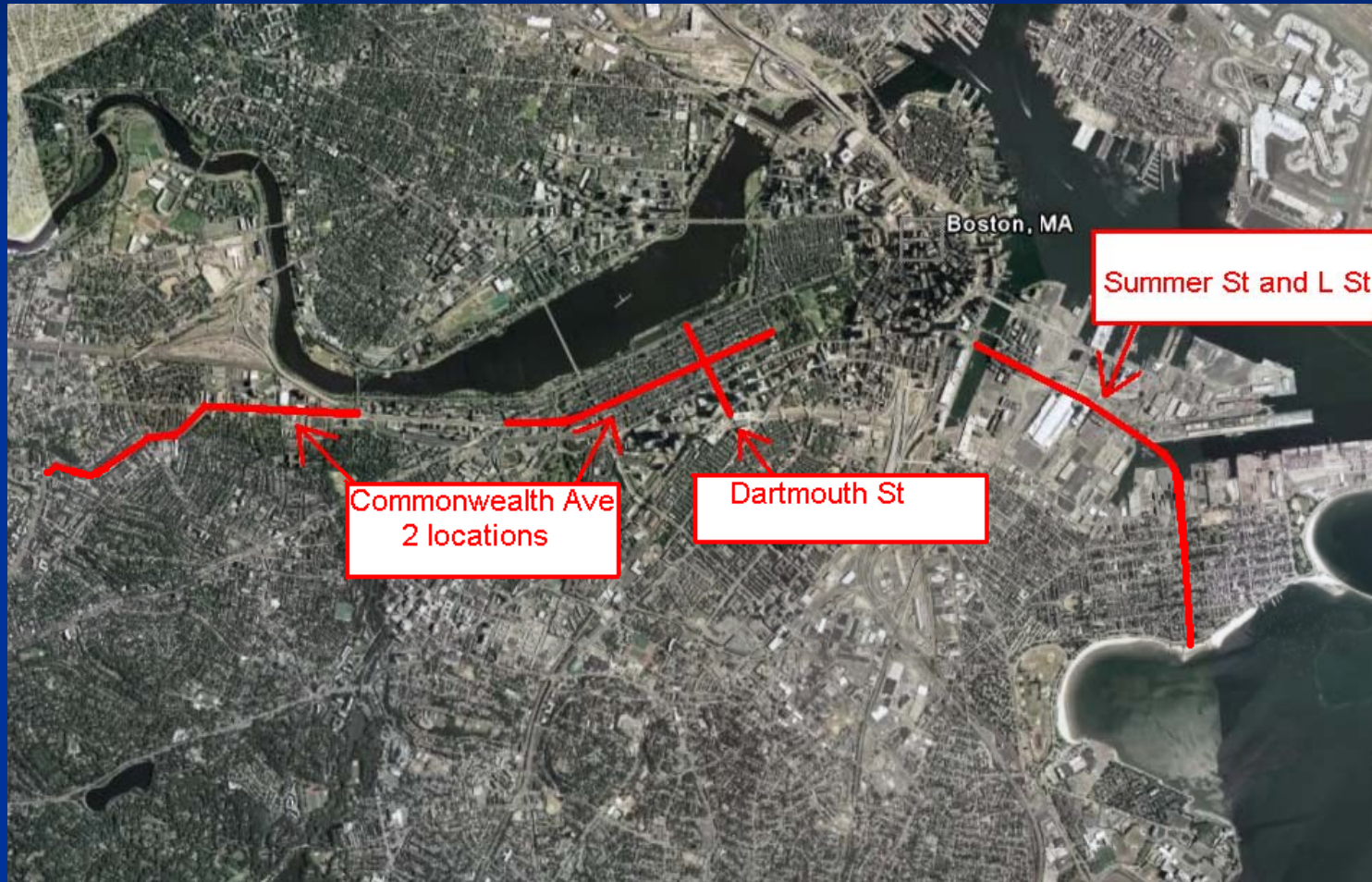


# Spokes Engineering

Bicycle Lanes for the City of Boston



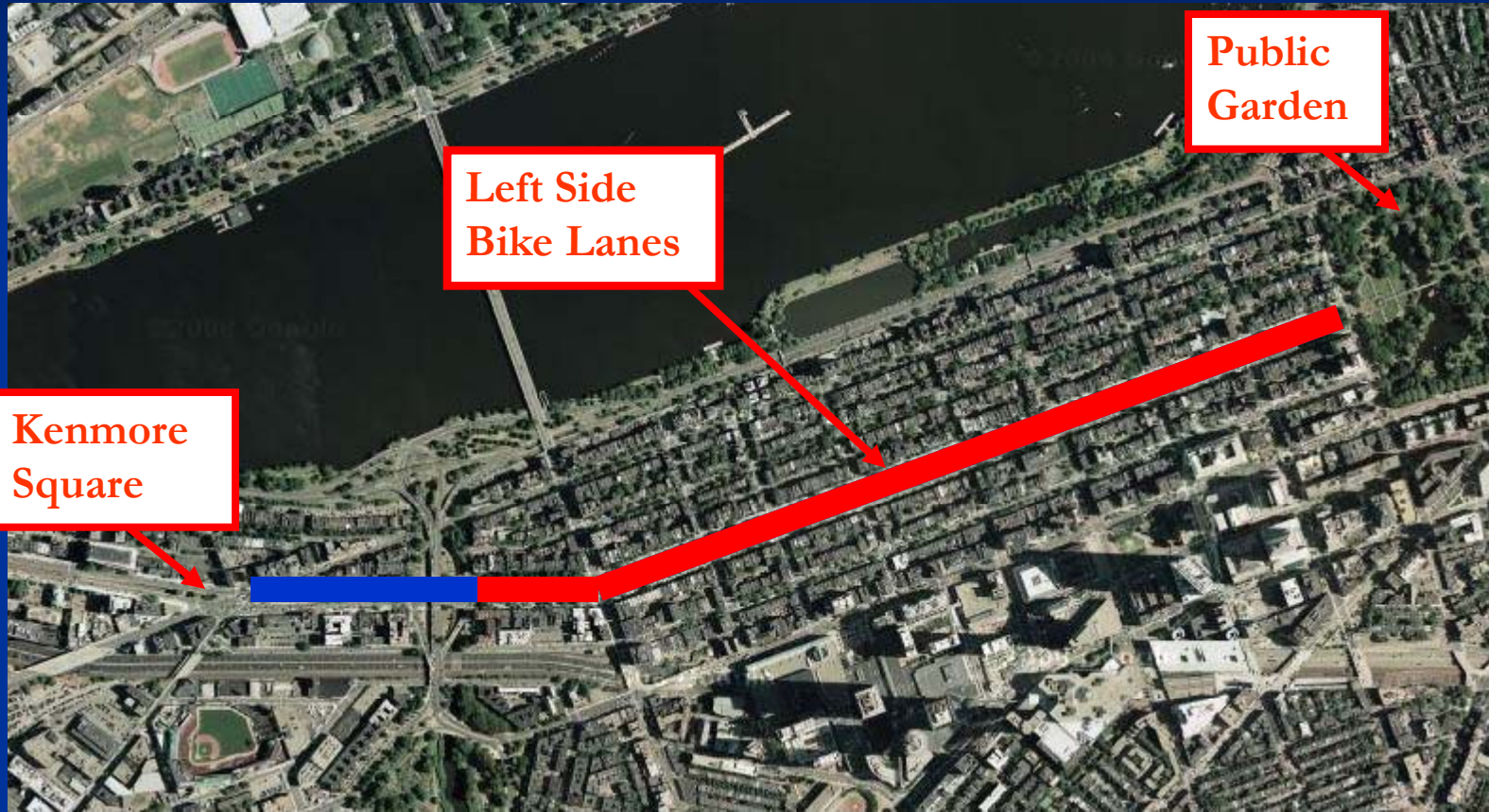
Hector Bermudez

Peter Hagen

Christopher Longenbaker

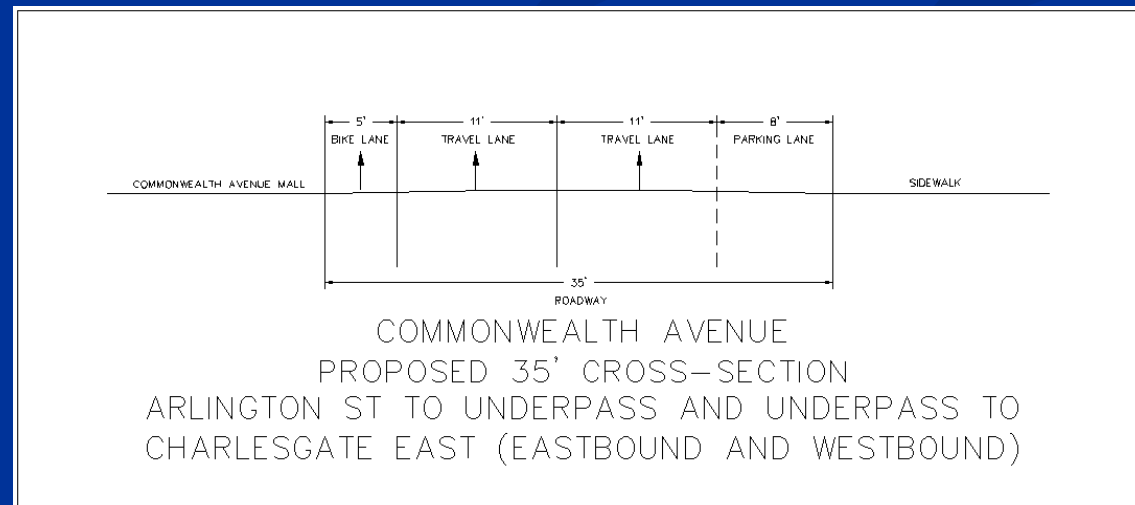
Zachary Wassmouth

# Commonwealth Avenue

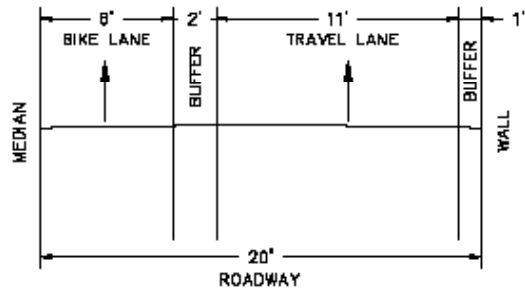


# Benefits of Left Side Bike Lanes

- No risk of “dooring” while traveling alongside parked cars
  - No blockage of bike lane from double-parked vehicles
  - Access into the underpass at Massachusetts Avenue
- Avenue



