

I-81 2025 CORRIDOR IMPROVEMENT PLAN

Public Input: Potential Solutions

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July 2025

I-81 Corridor Improvement Plan Update

- 65 projects in the 81 Program have advanced or are advancing to construction
- Next tranche of projects need to be identified
 - Projects are complex and need to be identified early
 - Allows advanced activities- resulting in refined construction costs and shovel-ready projects
- Project identification is performance driven
- Solutions will be identified using a SMART SCALE-like process



2025 Public Input Schedule

**Issue
Identification**



March – April

**Potential
Solutions**



July

**Solutions
Refinement**



October

**2025 Corridor Plan
Published**



December

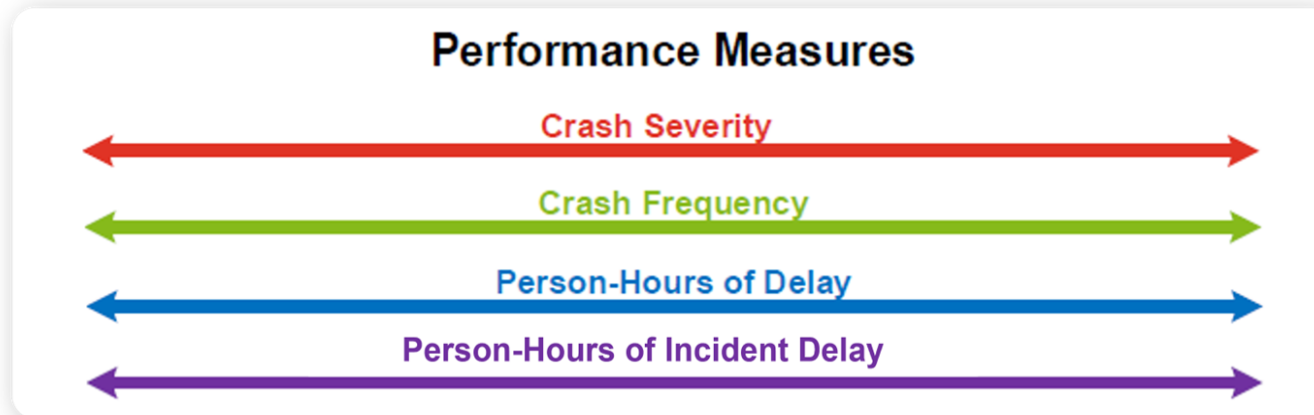
I-81 CIP Update: Work to Date

- **Performance measures analysis- complete**
- **Round 1 public engagement- complete**
 - Performance measures and public validation
 - Feedback on issues
- **Potential solutions development- underway**
- **Round 2 public meetings- underway**
 - Summary of feedback from Round 1
 - Feedback on potential solutions

