



# I-90 ALLSTON INTERCHANGE A MULTIMODAL TRANSPORTATION PROJECT

MBTA PRELIMINARY PDG

February 26, 2015

# MassDOT's Allston I-90 Project Team

- Tetra Tech
  - Coordinating Consultant
  - Highway Design
- WSP
  - I-90 Viaduct Design
- VHB (w/Baker International, Patrick Engineering)
  - Transit and Rail Engineering
  - Station Design

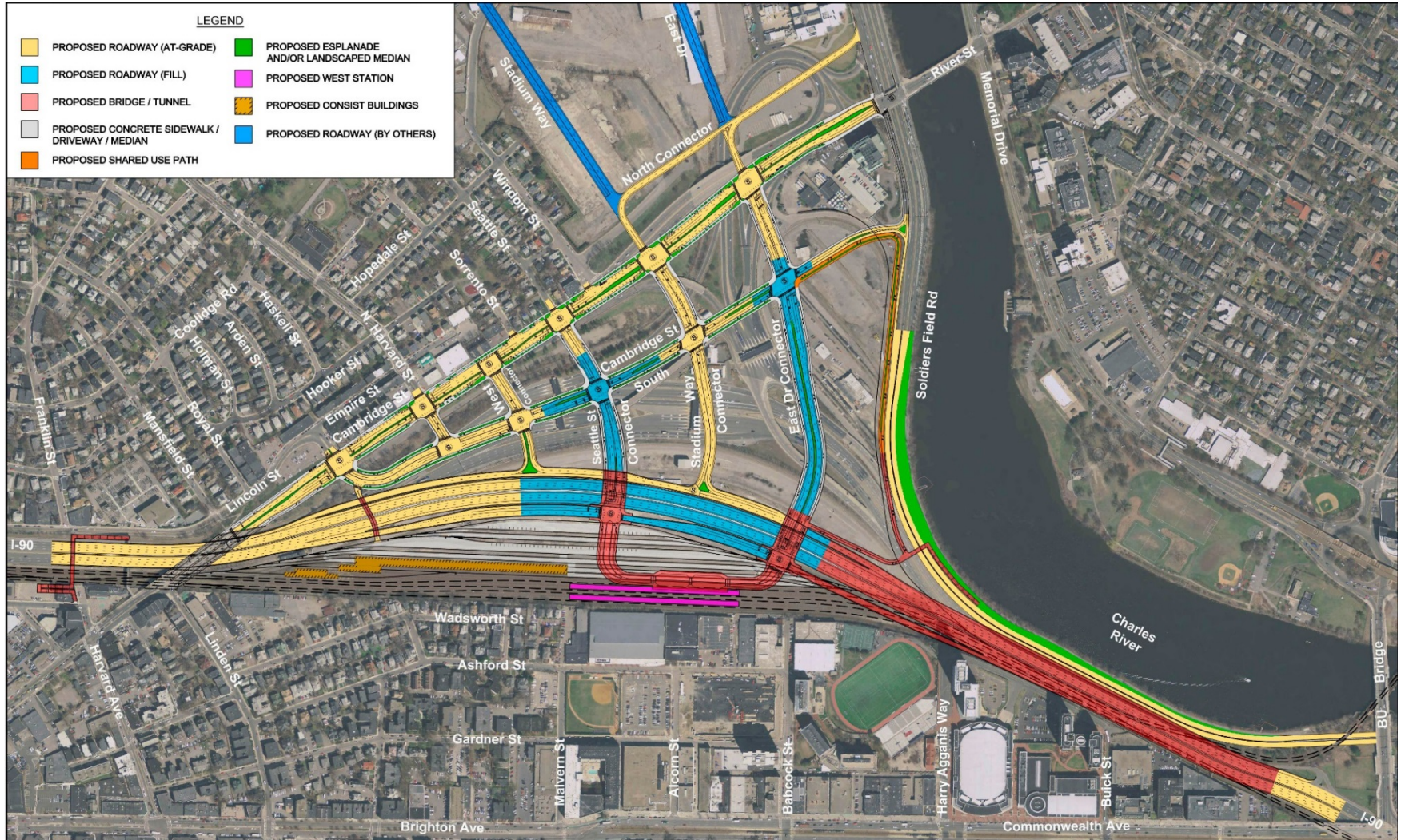
# I-90 Allston Interchange Project Area



# Project Purpose

- Replace Structurally Deficient/Functionally Obsolete I-90 Viaduct
- Straighten Main Line through Beacon Park Yards (BPY)
  - All Electronic Tolling
  - Rebuild Urban Interchange
  - Geometric & Safety Improvements
- Realign Soldiers Field Road
- Create a more vibrant Cambridge Street
- Construct Urban Improvements/Accessibility
  - Shared Use Path (“People’s Pike”)
  - Rebuild Lincoln St Ped Bridge
  - Cycle Tracks on Cambridge Street
- Build BPY Layover & West Station

# Project Overview



# Project Status

- Bridge/Highway Kick-off Spring 2014
- Governor's West Station Commitment – Sept 29, 2014
- Allston I-90 Task Force – 10 Meetings held
  - Overall Emphasis on Neighborhood Cohesion
  - Integration of West Station
  - Incorporation of Shared Use Path to Esplanade
- ENF filed 10/31/14
- MEPA Certificate – DEIR Scoped 12/24/14

# Railroad & Beacon Park Yards Elements

- MassDOT - Harvard MOU to use 22 acres for station & layover
  - Protect Air Rights Development
- Beacon Park Yards
  - Layover Tracks for 14-18 9-Car Consists
  - Sheltered Pit Track
  - Wheel Truing
  - Car Wash
  - Crew Quarters
  - Substation
- Do No Preclude Future Restoration of Grand Junction
- Maintain Houghton Chemical/Freight Activities

# West Station Elements

- Construct New West Station
  - 2 Platforms/4 Tracks
    - So. Station Service via Framingham/Worcester Branch
    - Potential Urban Rail Service - Riverside to So. Station (& No. Station via Grand Junction)
  - Bicycle/Pedestrian Access from North & South Comm Ave to PDW Path
    - Accessible at all times and not limited to MBTA operational hours
  - No Parking
  - Bus Loop access at Mezzanine
  - Consider 2-way bus loop, serving
    - Bus
    - Intercity Bus
    - Taxi
    - Shuttle

