I-95/I-395 Transit/TDM Study
CTB Project Briefing
January 2008
Study Background

• I-95/I-395 HOT Lanes Project is consistent with I-495 HOT Lanes Project in that it supports improved transit services and operations.

• I-95/I-395 HOT Lanes project scope includes significant benefits for transit:
  – 3,000 new park and ride spaces in the corridor
  – 33 new entry/exit ramp facilities
  – Lorton in-line Bus Rapid Transit station
  – 28 mile extension of the existing HOV lanes

• Transit/TDM Study conducted by DRPT with the project’s Technical Advisory Committee to recommend investment strategy for $195 million being committed by private sector to transit **above and beyond** the HOT Lanes Project scope.
Study Background

• Funding for improvements would come from a combination of HOT Lanes funding for Transit/TDM, farebox revenues, and Federal discretionary funds.

• Revenue dedicated to Transit/TDM improvements is subject to final negotiation by VDOT and Fluor Transurban and allocation by the CTB.

• Study recommendation will be used to update the January 2008 MWCOG CLRP.
Goals of Transit/TDM Improvements

• **Goal 1** – Preserve transit and HOV ridership while implementing HOT lanes.
  - Implement improvements to help maintain current market share for transit, carpools and vanpools.

• **Goal 2** – Utilize new HOT lane features to attract new transit and HOV riders.
  - Use a corridor management approach to improve existing service and serve new markets.
Existing Services in Corridor

• Existing Transit Services (Peak Hour/One Direction)

  Bus Service:
  – 90+ buses / hour operating in the northern portion of the corridor
  – 12 buses / hour operating in the southern portion of the corridor

  Rail Service:
  – 10 Metrorail trains / hour
  – 2 Virginia Railway Express trains / hour
  – 1 Amtrak train / hour

• Existing TDM Programs and Services
  – 500 Vanpools (10,000 daily passenger trips)
  – 21 Park-and-Ride Lots
  – 19 Slug Locations
  – 5 Rideshare/Employer Services Programs
  – VanStart/VanSave
Tiered Transit/TDM Alternatives

• Three Tiers Designated:
  - Low: Approximately $250 million
  - Medium: Approximately $500 million
  - High: Unconstrained cost

• Low Alternative ($250 million)
  100% increase in existing bus service, expanded VRE capacity

Definition - Baseline plus:
  - Bus service modifications (frequency, routes)
  - New Express Bus Routes
  - VRE service improvements (eight car trains in the peak, expand four station platforms)
  - Improved Shuttle Services, Transit Centers, Stations and Park-n-Ride Facilities
  - TDM Program Improvements (marketing, signage, carpool/vanpool incentives, rideshare operational support)
  - Park-n-Ride Improvements
Tiered Transit/TDM Alternatives

• Medium Alternative ($500 million)
  145% increase in existing bus service, Bus Rapid Transit (BRT) system and 45% increase in VRE service

Definition - Baseline and Low Alternative plus:
- BRT System (including 5 in-line stations)
- Increase VRE/Amtrak Fredericksburg Line trains from 14 to 20 trains and increase storage
- Three new transit centers
- TDM Improvements (vanpool/telework financial assistance, rideshare program operational support)
- Park-n-Ride Improvements
Tiered Transit/TDM Alternatives

• High Alternative (unconstrained)
  145% increase in existing bus service, 130% increase in VRE service and Metrorail extension

Definition - Baseline, Low and Medium Alternatives plus:
  – Metrorail extension (Franconia-Springfield to Potomac Mills Mall)
  – Increase VRE/Amtrak Fredericksburg Line trains from 20-32 trains, 2 new stations and storage
  – New BRT Route
  – TDM Improvements (vanpool financial assistance, statewide Guaranteed Ride Home program, pilot facilitated rideshare
  – Park-n-Ride Improvements
**Snapshot of Baseline and Tiered Enhancements at I-95 Cut-Line South of Springfield Area**

<table>
<thead>
<tr>
<th>Alternative</th>
<th>Bus</th>
<th>VRE</th>
<th>Metrorail</th>
</tr>
</thead>
<tbody>
<tr>
<td>Existing</td>
<td>40/hour</td>
<td>14/day</td>
<td>---</td>
</tr>
<tr>
<td>CLRP</td>
<td>66/hour</td>
<td>14/day*</td>
<td>---</td>
</tr>
<tr>
<td>Low</td>
<td>82/hour</td>
<td>14/day** (+6 cars)</td>
<td>---</td>
</tr>
<tr>
<td>Medium</td>
<td>97/hour</td>
<td>20/day</td>
<td>---</td>
</tr>
<tr>
<td>High</td>
<td>98/hour</td>
<td>32/day</td>
<td>10/day***</td>
</tr>
</tbody>
</table>

