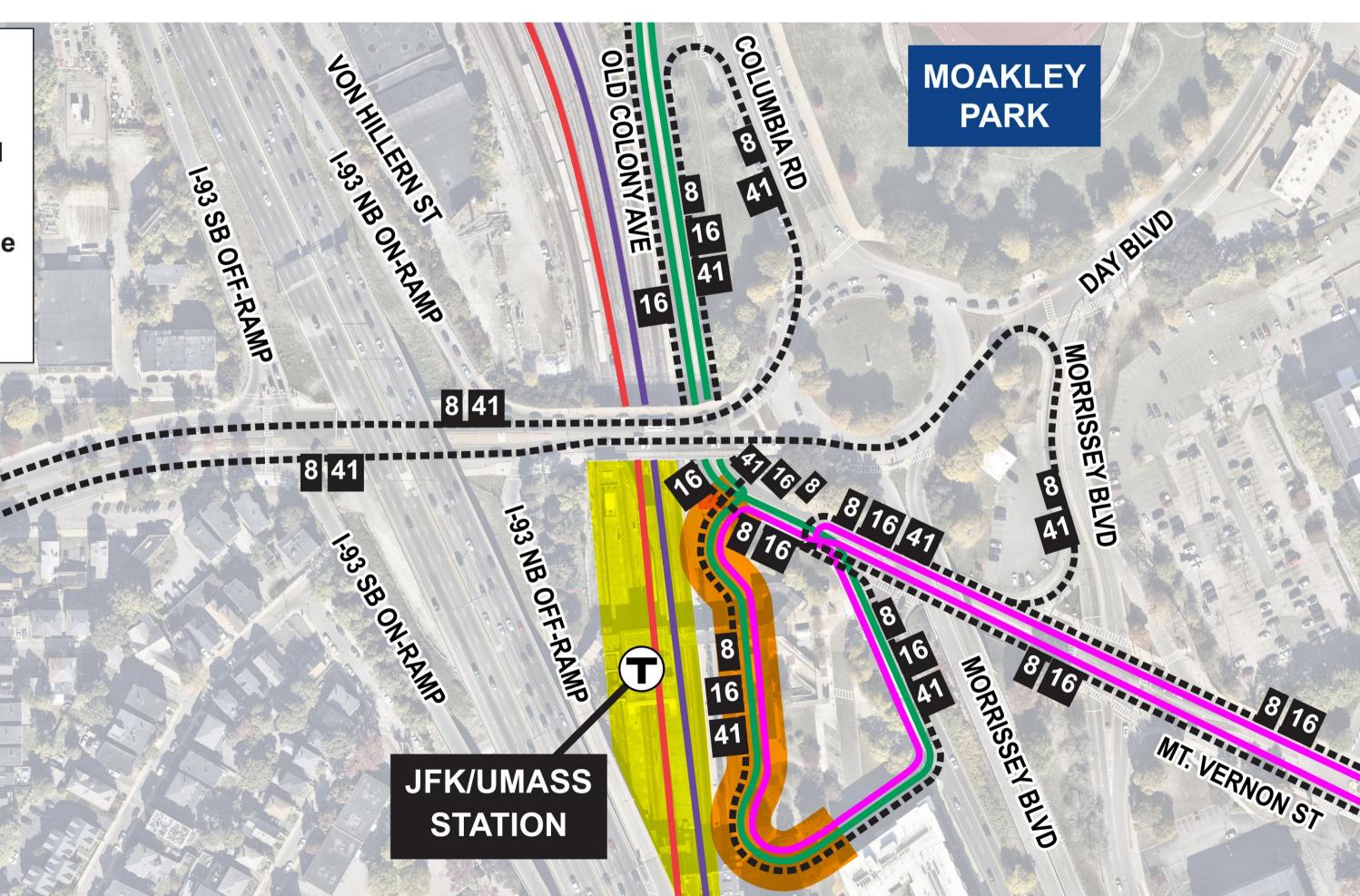
**New Commercial**/ **Residential** Development

## **MBTA and Shuttle Bus Routes**



MBTA Bus Route MBTA Red Line MBTA Commuter Rail LMA Shuttle UMass Boston Shuttle Dedicated Busway JFK/UMass Station

