

Massachusetts Bay Transportation Authority

Better Bus Project Update

Fiscal and Management Control Board

February 4, 2019

Overview

This presentation will update the Board on the Better Bus Project work plan including a summary of the materials that were shared with the public on January 28th, including the 47 near-term proposals. The Project Team welcomes the Board's feedback on this update.

- Provide update on Better Bus Project process map
- Highlight analyses, reports, and proposals available to public
- Review of examples of near-term proposals
- Review key next steps, including decisions and implementation timelines

Better Bus Project Process Map: Update

Continuous Change	Analysis	Proposed Near-term Changes	Multi-year Investment Strategy	Future Network Redesign
Phase 1	Phase 2	Phase 3	Phase 4	Phase 5
<ul style="list-style-type: none"> ✓ Early morning pilot ✓ Late night pilot ✓ SL3 service expansion ✓ Dedicated bus lanes ✓ Transit signal prioritization ✓ Signal optimization ✓ Additional resources ✓ Dropped trip task force ✓ Quarterly goals 	<ul style="list-style-type: none"> ✓ 1st round public/stakeholder/operator outreach ✓ Review existing service ✓ Jan 28: Release State of the System Report ✓ Jan 28: Release Market Analysis 	<ul style="list-style-type: none"> ✓ Ongoing: Municipal and state official outreach ✓ Jan 28: Release near-term service proposals • Jan 28 to Mar 13: 2nd round public/stakeholder outreach • Apr: FMCB vote: Go/No-go • Early-May: Build new schedules and routes • Fall: Implementation 	<ul style="list-style-type: none"> ✓ Jan 28: Release route profiles • Feb: Discuss multi-year investment strategies for FY20 • Mar: Finalize FY20 resource request • Apr: Selection of FY20 investment level by the FMCB 	<ul style="list-style-type: none"> ✓ Nov: RFP posted • Feb: Consultant award

Recommendations & Analysis Released on Jan. 28th

All proposals available online on at mbta.com/betterbus

Near-Term Proposals (47)

Cedarwood - Central Square, Cambridge

Route 70/70A

You asked for buses that come on time & more often

Our proposal

- Improve Route 70 frequency and reliability between Waltham and Central Square
- Shift midday/evening Route 70 service from Cedarwood to Market Place Dr. to meet rider needs
- Modify Route 70A to only operate between North Waltham and Waltham Center, with easier-to-understand routing and new Sunday service



5,013

passengers who'll get more consistent frequencies between Waltham Ctr. and University Park

3

minute shorter wait time for 71 (1%) Route 70 riders at Market Place Drive

216

increase in passenger trips on Route 70/70A each weekday

Cedarwood - Central Square, Cambridge

Route 70/70A

Why we believe in these changes

- More consistent frequency for 5,013 (77%) riders between Waltham Ctr. and University Park
- About a 3-minute shorter wait time for 71 (1%) Route 70 riders at Market Place Dr.
- 216 net increase in passenger trips each weekday
- New Sunday service every 90 minutes on Route 70A to North Waltham with 77 new passenger trips

Tell us what you think about this proposal at mbta.com/00PFeedback

Feedback will close on March 13, 2019.

Trade-offs

- About a 2-minute longer wait time for 476 (10%) Route 70 riders on Main St. between Cedarwood/Market Place Drive and Waltham Ctr.
- About a 2-minute longer wait time for 342 (20%) Route 70A riders in North Waltham
- About a 15-minute transfer time for 509 (29%) Route 70A riders at Waltham Ctr. to Route 70

Route Profiles (180)

Figure 3 | Weekday Inbound Ridership by Stop Area



Figure 4 | Weekday Ridership by Trip Inbound

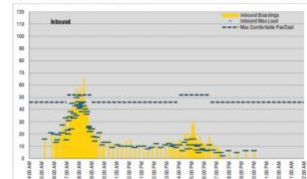


Figure 5 | Weekday Ridership by Trip Outbound

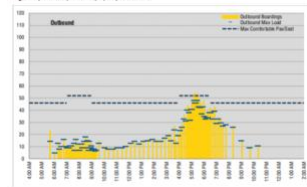
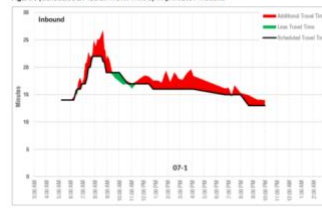


