

# HRBT EXPANSION Magazine



## IN THIS ISSUE

4

Mary's Final Act

6

Progress Inside the Tunnels

8

Bridge Updates

12

Intelligent Transportation Systems



## TABLE OF CONTENTS

- Progress at a Glance ..... **3**
- Progress Highlight ..... **4-5**
- Tunnel Update ..... **6**
- Community Outreach..... **7**
- Bridge Update ..... **8-11**
- Traffic Management Update ..... **12-13**
- Staff Spotlight..... **14-15**
- Construction Update ..... **16-17**
- Roadway Update ..... **18**
- HREL Update ..... **19**



# Project Director Message

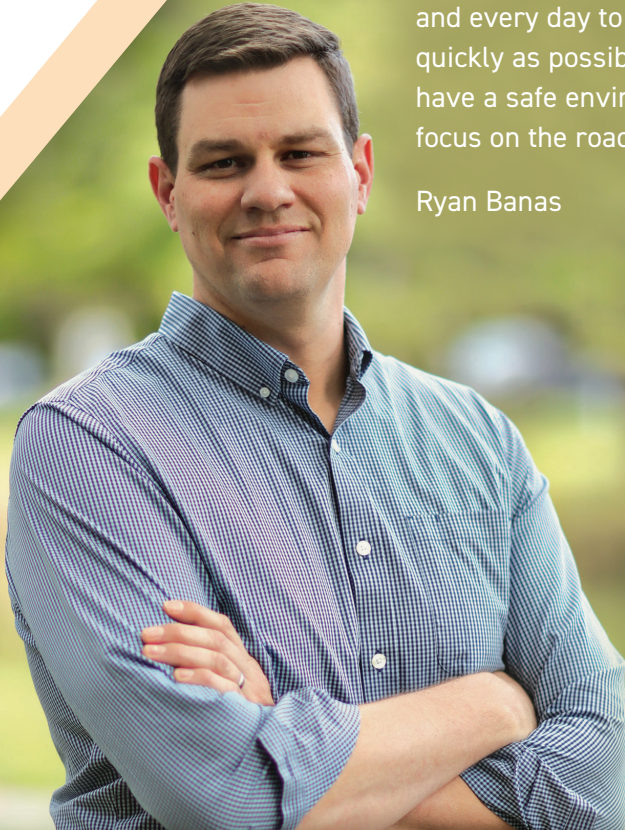
*Ryan Banas, PE, CCM*

2025 was a transformative year for the HRBT Expansion Project. From the early-year opening of new sections of roadway, to the September breakthrough of Mary our tunnel boring machine, and wrapping up the year with the major traffic shift of the first two lanes of traffic onto the new South Trestle, start to finish 2025 was a year to be remembered.

What's even more exciting is the fact we're not done yet! 2026 is slated to be just as meaningful as its predecessor. Motorists using the corridor see changes taking place every day throughout the nearly 10-mile project footprint. Additional new structures will be coming online this year such as the widened bridges over Bay Avenue in Norfolk, the second half of the new Mallory Street bridge, and the new North Trestle westbound. We'll also be seeing miles of new roadway widening in Hampton and Norfolk added to our already impressive list of accomplishments.

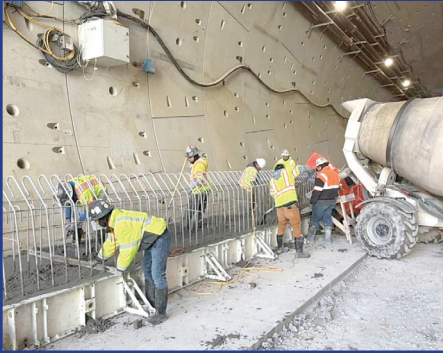
With numerous roadside work activities throughout the HRBT Expansion Project corridor, coupled with the more than 21 miles of other improvements currently underway on the Hampton Roads Express Lanes network, it's easy to become complacent on your daily commute or weekend trips. There are more than 2,000 construction professionals working each and every day to bring all of these improvements to fruition as quickly as possible and we need your help to make sure they have a safe environment to work in. Put down your phone, focus on the road, and stay alert in our work zones.

