

Northern Virginia Transportation Authority

The Authority for Transportation in Northern Virginia

TECHNICAL ADVISORY COMMITTEE Wednesday, February 17, 2016, 7:00pm NVTA Office 3040 Williams Drive, Suite 200 Fairfax, Virginia 22031

AGENDA

I. Call to Order/Welcome

Chairman Boice

II. Meeting Summary of December 20, 2015 Meeting

Recommended Action: Approval [with abstentions from those who were not present]

Discussion/Information

III. NVTA Update

Ms. Backmon, Executive Director

IV. TransAction Update

Mr. Jasper, Program Coordinator

- 1. Introductory Video
- 2. Objectives / Measures
- 3. Analytical Approach

Adjournment

V. Adjourn

Next Meeting: March 16, 2016 7:00pm NVTA Office



Northern Virginia Transportation Authority

The Authority for Transportation in Northern Virginia

TECHNICAL ADVISORY COMMITTEE Wednesday, December 16, 2015, 7:00pm NVTA Office 3040 Williams Drive, Suite 200 Fairfax, Virginia 22031

SUMMARY NOTES

I. Call to Order/Welcome

Chairman Boice

- Chairman Boice called the meeting to order at 7:05pm.
- Attendees:
 - Members: Chairman Randy Boice; Agnes Artemel; Bob Dunphy; Meredith Judy; Pat Turner.
 - o NVTA Staff: Monica Backmon (Executive Director); Keith Jasper (Program Coordinator); Sree Nampoothiri (Program Coordinator).
 - o Other: Noelle Dominguez (Fairfax County); Dalia Leven (AECOM)

II. Meeting Summary of October 21, 2015 Meeting

Chairman Boice

 Ms. Artemel moved to approve the minutes of October 21, 2015 meeting; seconded by Mr. Dunphy. Motion carried unanimously (with abstention from Ms. Judy and Ms. Turner who were not present at the October 21, 2015 meeting.)

Action

III. Chair/Vice-Chair positions

Chairman Boice

• The Committee unanimously approved the continuation of Mr. Boice as Chairman and Mr. Fahl as Vice-Chair of the Technical Advisory Committee. These recommendations will be communicated to Chairman Nohe, NVTA, who will be responsible for making the appointments.

IV. Calendar Year Meeting Schedule

Chairman Boice

• For the 2016 calendar year, the Committee unanimously approved to schedule meetings on the third Wednesday of every month at 7:00PM at the NVTA offices.

Discussion/Information

V. NVTA Update

Ms. Backmon

Ms. Backmon provided a summary of the December 10th NVTA meeting

- The Authority approved the FY2017 Program preliminary candidate list that included 24 projects.
- o The Authority adopted the 2016 calendar and will meet 2nd Thursday every month at 7:00PM at the NVTA offices.
- The Authority approved a non-binding resolution expressing its willingness to consider providing funding to one or more I-66 Outside the Beltway projects that are included in the NVTA's TransAction 2040 Plan, following a due selection process and in accordance with the Chapter 766 and the NVTA Act.
- The Authority adopted the Vision and Goals of the TransaAction update.
- In response to Chairman Boice's question, Ms. Backmon further explained that the Route 28/I-66 project submitted for the FY2017 program will be considered part of the I-66 project and will go through the HB599 evaluation and the NVTA selection process.

VI. NVTA FY2017 Program

Mr. Jasper

- Mr. Jasper presented the preliminary project list of the FY2017 Program approved by the Authority on December 10th.
- There are a total of 24 projects for a total request of nearly \$668 million.
- The available PayGo fund is about \$230 million with the option of issuing bonds at the discretion of the Authority.
- Nearly half of the projects are continuation projects from past programs.
- Projects are a mix of road, transit, and non-motorized modes.
- All projects will be evaluated through the HB599 process.
- In response to Ms. Judy's question, Mr. Jasper explained that the HB599 process will start soon and actual evaluations will happen mostly in January and February of 2016, at the same time as the NVTA analysis process. The initial results will be shared with the Technical Advisory Committee in April 2016. The results are expected to be released for public hearing at the May Authority meeting, with the hearing taking place in June 2016.
- Mr. Jasper informed the Committee that the Project Implementation Working Group (PIWG) and the Authority considered the project selection criteria recommendations of the Technical Advisory Committee (TAC) before finalizing the criteria.
- In response to Mr. Boice's request, Mr. Jasper confirmed that the project details will be published on the NVTA website after processing the list and adding more information sometime in January.

