

APPENDICES



Appendix A: Preliminary Capital Improvement Project Schedule

Appendix B: Improvements Summary Table

Appendix C: Crash Frequency and Severity Per Mile for Truck-Related Crashes

Appendix D: October 2023 I-81 Advisory Committee Meeting PowerPoint Presentation

Appendix A:

Preliminary Capital Improvement Project Schedule

Appendix B:

Improvements Summary Table

RECOMMENDED IMPROVEMENTS

Study Project ID	UPC	District	Jurisdiction(s)	Direction	Mile Marker			Improvement Description
					From	to	To	
27	116170	Bristol	Washington County / Bristol	SB only	8	to	9.9	Widen to three lanes between Exit 10 and Exit 7
26	116171	Bristol	Abingdon	SB only	16.5	to	16.8	Extend acceleration lane at Exit 17
25	115394	Bristol	Abingdon	SB only	17.6	to	17.6	Curve improvements (flashing chevrons)
1	115393	Bristol	Abingdon	NB only	17.9	to	17.9	Curve improvements (flashing chevrons)
2	116155	Bristol	Washington County / Abingdon	NB only	19.05	to	19.36	Extend deceleration lane at Exit 19
24	115395	Bristol	Washington County	SB only	21.5	to	21.5	Curve improvements (flashing chevrons)
23	115346	Bristol	Washington County	SB only	26.1	to	25.9	Extend acceleration lane at Exit 26
22	115345	Bristol	Washington County	SB only	26.8	to	26.7	Extend deceleration lane at Exit 26
3	116156	Bristol	Washington County	NB only	32.5	to	33.5	Add truck climbing lane
21	116172	Bristol	Washington County	SB only	32.8	to	34.3	Add truck climbing lane
20	116173	Bristol	Smyth County	SB only	38.1	to	39.2	High Friction Overlay and Animal Control Fence
5	116159	Bristol	Smyth County	NB only	38.6	to	38.9	Extend deceleration lane at Exit 39
19	116174	Bristol	Smyth County	SB only	39.4	to	39.7	Extend deceleration lane at Exit 39
4	116157	Bristol	Smyth County	NB only	39.5	to	40.8	Add truck climbing lane
17	116167	Bristol	Smyth County / Marion	SB only	42.8	to	43.1	Extend acceleration lane at Exit 44
6	116160	Bristol	Smyth County / Marion	NB only	45.1	to	45.7	Extend deceleration lane at Exit 45
16	116158	Bristol	Smyth County / Marion	SB only	47.3	to	47.7	Extend acceleration lane at Exit 47
7	116161	Bristol	Smyth County / Marion	NB only	48.1	to	48.9	Extend acceleration lane at Exit 47
15	116169	Bristol	Smyth County	SB only	54.1	to	54.5	Add auxiliary lane between Exit 54 and Smyth Safety Rest Area
8	116162	Bristol	Wytheville	NB only	67.1	to	67.4	Extend deceleration lane at Exit 67
9	115600	Bristol	Wytheville	NB only	67.6	to	67.6	Curve improvements (flashing chevrons)
10	116163	Bristol	Wytheville	NB only	72.5	to	73.3	Extend deceleration lane at Exit 72
18	116175	Bristol	Wythe County	SB only	72.7	to	73.4	Add auxiliary lane between I-77 Exit 40 and I-81 Exit 72 and extend acceleration lane
11	116164	Bristol	Wytheville	NB only	73 (I-81)	to	42.9 (I-77)	Extend I-77 deceleration lane and reconfigure off-ramp
14	116168	Bristol	Wytheville	SB only	73.2	to	73.8	Add auxiliary lane between Exit 73 and Exit 72
13	116166	Bristol	Wythe County	SB only	81.7	to	81.9	Extend deceleration lane at Exit 81
12	116165	Bristol	Wythe County	SB only	84.3	to	84.6	Extend deceleration lane at Exit 84
28	115794	Salem	Pulaski County	NB only	88	to	88	Curve improvements (flashing chevrons)
29	115795	Salem	Pulaski County	NB only	90.2	to	90.7	Extend acceleration lane at Exit 89
38	116200	Salem	Pulaski County / Pulaski	SB only	94.2	to	93.7	Extend acceleration lane at Exit 94
30	116198	Salem	Montgomery County / Radford	NB only	105.5	to	106	Extend acceleration lane at Exit 105
31	116197	Salem	Montgomery County / Christianburg	NB only	116.2	to	128.4	Widen to three lanes between MM116 and Exit 128
32	116197	Salem	Montgomery County / Roanoke County / Salem	NB only	128.4	to	137.1	Widen to three lanes between Exit 128 and Exit 137
39A	116203	Salem	Roanoke County / Salem	Both Directions	136	to	139	Widen to three lanes between Exit 137 and Exit 140
39B		Salem	Roanoke County / Salem	Both Directions	139	to	142	Widen to three lanes between Exit 140 and Exit 141
40	116201	Salem	Roanoke County / Botetourt County	Both Directions	144.2	to	151.3	Widen to three lanes between Exit 143 and Exit 150
37	116202	Salem	Botetourt County	SB only	158	to	157.2	Extend acceleration lane at Troutville Safety Rest Area
36		Salem	Botetourt County	SB only	158.4	to	158.2	Extend deceleration lane at Troutville Safety Rest Area
33	116199	Salem	Botetourt County / Buchanan	NB only	162.4	to	162.9	Extend acceleration lane at Exit 162
34	--	Salem	Botetourt County	NB only	171.7	to	175.6	Curve improvements (flashing chevrons)
35	--	Salem	Botetourt County	SB only	175.3	to	171.4	Curve improvements (flashing chevrons)
41	116246	Staunton	Rockbridge County	NB only	189	to	189.4	Acceleration Lane Extension at Exit 188
60	116269	Staunton	Rockbridge County	Both Directions	202.0 (NB) 204.5 (SB)	to	204.0 (NB) 195.1 (SB)	Shoulder Improvements
59	116245	Staunton	Rockbridge County	SB only	204.9	to	204.6	Acceleration Lane Extension at Exit 205
42	115801	Staunton	Rockbridge County	NB only	205.3	to	205.7	Acceleration Lane Extension at Exit 205
58	116279	Staunton	Augusta County	SB only	221.2	to	221	Add Auxiliary Lane between Exit 221 and Exit 220
61	116269	Staunton	Augusta County / Staunton	Both Directions	221.4	to	225.6	Widen to three lanes between Exit 221 and Exit 225
43	116271	Staunton	Augusta County	NB only	232.4	to	232.8	Acceleration Lane Extension at Northbound Mt Sidney Rest Area
57	116276	Staunton	Augusta County	SB only	232.5	to	231.9	Acceleration Lane Extension at Southbound Mt Sidney Rest Area
56	116275	Staunton	Augusta County	SB only	232.9	to	232.7	Deceleration Lane Extension at Southbound Mt Sidney Rest Area
44	116277	Staunton	Augusta County / Rockingham County	NB only	234.1	to	237.7	Truck Climbing Lane at Weyers Cave (Northbound)
55	116278	Staunton	Augusta County	SB only	237.9	to	234.2	Truck Climbing Lane at Weyers Cave (Southbound)
62	116280	Staunton	Rockingham County / Harrisonburg	Both Directions	242	to	248.8	Widen to three lanes between Exit 243 and Exit 247
45	115802	Staunton	Shenandoah County	NB only	268.8	to	268.9	Deceleration Lane Extension at Exit 269
54	115848	Staunton	Shenandoah County	SB only	272.7	to	271.8	Curve Improvements (Flashing Chevrons)
53	116243	Staunton	Shenandoah County	SB only	278.6	to	278.4	Acceleration Lane Extension at Exit 279
52	115804	Staunton	Shenandoah County	SB only	282.8	to	282.6	Acceleration Lane Extension at Exit 283
46	116270	Staunton	Shenandoah County	NB only	291.8	to	292.1	Acceleration Lane Extension at Exit 291
51	116244	Staunton	Shenandoah County	SB only	296.1	to	296	Acceleration Lane Extension at Exit 296
50	116268	Staunton	Shenandoah County / Warren County / Frederick County	SB only	299.6	to	295.4	Widen to three lanes between MM299 and MM296
48	115870	Staunton	Frederick County	NB only	302	to	302.2	Deceleration Lane Extension at Exit 302
47	116236	Staunton	Frederick County	NB only	302.6	to	302.9	Acceleration Lane Extension at Exit 302
49	115803	Staunton	Frederick County	NB only	303.5	to	303.8	Deceleration Lane Extension at Truck Scales (MM 304)
63	116281	Staunton	Frederick County / Winchester	Both Directions	313.8	to	317.5	Widen to three lanes between Exit 313 and Exit 317

