massDOT Office of Transportation Planning

Route 128/I-95
LAND USE & TRANSPORTATION STUDY

Public Informational Meeting #3

Alternatives & Draft Recommendations
Breakout Rooms

Wednesday January 18, 2023

You Are In Breakout Room #1

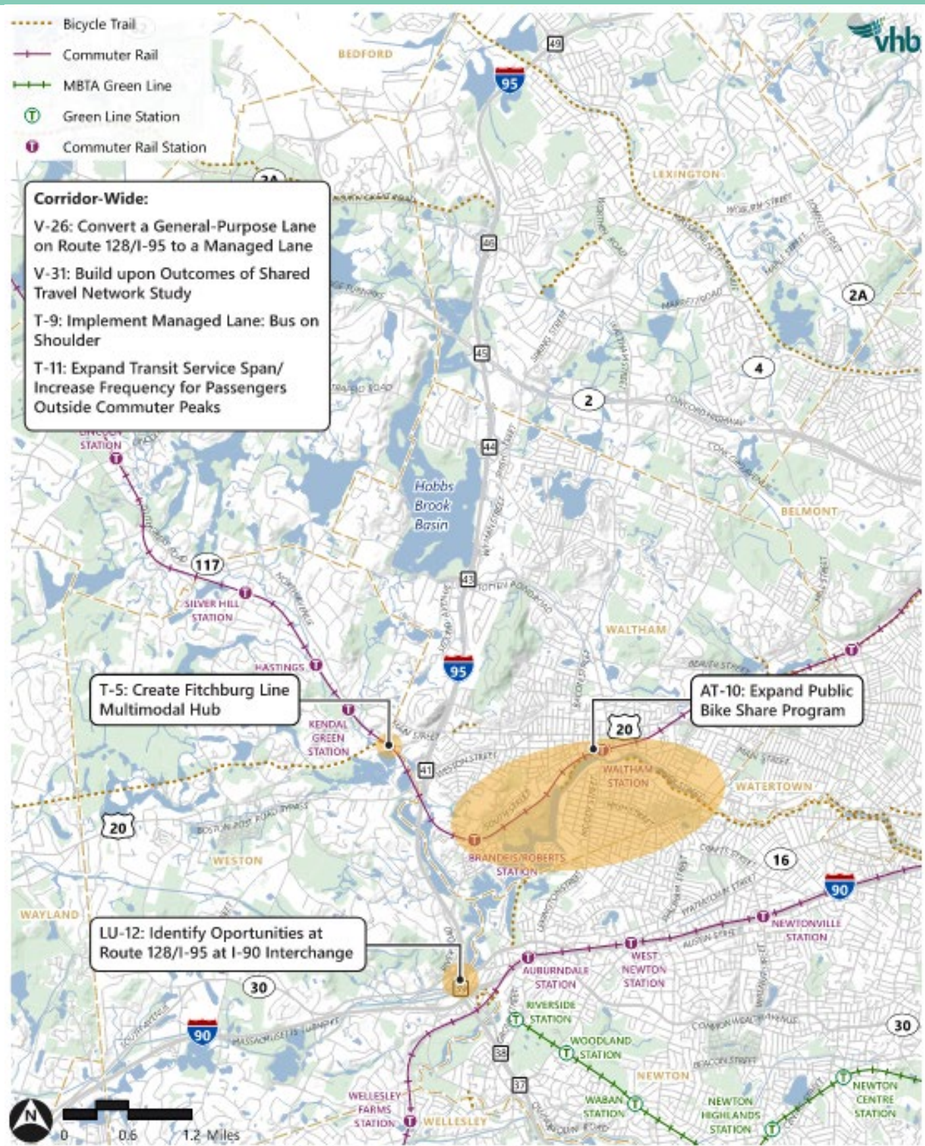
Improve Regional Mobility

At any point, you may **switch to another breakout room** by clicking "Leave Breakout Room" but be careful to only leave the room, not the meeting.

Improve Regional Mobility

More reliable and robust multimodal access between the region and the Study Area are critical to address congestion, decrease emissions, and protect adjacent neighborhoods.

- The study area needs to import workers at a rate of over 7:1 to fill available jobs, straining the regional transportation network.
- No significant transit or active transportation investments are planned, leaving limited multimodal choices.
- By 2040, it is estimated that 84 percent of study area trips will be made by a vehicle, which will continue to exacerbate congestion.



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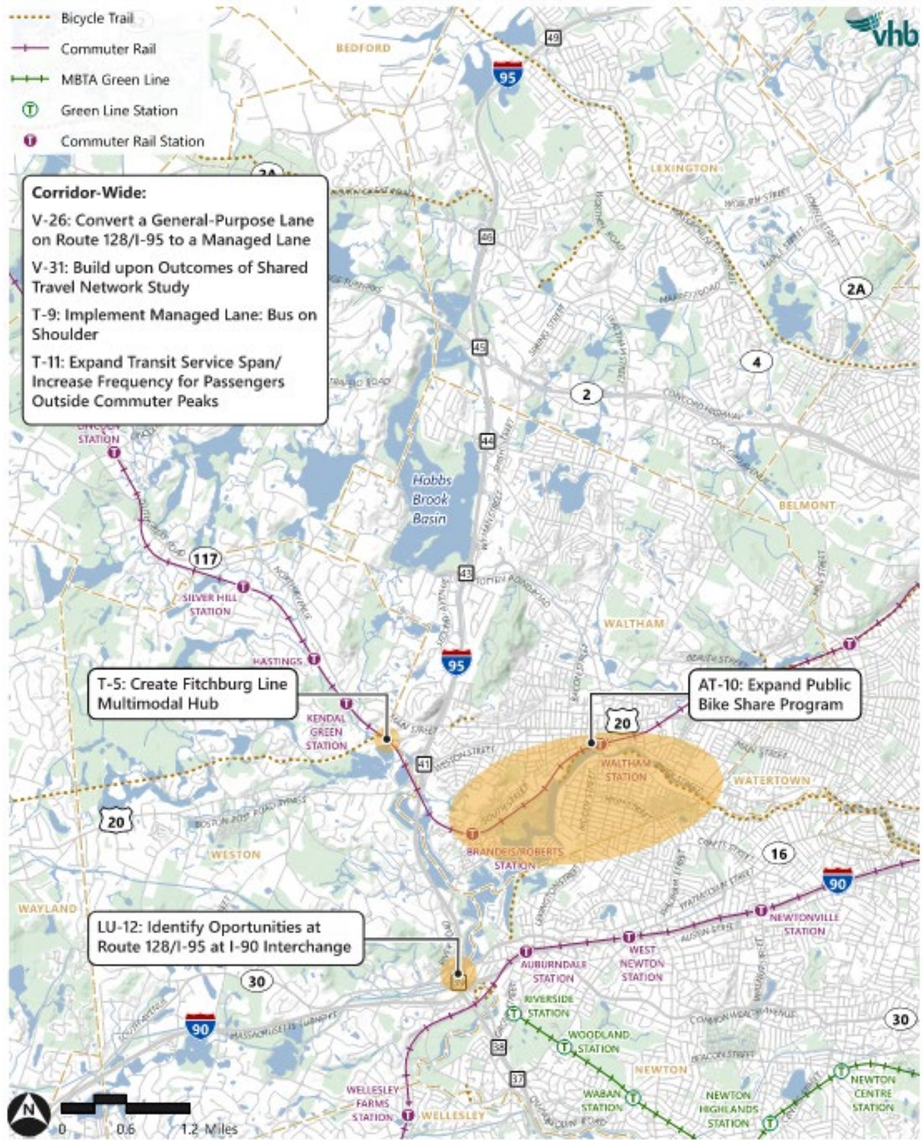
Improve Regional Mobility

More reliable and robust multimodal access between the region and the Study Area are critical to address congestion, decrease emissions, and protect adjacent neighborhoods.

- T-5: Create Fitchburg Line Multimodal Hub
- LU-12: Identify Opportunities at Route128/I-95 at & I-90 Interchange
- T-11: Expand Transit Service Span/Increase Frequency for Passengers Outside Commuter Peaks
- AT-10: Expand Public Bike Share Program
- V-31: Build upon Outcomes of Shared Travel Network Study
- T-9: Implement Managed Lane: Bus on Shoulder
- V-26: Convert a General-Purpose Lane on Route 128/I-95 to Managed Lane



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T-5: Create Fitchburg Line Multimodal Hub

Current Fitchburg Line stations in the study area lack robust multimodal connections, limiting the potential to accommodate transit trips to commercial development in the area.

- Multimodal hub would likely replace the existing Kendal Green Station and be relocated to the east
- Could incorporate increased parking and multimodal connections, including direct access to the Mass Central Rail Trail
- Provides an opportunity for transit-oriented development
- Potential for additional transit connections to better serve West Waltham
- Improves transit connection to Boston

Draft Recommendation: Advance

LU-12: Identify Opportunities at Route128/I-95 at & I-90 Interchange

Land owned by MassDOT at the Route 128/I-95 at I-90 interchange could be used to support transportation and/or economic development goals.

- Potential uses:
  - Park and Ride lot and bus pick-up/drop-off facility
  - Private sector industrial/warehouse development
  - Truck-only layover/rest-stop facility
- Enhancements on the Worcester Commuter Rail line, including consideration of a new station, would further enhance this alternative
- Potential to create jobs and foster economic development
- Opportunity to expand regional transportation choice

Draft Recommendation: Advance

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T-11: Expand Transit Service Span/Increase Frequency

Transit service during the midday, in the late evenings, and on weekends is limited, restricting the ability for people to use transit for non-traditional commuting patterns.

- Increase the frequency of existing MBTA and Lexpress transit services in the study area outside traditional weekday morning and weekday evening peak periods.
- Extend the hours of operations on existing transit services on the weekends and in the late evening on weekdays.
- Advances social equity by providing additional transit service outside of typical commuter windows.