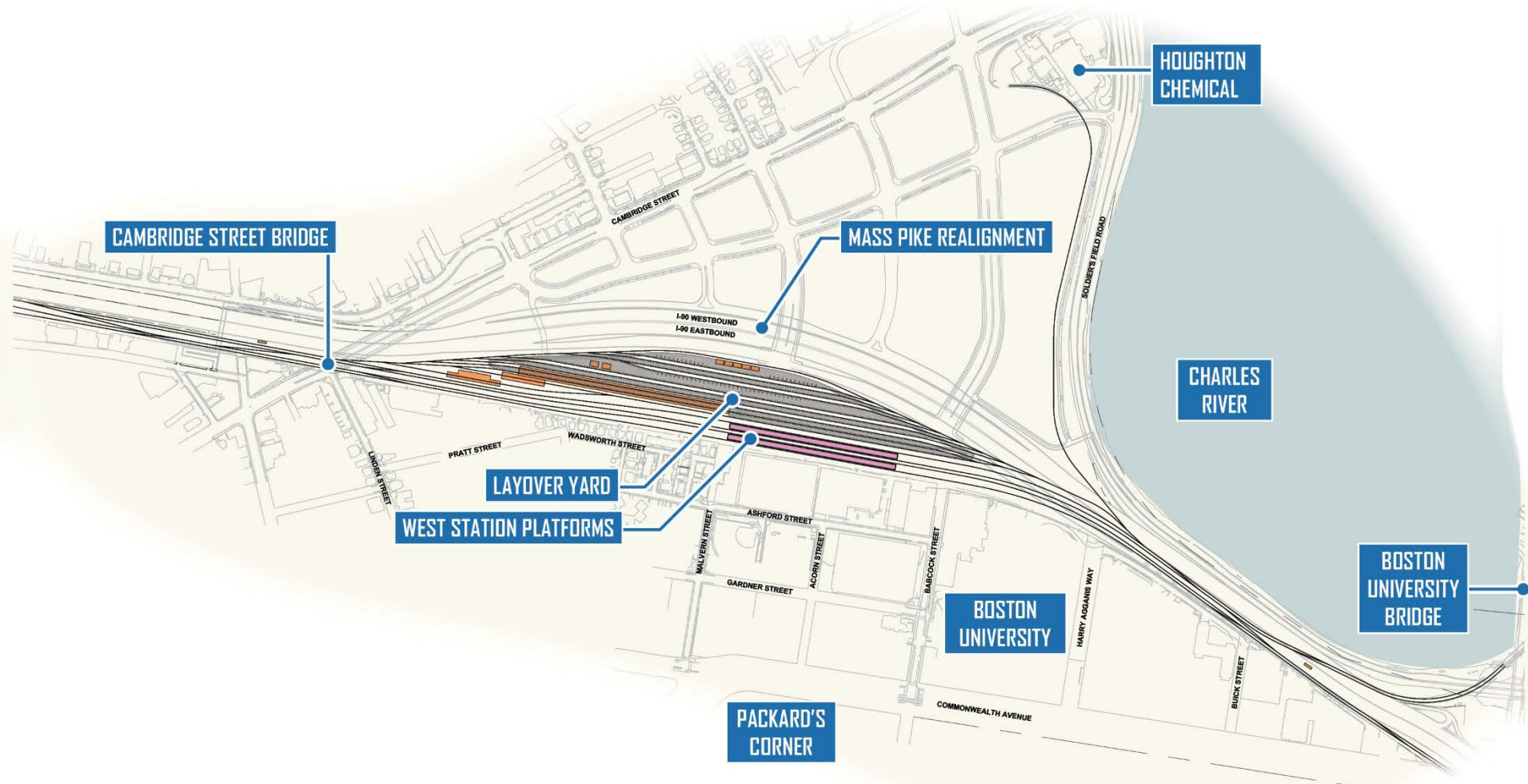


# Other Key Project Elements

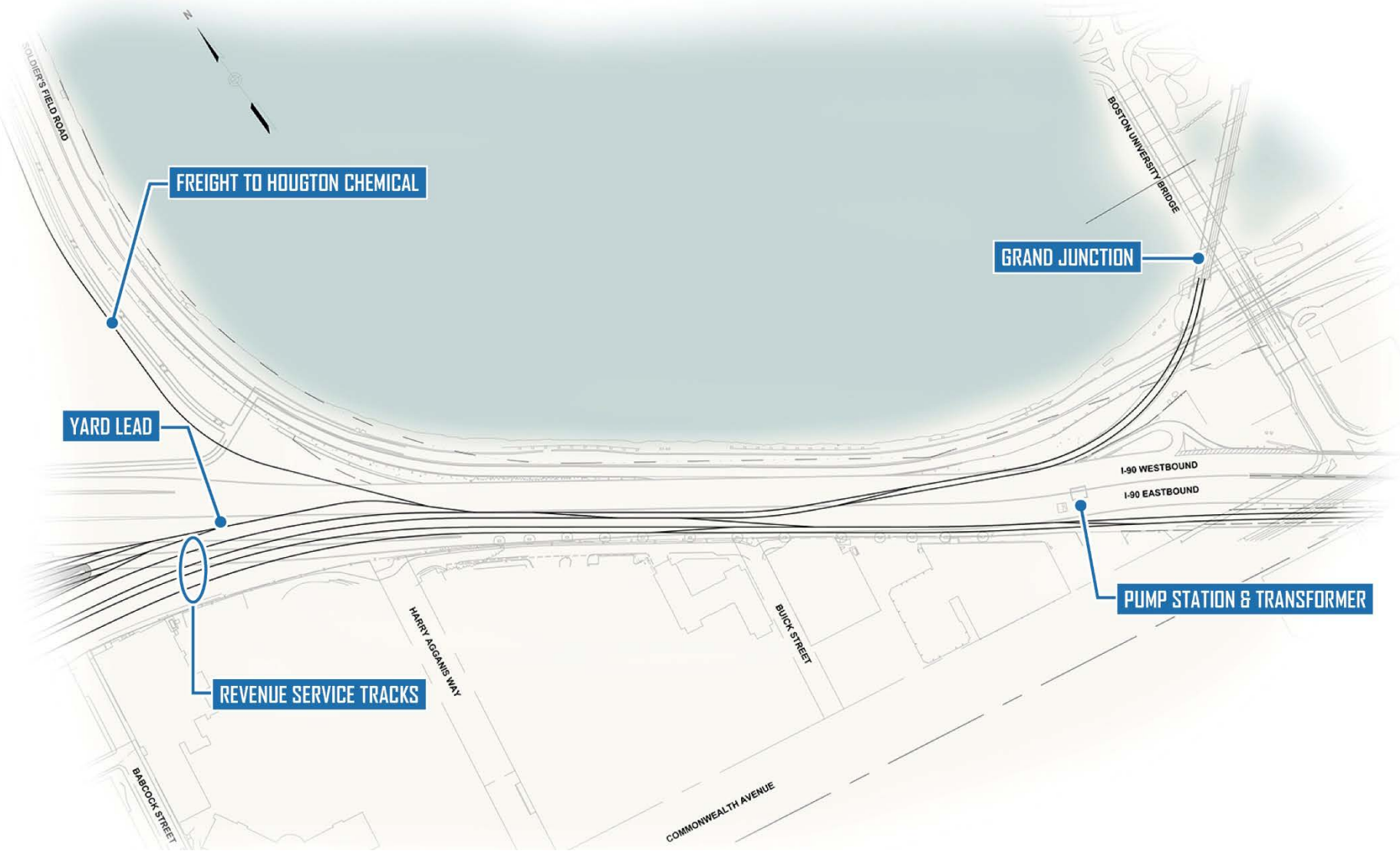
- Bicycle Cages
- Noise Mitigation/Sound Barriers
- Air Quality
- Design & Construction consistent with MBTA sustainability and energy management goals