LEGEND

- █ SYIP Projects Complete
- █ SYIP Projects Programmed

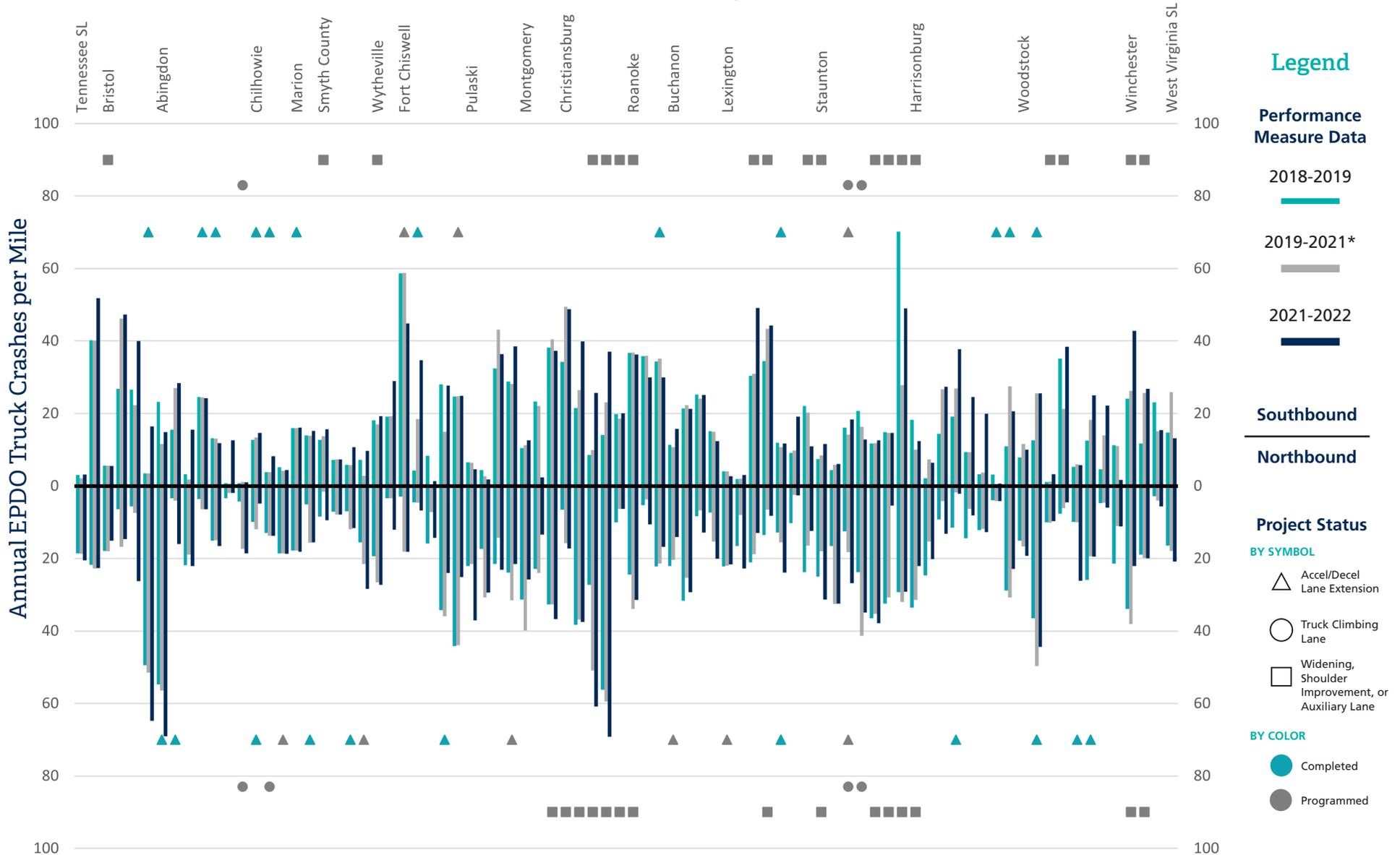


Appendix C:

Crash Frequency and Severity Per Mile for Truck-Related Crashes

I-81 PROGRAM PROGRESS REPORT

Annual EPDO Truck Crashes per Mile



Appendix D:

October 2023 I-81 Advisory Committee Meeting
PowerPoint Presentation

IMPROVE **81**

I-81 CORRIDOR IMPROVEMENT PROGRAM

I-81 Committee Meeting

Dave Covington, PE – VDOT I-81 Program Delivery Director

October 2, 2023

Program Benefits



Enhanced Safety

This program will implement a series of improvements such as lane and shoulder widening to reduce the rate and frequency of crashes along the corridor.



Reduced Congestion

The program will reduce congestion and improve reliability by adding capacity in targeted areas of the corridor and improve speed of incident clearance to help limit travel delays.



Economic Development

I-81 is the main corridor and key economic artery of western Virginia. These improvements will ensure that goods and services critical to our economy move safely and efficiently through and within the region.

Planned Improvements

The **325-mile long corridor** spans three VDOT districts: **Bristol, Salem, and Staunton.**

Localities along the corridor include:

- | | |
|-------------------|----------------------|
| City of Bristol | City of Lexington |
| Washington County | City of Buena Vista |
| Smyth County | Augusta County |
| Wythe County | City of Staunton |
| Pulaski County | City of Waynesboro |
| City of Radford | Rockingham County |
| Montgomery County | City of Harrisonburg |
| City of Salem | Shenandoah County |
| Roanoke County | Frederick County |
| City of Roanoke | City of Winchester |
| Botetourt County | |
| Rockbridge County | |



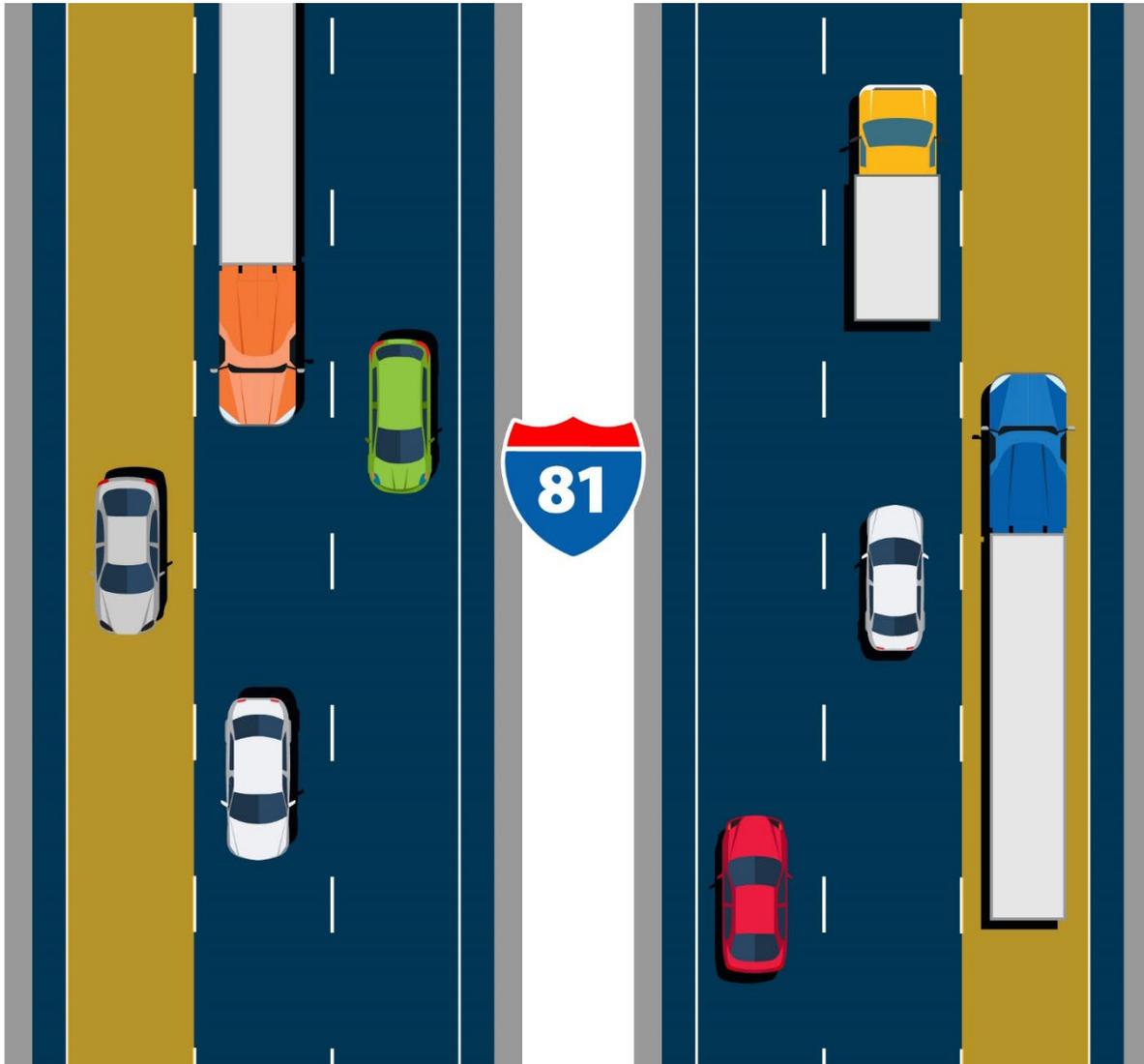
Takeaway Scorecard

Operational Projects

Capital Projects

Projects	Status	Anticipated Completion
Improved Incident Clearance 	Complete	N/A
Safety Service Patrol Expansion 	Complete	N/A
Additional Cameras (51) 	Complete	N/A
Additional Digital Message Signs (30) 	Complete	N/A
Arterial and Signal Upgrades 	Underway	43 VDOT signals complete, 39 under construction, 111 Locality signals complete in 2025
Completed Projects (34) 	Complete	N/A
Active Construction Projects (6) 	Underway	1 in 2024, 2 in 2025, 2 in 2026, 1 in 2027
Remaining capital projects (24) 	Upcoming Projects	All complete by 2033

