



## March 2021 Monthly Project Report

### I-64 HAMPTON ROADS BRIDGE-TUNNEL EXPANSION

**Report 24**

Project No. 0064-M06-032



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Prepared by:  
Virginia Department of Transportation

[www.hrbtexpansion.org](http://www.hrbtexpansion.org)

## 1. Executive Summary

### 1.1 Overview

This report provides an overview of accomplishments and activities for the Hampton Roads Bridge-Tunnel Expansion Project from February 21, 2021 – March 20, 2021. The Design-Builder for the project is Hampton Roads Connector Partners (HRCP), a consortium that includes lead contractors Dragados, Vinci, Flatiron, and Dodin Campenon Bernard, with lead designers HDR and Mott MacDonald.

The current reporting period is aligned with HRCP's fiscal-month structure, on which the project's design-build schedule updates and invoiced construction progress are based. Reporting periods typically close on the Saturday on or preceding the 24th of each month.

During this reporting period, the following project accomplishments were recorded:

- The design of the project continues to progress, with 29% of the project construction plans approved as Released for Construction (RFC).
- HRCP resumed the use of patrol dogs to discourage bird nesting on the South Island and will continue throughout the 2021 nesting season.
- Construction began on the S1 temporary construction trestle to prepare to build the new permanent South Trestle Bridge.
- At the South Island, 69% of the slurry wall panels required to begin excavation of the TBM Launch Pit are complete.
- North Island Expansion activities continue with placement of the rock establishing the perimeter of the expansion.
- The HRBT Project Team presented a virtual Tunnel Boring Machine Naming Contest Announcement Ceremony, with over 2,000 views to date. The TBM will be named "Mary," after NASA mathematician and aerospace engineer Mary Jackson.

### 1.2 Priorities

The Department's priorities for the Project are to achieve the following objectives:

- To provide mobility enhancements and travel-time reliability along the Project corridor.
- To minimize Project impacts on adjacent communities.
- To improve transportation operations and safety throughout the Project corridor.
- To develop public infrastructure in a financially responsible manner.

## 1.3 Key Updates

### Project Schedule

Schedule updates for this reporting period include:

- HRCP remains on track to achieve Substantial Completion in advance of the contract milestone of September 1, 2025.
- HRCP remains on track to achieve Final Completion in advance of the contract milestone of November 1, 2025.
- Approximately 28% of the estimated scheduled time has progressed to date.

### Project Budget

Updates through the March 2021 payment application, including pending payment:

- Project budget overview:

Original total project budget:	\$ 3,861,997,227
Total expenditures to date:	\$ 817,020,390
Remaining project budget:	\$ 3,044,976,837

- Design-build contract overview:

Design-build contract original amount:	\$ 3,299,997,227
Net change orders:	\$ 11,784,675
Exercised options:	\$ 73,454,414
Design-build contract sum to date:	\$ 3,385,236,316
Expenditures to date:	\$ 781,045,084
Remaining design-build contract amount:	\$ 2,604,191,232

- Design-build progress to date:

Overall:	22.99%
Project Management:	22.16%
Design:	66.05%
Physical Construction Progress:	8.22%

## Environmental

During this reporting period, HRCP took the following steps in support of environmental management for the project:

- HRCP submitted permit modification request #3, concerning construction sequencing of the North Island Expansion fill, to the US Army Corps of Engineers on March 11, 2021.
- HRCP sent a final round of sound wall surveys on March 17, 2021 that included approximately 21 recipients. The deadline for responses is March 31, 2021.
- HRCP's Health and Safety Team continues to conduct noise monitoring for construction activities, with a focus on the Hampton and Norfolk shorelines that are adjacent to ongoing marine construction work.
- HRCP received approval from NOAA on March 2, 2021 to utilize the Incidental Harassment Authorization (IHA) to begin installation of the temporary work trestle at Willoughby Spit.
- HRCP continues to restore and install measures to discourage birds from using the South Island. In addition, HRCP's use of patrol dogs to discourage bird nesting on the South Island has resumed and will continue throughout the 2021 nesting season.

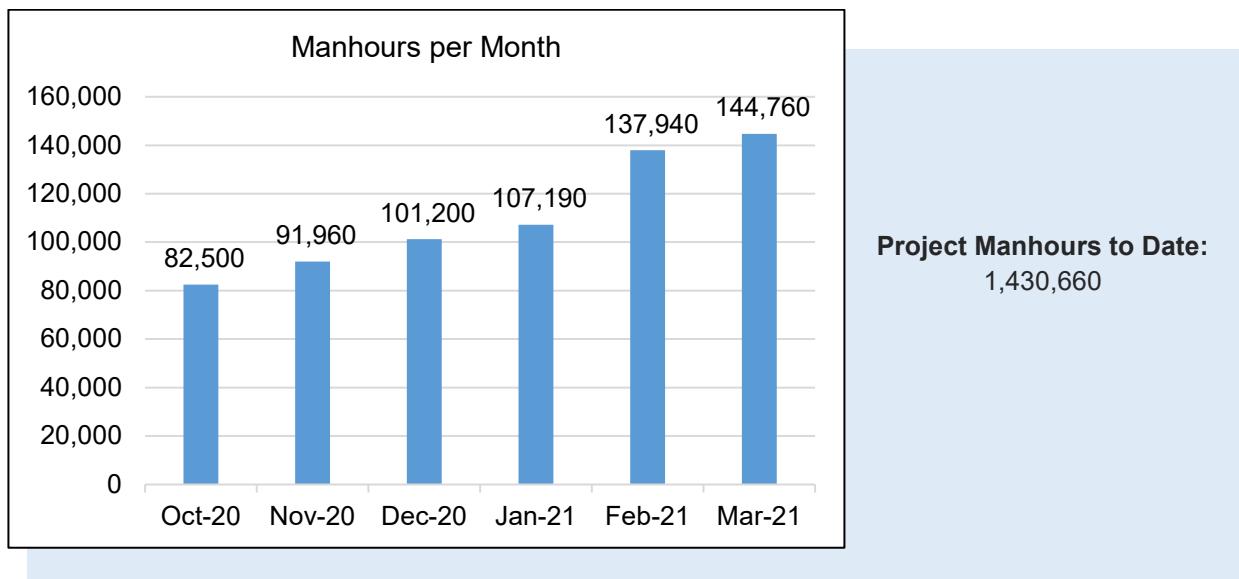
## Construction

Progress updates for this reporting period include:

- Hampton Landside
  - No construction activity during this period.
- Marine Works
  - Construction began on the S1 temporary construction trestle at the North Shore of Willoughby Spit to be used to build the new permanent South Trestle Bridge.
  - Continued construction of the N1 temporary construction trestle to be used to build the new permanent North Trestle Bridge.
  - Completed the Test Pile Program for the Willoughby Bay Bridge structures.
  - Completed driving support piles for the dock at the North Island.
  - Continued placement of perimeter stone for expansion of the North Island.
  - Production of concrete precast 54" cylinder piles for the new EB North Trestle began at an off-site facility.
- Islands and Tunnels
  - 69% of the slurry wall panels required to begin excavation of the TBM Launch Pit are complete.
  - Continued installation of the conveyor system support piles at the South Island.
  - Continued construction of the temporary substation on the South Island to power the TBM.
  - Began installation of piezometers for the instrumentation and monitoring (I&M) program on the South Island.
  - Began the jet grout field trial program on the South Island.

- Continued operation for the continuous flight auger pile cut-off wall on the North Island.
- Completed work on the drainage and outfall system for the North Island.
- Completed installation of the water treatment plant on the North Island and prepared for water connection.
- Norfolk Landside
  - Continued clearing, grading, and constructing temporary access road from Patrol Road to Oastes Creek.
  - Began clearing and grubbing operations adjacent to I-64 at the Bayview Blvd Bridge.
  - Began construction of the Bay Avenue temporary work trestle.

