Regional Transit Needs Assessment

February 24, 2016

Baltimore Metropolitan Council
Study Process

• Scope developed with board member staff
• Report written by BMC staff as a report to the Board of Directors
• Public participation through a qualitative study
• Comment sought collectively from all members, and from individuals on county specific issues
• Relies on state/local data and previous studies
Study Scope

Overview
- Existing Service
- Transit Users
- Demographics
- Peer Systems

Analysis
- Wayfinding
- Access
- Performance
- Welfare/Safety

Recommendations
- Local Priorities
- By Mode
- Address 5 Needs
Multi-modal Analysis & Inventory

- Local Bus
- Commuter Bus
- Light Rail
- Metro
- MARC
- LOTS
- Circulator
- York Shuttle
- Private/College Service
- Water Taxi/Harbor Connector
- Paratransit
Current Core Service Network
Core Service/Job Density

**Employment Density by TAZ, 2015**

**Legend**
- 2015 Employment Density
  - Jobs per Square Mile
  - 0 - 1,000
  - 1,001 - 2,500
  - 2,501 - 7,500
  - 7,501 - 15,000
  - > 15,000

---

Baltimore Metropolitan Council
Core Service/Pop. Density

POPULATION DENSITY BY TAZ, 2015

LEGEND

2015 Population Density
Persons per Square Mile
- 0 - 2,000
- 2,001 - 4,000
- 4,001 - 6,000
- 6,001 - 8,000
- 8,001 - 12,000
- > 12,000

Transit Routes (2014)
Job Density 1990
Job Density 2015
Job Density 2040
Top 10 MTA Bus Routes

<table>
<thead>
<tr>
<th>Route</th>
<th>2014 Boardings</th>
</tr>
</thead>
<tbody>
<tr>
<td>15</td>
<td>13,600</td>
</tr>
<tr>
<td>13</td>
<td>12,500</td>
</tr>
<tr>
<td>23</td>
<td>12,100</td>
</tr>
<tr>
<td>8</td>
<td>11,000</td>
</tr>
<tr>
<td>10</td>
<td>10,900</td>
</tr>
<tr>
<td>5</td>
<td>9,900</td>
</tr>
<tr>
<td>Q8 40</td>
<td>9,900</td>
</tr>
<tr>
<td>3</td>
<td>9,900</td>
</tr>
<tr>
<td>22</td>
<td>9,400</td>
</tr>
<tr>
<td>20</td>
<td>9,300</td>
</tr>
</tbody>
</table>

Legend

Top Bus Routes
- Route 15
- Route 13
- Route 23
- Route 6
- Route 10
- Route 5
- QuickBus 40
- Route 3
- Route 22
- Route 20
Regional Transportation Agency

Regional Transportation Agency Service Area

Prepared by Transportation Planning Division
Projected Coordinate System: NAD 1983 State Plane (ft)
Data Source: BMC, © NAVTEQ 2014, TIGER/Line® RTA
Printed – October 2015
Charm City Circulator
Transit Riders Analysis

• Study includes demographics, modes, income, routes, and motivations
  – 80,000 daily transit commuters
    • 6% of all commuters ride transit
    • 76% of commuters are in Single Occupant Vehicles
  – 43% are from households less than $50,000
  – 56% are female

• Transit riders come from vulnerable populations
Peer Systems

BMC ranked MTA service by mode against peer regional networks and found the following:

- **MTA Buses**
  11th of 16 operating expense per mile; 10th of 16 operating expense per hour

- **MARC**
  3rd of 5 service efficiency, one of the largest commuter rail systems in USA

- **METRO**
  3rd of 6 operating expense per hour, a small heavy rail system

- **LIGHT RAIL**
  3rd of 8 in operating expense

- **COMMUTER BUS**
  Major route realignments in 2014 increasing frequency and coverage
# Light Rail Sample Peer Comparison

<table>
<thead>
<tr>
<th>Agency</th>
<th>Urbanized Area (UZA) Name</th>
<th>UZA Population (Service Area Population)</th>
<th>Operating Expenses</th>
<th>Average Fleet Age in Years</th>
<th>2012 Vehicles Operated Maximum Service</th>
<th>2012 Unlinked Passenger Trips</th>
</tr>
</thead>
<tbody>
<tr>
<td>APTA Peers</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Central Puget Sound Regional Transit Authority (ST)</td>
<td>Seattle, WA</td>
<td>3,059,393 (2,781,740)</td>
<td>$51,370,132</td>
<td>4.3</td>
<td>26</td>
<td>16t</td>
</tr>
<tr>
<td>Maryland Transit Administration (MTA)</td>
<td>Baltimore, MD</td>
<td>2,203,663 (2,203,663)</td>
<td>$43,345,659</td>
<td>18.3</td>
<td>38</td>
<td>14</td>
</tr>
<tr>
<td>Metro Transit</td>
<td>Minneapolis-St. Paul, MN-WI</td>
<td>2,650,890 (1,805,940)</td>
<td>$27,886,232</td>
<td>7.7</td>
<td>27</td>
<td>15</td>
</tr>
<tr>
<td>Santa Clara Valley Transportation Authority (VTA)</td>
<td>San Jose, CA</td>
<td>1,664,496 (1,880,876)</td>
<td>$61,685,649</td>
<td>10.7</td>
<td>55</td>
<td>13</td>
</tr>
</tbody>
</table>
Analysis
System Needs

