Massachusetts Bay Transportation Authority

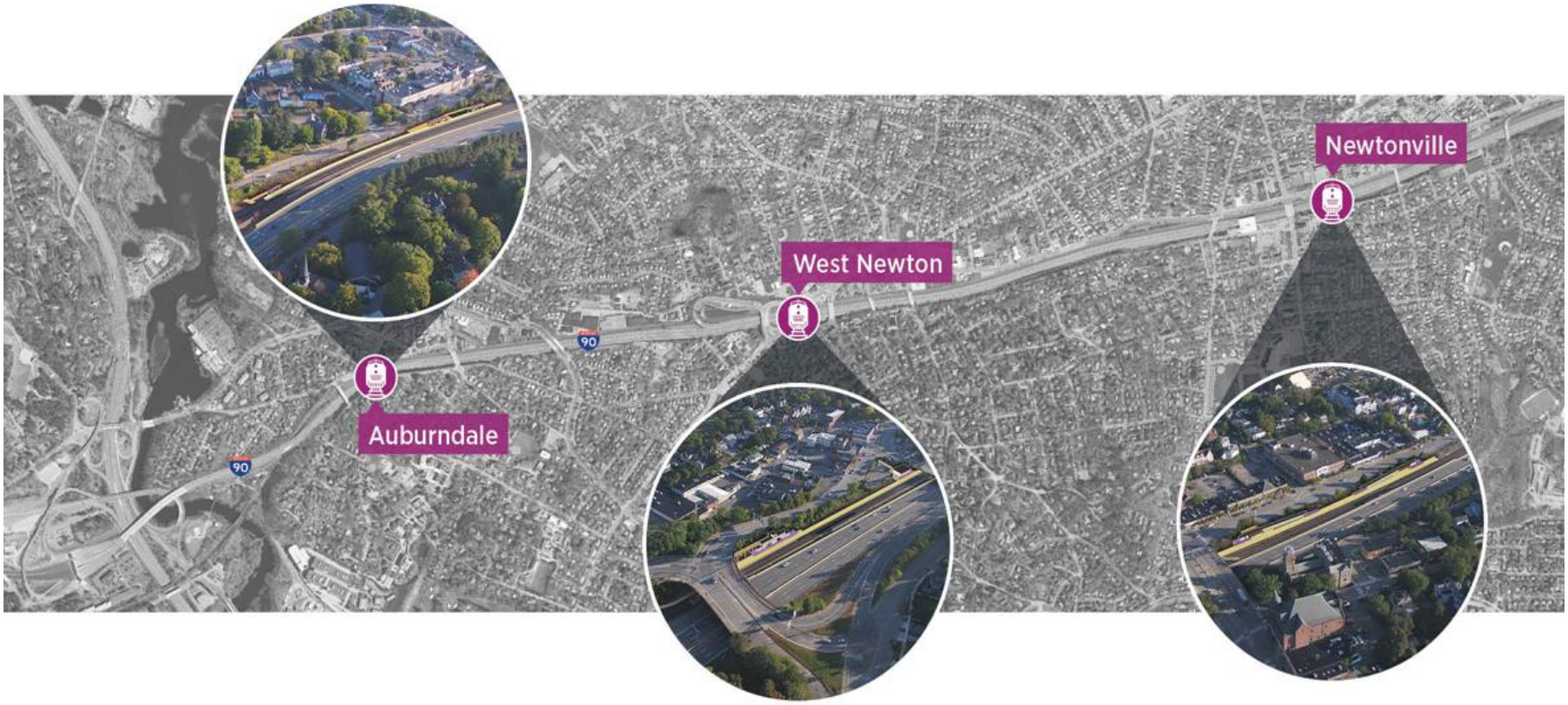
Auburndale, West Newton and Newtonville Commuter Rail Stations Improvements

Public Meeting

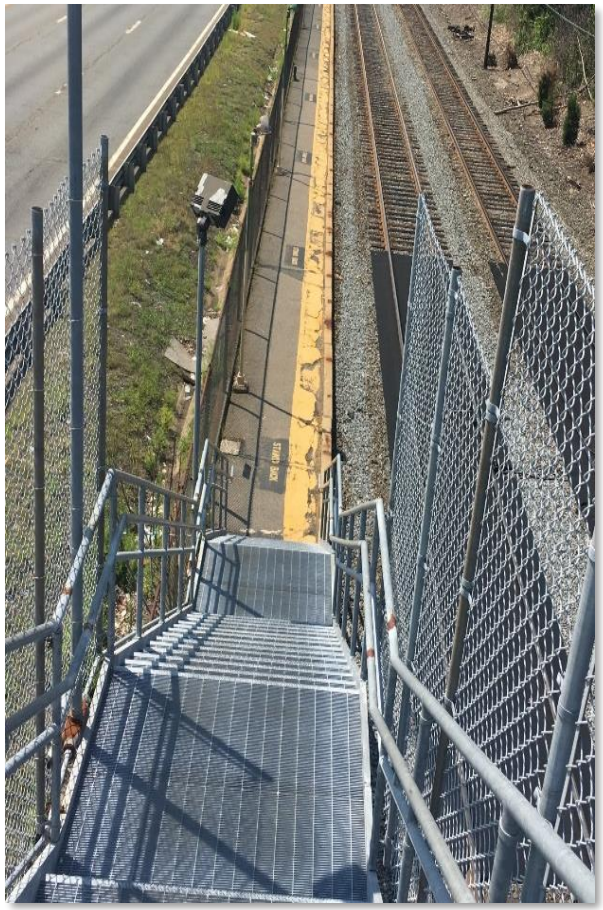
July 25, 2019

Overview

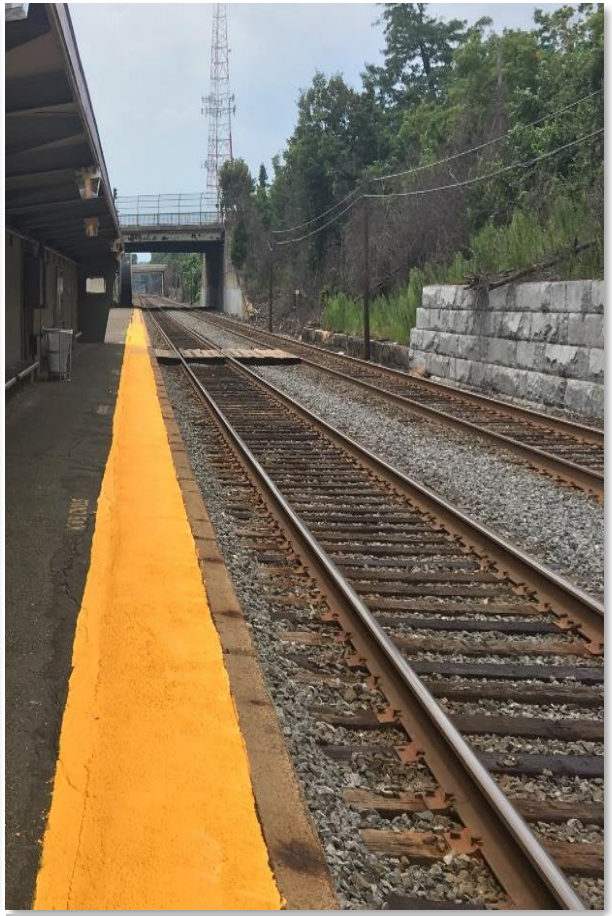
Today's presentation summarizes the project goals for the Newton CR Stations Project, alternatives studied, recommendations and Go Forward plan for addressing the MBTA's reliability, modernization, and accessibility needs.