Performance Measures Used

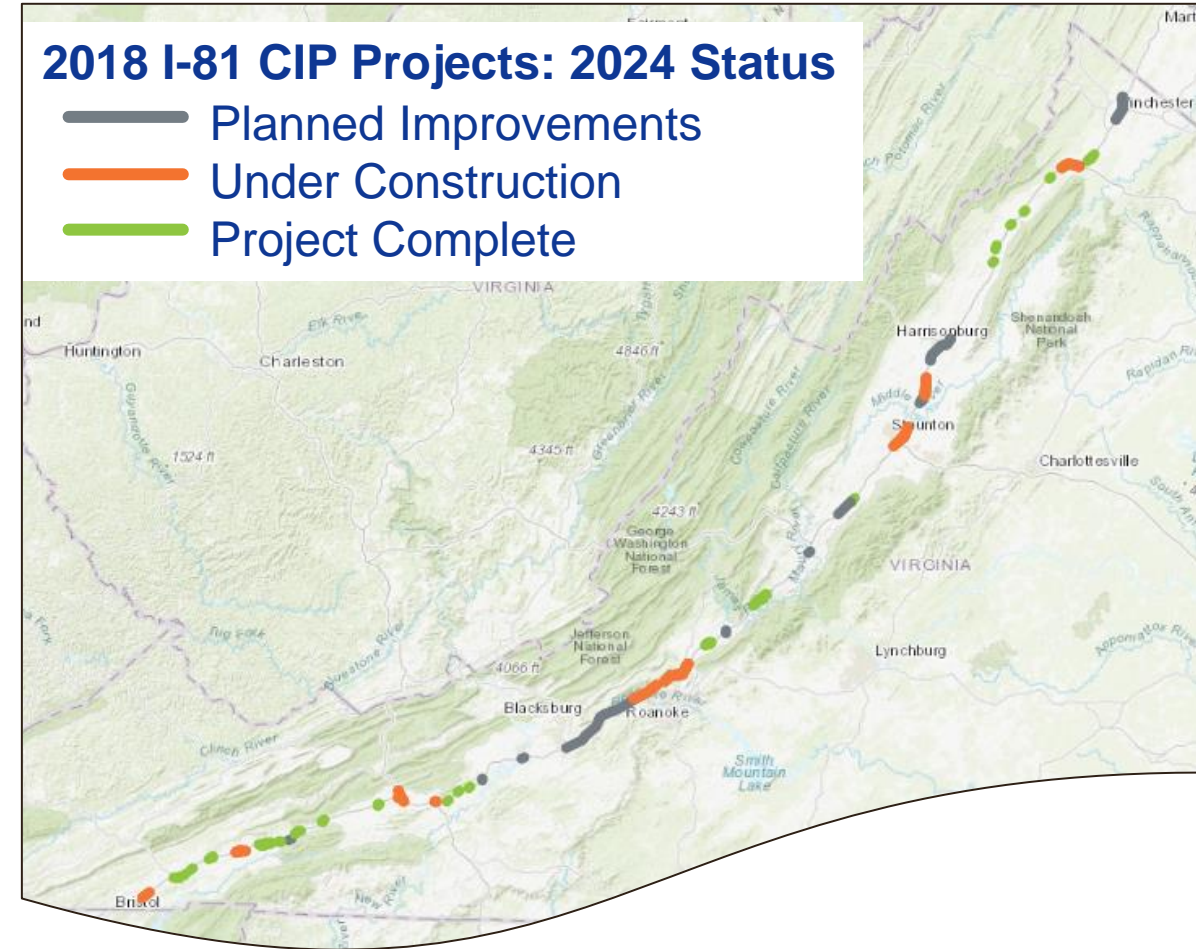
Determine the top 25% of one-mile segments for the following performance measures in both directions of I-81

Crash Severity	fatal and severe injury crashes over the last 5 years
Crash Frequency	rate of crashes during the last 5 years
Person-hours of Delay	hours of delay caused by congestion, incidents, and weather events
Person-hours of Incident Delay	incidents or crashes that lead to at least one lane of the interstate being closed an hour or more



Data Analysis Assumptions

- **Exclude 2020 data**
 - 5-year dataset: 2019 & 2021-2024
- **Exclude one-mile segments in 2018 I-81 CIP with widening and truck climbing projects already programmed for improvement**



Performance Measures Summary

Milepost	District	Number of One-Mile Segments (both directions) in the Top 25% by Performance Measure			
		Crash Severity	Crash Frequency	Person Hours of Delay	Person Hours of Incident Delay
0–88	Bristol	44	49	9	2
88–175	Salem	30	33	29	23
175–325	Staunton	59	49	93	109

