

# NVTA's Project Prioritization Process



**TPB Technical Committee**  
**Sree Nampoothiri, Transportation Planner**  
***September 8, 2017***

Northern Virginia  
Transportation Authority  
*The Authority for Transportation in Northern Virginia*

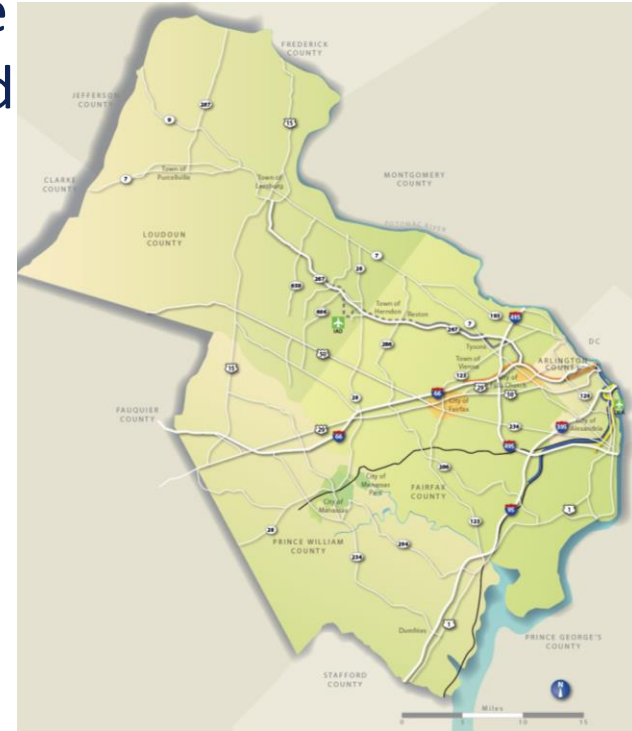
# Overview

- NVTA 101
- Revenues
- TransAction – NOVA's Long Range Transportation Plan
- Six Year Program