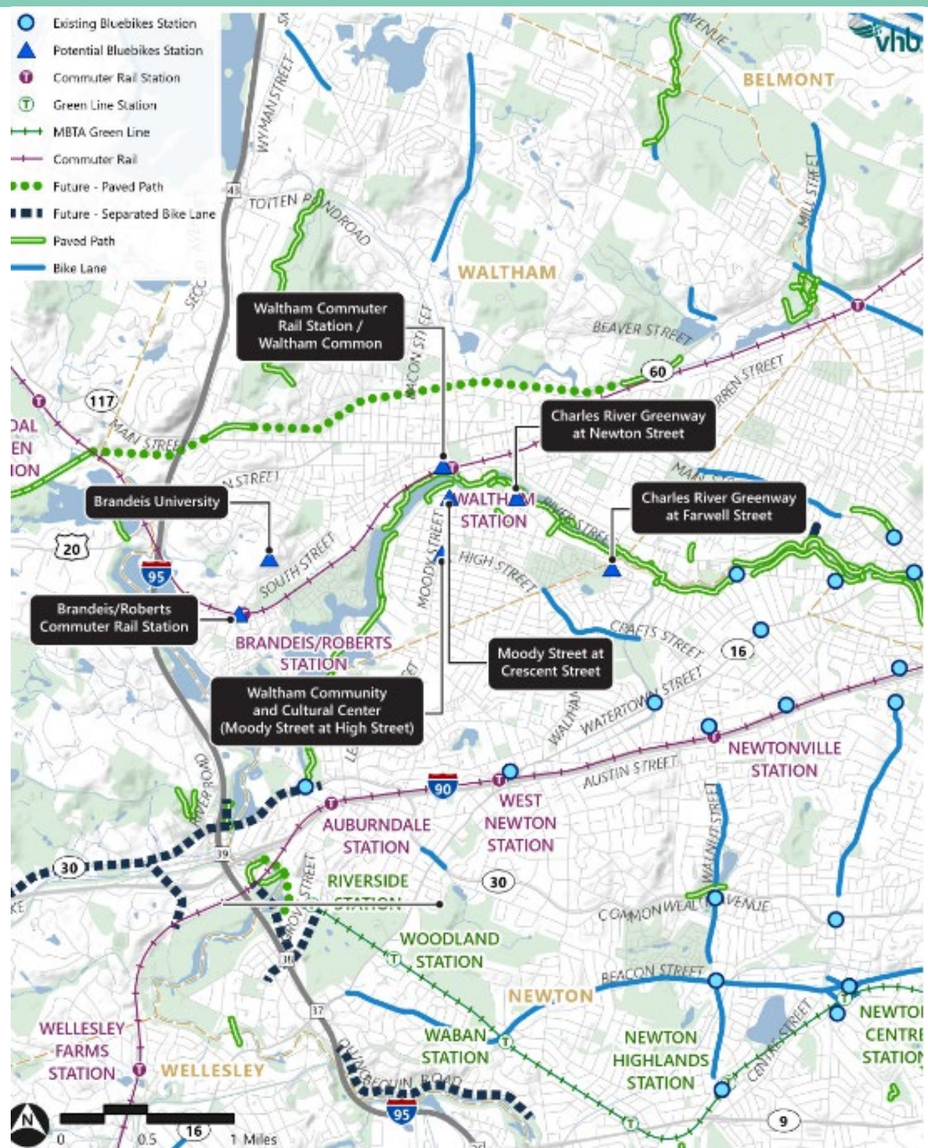
Draft Recommendation: Advance

AT-10: Expand Public Bike Share Program

Expanding the bike share system in the Study Area beyond Newton could encourage more people to bike and serve as a "last-mile" solution for commuters connecting to transit stations and workplaces or residences.

- Initial expansion of seven bike share stations in Waltham
- Expand the Bluebikes bike share system throughout the rest of the Study Area municipalities in subsequent phases
- Provides access to a new mode of transportation
- Creates a potential last-mile connection solution
- Improves equity if subsidies are provided

Draft Recommendation: Advance



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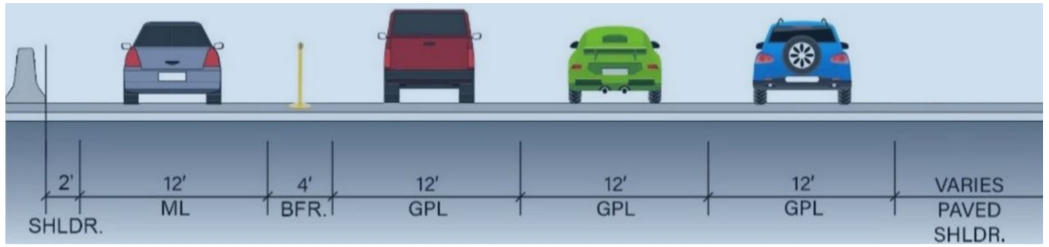
Additional Alternatives

More reliable and robust multimodal access between the region and the Study Area are critical to address congestion, decrease emissions, and protect adjacent neighborhoods.

- **V-31: Build upon Outcomes of Shared Travel Network Study**
  - Consider components of an ideal shared travel network where future Transit-Oriented Development (TOD) and/or mobility enhancements are considered.
  - Draft Recommendation: Discard as standalone alternative.
- **T-9: Implement Managed Lane: Bus on Shoulder**
  - Repurpose existing Route 128/I-95 shoulder as bus lane within the study area.
  - No MBTA/Route 128 Business Council routes on Route 128/I-95.
  - Draft Recommendation: Monitor
- **V-26: Convert a General-Purpose Lane on Route 128/I-95 to Managed Lane**
  - Convert the leftmost lane along the corridor to an express lane, High-Occupancy Vehicle Lane, or High Occupancy Toll Lane
  - Draft Recommendation: Discard at this time.



Route 128/I-95 Potential Cross-Section Per Direction with Managed Lane
Source: Congestion in the Commonwealth: Managed Lanes Screening Study; MassDOT; 2020

You Are In Breakout Room #2

Expand Transportation Choice

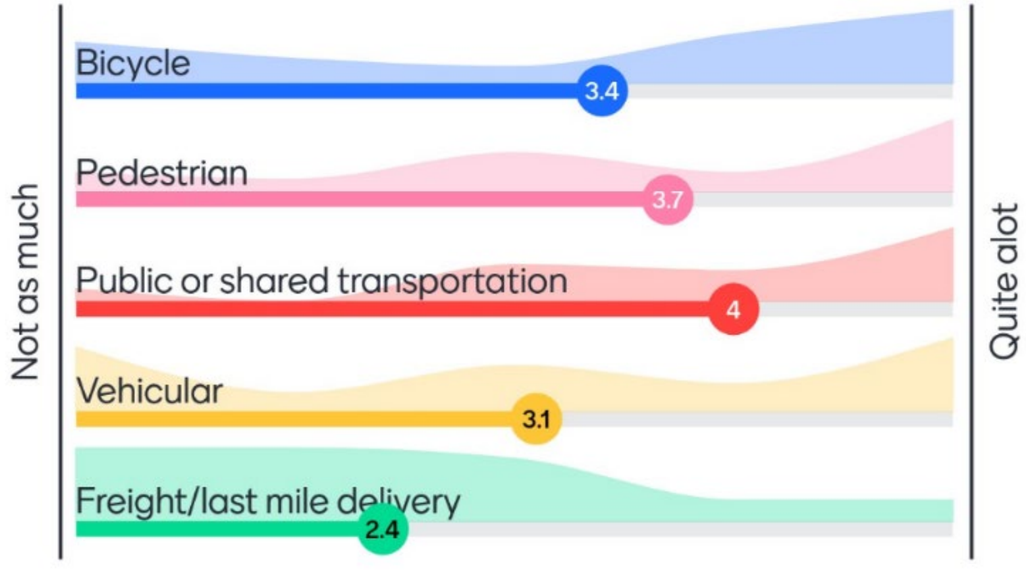
At any point, you may **switch to another breakout room** by clicking “Leave Breakout Room” but be careful to only leave the room, not the meeting.

Expand Transportation Choice

Expanding and diversifying multimodal options will help the corridor realize its full potential as an economic engine for the region and, as importantly, serve to protect near-by neighborhoods from unintended traffic impacts from this growth.

- The Study Area is hampered by a lack of quality multimodal connections, limiting the potential for mode share shifts for all trip types to more sustainable modes like transit, bicycling, and walking.

- Feedback from previous public meetings and from the Working Group underscored the desire to invest in transit and active transportation options ahead of expanding vehicular infrastructure.

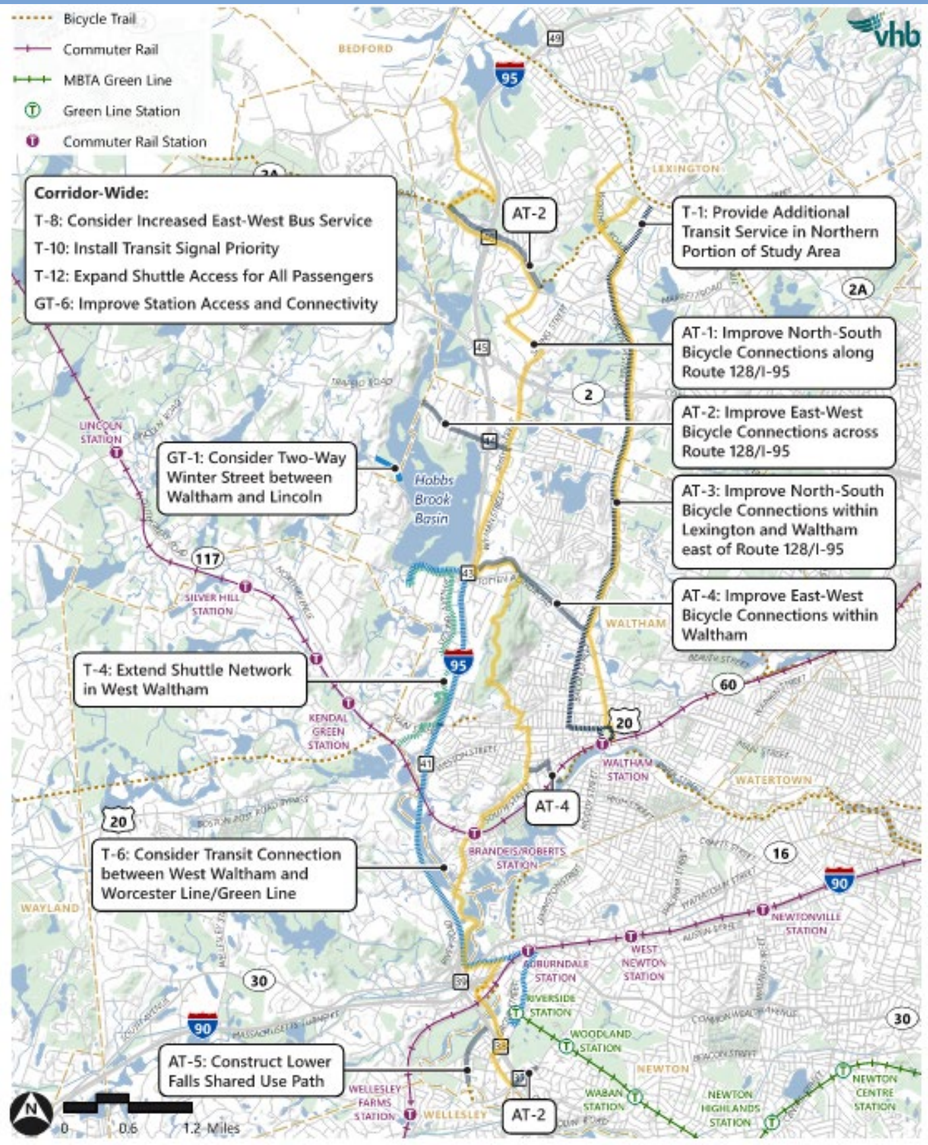


Source: Public Informational Meeting #2 Poll Results

Expand Transportation Choice (1 of 2)

Expanding and diversifying multimodal options will help the corridor realize its full potential as an economic engine for the region and, as importantly, serve to protect near-by neighborhoods from unintended traffic impacts from this growth.