VII. TransAction

Mr. Jasper

- Mr. Jasper presented the results of Benchmark Survey conducted in October. The survey results are published on the TransAction website: www.NVTATransAction.org.
- Mr. Jasper presented the Vision and Goals, as approved by the Authority at its December 10th meeting, as well as sample objectives. Objectives and

- corresponding performance measures will be developed in the coming weeks/months.
- Ms. Artemel stated that Goal #1 Objective #4 reads more like a way to achieve the objectives. Ms. Artemel suggested reversing the order of the wording of the objective. Ms. Leven explained that this is a preliminary list only and will be reviewed and revised.
- Ms. Artemel suggested to include specific language about transportation assets such as Dulles Airport since Dulles Airport is planning on increasing its profile on freight transport, which can have considerable impact on our transportation system.
- Mr. Jasper pointed out that there are some objectives that address markets and their performance measures can directly deal with the impacts.
- Ms. Judy inquired about the incorporation of language on concentrated growth
 that can have high impact on travel time. Ms. Leven mentioned that land use
 planning decisions are made by member jurisdictions, not NVTA. Mr.
 Nampoothiri pointed out that there are some objectives that directly support
 concentrated growth and activity centers.
- Ms. Backmon emphasized that projects should be consistent with the local plans for smooth implementation and the NVTA follow the latest CLRP land use scenario that is vetted with local jurisdictions.
- Ms. Boise suggested to incorporate 'balanced approach on modal distribution' into the goals.
- Ms. Artemel pointed out that the 'fiscal sustainability' in the vision is not reflected in the goals. Mr. Jasper informed that this language was added by the Authority and consideration will be given to incorporating this into goals and objectives.
- In response to Mr. Boice's inquiry, Mr. Jasper mentioned that the goals/objectives/measures must be finalized by March 2016 in time for the public engagement activities. However, there will still be flexibility for modifications based on public comments.
- Mr. Dunphy mentioned that the congestion reduction is the most important factor for the public and public expectations need to be managed. The public will need to be educated since congestion depends a lot on life styles.
- Mr. Dunphy requested that the Committee discuss how congestion is measured. Ms. Leven indicated the team had compiled an extensive list of congestion measures. These will be discussed at the January 2016 TAC meeting.

Adjournment

VIII. Adjourn

Chairman Boice

• Meeting adjourned at 8:35pm.

NVTA TransAction Sequencing and Detailing of Technical Tasks Draft January 8, 2016

Overview: Current Scope and Proposed Restructuring

Pro	posed Task Restructuring	Original Tasks Covered		
5.	Review of Regional Transportation Plans and Patterns	5. Identification of Regional Transportation Needs		
	5.1. Review Existing Plans	5.1 Review of Existing Plans		
	5.2 Demographic and Land Use Analysis	5.2 Identify Demographic and Land Use Data for		
		Analysis		
	5.3 Review of Regional Trip Patterns	5.3 Definition of Regional Projects		
	5.4 Develop database of Previously Planned Projects	5.4 Identify Transportation Plans and Projects for Analysis		
		 Identify New Projects for Inclusion in Plan (bottom- up) 		
	5.5 Project Selection Methodology	5.3 Definition of Regional Projects		
	5.6 Identify New Projects for Inclusion in Plan (Bottom- up)	 5.5 Identify New Projects for Inclusion in Plan (bottom- up) 		
	.,	.,		
6.	Development of Future Scenarios, Needs, and			
	Solutions			
	6.1. Development of Future Scenarios	Task 6		
	6.2. Needs Assessment	5.3 Definition of Regional Projects		
	6.3. Refine Performance Measures	5.7 Identify Final Performance Measures		
	6.4. Develop Corridor Solution Packages	Task 6		
		 5.6 Identify New Projects for Inclusion in Plan (top-down) 		
7.	Analysis			
	7.1 Travel Demand Model Validation	7.1 Travel Demand Model Validation and Runs		
	7.2 Baseline Travel Demand Model Runs	7.1 Travel Demand Model Validation and Runs		
	7.3 Travel Demand Model Runs – Alternative Futures and Solution Packages	7.1 Travel Demand Model Validation and Runs		
	Š	7.2 Analysis of Madel Output		
	7.4 Analysis and Visualizations of Model Output and Network Performance	7.2 Analysis of Model Output		
	Network Performance	7.3 Development of Visualizations Showing Network Performance		
	7.5. Do Evaluation Process			
	7.5 Re-Evaluation Process	7.4 Re-evaluation Process		
8. F	Ranking of Corridor Solutions	8. Ranking of Projects		

Proposed Approach: Task Details for Discussion

5 Identification of Regional Transportation Needs

5.1 Review of Existing Plans (draft report complete)

Review regional and jurisdictional plans highlighting any conflicts or inconsistencies between plans, especially considering TransAction 2040 and the most recent CLRP.

Note how the plans relate to the revised TransAction goals/objectives.

5.2 Demographic and Land Use Analysis (draft report complete)

Memo detailing land use and demographic changes forecast for NoVA in 2040. High-level analysis of changes to forecasts since TransAction 2040. Include a high-level comparison to the adopted land use at the end of the project (Round 9.0?)