* CLRP indicates a non-specific increase in service.
** Low alternative adds railcars but does not change number of trains.
*** Adds Metrorail service in the South.
Key Findings from Travel Forecasting

- CLRP Baseline Alternative has significant service additions and is already a very strong performer

- Most difference among tested alternatives was in the competition among transit modes

- HOT lanes generally did not adversely impact transit or carpool mode share versus today

- The transit/TDM alternatives maintain high mode share in the corridor even with significant increases of travel in the corridor

- Many of the new proposed transit routes show strong ridership
Key Findings from Market Research

- Awareness of HOT lanes is high. Nearly all sluggers (94%) are aware of the HOT lanes vs. 75% of SOV users.
- Sluggers are especially likely (71%) to believe that HOT lanes will discourage drivers from picking up sluggers.
- However, most transit and HOV commuters say they would not change their commute in any way when the HOT lanes are open and functional.
  - 53% of SOV
  - 81% of Carpoolers
  - 82% of Sluggers
  - 91% of Bus Riders
  - 95% of Vanpoolers
  - 91% of Train Riders
- Likelihood of using HOT lanes is highest among commuters from Spotsylvania, Stafford and Prince William
- 34% of SOVers say there is no park-and-ride lot located along their commute to catch express bus or there is a lot but it is usually full (12%). 24% say they don’t know.
- Of those who do not have such a park-and-ride lot, 11% of SOVers say they would use one if it were available.
Refined Alternative

$230 million (Capital) / $417 million (Operating – 20 yrs)

- Carried forward strong performers and dropped elements that did not test well in the three tiered alternatives

- Strong performers included:
  - Service modifications to existing bus service
  - Selected new services
  - BRT concept
  - Transit centers and park-and-ride expansion
Fiscally Constrained Alternative
Investment Strategy Objectives

• Prioritize and phase the proposed improvements from the Refined Alternative
  – Productivity and rapid impact
  – Ease of implementation
  – Long-term regional network effects

• Identify and leverage all reasonably available funding sources for the proposed improvements

• Protect and respect currently planned and programmed transit improvements and associated funding sources

• Identify services and facilities that require further design work
Fiscally Constrained Alternative
Funding Assumptions

- Funding Assumptions:
  - $195 million HOT lanes lump sum
  - $40 million in Federal discretionary funding
  - $63 million in farebox recovery
    $298 million TOTAL

- Farebox recovery figure is derived from the actual services proposed

- Greater level of facility improvements in recommended program provides less revenue for operating than in original CLRP submission
Fiscally-Constrained Alternative
Recommended Services/Facilities

$137 million (Capital) / $161 million (Operating – 20 yrs)

• Service Modifications
  - Bus frequency increases
  - Bus service extensions
  - Increase VRE train length to eight cars

• New Services
  - Shirlington to Rosslyn
  - Central Prince William to Downtown Alexandria
  - Kingstowne to Shirlington to Pentagon
  - Woodbridge to Lorton/Tyson’s to Merrifield
  - Lake Ridge to Seminary Road Area
  - Fredericksburg to Pentagon/Crystal City
  - Fredericksburg to Washington, DC
  - Massaponax to Washington, DC
  - Lorton VRE Station to EPG/Ft. Belvoir (new shuttle)
Fiscally-Constrained Alternative
Recommended Services/Facilities

• Facility Improvements
  – New and Improved Transit Centers:
    • Pentagon Metrorail station
    • Franconia-Springfield Metrorail station
    • Massaponax Transit Center
  – Five in-line BRT stations along HOT lane corridor
  – VRE Fredericksburg Line platform extensions at four stations
  – Increased overnight parking for VRE trains in Fredericksburg
  – Additional park-and-ride spaces and/or lots

• TDM Program Elements
  – Capital assistance for vanpools
  – Enhanced Guaranteed Ride Home program
  – Financial incentives for vanpools and carpools
  – Rideshare program operational support
  – TDM program marketing support
  – Telework program assistance
Next Steps

• January - February 2008
  – Revise CLRP Submission
  – Final Report Issued
  – Advance necessary environmental and preliminary engineering work on Bus Rapid Transit