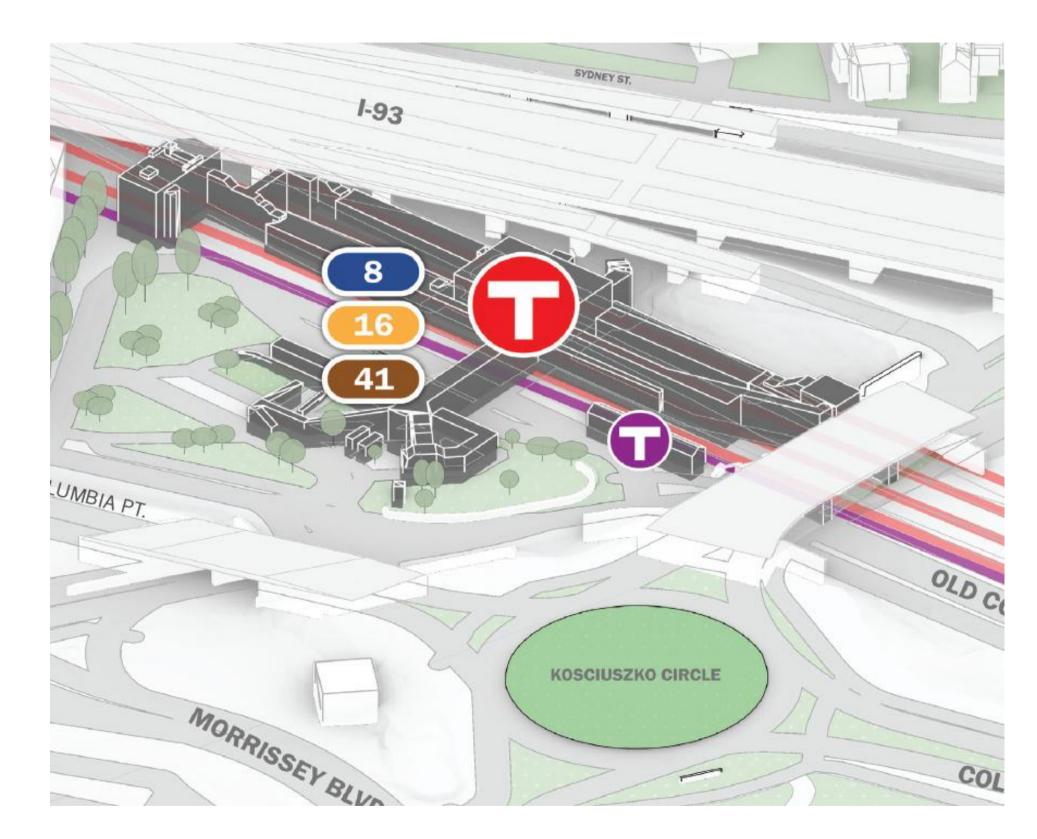
COLUMBIA RD





scale

#### **MBTA – JFK/UMass Station Goals**



entrances

- - Reduce pedestrian transfer between modes
  - Enhance fare-free connection across station and pedestrian connections on Columbia Road and under I-93
  - Accommodate increased ridership with new nearby developments
  - Incorporate Bus Network Redesign and improve busway operations



MASSACHUSETTS BAY TRANSPORTATION AUTHORITY

# Assessing station design to bring it up to a state of good repair and add accessible

Design priorities:





# What intersection types are being considered?

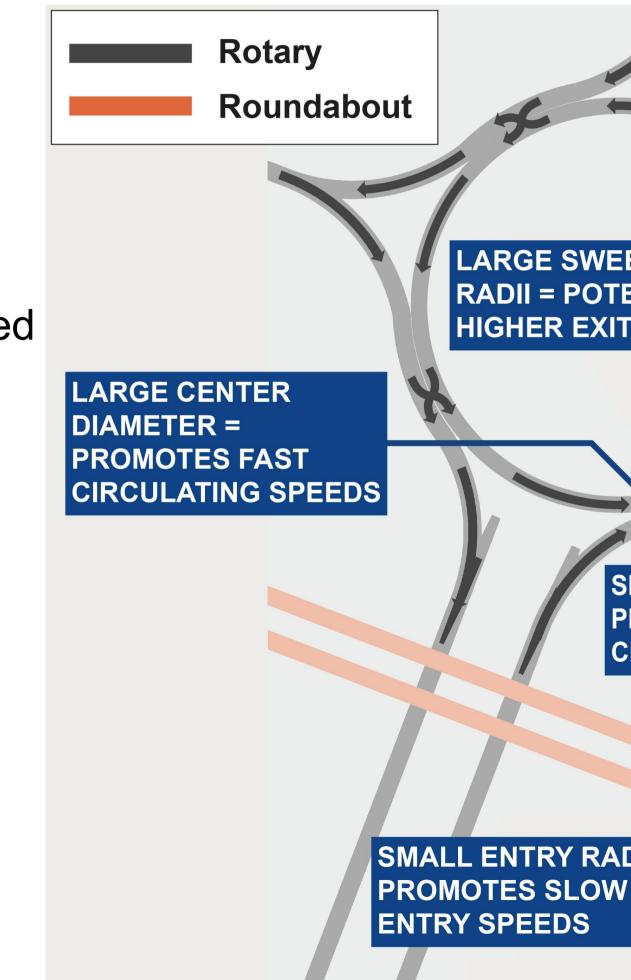
# **Modern Roundabout versus Rotary**

#### **Rotaries are:**

- Larger
- Faster speeds
- Lane changing often required

#### Modern Roundabouts are:

- Smaller
- Encourage slower speeds
- Yield upon entry
- Lane changing not required



