



**November 2022
Monthly Project Report
I-64 HAMPTON ROADS
BRIDGE-TUNNEL
EXPANSION**

Report No. 44
Project No. 0064-M06-032



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1. Executive Summary

1.1 Overview

This report provides an overview of accomplishments and activities for the Hampton Roads Bridge-Tunnel Expansion Project from October 23, 2022 – November 19, 2022. 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, project accomplishments included the following:

- South Island Progress:
 - Jet grouting at tunnel approach plug to 88%.
 - Headwall installation at Cell 1 launch pit to 84%.
 - Launching pit base slab to 67%.
- Tunnel Progress:
 - Precast tunnel segment liner production to 40%.
 - Completed TBM shield cradle installation at Cell 1 launching pit.
 - Slurry treatment plant assembly to 75%.
- North Island Progress:
 - Capping beams to 39%.
- Landside Progress:
 - Completed median pier shoring tower at Mallory St. Bridge.
 - Completed lead abatement and protective coating application for existing Evans St. westbound bridge.
- Marine Progress:
 - North Trestle eastbound piles to 76%.
 - North Trestle eastbound beams to 53%.
 - North Trestle eastbound decks to 21%.
 - Permanent South Trestle caps to 19%.

1.2 Priorities

VDOT'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

The last approved schedule for the project is Update 39 (data date: October 23, 2022), and the schedule information in this report reflects this update.

- Contractual Substantial and Final Completion Dates remain unchanged.
- HRCP's Schedule Update 39 is reporting Substantial Completion date of August 31, 2026.
- HRCP's Schedule Update 39 is reporting Final Completion date of October 30, 2026.

Project Budget

The project budget summary below now includes all incurred to date costs through November 19, 2022 and does not include forecasted cost outside of the reporting period.

- Project budget overview:

Current total project budget:	\$ 3,935,451,641
Total costs to date:	\$ 1,601,370,680
Remaining project budget:	\$ 2,334,080,961

- Design-build contract overview:

Design-build contract original amount:	\$ 3,299,997,227
Net change orders:	\$ 1,752,944
Exercised Options:	\$ 73,454,414
Design-build contract sum to date:	\$ 3,375,204,585
Expenditures to date:	\$ 1,527,031,561
Remaining design-build contract amount:	\$ 1,848,173,024

- Design-build progress to date:

Project Management:	51.5%
Design:	89.4%
Physical Construction Progress:	27.7%
Overall:	45.2%

Environmental

Environmental updates for this reporting period include:

- DEQ approved VPDES permit modification request on November 1, 2022.
- HRCP conducted a quarterly agency status meeting on November 9, 2022.

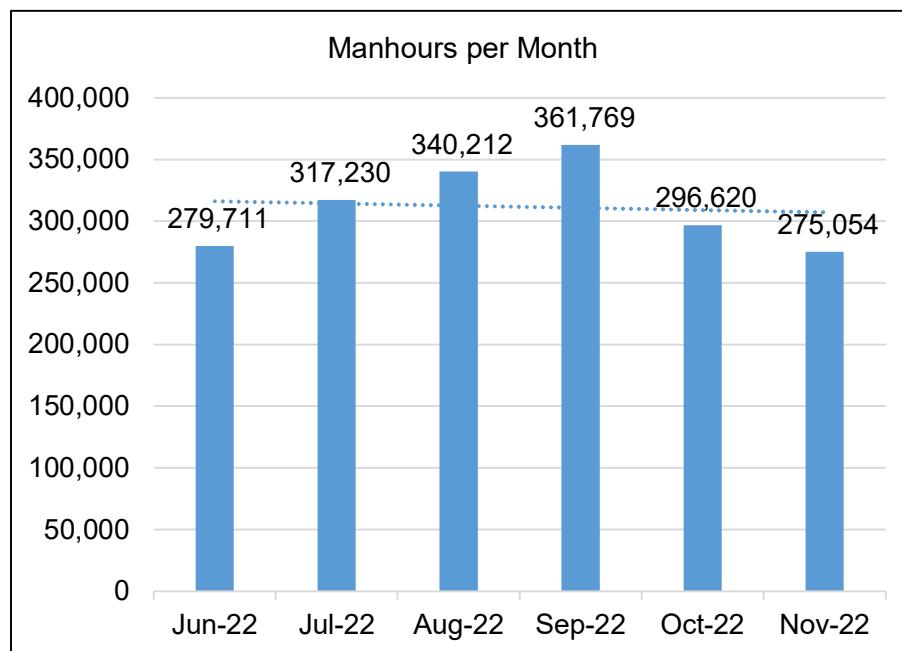
Construction

Progress updates for this reporting period include:

- Landside Roadways
 - Began excavation for retaining wall 103A near Mallory Bridge.
 - Began and completed excavation and grade for Blue Crab Substation retaining wall 02 near Mallory Bridge.
 - Completed temporary barrier installation for westbound Phase 1 traffic shift from 13th View Bridge to Ocean View off-ramp.
 - Completed drainage jack and bore underneath eastbound I-64 on and off ramps at Bayville St.
 - Completed installation of panels for retaining wall 401 between Mason Creek Rd. and 1st View St. for eastbound widening.
- Marine Works
 - Drove piles at North eastbound MOT trestle (5 installed this period).
 - Placed caps at North eastbound MOT trestle (1 installed this period).
 - Drove piles at North eastbound permanent trestle (3 installed this period).
 - Set beams at North eastbound permanent trestle (34 installed this period).
 - Placed decks at North eastbound permanent trestle (2 installed this period).
 - Drove piles at South eastbound MOT trestle (6 installed this period).
 - Placed caps at South eastbound MOT trestle (3 installed this period).
 - Set beams at South eastbound MOT trestle (9 installed this period).
 - Drove piles at South westbound MOT trestle (5 installed this period).
 - Placed caps at South permanent trestle (7 installed this period).
 - Drove pipe piles at Cell 1 Cofferdam for South Island Expansion (18 installed this period).
 - Drove sheet piles at Cell 1 Cofferdam for South Island Expansion (15 installed this period).
- Tunnels and Islands
 - Completed concrete placement 10 and cores of concrete placements 11 and 12 for South Island General Purpose headwall.
 - Completed concrete placement 8 for South Island High Occupancy Toll headwall.
 - Completed base slab concrete placement for the remainder of east side of launching pit, including section of Cell 2 step wall.
 - Completed North Island Cell 1 capping beams.
 - Completed TBM shield cradle installation at Cell 1 launching pit.
- Landside Bridges
 - Completed median pier shoring tower at Mallory St. Bridge.