Figure 6 | Scheduled & Median Travel Time by Trip Route 7 Inbound

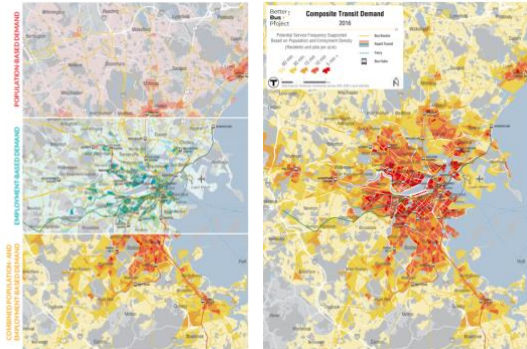


Market Analysis (1)

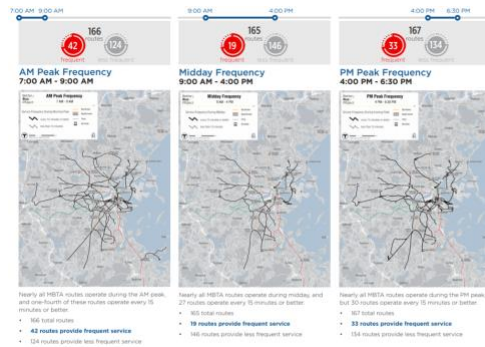
Overview of Transit Demand

Underlying transit demand is strongly related to six factors:

- Population and Population Density:** Since transit relies on having more people in close proximity to service, higher population density makes it feasible to provide higher levels of service.
- Socioeconomic Characteristics:** People may be more or less likely to use transit based on socioeconomic characteristics. For example, households with many cars are much less likely to use transit than those with one or none.
- Employment and Employment Density:** The location and density of jobs is a strong indicator of transit demand, as traveling to and from work often accounts for the most frequent type of transit trip.
- Development Patterns:** In all cities, there is a strong correlation between development patterns and transit ridership. In areas with denser development, mixed-use development, and a good pedestrian environment, transit can become very convenient.
- Major Activity Centers:** Large employers, universities, tourism destinations, and other high-activity areas attract large volumes of people and can generate a large number of transit trips.
- Transit Flow:** People use transit to get from one place to another. Major transit lines such as rapid transit services and Key Bus (High Frequency) routes are designed to serve corridors with high volume travel flows.



State of the Bus System (1)



Methods to Communicate Scale of Change

All proposals available online on at mbta.com/betterbus

All Routes Affected by Proposals

Summary of All Changes

Proposals to help buses come on time and more often on routes

1	4	5	8
9	16	18	36
37	44	47	52
59	64	70	70A
72	74	75	89
90	92	93	106
111	120	131	134
136	137	201	202
215	220	222	238
411	424	428	430
435	441	442	448
449	455	459	501
502	503	504	CT1
SL2			

Proposals to provide better connections on routes

19	26	27	34
34E	60	64	65
95	225	350	

MBTA bus service could be much better.

Too many of our bus routes still fail to live up to our own standards. Through the Better Bus Project, we are changing that. Every day we're finding new ways to improve the experiences of the people who use and ride our buses.

We started by listening to the needs and concerns of more than 3,000 riders we spoke with at bus stops, community meetings and online. The answer—more reliable bus service on more routes that run frequent service all day, not just during peak hours. So that is our mission.

System-wide Impact of Changes

- We have 47 proposals that affect 63 of our 360 routes
- Nearly 2,000 passenger hours saved each weekday, or 500,000 weekday hours a year
- We estimate these changes will result in 8,000 new bus riders every weekday, or over 2 million new riders a year
- 14,000 or 9% of weekday bus riders affected by these proposals will have a faster trip
- 32,500 or 20% of weekday bus riders affected by these proposals will have a shorter wait time
- 3,000 or 2% of weekday bus riders affected by these proposals will have to transfer who didn't before
- Only 0.2% of current riders would ride farther than 1 mile from transit services

We are making the existing system more efficient.