The number of construction manhours worked continues to increase each month across the Project. The following data is provided by HRCP and is current as of March 31, 2021:



- Tunnel Boring Machine (TBM) Progress as of March 2021:
  - TBM Design ----- 100%
  - Manufacturing of Components ----- 100%
  - Final Assembly for Factory Tests ----- 80%

## Operations

The following operations activities took place during this reporting period:

- HRCP continued to coordinate the power outages to complete utility relocations and accommodate bridge trestle tie-ins.
- Continued installation of the temporary TBM power at the Norfolk shore to connect to Dominion Energy service.

- Continued installation of instrumentation and monitoring across the project to establish baselines in advance of tunnel boring and bridge construction.
- Installed temporary traffic control signs in advance of upcoming I-64 lane shifts.
- Hosted quarterly Concept of Operations meeting which covered the design status of various ITS systems.
- HRCP and VDOT are monitoring settlement of the WB approach slab to West Evans Street.

## Quality

Quality updates for this reporting period include:

- VDOT reviewed 26 Construction Quality Management Plan (CQMP) updates this period.
- VDOT continued working with HRCP's tunnel group to define the Tunnel Quality Control Plan.
- VDOT continues to track Owner's Independent Assurance (OIA) and Owner's Verification Sampling and Testing (OVST) and conduct testing as needed.
- VDOT continues to monitor HRCP's material book records for compliance.

## Safety

Safety procedures and activities during this reporting period include:

- VDOT conducted 14 safety site visits this period. Minor safety deficiencies were noted and corrected.
- The Project Team hosted quarterly site visits for first responders from the City of Hampton and the City of Norfolk at the North and South Islands.
- The following safety performance indicator information is provided by HRCP and is current as of March 31, 2021. HRCP is performing better than the national averages.
  - Total Recordable Incidence Rate: 1.96 (National Average: 2.8)
  - Lost Time Incidence Rate: 0.00 (National Average: 1.1)

## Civil Rights & DBE/SWaM Business Opportunities

As of this reporting period, HRCP has awarded a total of **207** subcontracts, subconsultant agreements, and purchase orders to DBE/SWaM certified firms for a total of **\$122.2 million**, towards a project goal of \$394.5 million.

Civil Rights activities attended, including DBE and SWaM business opportunities, for this reporting period are as follows:

- VDOT conducted 6 formal DBE compliance reviews.
- HRCP finalized an EEO and Affirmative Action Anonymous Hotline and displayed required EEO and labor posters at various locations throughout the project and corporate headquarters.
- VDOT and HRCP participated in the Graduation & Closing session of the 2<sup>nd</sup> HRBT hosted Bonding Education Program.

- VDOT and HRCP participated in the Cities of Norfolk and Hampton's Bridging the Connection small business outreach event.
- Blackstar Diversified Enterprises, a certified DBE firm on the HRBT Expansion Project, was featured in an edition of The Virginian Pilot's Inside Business.

## Public Outreach & Media

Public outreach and project media updates provided by VDOT and HRCP for this reporting period are as follows:

- HRBT Expansion Team presented a virtual Tunnel Boring Machine Naming Contest Announcement Ceremony.
- HRBT Expansion Team held a Mallory Street Bridge Stakeholder's meeting.
- HRBT Expansion Team presented to the Hampton Maritime Academy class virtually about marine construction and job opportunities.
- HRBT Expansion Communications Team presented to the Broad Bay Sailing Association.
- HRCP design firm HDR provided a geotechnical presentation to the American Society of Civil Engineers.
- 9 articles/stories released regarding the naming contest of the TBM hosted by VDOT.
- Article released from Inside Business regarding "Chesapeake native and NSU grad helps company score bridge-tunnel project contract".
- ARTBA article on "Federal Investment Helped Advance 22,000 Highway Improvement Projects in 2020, New Data Reveals" mentions HRBT Expansion Project.

## 2. Project Schedule

### 2.1 Schedule Status

The following table depicts key milestone dates outlined in the contract requirements. This table will be updated to reflect these dates and used as a benchmark to track milestone achievements and has been updated as of the current approved schedule. The dates below are reflective of the most recent approved schedule update, which is the Schedule of Record compared with Schedule Update 19.

	Contract Requirement	Schedule of Record Dates	February 2021 (Update 19)	Actual
<b>NTP</b>		Sep 9, 2020	Sep 11, 2020	Sep 11, 2020
<b>Substantial Completion</b>	Sep 1, 2025	Aug 27, 2025	Sep 1, 2025	
<b>Final Completion</b>	Nov 1, 2025	Nov 1, 2025	Nov 1, 2025	

### 2.2 Longest Path

The longest path to achieve the completion date of the Project schedule is driven by the following activities:

- Design of New Arch Panels at Cell 2 & VDOT Acceptance.
- S Portal New Slurry Walls Construction, Capping Beam Cell 2, Excavation.
- S Portal Cell 1 Base Slab Concrete Works.
- Assembly of the Tunnel Boring Machine (TBM) in the launching pit.
- TBM drive in High Occupancy Toll (HOT) Tunnel.
- TBM U-turn then drive in General Purpose (GP) Tunnel.
- N Portal Cell 1 Structures Phase 3 and Cell 2 Structures Phase 2 (External Walls, Internal Walls, and Slab).
- S Portal Cut & Cover-Structures Phase 3 Cells 1 & 2 and Phase 4 Cell 1 (TBM Window).
- TBM Disassembly.
- Tunnel Fit Out, Finishes and Roadway Construction-Civil, MEP, Site Integration.
- N Island, S Island Buildings-MEP.
- S Portal MEP.
- Tunnel Commissioning and Systems Integration.

## 2.3 Impact Analysis

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Several elements of work are near-critical and could affect schedule performance if they are not addressed diligently. VDOT and HRCP are closely monitoring these activities. The following work elements have been identified as near critical, meaning there is less than one month of float in the Schedule Update 19:

