

IMPROVE 81

Winter 2022

81 INSIDER

Where Do We Stand?

In 2021, the I-81 Corridor Improvement Program (CIP) made significant strides in improving safety and reliability along the interstate.

The calendar year saw design-build contracts kick off, smaller construction projects awarded and completed, and program revenue reach nearly \$230 million.

“The Corridor Improvement Program is creating unprecedented forward momentum,” said I-81 Program Delivery Director Dave Covington. “As we move further into the program and larger projects complete the design and right of way process, then move to the construction phase, improvements needed for decades will be underway.”



Digital message signs in Wytheville

The following are a few I-81 CIP highlights for 2021:

- The Virginia Department of Transportation (VDOT) contracted with Archer-Western construction team in April to design and build the \$232.7 million project to widen I-81 from two lanes to three lanes in both directions between exits 137 and 141 in Roanoke County and Salem.
- Thirty new digital message signs were installed along the corridor. Twenty-one are located on the interstate between mile marker 72 in Wythe County and mile marker 321 in Frederick County. Another nine signs are on roadways approaching I-81, offering information that can help motorists decide whether to merge onto the interstate.
- Fifty-one new traffic cameras were installed along the corridor. The installation of the cameras began in 2020 and was completed in 2021. The additional cameras provide visibility to our Traffic Operations Centers and allow the operators to recognize incidents along the interstate more quickly which helps to drive down incident clearance times.



VDOT contractors work at I-81 Exit 205

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Where Do We Stand? *(continued)*

- VDOT launched a Towing and Recovery Incentive Program (81TRIP) in May in order to further drive down interstate clearance times related to incidents such as crashes. The 81TRIP program incentivizes our towing and recovery partners to meet specific clearance goals. To date, the program has driven down average clearance times to approximately 22 minutes.
- The Bristol District awarded construction contracts for nine acceleration/deceleration lane extension projects in 2021, with many wrapping up during the year. Additionally, a shoulder stabilization project in Washington and Smyth counties was completed and a Smyth County project to apply a high-friction epoxy overlay to improve traction during wet weather moved to construction. The epoxy overlay project includes adding fencing to prevent animals from crossing the interstate.
- In November, Staunton District completed three new ramp-extension projects in the northern Shenandoah Valley. The projects are located at Exit 291 and Exit 296 in Shenandoah County, and at the northbound truck weigh station near mile marker 304 in Frederick County. All three interchanges handle significant commercial-truck traffic.



In spring and summer 2022, multiple projects that have been in the preliminary engineering stage will move to construction. These include a truck climbing lane project at mile marker 39.5 in Smyth County and the Troutville Rest Area improvements, consisting of ramp extensions and enhancements to truck parking.

The corridor's first major widening project also will begin heavy construction. The design-build project to widen I-81 in both the northbound and southbound directions between Exit 137 and Exit 141 will begin construction in the spring of 2022.

In the Staunton District, two SMART SCALE program projects that are tied to future I-81 CIP projects go under construction in 2022 in the Harrisonburg and Strasburg area.

In Harrisonburg at Exit 247, four bridges on Route 33 (East Market Street) will be replaced including two that cross over I-81. The project begins in summer 2022 and will finish up in 2025, when a project to widen I-81 through Harrisonburg begins.

In the Strasburg area where I-81 and I-66 come together, a SMART SCALE project to extend the merge area from westbound I-66 onto southbound I-81 begins in spring 2022. This requires replacement of the I-81 bridge over Water Plant Road. When the project wraps up in 2024, a southbound I-81 widening project between mile markers 299 and 296 begins.



Northbound truck climbing lane planned for mile marker 39.5 in Smyth County



The People Behind the Projects

Meet some of the team members who offer expertise, dedication and innovative thinking to the Interstate 81 CIP. Jenn Robertson is a senior traffic engineer for VDOT in the Southwest Operations region. She is currently managing a signal communications project for the I-81 CIP that will keep traffic moving on detour routes when crashes occur on the interstate.

Tell us more about the I-81 CIP project that are you currently involved in.

We have identified several detour routes for I-81 and will be improving signals along these alternate routes. These routes already experience congestion, especially during peak travel times. When we add traffic from I-81, it can create gridlock and sometimes secondary crashes. The purpose of these improvements is to help alleviate traffic congestion when incidents occur along the corridor.

Why is being able to communicate with these signals so important?

The way our traffic signals are set up now, technicians would have to go to the signal boxes for each traffic signal to change the controls. With these upgrades, the Traffic Operations Center (TOC) will be able to make the changes remotely which saves time and manpower. We will also be able to have pre-determined signal timings ready so that as soon as an incident happens, the signals will start their new timing before the traffic has a chance to back up too much.