There's some long-overdue simplification to do. Consolidating duplicate routes, improving bus stop spacing, eliminating route variations that add fuel don't make sense anymore. We're preparing the system so that when we add more buses, more bus drivers and more bus services, we'll get much better service per dollar invested. To use a metaphor, we need to lay a better foundation before building a bigger house.

To do this step right we need your help.

We have 47 proposals to update and modernize existing routes. These are good and long-overdue changes. Taken together, they're laying the foundation for a bus network with more frequent, reliable service that provides better connectivity in Greater Boston. What we need is your feedback on them. With your help, we'll bring these changes to our board in April 2019. If approved, you'll start to see these changes take effect as early as fall of 2019.

betterbus.mbta.com

Better Bus Project

Proposed Route Changes

- 1 & CT1 Provide more frequent and reliable Route 1 service by combining Route CT1 and Route 1 into a single route
- 4 Provide more reliable service on Route 4 by bypassing Northern Ave. by bypassing on Seaport Blvd.
- 5 & 16 Add midday and Saturday service to 5/16/16 on Route 16 (currently only weekday peak); Route 5 is discontinued and partially replaced by Route 16 and more frequent Route 16
- 8 Provide faster, more reliable service from Fenwick to Union Station by strengthening Route 8
- 9 Provide a faster and more reliable Route 9 by strengthening our Seaport Station routing to turn left on Conchester Ave. in the inbound direction
- 18 Provide faster, more reliable service between Andrew and Admont by stopping at Conchester Ave. and bypassing Public Center Station
- 19 Enhance midday service (currently peak only) in downtown and Longwood Medical Area (LMA), including an all-day connection between Cleveland, LMA and Green Line
- 26 & 27 Improve neighborhood connectivity between Ashmont, Codman Sq. and Mattapan by changing routing of Routes 26 and 27
- 34 & 34E Combine Route 34E and Route 34 into a single route that provides new service to Legacy Place on Route 34, and reduces the number of route variations
- 36 Provide a more consistent travel pattern on Route 36 by reducing the number of route variations and providing more frequent service to Southview Center Hospital
- 37 Provide faster, more reliable service on Route 37 by reducing the number of route variations
- 44 Provide a more consistent travel pattern on Route 44 by shifting outboard evening and weekend service from Dudley St. to Malcolm St. Blvd.
- 47 Provide more direct service to decrease travel times and improve frequency and reliability
- 52 Provide faster and more reliable service that reduces more trips to Downtown Mall
- 58 Double the bus frequency on the busy Heathrow St. section of Route 58
- 60 Improve consistency and reliability by providing new service to Chestnut Hill Square (off-peak) and distribution by adding stop and changing route
- 64 Proposal #1: Extend midday service (currently peak only) to Kendall Sq., creating an all-day connection between Union Sq. and Kendall Sq., and shift some service from Broadway to Main St.
- Proposal #2: Provide faster service by shifting route from Heald St. to Route 58
- 65 Provide new connection from Brigham Center and Brookline to Orange Line while maintaining service to Longwood Medical Area
- 70 & 70A Improve Route 70 frequency and reliability between Waltham and Central Sq. while modifying Route 70A to only operate between North Waltham and Waltham Center, with service to underground routing and new Sunday service
- 72, 74 & 75 Run straighter, faster and more frequent Route 74 and Route 75, and operate Route 72 as a peak-only service with Route 75 serving North Ave. all weekday/evening