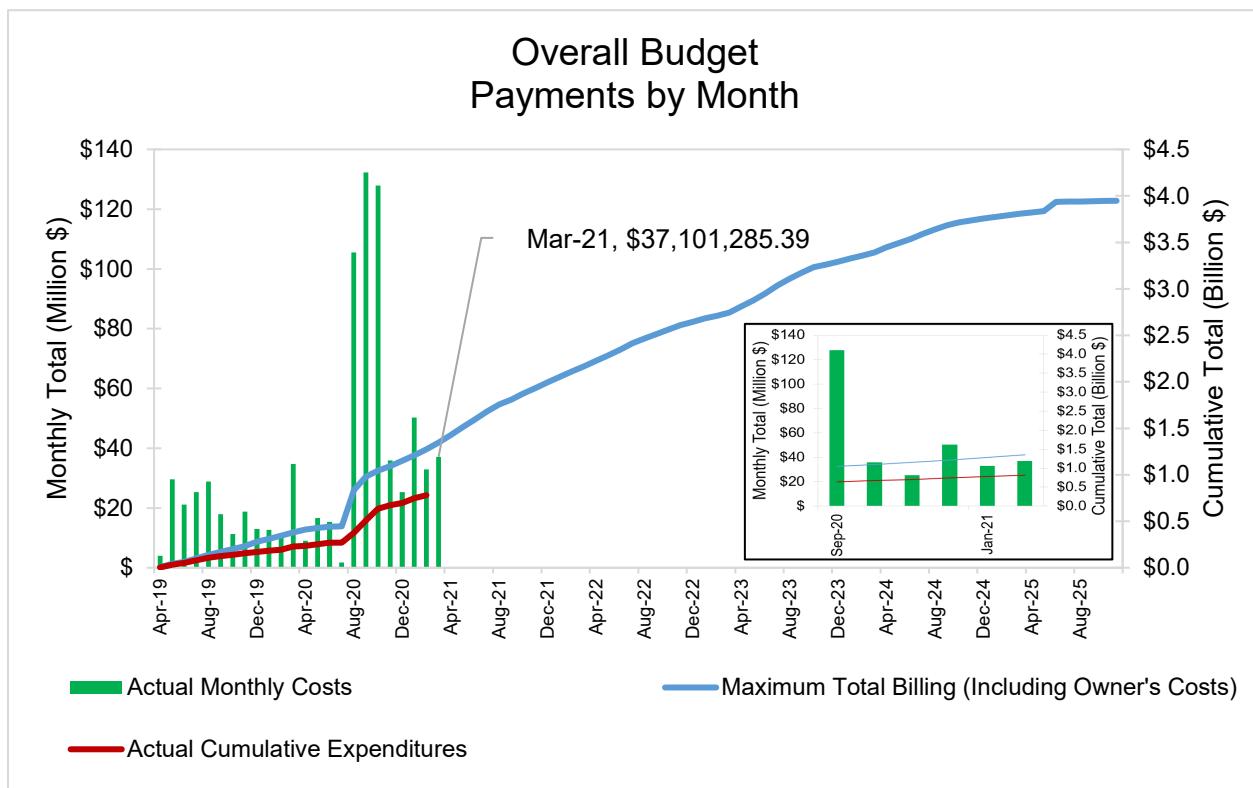
- Segment 4 Miscellaneous Structures Design and Geotechnical Report.
- Segment 5 Roadway Traffic Signal Plans.
- Utility Relocation South Trestle Tie-in to 13<sup>th</sup> before start of roadway.
- Site Jet Grout, Portal Launching Pit, Portal Structures.
- N Portal Structures, N Portal MEP.
- Tunnel Finishes-Civil, Finishes, MEP.
- Land Bridges-13<sup>th</sup> Ave, 4<sup>th</sup> View, Mason Creek, 1<sup>st</sup> View, Bay Ave, Oastes Creek.
- Land Roadway Segment 4 (4<sup>th</sup> Ave to BAY) and Segment 5 (BAY to GBY).

### 3. Project Budget

#### 3.1 Overall Budget

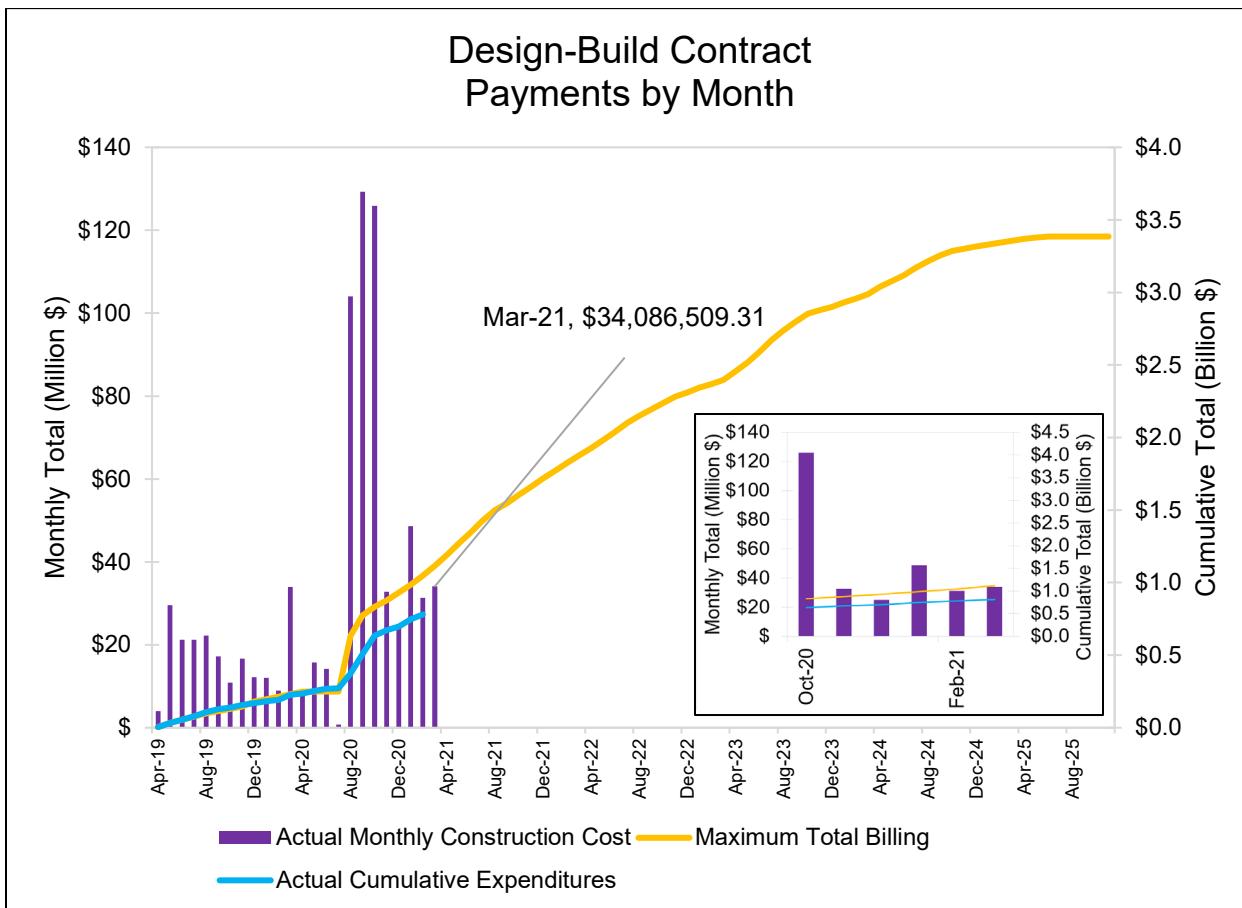
The overall budget outlined in this report is based on the terms and conditions of Article 3 (Project Funding) in the Project Agreement for Funding and Administration (PAFA). The cost curve is based on Exhibit 6 of the Comprehensive Agreement (monthly maximum cumulative compensation amount). Amounts this period reflects payments invoiced for Construction, Engineering Administration, Right of Way, and Contingency between February 21, 2021 – March 20, 2021.

	Amount Accrued this Period:	Total to Date:	Original Total Budget:	Total Remaining Budget:	Percent Accrued To-date:
<b>Comprehensive Agreement</b>					
<i>Construction</i>	\$34,086,509.31	\$781,045,084.20	\$3,299,997,227.00	\$2,518,952,142.80	23.67%
<b>Owner Costs</b>					
<i>Administration</i>	\$3,012,622.86	\$25,501,944.49	\$122,000,000.00	\$96,498,055.51	20.90%
<i>Right of Way</i>	\$2,153.22	\$6,473,361.48	\$15,000,000.00	\$8,526,638.52	43.16%
<i>No-Excuses Incentive</i>	\$0.00	\$0.00	\$90,000,000.00	\$90,000,000.00	0.00%
<i>Contingency</i>	\$0.00	\$4,000,000.00	\$335,000,000.00	\$331,000,000.00	1.19%
<b>Total</b>	<b>\$37,101,285.39</b>	<b>\$817,020,390.17</b>	<b>\$3,861,997,227.00</b>	<b>\$3,044,976,836.83</b>	<b>21.16%</b>



### 3.2 Design-Build Contract Cost Status

The construction budget and planned cost have been established based on the maximum cumulative compensation amount. For this period, the invoiced expenditures (actual construction contract cost) cover the activities noted in this report.