# Underpass at Massachusetts Ave.

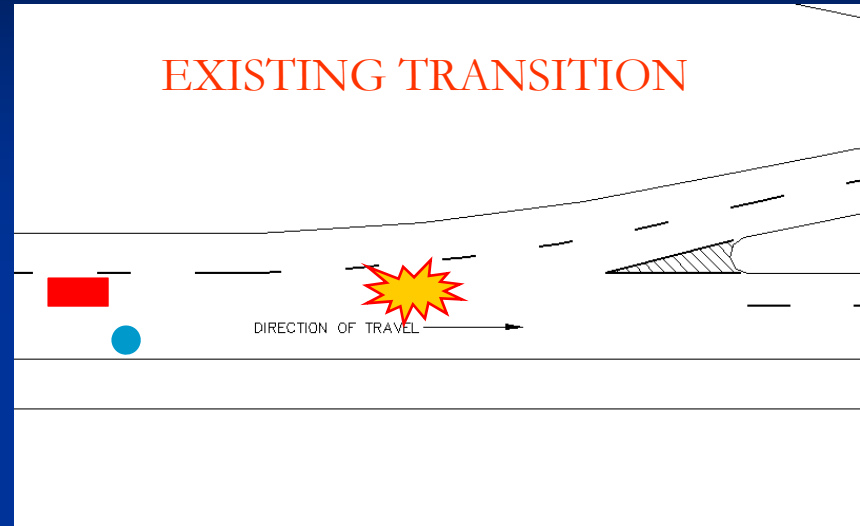


COMMONWEALTH AVENUE  
PROPOSED 20' CROSS-SECTION  
COMMONWEALTH AVE UNDERPASS

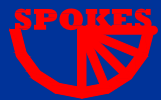
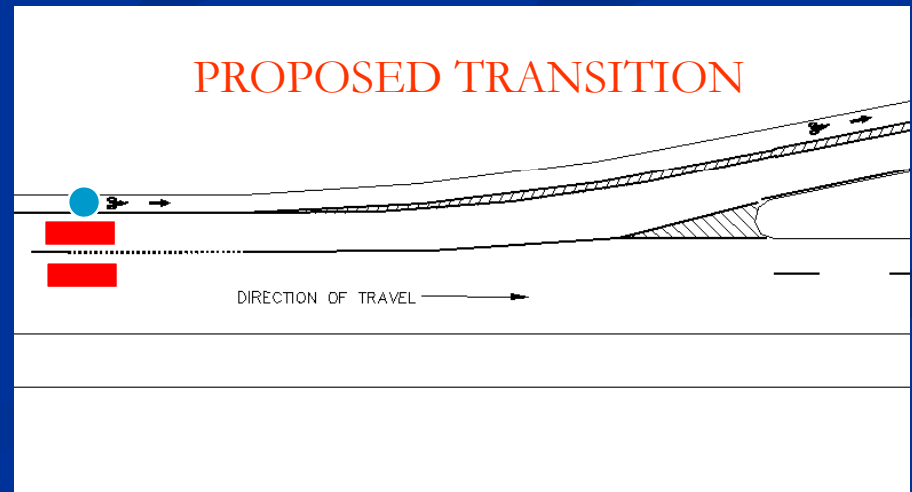


[Video](#)

## EXISTING TRANSITION

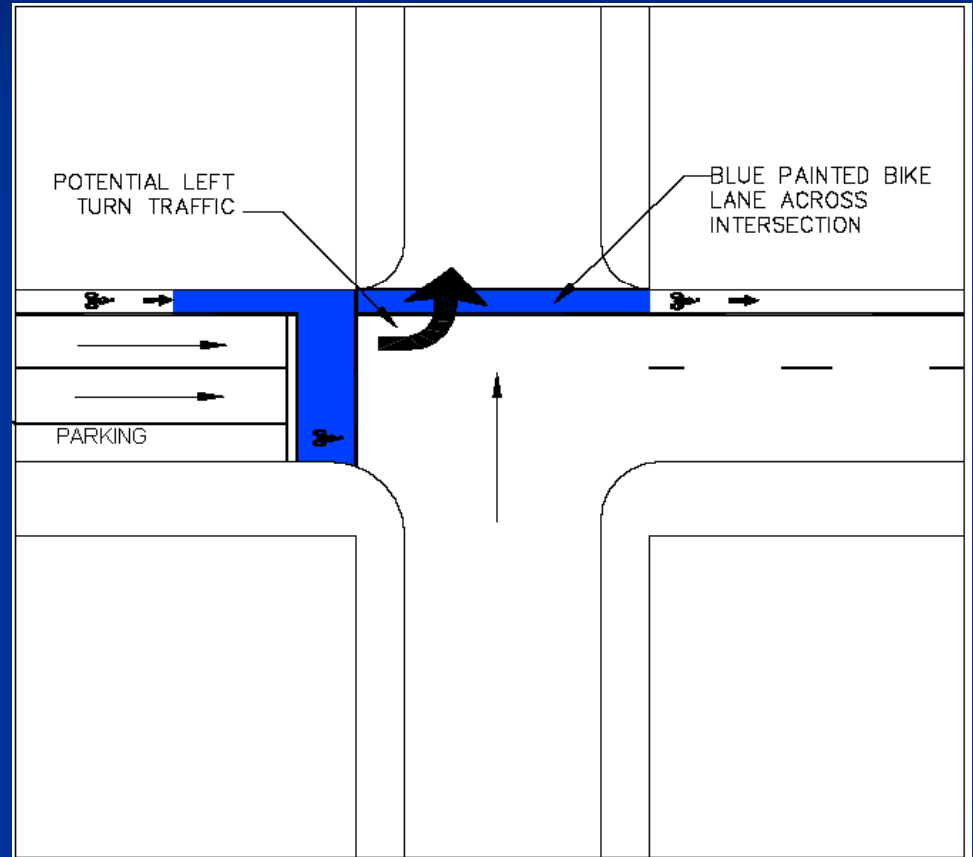


## PROPOSED TRANSITION



# Bike Boxes

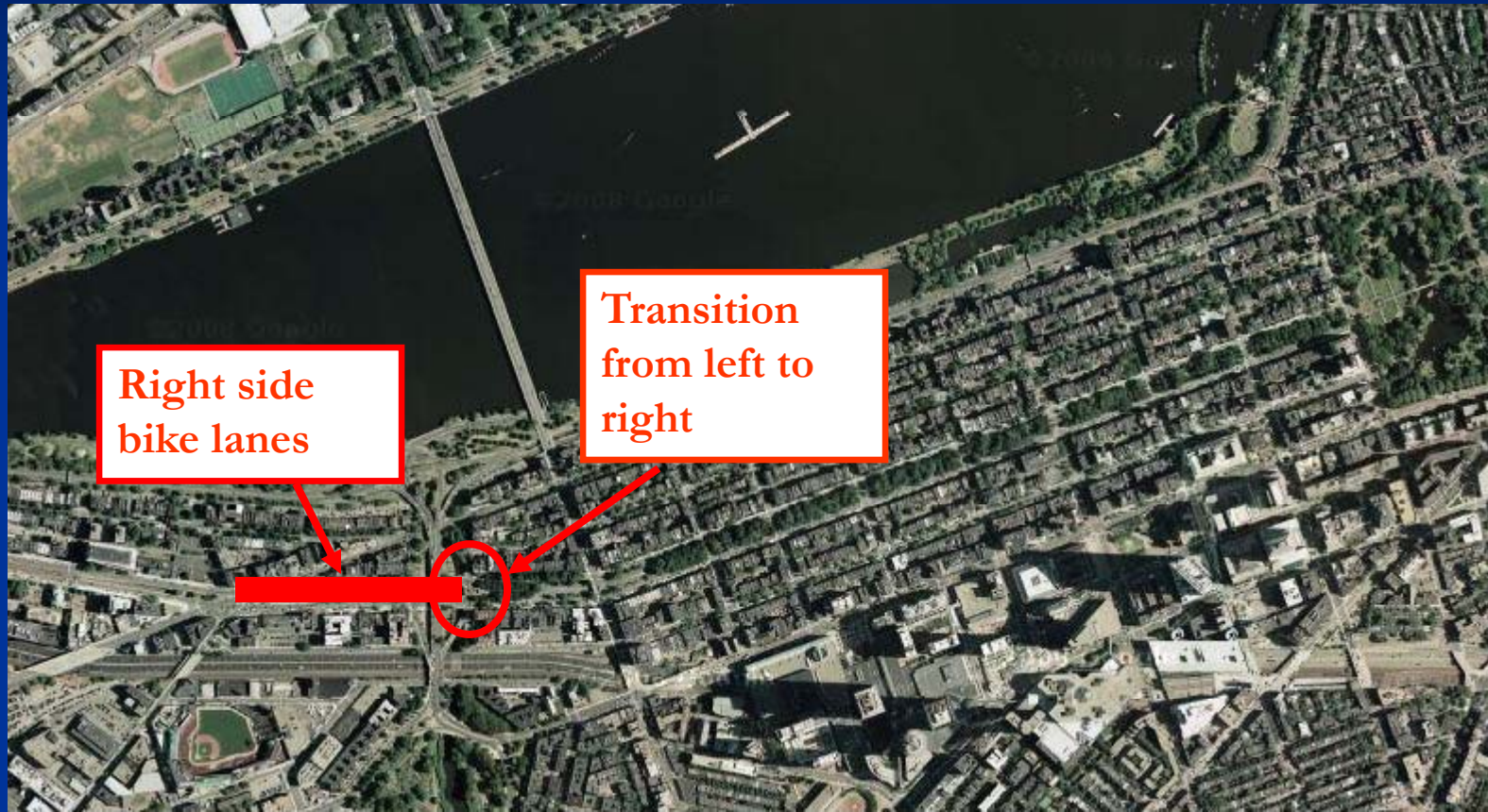
- Advanced stop line for cyclists
- Cyclists more visible to motorists
- Bike lane painted across intersections



