



Northern Virginia Tolling & Congestion; P3 Lessons Learned; and I-81 Congestion & Funding

JLARC directed staff to review several transportation topics*

Northern Virginia	Statewide	I-81
Evaluate the transparency & understandability of tolled roads.	Identify lessons from prior P3s to inform future transportation projects.	Evaluate funding for planned congestion-related improvements.
Determine how, if at all, existing P3s hinder ability to address traffic congestion.		Identify how to raise additional revenue, if needed, for planned congestion-related improvements.

P3 = Public-Private Partnership

*Commission study resolution, November 13, 2023.

Research activities

- Interviewed key stakeholders in Virginia and nationally
 - State, regional, and local transportation officials
 - Commonwealth Transportation Board & I-81 Advisory Committee members
 - Toll road operators
 - Subject-matter experts (P3s and tolling)
- Conducted two surveys of Northern Virginia drivers
- Reviewed Virginia's P3 contracts & policies; corridor improvement plans & documents; and research literature, including case studies on P3 agreements
- Analyzed traffic congestion data and I-81 funding

In brief

Tolling in Northern Virginia is generally understandable, but some complex toll roads are less understandable, and inconsistent signage may cause confusion. State should require future P3s to use consistent signage along the same road corridor.

Contractual restrictions and continually high levels of traffic congestion will make it extremely difficult to fully alleviate congestion around Occoquan.

State has already incorporated some lessons learned into the P3 process but can still learn from other emerging lessons.

I-81 improvement plan will address some, but not all, congestion. Many projects are complete or underway, but schedule has slipped because of several factors. State will need to reassess plan & funding in several years to evaluate progress made and determine next steps.

In this presentation

Tolling & traffic congestion in Northern Virginia

Lessons learned from prior P3s

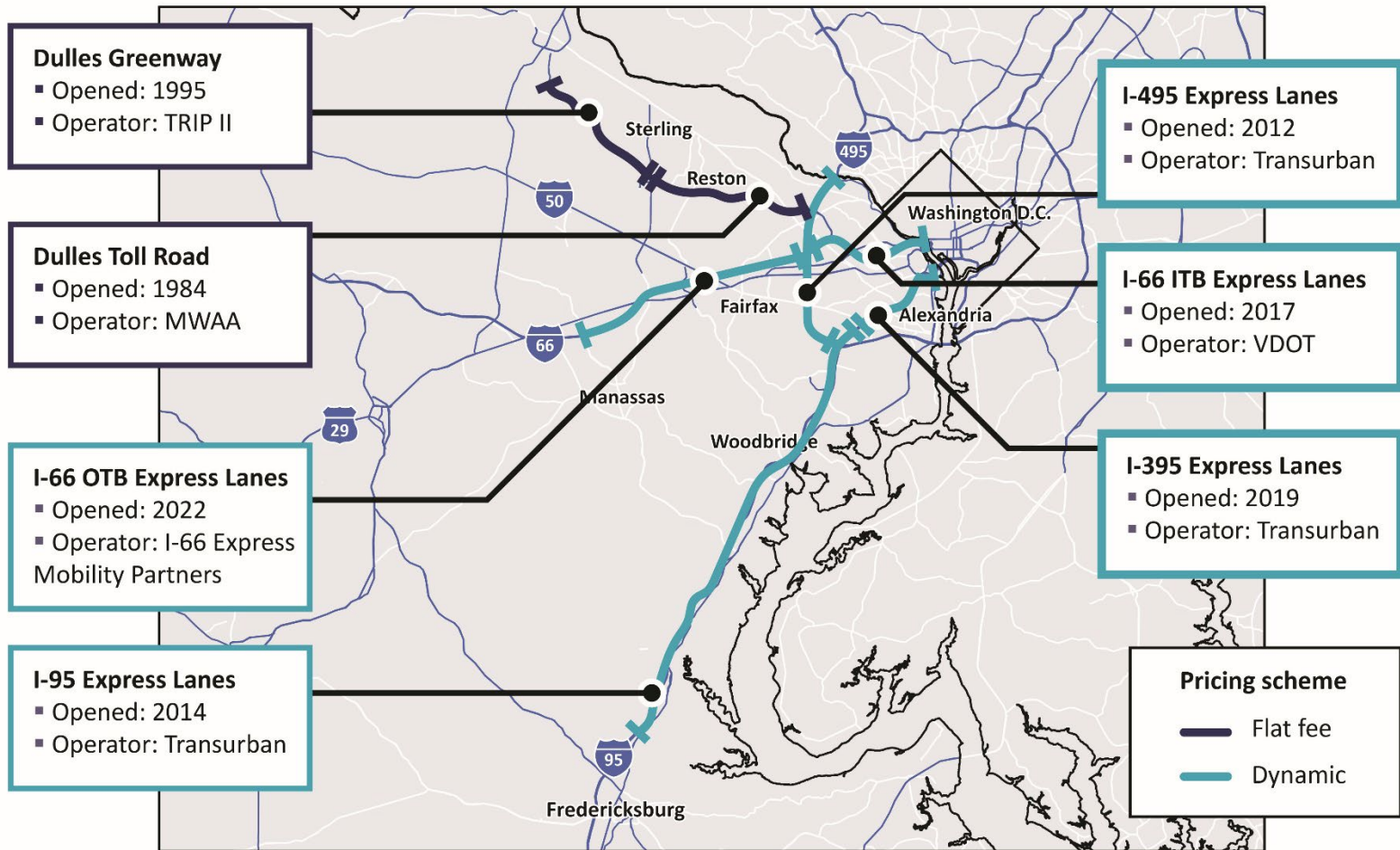
Efforts to reduce congestion on I-81

Appendix: Additional information

Tolled roads are used to manage traffic congestion

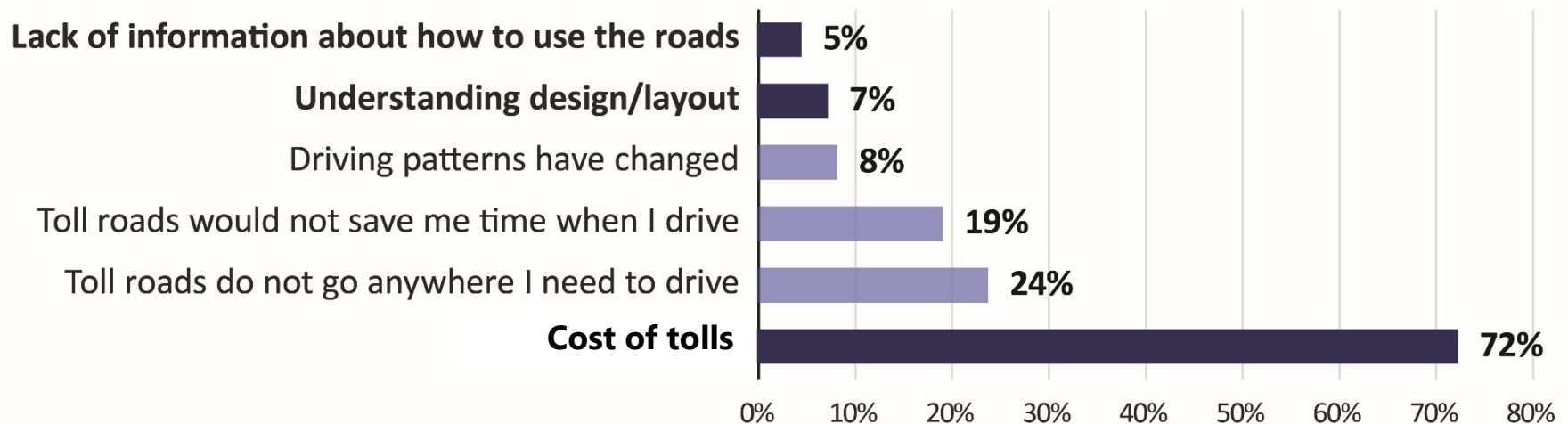
- Tolled roads in Northern Virginia use two different types of pricing structures: flat fee & dynamic
- Flat fee tolled roads cost the same to use regardless of traffic conditions
- Cost of using dynamically priced express lanes can vary widely (e.g., \$2 to \$20+) depending on congestion & length of travel
- Many tolled roads in Northern Virginia are optional because they run parallel to free-to-use lanes

Northern Virginia has 100+ miles of privately & publicly operated tolled roads



Difficulty understanding tolled roads not major impediment to toll road usage in Northern Virginia

According to E-ZPass data, you have not recently used the toll roads in Northern Virginia. Broadly speaking, why not? (917 respondents)



JLARC survey of NOVA E-ZPass users who had driven on a toll road in the region at least once between Feb. 2023 and Dec. 2023, but not between Jan. 2024 and Mar. 2024. 917 respondents; 9% response rate.