### 3.3 Budget by Funding Source

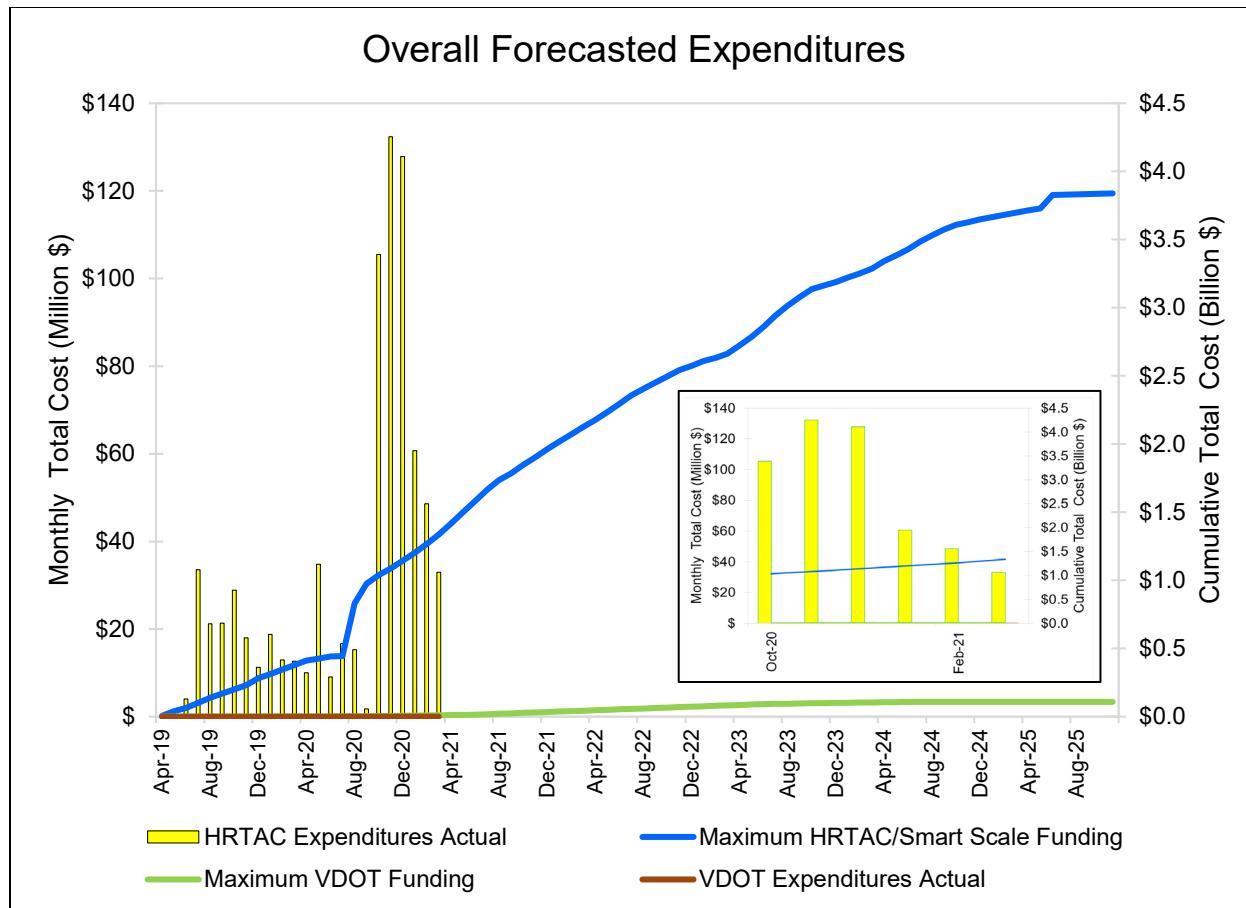
The budget for expenditures by funding source is based on the terms and conditions of Article 3 (Project Funding) and Exhibit 5 of the PAFA. This section outlines planned expenditures of both HRTAC and VDOT funds. The cost curve has been developed based on the monthly maximum cumulative compensation amount in the Comprehensive Agreement and will be updated as HRCP refines its design, construction means-and-methods, activity sequences, and project resourcing. Amounts this period reflect amounts paid for Construction, Engineering, Administration, Right of Way, and Contingency between February 21, 2021 – March 20, 2021.

### 3.3.1 HRTAC and Smart Scale

	Amount Spent this Period:	Total Spent to Date:	Original Total Budget Including Smart Scale:	Total Remaining Budget:	Percent Spent To-date:
<b><u>Comprehensive Agreement</u></b>					
<i>Construction</i>	\$31,323,647.79	\$746,958,574.89	\$3,204,569,251.00	\$2,457,610,676.11	23.31%
<b><u>Owner Costs</u></b>					
<i>Administration</i>	\$1,630,593.88	\$22,489,321.63	\$118,472,054.00	\$95,982,732.37	18.98%
<i>Right of Way</i>	\$2,696.50	\$6,471,208.26	\$15,000,000.00	\$8,528,791.74	43.14%
<i>No-Excuses Incentive</i>	\$0.00	\$0.00	\$90,000,000.00	\$90,000,000.00	0.00%
<i>Contingency</i>	\$0.00	\$4,000,000.00	\$325,428,277.00	\$321,428,277.00	1.23%
<b>Total</b>	<b>\$32,956,938.17</b>	<b>\$779,919,104.78</b>	<b>\$3,753,469,582.00</b>	<b>\$2,973,550,477.22</b>	<b>20.78%</b>

### 3.3.2 VDOT

	Amount Spent this Period:	Total Spent to Date:	Original Total Budget:	Total Remaining Budget:	Percent Spent To-date:
<b><u>Comprehensive Agreement</u></b>					
<i>Construction</i>	\$0.00	\$0.00	\$95,427,976.00	\$95,427,976.00	0.00%
<b><u>Owner Costs</u></b>					
<i>Administration</i>	\$14,757.17	\$266,586.82	\$3,527,946.00	\$3,261,359.18	7.56%
<i>Right of Way</i>	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
<i>No-Excuses Incentive</i>	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
<i>Contingency</i>	\$0.00	\$0.00	\$9,571,724.00	\$9,571,724.00	0.00%
<b>Total</b>	<b>\$14,757.27</b>	<b>\$266,586.82</b>	<b>\$108,527,646.00</b>	<b>\$108,261,059.18</b>	<b>0.25%</b>



### 3.4 Contingency

#### Contract Changes

	Description	Date	Value	Time
CO-1	Department's Acquisition of Willoughby Staging Area	2/11/2020	\$ (3,000,000.00)	0 days
CO-2	Minor Revisions to Technical Requirements	3/18/2020	\$ -	0 days
CO-3	Tunnel Approach Structure Support of Excavation Requirements Refinement	4/28/2020	\$ -	0 days
CO-4	Dispute Resolution Board (DRB) Allowance	5/12/2020	\$ 200,000.00	0 days
CO-5	North Island Armor Stone Value Engineering Change Proposal (VECP)	4/28/2020	\$ (2,011,117.50)	0 days
CO-6	Exit Ramp at Bayville Avenue	5/29/2020	\$ 46,906.29	0 days
CO-7	Minor revisions to the Technical Requirements	7/16/2020	\$ -	0 days
CO-8	Zero Spread Drainage	9/16/2020	\$ 3,239,212.24	0 days