#### WIDE WEAVING AREAS = **PROMOTES ENTRY AND EXIT VEHICLES MIXING**

#### LARGE SWEEPING EXIT RADII = POTENTIAL FOR **HIGHER EXIT SPEEDS**

LARGE SWEEPING ENTRY RADII = **POTANTIAL FOR HIGHER ENTRY SPEEDS** 

#### SMALL CENTER DIAMETER = **PROMOTES SLOW CIRCULATING SPEEDS**

SMALL EXIT RADII = **PROMOTES SLOW EXIT SPEED** 

SMALL ENTRY RADII =

#### **Pedestrians and Bicyclists at a Modern Roundabout**

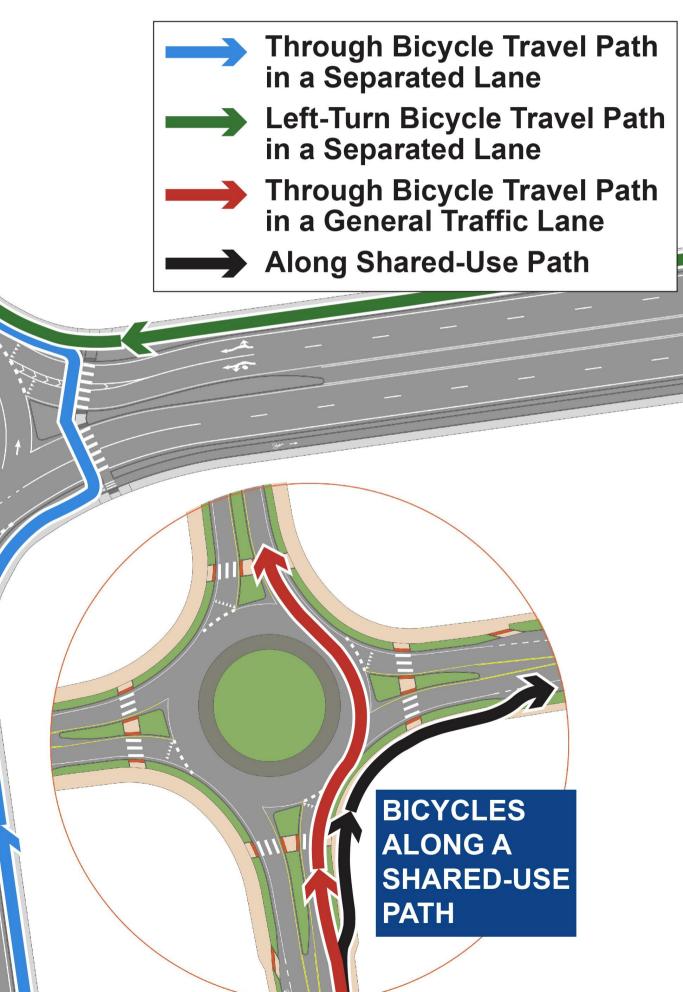
#### **Pedestrian Movements:**

 Signalized Crossings for multi-lane crossings

#### **Bicycle Movements:**

 Removed from Roadway when approaching roundabout





# **Opposing Left Turn Intersection**

**Operational Benefits** 

- Increased Vehicle Queue Storage
- Traffic Signal Phasing Flexibility
- Removes Eastbound to Northbound and Northbound to Westbound movements from Kosciuszko Circle

**Typical Challenges** 

- Education: Left turn on opposing sides
- Large Footprint

User/Multimodal Accommodations

- Sidewalks/Shared Use Paths on both sides of the roadway
- Pedestrian and Bicycle Crosswalk across Columbia Road



