

Public Open House



I-66 Multimodal Study

Inside the Beltway

April 2012

CAMBRIDGE
SYSTEMS

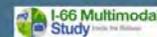
Transportation leadership you can trust.

Tonight's Meeting

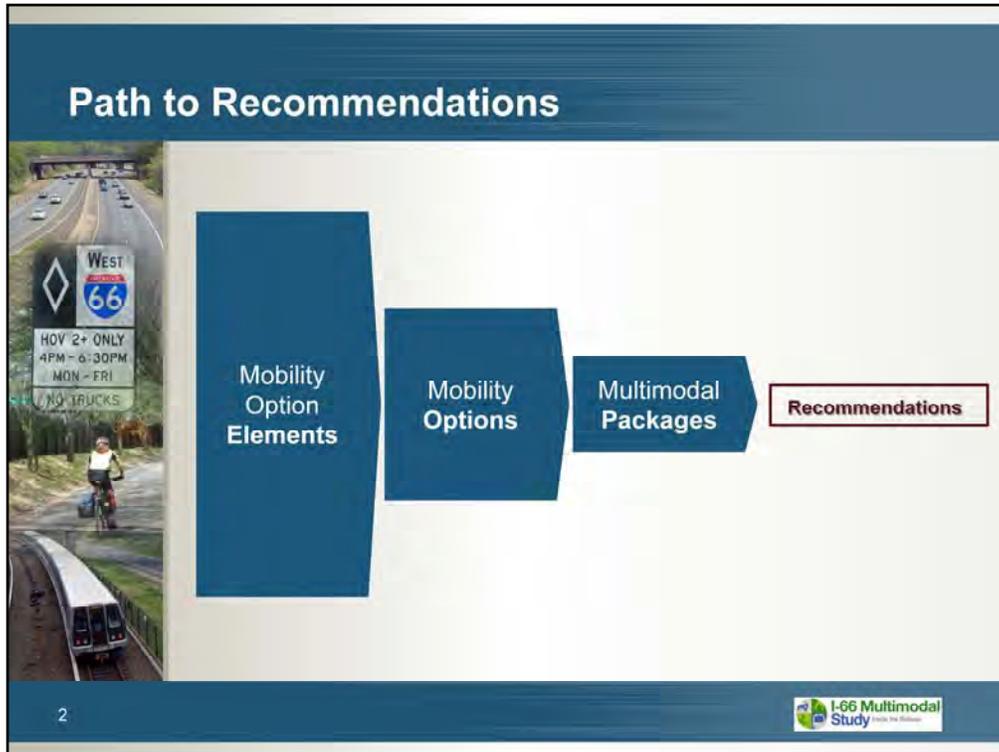


- **Overview of the progress since December**
 - » **Published Interim Report**
 - » **Completed stakeholder interviews**
 - » **Performed technical analysis on eleven Mobility Options**
 - » **Identified four Multimodal Packages**
 - » **Developed a Recommendations Framework**

1



The presentation boards and this PowerPoint provide an overview of the study and are intended to highlight the work that has been performed since the December round of public meetings. All posters are available on the study web page.



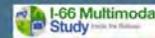
The eleven Mobility Options discussed at the December meeting have since been analyzed and reviewed and, with guidance from the Participating Agency Representatives Committee (or PARC), a set of four Multimodal Packages has been offered as potential means to reduce congestion and improve mobility in the I-66 corridor.

Baseline Assumptions for 2040



- **Financially Constrained Long-Range Plan (CLRP)**
 - » I-66 restricted to Bus/HOV 3+ in the peak direction
 - » I-66 westbound spot improvements #1, #2, #3
 - » Same I-66 HOV hours of operation as today
 - » Silver Line Phase I (to Wiehle Avenue) and Silver Line Phase II (to Dulles)
- **Metrorail core capacity improvements, including systemwide 8-car trains**
- **Plus, bus services and TDM measures recommended in the I-66 Transit/TDM study**
 - » Priority Bus services on I-66, U.S. 29, and U.S. 50

3



The technical evaluation for this project is in reference to a 2040 Baseline scenario. This Baseline includes all of the improvements in the region's financially constrained long-range plan (or CLRP), plus bus services and transportation demand management (or TDM) measures recommended in the I-66 Transit/TDM Study, completed in 2009. In addition, improvements addressing Metrorail core capacity are included in the Baseline.

Multimodal Package #1



Convert existing I-66 to a Bus/HOV/HOT lane system

All Day

←	◇ Free: Bus/HOV 3+	Toll: SOV, HOV 2	→
←	◇ Free: Bus/HOV 3+	Toll: SOV, HOV 2	→
→	Free: Bus/HOV 3+	Toll: SOV, HOV 2 ◇	→
→	Free: Bus/HOV 3+	Toll: SOV, HOV 2 ◇	→

- » Enhance bus transit services
- » Include ICM, TDM, and bicycle/pedestrian improvements

- SOV and HOV 2 vehicles would be tolled
- Bus/HOV 3+ vehicles would not be tolled
- Applies to all lanes in both directions 24/7

4

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Multimodal Package #1 focuses on conversion of the existing I-66 to a high-occupancy toll lane facility 24 hours a day, seven days a week.