How many traffic signals will be upgraded in your area?

There are 82 signals in need of upgrades in Roanoke, Salem, Christiansburg, Radford, Dublin and Pulaski. These signals are at intersections along the Route 11 and Route 460 corridors where congestion occurs during a blockage on I-81 in the Roanoke Valley or the New River Valley. We started the design process with a consultant back in January 2021 and we hope to advertise for construction in the summer of 2022.

How will the project that you're working on benefit I-81 drivers?

When drivers get off the interstate to avoid an incident, they sometimes find themselves in a lot of traffic because the parallel route backs up. With these signal upgrades, we will be able to change the timings based on the backup to keep the traffic moving with more green time on the detour routes. Our goal is to just keep traffic moving when there is an incident on the interstate.

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The People Behind the Projects (*continued*)

What has been the biggest challenge?

Not all of the traffic signals that we are upgrading are the same. Some are owned and maintained by localities. Working together and coordinating with them and their systems has definitely been a challenge because every locality does it differently. Ensuring that their equipment can communicate with our equipment is a hurdle that we have to overcome in some instances. We're dealing with several different types of signal controller equipment as well as detection devices.

What do you look forward to most about these changes happening?

We've been working on these upgrades for more than a year. I'm really looking forward to seeing all of our communications upgrades come to fruition. It will be really cool to watch traffic move faster, especially through Main Street in Salem where I travel a lot. From personal experience, being stuck in traffic is not fun whether you're on the interstate or on an alternate route.

Harrisonburg Widening Plans Unveiled

Early plans for widening I-81 through the Harrisonburg area made their debut during a citizen information meeting in September 2021. About 70 people turned out for the meeting, which offered a series of large display boards showing the six-mile-long project. It is designed to enhance safety, ease existing congestion and provide for future capacity needs along the interstate.

At roughly \$300 million, the Harrisonburg widening is one of the largest projects in the I-81 CIP. Plans specifically call for:

- A third lane northbound and southbound between mile marker 242.2 in Rockingham County and mile marker 248.5 in Harrisonburg.
- Widening to the median side where possible, to make use of existing VDOT right of way and minimize traffic disruption during construction.
- Replacement or widening of eight bridges along I-81, and replacement of the Pleasant Valley Road overpass.

Because of its proximity to the bridge over I-81, the intersection of Pleasant Valley Road and Early Road will be reconstructed, either using a traditional configuration or a roundabout. The citizen information meeting at nearby Pleasant Valley Elementary School offered conceptual designs and video simulations of both alternatives.

As part of continued design work, VDOT and its consultant partners are studying the possibility of sound walls along certain portions of the interstate. The study process includes environmental assessment and public outreach. Environmental planning for this project also focuses on protections for Blacks Run, an impaired waterway passing through the I-81 project limits at several locations.

Visit the I-81 Harrisonburg Widening web page at VirginiaDOT.org for more information about the project including display boards, a video and a podcast. More detailed plans will be available during a public meeting in summer 2022.

Parallel Projects

When drivers see an I-81 crash alert on a digital message sign, or notice a long line of brake lights in the distance, they may decide to take an alternate route. And they need to know that the roads running parallel to the interstate can safely and efficiently handle the extra traffic.

These arterial routes, including Routes 11 and 460, already serve thousands of commuters and local motorists. They are “Main Street” for numerous towns and cities along the I-81 corridor, and a sudden influx of interstate traffic can create gridlock.

The I-81 CIP includes nearly \$30 million worth of arterial route improvements in the Bristol, Salem and Staunton Districts. These projects are bringing technology upgrades to more than 180 traffic signals, and offering other operational enhancements such as traffic cameras, electronic message boards and turning-radius improvements.

The signal upgrades will bring smarter



Turning-radius improvements on Route 11, Rockbridge County

technology to traffic lights owned by VDOT and localities throughout the I-81 corridor. VDOT traffic operations centers will be able to remotely monitor the signals and quickly make adjustments to their timing. This will help keep traffic moving during incidents or construction on the interstate. “We can also more closely monitor the performance of those signals and make adjustments over time,” notes Dave Covington, I-81 program delivery director. “That optimizes the signal for everyday use – not just during incidents.”

In the Bristol District, three projects will improve 64 signalized intersections in Bristol, Abingdon, Marion and Wytheville. “Route 11 goes through the heart of downtown communities and stays busy throughout the day with local traffic,” says Bristol District Traffic Engineer Brian Holt. “These signal upgrades will help to more efficiently move the existing traffic along with the interstate traffic when crashes occur.”