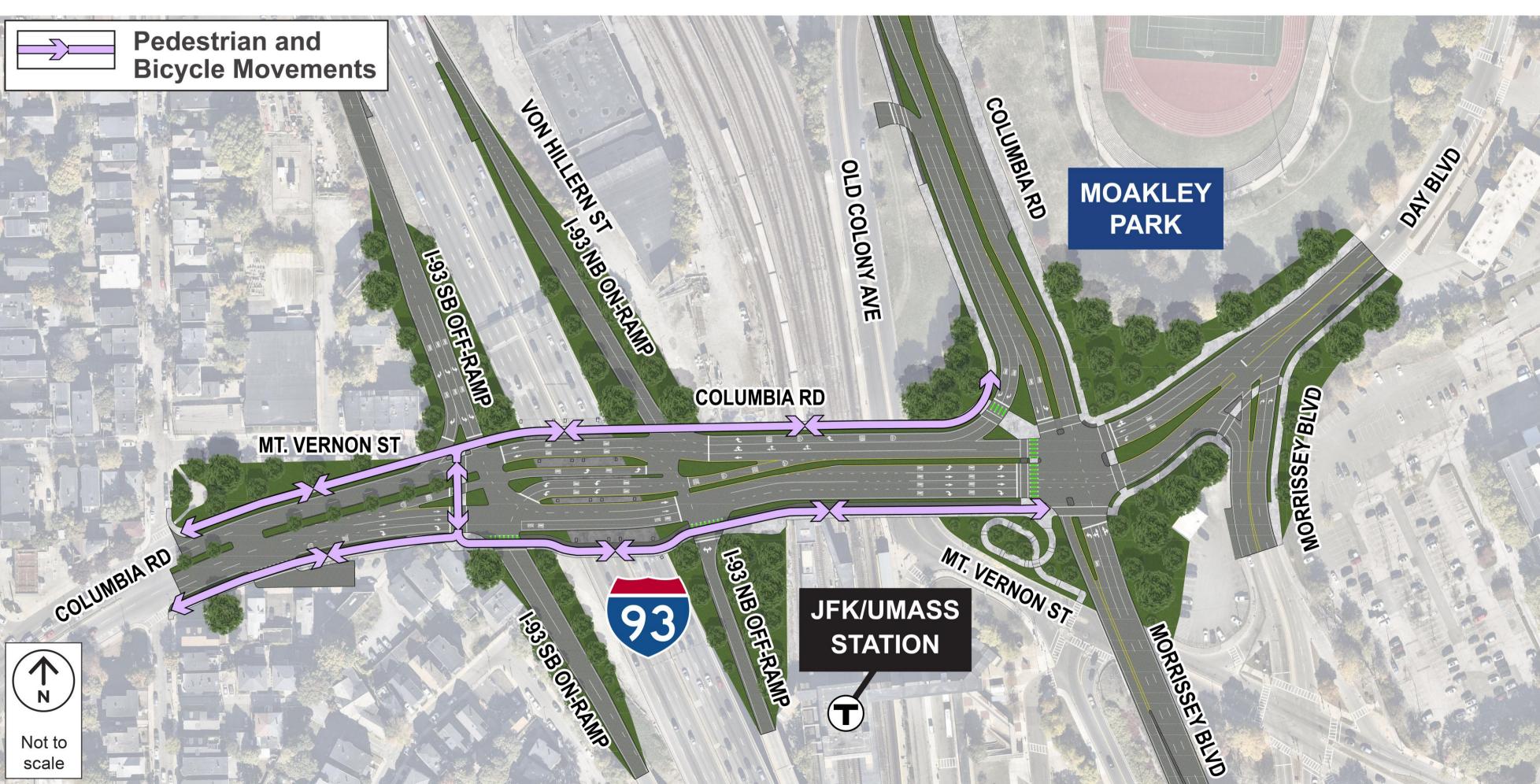
# **Opposing Left Turn – Vehicular Through Movements**



# **Opposing Left Turn – Vehicular Left Turn Movements**



#### **Opposing Left Turn – Pedestrian and Bicycle Movements**



# **Diverging Diamond Interchange (DDI)**

#### Example

- Massachusetts Natick
- **Operational Benefits** 
  - Traffic Capacity
  - Fewer Conflict Points
- **Typical Challenges** 
  - Education: New to MA
  - Large Footprint

**User/Multimodal Accommodations** 

- Pedestrian & cyclists cross one direction of travel at a time
- Access can be provided to the exterior or the center of the DDI