- 88 Double the bus frequency between Broadway/Winter Hill to the Red Line by removing Route 88 service from Chestnut Hill, but maintaining community connectivity on Routes 47 and 88
- 90 Provide more frequent and faster service between Davis and Assembly Sq., ending route at Assembly Square Mall
- 92 Provide more frequent and reliable Route 92 service between Hynes and Sullivan Sq. by removing Route 92 service to Assembly Sq. (transfer to available via Orange Line)
- 93 Provide faster service between Hynes and Sullivan Sq. by removing service around the Navy Yard
- 96 Provide new service connecting Arlington Center, Shedd St. and Sullivan Sq. by removing service to West Shedd along Playstead Rd.
- 100 Provide more frequent Route 100 service on Salem and Main St. and simplify route
- 10 Provide faster and more reliable service on Route 10 by removing service at Park Ave. with connection remaining via Route 10
- 100 Provide faster and more reliable service on Route 100 by removing loop around Central Sq. in East Boston, maintaining a bus stop to access Liberty Place from Union St.
- 118, 126 & 137 Provide faster and more reliable service, connecting Reading, Wakefield, and Oak Grove Branches Route 118/137 service between Oak Grove and Malden
- 134 Provide faster and more direct service to Washington by shifting Central St. Courthouse service to Riverside Ave.
- 201 & 202 Provide faster and more reliable weekend service to Ashmont and Shepley neighborhoods by eliminating weekend service to Quincy (Route 201 continues to provide Saturday service)
- 218 Simplify Route 218 service by removing a single early morning route variation and carrying riders to Ashmont instead of North Quincy
- 220 Provide faster and more reliable service between Quincy Center and Brigham Depot
- 222 Provide faster and more reliable midday service by shifting Route 222 service from Essex St. to North and Middle St.
- 229 Provide new connections between Braintree and Columbia Sq. via Lincoln St. by shortening Route 229 and increasing frequency, and creating new Route 229 to provide connection between Columbia Sq. and Braintree
- 238 Make Route 238 faster and more reliable between Quincy Adams and Holliston/Henriette by removing service between Quincy Center and Quincy Adams
- 300 Provide new connection to Northside Park
- 401 Provide faster and more reliable service between Malden and Kennedy Dc. during peak, resulting in only midday service to each latter House
- 404 Provide faster, more reliable service from Boston to Lynn by terminating PM routing of Wonderland instead of Pagnanet (AAS already ends at Wonderland)
- 406 Provide faster and more reliable service between Lynn Falls Parkway and Pagnanet via Seaside Center by ending route at Lynn Falls Parkway at Pagnanet
- 430 Provide faster, more reliable service between Malden and Seaport Center via Square One by removing service to Chestnut St. and Seaport Center
- 435 Provide more frequent Route 435 service along Boston and Euclid Ave. by shifting service from Pine Hill
- 441, 442, 443 & 440 Provide faster, more reliable service between Boston and the North Shore with all service starting/ending at Wonderland, and lower the express fare rate to a local fare
- 450 & 450 Provide faster, more reliable service between Boston and the North Shore with all service starting/ending at Wonderland (remove Route 450 and instead on Route 450), and lower the express fare rate to a local fare
- 501, 502, 503 & 504 Provide faster, more reliable service on Routes 501, 502, 503, and 504 between Wakefield/Brighton and Boston by changing routing at Boston Common
- 512 Provide faster and more reliable service by removing a Silver Line 2 station serving a bus stop at 88 Black Falcon

