Multimodal Solutions - 495 to Haymarket

DULLES AREA TRANSPORTATION ASSOCIATION (DATA)

February 18, 2015

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I-66 Corridor Conditions

- Steady population growth
- Employment growth in activity centers
- Congestion and mobility demands
- 8-10 hours of congestion in 2040
- Safety concerns
- Lack of coordinated transit service and modal choices
Purpose and Need

- Improve multimodal mobility along the I-66 corridor by providing diverse travel choices in a cost-effective manner
- Enhance transportation safety and travel reliability
I-66 Outside the Beltway Improvement Area

Multimodal Solutions - 495 to Haymarket
Project Scope Assumptions

• Maintain current number of regular lanes during rush hours
• Rapid bus service will be studied along with recommendations from the 2009 I-66 Transit / TDM Study
• Safety and operational improvements can move forward independently or in conjunction with capacity improvements
• Will not preclude other concepts
• Feasible to implement in a reasonable timeframe
Project Scope Elements

- **Two Express Lanes (convert existing HOV lane & add one lane)**
  - HOV-3 and buses travel free
  - Non-HOV tolled
  - Congestion-based tolls (similar to other Express Lanes in region)
  - Converting HOV-2 to HOV-3 by 2020, consistent with the region’s Constrained Long Range Plan

- **Three regular lanes**
  - Open to all traffic
  - No tolls
  - Ramp-to-ramp connections (auxiliary lanes)

- **Rapid bus service and other multimodal improvements**
  - High frequency of service beyond peak hours
  - Travel in express lanes for predictable travel times
  - Park-and-Ride lots, Transportation Demand Management
Typical Section Alternatives

Alt. 1 – Concrete Barrier with Full Shoulders and Median for Future Center Transit (with auxiliary lanes, if needed)

Alt. 2A – Flexible Barrier with Buffer and Median for Future Center Transit (with auxiliary lanes, if needed)

Alt. 2B – Flexible Barrier with Buffer and No Median (with auxiliary lanes, if needed)
Access Points and Interchange Improvements

- Locating potential access points near key activity centers or park-and-ride lots
- Identified locations for connections between express and general lanes
- Studying existing interchanges to address recurring congestion at bottlenecks and safety concerns at hot-spot locations
- Evaluating needs for ramp-to-ramp connections between interchanges
- Replacing or widening I-66 overpasses and bridges, where needed
- In coordination with interchange and overpass construction, identifying bicycle and pedestrian access needs to improve multimodal connectivity
Express Lanes Access Alternatives

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[Map showing various access points and routes around the area, including
- Express Lanes Access Points
- Alternative 2A
- Alternative 2B
- Alternative 2A and 2B
- Between US 15 and US 29 - to/from east
- University Blvd. - to/from east & west
- Balls Ford Rd. - to/from east
- VA 234 Bypass/Cushing Rd. - to/from east
- VA 28/Sully Rd. - to/from east & west
- Monument Dr. - to/from east & west
- West US 501, es Jackson Hwy. - to/from east
- Stringfellow Rd. - to/from east
- VA 123/Chain Bridge Rd. - to/from east
- Vaden Dr. - to/from west
- Transition ramp - to east
- I-495 full and partial access - to/from west
- Project Limit]
Identifying the Best Solution

Universe of Alternatives for Roadways and Interchanges

Mainline Alternatives
Access Alternatives
Interchange Alternatives

Environmental Draft Alternative 2A
Environmental Draft Alternative 2B
Preferred Alternative (combination of best elements from each alternative)
Current Project Activities

Gathering data
- Survey
- Environmental
- Geotechnical
- Traffic

Developing preliminary designs

Completing traffic projections and analyses

Assessing potential impacts

Presenting findings to the public

Identifying a preferred alternative
Multimodal Solutions

- Transit Services
  - Commuter Bus Services
  - Rapid Bus Service
- Park-and-Ride Facilities
- Transportation Demand Management (TDM)
Operations Goals
- Improve travel time reliability (predictability)
- Improve person throughput
- Provide travelers with options
- Improve safety

Strategies
- Sharing real-time information
- Displaying travel times
- Implementing active traffic management during & after construction
- Transportation Management Plan and effective incident management
- Establishing high bandwidth and redundant communications backbone
- Enabling connected/automated vehicles in the future

I-66 Operations Working Group
- Developing corridor vision, Concept of Operations and needs
Public-Private Partnership Process

• Similar to the 95 and 495 Express Lanes projects, the I-66 Project is advancing as a Public Private Partnership (P3)

• The Virginia Office of Public-Private Partnerships (VAP3) is working with VDOT and DRPT to evaluate the project as a P3 initiative, following Virginia’s updated 2014 P3 Guidelines

• The Project is being evaluated for risk, cost, benefit to the users and other project specific elements that bring value

• Overall project cost expected to be $2B - $3B
• Briefings to key stakeholder groups – more than 60 meetings to date
• Proactively scheduling briefings to impacted HOAs
• Project team available to brief interested groups upon request
• Media and stakeholder engagement
• Ongoing e-mail updates to interested stakeholders
• Dedicated website with up to date information
• New, interactive community discussion board on the project website – coming soon
## Key Milestones