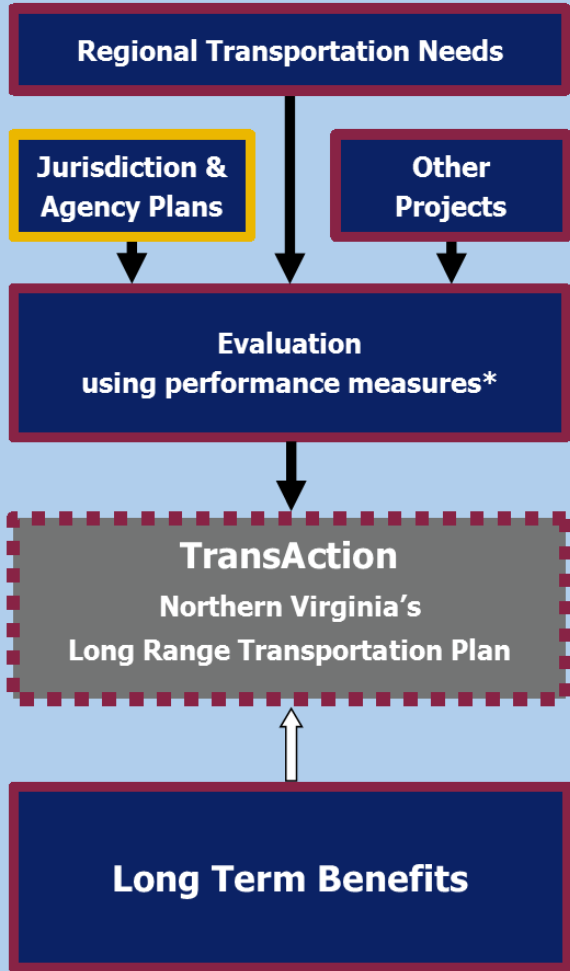


# Northern Virginia Transportation Authority (NVTA)

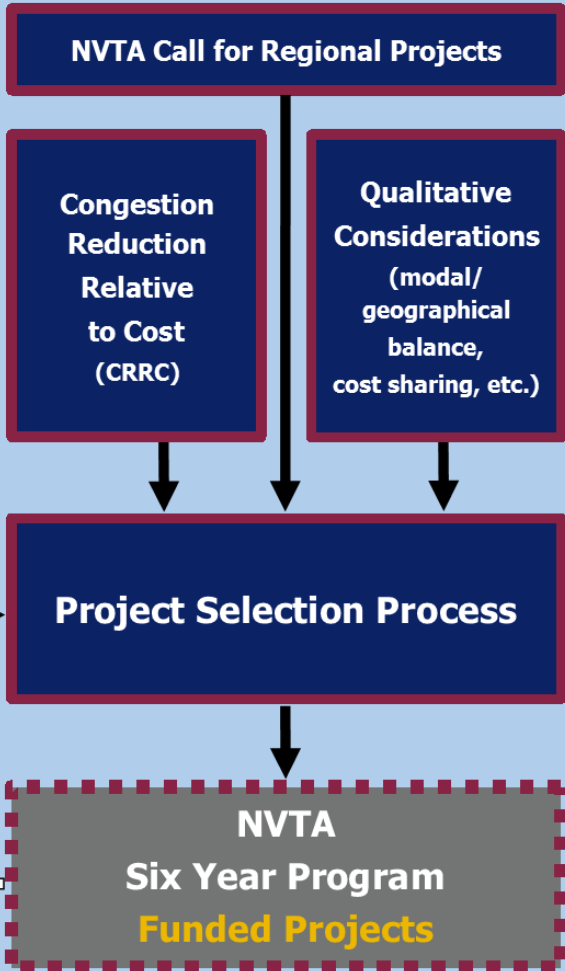
- The Authority is responsible for long range transportation planning, prioritization, and funding for regional transportation projects in Northern Virginia.
  - 2002: Virginia General Assembly created NVTA
  - 2012: Adoption of TransAction 2040
  - 2013: House Bill 2313 created dedicated funding source
  - 2013: FY2014 Program (\$187 Million)
  - 2015: FY2015-16 Program (\$337 Million)
  - 2016: FY2017 Program (\$466 Million)
  - 2017: Adoption of TransAction Update
  - 2018: Adoption of first Six Year Program
- Capital investment only; Within NOVA only
- Projects that increase capacity