- AT-5: Construct Lower Falls Shared Use Path
- T-1: Provide Additional Transit Service in Northern Portion of Study Area
- T-6: Consider Transit Connection between West Waltham and Worcester Line/Green Line
- T-12: Expand Shuttle Access for All Passengers
- AT-4: Improve East-West Bicycle Connections within Waltham
- T-8: Consider Increased East-West Bus Service



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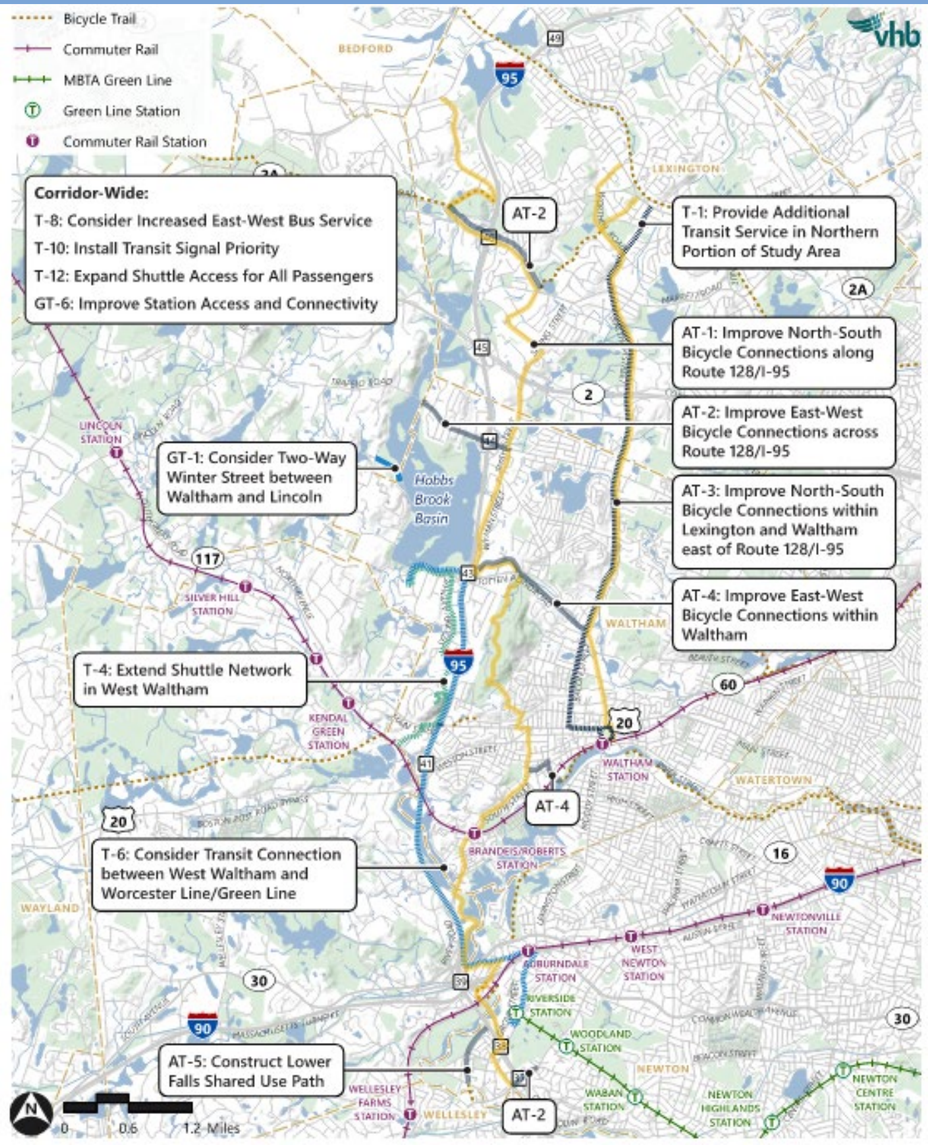
Expand Transportation Choice (2 of 2)

Expanding and diversifying multimodal options will help the corridor realize its full potential as an economic engine for the region and, as importantly, serve to protect near-by neighborhoods from unintended traffic impacts from this growth.

- GT-6: Improve Station Access and Connectivity
- T-4: Extend Shuttle Network in West Waltham
- AT-2: Improve East-West Bicycle Connections across Route 128/I-95
- AT-3: Improve North-South Bicycle Connections within Lexington and Waltham east of Route 128/I-95
- AT-1: Improve North-South Bicycle Connections along Route 128/I-95
- T-10: Install Transit Signal Priority
- GT-1: Consider Two-Way Winter Street between Waltham and Lincoln



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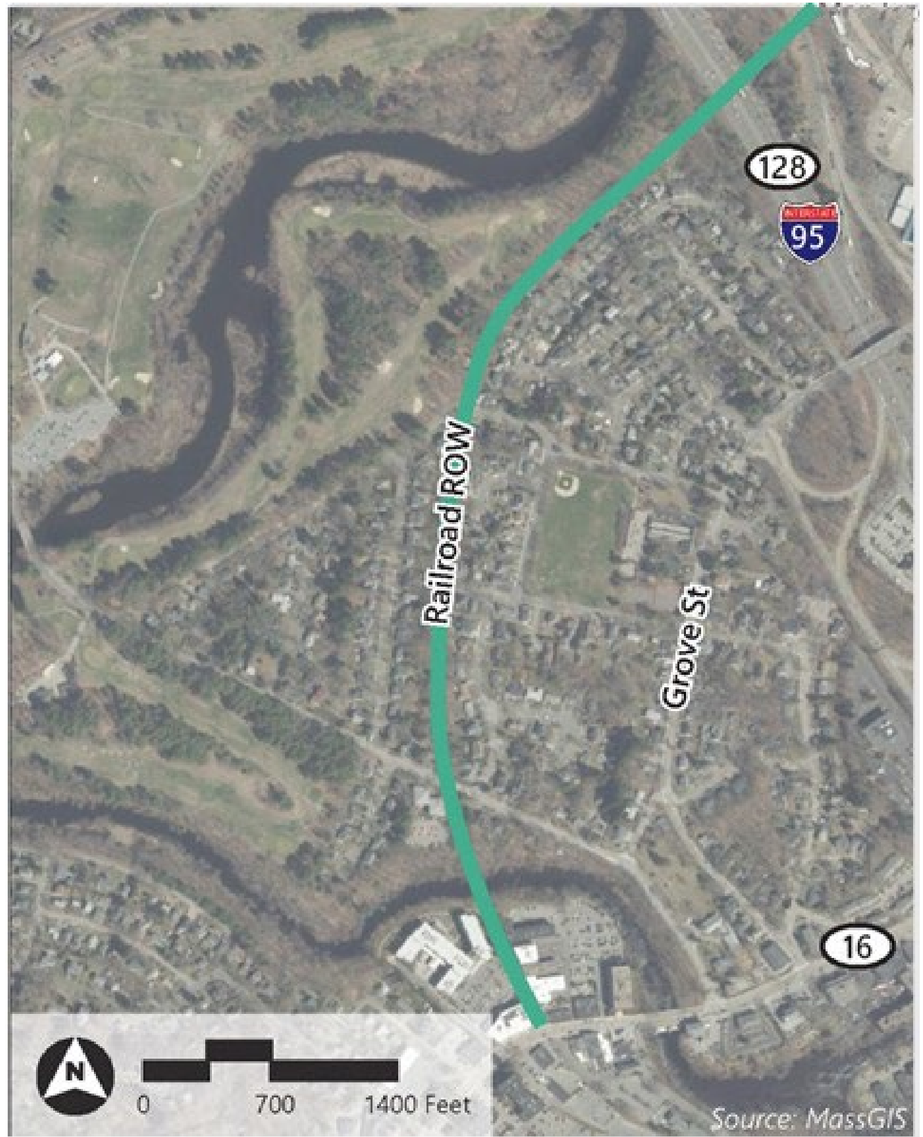
AT-5: Construct Lower Falls Shared Use Path

Opportunity to create a shared-use path that would complete the connection between the Riverside MBTA station and Newton Lower Falls/Wellesley.

- Construct an off-road, shared use path with potential alignment options including former railroad right-of-way or along the edge of the Leo J. Martin Golf Course.
- Utilize former railroad bridges over Route 128/I 95 to connect to the Riverside MBTA station and the proposed bicycle accommodations along the Charles River north of Riverside.
- Builds upon previously conducted studies and Riverside MBTA station redevelopment mitigation.
- Improves safety for bicyclists.

Draft Recommendation: Advance

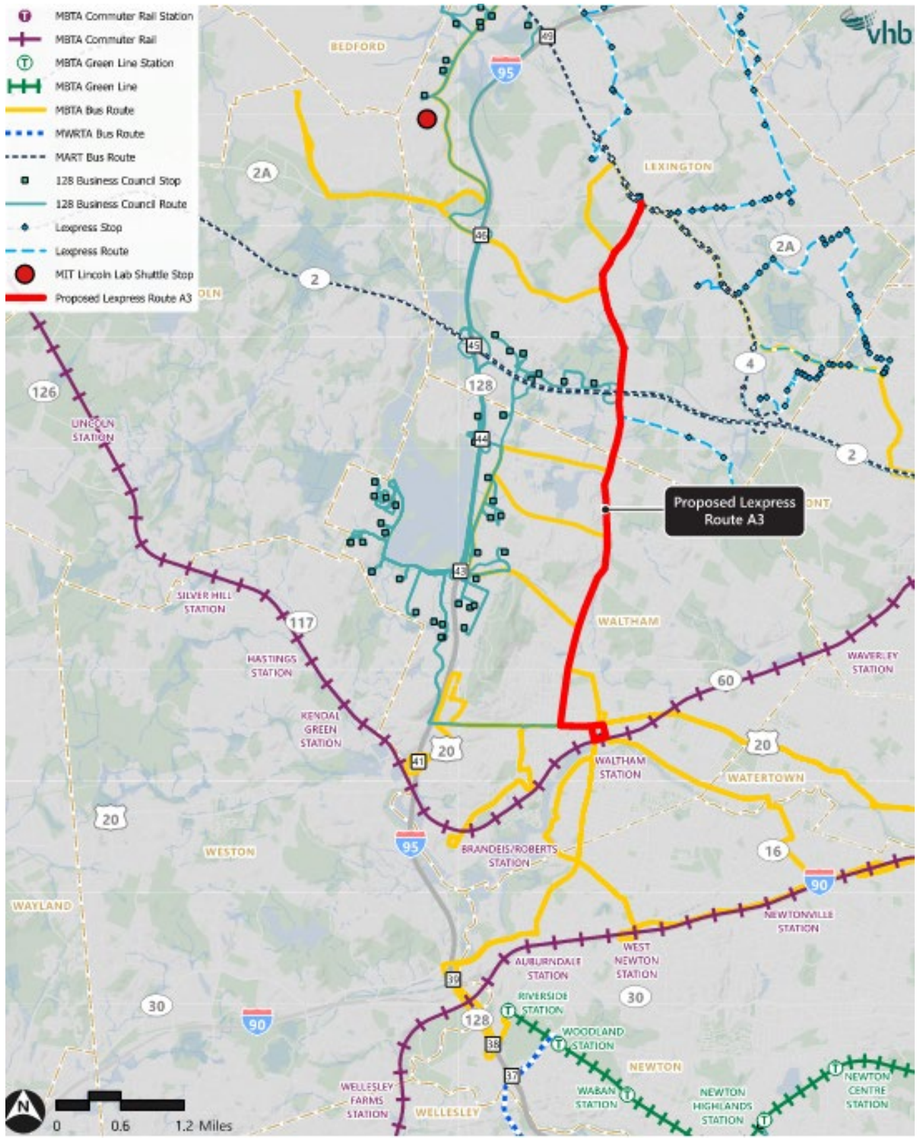


T-1: Provide Additional Transit Service in Northern Portion of Study Area

Existing service in the northern portion of the study area focuses on connecting to Alewife Station and the Fitchburg Line. There are limited transit opportunities to other destinations, including job clusters in Waltham.

- Potential route between Depot Square in Lexington Center and Downtown Waltham via Waltham Street and Lexington Street, potentially operated by Lexpress.
- Increases access to job centers in Waltham via non-vehicle modes of travel.
- May encourage commuters to shift modes.
- Improves transit connectivity to existing and future bus routes.