Multimodal Package #2



- SOV and HOV 2 vehicles would be tolled
- Bus/HOV 3+ vehicles would not be tolled
- Applies to all lanes in both directions 24/7

Convert I-66 to a Bus/HOV/HOT lane system and add a lane in each direction
All Day

←	◇ Free: Bus/HOV 3+	Toll: SOV, HOV 2	---
←	◇ Free: Bus/HOV 3+	Toll: SOV, HOV 2	---
←	◇ Free: Bus/HOV 3+	Toll: SOV, HOV 2	---
---	Free: Bus/HOV 3+	Toll: SOV, HOV 2	◇ →
---	Free: Bus/HOV 3+	Toll: SOV, HOV 2	◇ →
---	Free: Bus/HOV 3+	Toll: SOV, HOV 2	◇ →

- » Enhance bus transit services
- » Include ICM, TDM, and bicycle/pedestrian improvements

5



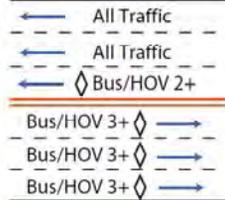
Multimodal Package #2 adds a lane to I-66 in each direction and operates as a high-occupancy toll lane facility 24 hours a day, seven days a week.

Multimodal Package #3

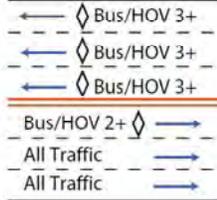


● Add a Bus/HOV lane to I-66 in each direction

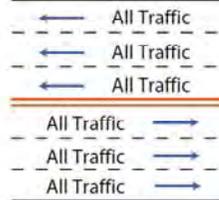
Morning Peak



Evening Peak



Off-Peak



- » Enhance bus transit services, including on U.S. 50
- » Include ICM, TDM, and bicycle/pedestrian improvements

Multimodal Package #3 adds a Bus/HOV lane to I-66 in each direction, which operates as such in both directions during peak periods.

Multimodal Package #4



Enhanced Bus Service, Including Buses on Shoulders Along U.S. 50



- Increased frequency on local, commuter, and regional bus services.
- Headway on individual routes that were not part of trunk line services were set at a minimum of 15 minutes in the peak and 30 minutes in the off-peak.
- Trunk line routes were set for a combined headway of 15 minutes in the peak and 30 minutes in the off-peak.

- » Enhance many bus transit services, including on U.S. 50
- » Include ICM, TDM, and bicycle/pedestrian improvements

7



Finally, Multimodal Package #4 provides for enhanced transit service in the study area and new bus-on-shoulder operations on U.S. 50.

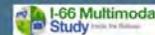
Sensitivity Tests



- **Test 1: Modified Multimodal Package 1**
 - » HOT lanes are during peak periods only

- **Test 2: Modified Multimodal Package 3**
 - » Added lanes are HOT lanes

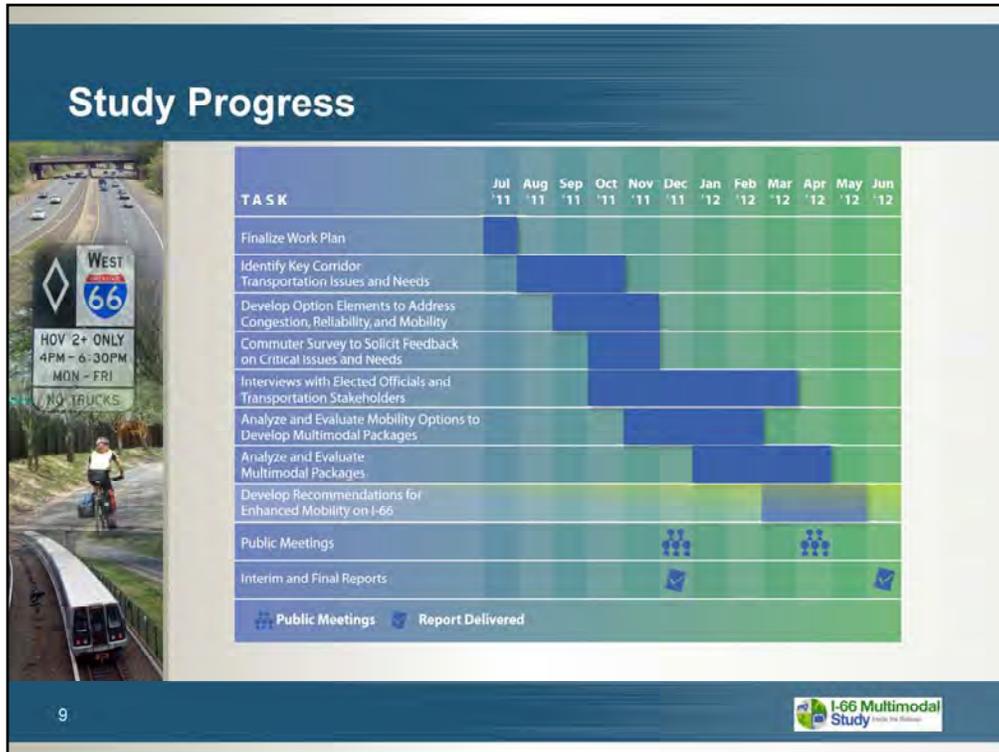
8



Sensitivity tests were performed to look at the performance of two variations on the multimodal packages.

