



# **Evaluation and Rating of Significant Transportation Projects in NoVA**

## **Basic Project Evaluation and Rating**

**NVTA – July 24, 2014**

## Briefing Outline

- **Basic Ratings – Purpose**
- **Methodology / Assumptions**
- **Basic Ratings – Performance Measures**
- **Basic Ratings – 2020 and 2040**
- **Next Steps**

## Basic Evaluation and Rating - Purpose

- Addresses the difference in the schedules for the HB 599 Study and NVTA's Six Year Program Development
- Basic / high-level rating will enable NVTA to begin development of its Six Year program (2.5 years)
- These ratings are based on the results of regional level analysis using the TPB travel demand model
- Traditional travel demand models (like TPB model) are not sensitive to small, traffic operational improvements
- Demand model outputs feed into the more detailed analysis and rating using operational simulation models
- The detailed operational ratings distributed in December may differ from the basic rating for some projects

## Basic Analysis Methodology

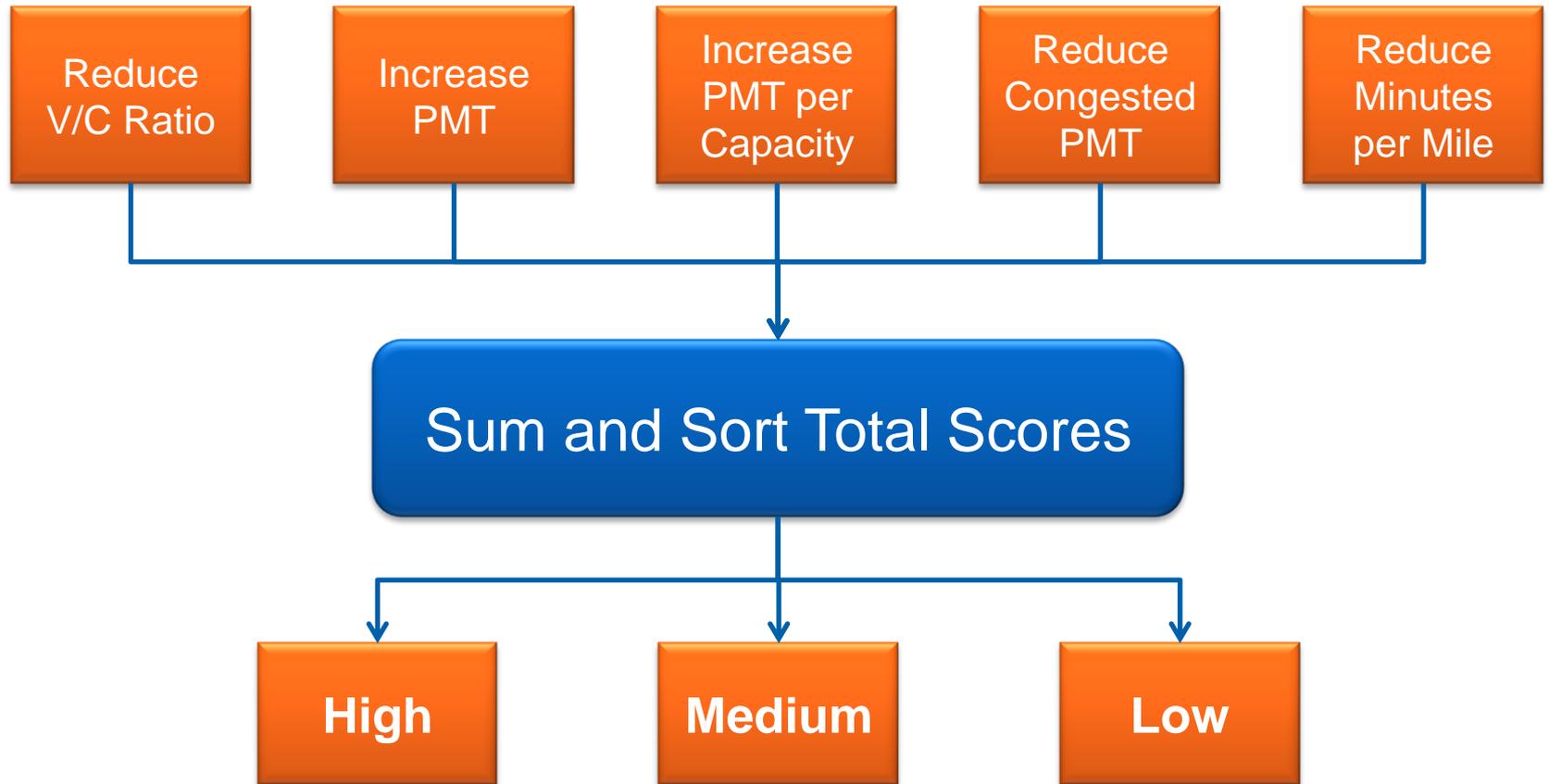
- **Use the COG/TPB Regional Travel Demand Model**
  - Full runs of the TPB Version 2.3.52 model
  - Highway and Transit networks as in currently adopted 2013 CLRP
  - Land Use as in the adopted Round 8.2 Cooperative Forecasts
- **Modify the TPB model (speeds and capacities) for projects that focus on traffic operational improvements**
- **Calculate the project's impact using 5 specific performance measures**
- **Project's impact calculated by measuring the difference in performance measures with and without the project**
- **Basic ratings provided as High, Medium, Low**