Draft Recommendation: Advance



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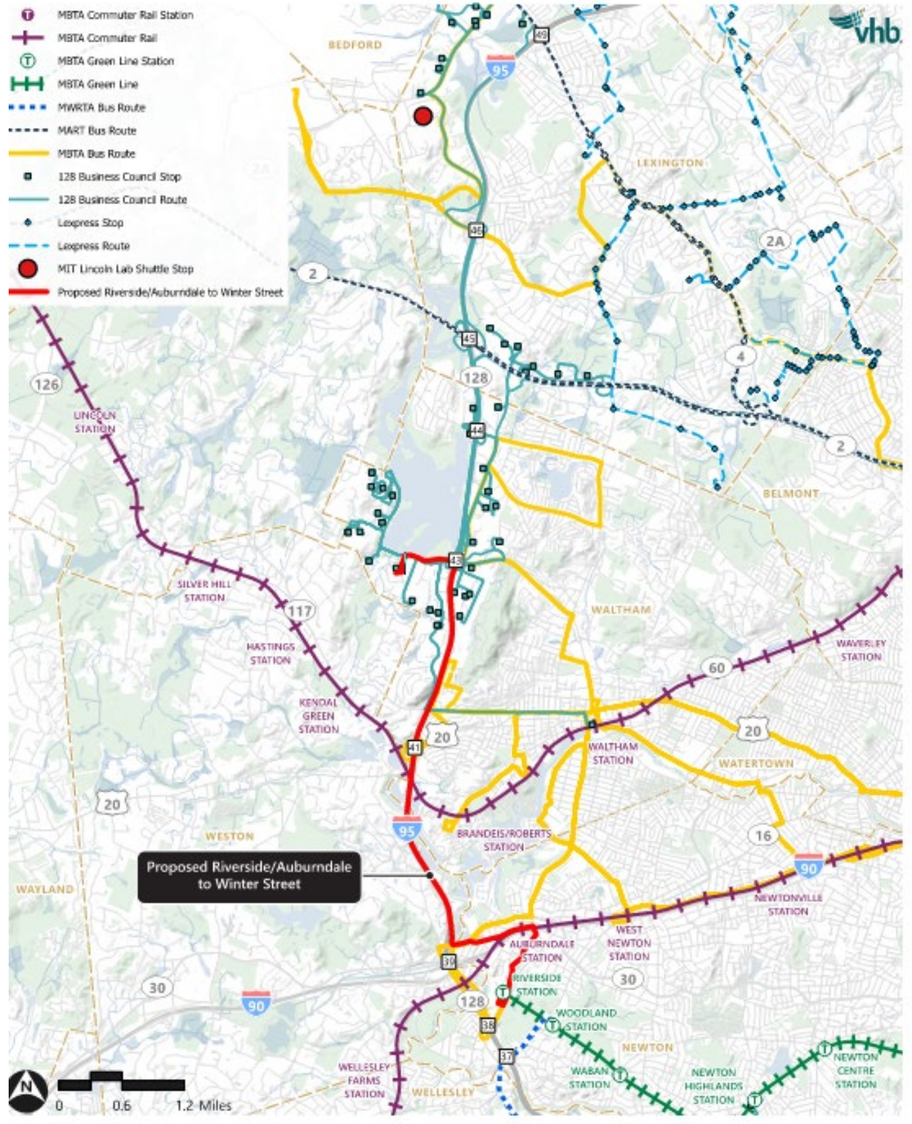
T-6: Consider Transit Connection between West Waltham and Worcester Line/Green Line

There is currently no transit connection between the commercial developments in West Waltham and nearby stations on the Worcester Commuter Rail Line and Green Line.

- Potential route would connect the Green Line Riverside station, Worcester Line Auburndale station, and Winter Street in West Waltham via Route 128/I-95.
- Route could be operated by the MBTA or by a shuttle operator, such as the 128 Business Council.
- Service could increase transit access to job centers in Waltham.

Draft Recommendation: Advance

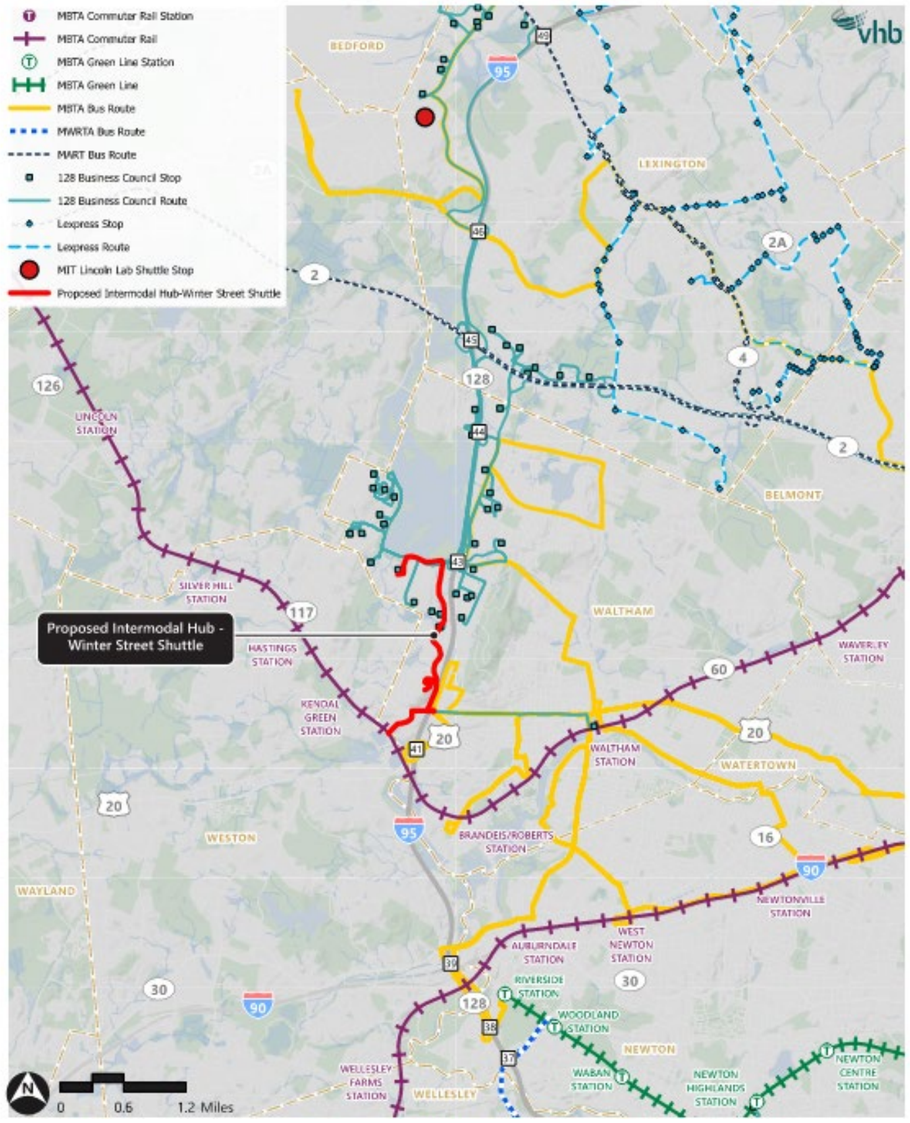


T-4: Extend Shuttle Network in West Waltham

Existing shuttle service in the study area mostly serves the east side of Route 128/I-95. Adding supplemental shuttle service west of Route 128/I-95 could capture existing and planned development trips.

- Potential route has been identified that would travel along Bear Hill Road between Main Street and Winter Street.
  - Would be coordinated with proposed Route 61 included in MBTA's Bus Network Redesign
- Route would connect several existing and proposed commercial and residential developments in West Waltham.
- Route could provide a connection to a potential multimodal hub on the Fitchburg Line (see Alternative T-5).
- Service likely would be operated by a non-MBTA operator, such as the 128 Business Council.
- Provides service to developments that are currently underserved by transit accommodations.

Draft Recommendation: Advance



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AT-1 & AT-3: North-South Active Transportation Alternatives

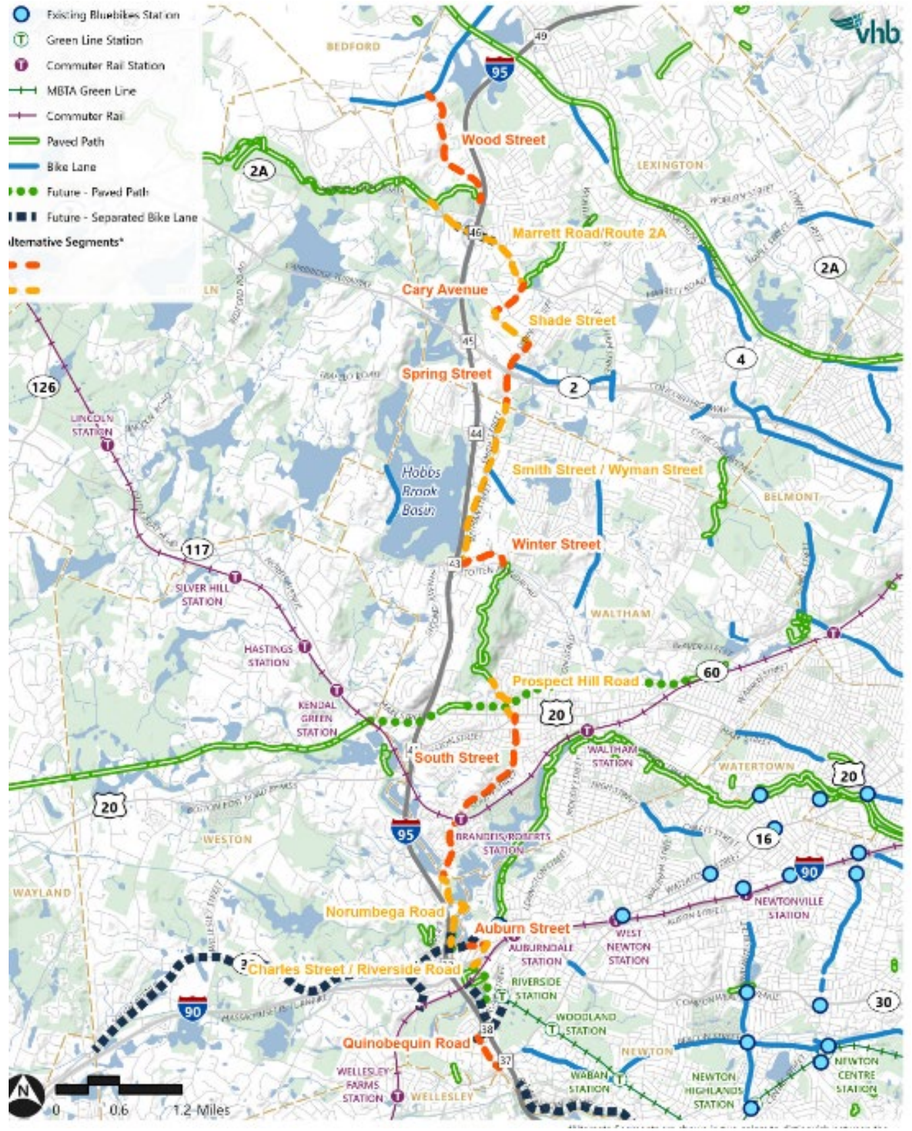
Local bicycle accommodations in the north-south direction through Lexington and Waltham are disconnected, requiring bicyclists to travel on roadways without dedicated bicycle accommodations.

Alternatives focused on improving north-south active transportation accommodations:

- AT-1: Improve North-South Bicycle Connections along Route 128/I-95
- AT-3: Improve North-South Bicycle Connections within Lexington and Waltham east of Route 128/I-95

These alternatives work towards building a continuous north-south network of local bicycle accommodations in Lexington and Waltham.