Types of Projects



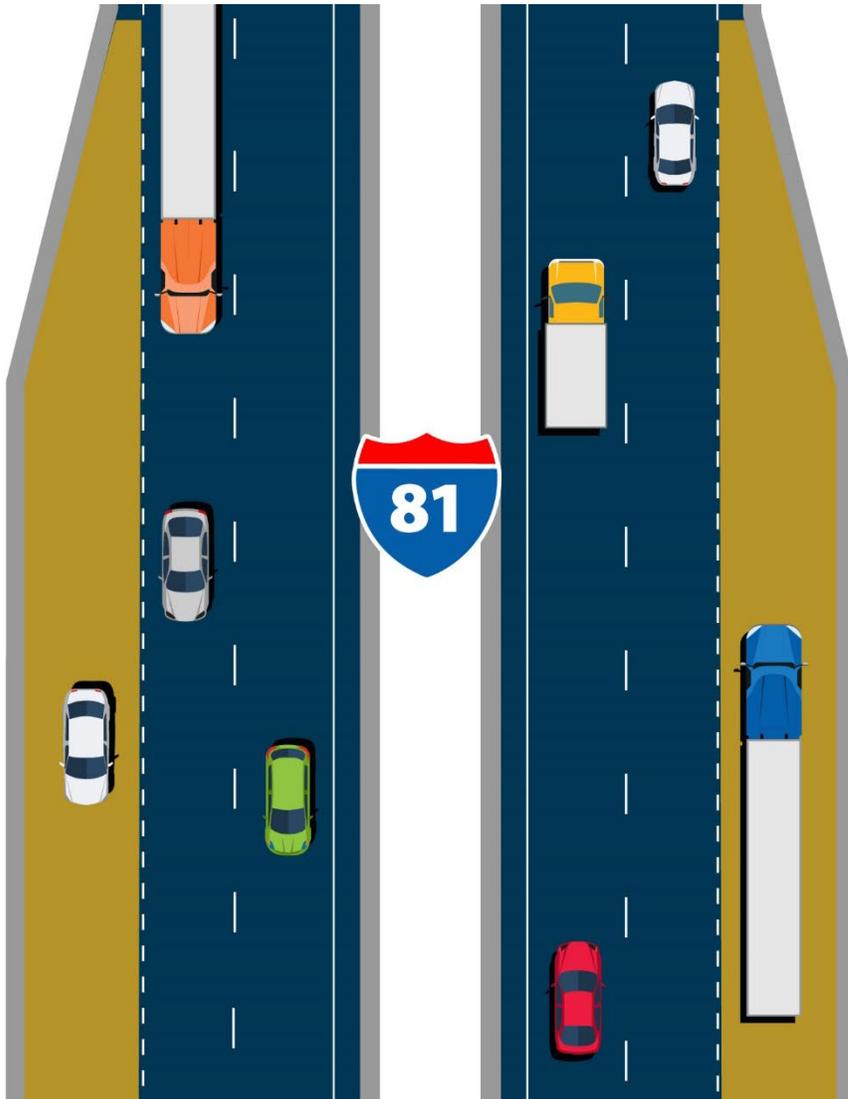
Capital Improvement Projects

Widening +1

10 Improvements

- 3 Projects Under Construction – Completion in 2026 and 2027.
- 7 Future Projects – Completion by 2033 or earlier

Types of Projects



Capital Improvement Projects

Acceleration & Deceleration Extension

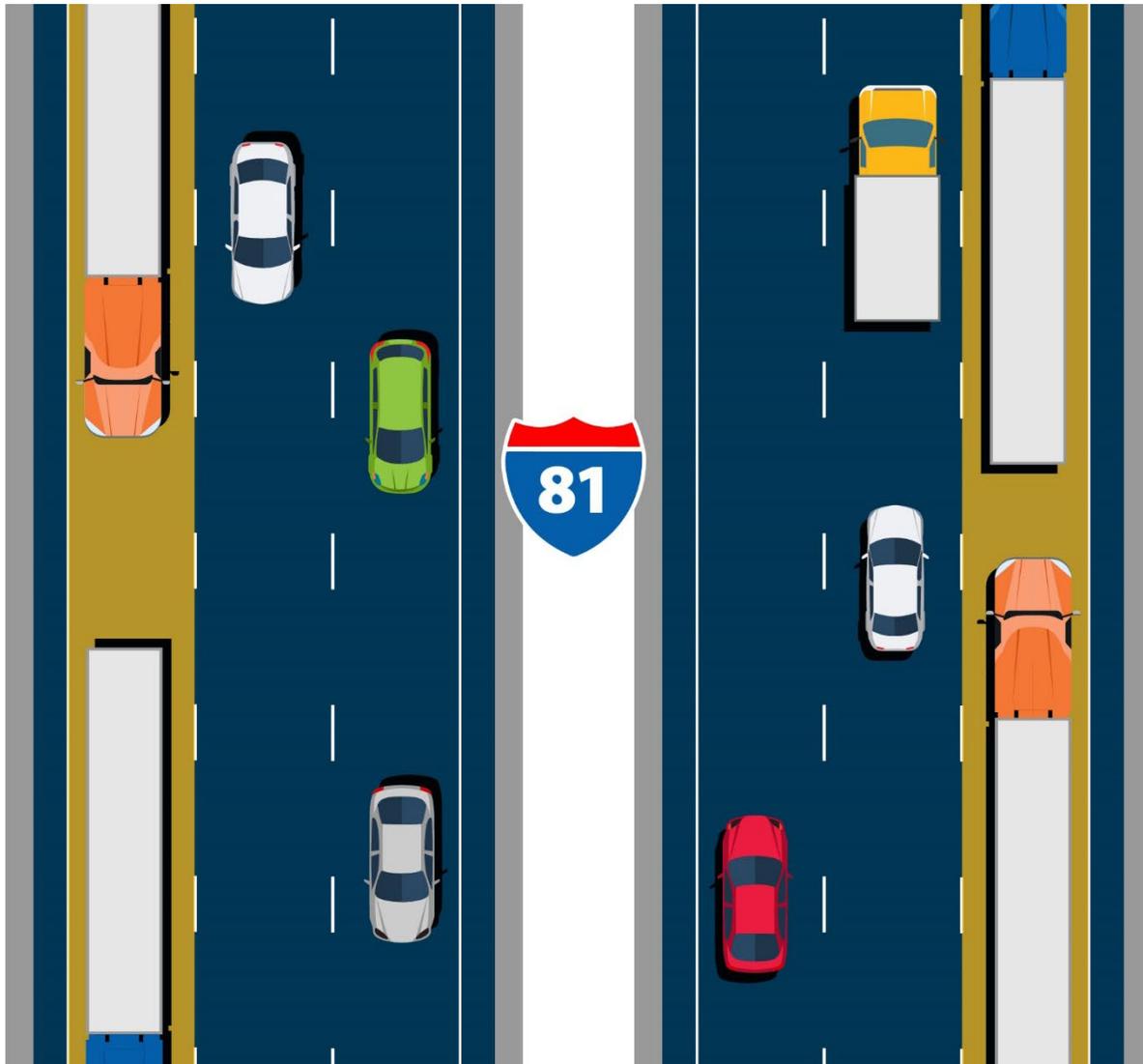


36 Improvements

- 25 Projects Complete
- 0 Projects in Construction
- 11 Future Projects –
Completion by 2033
- *Results – 2020-2021 a 45%
reduction in total crashes.

* Less than 3 years data available

Types of Projects



Capital Improvement Projects

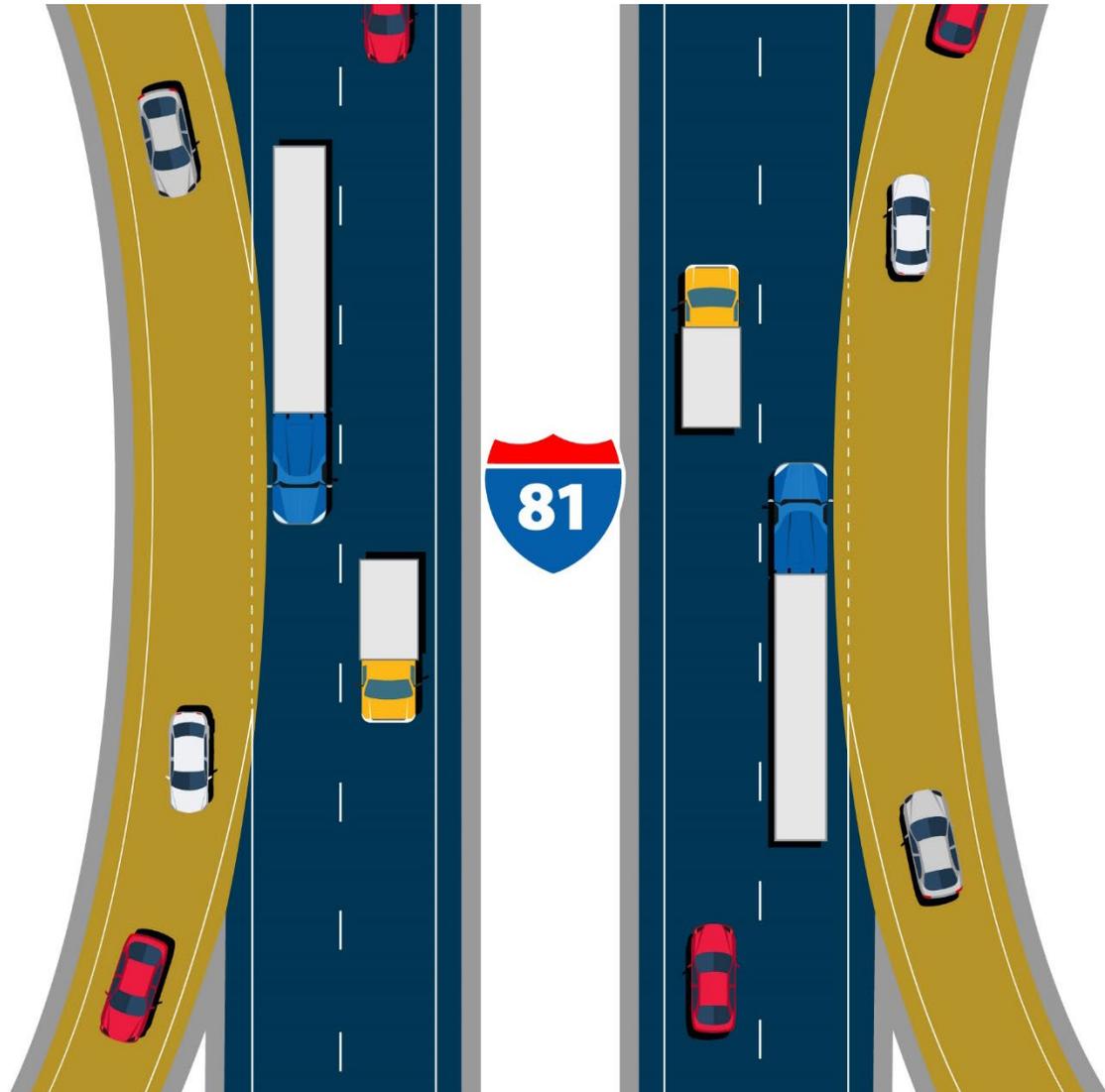
Truck Climbing Lanes



5 Improvements

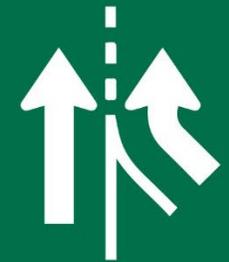
- 3 Projects Under Construction – 1 Complete in 2024, 2 Complete in 2025
- 2 Future Projects – Completion by 2033

