Forging Ahead: Scenario and Service Planning

Fiscal and Management Control Board
October 5, 2020
Anna Gartsman, Kat Benesh, & Angel Donahue-Rodriguez
Agenda

• Essential services analysis and reminder of trade-offs by mode

• Review of statutory obligations

• Public engagement plan
Defining Our Essential Services

Based on two analyses:

- Where are the trips made by transit critical populations
- Where we have high ridership now or are likely to in the next year or two

<table>
<thead>
<tr>
<th></th>
<th>Serving high transit critical population</th>
<th>Serving low transit critical population</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Higher ridership</strong></td>
<td>Preserve service / access at SDP standards</td>
<td>Consider trade-offs depending on budget availability</td>
</tr>
<tr>
<td>(current or propensity)</td>
<td><em>(though individual trips may still be affected)</em></td>
<td></td>
</tr>
<tr>
<td><strong>Lower ridership</strong></td>
<td>Consider trade-offs depending on budget availability</td>
<td>Most likely to reduce service levels</td>
</tr>
<tr>
<td>(current or propensity)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

This process is designed to create an equitable network that preserves access and quality of service available to transit critical populations (low-income, people of color, seniors, people with disabilities, and no to low vehicle households).
MBTA Essential Services Methodology

• The “quadrants” are created by two axes: ridership potential and transit criticality
  • The unit of measure at this point is a route (e.g. bus route, commuter rail line)
  • Ridership data is from weekdays September 2020 compared to September 2019
  • Ridership data is normalized by service hours to compare modes to each other
• Ridership potential based on pre-COVID ridership and COVID ridership retention per service hour (to adjust for routes that lost some service during the pandemic)
• Transit criticality is a travel demand measure (travel not necessarily on MBTA) that captures where low income people, people of color, and people in zero- and low-vehicle households traveled in July-August 2020
  • Transit criticality is an index accounts for the multiplicative effect of multiple group membership
  • Transit usage by seniors and people with disabilities will be used for route level trade-off decisions
• The data used in this analysis will be updated as we develop future scenarios and more data becomes available
  • What services are defined as essential can change over time
## Overview of Essential Service analysis

<table>
<thead>
<tr>
<th>Mode</th>
<th>Highly Transit Critical</th>
<th>Less Transit Critical</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Ridership Potential FY22</td>
<td>Blue Line, Orange Line, Red Line, Green Line (trunk), Mattapan line, most bus routes, Fairmount CR line, Charlestown ferry*</td>
<td>Some bus routes</td>
</tr>
<tr>
<td>Low Ridership Potential FY22</td>
<td>Some bus routes, some Commuter Rail lines</td>
<td>Hingham/Hull ferry, some bus routes, some Commuter Rail lines</td>
</tr>
</tbody>
</table>

*Incomplete data

- Most of the variation is in commuter rail and bus; trade-off decisions will be based on characteristics of routes/lines/corridors
- Analysis included evaluation for transit propensity based on pre-COVID rider demographics; the routes that retained a high proportion of ridership were overwhelmingly those with above system-average of low-income riders, riders of color, or riders from zero- or low-vehicle households
Heavy and Light Rail

- All lines fall into essential services, but service levels within Service Delivery Policy standards will vary based on demand on each line.
- Green Line branches data are incomplete, service levels will vary based on demand by branch.

<table>
<thead>
<tr>
<th>Heavy and Light Rail</th>
<th>Highly Transit Critical</th>
<th>Less Transit Critical</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Ridership</td>
<td>Orange, Blue, Red, Green Line (trunk), Mattapan</td>
<td>--</td>
</tr>
<tr>
<td>Potential FY22</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low Ridership</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Potential FY22</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Possible Levers:
- Reduce headways to Service Delivery Policy
- End service at 12 AM

<table>
<thead>
<tr>
<th>Service Delivery Policy</th>
<th>Rapid Transit</th>
</tr>
</thead>
<tbody>
<tr>
<td>AM &amp; PM Peak</td>
<td>Every 10 minutes</td>
</tr>
<tr>
<td>All other weekday periods</td>
<td>Every 15 minutes</td>
</tr>
<tr>
<td>Saturday</td>
<td>Every 15 minutes</td>
</tr>
<tr>
<td>Sunday</td>
<td>Every 15 minutes</td>
</tr>
<tr>
<td>Weekday</td>
<td>6:00 AM - midnight</td>
</tr>
<tr>
<td>Saturday</td>
<td>6:00 AM - midnight</td>
</tr>
<tr>
<td>Sunday</td>
<td>7:00 AM - midnight</td>
</tr>
</tbody>
</table>