- Completed Abutment A footing construction at Mason Creek Rd. Bridge for eastbound widening.
- Began and completed pile driving operations at Pier 1 and Abutment B at 1st View St. Bridge for eastbound widening.
- Completed Spans 41 and 42 deck concrete placements at Bay Ave. Bridge for eastbound widening.
- Began repair/rehabilitation of existing Bay Ave. eastbound bridge.
- Completed protective coating application for existing Evans St. westbound bridge.

The number of construction manhours worked each month is provided by HRCP and is current as of November 30, 2022:



Project Manhours to Date:
5,825,907

Operations

The following operations activities took place during this reporting period:

- New short-term lane closure for slow rolls near Willoughby Bay Bridge to support underdrain installation.

Quality

Quality updates for this reporting period include:

- VDOT reviewed Construction Quality Management Plan (CQMP) updates for two Notice of Design Change (NDC) packages this period.

- VDOT reviewed 42 Non-Conformance Reports (NCRs) for concurrence.
- VDOT continues to monitor HRCP's QA and QC material testing. VDOT also performed Independent Testing and Verification Testing on materials in accordance with VDOT requirements and coordinated with VDOT Materials Division for shop inspections as required.
- VDOT continues to engage HRCP in discussions on HRCP's implementation of their Quality Management System Plan (QMSP) and the effectiveness of the plan.

Safety

Safety procedures and activities during this reporting period include:

- VDOT and HRCP continue to follow latest CDC guidelines regarding COVID-19.
- VDOT and HRCP continue collaboration on emergency response planning.

The following safety performance indicator information is provided by HRCP and is current as of November 30, 2022:

- Total Recordable Incidence Rate: 1.61 (National Average: 2.5)
- Lost Time Incidence Rate: 0.17 (National Average 1.6)

Civil Rights & DBE/SWaM Business Opportunities

HRCP has awarded **323** subcontracts, subconsultant agreements, and purchase orders to certified DBE/SWaM firms on the project. These contract awards represent a total of **\$492.4 million** to certified DBE/SWaM firms.

- HRCP continued to make progress towards the 80 participant On-the-Job Training (OJT) contract goal. To date, 26 participants have completed all required training hours to graduate from the OJT program.
- VDOT and HRCP participated in business development and outreach events including the USDOT Small Business Transportation Resource Center's Regional Transportation Symposium, Virginia Asian Chamber of Commerce 2022 ProcureCon NOVA Buyer Showcase, City of Virginia Beach Minority Business Council's Conference and Expo, Black Brand's Diamond Weekend, and Christopher Newport University's SWaM Fair.



Public Outreach & Media

Public outreach and project media updates provided by VDOT and HRCP for this reporting period include:

- HRBT Expansion Team presented to LEAD Peninsula, Kecoughtan High School, NASA Langley Contractor Steering Committee, and Old Dominion University.
- HRBT Expansion Team hosted a booth for three days at the Governor's Transportation Conference, while also providing site tours for the Commonwealth Transportation Board and members of the Virginia House of Delegates and Senate.

2. Project Schedule

2.1 Schedule Status

The following table depicts key milestone dates for the project and has been updated as of the current approved schedule. The last approved schedule for the project is Update 39 (data date: October 23, 2022), and the schedule information in this report reflects this update. Update 39 projects substantial completion on August 31, 2026, and final completion on October 30, 2026. Contractual Substantial and Final Completion dates remain unchanged.

	Contract Requirement	October 2022 Schedule	Actual
NTP		Sep 11, 2020	Sep 11, 2020
Substantial Completion	Sep 1, 2025	Aug 31, 2026	
Final Completion	Nov 1, 2025	Oct 30, 2026	

2.2 Longest Path

The longest path/critical path in Project Schedule Update 39 is driven by the following activities:

- South Portal Launch Pit Headwall Construction
- Assembly of the Tunnel Boring Machine (TBM) in launching pit
- TBM Commissioning
- TBM drive in High Occupancy Toll Tunnel
- TBM U-Turn on North Island
- TBM drive in General Purpose Tunnel
- TBM Disassembly in south pit
- South Portal Cut and Cover Structures – Phase 4 Cell 1
- South Island Ventilation Building and Gate House – Phase 2
- South Ventilation Building Commissioning
- South Island Buildings Integrated Functional Testing
- Tunnel Systems Integration – ITS
- Commissioning – High Occupancy Toll and General Purpose Operational Testing
- Commissioning – Tunnel, Buildings, Roadways, and Trestles Integration Testing
- ITT Reversal
- Substantial Completion

2.3 Impact Analysis

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 Schedule Update 39:

South Portal

- South Portal Tri-Cell – Base Slabs
- South Portal Cut and Cover Structures – Phase 2
- South Portal Cut and Cover Structures – Phase 5
- South Portal Cut and Cover Structures – Phase 6
- General Purpose Tunnel – Interior Structures Construction

South Island

- South Island – Slurry Treatment Plant – Filter Press Walls
- South Island – Additional Conveyor and Quay Mooring Piles and Fenders
- Northside South Island Expansion – Clear Cluster 109
- South Island – Rectilinear Approach – Jet Grouting
- South Island – Rectilinear Approach – Support of Excavation – Capping Beams
- South Island – Rectilinear Approach – Construction
- South Island – Vent Building Construction – Phase 1

Tunneling

- Tunnel Boring Machine – Cell 3 Gantry Assembly
- South Portal Tri-Cell – TBM Pre-Assembly
- South Portal Tri-Cell – Thrust Frame Spreader Beam

North Island

- North Island – Soil Treatment – Field Test Program
- North Island – Break-in/Break-out Phase 1 and 2 – Jet Grout
- North Island – Rectilinear Section – Capping Beams
- North Island – Rectilinear Section – Jet Grout
- North Island – Rectilinear Section – Support of Excavation
- North Island – Rectilinear Section – Construction
- North Portal Construction
- North Island – Ventilation Building – Phase 2 Cell 1 – Construction