5.3 Review of Regional Trip Patterns

High level review of existing and baseline 2040 travel patterns: trip lengths by purpose, time of day, mode share, trips to/from RACs, major travel markets. Key input for discussion of Regional Projects.

5.4 Develop database of Previously Planned Projects

Database of projects from TransAction 2040, Unfunded Projects Database, and other plans completed since 2012 as identified in Task 5.1. Identify projects that have already been constructed.

Create GIS maps to help identify duplications/conflicts/relationships.

5.5 Project Selection Methodology

Replaces previous task 5.3 (Definition of Regional Projects)

To be based on the land use and demographic analysis (Task 5.2) and regional travel patterns (Task 5.3). Develop methodology that will be used to develop corridor solution packages including:

- Criteria to identify projects that will be included in a corridor solution package
- Potential themes for corridor segments

5.6 Identify New Projects for Inclusion in Plan (Bottom-Up)

Distribute results of 5.4 for review by jurisdictions to clarify details on specific projects and add projects not included in other plans.

Sort potential projects into categories or "themes" that will ultimately guide the creation of solution packages in Task 6.4. Package "themes" will help characterize our thinking and project selection criteria (i.e. transit/multi-modal focused, technology-focused, management-focused, congestion-relieving, neighborhood-focused, etc.).

This task also includes coordination with jurisdictions/agencies to clarify projects for which we don't have all the necessary details.

6 Development of Future Scenarios, Needs, and Solutions

6.1 Development of Future Scenarios

Original Task 6 scope requires at least three different "future scenarios" in addition to the CLRP baseline, with different levels of investment.

The proposed approach would include the CLRP baseline plus two or three "future scenarios" focused on major risk factors that impact decisions about the plan. Examples would include assumptions about behavior, demand, technology, or funding priorities that would result in substantially different travel conditions. Resulting characteristics could be significant reductions in peak period travel due to telework, or large increases in network capacity due to technology improvements. Review the "future" envisioned by each plan from Task 5.1 to see if they can help develop the future scenarios.

Define future scenarios (including Baseline), and any required inputs or assumptions. The assumed impacts on travel conditions are more important than the details about how these impacts are achieved. The scenarios should be clearly different from one another to highlight the effects of policy and technology decisions.

Develop relative probabilities of each future scenario. Each should be reasonable but doesn't need to be highly probable.

6.2 Needs Assessment

Based on results of Baseline model analysis (Task 7.2) identify major needs and issues on the network. Consider future scenarios to identify additional/different needs to be addressed if the same planned CLRP projects are implemented under these different futures.

Summarize needs by corridor (or corridor segment, as appropriate).

6.3 Refine Performance Measures

Refine performance measures that will be used to compare corridor solution packages. Comparing future scenarios within a corridor and between corridors can help identify what should be included in the plan and help prioritize initial funding decisions.

Develop targets for selected objectives.

Identify criteria that will be used to identify/quantify the effects of individual projects within a corridor solution package. For example: Does it attract substantial traffic or resolve a specific problem identified in the Baseline analysis?

6.4 Develop Corridor Solution Packages

Develop corridor-based solution packages based on the projects listed in Tasks 5.4 and 5.6. Multiple packages may be developed for each corridor. The solution packages should be corridor-based, and may include additional/different components for different segments (urban/suburban) of the corridor, but the transitions between segments should be logical and smooth.

As necessary, additional projects/solutions will be developed to address remaining corridor "gaps" to incorporate the old Task 5.6 – "top down" project development.

7 Analysis

7.1 Travel Demand Model Validation

Development and validation of the model for a base year using available data (traffic counts, transit ridership, roadway speeds, etc.)

7.2 Baseline Travel Demand Model Runs

Baseline travel demand model runs will be performed for each of the future scenarios defined in Task 6.1. Will be used to identify corridor needs (Task 6.2) and ultimately calculate the impacts of corridor solution packages in Tasks 7.3 and 7.4.

7.3 Travel Demand Model Runs – Alternative Futures and Solution Packages

Travel Demand Modeling will be performed for each corridor solution package developed (Task 6.4) to test impacts across the range of future scenarios (Task 6.1). Corridor solutions and future scenario combinations will be modeled together whenever possible to maximize efficiency of this task, especially where impact areas are small or if solutions are related under similar "themes".

We will not be performing a model run for each project individually.

For discussion: Consider putting all of the solution packages with similar themes together for an initial NoVA impact assessment and then decide if they need to be modeled separately. The number of total model runs may vary based on similarities among corridor solution packages.

7.4 Analysis and Visualizations of Model Output and Network Performance

Tabulate and compare results of model runs from Task 7.3 based on the selected performance measures (defined in Task 6.3). Analysis of relative strengths and weaknesses of each corridor solution package across the multiple future scenarios, weighted by the probability of each future scenario. Maps, charts, and graphs will be developed that communicate performance impacts and benefits for technical staff, political leaders, and the general public.