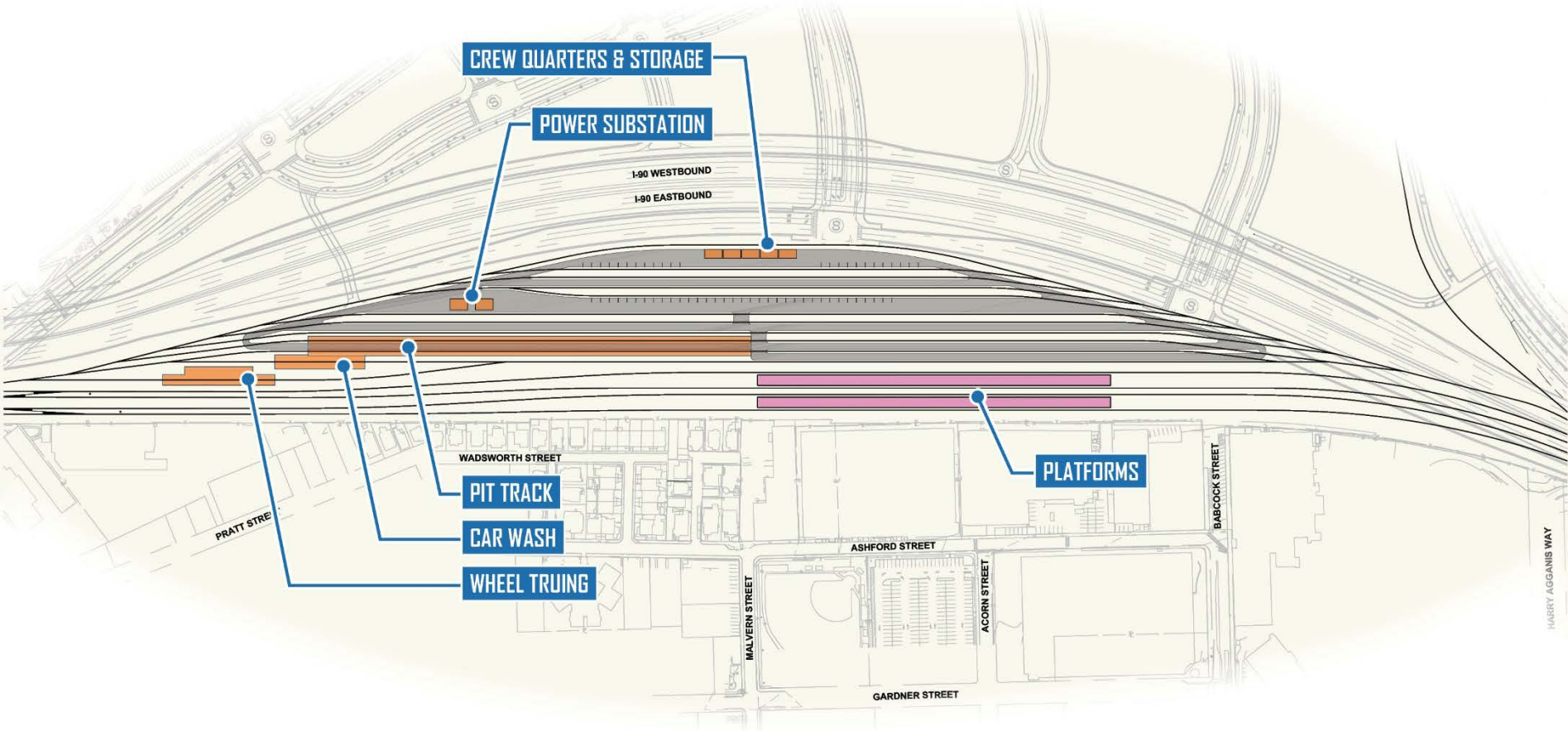
# Overall Track/Yard Flexibility



# Track Layout Under Viaduct

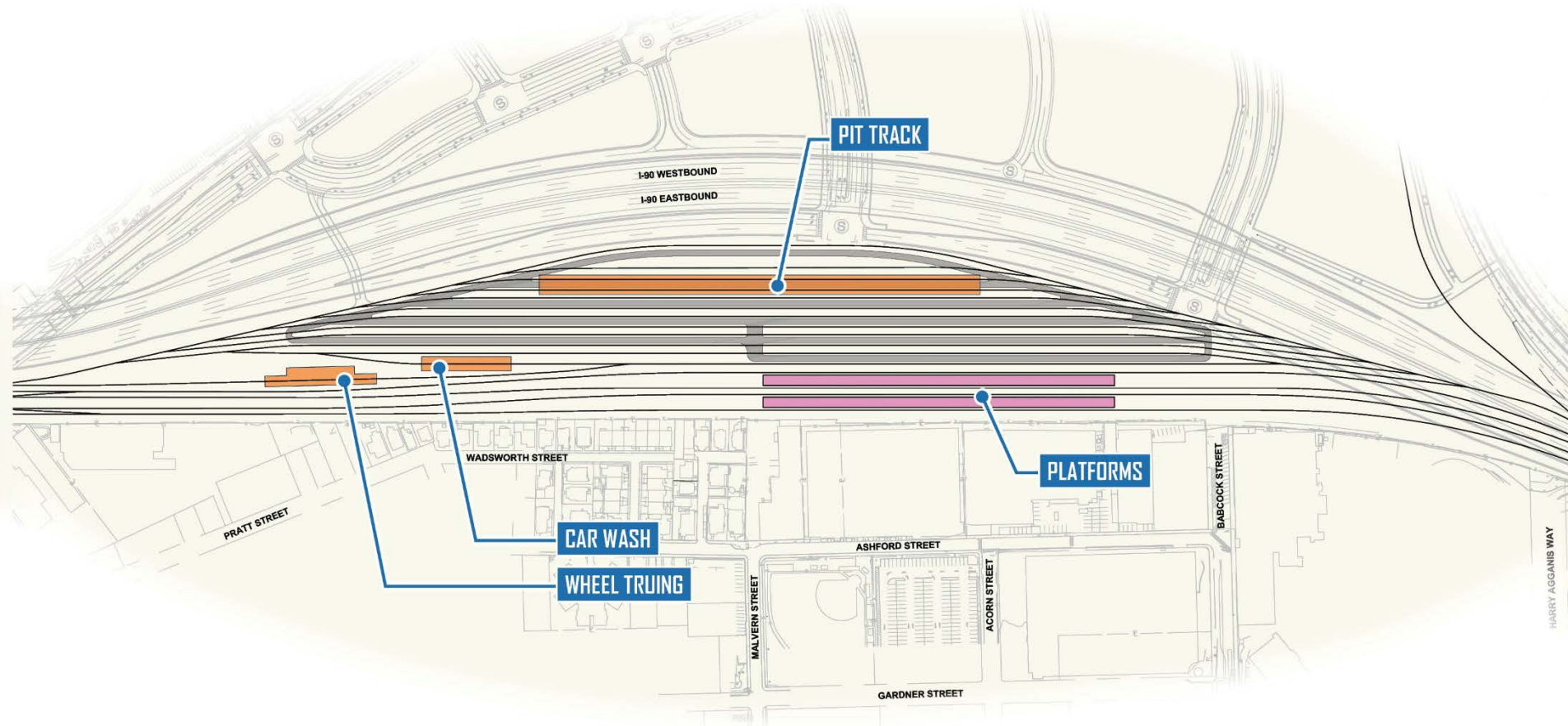


# BPY Track Layout Alt. 1



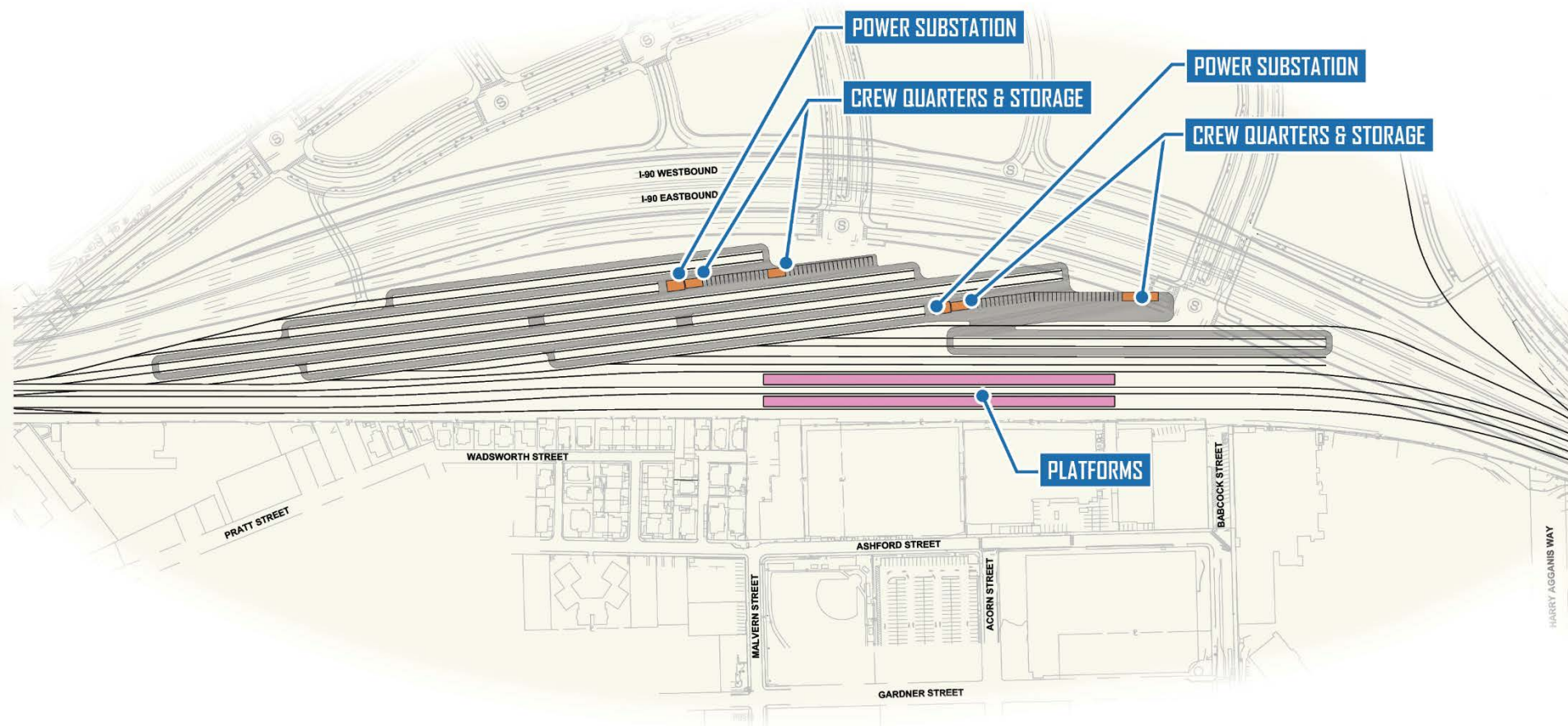
**Alternative 1**  
**14 9-Car Consists**

# BPY Track Layout Alt. 2



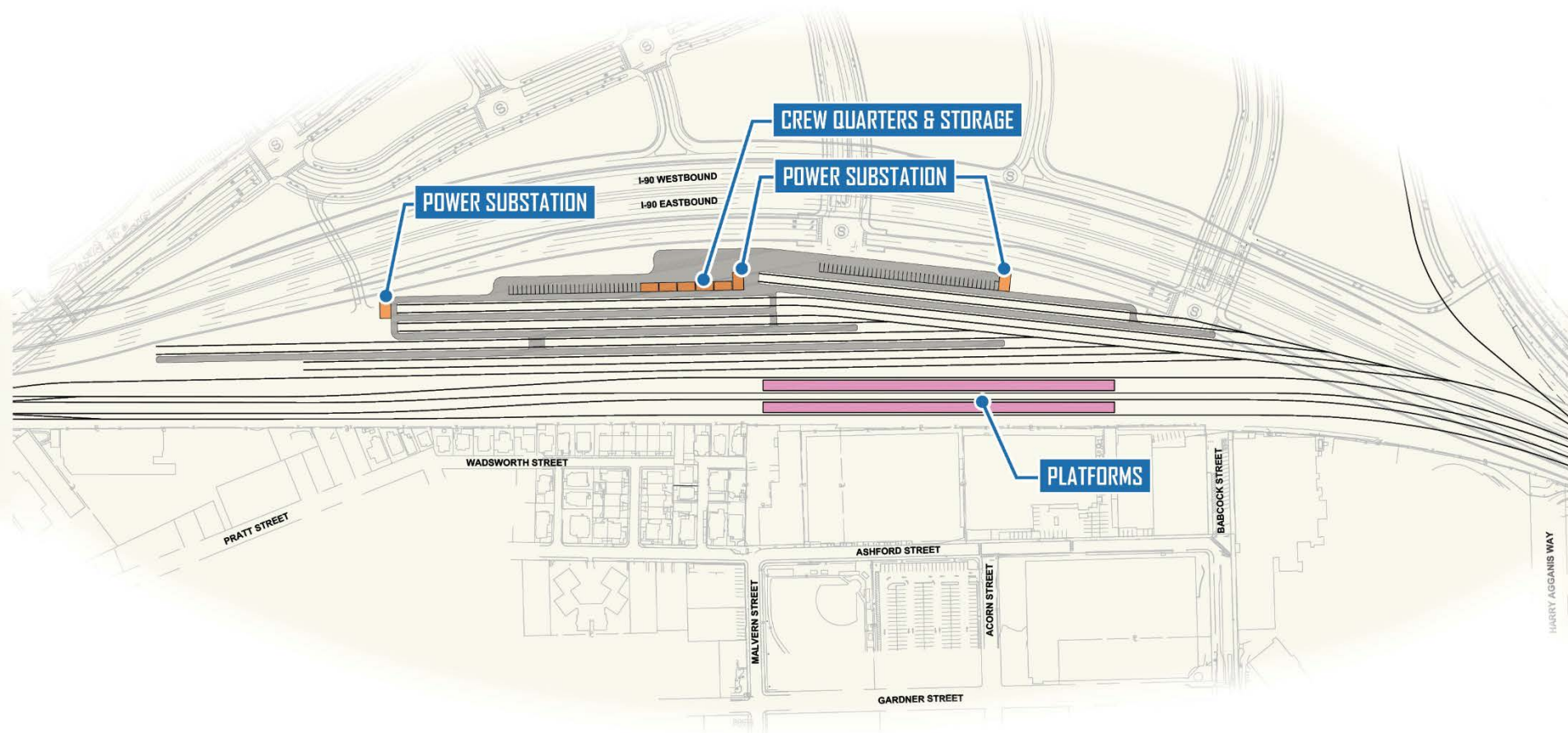
**Alternative 2**  
**14 9-Car Consists**

# BPY Track Layout Alt. 3



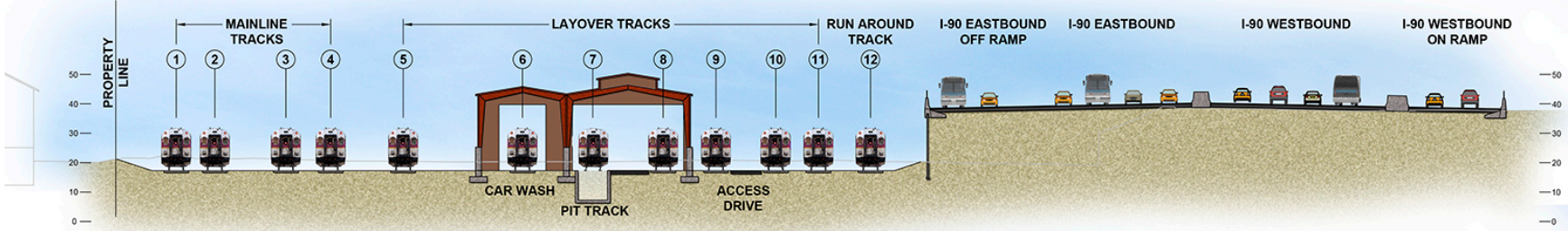
**Westerly Access Only**  
**18 9-Car Consists**