Ryan Banas

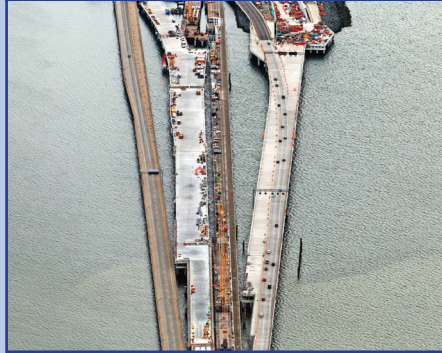


## PROGRESS AT A GLANCE

TUNNEL INTERIOR



NORTH TRESTLES



SOUTH TRESTLES



MASON CREEK BRIDGE



MALLORY STREET BRIDGE



WILLOUGHBY BAY BRIDGE



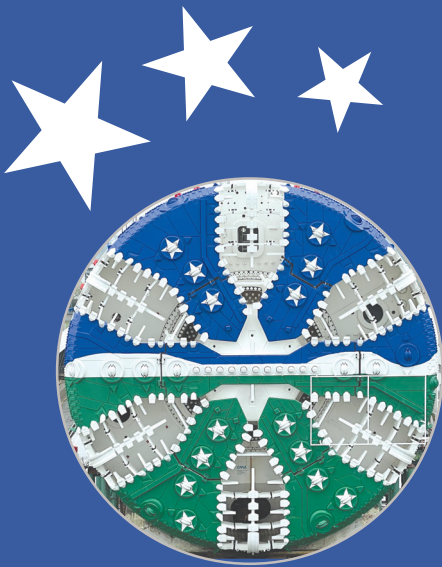
## Introducing New District Engineer Michael Davis, PE

The HRBT Expansion Project welcomes Michael Davis, PE, to the team. As the VDOT Hampton Roads District Engineer, in addition to oversight of this \$3.9 billion project, Davis leads more than 860 employees serving nine counties, 11 cities, and two islands, managing a transportation network that includes major bridges, tunnels and Virginia's only state-operated, 24-hour ferry system.

With nearly 20 years of service to VDOT and more than 36 years in the transportation industry, Davis manages over \$5.5 billion in active construction projects. Prior to his current role, Davis served six years as Deputy District Engineer, overseeing the development and delivery of the district's \$1 billion annual construction program and leading the Planning, Programming, Design, Construction, and Locally Administered Projects divisions. He is a licensed professional engineer in Virginia and North Carolina, a Certified Construction Manager, and a graduate of Old Dominion University, the Virginia Executive Institute, and the Commonwealth Management Institute at Virginia Commonwealth University.

Davis' experience in overseeing development and delivery of projects will be an asset to the HRBT Expansion Project team.





# Mary's Final Act

With excavation for HRBT Expansion Project's new twin bored tunnels complete, crews shifted their attention to dismantling the massive systems that made the region's newest underwater tunnels possible.

The disassembly process began shortly after Mary the Tunnel Boring Machine's (TBM) final breakthrough last fall, starting with deconstruction of the slurry treatment plant (STP), which we've affectionately come to know as Katherine. Dismantling the three-story facility was necessary to clear space on the South Island for Mary's cutterhead and trailing gantries. With Katherine's job complete, the STP's cyclones, conveyors, tanks, and filter press building were dismantled and removed from site.

## Disassembly

Mary's disassembly process required the same precision as her assembly. After a deep cleaning of the TBM's cutterhead, scaffolding was erected around the exposed shield to allow welders a working platform to install lifting eyes, or reinforced attachment points for crane rigging.

## Lifting the Cutterhead

Working in tandem, two cranes with a combined capacity of nearly 1,100 tons lifted the 500-ton cutterhead to the top of the South Island so crews could safely begin the dismantling process.

## Dismantling the TBM's Core

With the cutterhead out of the way, next sections of the TBM's shield were removed. With the protection of the shield no longer in place, it was the first time many parts of the TBM saw daylight since assembly in 2022. This allows key components such as the segment erector and main drive bearing to be removed by crane.

## The Final Shield Emerges

The final section of Mary's shield was removed from the receiving pit, giving the crews a clear path to begin extracting Mary's four trailing gantries. During the mining process, each gantry performed vital functions to permit continuous mining operations.

## Dismantling the Gantries

Crews installed 10 half rings, lining the bottom of the receiving pit with extra segments remaining from the mining process. The gantries were, one by one, extracted using hydraulic cylinders and structural frames in the same manner as when removed following completion of the first tunnel in spring 2024.

The gantries were stripped of their heaviest components in the receiving pit before being lifted to the surface. This allowed more manageable crane lifts prior to further disassembly once safely removed and staged away from the open shaft.