CO-9	Roadway and Bridge Scope Validation Issues	9/4/2020	\$ 15,516,248.00	0 days
CO-10	Slurry Walls as Permanent Structures	8/28/2020	\$ -	0 days
CO-12	Road and Bridge Lighting Requirements	8/27/2020	\$ 2,495,000.00	0 days
CO-13	Bridge Repair Work-Exercise Option	10/9/2020	\$ 73,454,313.00	0 days
CO-14	Trestle Barrier Form Liner elimination	7/29/2020	\$ (99,571.80)	0 days
CO-15	South Island Ground Improvement Value Engineering Change Proposal (VECP)	9/17/2020	\$ (5,338,000.00)	0 days
CO-17	Westbound ITT Reduced Instrumentation	10/30/2020	\$ (184,277.50)	0 days
CO-18	Willoughby Bay Bridge Barriers	9/10/2020	\$ -	0 days
CO-19	GeoPak Version Software Updates	8/3/2020	\$ -	0 days
CO-21	Material Price Adjustment for Asphalt Materials	2/26/2021	\$ -	0 days
CO-22	South Island Asbestos Conduits	9/16/2020	\$ 81,973.93	0 days
CO-23	Island & Tunnel Baseline Monitoring Requirements	7/22/2020	\$ -	0 days
CO-24	Construction Water Supply	9/10/2020	\$ (609,157.27)	0 days
CO-25	Solids Handling Pumps Requirements	11/12/2020	\$ -	0 days
CO-26	Mass Notification Independent System Requirements	11/12/2020	\$ -	0 days
CO-27	Fixed Fire Fighting System Requirements	11/16/2020	\$ -	0 days
CO-30	Willoughby Bay Bridges Fender & Lighting Replacement	2/12/2021	\$ 1,495,000.00	0 days
CO-33	Tunnel Finishes Height	12/18/2020	\$ -	0 days
CO-38	H-Piles in Aggressive Soils	12/18/2020	\$ (47,541.00)	0 days

## Material Price Adjustments

- A No-Cost/No-Time Work Order was executed on 2/26/2021 to add three asphalt items as substitutes for three similar asphalt items currently listed in Exhibits 9 and 10 of the Comprehensive Agreement.

## Miscellaneous

- Unsuccessful Offeror Payment – executed 5/8/2019 for \$4,000,000.00.

## 4. Environmental

HRCP has completed or is performing several compliance tasks included in permit conditions:

**Permits** - DEQ issued the Virginia Pollutant Discharge Elimination General Permit for Nutrient Discharge (Nutrient GP), NTGP Permit Number VAN040176, and VPDES Industrial Minor Permit VA0093084, effective February 1, 2021. During this reporting period HRCP began discharging from the South Island water treatment plant and discontinued hauling discharge water under the Hampton Roads Sanitation District (HRSD) permit. HRCP submitted permit modification request #3, concerning construction sequencing of the North Island Expansion, to the US Army Corps of Engineers on March 11, 2021. Approval of the modification request is anticipated within a 30-day period.

**Sound Wall Surveys** - HRCP sent a final round of sound wall surveys on March 17, 2021, due to receiving fewer responses than required in the second survey. This final, 14-day comment period will end on March 31, 2021.

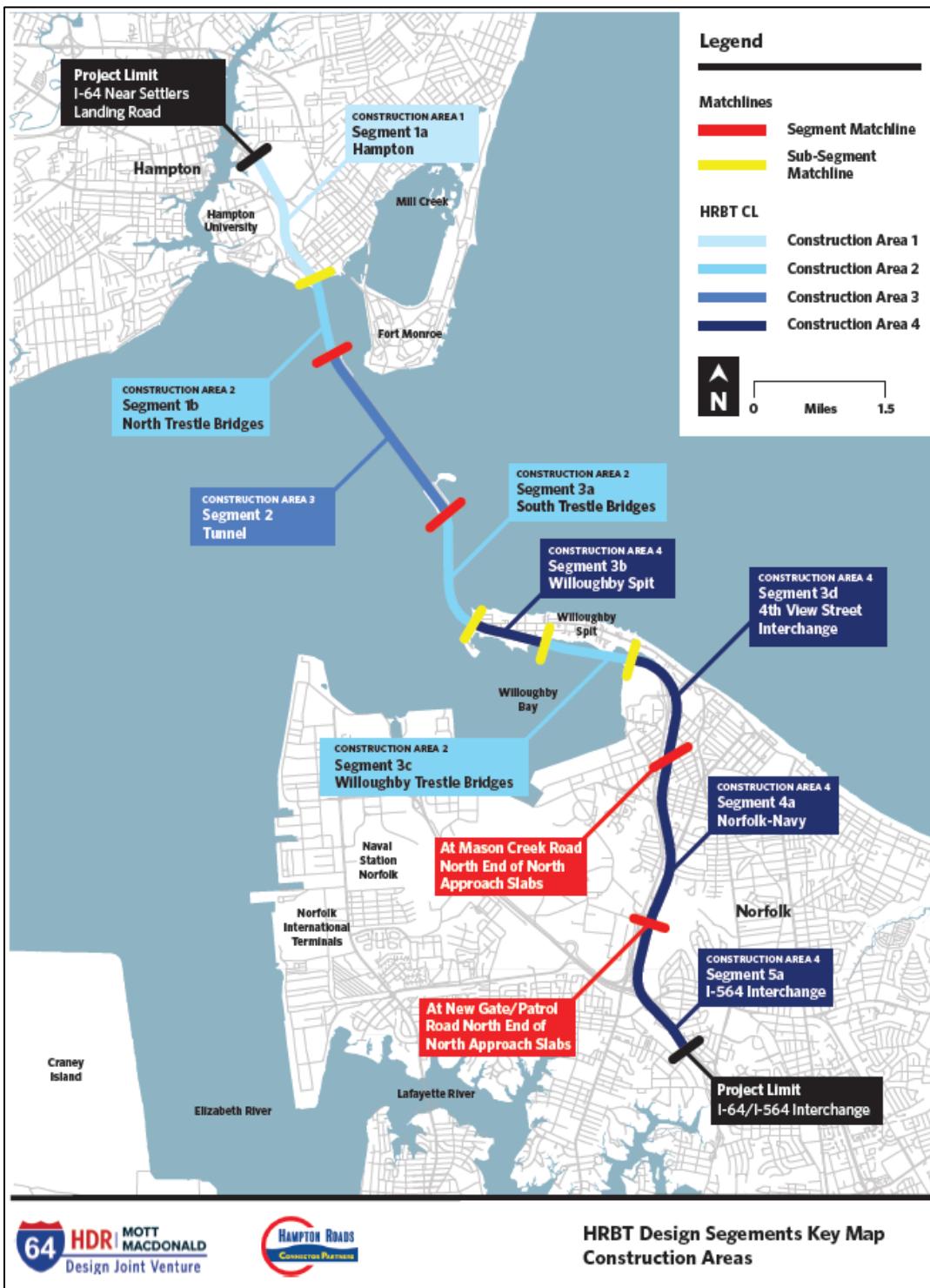
**Noise Monitoring** - HRCP continues to coordinate with Virginia Commonwealth University (VCU) to develop and schedule approved underwater acoustic noise monitoring during pile driving.

**NOAA/Proposed Rule** - NOAA published the Proposed Rule for the Letter of Authorization (LOA) in the Federal Register on January 8, 2021, and the public comment period ended on February 8, 2021. No major comments were received, and HRCP has submitted responses to NOAA requests. NOAA completed their final evaluation and is expected to publish the Final LOA Rule by the end of March 2021.

**Bird Mitigation** - HRCP continues to restore and install measures to discourage birds from using the South Island. In addition, HRCP's use of patrol dogs to discourage bird nesting on the South Island was resumed during this period and will continue throughout the 2021 nesting season.

## 5. Construction

The figure below illustrates the project limits and the four construction areas throughout the project identified by HRCP.



## 5.1 Area 1: Hampton Landside

No construction activity during the reporting period. The Commercial Ready-Mix Products (CRMP) batch plant continues to operate and provide concrete for project operations.

## 5.2 Area 2: Marine Work

During the reporting period, HRCP performed the following work in Area 2:

**S1 Temporary Construction Trestle** - Began driving piles for Bent 1 at the North Shore of Willoughby Spit. This trestle will be used for building the new permanent South Trestle.