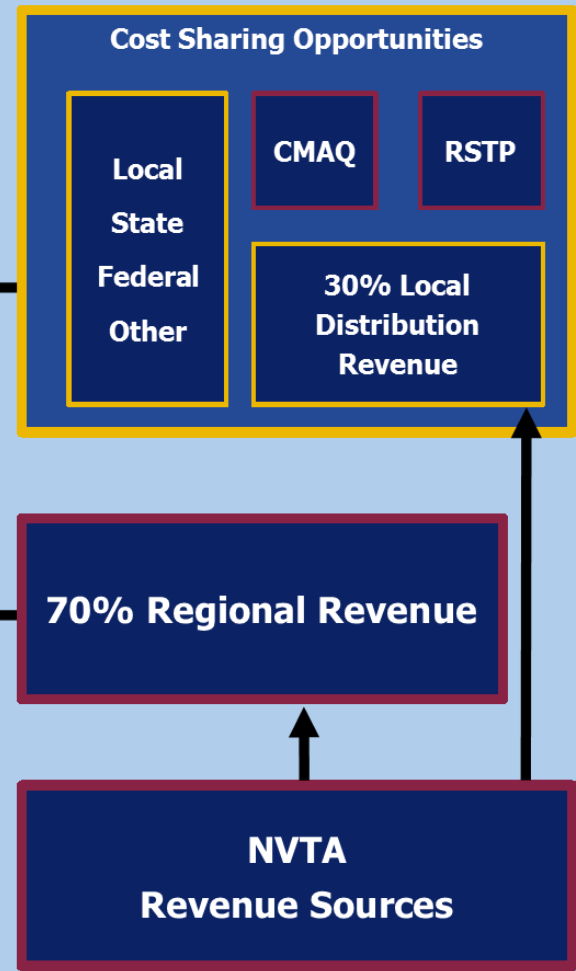
# PLANNING



# PROGRAMMING



# FUNDING

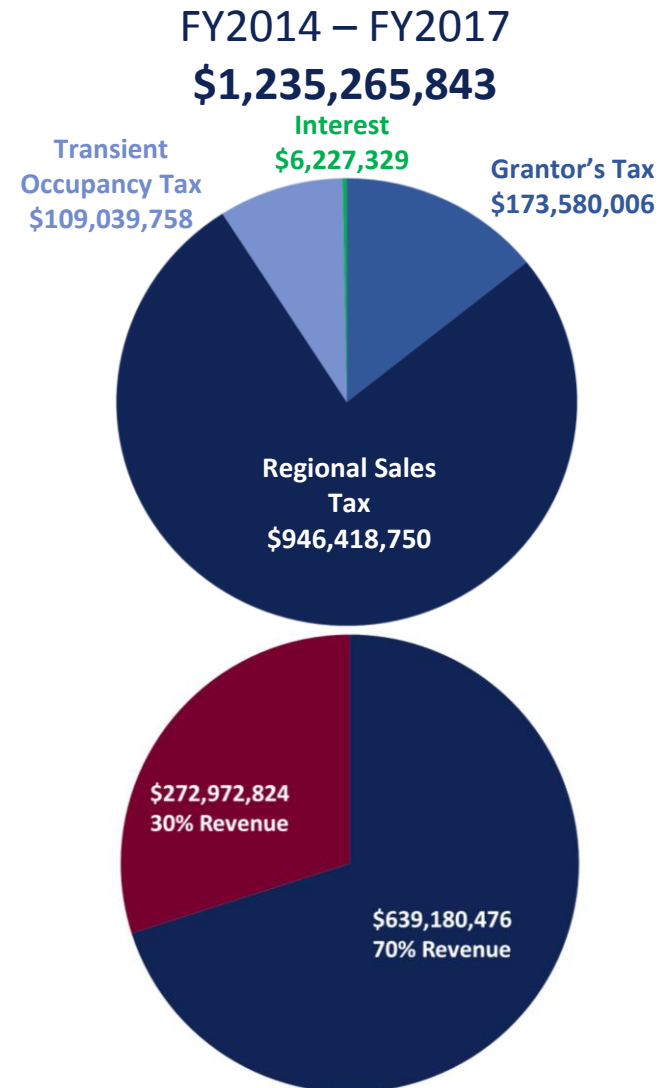


NVTA Responsibilities     
  Non-NVTA Responsibilities     
  Key NVTA Products     
  Periodic Updates

\* Includes State-mandated HB599 evaluation process

# NVTA Revenues

- HB 2313 Revenues
  - Retail Sales & Use Tax (0.7%)
  - Grantor's Tax (\$0.15/\$100)
  - Transient Occupancy Tax (2%)
- Option of issuing bonds
  - AA+ Rating
  - Issued bonds worth \$69 million as part of FY2014 Program
- Recommended allocation of CMAQ Funds: \$40M average annual
- Recommended allocation of RSTP Funds: \$50M average annual





# TransAction: Performance Measures

Vision								
In the 21st century, Northern Virginia will develop and sustain a multimodal transportation system that enhances quality of life and supports economic growth. Investments in the system will provide effective transportation benefits, promote areas of concentrated growth, manage both demand and capacity, and employ the best technology, joining rail, roadway, bus, air, water, pedestrian, and bicycle facilities into an interconnected network that is fiscally sustainable.								
Goals	Objectives		Measures		Overlaps	Weighting		
<b>Goal 1:</b> Enhance quality of life and economic strength of Northern Virginia through transportation	1.1	Reduce congestion and crowding experienced by travelers in the region	1.1.1	Total Person Hours of Delay (HB599)	①		③	10
			1.1.2	Transit Crowding (HB599)	①	②		5
			1.1.3	Person Hours of Congested Travel in Automobiles (HB599)	①		③	5
			1.1.4	Person Hours of Congested Travel in Transit Vehicles (HB599)	①		③	5
	1.2	Improve Travel Time Reliability	1.2.1	Congestion Severity: Maximum Travel Time Ratio	①	②		5
			1.2.2	Congestion Duration (HB599)	①	②	③	10
	1.3	Increase access to jobs, employees, markets, and destinations	1.3.1	Percent of jobs/population within 1/2 mile of high frequency and/or high performance transit	①			5
			1.3.2	Access to Jobs within 45 mins by auto or within 60 mins by transit (HB599)	①			5
	1.4	Improve connections among and within areas of concentrated growth	1.4.1	Average travel time per motorized trip between Regional Activity Centers	①			5
			1.4.2	Walkable/bikeable environment within a Regional Activity Center	①		③	5
							60	
<b>Goal 2:</b> Enable optimal use of the transportation network and leverage the existing network	2.1	Improve the safety of transportation network	2.1.1	Safety of the transportation system	①	②		5
	2.2	Increase integration between modes and systems	2.2.1	First and last mile connections	①	②		10
	2.3	Provide more route and mode options to expand travel choices and improve resiliency of the system	2.3.1	Share of travel by non-SOV modes	①	②	③	10
	2.4	Sustain and improve operation of the regional system	2.4.1	Person hours of travel caused by 10% increase in PM peak hour demand (HB599)		②		5
							30	
<b>Goal 3:</b> Reduce negative impacts of transportation on communities and the environment	3.1	Reduce transportation-related emissions	3.1.1	Vehicle miles traveled (VMT) by speed			③	10
							10	

Notes

① ② ③ indicate primary goal supported by each measure

① ② ③ indicate other goals supported by each measure

Measures 1.4.2, 2.1.1, and 2.2.1 are qualitative measures. All others are quantitative measures.