#### Route 27 Over Route 9, Natick, MA



### **Diverging Diamond Eastbound Vehicular Travel (Crossover)**



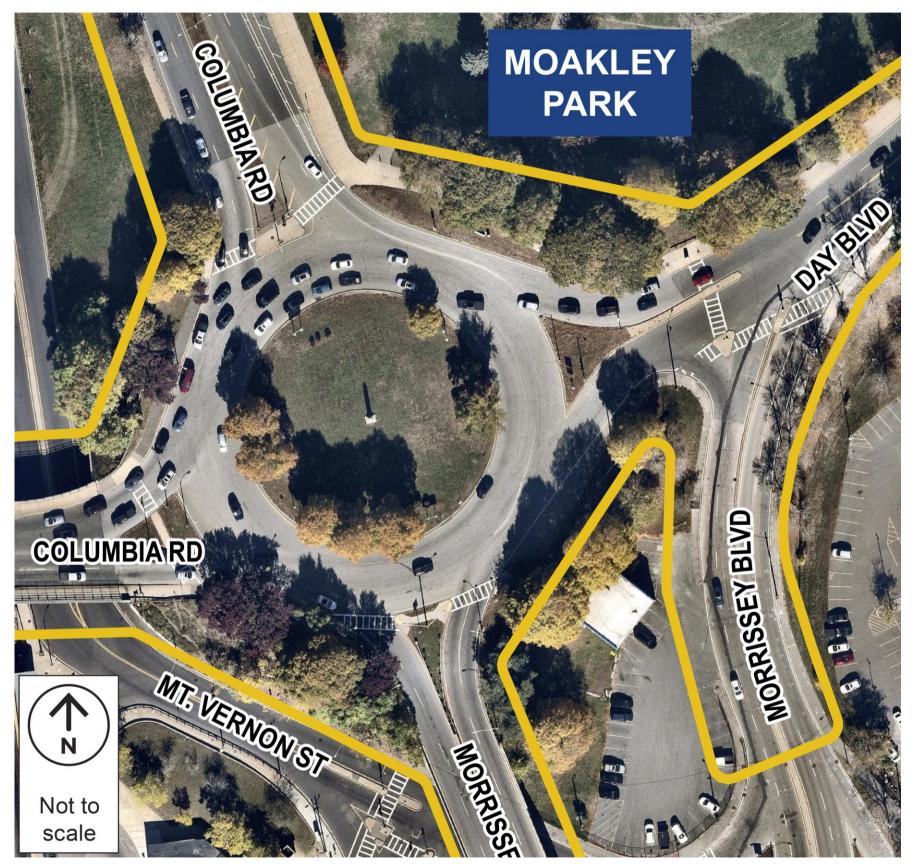
# **Diverging Diamond Westbound Vehicular Travel (Crossover)**



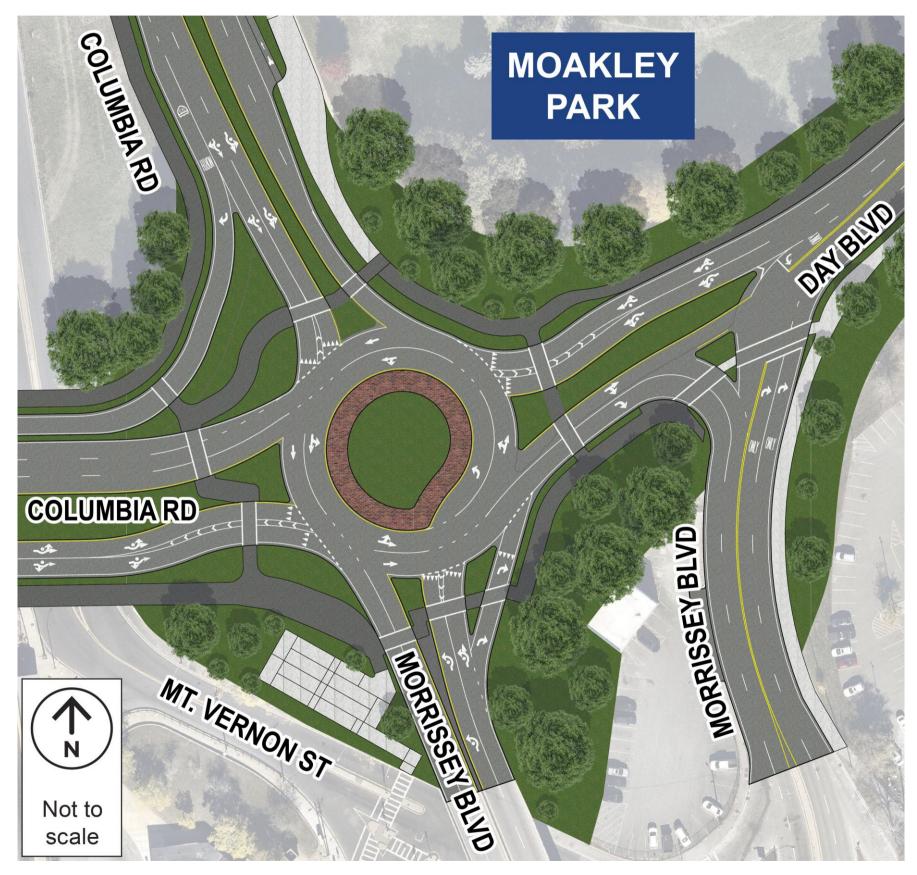
#### **Diverging Diamond Pedestrian and Bicycle Movements**