Sources: VDOT Roadway Network System (RNS) Data, INRIX

Round 1 Public Outreach (Virtual)—Problem Identification

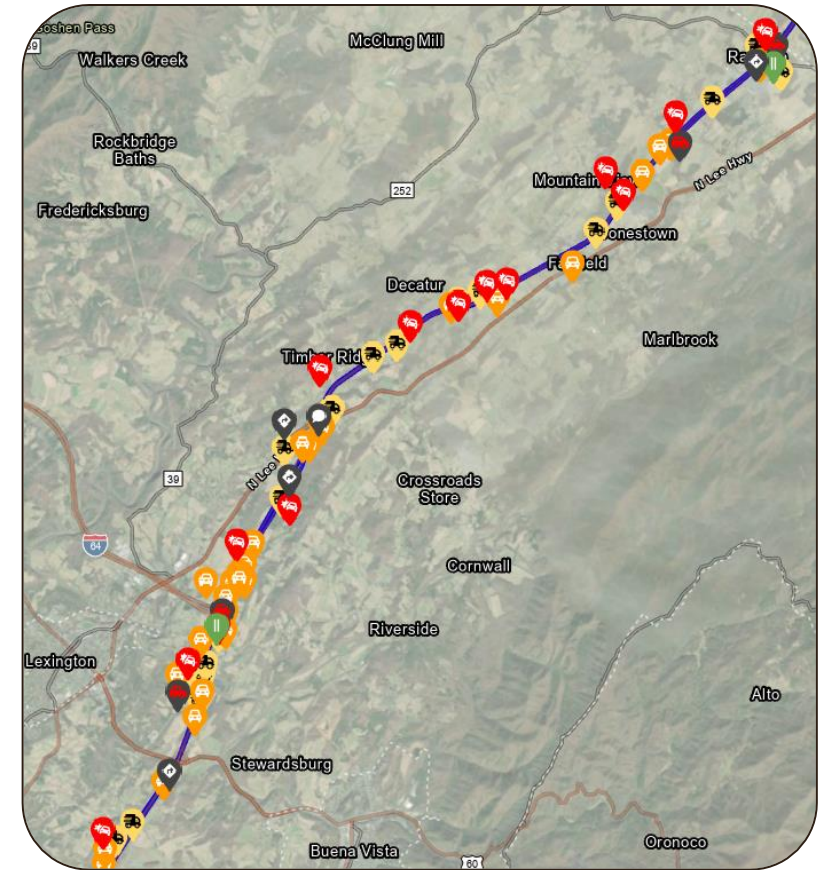
- Open April 1-15, 2025

VIRTUAL ENGAGEMENT

 **4,000**
COMMENTS





 **4,700**
PARTICIPANTS

- Performance measures identified, public asked to validate based on their driving experience
- Location-specific issues identified, and written comments provided



Round 1 Public Outreach Feedback Summary

Location-Specific Issue Identification by District

Issue Type	Bristol	Salem	Staunton	Total
 1. Congestion	36%	31%	42%	39%
 2. Truck Operations	25%	26%	20%	22%
 3. Safety	18%	16%	23%	21%
 4. Speeding and Aggressive Driving	10%	16%	9%	10%
5. Geometry	5%	7%	3%	4%
6. Pavement Markings and Signing	3%	1%	2%	2%
7. Other	2%	3%	1%	2%

- Participant-identified
- Top four issue types accounted for **92%** of the total identified

Round 1 Public Outreach Feedback Summary Continued

Top 10 Written Comment Themes



Need for additional lanes- 22%



Short/poorly designed ramps- 6%



Congestion and backups- 20%



Interchange and weigh station geometry- 5%



Heavy truck volumes- 19%



Pavement and drainage issues- 2%



Frequent crashes and safety concerns- 14%



Noise and local impacts- 1%



Aggressive/high-speed driving- 10%



Insufficient truck parking- 1%

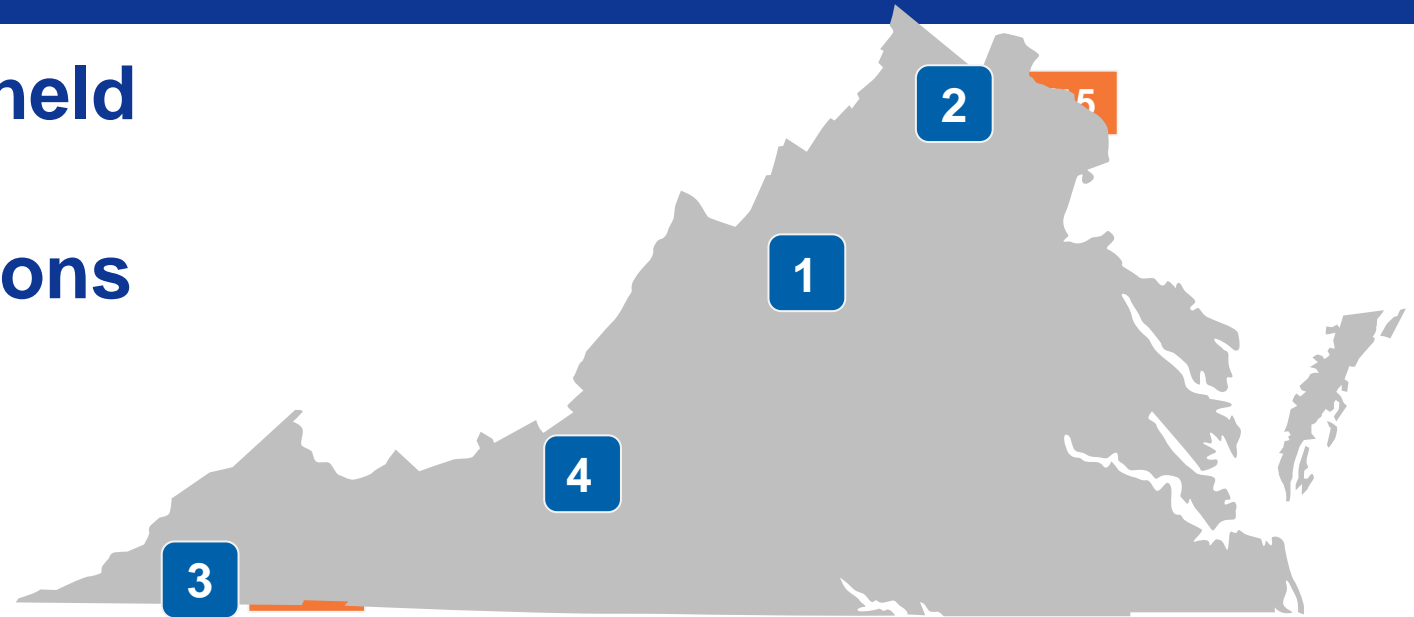
Round 1 Public Outreach Comments by District