In Test #1, Multimodal Package #1 was modified to test having the HOT operations only be in effect during peak periods.

In Test #2, Multimodal Package #3 was modified to test adding a HOT lane rather than a Bus/HOV lane.



In the next few weeks, the study team and PARC will formulate the recommendations from the study. Input received in the next few weeks via the public comment process, will be used to guide these recommendations, lessons learned, and the development of the final report.

Recommendations Framework



- **Review package benefits against study goals**
 - » Reduce Congestion
 - » Improve Mobility
- **Identify meritorious aspects and unique challenges of each package**
- **Provide decision support for future corridor investments**

10



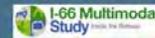
The recommendations framework being employed in this study recognizes that each of the multimodal packages has meritorious aspects as well as unique issues which can be outlined. There are also several policy considerations which have been identified. For example, adding tolls to the existing roadway without capacity expansion would be without a regional precedent. Widening I-66 may carry other challenges. Using a recommendations framework that accepts that different policy assumptions may lead to different recommendations, was seen as a useful way to organize the study findings.

Key Dimensions



- Core purposes of package
- Performance against study goal
- Other factors of interest
- Unique issues
- Implications for recommendations

11



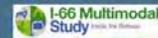
The recommendations framework has been organized to array information about each package across several dimensions. The posters on display in the Open House present each package, roughly following these key dimensions.

Key Dimensions



- Core purposes of package
- Performance against study goal
- Other factors of interest
- Unique issues
- Implications for recommendations

11



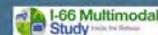
First, a description of the design of the package, including its core purpose(s) is provided.

Key Dimensions



- Core purposes of package
- Performance against study goal
- Other factors of interest
- Unique issues
- Implications for recommendations

11



Second, how each package performs against the study goals; specifically, reducing congestion (both highway and transit) and improving mobility is outlined.

Key Dimensions



- Core purposes of package
- Performance against study goal
- Other factors of interest
- Unique issues
- Implications for recommendations

11

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Third, discussion regarding other factors or dimensions of interest, including relevant market research and stakeholder input is noted.

Key Dimensions



- Core purposes of package
- Performance against study goal
- Other factors of interest
- Unique issues
- Implications for recommendations

11



Fourth, unique issues with each package are discussed. Just a few examples include: 1) introducing tolling to existing capacity or even additional capacity could carry special considerations; 2) widening I-66 inside the Beltway to a cross-section with three lanes in each direction is more physically difficult in certain stretches than others; 3) adding the shoulder bus lane requires substantial investment in certain segments of U.S. 50; 4) the robust transit program articulated in the fourth multimodal package, and, indeed, all packages, requires substantial additional annual funding to be secured.

Key Dimensions



- Core purposes of package
- Performance against study goal
- Other factors of interest
- Unique issues
- Implications for recommendations

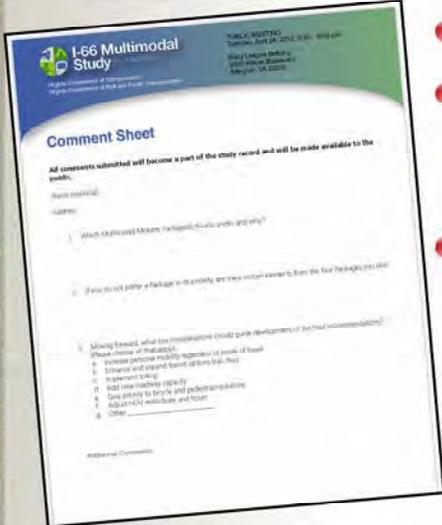
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For each Multimodal Package, the fifth key dimension, “Implications for Recommendations,” includes a synthesis of the opportunities and issues with each package and, as will be developed more fully in the final report, provide a guide to a way forward should policy-makers clear particular hurdles. For example, if tolling existing capacity is deemed possible but additional capacity beyond that already programmed in the CLRP is not, Multimodal Package #1 provides viable improvements to reduce congestion and improve mobility in the I-66 corridor versus the Baseline condition.

Your Comments Needed





- **Comment Sheet**
- **E-mail**
- » **info@
i66multimodalstudy.com**
- **Telephone**
- » **855-788-3966
855-STUDY66**

12


We are very interested in your feedback on the Multimodal Packages and recommendation framework and have established several ways to receive it:

- > First, there is a Comment Sheet available on the project website.
- > Alternatively, you can send us an email or leave us a voicemail.
- > For attendees of the Open House, a Court Reporter was available to transcribe oral comments and a team of personnel were present and stationed around the various posters to answer questions.

On behalf of the Virginia Department of Transportation, the Virginia Department of Rail and Public Transportation, and the members of the Participating Agency Representatives Committee, thank you very much for your interest.