



# COMMONWEALTH of VIRGINIA

## *Commonwealth Transportation Board*

Shannon Valentine  
Chairperson

1401 East Broad Street  
Richmond, Virginia 23219

(804) 786-2701  
Fax: (804) 786-2940

## COMMONWEALTH TRANSPORTATION BOARD WORKSHOP AGENDA

VDOT Central Office Auditorium  
1221 East Broad Street  
Richmond, Virginia 23219  
October 19, 2021  
10:00 a.m.

**Attendees will be required to wear a mask unless  
Proof of COVID vaccination is provided.**

1. DRPT/VPRA/VDOT MOU  
*D. J. Stadtler, Virginia Passenger Rail Authority*
2. I-81 Corridor Improvement Program  
*Dave Covington, Virginia Department of Transportation*
3. VTrans  
*Nick Donohue, Deputy Secretary of Transportation*  
*Jitender Ramchandani, Office Intermodal Planning and Investment*
4. Transportation Initiatives  
*Wendy Thomas, Virginia Department of Transportation*
5. Springfield to Quantico Enhanced Public Transportation Feasibility Study  
*Jennifer DeBruhl, Virginia Department of Rail and Public Transportation*
6. TRIP Program Update  
*Jennifer DeBruhl, Virginia Department of Rail and Public Transportation*
7. Periodic Regulatory Review  
*JoAnne Maxwell, Virginia Department of Transportation*
8. Capital Project Revenue Bonds, Series 2022  
*Laura Farmer, Virginia Department of Transportation*
9. Transportation Revenues and Opportunities – Part 2  
*Nick Donohue, Deputy Secretary of Transportation*  
*John Lawson, Deputy Secretary of Transportation*

Agenda  
Meeting of the Commonwealth Transportation Board  
Workshop Session  
October 19, 2021  
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10. SmartScale Round 5  
*Brooke Jackson, Office Intermodal Planning and Investment*
11. Virginia Transportation Infrastructure Bank  
*Nick Donohue, Deputy Secretary of Transportation*
12. Director's Items  
*Jennifer Mitchell, Virginia Department of Rail and Public Transportation*
13. Commissioner's Items  
*Stephen Brich, Virginia Department of Transportation*
14. Secretary's Items  
*Shannon Valentine, Secretary of Transportation*

###

October 19, 2021

# Transforming Rail in Virginia: VDOT-DRPT-VPRA Interagency Agreement



# VDOT-VPRA-DRPT Interagency Agreement

- Purpose of Agreement is to leverage VDOT's megaproject construction experience on Long Bridge and other TRV projects.
- VDOT to provide services such as design, construction, and procurement.
- VPRA to retain responsibility for communications, environmental reviews and compliance, grants management, service planning and operations and other duties unless delegated to VDOT.
- DRPT to provide administrative and operational support.
- Future project agreements will define specific roles and responsibilities, timelines, budgets and funding commitments.
- MOA creates Executive Committee of VDOT Commissioner, DRPT Director and VPRA Executive Director

# TRV Projects

### VA-AMTRAK-CSX-VRE INITIATIVE HIGHLIGHTS

#### RAIL CORRIDOR IMPROVEMENTS

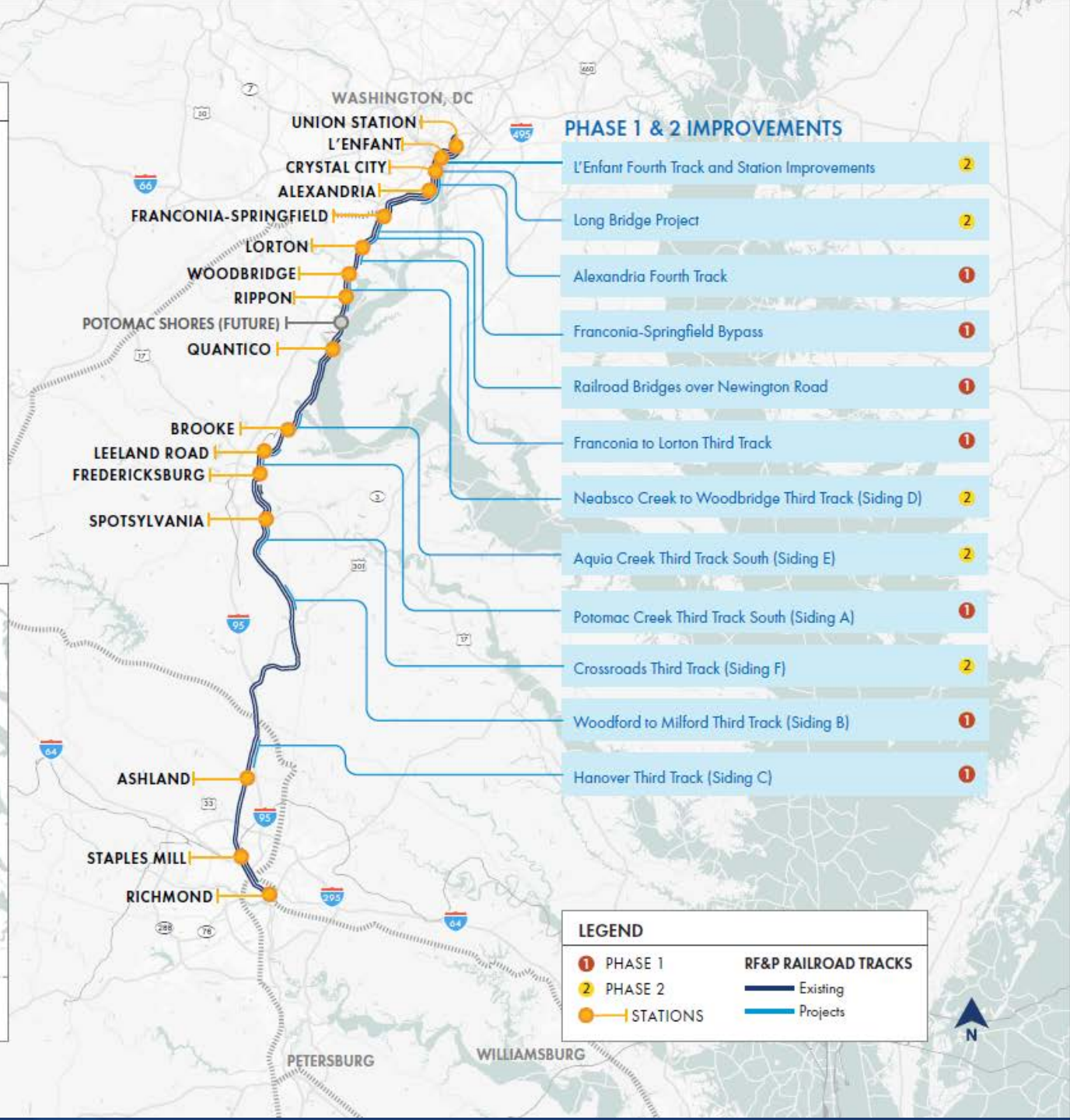
Construct 37 Miles of New Track

- 1 PHASE 1**  
(Complete 2026) 23 miles of new track
- 2 PHASE 2**  
(Complete 2030) 14 miles of new track

#### RAILROAD RIGHT-OF-WAY (ROW) AND TRACK ACQUISITION

Purchase of 384 Miles of Railroad ROW and 223 Miles of Track

- SEGMENT 1**  
Half of CSXT ROW between Washington, DC, and Petersburg, VA, (145 miles) and 44 miles of track
- SEGMENT 2**  
All of CSXT ROW (abandoned rail line between Petersburg, VA, and Ridgeway, NC (75 miles)
- SEGMENT 3**  
Nearly all of CSXT ROW between Doswell, VA, and Clifton Forge, VA, (164 miles) and 179 miles of track



# Project Delivery Responsibility – CSX Agreement

Project ID	Project Name	Beg. MP	End MP	Phase	Design Responsibility*	Construction Responsibility*
R01A	L'Enfant Fourth Track and Station Improvements	111.5	112.4	2	VRE	VRE
R02A	Long Bridge Project	110.1	111.5	2	DRPT	DRPT
R03A	Alexandria Fourth Track	104.1	110.1	1	CSXT	CSXT
R03A	Alexandria Fourth Track - Early Works			1	DRPT	VDOT
R05A	Franconia to Lorton Third Track	92.3	99.0	1	CSXT	CSXT
R05B	Franconia-Springfield Bypass	96.4	97.3	1	DRPT	DRPT
R05C	Railroad Bridges Over Newington Road	95.3	96.2	1	CSXT	CSXT
R06B	Railroad Bridges Over Route 1**	90.1	91.1	1/2**	CSXT	CSXT
R10B	Potomac Creek Third Track - South (Siding A)	61.3	65.2	1	CSXT	CSXT
R13C	Woodford to Milford Third Track (Siding B)	40.4	43.5	1	CSXT	CSXT
R13D	Hanover Third Track (Siding C)	15.8	18.7	1	CSXT	CSXT
R7A	Neabsco Creek to Woodbridge Third Track (Siding D)	84.9	88.0	2	CSXT	CSXT
R9A	Aquia Creek Third Track - South (Siding E)	68.5	70.8	2	CSXT	CSXT
R13B	Crossroads Third Track (Siding F)	48.7	53.0	2	CSXT	CSXT

\* Responsibility is subject to modification as projects are developed and progressed into design and construction

\*\*Project R06B "Railroad Bridges Over Route 1" was originally planned for Phase 3 but will be delivered by DRPT prior to the end of Phase 2. The delivery of this project is not tied to the increases in service associated with the completion of the Phase 1 and 2 projects.

# Long Bridge Project Timeline



Questions?







COMMONWEALTH of VIRGINIA  
Office of the  
SECRETARY of TRANSPORTATION

# Interstate 81 Corridor Improvement Program and Fund Update

Commonwealth Transportation Board Meeting  
October 2021



# Agenda

**2019 Acts of Assembly**

**Performance Measures Comparison**

**Project Development Process**

**Assessment of Strategies**

**Annual Program Allocations and Financing Plan**

**Takeaway Scorecard**

# 2019 Acts of Assembly

- Chapters 837 and 846 – CTB Report Requirements
- Report by December 15 to General Assembly
  - Performance of the I-81 corridor
  - Effectiveness of operational strategies and capital improvements
  - Status of projects
  - Current and projected I-81 Fund balance
- Annual program allocation
- Financing plan
- Schedule of projects and strategies

# Performance Measures - Baseline Comparison

## Safety and Performance of I-81

- Crash frequency and severity
- Person-hours of delay
- Number of incidents involving lane closures
- Average duration of incidents involving lane closures

# Performance Measures - Baseline Comparison

Start Year	End Year	Person Hours of Delay (Thousands)			Lane-Impacting Incidents			Hours of Lane Closures		
		Northbound	Southbound	Total	Northbound	Southbound	Total	Northbound	Southbound	Total
2018	2019	2,116	1,471	3,587	1,894	1,691	3,585	2,329	1,812	4,141
2019	2020	1,908	1,245	3,153	1,763	1,580	3,343	2,121	1,627	3,748
<b>Percent Change</b>		<b>-9.8%</b>	<b>-15.4%</b>	<b>-12.1%</b>	<b>-6.9%</b>	<b>-6.6%</b>	<b>-6.8%</b>	<b>-8.9%</b>	<b>-10.2%</b>	<b>-9.5%</b>

Start Year	End Year	EPDO Crashes		
		Northbound	Southbound	Total
2015	2019	50,094	48,907	99,001
2016	2020	49,360	47,270	96,630
<b>Percent Change</b>		<b>-1%</b>	<b>-3%</b>	<b>-2%</b>

# Operational Improvement Project Status

Operational Improvement Type	Status
Curve improvements (static and flashing chevrons)	✓
Safety Service Patrol enhancements	✓
Lift and tow	✓
Towing and Recovery Incentive Program (TRIP)	✓
Traffic camera installations	✓
Changeable message signs installations	Under construction Fixed completion date: October 28, 2021



# Arterial Improvement Project Status

## Corridor-wide Arterial Improvements

- Traffic signal upgrades
  - Planning and design continues in concert with coordination with localities for traffic signal system integration into the VDOT central signal system along entire corridor
- Parallel route upgrades
  - Minor geometric improvement projects to facilitate access to and from I-81 during incidents are complete (3 projects in Rockbridge County)

# Project Development Process - Capital Projects





# Capital Improvement Project Status - Bristol District

- 4 projects under design by VDOT staff
- 1 project under design by on-call consultant
- 2 projects under design by project-specific consultant (procured)
- 2 design-build projects (bundled) under development (**out year projects advanced**)
- 4 projects under construction
- 5 projects - contracts awarded, Spring constr.
- 2 projects - construction complete
- **Of the 18 SYIP projects in Bristol, all are currently under design or have construction completed. 2 out year projects advanced.**



## Exit 26 Washington County

Southbound  
acceleration and  
deceleration lane  
extensions



# Capital Improvement Project Status - Salem District

- 2 projects under design by VDOT staff
- 0 projects under design by on-call consultant
- 1 project under design by project-specific consultant (procured)
- 2 design-build projects (bundled) under construction
- 1 project - construction complete
- **Of the 6 SYIP projects in Salem, all are currently under design or construction**



## Exit 89 Pulaski County

Northbound  
deceleration lane  
extension



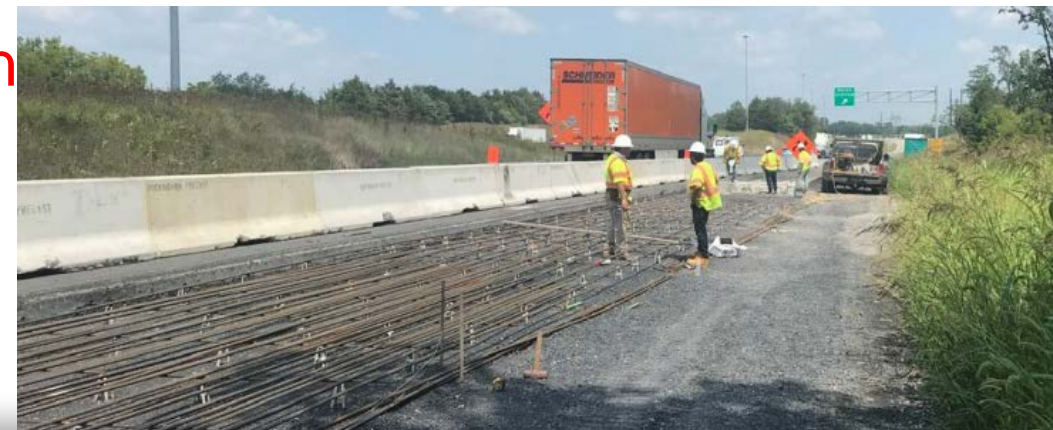
# Capital Improvement Project Status - Staunton District

- 1 project under design by VDOT staff
- 1 project under design by on-call consultant
- 4 projects under design by project-specific consultants (procured)
- 0 design-build projects
- 5 projects under construction
- 5 projects – construction complete
- **Of the 16 current SYIP projects in the Staunton District, all are currently under design or have construction completed**



**Exit 269 -  
Shenandoah  
County**  
**Northbound  
deceleration  
lane extension**

**Truck Weigh Station, MM 304 - Frederick County**  
**Northbound deceleration lane extension**

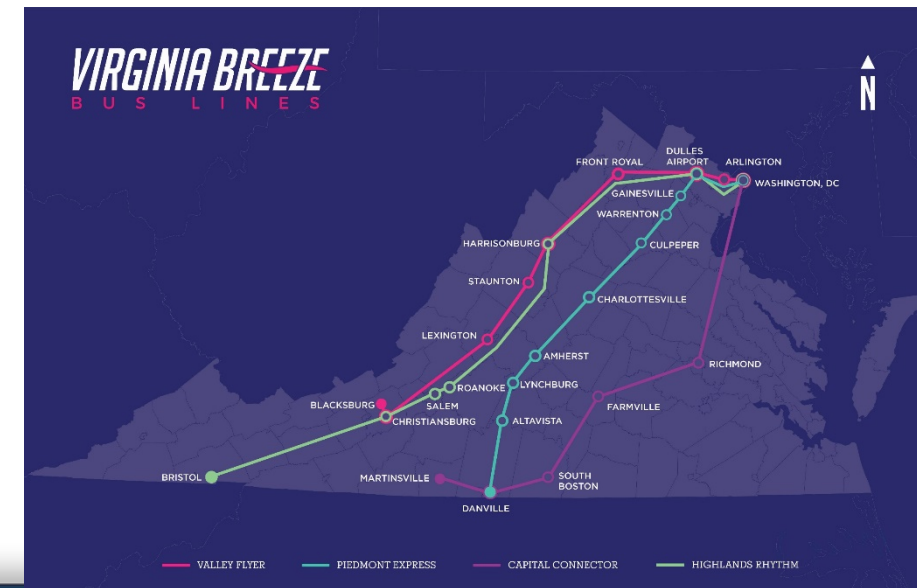


# Takeaway Scorecard

Activity	Status	Actual/Anticipated Completion
Curve improvements (8)	Complete	Fall 2019
Initial accel/decel lane extensions (8)	Complete	Fall 2020
Safety service patrol expansion	Complete	July 2019
Additional cameras (51)	Complete	Spring 2021
Additional changeable message signs	Nearly complete	October 2021
Arterial upgrades	Underway (geometric improvements complete)	Varies by project
Remaining capital projects (19)	Underway	Varies by project

# Multimodal Project Status – Virginia Breeze Intercity Bus

- Establishing new daily roundtrip service from Bristol to Washington DC
  - Ribbon cutting on November 13th, service begins November 15th
- Anticipated annual ridership of 25,000 on new service, nearly doubling intercity bus ridership in the I-81 corridor
- Highlands Rhythm is the 4th route in the Virginia Breeze network – joining daily services between:
  - Valley Flyer – Blacksburg to DC
  - Piedmont Express – Danville to DC
  - Capital Connector – Martinsville to RVA and DC