# Rendering of a Bike Box at Gloucester Street Intersection

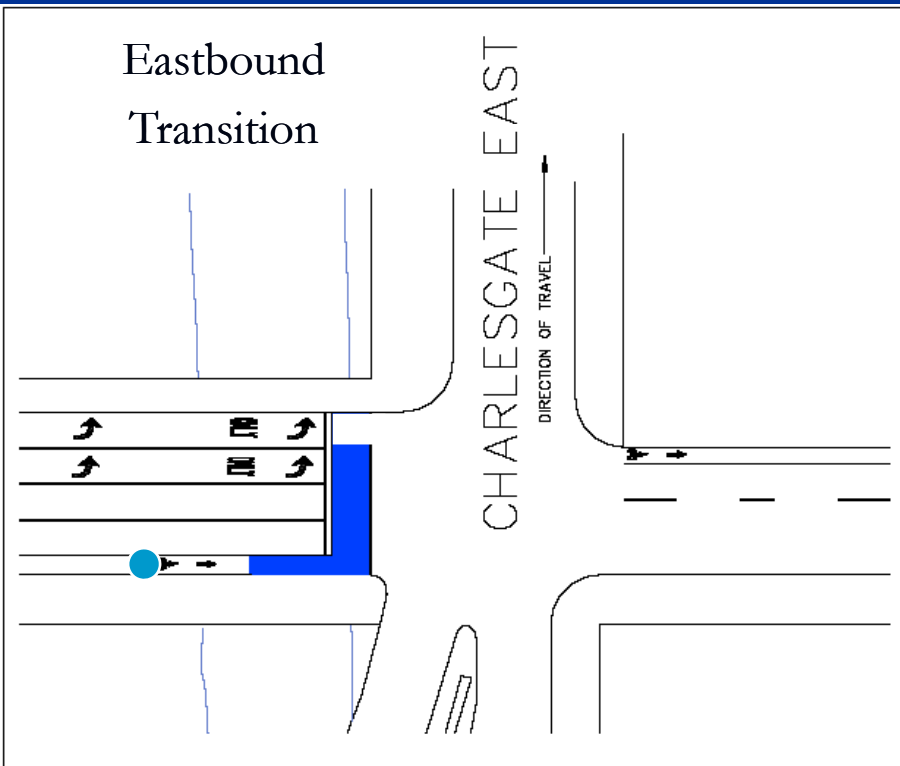


# Transition To/From Right Side Bike Lanes

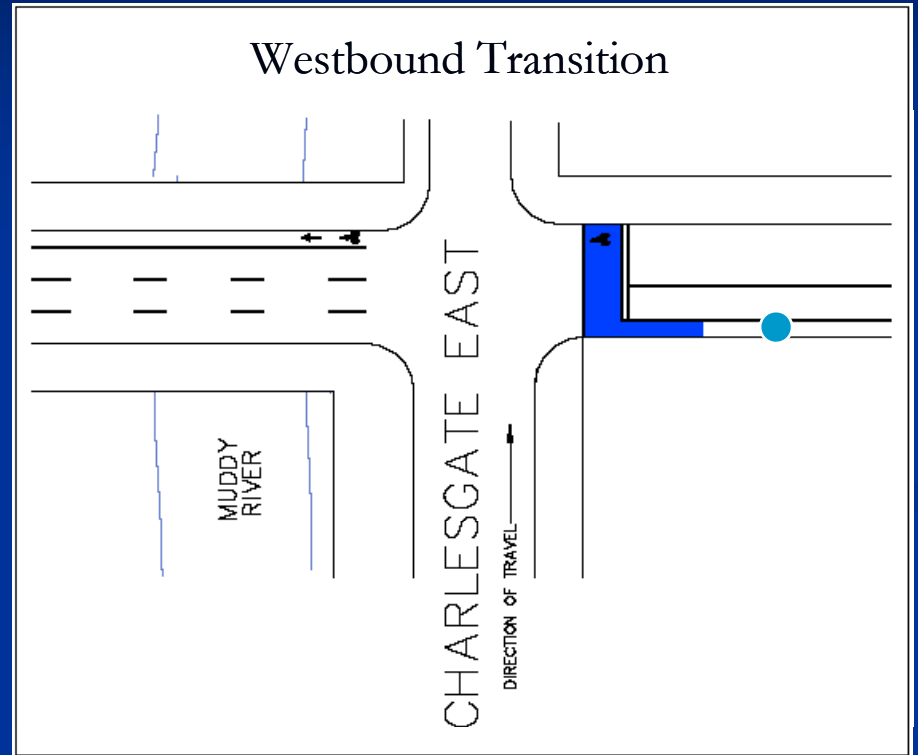


# Left to Right Transition

Eastbound Transition

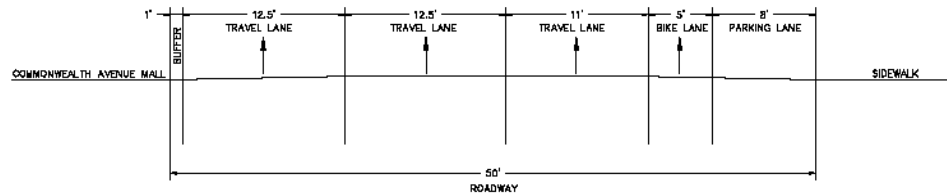


Westbound Transition





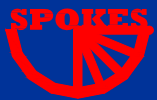
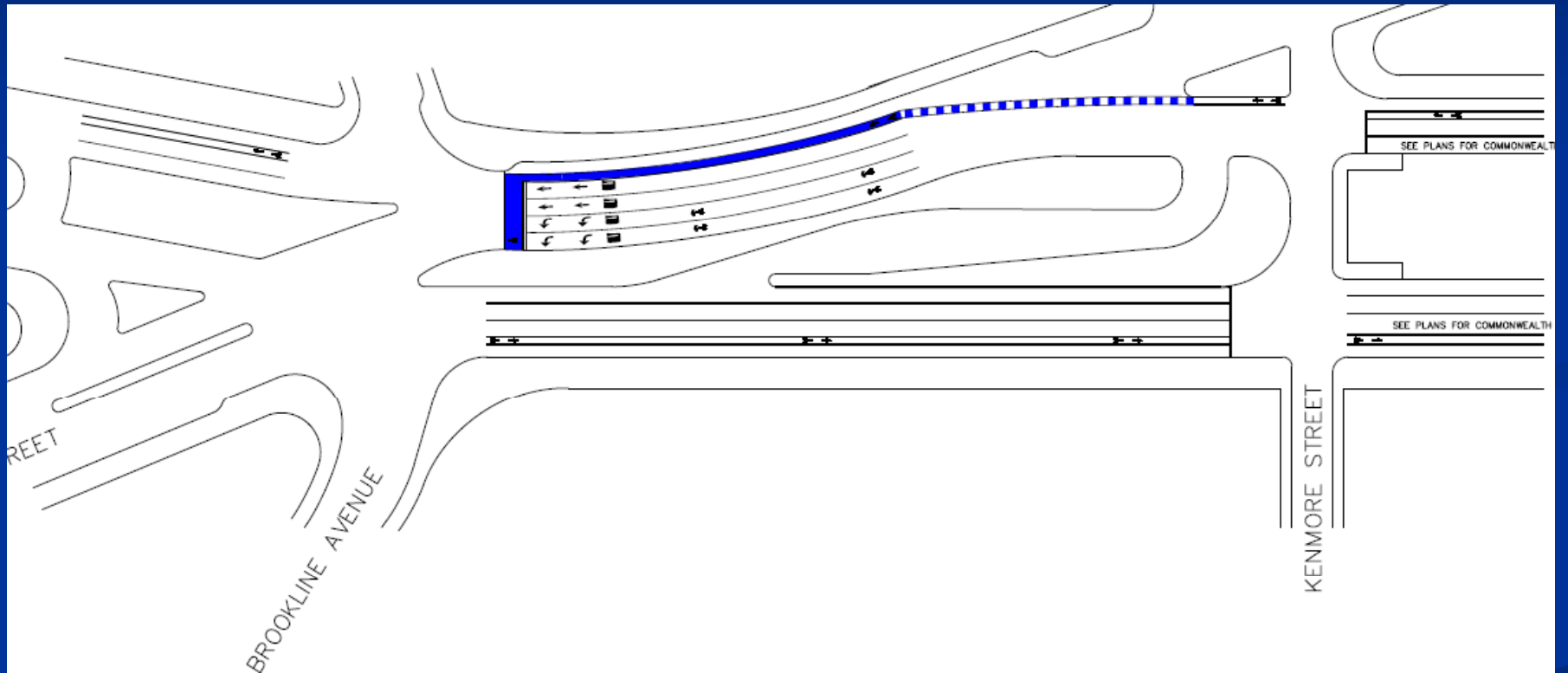
# Road Diet for Bike Lane



COMMONWEALTH AVENUE  
PROPOSED 50' CROSS-SECTION  
EASTBOUND KENMORE ST TO CHARLESGATE WEST

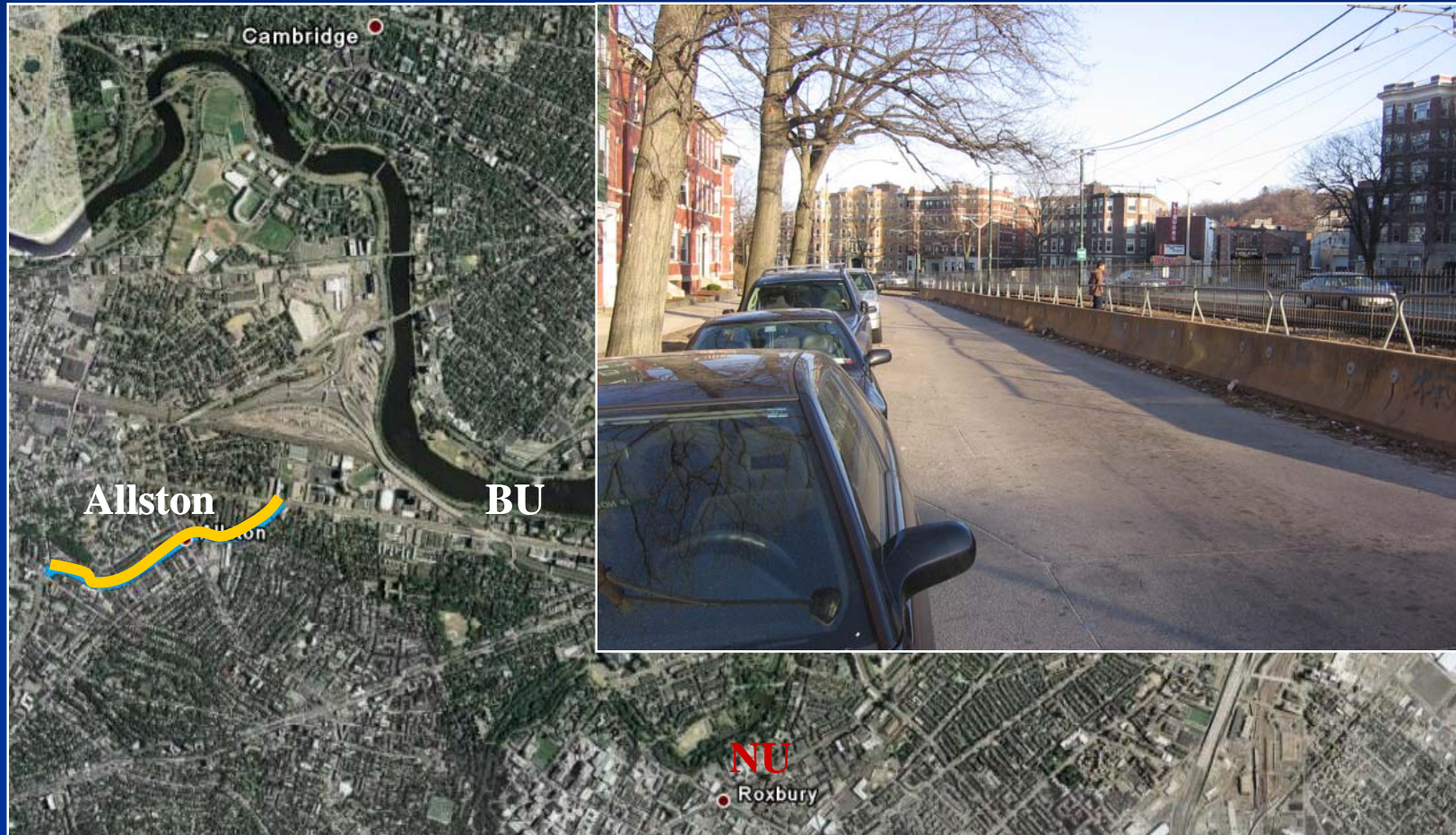


# Kenmore Square



# Commonwealth Avenue

*-Warren St. to Packard's Corner-*



# Left Side Bike Lane

*-Commonwealth Ave. Service Road-*

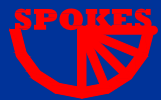


Where

are

*sharrows*

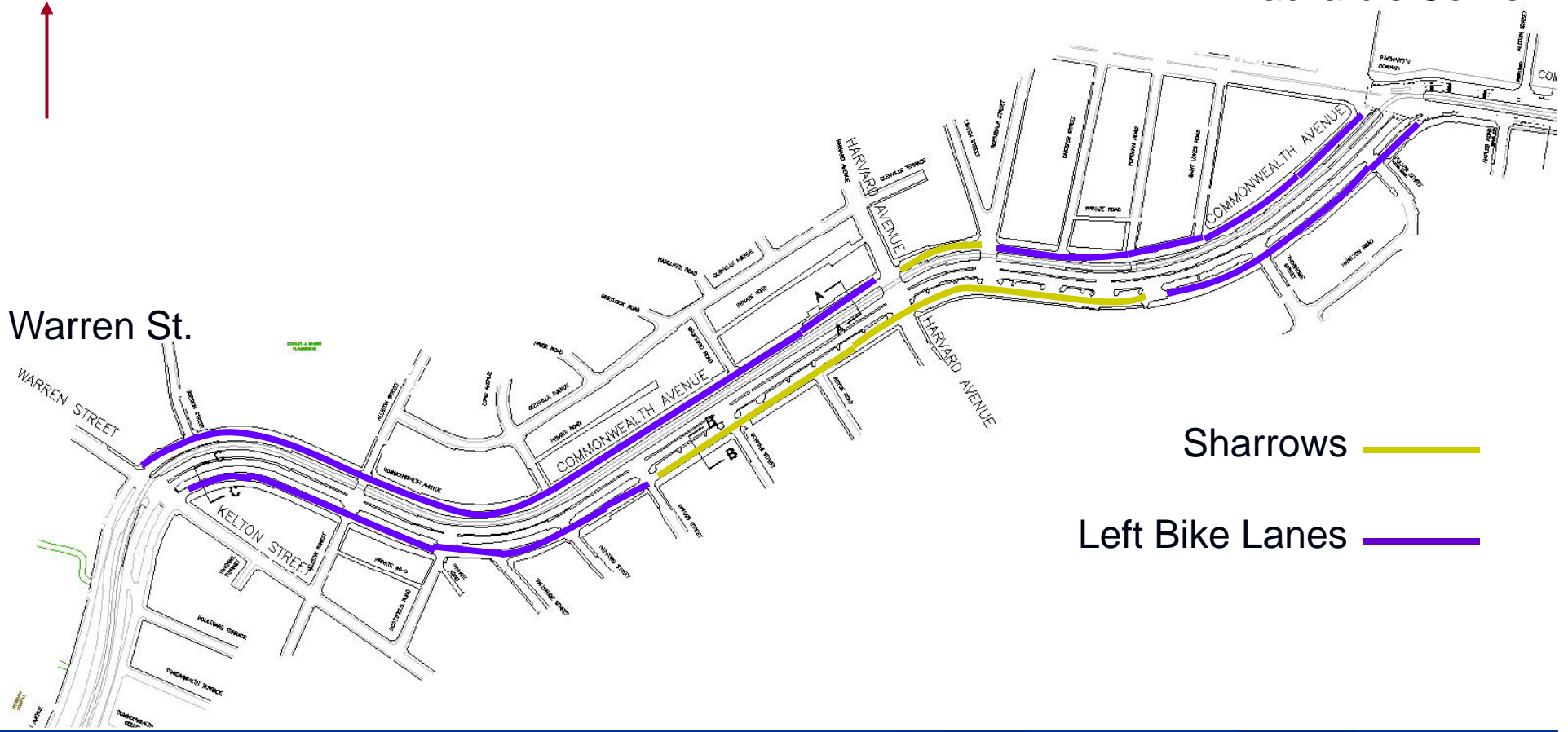
required ?





