



Northern Virginia Transportation Authority
The Authority for Transportation in Northern Virginia

TECHNICAL ADVISORY COMMITTEE
Wednesday, September 16, 2020, 7:00pm
(Electronic Meeting Only)

AGENDA

- I. Call to Order/Welcome** Chairman Boice

Action

- II. Resolution finding need to conduct meeting electronically** Chairman Boice
Recommended action: Adoption of resolution

- III. Summary Notes of June 17, 2020 Meeting** Chairman Boice
Recommended action: Approval of meeting notes

Discussion/Information

- IV. TransAction Update** Mr. Jasper, Principal Planner

- V. NVTA Update** Ms. Backmon, Executive Director

Adjournment

- VI. Adjourn**

Next Meeting: October 21, 2020
Location: NVTA Offices/Electronic Meeting

NORTHERN VIRGINIA TRANSPORTATION AUTHORITY

TECHNICAL ADVISORY COMMITTEE

**RESOLUTION FINDING NEED TO CONDUCT MEETING BY ELECTRONIC
COMMUNICATION MEANS DURING GOVERNOR'S DECLARED STATE OF
EMERGENCY DURING COVID – 19 PANDEMIC**

SEPTEMBER 16, 2020 MEETING ELECTRONICALLY

September 16, 2020

WHEREAS, on March 12, 2020, the Governor of Virginia declared a state of emergency in Virginia in response to the spread of novel coronavirus, or COVID-19, a communicable disease of public health threat as so declared by the State Health Commissioner on February 7, 2020 (“COVID-19”); and

WHEREAS, in subsequent Executive Orders, particularly Executive Order Nos. 53 and 55, as amended, the Governor of Virginia, among other measures designed to ensure safe physical distancing between individuals, prohibited public and private in person gatherings of 10 or more individuals and ordered all individuals in Virginia to remain at their place of residence, with limited exceptions, to mitigate the impacts of COVID-19 and prevent its spread; and

WHEREAS, the Northern Virginia Transportation Authority (Authority) – Technical Advisory Committee (Committee) finds that it has a responsibility to demonstrate to the public, through the Authority’s conduct, the importance of maintaining proper physical distance from others and to avoid gathering in public where the risks of infection are highest, and to take measures that promote physical distancing in order to protect the public health and mitigate the impacts and spread of COVID-19, including, among others, conducting meetings electronically whenever possible; and

WHEREAS, on April 22, 2020, the Virginia General Assembly adopted, and the Governor signed, budget bill amendments to HB 29 that expressly authorize “any public body, including any state, local, [or] regional body” to “meet by electronic communication means without a quorum of the public body . . . physically assembled at one location when the Governor has declared a state of emergency . . . , provided that (i) the nature of the declared emergency makes it impracticable or unsafe for the public body . . . to assemble in a single location; (ii) the purpose of the meeting is to discuss or transact the business statutorily required or necessary to continue operations of the public body . . . and the discharge of its lawful purposes, duties, and responsibilities” among other provisions; and

WHEREAS, member jurisdictions of the Northern Virginia Transportation Authority have adopted continuity of government ordinances pursuant to Va. Code Ann. § 15.2-1413 which ordinances, among other provisions, contemplate regional bodies of which the locality is a member meeting electronically to transact business to assure the continuity of government; and

NOW, THEREFORE, BE IT RESOLVED, that the Northern Virginia Transportation Authority Technical Advisory Committee hereby finds that meeting by electronic means is authorized because the nature of the declared emergency makes it both impracticable and unsafe for the Committee to assemble in a single location on September 16, 2020, to discuss and transact the business of the Authority listed on the September 16, 2020 Committee Meeting Agenda; and

BE IT FURTHER RESOLVED, that the Committee hereby finds that meeting by electronic means is authorized because the items on the September 16, 2020 Committee Meeting Agenda are statutorily required or necessary to continue operations of the Authority and the discharge of the Authority's lawful purposes, duties, and responsibilities; and

BE IT FURTHER RESOLVED, that the items on the September 16, 2020 Committee Meeting Agenda are encompassed within the continuity of operations ordinances adopted by member localities of the Northern Virginia Transportation Authority to assure the continued operation of the government during the disaster posed by the public health emergency resulting from COVID-19.

Adopted the 16th day of September, 2020.



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TECHNICAL ADVISORY COMMITTEE
WEDNESDAY, June 17, 2020, 7:00 pm
Electronic meeting with livestreaming on [YouTube](#)

MEETING SUMMARY

I. Call to Order/Welcome

- Chairman Boice called the meeting to order at 7:01 pm.
- Attendees:
 - **Members:** Randy Boice, Pat Turner, Armand Ciccarelli, Amy Morris, Dr. Shanjian Zhu, Frank Spielberg, Karen Campblin.
 - **NVTA Staff:** Monica Backmon (Executive Director), Keith Jasper (Principal), Sree Nampoothiri (Senior Transportation Planner), Ria Kulkarni (Regional Transportation Planner).

II. Resolution finding the need to conduct meetings electronically

- Chairman Boice noted that as a result of the COVID-19 and Governor Northam's declaration of a State of Emergency, the Authority's Technical Advisory Committee Meeting was being held electronically. He noted that the passage of the amendments to HB 29 allowed regional bodies such as the Authority, and their committees to conduct business meetings electronically. He added that the meeting by electronic means is authorized because the items on the Committee meeting agenda are statutorily required or necessary to continue operations of the Authority. The resolution was approved unanimously.

III. Summary of May 20, 2020 Meeting

- The meeting summary was approved unanimously with abstentions from members not present at the May 20 meeting.

IV. FY2020-2025 Six Year Program Recommendations

- Mr. Nampoothiri briefed the TAC on the qualitative and quantitative evaluations for the 41 candidate projects that are under the ongoing Six-Year Program FY2020-2025 update. He noted that HB2313 requires NVTa to give priority to projects that achieve the greatest Congestion Reduction Relative to Cost (CRRC). He emphasized that the CRRC ratio takes into account the total project cost.



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- He noted the other quantitative evaluation component, TransAction Rating, that involves evaluating projects based on 15 weighted performance measures that are used to evaluate the long-range plan, TransAction.
- Mr. Nampoothiri also added that qualitative aspects like project readiness, other available funds, local priority, and elements such as geographic and modal balance are evaluated for each candidate project in the program.
- Mr. Jasper pointed out that this was the fifth funding cycle, with total requests of approximately \$1.44 billion competing for available funding of \$522 million. This resulted in an approved to requested ratio of 36% for the FY2020-2025 Six-Year Program.
 - He provided a summary of the projects by primary mode. He also presented an overview of the public comments received highlighting four projects that received 85% of the comments and how the comments received after the public comment period did not change the course of recommendations.
 - He noted that 19 projects are on the recommended list, of which nine are continuation and 10 are first time projects.
- Chairman Boice asked why some of the continuation and highest CRRC ranking projects such as the City of Fairfax (Jermantown Rd) and Route 28 Improvements were not recommended under the FY2020-2025 Six-Year Program. Mr. Jasper explained that the projects were evaluated for readiness, geographical and modal balance, and local priority in some cases. He added that not all projects could be funded with the revenue available. City of Fairfax projects (Intersection improvements at Route 29 and Jermantown Road) could use 30% local funds for its projects. Whereas, if Prince William County project (Prince William Parkway at Clover Hill Road Innovative Intersection) were recommended, it would still have a funding gap that would keep the project far from completion. Therefore, NVTA staff recommended supporting the continuation projects through completion instead. Additionally, Prince William County submitted ten applications, of which two of its highest local priority projects were approved. Also, Route 28 project needed to finalize a design alternative before they could proceed with funding other phases of the project and therefore did not meet project readiness criteria. Mr. Jasper and Ms. Backmon echoed that the projects were evaluated for readiness, geographical and modal balance, and local priority in some cases.
- Ms. Campblin asked and Ms. Turner echoed whether the recommended funding for NOVA Parks should be used until after a public engagement process is held by NOVA Parks and Arlington County. Mr. Jasper responded that NVTA is cognizant of the overall support received for the W&OD trail expansion that outweighed



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opposition. The recommended funding would enable Arlington County and NOVA Parks to collaborate with the commissions and Board to take a measured approach and an effective public engagement process. The funds were allocated toward preparatory work and design without any commitment for construction.

- Ms. Morris asked if there is a specific methodology for allocating a certain percentage of funding by mode choice or perhaps a methodology for funding mega-projects that require higher funding amounts. Mr. Jasper responded that no specific percentage for funding by mode or for mega-projects was allowed under VA Code.
- Chairman Boice wanted to know the rationale behind NVTa recommending the CC2DCA Intermodal Connector, which appears to be a ‘developer’ project (with Amazon HQ2 planned in Arlington) rather than a regional project. Ms. Backmon responded that the CC2DCA project was in TransAction before Amazon HQ surfaced for discussions and added that the connection was the ‘last leg’ of multimodal connection to the Airport. She also added that NVTa’s robust evaluation process that includes geographic and modal balance coupled with Long-Term Benefit, played an important role in how projects were recommended for funding.
- Ms. Morris was interested to know if NVTa staff considered the decline in public transit usage due to COVID and instead channel those “transit” funds to other projects. Mr. Jasper responded that it was too soon to know how the situation would change in the short and long-term. However, these factors would be considered in the long-range plan updates to better understand travel behaviors in the “new normal” as a result of telework or reluctance to use transit.
- Mr. Ciccarelli expressed that it was surprising not to see any ITS related projects submitted by localities/agencies for candidate projects. Mr. Jasper indicated that Alexandria and Arlington received funding for ITS projects in the past. However, in this program cycle, there were no projects that were specific to ITS. He indicated that there may be Transit Signal Priority related projects as a result of funding the Duke Street Transitway in Alexandria.
- There were discussions on why has Fairfax County received close to 50% of funding. Ms. Backmon explained that Fairfax County is about 48% of the population and approximately 43% of revenues are attributed to Fairfax County. The recommendations therefore provide reasonable geographic balance
- Dr. Zhu asked if there were any noticeable changes with comments received after the deadline and if there were any lessons learnt through the public comment period. Mr. Jasper responded that the comments received after the deadline were included only on face value but did not result in changes to the staff recommendations.



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- Chairman Boice moved that the Committee recommend the Authority to approve staff recommendations for the FY2020-2025 Six-Year Program. The motion was seconded by Ms. Morris. Motion passed with a 6-0-1 vote, with abstention from Mr. Spielberg.

V. Next steps

- The public comment summary and project recommendations will be relayed to the Planning and Programming Committee to consolidate the NVTA's FY2020-2025 Six-Year Program for Authority's approval. Staff will post final recommendations by June 24 followed by Authority adoption on July 9. The next call for projects is anticipated in July 2021.

VI. Adjournment

- The meeting was adjourned at 8:31 pm.