# Multimodal Project Status – Western Rail Initiative

- DRPT and NS signed a term sheet for a 2<sup>nd</sup> State-supported Amtrak train to Roanoke (commence 2022) and an extension of both trains to the New River Valley (commence 2026).
- Major features include: purchase of 28 miles of track, construction of a double track south of Manassas and passenger rail bypass of Roanoke Yard, and a station in the New River Valley.
- DRPT, VPRA, and the Office of the Attorney General are negotiating the definitive agreements, completing environmental reviews and due diligence.
- The addition of the 2<sup>nd</sup> train and the extension to the New River Valley are estimated to add 80,000 net new rides



# Fiscal Year 2022-2027 Performance (in millions)

## Interstate I-81 Improvement Funding

Fund	PV	FY22	FY23	FY24	FY25	FY26	FY27
I-81 Regional Fuels Tax	\$ 110.1	\$ 53.6	\$ 57.3	\$ 47.5	\$ 59.5	\$ 56.2	\$ 43.9
I-81 Bond Proceeds		\$ 101.9	-	-	-	-	\$ 14.8
I-81 TIFIA Proceeds		\$ 101.8	-	\$ 258.2	-	-	\$ 379.8
Interstate 81 Fund	\$ 119.6	\$ 55.6	\$ 68.4	\$ 68.3	\$ 71.6	\$ 75.2	\$ 71.2
<b>Total</b>	<b>\$ 229.7</b>	<b>\$ 312.9</b>	<b>\$ 125.7</b>	<b>\$ 374.0</b>	<b>\$ 131.1</b>	<b>\$ 131.4</b>	<b>\$ 509.7</b>

Fund balance as of June 30, 2021 \$198.8 million

Fund balance as of September 30, 2021 \$215.4 million

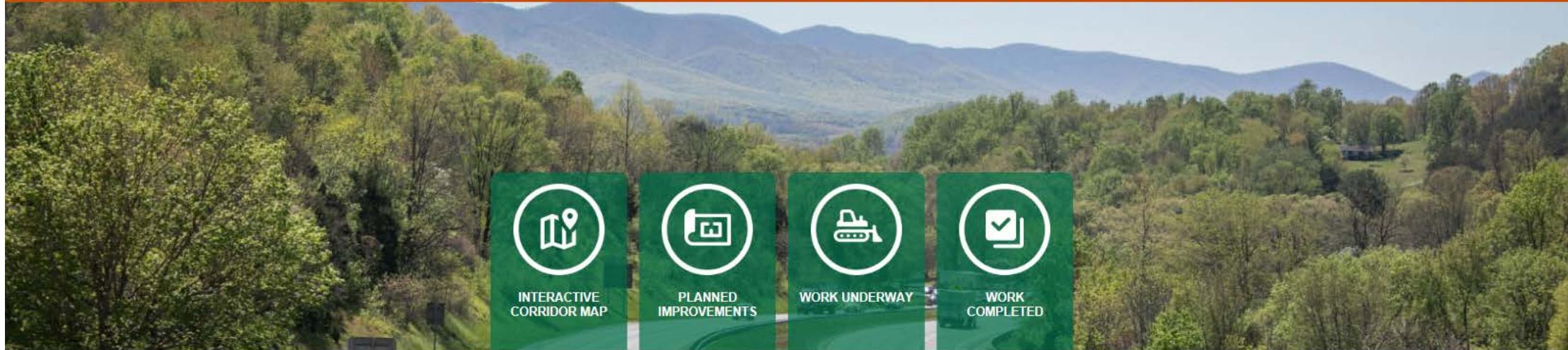
# Study Website Improve81.org

IMPROVE 81



Home

Home | Program Overview | Advisory Committee & Meetings | Resources & Documents | News & Alerts | Contact Us



## What Is The I-81 Improvement Program?

The I-81 Corridor Improvement Program consists of innovative, targeted improvements that will have a substantial effect on the safety and reliability of a critical portion of our nation's infrastructure.







COMMONWEALTH of VIRGINIA  
*Office of the*  
SECRETARY of TRANSPORTATION

## VTrans Long-term Risk & Opportunity Register - Part 2

### Commonwealth Transportation Board Workshop

Nick Donohue, Deputy Secretary of Transportation  
Jitender Ramchandani, Office of Intermodal Planning and Investment

October 19, 2021



- Present Draft Policy:  
Development and Monitoring of VTrans Long-term Risk & Opportunity Register
  - Review impacts of mega/macrotrends on CTB's Goals
  - Review the Draft Risk & Opportunity Register

# DRAFT LONG-TERM POLICY: CONTEXT AND OVERVIEW

1  
CTB's Vision, Guiding Principles, Goals and Objectives

2  
VTrans Mid-term Needs: Identification and Prioritization

3  
VTrans Long-term Risk & Opportunity Register

4  
Strategic Actions (Recommendations)



JAN 2020

JAN 2020  
MARCH 2021

BY THE END OF 2021

# DRAFT LONG-TERM POLICY: PURPOSE

## POLICY GUIDE (DRAFT Chapter 6)

A resource for policy makers.

### VTRANS POLICY GUIDE

- Vision, Goals, Objectives and Guiding Principles
- Vision Travel System
- Identification and Prioritization of the Mid-term Transportation Needs
- Development and Monitoring of the Long-term Risk and Opportunity Register



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PLANNING AND INVESTMENT FOR THE  
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DRAFT SEPTEMBER 2021

[Weblink](#)

## TECHNICAL GUIDE

A resource for planners,  
engineers, and other  
professionals interested in the  
data sources, processes, and  
methods used to implement  
the CTB's policies.

### TECHNICAL GUIDE: DEVELOPMENT AND MONITORING OF VTRANS LONG-TERM RISK & OPPORTUNITY REGISTER



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PLANNING AND INVESTMENT FOR THE  
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September 2021

[Weblink](#)

## ► Key Terms

### MEGATREND

“A large, social, economic, political, environmental or technological change that is slow to form. Once in place, megatrends influence a wide range of activities, processes and perceptions, both in government and in society, possibly for decades. They are the underlying forces that drive trends.” – European Foresight Forum

### MACROTREND

An emerging pattern of change likely to impact state government and require a response.

More than one macrotrend can be associated with a megatrend.

### RISK & OPPORTUNITY REGISTER

It “identifies and records the risks facing different areas of business. Identifying risk is a critical step in managing it and the risk and opportunity register allow our organization to assess the risk in context with our overall strategy and help record the controls and treatments of those risks.” – ISO9001

# DRAFT LONG-TERM POLICY: FRAMEWORK

STEP 1 IDENTIFY MEGA- & MACROTRENDS

STEP 2 IDENTIFY SURROGATES FOR CTB GOALS

STEP 3 ESTIMATE IMPACTS OF MACROTRENDS ON SURROGATES

STEP 4 DEVELOP VTRANS LONG-TERM RISK  
& OPPORTUNITY REGISTER

STEP 5 TRACK MACROTRENDS FOR ANNUAL REPORTING

MEGATREND

## CLIMATE CHANGE

MACROTREND



Increase in Flooding Risk

- Sea-level Rise
- Storm Surge
- Inland/Riverine Flooding

## TECHNOLOGICAL ADVANCEMENTS



Adoption of Highly Autonomous Vehicles



Adoption of Electric Vehicles



Growth in Shared Mobility

## CHANGE IN CONSUMPTION PATTERNS



Growth in E-commerce



Greater Automation of Production and Services

## SOCIO-DEMOGRAPHIC / EMPLOYMENT CHANGES



Increase in Workplace Flexibility



Growth of Professional Service Industry



Growth of the 65+ Cohort



Population and Employment Shift

Covered at the September 2021 Workshop

	GOALS	SURROGATES FOR CTB GOALS
	Economic Competitiveness and Prosperity	Vehicle Miles Traveled (VMT) Index
	Accessible and Connected Places	Shared Mobility Index
	Safety for All Users	Safety Index
	Proactive System Management	Roadways At Risk from Flooding
	Healthy Communities & Sustainable Transportation Communities	Tailpipe Emissions Index



## ➤ Paul Saffo's<sup>1</sup> six rules of forecasting:

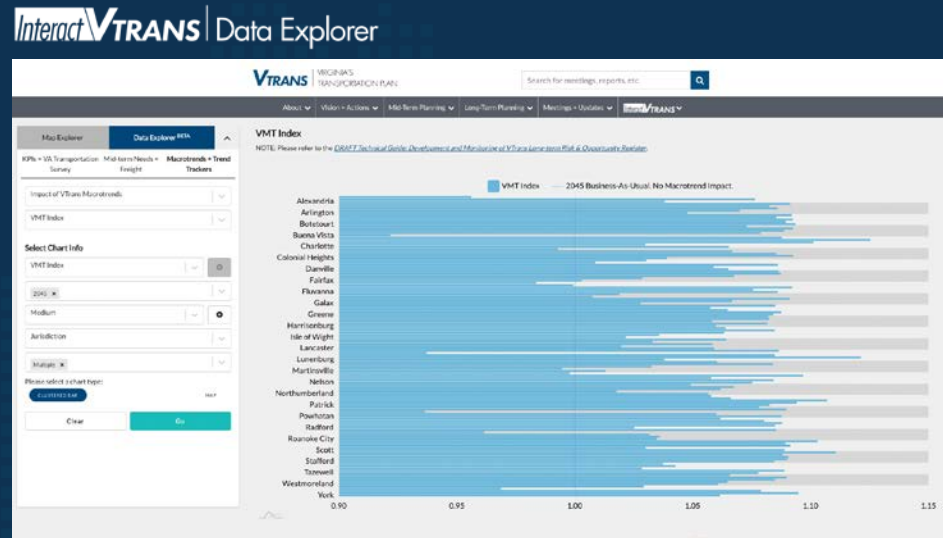
- Rule # 1: Define a Cone of Uncertainty
- Rule # 2: Look for the S Curve
- Rule # 3: Embrace the Things That Don't Fit
- Rule # 4: Hold Strong Opinions Weakly
- Rule # 5: Look Back Twice as Far as You Look Forward
- Rule # 6: Know When Not to Make a Forecast

"The primary goal of forecasting is to identify the full range of possibilities, not a limited set of illusory certainties."

"The consumer of the forecast must understand enough of the forecast process and logic to make an independent assessment of its quality—and to properly account for the opportunities and risks it presents."

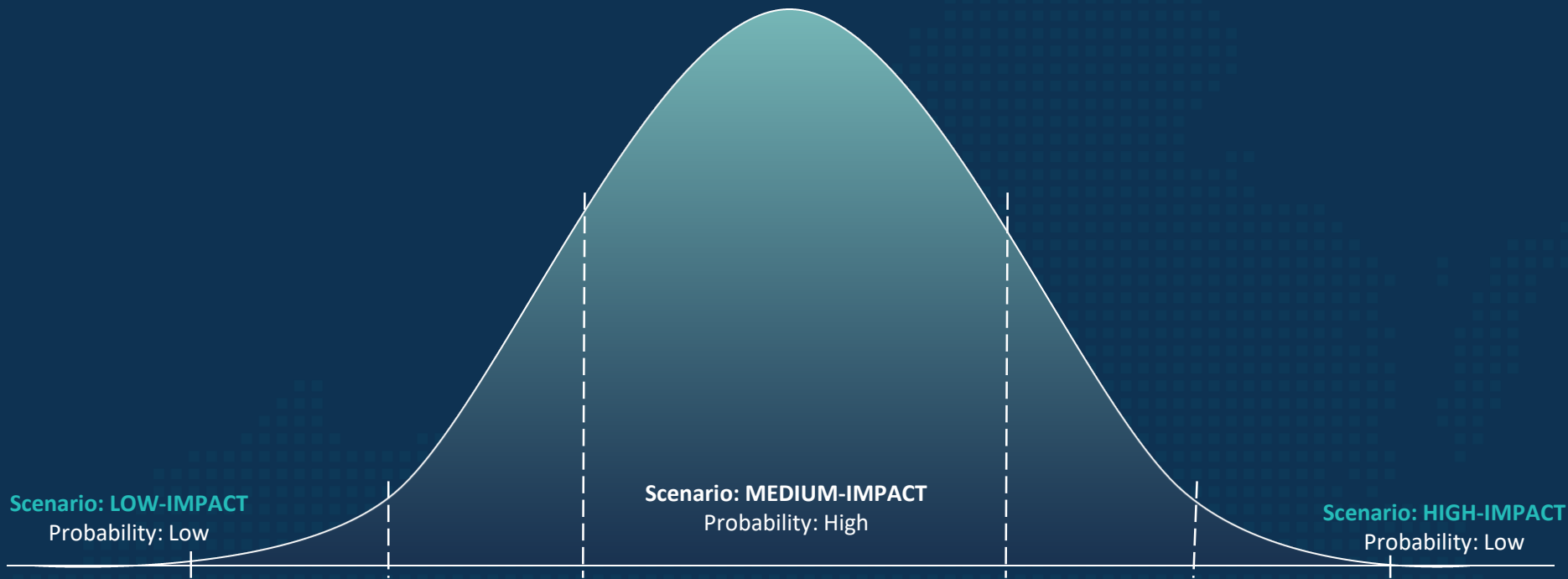
## ► Sources of Uncertainties:

- Global Policy (Megatrends are global in nature)
  - Scientific
  - Forecast
  - Model
- Annual updates to the Board because -  
 “If you must forecast, then forecast often—and be the first one to prove yourself wrong.” – Paul Saffo<sup>1</sup>

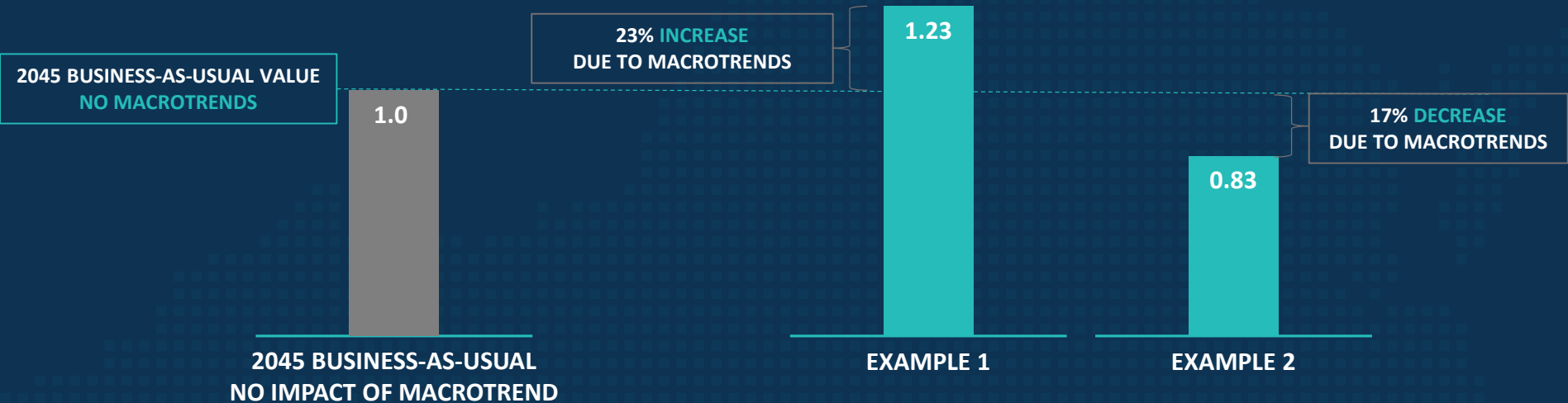


The presentation focuses on the key takeaways; more detailed numbers are available on [vtrans.org](http://vtrans.org).

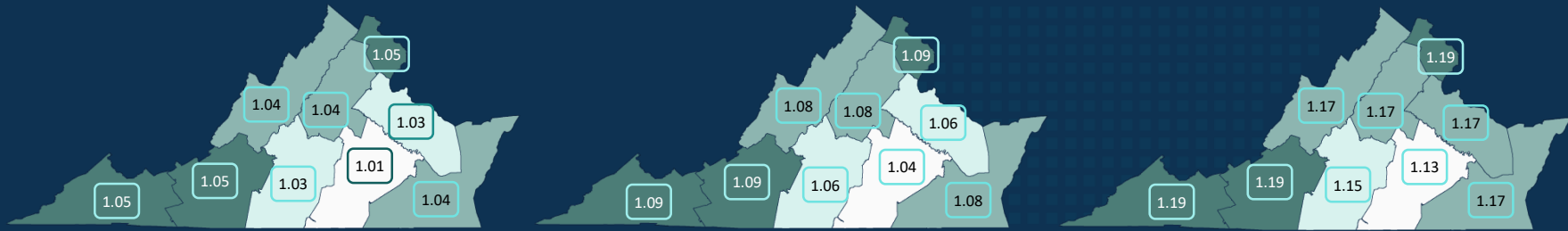
## PROBABILITY-BASED SCENARIOS: LOW, MEDIUM, HIGH



- Surrogates for CTB Goals are measured in relation to 1.0 which is 2045-Business-As-Usual Scenario with no impact from Macrotrends.