Draft Recommendations: Advance



AT-1: Improve North-South Bicycle Connections along Route 128/I-95

AT-2 & AT-4: East-West Active Transportation Alternatives

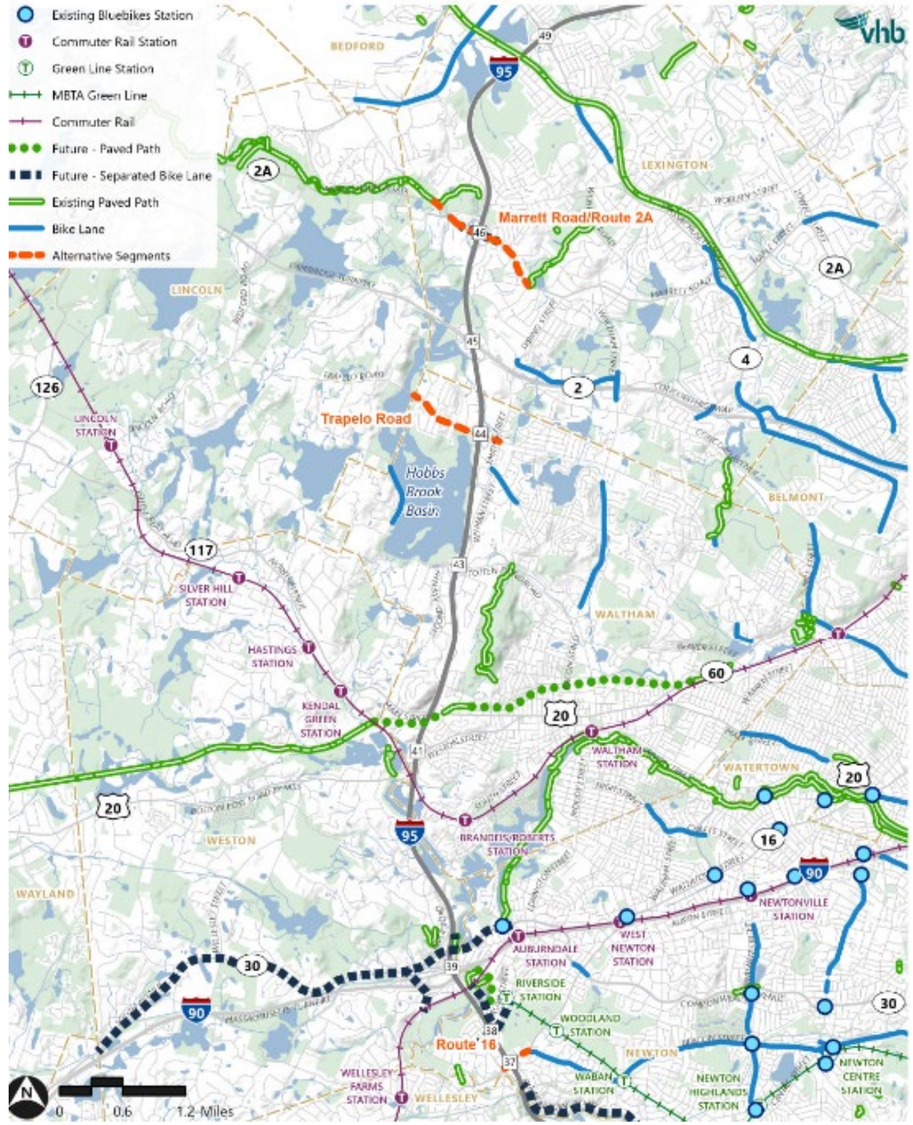
The study area has lacks consistent east-west bicycle accommodations, specifically crossing Route 128/I-95 and within Waltham, creating a barrier for non-motorized travel.

Alternatives focused on improving east-west active transportation accommodations:

- AT-2: Improve East-West Bicycle Connections across Route 128/I-95
- AT-4: Improve East-West Bicycle Connections within Waltham

These alternatives work towards building a continuous east-west network of local bicycle accommodations.

Draft Recommendations: Advance



AT-2: Improve East-West Bicycle Connections across Route 128/I-95

Additional Alternatives (1 of 2)

Expanding and diversifying multimodal options will help the corridor realize its full potential as an economic engine for the region and, as importantly, serve to protect near-by neighborhoods from unintended traffic impacts from this growth.

- **T-12: Expand Shuttle Access for All Passengers**
  - Establish partnerships between transit operators, business communities, and municipalities to allow all residents access to all shuttles.
  - Increase marketing to non-members to inform the public of this transit option.
  - Draft Recommendation: Advance
- **GT-6: Improve Station Access and Connectivity**
  - Incorporate access and connectivity considerations as existing transit stations are upgraded and new stations are designed within the study area.
  - Draft Recommendation: Advance

Additional Alternatives (2 of 2)

Expanding and diversifying multimodal options will help the corridor realize its full potential as an economic engine for the region and, as importantly, serve to protect near-by neighborhoods from unintended traffic impacts from this growth.

- **T-8: Consider Increased East-West Bus Service**
  - Provide additional east-west bus service to planned/proposed employment centers along Route 128/I-95.
  - Draft Recommendation: Discard
- **T-10: Install Transit Signal Priority (TSP)**
  - Consider installing TSP at signalized intersections with bus traffic
  - Draft Recommendation: Monitor traffic and bus delays for potential future TSP.
- **GT-1: Consider Two-Way Winter Street between Waltham and Lincoln**
  - Provide a two-way connection for transit, pedestrians, and bicycles on Winter Street between Waltham and Lincoln.
  - Draft Recommendation: Advance improvements to ped/bike connectivity considering current stormwater regulations.

You Are In Breakout Room #3

Plan for the Future

Align Policies with Mobility Goals

At any point, you may **switch to another breakout room** by clicking "Leave Breakout Room" but be careful to only leave the room, not the meeting.

Plan for the Future

How we live, work, and play is rapidly transforming. Future-focused alternatives for the Study Area seek to embrace current and leverage emerging technologies, support renewable energy, and address sustainability and resiliency challenges.

- V-29: Consider Transportation Systems Management and Operations (TSMO) Strategies
- V-28: Consider Connected/ Autonomous Vehicle Technologies
- E-2: Reduce Amount of Impervious Area and Increase Vegetative Cover
- E-3: Provide Flood Storage and Stormwater Treatment Areas
- GT-8: Install Electric Vehicle Infrastructure - Public
- E-1: Improve Hobbs Brook Reservoir Water Quality
- E-4: Limit Development within Flood-Prone Areas
- LU-4: Implement Solar Energy Program Expansion
- GT-9: Install Electric Vehicle Infrastructure - Private

V-29: Consider TSMO Strategies

MassDOT is currently building from previous efforts and leveraging lessons learned to advance its efforts around TSMO to tailor a program specific to minimize the congestion issues within the Commonwealth.

- MassDOT is in the process of developing a Transportation Systems Management and Operations (TSMO) Strategic Plan.
- Identify opportunities to build upon TSMO strategies.
- Specific pilot studies on the Route 128/I-95 corridor could include:
  - Incident Detection Monitoring
  - Integrated multimodal traveler information

Draft Recommendations: Advance

Transportation Systems Management and Operations (TSMO):

- Integrated set of strategies to optimize the performance of existing infrastructure
- Considers multimodal and intermodal, cross-jurisdictional systems, services, and projects
- Goals to preserve capacity and improve security, safety, and reliability

V-28: Consider Connected / Autonomous Vehicle Technologies

As vehicle and roadside infrastructure technology continues to advance, there will be opportunities to leverage these technologies to improve safety, enhance reliability, mitigate congestion, and reduce vehicle emissions.

- Evaluate opportunities to enable future vehicle-to-vehicle (V2V) and vehicle-to-infrastructure (V2I) communications along the Route 128/I-95 corridor.
- Prepare to leverage technology to support existing and future transportation needs in the study area.
- Long-term projected benefits include improved safety, enhanced reliability, congestion mitigation, and reduced vehicle emissions.

Draft Recommendations: Advance

- Automated vehicles are those in which some aspect of safety control function occurs without direct driver input.
- Automated vehicles may be autonomous or may be connected
- Connectivity is an important input to realizing the full potential benefits and broad-scale implementation of automated vehicles.

LU-4: Implement Solar Energy Program Expansion

The Commonwealth has a goal of achieving net-zero emissions by 2050. There is potential to support this goal by expanding MassDOT's Solar Energy Program and identifying and utilizing opportunity sites within the Study Area.

- Assessment of potentially suitable locations for solar farms along the Route 128/I-95 corridor was conducted.
- Identified parcels that include a minimum of five acres of land and are mostly vacant.
- Initially 11 sites were identified as options.
- Specific sites are being refined through coordination with municipalities and would be further refined with property owner(s).

Draft Recommendations: Advance

GT-8 & GT-9: Electric Vehicle Infrastructure Alternatives

Support the shift from gasoline-powered vehicles to EVs and the Commonwealth's goal of eliminating the sale of gasoline-powered vehicles by 2035.

GT-8: Install Electric Vehicle Infrastructure – Public

- Work within MassDOT's EV Infrastructure Deployment Plan to identify opportunities on publicly-owned property and ROW along Route 128/I-95 within the study area.
- Coordinate with the communities within the Study Area to plan for the release of Discretionary Grant Program funding.

GT-9: Install Electric Vehicle Infrastructure - Private

- Promote the installation of EV charging infrastructure on privately-owned properties with a focus on multi-family residential developments and workplace and commercial destination settings.
- Work to ensure local land use controls are supportive of EV charging infrastructure installations and to provide expedited permitting and inspection processes.

Draft Recommendations: Advance both alternatives

E-1 to E-4: Environnemental Alternatives

Many study alternatives include strategies to reduce congestion which could reduce GHG emissions and improve public health outcomes. Environmental specific alternatives focus on improving existing environmental conditions and increasing climate resilience in the study area for the future.

- **E-1: Improve Hobbs Brook Reservoir Water Quality:** Identify and implement measures to improve water quality in Hobbs Brook Reservoir and its tributaries
- **E-2: Reduce Amount of Impervious Area and Increase Vegetative Cover:** Identify opportunities to reduce impervious areas within the study area, particularly those within floodplains.
- **E-3: Provide Flood Storage and Stormwater Treatment Areas:** Identify properties within the 100-year and 500-year floodplains that could best serve the purpose of flood storage and stormwater treatment and explore ways to ensure their preservation for such purposes.
- **E-4: Limit Development within Flood-Prone Areas:** Review local ordinances and bylaws to ensure that they do not allow inappropriate development within the 100-year floodplain. Encourage longer-term safeguards by restricting development within the 500-year floodplain, as appropriate.

Draft Recommendations: Advance all alternatives

Align Policies with Mobility Goals

The connection between land use and transportation demands has been highlighted throughout this study. Changes to existing policies to better align with larger mobility goals and infrastructure investments compliment other alternatives.

Land Use & Transportation Relationship

- Route 128/I-95 development is oversubscribed to lab, office, and retail and vulnerable to shifts in real estate market demand.
- This puts more strain on traffic, exacerbates greenhouse gas emissions, and has a negative impact on public health.
- Policy changes can help to address these conditions and align them with larger mobility goals and infrastructure investments.

- LU-10: Encourage TOD
- LU-9: Encourage Mixed-Use Development
- LU-8: Encourage Workforce and Affordable Housing
- LU-3: Remove or Revise Parking Minimums
- LU-6: Improve Public Gathering Spaces
- LU-7: Improve Cambridge Reservoir Access
- LU-5: Improve Open Space Network
- GT-7: Develop Regional TDM Plan
- LU-2: Implement Resident and Small Business Protection
- LU-1: Conduct Market Analysis

LU-10: Encourage Transit Oriented Development (TOD)

The MBTA's Fitchburg and Worcester Commuter Rail lines traverse the Study Area and offer the potential for TOD.