Packard's Corner

Warren St.



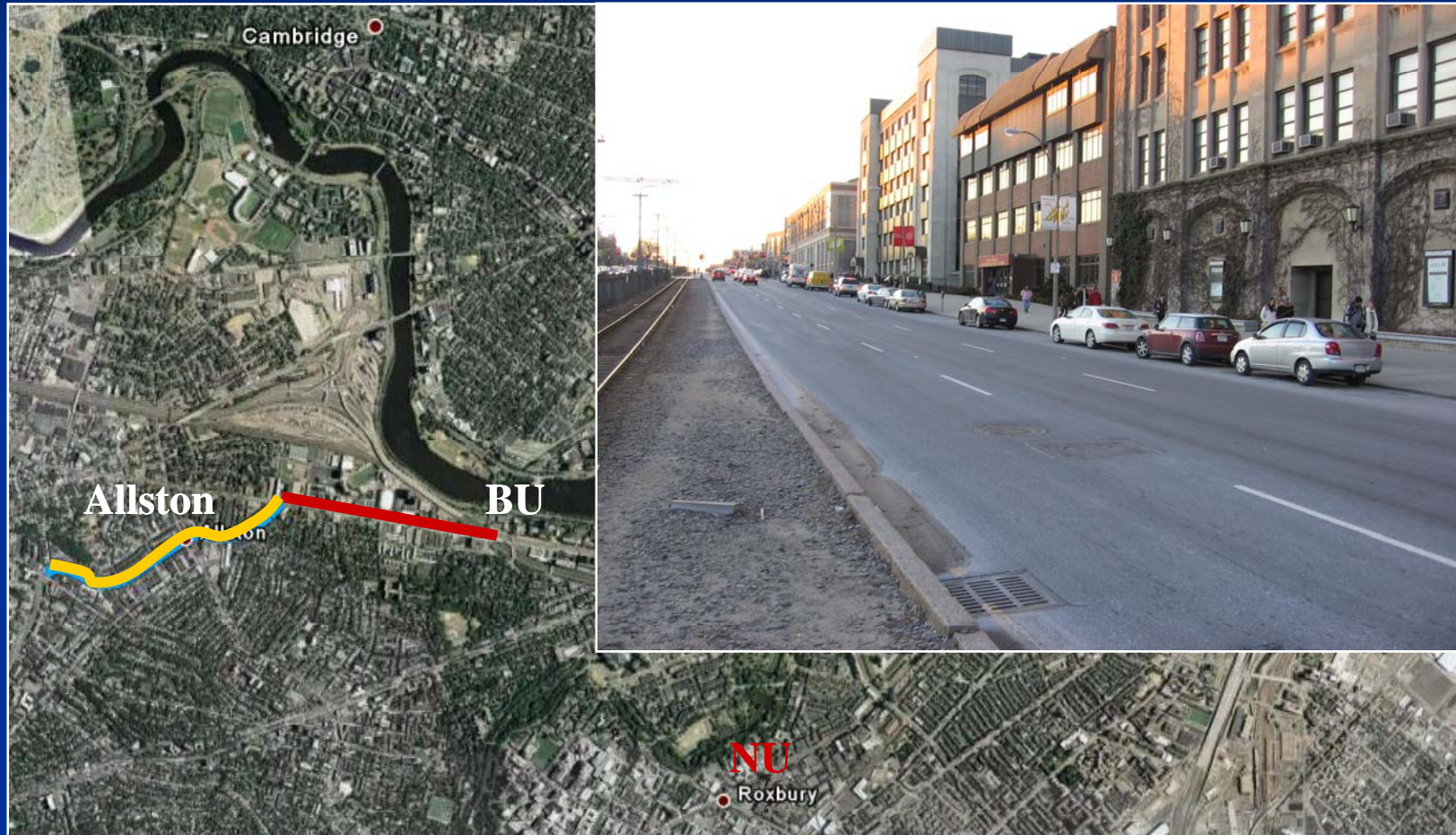
Sharrows ———

Left Bike Lanes ———



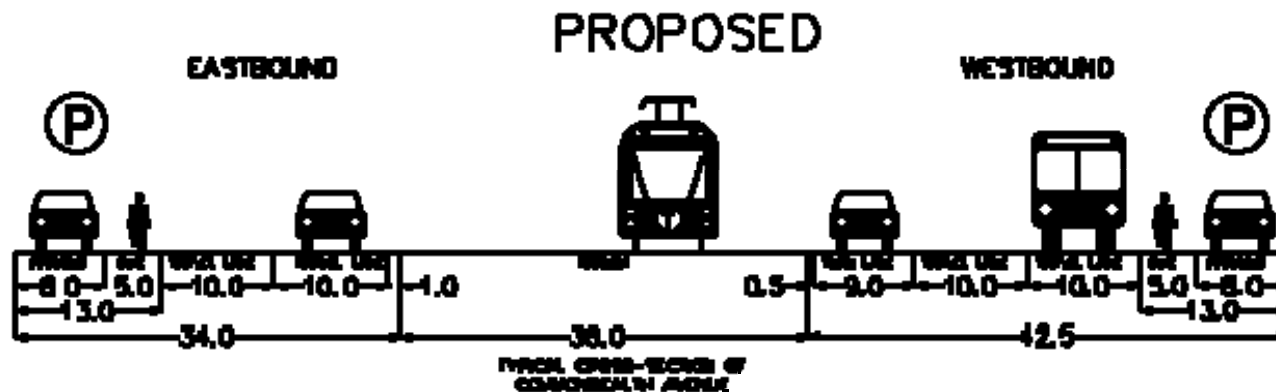
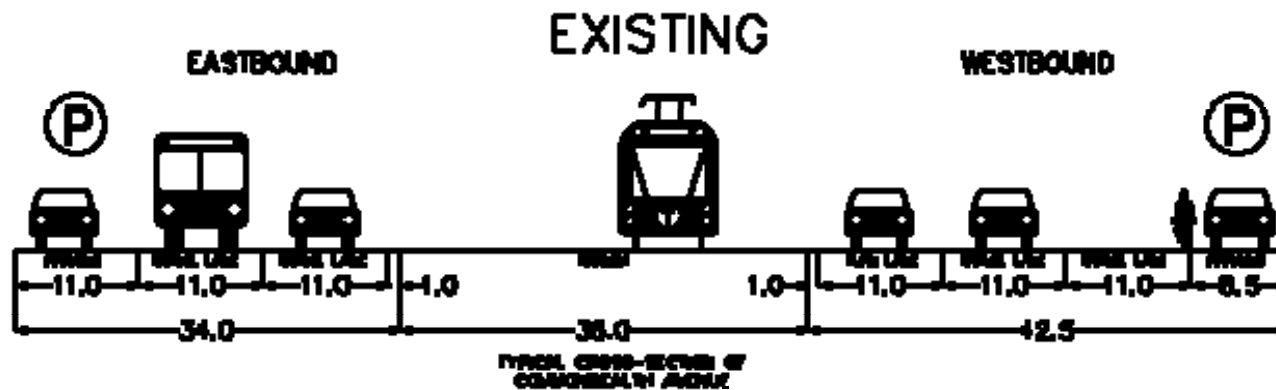
# Commonwealth Avenue