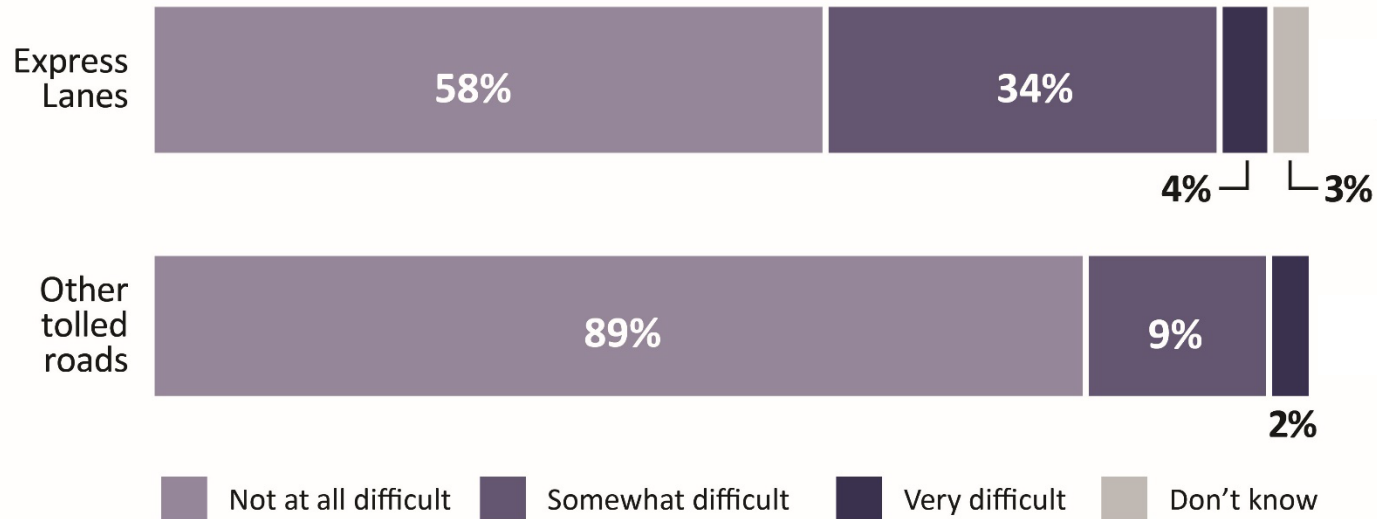
Most Northern Virginia drivers surveyed understood dynamic pricing; fewer understood “locking in” price

- Dynamic pricing depends on congestion; highest when express lanes congested to provide reliability
- 85% of survey respondents understood dynamic pricing concept
- Only 55% of respondents knew whether they “locked in” toll price once they drove under the sign to enter facility

JLARC survey of NOVA E-ZPass users who had driven on a toll road in the region at least once between Jan. 2024 and Mar. 2024. 5,331 respondents; 11% response rate.

Some surveyed Northern Virginia drivers report difficulty navigating express lanes

NOVA drivers' self-reported difficulty navigating...



- Increased difficulty navigating express lanes likely because of complex nature of facilities and tolling (e.g., limited entry and exit ramps, dynamic toll pricing)

JLARC survey of NOVA E-ZPass users who had driven on a toll road in the region at least once between Jan. 2024 and Mar. 2024. 5,331 respondents; 11% response rate.

Less than half of Northern Virginia drivers surveyed fully understood all HOV requirements

- Only 44% of drivers understood each specific requirement to use HOV
 - 3 or more occupants in vehicle
 - E-ZPass Flex transponder (*not* the standard E-ZPass)
 - Transponder switched to “HOV ON”
- Requirement to have transponder switched to “HOV ON” least understood requirement



JLARC survey of NOVA E-ZPass users who had driven on a toll road in the region at least once between Jan. 2024 and Mar. 2024. 5,331 respondents; 11% response rate.

Most drivers surveyed in Northern Virginia correctly determined toll pricing displayed on signage

- Most Northern Virginia drivers surveyed correctly determined toll price (83%) when shown static picture of a toll sign
- Drivers were less likely, though, to correctly determine price (56%) when shown a video approaching a toll sign as it would appear when driving at speed

JLARC survey of NOVA E-ZPass users who had driven on a toll road in the region at least once between Jan. 2024 and Mar. 2024. 5,331 respondents; 11% response rate.

VDOT and toll operators also provide information in addition to what signage conveys

- VDOT manages and makes available information about Virginia toll roads
- NOVA toll operator websites include toll rate calculators & Frequently Asked Questions
- Express lane operators must develop and submit communications plan to VDOT, which includes:
 - Tolling & rate information
 - Strategies for stakeholder outreach

Toll operators must use signage that complies with federal regulations and is approved by VDOT

- VDOT requires toll operators to use signage that complies with the federal Manual on Uniform Traffic Control Devices*
- VDOT requires express lane operators to develop and submit a signage plan
- VDOT has approved each express lane operator's signage plan
- Approved signage in Virginia differs depending on the operator and road

*Manual is periodically updated and revised over time.

Different types of signage on some Northern Virginia express lanes may cause confusion

Express lane
operator A



Express lane
operator B



Consistency is potentially more important than having “the best” or “the right” signage

- Signage used by both express lane operators has been used in other states
- Northern Virginia drivers may prefer signage that has been used in region for longer because they are more familiar with it
- In the near term, VDOT cannot require express lane operators to make existing signage consistent without triggering contract terms that may require payment* but can ensure consistency moving forward

*Referred to as a “compensation event”

Recommendation

As part of future transportation P3 agreements, VDOT should require toll operators to use signage that is consistent with signage already used, especially as part of the same road.

Example: If VDOT advances the I-495 Southside Express Lanes project—it should require signage to be similar or identical to what is currently used on the I-95, I-395, and I-495 Express Lanes.

Rules regarding toll road access and costs likely more confusing for drivers of larger vehicles

- Contracts allow toll operators to determine access and rates based on several factors, including a vehicle's weight, type, and # of axles (operators use type and # of axles, not weight)
- Trucks with 3+ axles allowed on I-66 OTB but generally not allowed on other express lane segments in region
- Rates vary on other toll roads in Northern Virginia

<i># of axles</i>	2	3	4	5	6
Dulles Greenway	\$5.80	\$11.55	\$14.60	\$17.65	\$20.70
Dulles Toll Road	\$4.00	\$8.00	\$9.25	\$10.50	\$11.75

*Rates shown for Dulles Greenway are for peak toll (4:00 p.m. to 6:30 p.m.); rates shown for Dulles Toll Road are for E-Z Pass, Main Line Plaza.