Types of Projects



Capital Improvement Projects

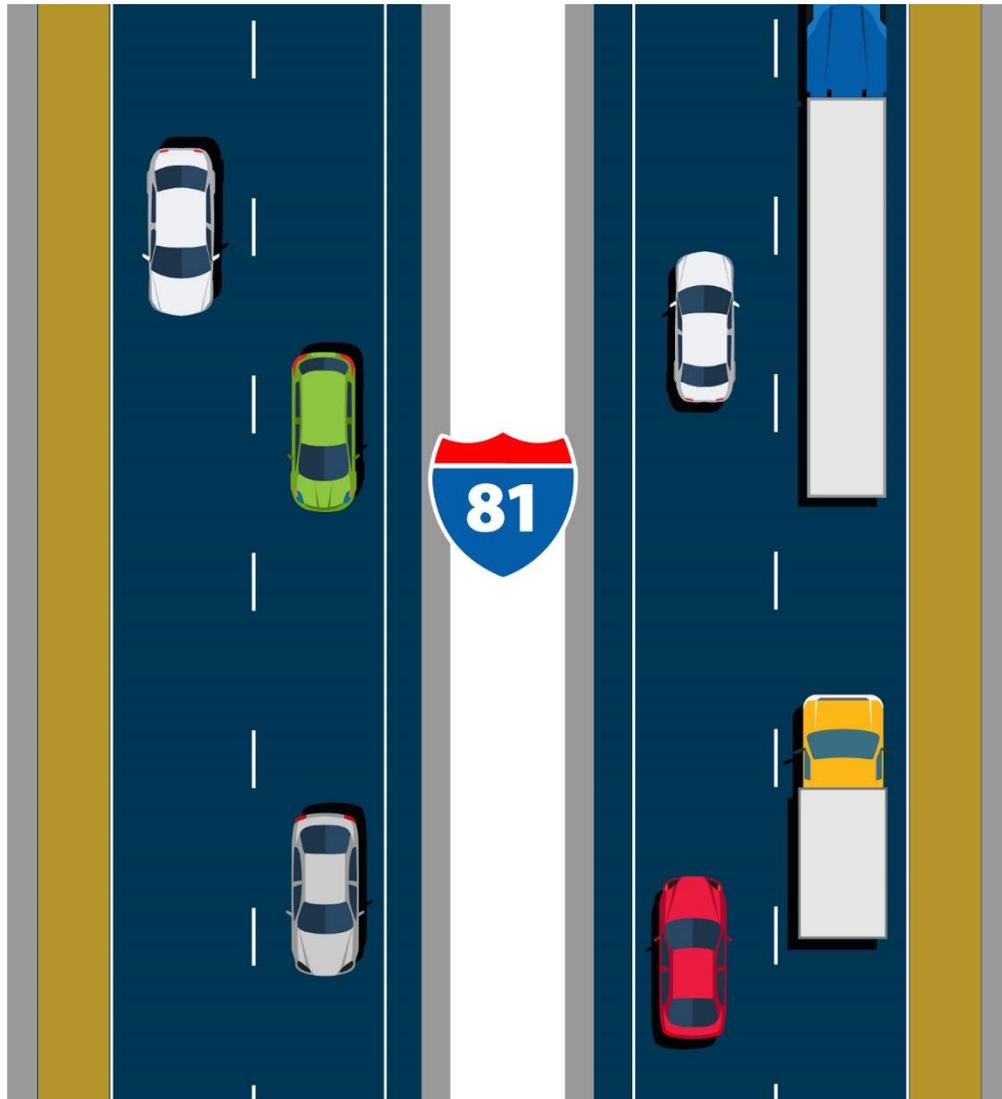
Auxiliary Lane



4 Improvements

- 1 Project Complete
- 3 Future Projects – Completion by 2033

Types of Projects



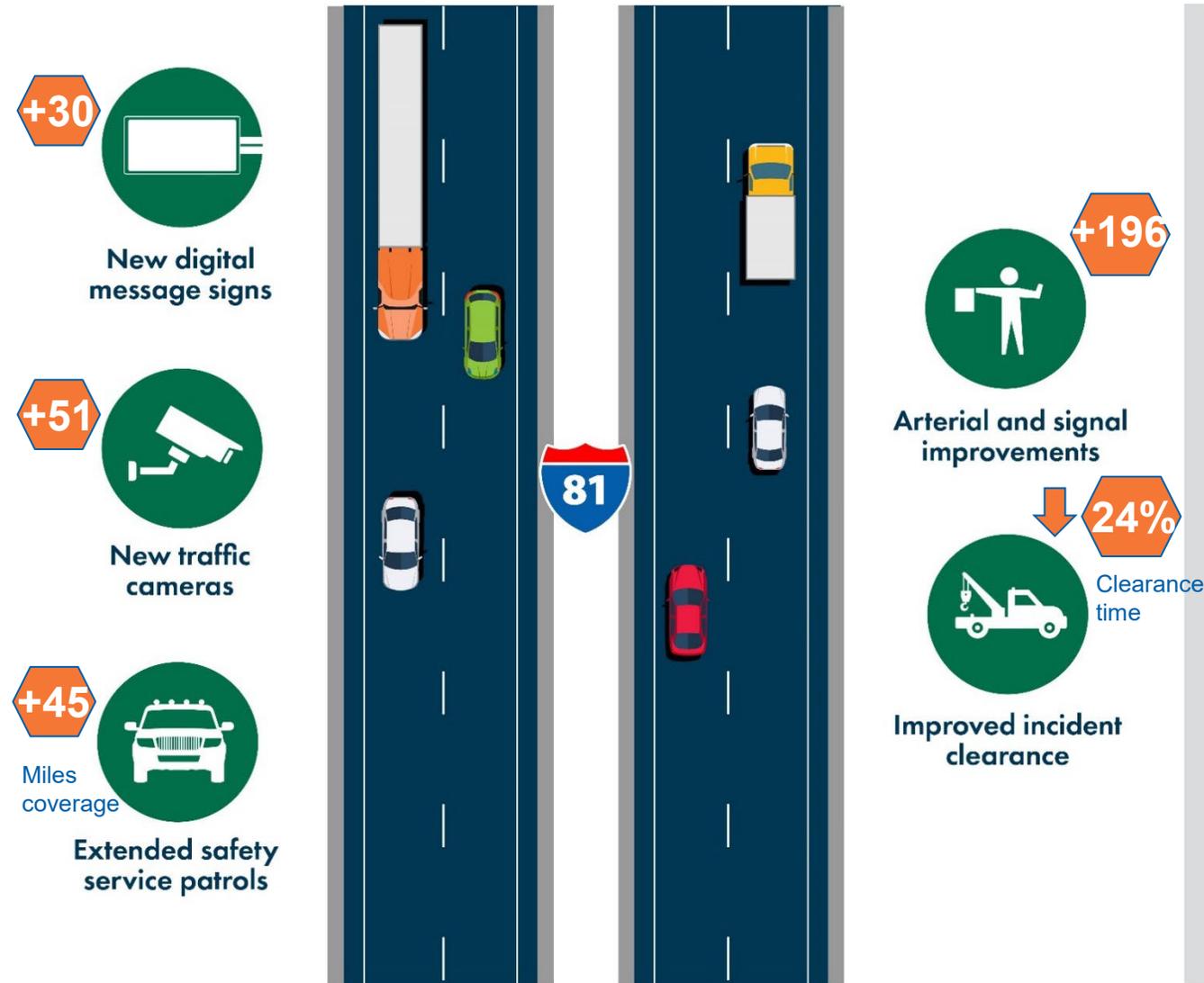
Capital Improvement Projects

+S Shoulder Widening
Curve Improvements 

9 Total Improvements

- **1 Shoulder Improvement**
 - Construction to begin in 2026
- **8 Curve Improvements**
 - All complete

Types of Projects



Operational Improvement Projects

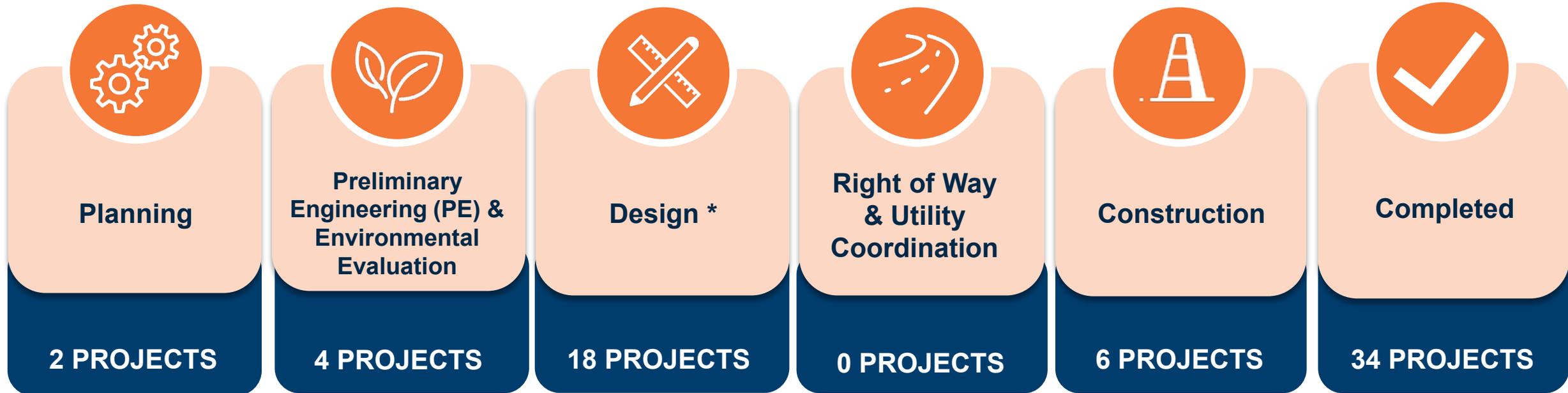
Operational Improvements

5 Improvement Types

- 43 VDOT signal improvements complete
- 39 VDOT signal improvements under construction
- 111 Locality signal improvements underway and will be complete by 2025
- 3 Geometric Improvements complete