COVID-19: Transportation Impacts and Opportunities

Northern Virginia Transportation Authority Meeting
July 9, 2020

Agenda

- **Overall Goals**
- **Scenario Analysis & Context**
- **Scenario Definitions**
- **Scenario Results & Comparison**
- **Conclusions**



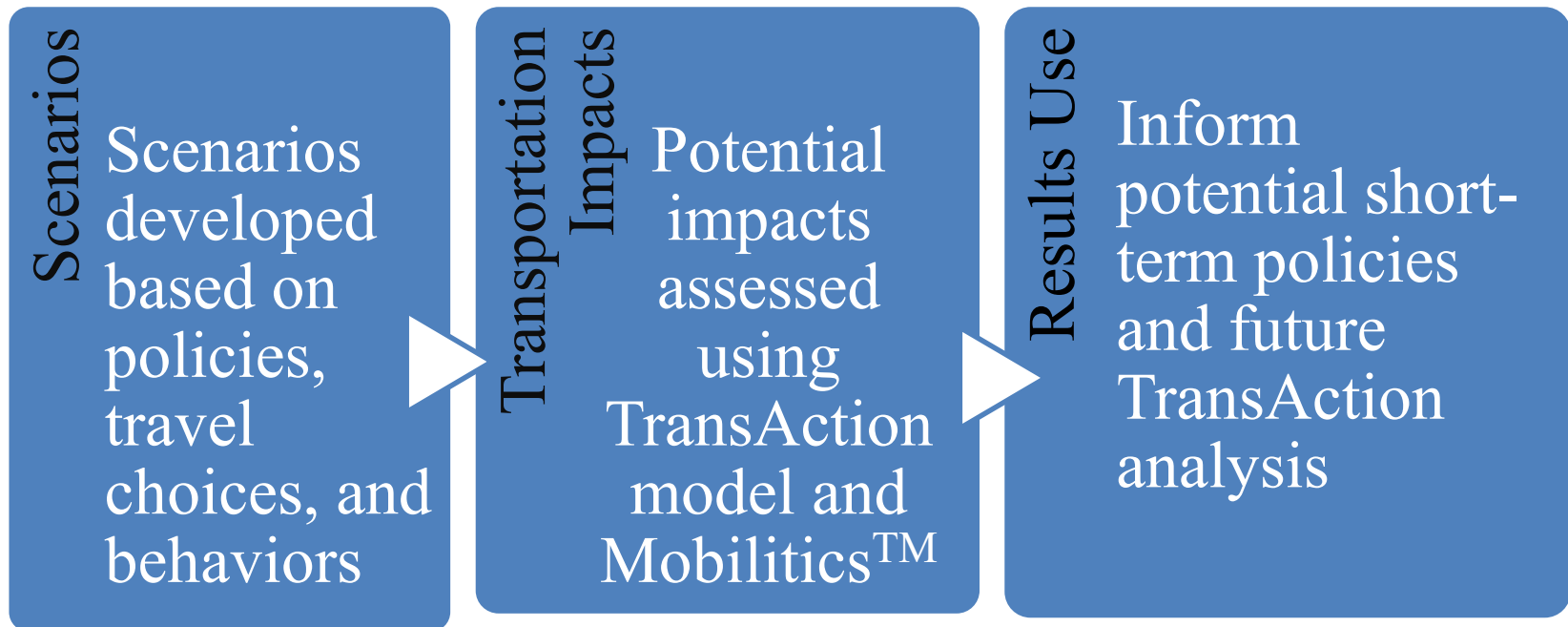
NVTA's
TransAction

Overall Goals

- Explore impacts to operating conditions & future transportation project investment considerations
 - Model different recovery scenarios to compare impacts
 - Use this analysis to structure future planning efforts

Scenarios & Impacts

Analyze plausible possible future scenarios, not intended to predict the future or imply any preferences

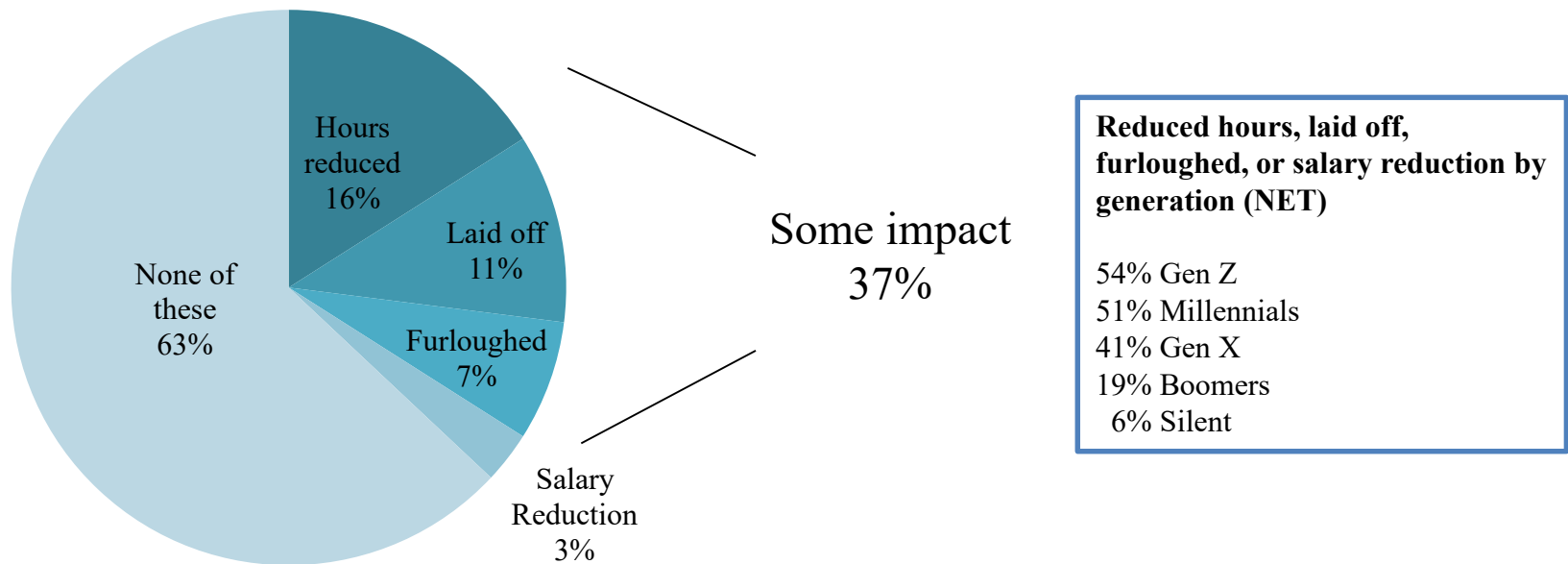


Background

- Through response to and recovery from COVID-19, trip behavior has been impacted starting in March 2020
- As a result:
 - Telework increased
 - Schools and many businesses closed
 - Travel decreased throughout the region
 - Safety concerns about transit and shared-rides

National Trends: Employment

Gen Z, Millennials, and Gen X are feeling the brunt of the economic impact from job or wage impacts due to COVID-19; decreasing their sense of personal security, happiness, productivity, success and sense of accomplishment.



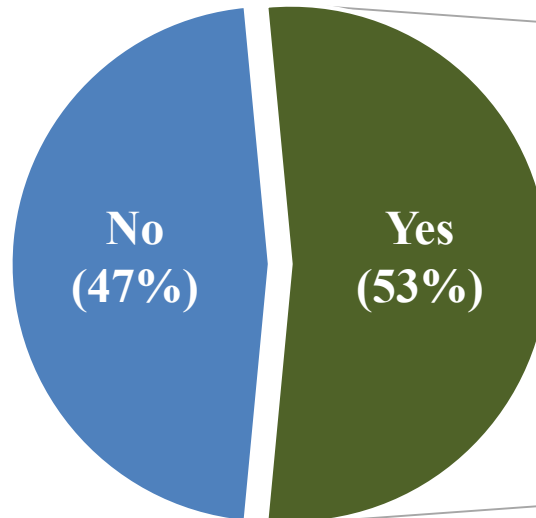
BASE: All Respondents (n=1,001)

Q1046C. Which of the following has happened to you in the past month?

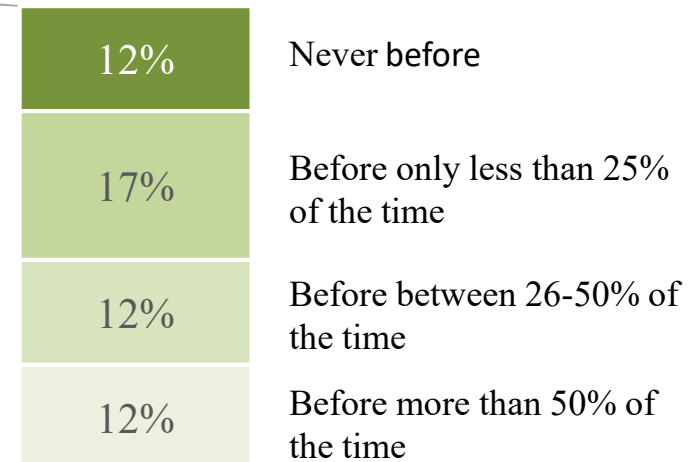
Source: Heart+Mind June 5th Roundtable

National Trends: Working from Home

Q: Are you currently working from home?



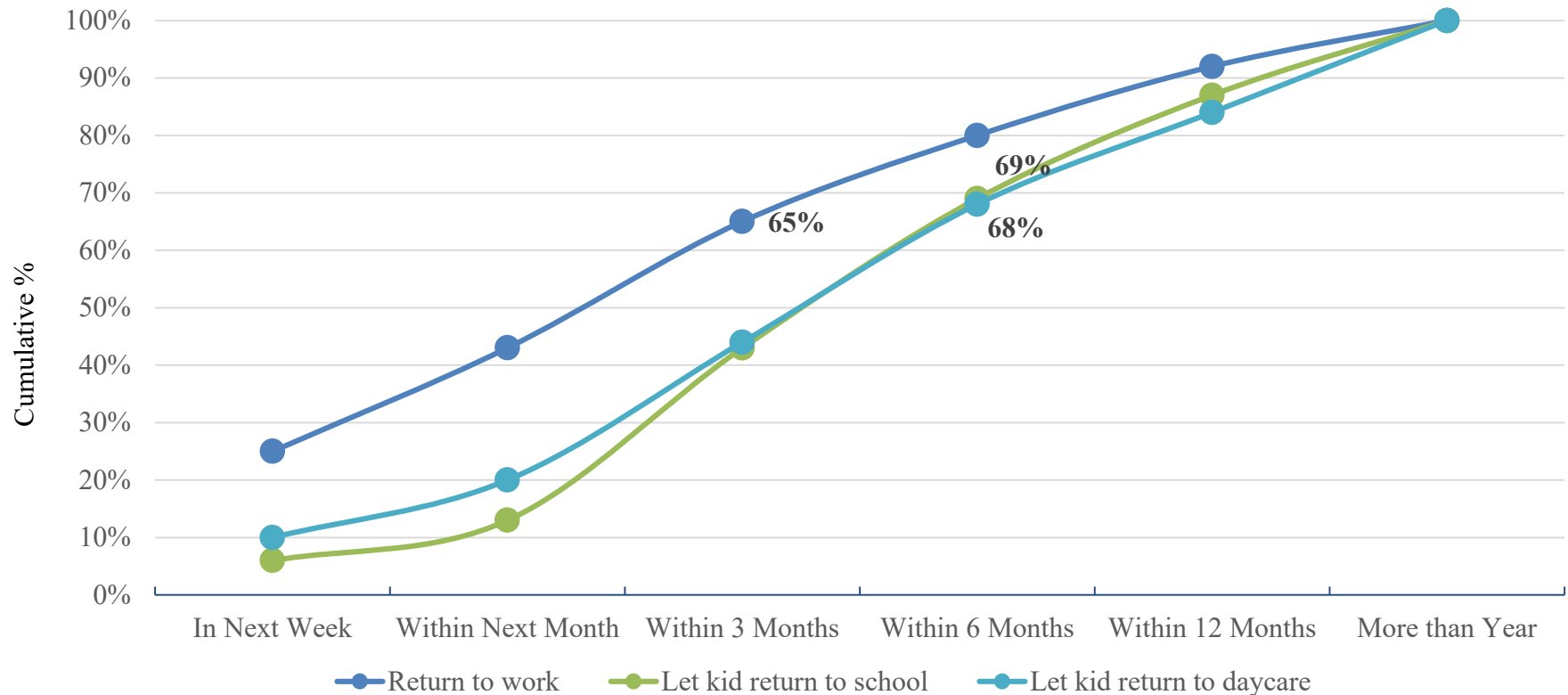
Q: Thinking of your job before the coronavirus outbreak, how often were you able to work from home?