<table>
<thead>
<tr>
<th>Key Milestones</th>
<th>Dates</th>
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<tbody>
<tr>
<td>Public Information Meetings</td>
<td>January/February 2015</td>
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<tr>
<td>Continued Public Outreach</td>
<td>Ongoing</td>
</tr>
<tr>
<td>Environmental Public Hearing</td>
<td>May 2015</td>
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<tr>
<td>Final Environmental Document</td>
<td>End of 2015</td>
</tr>
<tr>
<td>Design Public Hearing</td>
<td>TBD</td>
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<tr>
<td>Final contract and funding</td>
<td>December 2016</td>
</tr>
<tr>
<td>Construction Start</td>
<td>2017</td>
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<tr>
<td>Open to traffic</td>
<td>2021</td>
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TRANSFORM 66
INSIDE the Beltway

Investing in Multimodal Solutions

PROJECT OVERVIEW
I-66 Multimodal Improvements
Beltway to US 29 Rosslyn
I-66 Issues Reported in 2012:

- Eastbound & Westbound roadway congestion
- Congestion at interchanges
- Non-HOV users during HOV restricted period
- Orange / Silver Line Metrorail congestion
- Bus service impacted by roadway congestion
- Challenges to intermodal transfers
- W&OD and Custis Trail bottlenecks
- Limitations / gaps in Bike & Ped accessibility and connectivity
I-66 AM Period Existing Conditions
Results of MWCOG’s 2014 Analysis

**Eastbound Travel Lanes**

- 13% hybrid vehicles
- 21% is single occupant vehicle (in addition to hybrids)
  - Regularly congested conditions between:
    - VA 267 and George Mason Dr / Fairfax Dr
    - US 29 and Roosevelt Bridge
  - Speeds average 15 – 50 mph
  - Queue lengths of 3 – 5.5 miles

**Westbound Travel Lanes**

- Regularly congested conditions between:
  - Fairfax Dr and Westmoreland St
- Speeds average 20 – 50 mph
- Queue lengths of 2 – 3 miles

1 June 2014
I-66 PM Period Existing Conditions
Results of MWWCOG’s 2014 Analysis

Westbound Travel Lanes
• 18% hybrid vehicles\(^1\)
• 30% single occupant vehicles (in addition to hybrids)\(^1\)
• Regularly congested conditions between:
  – George Mason Dr and Sycamore St
  – VA 7 and I-495
• Speeds average 10 – 45 mph
• Queue lengths of 2 – 3 miles

Eastbound Travel Lanes
• Regularly congested conditions between:
  – VA 7 and Fairfax Drive
• Speeds average 15 – 50 mph
• Queue lengths of 3 – 4 miles

\(^1\) September 2013
Baseline assumptions for 2040 from Multimodal Study

- HOV changes from HOV-2+ to HOV-3+ throughout region
- I-66 westbound SPOT improvements 1, 2, and 3
- Silver Line Phase I and II (to Dulles)
- New and enhanced Priority Bus services on I-66, US 29, and US 50
- Transportation Demand Management (TDM) elements from the I-66 Transit/TDM Study
- Metrorail core capacity improvements – 8 car trains
Corridor activity since 2012:

- **August 2013 Supplemental Report**
  - Refined Package

- **Completed or Active Projects**
  - Active Traffic Management (ATM) underway
  - Spot 1 Widening WB – Completed December 2011
  - Spot 2 Widening WB – Under Construction
  - Bus on Shoulder – Under implementation, operational in 2015

- **Outside the Beltway project development**

- **Dec 9 letter from Secretary Layne**
  - Multimodal package of solutions

- **CLRP project submission, Jan 2015**
The purpose of the I-66 Multimodal Project inside the Beltway is to move more people and enhance connectivity in the corridor by improving transit service, reducing roadway congestion, and increasing travel options.
Identify and prioritize improvements from 66 Multimodal Study (2012/2013)

- Quickly implementable corridor improvements
- Tolling
- Transit
- Bicycle / Pedestrian
- Transportation Demand Management
- Integrated Corridor Management
- Future Widening
Environmental documentation to include:

- Tolling Element
- Multimodal improvements that require environmental clearance
- Future widening
Outreach

- **Project Working Group (PWG)**
  - VDOT, DRPT, Arlington County, Fairfax County, City of Falls Church

- **Inside Stakeholder Technical Advisory Committee (iSTAG)**
  - Arlington County
  - DDOT
  - FTA
  - MWCOG
  - NVTC
  - Town of Vienna
  - MDOT
  - City of Fairfax
  - Fairfax County
  - Loudoun County
  - NVRPA
  - PRTC
  - VRE
  - City of Falls Church
  - FHWA
  - MWAA
  - NVTA
  - Prince William Co.
  - WMATA

- **Elected Officials briefings**
- **Public Outreach**
  - Public Information Meetings, Public Hearing(s), Neighborhood groups
  - Website under development
### Major Project Milestones

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<tr>
<td>Submit Multimodal project to CLRP</td>
<td>January 2015</td>
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<tr>
<td>Level 2 Traffic &amp; Revenue Study</td>
<td>Mid 2015</td>
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<tr>
<td>Prioritize Multimodal solutions</td>
<td>2015</td>
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<td>Environmental document and hearing</td>
<td>2015</td>
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<tr>
<td>Tolling Design-Build procurement</td>
<td>Late 2015</td>
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<tr>
<td>Tolling Construction</td>
<td>2016</td>
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<tr>
<td>Begin first phases of multimodal solutions</td>
<td>2016-2017</td>
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<tr>
<td>Toll Day One</td>
<td>2017</td>
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