- **Written comment themes from each District**
 - Congestion or capacity constraints
 - Heavy truck volumes
 - Safety concerns
- **Comments on the above issues were focused in areas where there are currently programmed projects with construction activity or activity starting in the next 2 to 3 years**



Round 2 Public Meetings—Potential Solutions

- Four in-person meetings held week of July 14th
- Maps with potential solutions driven by performance measures
 - Operations
 - Capital
- Survey gathering public comment on potential solutions
- Meeting materials and survey will be posted on-line



- 1 Staunton South- Blue Ridge Community College 5-7pm
- 2 Staunton North- Shenandoah University 4-6pm
- 3 Bristol Hilton Garden Inn (Exit 7) 5-7pm
- 4 Salem Civic Center 5-7pm

How Can You Help Us Now?

- Please fill out the on-line survey focusing on the areas of the corridor of most interest to you
- The study team will use your feedback on the proposed potential solutions to inform prioritization and refinement of these solutions

I-81 2025 Corridor Improvement Plan Projects

The goal of the I-81 Corridor Improvement Plan is to identify recommended improvement projects at locations of highest need in the corridor.

The study started this January and will be finished in December 2025. At three separate points during this time, VDOT will seek public input to identify needs and prioritize recommended solutions in the corridor.

This second round of public engagement focuses on potential capital solutions for interstate segments with the highest rate and severity of crashes, or the most significant traffic delays.


Your input will inform decision makers as the study advances to the prioritization phase this fall.

[Introduction](#) **Bristol** [Salem](#) [Staunton](#) [Wrap Up](#)

Please let us know if you agree or disagree with the following potential solutions.

Answers for each potential solution are not required, please scroll down to the bottom of the webpage and select "Continue" to advance.

You can return to a previous page at any time by selecting the tabs above.