- RTPP Goals/Strategies are covered

# Findings: Select Measures

Population increase: 24%

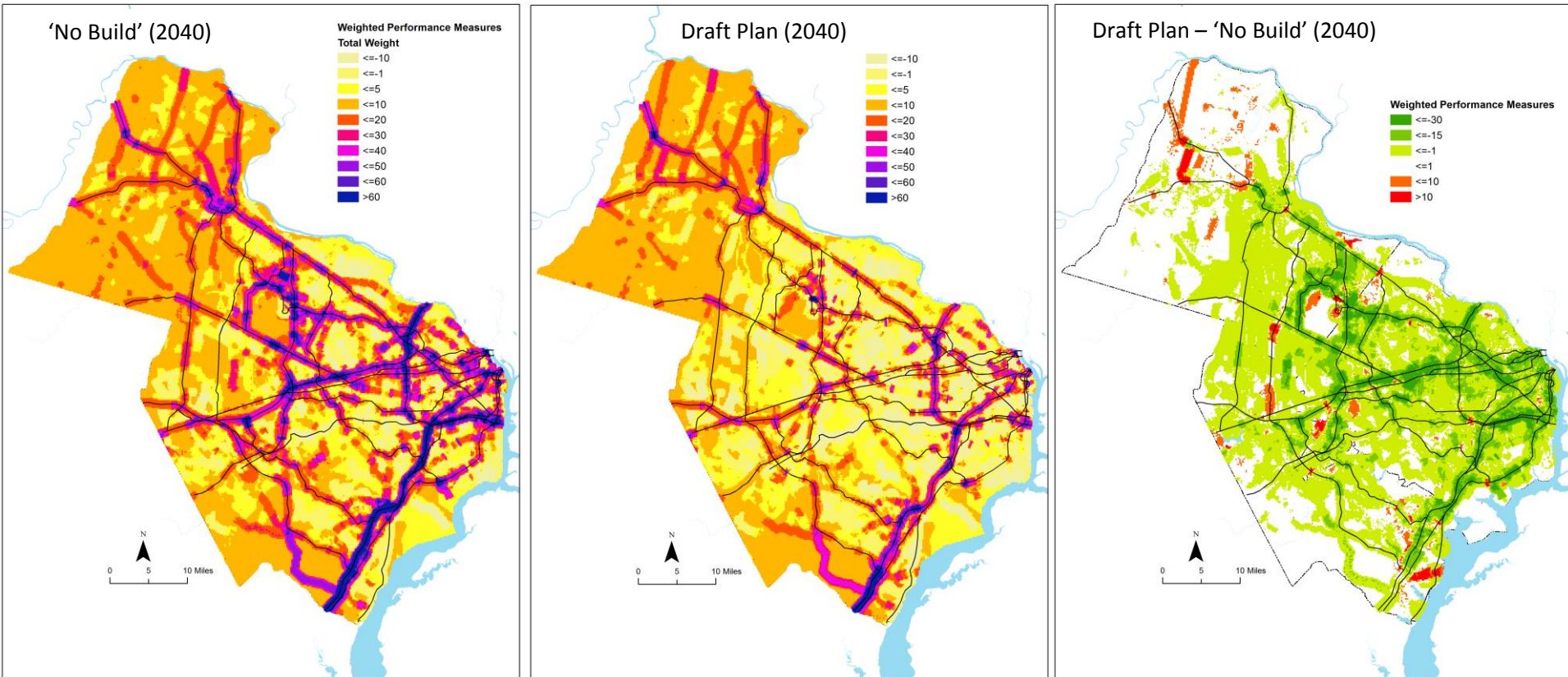
Employment increase: 37%

Measures (Weekday)	Current Conditions (2016)	'No Build' (2040)	Draft Plan (2040)	% Change
Motorized Trips	8,737,000	10,462,000	10,565,000	1.0%
Auto Trips	7,862,000	9,432,000	9,442,000	0.1%
Transit Trips	876,000	1,030,000	1,122,000	9.0%
Transit Share	10.0%	9.8%	10.6%	8.2%
Transit Boardings	1,002,000	1,359,000	1,551,000	14.1%
Miles of Travel	104,839k	125,379k	124,869k	-0.4%
Hours of Travel	3,298,000	5,811,000	4,446,000	-23.5%
Hours of Delay	1,007,000	3,030,000	1,704,000	-43.8%
Transit Crowding	10,800	20,100	7,200	-64.4%