Inconsistent signage about access and rates may create further confusion for larger vehicle drivers



Occoquan area of I-95 is among most congested traffic segments in Virginia

- P3 contract originally signed in 2012 includes terms that require the state to pay contractual penalties* if a project in region diverts traffic away from I-95 and the express lanes; therefore decreasing revenue
- Contract expressly requires the state to pay if it:
 - Adds general purpose lanes on I-95
 - Adds lanes on Occoquan Bridge on Route 1
 - Expands Route 1 from Lorton Road (Fairfax) to Garrisonville Road (Stafford)

*Referred to as a “compensation event”

Local stakeholders express frustration, but limited cost-effective options appear available

- Transportation planners familiar with Occoquan congestion lament contractual terms that require state to pay concessionaire if new projects built
- Contract penalty could be substantial, but amount would depend on specific improvements and revenue losses
- VDOT projects high levels of congestion will be persistent
- VDOT estimates that additional lanes on I-95 may not be cost effective long term, even without contractual penalties
 - \$12B per lane from Exit 118 (Thornburg) to 170 (Springfield)
 - Congestion would likely return to current levels by 2040

State has other programs and initiatives to further address traffic congestion along I-95

- In 2021, state studied corridor and developed I-95 Corridor Improvement Plan
 - Recommended multimodal approach to improving corridor, including operational and capital upgrades; additional Virginia Railway Express and commuter bus service; and expanded park and ride lots
- Transforming Rail in Virginia Program expanding passenger rail service
- Improvements being made to I-95 express lanes (Opitz Boulevard); others under consideration (bi-directional operations)

In this presentation

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Efforts to reduce congestion on I-81

Appendix: Additional information

Transportation Public-Private Partnership (P3) is complex, long-term contractual arrangement

- Governed by Virginia Public-Private Transportation Act of 1995 (§33.2: 1800-1823)
- A public entity (state) partners with a private entity (concessionaire) to develop and/or operate a facility, typically through a decades-long arrangement
- Private entity usually assumes some or all of the responsibilities and financial and construction risk
 - Private entities usually raise equity from investors and/or capital market borrowing
 - Private entity usually repaid through user fees (tolls, fares) or direct payments from public entity

P3s typically transfer project, operational, and financial risks from state to concessionaire

Project risk	Operational risk	Financial risk
Materials and labor issues and costs	Refinement or improvement after project completion	Changing market conditions or cost of capital
Unanticipated logistical, environmental, or legal issues	Roadway and other facility maintenance	Unanticipated disruptions in economic or transportation activity (e.g., pandemic)

Virginia has been using P3s for ~30 years and currently has 10 major transportation P3s

Northern Virginia	• Dulles Greenway; 1995*
	• I-495 Express Lanes; 2012
	• I-95 Express Lanes; 2014
	• I-395 Express Lanes; 2019
	• Transform I-66 (OTB); 2022
	• I-95 FedEx; 2023
	• I-495 NEXT; <i>underway</i>
Hampton Roads	• Elizabeth River Tunnels; 2012
	• Hampton Roads Bridge-Tunnel expansion; <i>underway</i>
Central Virginia	• Pocahontas Parkway (Route 895); 2002

*Dulles Greenway was procured under the Virginia Highway Corporation Act of 1988, not the PPTA.

P3s bring substantial, additional funding to address transportation issues

- In exchange for accepting associated risks, P3 concessionaires typically bring substantial funding (e.g., \$1B+) to pay for projects
 - Large P3 projects require funding that, if provided by the state, would consume a substantial portion of total transportation budget
 - Not held on state balance sheet
 - Frees up funding for other projects
- Users repay concessionaire over many years, often through tolls

General information about P3 lessons learned

- Virginia is recognized as a leader in transportation P3s
- Some lessons for effective P3s are similar to those effective for general contracting more broadly
- Applying lessons learned from P3s is limited because of each project's uniqueness

State has already incorporated some lessons learned from prior P3 experience

- Experiences from prior P3s—especially Route 460 and Elizabeth River Tunnels—addressed by amending PPTA in 2013 & 2015
- Key amendments required
 - more public information available
 - finding of public interest
 - public sector option for comparison
 - steering committee
- VDOT also changed its P3 guidelines to require federal environmental approvals *before* soliciting bid

Other lessons are emerging as Virginia gains more experience, and P3 industry evolves

Lesson	Example(s)
Tolls pay for infrastructure but can frustrate citizens because they impose visible, regular costs on users	<p><u>Northern Virginia</u> – Cost was by far the #1 reason cited for not using tolled roads (JLARC survey, 2024)</p> <p><u>Elizabeth River Tunnels</u>– Multiple delays, reductions, or elimination of tolls originally agreed to in contract, including:</p> <ul style="list-style-type: none">-ERC to delay tolls for 2 years in exchange for \$100M (2012). Subsequent \$82.5M to lower tolls after delay.-Eliminate tolls from MLK Freeway extension (2015)-Negotiation to lower tolls for low-income Portsmouth & Norfolk residents (2015, 2016)-\$101M for additional toll relief for low-income Hampton Roads residents (FY25 & FY26)

Other lessons are emerging as Virginia gains more experience, and P3 industry evolves (continued)

Lesson	Example(s)
Multiple concessionaires in same region requires state to address consistency & transition points	<u>Northern Virginia</u> – Citizens cited differences in signage used by two different concessionaires as potentially confusing. I-495 & I-66 express lanes each operated by different concessionaires. Decision will be needed about which concessionaire, or the state, should be responsible for new tolling infrastructure needed on ramp from I-66 to I-495.

VDOT has a study of signage consistency and quantity at key transition points underway (likely complete by end of 2024)

Other lessons are emerging as Virginia gains more experience, and P3 industry evolves (continued)

Lesson	Explanation
<p>“Availability payment” model is gaining more acceptance <i>(in contrast with “toll concession” or “revenue risk” model historically used in Virginia)</i></p>	<ul style="list-style-type: none">-Given challenges with tolling being accepted by citizens, P3 experts recommend the “availability payment” model.-Under an availability payment model, the state makes periodic payments to a private operator, in exchange for delivering & operating the facility.-A state funds the payments through taxes, or a state-operated toll, allowing the state to control toll prices.

Availability payment model increasingly used in other states and may be feasible in Virginia

- Other states have used the availability payment model
 - Florida (mega-projects)
 - Pennsylvania (bridges)
- Not previously used in Virginia because of concern about availability payments' effects on state debt
- However, current Treasury officials indicate state could consider this payment option in the future if debt capacity is available
- Would likely entail more attention to aligning debt capacity over the long term

In this presentation

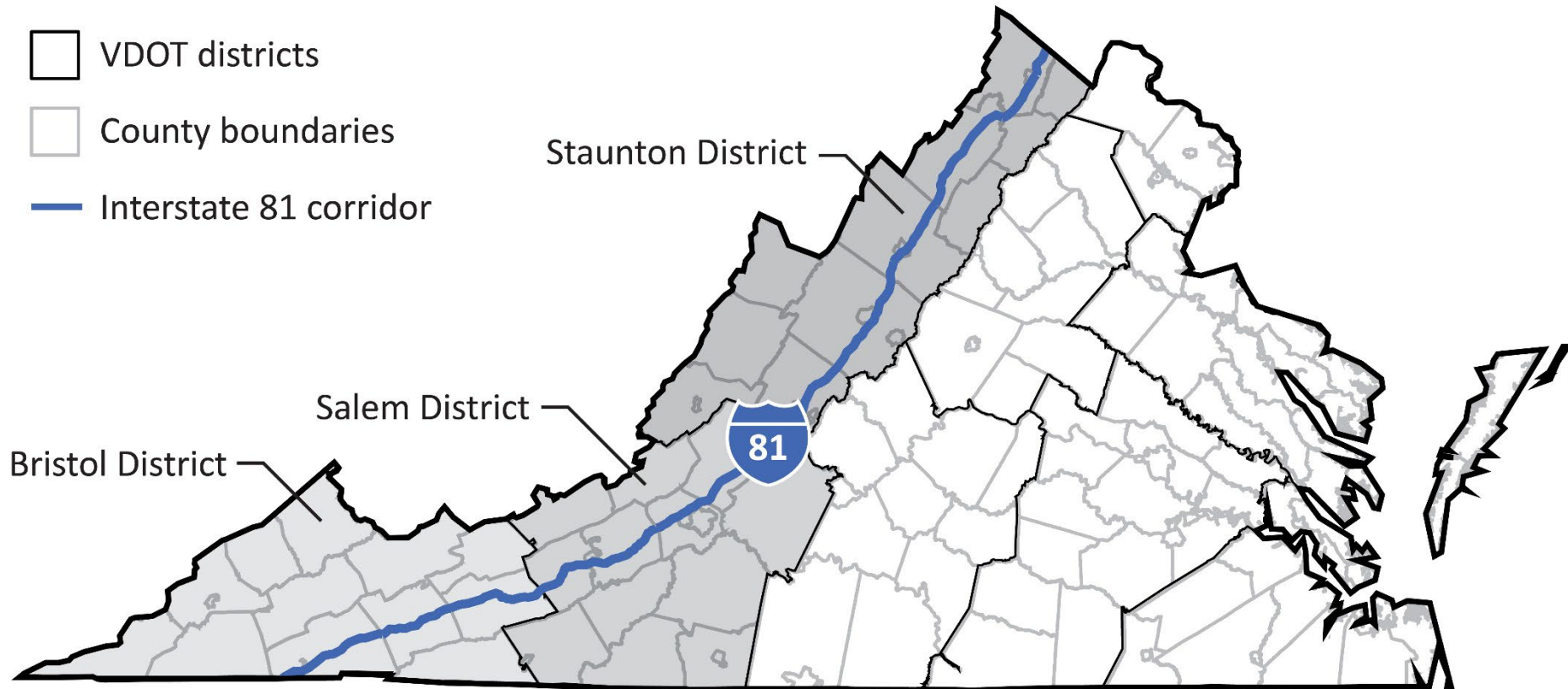
Tolling & traffic congestion in Northern Virginia