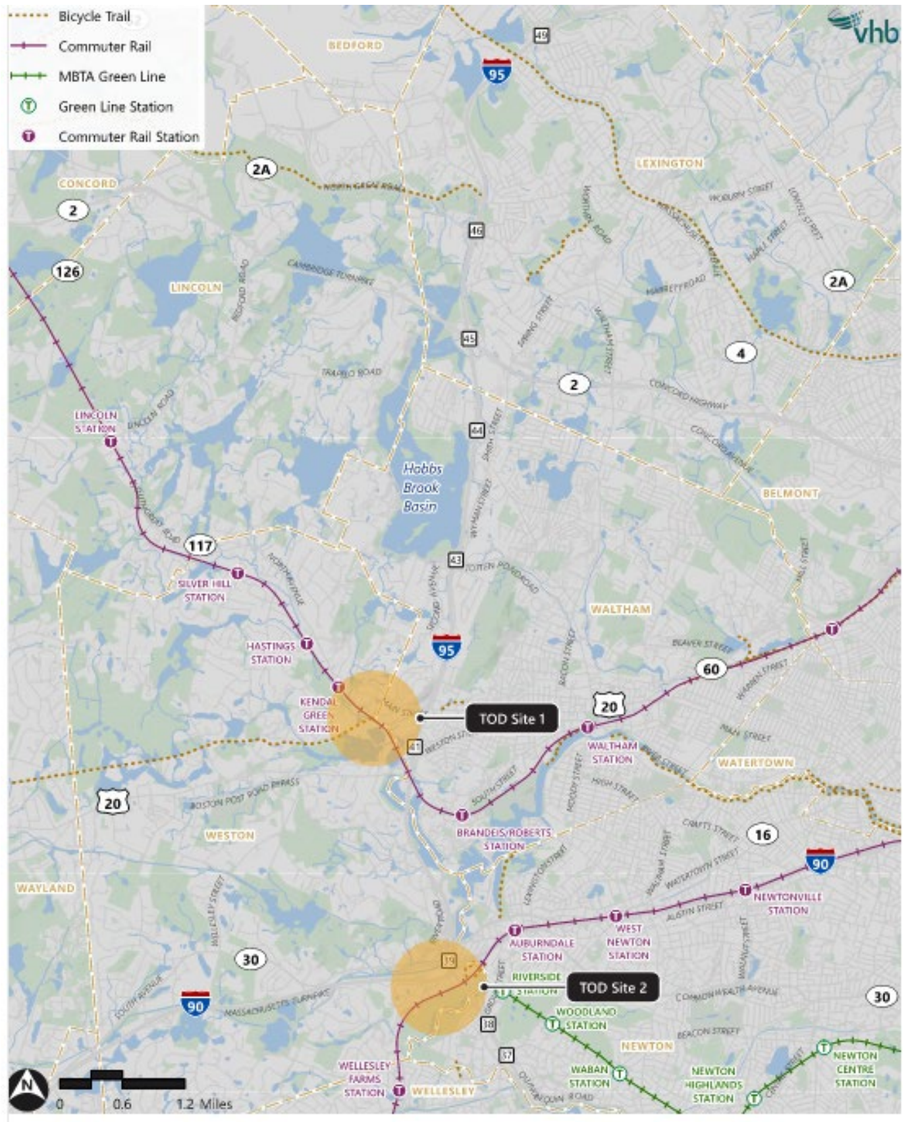
Examined the study area to identify locations best suited for TOD:

- TOD Site 1: Southeast of the MBTA's existing Kendal Green Station on the Fitchburg Line.
- TOD Site 2: Along the MBTA Worcester Commuter Rail Line and in proximity to Riverside Station of the MBTA Green Line D Branch.

Benefits of this alternative include:

- Promoting economic development
- Increasing mixed use and housing developments
- Supporting alternative modes of transportation
- Promoting social equity

Draft Recommendations: Advance TOD Site 1, Monitor TOD Site 2



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LU-9: Encourage Mixed-Use Development

Zoning regulations through the study area are generally amenable to single-use development patterns instead of mixed-use.

- Explore strategies that encourage mixed-use development within the study area such as:
  - Financial and regulatory incentives (e.g., tax abatements, density bonuses);
  - Strategic infill development;
  - Removal of regulatory barriers in local zoning ordinances/bylaws; and
  - Adoption of form-based codes.
- Benefits of this alternative include:
  - Could provide residential units closer to workplaces, which can shorten commutes and potentially reduce the number of vehicles on the roadway.
  - Help to make the corridor more resilient in the face of a rapidly changing real estate market.

Draft Recommendations: Advance

LU-8: Encourage Workforce and Affordable Housing

Directly along the Route 128/I-95 corridor, rental, multifamily housing and affordable housing are sparse. The municipalities of the study area can take steps to allow and incentivize multifamily development within the corridor.

- Identify opportunities for the study area to supply affordable and workforce housing for each level of low-income households.
- Encourage preparation of a Housing Production Plan at the municipal level to establish goals and an implementation matrix for municipalities that do not have one.
- Reform zoning in each municipality to reduce or eliminate single-family zoning.
- Benefits of this alternative include:
  - Help to address local, regional, and statewide housing needs.
  - Help to make the corridor more resilient in the face of a rapidly changing real estate market.
  - Supports job creation and retention.
  - Shortens commutes and potentially reduces vehicle trips.

Draft Recommendations: Advance

LU-3: Remove or Revise Parking Minimums

Municipalities in the study area all operate on minimum parking factors with very few instances of flexibility based on development context.

- Revise parking minimums and shared parking policies within local zoning ordinances and bylaws to ensure they do not encourage an automobile-centric transportation network.
- Benefits of this alternative include:
  - Encouraging use of public transit and active modes of transportation.
  - Potentially reduced costs on business and renters.
  - Land freed up from the local parking inventory could potentially be dedicated to community needs or additional non-paved open space, reducing heat islands.

Draft Recommendations: Advance

LU-6: Improve Public Gathering Spaces

Promoting public gathering spaces within the study area is important to balance development opportunities with the desire to increase social connectivity and the health and well-being of each community.

- Perform a planning study to identify candidate locations for high-impact public gathering spaces.
- Recommendations of this study could consider:
  - New community gathering spaces on both publicly owned and privately owned lands.
  - Connection of gathering spaces with each other (e.g., trails to plazas).
- Benefits of this alternative include:
  - Provide areas for public activities, social connectivity, and increased foot traffic that could support commercial activity/small businesses.
  - Enhance community health and well-being.
  - Augment the visual character of a community.

Draft Recommendations: Advance

Additional Alternatives (1 of 2)

The connection between land use and transportation demands has been highlighted throughout this study. Changes to existing policies to better align with larger mobility goals and infrastructure investments compliment other alternatives.

- **LU-7: Improve Cambridge Reservoir Access**
  - Create a continuous five-mile recreational loop surrounding the reservoir connecting Winter Street, Old County Road, Trapelo Road, and Wyman Street
  - Draft Recommendation: Advance segments on MassDOT/municipal owned roadways only.
- **LU-5: Improve Open Space Network**
  - Study and improve, as necessary, the accessibility of open spaces within the study area, particularly from an equity perspective.
  - Draft Recommendation: Discard, current Open Space and Recreation Plans are sufficient.

Additional Alternatives (2 of 2)

The connection between land use and transportation demands has been highlighted throughout this study. Changes to existing policies to better align with larger mobility goals and infrastructure investments compliment other alternatives.

- **GT-7: Develop Regional TDM Plan**
  - Develop and encourage implementation of enhanced regional TDM policies through a coordinated approach.
  - Draft Recommendation: Advance
- **LU-2: Implement Resident and Small Business Protection**
  - Implement/strengthen strategies that protect against local resident and small business displacement.
  - Draft Recommendation: Advance
- **LU-1: Conduct Market Analysis**
  - Preparation of a market analysis on a regular basis would determine the demand and supply of desired development types, which can then be used to inform local development policies.
  - Draft Recommendation: Advance

You Are In Breakout Room #4

Address Congestion & Improve Safety

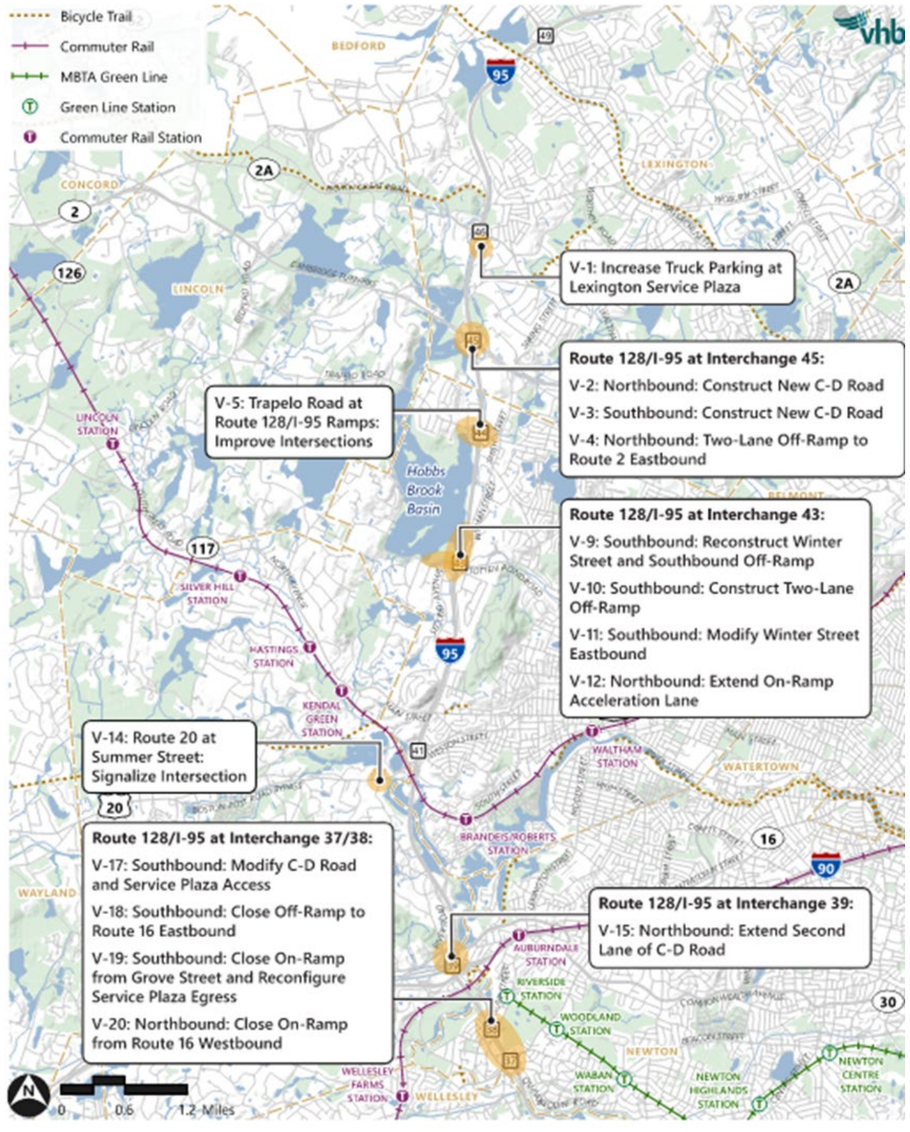
At any point, you may **switch to another breakout room** by clicking “Leave Breakout Room” but be careful to only leave the room, not the meeting.

Address Congestion & Improve Safety (1 of 2)

While we can't build our way out of vehicular congestion, we acknowledge the need to support vehicular traffic within and through the study area. Physical infrastructure investments focus on addressing congestion, reliability, and safety issues.