Existing Conditions



Auburndale



West Newton

Newtonville

Project Goals

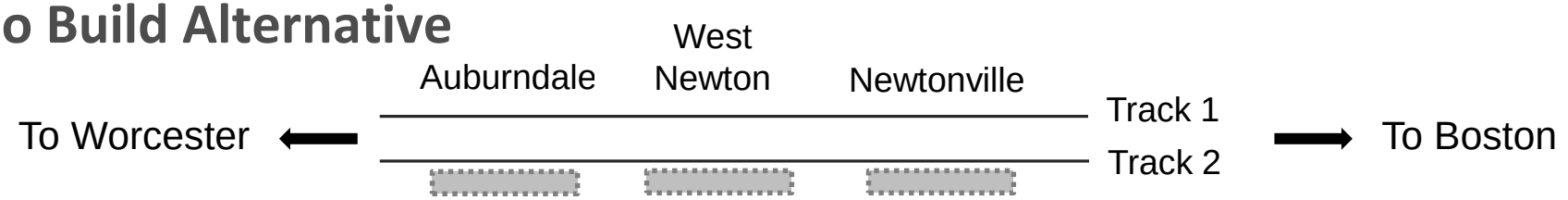
- Address MBTA reliability and modernization needs
- Improve operations by providing full-length, high-level platforms for level boarding
- Provide ADA Accessible status through a combination of ramps, stairs, and elevators, providing equitable paths of travel
- Improve station amenities including new benches, canopies, bike storage, etc.
- Improve connections to local roads and existing parking areas

Background

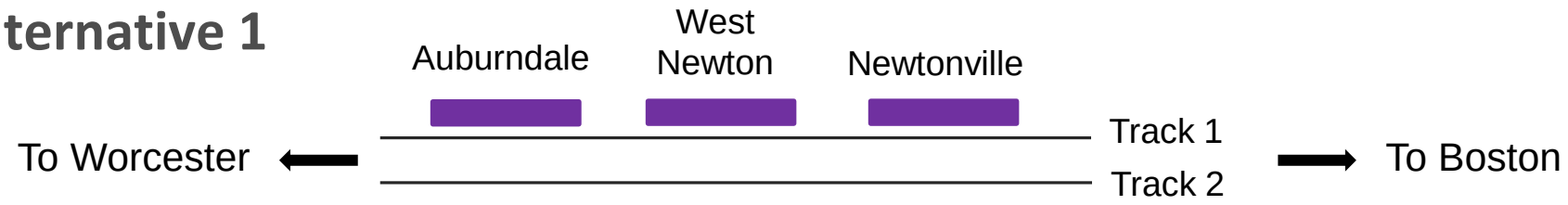
- MBTA committed to evaluate design and operations of all three Newton Stations – Auburndale, West Newton and Newtonville – as a segment after abandoning plans to advance the Auburndale Station as a stand alone project (due to negative impact on operations).
- From July 2017 to May 2018, the MBTA prepared the Newton Stations Conceptual Design & Operations Analysis Report.
- Over the course of the study, the MBTA engaged the City of Newton, TransitMatters, MassDOT, MBTA RR Operations, and System-Wide Accessibility to guide in the development of the study.

Alternatives Overview

No Build Alternative

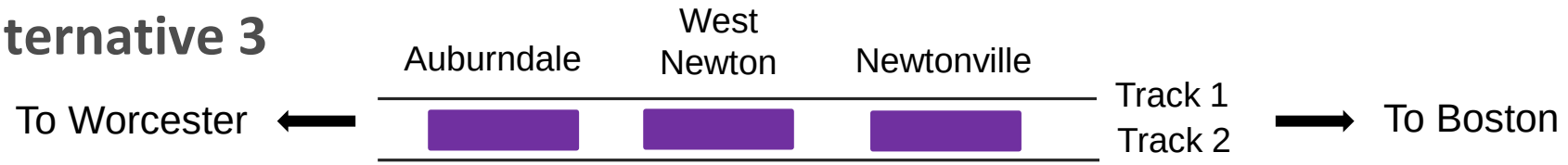


Alternative 1



Alternative 2

Alternative 3



Operations Analysis Findings

Stops at All Newton Stations		Existing Schedule	No Build Alternative (Existing Track 2 Single Side Platform)	Alternative 1 – Single Side Platform (Track 1)	Alternative 2/3 – Double Side/ Center-Island Platform
		Total Stops	Potential Total Stops	Potential Total Stops	Potential Total Stops
Inbound	Peak (AM Peak Period)	6	6	6	6
	Off-Peak (Midday & Evening)	5	6*	6*	9
	Reverse-Peak (PM Peak Period)**	1	1	1	5
	Total	***12***	***13****	***13****	***20***
Outbound	Peak (PM Peak Period)	5	5	5	5
	Off-Peak (Midday & Evening)	8	8	8	8
	Reverse-Peak (AM Peak Period)**	1	1	1	6
	Total	***14***	***14***	***14***	***19***
	Overall Total	***26***	***27****	***27****	***39***

** One additional off-peak inbound service as compared to the existing schedule could also be provided under the existing platform configuration (No Build Alternative) and is not a result of the proposed platform configurations*

*** Trains were counted as reverse-peak if they were operating during the time periods of 4:45 a.m. to 9:45 a.m. for the AM Peak Period and 3:30 p.m. to 8:15 p.m. for the PM Peak Period*

- Alternative 1 – Single Side Platform (Track 1)
  - Relocating single side platform to Track 1 does not create new opportunities for additional service that are not already possible under existing conditions
  - Single side platform operation limits reverse-peak service, resulting in periods of time with significant gaps in service
- Alternative 2/3 – Double Side/Center-Island Platform
  - Potential to reduce reverse-peak service gaps from approx. 5-6 hours to 2 hours
  - Alternative 3 center-island platforms provide additional operational flexibility/resiliency as compared to Alternative 2 double side platforms

Order-of-Magnitude (OOM) Cost Estimates and Available Funding

Alternative	Station OOM Cost	Roadway Bridge OOM Cost	Total Program OOM Cost
Alternative 1 (Single Side Platform, Track 1)	Approx. $46M	N/A	Approx. $46M
Alternative 2 (Double Side Platforms)	Approx. $112M	Approx. $17M*	Approx. $129M
Alternative 3 (Center-Island Platform)	Approx. $112M	Approx. $106M	Approx. $218M

* Opportunity for station design modifications to avoid bridge impacts may require design waivers/exceptions from current standards

- Costs include all infrastructure capital costs, soft costs, associated contingencies (including 40% contingency for scope changes during design and 10% contingency for scope changes during construction), and 3.5% escalation applied to anticipated mid-point of construction
- **Current Funding included in the FY20-24 CIP $20.6M**

