Geary Corridor Bus Rapid Transit

Institute of Transportation Engineers Luncheon Meeting
October 17, 2013

SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY
SAN FRANCISCO MUNICIPAL TRANSPORTATION AGENCY
Geary Corridor Bus Rapid Transit Project

Current Phase of Work:

- Environmental Impact Analysis
- Preliminary Engineering
<table>
<thead>
<tr>
<th>Agency</th>
<th>Role in Project</th>
</tr>
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<tbody>
<tr>
<td>SFCTA</td>
<td>Environmental lead agency</td>
</tr>
<tr>
<td></td>
<td>After preliminary engineering, project will be transferred to SFMTA</td>
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<tr>
<td>SFMTA</td>
<td>Will prepare final engineering design, construct, and operate BRT</td>
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</tbody>
</table>
Background: Need for Geary Improvements

- 6.5 mile corridor
- More than 50,000 passengers / day
- During peaks, 38 & 38L routes each operate at 6-min headways (3-min combined)
- End to end, 38 Local - 60+ mins 38L Limited – 45+mins
BRT: Transforming Geary

Existing

Proposed
Core Transit Features

- Dedicated bus lanes
- Higher quality, longer, and wider bus stops
- Level boarding
- Adjusted stop spacing
- New low-floor buses
- Signal priority for buses
- Left turn adjustments
- Improved pedestrian access
BRT Benefits

- Reduced travel time
- Increased user reliability
- Improved passenger experience
- Improved system cost effectiveness
- Improved pedestrian access and safety
Alternative Configurations

Side-Running

Center-Running
Project Development Status: Nodes and Segments
Underpasses: Existing Constraints

Fillmore

Masonic
Fillmore Side-Lane Option
Selecting a Locally Preferred Alternative: Segments – Mix-and-Match

- **Right- vs. Left-Side Loading (Alt 4)**

- **Service: Local/BRT vs. Consolidated**
Transition Design
<table>
<thead>
<tr>
<th>Milestone</th>
<th>Timeframe</th>
</tr>
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<tbody>
<tr>
<td>Initiate LPA discussion</td>
<td>Fall 2013</td>
</tr>
<tr>
<td>Draft EIS/R</td>
<td>Summer 2013</td>
</tr>
<tr>
<td>Final EIS/R</td>
<td>End of 2014</td>
</tr>
<tr>
<td>Design engineering</td>
<td>2014-2016</td>
</tr>
<tr>
<td>Construction</td>
<td>2016-2018</td>
</tr>
<tr>
<td>BRT Service</td>
<td>2018</td>
</tr>
</tbody>
</table>
5-door 60’ Articulated Bus in the U.S.

- New Flyer and NABI produced prototypes for the North America market - only New Flyer sold buses
- Less than 50 in the U.S. / 0 in Canada

NABI

New Flyer
Alt 3: Center-Side Option
Alt 4: Center-Center Option
Vehicle Performance

• 5-door bus loading – 2 doors on left, 3 doors on right
  - Time (stopped at station) is 20%-30% of total run time
  - 2 doors vs. 3 doors is estimated at 25%-50% slower loading
  - Use of 2 doors likely = 2-6 minutes of added run time

• A 5-door bus will have 4-6 less seats than a 3 door bus

47-49 seats – 3 door
43 seats – 5 door
Durability Concerns – Buses must last 12 yrs.

No transit agency with ridership and operations issues similar to Geary Blvd. has used 5-door buses for 12 years

- Eugene, OR (6.5 years) – 5,000 passengers per day – flat terrain
- Cleveland, OH (5.0 years) – 15,000 passengers per day – flat terrain
- Geary (SF, CA) (N/A) – 50,000+ passengers per day – flat + grades
Durability Concerns – Buses must last 12 yrs.

Revenue/Service hrs. – 12 yr. bus lifespan

- SFMTA
- SamTrans
- GGT

Passenger Trips – 12 yr. bus lifespan

- SFMTA
- SamTrans
- GGT

Comparative Hourly Bus Boarding Rate

Revenue/Service hrs. 12 years of SFMTA = 19 years of GGT
16 years of SamTrans

Passenger trips
12 years of SFMTA = 75 years of GGT
50 years of SamTrans
SFMTA Flexible Fleet Operations

- Facilities are too old, too cramped, and not equipped to manage sub-fleets
- Maintenance of a Geary BRT sub-fleet doesn’t fit into general strategy

<table>
<thead>
<tr>
<th>Division</th>
<th>Year Open &amp; Renovations</th>
<th>Vehicle Type &amp; Size</th>
<th>Number Present</th>
<th>Capacity</th>
<th>Real Estate Vision Plan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Presidio</td>
<td>1912 1950</td>
<td>40' Trolleybus</td>
<td>165</td>
<td>73</td>
<td>Replacement</td>
</tr>
<tr>
<td>Potrero</td>
<td>1914 1949</td>
<td>40' Trolleybus 60' Trolleybus</td>
<td>45 73</td>
<td>45 73</td>
<td>Replacement</td>
</tr>
<tr>
<td>Kirkland</td>
<td>1950</td>
<td>40' Motor bus</td>
<td>135</td>
<td>127</td>
<td>Replacement</td>
</tr>
<tr>
<td>Woods</td>
<td>1974 1991</td>
<td>30' Motor bus 40' Motor bus</td>
<td>224 (30' + 40' + 40' reserve)</td>
<td>30 160</td>
<td>Major Renovation</td>
</tr>
<tr>
<td>Green - Beach</td>
<td>1978</td>
<td>75' Breda LRV Hist. Streetcar</td>
<td>&lt;100*</td>
<td>110</td>
<td>Renovation</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>55</td>
<td></td>
</tr>
<tr>
<td>Cable Car</td>
<td>1890s 1984</td>
<td>Hyde St. car California St. car</td>
<td>28 12</td>
<td>28 12</td>
<td>OK</td>
</tr>
<tr>
<td>Flynn</td>
<td>1989</td>
<td>60' Motor bus</td>
<td>130</td>
<td>102</td>
<td>Minor Renovation</td>
</tr>
<tr>
<td>Metro East</td>
<td>2007</td>
<td>75' Breda LRV Hist. Streetcar</td>
<td>50* 25*</td>
<td>125</td>
<td>OK - fully furnish w/ equipment</td>
</tr>
<tr>
<td>Islais Creek</td>
<td>2013 2016</td>
<td>40' Motor bus 60' Motor bus</td>
<td>50-70* 0</td>
<td>70 or 160</td>
<td>Modification to accept 60' underway</td>
</tr>
</tbody>
</table>

* = Numbers are approximate.

Red boxes = overcrowding and/or need for renovation or replacement
Lavender box = still under construction
Cost of Vehicles

A 5-door bus from New Flyer (bus supplier) will cost approximately $250,000 more than a similar 3-door bus offered by New Flyer.
For More Information:
www.gearybbrt.org