Project Development Process (Capital Projects)

Project Status Today (64 Projects)



* 3 projects currently on ad schedule with awards in October and November

Project Status July 2022 (64 Projects)



Bristol District Project Status (Capital Projects)

Completed Projects:

- **Exit 26 SB Acceleration Lane Extension (Emory)**
- **Exit 26 SB Deceleration Lane Extension (Emory)**
- **Exit 67 Deceleration Lane Extension (South of Wytheville)**
- **Exit 19 Deceleration Lane Extension (Abingdon)**
- **Exit 84 SB Deceleration Lane Extension (North of Fort Chiswell)**
- **Bundle project (Exit 39 NB Decel, Exit 47 SB Accel, Exit 39 SB Decel, Exit 43 SB Accel)**
- **Exit 39 SB Acceleration Lane Extension (Seven Mile Ford)**
- **Exit 47 NB Acceleration Lane Extension, single phase DB (Marion)**
- **Exit 54 SB Auxiliary Lane - (South of Rural Retreat)**
- **Four curve improvements (chevron signs in Wytheville and Abingdon)**
- **Exit 17 SB Acceleration Lane Extension (Abingdon)**

Bristol District Project Status (Capital Projects)

Projects Under Construction:

- **Exit 39 NB Entrance Ramp to MM 40.6 NB Truck Climbing Lane – Completion June 2024**
- **MM 32.4 to MM 33.5 NB Truck Climbing Lane (Chilhowie) – Completion June 2025**
- **MM 34 to MM 33 SB Truck Climbing Lane (Washington County) – Completion June 2025**

Salem District Project Status (Capital Projects)

Completed Projects:

- Exit 89 NB Acceleration Lane Extension (Pulaski)
- Troutville Rest Area SB Entrance and Exit Extension (2 projects) - Troutville
- Three curve improvements (chevron signs south of Draper and south of Natural Bridge)

Projects Under Construction:

- Exit 137 to Exit 141 Widening NB and SB (Design Build, 2 projects bundled) – Salem
 - Approximately 50% complete. Completion date is January 2026

Staunton District Project Status (Capital Projects)

Completed Projects:

- Exit 302 NB Accel, Exit 302 SB Decel, Exit 283 SB Accel,
- Exit 269 NB Decel, Exit 279 SB Accel
- Exit 291 NB Accel, Exit 296 SB Accel, Exit 304 NB Accel
- Exit 205 SB Accel, Exit 205 NB Accel (Raphine)
- One curve improvement (chevron signs at Mount Jackson)

Projects Under Construction:

- Exit 221 to Exit 225 NB and SB Widening – Construction Spring/Summer 2023 (Staunton), Completion June 2027

Upcoming Capital Projects (Corridor-wide)

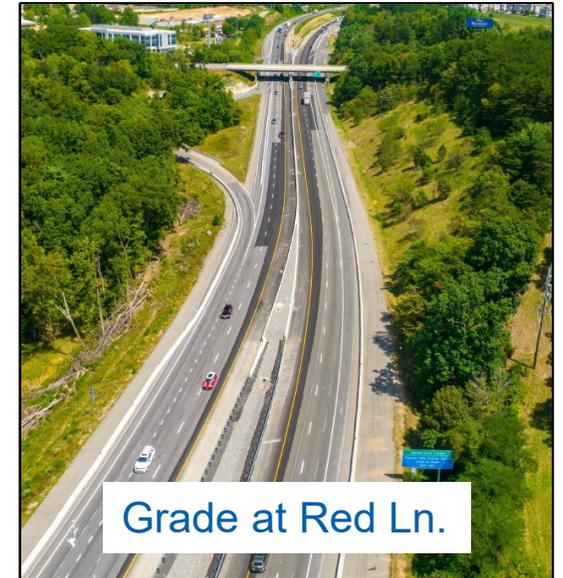
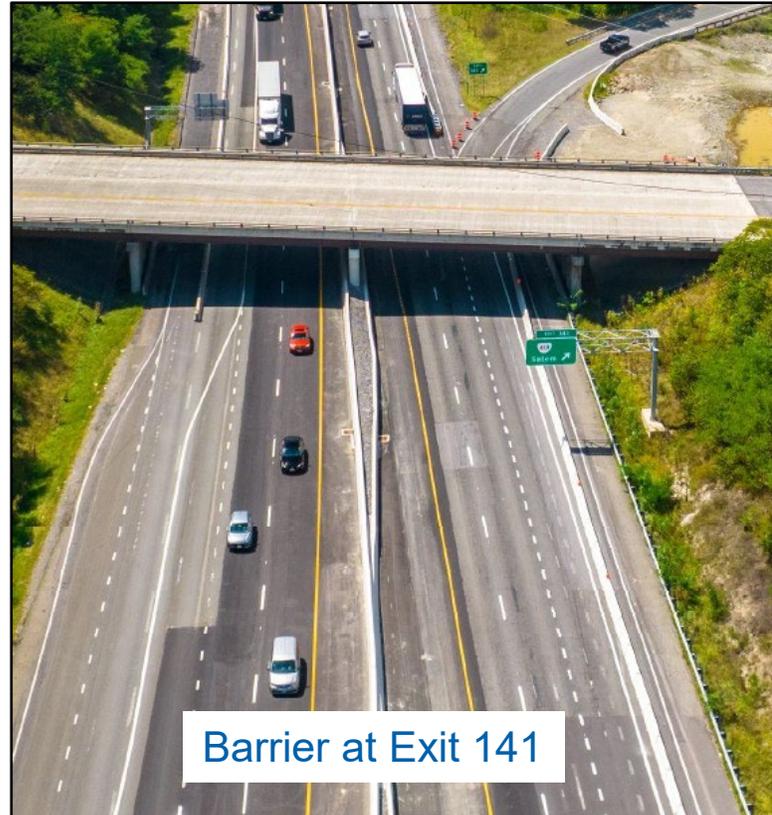
Bristol District	Project Description	Anticipated Construction Start
	Exit 72 NB Decel Extension and I-77 Exit 41 to I-81 SB Exit 72 Auxiliary Lane (Wytheville)	2024
	MM 8.1 to MM 9.7 SB Widening to three lanes (Bristol) – Letting Date Oct. 25	2024
	Exit 72 Deceleration Lane (Wytheville) – Letting Date Nov. 15	2024
	Exit 72 to Exit 73 Auxiliary Lane – Letting Date Nov. 15	2024

Salem District	Project Description	Anticipated Construction Start
	Exit 143 to Exit 150 Widening NB & SB (Roanoke to Troutville)	2024
	Exit 128 to Exit 137 Widening NB Only (Ironto to Salem)	2027
	MM 116 to Exit 128 Widening NB Only (Christiansburg to Ironto)	2028

Staunton District	Project Description	Anticipated Construction Start
	Exit 221 to Exit 220 SB Auxiliary Lane (South of Staunton)	2023
	Exit 299 to Exit 296 SB Widening – Construction Fall/Winter 2024 (Strasburg)	2024
	Weyers Cave NB and SB Truck Climbing Lanes (2 Projects)	2024
	Exit 242 to Exit 248 NB and SB Widening (Harrisonburg)	2025
	Exit 313 to Exit 317 NB and SB Widening – Construction 2028 (Winchester)	2028