Overall Project Schedule

- **Alternative 1 – Single Side Platform (Track 1)**
  - Total program duration of approximately under 5 years (58 months)
  - Total construction duration of 2.6 years (31 months)
  - Service to all stations would be maintained during construction
- **Alternative 2 – Double Side Platforms**
  - Total program duration of approximately 8 years
  - Total construction duration of 5 years
  - Service to all stations would be maintained during construction, with interim service to new Track 1 platforms once complete
- **Alternative 3 – Center-Island Platform**
  - Total program duration of approximately 12 years
  - Total construction duration of 9 years
  - Assumes sequential construction of new stations
  - Station under construction would have to be closed
  - Passenger shuttles could be provided from closed station to remaining open stations as mitigation

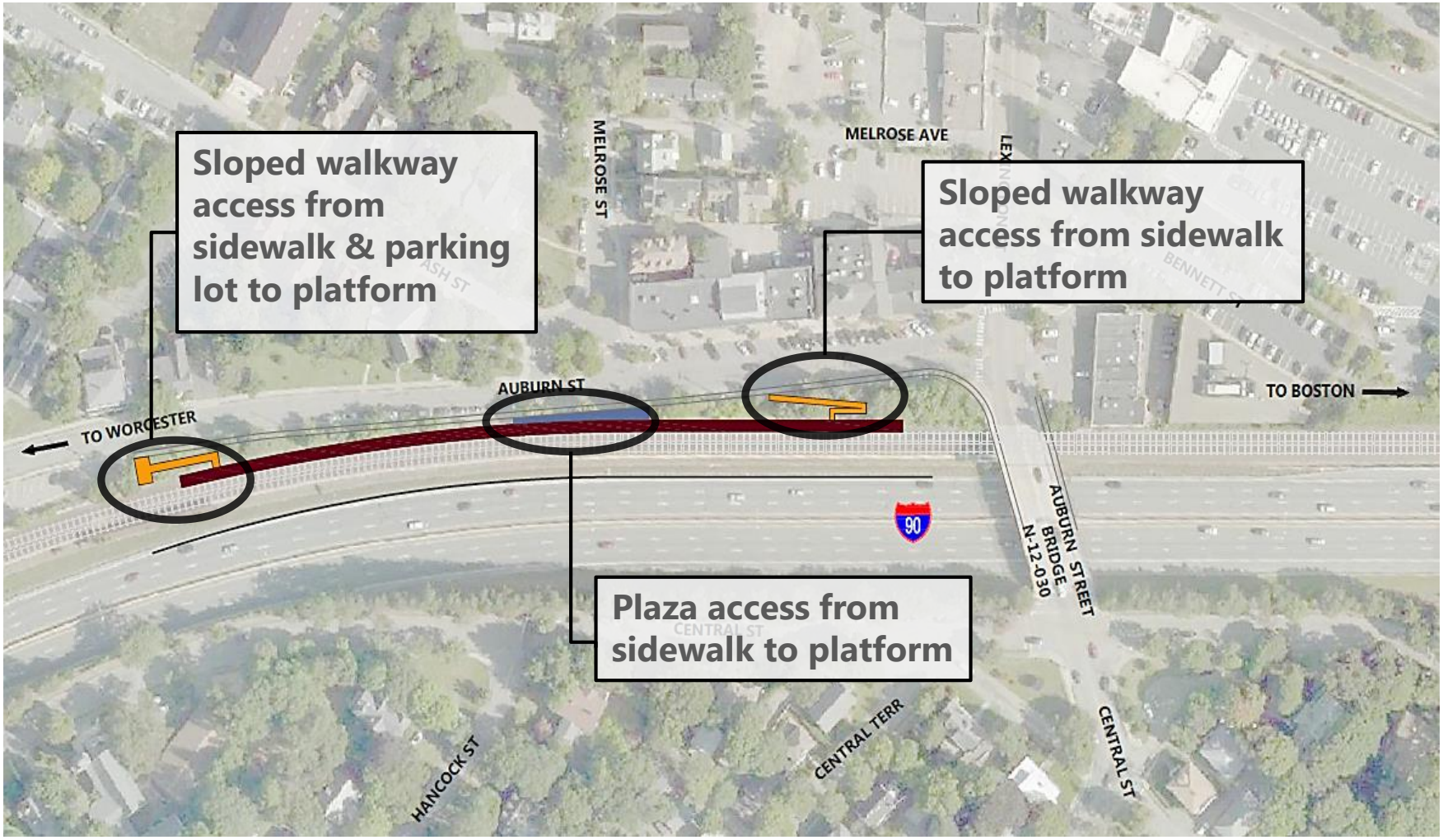
Alternative 3 – Not Considered Going Forward

- **Alternative 3**
  - The opportunity for increased off-peak and reverse peak service for Alternative 3 is the same as for Alternative 2, however:
    - the cost for Alternative 3 is estimated to be $89M more than for Alternative 2 ($218M - $129M), and
    - the overall schedule duration for Alternative 3 is projected to be 4 years longer than for Alternative 2 (12 years – 8 years).
  - Alternative 3, as compared to Alternative 2, is considered less desirable based on cost, schedule and operational considerations.
  - Alternative 3 is not under consideration moving forward.