Roadway and Land Bridges

- Segment 3b Phase 1 – Willoughby Spit Roadway and Storm Drainage
- Segment 3b Phase 2 – Willoughby Spit PV Drains/Ground Improvement, Drainage and Roadway
- Segment 3b Phase 2 – Willoughby Spit – RW302, RW312, RW306, and RW313
- Segment 3b Phase 3A – Willoughby Spit Roadway and Storm Drainage
- Segment 3b Phase 4 – Willoughby Spit Permanent Barrier Wall
- Segment 3d Phase 1 – Willoughby Bridge to Mason Creek Median Widening

- Segment 3d Phase 2A – Willoughby Bridge to Mason Creek Roadway
- Segment 3d Phase 2A – Willoughby Bridge to Mason Creek RW315
- Segment 3d Phase 3 – Willoughby Bridge to Mason Creek Roadway and Storm Drainage
- Segment 4 Phase 3 – Norfolk to Navy Median Widening and Storm Drainage
- Segment 4 Phase 3A – Norfolk to Navy Median Widening
- Segment 4 Phase 3A – Norfolk to Navy Median RW408
- Segment 4 Phase 4 – Norfolk to Navy Roadway and Storm Drainage
- Mallory Bridge Phase 1 – RW103A, RW02, and RW105A
- Mallory Bridge Phase 1 – Abutment B and Superstructure Construction
- Mallory Bridge Phase 2 – Demolition
- Mallory Bridge Phase 2 – RW103B and RW105B
- 13th Ave (Bayville) – Ramp C and F
- 13th Ave (Bayville) – Eastbound Abutment A Construction
- Willoughby Bridge – Eastbound Lighting and Abutment A Construction
- Willoughby Bridge Stage 1 Phase 2 – Eastbound Superstructure Construction
- Willoughby Bridge Stage 1 Phase 3A – Westbound Superstructure Unit 5 Construction
- Willoughby Bridge – Westbound North Temporary Trestle
- 4th View – Ramp H and Ramp I
- Bay Avenue Bridge – Westbound Substructure and Superstructure Construction
- Patrol Road Bridge – Eastbound Substructure and Superstructure Construction

Trestles

- South Island Expansion – Marine Works, Land Works, and Island Expansion
- South Trestle – Zone 3 Substructure and Superstructure Construction
- South Trestle – Zone 5 Superstructure Construction
- South Trestle – Zone 7 Substructure and Superstructure Construction
- South Trestle – Zone 8 Substructure and Superstructure Construction
- South Trestle – Zone 9 Substructure and Superstructure Construction
- South Trestle – Existing Trestle Demolition

Commissioning and Integration

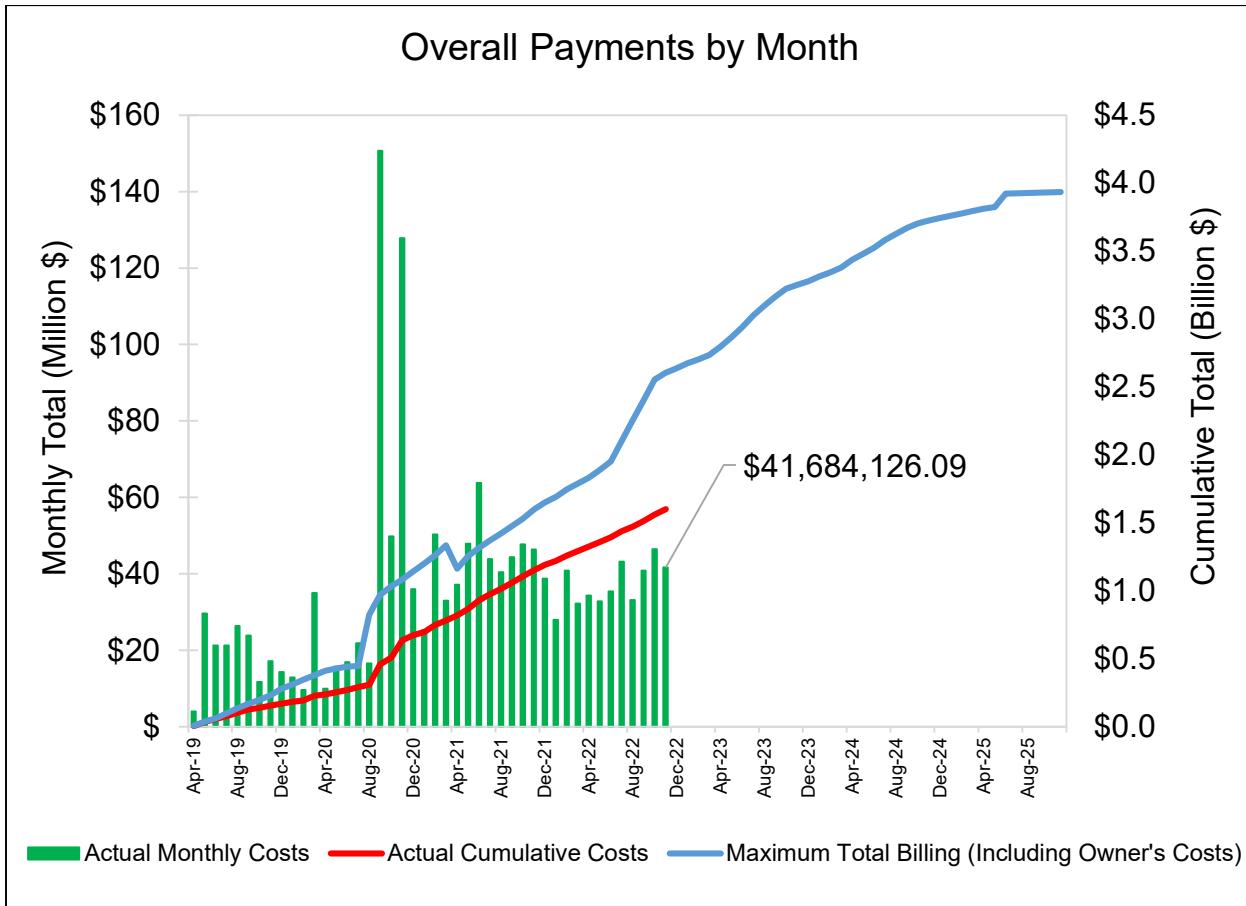
- General Purpose Tunnel – Low Point Pump Station Drainage
- General Purpose Tunnel – Fire Suppression and Detection
- General Purpose Tunnel – Booster Fans
- General Purpose Tunnel – Lighting
- North Island Buildings – Functional Testing – Mechanical Pressurization
- South Island Buildings – Functional Testing – Electrical Medium Voltage/Low Voltage
- Commissioning – Operational Testing – General Purpose Fire System
- Commissioning – Operational Testing – General Purpose Medium Voltage/Low Voltage
- Commissioning – Operational Testing – General Purpose Drainage System

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).