Salem Exit 137 to Exit 141 Project Progress

Illustrative of major widening project



Stay up-to-date – Videos, Podcasts, Newsletters



Safety Service Patrol



Troutville Rest Area



Traffic Operations Center/
Customer Service Center



Exit 205



Exit 137 to Exit 141
Widening



Digital Message Signs



Wytheville Interchange
Improvements



Harrisonburg Widening



Staunton Area
Auxiliary Lane



Arterial Improvements



Picking the Projects



Bristol District Truck
Climbing Lanes



Strasburg Area Widening



Troutville Rest Area
Temporary Closure



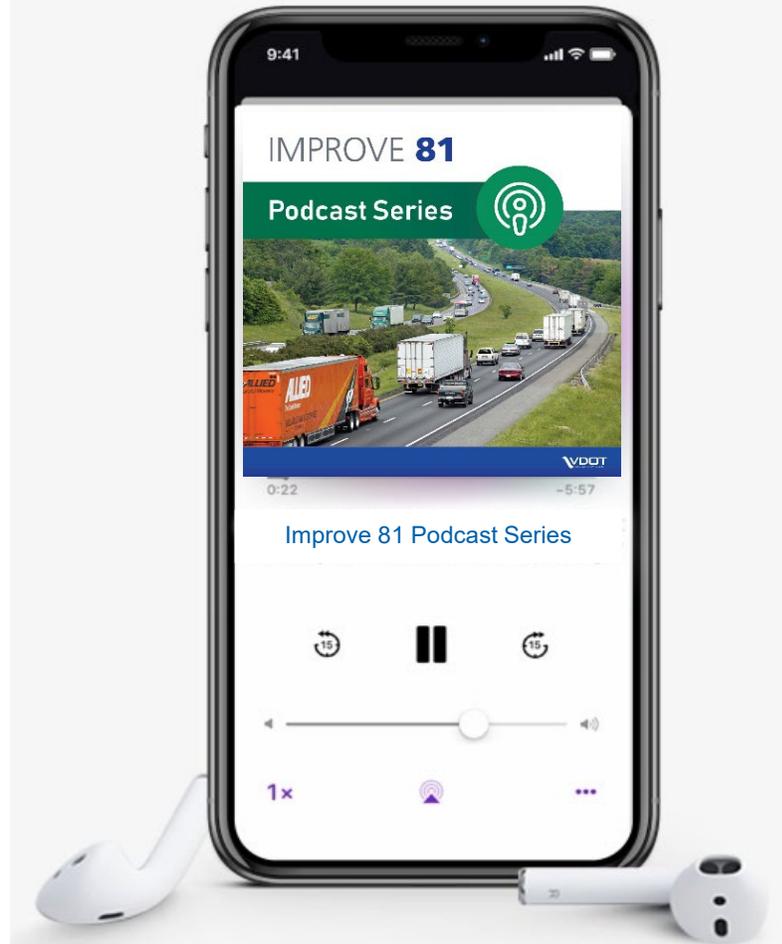
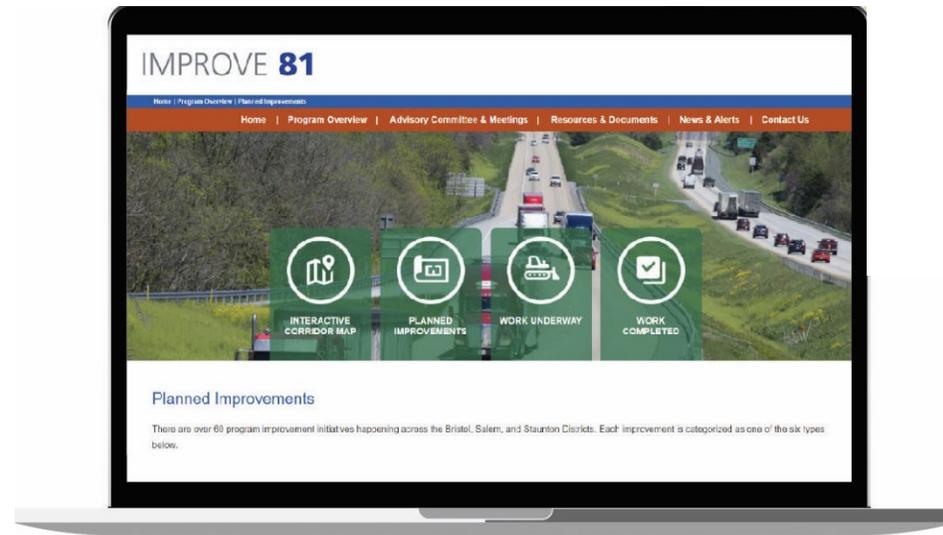
Staunton Area Widening

Published to date

- 22 videos
- 22 podcasts
- 11 newsletters

Program Specific Website – Learn More!

Improve81.org





Virginia Breeze

Connecting the Commonwealth with Virginia's intercity bus service

Zach Trogdon, Chief of Public Transportation



Overview



Launched in 2017 to connect underserved rural communities to national bus network and other transportation modes



Operates 365 days a year on four routes connecting cities through Western and Central Virginia to Washington, D.C.



Funded through Federal Transit Administration's Intercity Bus Program, I-81 funds, and ticket sales



Dillon's Bus Service operates it, providing vehicles, drivers, and maintenance, and DRPT manages

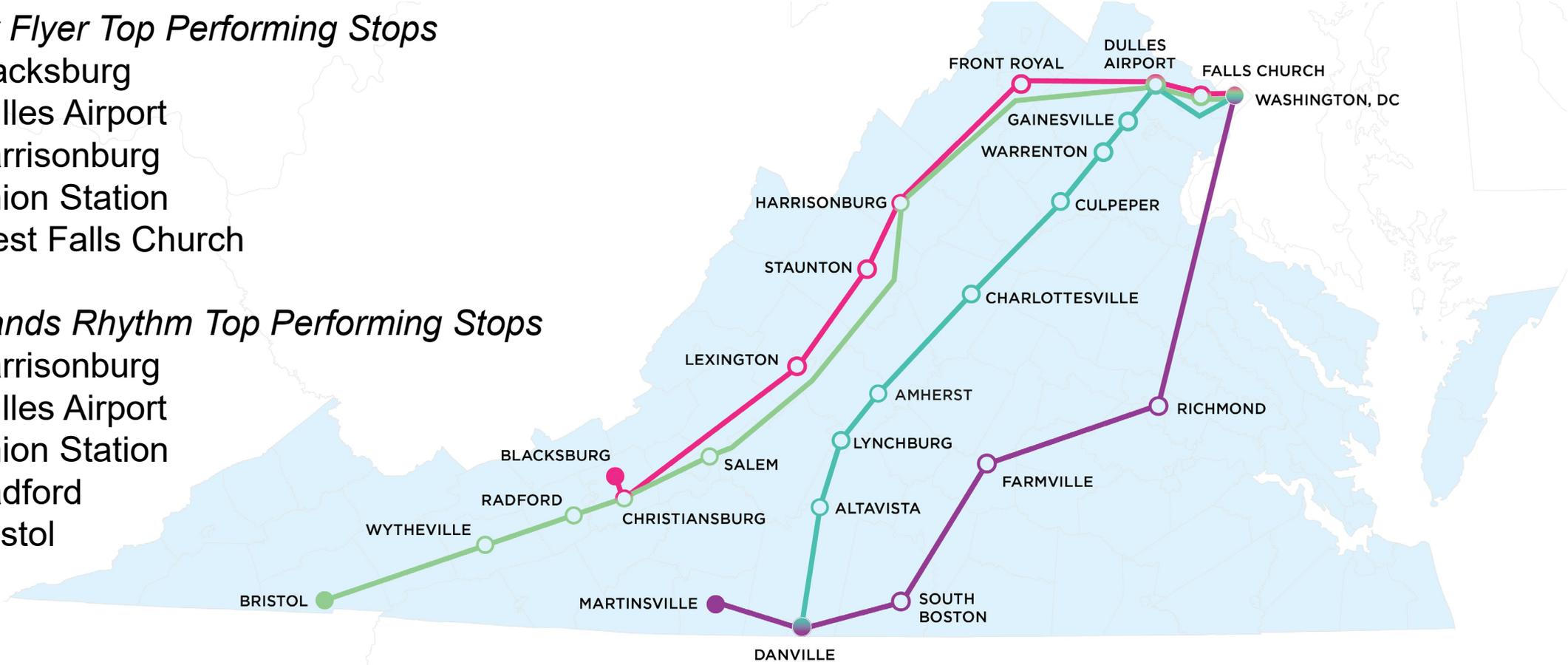
Virginia Breeze Routes

Valley Flyer Top Performing Stops

- 1) Blacksburg
- 2) Dulles Airport
- 3) Harrisonburg
- 4) Union Station
- 5) West Falls Church

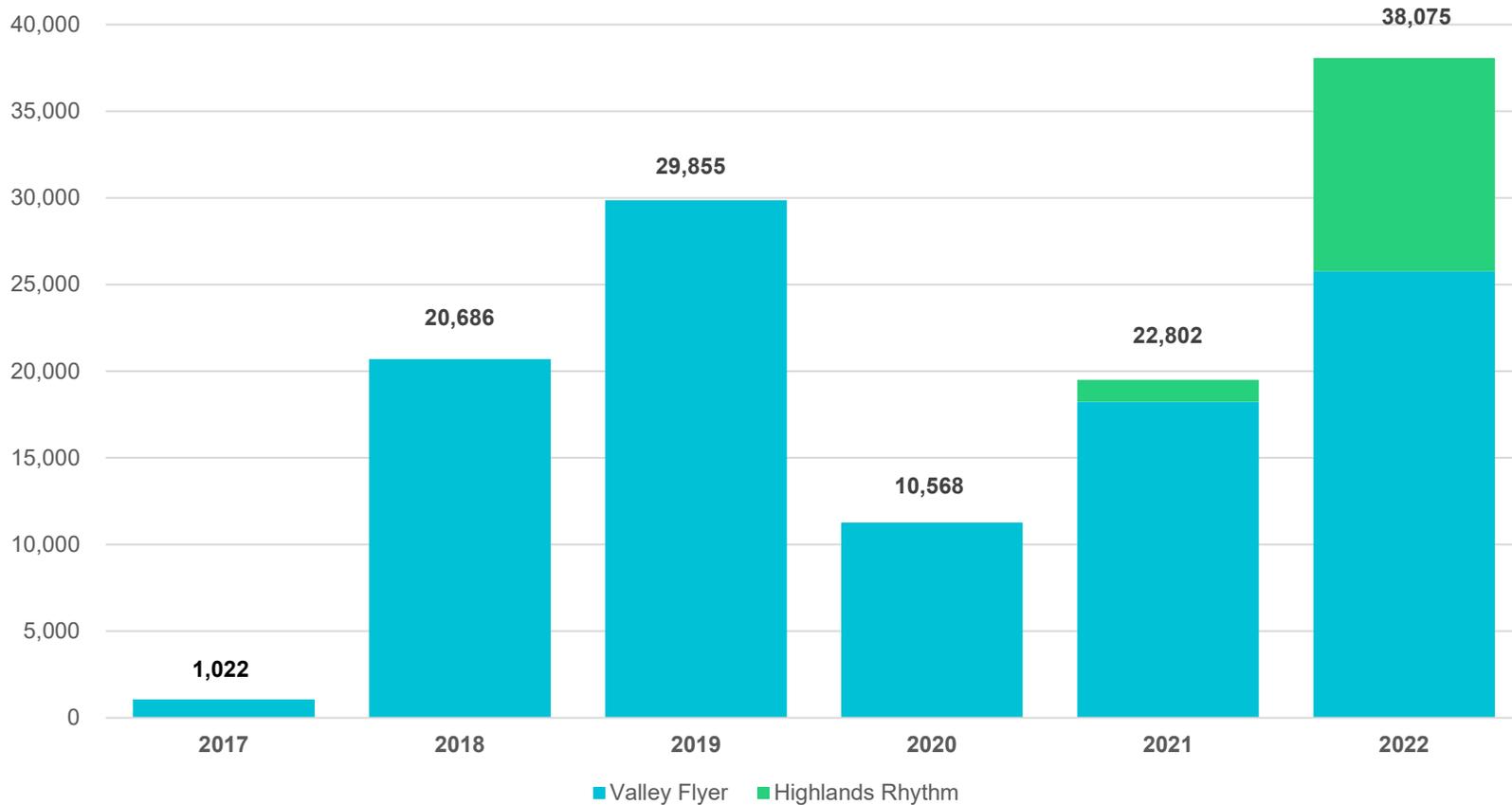
Highlands Rhythm Top Performing Stops

- 1) Harrisonburg
- 2) Dulles Airport
- 3) Union Station
- 4) Radford
- 5) Bristol