Source: Heart+Mind May 27th Roundtable

National Trends: Work Will Return Well in Advance of Childcare

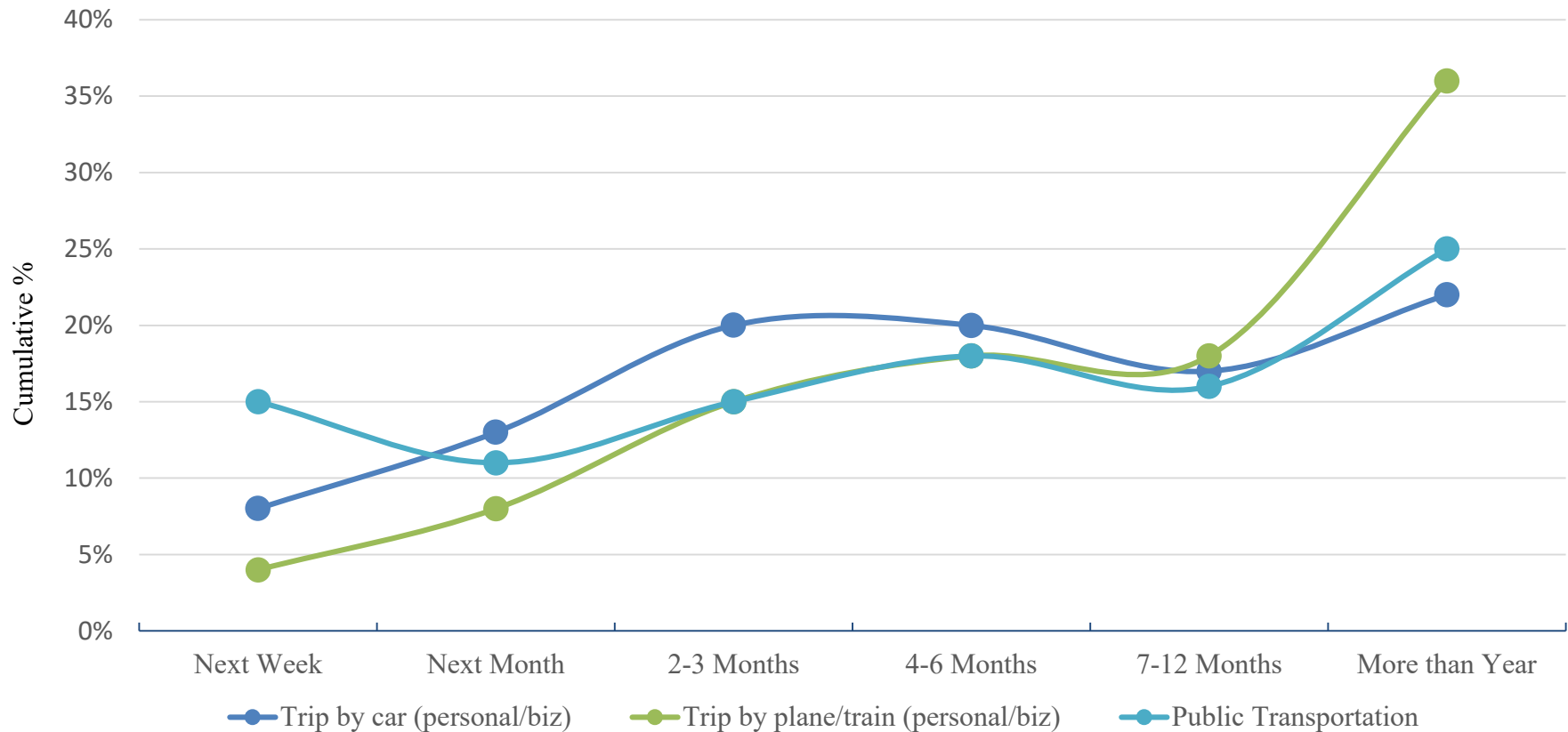
Q: When are you likely to do each of the following?



Source: Heart+Mind June 19th Roundtable

National Trends: Public Transit Lags Behind Car Trips

Q: When are you likely to do each of the following?

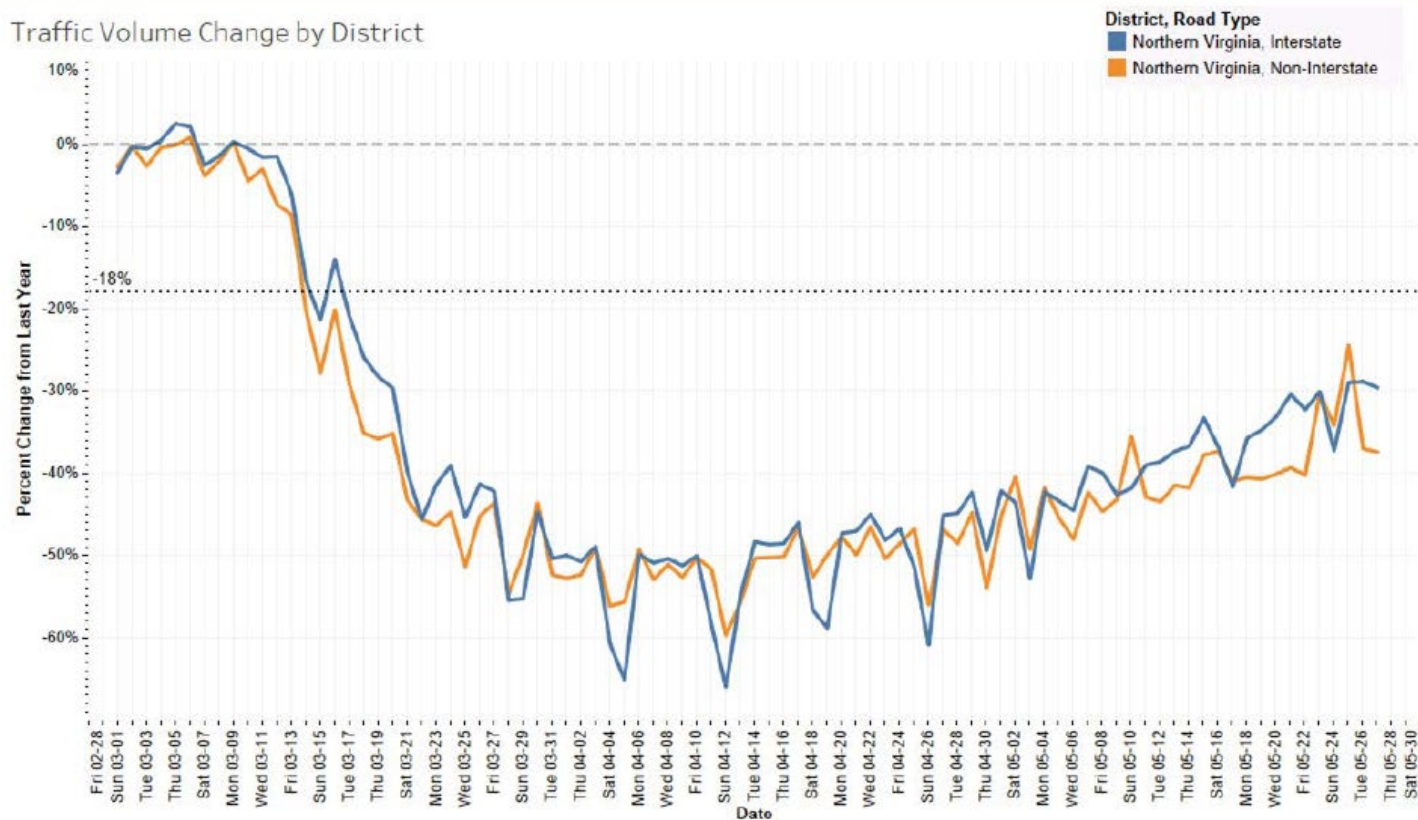


Source: Heart+Mind June 19th Roundtable

Regional Trends: VDOT Volume Trends

All Vehicles Daily Volume Change in Northern Virginia

Traffic Volume Change by District

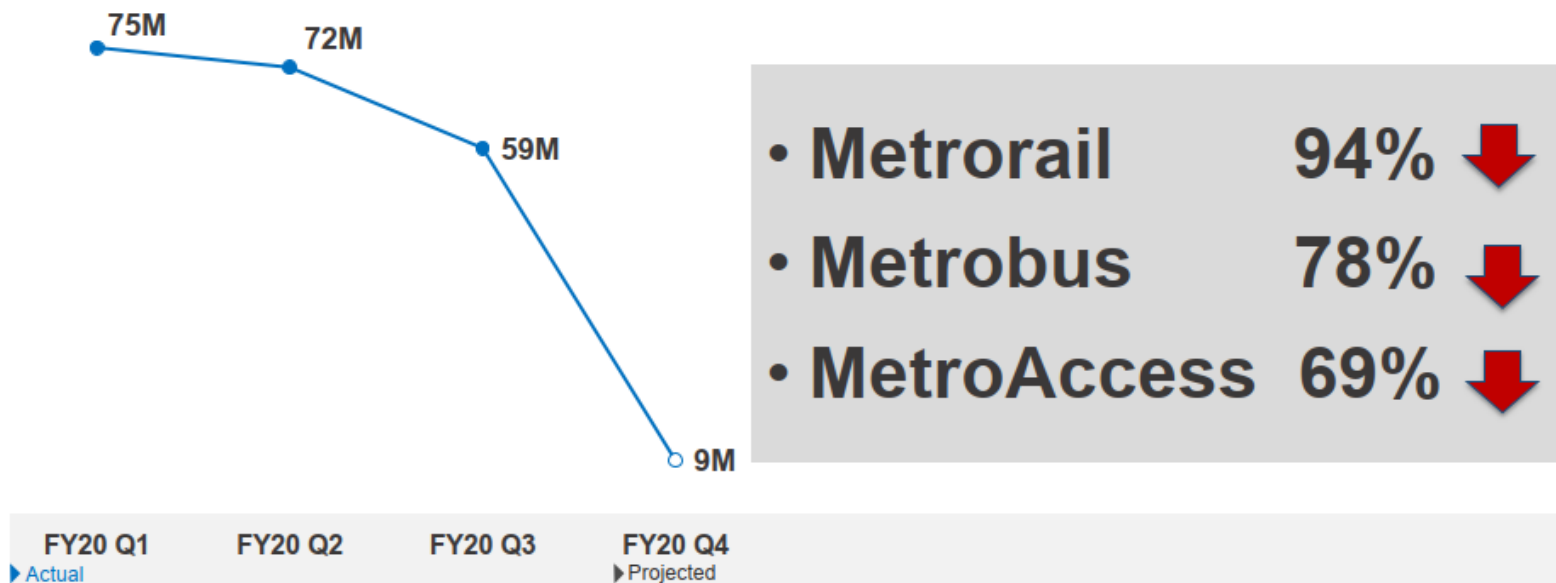


Mid-April shows the lowest daily volume at -55% compared to 2019 levels

Source: VDOT data presented at the Commonwealth Transportation Board June 17th Meeting