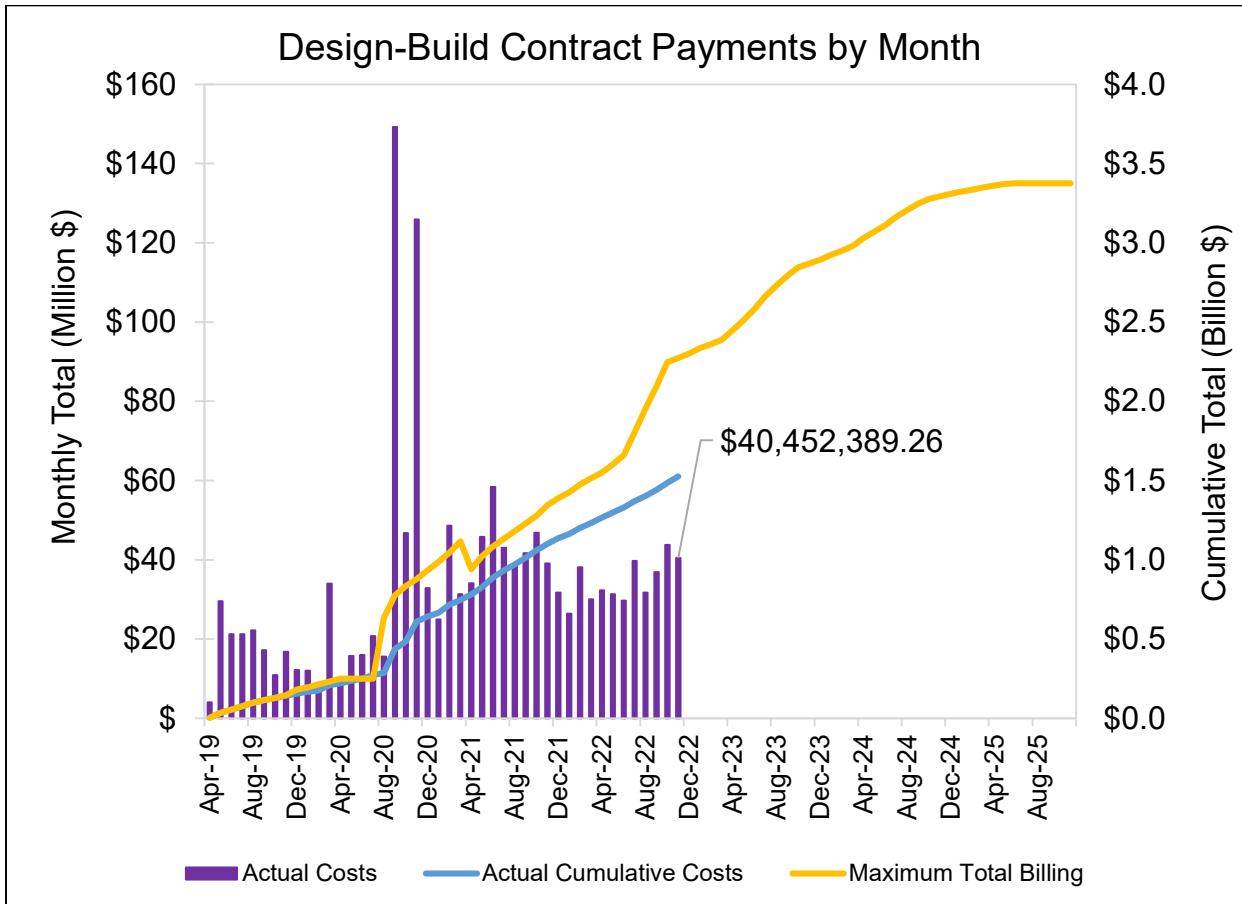
	Amount Spent this Period:	Total Spent to Date:	Original Total Budget:	Total Remaining Budget:	Percent Spent To-date:
Comprehensive Agreement					
<i>Construction</i>	\$40,452,389.26	\$1,506,316,191.26	\$3,299,997,227.00	\$1,793,681,035.74	45.65%
<i>Owner Costs</i>					
<i>Administration</i>	\$825,413.32	\$61,664,928.93	\$122,000,000.00	\$60,335,071.07	50.55%
<i>Right of Way</i>	\$21,785.38	\$8,674,190.10	\$15,000,000.00	\$6,325,809.90	57.83%
<i>No-Excuses Incentive</i>	\$0.00	\$0.00	\$90,000,000.00	\$90,000,000.00	0.00%
<i>Contingency</i>	\$214,666.21	\$22,383,450.17	\$335,000,000.00	\$312,616,549.83	6.68%
<i>Bridge Repair Work Option</i>	\$169,871.92	\$2,331,919.15	\$73,454,413.96	\$71,122,494.81	3.17%
Total	\$41,684,126.09	\$1,601,370,679.61	\$3,935,451,640.96	\$2,334,080,961.35	40.69%



*The Maximum Total Billing is now showing an adjustment in May 2021 due to the executed Change Order #40 – Update Maximum Cumulative Cost Curve

3.2 Design-Build Contract Cost Status

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



**The Maximum Total Billing is now showing an adjustment in May 2021 due to the executed Change Order #40 – Update Maximum Cumulative Cost Curve*

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.