- Information
- Access
- Performance
- Safety/Security
- Economic Integration
Information

• Rider
  – Real time data is unavailable to riders
  – On-line trip planning lags behind peers
  – Signage/maps are confusing

• Transit/Planning Agencies
  – “On time” performance is not tracked well
  – Rider survey does not provide detail
  – Model based reporting is not fully utilized
Access

• Universal fare collection would greatly increase ease of access
• Fare collection can be made simpler and more efficient
• Station amenities vary greatly, and are often non-existent at bus stops
• Hubs are not fully utilized and modes are not integrated
Edmondson Avenue
Towson Town Center
Performance

• Almost all individual modes rate well with peers (*not bus*)
• Lack of connectivity holds system back
• Major ridership is along the Woodlawn to Bayview corridor
  – High concentration of zero car households
• Major bus routes struggle with on-time performance
Safety/Security

- MTA recently won national award for rail
- Reporting lacks useful detail
  - 60% of incidents categorized as “other”
  - Only 3% of incidents deemed preventable
- Data provided does not line up with public sentiment, which does not view system as safe
- Many bus stops lack lighting & shelter
Economic Integration

• Major job centers are well covered
• A Woodlawn to Bayview connection would create regional economic access
• Despite coverage, last mile challenges keep potential riders away
• We do not maximize land surrounding current/planned transit investment
Recommendations
All Modes

• Routinely Articulate Long Term Multi-modal Vision and Functional Plans for Each Transit Mode
  – *ie.* – *MARC Growth and Investment Plan*
• State of Good Repair – Asset Management approach
• Unified Transit Fare Collection (MTA, LOTS)
• Improve Accessibility at Stations/Stops
• Transit Oriented Development
• Incentivize transit – fares/employer subsidies
• Information – Real Time, Mapping, Call Centers
• Improved Coordination – MTA, LOTS, Locals
Core Bus

- Bus Lanes/Bus on Shoulder, Signal Prioritization need to be studied
- Reporting Performance Metrics
- LOTS & Circulator capital and operating funds
- Expedite BNIP improvements
- Real Time arrival info
- Bus stop improvements
MARC

• Station improvements at Odenton, West Baltimore, Aberdeen, and Penn stations
• New Bayview station
• Study a Madison Square or Upton MARC station
• Penn & Camden expansion for additional evening and weekend service
Metro
- Lexington Market station redesign
- Green line extension to Morgan State

Light Rail
- Signal coordination/prioritization study
- Howard Street Revitalization Plan

Commuter Bus
- Parole Intermodal facility w/ BRT or premium bus service to DC, Baltimore
- Regional Park-&-Ride improvements
- BRT, Commuter BRT study
Key New Initiatives

• Woodlawn to Lexington Market fixed transit line through West Baltimore MARC station with station area development
• Fixed transit line between Harbor East and new Bayview MARC station
• First and last mile options, including private shuttles in work centers like BWI/Ft. Meade
• Premium Commuter Bus expansion
Performance Measures

- Develop system to routinely archive and report on system performance
- Publish regular on-time performance summary reports for the biggest 10 bus routes
- Open transit data to create open source solutions
- Additional service to improve hours of service, span of coverage, headways, and relieve overcrowding
Recommendations by County

- **Anne Arundel** – Odenton TOD, Commuter Bus, Annapolis/Parole Intermodal

- **Baltimore City** – Southeast connection, Green Line Extension, Madison Square/Upton MARC station, Woodlawn to Lexington Market, West Baltimore/Bayview Stations, MARC service improvements, Lexington Market, Commuter Bus, BNIP, Circulator, Penn Station

- **Baltimore County** – Sparrows Point service

- **Harford** – MARC Aberdeen, Bus Queue Jump

- **Howard** – LOTS capital assistance, BRT, MARC
Michael Kelly
Executive Director
Baltimore Metropolitan Council

The Offices at McHenry Row
1500 Whetstone Way, Suite 300
Baltimore, MD 21230
Direct Line: 410-732-9561
www.baltometro.org