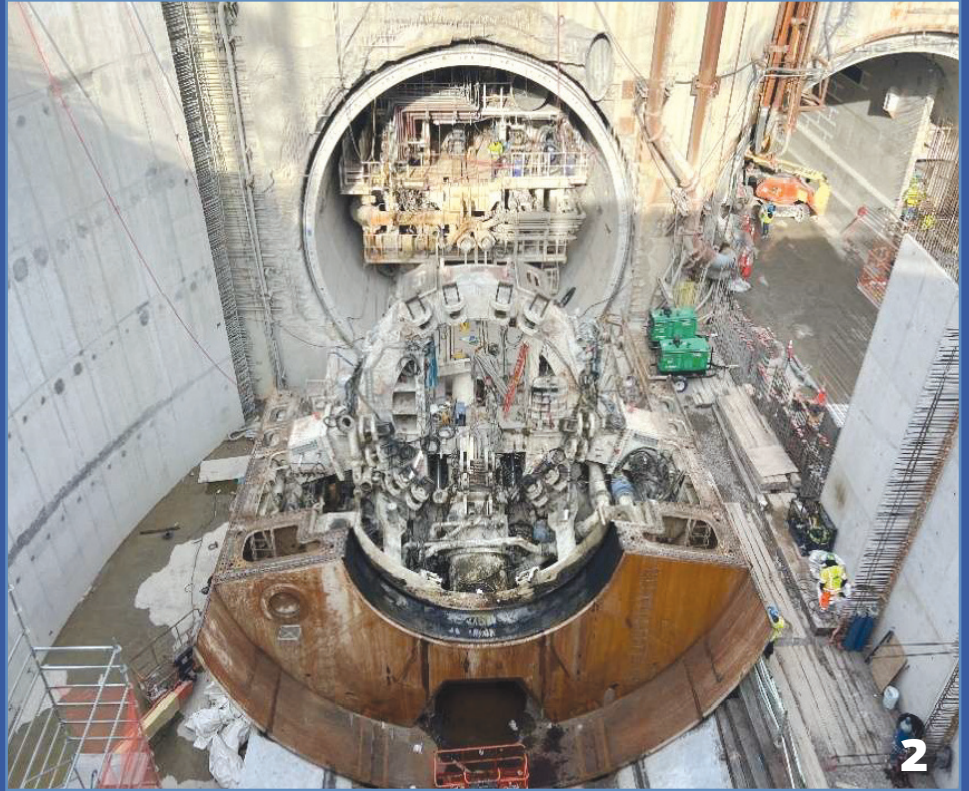
## From Start to Finish

Just like when she was received from the manufacturer, Mary will be broken down into more than 170 bulk pieces and shipping containers prior to leaving the South Island. In total, Mary's journey spans from summer 2022, when her first parts arrived on the island, to spring 2026, when she is expected to depart.

[1]: The cutterhead had to be carefully prepared for disassembly.

[2]: The lower portion of the shield remains after the main drive bearing is removed. [3]: Each gantry is removed using a crane.

[4]: Crews prepare to temporarily place extra segments to create a receiving surface for the gantries. [5]: The TBM main drive is loaded onto a heavy lift self-propelled modular transporter. [6]: The next gantry to be removed patiently waits just inside the tunnel.



# Progress Continues Inside the HRBT Tunnels



While boring two new tunnels was not a small task, significant work is still required to transform the new tubes into the infrastructure Hampton Roads will rely on for generations to come.

Currently, interior tunnel construction focuses on road placement and tunnel wall covering, along with installation of safety features required to support reliable tunnel operations.