# BPY Track Layout Alt. 4

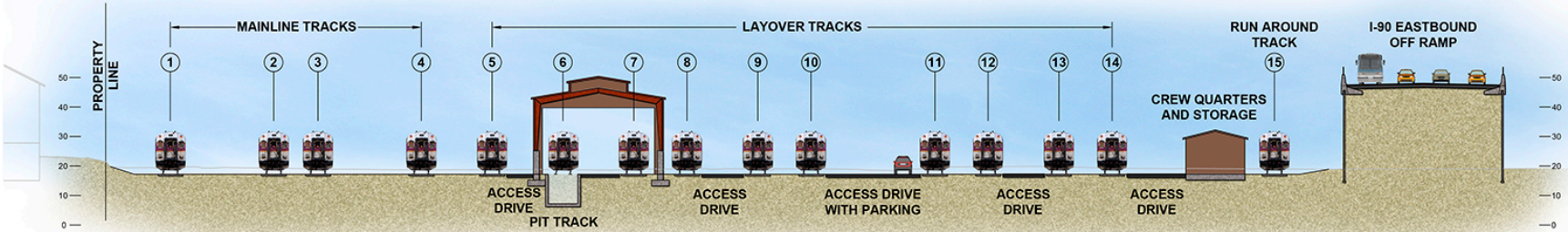


**Easterly Access Only**  
**18 9-Car Consists**

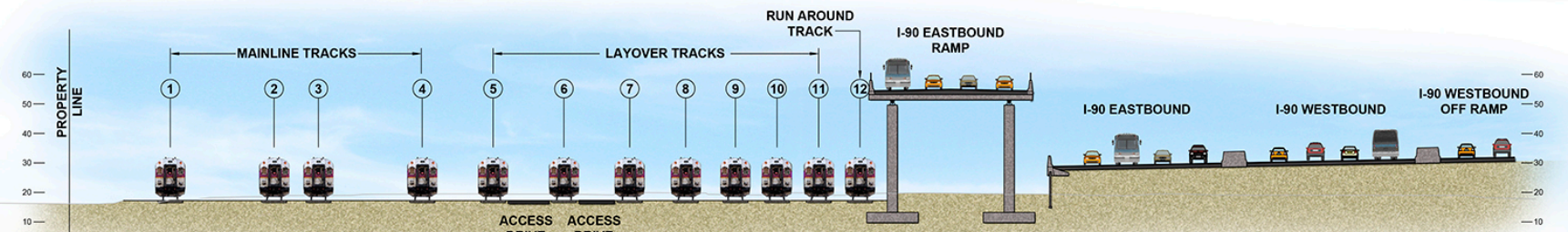
# Yard Section Concepts



**WEST SECTION**



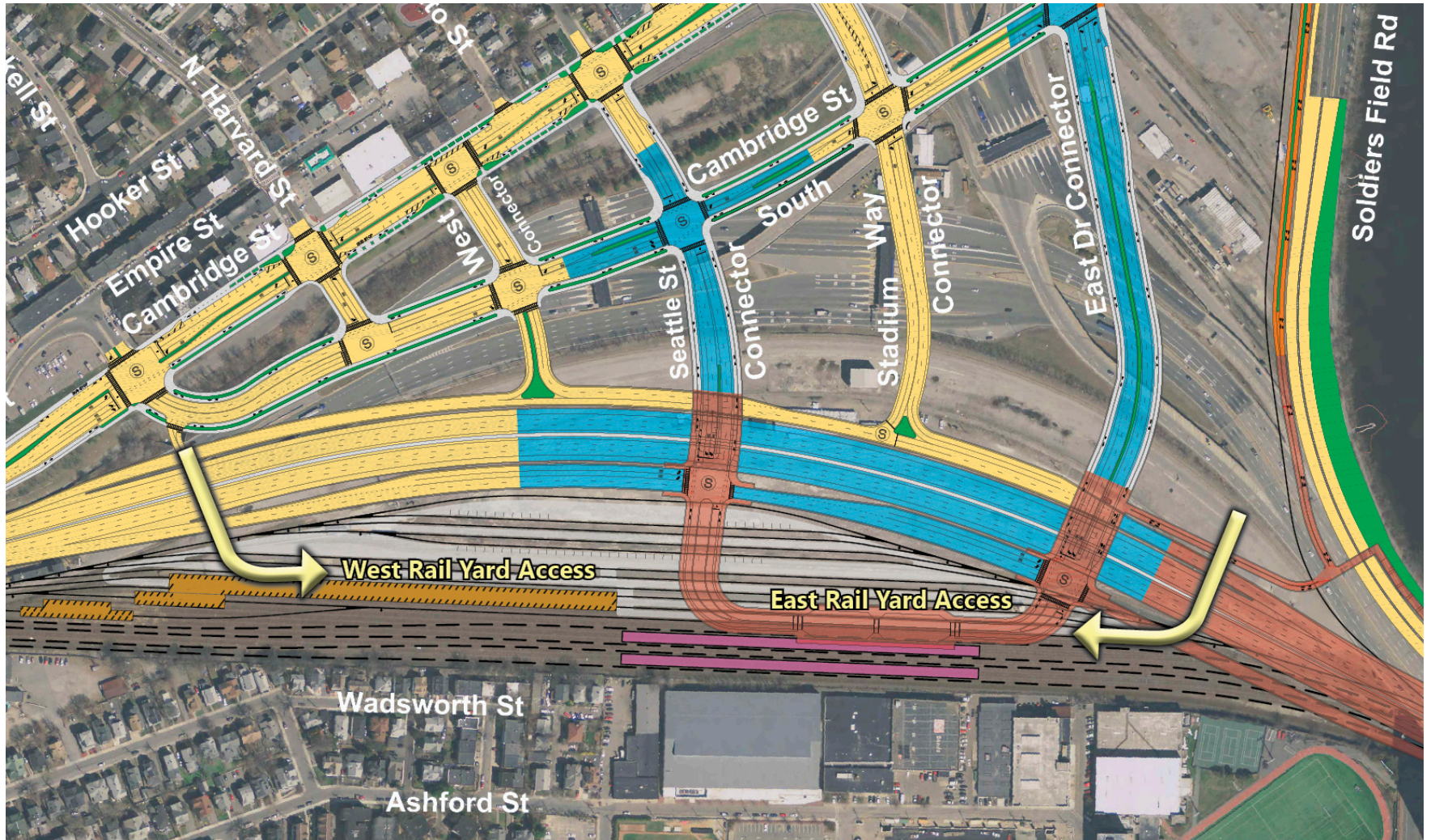
**MIDDLE SECTION**



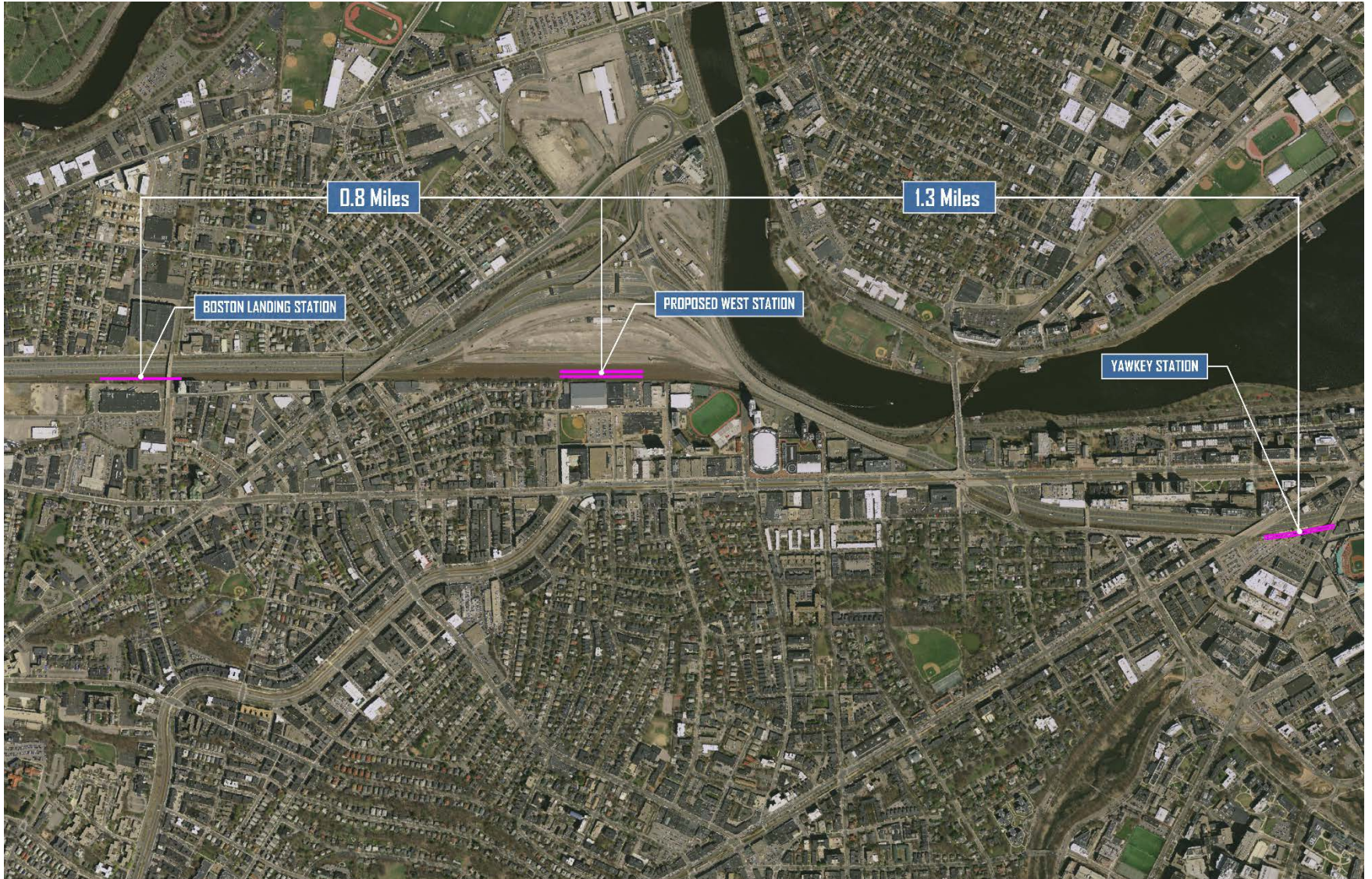
**EAST SECTION**



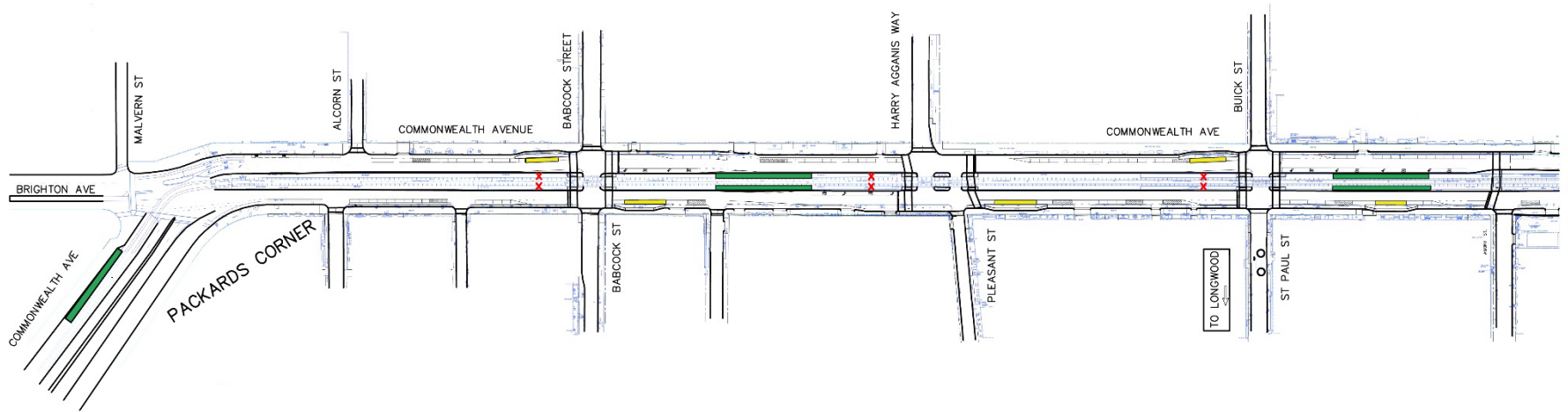
# Yard Maintenance Access



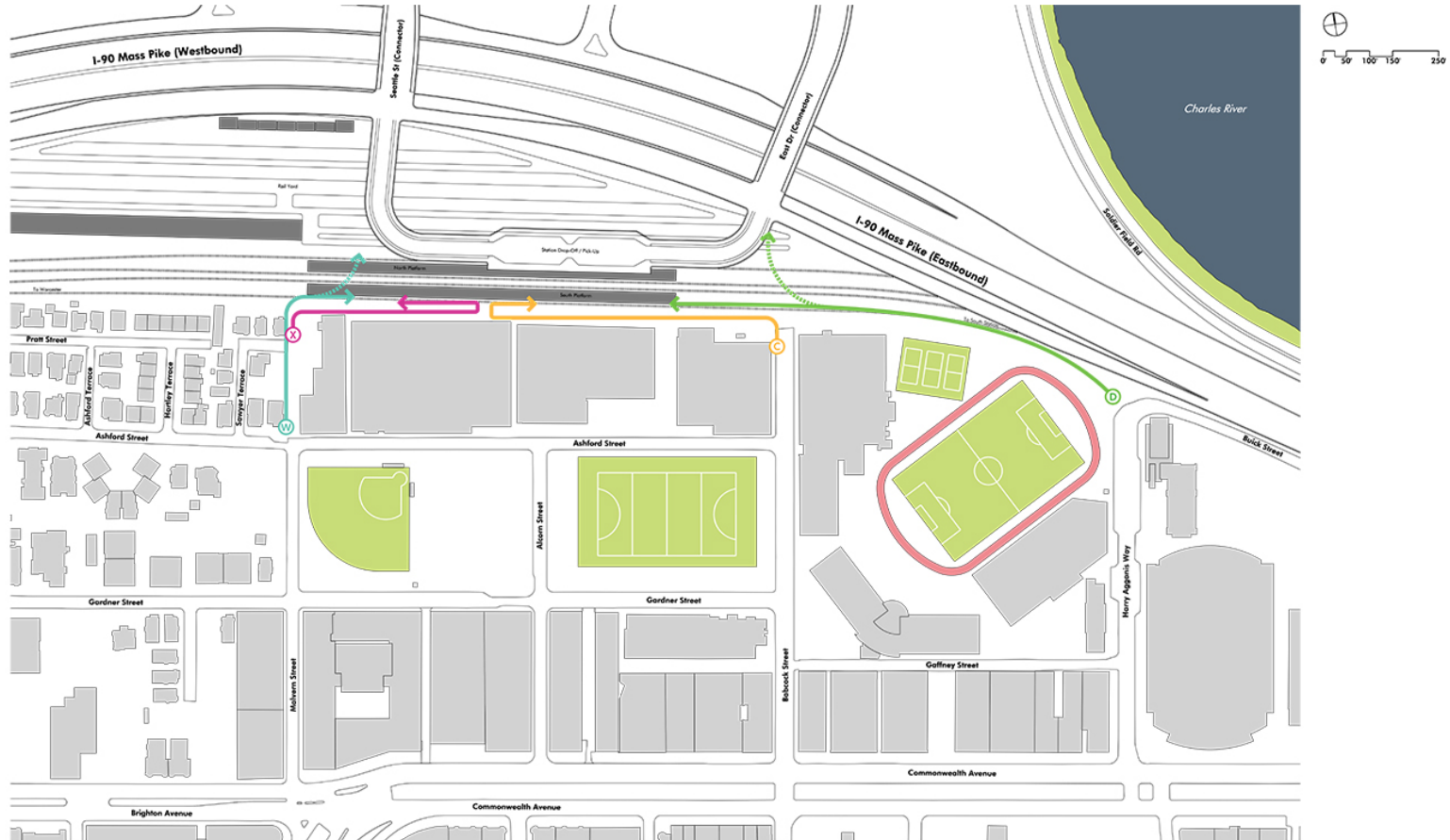
# Station Location



# Commonwealth Ave. Station Consolidation



# Bike/Ped Access – Alternative Routes



## WEST STATION PED/BIKE ACCESS

**C** END OF BABCOCK SWITCHBACK

Start Elevation	19'
Elevation Gain	36'
Distance Req'd	300'
Max Slope	4.5%

- Compact design w/ minimal impacts on Babcock Street and surrounding buildings
- Simple layout would make for easier construction and lower costs
- Low starting elevation requires an extensive climb to Mezz Level
- Visually hidden by BU buildings
- Safety concerns