*-Packard's Corner to BU Bridge-*



# Cross-Sections

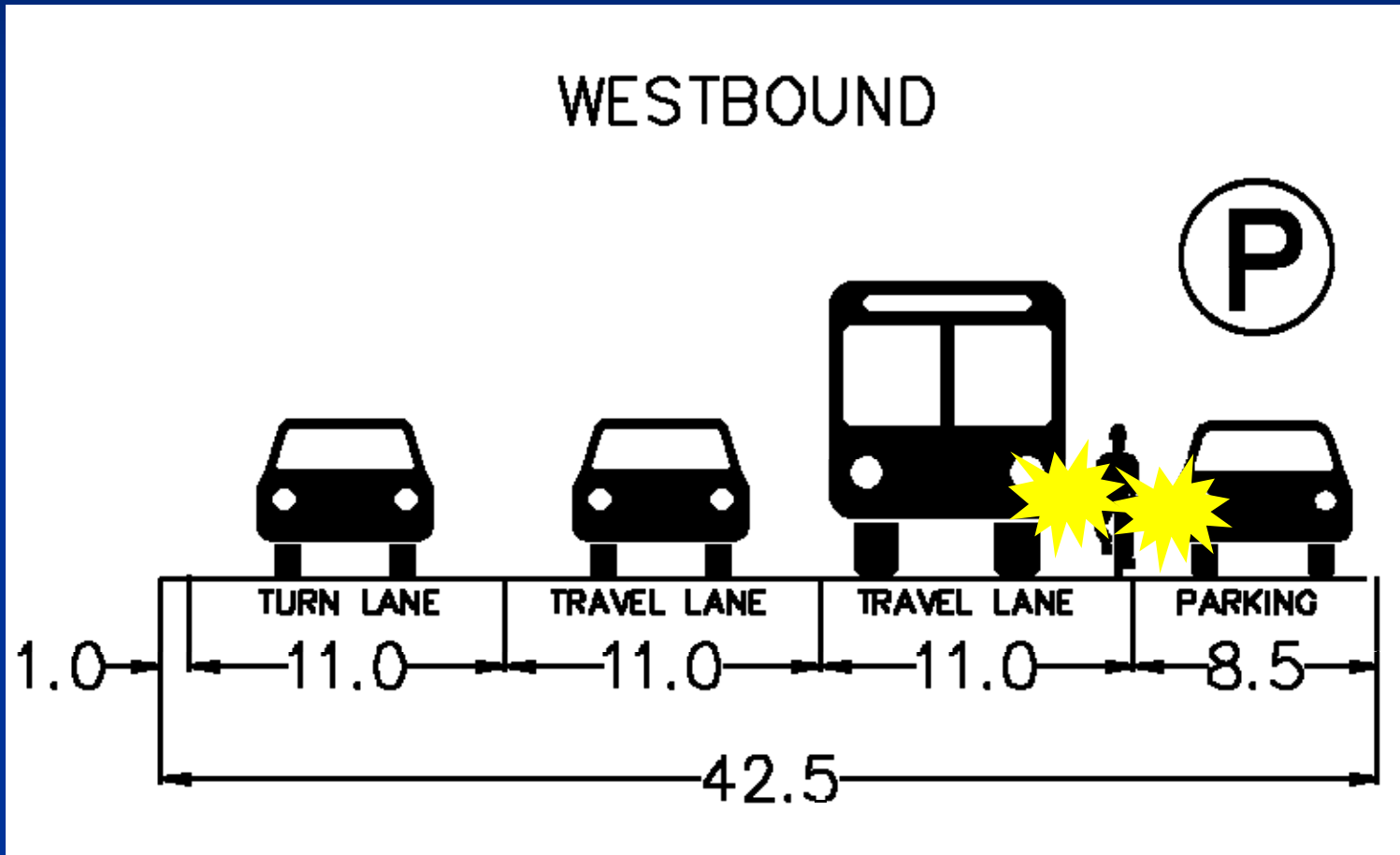
## *-Existing and Proposed-*





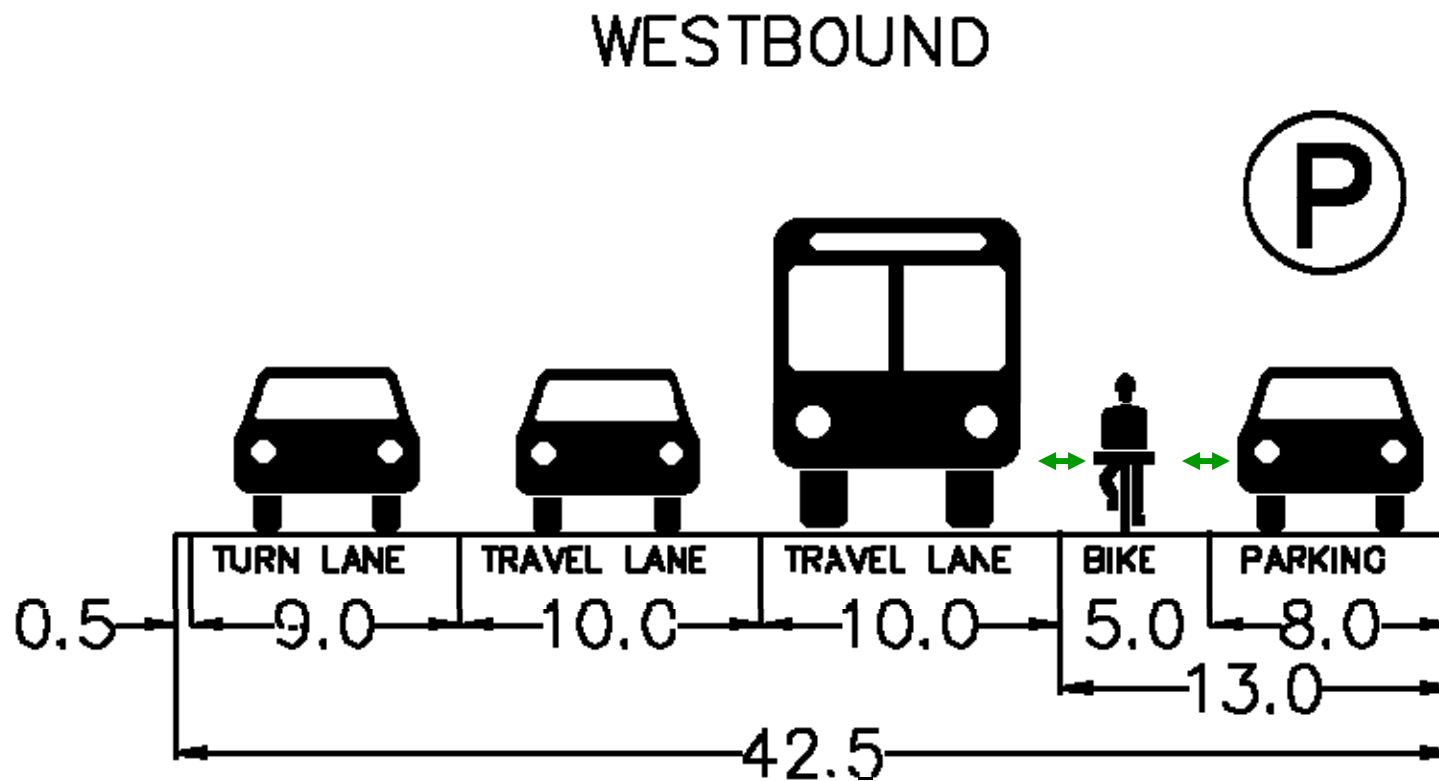
# 10' Lanes & Bike Lanes

*-A Win for Cyclists and Motorists-*



# 10' Lanes & Bike Lanes

*-A Win for Cyclists and Motorists-*



# 10' Lanes & Bike Lanes

*-A Win for Cyclists and Motorists-*

Potts Study (2007):

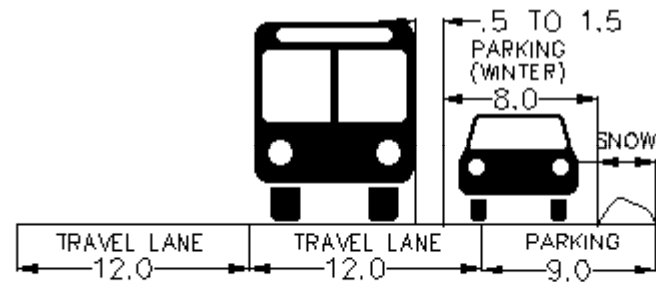
- “It was concluded from this research that there was no indication of an increase in crash frequencies as lane width decreased for arterial roadway segments or arterial intersection approaches.”