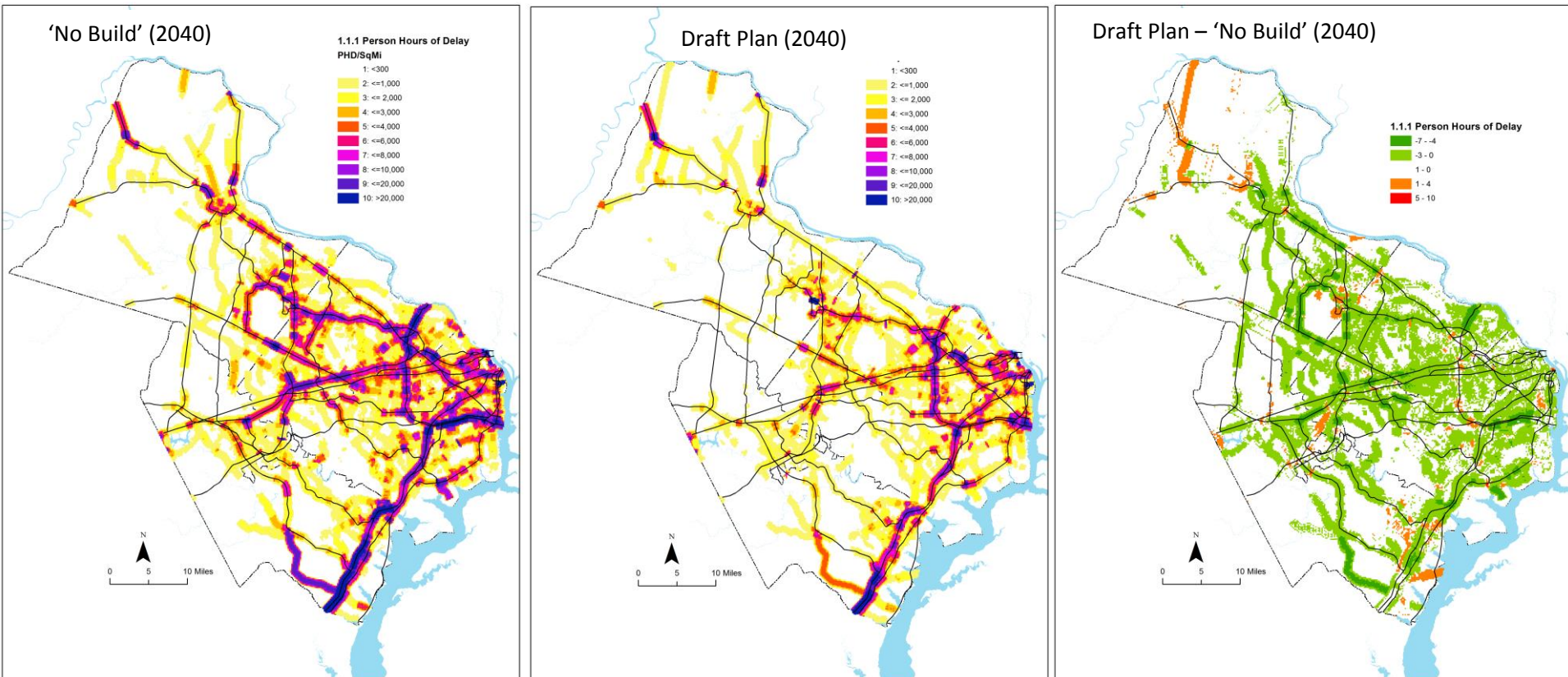
# Overall Impact of the Plan

Draft Plan (2040) compared to 'No Build' (2040)



