RapidRide Characteristics

RapidRide includes design elements based on the existing Metro RapidRide service, including:
- Curb-running service with right-door loading articulated vehicles
- Stop consolidation
- Transit signal priority and communications
- Enhanced stations with shelters, off-board fare collection, real time arrival information, lighting and level boarding
- Station area pedestrian enhancements

<table>
<thead>
<tr>
<th>Peak Hour Speed</th>
<th>North of Denny</th>
<th>South of Denny</th>
<th>Corridor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Existing</td>
<td>7.0 mph</td>
<td>2.5 mph</td>
<td>6.5 mph</td>
</tr>
<tr>
<td>RapidRide</td>
<td>8.9 mph</td>
<td>2.7 mph</td>
<td>7.7 mph</td>
</tr>
<tr>
<td>% Increase</td>
<td>26%</td>
<td>10%</td>
<td>17%</td>
</tr>
</tbody>
</table>

Cost Magnitude

$$$$$
Targeted Investment Characteristics

Targeted investment characteristics include the existing Metro RapidRide design elements as a starting point and incorporates Full BRT design elements at select locations along the corridor, including:

- Curb-running service with right-door loading articulated vehicles
- Potential for left-door loading vehicles
- Stop consolidation
- Transit signal priority and communications
- Enhanced stations with shelters, off-board fare collection, real time arrival information, lighting and level boarding
- Potential electric trolley bus extension
- Minor roadway geometric changes that may include use of queue jump, business access and transit lanes, or dedicated transit lanes
- Station area pedestrian enhancements
- Corridorwide pedestrian facility improvements
- Corridorwide bicycle facility improvements
- Limited/targeted parking and access modifications

Peak Hour Speed

<table>
<thead>
<tr>
<th>Location</th>
<th>Improvement</th>
<th>Justification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roosevelt &amp; 65th</td>
<td>Southbound queue jump lane</td>
<td>Existing southbound congestion present in both AM and PM peak hours. Queue jump would bypass intersection delay and allow BRT to access station south of intersection.</td>
</tr>
<tr>
<td>12th &amp; 65th</td>
<td>Northbound queue jump lane</td>
<td>Existing NB congestion present in PM peak hour. Queue jump would bypass intersection delay and allow BRT to access station north of intersection.</td>
</tr>
<tr>
<td>11th &amp; 50th</td>
<td>Northbound queue jump lane</td>
<td>Existing NB congestion present in PM peak hour. Queue jump would bypass intersection delay and allow BRT to access station north of intersection.</td>
</tr>
<tr>
<td>Roosevelt &amp; 45th</td>
<td>Southbound queue jump lane</td>
<td>Existing SB congestion present in AM peak hour. Queue jump would bypass intersection delay and allow BRT to access station south of intersection.</td>
</tr>
<tr>
<td>Eastlake &amp; Fuhrman</td>
<td>Northbound queue jump lane</td>
<td>Existing NB congestion present in PM peak hour. Queue jump would bypass traffic backups south of U bridge.</td>
</tr>
<tr>
<td>Eastlake from Harvard to Fuhrman</td>
<td>Northbound dedicated curb lane and queue jump at Fuhrman</td>
<td>Position bus for Eastlake/Fuhrman NB queue jump at Eastlake/Fuhrman and allow BRT to access station south of Fuhrman.</td>
</tr>
<tr>
<td>Fairview &amp; Valley</td>
<td>Southbound queue jump lane</td>
<td>Existing SB congestion present in both AM and PM peak hours. Queue jump would bypass SB traffic backups.</td>
</tr>
<tr>
<td>Fairview from Valley to Mercer</td>
<td>Southbound dedicated transit lane</td>
<td>Existing SB congestion present in both AM and PM peak hours along this segment. Queue jump would bypass SB traffic backups.</td>
</tr>
<tr>
<td>Fairview from Denny to Republican</td>
<td>Northbound and southbound dedicated transit lanes</td>
<td>Existing NB and SB congestion at Fairview/Mercer in both AM and PM along this segment. Dedicated lanes would bypass NB traffic backups associated with Fairview/Mercer and allow BRT to access stations at Fairview/Denny. Also provide higher bus speeds both directions through CBD portion of the corridor.</td>
</tr>
<tr>
<td>Valley from Fairview to Westlake (South Alternative)</td>
<td>Westbound dedicated transit lane (share streetcar lane)</td>
<td>Existing WB congestion present in both AM and PM peak hours along this segment. Dedicated transit lane would bypass WB traffic backups.</td>
</tr>
<tr>
<td>Westlake from Denny to Mercer (South Alternative)</td>
<td>Northbound and southbound dedicated transit lanes (contingent upon other projects currently under development)</td>
<td>Existing NB and SB congestion at Westlake/Mercer in both AM and PM along this segment. Dedicated lanes would bypass NB traffic backups associated with Westlake/Mercer. Also provide higher bus speeds both directions through CBD portion of the corridor.</td>
</tr>
</tbody>
</table>