**D** AGGANIS WAY FLYOVER

Start Elevation	34'
Elevation Gain	21'
Total Distance	1000'
Avg. Slope	2.1%

- Simple construction space
- Utilizes terrain, making for a more gradual ramp which benefits bikes and persons with disabilities
- Few turns reduces chance for pedestrian traffic conflicts
- Somewhat isolated from West Station; close to highway
- Requires appropriate railroad horizontal and vertical clearances

**W** DRIVEWAY AT MALVERN STREET

Start Elevation	35'
Elevation Gain	20'
Distance Req'd	450'
Max Slope	4.5%

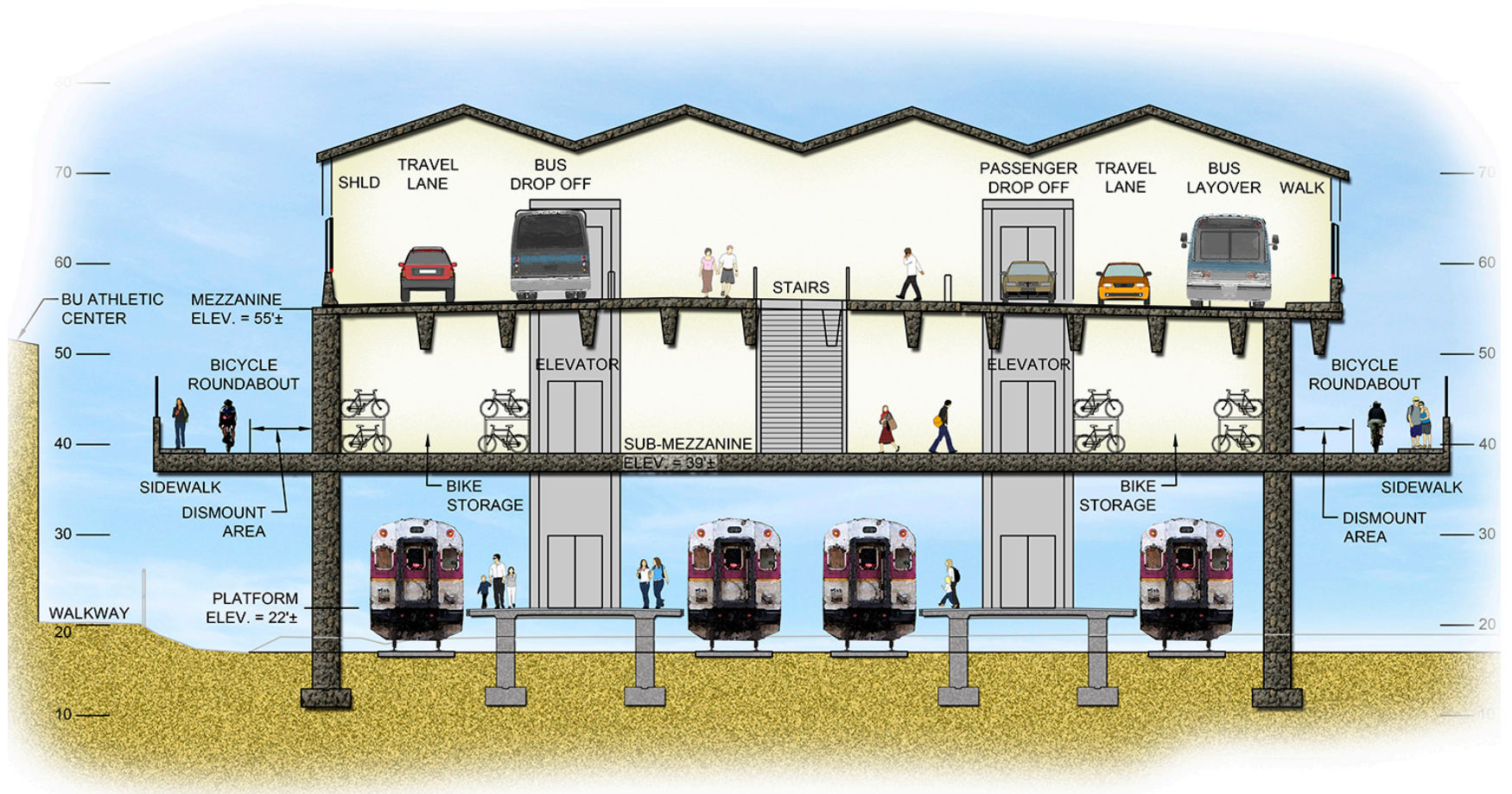
- Compact design with few turns and short overall ramp distance
- Utilizes terrain; minimizes elevation gain to Mezz Level
- Driveway and horizontal clearance concerns with existing commercial building
- Most likely will require property acquisition

**X** END OF MALVERN STREET SWITCHBACK

Start Elevation	28'
Elevation Gain	29'
Distance Req'd	650'
Max Slope	4.5%

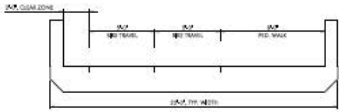
- Minimal impact to existing properties; requires minimal acquisition
- Complements Option C
- Visually hidden from travel network; raises safety concerns
- Proximity to major sewer line; raises construction concerns
- Spoke limitations requires narrower ramp width
- Sharp switchback

# Station Section

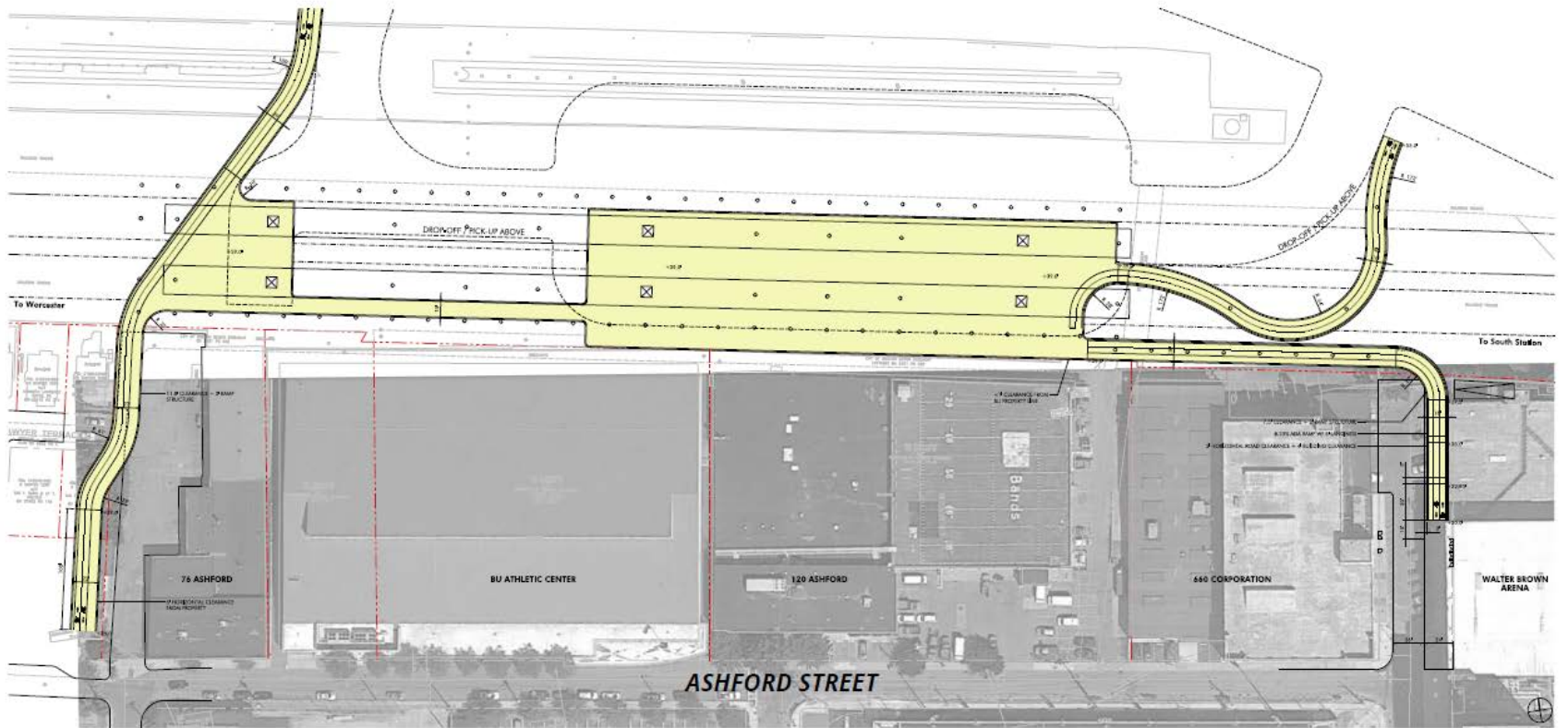
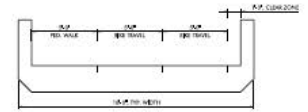