## Roadways Take Shape

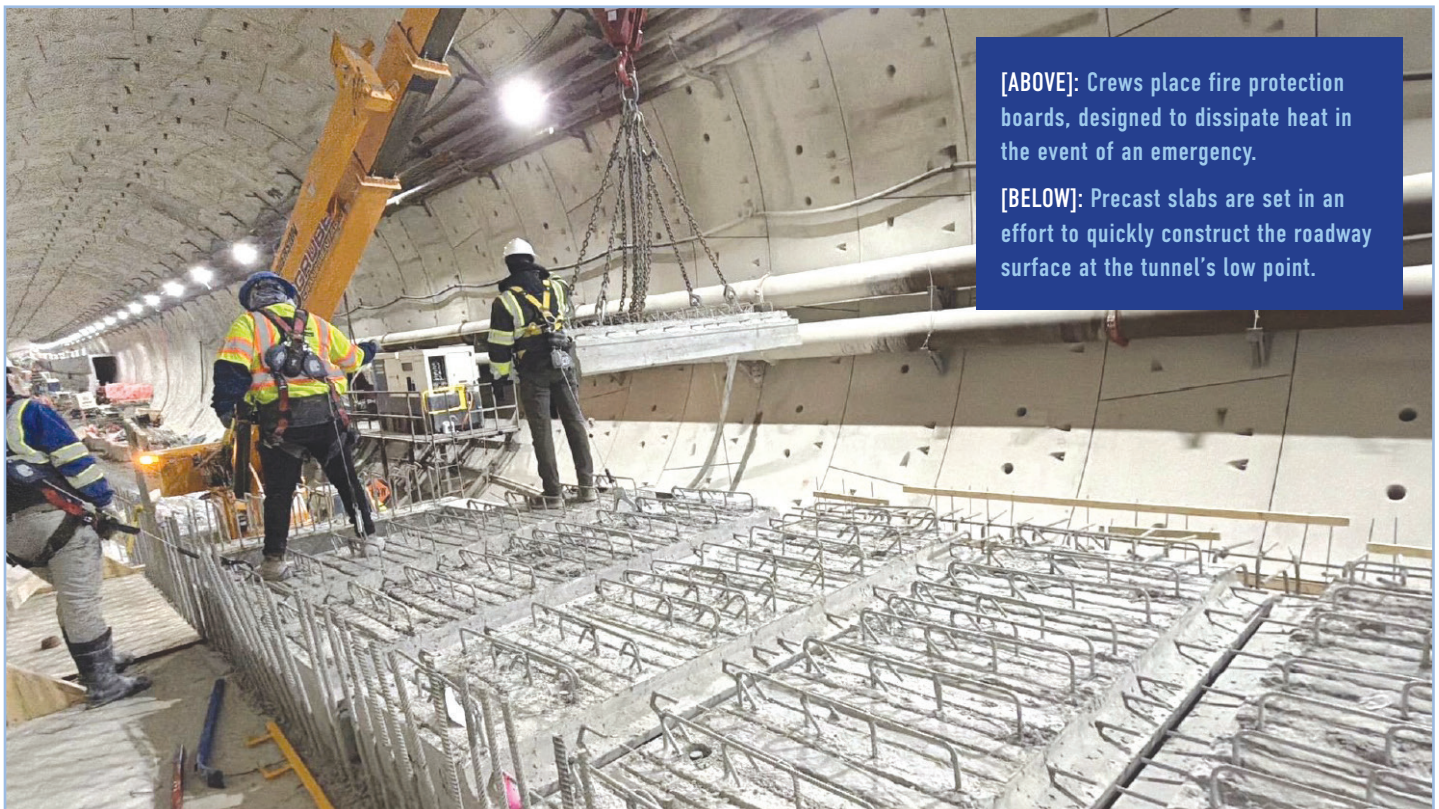
Crews are hard at work placing a mixture of crushed stone and cement to form a stable base for the roadway that will eventually traverse the harbor. Additionally, efforts are underway to complete the drainage system that will handle any water from vehicles or tunnel operations such as regular tunnel washings.

## Egress Corridor and Safety Features

In the first bored tunnel, more than

70% of the egress corridor has been completed. This passageway provides motorists a safe way to exit the tunnel in the event of an emergency. Efforts are also underway to construct mock ups of the tunnel's final facade; fire protection boards that will be applied to walls and the ceiling. Work in the second tunnel is following the same path as the first; working from the roadway up, crews are making great progress on drainage and interior concrete activities.

As the tunnels take shape, they're beginning to resemble tunnel interiors that drivers will experience when the finished tunnels open to traffic.



[ABOVE]: Crews place fire protection boards, designed to dissipate heat in the event of an emergency.

[BELOW]: Precast slabs are set in an effort to quickly construct the roadway surface at the tunnel's low point.

# Welcome Center Offers a Front Door to the Expansion Project

While aerial photos, project videos and tunnel “boring” podcasts help tell the HRBT Expansion story online, the Welcome Center connects directly to the people, technology and strategies that drive progress.

Through interactive displays and one-on-one staff engagement in 2025, more than 1,600 guests enjoyed a panoramic view of one of the region’s most transformative infrastructure projects in Virginia’s history. As crews advance construction across the project’s marine trestles, tunnels and landside bridges in 2026, the HRBT Expansion Project team is gearing up for another season of monthly open house events, visits from community and civic groups and STEM-focused summer sessions for students of all ages.

The HRBT Welcome Center is open for groups of 10-30 individuals between 9 a.m. and 4 p.m., Monday through Friday. Contact the Communications Team at [HRBTInfo@vdot.virginia.gov](mailto:HRBTInfo@vdot.virginia.gov) to make a reservation and visit [hrbtexpansion.org](http://hrbtexpansion.org) to view the Open House schedule.



HRBT Expansion Project engineer Jason Stull shares his experience on bridge rehabilitation with homeschool seniors.

[1,2] Since fall 2025, hundreds of guests from the Hampton Roads homeschool community, along with families from as far as Richmond, Virginia, have visited the Welcome Center to be inspired by the history, engineering and career opportunities related to the construction. [3] Girl Scout Unit 220 traveled from Virginia Beach in November to bolster their interest in STEM.

# NOW OPEN: South Trestle

For only the second time in more than 50 years, a new bridge opened at the Hampton Roads Bridge Tunnel. In November 2025, two eastbound lanes were shifted onto the new South Trestle, which connects the HRBT's South Island to the Norfolk shoreline. Drivers heading to Norfolk are traveling on two eastbound lanes of the new span with higher elevations than the original bridges. The increased elevation keeps corrosive saltwater further away from the structure's critical components as well as allows for banking the structure to promote drainage during rain events.