Cost Magnitude

$\text{\$\$\$\$}$
**Full BRT Characteristics**

Full BRT incorporates premium design elements along the entire corridor that may include:

- Maximize median-running service with left-door loading articulated vehicles
- Stop consolidation
- Transit signal priority and communications
- Major roadway geometric changes that may include use of queue jump, business access and transit lanes, or dedicated transit lanes
- Enhanced stations with shelters, off-board fare collection, real time arrival information, lighting and level boarding
- Potential electric trolley bus extension
- Station area pedestrian enhancements
- Corridorwide pedestrian facility improvements
- Corridorwide bicycle facility improvements
- Redistribution of curb-to-curb or ROW width allocation by travel mode
- Significant parking and access modifications

**Peak Hour Speed**

<table>
<thead>
<tr>
<th></th>
<th>North of Denny</th>
<th>South of Denny</th>
<th>Corridor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Existing</td>
<td>7.0 mph</td>
<td>2.5 mph</td>
<td>6.5 mph</td>
</tr>
<tr>
<td>Full BRT</td>
<td>21.3 mph</td>
<td>21.1 mph</td>
<td>21.3 mph</td>
</tr>
<tr>
<td>% Increase</td>
<td>203%</td>
<td>905%</td>
<td>229%</td>
</tr>
</tbody>
</table>

**Cost Magnitude**

$$$$$
Existing Conditions and Areas for Improvement

The findings presented here show transit, traffic, bicycle and pedestrian, and jobs and population growth data that was revealed in the existing conditions analysis as challenges along the corridor.

Existing mode share of residents is presented below to show how residents living within a 1/2-mile of the corridor are getting to and from work.

**Existing Mode Share (workers 16+)**

<table>
<thead>
<tr>
<th>Mode</th>
<th>1/2-mile of Corridor</th>
<th>Percent of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drive Alone</td>
<td>23,473</td>
<td>39%</td>
</tr>
<tr>
<td>Carpool</td>
<td>3,946</td>
<td>7%</td>
</tr>
<tr>
<td>Public Transportation</td>
<td>14,100</td>
<td>23%</td>
</tr>
<tr>
<td>Bicycle</td>
<td>2,527</td>
<td>4%</td>
</tr>
<tr>
<td>Walked</td>
<td>11,917</td>
<td>20%</td>
</tr>
<tr>
<td>Taxi, motorcycle, work from home, other</td>
<td>4,212</td>
<td>7%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>60,174</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

Source: 2013 American Community Survey (5-year estimates)

**Transit**

**Transit Peak Hour Speed**
- 7.0 mph

**Reliability:**
- On-time performance of transit is below 70% for routes 66 and 70 during the morning or evening peaks

**Overcrowding:**
- Occurs on 32% of trips throughout the day and 63% of trips in the morning peak

**Average Weekday Ridership:**
- Total – 8,270 daily riders

**Bicycle and Pedestrian**

**Pedestrian Network**
- Missing sidewalk at six locations along corridor
- Poor or no sidewalk conditions along portions of Roosevelt, 11th Ave NE, and Eastlake.

