Passenger Rail in Virginia:
Current Rail Initiatives to Improve Passenger Rail Service in the Commonwealth

July 13, 2006
National Passenger Rail Corridors

- Northeast Corridor
- Amtrak Designated Corridors
- Federally Designated Corridors
- Other Current Amtrak Routes
National Passenger Rail
Federal Legislation

- Amtrak funding approved at $1.16 Billion for FY 2007
- Key Amtrak issues:
  - Leadership
  - Northeast Corridor
  - Continued push for states to fund the service
- US Senate: some movement (S. 1516) to fund the federal share for national passenger rail in the states
- Virginia’s position: any shift to the states is an unfunded mandate
Focus on “higher” speed rail

High speed rail: 90-110 mph
- Requires major, costly improvements to operate at this speed
- Would be difficult to achieve within a reasonable time frame, given the level of funding currently available

Many quick, high-impact improvements possible within the existing rail system:
- Most trains in VA operate at 45 mph on average, while the speed limit is 70-79 mph
- Need to bring average operating speed closer to maximum speed
Virginia Railway Express
Proposed Service Extension to
Gainesville and Haymarket
VRE Gainesville/Haymarket
Conduct a Feasibility Study of 11 mile extension from Manassas to Haymarket

- Develop detailed cost estimates
- Develop construction phasing
- Update ridership forecasts
- Identify potential environmental and right-of-way issues
- Determine impact of the extension on the rest of the VRE System
VRE Gainesville/Haymarket
Budget and Schedule

- **Budget**
  - Total Cost $121.0
  - REF Phase 1 approved $0.7
  - Match Phase 1 $0.3
  - REF Phase 2 (Estimate) $60.0
  - Match Phase 2 $60.0

- **Schedule**
  - Sept. 2006 Begin Phase I - PE and NEPA
  - Sept. 2007 Complete Phase 1
  - Spring 2009 Begin Construction (Estimated)
Virginia Railway Express
Proposed Cherry Hill Third Track

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Cherry Hill 3rd Track

Arkendale

Powells Creek

VRE Proposed Arkendale to Powells Creek Third Track
VRE Cherry Hill 3rd Track

Project Scope

- Preliminary Engineering of 11.4 miles of 3rd main track between Arkendale and Powell’s Creek
- Conduct National Environmental Policy Act (NEPA) analysis of this proposed 3rd track
- Develop project benefits and measurements to determine performance requirements
- Local match provided by developer of Harbor Station at Cherry Hill, includes the following:
  - Design & construct VRE double platform at Cherry Hill Station
  - Design & construct the bridge over CSX tracks to replace existing Cherry Hill Rd. at-grade crossing
  - Design & construct 550 space parking structure for commuters at the Cherry Hill Station
VRE Cherry Hill 3rd Track
Budget and Schedule

Budget
- Total Cost $72.0
- REF Phase 1 approved $2.5
- Match Phase 1 $1.1
- REF Phase 2 (Estimate) $47.7
- Match Phase 2 $20.7

Schedule
Sept. 2006 Begin Phase I - PE and NEPA
Sept. 2007 Complete Phase 1
Spring 2008 Begin Construction
Southeast High Speed Rail Corridor
Southeast High Speed Rail Corridor
Southeast High Speed Rail
Project Schedule

1998 Memorandum of Understanding (MOU)
DRPT, NCDOT Rail, FRA, FHWA

1999 Tier I EIS - Joint VA/NC effort
- 9 alternatives
- Over 1,200 miles of rail right of way
- Over 7,000 phone contacts
- Over 225,000 direct mail contacts
- 26 public workshops, 26 official workshops, 18 public hearings

2002 Tier I EIS Record Of Decision by FRA and FHWA
Southeast High Speed Rail
Primary Outcomes from Tier I EIS

- Established project purpose & need
  - Provide competitive option
  - Ease growth of congestion
  - Improve safety & energy effectiveness
  - Reduce pollution emissions
  - Improve transportation effectiveness while minimizing environmental impacts

- Modal Alternative Selected
  - Incremental approach
  - Fossil fuel engines
  - 110 mph max. speed

- Established preferred study corridor
## Southeast High Speed Rail Tier II - Raleigh to Richmond (168 mi.)