7.5 Re-evaluation Process

Based on results of Task 7.4, identify whether major needs are still unaddressed by corridor solution packages. Realistic performance improvement targets can help with this.

May develop additional projects as add-ons to previously analyzed packages, or create hybrid packages. May subtract projects that don't perform as expected.

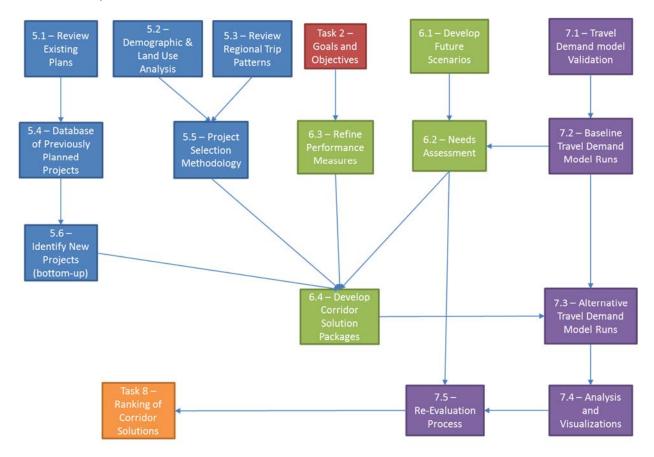
Re-evaluate new corridor packages for improved performance to put the best corridor solutions together into a final run of the recommended NoVA plan.

8 Ranking of Corridor Solutions

The overall goal is to develop a master plan for all of NoVA that makes sense in total and within each corridor. Illustrate the relative effectiveness of projects proposed in TransAction, in order to identify priorities, and help support development of NVTA's first full Six Year Program for FY2018-23.

For Discussion: We assume that individual project ratings are not required. More practicable/appropriate to assign priorities based on the magnitude of the impact by a project within the corridor solution. Alternatively, we could rank the projects within a preferred corridor package based on performance measures/methodology outlined in Task 6.

Revised Scope Structure





Methods for Measuring Congestion

January 13, 2016

The table below summarizes a range of measures that have been used in Northern Virginia and across the U.S. to quantify levels of congestion on transportation facilities and services. It is intended as a reference document to inform the ongoing discussion of measures that are most suitable for use in the TransAction planning process.

Measure(s)	What it measures	Considerations
Volume to Capacity	Volume of vehicle traffic divided by roadway capacity	Generally only applies to vehicle volumes
ratio (V/C)		• Hard to define ideal results (too high is bad, but too low could also be bad)
		Can be calculated for all facilities in a network, but may be more useful to select specific locations/cutlines
		• Modeled V/C ratios >1 are possible, which should not be theoretically attainable
Person throughput	Number of people passing a specific point on a facility per hour	Multimodal – accounts for all roadway users
		Not a measure of delay or inconvenience
		Requires definition of specific locations or cutlines of interest
Level of Service (LOS)	Vehicle delay at intersections or along segments of roadways categorized into letter grades ("A" through "F")	Generally only applies to vehicles, although several multi- modal LOS formulations have been developed
		• Hard to define ideal results ("F" is bad, but "A" is not the target in most areas)
		Calculated for a peak hour or 15-minute period
		Calculated for each intersection/segment individually
		Hard to show small improvements unless an intersection/segment changes LOS categories
		Commonly used measure that they public has seen before
Average travel speed	Average travel speed of people or vehicles	Not always comparable across modes (some modes are inherently slower) and may be biased towards highway solutions
- PMT/PHT		• Can be calculated for individual links/facility types or for
- VMT/VHT		the overall network as a whole
		Usually calculated for the peak period or peak hour

