

Evaluation and Rating of Significant Transportation Projects in Northern Virginia

Project Selection Weights

December 16, 2013

Project Selection Weights

This memo summarizes the rank ordering of the 11 project selection criteria adopted by the Northern Virginia Transportation Authority (NVTA) on December 12th.

Category 1: Project Significance

1. Project Type

The project includes a highway, rail, bus, technology or large scale travel demand management investment.

Yes → 100 points

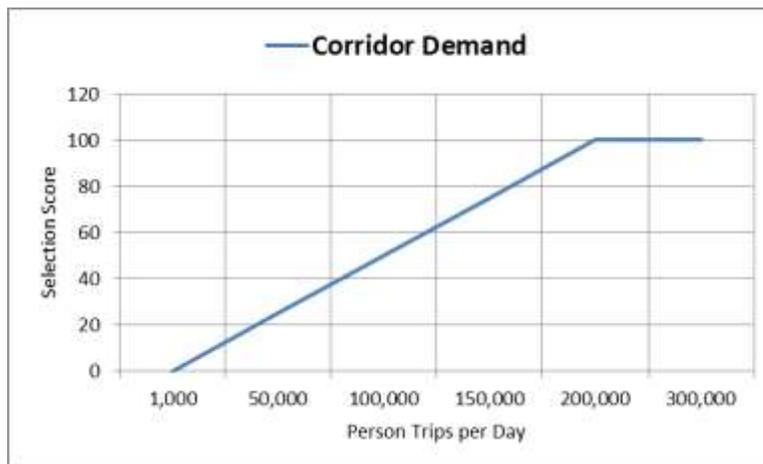
2. Designated Corridors

The project is on a facility in/near Northern Virginia and included in the Statewide Mobility System, Corridors of Statewide Significance, in a Super NoVA corridor or in a TransAction 2040 corridor.

Yes → 100 points

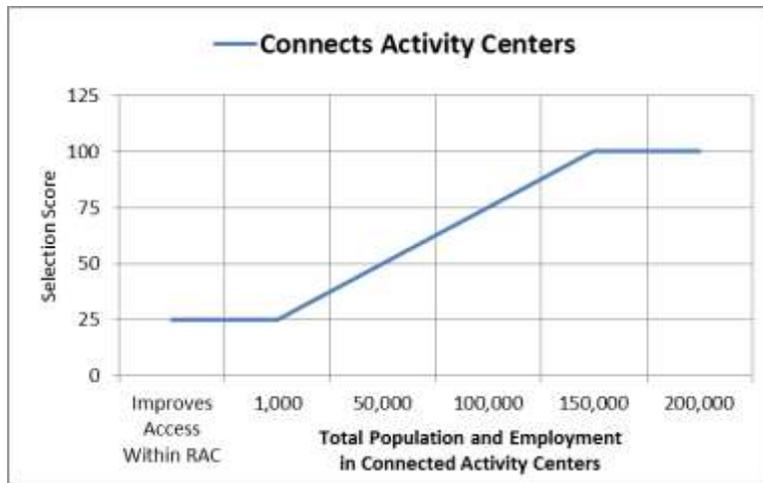
3. High Travel Volume

The project is in a corridor that serves a high volume of person trips.



4. Connects Regional Activity Centers (RACs)

The project enhances or expands transit, HOV/HOT or roadway connections between non-contiguous regional activity centers (RACs).



5. Connects Major Facilities

The project enhances or completes connections between interstate highways, principal arterials or transit stations, park-&-ride lots and DCA or IAD airports.

Improves or adds one connection → 50 points

Improves or adds two or more connections → 100 points

Category 2: Congestion Reduction Potential

6. Congestion Severity

The project is located in a heavily congested corridor.

Moderate Congestion (peak hour TTI = 1.3-2.0 or Load Factor) → 25 points

Heavy Congestion (peak hour TTI = 2.0-3.0 or Load Factor) → 75 points

Severe Congestion (peak hour TTI > 3.0 or Load Factor) → 100 points

(TTI = travel time index = congested travel time / free flow travel time)

(Load Factor = transit passengers / vehicle seats)

Load Factors	Local Bus	Express Bus	Metrorail	Commuter Rail
Moderate	1.0-1.15	0.9-1.0	100-110 ppc	0.9-1.0
Heavy	1.15-1.3	1.0-1.1	110-120 ppc	1.0-1.1
Severe	> 1.3	> 1.1	> 120	> 1.1

7. Congestion Duration

The project corridor experiences moderate to heavy congestion for multiple hours of the day.

Congested during the peak hour only → 25 points

Congested for the whole peak period → 75 points

Congested during peak and off-peak periods → 100 points

8. Person Hours of Delay

The project is located in a corridor with significant person hours of delay.

Moderate Delay (100 person hours of delay per mile per day) → 25 points

Substantial Delay (500 person hours of delay per mile per day) → 75 points

Major Delay (1,000 person hours of delay per mile per day) → 100 points

9. Adds Capacity

The project adds person moving capacity to a congested location, facility or corridor.

Adds 10% to 25% person moving capacity → 50 points

Adds 25% or more to the person moving capacity → 100 points

10. Reduces Vehicle Trips

The project has the potential to reduce vehicle trips on a congested facility or corridor.

Reduce vehicle trips by 5% to 10% → 25 points

Reduce vehicle trips by 10% to 25% → 75 points

Reduce vehicle trips by 25% or more → 100 points

Category 3: Homeland Security Mobility

11. Facility and Operational Improvements

The project improves regional mobility in the event of a homeland security emergency.

Improve mobility between jurisdictions or activity centers → 50 points

Improves radial roadway or bus capacity or reversible capabilities → 100 points

Expands/extends rail transit system → 100 points

Project Selection Weights

The following weights were assigned to each project selection criteria by NVTa based on the input from stakeholder agency representatives who participated in the December 3rd voting process.

Category	Attribute	Category Weights	Attribute Weights	Overall Weights
Project Significance		55.5%		
	Project Type		5.6%	3.1%
	Designated Corridors		23.3%	12.9%
	High Travel Volume		27.3%	15.2%
	Connects Regional Activity Centers		29.3%	16.3%
	Connects Major Facilities		14.4%	8.0%
			100.0%	55.5%
Congestion Reduction Potential		36.5%		
	Congestion Severity		15.6%	5.7%
	Congestion Duration		25.2%	9.3%
	Person Hours of Delay		22.1%	8.1%
	Adds Capacity		24.4%	8.9%
	Reduces Vehicle Trips		12.7%	4.6%
			100.0%	36.5%
Homeland Security Mobility		8.0%		
	Facility and Operational Improvements		100.0%	8.0%
Total		100.0%		