North Shore Alternatives Analysis

May 2012
Agenda

- Study Process and Progress to Date
- Short List Alternatives Screening
  - Traffic Analysis
  - Conceptual Engineering
  - Ridership Forecasts
  - Refinement of Service Plans
  - Supplemental Environmental Data Collection
  - Cost Refinements
- Recommendation and Conclusion
Study Area
Study Process

Define Project Purpose, Need, Goals and Objectives → Fatal Flaw Screening → Long List Screening → Short List Screening → Select LPA and Complete Alternatives Analysis

We are here

Project Goals:
1) Improve Mobility
2) Preserve and Enhance the Environment, Natural Resources, and Open Space
3) Maximize Limited Financial Resources for the Greatest Public Benefit

Environmental Impact Study → Preliminary Engineering → Final Design Construction Operation
Previous Activities

- Defined Project Purpose, Need, Goals and Objectives
- Long List Screening eliminated:
  - Ferry alternative
  - Alternatives terminating at Arlington
  - Heavy rail and diesel light rail
- Short List retained for further study:
  - Transportation Systems Management (TSM)
  - Electric Light Rail to West Shore Plaza (LRT)
  - Bus Rapid Transit to West Shore Plaza (BRT)
Transportation System Management (TSM)

- Existing bus operations with two new routes.
- Would include some route extensions to proposed Transit Center at Arlington.
- Does not make use of the former NS Rail right-of-way.
- Federal process requires consideration of a low-cost alternative.
Transportation System Management (TSM) Alignment Map
Electric Light Rail Alternative (LRT)
Alignment & Stations

- Light Rail service on two new tracks
- Build a dedicated transitway generally using the North Shore right-of-way between St. George and Arlington
- Travels from Arlington to West Shore Plaza in mixed traffic on South Avenue
- Trains would meet St. George Ferry service, and depart shortly after ferry arrival
- 15 total proposed stations
Electric Light Rail Alternative (LRT)
Associated LRT Service Changes

- Reduced number of buses on Richmond Terrace: S40/S90 route would be discontinued upon LRT opening. The S48/S98 would be extended west and north (to cover the area north of the ROW).
- S46/S96 is truncated at Elm Park/Morningstar
- Reduced number of stops on transitway between St. George Terminal and Arlington
Electric Light Rail Alternative (LRT) Alignment & Stations
Bus Rapid Transit (BRT) Alternative Alignment & Stations

- Build a dedicated busway generally using the North Shore right-of-way between St. George and Arlington.
- Travels from Arlington to West Shore Plaza in mixed traffic on South Avenue.
- Buses would meet St. George Ferry service, and depart shortly after ferry arrival.
- 15 proposed stations
Bus Rapid Transit (BRT) Alternative
Associated Bus Service Changes

- Reduced number of buses on Richmond Terrace: S40/S90 route would be discontinued upon BRT opening. S48/S98 would be extended to cover this service west of Arlington.
- S46/S96 is truncated at Elm Park/Morningstar
- Reduced number of stops on transitway between Arlington and St. George Terminal
Bus Rapid Transit (BRT) Alternative Alignment & Stations
Ridership Forecasts: AM Peak Ridership

- Ridership forecasts were produced for Short List Alternatives
- MTA Regional Transit Forecasting Model (same travel demand model used by the MTA for transit expansion projects)
- NYCT measures *segment users*: total travelers using the service in either direction

<table>
<thead>
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<th>Alternative</th>
<th>AM Period Segment Users</th>
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<tr>
<td>Transportation Systems Management*</td>
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<tr>
<td>Electric Light Rail to West Shore Plaza</td>
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<tr>
<td>Bus Rapid Transit to West Shore Plaza</td>
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*TSM total shows total AM riders on proposed TSM alternative S99 and S83 routes.*
### Environmental Analysis

#### Environmental Categories and Potential Impacts

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<tr>
<th>Alternative</th>
<th>Noise</th>
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<th>Air Quality</th>
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<th>Land Use</th>
<th>Hist/Arch</th>
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<th>Coastal/Ecology</th>
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- Little or no impacts
- ✓ some impacts
- ✓✓ most impacts
# Summary of Short List Alternatives

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<td>Some; fully mitigable</td>
<td>21</td>
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<td>$7.0m</td>
<td>$645m</td>
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<tr>
<td>Bus Rapid Transit to West Shore Plaza</td>
<td>15 with</td>
<td>Some; fully mitigable</td>
<td>23</td>
<td>12,120</td>
<td>$6.5m</td>
<td>$371m</td>
<td>Some impacts</td>
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Recommendation

Bus Rapid Transit

BRT Selected as Locally Preferred Alternative

- Lower capital costs than Light Rail

Port Richmond - Proposed Busway (aerial view)
Recommendation
Bus Rapid Transit

Port Richmond - Proposed Busway close-up
Recommendation

Bus Rapid Transit

View of street level connection between BRT service and Staten Island Ferry
Recommendation

Bus Rapid Transit

BRT Selected as Locally Preferred Alternative

- Would reduce travel time
- Would improve access to key locations
- Would attract new riders

View of Snug Harbor from Kill Van Kull
Bus Rapid Transit (BRT) Alternative
Arlington Station Park & Ride

Arlington - Proposed station (aerial view)
Bus Rapid Transit (BRT) Alternative

Freight Rail Coordination

- Potential future tail track on north side
- Proposed BRT guideway on south side
Bus Rapid Transit (BRT) Alternative
Freight Rail Coordination

- Potential future tail track on north side
- Proposed BRT guideway on south side
Questions or Comments:

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