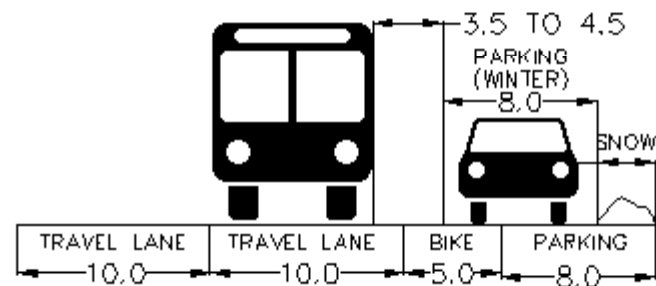
# Benefits for Motorists

## *-More Room in Winter-*

WIDER LANE  
WITHOUT BIKE LANE

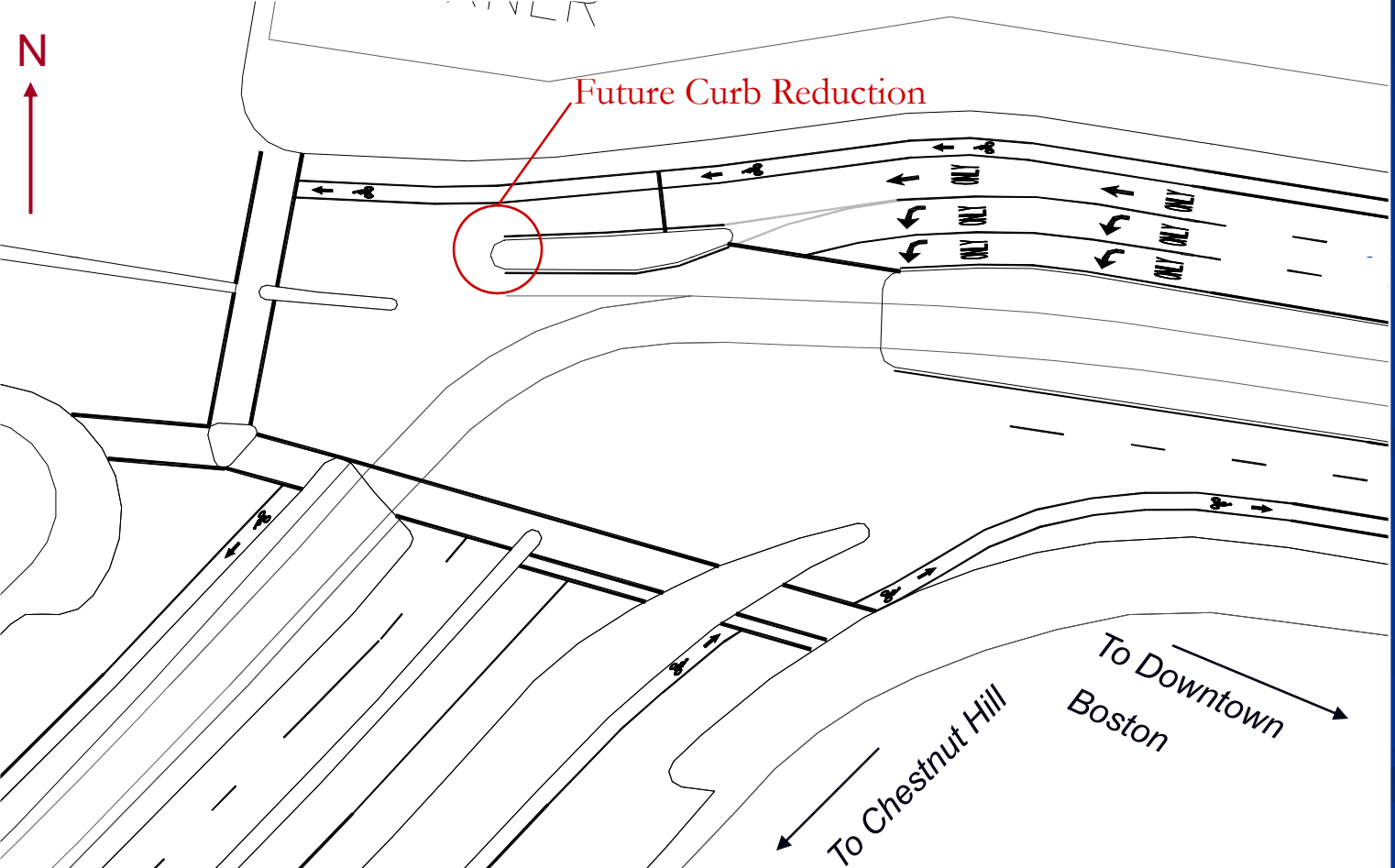


10' LANE  
WITH BIKE LANE



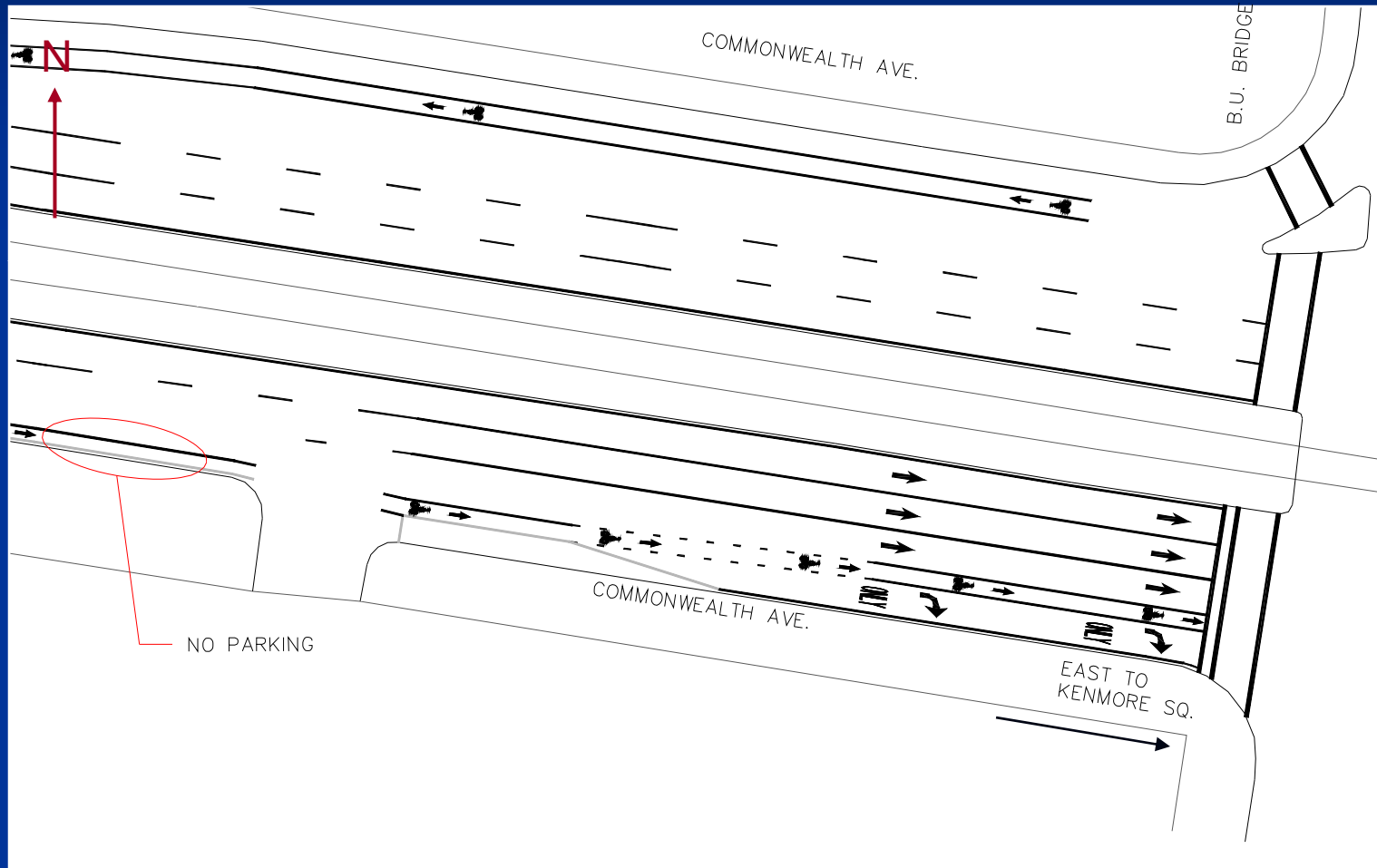
# Packard's Corner

*-Interesting Intersections-*



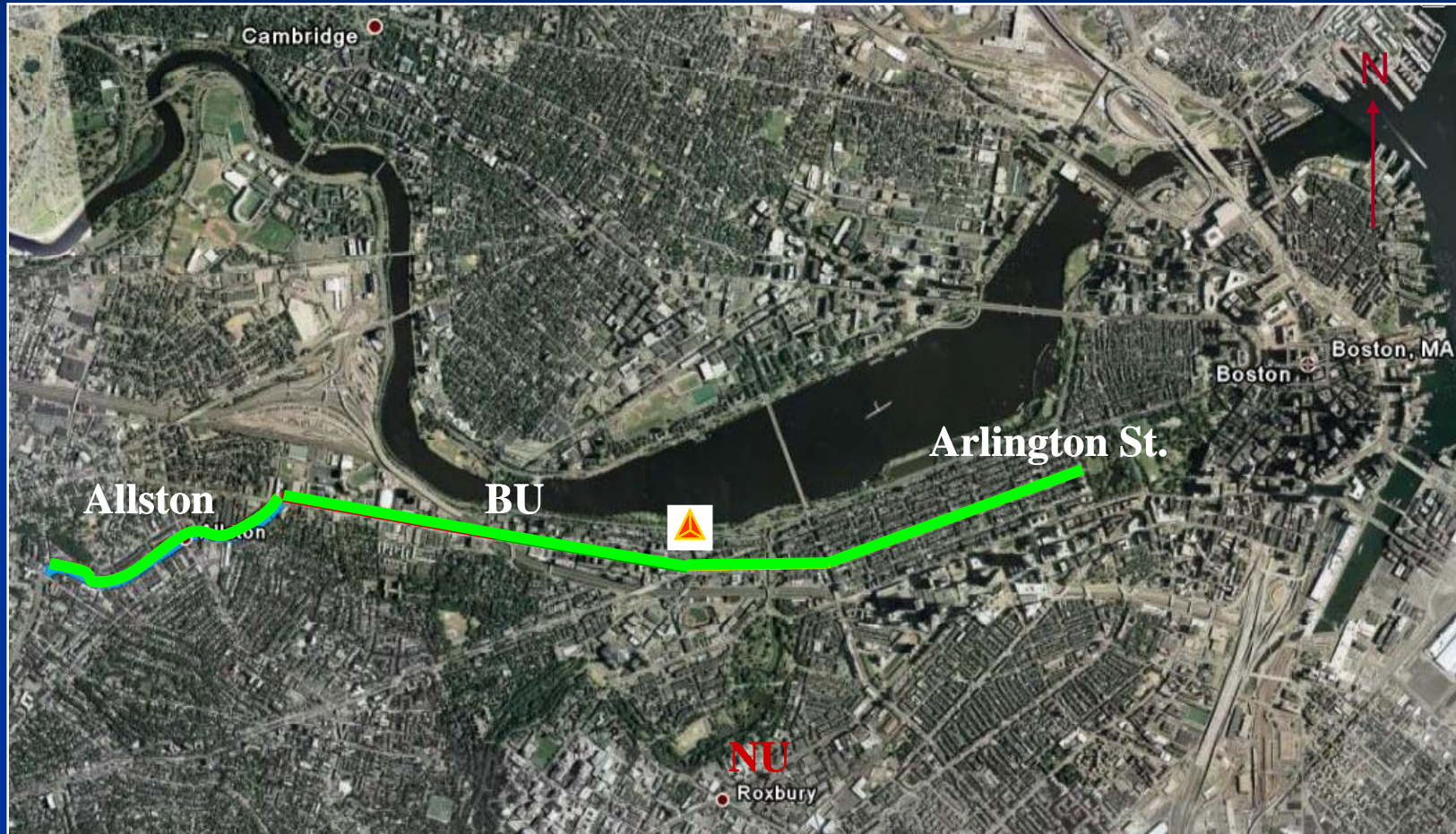
# BU Bridge

*-Interesting Intersections-*



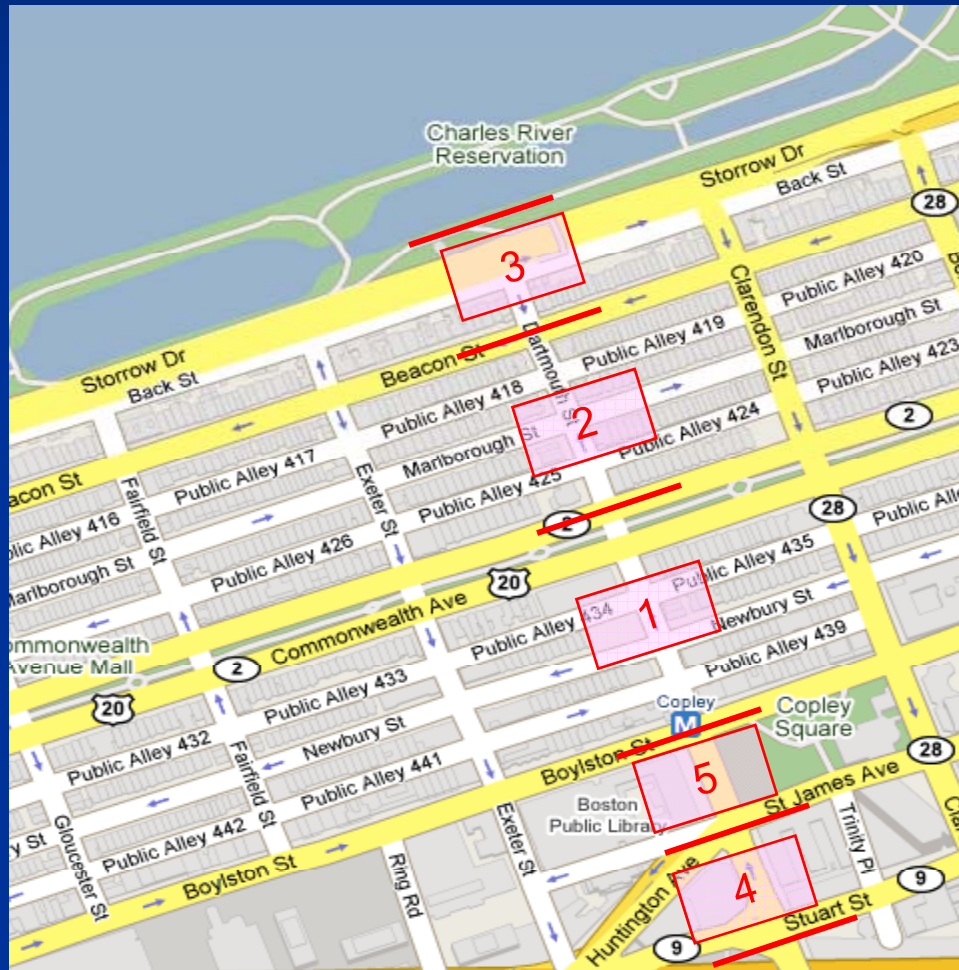
# Commonwealth Avenue

*-Making Connections: Allston to Arlington St.-*



# Dartmouth Street

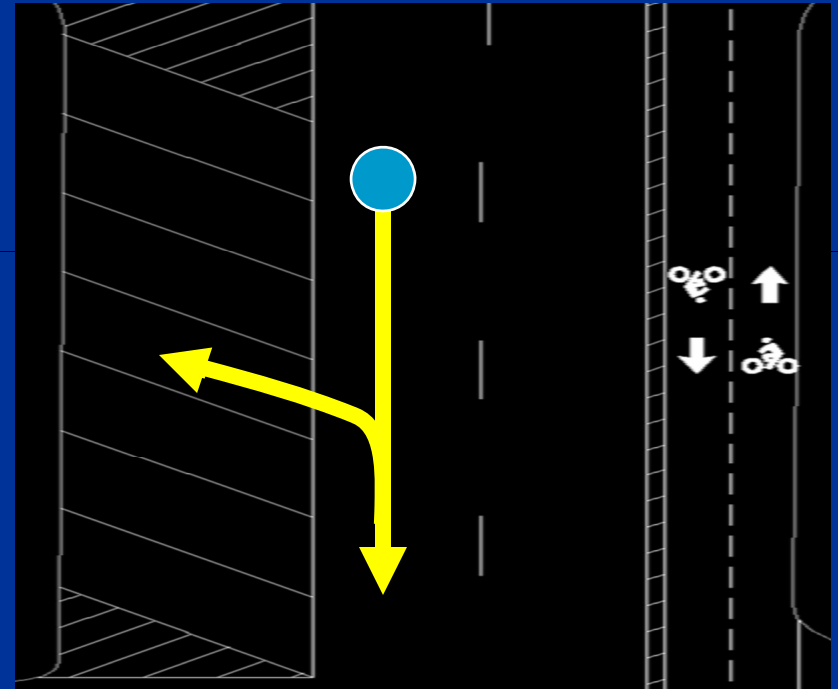
Stuart Street to Charles River Bike Path



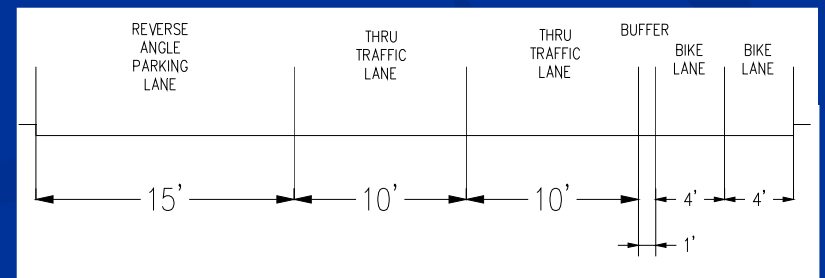


# Section 1

Boylston Street to Commonwealth Ave.