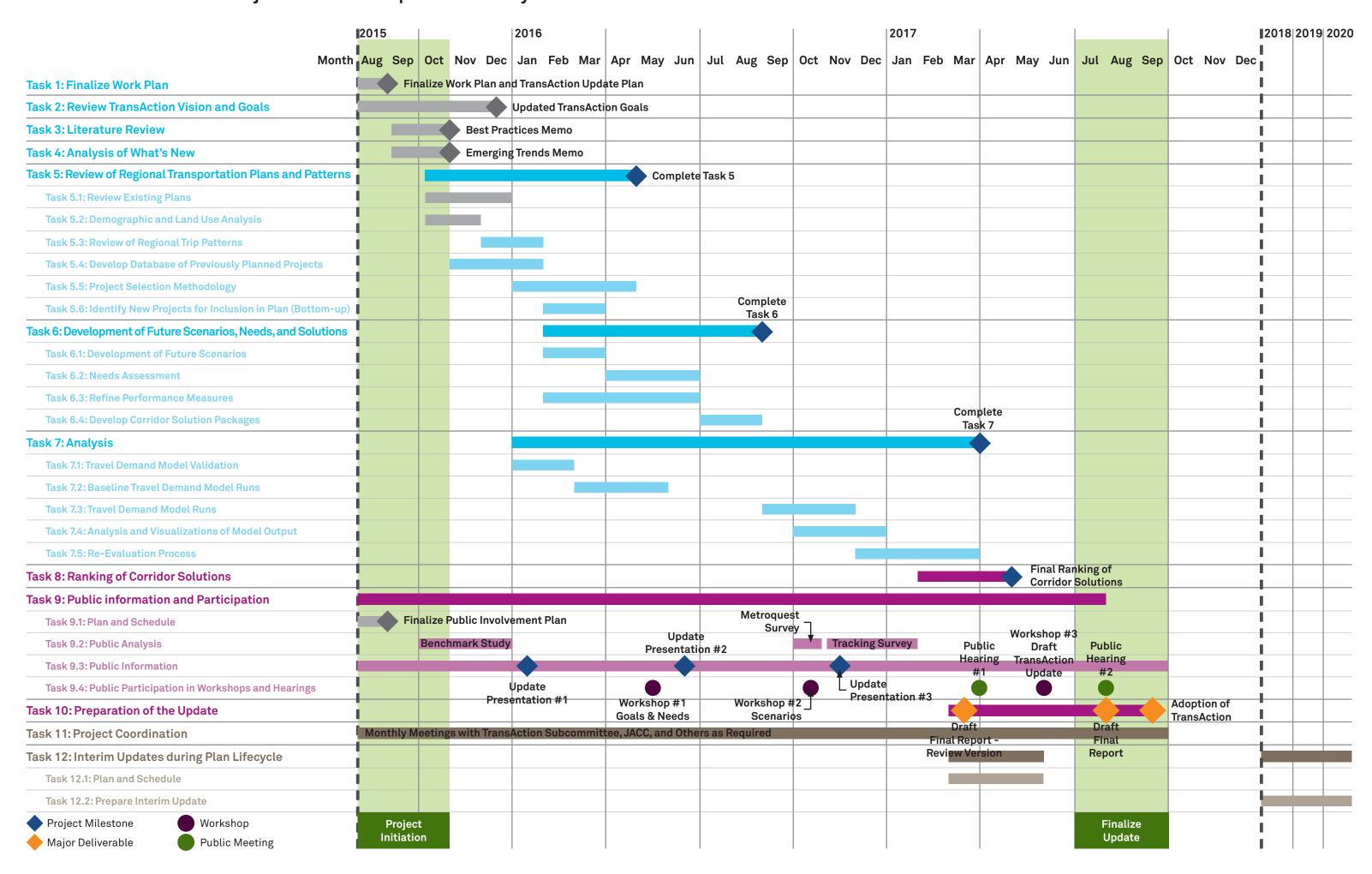


Measure(s)	What it measures	Considerations
Travel Time Index	Ratio of average peak period travel speed/time to free flow speed/time	Generally geared toward roadway travel (does not change for rail service, non-motorized modes)
		How to define the target, since achieving a TTI=1 is not realistically possible
		• Provides an indication of the severity of congestion at specific locations, but difficult to summarize for the entire network
Travel Delay	Additional time spent travelling due to congestion	Can be calculated as Person or Vehicle-Hours of delay
- Travel Delay/ vehicle-trip		Highlights the direct impacts of congestion (and scales to the severity of congestion and number of people effected)
- Travel Delay/capita		Only applies to roadway travel (buses and autos)
Бешусирии		• Normalizing by the number of vehicle-trips can help account for shifts to transit (but is best applied at the network level only)
Reliability Indices	Time required to plan an	Measures variability in travel rather than delays
- Buffer Index	on-time arrival 95% of the time compared to the	Can be applied to multiple modes
- Planning Time Index	typical travel time for the same trip	Incorporates the effects of special events, but does not address recurring congestion
		Difficult to predict over time
Total Travel time	Total time spent traveling	• Incorporates all modes of travel
		• Inherent bias against "slower" non-auto trips
		• Land Use considerations affect the baseline total travel time, so most appropriate to look at the change in travel time between scenarios
Average Commute	Average time spent commuting	• Inherent bias against "slower" non-auto trips
Time		Similar to total travel time, but more focused on a single trip purpose
Percent of	Congested vehicle-miles of	Doesn't quantify the actual time impact of congestion
Congested Travel	travel divided by total VMT (congested person- miles/ total PMT)	Presumes that all congestion is equally bad
		Accounts for changes to the total amount of travel occurring
Congested Duration	Amount of the day in which average travel speeds are less the X% of free-flow speed	Generally only used for vehicle travel
		• Requires a definition of when "congestion" occurs
		Accounts for the effects of peak-spreading or off-peak period congestion



