VRE Gainesville-Haymarket Extension (GHX) Study

December 16, 2016
Project Origins

System Plan 2040 and Financial Plan

• Follow Natural Growth profile to run longer trains

• Continue to pursue funding for System Plan 2040 service concepts
  – Additional peak trains
  – Gainesville Haymarket Extension
  – Reverse peak and off-peak service
Purpose of the Study

Advance the planning and development for VRE Manassas Line growth needs including a Gainesville-Haymarket extension

• Identify the service, station locations and railroad infrastructure that best serve the community and VRE riders

• Estimate the cost and identify funding sources

• Perform engineering and identify any potential environmental impacts

• Help Norfolk Southern make an informed decision about allowing joint use
Project Goals

1. Add capacity to the I-66 corridor

2. Accommodate current and future freight operations

3. Provide cost-effective and reliable mobility options

4. Enhance service on existing line for current and future riders

5. Support local and regional economic development and plans
Contingent upon Norfolk Southern approval and funding availability.
Phase A: Planning/Alternatives Analysis

Screening of Initial Alternatives

Evaluation of Refined Alternatives

Recommended Alternative(s) for PE/Environmental Review
Study Area
Broad Run Equipment Storage Facility
OUTREACH SUMMARY
Study Outreach

• July 2015 - December 2016
  – 65 Individual, Organizational Briefings and Events
  – 17 Board Presentations and Public Meetings

• Public meeting attendance
  – 55% VRE riders
  – 45% non-riders

• Comments
  – “Just build it”
  – Non-riders more likely to use VRE if station is close to their home
  – Support among VRE riders for keeping Broad Run station
  – Concerns about cost, especially fare impacts
  – Requests for more frequent service even without extension
  – Concern about community and environmental impacts, esp. at station areas
  – Belief ridership forecasts are understated
KEY FINDINGS
What We Learned

• More peak service provides the greatest ridership potential relative to cost
• Separate VRE and freight operations drives service and infrastructure costs up
• Broad Run station and GHX travel markets overlap
• Cannot add trains to Manassas Line without expanding Broad Run MSF storage capacity

Note: Graphic adapted from Transform 66 Outside the Beltway, Tier 2 Final Environmental Assessment, 6/21/2016.
Land Use and Economic Development Benefits

VRE station can support local land use and economic development plans and policies:

- Target population and employment activity centers
- Encourage greater tax revenues
- Minimize sprawl and conserve open space
Ridership Forecasts

Broad Run terminus retains 93% of GHX riders

- Existing Service: 10,220
- Broad Run Terminus: 15,350
- Innovation Terminus: 15,820
- Gainesville Terminus Option A (2 stations): 16,100
- Gainesville Terminus Option B (3 stations): 16,340
- Haymarket Terminus: 16,460

Source: VRE/MWCOG Travel Demand Model, results as of 9/26/16
Capital Cost

Broad Run terminus capital costs are close to half of GHX alternatives.

- Broad Run Terminus: $345 M
- Innovation Terminus: $580 to $630 M
- Gainesville Terminus Option A (2 stations): $570 to $615 M
- Gainesville Terminus Option B (3 stations): $590 to $630 M
- Haymarket Terminus: $610 to $660 M
Annual Operating Cost

Broad Run terminus operating costs are about 20% less than GHX alternatives.

- Existing Service: $29 M
- Broad Run Terminus: $36 M
- Innovation Terminus: $37 M
- Gainesville Terminus Option A (2 stations): $40 M
- Gainesville Terminus Option B (3 stations): $40 M
- Haymarket Terminus: $45 M
## Cost Effectiveness

<table>
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<tr>
<th></th>
<th>Existing Service</th>
<th>Broad Run Terminus</th>
<th>Innovation Terminus</th>
<th>Gainesville Terminus</th>
<th>Haymarket Terminus</th>
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<td>Option A (2 stations)</td>
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<td>Revenue Trains</td>
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<td>Daily Riders (2040)</td>
<td>10,220</td>
<td>15,350</td>
<td>15,820</td>
<td>16,100</td>
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### Cost Per Rider

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<thead>
<tr>
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<th>Operating Cost Per Rider ($)</th>
<th>Capital Cost Per Rider ($)</th>
<th>Total Cost Per Rider ($)</th>
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1. Projections based on VRE Travel Demand Model 2015; MWCOG Round 8.4 Cooperative Land Use Forecasts, 9/26/16
2. Operating costs based on VRE FY15 average cost per train mile
3. Annualized capital costs based on FTA useful life estimates and assume 251 service days/year
4. No additional capital investments assumed for Broad Run station/yard complex.
Capital Funding Sources

Initial funding plan assumption: Federal grant for 50% of capital cost of an extension

- No GHX alternative is competitive for Federal New Starts funding
- A Broad Run extension could potentially compete for Federal Core Capacity funding
• Minimum 50% fare revenue
• Additional revenue source(s) required for future operations, even Natural Growth
• New operating revenue for VRE expansion TBD
RECOMMENDATION
Advance Broad Run Terminus alternative to Phase B of the GHX Study to complete Preliminary Engineering (PE) and prepare National Environmental Policy Act (NEPA) evaluation.
Issues

• Jurisdiction concerns
  – Increase in future operating costs and jurisdiction subsidy level
  – Proceeding with Phase B of study is a commitment to additional VRE service and capital investment

• Response
  – Completing the study is not a commitment to additional VRE service or to building anything
  – Completion of NEPA and PE is a requirement to seek additional funding
  – The need for an additional source of VRE operating revenue is recognized
  – Stopping the study precludes any VRE growth opportunities
Study Funding

- Virginia Rail Enhancement Fund (REF) Grant
  - $2,785,714
  - Phase A, Alternatives refinement
  - Phase B, Preliminary engineering design and NEPA
- Northern Virginia Transportation Authority
  - $1,500,000
  - Corridor study and preliminary project development for extension
  - Other VRE options addressing the need for service will also be investigated
QUESTIONS