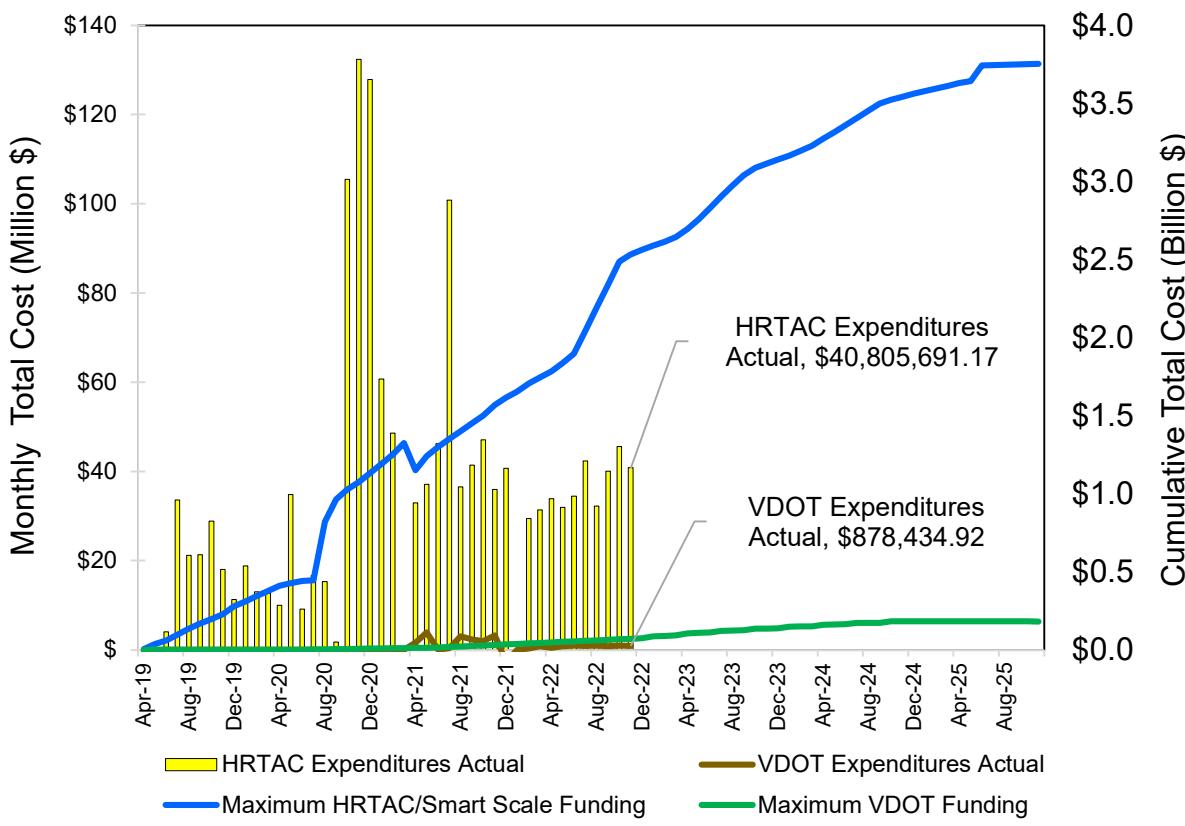
3.3.1 HRTAC and Smart Scale

	Amount Spent this Period:	Total Spent to Date:	Original Total Budget:	Total Remaining Budget:	Percent Spent To-date:
Comprehensive Agreement					
<i>Construction</i>	\$39,894,563.26	\$1,491,075,713.50	\$3,204,569,251.00	\$1,713,493,537.50	46.53%
Owner Costs					
<i>Administration</i>	\$674,676.32	\$60,007,679.93	\$118,472,054.00	\$58,464,374.07	50.65%
<i>Right of Way</i>	\$21,785.38	\$8,674,190.10	\$15,000,000.00	\$6,325,809.90	57.83%
<i>No-Excuses Incentive</i>	\$0.00	\$0.00	\$90,000,000.00	\$90,000,000.00	0.00%
<i>Contingency</i>	\$214,666.21	\$21,398,484.04	\$325,428,276.00	\$304,029,791.96	6.58%
Total	\$40,805,691.17	\$1,581,156,067.57	\$3,753,469,581.00	\$2,172,313,513.43	42.13%

3.3.2 VDOT

	Amount Spent this Period:	Total Spent to Date:	Original Total Budget:	Total Remaining Budget:	Percent Spent To-date:
Comprehensive Agreement					
<i>Construction</i>	\$557,826.00	\$15,240,477.76	\$95,427,976.00	\$80,187,498.24	15.97%
Owner Costs					
<i>Administration</i>	\$150,737.00	\$1,657,249.00	\$3,527,946.00	\$1,870,697.00	46.97%
<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	\$984,966.13	\$9,571,724.00	\$8,586,757.87	10.29%
<i>Bridge Repair Work Option</i>	\$169,871.92	\$2,331,919.15	\$73,454,413.96	\$71,122,494.81	3.17%
Total	\$878,434.92	\$20,214,612.04	\$181,982,059.96	\$161,767,447.92	11.11%