- V-5: Trapelo Road at Route 128/I-95 Ramps: Improve Intersection
- V-20: Route 128/I-95 Northbound Interchange 37: Close On-Ramp from Route 16 Westbound
- V-19: Route 128/I-95 SB Interchange 37B/38: Close On-Ramp from Grove Street and Reconfigure Service Plaza Egress
- V-3: Route 128/I-95 Southbound at Interchange 45: Construct New C-D Road
- V-17: Route 128/I-95 Southbound Interchange 37/38: Modify C-D Road and Service Plaza Access
- V-10: Route 128/I-95 Southbound Interchange 43: Construct Two Lane Off-Ramp
- V-18: Route 128/I-95 Southbound Interchange 37/38: Close Off-Ramp to Route 16 Eastbound

Route 128/I-95
LAND USE & TRANSPORTATION STUDY

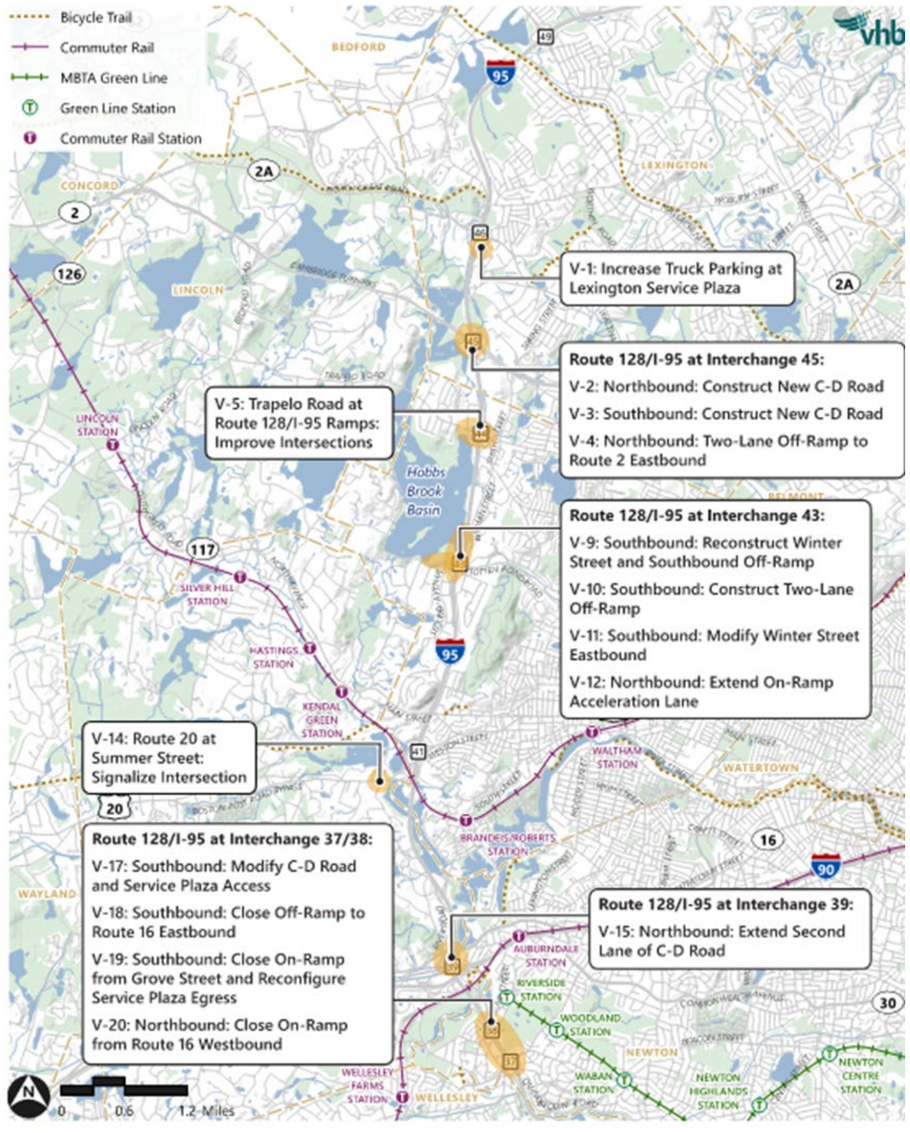


Address Congestion & Improve Safety (2 of 2)

While we can't build our way out of vehicular congestion, we acknowledge the need to support vehicular traffic within and through the study area. Physical infrastructure investments focus on addressing congestion, reliability, and safety issues.

- V-14: Route 20 at Summer Street: Signalize Intersection
- V-15: Route 128/I-95 Northbound Interchange 39: Extend Second Lane of C-D Road
- V-1: Increase Truck Parking at Lexington Service Plaza
- V-4: Route 128/I-95 Northbound Interchange 45: Two-Lane Off-Ramp to Route 2 Eastbound
- V-12: Route 128/I-95 Northbound Interchange 43: Extend On-Ramp Acceleration Lane
- V-9: Route 128/I-95 Southbound Interchange 43: Reconstruct Winter Street and Southbound Off-Ramp
- V-2: Route 128/I-95 Northbound between Interchanges 44 and 46: Construct New C-D Road
- V-11: Route 128/I-95 Southbound Interchange 43: Modify Winter Street Eastbound

Route 128/I-95
LAND USE & TRANSPORTATION STUDY



V-5: Trapelo Road at Route 128/I-95 Ramps: Improve Intersections

The existing intersections have operational issues and do not provide sufficient pedestrian and bicycle accommodations.

- Proposes to advance a two-lane roundabout at the intersection of Trapelo Road at the Route 128/I-95 northbound ramps.
- Eliminates a weaving segment on the Route 128/I-95 mainline and improves operations and queues for traffic on the off-ramp approaching Trapelo Road.
- Allows for dedicated pedestrian and bicycle accommodations and eliminates the existing conflict points.
- Reduces speeds for vehicles on Trapelo Road and vehicles exiting the interstate.
- Expected to produce a significant reduction in crash frequency.

Draft Recommendations: Advance

Alternative V-5: Trapelo Road at Route 128/I-95 Ramps: Improve Intersections

V-20: Route 128/I-95 NB Exit 37: Close On-Ramp from Route 16 WB

The Route 16 westbound on-ramp creates a weave on the Route 128/I-95 northbound mainline and has operational deficiencies.

- Close the on-ramp from Route 16 westbound to Route 128/I-95 northbound
  - Traffic from Route 16 westbound to Route 128/I-95 northbound will use the existing loop ramp from the bridge.
- Lengthen the short weaving segment on the mainline.
- Construct a three-way signalized intersection with left-turns from Washington Street westbound onto the existing on-ramp and with improved operations.
- Provide a potential for improved pedestrian accommodations with the installation of a new crosswalk at the new traffic signal.

Alternative V-20: Route 128/I-95 Northbound Interchange 37: Close On-Ramp from Route 16 Westbound

Draft Recommendations: Advance

V-3: Route 128/I-95 SB Exit 45: Construct New C-D Road

The weaving movement on Route 128/I-95 SB at Exit 45 (Route 2) presents an operational and safety issue with vehicles entering from Route 2 WB conflicting with vehicles exiting to Route 2 EB.

- New Collector-Distributor (C-D) Road on Route 128/I-95 southbound starting north of the Exit 45B off-ramp to Route 2 westbound and extending south of the on-ramp from Route 2 eastbound.
- All on- and off-ramps for the Route 2 interchange will occur on the C-D Road.
- Expected to improve vehicular operations and safety by separating the interchange merge, diverge, and weave movements from the mainline through traffic.

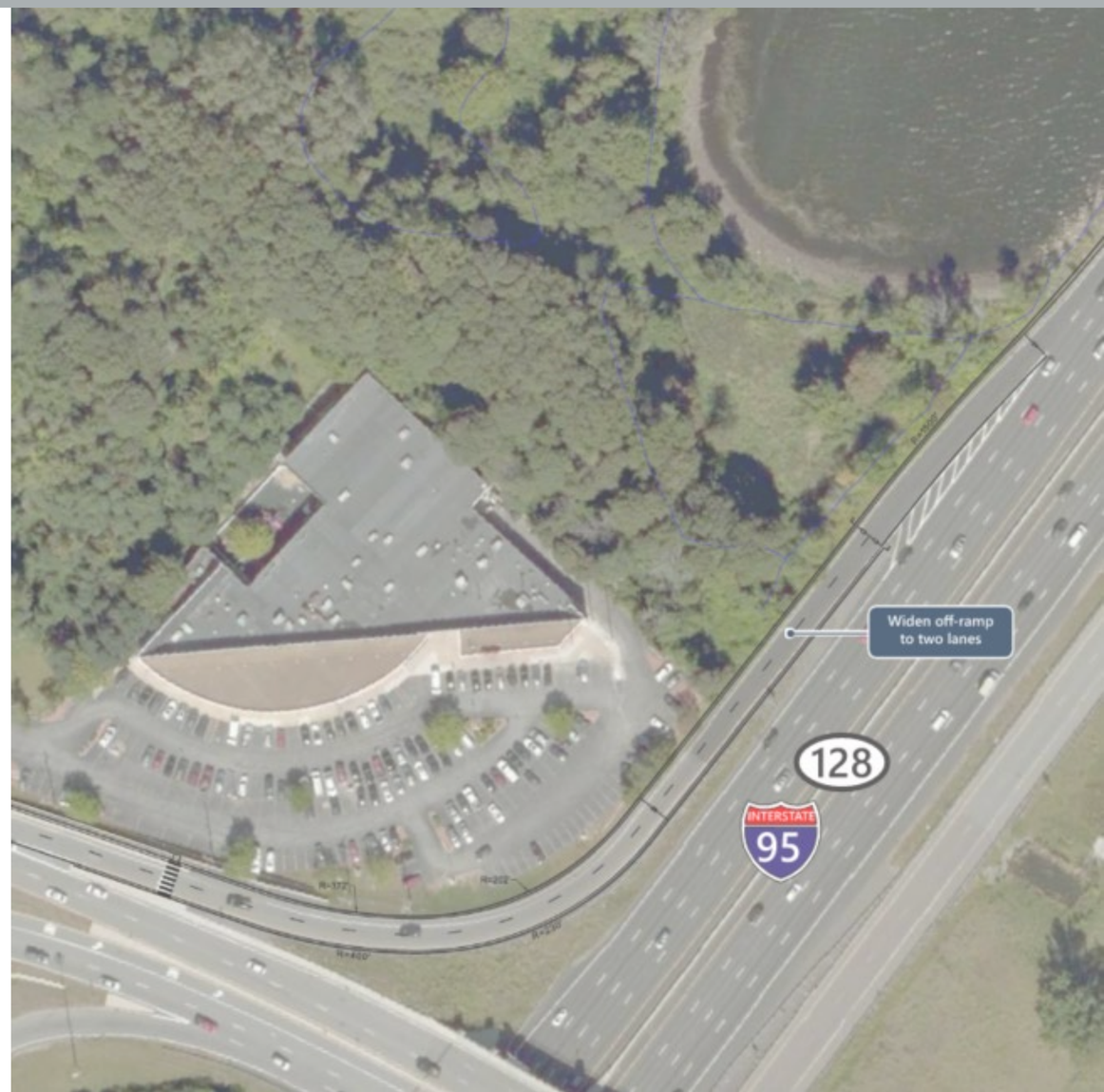
Draft Recommendations: Advance

V-10: Route 128/I-95 SB Exit 43: Construct Two-Lane Off-Ramp

The single lane off-ramp from Route 128/I-95 southbound to Winter Street at Interchange 43 is expected to experience poor operations in the future with long queues.

- Expand the off-ramp from Route 128/I-95 southbound to Winter Street at Interchange 43 from one lane to two lanes approaching the signalized ramp termini at Winter Street.
- Maintain one lane departing the mainline and open up to two lanes approaching Winter Street.
- Expected to improve vehicle operations and travel times while having minimal impacts on the other study area goals.

