I-81 2025 CORRIDOR IMPROVEMENT PLAN

Solutions Development and Evaluation

Rob Williams, AICP

September 16, 2025

CIP Background
Enabling Legislation

2019: I-81 Program Improvement Fund (§ 33.2-3601) created by the General Assembly

§ 33.2-3604: Established requirements for I-81 Corridor Improvement Plan

- Analyze existing conditions and identify needs related to safety, congestion, and incident-delay
- Identify potential roadway improvements, operations strategies and upgrades to parallel facilities to address the needs
- Prioritize the solutions in a manner consistent with § 33.2-214.1





Source: Virginia Department of Transportation

CIP Background
Interstate Operations and Enhancement Program Policy

CTB adopted IOEP policy on June 23, 2021

- Requires identification of top 25% performance measure locations for:
  - Person hours of delay,
  - Person hours of incident delay,
  - Crash severity, and
  - Crash frequency
- Prioritize using SMART SCALE-like evaluation of improvements using the following weights:
  - **40%** for person hours of delay reduction
  - **40%** for reduction in fatal and severe injury crashes
  - **20%** for accessibility to jobs
- Measures correlate with IOEP goals in § 33.2-372

CIP Background
2018 I-81 Corridor Improvement Plan

Identified and funded operational improvements

- Cameras
- Dynamic signs
- Safety service patrol
- Towing and recovery program
- Improvements to parallel arterials (signal upgrades)

$39M funded

- **Identified 104 capital improvement projects**
  - Curve improvements
  - Acceleration and deceleration lane extensions
  - Realignment
  - Truck climbing lanes
  - Auxiliary lanes
  - Widening

$4B for 65 projects funded

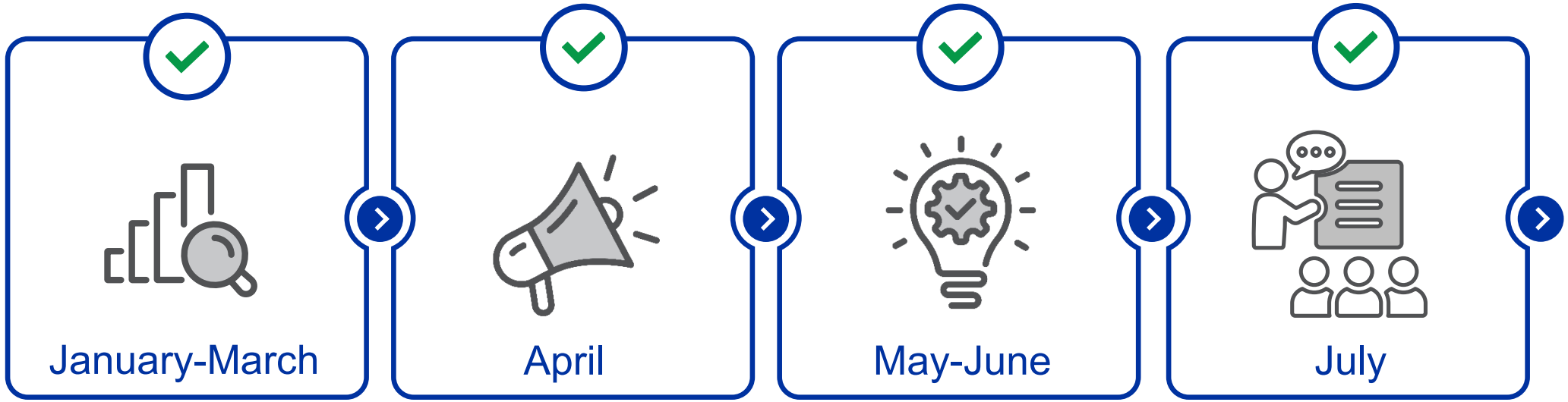
2025 I-81 Corridor Improvement Plan Update

- **65 capital projects in the 81 Program are complete or are advancing to construction by 2035**
- 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 prioritized using the same SMART SCALE-like process



I-81 Corridor Improvement Plan Update Process

Steps completed for the 2025 I-81 CIP Update



January-March

Identified and analyzed the top 25% worst performing one-mile segments

April

Engaged the public to validate performance issues and gather feedback on potential solutions