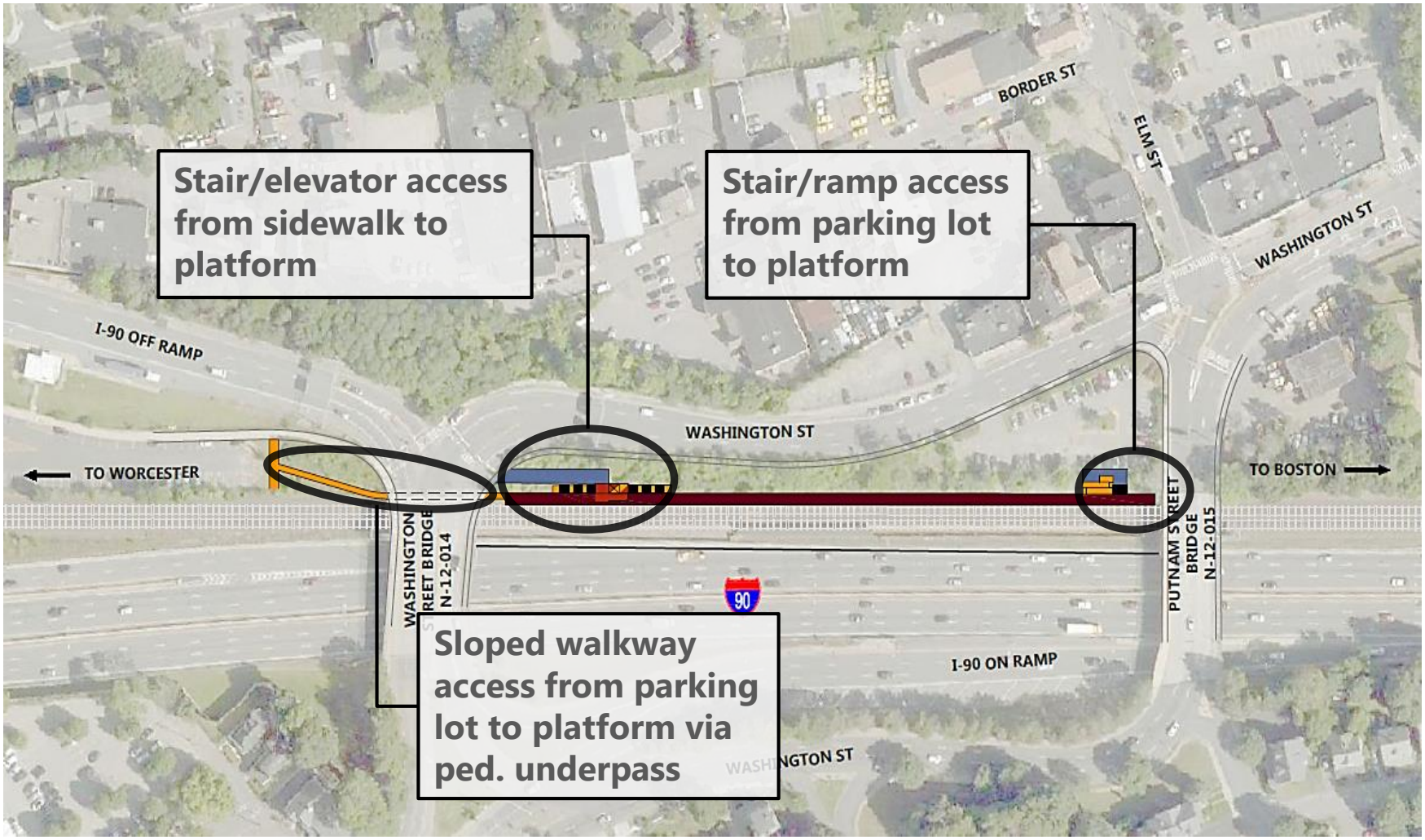
Alternative 1 Project Benefits

- Addresses MBTA's Reliability and Modernization Needs
- Provides ADA Compliant Accessibility
- More efficient boarding (level boarding)
- Reduces station life cycle maintenance costs and lower energy consumption
- Achieves project goals at the least cost and shortest project schedule
- **Allows for the future opportunity to add a second side platform to increase inbound off-peak and reverse peak service (i.e., Alternate 1 provides a path towards Alt. 2)**
- Does not preclude future Urban Rail Vision

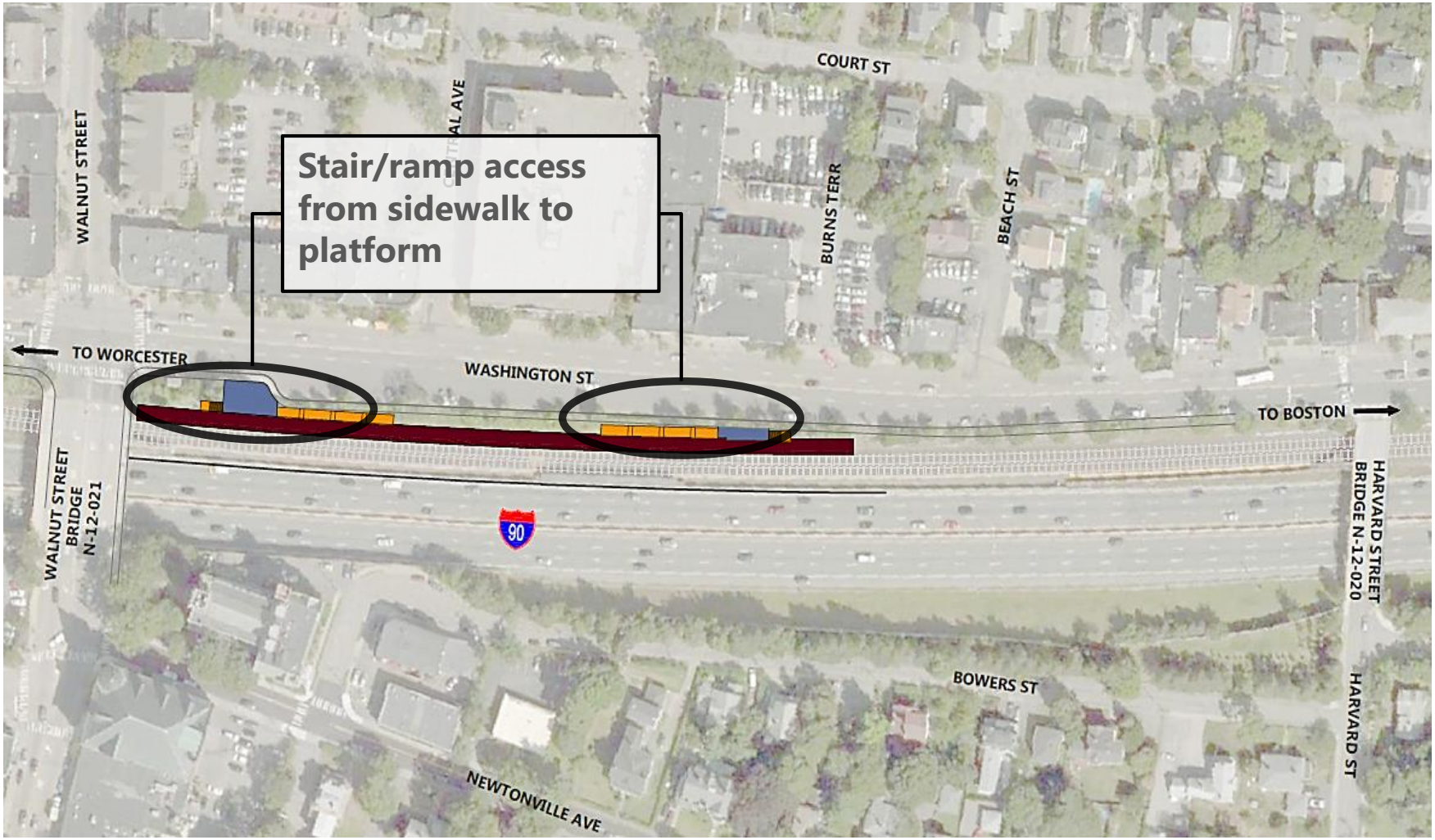
Auburndale Station: Alternative 1
Single Side Platform (Track 1)



West Newton Station: Alternative 1
Single Side Platform (Track 1)