## Performance Measures for Basic Ratings❖

- **Calculated on the Roadway being improved**
    - Reduce the maximum peak period V/C ratio on the project facility
    - Increase the daily person miles of travel (PMT) on the project facility
    - Increase the PMT per Capacity increase on the project facility
  - **Calculated over an Area experiencing the greatest impact**
    - Reduce the total congested PMT in the project impact area
    - Reduce the minutes of travel time per mile in the project impact area
- ❖ *These performance measures are used for the Basic Rating only; the Detailed Rating will use a different set of measures, previously reviewed by the NVTA and CTB members.*

# Rating Process

Measure Change in Metric Due to the Project



Assign 1/3 of Projects to each Rating based on Total Score

## Basic Project Ratings

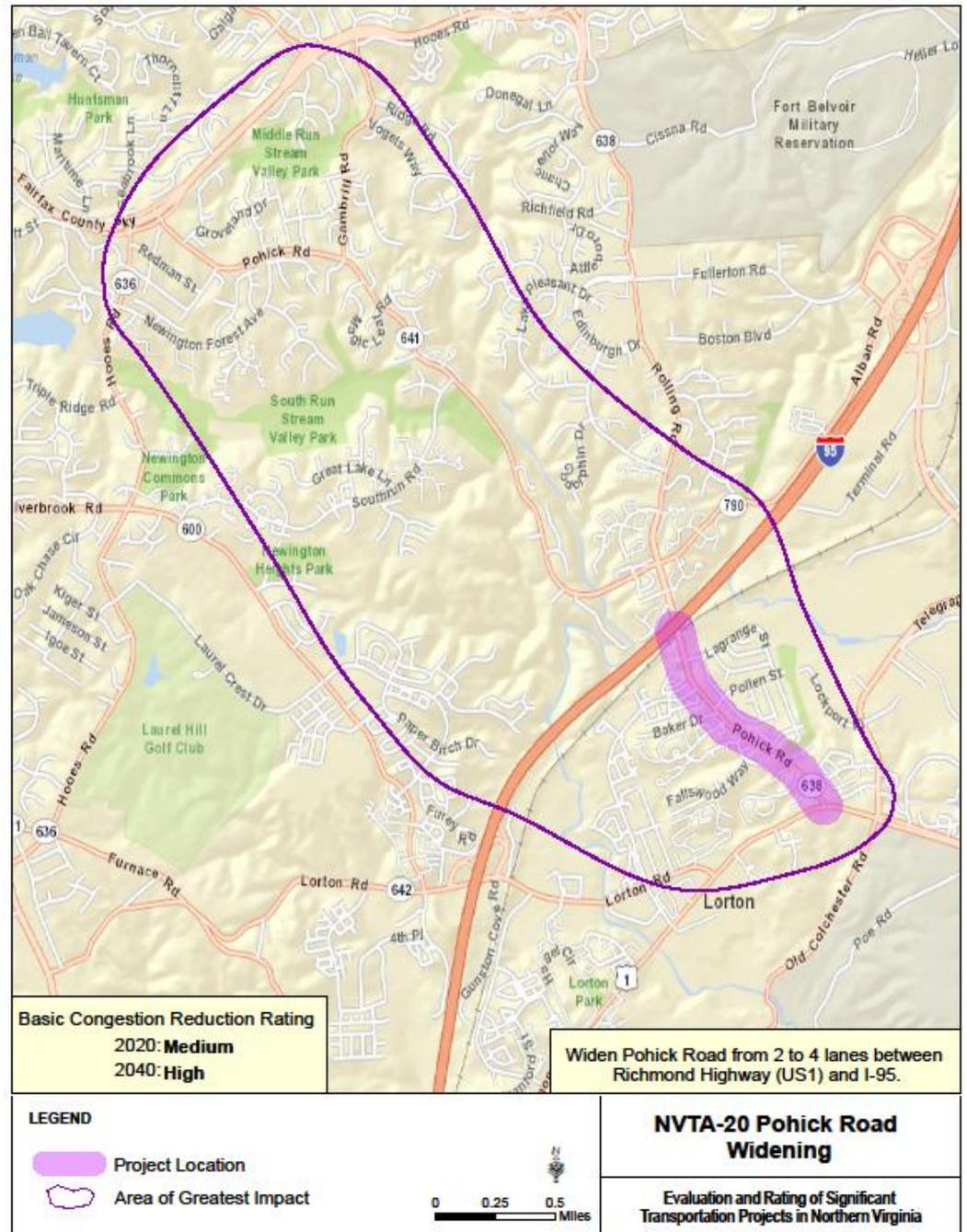
- Basic ratings are provided as an interim step in the Evaluation and Rating of Significant Projects study. They were provided at the request of NVTA, to assist them in the selection of projects for funding. The basic ratings for each project on the following slide **will be replaced** by the detailed rating in December.
- Basic ratings represent high level estimates of the congestion reducing potential of the 37 projects, based on a regional analysis.
- The basic rating for each project does not indicate the projects' priority, e.g. a project rated low for congestion reduction may not necessarily be a low priority for the region.
- More detailed **numeric** ratings are currently under development, and may result in a different rating for some projects. Each project's rating in relation to the other projects may change as well.
- The detailed ratings will be based on a different set of performance measures, specifically tailored to the TRANSIMS modeling tool that is being used.
- Projects for the basic rating were grouped into high, medium and low, assigning 1/3 of projects to each based on a total score. **The use of high, medium and low will not be repeated for the detailed rating.**