The traffic shift is part of the phased construction needed to complete the new bridges while maintaining two lanes of travel in each direction. Now that eastbound traffic has been moved to the new South Trestle, crews can begin removing the original structure and make tie-ins to the new and existing tunnels. The new South Trestle will eventually carry all eight lanes of traffic across the harbor between Norfolk and the HRBT.



Two eastbound lanes of the new span are NOW OPEN.

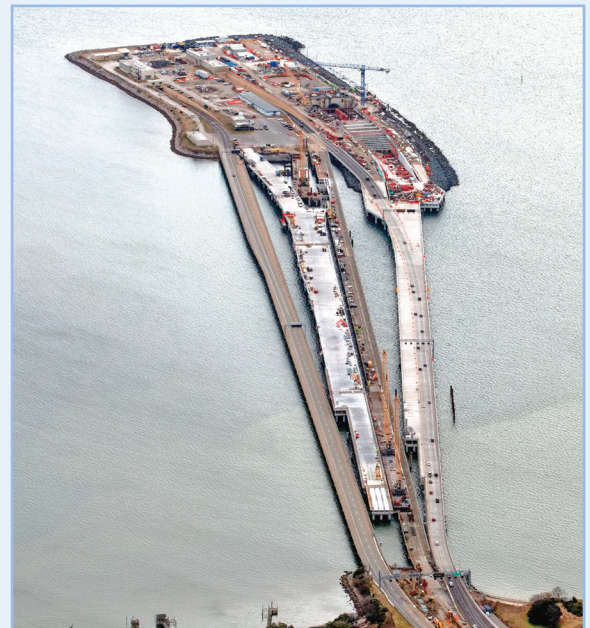


## Westbound North Trestle in its Final Stretch

Marine bridge construction continues to advance steadily on both ends of the corridor, with the new westbound North Trestle on track to open in the second half of 2026. This upcoming milestone follows the successful spring 2024 opening of the new eastbound North Trestle, which was hailed as the first new HRBT bridge in half a century.

Crews have continued the complex coordination of working between two active bridges carrying tens of thousands of vehicles each day. To date, crews have already driven 177 of the 262 piles needed. The beam launcher, an innovative piece of equipment, assisted with the placement of 99 out of the 185 total girders in the narrow work zone between the original trestles.

Work progresses throughout the year on this critical structure, even in cold weather. Crews implement additional controls such as insulated blankets, heaters to provide a boost of warm air, and temperature probes that monitor curing conditions. With strategic planning and attention to the smallest details, bridge construction continues to drive forward even in the coldest of months.





## ***BRIDGE UPDATE***

# **New Mallory Street Bridge Nearing Completion**

Construction is moving closer to completion at the new Mallory Street Bridge with a target of opening all four lanes by summer 2026.

The existing bridge required phased replacement given the criticality of the link it provides between major stakeholders in Hampton. The first half of the new structure was completed in 2024. Shortly after, crews began demolition of the remaining portions of the existing bridge and quickly moved into the final phases of construction. Well coordinated closures of I-64 west were performed in late 2025 to allow placement of the new girders spanning the interstate.

The new Mallory Street Bridge will provide additional capacity for pedestrians and bicyclists. This critical infrastructure will bring improved access for those walking between Phoebus, the Hampton VA Medical Center, and Hampton University. The new Mallory Street Bridge is the only new bridge in the nearly 10-mile corridor project that spans the interstate.



# HRBT Expansion Bridge Demolition Update

Existing South Trestle Westbound is demolished to make way for the new structure.



Heavy lifting continues at the HRBT Expansion Project with the demolition of the existing trestles flanking the Hampton Roads Bridge-Tunnel. Here's what to expect in 2026:

**South Trestle Eastbound:** Demolition continues this spring at the existing bridge connecting South Island to Norfolk to prepare a path that allows for completion of the new South Trestle.

**South Trestle Westbound:** Demolition recently began near South Island to make room for connection to the new South Trestle. Crews are using hydraulic shears capable of severing bridge columns in a single stroke, making quick work of the operation.

**North Trestle Eastbound:** Located between two new trestles, demolition of the existing North Trestle eastbound began in 2024. Crews have preserved much of the structure for use as a temporary work bridge. As need begins to diminish, more of the existing trestle will be removed.

**North Trestle Westbound:** The last of the existing structures to be removed, demolition on North Trestle westbound will begin in the second half of 2026. Crews won't begin this effort until traffic switches onto the new trestle later this year.



Support piles of the original bridge removed from the water.