Heavy rail and GL trunk: ~120,000 gate entries on weekdays, 24% pre-COVID (weekdays September 2020 vs September 2019)
### Ferry

<table>
<thead>
<tr>
<th></th>
<th>Highly Transit Critical</th>
<th>Less Transit Critical</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>High Ridership</strong></td>
<td>Charlestown* (30% of 2019 Ferry service hours)</td>
<td>--</td>
</tr>
<tr>
<td><strong>Potential FY22</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Low Ridership</strong></td>
<td>--</td>
<td>Hingham/Hull (70% of 2019 Ferry service hours)</td>
</tr>
<tr>
<td><strong>Potential FY22</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Incomplete data for the Charlestown ferry, analysis will continue

**Possible Levers:**

- Eliminate routes
- Reduce frequency

Ferry: ~775 trips on weekdays, 11% of Pre-COVID (weekdays September 2020 vs September 2019)
Commuter Rail

• Next step is additional analysis at the corridor and station level

<table>
<thead>
<tr>
<th>Commuter Rail</th>
<th>Highly Transit Critical</th>
<th>Less Transit Critical</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Ridership Potential FY22</td>
<td>Fairmount Line (4% of 2019 CR service hours)</td>
<td>(0%)</td>
</tr>
<tr>
<td>Low Ridership Potential FY22</td>
<td>Newburyport/Rockport, Middleborough/Lakeville, Providence/Stoughton (34% of 2019 CR service hours)</td>
<td>All others (62% of 2019 CR service hours)</td>
</tr>
</tbody>
</table>

Possible levers:

• Eliminate weekend service on some or all lines
• End weekday service after 9 PM
• Reduce or eliminate midday frequency
• Reduce peak frequency
• Station closures

Commuter Rail: ~14,500 trips on weekdays, 12% pre-COVID (weekdays September 2020 vs manual counts Spring 2018)
Commuter Rail: Transit-Critical Stops

- Some lines have their transit-critical service at the end of the line
- Others have transit-critical service mid-route
- *Dataset only includes travel in MA, so Providence station is not evaluated but expected to be highly transit critical

<table>
<thead>
<tr>
<th>Commuter Rail Line</th>
<th>Pre-COVID Riders per Service Hour Retained</th>
<th>Essential Services Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fairmount Line</td>
<td>21%</td>
<td><strong>High</strong> Ridership Potential/ <strong>Highly</strong> Transit Criticality</td>
</tr>
<tr>
<td>Middleborough/ Lakeville Line</td>
<td>18%</td>
<td>Low Ridership Potential/ <strong>Highly</strong> Transit Critical</td>
</tr>
<tr>
<td>Newburyport/ Rockport Line</td>
<td>15%</td>
<td>Low Ridership Potential/ <strong>Less</strong> Transit Critical</td>
</tr>
<tr>
<td>Providence/ Stoughton Line</td>
<td>14%</td>
<td></td>
</tr>
<tr>
<td>Fitchburg Line</td>
<td>8%</td>
<td></td>
</tr>
<tr>
<td>Framingham/ Worcester Line</td>
<td>11%</td>
<td></td>
</tr>
<tr>
<td>Franklin Line</td>
<td>15%</td>
<td></td>
</tr>
<tr>
<td>Greenbush Line</td>
<td>8%</td>
<td></td>
</tr>
<tr>
<td>Haverhill Line</td>
<td>8%</td>
<td></td>
</tr>
<tr>
<td>Kingston/ Plymouth Line</td>
<td>15%</td>
<td></td>
</tr>
<tr>
<td>Lowell Line</td>
<td>16%</td>
<td></td>
</tr>
<tr>
<td>Needham Line</td>
<td>12%</td>
<td></td>
</tr>
</tbody>
</table>
### Bus