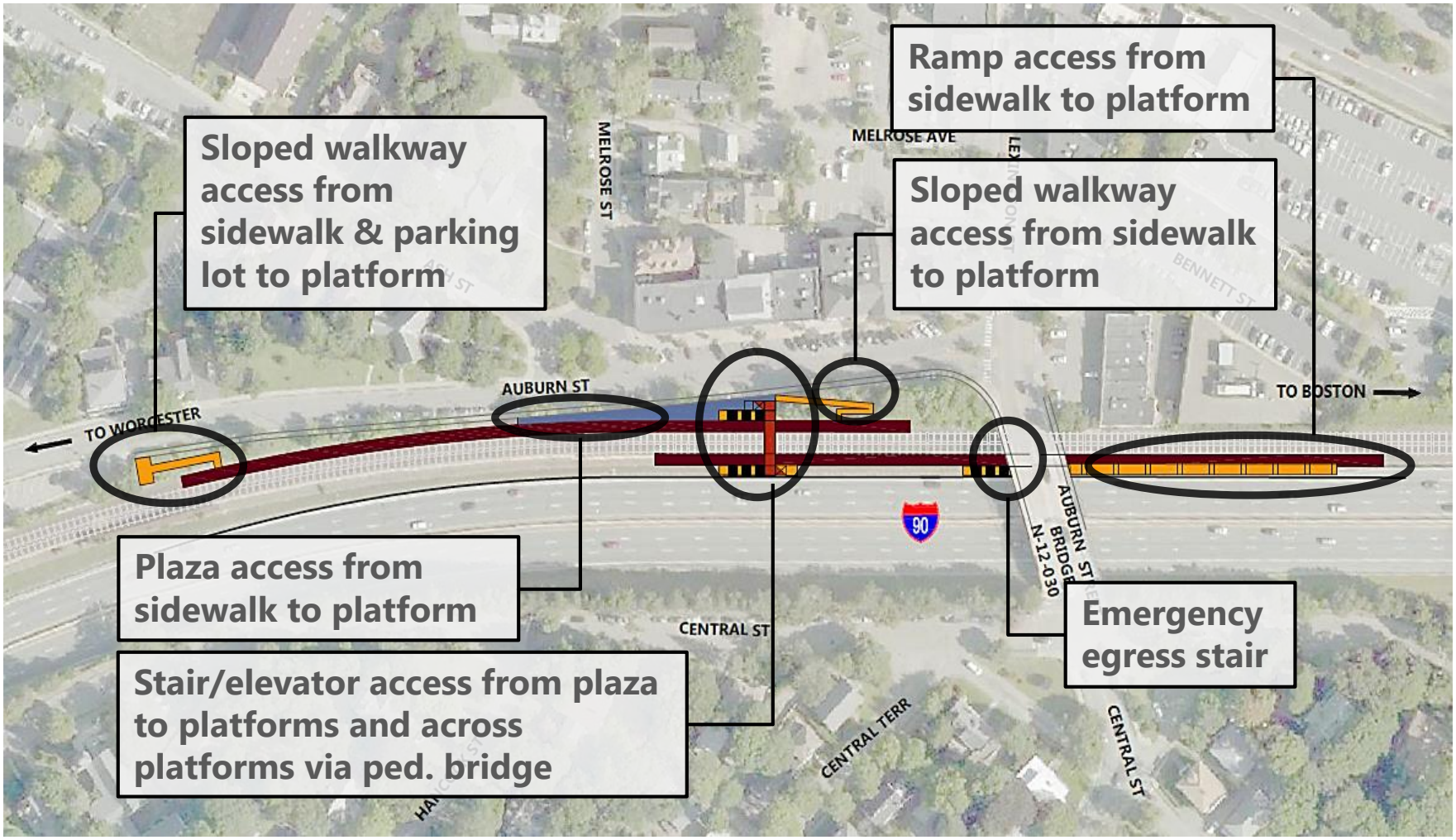
Newtonville Station: Alternative 1
Single Side Platform (Track 1)



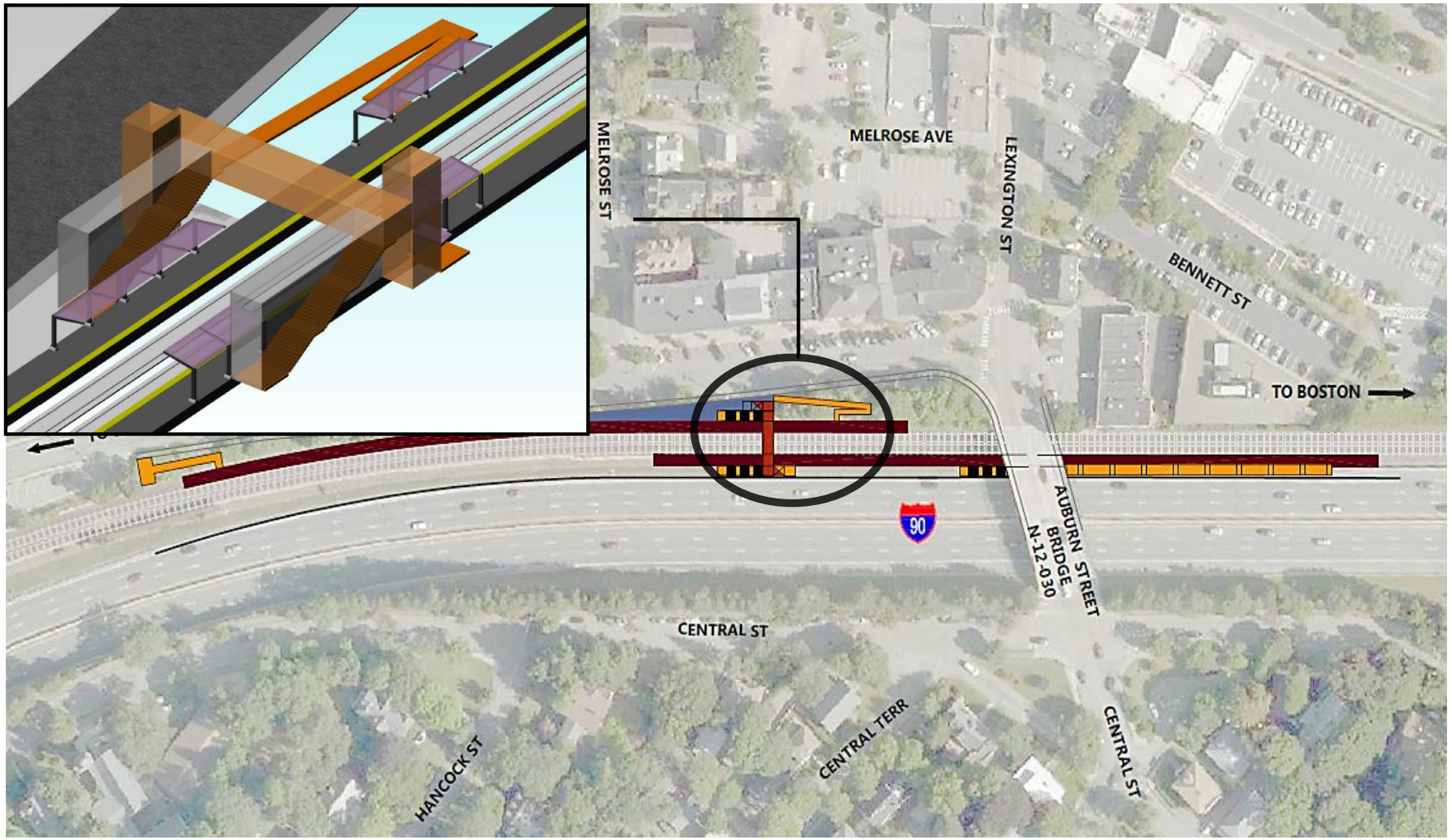
Alternative 2 Project Benefits

- Addresses MBTA's Reliability and Modernization Needs
- Provides ADA Compliant Accessibility
- Improves operations (level boarding)
- Reduces station life cycle maintenance costs and lower energy consumption
- **Provides the opportunity to increase inbound off-peak and reverse-peak service**
- Does not preclude future Urban Rail Vision