Regional Trends: WMATA Ridership

Ridership Decline of 88% from Q4 FY2020 Budget



Northern Virginia Reopening Phases

- Phase 1 (started 5/29)
 - Continued social distancing & teleworking
 - Non-essential businesses, like restaurants and salons, reopened with limited capacity
- Phase 2 (started 6/12)
 - Social gatherings increase from 10 to 50 people
 - Restaurant and beverage establishments may offer indoor dining at 50% occupancy & certain recreation/entertainment venues without shared equipment may open with restrictions

Northern Virginia Reopening Phases

- Phase 3 (started 7/1)
 - Limit the occupancy of physical spaces to ensure adequate physical distancing may be maintained
 - Encourage telework, when not feasible move/stagger workstations to maintain 6 feet of distance
- Phase 4 “New Normal” – June 2021-2025

Scenario Definitions

Scenario	Short Term (2020-2021)	“New Normal” (2025)
Quick Recovery	Economy recovers by fall and most people are back to work and school	Overall travel is about 95% of pre-COVID levels
Active Transportation	Gradual recovery where more people drive alone or take active transportation (walking/biking)	Active transportation remains higher than 2019; overall travel about 90% of pre-COVID levels
Second Pandemic Wave in October	A second stay at home advisory issued in October, with an increase in job loss and teleworking and a decrease in transit ridership	Most significant impact on overall travel, returning only to about 85% of pre-COVID levels
Cautious Recovery	Most gradual recovery with low school attendance and business related travel is reduced, & E-commerce increases	Overall travel lower than Quick Recovery Scenario at about 90% of pre-COVID levels

Scenario Comparison: Assumptions

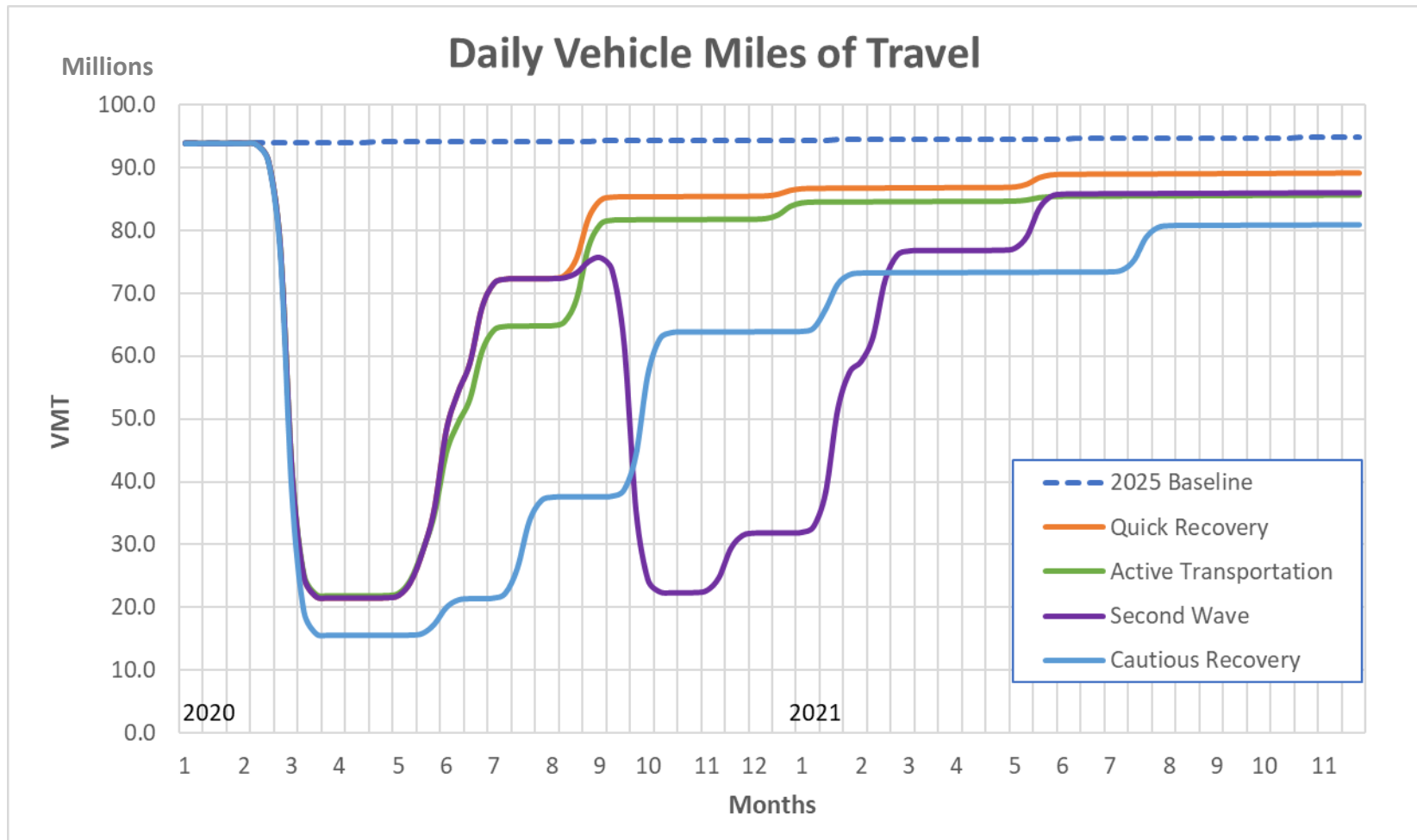
	Quick Recovery		Active Transportation		Second Wave		Cautious Recovery	
	Short Term	New Normal	Short Term	New Normal	Short Term	New Normal	Short Term	New Normal
Telework*	10%	10%	20%	15%	50%	10%	25%	15%
Jobs Lost*	3%	0.5%	5%	1%	10%	6%	8%	2%
School Attendance	90%	95%	90%	95%	0%	100%	40%	90%
Transit Safety Perception	85%	100%	75%	95%	25%	95%	40%	100%
Active Transportation	Pre-COVID Mode Share		60% trips <5 mi are walk/bike. Mode share increases 30%.		Pre-COVID Mode Share		Pre-COVID Mode Share	