**N1 Temporary Construction Trestle** - Continued to drive piles, set beams, and install decking to extend the N1 temporary construction trestle towards the Hampton Shore. This trestle will be used for building the new permanent North Trestle.

**Test Pile Program** - Completed dynamic and static load tests at the Willoughby Bay structures.

**North Island Circulation Dock** - Completed driving support piles for the temporary dock for barges. Framing and decking installation remains.

**North Island Expansion Work** - Continued expansion of the North Island. Multiple crews are working at the north and south termini of the work to place small diameter stone (“bund”) to define the perimeter of the expanded island. Layers of progressively larger stone are being placed on the bayside of the smaller stone.



### ► Willoughby Spit

Pile driving operation for the S1  
Temporary Construction Trestle

## 5.3 Area 3: Tunnels and Islands

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During the reporting period, HRCP performed the following work in Area 3:

**South Island Slurry Wall Construction** - Slurry wall construction continued for the tri-cell TBM launching pit as well as the bored tunnel proximity walls. Excavation for the walls was accomplished using three hydromill excavators and one clamshell bucket. The slurry wall panel reinforcing cages continue to be fabricated on-site and lifted utilizing a crawler crane followed by concrete placement. To date, 69% of the slurry wall panels required to begin excavation of the South Portal are complete. Work also continued on the first Y-panel at the joint between cells in the tri-cell structure.

**South Island TBM Quay Install** - Began installation of the offshore gantry and fender piles for the quay (dock). Work also continued on the installation of onshore quay piles. Overall a total of 37 piles have been driven to date.

**South Island Temporary Substation** - Continued construction for the temporary electrical substation to power the tunnel boring machine.

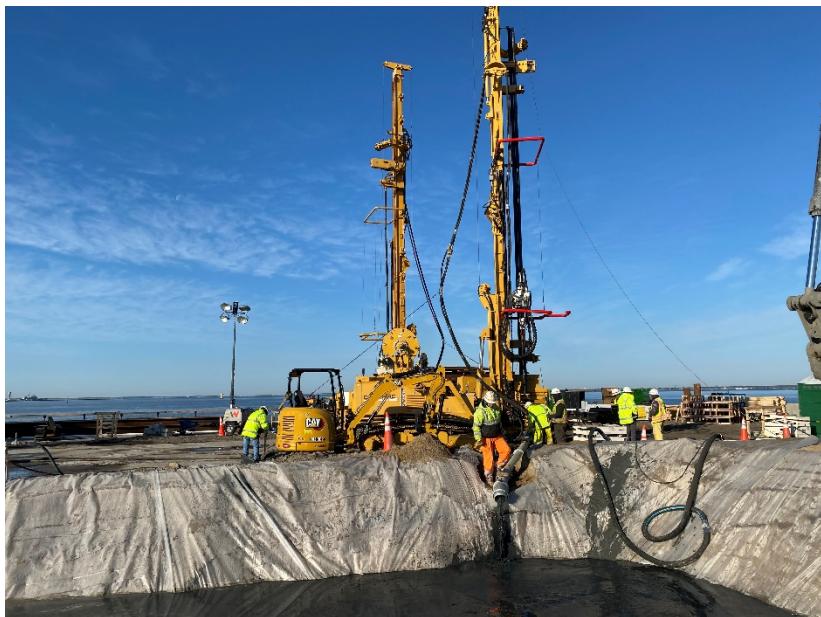
**South Island Instrumentation and Monitoring (I&M) Install** - Began installation of piezometers to monitor groundwater levels for the I&M program. 8 piezometers have been installed to date.

**South Island Temporary Drainage** - Began work on the jack and bore for the installation of temporary 24" drainage line at the south end of the island.

**South Island Ground Improvement Operations** - Began the jet grouting field trial program for the break-in/break-out block along the path of the tunnel. Equipment for the deep soil mixing operation was mobilized to site and the mixing plant was assembled.

**North Island Cut-Off Wall Operation** - Continued installation of Continuous Flight Auger (CFA) piles to mitigate potential settlement induced by the North Island Expansion and potential impacts to the existing eastbound tunnel and approach structure. To date, 185 out of 213 CFA Piles have been installed.

**North Island Site Offices** - The Memorandum of Understanding (MOU) for the water supply connection was returned to HRCP for approval. The next upcoming activity is to begin the waterline connection from the hydrant to the water treatment plant, pending final MOU approval and procurement of materials.



► **South Island**  
Jet Grouting Field Trial  
Program



► **North Island**  
Cut-off Wall - CFA Pile Installation

Herrenknecht, the TBM manufacturer, reported the following progress in March 2021:



◀ Overview of TBM Assembly

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TBM Schedule Milestones:

- TBM Ordered by HRCP ----- Feb 2020
- TBM Factory Tests & Acceptance ----- May 2021
- Delivery at Project Site----- Fall 2021
- Planned Start of TBM Excavation----- Spring 2022

Progress:

- TBM Design ----- 100%
- Manufacturing of Components ----- 100%
- Final Assembly for Factory Tests ----- 80%

Final Assembly by Component:

- Shield ----- 100%
- Cutterhead-----0%
- Main Drive ----- 100%
- Screw Conveyor----- 100%
- Erector----- 95%
- Systems ----- 60%
- Man Locks ----- 100%
- Gantry ----- 90%



TBM Shield Concept

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## 5.4 Area 4: Norfolk Landside

During the reporting period, HRCP performed the following work in Area 4:

**Tree Clearing and Grading for Temporary Access Road** - Continued clearing of vegetation and initial grading for temporary access road to Oastes Creek Bridge. The access road will be used for construction of the temporary work trestle adjacent to Oastes Creek Bridge.

**Bayview Blvd** - Began clearing and grubbing operations adjacent to I-64 at the Bayview Blvd Bridge.

**Bay Avenue Temporary Work Trestle** - Began construction of the temporary work trestle 2A adjacent to I-64 EB on-ramp. Construction is approximately 50% complete.

**4<sup>th</sup> View** - Completed survey/staking of LDL for the eastbound entrance and exit ramps.

**Willoughby Spit** - Completed TBM power temporary works at the North Shore.



### ► Bay Avenue

Impact driving of first piles  
for the 2A Temporary  
Construction Trestle

## 6. Operations

Operation activities include shoulder and lane closures, creation and maintenance of intelligent transportation system (ITS) architecture, other maintenance within the corridor, coordination with existing VDOT Operations, coordination with first responders, and communication with the Hampton Roads Harbor Tunnels (HRHT) facility. The following operation activities occurred during this reporting period:

**Shoulder and Lane Closures** - Conducted for maintenance of equipment for tunnel baseline instrumentation and monitoring, installation of North and South Trestle instrumentation and monitoring equipment, and clearing and grubbing.

**Long Term Lane Closure** - Implemented on Bay Avenue in Norfolk to facilitate access to a staging area for the widening of the Oastes Creek Bridge.

**Preparation for Upcoming Lane Shifts** - Shoulder and lane closures were performed to install temporary traffic control signs in advance of upcoming mainline I-64 lane shifts to accommodate roadway widening work.

**Temporary Power for the Tunnel Boring Machine** - Continued installation, testing, and certification of temporary power in advance of energization by Dominion Energy.

**Quarterly Concept of Operations Meeting** - Held quarterly meeting on March 17, 2021, which covered advancement in design of the ITS and over-height detection system as well as an update on the design and integration of existing and proposed tunnel systems.