## VEHICLE MILES TRAVELED (VMT) INDEX: ESTIMATED CHANGE IN VMT DUE TO VTRANS MACROTRENDS COMPARED TO THE 2045 BUSINESS-AS-USUAL SCENARIO



**+4%**

STATEWIDE: LOW IMPACT

**+8%**

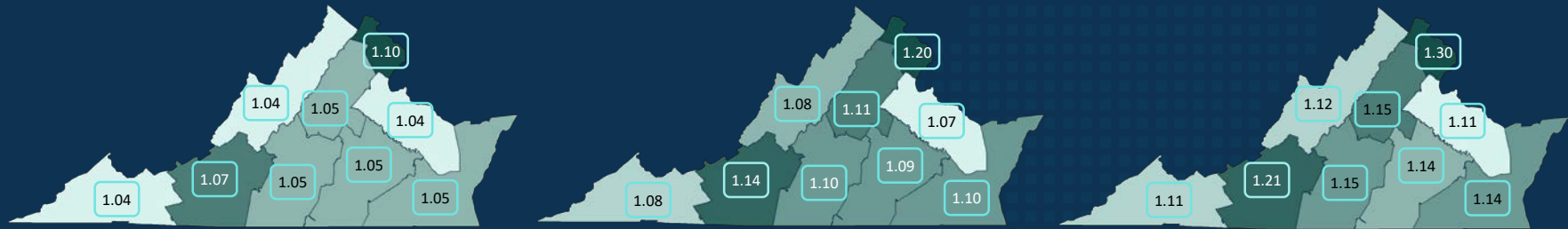
STATEWIDE: MEDIUM IMPACT

**+17%**

STATEWIDE: HIGH IMPACT



SHARED MOBILITY INDEX: ESTIMATED SWITCHABLE URBAN AUTO SOV VMT TO MICROMOBILITY + RIDESOURCING DUE TO VTRANS MACROTRENDS COMPARED TO THE 2045 BUSINESS-AS-USUAL SCENARIO



**+9%**

STATEWIDE: LOW IMPACT

**+18%**

STATEWIDE: MEDIUM IMPACT

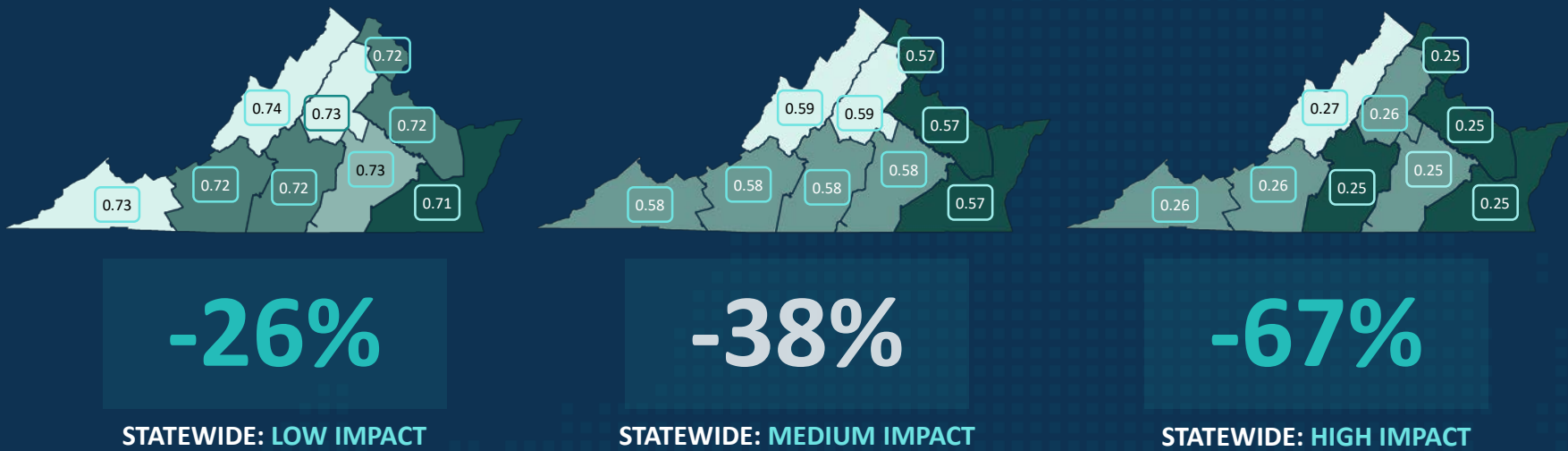
**+27%**

STATEWIDE: HIGH IMPACT

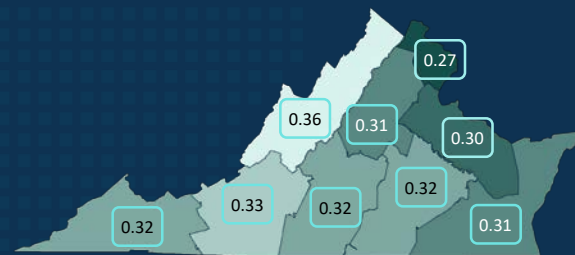
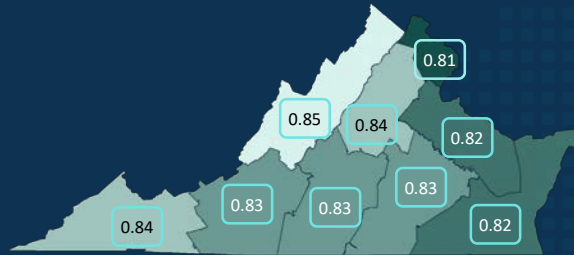
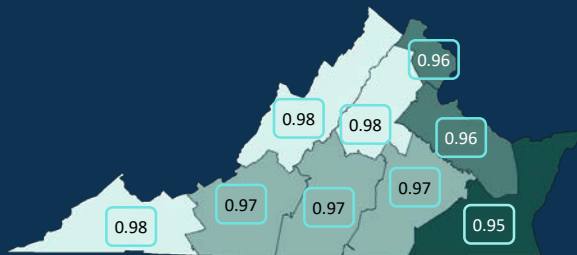


# IMPACTS OF MACROTRENDS ON CTB GOAL C SURROGATE

SAFETY INDEX: ESTIMATED CHANGE IN NUMBER OF CRASHES INVOLVING FATALITIES + SERIOUS INJURIES DUE TO VTRANS MACROTRENDS COMPARED TO THE 2045 BUSINESS-AS-USUAL SCENARIO



## TAILPIPE EMISSIONS INDEX: ESTIMATED CHANGE IN TAILPIPE EMISSIONS DUE TO VTRANS MACROTRENDS COMPARED TO THE 2045 BUSINESS-AS-USUAL SCENARIOS



**-3%**

STATEWIDE: LOW IMPACT

**-17%**

STATEWIDE: MEDIUM IMPACT

**-69%**

STATEWIDE: HIGH IMPACT





## DOWNSIDE RISK

- A 17% VMT increase due to Macrotrends, on top of the VMT growth due to economic expansion, overwhelms Virginia's transportation network in highly population areas and corridors.
  - Virginia is unable to maximize transportation system benefits from a high number of telework capable jobs.
- TNCs /Ridesourcing vehicles merely replace single-occupancy vehicle VMT.
  - Shared mobility services are unable to provide meaningful mobility benefits for populations that can benefit the most.
- Over 20,000 directional roadway miles remain at risk from flooding due to different hazards.

## UPSIDE RISK

- Despite the projected VMT growth due to Macrotrends, technological advancements allow Virginia to reduce the number of crashes involving fatalities and serious injuries by as much as 67%.
- Despite the projected VMT growth due to Macrotrends, Virginia is able to reduce tailpipe emissions by as much as 69%.






- Risks and opportunities are identified utilizing the following criteria and based on estimated impacts (Step 3) of Macrotrends on CTB Goals.
  - Strategic in nature
  - Manageable in number
  - Level of detail suitable for policy-makers and executives
  - Most importantly based on [Step 3](#) evidence that is measurable, replicable, and with an ability to monitor



- ⚠ Large number of roadways at-risk from flooding
- ⚠ Presence of unknown and unquantified flooding risks
- ⚠ Disproportionate flooding impacts on certain areas and populations
- ⚠ Higher rate of wear-and-tear on the transportation system
- ⚠ Increased curb access conflicts in urbanized areas
- ⚠ Insignificant (transportation system) benefits from shared mobility
- ⚠ Inequitable distribution of shared mobility benefits
- ⚠ Inability to meet mobility needs of Virginians age 65 and older






- ☀ Eliminate or mitigate identified flooding risks
- ☀ Increase state's preparedness to address other climate-related macrotrends
- ☀ Improve ability to manage high number of highly autonomous vehicles
- ☀ Maximize safety benefits offered by highly autonomous vehicles
- ☀ Significantly reduce tailpipe emissions
- ☀ Utilize shared mobility services to improve accessibility
- ☀ Improve ability to manage shared mobility vehicles and services
- ☀ Proactively mitigate transportation impacts of automation and large warehouse/distribution centers
- ☀ Maximize utilization of workplace flexibility for telework capable jobs

OPI will provide annual updates to the Board utilizing the following **VTrans Trend Trackers**.

MACROTREND	VTRANS TREND TRACKERS
	<ul style="list-style-type: none"> <li>▪ Number of directional miles at risk from sea level rise</li> <li>▪ Number of directional miles at risk from storm surge</li> <li>▪ Number of directional miles at risk from inland/riverine flooding</li> <li>▪ Annual cost of transportation repair due to flooding events</li> </ul>
	<ul style="list-style-type: none"> <li>▪ Market Penetration of Highly Autonomous Vehicles*</li> <li>▪ Attitude and Preferences for Adoption of Highly Autonomous Vehicles*</li> </ul>
	<ul style="list-style-type: none"> <li>▪ Market Penetration of Electric Vehicles*</li> <li>▪ Attitude and Preferences for Adoption of Electric Vehicles*</li> <li>▪ Transportation Revenue by Revenue Source</li> <li>▪ Greenhouse Gas (GHG) Emissions</li> </ul>
	<ul style="list-style-type: none"> <li>▪ Access to Shared Mobility Services*</li> <li>▪ Utilization of Shared Mobility Services by Type*</li> </ul>
	<ul style="list-style-type: none"> <li>▪ Number of Warehouse and Distribution Centers</li> <li>▪ Square Footage of Warehouse and Distribution Centers</li> <li>▪ Share of E-commerce Sales (business-to-business, business-to-customers)</li> </ul>

\*Based on the VTrans State of Transportation Biennial Survey

OIPI will provide annual updates to the Board utilizing the following **VTrans Trend Trackers**.

MACROTREND	VTRANS TREND TRACKERS
	<ul style="list-style-type: none"> <li>▪ Number of short-range and long-range drone deliveries</li> <li>▪ Number of last-mile robotic deliveries</li> <li>▪ Value output of 3D Printing</li> </ul>
	<ul style="list-style-type: none"> <li>▪ Number of Workers with Workplace Flexibility*</li> <li>▪ Utilization of Workplace Flexibility*</li> </ul>
	<ul style="list-style-type: none"> <li>▪ Job Share of Professional + Technical Services Industry</li> </ul>
	<ul style="list-style-type: none"> <li>▪ Number of Virginians Age 65 or older</li> <li>▪ Share of Age 65+ Cohort</li> </ul>
	<ul style="list-style-type: none"> <li>▪ VTrans Land Use Vitality (LUV) Index</li> <li>▪ Population</li> <li>▪ Employment</li> <li>▪ Income</li> </ul>

\*Based on the VTrans State of Transportation Biennial Survey

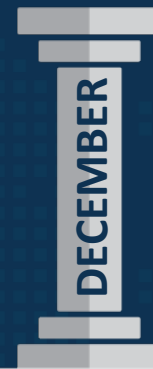
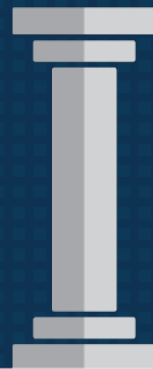
# NEXT STEPS

1  
CTB's Vision, Guiding Principles, Goals and Objectives

2  
VTrans Mid-term Needs: Identification and Prioritization

3  
VTrans Long-term Risk & Opportunity Register

4  
Strategic Actions (Recommendations)



JAN 2020

JAN 2020  
MARCH 2021

BY THE END OF 2021

## NEXT STEPS

### ➤ November

- Gather CTB input on VTrans Strategic Actions
- Conduct outreach and engagement

### ➤ December: Request CTB Action on:

- Draft Policy for the Development and Monitoring of VTrans Long-term Risk & Opportunity Register
- VTrans Strategic Actions
- Document synthesizing CTB-adopted policies for the **Governor and the General Assembly**





# 2021 Transportation Initiative Interim Report

Wendy E. Thomas  
Director, Budget and Funds Management Division

October 19, 2021

# 2021 Transportation Initiative

**Item 447.10 of Chapter 552 of the 2021 Special Session I Acts of the Assembly (Appropriation Act) directed allocation of \$323.4 million in one-time federal funds, one-time general funds, and previous year economic development transportation funds**

## **Amount based on the following:**

- \$233.4 million in funds made available for Highway Infrastructure Programs by the Coronavirus Response and Relief Supplemental Appropriations Act (CRRSA);
- \$20.0 million out of uncommitted balances in the Transportation Partnership Opportunity Fund (TPOF);
- \$15.0 million in uncommitted balances previously allocated for Financial Assistance for Planning, Access Road, and Special Projects (Access Programs); and
- \$55.0 million in General Funds

# 2021 Transportation Initiative - Uses

Project/Initiative	Amount millions)
Intercity Passenger Rail from Roanoke to Blacksburg/Christiansburg	\$83.5
Improve commuter rail service on the VRE Manassas Line	83.5
Improvements to the I-64 Corridor - (1) HRELN, (2) improvements between exit 205 to 234	93.1
WMATA Capital for FY 2022	32.4
Regional trails	10.0
Pilot programs for fare-free transit with urban and rural providers	10.9
Redevelopment demonstration program - Falls Church	10.0
<b>Total</b>	<b>\$323.4</b>

**Item 447.10 requires the Board to provide an interim report on the use of the funds to the General Assembly no later than November 1, 2021**

# Intercity Passenger Rail from Roanoke to Blacksburg/Christiansburg

- To extend passenger rail service from Roanoke to New River Valley and increase the frequency of service along the I-81/US 29 Corridor
- FY 2022-2027 CTF Six-Year Financial Plan (SYFP) provides \$83.5 million across FY 2022 and FY 2023 to the Department of Rail and Public Transportation (DRPT)
- DRPT and Norfolk Southern executed a binding term sheet on April 2, 2021
- DRPT and the Virginia Passenger Rail Authority are in active negotiations with Norfolk Southern to complete definitive agreements by December 2021

# Commuter rail service – VRE Manassas Line

- To improve commuter rail service on the VRE Line
- FY 2022-2027 CTF SYFP provides \$83.5 million across FY 2022 and FY 2023 to DRPT for this purpose
- DRPT, VPRA, and VRE are working to finalize negotiations with Norfolk Southern on agreement for expanded VRE service on the Manassas line
- Term sheet negotiations underway

# I-64 Corridor Improvements

- Provides funds first to cover any funds needed for the Hampton Roads Express Lanes Network (HRELN)
- Any remaining funds to improve I-64 between Bottoms Bridge (Exit 205) and Lightfoot (Exit 234)
  - In coordination with the Central Virginia Transportation Authority
- **FY 2022-2027 CTF SYFP provides \$93.1 million for this purpose**
- **The Board may not distribute any funds for HREL until an updated traffic and revenue modeling considering summer weekend traffic volumes is completed. Estimated revenue results will be provided in mid-January 2022 with the full report completed in late February 2022**

# WMATA Capital

- Funds to be used first to ensure Virginia meets its commitments to the \$500 million in dedicated regional funding in FY 2022
- Any remaining funds to be transferred to the Northern Virginia Transportation Commission (NVTC) to reduce local contribution necessary to support WMATA helping to address reduced regional gas tax revenues
- FY 2022-2027 CTF SYFP provides \$32.4 million in FY 2022 to DRPT
- The Board subsequently allocated \$22,397,000 of the \$32.4 million in the FY 2022-2027 SYIP to fully fund the \$154.5 million of WMATA Dedicated Funding for FY 2022
- The remaining \$10,003,000 will be allocated between WMATA and NVTC in the fourth quarter of FY 2022 based on actual revenue collections for the WMATA Dedicated Funding sources

# Regional trails

- To support planning, development, and construction of multi-use trails with priority given to developing new regional trails, to projects to improve connectivity of existing trail networks, and to geographic diversity in the use of such funds
- FY 2022-2027 CTF SYFP provides \$10.0 million in FY 2022 for this purpose
- Per the Appropriation Act, the Office of Intermodal Planning and Investment (OIPI) has convened a working group to identify trails, master planning process, and complete funding needs assessment



# Fare Free Transit Pilot

- To establish pilot programs for fare free transit with urban and rural transit providers
- Appropriation Act provides that not more than \$900,000 may be used to study transit equity and modernization (as required by HJ 542)
- FY 2022-2027 CTF SYFP provides \$10.9 million to DRPT for this purpose
- VDOT has transferred the FY 2022 funds to DRPT
- DRPT received mid-cycle grant applications for the Transit Ridership Incentive Program's fare free transit program on September 17, 2021 and is presenting funding recommendations to the Board in this month's workshop
- Transit Equity and Modernization study underway with interim report due December 1, 2021; total study budget is \$1.8 million

# Connected Infrastructure Demonstration Program

- **FY 2022-2027 CTF SYFP provides \$10 million for connected infrastructure redevelopment demonstration program within and adjacent to the Virginia Tech campus in the City of Falls Church**
- **The Act provides the Board may not distribute funds for this purpose unless the implementing entity has entered into an agreement with VDOT to facilitate information sharing and knowledge exchange**
- **Planning for this program begins mid-October 2021**
  - VDOT and VTRC staff have been involved in pre-planning efforts and are members of both technical and executive steering committees related to this program
  - Coordination for development of required agreement underway

# Next Steps

- **Action item to approve interim report**
- **Submittal of interim report to General Assembly by November 1, 2021**
- **Final report due to General Assembly no later than June 30, 2022**
  - Board to be briefed on final report ahead of that submittal
- **Additional briefings and recommendations to be brought before the Board as required**

# Springfield to Quantico Enhanced Public Transportation Feasibility Study

Commonwealth Transportation Board Workshop  
October 19, 2021

Jennifer DeBruhl, Chief of Public Transportation  
Virginia Department of Rail and Public Transportation