Measure(s)	What it measures	Considerations
Congestion costs	Monetized value of delay resulting from congestion	• Identical to delay measures, but in different units
Roadway Congestion Index (RCI)	Measure of area-wide severity of congestion	Daily vehicle miles per lane-mile weighted by the type of road (freeway or arterial) compared with total expected vehicle miles under congested conditions, weighted by the roadway type (freeway or arterial roadway)
		Specific method of combining vehicle throughput measures for an entire network to create a single measure
Vehicle Miles Traveled (VMT)	Total number of miles traveled in a motor vehicle	Connection to land use (e.g. shorter trips correlate to lower VMT)
- Daily VMT		Not a direct measure of non-motorized travel
- VMT per capita		• Only accounts for congestion indirectly (as trips are likely to be shorter in a more congested network)
Person Miles	Total number of person-	Encompasses all modes
Traveled	miles traveled via any mode	Hard to define ideal results (are more miles good or bad?)
	mode	Does not account for congestion directly
PMT/VMT	Efficiency of Vehicle Travel	Highlights the use of high-occupancy modes
		Multi-modal
		Doesn't directly address the effects of congestion, but instead looks at the efficiency of vehicle travel
Person-hours in	Amount of time spent by travelers in congested conditions	Requires a definition of when "congestion" occurs
congestion		Only accounts for roadway travel (cars and buses)
Transit Crowding	Amount or percent of transit travel on crowded vehicles	Only accounts for transit, not autos
Accessibility	Average number of jobs accessible per HH within a certain time	• Typically uses 45 or 60 minute thresholds
		• Can be calculated separately for different modes, but can be difficult to combine
		• Indirectly accounts for congestion, as more jobs are accessible in an uncongested network (if land use is held constant)

NVTA TransAction 2040 Project Schedule - Updated January 2016





Transportation Action Plan for Northern Virginia

Technical Advisory Committee

February 17, 2016



Agenda

- 1. Goals/Objectives/Measures/Targets
- 2. Project Scope Restructuring
- 3. Analytical Approach
- 4. Next Steps



Goals-Objectives-Measures-Targets

Goals	Objectiv	ves	Example Measures	Targets?
		- Duration of congestion		
	1a	Reduce congestion and crowding experienced by travelers in the region	Peak hour/period throughput at specific locations	Target
	10		- Total delay	Candidate
4			- PHT in congested/crowded conditions	
		Improve travel time reliability	Peak hour reliability (buffer index or planning time index)	Target Candidate
	1b		- Congestion severity	
			- Incident clearance times	Carrarate
Maintain and enhance		Increase convenient access to regional jobs and destinations	- Access to jobs by households within a 45 or 60 minute peak period travel	Target Candidate
the economic strength	l 1c		time	
and quality of life of			- Average work trip distance or travel time	Januare
Northern Virginia			- Share of travel by Non-SOV modes	Target
	1d	Provide more route and mode options for trips	Ratio of Non-SOV travel time to SOV travel time (zone to zone average)	Candidate
			Percentage of region (HH, EMP) within 1/2 mile of transit	Garrarate
		Improve connections between major regional destinations	- Travel time between activity centers	
	1e		- Share of trips destined to activity centers	
			Percentage of trips contained within activity centers	
			- Combined average transportation costs: fares, parking fees, auto ops (per	
	1 f	Reduce regional household transportation costs	mile), tolls	
			- Cost of time spent traveling (PMT * value of time)	
	2a Improve system operations		- Person capacity of roads and rail lines	Target Candidate
		Improve system operations	- Throughput at specific locations	
		- PHT in congested/crowded conditions	 	
	2b	Improve the safety of transportation networks	- Number of severe crashes	Target
	2c	Advance initiatives with strong benefits relative to costs for	Cost hours!! of annuaced unclost at 2020 and 2040	Candidate
Enable optimal use of		Advance initiatives with strong benefits relative to costs for	- Cost-benefit of proposed project at 2020 and 2040 - Portion of cost from private sources	
the network and	2-1	short-, medium-, and long-term timeframes	i	
leverage the existing	2d	Shift short trips to local street networks	- Share of vehicle traffic on key corridors due to trips under X miles	
network	2e	Reduce travel demand during peak periods	- Number of trips during peak periods	
	2f	Increase integration between modes and systems	- Improved last mile connections (qualitative)	
			- Number of trips by two or more modes or services	
		2g Increase state of good repair	Improved dissemintation of information (qualitative)	
	2-		- Buses, rail cars, pavement miles, bridges, buses (etc.) in good condition	
	2g		- Funding mechanisms in place to maintain or replace existing facilities	
Budana "		Increase redundancy for high values (exitient connections in	(qualitative) - Qualitative assessment of high-demand corridors connecting activity centers	
Reduce negative	3a	Increase redundancy for high volume/critical connections in	· · · · · · · · · · · · · · · · · · ·	
impacts on	3b	the network Reduce greenhouse gas emissions and stormwater runoff	Recovery time after incident GHG emissions based on VMT by speed	
communities and the			· · ·	
environment and	2-	Cupport and strongthon local land was a bisetimes	- Amount of impervious pavement area	
improve resiliency	3c	Support and strengthen local land use objectives	- Consistency with local planning efforts (qualitative)	