Virginia Breeze Ridership

I-81 Routes



- **Future Year Projections:**
- **2023: 42,176**
 - Valley Flyer: 28,411
 - Highlands Rhythm: 13,725
- **2024: 49,575**
 - Valley Flyer: 33,506
 - Highlands Rhythm: 16,069
- **2025: 57,003**
 - Valley Flyer: 37,806
 - Highlands Rhythm: 19,197

- Valley Flyer started in December 2017
- Highlands Rhythm started in November 2021
- Service shut down for several months in 2020 due to COVID-19 pandemic

I-81 Multimodal Financial Plan

I-81 Multimodal Financial Plan (Transit)

Description	Capital	O&M
Virginia Breeze Service Extension to Bristol	---	\$243,000
Virginia Breeze Extension Stops	\$60,000	
Improvements to Existing Stops	\$40,000	



FY23 Budgeted Operating Revenues

FY23 Budgeted Operating Revenues (I-81 VA Breeze Service)

<i>Source</i>	<i>Amount</i>	<i>Percent</i>
I-81 Multimodal Transit Funding- Bristol Extension	\$243,000	12%
FTA Funding (5311(f) & CARES Act)	\$681,320	34%
Farebox Revenues	\$1,065,139	54%
Total Operating Costs	\$1,989,459	100%



Questions?

Zach Trogdon

Chief of Public Transportation

Zach.trogdon@drpt.virginia.gov

I-81 Corridor Finance Update

 Laura Farmer
Chief Financial Officer

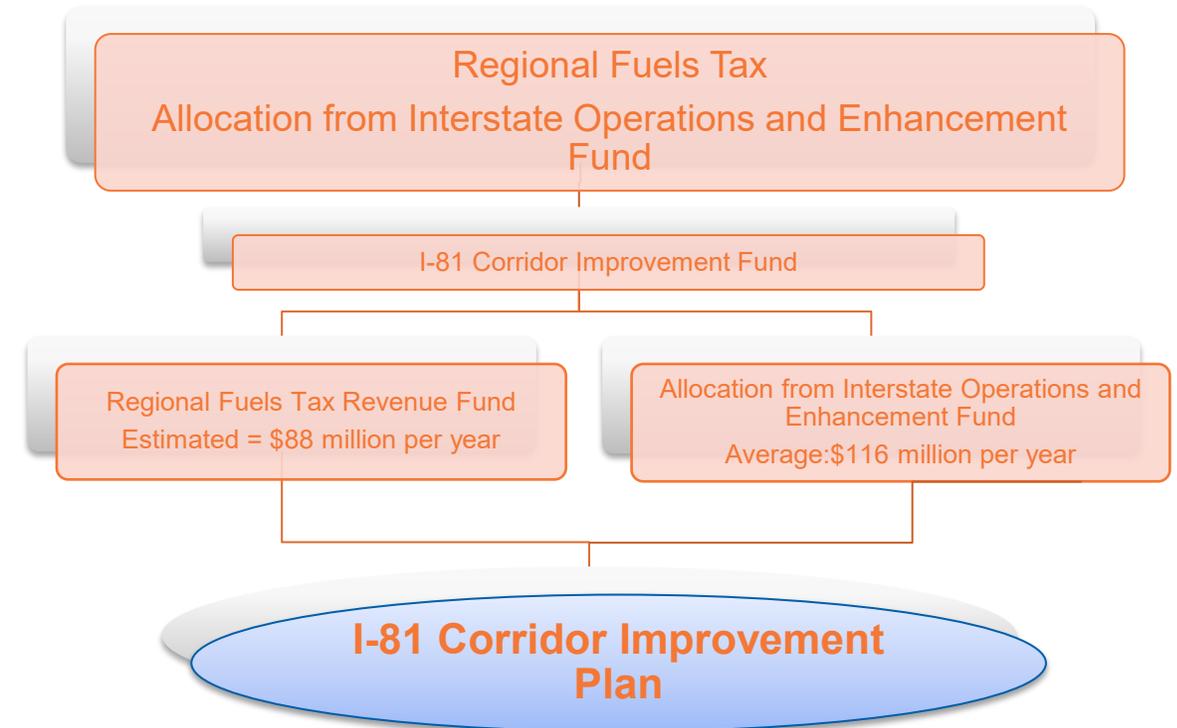
October 2, 2023

Legislative Background

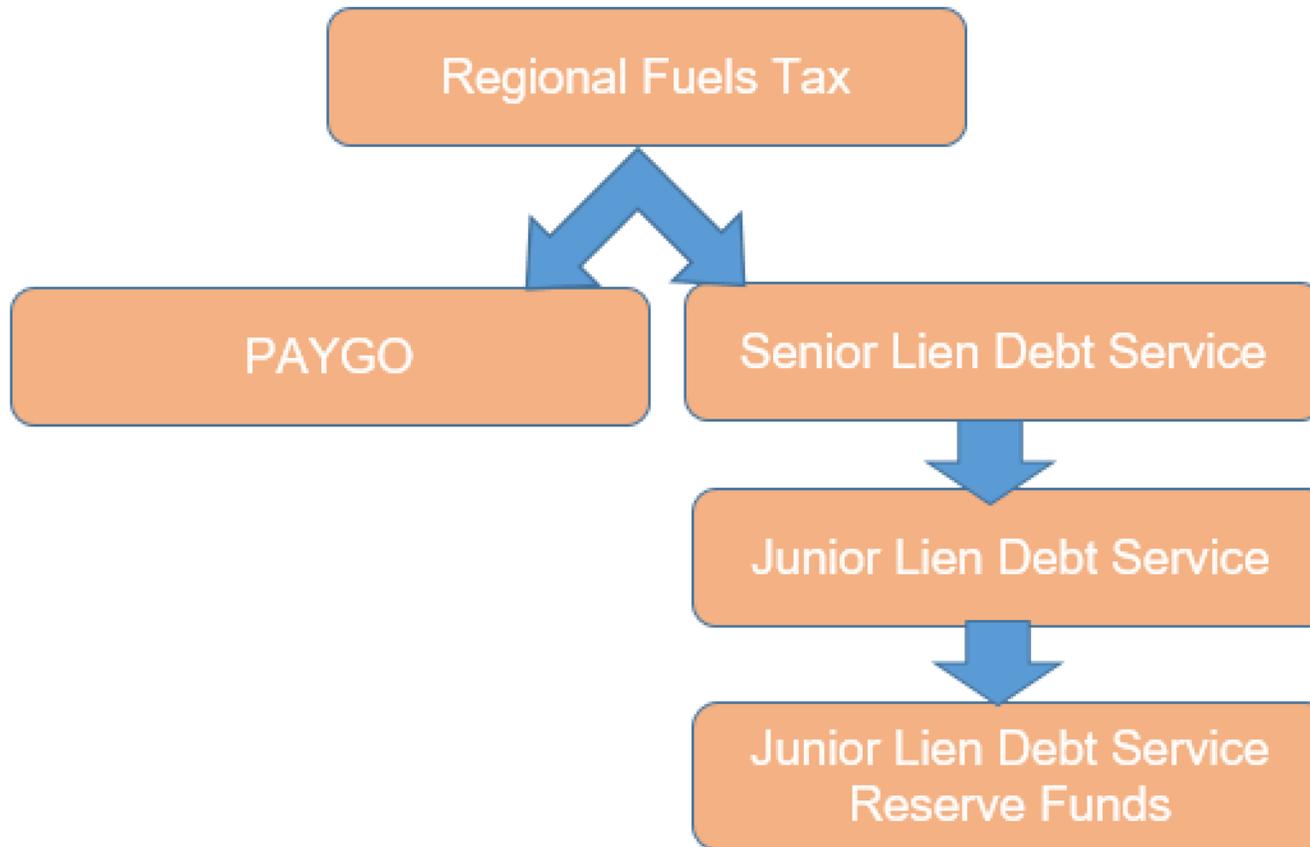
- **Chapters 837 and 846 (HB 2718 and SB 1716, 2019 Session)**
 - Created the Interstate 81 Corridor Improvement Program and Fund
 - Provided new transportation revenues to support the interstate highways and specifically I-81
- **Chapters 1230 and 1275 (HB 1414 and SB 890, 2020 Session)**
 - Authorized the sale and issuance of bonds with an aggregate principal amount not to exceed \$1 billion
 - Changed the localities contributing to fuel tax revenue for I-81 Fund to those through which I-81 passes or cities wholly encompassed by a county through which I-81 passes
 - Provided allocated funding through the Interstate Operations and Enhancement Program (IOEP)

Funding Sources and Structure

- **Dedicated funding for the I-81 Program is deposited in the I-81 Corridor Improvement Fund and includes:**
 - Regional Fuels Tax along the I-81 Corridor
 - Share of statewide revenues from allocation of the IOEP
- **Regional Fuels Tax**
 - July 1, 2019 through June 30, 2020, additional 2.1% tax on gasoline and diesel sold by a distributor to a retail dealer
 - Effective July 1, 2020, changed to a per gallon rate subject to annual CPI-U adjustment
 - Current tax rate as of 7/1/2023: 8.8 cents/gallon gasoline; 8.9 cents/gallon diesel
 - May be leveraged for debt service and paygo
- **Allocation from IOEP**
 - I-81 receives allocation equal to ratio of Vehicle Miles Traveled (VMT) on I-81 by vehicles Class 6 or higher to total VMT on all Interstate highways
 - May provide funding only for paygo



Planned Use of Regional Fuels Tax



Debt service for the program can only be supported by the regional fuels tax collections