<table>
<thead>
<tr>
<th>Date</th>
<th>Event Description</th>
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<tbody>
<tr>
<td>May 2003</td>
<td>Notice to Proceed</td>
</tr>
<tr>
<td>July/Aug 2003</td>
<td>9 Public Workshops</td>
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<tr>
<td>2004/2005</td>
<td>Environmental Field Work</td>
</tr>
<tr>
<td></td>
<td>Preliminary Engineering</td>
</tr>
<tr>
<td></td>
<td>Public Involvement</td>
</tr>
<tr>
<td>Dec. 2005</td>
<td>REF Grant to extend to Richmond</td>
</tr>
<tr>
<td>Oct. 2007</td>
<td>Complete Draft EIS</td>
</tr>
<tr>
<td>April/May 2008</td>
<td>Public Hearings</td>
</tr>
<tr>
<td>Aug. 2008</td>
<td>Complete Final EIS</td>
</tr>
<tr>
<td>Dec. 2008</td>
<td>Record of Decision from FRA</td>
</tr>
</tbody>
</table>

[Diagram showing the route from Raleigh to Richmond with key milestones depicted on the timeline.]
Southeast High Speed Rail

Alternative Routes
Richmond to Petersburg

Southeast High Speed Rail
Richmond to Petersburg, Virginia
Southeast High Speed Rail Service Improvements

- High-speed train sets
- Reduced travel time
- Increased frequency
- Service expansion

*Time frame: within 10 years*

**Travel Time Goal:**

9:15 → 6:00
Southeast High Speed Rail
Moving Forward

- Strong political support in both states
- Funding support in both states
- Current approach is incremental with limited state funds
- Ability to move forward to design and construct entire SEHSR system is dependent on a federal program
- Need to develop operations and maintenance plan
Richmond/Hampton Roads
Passenger Rail Study

www.drpt.virginia.gov
# Richmond to Hampton Roads

## Proposed Alternatives

<table>
<thead>
<tr>
<th></th>
<th>79 MPH</th>
<th>90 MPH</th>
<th>110 MPH</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Cost (M)</td>
<td>Ridership</td>
<td>Cost (M)</td>
</tr>
<tr>
<td><strong>Alternative</strong></td>
<td><strong>High Speed Route</strong></td>
<td><strong>Travel Time</strong></td>
<td><strong>Time</strong></td>
</tr>
<tr>
<td>Alternative 1 3 CSXT/6 NS</td>
<td>Southside</td>
<td>1:16</td>
<td>*$191.4</td>
</tr>
<tr>
<td>Alternative 2a 3 NS/6 CSXT</td>
<td>Peninsula</td>
<td>1:38</td>
<td>*$347.1</td>
</tr>
<tr>
<td>Alternative 2b 9 CSXT</td>
<td>Peninsula</td>
<td>1:38</td>
<td>$192.9</td>
</tr>
</tbody>
</table>

**Notes:**
- 2025 Ridership Projections
- Cost in 2004 Dollars (In Millions)
- Time measurement in Hours : Minutes
- *Does not include cost for Petersburg to Richmond =* $87.1
## Richmond to Hampton Roads