**High Pedestrian Collisions:**
- Roosevelt Way NE and NE 45th Street
- Denney Way and Fairview Avenue
- 12th Avenue NE and NE 75th Street
- Roosevelt Way NE and NE 65th Street

**Bicycle Network:**
- Need for continuous network

**High Bicycle Collisions:**
- Eastlake Avenue E and Fuhrman Avenue E
- 11th Avenue NE and NE 45th Street
- Eastlake Avenue E between Harvard Avenue E and Fuhrman Avenue E
- Roosevelt Way NE and NE 66th Street
- Eastlake Avenue E and E Edgar Street

**Northgate:**
- All intersections operate at LOS D or better

**Roosevelt and University:**
- Roosevelt Ave & NE 65th St: LOS E (AM and PM)
- 12 Ave NE & NE 65th St: LOS E (PM)
- Roosevelt Ave & NE 45th St: LOS E (AM)

**Eastlake:**
- Fairview Ave and Fuhrman Ave: LOS E (PM)

**Downtown and South Lake Union:**
- Valley St and Westlake Ave: LOS E (AM and PM)
- Mercer St and Westlake Ave: LOS E (AM and PM)
- Valley St and Fairview Ave: LOS F (AM) and LOS E (PM)
- Mercer St and Fairview Ave: LOS F (AM) and LOS E (PM)

**Jobs and Population**

**Existing**

<table>
<thead>
<tr>
<th>City of Seattle</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population</td>
<td>83,920</td>
</tr>
<tr>
<td>Jobs</td>
<td>169,710</td>
</tr>
</tbody>
</table>

Source: 2013 American Community Survey (5-year estimates)

**Future Growth**

Three urban centers, Northgate, U District, and South Lake Union, are identified as areas of employment and residential growth, including up to 21,000 new households and 36,000 new jobs (growth projections for the year 2030-2035).
Focus Areas

The high capacity transit corridor has been segmented into four geographic focus areas:

- Northgate and Maple Leaf: Northgate Transit Center to NE 80th Street
- Roosevelt and University District: NE 80th Street to U Bridge
- Eastlake: U Bridge to Fairview Avenue Bridge
- Downtown and South Lake Union: Fairview Avenue Bridge to Westlake Station

There is a kiosk for each focus area with preliminary station locations, layouts, and additional detail on various right-of-way allocation options.
North Beach/Blue Ridge

This portion of the corridor connects the Northgate and Maple Leaf neighborhoods, extending from Northgate Transit Center to NE 80th Street.

Proposed Bicycle Facilities
- Roosevelt Way NE: Protected bike lane (Bicycle Master Plan)
- NE 100th Street: Protect bike lane (Bicycle Master Plan)
- NE 103rd Street: Neighborhood greenway (Bicycle Master Plan)

RapidRide

Targeted Investment

Note: There are no targeted transit investments in the Northgate and Maple Leaf area.

Full BRT

Note: There are no targeted dedicated transit lanes in the Northgate and Maple Leaf area.
Roosevelt and University: Station Concepts

Roosevelt Way & NE 45th St - Southbound Station
Roosevelt Way & NE 50th St - Southbound Station
Roosevelt Way & NE 55th St - Southbound Station
Roosevelt Way & NE 60th St - Southbound Station
Roosevelt Way & NE 65th St - Southbound Station
Roosevelt Way & NE 70th St - Southbound Station
Roosevelt Way & NE 75th St - Southbound Station

Northgate and Maple Leaf

Downtown and South Lake Union

Eastlake

Roosevelt Way & NE 45th St - Northern Terminus
Roosevelt Way & NE 50th St - Northern Terminus
Roosevelt Way & NE 55th St - Northern Terminus
Roosevelt Way & NE 60th St - Northern Terminus
Roosevelt Way & NE 65th St - Northern Terminus
Roosevelt Way & NE 70th St - Northern Terminus
Roosevelt Way & NE 75th St - Northern Terminus