**Compared to pre-COVID levels*

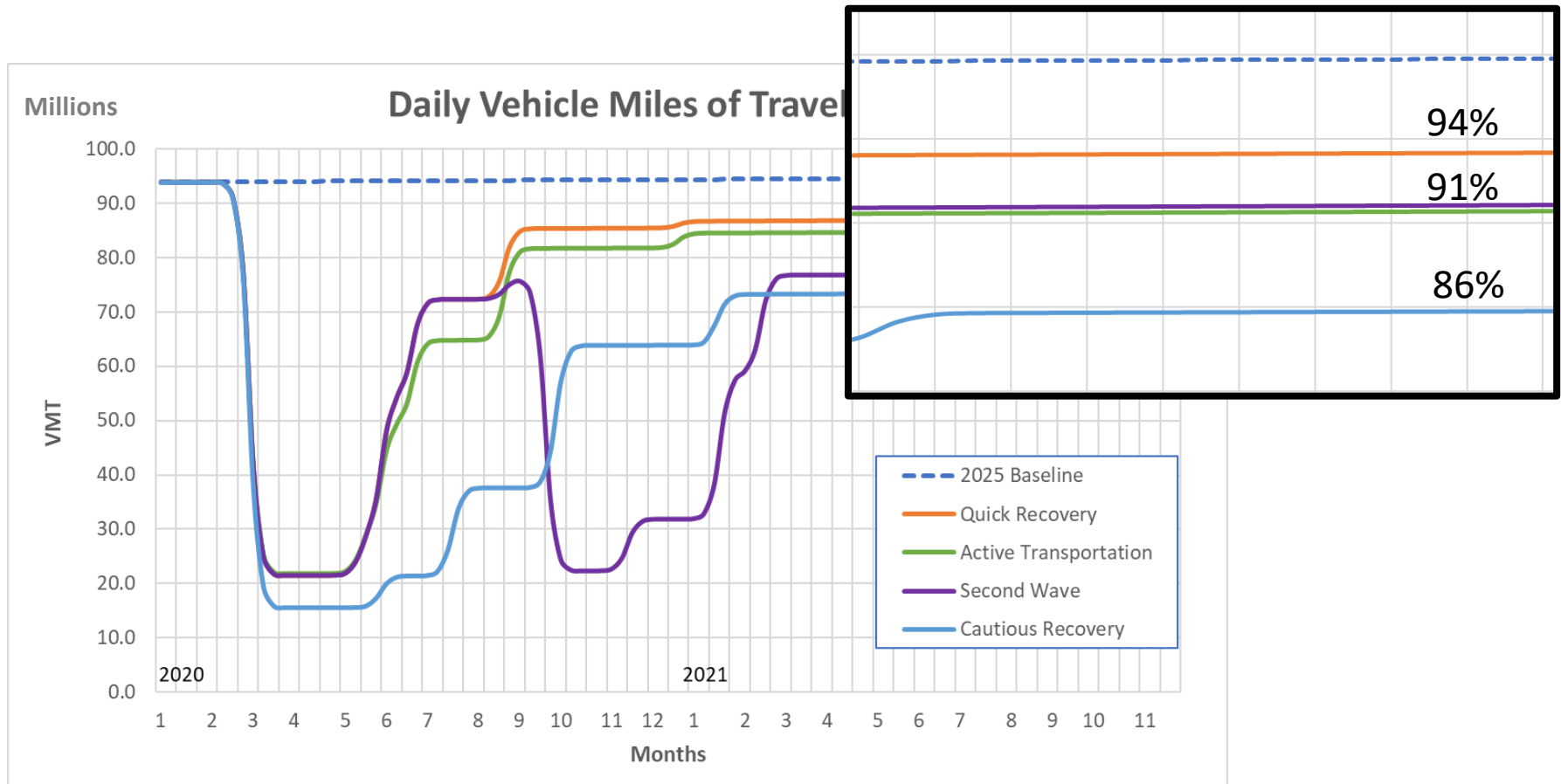
Short Term Impacts

Jan 2020 to June 2021

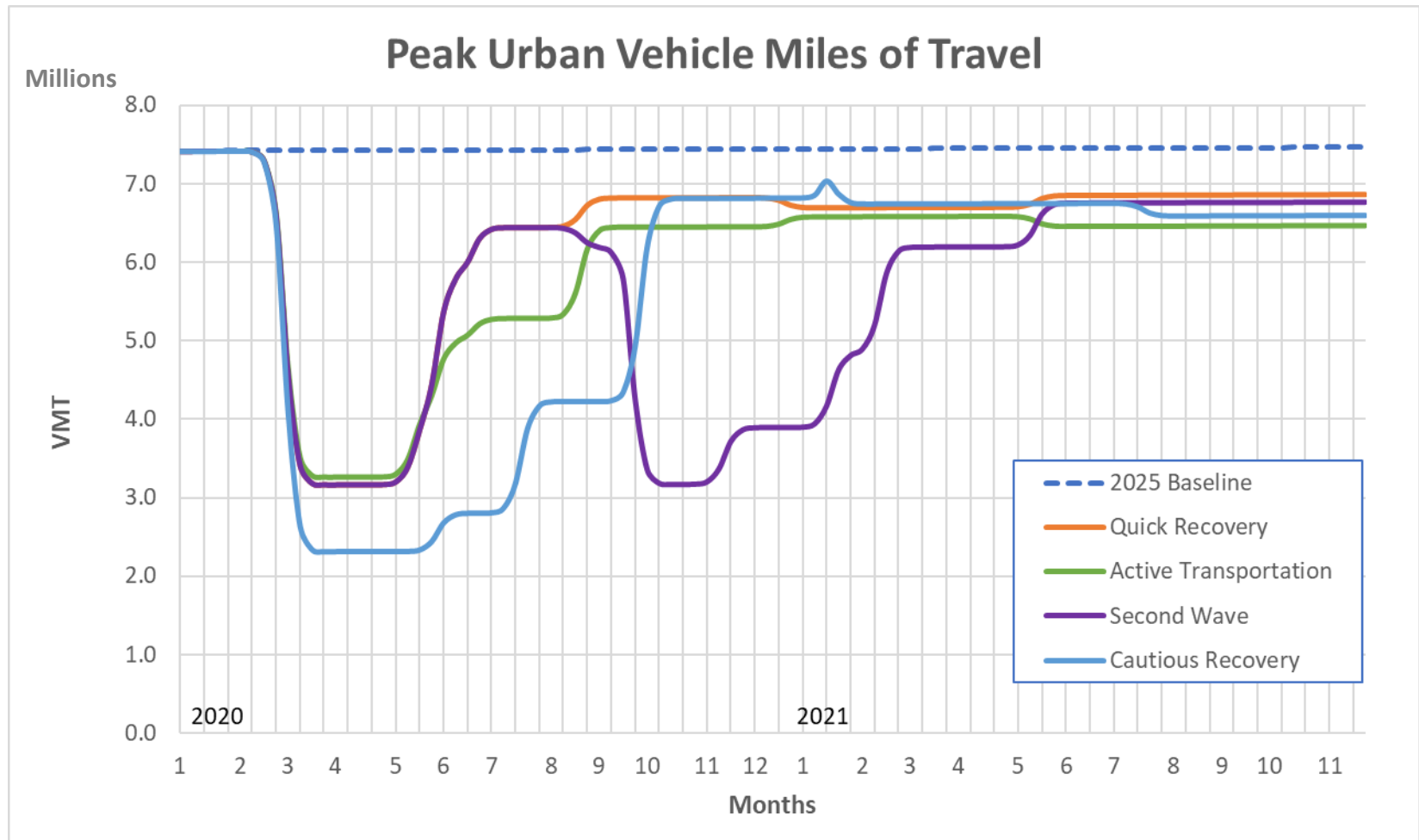
Impact on Vehicle Miles Traveled (VMT)



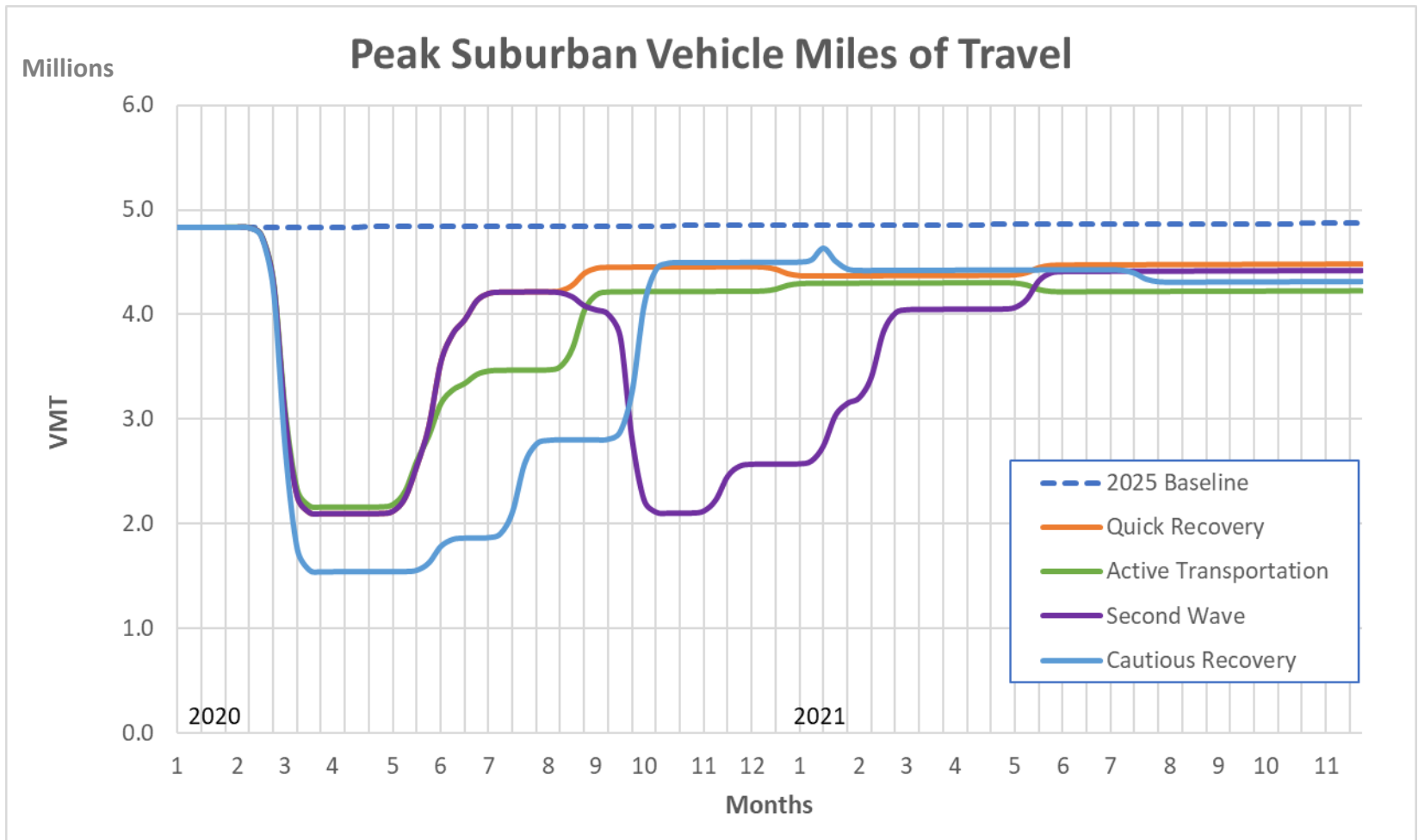
Impact on Vehicle Miles Traveled (VMT)