Overall Expenditures by Source



3.4 Contingency

3.4.1 Contract Changes

	Description	Date	Value	Time
CO-1	VDOT'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	\$ 73,454,413.96	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-16	Navy Security Fencing Design	7/15/2021	\$ 150,000.00	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-28	HOT Lane Shoulder Width	3/29/2021	\$ 2,950,000.00	0 days
CO-30	Willoughby Bay Bridges Fender & Lighting Replacement	2/12/2021	\$ 1,495,000.00	0 days
CO-31	Builder's Risk Insurance	10/21/2021	\$ 1,500,000.00	0 days
CO-32	VCU Fisheries and SAV Mitigation Plan	4/16/2021	\$ (1,042,144.00)	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
CO-39	Re-use of existing drainage pipes	4/20/2021	\$ (100,984.25)	0 days
CO-40	Update Maximum Cumulative Cost Curve	7/15/2021	\$ -	0 days
CO-41	Wetland Mitigation Costs	4/26/2021	\$ 3,503,400.00	0 days
CO-42	Navy Gate 22 Drainage Design and Construction	8/19/2022	\$ 1,524,940.16	0 days
CO-43	Hybrid Trestle Beam Design	7/2/2021	\$ -	0 days
CO-44	SCADA Control of Deluge Valves	7/27/2021	\$ -	0 days
CO-45	HRCP Project Executive/Representative Change	5/24/2021	\$ -	0 days
CO-46	Tunnel Sprinkler Heads Material Change	7/28/2021	\$ -	0 days
CO-47	Evans Street Approach Slab Settlement Repair	6/22/2022	\$ 34,082.83	0 days
CO-48	Scope Reduction – City of Hampton	8/24/2022	\$ (6,072,941.31)	0 days
CO-49	HRCP Senior Representative Change	7/2/2021	\$ -	0 days
CO-50	Change in Precast Form Tolerance & Change in Curing Methods	1/10/2022	\$ -	0 days
CO-53	Sound Wall Quantity Reconciliation	12/6/2021	\$ (16,561,217.63)	0 days
CO-54	4th View Interchange Design and Construction Drainage	8/17/2022	\$ 984,598.45	0 days
CO-55	HREL Overlap Scope Change in Norfolk-Proposal Costs	8/12/2022	\$ 157,237.34	0 days
CO-56	Building Code Changes - Design	10/21/2022	\$ 2,186,150.00	0 days
CO-57	Design-Builder's Senior and Representative Changes	1/11/2022	\$ -	0 days
CO-59	Fisheries and SAV Mitigation Plan - VCU	6/16/2022	\$ (70,238.22)	0 days
CO-60	Navy Fence (remaining design costs)	8/17/2022	\$ 180,142.36	0 days
CO-62	SIP Forms for Marine Bridges	6/28/2022	\$ -	0 days
CO-64	Tolling Infrastructure Proposal Costs	10/21/2022	\$ 645,242.40	0 days
		TOTAL	\$ 75,207,357.48	0 days

3.4.2 Material Price Adjustments

This progress period included the following material price adjustments:

Material	Current Amount	Total to Date	Material Price Adjustment Through
Asphalt	\$ 1,532.85	\$ 23,703.86	September 2022
Fuel	\$ 40,205.01	\$ 151,453.52	September 2022
Steel	\$ 140,315.84	\$ 1,365,043.30	May 2022

4. Environmental

The following environmental management activities occurred during this reporting period:

Permits:

- HRCP received all agency approvals for JPA permit modifications #1-8.
- DEQ issued final approval of HRCP's requested modification to the Virginia Pollutant Discharge Elimination System (VPDES) permit.
- DEQ is continuing to review the air permit application for the South Island concrete plant.
- HRCP held a quarterly status meeting to inform the regulatory agencies of construction progress over the past three months on November 9, 2022.
- HRCP held a pre-modification request meeting with the regulatory agencies to introduce permit modification request #9 on November 17, 2022.

Marine Mammal Protection:

- No new activities.

Bird Mitigation:

- No new activities.

Programmatic Agreement:

- No new activities.

Archeological Discoveries:

- No new discoveries.

5. Construction

The figure below illustrates a map of the project corridor. The project is further categorized into four construction areas.

- Construction Area 1 is composed of landside road work.
- Construction Area 2 is composed of marine work, including the North Trestle, South Trestle, and island expansions.
- Construction Area 3 is composed of tunnel and island site work.
- Construction Area 4 is composed of landside road and bridge work.



5.1 Construction Area 1: Landside Roadways

I-64 (Segment 1):

- Drainage installation along I-64 eastbound exterior near inspection station in Hampton.
- Began excavation for retaining wall 103A.
- Began and completed excavation and grade for Blue Crab Substation retaining wall 02.

I-64 (Segment 3):

- Drainage installation along I-64 eastbound off ramp at 4th View St.
- Continued installation of embankment between 4th View St. and Mason Creek Rd. for eastbound widening.
- Completed temporary barrier installation for WB Phase 1 traffic shift from 13th View Bridge to Ocean View off-ramp.
- Completed drainage jack and bore underneath I-64 EB on and off ramps at Bayville St.

I-64 (Segment 4):

- Completed installation of retaining wall 401 panels between Mason Creek Rd. and 1st View St. for eastbound widening.
- Continued installing wall posts and panels for sound wall 4-6 between Bay Ave. and Evans St. for eastbound widening.



► I-64 EB (Segment 1)

Foundation undercut at Blue Crab Substation retaining wall 02.

5.2 Construction Area 2: Marine Trestle Work

North Trestle:

- **Eastbound MOT Trestle**
 - Completed pile driving.
 - Completed cap placement.
- **Eastbound Trestle**
 - 3 piles driven during this period (192 out of 254 total piles driven).
 - 34 beams placed during this period (157 out of 296 total beams placed).
 - 2 decks placed during this period (7.5 out of 36 total decks placed).

South Trestle:

- **Eastbound MOT Trestle**
 - 6 piles driven during this period (114 out of 118 total piles driven).
 - 3 caps placed during this period (23 out of 26 total caps/footers placed).
 - 9 beams placed during this period (77 out of 95 total beams placed).
- **Westbound MOT Trestle**
 - 5 piles driven during this period (45 out of 109 total piles driven).
- **Permanent Trestle**
 - 7 caps placed during this period (13.5 out of 70 total caps placed).

South Island Expansion:

- **Cell 1 Cofferdam**
 - 18 pipe piles driven during this period (18 out of 46 total piles driven).
 - 15 sheet piles driven during this period (15 out of 50 total piles driven).