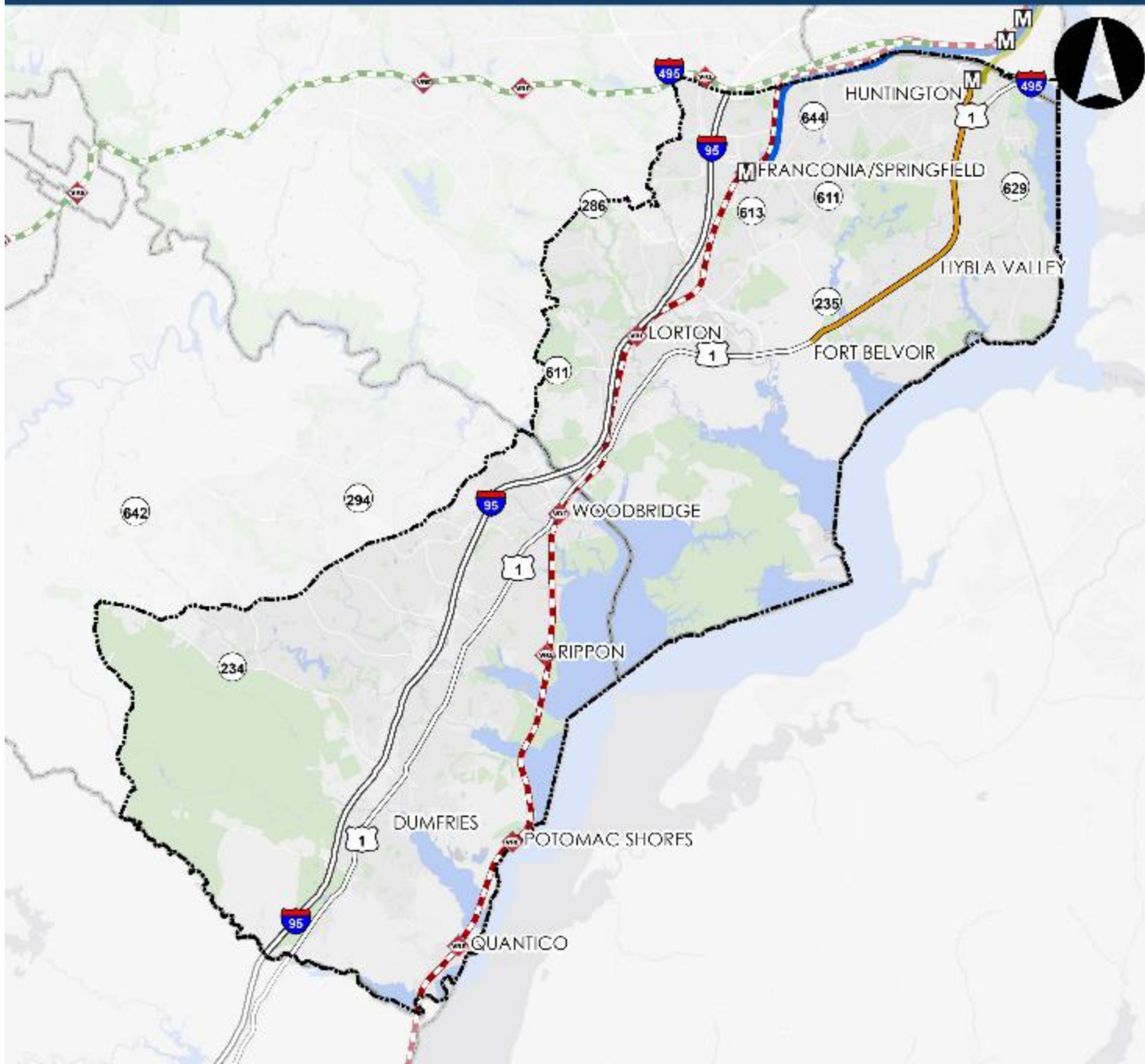


# Study Background and Objectives

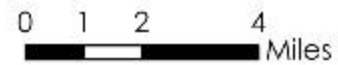
- Virginia General Assembly approved a 2020 budget amendment directing DRPT to conduct a feasibility study to be completed by December 1, 2021
- Study Objectives:
  - *Comprehensive, objective evaluation of a range of potential future enhanced transit alternatives that compares the cost, benefits, and impacts of each option to inform recommendations about future investment in the corridor.*



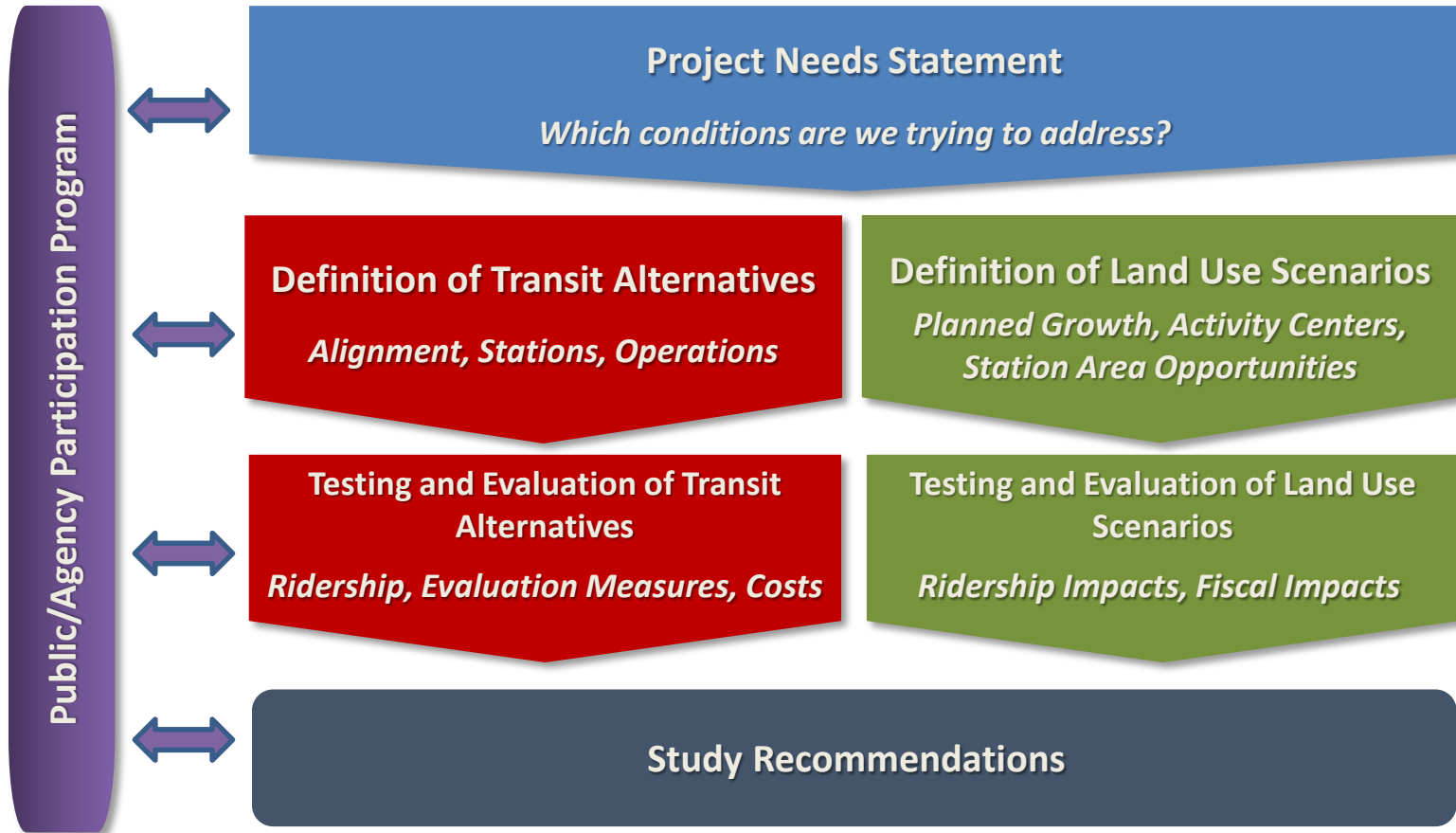
# STUDY AREA



- Metrorail Stations
- Virginia Railway Express (VRE) Stations
- Study Area
- County Boundary
- I-95
- US Route 1
- Richmond Highway BRT
- Metrorail Routes**
  - Blue
  - Yellow
- VRE Routes**
  - Fredericksburg
  - Manassas



# Study Technical Approach



# Public and Stakeholder Outreach

- Completed Activities:
  - Technical Advisory Committee
  - Elected officials briefings
  - DRPT website page
  - Project factsheet
  - On-Line survey
  - Pop-up events
  - Public Meeting #1 (May)
  - Public Meeting #2 (July)
  - Public Meeting #3 (Sept)



<http://www.drpt.virginia.gov/transit/springfield-to-quantico/>



# Enhanced Public Transit is Needed Because...

Existing transit does not **serve all trips well**

Transit services may need enhancements to support **future development**







Transit can improve **equity** by connecting low-income and minority populations to opportunities

Transit connections to key regional **activity centers**, such as Fort Belvoir and Quantico bases, are limited





**Traffic congestion** is severe and continuing to get worse

**Access to Transit Services** is reliant on park & ride or long walks to the bus

# How are we evaluating feasibility?

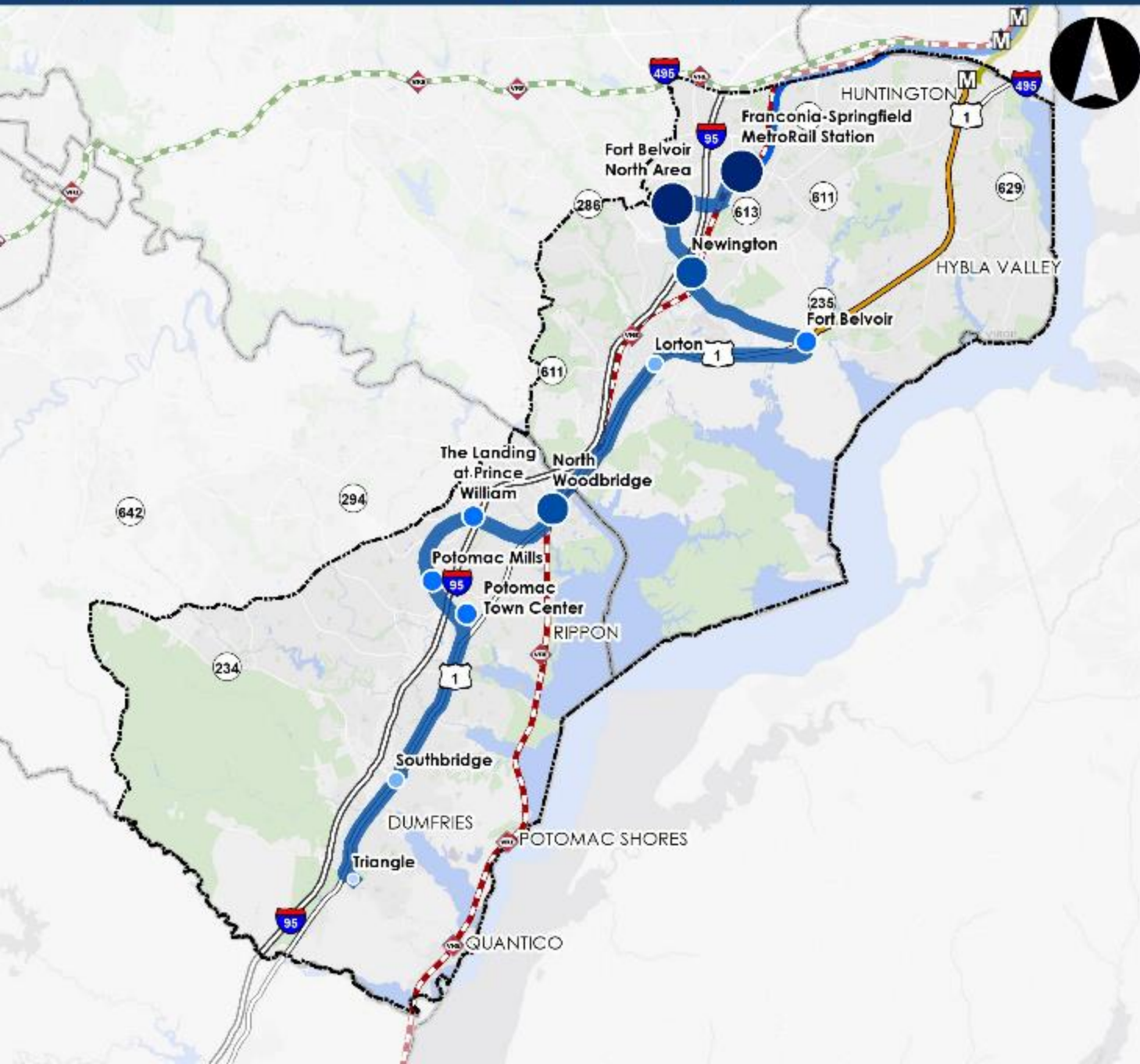
<b>Goals for Enhanced Transit</b>		
<p><b>Ridership Potential</b></p>  <p>Increase transit usage in the study corridor</p>	<p><b>Congestion Mitigation</b></p>  <p>Reduce the amount of traffic congestion in the study corridor</p>	<p><b>Equity</b></p>  <p>Provide a fair distribution of costs and benefits across different population groups</p>
<p><b>Regional Accessibility/Connectivity</b></p>  <p>Increase access to regional activity centers and meet identified service gaps</p>	<p><b>Cost-effectiveness</b></p>  <p>Ensure that resources are used efficiently</p>	<p><b>Development Potential</b></p>  <p>Create opportunities for development around stations or stops</p>

# Transit Alternatives Evaluated in the Study

	Metrorail – Blue Line Extension
	Metrorail – Yellow Line Extension
	Bus Rapid Transit
	VRE Service Improvements
	Express Bus Routes

\* Additional Service Above Transforming Rail in Virginia Improvements Included in Baseline

