Quarterly Ridership Update

Third Quarter FY19

May 20, 2019
Overview

• Background on ridership data
  • Data sources differ by mode: automated fare collection (AFC), automated passenger counters (APC), manual counts
  • Correction factors differ by mode and data source
• Aligning all ridership reporting
  • MBTAbackontrack dashboard
  • National Transit Database
  • Quarterly reports to FMCB
• Quarterly ridership data update
  • Ridership increases on bus and subway
• Ridership reporting going forward
  • Improvements to data sources and factors
Ridership Estimation Review

How data becomes ridership depends on the source and mode

- **Data Source**
  - **Measure Design**
    - Corrections & Imputations
  - **AFC (HR/LR)**
    - Non-interaction, behind the gate
      - Transfers, station splits
  - **Manual (CR)**
    - Sampling; data quality
  - **APC (bus)**
    - Unlinked trips only
      - Corrections for sampling; calibration to manual counts

- **Unlinked trips only**
  - Linked trips, unlinked trips, unique riders

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Ridership Estimation Example: Red Line

Average Weekday Ridership Calculation, Red Line (March 2019)

- Raw Taps: 220
- Passengers to Other Lines at Transfer Stations: -27
- Taps and "Split" Estimate: 194
- Plus non-interaction estimate: 13
- Split + Non-Interaction: 206
- Ungated Xfers from Other lines: 36
- Unlinked Trips: 242

In Thousands of Riders
Ridership on www.mbtabackontrack.com

- Reconciling all ridership data sources and scaling factors
- Ridership on the www.mbtabackontrack.com dashboard will be updated with consistent and stable annual scaling factors for missing data, non-interaction, station splits, and behind the gate transfers.
- Dashboard ridership numbers will be reported monthly and available back to January 2016. The updates will be on a one-month lag (June data will be available August 1).
- Underlying data is consistent with data reported to National Transit Database, and summarized as average weekday unlinked trips.
Quarterly Update: Q1 CY2019 vs Q1 CY2018

Average Weekday Ridership - Q1 CY2018 and Q1 CY2019

In Thousands of Riders

<table>
<thead>
<tr>
<th>Line</th>
<th>Q1 2018</th>
<th>Q1 2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blue Line</td>
<td>66</td>
<td>69</td>
</tr>
<tr>
<td>Bus</td>
<td>329</td>
<td>342</td>
</tr>
<tr>
<td>Green Line</td>
<td>157</td>
<td>151</td>
</tr>
<tr>
<td>Orange Line</td>
<td>196</td>
<td>201</td>
</tr>
<tr>
<td>Red Line</td>
<td>231</td>
<td>240</td>
</tr>
<tr>
<td>Silver Line</td>
<td>31</td>
<td>36</td>
</tr>
</tbody>
</table>
Year-Over-Year Comparison

Average Weekday Ridership, By Month, Year-over-Year

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Ridership Estimates in the Future

**Long-term:** Shift all modes to APC in order to more directly measure ridership
- Green Line – new cars will be equipped with APCs; preliminary data collection in progress
- Orange/Red Line – new cars will be equipped with APCs
- Commuter Rail – APCs being installed

When the switch from AFC to APC happens, there will be a methodological break in ridership estimation.

**Short-term:** Improvements to source data and factors
- Improve underlying AFC data for the AFC-based estimates
- Improve corrective factor methodology
  - Use updated factors for FY2019 National Transit Database submission