► **South Island Expansion**
Cell 1 Cofferdam pipe pile
installation

5.3 Construction Area 3: Tunnels and Islands

South Island:

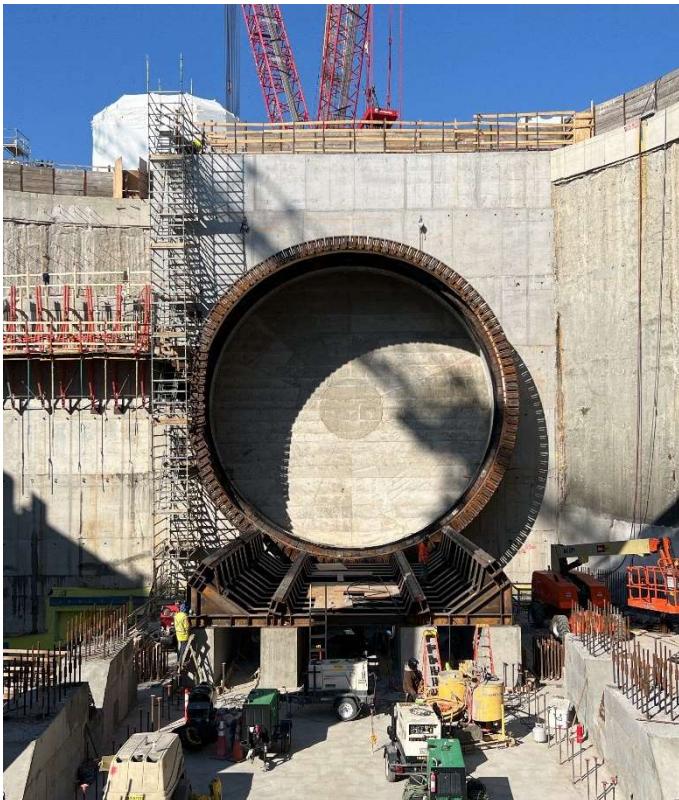
- 88% complete for jet grouting operations at tunnel approach plug.
- 67% complete for launching pit base slab.
- 96% complete for High Occupancy Toll headwall installation.
- 72% complete for General Purpose headwall installation.
- 99% complete for waterproofing installation for launching pit base slab.
- 9% complete for waterproofing on the launching pit walls.

North Island:

- 39% complete for capping beams.
- Continued field trial program for jet grouting.
- Installed instrumentation and dewatering wells in preparation for receiving pit excavation.

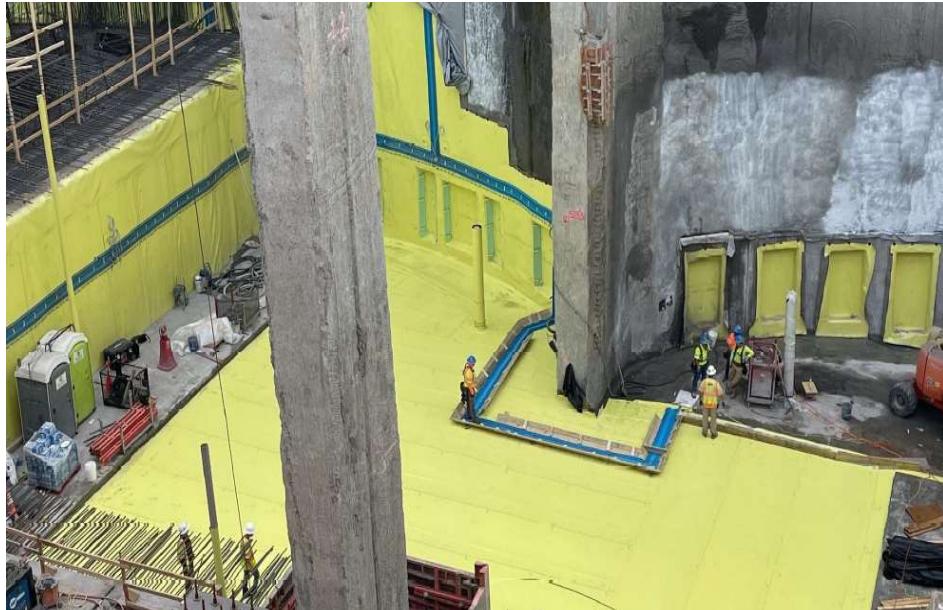
Tunnel:

- 40% complete for precast tunnel segment liner production.
- 75% complete for assembly of de-sanding unit for slurry treatment plant.
- Completed TBM shield cradle installation at Cell 1 launching pit.
- Delivery of TBM shield parts to South Island.
- Installation of gantry tracks in launching pit Cell 2 to allow for shifting of gantry #1 into launching pit Cell 2.
- Installation of thrust frame anchors in launching pit Cell 1.



► South Island

Installation of cradle supports to enable TBM shield assembly



◀ **South Island**

Waterproofing membrane installation in Cell 1 and Cell 2

Total Segments Required:	Conforming Segments Cast To-Date:	Percentage Complete:
21,492	8,572	40%

5.4 Construction Area 4: Landside Bridges

Mallory St Bridge:

- Completed median pier shoring tower.

Willoughby Bay Bridge:

- Continued placing cap pedestal concrete for eastbound widening.
- Continued installation of precast girders for eastbound widening (37 out of 80 total spans installed).
- Continued demolition of existing parapet and deck overhang for eastbound widening.
- Continued repair/rehabilitation of existing eastbound bridge.

Mason Creek Road Bridge:

- Completed Abutment A footing construction for eastbound widening (1.5 out of 2 total abutments compete).
- Began platform installations for eastbound and westbound bridges.

1st View Street Bridge:

- Began and completed pile driving operations at Pier 1 and Abutment B for eastbound widening (27 out of 36 total piles driven).

Bay Avenue Bridge:

- Placed caps at Bents 5, 7, 8, and 10 for eastbound widening (16.5 out of 34 total caps placed).

- Completed Spans 41 and 42 deck concrete placements for eastbound widening (7 out of 42 total decks placed).
- Continued installation of bridge deck reinforcing steel and edge forms for eastbound widening.
- Began repair/rehabilitation of existing eastbound bridge.