Lessons learned from prior P3s

Efforts to reduce congestion on I-81

Appendix: Additional information

I-81 is 325-mile corridor that runs north to south through western Virginia



Terrain and trucks cause less predictable delays on I-81 than other Virginia interstates

- Mountainous terrain and truck traffic make I-81 different from other Virginia interstates
 - 44% of all interstate truck traffic statewide occurs on I-81
- Delays on I-81 more likely to be caused by random incidents than predictable, recurring congestion
 - I-81: majority of delays caused by random incidents
 - All other Virginia interstates: majority of delays caused by recurring congestion (i.e., rush hour traffic)
- Incident-related delays lead to unreliable travel times on I-81 and can be more difficult to address than recurring congestion in many other locations

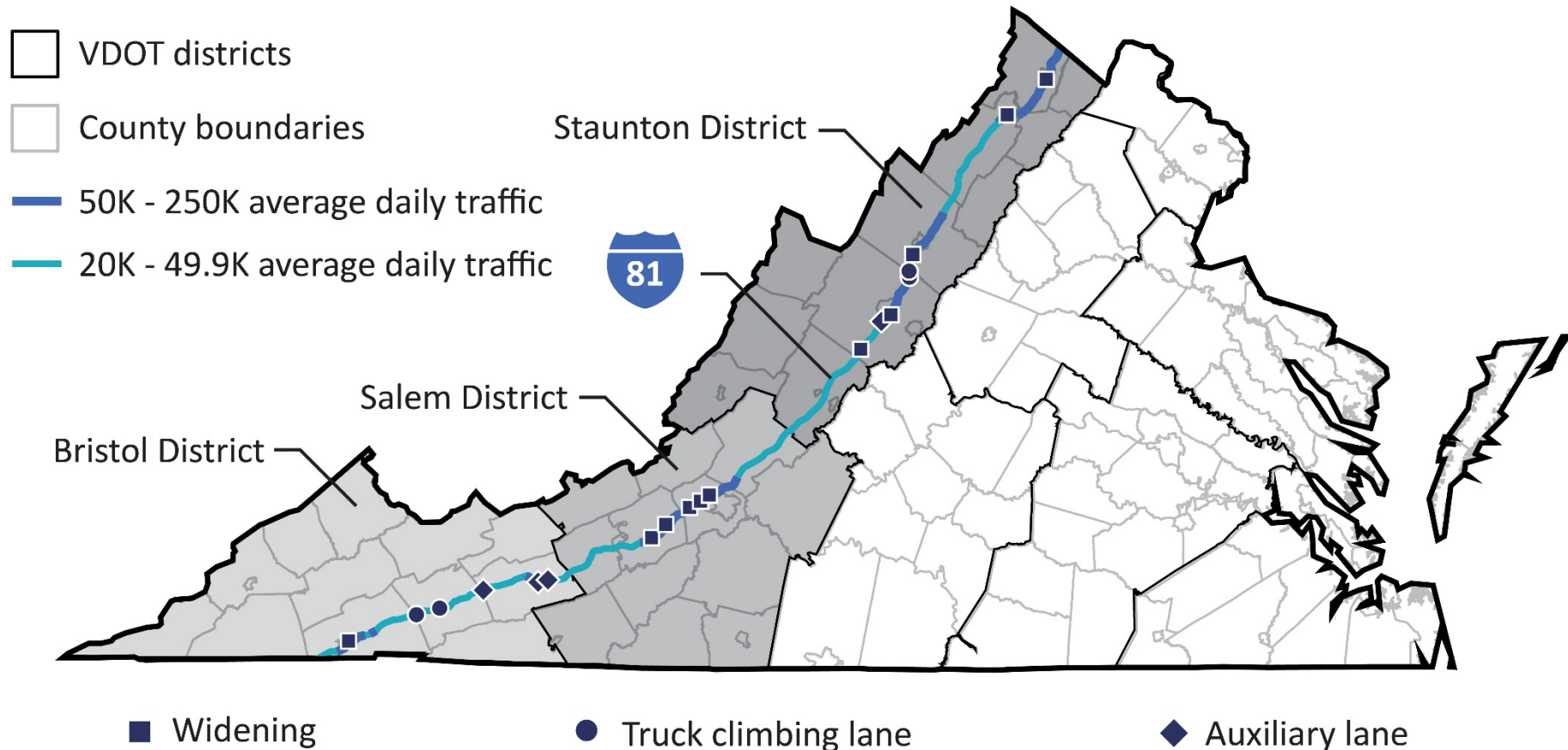
I-81 corridor improvement program is guiding current capital and operational improvements

- In 2018, state studied I-81 corridor to find ways to reduce congestion and improve safety at key points
- Study resulted in I-81 Corridor Improvement Program and Fund
 - Addresses top 20% of problem areas along corridor
 - \$2.2B to fund 65* capital and ~200 operational projects through 2033
 - ~\$200M annually from IOEP allocation (\$116M) & regional fuels tax (\$88M) dedicated to corridor

*Originally was 64, but additional widening project added to program via Commonwealth Transportation Board resolution in December 2023, bringing total to 65.