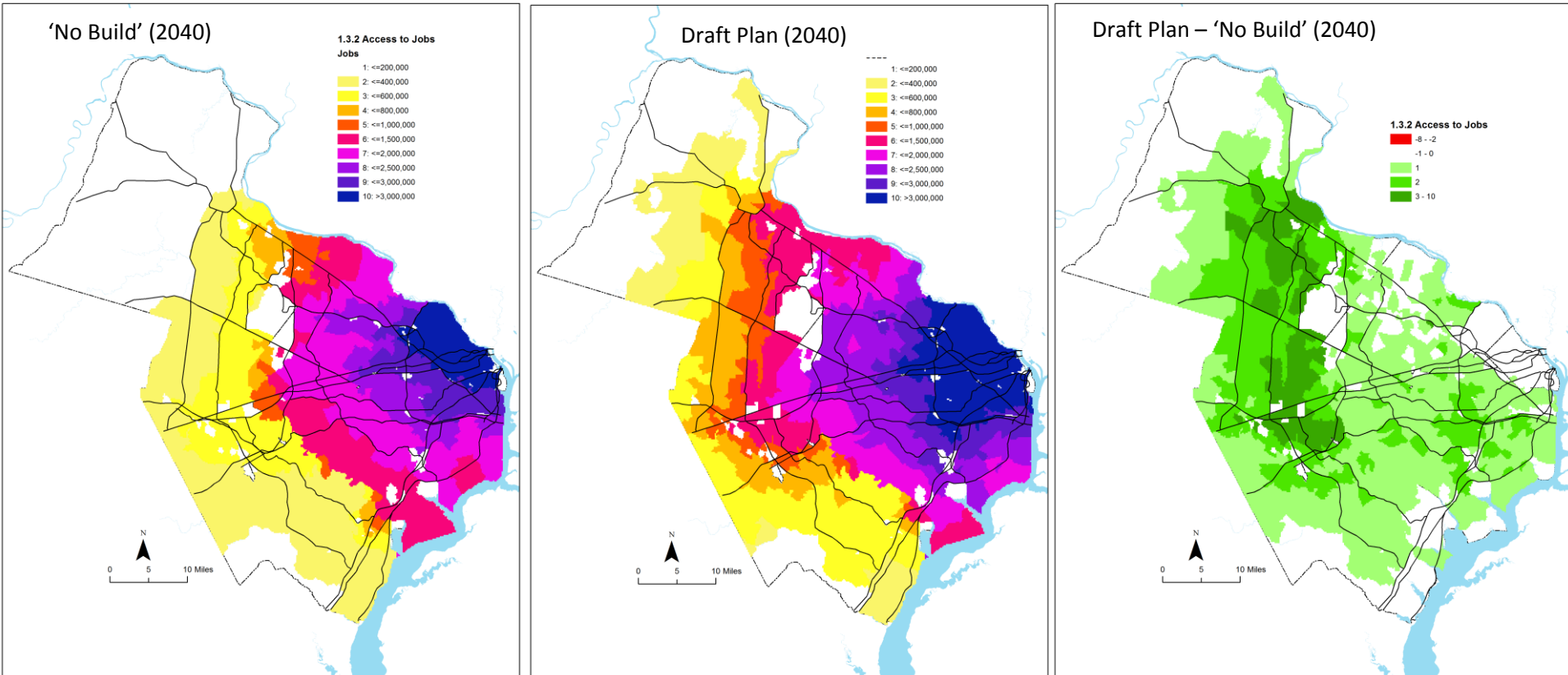
# Impact on Person Hours of Delay

Draft Plan (2040) compared to 'No Build' (2040)



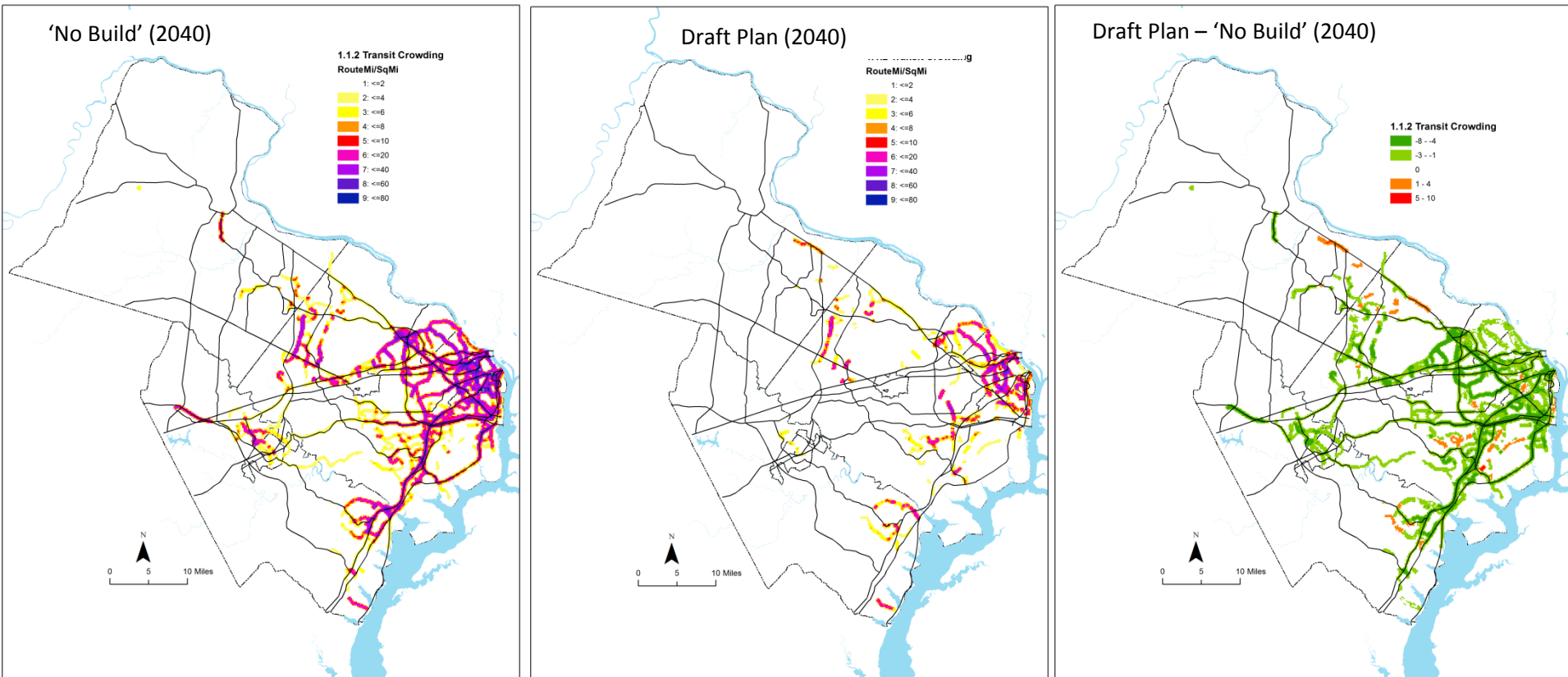
# Impact on Access to Jobs

Draft Plan (2040) compared to 'No Build' (2040)