# Projected Blue Line Daily Boardings



- MetroRail Stations
- Virginia Railway Express (VRE) Stations
- County Boundary

### MetroRail Routes

- Blue
- Yellow

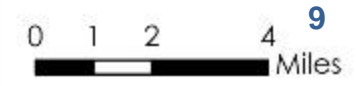
### VRE Routes

- Fredericksburg
- Manassas
- Richmond Highway BRT

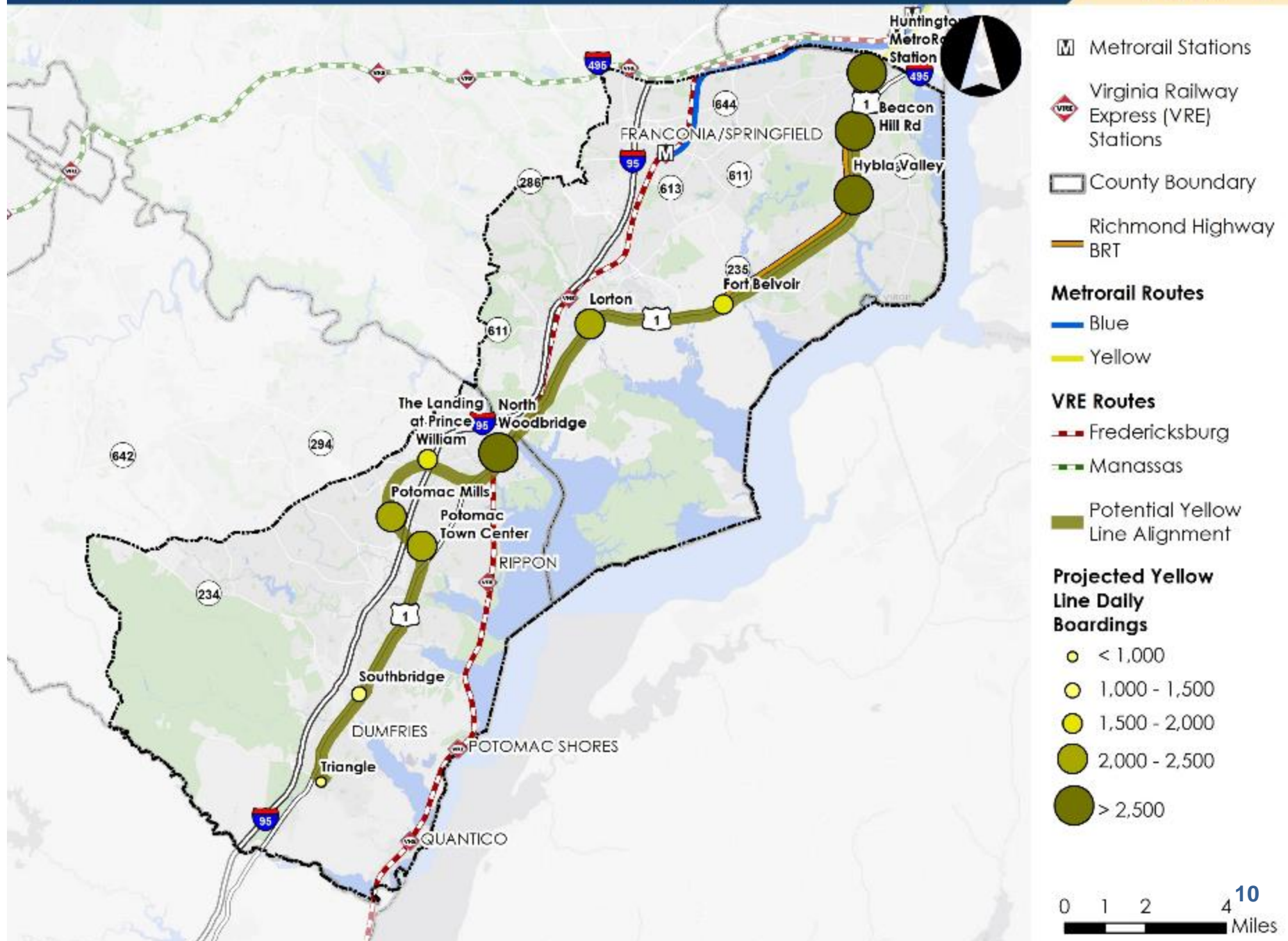
Blue Line Alignment

### Projected Blue Line Daily Boardings

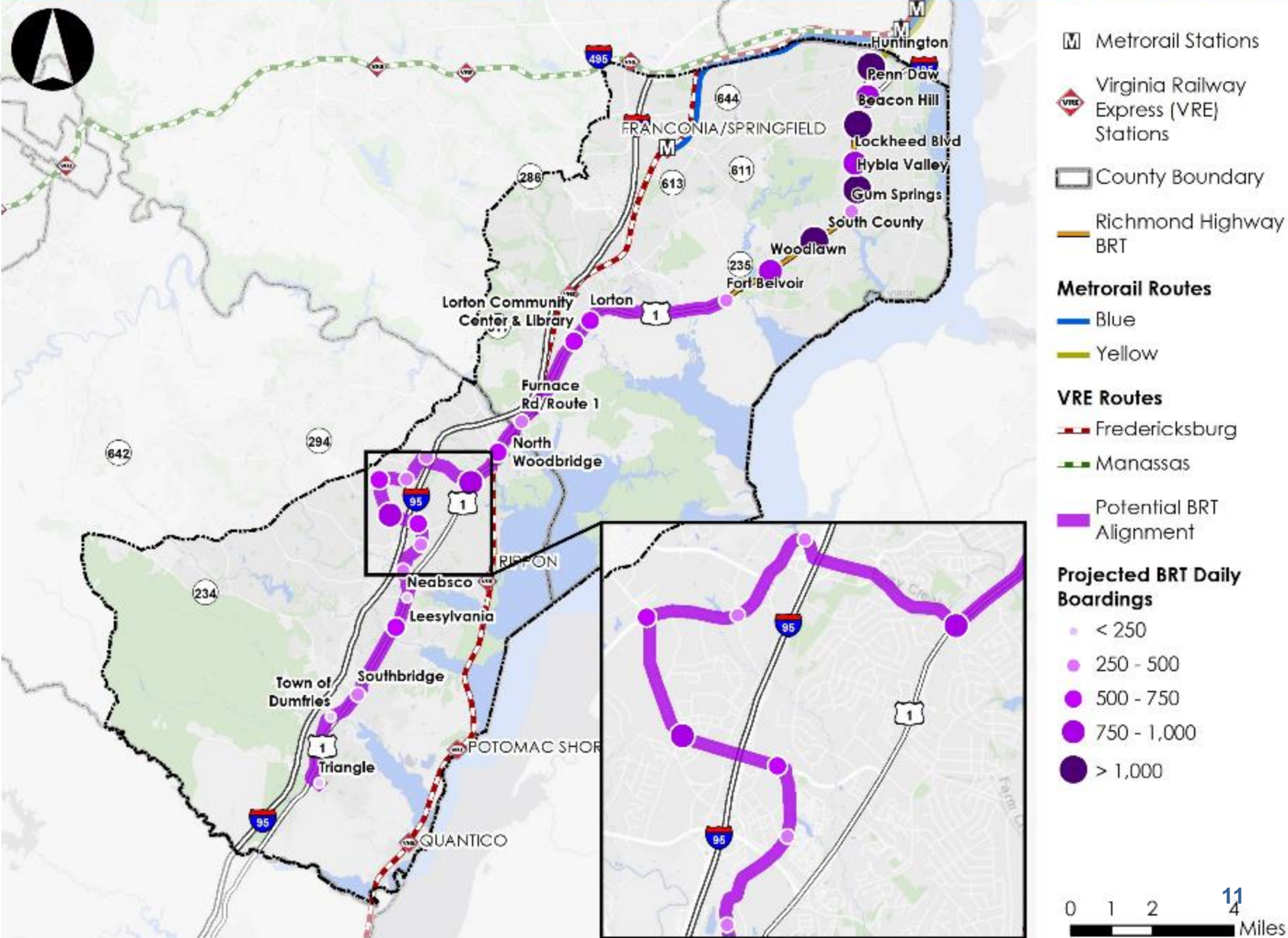
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- 2,000 - 2,500
- > 2,500



# Projected Yellow Line Daily Boardings



# Projected BRT Daily Boardings

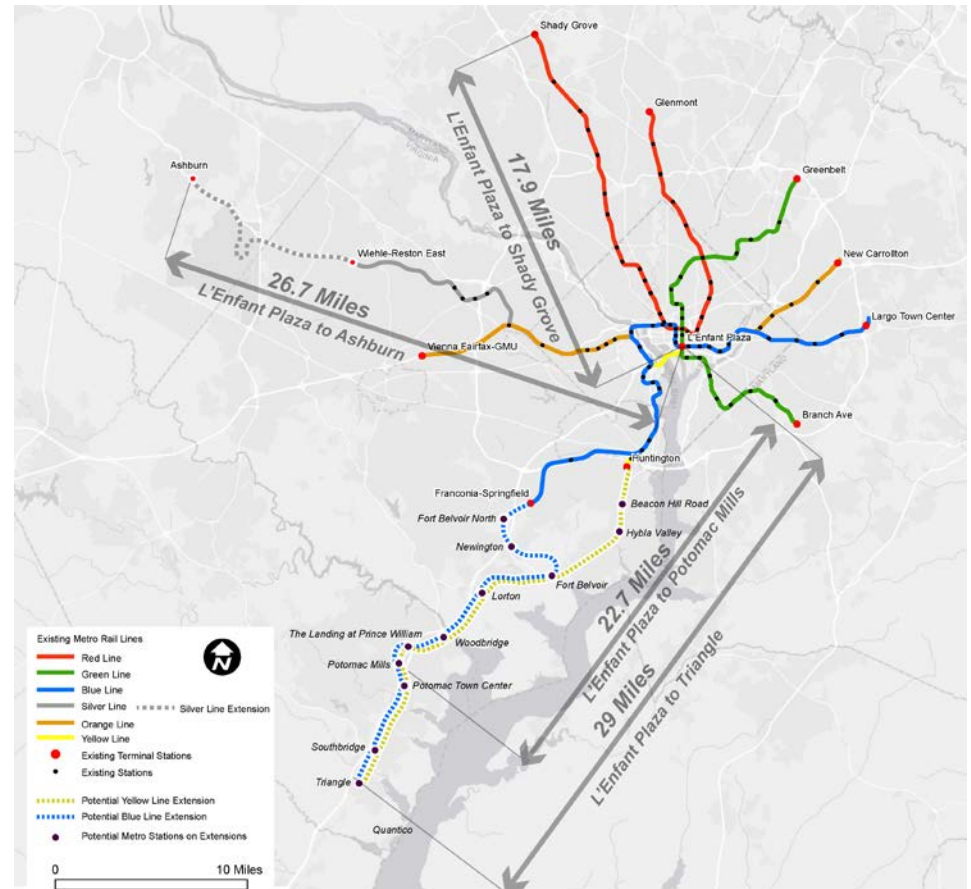


# Summary of Evaluation Results

	Additional Express Bus	BRT Extension	Additional VRE Service*	Metrorail Blue	Metrorail Yellow
Ridership Potential	★★	★★★★	★★	★★★★	★★★★
Congestion Mitigation	★	★★	★	★★★★	★★★★
Regional Accessibility	★★	★★★★	★★	★★★★	★★★★
Equity	★	★★	★★	★★★★	★★★★
Cost-Effectiveness	★★★★	★★	★	★	★

# Other Considerations for Metrorail Extensions

- Metrorail extension would be a significant addition to the Metro system
- Core capacity needs must be addressed first
- Legal / governance implications of adding Prince William County to the WMATA compact jurisdictions
- Annual capital and operating budget subsidy contributions for Prince William County (and an increase for Fairfax County)



***L'Enfant Plaza to Triangle  
Track Length = 46 Miles (Blue)  
Track Length = 37 Miles (Yellow)***



# Sensitivity Tests

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- Can we make the alternatives more cost efficient by shortening the alignment?
- Uncertainty in long-range planning - What might happen to ridership forecasts if people keep teleworking?
- How would significant changes in land use change ridership forecasts?

# Estimated Costs of Alternatives (\$2030)

*Additional Costs Beyond What is Included in the Future Baseline*

	Add'l Express Bus	Add'l VRE	BRT Ext	Shorter BRT Ext	Metrorail Blue	Shorter Metrorail Blue	Metrorail Yellow	Short Metrorail Yellow
<b>Total Capital Cost Range</b>	\$37 M - \$54 M	\$116 M - \$174 M	\$2.4 B- \$3.6 B	\$1.6 B- \$2.4 B	\$18.1 B- \$27.2 B	\$13.6 B- \$20.5 B	\$18.3 B- \$27.5 B	\$13.8 B - \$20.8 B
<b>Annual O&amp;M Cost</b>	\$7 M	\$80 M	\$19 M	\$15 M	\$168 M	\$135 M	\$168 M	\$135 M
<b>Annual Net Cost: Cap + O&amp;M - Fare Revenue</b>	\$8 M	\$46 M	\$133 M	\$90 M	\$764 M	\$579 M	\$771 M	\$587 M

# Next Steps

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- Draft report – posted for public comment
- Final report submitted to General Assembly by December 1, 2021

# Springfield to Quantico Enhanced Public Transportation Feasibility Study

Commonwealth Transportation Board Workshop  
October 19, 2021

Jennifer DeBruhl, Chief of Public Transportation



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# Transit Ridership Incentive Program (TRIP)

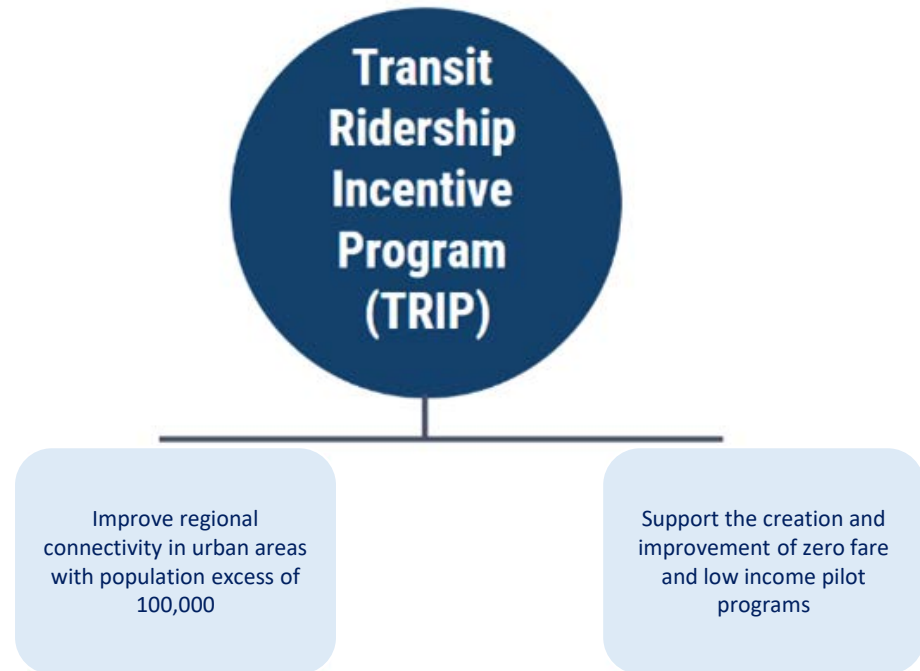
## Commonwealth Transportation Board-October 19, 2021

Jennifer DeBruhl, Chief of Public Transportation  
Department of Rail and Public Transportation



# General Program Overview

- Established in the 2020 General Assembly Session, [Code of Virginia §33.2-1526.3](#)
- Promote increased ridership of large urban transit systems
- Reduce the barriers to transit use for low-income individuals
- Implementation delayed due to COVID-19
- CTB Policy approved in July



# Program Funding FY22-27

(\$ in millions)

	FY22	FY23	FY24	FY25	FY26	FY27	Total
Regional Routes	\$7.5	\$11.3	\$16.9	\$16.5	\$18.0	\$18.2	\$88.4
Zero Fare/ Low Income	\$12.5	\$3.7	\$5.6	\$5.8	\$6.0	\$6.0	\$39.6
<b>Total</b>	<b>\$20.0</b>	<b>\$15.0</b>	<b>\$22.5</b>	<b>\$23.3</b>	<b>\$24.0</b>	<b>\$24.2</b>	<b>\$129</b>

- FY22 – Includes \$10M in 2021 Transportation Initiative Funding dedicated for Zero-Fare Pilots
- Beyond FY22, up to 25% annually can be utilized for Zero-Fare/Low Income projects on a statewide basis

# Regional Routes Funding FY22-27

(\$ in millions)

Region	Share	FY22	FY23	FY24	FY25	FY26	FY27	Total
NOVA	42.4%	\$3.2	\$4.8	\$7.2	\$7.0	\$7.6	\$7.7	\$37.5
Hampton Roads	27.3%	\$2.0	\$3.0	\$4.6	\$4.5	\$4.9	\$5.0	\$24.0
Richmond	18.1%	\$1.4	\$2.0	\$3.0	\$3.0	\$3.3	\$3.3	\$16.0
Roanoke	4.0%	\$0.3	\$0.5	\$0.7	\$0.6	\$0.7	\$0.7	\$3.5
Fredericksburg	2.7%	\$0.2	\$0.3	\$0.4	\$0.4	\$0.5	\$0.5	\$2.3
Lynchburg	2.2%	\$0.2	\$0.3	\$0.4	\$0.4	\$0.5	\$0.5	\$2.3
Blacksburg	1.7%	\$0.1	\$0.2	\$0.3	\$0.3	\$0.3	\$0.3	\$1.5
Charlottesville	1.7%	\$0.1	\$0.2	\$0.3	\$0.3	\$0.3	\$0.3	\$1.5

- Each region must receive their proportional share on a 5-year rolling average
- Percentages will be revisited with data from the 2020 Census



# Key Themes for Project Evaluation

## Well Planned

- Project included in statewide or local transportation plans (I.E TSP, TDP, etc.)
- Well defined and quantifiable measures of success - clear rationale behind target performance measures

## Collaborative

- Supported by appropriate MPO (regional connectivity projects), serviced localities, and VDOT if project has infrastructure needs
- Built through partnerships with local organizations or municipalities

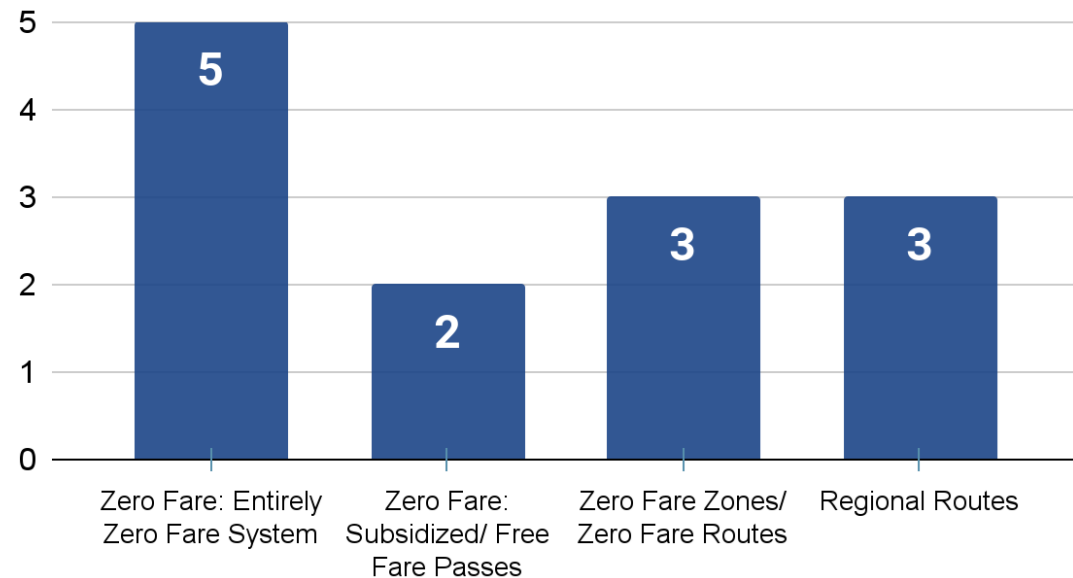
## Quickly Implementable

- A strong rationale for funding duration request and financial capacity to continue after pilot
- Existing technical capacity and experienced project management
- Low start up costs and a quick implementation timeline

# TRIP Applications at a Glance

- Application period opened August 1 and closed September 17
  - Supporting materials accepted through October 4
- Received **10** zero fare and **3** regional applications
- Total FY22 state funding requested for zero fare projects: **\$11,274,486**
- Total FY22 state funding requested for regional projects: **\$2,184,327**
- Need to consider multi-year project needs when approving projects in FY22

FY 22 TRIP Applications Received



# Regional Routes – Funding Recommendations

---

- Policy provides for a five year pilot – with funding step down
- Projects were evaluated and prioritized using the policy criteria
- Regional services are still seeing diminished ridership due to COVID, low number of applications was anticipated
- All three projects are recommended for multi-year funding
  - GLTC – Route 4 Extension (recommended in Transit Strategic Plan)
  - PAT Southern Connector – Petersburg – Emporia connection (recommended in Transit Strategic Plan)
  - HRT – Naval Base Circulator – increased on-base circulation (recommended in Transit Strategic Plan)

# Regional Routes – Funding Recommendations

	FY22	FY23	FY24	FY25	FY26	Total
<b>Available Funding</b>	<b>\$7.5M</b>	<b>\$11.3M</b>	<b>\$16.9M</b>	<b>\$16.5M</b>	<b>\$18.0M</b>	<b>\$88.4M</b>
GLTC Route 4	\$652K	\$489K	\$244K	\$163K	\$81K	\$1.6M
Petersburg Southern Connector	\$530K	\$301K	\$151K	\$101K	\$50K	\$1.0M
HRT Naval Station Circulator	\$1.0M	\$924K	\$463K	\$0	\$0	\$2.4M
<b>Unallocated</b>	<b>\$5.3M</b>	<b>\$9.6M</b>	<b>\$16.0M</b>	<b>\$16.2M</b>	<b>\$17.9M</b>	<b>\$65.0M</b>

# Zero Fare – Funding Recommendations

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- Policy provides for a three year pilot – with funding step down
- Projects were evaluated and prioritized using the policy criteria
- Tier I Projects – recommended for multiyear funding (FY22, FY23, FY24)
  - GRTC, Alexandria, and MEOC – Systemwide Zero Fare
  - Fairfax County – Low Income Pass Program
- Tier II Projects – recommend continuing to work with applicants and advancing as funding becomes available
  - CAT, FRED – Systemwide Zero Fare
  - Based on current projections, funding would become available in FY24

# Zero Fare- Funding Recommendations

	FY22	FY23	FY24	Total
<b>Available Funding</b>	<b>\$12.5M</b>	<b>\$3.7M</b>	<b>\$5.6M</b>	<b>\$21.8M</b>
GRTC-Richmond	\$4.5M	\$2.5M	\$1.0M	\$8.0M
Alexandria-DASH	\$2.5M	\$2.4M	\$2.2M	\$7.1M
MEOC	\$48K	\$36K	\$18K	\$102K
Fairfax County	\$2.2M	\$1.9M	\$1.3M	\$5.4M
<b>Unallocated</b>	<b>\$3.3*</b>	<b>\$0</b>	<b>\$1.0M</b>	<b>\$1.0M</b>

\* FY22 unallocated will be fully utilized in FY23 to fulfill year 2

# Next Steps

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- December 2021 –
  - CTB Action to add recommended projects to the SYIP
  - Execute multiyear funding agreements for pilot projects
  - FY23 Grant Application Cycle Opens
    - Solicit applications for Regional Routes projects as part of the regular grant cycle
- Spring 2022 –
  - Incorporate additional Regional Routes projects into the FY23 SYIP, based on applications/prioritization
  - Incorporate Tier 2 recommended Zero Fare pilot projects into the FY23 SYIP, as funding becomes available

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# Transit Ridership Incentive Program (TRIP)

## Commonwealth Transportation Board-October 19, 2021

Jennifer DeBruhl, Chief of Public Transportation  
Department of Rail and Public Transportation





# PERIODIC REGULATORY REVIEW

Jo Anne Maxwell, Director Governance and Legislative Affairs

October 19, 2021

# Periodic Regulatory Review—APA Requirement

- **The Administrative Process Act requires any agency that adopts regulations to periodically review those regulations, including consideration of:**
  - 1) the extent to which regulations remain supported by statutory authority/do not duplicate/overlap/conflict with state or federal law;**
  - 2) the nature of complaints/comments received from the public;**
  - 3) whether the regulations are necessary for the protection of public health, safety and welfare;**
  - 4) whether the regulations are clearly written and easily understandable;**
  - 5) whether the regulations' economic impacts on small businesses and families are minimized as much as possible; and**
  - 6) the length of time since the regulation has been evaluated.**

See § 2.2-4007.1 and § 2.2-4017 of the *Code of Virginia*

# Periodic Regulatory Review Process Authorities

- **The Governor's Executive Order 14:**
  - specifies the process for conducting the periodic review
  - requires that the review be performed on all regulations at least once every four years.
  