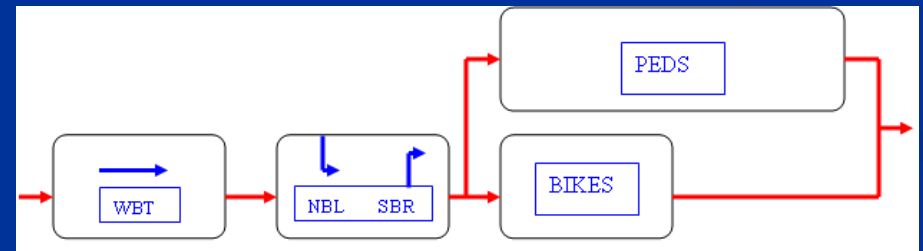
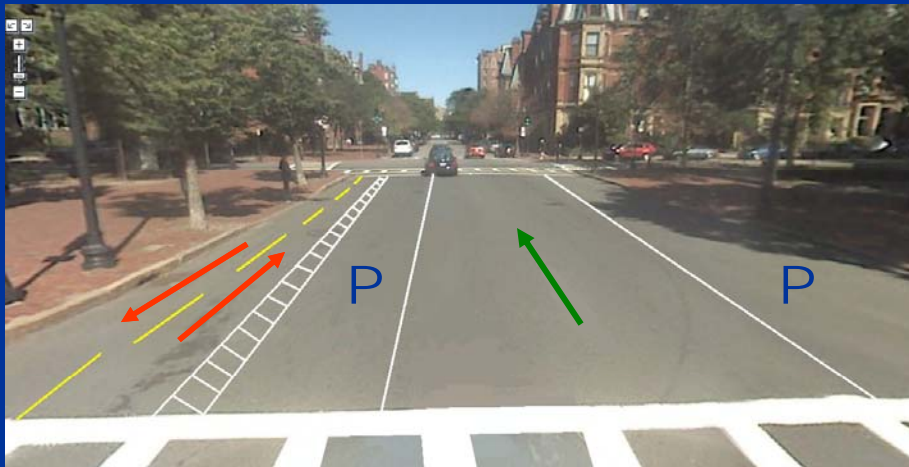
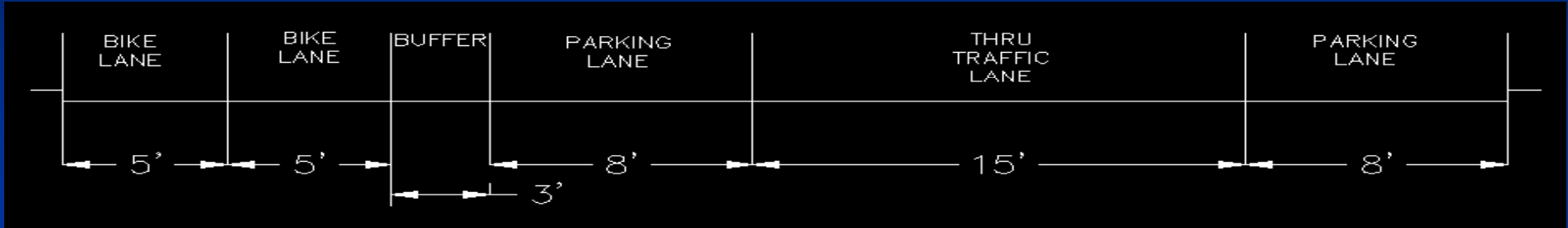


- ◆ Eliminating parking along left side of the road
- ◆ Reduction of travel lanes to 10'
- ◆ Implementing reverse-angle parking
- ◆ Pair of 4' bike lanes on left side with 1' buffer



# Section 2

Commonwealth Ave. to Beacon Street

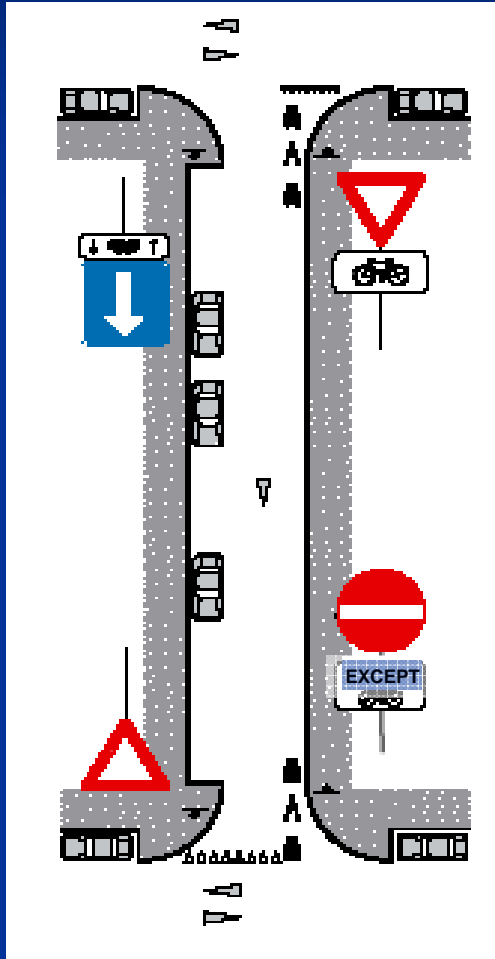


- ◆ Reducing street to 1 travel lane
- ◆ 332 during PM peak (avg. 10 per cycle)
- ◆ NYC style parking buffer
- ◆ Provision of a bike phase at Dartmouth/Beacon



# Section 3

## Beacon Street to Charles River Path



- ◆ Access to Charles River
- ◆ Dashed line through intersection
- ◆ Provision of signage for vehicular traffic

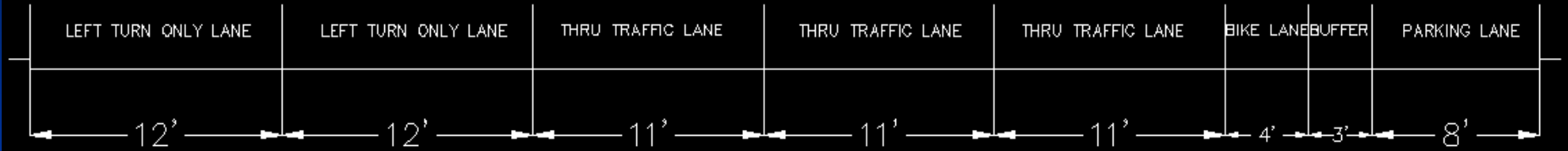
# Dartmouth Street

Sections 4 & 5

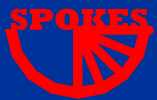
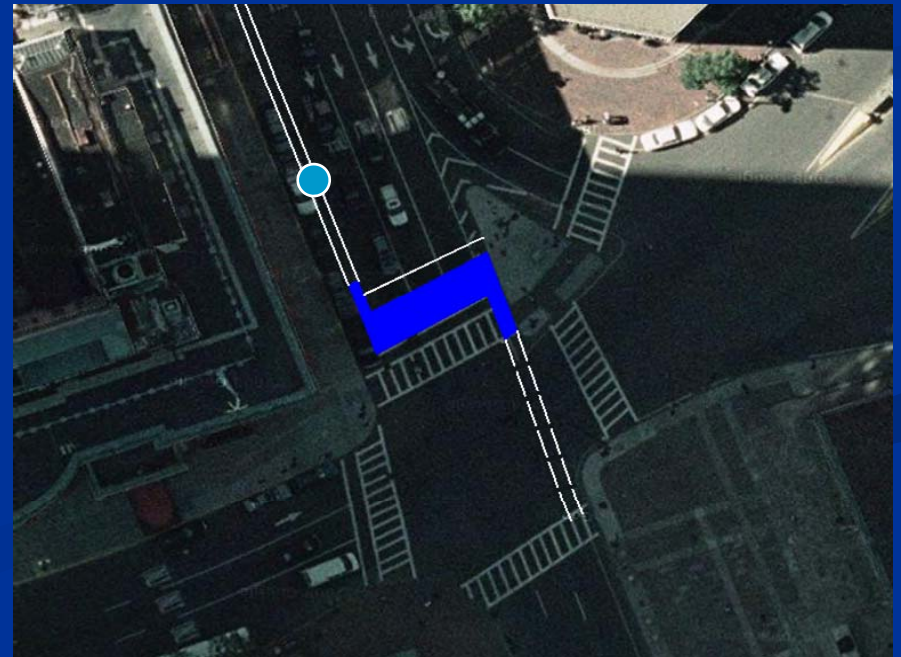


# Section 4

## Stuart Street to Huntington Avenue

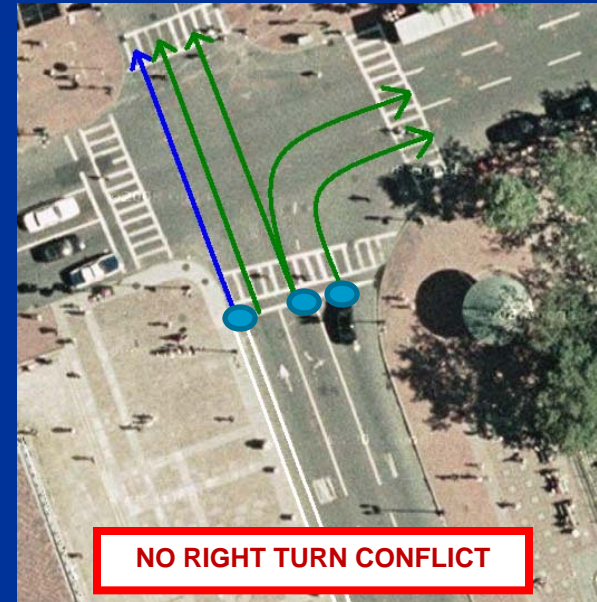
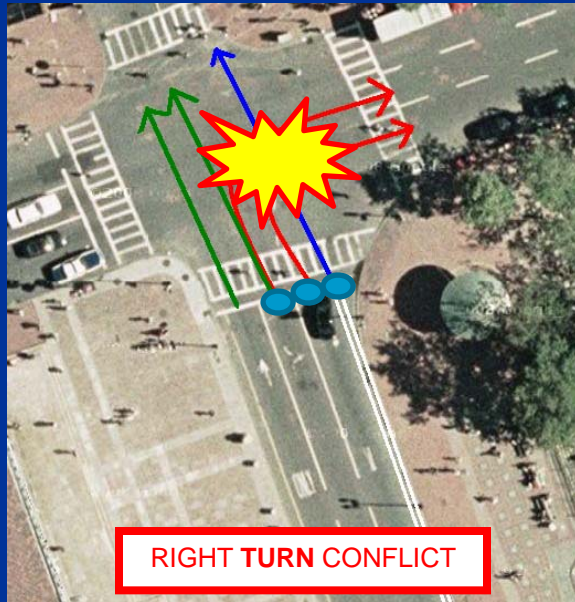


- ◆ Heavy left turn traffic onto Huntington or I-90
- ◆ Single NB 4' bike lane with 3' buffer
- ◆ Bike Box



# Section 5

Huntington Avenue to Boylston Street



- ◆ Heavy right turn traffic onto Boylston Street
- ◆ 409 during AM peak (avg. 12 per cycle)
- ◆ Pair of 4' bike lanes on left side with 2' buffer



