

Bus Rapid Transit in Northern Virginia

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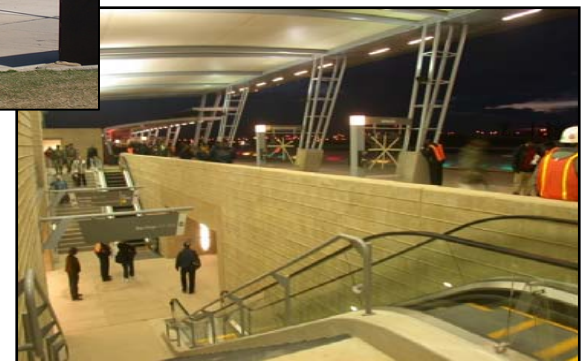
What is Bus Rapid Transit (BRT)?

- ❑ There are many differing opinions on what is BRT
- ❑ The Transit Cooperative Research Program defines it as:
“A flexible, high performance rapid transit mode that combines a variety of physical, operating and system elements into a permanently integrated system with a quality image and unique identity.”
- ❑ Commonly mentioned characteristics include:
 - Dedicated running lanes
 - Substantial transit stations and stops
 - Distinctive easy-to-board vehicles (no steps)
 - Uniquely branded service
 - Traffic signal priority
 - Off-vehicle fare collection
 - Use of Intelligent Transportation System (ITS) technologies
 - Frequent service (14-16 hours/day, 10-min peak, 15-min off-peak)

Existing Conditions

- ❑ There are no bus services in Northern Virginia today that have **all** of the common BRT characteristics; however, services with some BRT characteristics are operating in the following corridors:

- I-95 Corridor
- I-395 Corridor
- I-66 Corridor
- Route 1 Corridor
- VA 267 - Dulles Corridor
- VA 244 - Columbia Pike



Existing Conditions

BRT Characteristic	I-95	I-395	I-66	Rt. 1	Dulles	C. Pike
Dedicated running lanes	✓ –	✓ –	✓ –		✓ –	
Stations and stops	✓ –	✓ –	✓ –	✓ –	✓ –	✓ –
Distinctive vehicles				✓		
Unique branding	✓	✓	✓	✓		✓
Traffic signal priority				✓		✓
Off-vehicle fare collection						
Use of ITS	✓	✓	✓	✓	✓	✓
Frequent service	✓	✓		✓	✓	✓

Note: HOV lanes and Dulles Airport Access Road are not fully dedicated to buses but offer a distinct advantage over general purpose lanes. Stations and stops are not equipped for off-vehicle fare collection.

Projects That Will Help Advance BRT

❑ I-495 Corridor – HOT Lanes Project

- Project is under construction and will provide access to new markets for transit such as Tysons Corner

❑ I-95/I-395 Corridor – HOT Lanes Project

- \$195 million proposed Concession Payment for transit and transportation demand management, including Bus Rapid Transit Service

❑ Rappahannock-Rapidan Regional Commission

- Starting a new demonstration commuter bus service to NOVA/DC
- Responses to RFP received on October 17, 2008

❑ Across the Region - Mega Transportation Management Plan

- Transit strategies will be deployed to mitigate construction impacts including ITS technologies and new transit services

Ongoing Studies

❑ I-95/I-395 Corridor

- February 2008 – Transit/TDM Study led by a technical advisory committee consisting of local governments and transit operators in the corridor recommended plan for how to use the \$195 million. Included BRT concept and recommended further analysis at an operational level.
- July 2008 – DRPT/VDOT initiated operational analysis of proposed HOT Lanes project to develop recommendations on improving transit service
- September 2008 – DRPT/VDOT initiated operational analysis of BRT concept recommended in Transit/TDM Study and expanded concept to include BRT in I-495 Corridor
- September 2008 – DRPT/VDOT released results of a bus-only lane analysis that determined the dedicated lane would not provide a significant benefit over the current HOT Lanes design. VDOT continues to conduct environmental work on the project.