### Project Schedule

<table>
<thead>
<tr>
<th>Event</th>
<th>Date</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nov 2003</td>
<td></td>
<td>EIS project started</td>
</tr>
<tr>
<td>Spring 2004</td>
<td></td>
<td>Public Scoping Meetings</td>
</tr>
<tr>
<td>Summer 2005</td>
<td></td>
<td>Alternatives Analysis Completed</td>
</tr>
<tr>
<td>Spring 2006</td>
<td></td>
<td>Preliminary Draft EIS prepared &amp; submitted to FRA</td>
</tr>
<tr>
<td>Summer 2006</td>
<td></td>
<td>Review FRA comments and preparation of Draft EIS</td>
</tr>
<tr>
<td>Fall 2006</td>
<td></td>
<td>Draft EIS issued and public hearings</td>
</tr>
</tbody>
</table>
Richmond to Hampton Roads

Next Steps

Schedule for completion of the following tasks dependent on funding:

- Completion of Final Tier I EIS and Record of Decision
- Completion of Tier II EIS
- Final Design
- Construction
- Operations
Washington, DC to Richmond Corridor Improvements
Virginia Rail Needs 2004 – 2025
Washington, DC to Richmond Corridor

Needs:
- Complete 3rd track
- Upgrade signal system
- Add crossovers
- Cost: $400 Million +

Benefits:
- Reduce travel time by 30 minutes
- Increase maximum speed to 90 mph
- Increase frequency, capacity and reliability for both freight and passenger rail
### Projects Underway

**Washington, DC to Richmond Corridor**

**VTA 2000 Funds**

<table>
<thead>
<tr>
<th>Project</th>
<th>Cost (Millions)</th>
<th>Completion Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arkendale Crossover</td>
<td>$5.6</td>
<td>Completed</td>
</tr>
<tr>
<td>Elmont Crossover</td>
<td>$6.0</td>
<td>July 2006</td>
</tr>
<tr>
<td>L’Enfant 3rd Track</td>
<td>$6.2</td>
<td>Spring 2007</td>
</tr>
<tr>
<td>RO-SRO 3rd Track</td>
<td>$5.9</td>
<td>Spring 2007</td>
</tr>
<tr>
<td>Quantico Bridge (VRE)</td>
<td>$6.0*</td>
<td>Spring 2007</td>
</tr>
<tr>
<td>Franconia 3rd Track</td>
<td>$9.7</td>
<td>Summer 2007</td>
</tr>
<tr>
<td>Fredericksburg 3rd Track</td>
<td>$6.0</td>
<td>Fall 2007</td>
</tr>
</tbody>
</table>

* State share. There is also $20 million in federal funding.
Richmond Area Rail Improvements

- **Staples Mill Station**
- **Acca Yard**
- **Upgrade Crossovers**
- **Improve Grade Crossings**
- **Close Grade Crossings**
- **New Crossovers**

**Legend:**
- **Blue** - Current Route - Newport News Trains
- **Green** - Current Route - Florida Trains
- **Red** - Proposed Florida/SEHSR Route

**Map Details:**
- **Richmond**
- **Fulton Yard**
- **Main Street Station**
- **Hospital St.**
- **Brown St. Yard**
- **South Yard**
- **Hermitage Rd.**
- **Brook Rd.**

*Image: Richmond Area Rail Improvements map as of July 13, 2006.*
Richmond Area Improvements

Short Term Projects

Staples Mill to Main Street Station

Projects:
- Upgrade tracks and signals and realign curves to increase speed from 25 mph to 40 mph
- Upgrade three grade crossings
- Eliminate three grade crossings
- Install new universal crossover

Benefits:
- Reduce travel time by 5-7 minutes (estimated)
- Increase reliability
- Estimated completion: 2007

Estimated cost: $14.9 Million
Funds currently available: $12.5 Million
Main Street Station
Bringing More Trains Downtown

- Turning & storage facility near Main St. Station
- Acca Yard improvements
- Track upgrades for speed and capacity
- Improvements from Main St. Station south to Centralia to allow through-trains to serve downtown
Acca Yard Study

- Major bottleneck for both freight and passenger trains
- Study is underway
- Funding
  - $500K from Statewide Multimodal Planning Funds
  - CSX and Amtrak support
- Study Completion date: April 2007
Washington, DC to Richmond Corridor
Update of Costs and Priorities