- **Chapter 444 of the 2018 Acts of Assembly**
  - requires the Department of Planning and Budget (DPB) to track and report to the General Assembly annually which agencies are complying with the periodic review requirements.

# Periodic Regulatory Review Process

- ❑ The agency posts a notice to the public on Virginia Town Hall that it is beginning a periodic review of one or more of its regulations
- ❑ The notice is published in the next edition of the Virginia Register of Regulations
- ❑ The agency collects public comment on the regulations
- ❑ Within 120 days of the end of the public comment period, the agency must report on its review, indicating one of the following:
  - That the regulation will be retained “as is”;
  - That the regulation will be amended; or
  - That the regulation will be repealed.

# Summary of Periodic Regulatory Review for CTB Regulations

☐ **Thirty-three** Chapters to be reviewed over three years, beginning 7/30/19:

☐ **Review Schedule:**

- 7 Chapters due 7/30/19
- 7 Chapters due 12/31/2019
- 3 (previously 6) Chapters due 6/30/2020
- 5 (previously 6) Chapters due 12/31/2020
- 8 (previously 7) Chapters due 6/30/2021
- 3 (previously 5) Chapters due 12/31/2021

☐ **Process for each review period**

- **Workshop presentation describing regulation and proposed action for each regulation (retain, repeal, or amend)**
- **Resolution approving action and authorizing Commissioner to take all action necessary to implement approved action**

# Periodic Regulatory Review

## Three CTB Regulations to be Reviewed by December 31, 2021

<u>Chapter Number</u>	<u>Title</u>
<b>24 VAC 30-120</b>	<b>Rules and Regulations Controlling Outdoor Advertising and Directional and Other Signs and Notices</b>
<b>24 VAC 30-451</b>	<b>Airport Access Fund Policy</b>
<b>24 VAC 30-551</b>	<b>Integrated Directional Signing Program (IDSP) Participation Criteria</b>

# Periodic Regulatory Review

## Rules and Regulations Controlling Outdoor Advertising and Directional and Other Signs and Notices

### (24 VAC 30-120)

- ❑ The CTB has authority to make regulations “with respect to the regulation and control of signs, advertisements and advertising structures” in § 33.2-1200 and § 33.2-1220.
  - ❑ Consistent with requirements of federal law and regulation relating to highway beautification and outdoor advertising.
  - ❑ Address key issues for advertisements, directional and other official signs such as size, spacing, lighting and administration of the regulations by the Commissioner of Highways.
- Originally adopted by the CTB in 1995. Amended in 2004.
  - Necessary for the protection of the public; written to be understandable; no negative impact on small businesses.
  - No Public Comments received
  - Recommendation: Retain As Is.

# Periodic Regulatory Review Airport Access Fund Policy (24 VAC 30-451)

- ❑ Per § 33.2-1509 , the CTB is authorized to allocate and expend funds to construct, reconstruct, maintain, or improve access roads to licensed, public-use airports.
  - ❑ CTB adopted Airport Access Fund Policy and the Airport Access Program Guide is listed as a guidance document on Townhall
- Adopted as regulation in 1996. Last amended in 2012.
  - Policy necessary for the protection of the public; written to be understandable; no negative impact on small businesses.
  - No Public Comments received
  - Recommendation: Repeal, retaining policy and Program Guide as a guidance document.



# Periodic Regulatory Review

## Integrated Directional Signing Program (IDSP) Participation Criteria (24 VAC 30-551)

- ❑ **The CTB has authority to make regulations with respect to the regulation and control of signs in § 33.2-1220. The CTB has authority to set fees for IDSP program participants pursuant to § 33.2-218.**
  - ❑ **Facilitates motorist awareness and accessibility to historical, cultural, or commercial attractions.**
  - ❑ **Addresses LOGO, TODS, Supplemental Guide signs, and General Motorist Services signs, but not advertisements.**
- **Adopted as regulation in 2006. Has not been amended, nor has it been subject to a periodic review.**
  - **Necessary for the protection of the public; written to be understandable; no negative impact on small businesses.**
  - **No Public Comments received**
  - **Recommendation: Retain as is.**

# Periodic Regulatory Review—Next Steps

- ❑ **CTB will be presented with a resolution in December to approve recommended actions for the three CTB regulations reviewed this review period.**
- ❑ **VDOT will post results on Town Hall**
- ❑ **In the ensuing months and years, CTB will be presented with results of scheduled reviews and requests to approve recommended actions.**





# **Capital Project Revenue and Refunding Bonds, Series 2022**

**October 19, 2021**

**Laura Farmer**

**Chief Financial Officer**

# Authorization to Issue Capital Project Revenue Bonds

Chapter 896 (HB 3202) of the 2007 Virginia Acts of Assembly authorized the issuance of \$3 billion of Commonwealth of Virginia Capital Projects Revenue Bonds (CPR)

- 20% dedicated to Transit Capital
- 4.3% dedicated to Rail Capital
- Balance to be used to provide for federal match, enhance the Revenue Sharing Program and Statewide and Regional Projects

Annual sales limited to \$300 million, with carry over of unsold amount

Total authorization is limited to \$3.23 billion

- Initial authorization \$3.0 billion
- Increased in 2009 to \$3.18 billion to replace \$180 million of General Funds (GF) provided in 2007 and subsequently taken
- Additional \$50 million authorized in 2018 through Chapters 854 and 856 to match federal funds provided for capital projects by the Washington Metropolitan Area Transit Authority (PRIIA Match)

# CPR Authorization

To date, the Commonwealth Transportation Board has issued **\$2.987 billion of CPR bonds**

**Next sale of \$96.6 million planned for February 2022, leaving a balance of \$146.6 million**

**Refunding \$211.1 million of Series 2012 for estimated NPV savings of \$50.1 million or 23.7% of the refunded par value (Based on current rates)**

**The annual issuance amounts were accelerated in 2011 and 2012 by the Governor’s Transportation Bill to allow for \$1.8 billion in CPR bonds**

**Bond proceeds are fully allocated in the SYIP. Sales are timed to support project spending**

CPR Bond Authorization Summary		(in millions)
Authorized		\$ 3,230.0
Less: Sold May 2010		492.7
Sold May 2011		600.0
Sold May 2012		600.0
Sold December 2014		300.0
Sold May 2016		300.0
Sold June 2017		284.1
Sold May 2018		155.0
Sold April 2019		255.0
Planned sale February 2022*		96.6
Remaining amount to be sold in future		\$ 146.6

\*Preliminary and Subject to Change

# Use of the CPR Bonds

- ❑ CPR bonds have been allocated to the prescribed VDOT and DRPT programs each year since 2008
- ❑ The planned use of the full \$3.23 billion authorization is as follows:

CPR Bonds Use	Amount (in millions)	Percent Share
Transit Capital	\$600.0	20.0%
Rail Capital	129.0	4.3%
Match Federal Funds	1,044.8	34.8%
Dulles Rail	125.0	
PRIIA Match	500.0	
Construction Projects	419.8	
Revenue Sharing	70.0	2.3%
Project Funding	1,156.2	38.5%
<b>Total 2007 Authorization</b>	<b>3,000.0</b>	<b>100.0%</b>
2009 GF Replacement		
Transit / Rail	60.0	
VDOT	120.0	
<b>Total GF Replacement</b>	<b>180.0</b>	
2018 Authorization	50.0	
<b>Total</b>	<b>\$3,230.0</b>	

## **Use of the CPR Bonds**

**The first sale in May 2010 was used to reimburse VDOT and DRPT for eligible project costs incurred prior to the sale and for DRPT transit and rail activity during FY 2011**

**The two \$600 million sales in FY2011 and FY2012 provided proceeds to continue the transit and rail components overseen by DRPT and to fund the projects accelerated by the 2011 Transportation Bill**

**The FYs 2014, 2016, 2017 and 2018 sales continued to accelerate and support the SYIP and the on-going transit and rail activities**

**The FY 2022 sale continues to support projects in the SYIP and the on-going transit and rail activities**



# Debt Service Payments and Coverage

The first use of the revenues dedicated to the Priority Transportation Fund (PTF) is the debt service on the CPR bonds

The PTF revenue is provided from the Transportation Trust Fund in accordance with the distribution formula specified by Chapter 1230 of the 2020 Acts of Assembly of the Commonwealth of Virginia 2020 Regular Session (10.5%)

For planning and debt management purposes, maintain a 1.15x revenue to debt service coverage ratio

Priority Transportation Fund (in millions)		
Fiscal Year Ending June 30:	Forecast 2022	Forecast 2023
Allocation to the Transportation Trust Fund	\$ 1,883.5	\$ 1,959.6
Allocation to Priority Transportation Fund	\$ 236.5	\$ 245.6
Interest Earnings	9.1	9.1
<b>Total Revenue<sup>(1)</sup></b>	<b>\$ 245.6</b>	<b>\$ 254.7</b>
Planned Issuance <sup>(2)</sup>	\$ 96.6	\$ 146.6
Coverage Ratio	1.26x	1.28x

(1) Distribution reflects adjustments pursuant to Enactment Clause 11 of Chapter 1230  
 (2) Preliminary; subject to change

# Capital Project Revenue Bonds, Series 2022 New Money and Refunding

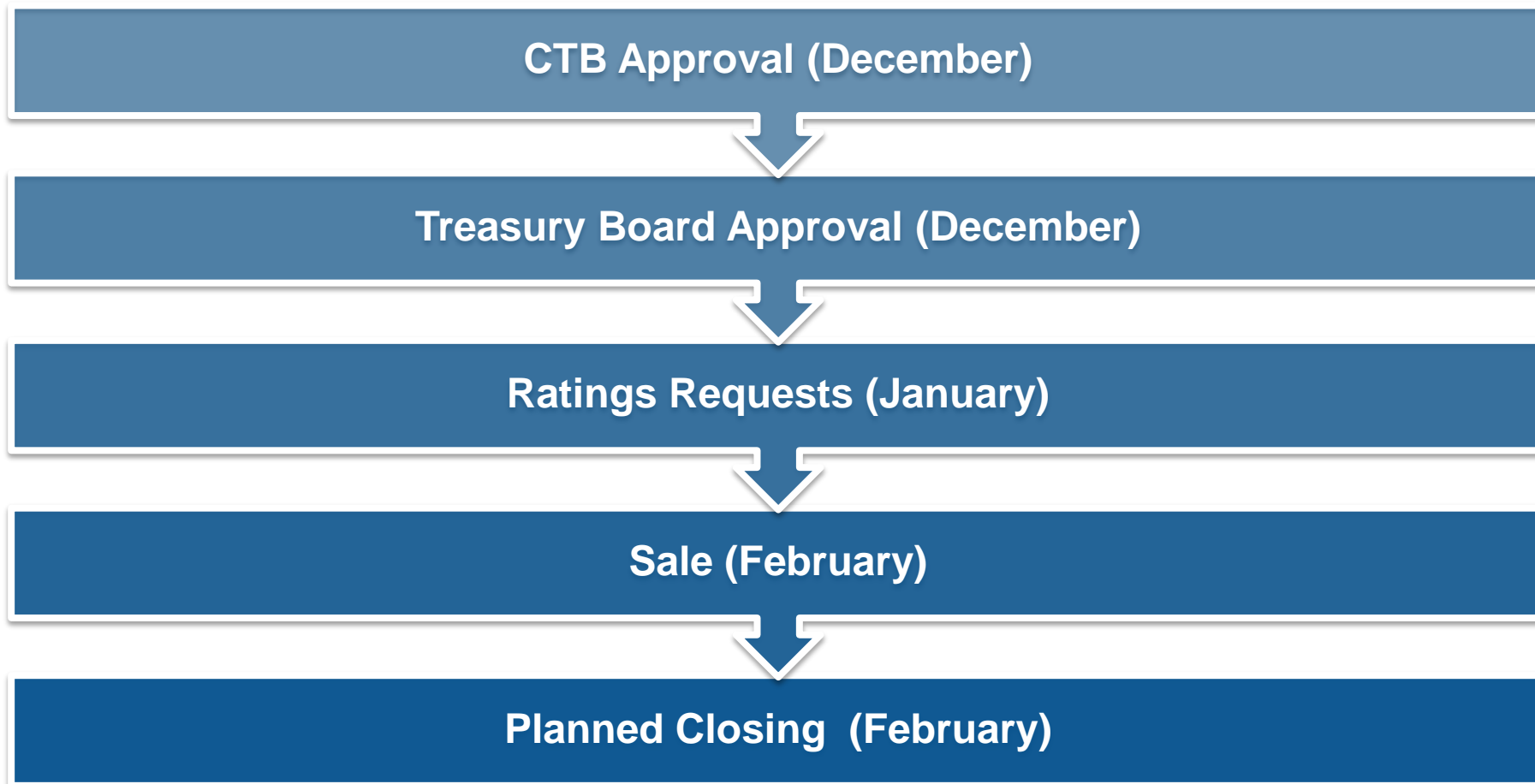
Summary Terms of New Money Offering*	
Issuer	Commonwealth Transportation Board
Series	2022
Anticipated Ratings	AA+/Aa1/AA+
Sale Date	February 8, 2022
Security	The Series 2022 bonds are payable from and secured by revenues (i) first, from revenues deposited into the PTF, (ii) legally available revenues from the TTF, and (iii) from any legally available funds of the General Fund
Target Proceeds (in millions)	\$96.6
Structure	Fixed rate serial bonds maturing annually
Final Maturity (years)	25

\*Preliminary; subject to change

Summary Terms of Refunding Offering*	
Issuer	Commonwealth Transportation Board
Series	2022
Anticipated Ratings	AA+/Aa1/AA+
Sale Date	February 8, 2022
Security	The Series 2022 bonds are payable from and secured by revenues (i) first, from revenues deposited into the PTF, (ii) legally available revenues from the TTF, and (iii) from any legally available funds of the General Fund
Target Proceeds (in millions)	\$215.4
Structure	Fixed rate serial bonds maturing annually
Final Maturity (years)	15

\*Preliminary; subject to change

## Next Steps





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# Transportation Revenues and Opportunities

Nick Donohue

Deputy Secretary of Transportation

October 19, 2021



# Opportunity Costs of COVID Pandemic

- From the start of the pandemic through FY27 state transportation revenues are down \$1.8 billion from March 2020 estimates
- Opportunity costs across a variety of programs – SMART SCALE, revenue sharing, Omnibus spending, State of Good Repair, transit, rail, Interstate program
- FY21 collections were \$365.8M above estimates
- Will not know extent of revenue recovery until December revenue forecast

# Recommendations Moving Forward – FY21 CTF Surplus

- **Use Appropriations Act authority, Item 430 P, to restore anticipated FY22 Omnibus spending**
  - \$39.8M for transit
  - \$10M for safety
- **Recommend Board select \$295M in priority projects from SMART SCALE Round 4 project list**
  - **Ensure equitable distribution of funds throughout the state through approximate use of DGP formula**
  - **SMART SCALE was subject to the single largest reduction in available funding**

# Priority Projects from SMART SCALE Round 4

District	Percentage	FY2022 PTF
Bristol	6.7%	\$19.8
Culpeper	6.3%	\$18.7
Fredericksburg	7.0%	\$20.5
Hampton Roads	20.0%	\$58.9
Lynchburg	7.1%	\$21.0
NOVA	21.3%	\$62.8
Richmond	14.5%	\$42.7
Salem	9.4%	\$27.8
Staunton	7.8%	\$22.9
<b>Grand Total</b>	<b>100.0%</b>	<b>\$295.0</b>

- Recommend that \$295 million from the CTF Surplus be used by the Board to fund priority projects from SMART SCALE Round 4
- Funds allocated generally in line with District Grant Program percentages

# Proposed Allocations to Priority Projects

District	Project	Applicant	Amount
Bristol	US 23 at Hilton Road	Scott County	\$3.1M
Bristol	College Ave Access Mgt	Town of Bluefield	\$2.6M
Bristol	Widen US 11 Eastern Section	Bristol MPO	\$13.4M
Culpeper	Route 29 and Lees Mill Road R-CUT	Rappahannock-Rapidan RC	\$6.8M
Culpeper	Route 522 and Route 20 Roundabout	Orange County	\$10.9M



# Proposed Allocations to Priority Projects

District	Project	Applicant	Amount
Fred'burg	US 1 STARS/Route 3 Off-Ramp	City of Fredericksburg	\$9.5M
Fred'burg	Onville Road Improvements	George Washington Regional Comm.	\$8.5M
Hampton Roads	Route 10/32 Diverging Diamond Interchange	City of Suffolk	\$12.9M
Hampton Roads	Route 17 Widening	City of Suffolk	\$9.8M
Hampton Roads	Route/Route 171 Intersection Improvements	York County	\$16.7M