Widening



Acceleration/
Deceleration Extension



Curve
Improvements



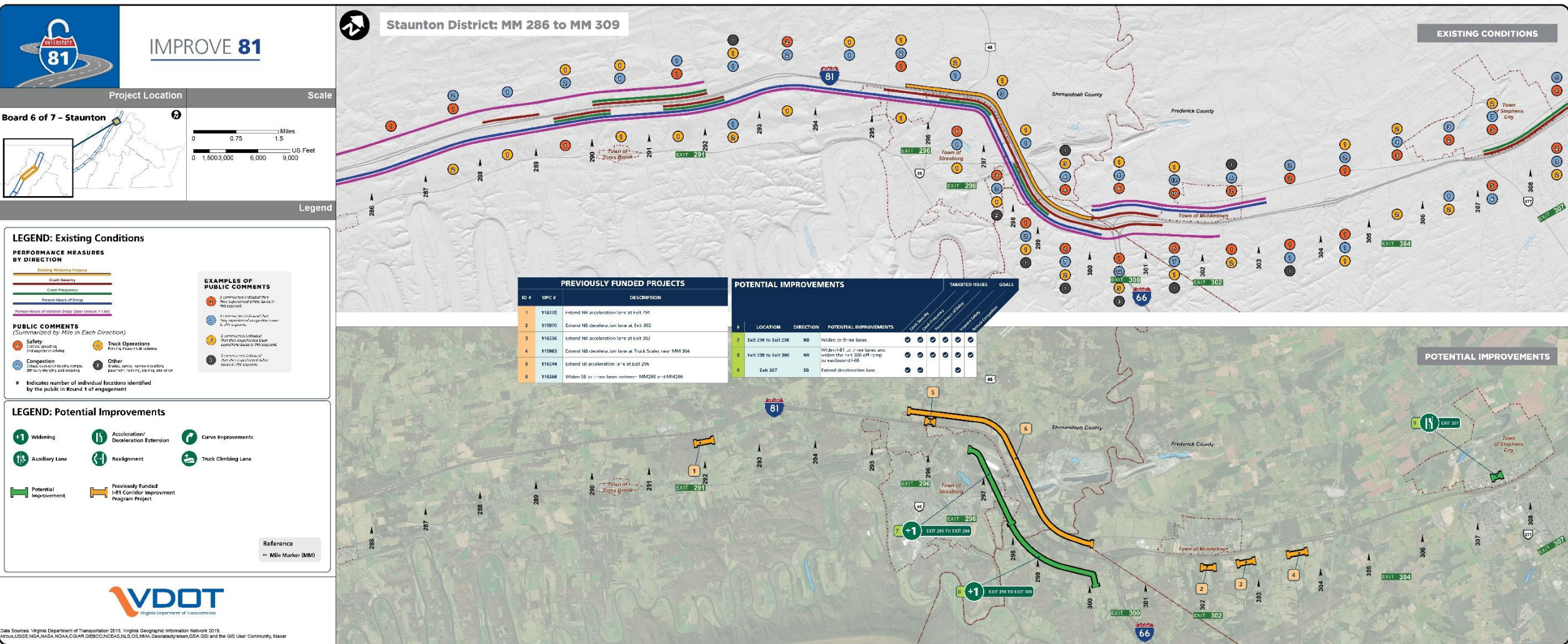
Auxiliary Lane



Realignment



Truck
Climbing Lane



Operations Improvements



Incident Signal Timing Plans – traffic signals along detour routes are optimized to handle extra traffic during I-81 incidents.



System Resiliency – backup power keeps traffic signals and cameras running during power outages.



Dynamic Detour Signs – real-time signs guide drivers along detours, reducing confusion and delays.



Zipper Merge – traffic flow in construction areas improved by guiding drivers to merge late and evenly at the merge point.



Public Safety Answering Point (PSAP) Integration – traffic operations centers are notified in real time when 911 calls are made, allowing faster incident response.



SSP Vehicle Cameras – cameras provide real-time visuals to traffic operations centers, improving situational awareness and speeding up incident response.

Capital Improvements



Widening

Adds new lane, typically within the existing median



**Acceleration/
Deceleration
Extension**

Extends ramps to allow for more distance to merge or exit



**Curve
Improvements**

Addresses superelevation in curves to reduce the potential for run-off-the-road crashes