# Intelligent Transportation Systems: What's Coming Online



[1]: A crane is used to place steel reinforcement in the foundation for the overhead sign structures. [2]: Conduit is laid in protected trenches in many corridors throughout the project. [MAIN]: A new overhead sign structure is assembled in preparation for installation.

Installing a new traffic management system is challenging under any circumstances. Doing it amid construction and while thousands of vehicles continue to move through one of the region's busiest corridors makes it significantly more complex. Yet along the HRBT Expansion, crews work behind the scenes to set up and

integrate Intelligent Transportation Systems (ITS) while maintaining the existing ITS and carefully sequencing work to keep traffic moving safely throughout construction.

One of the most visible tasks is the installation of new overhead sign structures with digital message

signs (DMS) throughout the project's footprint. Spaced at regular intervals, 48 new DMS will allow VDOT's traffic operations center and tunnel operators to provide advance notification to motorists in the event of adverse conditions. Crews will install more than 35 overhead sign structures in some of the project's tightest areas. Long span, cantilever, and butterfly sign structures can be found on various types of foundations including drilled shafts as well as bridge mounted sign structures. One of the project's most challenging structures at the Willoughby Bay Bridges was so large it required transportation via barge prior to its installation.

Lane-use signals, variable speed limit signs and traffic control signals are also being installed. These systems allow VDOT tunnel operators to open or close lanes, manage speeds, and control vehicles at tunnel approaches and inspection stations, helping maintain safe and orderly traffic flow through the corridor.



Another critical system for safety of both the new and existing tunnels is also being supplemented. The corridor's overheight detection system is being expanded to account for all possible routes traffic may take as it approaches the tunnels. This system ensures all vehicles entering the tunnel stay within the maximum allowable height restrictions. What if your vehicle is too tall? Don't worry, VDOT has you covered. In the event a vehicle is too tall, it is directed to the I-664 Monitor-Merrimac Memorial Bridge-Tunnel, which has increased clearances when compared to the HRBT.

Supporting all these devices is an expanded network of traffic cameras, installed both inside the tunnels

and along the surrounding roadway corridor. The cameras give VDOT tunnel operators real-time conditions of the roadway and help coordinate incident response. Motorists can view these cameras, too, via the use of VDOT's 511 app.

Whether it's underground or overhead, installing ITS while maintaining an active traffic corridor remains one of the project's most complex challenges. Crews are carefully relocating existing devices, installing new systems,

testing performance and transitioning operations in phases to ensure traffic continues moving safely during construction. Once complete, the ITS network will operate end to end across the HRBT corridor, providing VDOT with the tools it needs to manage traffic, communicate with drivers, and respond quickly to incidents.



# STAFF SPOTLIGHT



Martin's role includes identifying and solving technical issues on the expansion project.

## **Michelle Martin:** *PROJECT MANAGER AND RESPECTED MENTOR*

Her quiet confidence and low-key demeanor belie the demands and complex challenges Michelle Martin tackles daily as project manager for VDOT's team at the HRBT Expansion Project. And shying away from a technical issue or problem is never an option for the Hampton Roads native, whose interest in building things dates to her days as a young girl eager to work alongside her father on construction projects.

## Engineering a Leader

Her innate, problem-solving curiosity and desire to design big things accompanied her path to Virginia Tech, where Martin began her studies as an architectural major but pivoted to civil engineering. After graduating in 2003, she started building a resume that rivals even the most seasoned engineering professionals.

Martin's other professional credits include work on the Elizabeth River Crossing Tunnels, Dominion Boulevard (Veterans Bridge) in Chesapeake, Kempsville/Indian River Road Continuous Flow Intersection in Virginia Beach, the Denver Colorado Central Interstate 70 tunnel initiative, and lead on the Meadowville Interchange project in Chesterfield, Virginia

## Leading Woman in Construction

Accolades followed. In 2017, she was honored by the American Council of Engineering Companies (ACEC-Virginia) as a rising star and later named one of CoVa BIZ Magazine's trailblazing WOMEN ON THE LEADING EDGE as an innovator and disruptor in her field.

Martin, a senior vice president for program management at engineering firm WSP USA, serves alongside VDOT staff at Virginia's largest-ever transportation construction project. Being part of a collaborative team that delivers large infrastructure projects, while identifying and solving technical issues along the way, is what drives Martin to complex mega projects and inspires confidence in everyone around her. Martin credits her mother (retired from the FBI) with encouraging prompts to aim high.

She's also a respected mentor to the teams she manages. Josh Gormer, HRBT Expansion Construction Manager has worked with Martin for the past seven years. "Michelle trusts our teams to work independently and provides support and accountability when needed. She leads with integrity, empathy and respect," said Gormer. What he especially appreciates about her management style is her "mentorship for leading large projects such as the HRBT Expansion Project and the encouragement she provides for professional growth."