# Proposed Allocations to Priority Projects

District	Project	Applicant	Amount
Hampton Roads	Main Street/US 258 at Route 10 Bypass	Isle of Wight	\$8.5M
Hampton Roads	Route 168/Route 17 to WB I-64 Improvements	City of Chesapeake	\$8.1M
Lynchburg	High Street and Oak St/Griffin Blvd Roundabout	Town of Farmville	\$14.8M
NOVA	Sycolin Road-Loudoun Center PI to Crosstrail Blvd	Loudoun County	\$15.1M
NOVA	North Woodbridge Mobility Improvements	Prince William County	\$25.3M
NOVA	Braddock Rd at Old Lee Rd Improvements	Fairfax County	\$16.0M

# Proposed Allocations to Priority Projects

District	Project	Applicant	Amount
Richmond	Gillies Creek Greenway	City of Richmond	\$3.8M
Richmond	Clay St Streetscape Improvements	City of Richmond	\$8.3M
Richmond	Alverser at Old Buckingham Roundabout	Chesterfield County	\$7.9M
Richmond	James River Branch Trail	City of Richmond	<b>\$14.3M</b>
Richmond	Matoaca Rd at Woodpecker Rd Rndabout	Chesterfield County	\$7.1M

# Proposed Allocations to Priority Projects

District	Project	Applicant	Amount
Salem	Orange Avenue Improvements	Roanoke Valley TPO	\$23.7M
Staunton	Route 42 Corridor Improvements East	Northern Shenandoah Valley Reg. Commission	\$2.7M
Staunton	Broad St Streetscape	City of Waynesboro	\$7.2M
Staunton	I-81 Exit 317 NB Ramp Realignment	Frederick County	\$6.9M
Staunton	Route 11/Old Charles Town Roundabout	Win-Fred MPO	\$6.4M

# Next Steps for FY21 CTF Surplus

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- **Receive feedback from Board members and public on allocation strategy and potential allocations**
- **Determine allocations for \$24.7M in unallocated funds**
- **Finalize list of allocations for action by Board at December Board meeting**

# Moving Pieces for Additional Restoration of Opportunity Costs

- **FY22 through FY27 state transportation revenue estimates will not be updated until December**
- **Federal infrastructure bill and ‘reauthorization’ proposal is pending in Congress**
  - **Current federal program expires at the end of the October – operating under 1 month extension**
  - **Action is anticipated prior to this expiration**
- **GF Surplus for transportation is subject to appropriation during the 2022 GA Session**

# Discussion of December Forecast Options

- **First quarter of FY22 revenues were 16.5% over FY21 Q1 collections**
- **Current FY22 estimate requires a (2.4%) growth rate**
- **To meet pre-COVID FY22 estimates a 6.4% growth rate would be required over FY21 collections**
- **FY21 Q1 collections proportionally are lower for fuel tax and motor vehicle sales and use tax compared with previous fiscal years**

# Discussion of December Forecast Options

Assuming December forecast increases revenues over the 6-year window recommend two tiers of priority for restoring previous cuts

- **Tier 1 – \$258.6M**
  - Would require an increase of ~\$45M/year over 6-year forecast period
- **Tier 2 – Any remaining funds be distributed through the Commonwealth Transportation Fund formula**



# Discussion of December Forecast Options

## Tier 1 Recommendations

- **Move Revenue Sharing Program up to FY23/FY24 from FY25/26 - \$200 million**
  - Allows upcoming cycle to shift to FY25/26
  - Program would continue in years 3 and 4 of SYIP
- **Option to consider using \$30M in FY21 GF Surplus to provide funds to projects that will spend funds in FY22**
- **Both recommendations would require GA action during upcoming session**

# Discussion of December Forecast Options

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## Tier 1 Recommendations

- **Distribution of \$58.6M in FY23 Omnibus spending would be as follows—**
  - **\$32.5M to construction programs**
  - **\$17.9M to transit programs**
  - **\$5.2M to rail**
  - **\$3M for other modes and agencies**

# Discussion of December Forecast Options

**Recommend that any funds above that amount be distributed based on CTF formulas—**

- **51% to Highway Maintenance and Operating Fund**
  - Amounts necessary to cover any increases in maintenance costs with remaining amounts distributed to construction programs
- **26.0% to Construction Programs**
- **11.3% to Commonwealth Mass Transit Fund**
- **3.7% to the Commonwealth Rail Fund**
- **8% to other modes, funds and agencies**

# Recommendations Moving Forward

- **Board should allocate FY21 CTF Surplus by December 2021**
- **Must wait for 2022 General Assembly Session to use FY21 GF Surplus for transportation**
- **Must wait for Congressional action prior to assuming the use of any additional federal funds beyond those already assumed in SYIP**
- **Consider impacts of December forecast in January**



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# SMART SCALE ROUND 5

## Proposed Changes

October 19, 2021



# SMART SCALE Overview

- **Safety** – reduce the number and rate of fatalities and severe injuries
- **Congestion** – reduce person hours of delay and increase person throughput
- **Accessibility** – increase access to jobs and travel options
- **Economic Development** – support economic development and improve goods movement
- **Environmental Quality** – improve air quality and avoid impacts to the natural environment
- **Land Use** – support and improve non-work accessibility

Scoring based on outcomes, not the size of the problem



$$\frac{\text{Benefit Score}}{\text{Requested \$}}$$

# Summary Round 5 Proposed Changes

- **Environmental Quality Measures**
  - **E.1 (Air Quality)**
  - **E.2 (Impact to Natural and Cultural Resources)**
    - Round 2 change - address issue of projects with no other benefits getting funded by this measure
    - Round 4 change – made measure subtractive
- **Land Use Measure**
- **Cost Estimates**

# Environmental Measures

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- **CTB Member(s) Request**
  - Interest in enhancing E.1 Quantify Greenhouse Gas (GHG) Emissions
  - Increased Scrutiny on E.2 measure as a negative measure
- **Environmental Working Group Established in Early June**
  - District POCs, OIPI, VDOT CO Environmental
- **Additional Support/Stakeholders**
  - Cambridge Systematics
  - DEQ



# Environmental E.1 – Air Quality

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1. Current Process/Methods
2. Potential Qualitative Improvements
3. Potential Quantitative Improvements

## Round 4 Observations

- Intent of E.1 Measure is to reduce Greenhouse Gas Emissions
- Can it be improved or benefits better quantified?

# Strategies to Improve Air Quality and Reduce GHG

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- 1. Reduce Vehicle Miles Traveled (VMT) / Increase Non-Single Occupancy Vehicle (Non-SOV) VMT**
- 2. Reduce vehicle delay to reduce fuel use per mile**
- 3. Technological change including improved vehicle efficiency, electrification, and using low carbon fuels**
- 4. Reduce Impacts to Natural Resources**

# Current E.1 (Air Quality) Overview

Potential of project to improve air quality and reduce greenhouse gas (GHG) emissions

Non-SOV Project Characteristics	Points
Rail Factor - Project includes improvements to rail transit or passenger rail facilities.	3
Bicycle Factor - Project includes construction or replacement of bike facilities	2
Pedestrian Factor - Project includes construction or replacement of pedestrian facilities	2
Park and Ride Factor - Project includes improvements to an existing or proposed park-and-ride lot	2
Bus Factor - Project includes bus facility improvements or reduces delay with scheduled peak service of 1 transit vehicle per hour	1
Special Accommodations Factor - Project include special accommodations (space/infrastructure) for hybrid or electric vehicles	0.5
Energy Efficient Factor - Project includes energy efficient infrastructure or fleets	0.5
<b>Total Points Possible 8.5 points maximum*</b>	
<b>Measure Scaling: *Points are multiplied by the increased number of peak period non-SOV users</b>	

+

Freight Transportation Project Characteristics	Points
Project reduces traffic delay with a high percentage of truck traffic (greater than 8 % of AADT)	1
Project includes improvements to freight rail network or intermodal facilities/ports/terminals	0.5
<b>Total Points Possible 1.5 points maximum**</b>	
<b>Measure Scaling: **Points are multiplied by peak period truck volumes</b>	

# Proposed Qualitative Improvements

- **Increase Non- SOV Component**
  - Currently all points are totaled and multiplied by increase *in all non-SOV users*
    - Results in points given credit based on users from other categories
    - Propose multiplying by *non-SOV increase for respective category – (eg Bike, Ped, transit...)*
- **Freight Component with Reduced Delay**
  - **Non-SOV Users and Freight Component are not in the same unit**
    - Freight requires reduced delay greater than zero, but captures *existing* truck volumes
    - Propose normalizing separately, and equal weight the two categories
    - Propose scaling by delay reduction
- **Special Accommodations Point Category**
  - Policy Guidelines are not clear on the Federal / State Level – Sale of Non-Food
  - Federal Grant money is proposed

# Example - Lafayette Boulevard Multimodal Improvements

Factor	In App?	Supporting Information	Current E.1 - Increase in Non-SOV			Proposed - Increase in Non-SOV by Mode		
			Points	Increased Users	Measure	Points	Increased Users	Measure
Rail	✗		3			3		
Bike	✓	Route 208 PNR lot - 10 bicycle lockers and 10 covered bicycle parking spaces	2	X	59 = 118.0	2	X	0 = 0.0
Pedestrian	✓	2000 ft sidewalk on the eastside of Lafayette Blvd (Sheetz to Family Dollar)	2	X	59 = 118.0	2	X	22 = 44.0
Park and Ride	✓	Route 208 PnR Lot - Add Transit Stations, Lighting, Bicycle Lockers/Parking	2	X	59 = 118.0	2	X	5 = 10.0
Bus	✓	VRE Feeder Service and Bus Stop Improvements	1	X	59 = 59.0	1	X	31 = 31.0
Special Accomodations EV	✗		0.5			<i>Proposed Removal</i>		
Energy Efficient	✓	New transit Shelter at the Route 208 PNR lot will include LED solar lighting	0.5	X	59 = 29.5	0.5	X	31 = 15.5
Increase in Non-SOV User Points			Sum = 442.5			Sum = 100.5		
Non-SOV Normalized Measure						<i>(divide by maximum score in cohort and multiply by 100)</i> 8.7		

Factor	In App?	Supporting Information	Current E.1 - Freight			Proposed - Freight Scaled by Delay		
			Points	Trucks	Measure	Points	Trucks	Measure
Intermodal / Freight Rail	✗		0.5					
Reduces Delay with High Truck	✓	13% Trucks (3515 Peak Period Volume)	1	x	3515 = 3515			
Points based on Delay Reduction								
0 < Delay Reduction < 2 = 0.5 point 2 <= Delay Reduction < 100 = 1 point Delay Reduction >= 100 = 2 points	✓	5.88 Person-Hours of Delay Reduced <i>(From C.2 Score)</i>				1	X	3515 = 3515.0
Freight Delay Reduction Points			1		3515	1		3515
Freight Delay Reduction Normalized Measure						<i>(divide by maximum score in cohort and multiply by 100)</i> 100.0		
			Total Measure = 3957.5			Weight Each 50% = 54.4		

# Results Summary

## Impacts to E.1 Measure Top Scoring

Current E.1 - Increase in Non-SOV				Proposed - Increase in Non-SOV by Mode			
Points	Increased Users	Measure		Points	Increased Users	Measure	
3				3			
2	X 59	= 118.0		2	X 0	= 0.0	
2	X 59	= 118.0		2	X 22	= 44.0	
2	X 59	= 118.0		2	X 5	= 10.0	
1	X 59	= 59.0		1	X 31	= 31.0	
0.5				<i>Proposed Removal</i>			
0.5	X 59	= 29.5		0.5	X 31	= 15.5	
Sum = 442.5				Sum = 100.5			
				<i>(divide by maximum score in cohort and multiply by 100)</i>			
				8.7			
Current E.1 - Freight				Proposed - Freight Scaled by Delay			
Points	Trucks	Measure		Points	Trucks	Measure	
0.5							
1	x 3515	= 3515					
				1	X 3515	= 3515.0	
1		3515		1		3515	
				<i>(divide by maximum score in cohort and multiply by 100)</i>			
				100.0			
<b>Total Measure = 3957.5</b>				<b>Weight Each 50% = 54.4</b>			

**Current and proposed measures should not be compared directly, as they are not on the same magnitude. Example project does not change rank.**

Rank E.1 Current	Rank E.1 Proposed	Display ID	Project Title
1	2	6867	Route 208 Operational and Multimodal Improvements
2	1	7198	Intercity Rail Service Expansion along US-29 & I-81 Corridors
3	3	6806	Rt 2 & 17 Widening from City Line to Shannon Airport Area
4	4	6719	Lafayette Boulevard Multimodal Improvements
5	5	7076	Town of Bowling Green US 301/Chase Street
6	7	6738	Weyers Cave Road (Rt. 256) Turn Lane Project
7	9	6842	I-64 WB Widening (Exit 211 to Exit 205)
8	8	6822	Route 1 (Fraleley Boulevard) Widening
9	10	6815	BRITE Pedestrian Improvements
10	11	6799	I-81/Route 8 (Exit 114) Park & Ride Lot

Rank E.1 Proposed	Display ID	Project Title
6	6948	Mount Vernon Trail North Enhancements

# Proposed Quantitative Calculate CO<sub>2</sub> Offset

## Use existing collected data for **High Level Analysis**

- Increase in non-SOV users - *currently calculated for E.1*
- Hours of delay reduced - *currently calculated for C.2*
- Trip Length - national averages, and SS analysis segment length (C.1/C.2)
- Emissions factors - *average passenger car fuel efficiency*
- Fuel use factor - *from delay reduced (gallon/hour)*

## Two Parts

## Non-SOV CO<sub>2</sub> Offset + Reduced Truck Delay CO<sub>2</sub> Offset

# Proposed Quantitative Non-SOV CO<sub>2</sub> Offset

## 1. Increased Non-SOV VMT

- **Transit and Park & Ride Users** - multiply new users by the analysis trip length
- **Pedestrians** - multiply total new users by 0.67 miles\*
- **Bicyclists** - multiply total new users by 3.54 miles\*

\*Average Person Trip Length

## 2. Increased Non-SOV VMT - Sum Above

## 3. Non-SOV CO<sub>2</sub> Offset (Apply Fuel Efficiency and Emissions Factors)

$$\text{Non-SOV VMT} \times \frac{1 \text{ gallon gas}}{24 \text{ miles}} \times \frac{8.9 \text{ kg CO}_2}{1 \text{ gallon gas}}$$



# Proposed Quantitative Freight CO<sub>2</sub> Offset

## 1. Reduced Truck Delay - Get Back to Vehicle Hours of Delay (VHD)

- Divide total Person-Hours of Delay (PHD) by 1.2 Person/Vehicle

## 2. Reduced Truck Delay - Heavy Vehicle Hours of Delay (HVHD)

- Multiply VHD by project weighted average truck percent

## 3. Heavy Vehicle CO<sub>2</sub> Offset (Apply Gas & Emissions Factors)

$$\text{HVHD (hours)} \times \frac{0.44 \text{ gallons}}{1 \text{ hour}} \times \frac{8.9 \text{ kg CO}_2}{1 \text{ gallon gas}}$$

**Final Measure is sum of two values**

1. Non-SOV CO<sub>2</sub> Offset
2. Freight CO<sub>2</sub> Offset

# Example - Lafayette Boulevard Multimodal Improvements

Non-SOV CO <sub>2</sub> Offset						
Factor	In App?	Supporting Information	Increased Users		Trip Length (miles)	VMT
Rail	✗					
Bike	✓	Route 208 PNR lot - 10 bicycle lockers and 10 covered bicycle parking spaces	0.0	X	3.54	= 0.0
Pedestrian	✓	2000 ft sidewalk on the eastside of Lafayette Blvd (Sheetz to Family Dollar)	22.0	X	0.67	= 14.7
Park and Ride	✓	Route 208 PnR Lot - Add Transit Stations, Lighting, Bicycle Lockers/Parking	<b>VMT Summed by Segment</b>			<b>= 122.8</b>
Bus	✓	VRE Feeder Service and Bus Stop Improvements	<b>VMT Summed by Segment</b>			<b>= 200.9</b>
<b>Non-SOV VMT</b>						<b>338.4</b>
<b>Non-SOV CO<sub>2</sub> Offset (kg)</b>						<b>125.5</b>
<small>x 1 gallon gas x 8.9 kg CO<sub>2</sub></small>						
<small>24 miles 1 gallon gas</small>						

Freight CO <sub>2</sub> Offset						
Total Delay Reduction (Person-Hours)	÷	Persons/Vehicle		X		% Trucks
5.8	÷	1.2		X		0.13
<b>Freight Delay Reduction (hours)</b>						<b>0.63</b>
<b>Freight CO<sub>2</sub> Offset (kg)</b>						<b>2.46</b>
<small>0.44 gallons x 8.9 kg CO<sub>2</sub></small>						
<small>1 hour 1 gallon gas</small>						
<b>Total CO<sub>2</sub> Offset</b>						<b>128.0</b>