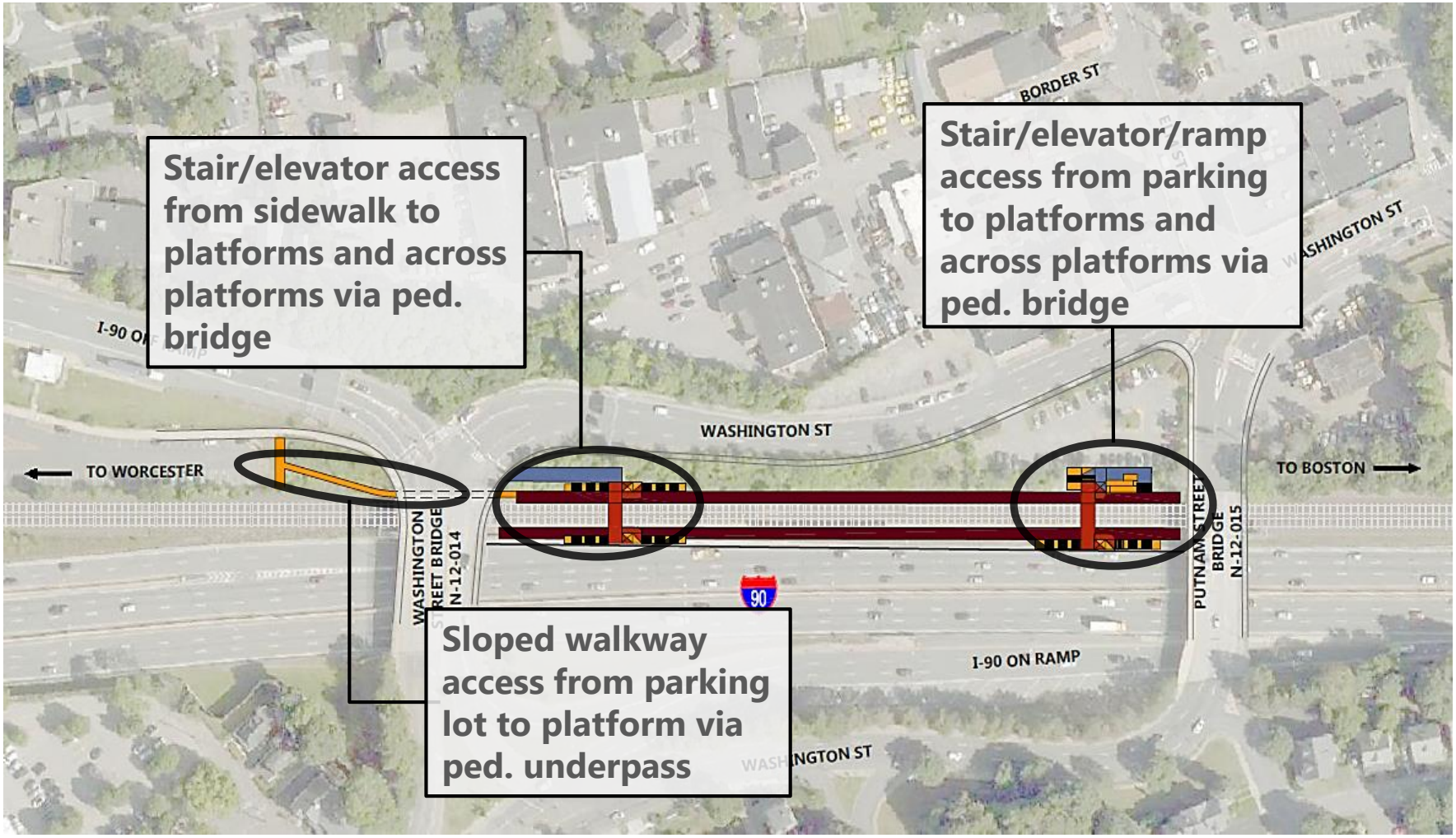
Auburndale Station: Alternative 2
Double Side Platforms



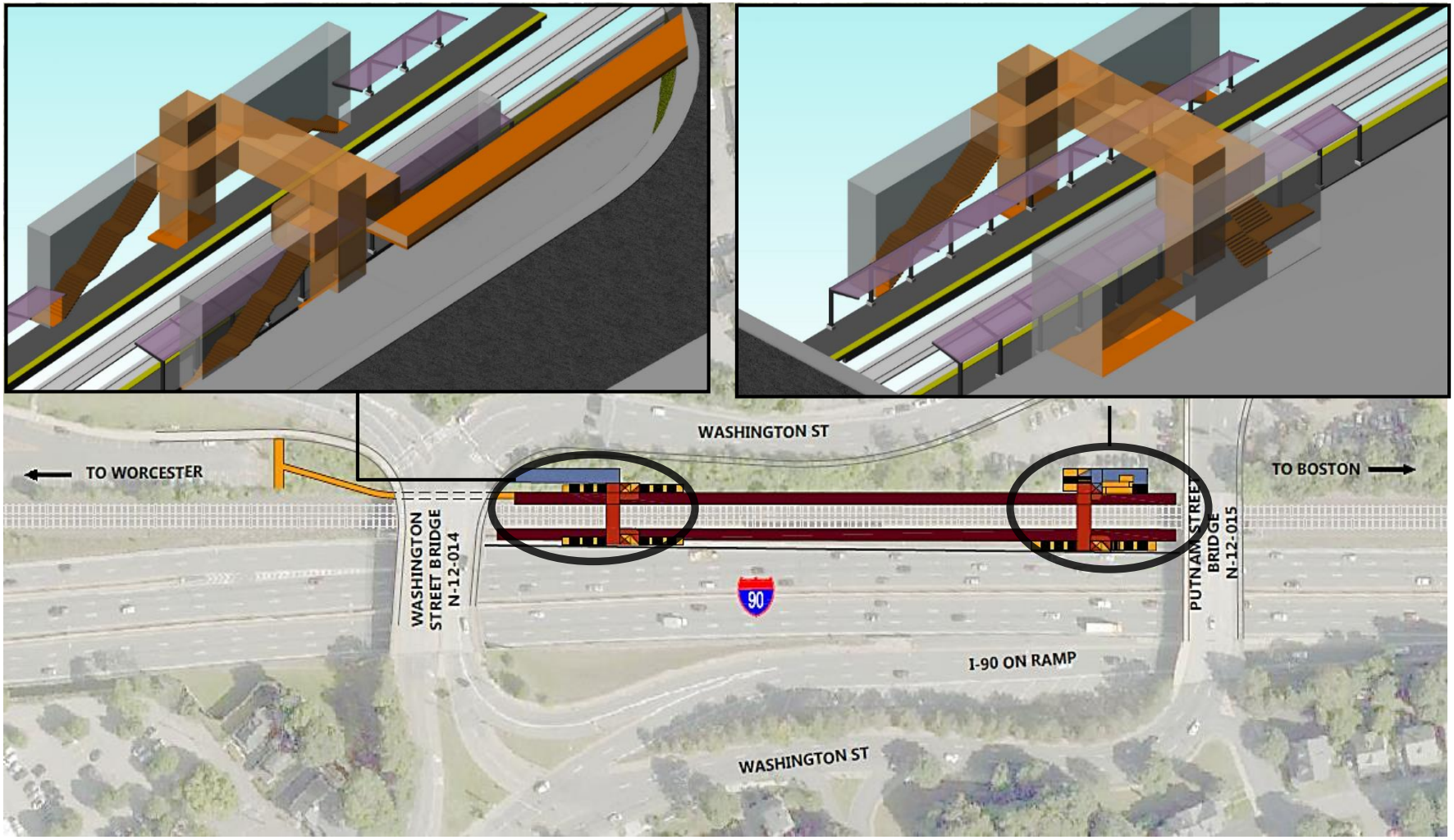
Auburndale Station: Alternative 2
Double Side Platforms