## Work/Life Balance

Outside work, Martin can be found recreating with her husband and teenage son and daughter, preferably at her "happy place" on the Outer Banks of North Carolina.

Finding work-life balance in a demanding engineering field can be equally challenging, but Martin makes it a priority. Aligned with her professional commitment to team building, she emphasized the same cooperative spirit in the young women she recently coached in a travel volleyball league. As she lobbed balls to them to perfect their bump, set and hit drills, Martin served up a friendly reminder of the importance of teamwork.



Visiting engineers learn how twin tunnels were bored at the HRBT.



Project Controls: A daily oversight in Martin's management responsibilities.



When the HRBT Expansion is completed, Martin expects to embrace the next big project, somewhere in the U.S. or perhaps abroad. No doubt, her leadership, organizational skills and ability to motivate others will transform challenges into another opportunity for success.

# Building the Future of HRBT Operations

New buildings are rising out of the dirt on both the North and South Islands. The structures will support VDOT's ongoing maintenance and operations efforts at the HRBT. In addition to new control rooms for operating the tunnels, plans include improvements to workshops, garages, and other support functions necessary to keep the crossing in working order.

## South Island: Operations and Support Hub

On South Island, new buildings support tunnel ventilation and mechanical equipment, electrical and power infrastructure, maintenance access for crews, and emergency and operational support functions.

Currently, the new ventilation building is growing vertically on a daily basis. Walls, columns, and floor sections are being built, and steel framing is underway.

## North Island: Systems, Safety, and Redundancy

New buildings on North Island will augment existing tunnel support systems and are designed to work in coordination with the South Island, providing operational balance and redundancy.



The buildings are supported by a foundation of reinforcing steel and concrete.



Steel beams provide structural support for the ventilation building on the South Island.



Progress of building construction on the South Island.



[LEFT]: Crews level fresh concrete of the foundation for the North Island garage building.

# The Birds Are Back in Town

This spring, migratory and coastal bird species are once again returning to the waters and islands surrounding the HRBT. And as they have for six years now, crews are ready, employing all the same deterrent methods to keep the birds safe and away from the construction site.

This year, however, may prove a bit more challenging. With tunneling operations complete and the tunnel boring machine and slurry treatment equipment removed, portions of the South Island now appear more open than in recent years, offering open spaces birds could eye with nesting in mind.

As the landscape of the project changes, it is even more important to maintain the project's bird management program to prevent nesting on the Islands and within

active construction zones. As nesting season approaches, trained dogs continue to patrol the project work sites, redirecting birds away from active construction zones without harm. Fort Wool continues to be available as a nearby nesting ground for the birds. As in past years, three barges are positioned near the South Island to serve as temporary nesting sanctuaries. Another line of defense is the decoy system with strategically placed reflectors around the rock perimeter that continue to safely deter birds from the islands.

Even as the HRBT Expansion project transitions into a new phase, long-standing bird-protection efforts remain in place, reflecting an ongoing commitment to environmental responsibility alongside major construction activity.



# Building the Roadway Network Around HRBT

Crews are widening westbound lanes in the median near W. Bayview Boulevard.

Major progress is unfolding across the roadway network surrounding the HRBT Expansion. With 25 new or widened bridges, each one requires a smooth transition between the bridge and roadway. When traffic was shifted to the South Trestle in fall 2025, motorists traveling eastbound on Interstate 64 were able to experience the seamless connection from the HRBT across the Willoughby Bay Bridge and bridges over city streets such as 4th View Street, W. Evans Street and West Bayview Boulevard.

On the westbound Willoughby Bay Bridge, widening efforts continue as crews build new bridge sections with pile driving, pile cap construction, girder placement and concrete deck pours. Roadway approaches at both ends of the bridges are being built to tie the widened structures into the surrounding interstate network.

Over the winter of 2025 and into spring 2026, crews have continued widening efforts along the interstate. As the median is cleared, new sections of roadway appear in the gap between the eastbound and westbound lanes. With much of eastbound traffic already shifted, it provides more space in the median work zone for crews to widen all the westbound bridges connecting to the roadway.

Beyond the main HRBT bridge structures, roadway work continues along key approach areas to create a continuous network. As construction continues through spring 2026, expect additional traffic shifts as crews continue to work in phases to create a smoother drive across the HRBT.



Crews place girders for the bridge over W. Bayview Boulevard.



Working between two existing bridges, crews work to place the foundation to widen the westbound bridge over 1st View Street.