Ongoing Studies

❑ I-495 Corridor

- February 2008 – Transit/TDM Study examined bus routes that would take advantage of I-495/I-95/I-395 HOV/HOT Lanes. Routes were included in recommendation as some of the best performers.
- September 2008 – DRPT/VDOT advancing implementation of routes as part of Mega Transportation Management Plan
- September 2008 – corridor included in BRT operational analysis for I-95/I-395 Corridor

Ongoing Studies

- ❑ I-66 Corridor (inside and outside I-495)
 - June 2008 – DRPT produced draft data collection report documenting previous transit studies in the corridor and identified data gaps
 - July 2008 - DRPT initiated Transit/TDM study. Study is focused on short term bus improvements and Bus Rapid Transit
 - Information from the study will feed into the upcoming multi-modal Environmental Impact Statement for I-66 (outside of I-495)

Ongoing Studies

❑ Route 1 Corridor

- Prince William County is conducting a Bus Rapid Transit study in the corridor using funds from the Commonwealth's Multi-Modal Office.

Other Studies

- ❑ National Capital Transportation Planning Board
 - Scenario Study that is looking at value priced lanes and a regional Bus Rapid Transit Network
- ❑ George Mason University
 - Bus Rapid Transit study in Route 50 Corridor

Regional BRT Network

❑ Regional BRT Network could include the following corridors:

- I-95/I-395 Corridor
- I-66 Corridor
- Route 1 Corridor
- Route 28 Corridor
- Route 50 Corridor
- VA 236 Corridor
(Little River Turnpike)
- I-495 Corridor
- Dulles Corridor
- Route 7 Corridor
- Route 29 Corridor
- Route 7100 Corridor
(Fairfax County Pkwy.)
- VA 244 Corridor
(Columbia Pike)



LEGEND

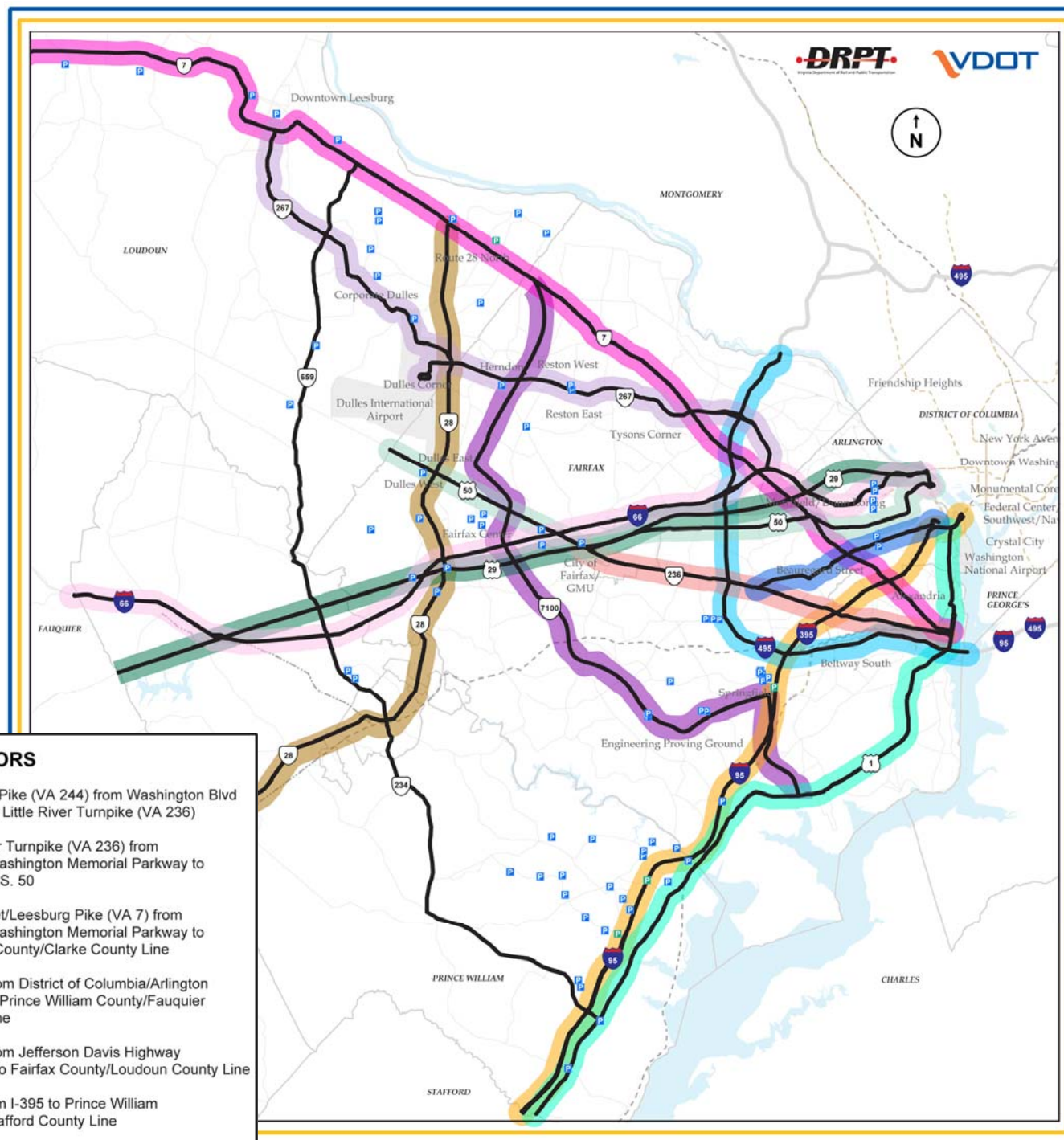
- County Boundaries
- Water Bodies
- Regional Activity Centers
- Metrorail
- Commuter Rail
- Proposed VRE Extension