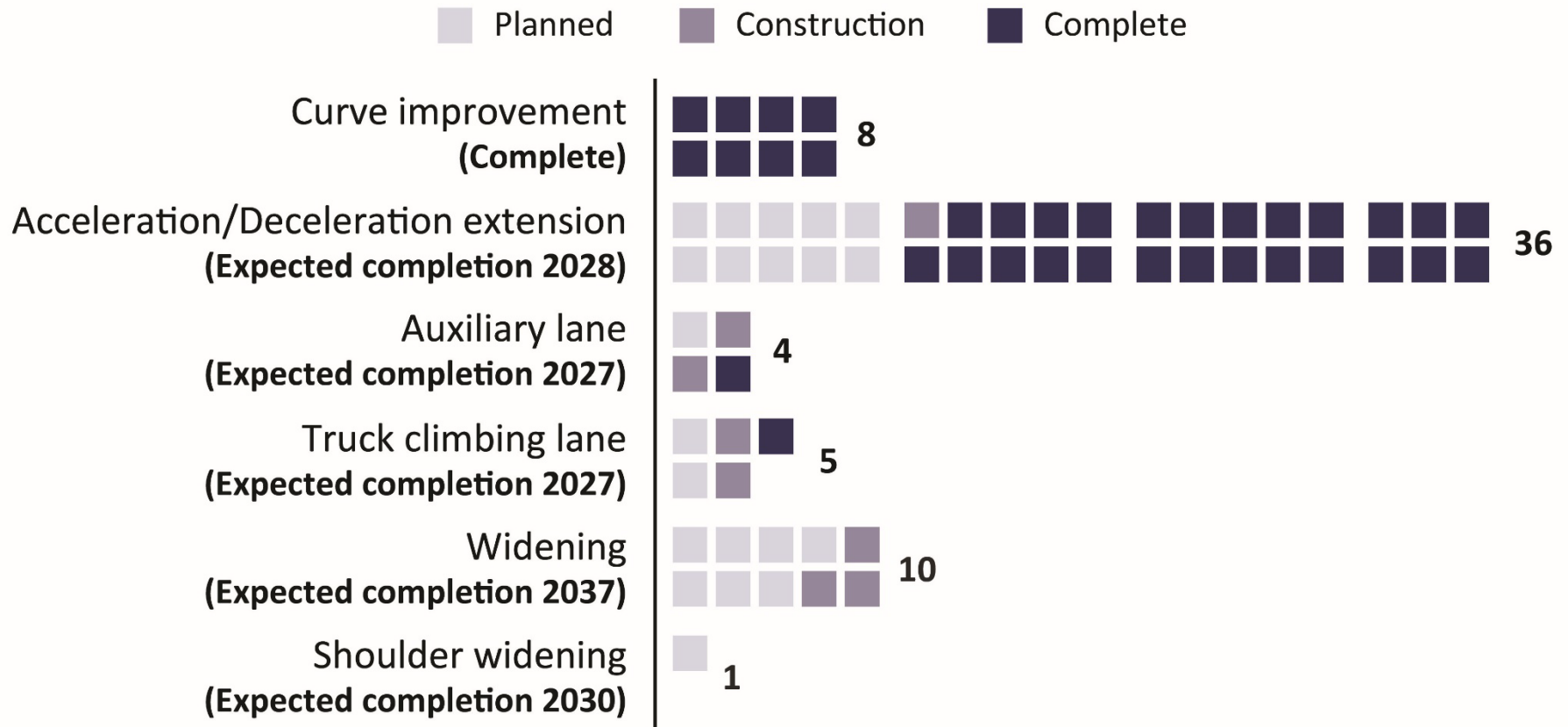
IOEP = Interstate Operations and Enhancement Program (interstate funding program established in 2020)

Major improvement projects generally focused on areas with most significant congestion needs



Does not include 8 curve improvements, 36 acceleration/deceleration lane extensions, or operational improvements.

Initial focus has been on curve improvement and acceleration & deceleration lane projects



Project status as of April 2024. Does not include operational projects, which should be complete by 2025.

Program completion has slipped past original timeline into mid-2030s due to increased budget

- All projects in improvement program expected to be funded through corridor revenues, bonds, and TIFIA loans
- Planning estimates prior to engineering were \$2.2B with projects planned to be fully funded by 2033
- Program now expected to cost \$3.8B and be funded in FY35–FY36 because of
 - Refinements from planning estimates
 - Inflationary increases in construction costs
 - Additional project added to program
- 2024 Appropriation Act includes up to \$245M in additional funding for I-81, which will help fund improvements

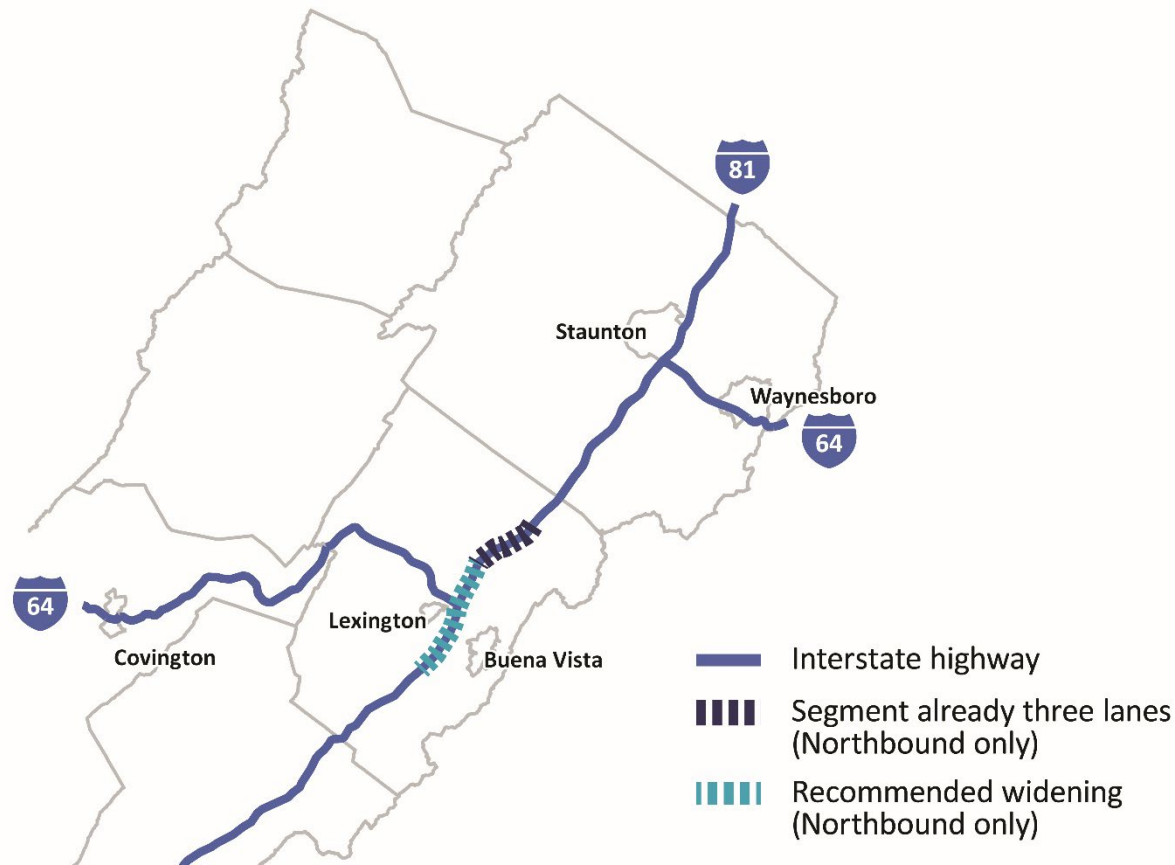
I-81 revenues projected to slightly increase over next five years and will likely decline long term

- Short term: revenues projected to increase through FY29
- Long term: funding likely to decline as fuel consumption declines and generates less fuels tax revenue
 - Transition from gas and diesel to alternative fuel sources difficult to predict with certainty – projected to happen slowly and likely even slower on I-81 because of truck traffic
- Key aspects of I-81 funding sources make revenues relatively sustainable for foreseeable future
 - Regional fuels tax indexed to inflation
 - IOEP allocation funded by diversified revenue sources, not just fuels tax
 - Both funding sources dedicated to corridor in Code