## Basic Project Ratings: based on total scores with 1/3 of projects assigned to each rating

Project Name (* = new facilities)		Location	2020 Rating	2040 Rating
NVTA-1	Columbia Pike Multimodal Streets	Arlington	Low	Low
NVTA-2	Rolling Road Widening	Fairfax	High	High
NVTA-3	US 29 Widening	Fairfax	Medium	Medium
NVTA-4	Braddock Road Widening	Fairfax	Low	Medium
NVTA-5	South Van Dorn St & Franconia Rd Interchange	Fairfax	High	High
NVTA-6	Frontier Dr Extension*	Fairfax	Low	Low
NVTA-7	Fairfax County Pkwy Improvements	Fairfax	High	High
NVTA-8	Belmont Ridge Rd	Loudoun	Low	Low
NVTA-9	Loudoun County Parkway*	Loudoun	High	High
NVTA-10	Route 7 Bridge Widening	Fairfax	Medium	Medium
NVTA-11	US 1 Widening and Relocation - Dumfries	Dumfries	High	High
NVTA-12	US 1 Widening - Fairfax	Fairfax	High	Medium
NVTA-13	Route 15 Bypass/Edwards Ferry Road Interchange	Leesburg	Medium	Low
NVTA-14	Northfax Intersection (US29/50 @ VA123)	City of Fairfax	Low	Low
NVTA-15	Jermantown/US 50 Roadway Improvements	City of Fairfax	Low	Low
NVTA-16	Frying Pan Road Widening	Fairfax	Low	Medium
NVTA-17	Kamp Washington Intersection (US 50/29 @ VA236)	City of Fairfax	Medium	Low
NVTA-18	Real-Time Adaptive Traffic Control & Management	Alexandria	Medium	Medium
NVTA-19	Glebe Rd Corridor ITS Improvements	Arlington	Medium	Medium
NVTA-20	Pohick Road Widening	Fairfax	Medium	High
NVTA-21	Shirley Gate Road Extension*	Fairfax	Low	Low
NVTA-22	Northstar Blvd Extension*	Loudoun	High	High
NVTA-23	Route 7/690 Interchange	Loudoun	High	High
NVTA-24	Route 234/Grant Avenue Reconstruction	Manassas	Low	Medium
NVTA-25	Main St & Maple Ave Intersection	Purcellville	Low	Low
NVTA-26	Route 7/Battlefield Pkwy Interchange	Leesburg	Medium	Medium
NVTA-27	East Elden Street Widening	Herndon	Medium	Low
NVTA-28	Route 1 Widening - Prince William	Prince William	Medium	High
NVTA-29	Route 15 Widening	Prince William	Low	Medium
NVTA-30	Route 28 Widening - Fairfax	Fairfax	High	High
NVTA-31	Route 28 Widening - Prince William	Prince William	Medium	Low
NVTA-32	Route 28 - Godwin Drive Extension*	Manassas/PW	High	High
CTB-1	Route 294 (PW Pkwy) Grade Separation	Prince William	High	Medium
CTB-2	Route 7 Widening	Fairfax	High	High
CTB-3	I-395 Southbound Widening	Alexandria	Low	Low
CTB-4	Fairfax County Pkwy - I-95 to US1	Fairfax	High	High
CTB-5	Fairfax County Pkwy - I 95 to US 1 (County Alt)	Fairfax	Medium	Medium

# Project Summary Map Highlights

- Project location
- Description of the project
- Area of greatest impact
- Basic Congestion Reduction Rating – 2020 and 2040



## Next Steps

- June 19 – Preliminary Evaluation and Ratings Review By Stakeholders Jurisdiction Representatives
- June 26 – Review responses to stakeholder suggestions for changes to performance measures and rating methods
- June 25-27 – met with each jurisdiction to review project coding and analysis methods
- June 27 – July 8 - Update the 2020 ratings (response to comments) and add the 2040 ratings
- July 11 – NVTA-PIWG – review ratings
- July 16 – NVTA-TAC meeting – review ratings
- **July 24 – NVTA meeting – present basic project ratings**
- **November 2014 – draft detailed ratings available**
- **December 2014 – publish detailed ratings**



*Questions / Comments*

**THANKS!**

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