#### **Existing Kosciuszko Circle**

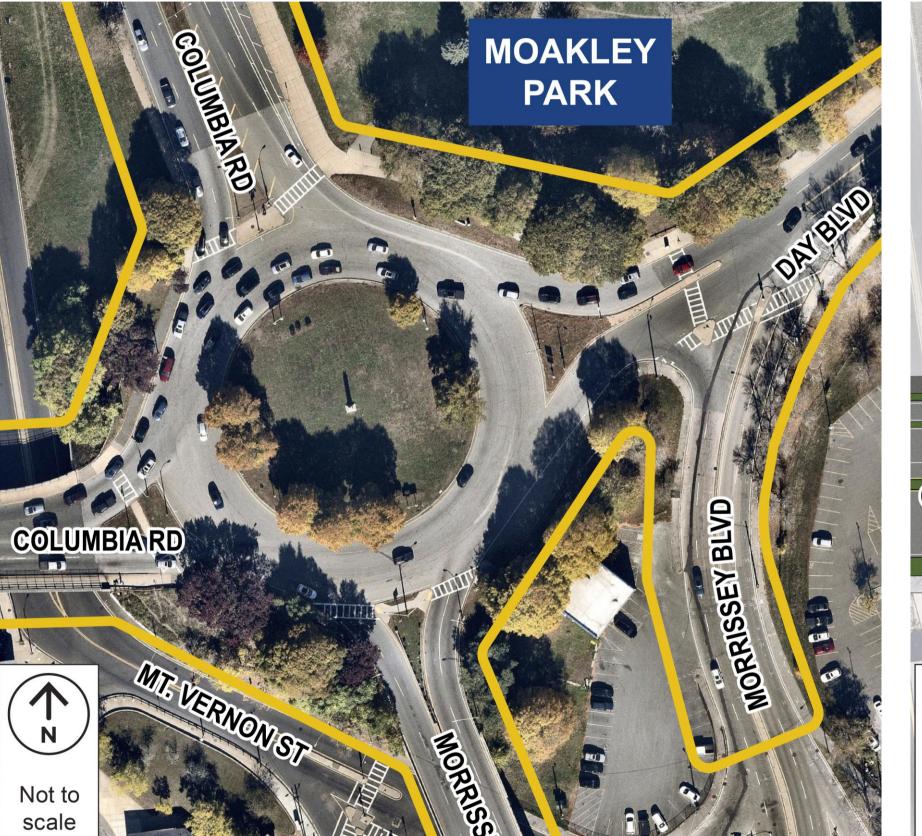


#### Alternative – Modern Roundabout

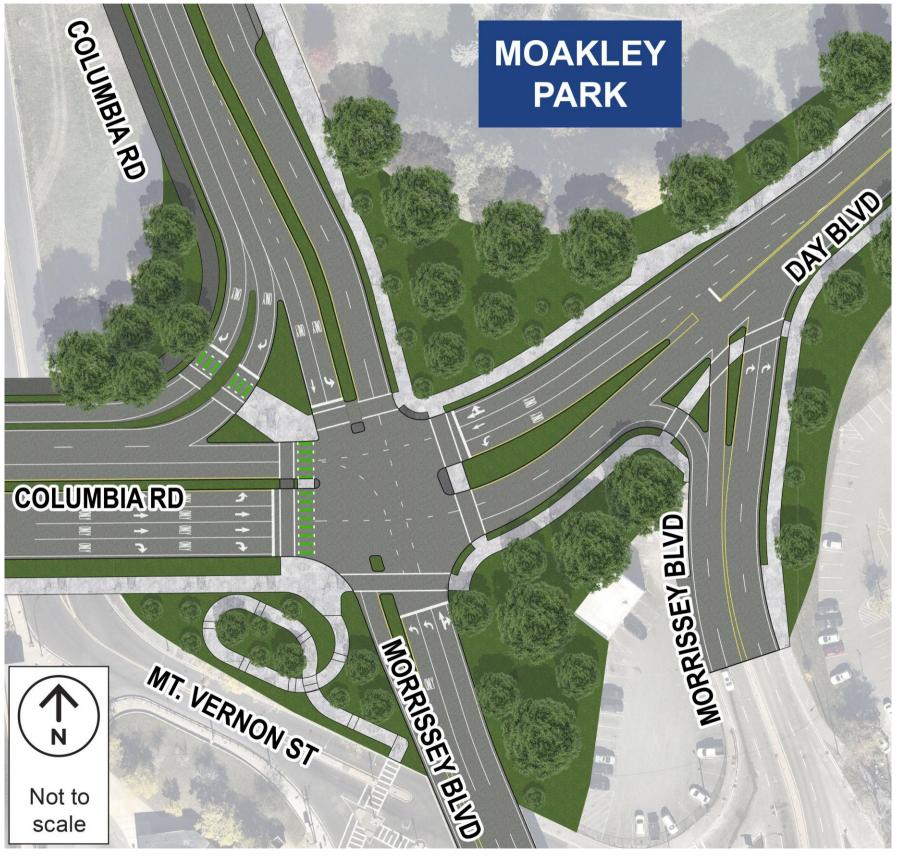




#### **Existing Kosciuszko Circle**



#### **Alternative – Signalized Intersection**

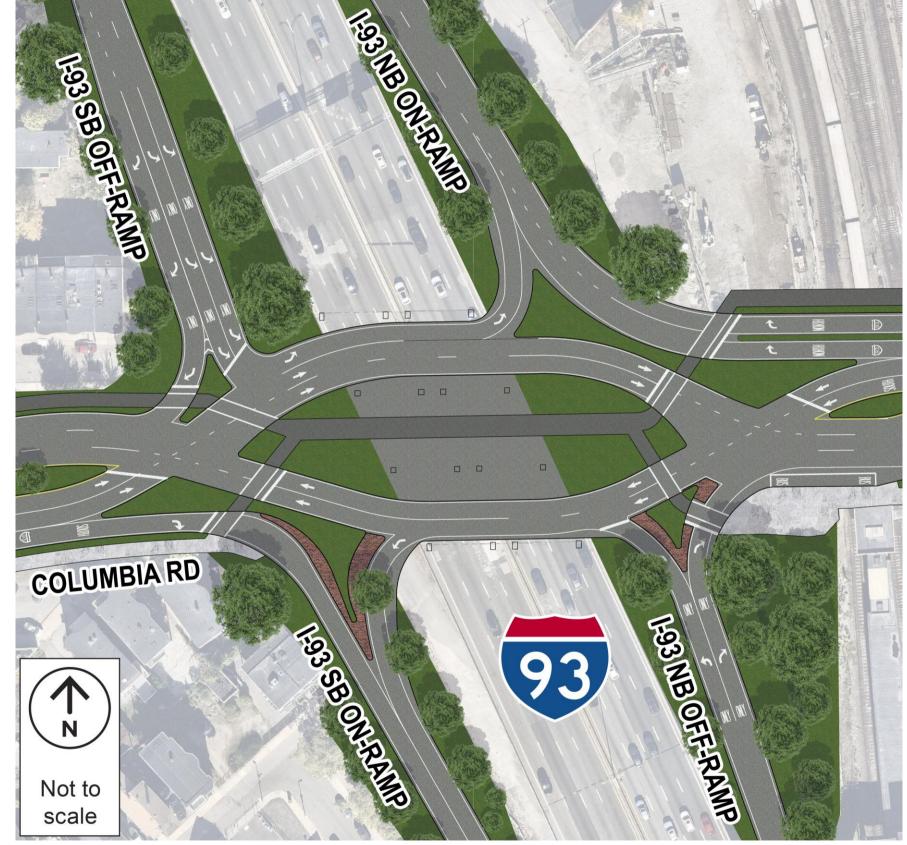




#### **Existing Interchange**



#### **Alternative – Diverging Diamond**





#### **Existing Interchange**



#### **Alternative – Opposing Left Turns**

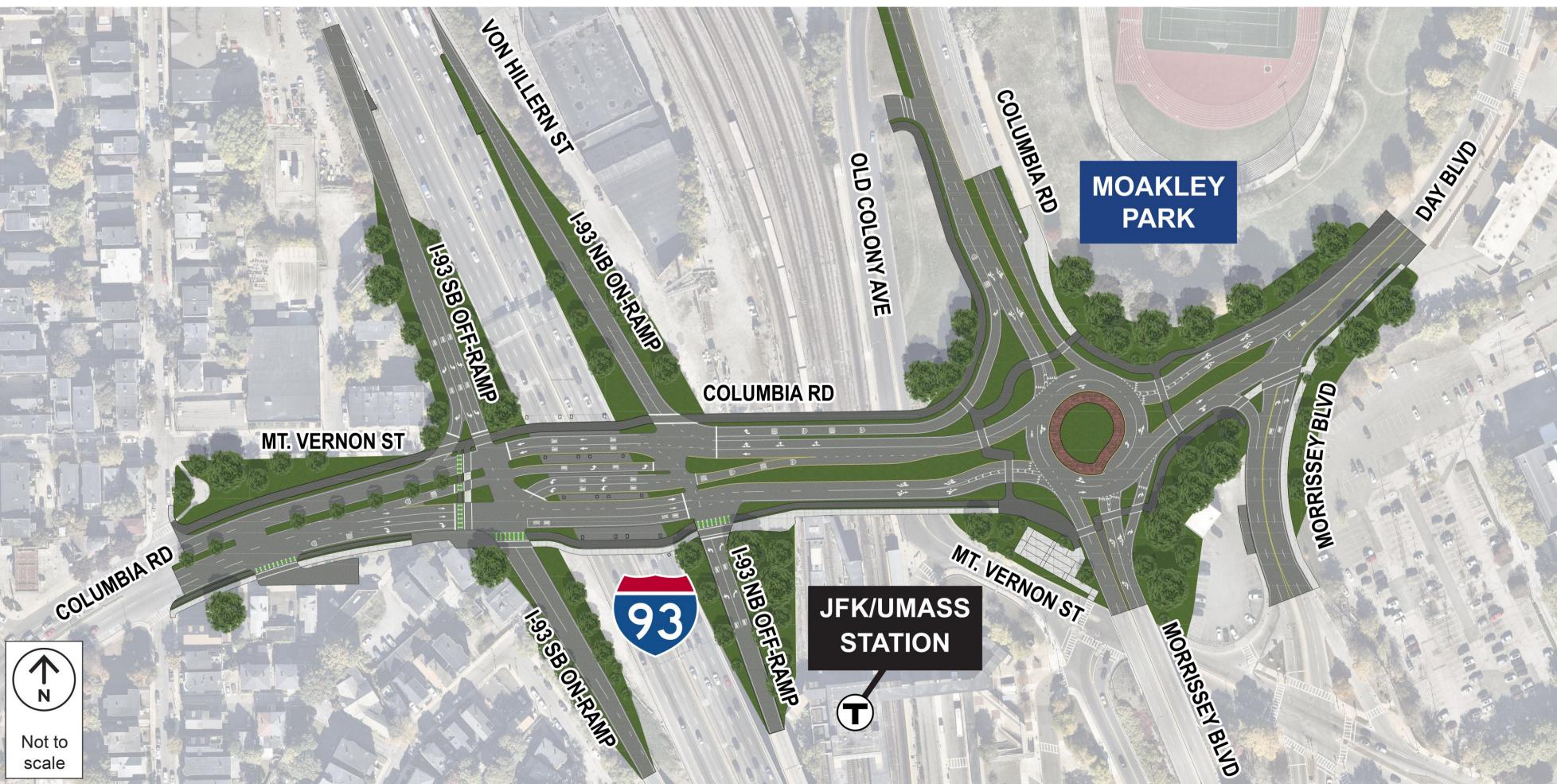




# **Option 1 – Opposing Left Turns and Signalized Intersection**



# **Option 2 – Opposing Left Turns and Modern Roundabout**



# **Option 3 – Diverging Diamond and Signalized Intersection**



# **Option 4 – Diverging Diamond and Modern Roundabout**



# Interagency & Stakeholder Coordination

- MBTA