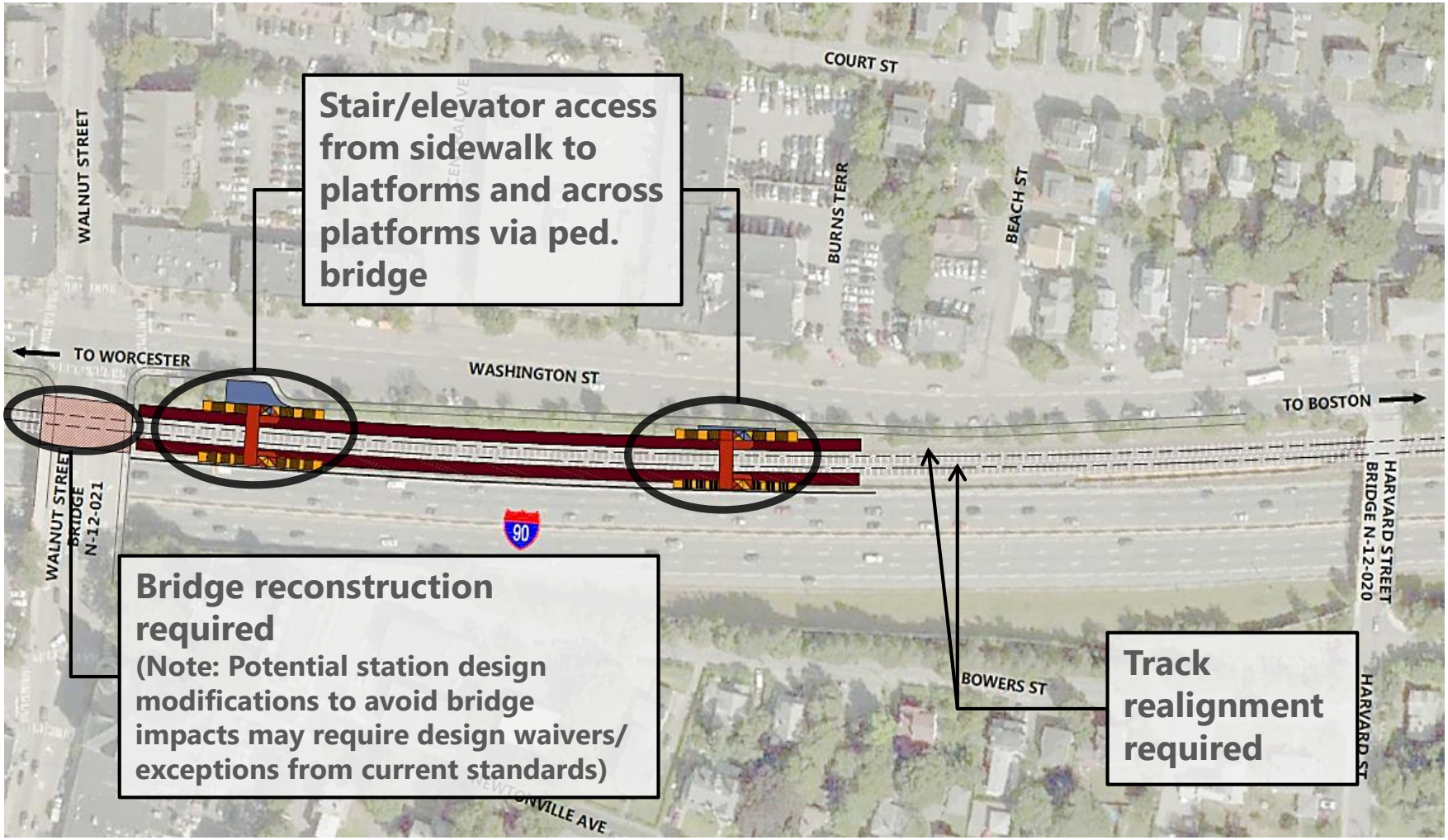
West Newton Station: Alternative 2
Double Side Platforms



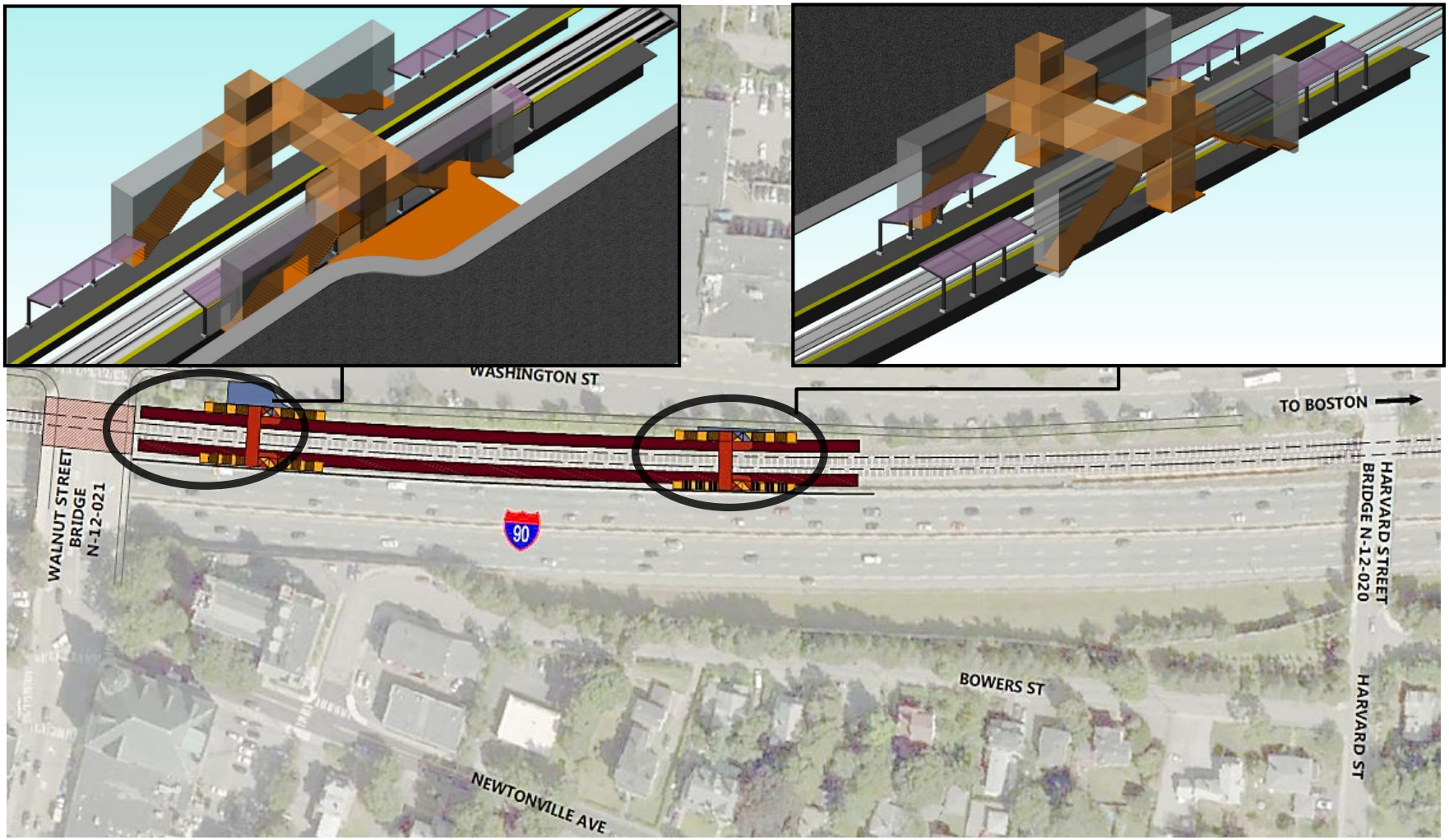
West Newton Station: Alternative 2
Double Side Platforms