**West Evans Street Bridge Approach Slab** - HRCP and VDOT are monitoring settlement of the WB approach slab to West Evans Street. On March 12, 2021, Virginia State Police stopped all traffic for an inspection of the settlement to be performed. The roadway was closed for nearly two hours and reopened following a safety inspection. Later that evening, HRCP performed a temporary repair, which included a pavement patch in an area of the shoulder that had settled. The structure continues to be monitored daily, and HRCP will address further required repair of the slab.

**Routine Management** - HRCP performed routine incident management and maintenance operations within the corridor. VDOT continues to monitor HRCP's approved maintenance management plan for compliance.

## 7. Quality

Quality updates for this reporting period include:

**Construction Quality Management Plan (CQMP) Updates** - VDOT reviews as part of final “Released for Construction” (RFC) design packages. There were 26 updates reviewed this period. The CQMP updates include specific testing and inspection plans for the work shown in the corresponding RFC plans and a staffing matrix showing quality assurance and quality control staffing for the work.

**Quality Management System Plan (QMSP)** - HRCP forwarded a draft of the updated QMSP. VDOT is conducting a review.

**Material Book Records** - HRCP continues to update the material book records in response to VDOT’s first audit of the material notebook. VDOT monitored this process and reviewed updated documentation for compliance. VDOT also conducted a monthly review of the current records.

**Routine Quality Activities** - Conducted reviews of deficiencies and nonconformance reports (NCRs) and coordinated with the resident engineers for acceptance of root causes and dispositions of deficiencies. Conducted reviews of QA and QC records for accuracy and quality issues. Coordinated documentation reviews through VDOT’s Material Department.

## 8. Safety

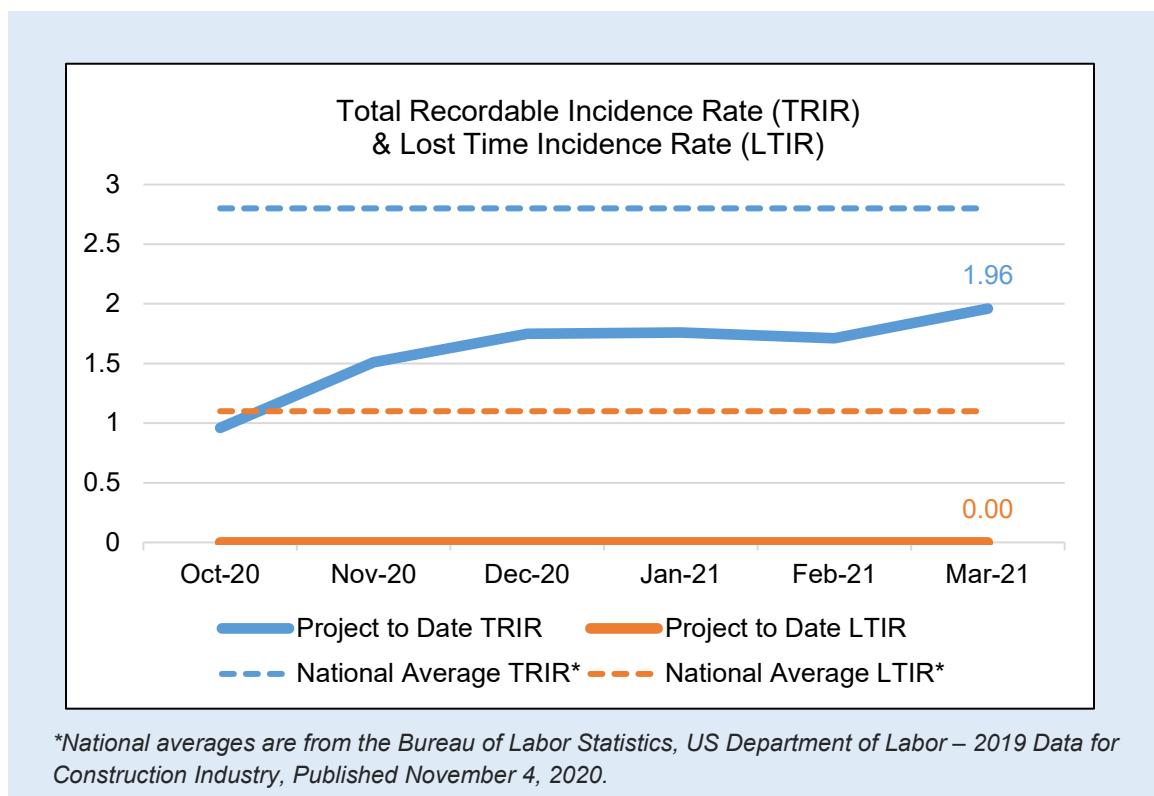
Safety procedures and activities during this reporting period include:

**COVID-19 Policies** - HRCP and VDOT continue to enforce COVID-19 policies on the job site and at the project office. VDOT and HRCP office staff have returned to a normal work schedule with health protocols in place.

**Safety Site Visits** - VDOT conducted 14 safety site visits this period. Minor safety deficiencies were noted and corrected. Additional marine training was conducted with crews working on barges.

**First Responder Tours** - A series of tours was provided to both Hampton and Norfolk first responders on the North and South Islands to provide awareness of the current construction operations and the layout of the islands in the event of emergencies.

**Safety Performance Indicators** - The following safety performance indicator information is provided by HRCP and is current as of March 31, 2021. HRCP is performing better than the national averages.



## 9. Civil Rights & DBE/SWaM Business Opportunities

As of this reporting period, HRCP has awarded a total of **207** subcontracts, subconsultant agreements, and purchase orders to DBE/SWaM certified firms for a total of **\$122.2 million**, towards a project goal of \$394.5 million. Contract awards include those issued to lower-tiered subcontractors. HRCP continues to demonstrate good faith efforts towards achieving the established DBE/SWaM and On-the-Job Training (OJT) contract goals.

**Compliance Activities** - HRCP and VDOT Civil Rights Work Group met on March 16, 2021 for the monthly project and compliance update, which provided an opportunity to address equal employment opportunity, compliance, and business development matters. Project field support and compliance monitoring continued, which included field visits to conduct Davis-Bacon labor compliance interviews of contractor personnel working on the project site. VDOT's Compliance Team conducted six (6) formal DBE commercially useful function reviews during the reporting period. These extensively detailed reviews were conducted on DBE firms actively working on-site to ensure participation credit is appropriately counted towards the Design-Builder's DBE goal. The reviews are submitted to VDOT's Civil Rights Division for concurrence. In addition, a total of 934 civil rights compliance documents have been submitted by HRCP, which includes certified payrolls, subcontract agreements, required construction forms, and DBE/SWaM/Workforce Participation plans.

**Workforce Development Activities** - HRCP met with the City of Norfolk's Department of Economic Development to continue discussions on hiring goals and supplier diversity efforts on the HRBT project for all trades, technical and professional level positions. The Hampton Roads District Civil Rights Manager met with the Virginia Transportation Construction Alliance's (VTCA) Construction Director on March 2, 2021, to develop a plan for addressing additional on-the-job training work classification requests from contractors, including HRCP's recent recommendations submitted to VDOT. It was determined that each District Civil Rights Manager is granted authority to render a decision on requests received. Those approved would be submitted to the VTCA/VDOT Steering Committee for inclusion in the statewide OJT Program Manual for Standard Pre-Approved Job Classifications. This will give contractors the ability to utilize the approved classifications on other VDOT projects in achieving their OJT contract goals. This process contributes to enhancing the overall OJT program, while providing increased training opportunities for minority and women candidates participating in the program. HRCP has also finalized an EEO and Affirmative Action Anonymous Hotline and displayed required EEO and labor posters at various locations throughout the project and corporate headquarters.