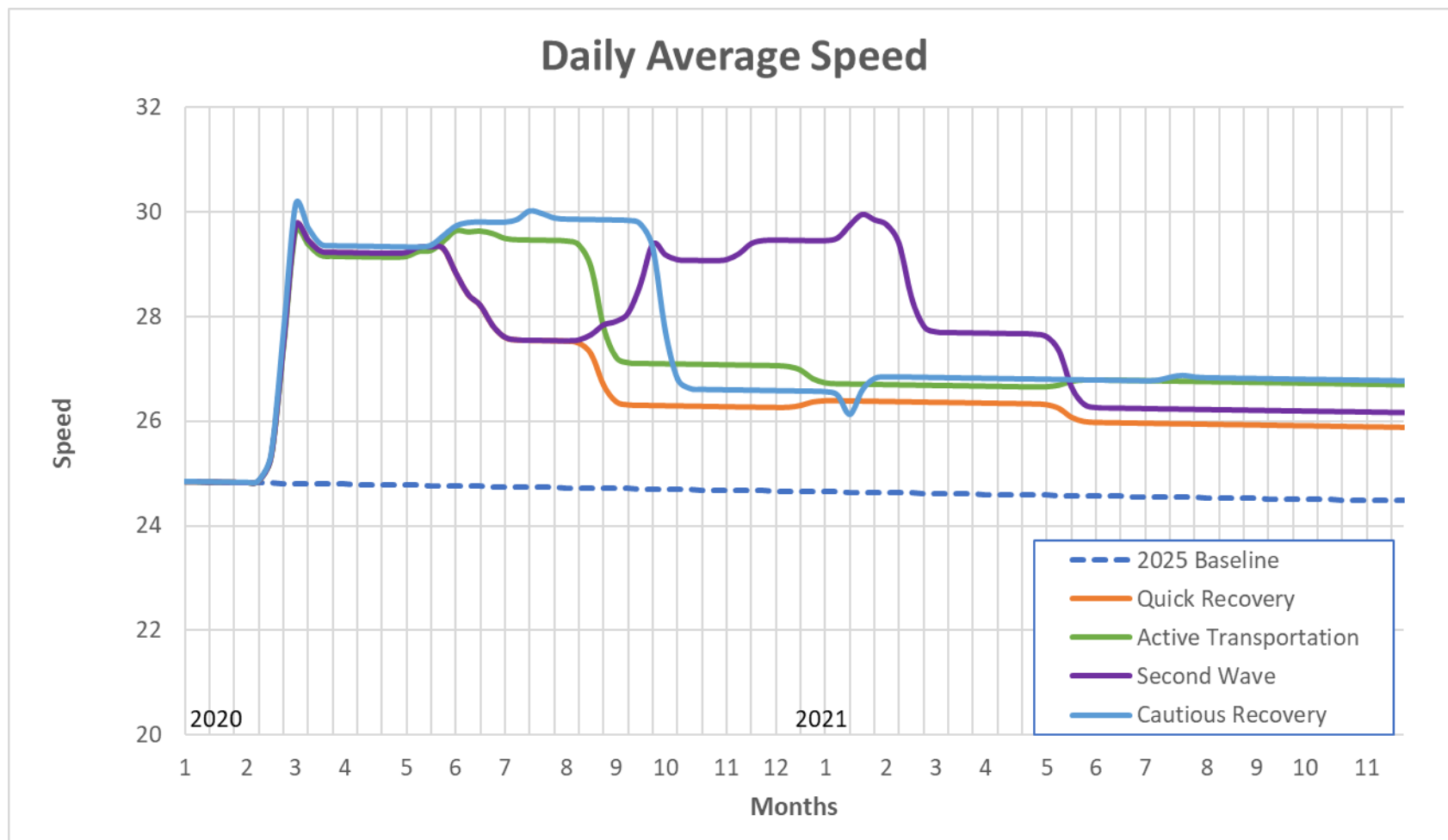
Impact on VMT by Subarea



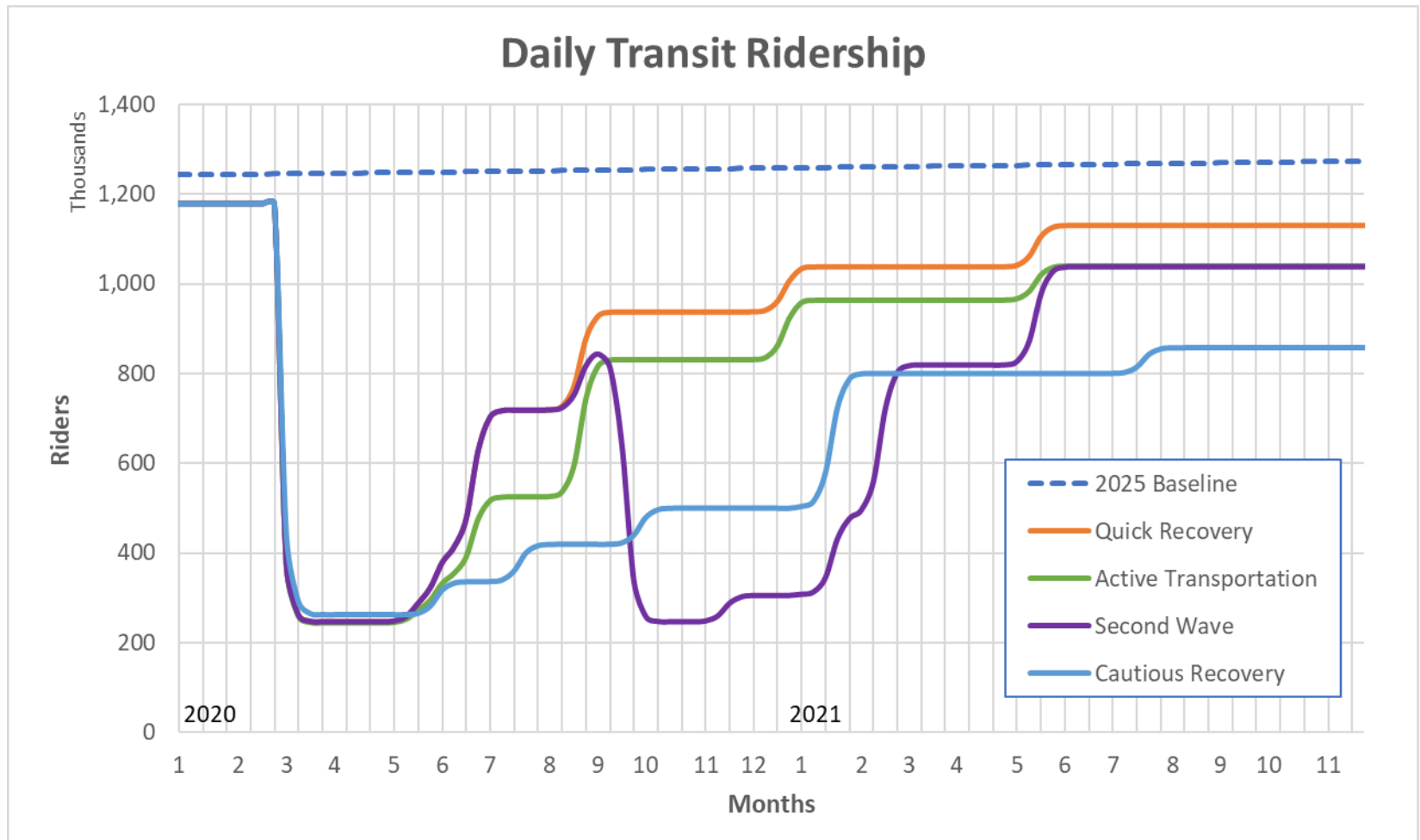
Impact on VMT by Subarea



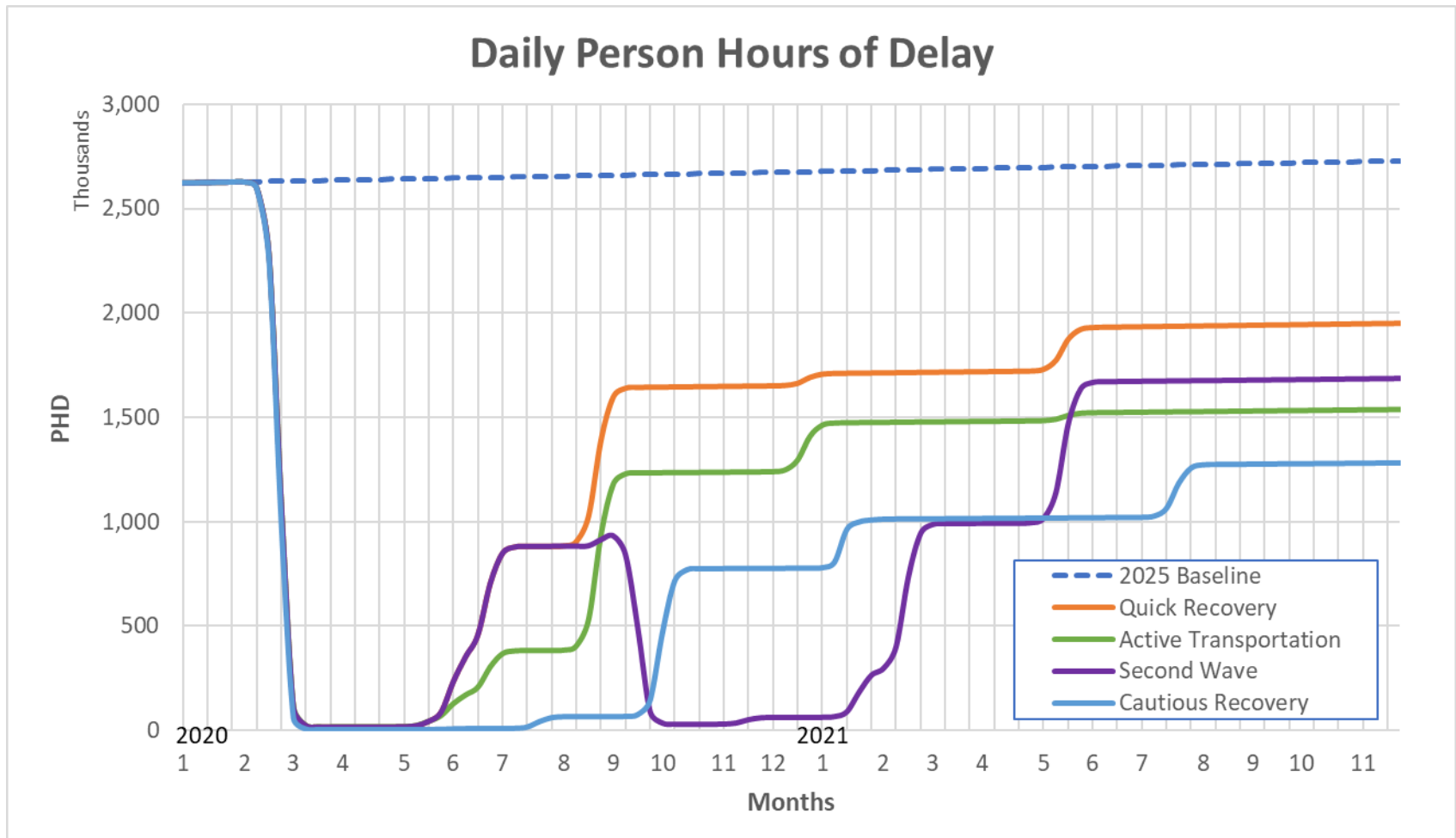
Impact on Vehicle Speed



Impact on Transit Ridership



Impact on Person Hours of Delay



“New Normal” Impacts

Horizon Year: 2025

2025 Transportation Network Performance

- Evaluate the scenarios using TransAction performance metrics
- Multi-modal measures that address accessibility and mobility in the region
 - Congestion
 - Transit ridership
 - VMT, etc.

Findings: Selected Measures (2025)

Measures (Weekday)	Base 2025 Conditions	Quick Recovery (%Change)	Active Transportation (%Change)	Second Wave (%Change)	Cautious Recovery (%Change)
Auto Trips	6,883,071	-16%	↓ -46%	-24%	-38%
Transit Trips	618,202	-15%	-36%	-22%	↓ -37%
Transit Share%	8.2%	+0.1%	↑ +1.4%	+0.2%	+0.1%
Transit Boardings	889,648	-15%	-33%	-22%	↓ -37%
Miles of Travel (Person)	116,060,798	-16%	-30%	-24%	↓ -38%
Hours of Travel (Person)	4,040,851	-31%	-49%	-42%	↓ -55%
Hours of Delay (Person)	1,472,169	-57%	-81%	-72%	↓ -85%
Transit Crowding	1,564	-34%	-58%	-58%	↓ -66%

Findings: VMT by Jurisdiction (2025)