Salem District Traffic Engineer Jennifer Robertson says three projects will bring upgrades to 82 signals in Pulaski, Dublin, Radford, Christiansburg, Salem and Roanoke. “A lot of these routes experience congestion already – especially during peak travel times,” Robertson explains. “Once these signals are upgraded, we can increase the green-light time temporarily. This will help traffic from 81 and the parallel routes to keep moving.”

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Route 11 traffic signals in the town of Marion

Parallel Projects *(continued)*

The Staunton District has five projects to upgrade intersections in the areas of Staunton, Weyers Cave, Mount Crawford, Stephens City and Winchester. These projects also include new traffic cameras, digital message signs, and geometric improvements at three intersections along Route 11 in Rockbridge County. “We identified a number of locations we can target with small improvements – like shoulder or median

widening – to remove those pinch points and smooth out the detour traffic flow,” says Staunton District Traffic Engineer Matt Bond.

The Rockbridge County work and six traffic-signal upgrades were completed in 2021. Many more projects will go under construction in 2022, and all of the arterial route improvements should be complete by 2025.

Lots of Ways to Get There

Traveling the I-81 corridor in Virginia doesn’t require driving. Several multimodal options help take traffic off the interstate, save fuel, and remove barriers to transportation access.

The Department of Rail and Public Transportation (DRPT) recently expanded the Virginia Breeze inter-city bus network. This service now includes four routes connecting

rural communities in western and central Virginia with urban areas and other forms of transportation. The buses offer roomy seats, restrooms, power outlets and wireless internet service.

The Valley Flyer and the new Highlands Rhythm both offer daily northbound and southbound service along the I-81 corridor.

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Ribbon-cutting for the Virginia Breeze's new "Highlands Rhythm" route



The Virginia Breeze carries passengers on the Valley Flyer route near Staunton

Lots of Ways to Get There (continued)

The Valley Flyer connects Blacksburg with Washington D.C. and has several stops in the Shenandoah Valley and New River Valley.

The Highlands Rhythm started on November 15, 2021, and is expected to carry up to 25,000 passengers each year. The service is partly funded by the I-81 CIP. It runs between Bristol and Washington D.C. with several stops including Wytheville and Salem.

“You’re able to access Dulles Airport or Union Station,” explains DRPT Director Jennifer Mitchell. “From Union Station you can take Megabus or Amtrak trains up into the northeast corridor. It’s a convenient, predictable service to connect people with friends and families.”

Enhancements to passenger rail service are just around the bend. In spring 2022, travelers will have a second daily round-trip train between Roanoke and Washington D.C. This service is expected to attract more than 220,000 passengers a year. The rail line is also eyeing an expansion southward to the New River Valley, with construction of a new station in the Christiansburg area. The Christiansburg-to-Washington passenger rail service is expected to start in 2025.

Dave Covington, VDOT’s program delivery

director for the I-81 CIP, says rail and transit upgrades are vital to improving the interstate corridor. “Multimodal projects really make this a system,” Covington says. “They work together for the overall goals of the program, which are enhancing safety, reducing congestion and providing opportunities for economic development.”

Mitchell explains that these multimodal enhancements also improve transportation equity by providing underserved communities with better access to educational and medical facilities. “Not everybody has a car, and people need options,” she says.


Improvements to Virginia’s rail system also have the potential to move some freight traffic off Interstate 81 and onto the tracks. The Western Rail Initiative includes the purchase of 28.5 miles of track between Salem and Christiansburg; replacement of the Long Bridge over the Potomac River; and infrastructure improvements between Roanoke, Lynchburg and Manassas. Partnerships between DRPT and the private rail industry will also create more effective scheduling of passenger and freight trains. All of this work will allow the Commonwealth to expand freight-rail service and improve reliability.



Keep in Touch

Have a question or comment regarding the I-81 CIP?
Connect with VDOT's Improve81 communications team!

CONTACT THE VDOT CUSTOMER SERVICE CENTER (24/7/365)

 1-800-367-7623
 (1-800-FOR ROAD)

 vdotinfo@vdot.virginia.gov

 VDOT Customer Service app:
<https://my.vdot.virginia.gov/>

An agent will answer your questions and/or forward your questions and comments with contact information you provide to the appropriate I-81 CIP team member.

CONNECT WITH US

For access to I-81 VDOT district Twitter feeds, regional 511 traffic feeds, overall district news, and district traffic alerts, go to [Improve81.org](https://www.improve81.org), look at the website menu bar then select "Contact Us" and scroll to the page bottom.

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