  - JFK/UMass Station
  - Bus Route Coordination
- City of Boston Agencies
- Department of Conservation and Recreation (DCR)
- UMass & Regional Schools
- Shuttle Operators
  - Longwood Collective
- Area Development







#### CITY of BOSTON







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#### **Our next steps**



Public Information Meeting (PIM) #1 Tonight



Review of Public Comments



Agency & Municipal Coordination



#### Alternative Refinement



#### PIM #2 Spring 2025



#### How to reach us

- Visit the project website at: • Project website pending
- Submit email comments to:  $\bullet$ DOT.feedback.highway@state.ma.us
- For project information visit the MassDOT Upcoming Events for Highway Division web site at ۲ http://www.mass.gov/orgs/highway-division/events or used the QR Code:
- Submit written comments to:  $\bullet$

Carrie Lavallee, P.E., Chief Engineer **MassDOT** 10 Park Plaza Boston, MA 02116 Attention: Major Projects PROJECT FILE NO. 613555







# Questions and answers

#### **Questions and Comments**



Use Microphone provided and please line up three (3) at a time.



• Please state your name before your question.



Please share only 1 question or comment at a time, limited to 2 minutes, to allow others to participate. We will get to all questions.

All questions and comments are subject to disclosure for public records. Please use these functions for project related business only.