- "Caboose Bill" provided $200K funding to update corridor plan:
  - Identify additional right-of-way needed
  - Identify major environmental issues;
  - Develop a phased implementation plan including schedule and financing
  - Review legal and regulatory issues
  - Estimate the cost electrifying corridor
  - Report due December 1, 2006

- Additional $500K Multi-Modal Planning Funds will be used to refine capital and operating cost estimates
TransDominion Express
TransDominion Express
Proposed Route and Stations

KEY:
- Proposed stops at staffed stations
- Proposed stops at non-staffed stations
- Proposed Starter Service

Washington, D.C.
Alexandria
Manassas
Orange
Charlottesville
Richmond
Farmville
Appomattox
Lynchburg
Roanoke
Bedford
Wytheville
Radford
Pulaski
Christiansburg
Marion
Abingdon
Bristol

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Trans Dominion Express

Need

- Provides a transportation alternative to under-served region of the Commonwealth
- Connects southwest Virginia with the rest of the state
- Economic development tool for the communities along the route
<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>1999</td>
<td>Bristol Rail Passenger Study</td>
</tr>
<tr>
<td>2000</td>
<td>Committee to Advance the TransDominion Express created</td>
</tr>
<tr>
<td>2001</td>
<td>Norfolk-Southern Study</td>
</tr>
<tr>
<td>2001</td>
<td>Amtrak Study</td>
</tr>
<tr>
<td>2004</td>
<td>Norfolk Southern Study on starter service</td>
</tr>
<tr>
<td>2005</td>
<td>Report to the General Assembly</td>
</tr>
<tr>
<td>2005</td>
<td>TDX Committee Incorporated as a 501(c)3 non-profit</td>
</tr>
<tr>
<td>2006</td>
<td>Additional report requested by General Assembly</td>
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</table>
Trans Dominion Express
Cost of Full Service

From General Assembly Report (HD 37)

<table>
<thead>
<tr>
<th>(In $Millions)</th>
<th>Estimated Travel Time</th>
<th>Total Capital Costs</th>
<th>Annual Operating Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total System Costs</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Bristol-Washington</td>
<td>8:18</td>
<td>$120.0*</td>
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<tr>
<td>Bristol-Richmond</td>
<td>7:45</td>
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<tr>
<td>Purchase &amp; Refurbishment of 5 Rail Cars</td>
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<td>$2.5</td>
<td>$0.0</td>
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<tr>
<td><strong>Total Costs</strong></td>
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<td>$122.5</td>
<td>$14.5</td>
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<tr>
<td>State Funds Available</td>
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<td>$8.5(^1)</td>
<td>$0.0</td>
</tr>
<tr>
<td><strong>Unfunded Balance</strong></td>
<td></td>
<td>$114.0</td>
<td>$14.5</td>
</tr>
</tbody>
</table>

* Estimates of the total system capital and operating costs are preliminary and based on studies that were conducted in 2001. These estimates are under review and subject to further study.

\(^1\) Funding from the Virginia Transportation Act of 2000
Trans Dominion Express
Cost of Proposed Starter Service

<table>
<thead>
<tr>
<th>(In $Millions)</th>
<th>Estimated Travel Time</th>
<th>Total Capital Costs</th>
<th>Annual Operating Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Demonstration Service</strong></td>
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<tr>
<td>Bristol-Richmond</td>
<td>10:00</td>
<td>20.0</td>
<td>$8.0</td>
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<tr>
<td>DC-Charlottesville (VRE Extension)</td>
<td>2:30</td>
<td>$2.0</td>
<td>$1.1</td>
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<td><strong>Purchase &amp; Refurbishment of 5 Rail Cars</strong></td>
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<td>$2.5</td>
<td>$0.0</td>
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<tr>
<td><strong>Total Costs</strong></td>
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<td>$24.5</td>
<td>$9.1</td>
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<tr>
<td><strong>State Funds Available</strong></td>
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<td>$8.5&lt;sup&gt;1&lt;/sup&gt;</td>
<td>$0.2&lt;sup&gt;2&lt;/sup&gt;</td>
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<tr>
<td><strong>Unfunded Balance</strong></td>
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<td>$16.0</td>
<td>$8.9</td>
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<sup>1</sup> Funding from the Virginia Transportation Act of 2000.