# Bike/Ped Access Route w/Babcock

OPTION W - TYP. SECTION



OPTION C - TYP. SECTION

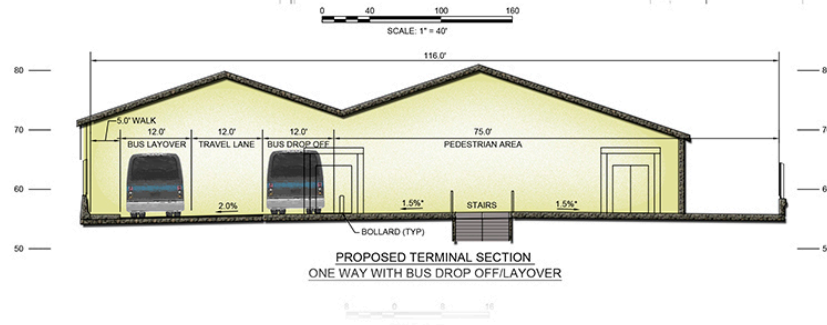
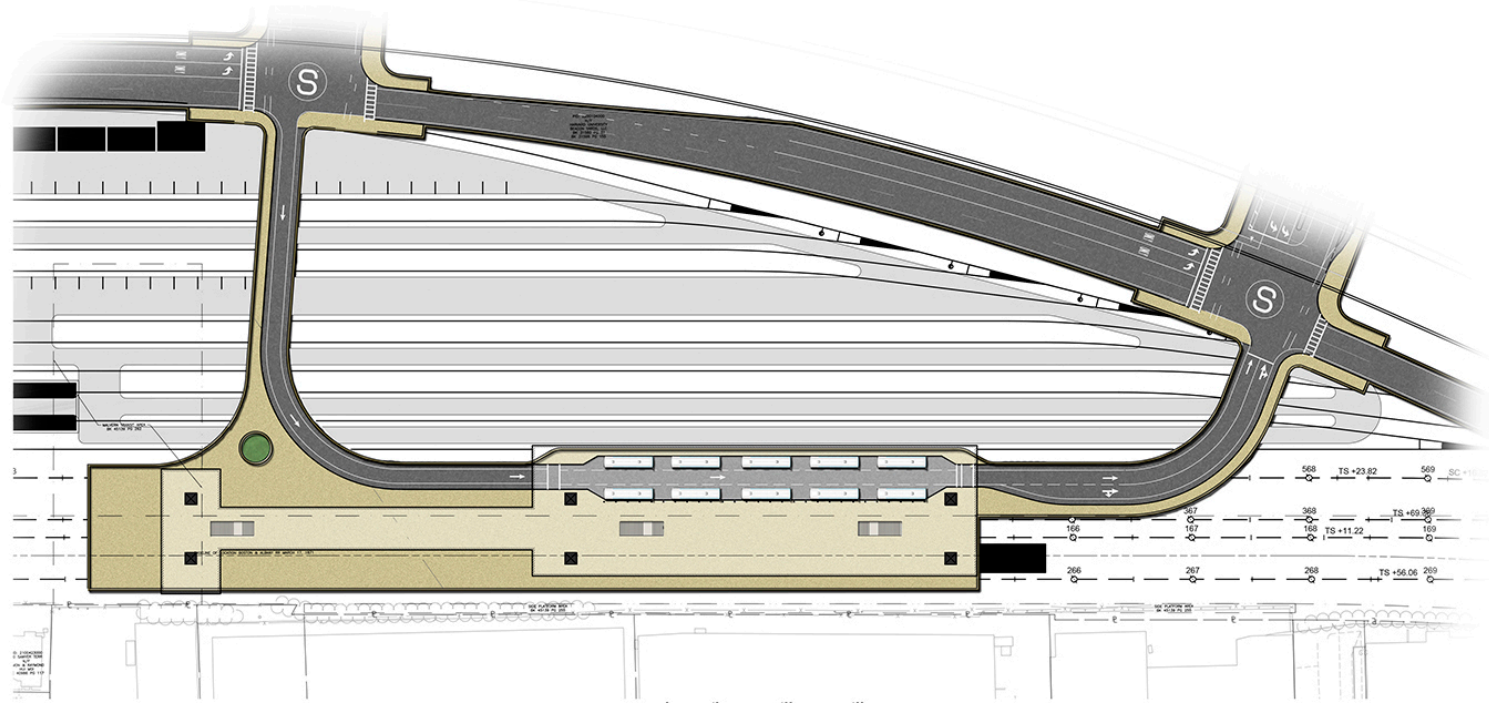


**OPTION W**  
FROM MALVERN ST

**OPTION C**  
FROM BABCOCK ST

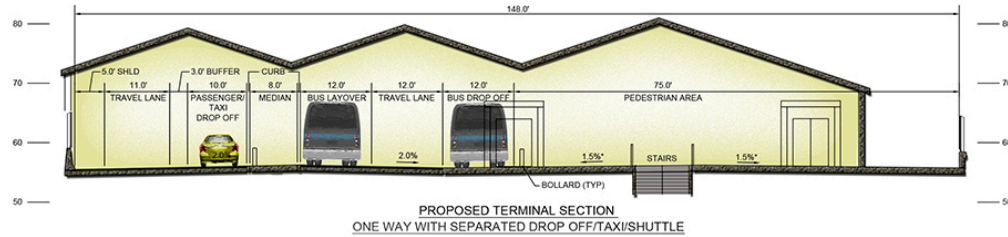
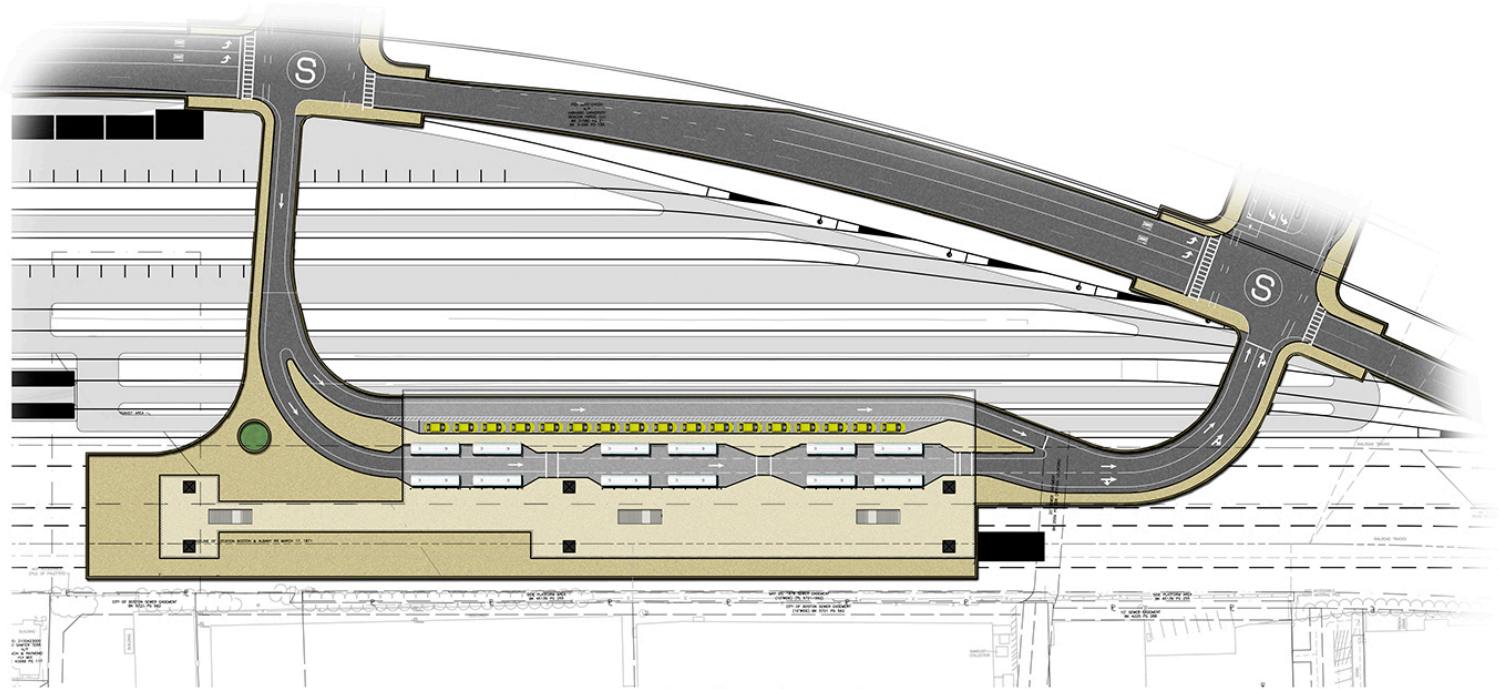