Additional improvements still identified as needed along corridor

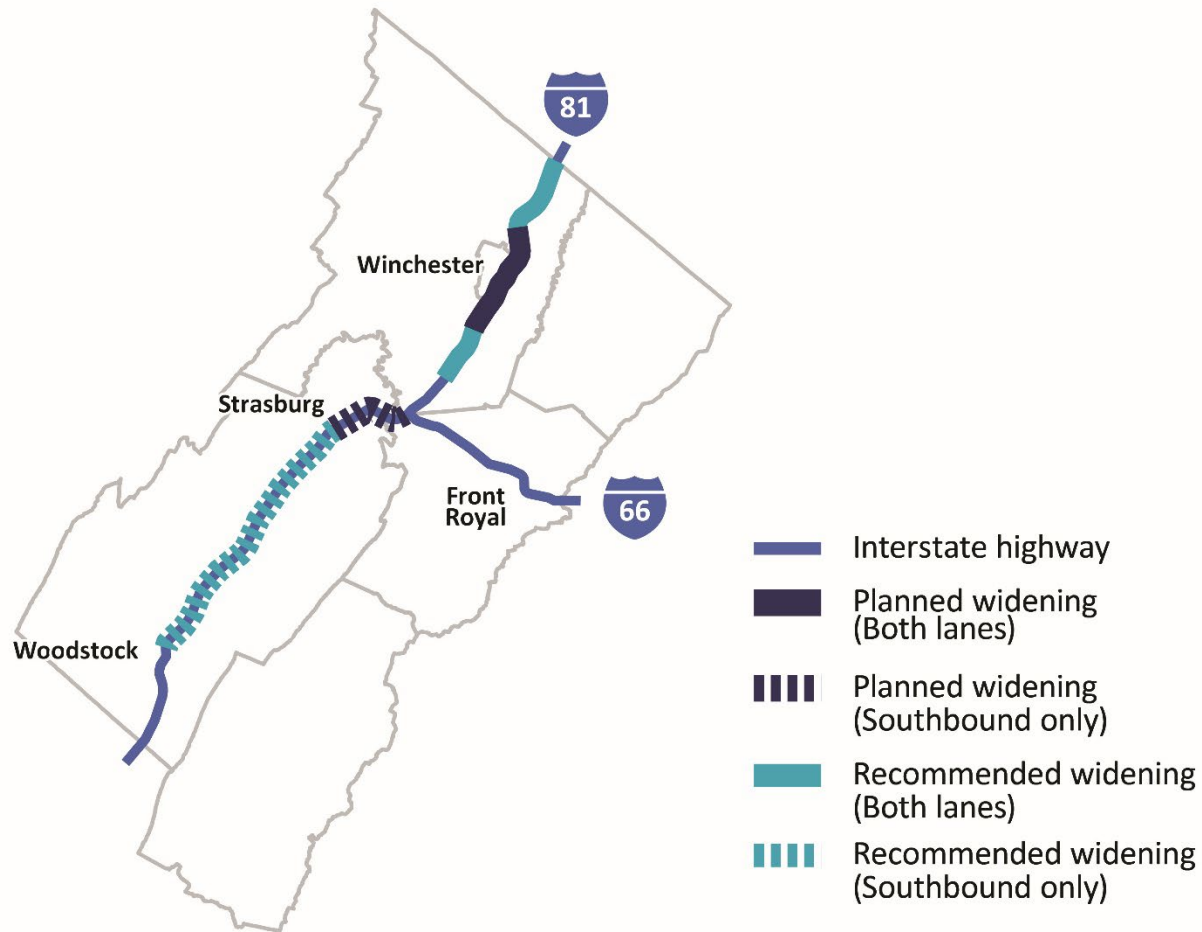
- 41 capital improvements originally identified as needed were considered lower priority in 2018 and left out of improvement program because of funding limitations
- Some stakeholders identified additional needed improvements, especially in Staunton district, which has experienced population and industry growth since 2018
- Some potential congestion mitigation improvements included in VTrans—Virginia's statewide transportation plan—also still unaddressed

Example: VTrans indicates additional congestion mitigation still needed along I-81 near Lexington



VTrans = Virginia's statewide transportation plan

Example: Regional planners indicate additional widening needed near Winchester



All I-81 funding obligated through mid-2030s; additional improvements could be funded then

- VDOT is planning to use all projected revenues available through the FY35–FY36 time period
 - Revenues being used to fund improvements and service debt for additional construction
- More revenue will be available once current corridor improvement program cycle is complete
- VDOT estimates nearly \$1.9 billion in additional projects could be supported by corridor fund FY35 through FY40

State explored using P3 to deliver I-81 improvements but found P3 approach infeasible

- In 2023, state hired consultants to assess viability of using P3 to deliver improvements along I-81 more quickly, efficiently than state's current program
- Consultants determined that P3 options not suitable given substantial state contribution required and potential legal and political challenges
- However, assessment did not consider several additional options to structure P3, which may have been more feasible
 - Many P3 experts suggested availability payment P3 approach could be suitable for I-81; consultant did not explore

Regional growth, rising costs, and completion of majority of projects necessitate reevaluation

- Corridor has experienced population and industry growth that may have changed needs since 2018 study
- Transportation technology and operational advancements may have also changed potential solutions
- Construction cost inflation has slowed progress and may alter cost effectiveness or feasibility of major capital projects
- Completed projects will soon begin to show benefits
- P3 options not initially considered—especially availability payment model for bundle of improvements—could be evaluated

Re-evaluation of I-81 needs and funding should not occur for several years

- Wait for majority of projects in improvement program to be complete to measure impact on congestion reduction
 - Best practice is to have 5 years of data to analyze before reliable conclusions can be made
 - Two-thirds of projects expected to be complete by 2025
- Limit to how many concurrent projects along corridor can be tolerated; substantial disruption and safety concerns
- All available funding obligated; program cannot support additional projects without raising more revenue
 - Stakeholders report low tolerance for raising additional revenue, and substantial increases would be needed

JLARC staff for this report

Justin Brown, Senior Associate Director

Kate Hopkins, Senior Legislative Analyst

Madison McCaffrey, Assistant Legislative Analyst

In this presentation

Tolling & traffic congestion in Northern Virginia

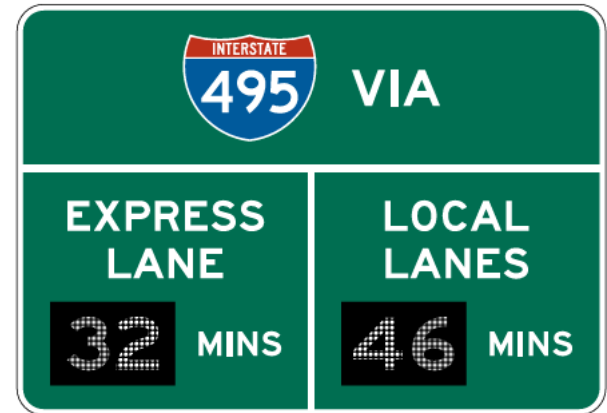
Lessons learned from prior P3s

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Appendix: Additional information

Northern Virginia drivers responding to a survey found signs with travel time estimates informative

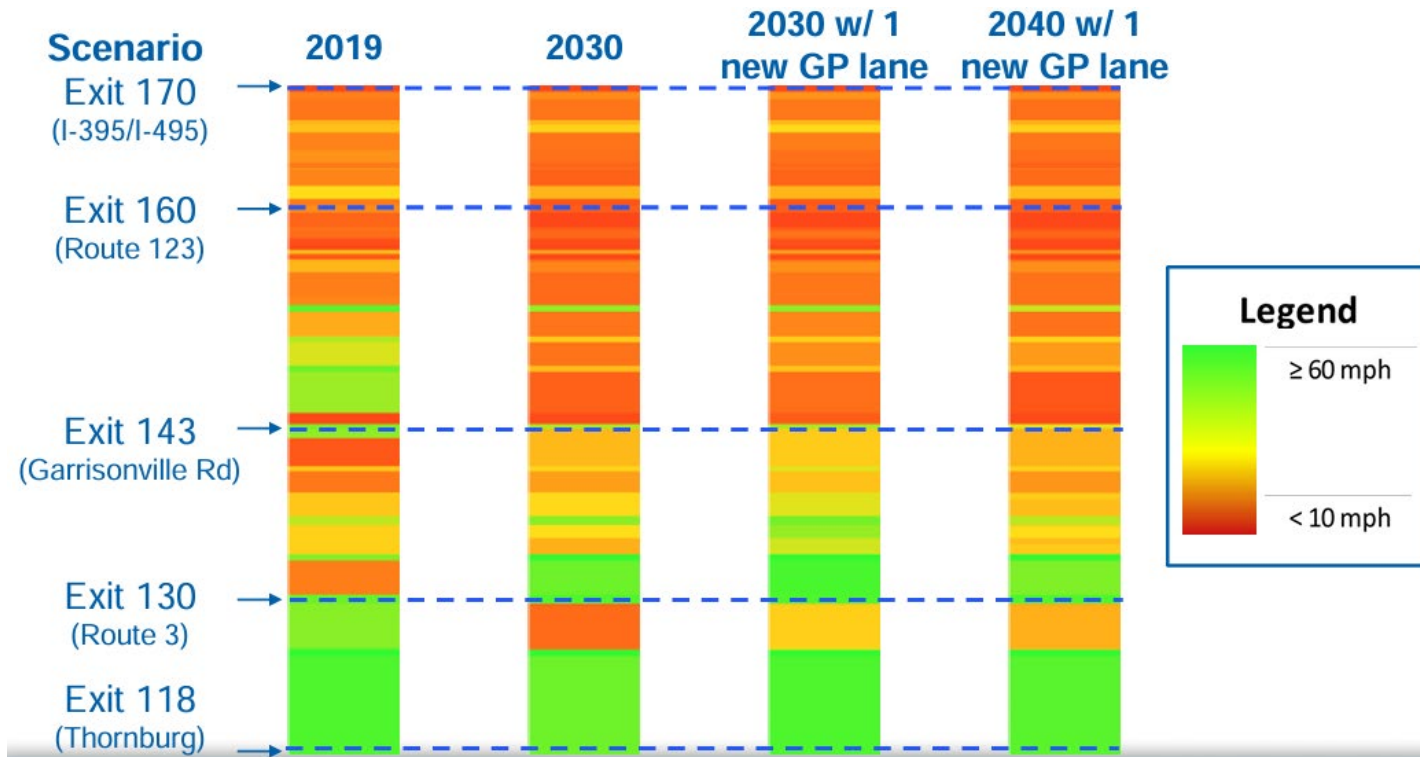
- 88% of respondents reported that time estimates would be useful to include (*when showed example sign at right*)