May-June

Developed potential solutions to address the performance issues

July

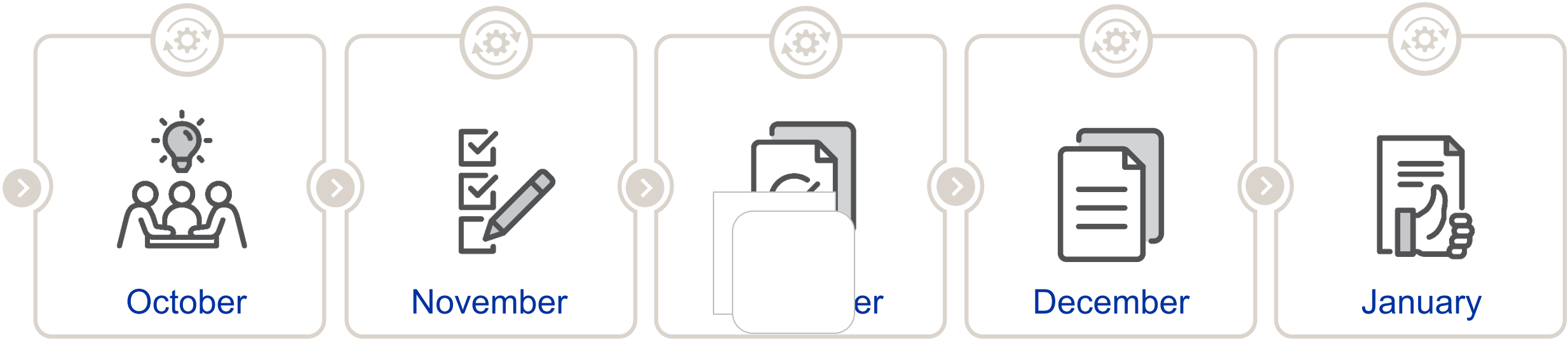
Conducted public engagement to present and receive feedback on the potential solutions

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✓ Step is complete

I-81 Corridor Improvement Plan Update Process

Steps remaining for the 2025 I-81 CIP Update



October	November	er	December	January
Prioritize potential solutions using SMART SCALE-like process and share results	**Share shortlist of solutions and cost estimates with CTB and I-81 Advisory Committee**	**I-81 Advisory Committee submits recommended projects to the CTB**	**CTB considers I-81 Advisory Committee recommendations**	**CTB adopts the I-81 Plan**