Draft Recommendations: Advance



Route 128/I-95
LAND USE & TRANSPORTATION STUDY

V-15: Route 128/I-95 NB Exit 39: Extend Second Lane of C-D Road

An upcoming MassDOT project will remove the existing on-ramp from Route 30 EB to the Route 128/I-95 NB C-D Road. With the on-ramp removed, there is an opportunity to extend the second lane on the C-D Road.

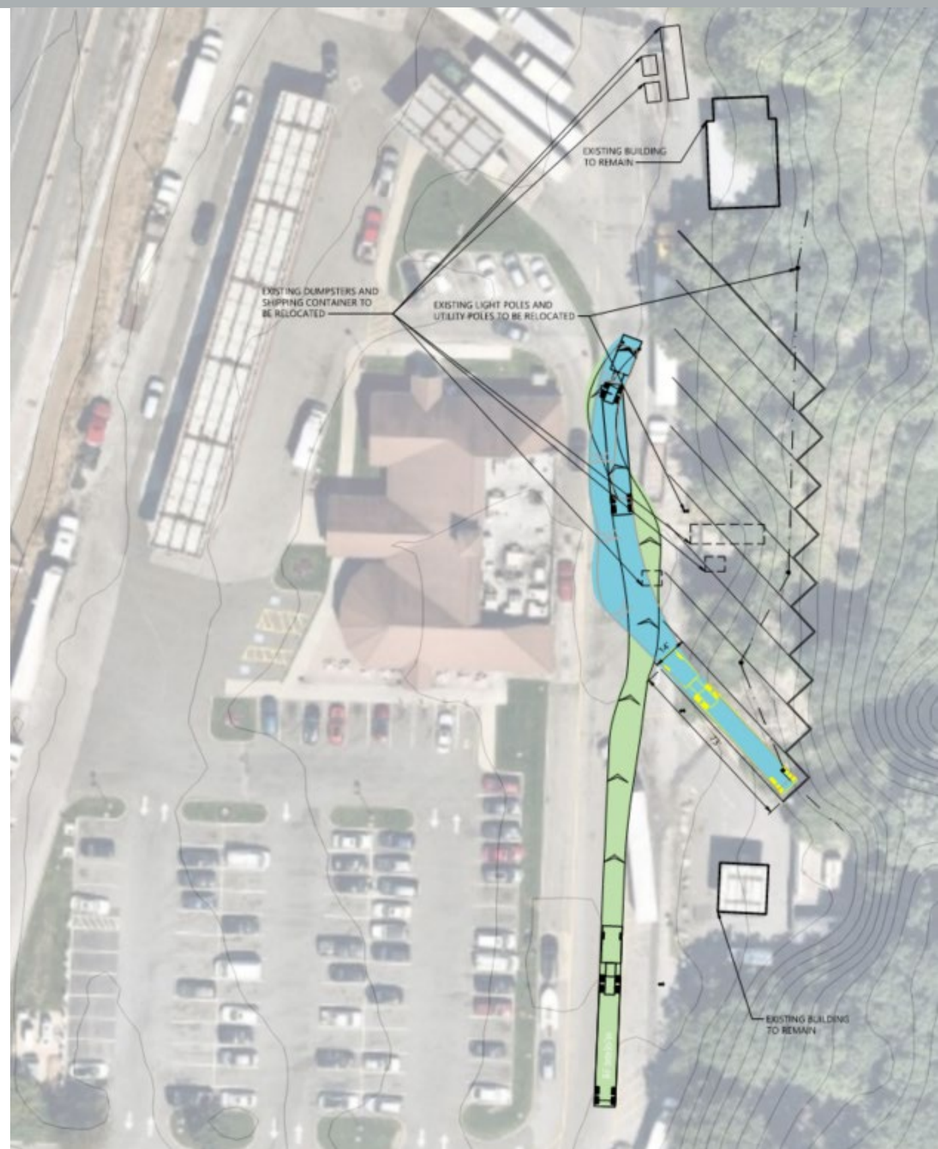
- Leverage the closure of the on-ramp from Route 30 eastbound to improve traffic flow on the Route 128/I-95 NB C-D Road.
- Extend the two-lane section on Route 128/I-95 NB C-D Road from I-90/ Grove Street/ Route 30 by approximately 1,000 feet.
- Can be advanced as a short-term, low-cost option that will slightly improve operations with a relatively minor investment.

Draft Recommendations: Advance

V-1: Increase Truck Parking at Lexington Service Plaza

There is currently insufficient truck parking at the Lexington Service Plaza. Tractor trailers are frequently observed to park in non-designated parking spaces, such as on the shoulders of the service plaza access roadways.

- Construct approximately nine additional truck parking spaces in the wooded area on the east side of the service plaza.
- A preliminary review indicates the truck parking spaces can be constructed with minimal grading issues and no major objects needed to be relocated.
- Would improve safety and circulation through the service plaza by not having tractor trailers park on the shoulder of the access roadways.



Draft Recommendations: Advance

V-12: Route 128/I-95 NB Exit 43: Extend On-Ramp Acceleration Lane

The existing acceleration lane for the Route 128/I-95 on-ramp from Winter Street / Wyman Street is currently substandard in length and radius. Mainline vehicles have been observed to avoid the rightmost lane as to not conflict with on-ramp traffic.

- Extend the acceleration lane for the on-ramp from Winter Street / Wyman Street to meet current design standards
- Additional length in the acceleration lane will provide increased distance for drivers to merge into the mainline.
- Can be advanced as a short-term, low-cost option that will slightly improve operations with a relatively minor investment.

Draft Recommendations: Advance

V-2: Route 128/I-95 NB Exits 44-46: Construct New C-D Road

The weaving movement on Route 128/I-95 NB at Exit 44 (Trapelo Road) and Exit 45 (Route 2) presents an operational and safety issue with vehicles entering from Trapelo Road / Route 2 EB conflicting with vehicles exiting to Trapelo Road / Route 2 WB.

- New C-D Road on Route 128/I-95 NB extending between Exit 44 (Trapelo Road) and Exit 45 (Route 2) or between Exit 45 (Route 2) and Exit 46 (Route 2A).
- All on- and off-ramps for the Trapelo Road / Route 2 interchanges would occur on the C-D Road.
- Expected to improve vehicular operations and safety
- High volumes entering and exiting at the Route 2 interchange result in poor operations on the C-D Road with demand greater than capacity

Draft Recommendations: Advance auxiliary lane between Exits 44 and 45 only (based on coordination with MassDOT)

V-17, V-18, & V-19: Route 128/I-95 SB Exit 37/38 Alternatives

The ramps to/from the Newton Service Plaza on Route 128/I-95 SB are inadequate and do not meet current MassDOT standards. In addition, there are over six ramps in a 2/3-mile segment, creating driver confusion and presenting several conflict points.

V-17: Route 128/I-95 SB Exit 37/38: Modify C-D Road and Service Plaza Access

- Close the existing ramps to/from the Newton Service Plaza and reconfigure circulation of the service plaza to provide full access from the west from Quinobequin Road.

V-18: Route 128/I-95 SB Exit 37/38: Close Off-Ramp to Route 16 EB

- Close the Interchange 37A off-ramp to Route 16 eastbound and divert traffic to the Interchange 37B off-ramp.

V-19: Route 128/I-95 SB Exit 37B/38: Close On-Ramp from Grove Street and Reconfigure Service Plaza Egress

- Eliminate on-ramp from the Newton Service Plaza and reconfigure service plaza egress to merge onto the on-ramp from Route 16 WB.

Draft Recommendations: Advance for further study

Route 128/I-95
LAND USE & TRANSPORTATION STUDY

MassDOT
Office of Transportation Planning

V-9 & V-11: Route 128/I-95 SB Exit 43 Alternatives

The Route 128/I-95 SB Exit 43 and Winter Street area is congested, operates poorly, and does not provide sufficient pedestrian and bicycle accommodations.

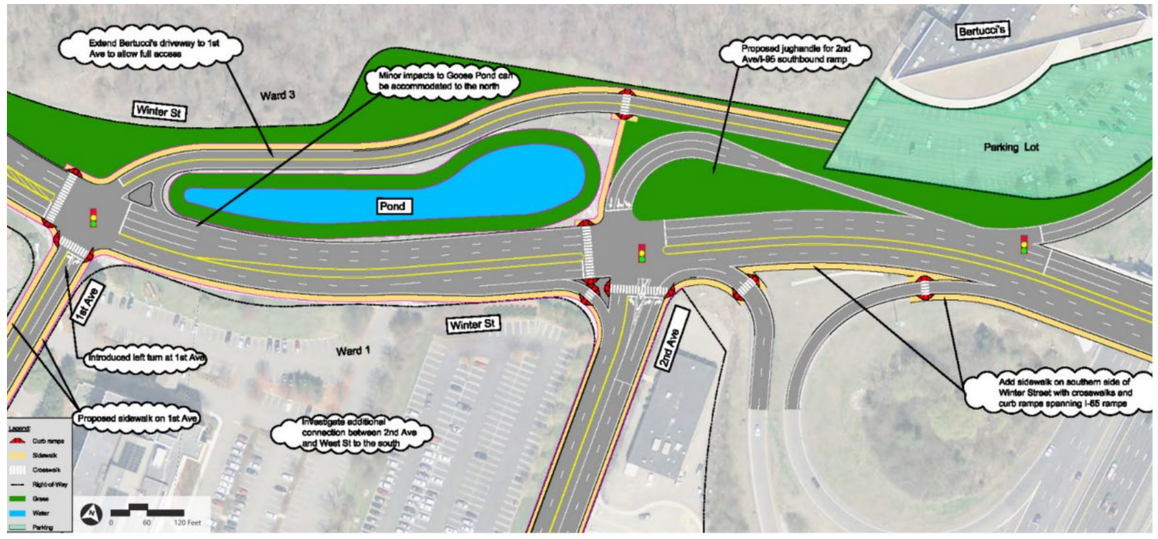
V-9: Route 128/I-95 SB Exit 43: Reconstruct Winter Street and SB Off-Ramp

- Reconstruct Winter Street to remove the "goose pond" and add a jug handle from Route 128/I 95 southbound and Winter Street westbound for access to 2nd Avenue.

V-11: Route 128/I-95 SB Exit 43: Modify Winter Street EB

- Simplify the intersections of Winter Street EB and WB with 2nd Avenue and create a new signalized intersection east of 2nd Avenue for U-turns from Winter Street EB to WB.
- The level of investment needed to implement either alternative would not result in a significant improvement in intersection operations and congestion.

Draft Recommendations: Discard both alternatives



Concept from City of Waltham Transportation Master Plan (2016).

Additional Alternatives

While we can't build our way out of vehicular congestion, we acknowledge the need to support vehicular traffic within and through the study area. Physical infrastructure investments focus on addressing congestion, reliability, and safety issues.

- **V-14: Route 20 at Summer Street: Signalize Intersection**
  - Install traffic signal to improve operations for vehicles on the Summer Street approach.
  - Based on review of traffic volumes, the intersection does not meet traffic signal warrants.
  - Draft Recommendation: Discard

- **V-4: Route 128/I-95 NB Exit 45: Two-Lane Off-Ramp to Route 2 EB**
  - Expand the Route 128/I-95 NB Exit 45A off-ramp to Route 2 EB from one lane to two lanes.
  - Modify the Route 2 EB mainline from three lanes to two lanes to accommodate two receiving lanes from Route 128/I-95 NB.
  - Likely to have constructability challenges due to grading issues southeast of the off-ramp.
  - Draft Recommendation: Discard