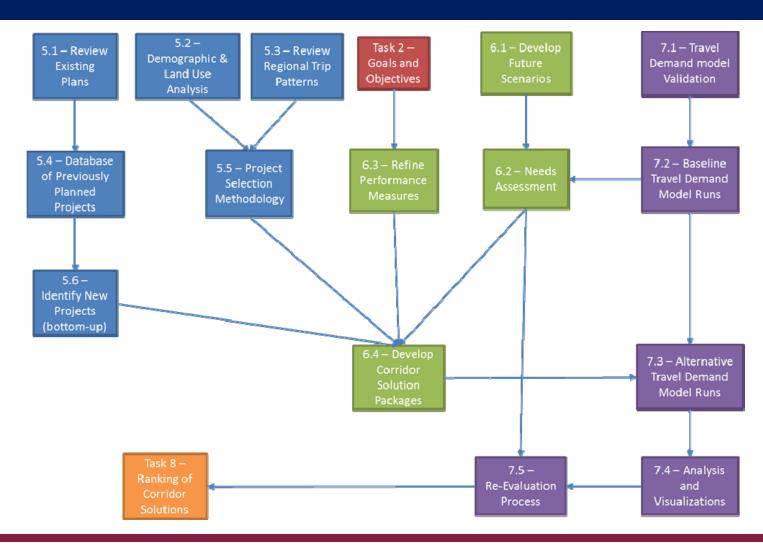


Scope Restructuring

- 1. Modify the task sequence to follow a more chronological process
- 2. Provide additional clarity about what will be done and how projects will be evaluated
- 3. Focus the work around the corridor analysis approach

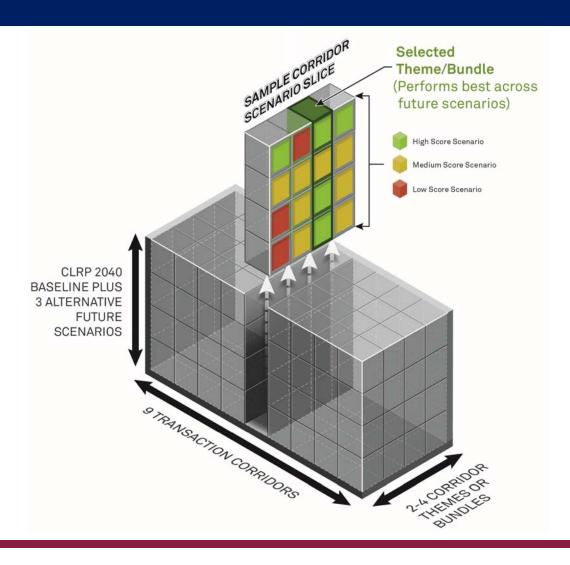


Task Relationships



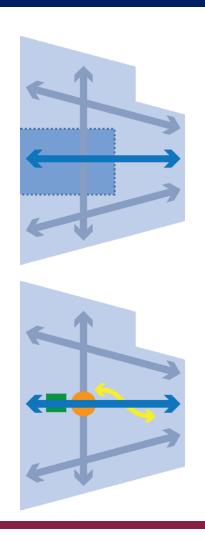


Analysis Approach



Test robustness of infrastructure investments across a range of futures



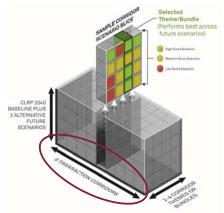


Unlike previous TransAction plans, the TransAction Update will:

- Develop a plan for NoVA as a whole
- Develop corridor-based solutions that make sense within a regional context
- Not analyze the impacts of individual projects