- MUTCD (federal manual) suggests, but does not require, comparative travel time signs

JLARC survey of NOVA E-ZPass users who had driven on a toll road in the region at least once between Jan. 2024 and Mar. 2024. 5,331 respondents; 11% response rate.

2019: Projected speed on I-95 would be similar in 2030 & 2040 even if VDOT added new GP lane



Note: “GP” = general purpose. Figure shows peak period speed in 2019, projected peak period speed in 2030 with and without an additional general purpose lane, and projected speed in 2040 with an additional general purpose lane.

Source: “Interstate 95 Corridor Improvement Plan” presentation to the Commonwealth Transportation Board (Oct. 2019)

Virginia may have fewer lessons to learn, is recognized as a leader in transportation P3s

- Transportation experts routinely cited Virginia as a state other states seek out for guidance on how to implement P3s
- Multiple concessionaires cited Virginia as having a positive history of working with the private sector
- Positive reputation facilitates interest in and competition for Virginia's P3 contracts

Some lessons for effective P3s are similar to those for effective general contracting more broadly

- Competition is important whenever possible to give the state more options and negotiating power
- State often best served by defining clear requirements and asking the private sector to determine the best way to meet them
- Outcomes, incentives, and penalties should be clearly defined
- Affected public should be engaged early in the planning process

State has already incorporated some lessons learned from prior P3 experience

Lessons	Experiences	Changes made
At least 2 alternatives are critical to properly evaluate a P3	<u>Elizabeth River Tunnels</u> – Only 1 concessionaire bid in private, precluding having a comparison and publicly available information on cost, timeframe, and technical proposal	-PPTA amended: <u>in 2013</u> to require (i) more information publicly available about bid terms and agreements, (ii) allowing public comment on viability and feasibility of proceeding.
Detailed planning & evaluation are essential	<u>Route 460</u> – Failed P3 attempt plagued by multiple problems because of inadequate evaluation of need & insufficient environmental analysis	<u>in 2015</u> to require (i) finding of public interest, (ii) public sector option for comparison, and (iii) steering committee. -VDOT changed PPTA guidelines to require federal environment approval prior to releasing RFP.

Concept of lessons learned to apply to future P3s has limits

- Each P3 has unique geographic, logistical, transportation, financial, and other characteristics
- Experts caution that while it is useful to evaluate and adjust practices, uniqueness of each P3 underscores
 - Needing state and local transportation experience and expertise
 - Engaging a wide array of logistical, transportation, legal, risk management, and financial stakeholders
 - Fully understanding content, meaning, limitations, and implications of proposed P3s
 - Having the discipline to not proceed with a P3 if it becomes clear it is not the best model

State studied I-81 corridor and developed improvement plan in 2018

- State studied congestion and safety needs along corridor and developed potential solutions
- Process involved extensive data analysis and stakeholder engagement to identify needs and solutions
- Solutions included operational and capital improvements
 - Capital improvements prioritized using Smart Scale-like scoring process
- Plan identified \$4.3B of needed improvements, recommended \$2.2B in improvements
 - \$200M operational, \$2B capital (64 projects)

Study resulted in I-81 Corridor Improvement Program and Fund

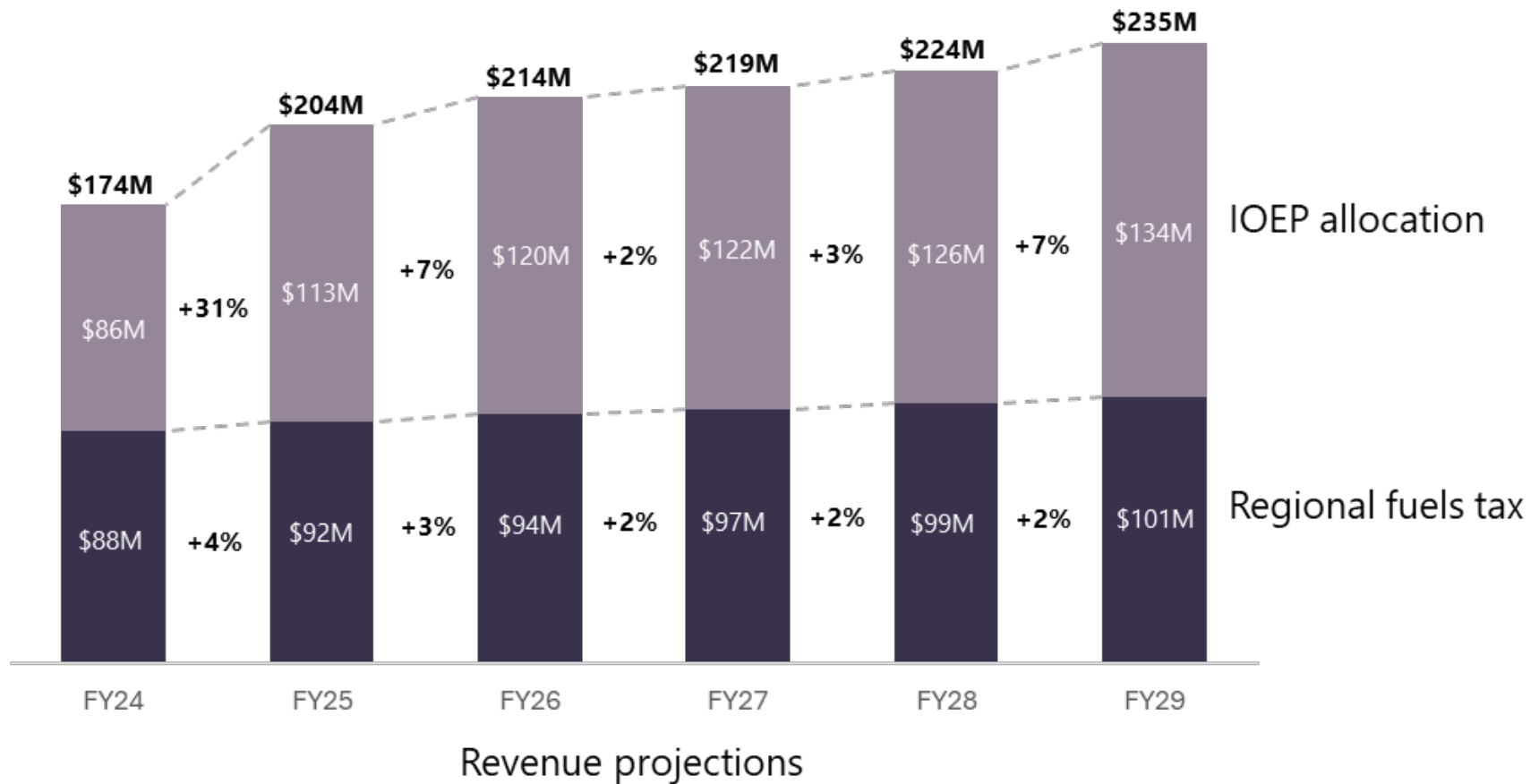
- General Assembly established I-81 Corridor Improvement Program and Fund in 2019
- Improvement program guides implementation of capital and operational improvement projects
- Program also includes multimodal improvements
 - Expansion of bus transit and passenger and freight rail
- I-81 Advisory Committee oversees improvement program