Step is incomplete

Round 1 Public Outreach (Virtual)- April

Performance Issue Identification Takeaways

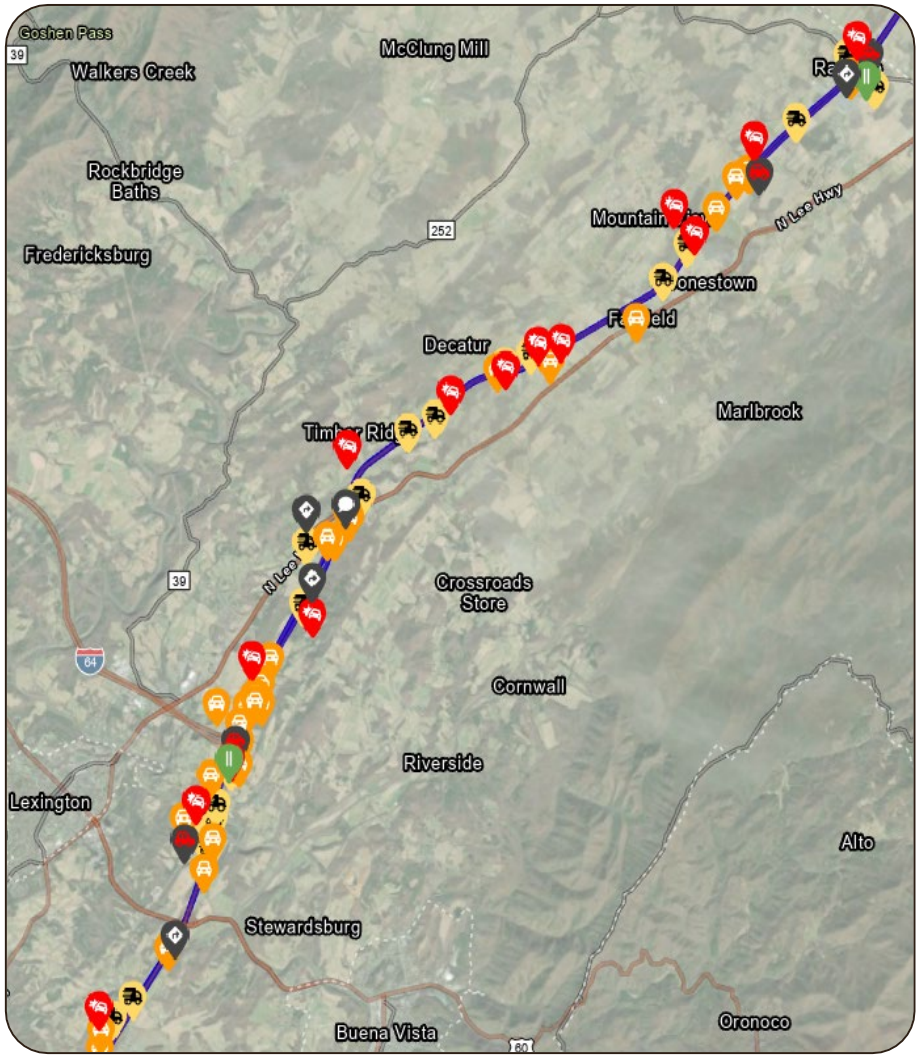
- **Open April 1-15, 2025**

VIRTUAL ENGAGEMENT

4,000 COMMENTS

4,700 PARTICIPANTS

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. Other	11%	11%	6%	8%



Solutions Development- July
Operational Improvements

Incident Signal Timing Plans

traffic signals along detour routes are optimized to handle extra traffic during I-81 incidents.

- Expands upon signal upgrades funded in 2018 CIP
- Coordination with municipal systems along the corridor
- Focused on areas with incident related delay in top 25%





Solutions Development- July
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

Round 2 Public Outreach- July
Potential Solutions Takeaways

- **Open July 14-31, 2025**

IN-PERSON MEETINGS

4
MEETINGS

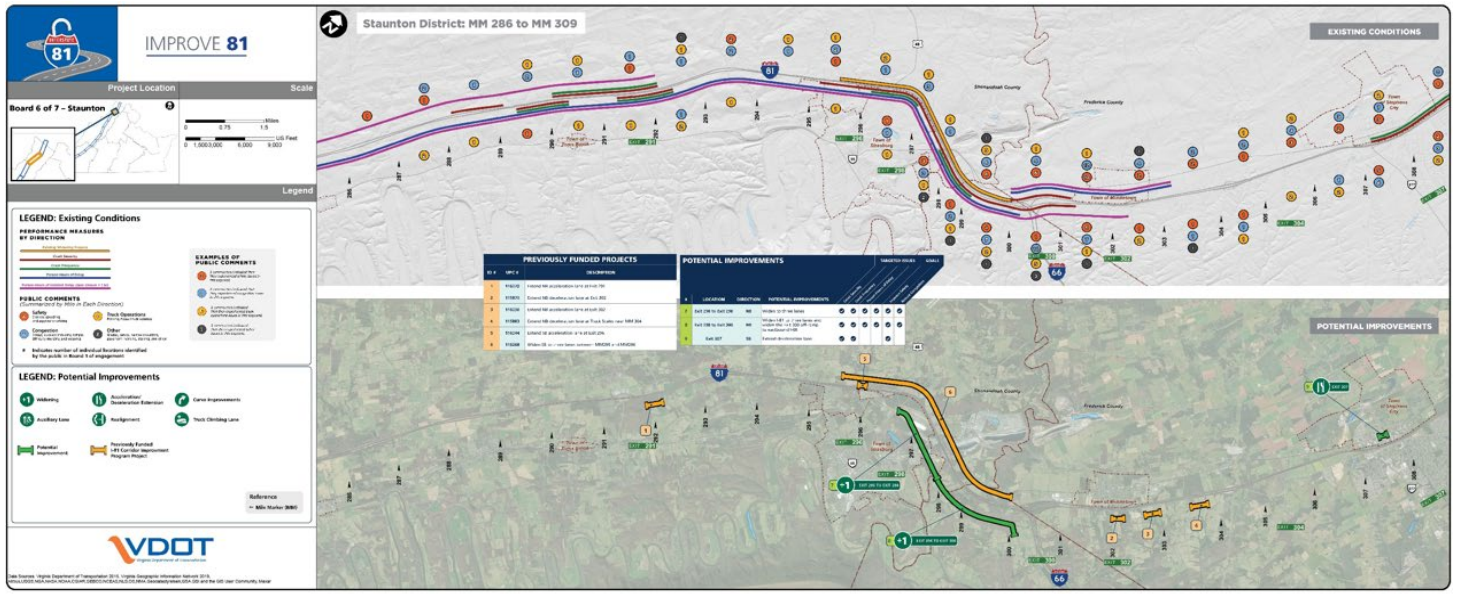
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PARTICIPANTS

VIRTUAL ENGAGEMENT

1,136
COMMENTS

1,674
PARTICIPANTS





Round 2 Public Outreach- July
Potential Solutions Takeaways

- **87% of respondents "Agree" with the overall list of potential solutions that was presented at the July public meetings**
- **General corridor-wide comments**
  - Speed and enforcement (100+ mentions)
  - Widening to three lanes (90+ mentions)
  - Truck management (30+ mentions)