# Travel on the Hampton Roads Express Lanes



When completed, the Hampton Roads Express Lanes (HREL) will feature a 45-mile network stretching from Chesapeake to Newport News, including through some of the new lanes along the Hampton Roads Bridge-Tunnel. Currently, the Norfolk Reversible and Chesapeake segments are open and operational. Drivers can take advantage of these Express Lanes every day for a more reliable commute.

All vehicles using the Express Lanes must have an E-ZPass transponder. The lanes operate using dynamic tolling, meaning rates adjust based on traffic conditions to help keep traffic moving in the Express Lanes. Drivers traveling solo can choose to use the Express Lanes and pay the posted dynamic toll price with a standard E-ZPass or an E-ZPass Flex.

Vehicles with two or more occupants may travel toll-free in the Express Lanes in Hampton Roads when using an E-ZPass Flex transponder with the

switch set to "HOV-On." The Flex works just like a standard E-ZPass on other toll facilities, but it is the only transponder that allows drivers to use HREL toll-free when riding with passengers.

There is no cost for the E-ZPass Flex transponder. The \$35 paid for the initial E-ZPass transponder is fully credited to the customer's account to cover future tolls, and there are no additional device fees beyond toll usage. Account holders are required to keep a positive balance at all times. Drivers who already have a standard E-ZPass may exchange it

for an E-ZPass Flex online or at any E-ZPass Customer Service Center. New customers may obtain a transponder online, by phone, at a customer service center, or through participating retail locations.

Add flexibility to your commute with HREL and the E-ZPass Flex.

For more information, visit [www.64expresslanes.org](http://www.64expresslanes.org)



## Tune In to Our Podcasts & Videos!

Dive deeper into both industry topics as well as the major happenings along the HRBT Expansion Project corridor.

### PODCASTS:

- Mary's Milestones Delivering the HRBT twin bored tunnels
- HRBT New South Trestle Bridge Opening
- Eyes in the Sky over the HRBT Expansion Project

### VIDEOS:

- HRBT Year in Review 2025
- Mary the TBM Cutterhead Lifted Receiving Pit
- Mary's Second Breakthrough

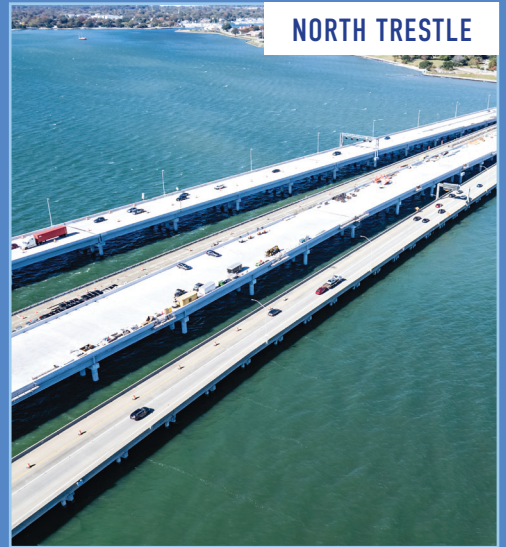
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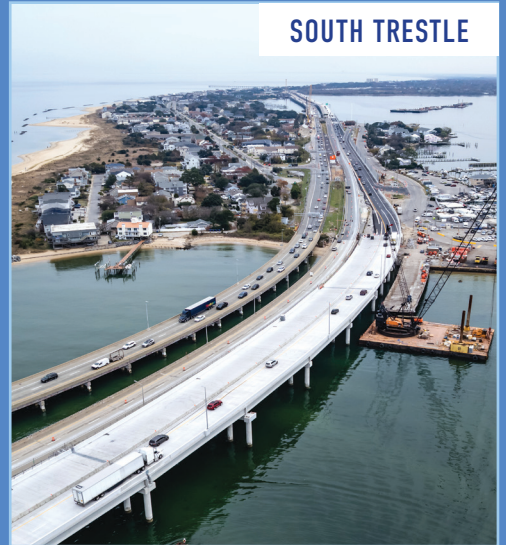
**NORTH ISLAND**



**NORTH TRESTLE**



**SOUTH ISLAND**

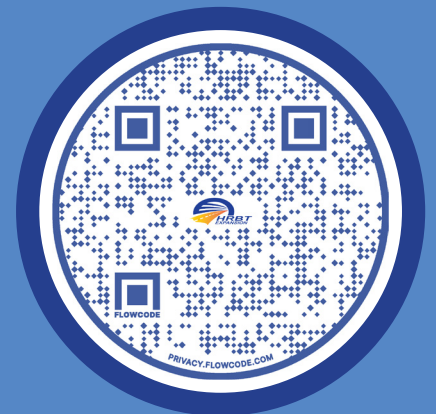


**SOUTH TRESTLE**



**HRBT ISLANDS**

Photo credit for aerial and drone photos:  
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