Recap: Principles for Change

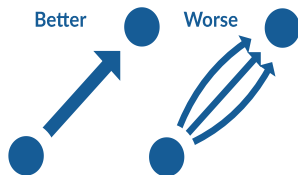
All proposals available online on at mbta.com/betterbus

Keep Proposals Cost Neutral

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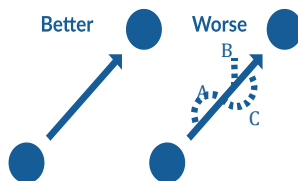
Consider route changes that improve bus service, without requiring additional resources to implement the proposal.

Combine Similar Services



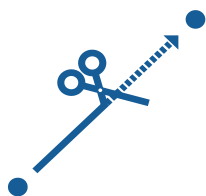
Combine routes that serve the same areas in slightly different ways to create a more reliable and frequent service that's easier for our customers to use.

Minimize Route Variations



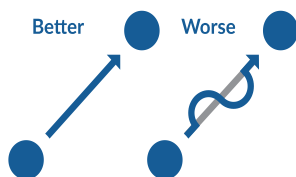
Reduce route variations that create customer confusion, serve few people, and do not impact vulnerable populations who do not have other alternatives. This creates faster and more reliable service for customers that's easier to understand.

Shorten Unproductive Sections



Many routes are very long with sections that have little to no ridership, or have other service options. By shortening routes, we provide customers on the remaining service with increased frequency and reliability.

Straighten Routes

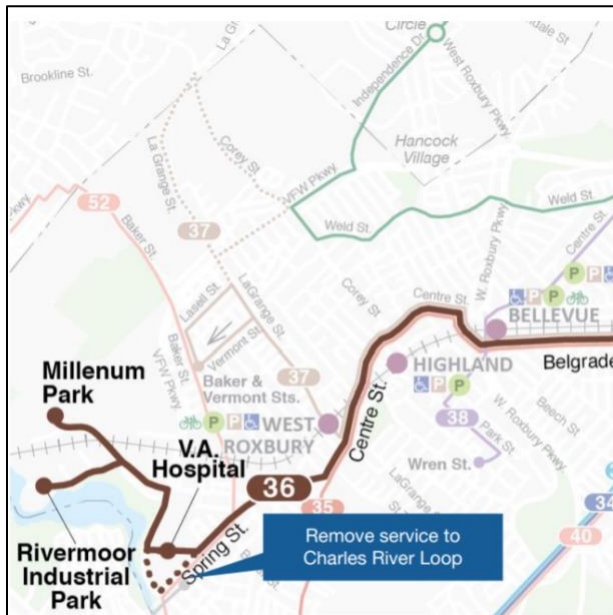


The less a bus needs to turn or deviate from a straight path, the faster it will travel. This makes bus routes easier to understand while also provide faster and more reliable service for our customers.

Additional Examples of Near-Term Changes

All proposals available online on at mbta.com/betterbus

More Consistent Travel Pattern: Route 36



- Provide a more consistent travel pattern by reducing the number of route variations
- More frequent service to VA Medical Center/Hospital

Faster & More Reliable: Routes 448 & 449



Faster, more reliable service between Boston and the North Shore with all service starting/ending at Wonderland

Better Connections: Routes 26 & 27



Improve neighborhood connectivity between Ashmont, Codman Square and Mattapan

BBP Public Engagement Completed to Date

- State House Briefing
- Transportation Advocates Briefing
- Municipal Staff-to-staff Briefings (ongoing)
- Municipal Leadership Briefings (ongoing)
- Street Team at Andrew Station (1 of 6)
- Open House at Boston City Hall (1 of 7)

Complete meeting schedule available online on at mbta.com/betterbus



Total Impact for Proposed Near-term Changes

- **47 proposals** that affect 63 of our 180 routes across ~35 communities
- **2,000 passenger hours saved each weekday**, or 509,000 weekday hours a year
- **8,000 new bus rides every weekday**, or over 2 million new rides a year
- **At least 30,000-45,000 of weekday bus riders positively affected** by these proposals
 - 14,000 of weekday bus riders will have a faster trip
 - 32,500 of weekday bus riders will have a shorter wait time
- **A small subset of riders will be inconvenienced** by these proposals
 - 786 of weekday bus riders will be further than ½ mile from bus or other MBTA transit service
 - 3,000 of weekday bus riders will have to transfer who didn't before

All proposals available online at [mbta.com/betterbus](https://www.mbta.com/betterbus)

Key Next Steps

Date	
✓ December 10	<i>FMCB Presentation – Part 1 Work Plan Review, Overview of State of System and Market Analysis</i>
✓ January 28 to March 13	<ul style="list-style-type: none"> • Kick off Round 2 of public engagement • Release Market Analysis • Release State of the Bus System Report • Release Near-term Change Proposals • Release Route Profiles
March	Action: <i>FMCB Propose FY20 Budget</i>

All proposals available online on at mbta.com/betterbus

Appendix: Near-Term Proposal for Route 36

VA Hospital – Forest Hills Station

Route 36

You asked for buses that come **on time & more often**

Our proposal

- Provide a more consistent travel pattern on Route 36 by reducing the number of route variations
- More frequent service to VA Medical Center/Hospital