# South Boston Fort Point Channel to L St. Beach

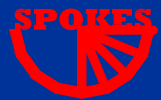
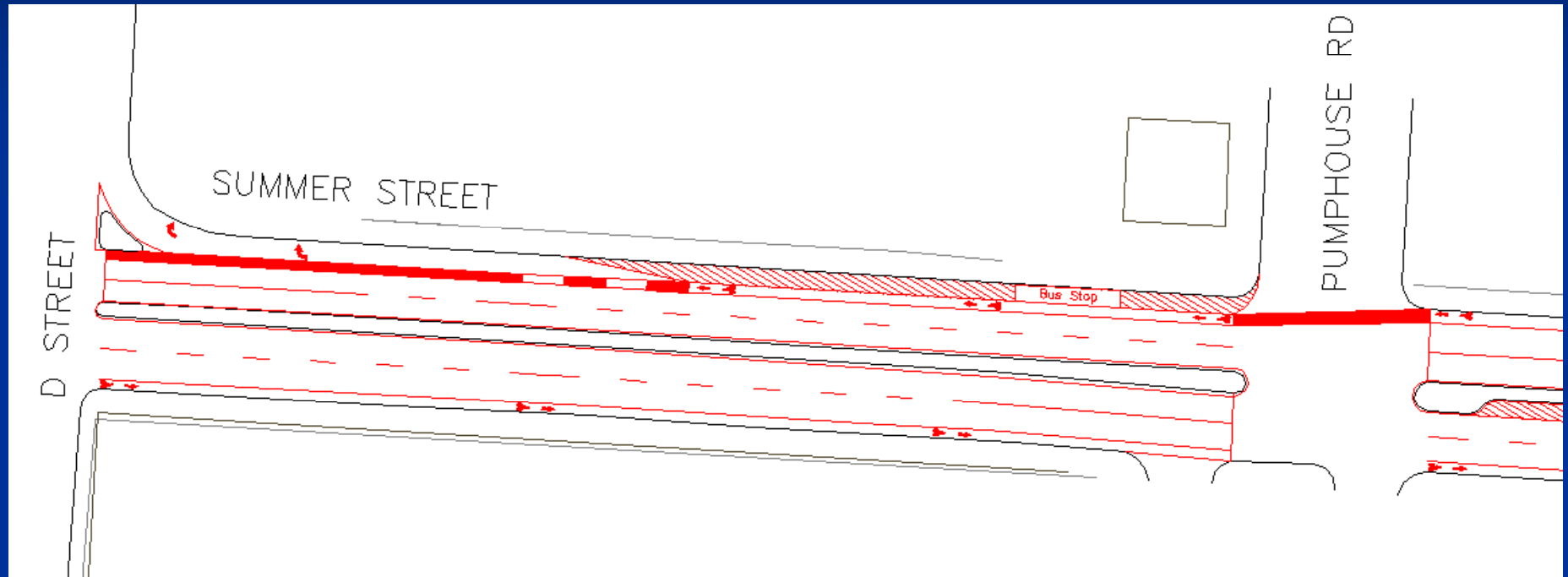


# Safety @ Right Turns





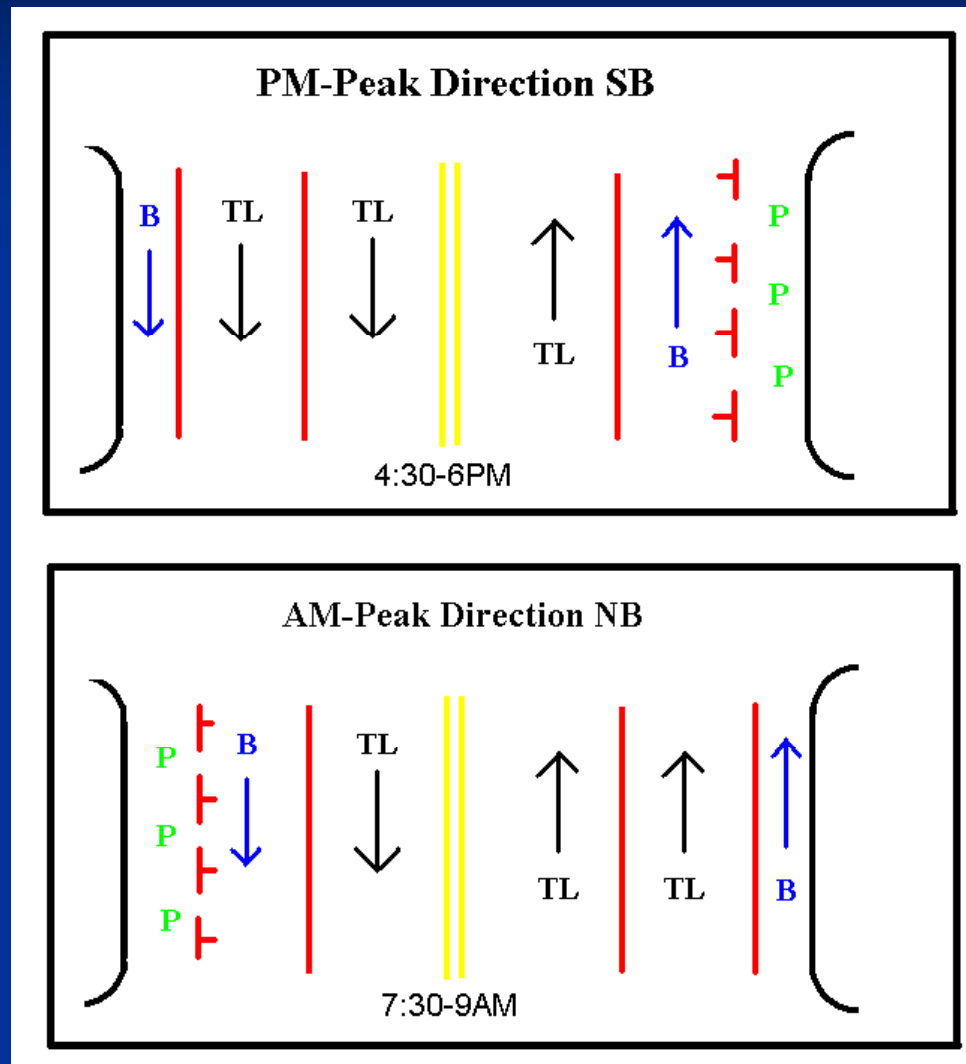
# D St.



# Width - Floating Bike Lanes



# Floating Bicycle Lane Operation

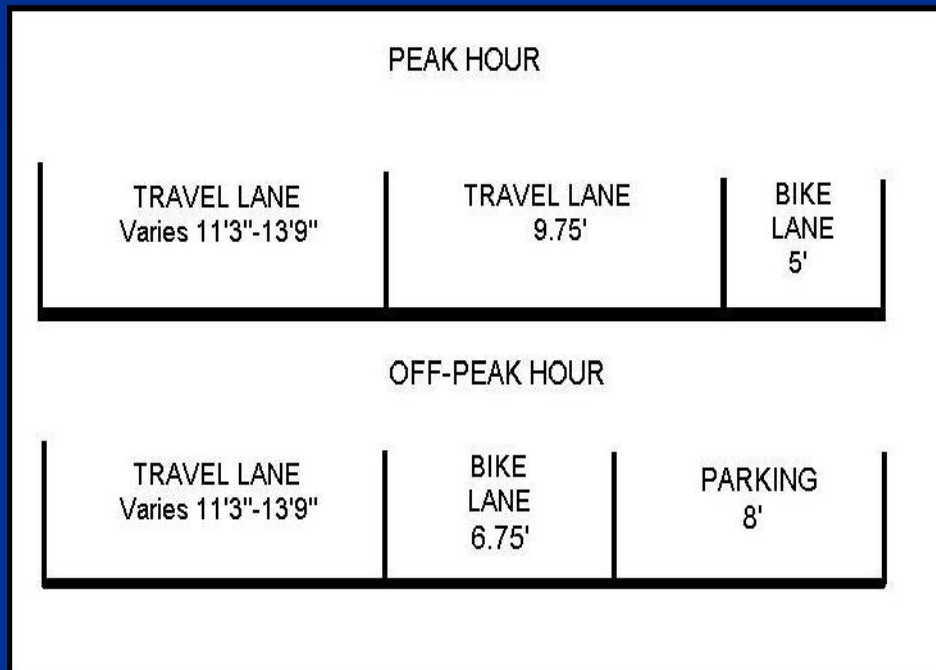


# Summer St. looking NB



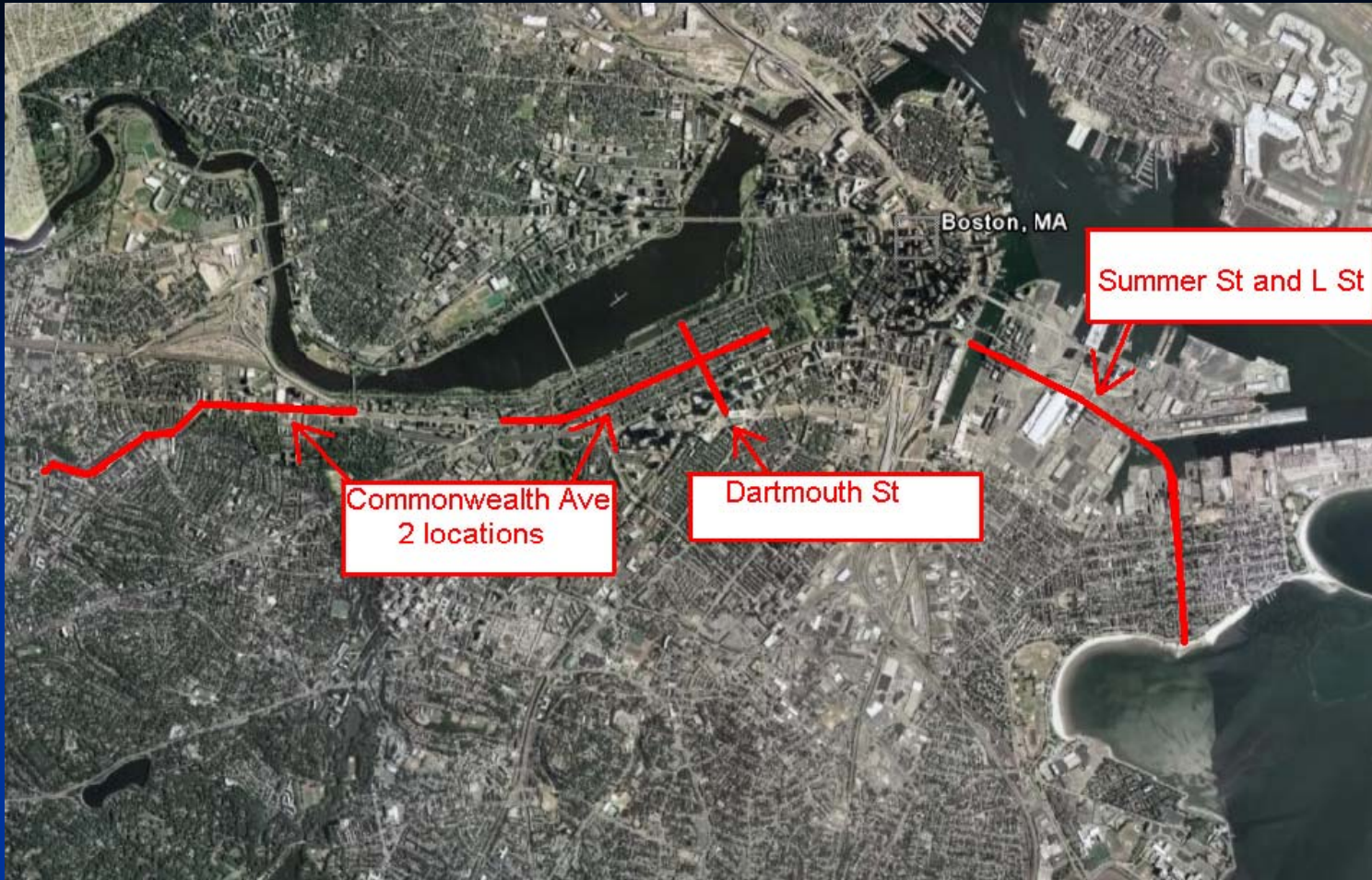
# Floating Bike Lane Cross Section

## NORTHBOUND SIDE



- Lane Orientation
- Traffic Analysis
  - Two intersections
  - Under capacity





THE END