<table>
<thead>
<tr>
<th>Bus</th>
<th>Highly Transit Critical</th>
<th>Less Transit Critical</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Ridership Potential FY22</td>
<td>Majority of routes (65% of 2019 Bus service hours)</td>
<td>e.g. 350, 225, 77, 73 (20% of 2019 Bus service hours)</td>
</tr>
<tr>
<td>Low Ridership Potential FY22</td>
<td>e.g. 4, 7, 18, 43, 55 (8% of 2019 Bus service hours)</td>
<td>e.g. 553, 554, 351, 52 (8% of 2019 Bus service hours)</td>
</tr>
</tbody>
</table>

- **Possible Levers:**
  - Reduce frequency & span to Service Delivery Policy for essential routes (top left box)
  - Reduce frequency & span below Service Delivery Policy for non-essential routes
  - Route eliminations & consolidations for non-essential routes

- Bus at the route level has the most variation
- Route level changes in all quadrants will consider usage data by people with disabilities and senior cardholders
- Bus routes suspended during COVID or with significant changes during COVID will be evaluated outside of this framework

**Bus:** 171,000 trips on weekdays, 41% pre-COVID (weekdays September 2020 vs September 2019)
Essential Bus Routes have high ridership potential and serve highly transit-critical geographies.

Additional analysis required to make trade-off decisions among bus routes within each quadrant.
Service Packages for November 2nd

Service Packages

- **Commuter Rail** span, weekend service, and line-specific changes
- **Ferry** lines operating
- **Heavy Rail** headways & span
- **Light Rail** headways & span
- **Major Bus** changes
- **Any RIDE** implications

Service Packages for 11/2
(vote in December)

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Service Target (based on budget projections)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scenario A</td>
<td>$60M</td>
</tr>
<tr>
<td>Scenario B</td>
<td>$150M</td>
</tr>
<tr>
<td>Scenario C</td>
<td>$255M</td>
</tr>
</tbody>
</table>

Will include detail as possible about any fare or accessibility implications for riders.
Service Implementation Timeline

• Bus, light rail, and heavy rail changes can be made quarterly, first changes to take effect ~July 1, 2021
  • Major implementation activities include: Route planning, municipal outreach, scheduling, labor impacts, re-picking work & training, signage incl. stop closures (for bus), customer information

• Ferry and commuter rail changes subject to contract negotiations, could be implemented as soon as Spring 2021
  • Major implementation activities include: Scheduling, labor & legal impacts, re-picking work, customer information

• Once implemented, it could take months to years to re-add service depending on mode, scale of reductions, actions taken, and financial certainty.
  • Changes will be permanent and we will build back a network that better serves the region.
Major Service Change Requirements

Statutory and regulatory requirements for a service reduction of more than 10% of revenue vehicle hours

- Title VI service equity analysis for all concurrently proposed changes in the aggregate (implementation dates can vary)
- One or more public hearings
- Review by MBTA Advisory Board
- Decrease shall be the subject of an environmental notification form initiating review pursuant to MEPA

*Title VI and MEPA analysis will be done after Board decides on preferred package and will come back to the Board for final approval in February*
Forging Ahead External Engagement

• We will be launching a public engagement process for the weeks following today’s presentation to engage and seek input from riders and community members on service scenarios.

• The engagement process for Forging Ahead will be:
  • **Transparent** – we will share all information needed to provide input
  • **Proactive** – we will reach out to impacted communities
  • **Iterative** – we will return to communities when we have more information
  • **Accessible** – we will ensure language access and access to persons with disabilities

• Engagement Strategy:
  • Virtual public meetings
  • Proactive, non-virtual engagement with communities
  • Online feedback tools at [www.mbta.com/forgingahead](http://www.mbta.com/forgingahead)

All engagement will be in accordance with the MBTA Public Engagement Plan.
Forging Ahead Engagement Audiences

Multipronged coordinated strategy for external and internal audiences

• Internal
  • MBTA workforce and unions

• External
  • Riders
  • Advocates
  • Business community
  • Elected officials
  • Municipal partners
Two Phases of Engagement

Phase 1 Essential Services: October 5 - October 30
• Focus on explaining our process to prioritize essential services
• Reaching out to advocates, business community, elected officials to provide briefings and get feedback
• Feedback report back to the FMCB on November 2nd

Phase 2 Service Packages: November 2 - December 4
• Virtual public meetings, including an official public hearing
• Outreach directly to community organizations and the public
• Online feedback tools
• Feedback report back to the FMCB on December 7th
MBTA Community Liaisons