# West Station: One-Way/Bus-Only Loop

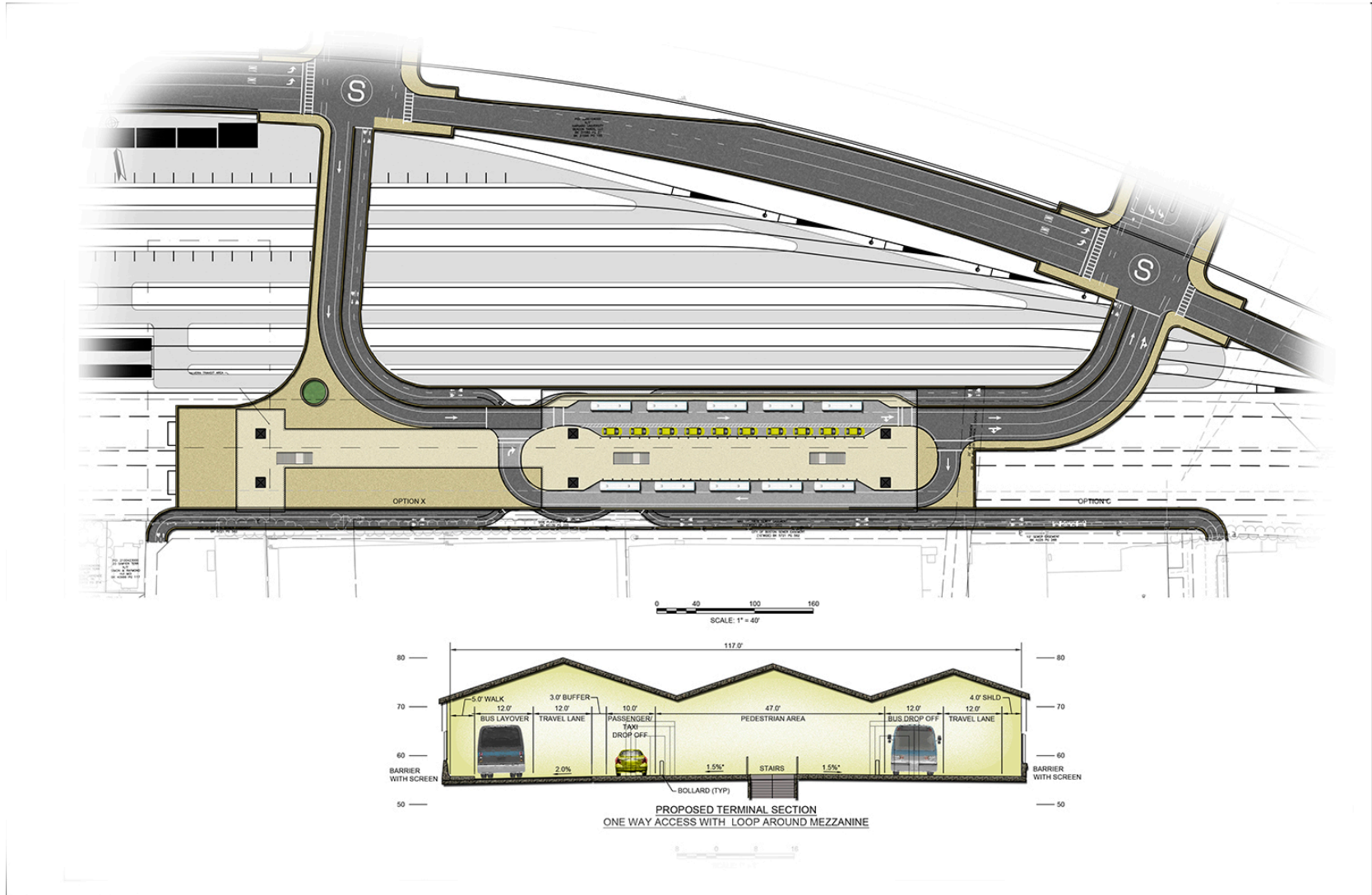




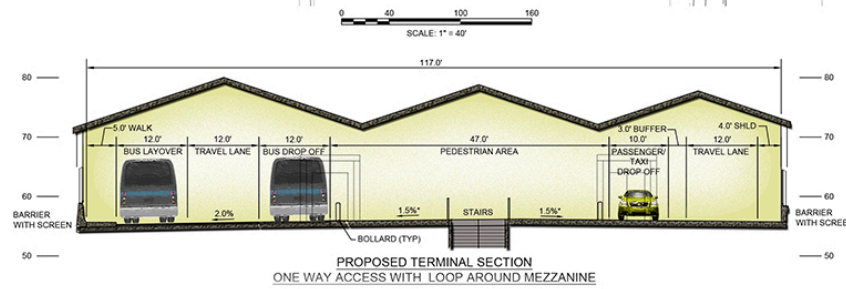
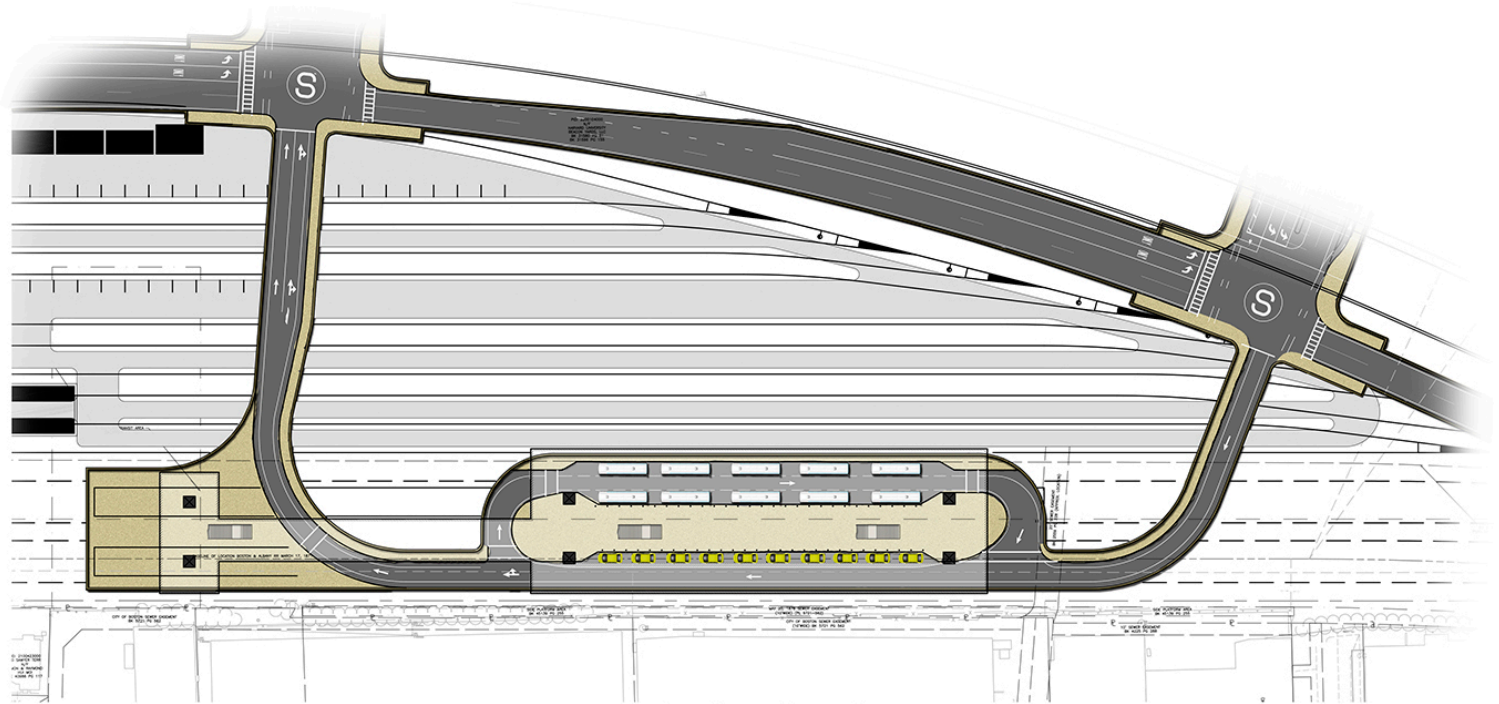
# West Station: One-Way Loop w/Offset



# West Station: One-Way Loop & Center

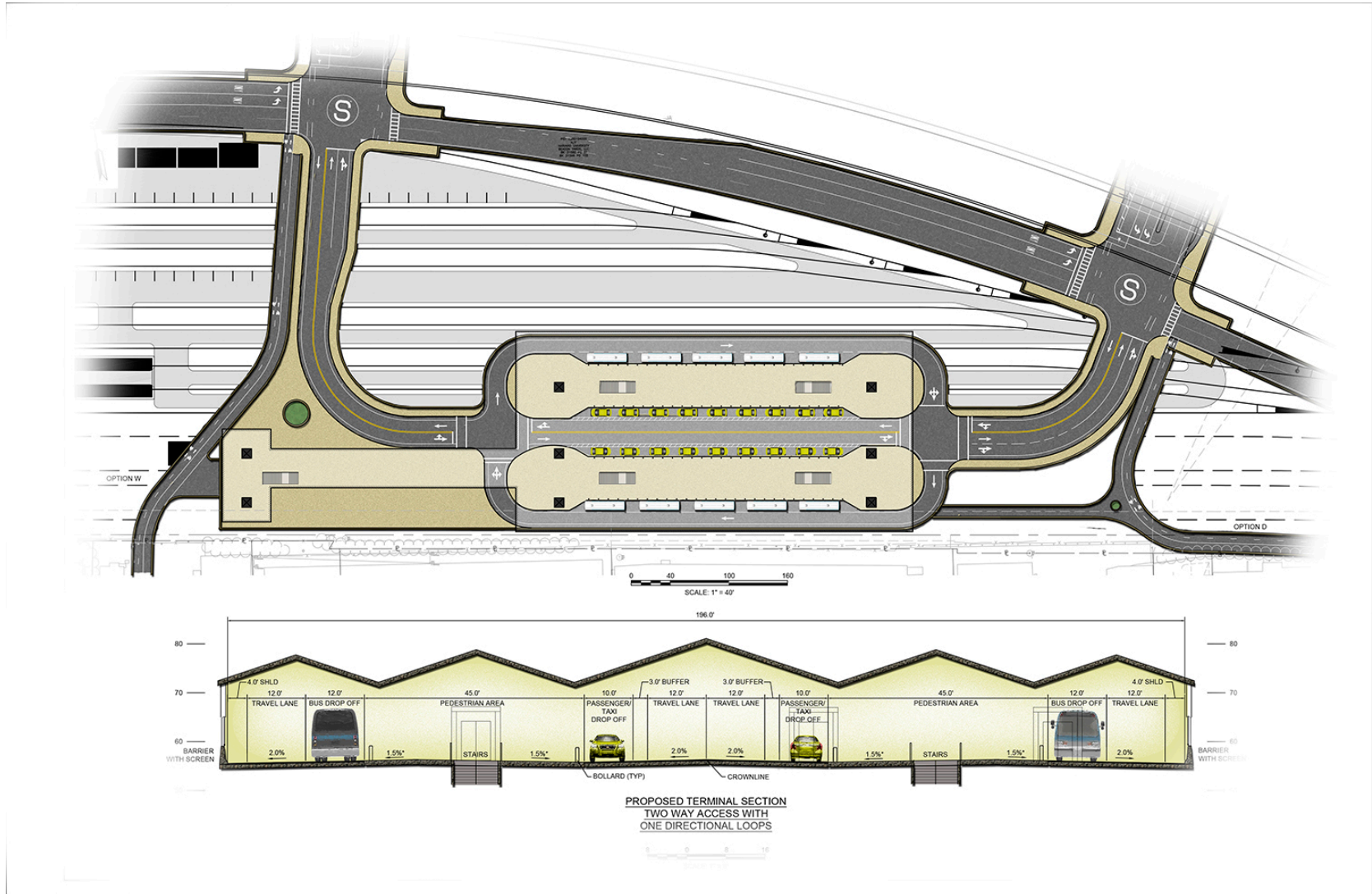


# West Station: One-Way Loop w/Offset

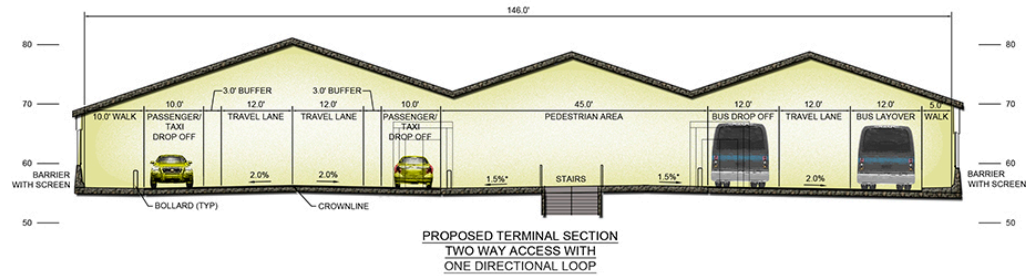
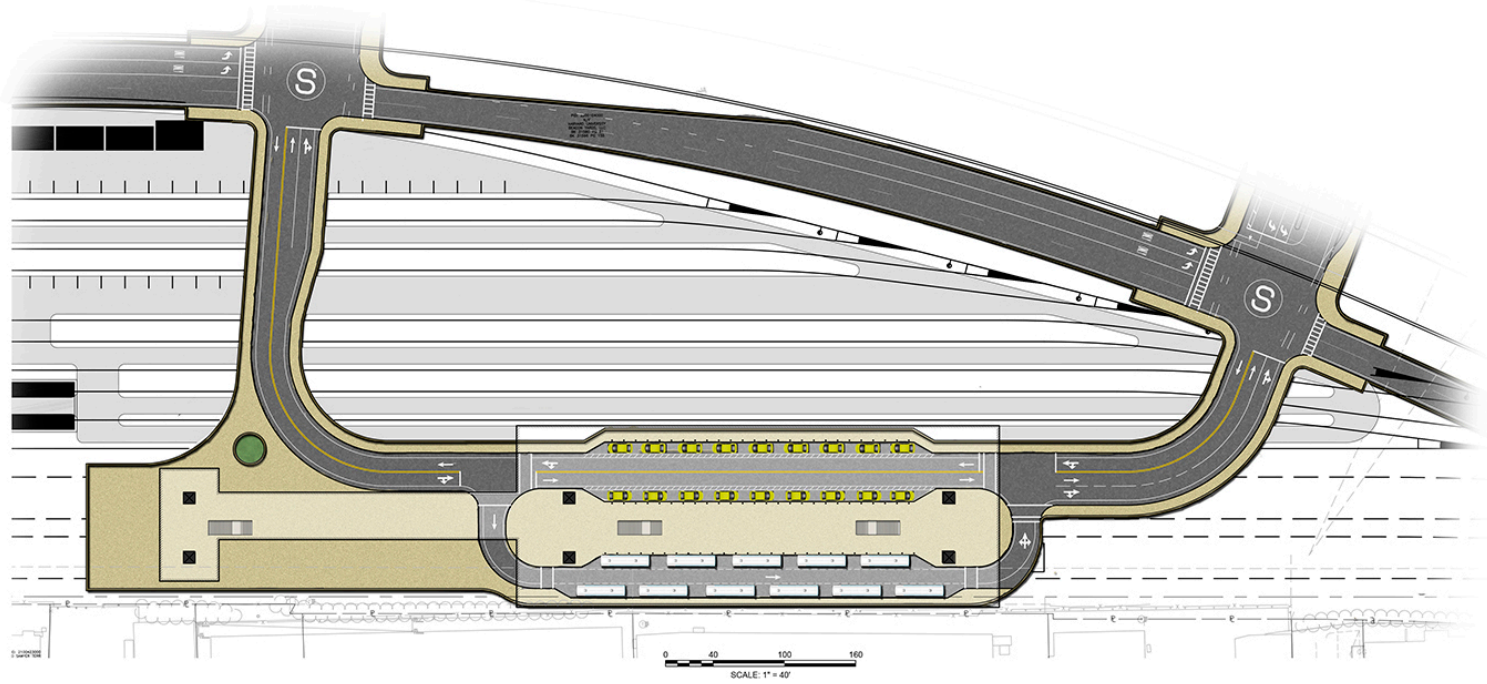