# Propose Combining Quantitative and Qualitative

## Final Proposed E.1 Score

- Weight Qualitative Method - 50%
- Weight Quantitative Method - 50%

## Impacts to E.1 Measure Top Scoring

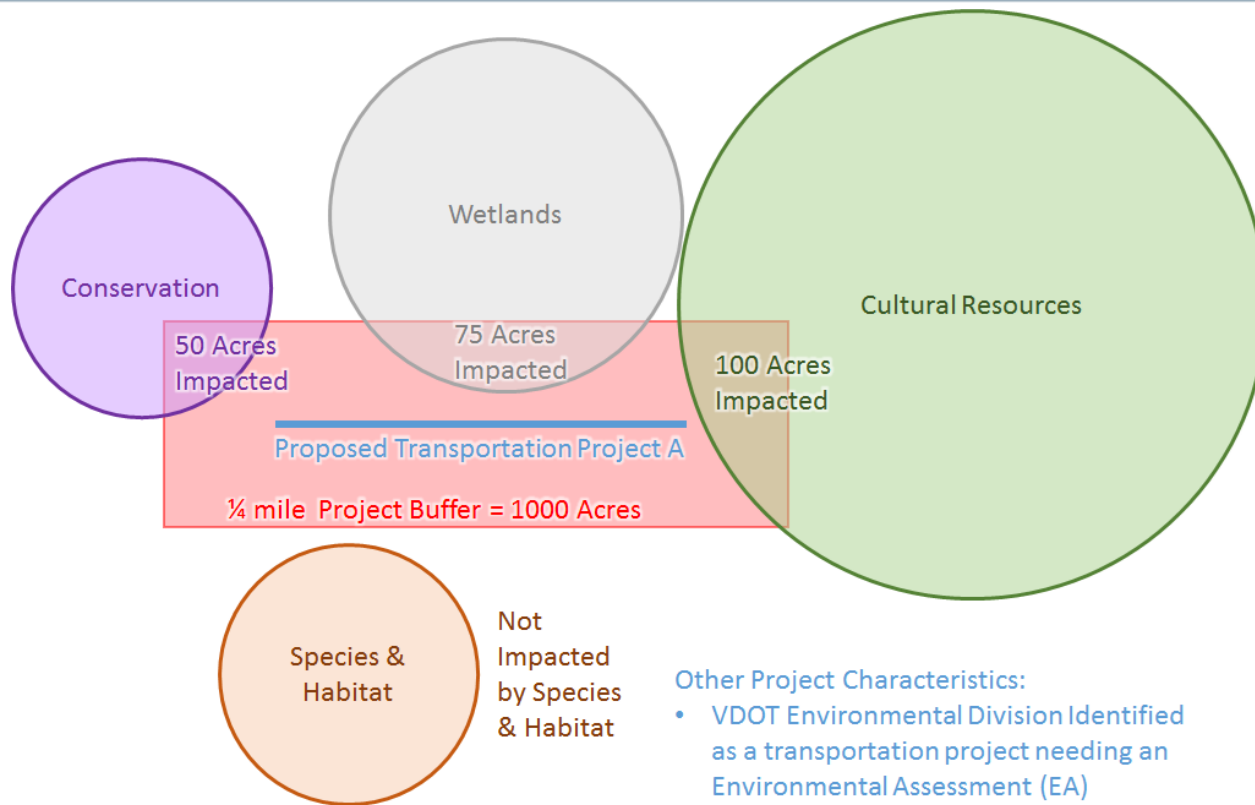
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8	4	6822	Route 1 (Fraley Boulevard) Widening
9	31	6815	BRITE Pedestrian Improvements
10	14	6799	I-81/Route 8 (Exit 114) Park & Ride Lot

## Additional New Top Scoring

Rank E.1 Proposed	Display ID	Project Title
2	6948	Mount Vernon Trail North Enhancements
6	6858	Upper King Street Multimodal Reconstruction
10	6809	Rte 15 Leesburg Bypass Interchange with Edwards Ferry Road

# E.2 (Impact to Natural and Cultural Resources) - Overview

Potential of project to minimize impact on natural and cultural resources located within project buffer



**Round 4 Observations**

- Is it appropriate to apply a 1/4 mile buffer to all project types?
- Projects within R/W?

Other Project Characteristics:

- VDOT Environmental Division Identified as a transportation project needing an Environmental Assessment (EA)

Project	Conservation	Species/ Habitat	Cultural Resources	Wetlands	Total Acres	Environmental Document Scale	Total Acres Scaled by Environmental Document	Impact Buffer Acres	Final Total Acres
A	50	0	100	75	225	EA (30%)	68	1000	68

# E.2 Process Improvements

- **Impact Buffer Acres**
  - *Proposed* tiering approach
  - Features selected
    - **Tier 1 = 30 ft**
    - **Tier 2 = 1/8 mile**
    - **Tier 3 = 1/4 mile**
- **Sensitive Areas**
  - Environmental Division will review for validity every round

## Examples

Project Feature	E.2 Tier
Road Diet	1
Roadway Reconstruction/Realignment	1
Shoulder Improvement(s)	1
TDM Other	1
Traffic Signal Modification	1
Turn Lane Improvement(s)	1
Widen Existing Lane(s) (No New Lanes)	1
Construct/Expand Bus Facility	2
Freight Rail improvements	2
Improve Park and Ride Lot	2
New Intercity Passenger Rail Station or Station Improvements	2
New Park and Ride Lot	2
New Station or Station Improvements	2
Right-of-Way/Easements acquisition required	2
Add New Through Lanes(s)	3
Highway Other	3
Improve/replace existing bridge(s)	3
Managed Lane(s) (HOV/HOT/Shoulder)	3
New Bridge	3
New Interchange, Limited Access Facility	3
New Interchange, Non-Limited Access Facility	3
Rail Transit Other	3
Roadway on New Alignment	3

## E.2 Outcomes

- **Improved Distribution**

- Projects in Tier 1 (30' buffer) either improved in SMART SCALE rank or remained at the exact same rank
- Projects in Tier 2 (1/8th mile) projects on average changed by less than one position in SMART SCALE rank
- Projects in Tier 3 (1/4th mile) fell an average of 4 positions in SMART SCALE rank
- ***Statewide - only 2 projects impacted in funding scenario***

# Land Use

- Land Use has two components: Future Transportation Efficient Land Use (L.1) and **Increase** in Transportation Efficient Land Use (L.2)
- What they have in common is - the non-work accessibility, or the number of key non-work destinations that are accessible within a **reasonable walking distance**, scaled by population density

## Round 4 Observations

- Concerns that **3 mile buffer is excessive** to consider reasonable.
- Large component of score, should other Area Types be considered for Land Use?

# Land Use

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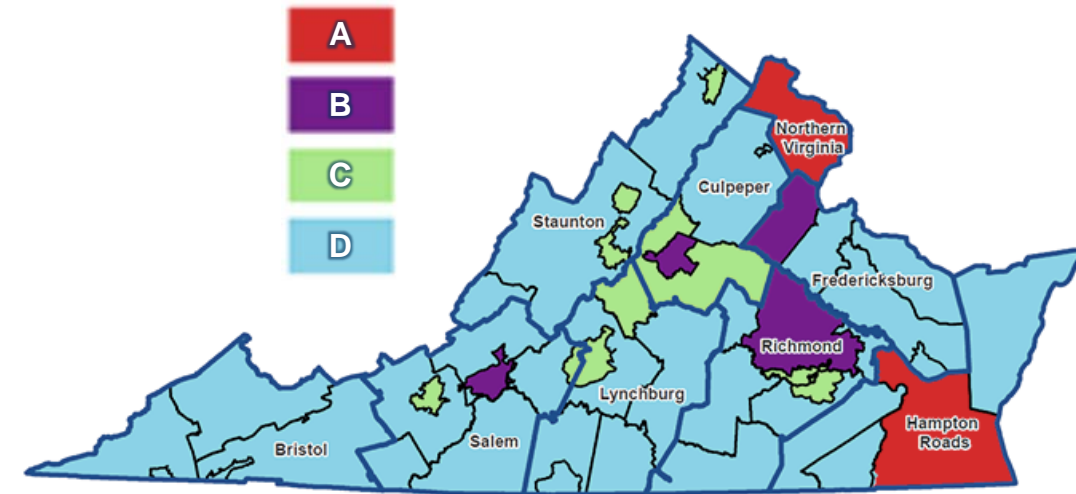
- **Multiple Scenarios Tested**
- **Apply Land Use to all Area Types**
  - **Weighting Changes for Type C & D Considered**
  - **Use a 1 Mile Buffer instead of 3 Mile Buffer**
    - 1 mile walk is closer to the average pedestrian trip length



# Potential Weighting Adjustments

Existing						
Area Type	Congestion	Safety	Accessibility	Environment	Economic Development	Land Use
A	45%	5%	15%	10%	5%	20%
B	15%	20%	25%	10%	20%	10%
C	15%	25%	25%	10%	25%	
D	10%	30%	15%	10%	35%	

Proposed						
Area Type	Congestion	Safety	Accessibility	Environment	Economic Development	Land Use
A	45%	5%	15%	10%	5%	20%
B	15%	20%	20%	10%	20%	15%
C	15%	25%	15%	10%	25%	10%
D	10%	30%	10%	10%	30%	10%



# Cost Estimates

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- **August 2, 2021 VDOT Published Cost Estimating Manual and an associated Implementation Plan (IIM)**
- **Cost Estimate Workbook (Consistent Summary and Transparency)**
- **Cost Estimating Manual Overview Training**
  - Currently Internally Available
  - VDOT University Winter 2022
- **In-Person, In-Depth Training by District (Winter 2022)**

# Next Steps

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- **November**
  - Deeper Dive into Land Use
  - Intake Public Comments
- **December**
  - Seeking Action Round 5 Policy Changes
  - Release Updated Technical Guide



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Thank you.





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**Virginia Transportation Infrastructure Bank  
Advisory Panel Recommendation  
Capital Beltway Express, LLC  
I-495 Express Lanes Northern Extension**

Commonwealth Transportation Board  
Deputy Secretary Donohue  
October 19, 2021



# Virginia Transportation Infrastructure Bank

- **Established in 2011 to provide loans to finance transportation projects**
- **Purpose is to encourage public and private investment in transportation infrastructure**
- **Guidelines are established by the Board. The most recent update to the guidelines were approved on September 21, 2016**
- **Eligible projects including all forms of surface transportation**
- **Eligible applicants include localities, transit agencies, regional entities, private entities**

# VTIB Activity to Date

## \$332 million in loans closed since creation

- **City of Chesapeake (Dominion Boulevard) - \$151M loan closed in November 2012**
- **Loudoun County IDA (Pacific Boulevard Extension Project) - \$36M loan closed in December 2013**
- **Chesapeake Bay Bridge Tunnel District (Parallel Thimble Shoal Tunnel) - \$50M loan closed in November 2016**
- **City of Alexandria (Potomac Yard Metrorail Station) - \$50M loan closed in December 2016**
- **95 Express Lanes LLC (I-395 Express Lanes) - \$45M loan closed in July 2017**

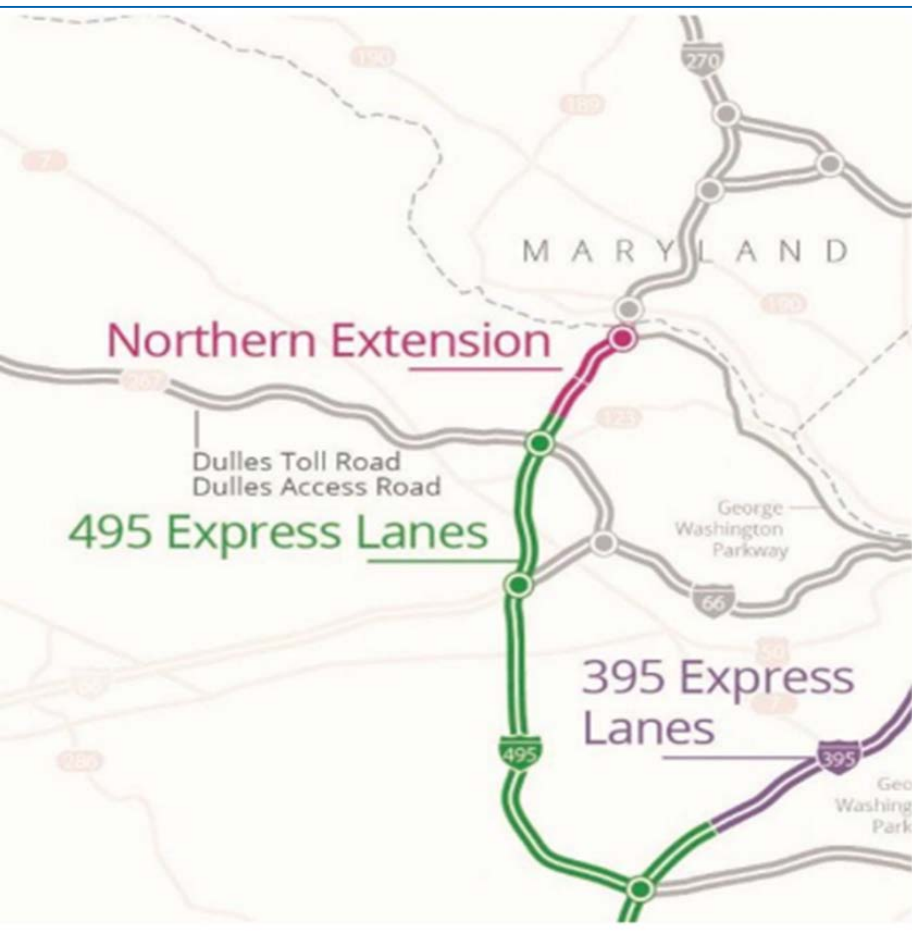
# VTIB Balance

- **Total capitalization to date of \$311.4M**
  - \$32.7 million General Fund from FY 2010 surplus
  - \$250.0 million from Commonwealth Transportation Fund
  - \$28.7 million General Fund from FY 2011 surplus
- **\$70.7M in interest earnings on the fund, the HMOF and the Construction Fund**
- **Repayments to date of \$50.3M** (as of September 30, 2021)
- **Total funding available for loans is ~\$133M**
- **Anticipated principal and interest repayments for the next 6 years total \$39.3M** (Fiscal Year 2022 through Fiscal Year 2027)



# I-495 Express Lanes Northern Extension

## “Project NEXT”



**Capital Beltway Express, LLC has requested a loan of up to \$49M plus capitalized interest for up to 5 years**

**VTIB loan will be secured by a subordinate pledge of toll revenues from entire 495 Express Lane system**

# Project NEXT – Construction Status

- **Project has completed the NEPA Process**
- **Project to be constructed under \$441.7M design-build contract awarded in September 2021**
- **Construction expected to begin around December 2021/January 2022**
- **Completion is anticipated in mid-2026**

(Dates are subject to change)

# VTIB Eligibility and Screening Criteria

- **Project meets the Bank's mandatory criteria**
  - Eligible borrower under the Act
  - Project is a local and regional transportation priority
- **Application scored 21 out of 30 possible points by VDOT and VRA Staff using VTIB scoring criteria**
  - Readiness and Acceleration – 5 out of 9 points
  - Impact on VTIB Lending Capacity – 6 out of 11 points
  - Benefits of Project – 10 out of 10 points

# Project NEXT Sources of Funding

- **Senior Lien Revenue Bonds – Private Activity Bonds (PABs)**
  - \$137,474,000 for Project NEXT
  - \$224,660,000 to refund existing debt
- **Transportation Infrastructure Finance and Innovation (“TIFIA”) Loan**
  - \$227,866,000 for Project NEXT
  - \$828,708,000 to refund existing debt
  - Subordinate to senior obligations with springing lien provisions
- **VTIB Loan**
  - \$49,000,000 million plus capitalized interest
  - On parity with TIFIA, no springing lien provision
- **Equity**
  - \$327,459,000 million in Equity Funding
  - Will include a Letter of Credit

\*Amounts are subject to change; Refunding amounts refinance outstanding project company debt

# VTIB Loan Structuring

- **2.59% fixed interest rate**
- **2-year drawdown of funds starting in December 2021**
- **Capitalized Interest through December 2026**
- **Anticipated repayment** (Dates subject to change)
  - Interest payments begin June 2027
  - Minimal principal payments begin June 2030
  - Principal payment ramp-up period beginning in 2041
  - Level mandatory debt service beginning in 2051 through the of the life of the loan, ending in 2060
- **Assumed additional senior indebtedness and distribution requirements**
  - 1.45x senior debt service coverage
  - 1.35x total debt service coverage
  - 1.35x loan life coverage ratio (LLCR)
  - 2.30x project life coverage ratio (PLCR)
- **Additional leveraging for distributions requires partial prepayment**

# Advisory Panel Recommendations

- **The Advisory Panel recommends the CTB approve the loan request**
- **VTIB Loan closing conditions**
  - **Subordinate Pledge of Total System Revenues**
    - Loan subordinate to Senior PABs but on parity with TIFIA
  - **Debt service coverage, LLCR, and PLCR Requirements Consistent with TIFIA**
  - **Funding of Debt Service, O&M, and Major Maintenance Reserves**
  - **Execution of Fixed-Price Design-Build Contract (Satisfied)**
  - **Execution of the Second ARCA**
  - **Independent Audit of the Transurban Financial Model**
  - **Completion of Lenders' T&R Report (Satisfied)**
  - **Completion of Lenders' Technical Advisor Report**
  - **Final Investment Grade Ratings, including rating for VTIB loan**
  - **VTIB Loan Closing Concurrent with Project NEXT and Existing CBE Refinance Closings**

# Risk Considerations

- **Construction Risk**
  - Straight forward project with same parties as existing 495 Express Lanes and fixed-price, design-build contract
  - Payment and performance bonds, guarantee from Design-Build contractor
  - Equity contribution backed by acceptable letter of credit or guarantee
  - Design-build risk pool with VDOT
  - Independent Lenders' technical advisor review
- **Applicant Risk**
  - Managed lane expertise and commitment to region
  - Strong ownership group
  - Loan covenants provide protection against additional debt and distributions
- **Concession Agreement Risk**
  - Exclusive rights to assets and discretion over rate setting
  - Lender protections reflected in the Second ARCA

# Risk Considerations

- **Interest Rate Risk**
  - Base Case projections assume debt at conservative interest rate levels
- **Revenue Risk**
  - Large metropolitan area with congestion and strong socio-economic trends
  - Could sustain significant decrease in total annual system revenues and still pay all debt service in each year
  - Resiliency to stress case scenarios (including extended COVID recovery period and increased work from home)
  - Revenue uplift from future managed lane projects would enhance revenues
- **Operations and Maintenance Risk**
  - Same operator as existing I-95, I-395, and I-495 Express Lanes
  - Independent Lenders' technical advisor review



# I-495 Express Lanes Northern Extension Risk Considerations (Continued)

- **Debt and Refinance Risk**
  - TIFIA and VTIB scheduled debt provides flexibility in stress events without default
  - Refinance of existing CBE debt results in substantial interest rate savings; will be VTIB loan closing requirement

# Project NEXT

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- **Recommend Board approve VTIB loan**
- **VTIB will have borrowing capacity of \$84M if requested amount is approved**
- **Without approval Project NEXT will require restructure other debt and may impact timing USDOT approval of TIFIA loan**