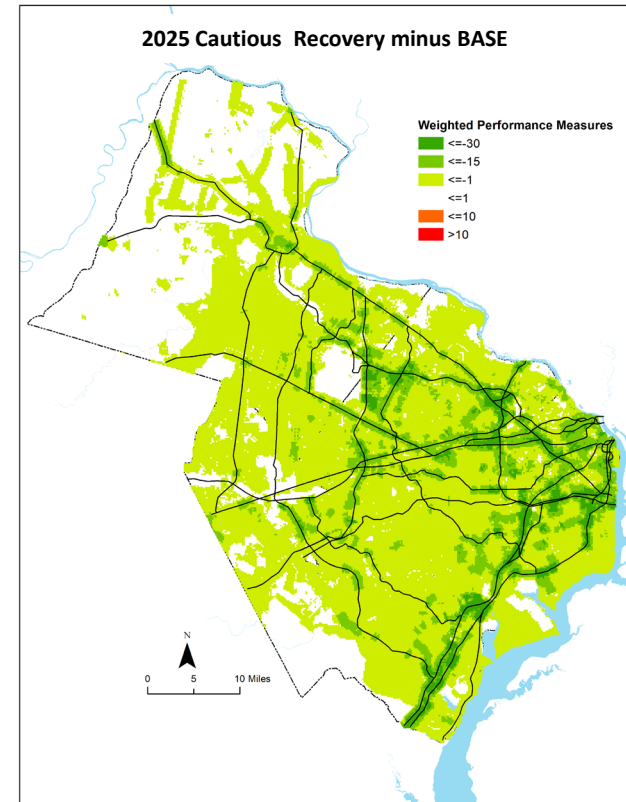
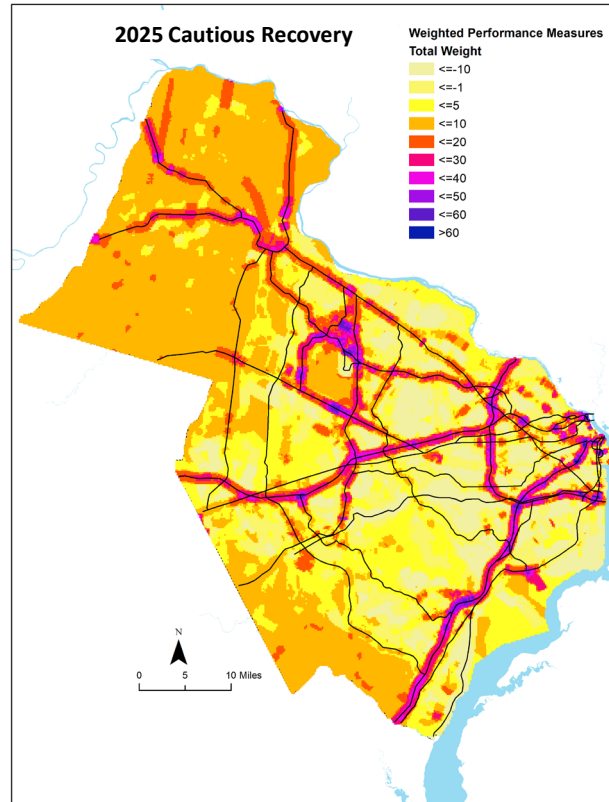
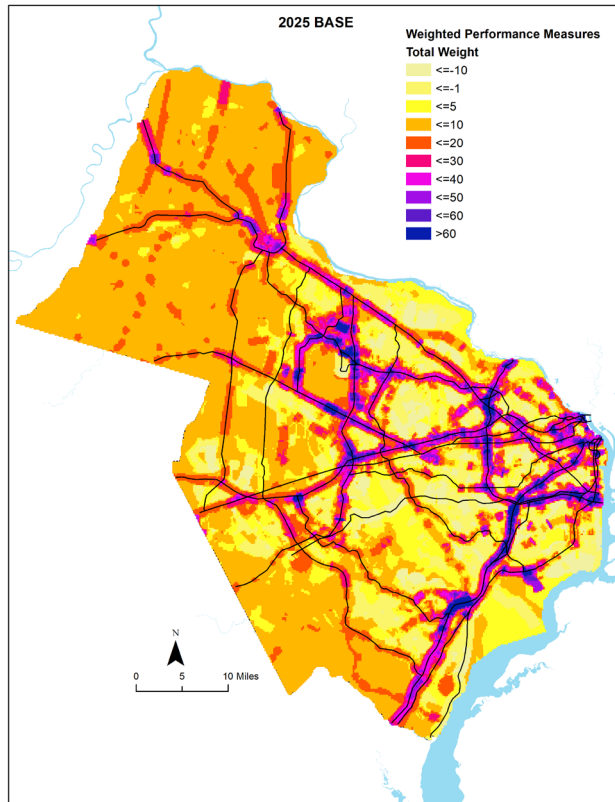
Miles of Travel Per Person (Auto & Transit)	Base Conditions (2025)	Quick Recovery (%Change)	Active Transportation (%Change)	Second Wave (%Change)	Cautious Recovery (%Change)
Arlington	8.3 mil	-19%	-35%	-28%	-45%
Alexandria	5.2 mil	-18%	-36%	-28%	-44%
Fairfax, Fairfax City & Falls Church	62.0 mil	-16%	-29%	-24%	-38%
Loudoun	18.1 mil	-14%	-28%	-21%	-34%
Prince William, Manassas & Manassas Park	22.5 mil	-16%	-31%	-24%	-38%

Findings: Person Hours of Delay by Jurisdiction (2025)

Person Hours of Delay (PHD)	Base Conditions (2025)	Quick Recovery (%Change)	Active Transportation (%Change)	Second Wave (%Change)	Cautious Recovery (%Change)
Arlington	143,000	-66%	-87%	-80%	-92%
Alexandria	84,500	-69%	-90%	-83%	-94%
Fairfax, Fairfax City & Falls Church	792,000	-61%	-83%	-75%	-88%
Loudoun	264,400	-44%	-68%	-57%	-72%
Prince William, Manassas & Manassas Park	188,300	-48%	-77%	-68%	-84%

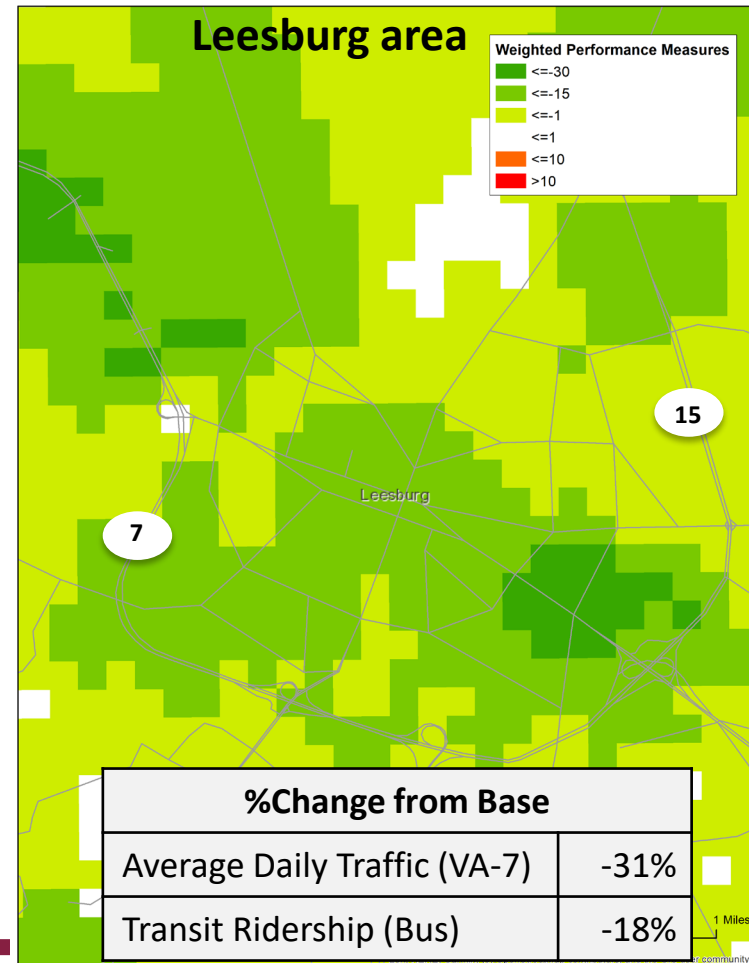
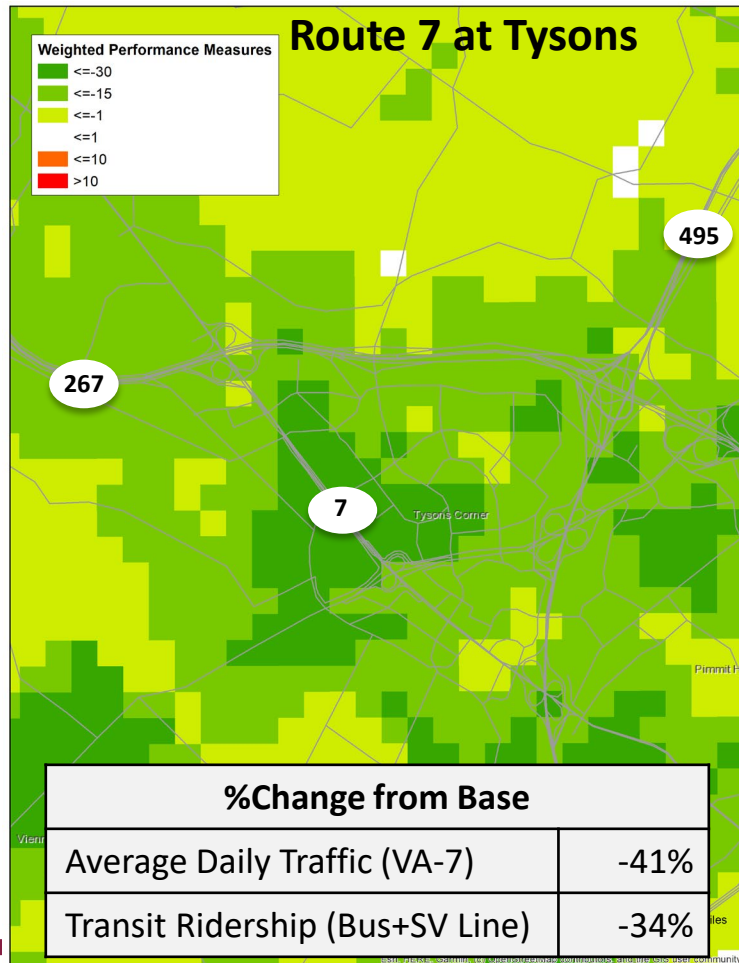
Overall Impact of Cautious Recovery Scenario