Auxiliary Lane

Connects interchange on- and off-ramps for additional distance to merge or exit



Realignment

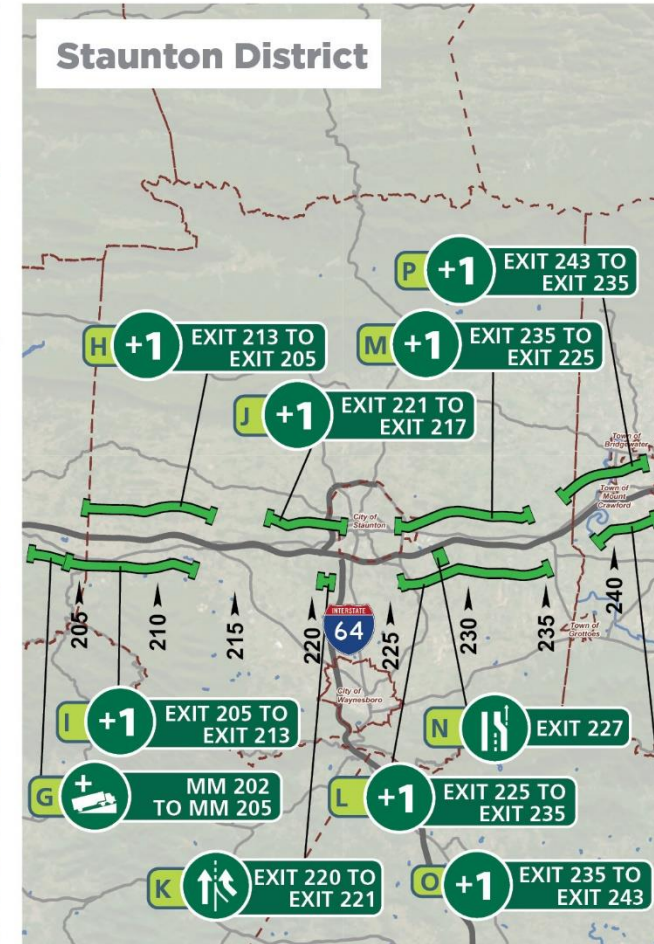
Addresses roadway curvature by improving geometrics



**Truck
Climbing Lane**

Adds lane on steep grades for trucks allowing cars to pass

District Potential Solutions—Samples



LEGEND: Potential Improvements

- +1** Widening
- Acceleration/Deceleration Extension
- Curve Improvements
- Auxiliary Lane
- Realignment
- Truck Climbing Lane

I-81 Corridor Improvement Plan—2018 Funded Capital Projects

District	Solutions Summary	Improvement Type					Total
		Widening	Auxiliary Lane	Truck Climbing Lane	Accel/Decel Lane Extension	Curve Improvement	
Bristol	No. of Improvements	2	2	3	15	4	26
	Total Mileage*	3.8	1.0	4.1	5.8	0	14.7
Salem	No. of Improvements	4	0	0	6	3	13
	Total Mileage*	49.8	0.0	0.0	3.0	7.8	60.6
Staunton	No. of Improvements	8	1	2	14	1	26
	Total Mileage*	43.9	0.2	7.3	4.0	0.9	56.3
Total	No. of Improvements	14	3	5	35	8	65
	Total Mileage*	97.5	1.2	11.4	12.8	8.7	131.6

* I-81 corridor centerline mileage

** Note: There are now 65 capital improvement projects since the southbound Exit 137 to Exit 128 project in the Salem District was added.

I-81 Corridor Improvement Plan—Proposed Capital Projects

District	Solutions Summary	Improvement Type						Total
		Widening	Auxiliary Lane	Truck Climbing Lane	Accel/Decel Lane Extension	Curve Improvement	Realignment	
Bristol	No. of Improvements	2	1	0	5	2	0	10
	Total Mileage*	10.9	0.4	0	2.1	2.9	0	16.3
Salem	No. of Improvements	2	0	2	1	0	2	7
	Total Mileage*	33.0	0	4.1	0.3	0	4.1	41.5
Staunton	No. of Improvements	13	1	2	7	0	0	23
	Total Mileage*	70.7	0.7	5.6	2.2	0	0	79.2
Total	No. of Improvements	17	2	4	13	2	2	40
	Total Mileage*	114.6	1.1	9.7	4.6	2.9	4.1	137.0

* I-81 corridor centerline mileage

Financial Constraints

- **\$2 - 2.25 billion in revenue anticipated to be available for new projects**
- **Potential solutions identified in 2025 CIP far exceed anticipated revenue**
- **SMART SCALE-like prioritization will be used to narrow potential solutions list**



Next Steps

- **Study team will use public feedback from the July meetings to inform recommended solutions**
- **Fall public meetings**
 - **Present refined solutions that have been prioritized using a SMART SCALE-like process**
- **Present refined solutions to the I-81 Advisory Committee and CTB**
- **Anticipate adopting updated Corridor Improvement Plan in December**

Contact Information

- **Visit the project website:**
<https://improve81.vdot.virginia.gov/resources/corridor-improvement-plan>
- **Contact the project team using this e-mail address:**
va81CorridorPlan@vdot.virginia.gov
- **VDOT Project Manager:** Robert J. Williams, 1401 E. Broad St., Richmond, Virginia 23219 or by phone at 804-371-4868