• Liaisons will supplement virtual public engagement with tactical physical distanced community outreach:
  • street teams,
  • Working directly with partner organization to reach their members
  • attending community events
• The group will also ensure language access by reaching out to riders directly in various languages.
• The goal of the Community Liaison program is to invest resources in community engagement to ensure we are hearing from our riders who are least likely to engage virtually.
• Feedback received through the Community Liaison program will be shared directly with MBTA leadership and decision-makers.
• Learn more about our new Community Liaisons at www.mbta.com/forgingahead.
Forging Ahead Online Feedback + Public Outreach

**Online Feedback**
- Online tools will also be made available for riders to give the MBTA direct feedback on Forging Ahead service scenarios.
- Feedback from these online tools will be provided directly to MBTA leadership and decision-makers

**Public Outreach**
- We will use various tools at our disposal to notify riders of these opportunities to provide feedback:
  - Digital station screens
  - On-vehicle and in-station print media
  - Newspaper ads
  - Website and social media
  - Community partners (community groups, transportation advocates, accessibility organizations, municipal partners)
Timeline for Service, Budget, and Capital Decisions

October 19
(Joint Board)

- **Budget**: Revenue re-projections and FY22 update
- **Scenarios**: FY 22 scenarios

November 2
(FMCB)

- **Budget**: Return to the board to detail September results (monthly recurrence) - FY21/FY22 target progress
- **Service Planning**: Detailed service packages
- **Capital Planning**: Present recommended reprioritization to accommodate shift of 5307 funds to operating and other reductions

November 16
(Joint)

- **Additional updates as needed**

December 7

- **Service Planning**: Board decision on service level packages

May 15, 2021

- **Budget**: Preliminary itemized budget May 15, 2021 and final itemized budget on June 15, 2021

July 1, 2021

- **Budget**: FY22 begins and three-pronged approach implemented
Appendix
## Appendix: Service Delivery Policy - Frequency & Span

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Commuter Rail</th>
<th>Ferry</th>
<th>Rapid Transit</th>
<th>Bus – Key Bus Routes</th>
<th>Bus – Local Routes*</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>AM &amp; PM Peak</strong></td>
<td>3-4 trips in peak direction</td>
<td>3 trips in peak direction</td>
<td>Every 10 minutes</td>
<td>Every 10 minutes</td>
<td>Every 30 minutes</td>
</tr>
<tr>
<td><strong>All other weekday periods</strong></td>
<td>Every 3 hours in each direction</td>
<td>Every 3 hours</td>
<td>Every 15 minutes</td>
<td>Every 15-20 minutes</td>
<td>Every 60 minutes</td>
</tr>
<tr>
<td><strong>Saturday</strong></td>
<td>Every 3 hours in each direction</td>
<td>-</td>
<td>Every 15 minutes</td>
<td>Every 20 minutes</td>
<td>Every 60 minutes</td>
</tr>
<tr>
<td><strong>Sunday</strong></td>
<td>-</td>
<td>-</td>
<td>Every 15 minutes</td>
<td>Every 20 minutes</td>
<td>Every 60 minutes</td>
</tr>
</tbody>
</table>

### Span of Service

<table>
<thead>
<tr>
<th>Weekday</th>
<th>7:00 AM – 10:00 PM</th>
<th>7:00 AM – 6:30 PM</th>
<th>6:00 AM – midnight</th>
<th>6:00 AM – midnight</th>
<th>7:00 AM – 7:00 PM</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Saturday</strong></td>
<td>8:00 AM – 6:30 PM</td>
<td>8:00 AM – 6:30 PM (seasonal)</td>
<td>6:00 AM – midnight</td>
<td>6:00 AM – midnight</td>
<td>8:00 AM – 6:30 PM*</td>
</tr>
<tr>
<td><strong>Sunday</strong></td>
<td>-</td>
<td>-</td>
<td>7:00 AM – midnight</td>
<td>7:00 AM – midnight</td>
<td>10:00 AM – 6:30 PM*</td>
</tr>
</tbody>
</table>

*Commuter or Community Route Standard not shown; Minimum span only standard for high-density areas. There is no span standard for low-density areas on weekend.