<sup>2</sup> Service to Charlottesville by extension of VRE may be eligible for funding under the current State Mass Transit Trust Fund Formula Program. However, unless new funding is made available, this will have a negative impact on transit systems that are already funded through this program.
TransDominion Express
Overview of Startup Issues

- Governance
  - TDX, Inc. has taken important 1st step of incorporating
  - TDX, Inc. is applying for grants to fund staff and operations
  - Inter-jurisdictional agreements not currently in place
  - Legislation to create TDX Authority sent back to committee by General Assembly

- Operating Issues
  - Who operates - Norfolk Southern?
  - Operating cost
    - Liability
    - Access
  - Storage
Trans Dominion Express
Additional Startup Issues

- Need for a financial plan:
  - Short and long-term capital needs
  - Short and long-term operating subsidies.
  - Sources of funding
  - Implementation schedule

- Options for phasing starter service
  - Bristol to Richmond
  - Charlottesville to Washington, DC (VRE extension)
  - Roanoke to Washington, DC

- Subject to negotiations with:
  - Norfolk Southern
  - VRE (Charlottesville extension)
  - CSX (Access to Union Station and Main St. Station)

- Possible purchase of five railcars from VRE
TransDominion Express
Updated System Study

- FY 2006 – 2008 Budget Bill directs DRPT to update study
  - Revise capital and operating costs
  - Estimate potential revenue
  - Determine potential to alleviate congestion
  - Study due on January 2, 2007
  - No funding provided

- Need to analyze relationship between TDX improvements and other rail initiatives:
  - I-81
  - Heartland Corridor
  - VRE service extensions
  - Washington, DC to Richmond corridor service
### Passenger Rail Projects

#### Upcoming Milestones

<table>
<thead>
<tr>
<th>Year</th>
<th>Month</th>
<th>Project Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>July</td>
<td>Completion of Elmont Crossover</td>
</tr>
<tr>
<td></td>
<td>October</td>
<td>Completion of Richmond/Hampton Roads DEIS</td>
</tr>
<tr>
<td></td>
<td>December</td>
<td>Completion of Washington, DC – Richmond Corridor Priority Plan</td>
</tr>
<tr>
<td>2007</td>
<td>January</td>
<td>Completion of TDX Update</td>
</tr>
<tr>
<td></td>
<td>March</td>
<td>Completion of Quantico Creek Bridge</td>
</tr>
<tr>
<td></td>
<td>April</td>
<td>Completion of Acca Yard Study</td>
</tr>
<tr>
<td></td>
<td>May</td>
<td>Completion of L’Enfant 3rd Track</td>
</tr>
<tr>
<td></td>
<td>June</td>
<td>Completion of RO-SRO 3rd Track</td>
</tr>
<tr>
<td></td>
<td>August</td>
<td>Completion of Franconia 3rd Track</td>
</tr>
<tr>
<td></td>
<td>September</td>
<td>Completion of VRE Gainesville/Haymarket Extension Feasibility Study</td>
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<tr>
<td></td>
<td>September</td>
<td>Completion of VRE Cherry Hill 3rd Track PE and Environmental Study</td>
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<tr>
<td></td>
<td>October</td>
<td>Completion of SEHSR Tier II DEIS</td>
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<tr>
<td></td>
<td>November</td>
<td>Completion of Fredericksburg 3rd Track</td>
</tr>
<tr>
<td></td>
<td>December</td>
<td>Completion of Richmond Improvements</td>
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