PROPOSED TERMINAL SECTION  
ONE WAY ACCESS WITH LOOP AROUND MEZZANINE

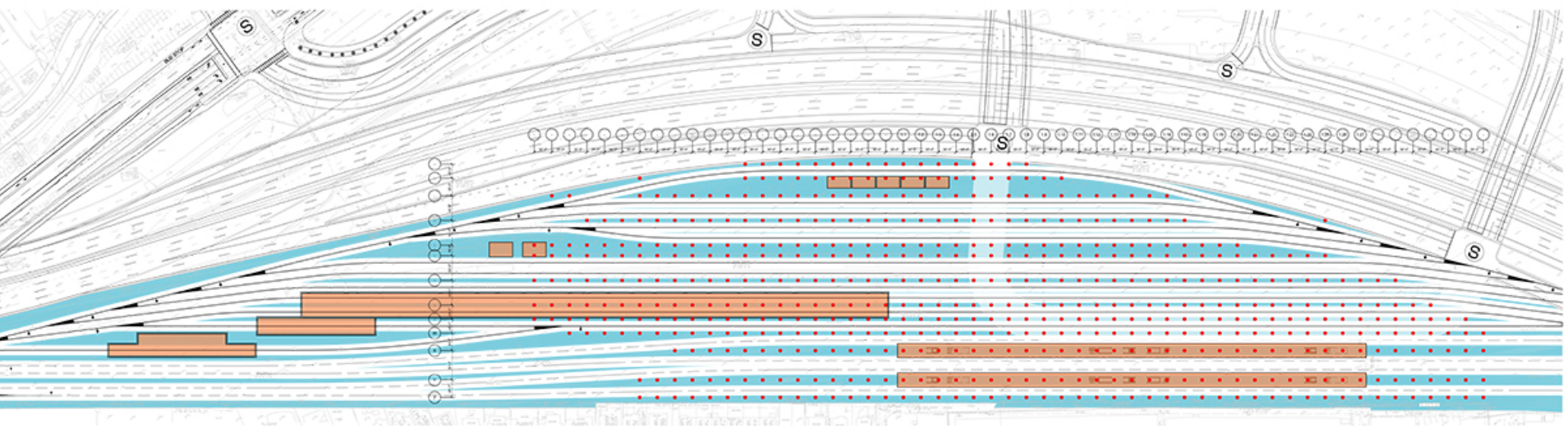
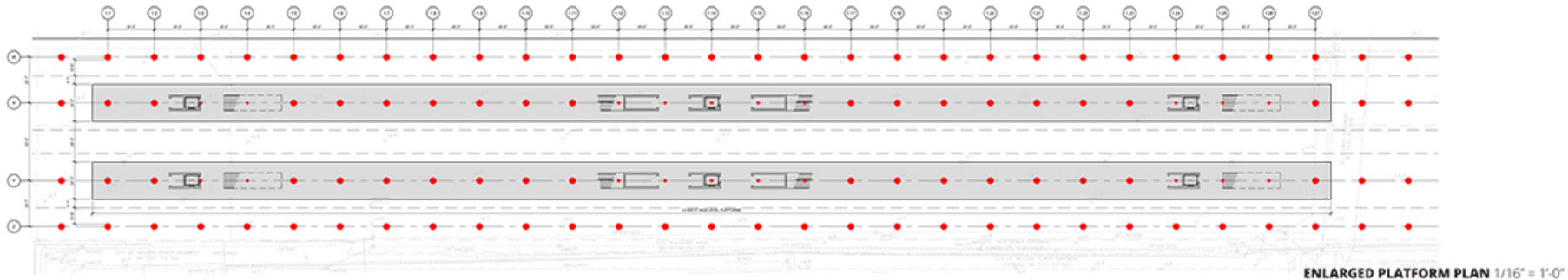
# West Station: Two-Way Loop w/Split



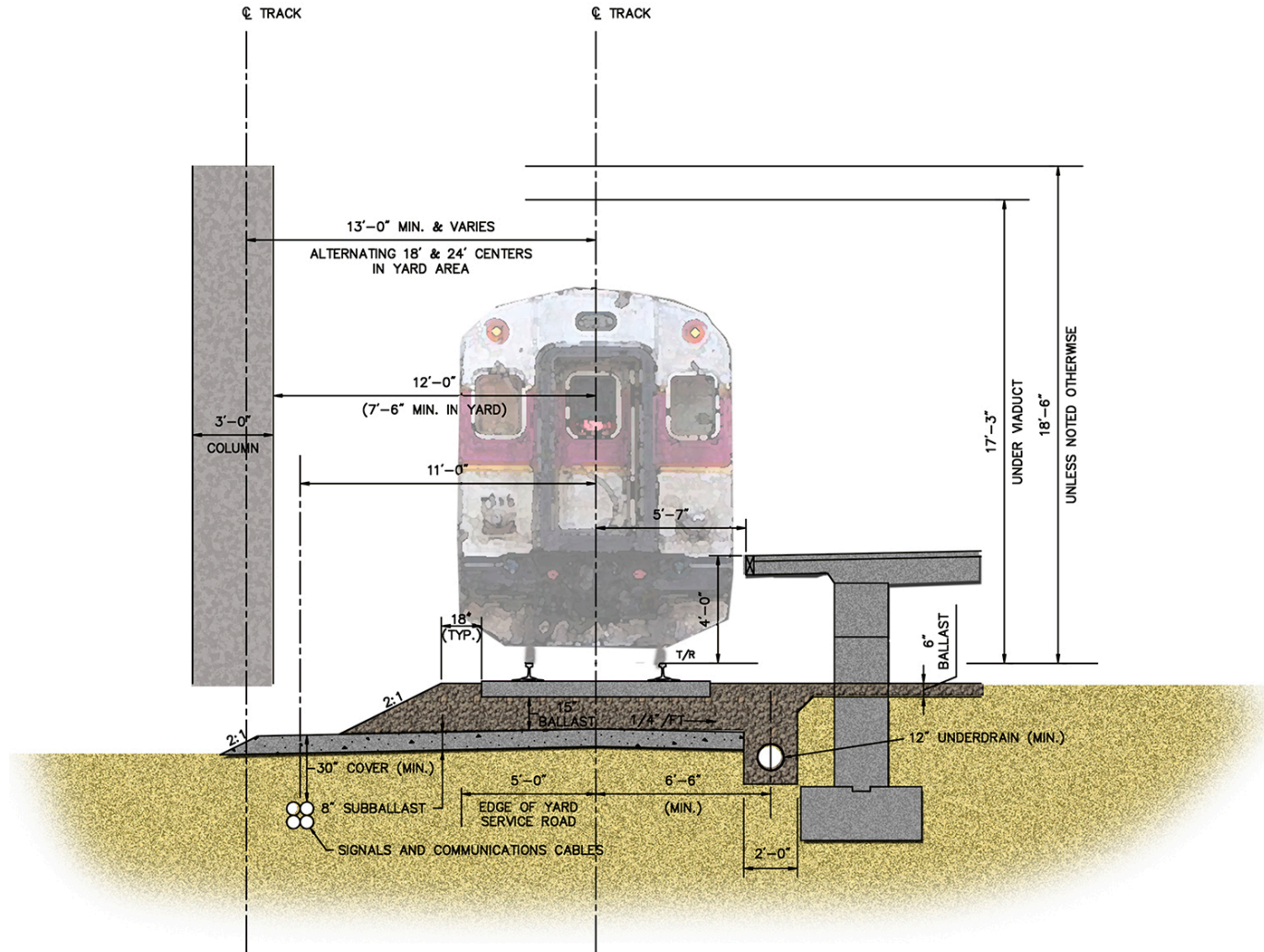
# West Station: Two-Way Loop w/Separate Bus Terminal



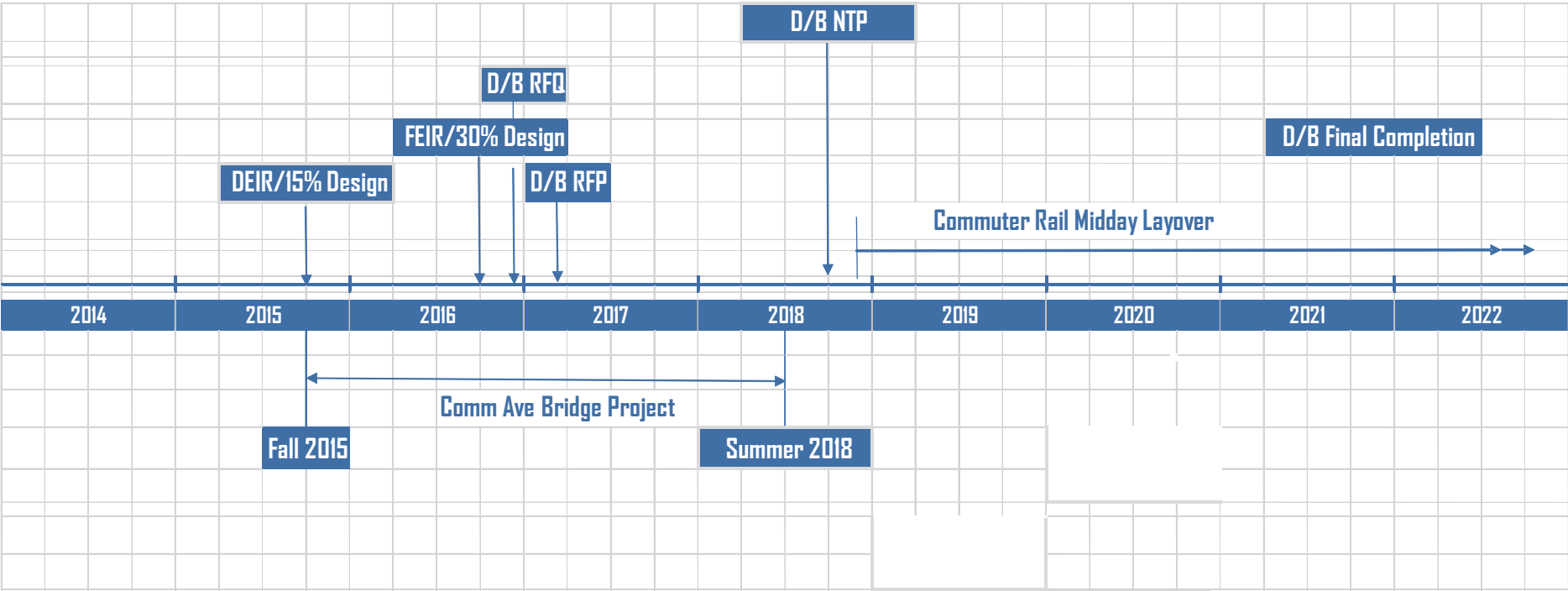
# Beacon Park Yards Air Rights



# Critical Clearances



# Design & Construction Timeline





# QUESTIONS