Financial Constraints

$2-2.25 Billion in funding

anticipated to be available for *new projects*

Preliminary estimate $6+ Billion in potential solutions identified

2025 CIP exceeds anticipated funding

SMART SCALE-like prioritization will be used to

Narrow Potential Solutions List

Next Steps- October Deliverable

Prioritized Solutions

Operational Prioritization

- District input and analysis
  - Safety (secondary crash reductions)
  - Mobility (reduced delay and improved incident response times)
  - Environmental (fuel savings and emission reductions)

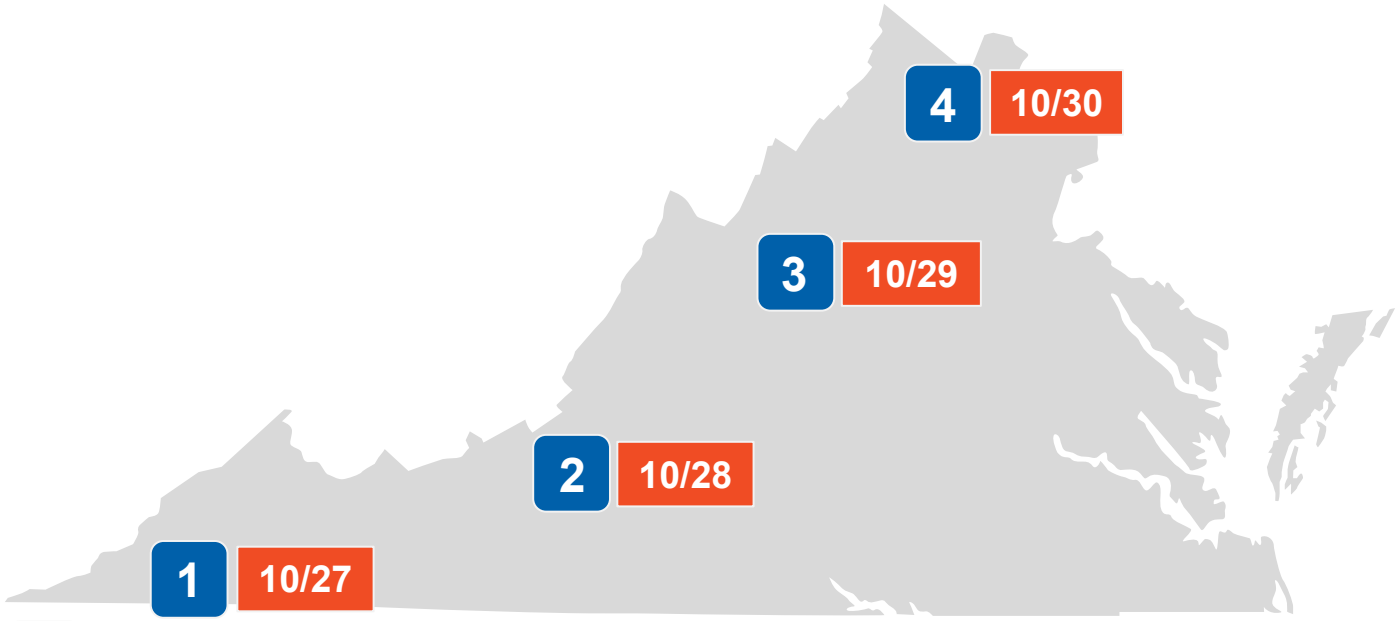
Capital Prioritization

- Apply SMART SCALE ‘like’ scoring
  - 40%: person hours of delay reduction
  - 40%: fatal and severe injury crashes reduction
  - 20%: accessibility to jobs increase

Present Staff-Recommended Funding Scenario

Next Steps- Round 3 Public Outreach
Prioritized Solutions

- **Four in-person meetings to be held week of October 27th**
- **Maps displayed with prioritized solutions and cost estimates**
- **Operational improvements included**
- **Virtual survey to gather public comment on prioritization**
- **All materials shared on the project website**



1	Bristol District	SWVA Higher Education Center
2	Salem District	Salem Civic Center
3	Staunton District (South)	Blue Ridge Community College
4	Staunton District (North)	Shenandoah University

All meetings 5-7pm

Next Steps- November 2025—January 2026

- Finalize funding scenario
- Share funding scenario with the CTB and I-81 Advisory Committee
- Receive I-81 Advisory Committee recommendation on funding scenario
- CTB considers funding scenario
- CTB adopts final funding scenario and update to the I-81 CIP

Questions

Study Manager: Rob Williams, AICP

Email: va81corridorplan@vdot.virginia.gov

Phone: 804-371-4868

Project Website: www.improve81.org