Northgate Transit Center
(Downtown Terminus)

Northgate and Maple Leaf

Downtown and South Lake Union

Eastlake

Roosevelt Way & NE 41st St - Southern Terminus
Roosevelt Way & NE 45th St - Southern Terminus
Roosevelt Way & NE 50th St - Southern Terminus
Roosevelt Way & NE 55th St - Southern Terminus
Roosevelt Way & NE 60th St - Southern Terminus
Roosevelt Way & NE 65th St - Southern Terminus
Roosevelt Way & NE 70th St - Southern Terminus
Roosevelt Way & NE 75th St - Southern Terminus

Northgate Transit Center
(Southern Terminus)

Northgate and Maple Leaf

Downtown and South Lake Union

Eastlake
This portion of the corridor connects the Roosevelt and University District neighborhoods, extending from NE 80th Street to the U Bridge.

This portion of the corridor has high transit ridership and traffic issues, impacting transit speed and reliability. Roosevelt Way NE and 11th Avenue NE also have poor sidewalk conditions.

Proposed Bicycle Facilities
- Roosevelt Way NE: Protected bike lane (Bicycle Master Plan, construction 2016)
- 11th/12th Avenue NE: Protected bike lane (Bicycle Master Plan)
- NE 75th Street: Bike lane (Bicycle Master Plan, 2016)
Eastlake: Station Concepts

Eastlake Ave & Fuhrman Ave

Eastlake Ave & Lynn St

Eastlake Ave & Garfield St

Eastlake Ave E and E Lynn St Southbound Station

Eastlake Ave E and E Lynn St Northbound Station

Northgate and Maple Leaf

Roosevelt and University

Downtown and South Lake Union

Eastlake

Northgate and Maple Leaf

Roosevelt and University

Downtown and South Lake Union

Eastlake
**Eastlake**

This portion of the corridor connects the Eastlake neighborhood, extending from the U Bridge to the Fairview Bridge.

This portion of the corridor has high transit ridership and traffic issues, impacting transit speed and reliability.

**Proposed Bicycle Facilities**

- Eastlake Avenue N (E Galer Street and Fuhrman Avenue E): Bike lane, two-way protected bike lane, or protected bike lane (Roosevelt Project, Bicycle Master Plan)
- Fairview Avenue N (E Galer Street and Fuhrman Avenue E): Neighborhood greenway (Bicycle Master Plan)
- University Bridge: Protected bike lane (Bicycle Master Plan, construction 2016)
Downtown and South Lake Union

This portion of the corridor connects Downtown and the South Lake Union neighborhood, extending from the Fairview Bridge to the Westlake Station.

Proposed Bicycle Facilities
- Fairview Avenue N: Off-street bike pathway (Bicycle Master Plan)
- Fairview Avenue N: Bike Lane (Roosevelt Project)
- Virginia St and Terry Ave: Sharrow (Roosevelt Project)
- Stewart Street: Protected Bike Lane (Bicycle Master Plan, 2018)
- Valley Street: Protected Bike Lane (Bicycle Master Plan, 2017)
- 9th Avenue N: Protected bike lane (Bicycle Master Plan)
- 7th Avenue: Protected bike lane (Bicycle Master Plan)

Targeted Investments
- A. Fairview Avenue N at Alki (5'Curb to Curb, 7' ROW)
- B. Fairview Avenue N (5'Curb to Curb, 8' ROW)
- D. Stewart Street (48'Curb to Curb, 78' ROW)

Full BRT
- A. Fairview Avenue N at Alki (5'Curb to Curb, 7' ROW)
- B. Fairview Avenue N (5'Curb to Curb, 8' ROW)
- C. Virginia Street (5'Curb to Curb, 7' ROW)
- D. Stewart Street (48'Curb to Curb, 7' ROW)