Park-and-Ride Lots

- Existing
- Planned Expansion

REGIONAL BRT CORRIDORS

- | | |
|--|---|
| Dulles Toll and Airport Access Road (VA 267) from I-66 to Leesburg Pike (VA 7) | Columbia Pike (VA 244) from Washington Blvd (VA 27) to Little River Turnpike (VA 236) |
| VA 28 from Prince William County/Fauquier County Line to Leesburg Pike (VA 7) | Little River Turnpike (VA 236) from George Washington Memorial Parkway to U.S. 29/U.S. 50 |
| Fairfax County Parkway (VA 7100) from U.S. 1 to Leesburg Pike (VA 7) | King Street/Leesburg Pike (VA 7) from George Washington Memorial Parkway to Loudoun County/Clarke County Line |
| I-66 from Washington D.C./Arlington County to Prince William County/Fauquier County Line | U.S. 29 from District of Columbia/Arlington County to Prince William County/Fauquier County Line |
| Capital Beltway (I-495) in Virginia | U.S. 50 from Jefferson Davis Highway (VA 100) to Fairfax County/Loudoun County Line |
| I-95/I-395 from Stafford County/Prince William County Line to Washington, D.C./Arlington County Line | U.S. 1 from I-395 to Prince William County/Stafford County Line |



Issues

- ❑ **Service Area/Market** – cost and effectiveness of service is driven by market demand
- ❑ **Governance/Coordination** – multiple public and private operators in the region (Metro, PRTC, Local Jurisdictions, Quicks, Martz, etc.)
- ❑ **Roadway/Operational Improvements** – improve HOV Network (management, capacity, connections), implement priority signal systems, bus lanes, park-and-ride facilities, station/stops, etc.
- ❑ **Financial Feasibility** – identify capital and operating costs, funding sources, fare policy, etc.

Opportunities

- ☐ Incremental approach can be financially feasible and bring significant improvements in the short term
- ☐ Reduce travel time
- ☐ Increase ridership
- ☐ Better coordinate services
- ☐ Provide relief to rail systems
- ☐ Encourage public-private partnerships

Next Steps/Recommendations

- ❑ Complete analysis in I-66, I-495 and I-95/I-395 Corridors
- ❑ Construct I-495 and I-95/I-395 HOT Lanes Projects
- ❑ Work with local jurisdictions to concentrate transit oriented development around major stations/stops
- ❑ Evaluate potential benefit of public-private partnerships with private operators
- ❑ Consider branding partnerships among providers



Virginia Department of Rail and Public Transportation