**Business Development Activities** - VDOT and HRCP participated in the Graduation & Closing session for the 2<sup>nd</sup> HRBT hosted Bonding Education Program (BEP) in partnership with the USDOT Small Business Transportation Resource Center (SBTRC) held on March 4, 2021. Fourteen (14) firms participated in the 3-week program, representing areas of construction clean-up, welding, general contractor, trucking/hauling, and landscaping. Participants will continue to receive business counseling from SBTRC to obtain or expand their bonding

capacity. Some of the greatest challenges identified by firms included access to capital and identifying contract opportunities. Based on these identified needs, the BEP continues to be another relevant source for assisting small businesses. Ms. Sandra Norman, VDOT's Civil Rights Division Administrator, was the guest speaker for the closing event.



Virtual BEP Event Panel 

*(left to right, from top row)*

Shara Gibson (SBTRC); Queen Crittendon (VDOT); Courtney Seed (Assured Partners); Alyssa Mako (SBTRC); LaShawda Williams (City of Norfolk); Malcom Kates (HRCP); Nina Britton (SBSD); Erica Spencer (City of Hampton); and Calvin Thweatt (SBSD).

VDOT and HRCP participated in the Cities of Norfolk and Hampton's Bridging the Connection small business outreach event held on March 16-17, 2021. HRCP provided an update of the project and upcoming contracting opportunities to attendees on the first day of the event. VDOT's BOWD served as a virtual resource exhibitor along with several local small business development partners on the second day of the event. Both localities are strategic partners and have been actively engaged in promoting the project and sharing business and workforce opportunities available to their constituents.



**Small Business Profile** - Blackstar Diversified Enterprises, a certified DBE firm, was featured in the March 1, 2021, edition of The Virginian Pilot's Inside Business. The firm has offices in Baltimore and New Orleans, providing key electrical components and manufacturing traffic equipment like traffic signals, traffic control cabinets, and parking gates for major infrastructure projects. The firm will provide transformers to the HRBT project. The transformers will help power equipment like the tunnel boring machine in remote locations. This is the first contract in Hampton Roads for the firm.



**Featured Article** - Virginia's Secretary of Transportation, Shannon Valentine, was featured in the 2021 winter edition of the *American DBE Magazine*, a national publication distributed across the country for individuals and stakeholders who work within the federal DBE program administration. Secretary Valentine was highlighted for her support of the Civil Rights Program and commitment to helping to advance a shared vision for inclusion of diverse companies in government contracting opportunities. She also discussed the role of the HRBT project in providing DBE and SWaM firms access to opportunities. Visit <https://americandbe.com/winter-2021> to view more information.



**HAMPTON ROADS CONNECTOR PARTNERS**  
Invites you to be a part of

**VIRGINIA'S LARGEST  
TRANSPORTATION PROJECT**

Traffic on these four lanes exceeds 100,000 vehicles per day during peak summer traffic. The Hampton Roads Bridge-Tunnel Expansion Project will add two lanes to each of the three, addition of two 2-lane bored tunnels just west of the existing bridge, and widening of the two segments of the I-64 corridor in the cities of Hampton and Norfolk will be widened.

**OVER \$100 MILLION  
IN PROJECT  
OPPORTUNITIES  
FOR DBE AND  
SWaM FIRMS**

**WORKFORCE PARTICIPATION  
GOALS FOR LOCAL  
MINORITY AND WOMEN  
JOB CANDIDATES**



Visit the project's website at  
[www.hrbtexpansion.org](http://www.hrbtexpansion.org)  
to stay up to date on opportunities.

Hampton Roads Connector Partners | 240 Corporate Blvd. | Norfolk, VA 23502 | 757-939-9284  
HAMPTON ROADS CONNECTOR PARTNERS IS AN EQUAL OPPORTUNITY EMPLOYER

**CIVIL/HIGHWAY**

**TRANSPORTATION SECRETARY SHANNON VALENTINE  
MAINTAINS COMMITMENT TO DBEs DURING PANDEMIC**



Virginia Secretary of Transportation Shannon Valentine faced the formidable challenge of leading the state's largest transportation system through the COVID-19 pandemic by displaying the resilience and determination needed to manage multiple priorities simultaneously. Her leadership and personal leadership style, which emphasizes employee morale high, while maintaining a focus on the Commonwealth's seven transportation partners to focus on helping Virginians recover from one of the most difficult years in state history.

Valentine's leadership and management styles emphasize operating safety as a priority, ensuring the timely and safe and efficient movement of people, goods and supplies throughout the Commonwealth. As the pandemic began, she has directed the fiscal management and financial recovery of the transportation system crossing seven agencies, and led the rehiring of financial resources and the reduction of financial risk while preparing for the future. Despite these challenges, Valentine has continued to champion the ongoing participation of small and diverse businesses in the transportation

agencies' recovery efforts and a part of upcoming improvement projects.

Keeping customers, partners, and

Virginia's 10,000 transportation

employees safe from the coronavirus is

the top priority for Valentine and her

team as they implemented new procedures

to keep essential workers and

adherent to strict safety as possible

while continuing to move the state forward.

Throughout the pandemic, Valentine

has continued the use of 'work from home'

options for administrative personnel

and employee safety protocols for staff

working in the field to keep programs moving while maintaining safety.

It was also necessary to quickly make the use of Virginia's transportation agencies available to move critical goods, medical supplies and equipment as they were able to reach their agencies more efficiently.

Secretary Valentine's

commitment to the Commonwealth's port

operations, airports,

major public transit

systems, rail and freight rail, and Virginia's

highway system. "As we focus on

recovery, we must continue to

transport critical goods and

commodities for essential work,

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## 10. Public Outreach & Media

The following public outreach and project media activities occurred in this period:

### Public Outreach -

- February 24, 2021 - HRBT Expansion Team presented a virtual Tunnel Boring Machine Naming Contest Announcement Ceremony with over 2,000 views to date
- March 3, 2021 - HRBT Expansion Team held a Mallory Street Bridge Stakeholders Meeting
- March 4, 2021 - HRBT Expansion Team presentation to the Hampton Maritime Academy class (Hampton High School) virtually about marine construction and job opportunities
- March 15, 2021 - HRBT Expansion Communications Team along with HRCP representatives presented to the Broad Bay Sailing Association
- March 17, 2021 - HRCP design firm HDR provided a geotechnical presentation to American Society of Civil Engineers



### Media -

- February 23-24, 2021 - TBM Naming Announcement Contest
  - WAVY-TV story on “Hampton Roads Students to name Tunnel Boring Machine used in HRBT Expansion Project”

- Virginia Business article on “HRBT tunnel boring Machine’s Name will be ‘Mary’”
- WTKR-TV story on “Virginia Beach Student Team Wins First Place in VDOT’s HRBT Expansion Project Tunnel Boring Machine Naming Contest”
- WHRV-FM HearSay with Cathy Lewis interview of students from winning team of the HRBT Expansion Project Tunnel Boring Machine Naming Contest
- WVEC-TV story on “Students win contest, name machine helping expand HRBT after NASA mathematician Mary Jackson”
- WAVY-TV story on “Proud of Mary: Machine to create new tunnels for HRBT will be named for Hampton’s Mary Jackson”
- WRIC-TV Proud of Mary: Machine to create new tunnels for HRBT will be named for Hampton’s Mary Jackson
- Newsbreak Virginia Beach student team wins first place in VDOT’s HRBT Expansion Project Tunnel Boring Machine naming contest
- CityBizList HRBT Tunnel Boring Machine’s Name will be “Mary”
- March 1, 2021 - Inside Business Chesapeake native and NSU grad helps company score bridge-tunnel project contract
- March 16, 2021 - ARTBA Federal Investment Helped Advance 22,000 Highway Improvement Projects in 2020, New Data Reveals
- March 19, 2021 - WVIR-TV Virginia adopts new legislation to protect migratory birds

**Visit our website to view more information:**  
[www.hrbtexpansion.org](http://www.hrbtexpansion.org)