I-81 receives dedicated funding for improvements along corridor

- I-81 funding comes from (i) regional fuels tax and (ii) allocation from IOEP
 - Regional fuels tax revenue from localities within I-81 corridor directed to fund
 - Corridor receives share of IOEP based on truck traffic relative to other interstates
- Revenues = \$204M in FY23, totaled ~\$800M since start of program (FY20–23)
 - Regional fuels tax revenue = ~\$88M annually
 - IOEP allocation = ~\$116M annually

IOEP = Interstate Operations and Enhancement Program (interstate funding program established in 2020)

I-81 funding projected to increase through FY29



Note: Does not include planned debt to support construction (bonds + TIFIA loans).

Source: Virginia Department of Taxation and Virginia Department of Transportation, October 2023.

Recent state and federal legislative action has directed funding to I-81 and provided flexibility

- 2024 Appropriation Act includes \$70M in general funds in FY25 for I-81 Corridor Improvement Program
 - Also includes additional \$175M for program contingent on excess revenue in FY24
- 2024 Appropriation Act includes language that allows VDOT to advance preliminary engineering and right-of-way activities before I-81 Corridor Improvement Program projects are fully funded
 - Projects must be planned for within next three years of state's six-year improvement program
- Federal 2024 appropriations bill included \$42M earmarked for I-81 corridor improvements

More funding would be needed to implement additional improvements before end of program

- Extent of funding needed dependent on number and types of projects added to program
 - Widening projects generally most expensive (~\$35M/mile per direction)
- Increasing regional fuel tax rates appears to be most feasible option to raise additional funding for corridor
 - Stakeholders unsupportive of raising revenue via sales tax, tolling, or increased truck fees
- Each 1¢/gallon increase in regional fuels tax raises ~\$10M annually

Regional fuels taxes currently 8.8¢/gallon for gasoline and 8.9¢/gallon for diesel.

Additional funding opportunities available if fuel tax revenues become unsustainable

- If fuel tax revenues decline, state could consider
 - Adding regional surcharge on state's highway use fee
 - Assessing user fee on heavy electric and fuel-efficient vehicles
 - Assessing other taxes or fees on fuel-efficient and electric vehicles (e.g., electric vehicle charging tax)

State explored using P3 to deliver I-81 improvements more quickly and cost effectively

- In 2023, state hired consultants to conduct “market sounding” with six P3 developers
- Assessed viability of using a P3 to deliver improvements more quickly, efficiently than state’s current program
- Considered options to widen entire corridor (325 miles) or northern segment (102 miles) by constructing tolled lanes or tolling entire interstate
 - Developer would have used toll revenue to repay investment

Market sounding yielded several obstacles and challenges to using proposed P3 options

- Consultants responded that P3 options not suitable given substantial state contribution required
 - I-81 does not have enough recurring congestion to warrant demand for tolled lane, so state would need to subsidize P3 developer
 - State financial contribution would be in addition to tolls
 - Size of required contribution varied based on option, up to \$13B for car-only tolled lane along entire corridor
- Also noted P3 options could face potential legal and political challenges

State did not consider several additional options to structure a P3, which may have been more feasible

- Some stakeholders expressed concern that P3 options considered by market were too broad to elicit satisfactory response
- Stakeholders indicated a targeted approach of only widening corridor's most congested areas could potentially have been more viable
- Many P3 experts also suggested availability payment P3 approach could be suitable for I-81 but was not explored

Study Resolution

Tolling & Traffic Congestion Reduction

Authorized by the Commission on November 13, 2023

WHEREAS, the Commonwealth Transportation Board has set objectives to reduce (i) how much travel occurs in severe congestion, and (ii) peak-period travel times and daily trip lengths in metropolitan areas; and

WHEREAS, the Commonwealth has major congestion relief projects completed, underway, and planned in Northern Virginia and on the I-95 and I-81 corridors; and

WHEREAS, the state executes congestion relief projects using a mix of state-owned and operated toll roads and those operated and owned through a public-private partnership (P3), including in Northern Virginia which has 7 major toll roads; and

WHEREAS, P3 contracts are very long-term, complex arrangements that include “compensation events” for which the state has agreed to compensate concessionaires for damages for: state-caused delays; changes to state law or policy, including those that affect (i) the construction of the project or (ii) tolling (when the project is supported by toll revenue); and injunctions stemming from National Environmental Policy Act violations; now, therefore, be it

RESOLVED by the Joint Legislative Audit and Review Commission that staff be directed to review the state’s efforts to reduce traffic congestion (i) in Northern Virginia and on Interstate 95 through the use of tolling and public-private partnerships (P3’s), and (ii) on Interstate 81. In conducting its study staff shall (i) evaluate the transparency and understandability of toll obligations when driving through the various tolled roads in Northern Virginia; (ii) determine to what extent existing P3’s affect the state’s ability to address congestion in Northern Virginia; (iii) identify lessons from prior public-private partnerships across the state that may help ensure future P3’s are sufficiently cost-effective and advantageous to the Commonwealth over the long-term; (iv) evaluate the availability and sustainability of funding for planned congestion-related improvements on the I-81 corridor; and (v) identify what, if any, opportunities exist for the state to raise additional revenue for planned congestion-related improvements on the I-81 corridor. JLARC may make recommendations as necessary and may review other issues as warranted.

All agencies of the Commonwealth, including the Department of Transportation, Office of the Secretary of Transportation, Commonwealth Transportation Board, Department of Motor Vehicles, Department of Planning and Budget, and Metropolitan Planning Organizations shall provide assistance, information, and data to JLARC for this study, upon request. JLARC staff shall have access to all information in the possession of agencies pursuant to § 30-59 and § 30-69 of the Code of Virginia. No provision of the Code of Virginia shall be interpreted as limiting or restricting the access of JLARC staff to information pursuant to its statutory authority.

Recommendations: Northern Virginia Tolling & Congestion; P3 Lessons Learned; & I-81 Congestion and Funding

RECOMMENDATION 1

As part of future transportation P3 agreements, the Virginia Department of Transportation should require toll operators to use signage that is consistent with signage already used, especially as part of the same road.



COMMONWEALTH of VIRGINIA

DEPARTMENT OF TRANSPORTATION
1401 EAST BROAD STREET
RICHMOND, VIRGINIA 23219-2000

Stephen C. Brich, P.E.
COMMISSIONER

May 28, 2024

Mr. Hal Greer, Director
Joint Legislative Audit and Review Commission
919 East Main Street, Suite 2101
Richmond, VA 23219

Mr. Greer,

Thank you for the opportunity to review a draft of the JLARC presentation, *Northern Virginia Tolling & Congestion; P3 Lessons Learned; and I-81 Congestion & Funding*. The Virginia Department of Transportation (VDOT) has been pleased to support JLARC throughout this effort. We have reviewed the content and provided technical updates in-person and in writing. VDOT appreciates your time and consideration on these important topics.

Sincerely,

A handwritten signature in blue ink, reading "Stephen C. Brich, P.E.", written over a horizontal line.

Stephen C. Brich, P.E.