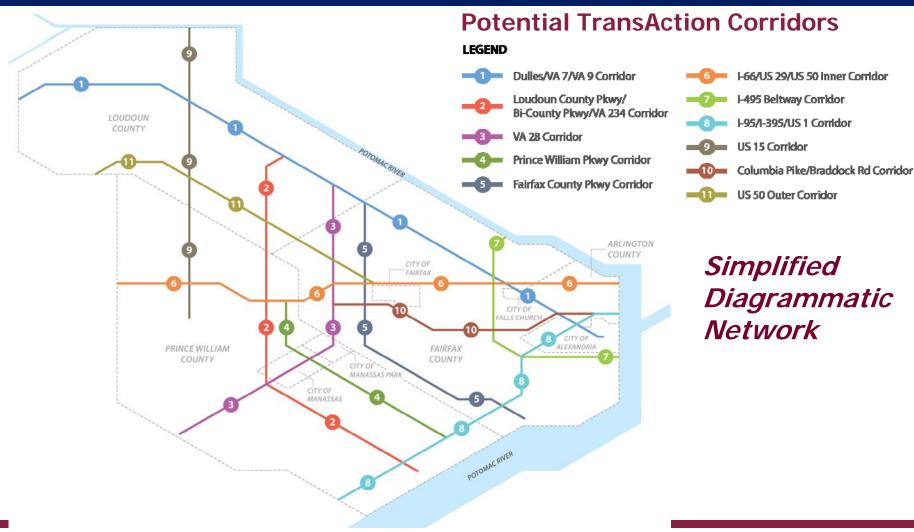
Requires identification of specific corridors to be addressed

- Corridors may be divided into segments (urban/suburban)
- Transitions between segments must be logical and smooth



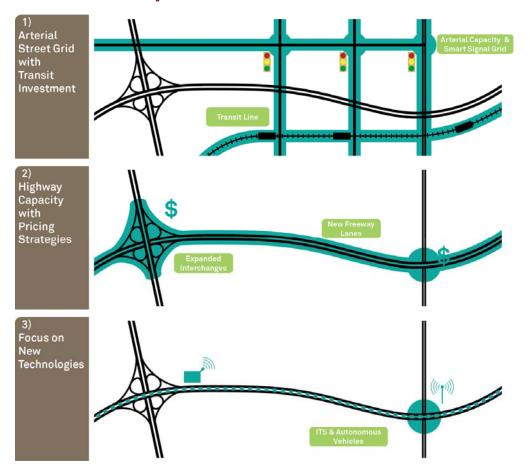


TransAction Study Corridors





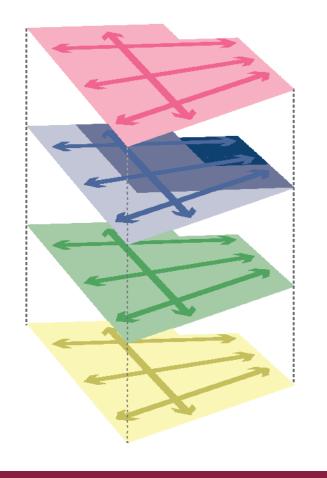
Sample Corridor Themes



Corridor Solution Packages

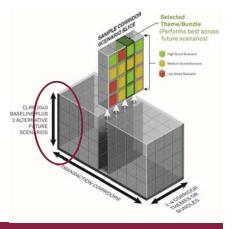
- Comprised of multiple projects from previous and new projects
- Grouped logically into "themes" that represent alternative approaches to dealing with needs in a corridor (or corridor segment)



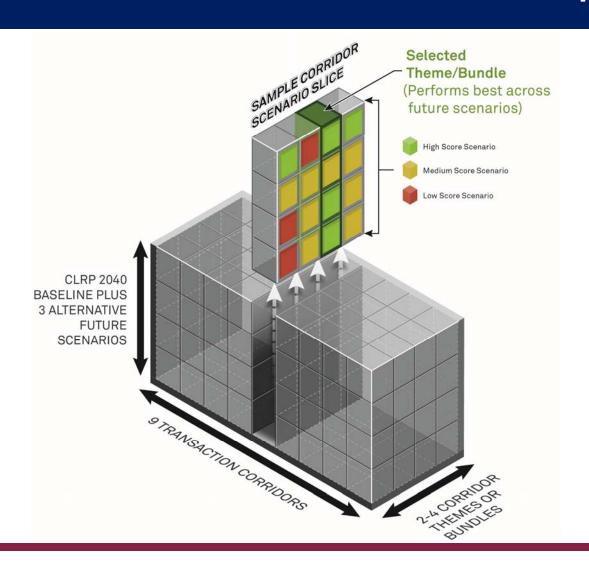


Future Scenarios

- Set of future conditions that serves as backdrop for comparing corridor solutions
- Focused on major risk factors that impact decisions about the plan, such as:
 - Travel behavior/demand
 - Technology
 - Funding Priorities







Each box represents a Corridor Solution Package in a different Future Scenario

Corridor Solution Packages will be analyzed across multiple futures to determine the Solution Package with the highest likelihood of success

Regional Plan will also analyze the impacts of combining preferred Solution Packages across corridors for NoVA



Upcoming Topics for Discussion

- Develop Future Scenarios
 - Estimate travel needs based on each future scenario
- Prepare Potential Corridor Solutions
 - Define project selection/packaging methodology
 - Group projects into corridor themes
 - Identify new projects to address gaps



Updated Project Schedule