10
minute shorter wait time for 503 (17%) riders at Millennium Park and VA Medical Center/Hospital

8
passenger hours saved each weekday

38
new passenger trips each weekday

Why we believe in these changes

- Creates a single main route variation to Millennium Park with late-night service to Rivermoor Industrial Park
- About a 10-minute shorter wait time for 503 (17%) riders at Millennium Park and VA Medical Center/Hospital
- 8 passenger hours saved and 38 new passenger trips each weekday

Trade-offs

- About a 2-minute longer wait time for 2,359 (79%) riders between Forest Hills and Charles River Loop
- About a 1-minute walk for 226 (8%) riders from Charles River Loop to the nearest stop on Spring St.

Tell us what you think about this proposal at mbta.com/BBPfeedback

Feedback will close on March 13, 2019.

All proposals available online on at betterbus.mbta.com/proposals

Appendix: Near-Term Proposal for Routes 448 & 449

Route 441, 442, 448, & 449

You asked for buses that come **on time & more often**

Our proposal

- Faster, more reliable service between Boston and the North Shore with all service starting/ending at Wonderland
- Routes 448/449 combined with Routes 441/442
- New peak Route 441 route variation to/from Ocean St.
- Existing Routes 441/442 route variations serving Vinnin Square loop
- Existing local route variations and new express route variations (between Lynn Central Sq. and Wonderland) on Routes 441 and 442 serving Paradise Rd. and Humphrey St., respectively



4
minute shorter wait time for 1,214 peak (32%) riders between Wonderland and Ocean St.

30
minute faster trip for 82 (26%) Route 448/449 riders traveling through Wonderland

138
passenger hours saved each weekday

Why we believe in these changes

- About a 4-minute shorter wait time for 1,214 peak (32%) riders between Wonderland and Ocean St.
- About a 30-minute faster trip for 82 (26%) Route 448/449 riders traveling through Wonderland
- Local bus + subway fare is less expensive than express bus fare for 82 (26%) Route 448/449 riders
- 529 new passenger trips and 138 passenger hours saved each weekday

Trade-offs

- About a 1-minute longer wait time for 67 peak (2%) riders along Paradise Rd., Humphrey St., and Ocean St.
- About a 4-minute longer wait time for 122 peak (3%) riders between Salem St. and Marblehead

Tell us what you think about this proposal at [mbta.com/BBFeedback](https://www.mbta.com/BBFeedback)

Feedback will close on March 13, 2019.

All proposals available online on at betterbus.mbta.com/proposals

Appendix: Near-Term Proposal for Routes 26 & 27

Route 26 & 27

You asked for **better connections**

Our proposal

- Improve neighborhood connectivity between Ashmont, Codman Square and Mattapan
- Extend Route 26 to Mattapan; Route 21 continues to serve Gallivan Boulevard
- Modify Route 27 to redirect service from Dorchester Ave. to Washington St.



New

service along Norfolk St. on Route 26 and along Washington St. on Route 27

5

minute faster trip between Codman Sq. and Mattapan on Route 26

15

minute faster trip between Codman Sq. and Lower Mills and along River St. on Route 27

Why we believe in these changes

- New service on Route 26 along Norfolk St. between Talbot Ave. and Blue Hill Ave. every 25 minutes (peak)/ 45 minutes (off-peak)
- About a 5-minute faster trip between Codman Sq. and Mattapan on Route 26
- About a 15-minute faster trip between Codman Sq. and Lower Mills and along River St. on Route 27

Trade-offs

- About an 8-minute longer wait time for 1,337 (84%) Route 26 riders from Ashmont to Talbot Ave. and Norfolk St
- About a 4-minute longer wait time for 124 (8%) Route 26 riders along Washington St
- About a 6-minute longer wait time for 811 (100%) Route 27 riders along River St

Tell us what you think about this proposal at mbta.com/BBPfeedback

Feedback will close on March 13, 2019.

There are additional impacts (benefits or trade-offs) not captured in this summary. You'll find them at www.mbta.com/busanalysis.

All proposals available online on at betterbus.mbta.com/proposals