# Impact on Transit Crowding

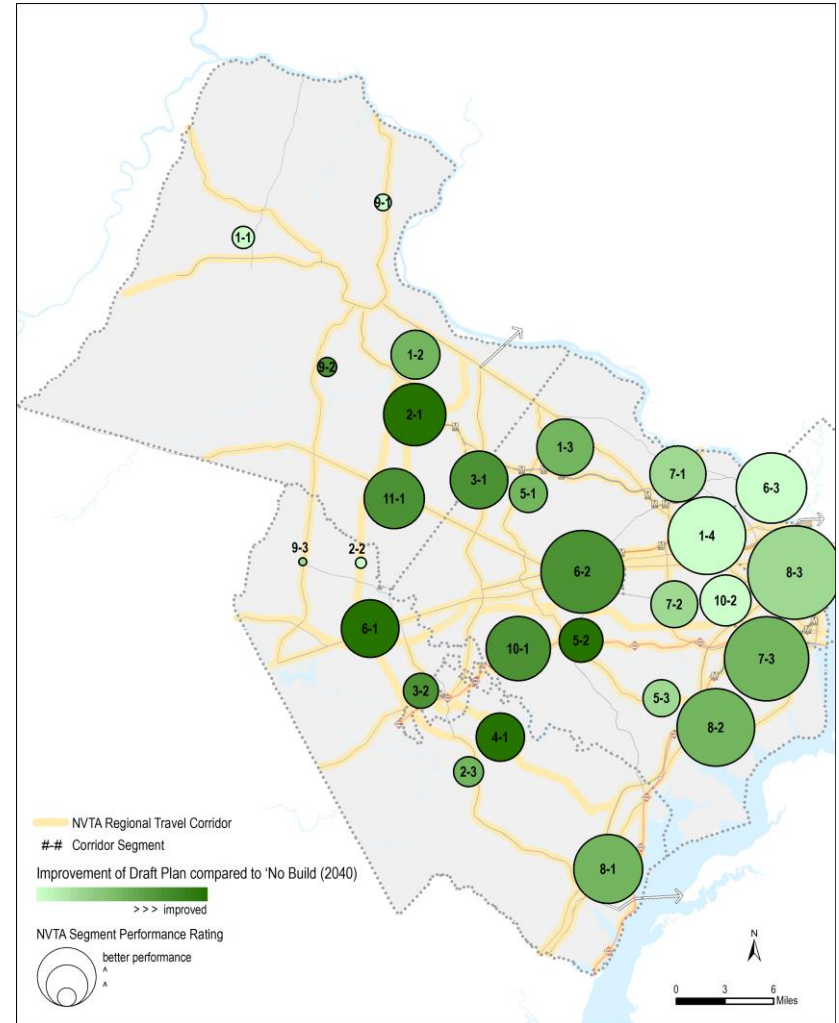
Draft Plan (2040) compared to 'No Build' (2040)



# Segment Performance

## Ratings by Segment:

- Circle Size: NVTa Segment Performance Rating
  - Larger circles show segments with higher ratings relative to other segments
- Circle Color: Improvement of Draft Plan compared to 'No Build' (2040)
  - Darker circles show larger improvement on a segment relative 'No Build' (2040) conditions



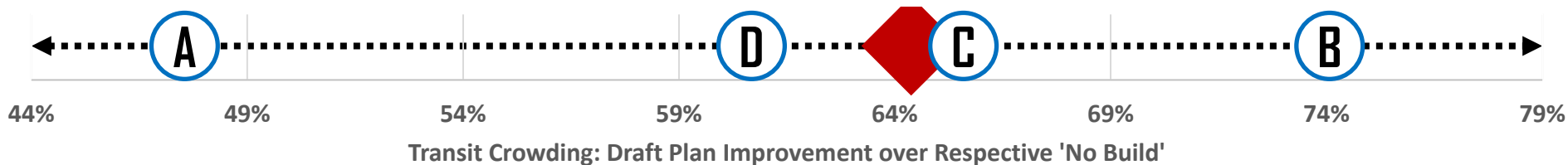
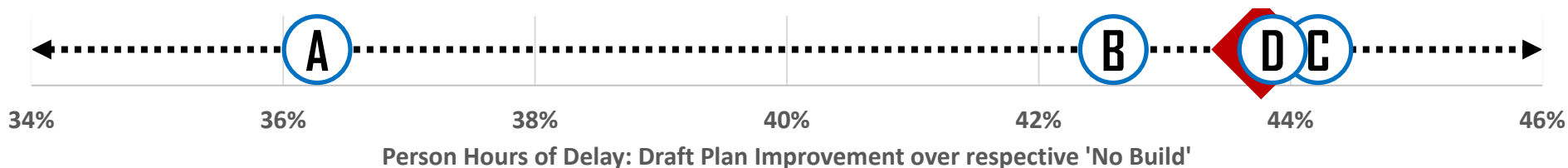
# Alternate Futures