Revenue and Expenditures to Date

Interstate 81 Improvement Fund (in millions) Activity to Date

Sources	Actuals Through FY 2023
Regional Fuels Tax	\$296.5
Interstate Operations and Enhancement Program Allocation (State and Federal)	266.0
Other Sources Prior to FY 2021/Other	24.6
Interest Income	8.6
Total	\$595.7
Bonds/TIFIA Loan	203.1
Total	\$798.8

Activity	Total
Expenditures	
Pay-Go Project Expenditures	\$139.7
Bond Fund Project Expenditures	61.1
Debt Service	7.6
Financing Costs	1.1
Total	\$209.5
Balance Remaining	
Fund Balance	\$443.2
Bond Balance	40.2
Federal IOEP Balance	4.1
TIFIA Balance	101.7
Total Available	\$589.3
Expenditures and Balance Remaining Total	\$798.8

Sources – Revenue Performance and Projections

Sources	Actuals Through FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	Total
Regional Fuels Tax	\$296.5	\$88.1	\$91.5	\$94.4	\$96.5	\$98.7	\$100.9	\$866.6
Interstate Operations and Enhancement Program Allocation	266.0	85.8	112.5	120.0	122.4	125.6	134.0	966.3
Other Sources Prior to FY 2021/Other	24.6							24.6
Prior Year Revenue Adjustment		(1.3)						(1.3)
Interest Income	8.6							8.6
Total	\$591.6	\$172.6	\$204.0	\$214.4	\$218.9	\$224.3	\$234.9	\$1,864.8
Planned Debt for Construction	203.1	237.9		272.9	251.4			965.3
Total	\$798.8	\$410.4	\$204.0	\$487.3	\$470.3	\$224.3	\$234.9	\$2,830.1

Estimate Sources:

Regional Fuels Tax estimate provided by the Virginia Department of Taxation, December 2022

Interstate Operations and Enhancement Program, Commonwealth Transportation Fund Six-Year Financial Plan, June 2023

Uses - Support I-81 Corridor Improvement Program

Uses (in millions)	Through FY 2023*	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	TOTAL
Debt Service	\$7.6	\$5.2	\$5.3	\$14.0	\$9.7	\$33.9	\$23.6	\$99.3
Remaining Fuel Tax Revenue	288.9	80.3	85.7	79.9	85.4	64.8	77.3	762.3
Interstate / IOEP Allocation	297.4	85.8	112.5	120.0	122.4	125.6	134.0	997.7
Administration and Financing Costs	1.8	1.3	0.5	0.5	1.5	-	-	5.6
Total	\$595.7	\$172.6	\$204.0	\$214.4	\$218.9	\$224.3	\$234.9	\$1,864.9
Planned Debt to support Construction	203.1	237.9	-	272.9	251.4	-	-	965.3
Total with Planned Debt	\$798.8	\$410.4	\$204.0	\$487.3	\$470.3	\$224.3	\$234.9	\$2,830.1

I-81 Corridor Program – Project Costs

- **The estimated cost of all improvements totals \$3.1 billion, with projects implemented through 2033 (based on the current revenue assumptions and debt model)**
 - **Current Six-Year Improvement Program (SYIP) runs through FY 2029**
 - **§ 33.2-214 of the *Code of Virginia* requires projects funded by Construction Programs (including Interstate Operations and Enhancement Program) to be fully funded to the estimated cost within the SYIP period**
 - **Undistributed balances remain for projects to be fully funded by FY 2033**
- **The program remains:**
 - **Comprised of operational and capital improvements**
 - **No single project exceeds 15.5% of the Program**
 - **Projects are independent of each other**

Transportation Infrastructure Finance and Innovation Act (TIFIA) Loan

- Remaining debt planned for the program is assumed to be additional TIFIA loans
- Proposed structure allows for maximized TIFIA program benefits
 - Rural loan – allows for financing of up to 49% of project costs at one-half 30-year U.S. Treasury rate (For projects less than \$100 million in total costs)
 - Regular/non-rural loan – allows for financing of up to 33% of project costs at 30-year U.S. Treasury rate (no project size limitation)
- Repayment term – 35 years after substantial completion
- Flexible payment structure and draw period of up to one-year after substantial completion

TIFIA Program allows VDOT to advance projects with the use of debt financing

Debt Issuance Plan

- **The I-81 Regional Fuels Tax revenues will support all debt issued**
- **Will not impact debt capacity of the Commonwealth**
- **Mixture of municipal bonds and Transportation Infrastructure Financing Innovation Act (TIFIA) loans over the life of the program**

	2021 Bonds	2022 TIFIA Loans	Future Financings	Total
Funded Costs (in millions)				
Senior Lien Bonds	\$101.9	\$ -	\$ -	\$101.9
Senior Lien Rural TIFIA Loan	-	14.9	133.6	148.6
Junior Lien Regular TIFIA Loan	-	82.6	629.4	712.0
Total	\$101.9	\$101.5	\$762.0	\$962.5

Preliminary, Subject to change, based on latest model

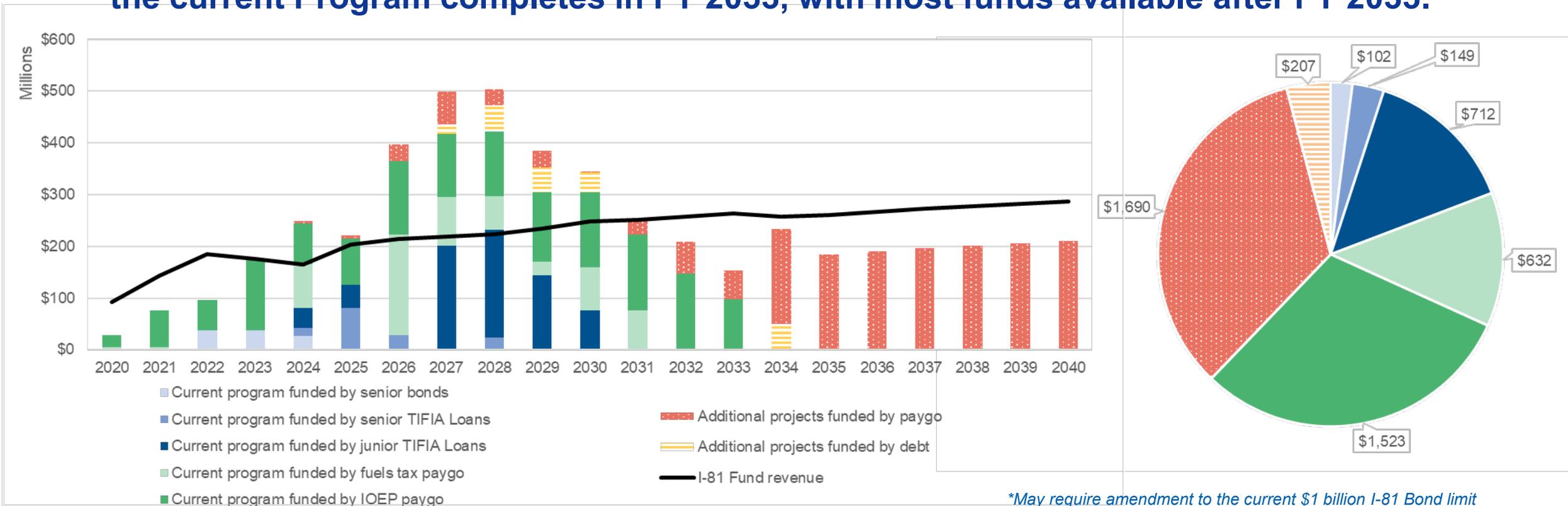
Project Status in SYIP – I-81 Corridor Plan

- **Two of the originally prioritized projects remain to be added to future SYIPs, pending sufficient allocations to fully fund them within the six-year window:**
 - **UPC 116196 Add northbound lane from MM 116 to MM 128 (2023 estimate: \$360 million)**
 - **UPC 116281 Widen to 3 lanes northbound and southbound from MM 313 to MM 317 (2023 estimate: \$333 million)**
- **Current revenue projections support completing the original I-81 program by 2033**

Extended Financial Outlook for I-81 Program

Preliminary Funding by Year and Source

- The current I-81 Program of \$3.1 billion is fully funded by a mix of IOEP and fuels tax pay-go as well as multi-lien fuels tax debt.
- Nearly \$1.9 billion* in additional project costs can be supported through FY 2040, after the current Program completes in FY 2033, with most funds available after FY 2033.



Potential for Additional Projects in the Plan

- **The Corridor Plan initially identified 106 projects for consideration and prioritized 64 projects for funding**
- **Additional projects from the original list could be amended to the Corridor Plan so that the Department is positioned to add projects to the SYIP as revenues support them**
- **Current revenue projections support the completion of additional projects estimated at \$1.9 billion by 2040 (preliminary, may require additional debt capacity)**
- **Five additional projects were identified beyond the original 64 capital projects**
- **These projects represent the most complex, highest risk segments of the remaining capital projects from the Corridor Plan**

Additional Projects

VDOT has continued concept refinement for the next five major capital improvement projects that were identified in the I-81 CIP, but not included in the funding program that address delay, crashes and accessibility to jobs

District	Location	VDOT Preliminary Cost Estimates	
		Low Range*	High Range*
Salem	Southbound widening between Exits 137 and 128	\$246	\$308
Staunton	Northbound widening MM 190 – Exit 195	111	141
Staunton	Southbound widening Exit 195 – MM 190	103	130
Staunton	Northbound widening between Exits 298 and 300	53	66
Salem	Northbound/southbound realignment of S-curves in Botetourt (MM 167- Exit 168)	159	243
Total Cost		\$672	\$888

**Estimates are in millions and are provided as uninflated in 2022 dollars.*

Preliminary analysis indicates these projects could be delivered by FY 2038 at an estimated inflated cost of \$1.5 billion (using the high range of the estimates provided).

Summary

- **Updates to project estimates (to reflect market conditions), refined project scoping, and debt assumptions extended delivery of the original program of projects by one year.**
- **Revenue and allocations that support Interstate 81 Improvements continue to remain strong to support project delivery.**
- **Capacity for additional projects will begin to be available from the program's current funding sources in the 2030s.**