Weighted Performance Measures



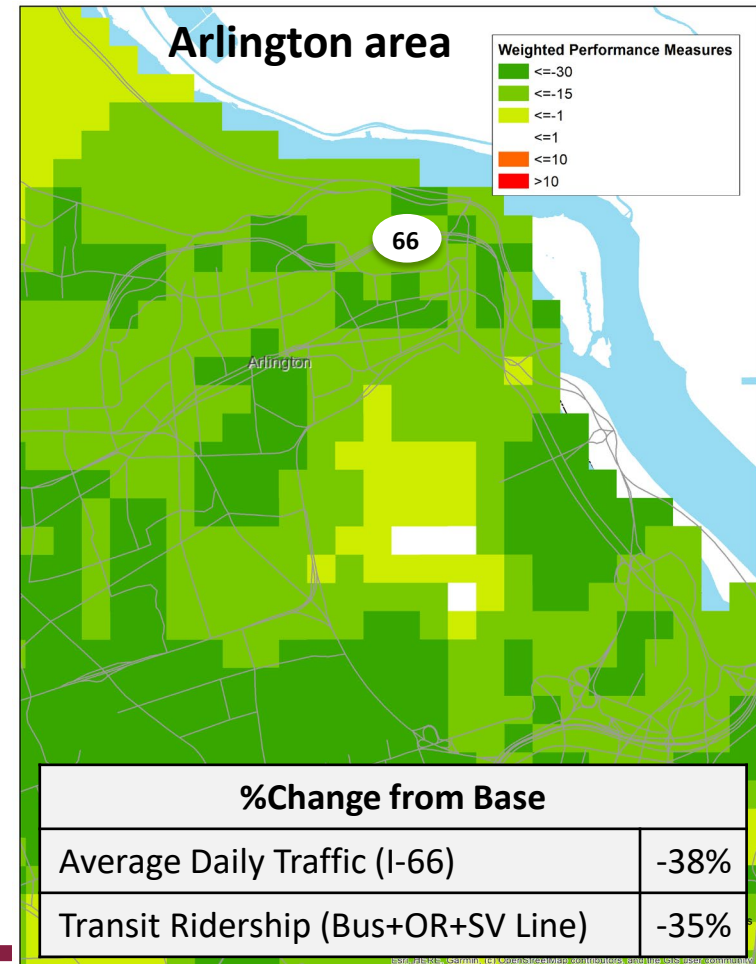
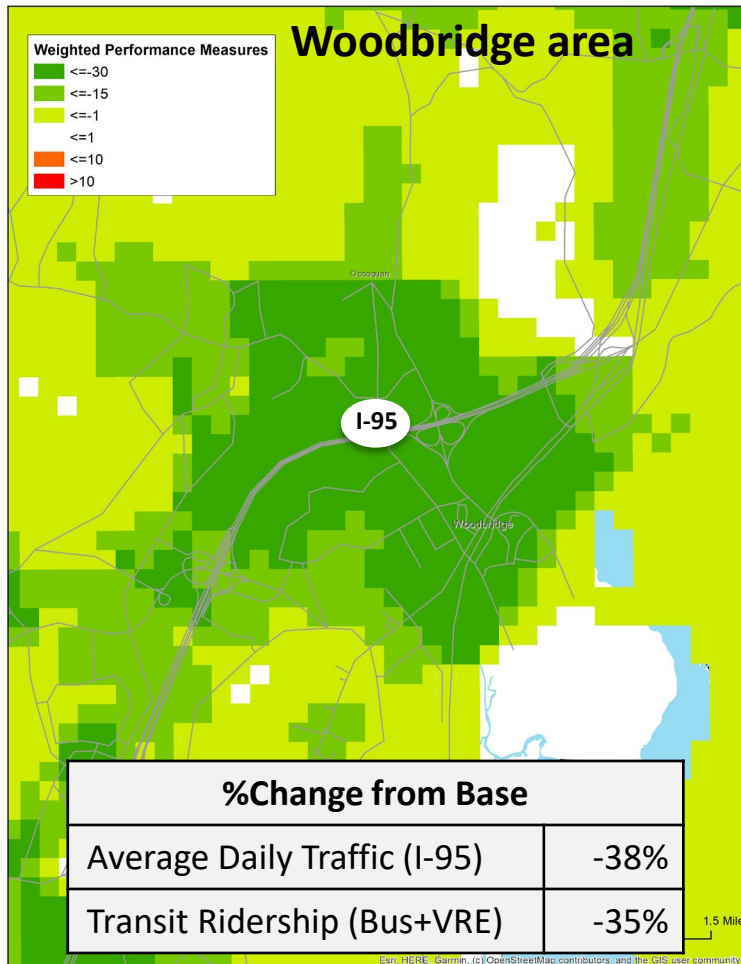
Cautious Recovery Scenario: Route 7 Tysons; Leesburg

Weighted Performance Measures



Cautious Recovery Scenario: I-95 South near Woodbridge; Arlington

Weighted Performance Measures



“New Normal” Scenario Observations

- All four scenarios assume 10-15 percent more telework than pre-COVID levels, and school attendance levels close to pre-COVID levels
- All four scenarios reduce auto and transit trips
 - ‘Active Transportation’ scenario has the largest impact for auto trips (46 percent reduction)
 - ‘Cautious Recovery’ scenarios has the largest impact for transit trips (37 percent reduction)
- All four scenarios reduce person hours of delay
 - ‘Cautious Recovery’ scenario has the largest impact (85 percent reduction)
 - Impact is most pronounced among inner jurisdictions, but is still significant for outer jurisdictions
 - Impact is evident along major corridors

Conclusions

- Short Term
 - The majority of changes occur within the first 18 months and level off around June 2021
- “New Normal”
 - Teleworking and economic impacts result in:
 - Traffic volumes and transit ridership that do not fully recover to pre-COVID levels
 - Significant reductions in time spent traveling and time lost in congestion
 - While congestion reduction impacts are a positive, transit ridership reduction may be challenging to financial stability of some transit agencies

Implications for NVTAs Planning and Programming Responsibilities, and Transportation Policy

- These findings suggest several topics for further consideration through the upcoming TransAction planning process and ongoing capital program development
 - Potential **policies** to support continued teleworking at greater than pre-COVID levels while mitigating impact on transit ridership, e.g. incentivization
 - **Using data** to further refine understanding of travel choices by households and businesses, and implications on the network
 - Quantifying the extent to which **TDM programs** influence travel behavior
 - Projects that support **multiple modes of transportation**
 - Emphasis on **flexible use of right-of-way** to accommodate changing travel patterns

Q & A

Backup Slides

Performance Measures

- 1.1.1 Total Person Hours of Delay
- 1.1.2 Transit Crowding
- 1.1.3 Person Hours of Congested Travel in Automobiles
- 1.1.4 Person Hours of Congested Travel in Transit Vehicles
- 1.2.1 Congestion Severity: Maximum Travel Time Ratio
- 1.2.2 Congestion Duration
- 1.3.1 Percent of jobs/population within ½ mile of high frequency and/or high performance transit
- 1.3.2 Access to jobs within 45 mins by auto or within 60 mins by transit
- 1.4.1 Average travel time per motorized trip between Regional Activity Centers
- 1.4.2 Walkable/bikeable environment within a Regional Activity Center
- 2.1.1 Safety of the transportation system
- 2.2.1 First and last mile connections
- 2.3.1 Travel by non-SOV modes
- 2.4.1 Person hours of travel caused by 10% increase in PM peak hour demand
- 3.1.1 Vehicles miles traveled (VMT) by speed

TransAction Update

Vision and Goals (Discussion Draft)
September 16th, 2020



Presented by:

Keith Jasper

Principal, Planning & Programming, Northern Virginia Transportation Authority



Definitions/Guidelines

1. **Vision:** The vision statement articulates a preferred idealized state.
2. **Goals:** Goals focus on priorities and outcomes the region desires to move toward.
3. **Objectives:** Objectives are measurable and targeted actions that result in incremental but tangible advancement toward the stated goals.
4. **Performance Measures:** Performance measures are used to evaluate potential performance of the transportation network. They derive from the stated objectives. Objectives can and should change over time as the region progresses and diverse aspects of goals become more pronounced in response to contemporary issues or understanding.
5. **Weights:** Weights reflect the relative importance associated with each performance measure.



Current Vision and Goals

TransAction Vision Statement

"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."

Goal	Objective	Performance Measure	Weight
Goal 1: Enhance quality of life and economic strength of Northern Virginia through transportation	Reduce congestion and crowding experienced by travelers in the region	Total person hours of delay*	10%
		Transit crowding*	5%
		Person hours of congested travel in automobiles*	5%
		Person hours of congested travel in transit vehicles*	5%
	Improve travel time reliability	Congestion severity: maximum travel time ratio	5%
		Congestion duration*	10%
	Increase access to jobs, employees, markets, and destinations	Percent of jobs/population within 1/2 mile of high frequency and/or high performance transit	5%
		Access to jobs within 45 minutes by auto or within 60 minutes by transit*	5%
Goal 2: Enable optimal use of the transportation network and leverage the existing network	Improve connections among and within areas of concentrated growth	Average travel time per motorized trip between Regional Activity Centers	5%
		Walkable/bikeable environment within a Regional Activity Center	5%
	Improve the safety of transportation network	Safety of the transportation system	5%
	Increase integration between modes and systems	First and last mile connections	10%
Goal 3: Reduce negative impacts of transportation on communities and the environment	Reduce transportation related emissions	Share of travel by non-SOV modes	10%
		Person hours of travel caused by 10% increase in PM peak hour demand*	5%
		Vehicle miles traveled (VMT) by speed	10%

* Measure included in HB 599 rating process.



Proposed Vision Statement

*"Northern Virginia will plan for, and invest in,
a sustainable and integrated multimodal transportation system
that enhances quality of life,
strengthens the economy,
and builds resilience."*



Mapping Goals & Objectives – 1

PROPOSED VISION

*"Northern Virginia will plan for, and invest in,
a sustainable and integrated multimodal transportation system
that enhances quality of life,
strengthens the economy,
and builds resilience"*

GOAL	OBJECTIVES AND MEASURES
#1 [Mobility]	Congestion/crowding <ul style="list-style-type: none">• 3 measures – includes Congestion and Safety Travel time reliability <ul style="list-style-type: none">• 1 measure
#2 [Accessibility]	Access to jobs/employees/markets/destinations <ul style="list-style-type: none">• 2 measures
#3 [Resiliency]	Emissions <ul style="list-style-type: none">• 1 measure – Environmental Resilience/choices <ul style="list-style-type: none">• 1 measure – Homeland Security

Mapping Goals & Objectives – 2

"Northern Virginia will plan for, and invest in, a sustainable and integrated multimodal transportation system that enhances quality of life, strengthens the economy, and builds resilience."



GOALS	OBJECTIVES	MEASURES	Include/ Drop/Move/Swap?
#1 [Improve <i>Mobility</i>]	Reduce roadway <i>congestion</i>	Person Hours of Delay*	<ul style="list-style-type: none"> Person hours of congested travel in automobiles* Person hours of congested travel in transit vehicles* Congestion duration* Average travel time per motorized trip between Regional Activity Centers (<i>expand travel choices</i>) <i>Share of travel by non-SOV modes</i>
	Reduce Transit <i>crowding</i>	Daily crowded transit miles*	
	Improve travel time <i>reliability</i>	Congestion severity: maximum travel time ratio	
	Improve <i>safety</i> of the transportation system	Safety measure	
#2 [Increase <i>Accessibility</i>]	Increase <i>access</i> to jobs, employees, markets and destinations	Access to jobs within 45 mins by auto or 60 mins by transit*	<ul style="list-style-type: none"> Walkable bikeable environment within regional activity center First and last mile connection
		Percent of Jobs within 1/2 mile of high frequency transit	
#3 [Build <i>Resiliency</i>]	Reduce transportation related <i>emissions</i>	Vehicle Miles traveled (VMT) by speed	
	Sustain operation and build <i>resiliency</i>	Person hours of travel caused by 10% increase in PM peak hour demand*	



- Equity
- Others?

Core Values