- Sensitivity tests
- Four Alternate Futures tested:
  - Scenario A: Technology makes driving easier
  - Scenario B: Changes in travel behavior
  - Scenario C: Dispersed land use growth
  - Scenario D: Concentrated land use growth
- Scenarios are ‘plausible’ alternate futures, but are neither ‘predicted’ nor ‘preferred’; hybrid scenarios are ‘probable’
- Scenario (sensitivity) analysis provides an understanding of the robustness of TransAction findings and recommendations



# Draft Plan: Alternate Futures

- Draft Plan shows improvement under all Alternate Futures
  - 36-44% improvement in Person Hours of Delay
  - 48-74% improvement in Transit Crowding
- Draft Plan likely to provide benefits to NOVA regardless of potential future changes



Standard Forecast

Alternate Future

All data shown is for Draft Plan

# Programming

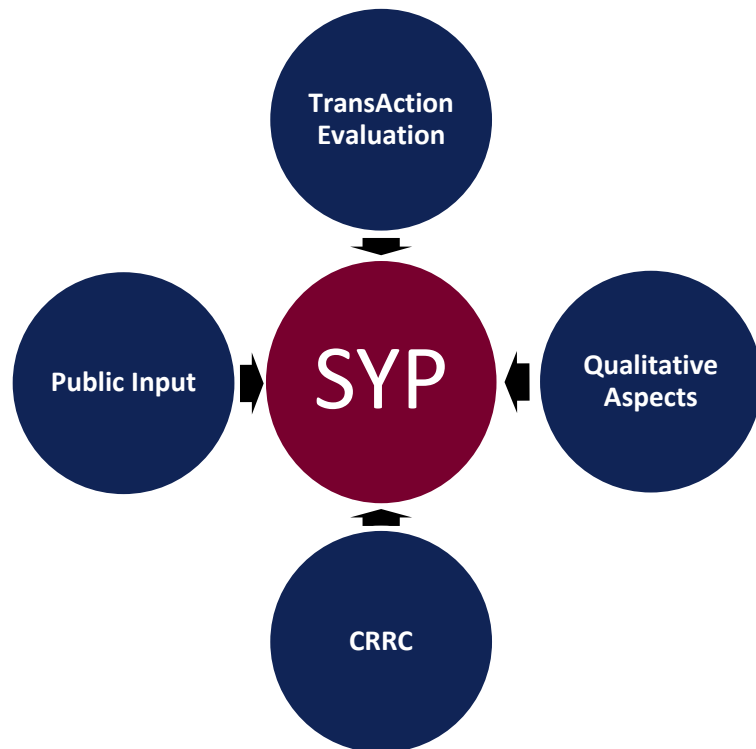
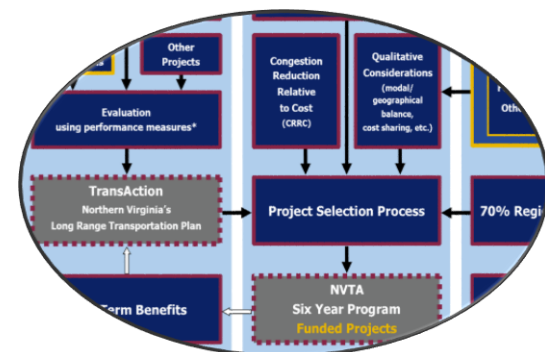
- Moving to Six Year Program (SYP)
- “Call for Regional Projects”
- Projects must be included in TransAction
- Only regional level studies are eligible
- Projects must be capital improvement; operations and maintenance are NOT eligible
- Projects must be within NOVA
- Developing scope and providing sufficient details on all aspects, including cost, is the responsibility of jurisdictions/agencies
- Requires governing body’s support in the form of resolution





# Programming

- Review relevant TransAction evaluations, including 'regional coherence', phasing, and sequencing of regional projects
- Calculate Congestion Reduction Relative to Cost Ratios (CRRC)
- Document relevant qualitative considerations (geographical/modal balance, cost sharing)
- NVTA's Committees, Public Comments, Public Hearing
- Authority Adoption



# Programming

- Total project cost is considered since the benefit is calculated for the total project
- Projects leveraging other funds fare better
- NVTA's SYP is not an amalgamation of jurisdictional CIPs or agency funding plans
- Schedule:
  - TransAction Adoption – October 12, 2017
  - Call for Regional Projects – October 12, 2017
  - Deadline for Applications – December 15, 2017
  - SYP Adoption – May/June 2018



# Thank You!

[www.thenovaauthority.org](http://www.thenovaauthority.org)

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