Newtonville Station: Alternative 2
Double Side Platforms



Newtonville Station: Alternative 2
Double Side Platforms



Alternative 1/Alternative 2 Comparison

	Capital Investment (Approx. OOM Cost)	Total Program Duration	Total Construction Duration	Operational Impacts/Flexibility
Alternative 1 (Track 1 Single Side Platform)	Stations: $46M MassDOT Bridge: N/A Total Program: $46M	< 5 years (58 months)	2.6 years (31 months)	Maintains existing service levels
Alternative 2 (Double Side Platforms)	Stations: $112M MassDOT Bridge: $17M* Total Program: $129M	Approx. 8 years	5 years (60 months)	Provides additional flexibility with potential to increase reverse-peak service (does not support increased peak direction service)

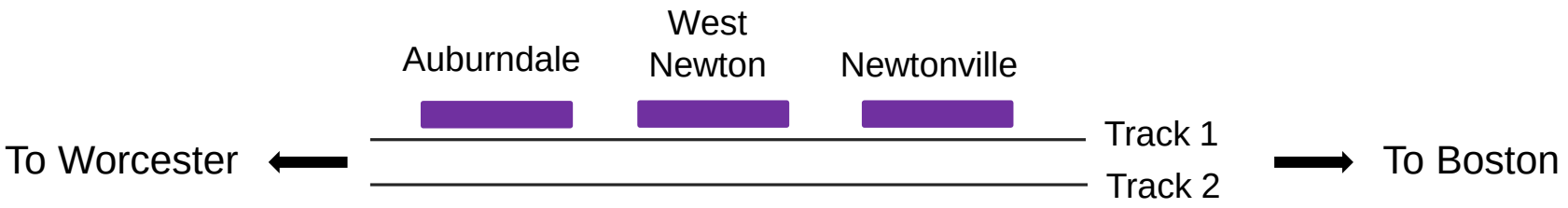
* Opportunity for station design modifications to avoid bridge impacts may require design waivers/exceptions from current standards.

Considerations

- Alternative 1 fully addresses the project goals at the least cost and can be delivered in less than 5 years.
- Alternative 2 fully addresses the project goals at a significant cost and schedule premium longer than Alternative 1 to implement.
- Alternative 2 provides the opportunity for expansion of existing service at an estimated project cost premium of $83M ($129M-$46M). Expanded service includes potential:
  - 3 additional inbound off-peak trips
  - 4 additional inbound reverse peak (PM) trips
  - 5 additional outbound reverse peak (AM) trips
- **Alternative 1 will not preclude future Alternative 2 project elements from being constructed**.

Recommendation and Go Forward Plan

- Alternative 1, designed to not preclude potential future expansion to Alternative 2, best meets the MBTA's accessibility and current operational goals and can be implemented in the least amount of time and at the lowest cost.
- MBTA plans to award a professional services contract with VHB to advance the design of Alternative 1.
- In order to construct the project, additional funding will be required (non-MBTA funding).



Alternative 1

Alternative 1 Project Schedule/Funding

- Award Consultant Contract: August 2019

- Design: 27 months*
  - Preliminary Design: September 2019 – June 2020
  - Final Design: July 2020 – July 2021
  - Bid Phase: August 2021 – November 2021
    (Contingent upon securing 100% funding prior to August 2021)

- Construction: 31 months
  - December 2021 – June 2024

* Candidate for Acceleration if funding is available by February 2021

Study Report Coordination & Briefings

- Jul 27, 2017: Transit Matters Coordination Meeting
- Feb 15, 2018: City of Newton/Elected Officials Briefing
- Mar 19, 2018: Transit Matters Coordination Meeting
- May 7, 2018: Briefing at FMCB Meeting with support from Elected Officials
- Nov 14, 2018: City of Newton/Elected Officials Briefing

Planned Outreach - Upon Award of Consultant Contract

• Public ENF Scoping Meeting	Spring 2020
• 30% Legislative Briefing	Summer 2020
• 30% Mayor/City Council Meeting	Summer 2020
• 30% Public Meeting	Summer 2020
• 75% Legislative Briefing	Winter 2021
• 75% Mayor/City Council Meeting	Winter 2021
• 100% Legislative Briefing	Spring 2021
• 100% Mayor/City Council Meeting	Spring 2021
• 100% Public Meeting	Spring 2021

Project Cost Comparison – New Double Sided Platform CR Stations

Commuter Rail Projects	Notice to Proceed	Construction Cost (Actual/ Projected)	Total Project Cost (Actual/ Projected)	Years of Additional Escalation to 2024 Mid-Point	Approx. Escalated Construction Cost	Approx. Escalated Total Project Cost
South Acton	12/5/2012	$11,103,922	$19,085,037	9.75	**$15,500,000**	**$26,700,000**
Blue Hill Avenue	2/2/2017	$20,656,378	$26,550,000	6.00	**$25,400,000**	**$32,600,000**
Chelsea	6/5/2019	$32,367,200	$37,939,311	3.75	**$36,800,000**	**$43,200,000**
Winchester	Spring 2020	$39,600,000	$49,920,424	2.67	**$43,400,000**	**$54,700,000**
Newton Stations (Alt. 2) [Auburndale, West Newton, and Newtonville]	Summer 2022	-	-	-	***$105,100,000***	***$129,000,000***
Average Cost for each Newton Station		-	-	-	**$35,000,000**	**$43,000,000**

Note: Escalation of 3.5% applied to March 2024 Mid-Point of Construction for comparison purposes only. Approximate Escalated Costs rounded to nearest $100,000.

Thank You

Questions & Answers