Evans Street Bridge:

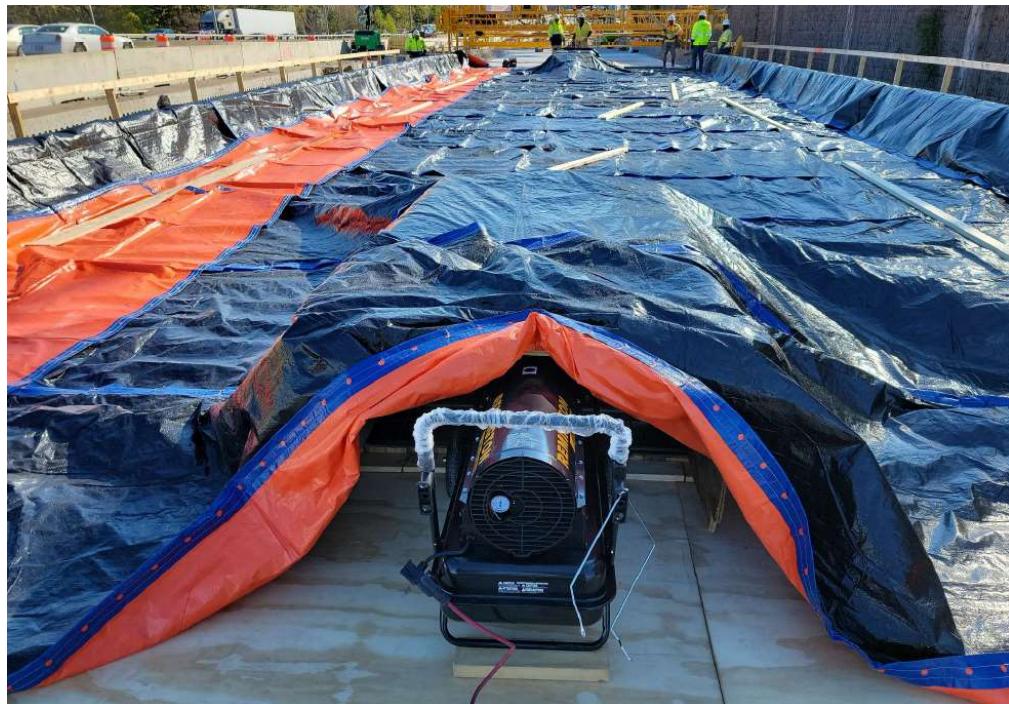
- Continued protective coating application for existing eastbound bridge.
- Completed protective coating application for existing westbound bridge.

Bayview Boulevard Bridge:

- Continued repair/rehabilitation of existing eastbound and westbound bridges.

Oastes Creek Bridge:

- Continued installation of stay-in-place deck forms and overhangs for eastbound widening.
- Continued demolition of existing pile jackets for eastbound and westbound bridges.



► **Bay Ave. Bridge**
Span 41 deck concrete placement with cold-weather protection

6. Operations

Operations 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, and communication with the Hampton Roads Harbor Tunnels (HRHT) facility staff. The following operations activities occurred during this reporting period:

Short-Term Lane Closures:

- Willoughby Bay Bridge, North Trestle, and South Trestle eastbound to facilitate ongoing concrete placement for piles, caps, and decks.
- Willoughby Bay Bridge, North Trestle, and South Trestle eastbound for beam placements.
- South Trestle for parapet demolition.
- Willoughby Bay Bridge and South Trestle for temporary lighting installation.
- Striping maintenance throughout the project corridor.
- Slow roll of I-64 eastbound and westbound near Willoughby to support underdrain installation.

Long-Term Lane Closures:

- Bay Ave. in Norfolk to facilitate access to staging area for widening Oastes Creek Bridge.
- Bayview Blvd. in Norfolk and Mallory St. in Hampton to facilitate bridge widening.
- West Ocean Ave. in Norfolk traffic shift to facilitate bridge widening.

Hampton Lane Shifts:

- No new activities.

Norfolk Lane Shifts:

- No new activities.

Detours:

- Long-term detour at West Evans St. to facilitate bridge widening.
- Nightly detours on West Bay Ave. eastbound on-ramps for bridge widening work.
- Long-term detour at Mason Creek Rd. to facilitate bridge widening.

Intelligent Transportation System (ITS):

- Began preparatory works for installation of temporary lane-use signal overhead truss structures at the Mallory and Willoughby inspection stations.
- Installation of ITS conduit on the South Trestle.

Routine Maintenance:

- HRCP performed routine incident management and maintenance operations within the corridor, including pavement repairs at several bridge approaches within the corridor.

7. Quality

Quality updates for this reporting period include:

Construction Quality Management Plan (CQMP) Updates:

- VDOT reviews these updates as part of final “Released for Construction” (RFC) design packages and “Notice of Design Change” (NDC) packages. There were 2 NDC updates reviewed this period. These updates included 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.

Independent Assurance (IA) Testing Activities:

- VDOT continues to monitor HRCP’s QA and QC material testing. VDOT also performed Independent Testing and Verification Testing on materials in accordance with VDOT requirements and coordinated with VDOT Materials Department for shop inspections as required. This testing included oversight of the HRCP precast yard in Chesapeake and Technopref’s precast yard in Cape Charles producing the tunnel lining segments.

Quality Management System Plan (QMSP):

- VDOT continues to engage HRCP in discussions on HRCP’s implementation of their QMSP and the effectiveness of the plan, which is updated quarterly.

Quarterly Updates of Quality Plans:

- HRCP resubmitted the quarterly updates of the Quality Management System Plan (QMSP), Construction Quality Management Plan (CQMP), and the Design Quality Management Plan (DQMP) for the third quarter of 2022. VDOT completed the review and returned the DQMP as approved, and the QMSP and CQMP as Revise and Resubmit.
- HRCP continues to update its Tunnel Quality Plan and address VDOT’s comments. VDOT previously reviewed Update 4 and returned the plan to HRCP to revise and resubmit.

Material Book Records:

- VDOT conducted a monthly review of the current records, and HRCP is responding to audit comments provided by VDOT. Review of the Material Book records includes confirming that HRCP is completing the proper documentation for Buy America compliance. VDOT has completed the full audit of nine volumes of Material Book records.

Routine Quality Activities:

- VDOT’s quality team conducted reviews of written deficiency notices (WDNs), non-conformance reports (NCRs), root cause analyses and dispositions of deficiencies. The VDOT Team reviewed 42 NCR’s for concurrence during this period. VDOT conducted reviews of QA and QC records for accuracy and quality issues and coordinated documentation reviews through VDOT’s Material Department. VDOT also continues a review of current construction quality by performing inspections based on VDOT’s Construction Quality Improvement Program (CQIP).

8. Safety

Safety procedures and activities during this reporting period include:

COVID-19 Update:

- VDOT and HRCP continue to follow latest CDC guidelines regarding COVID-19.

Safety Site Visits:

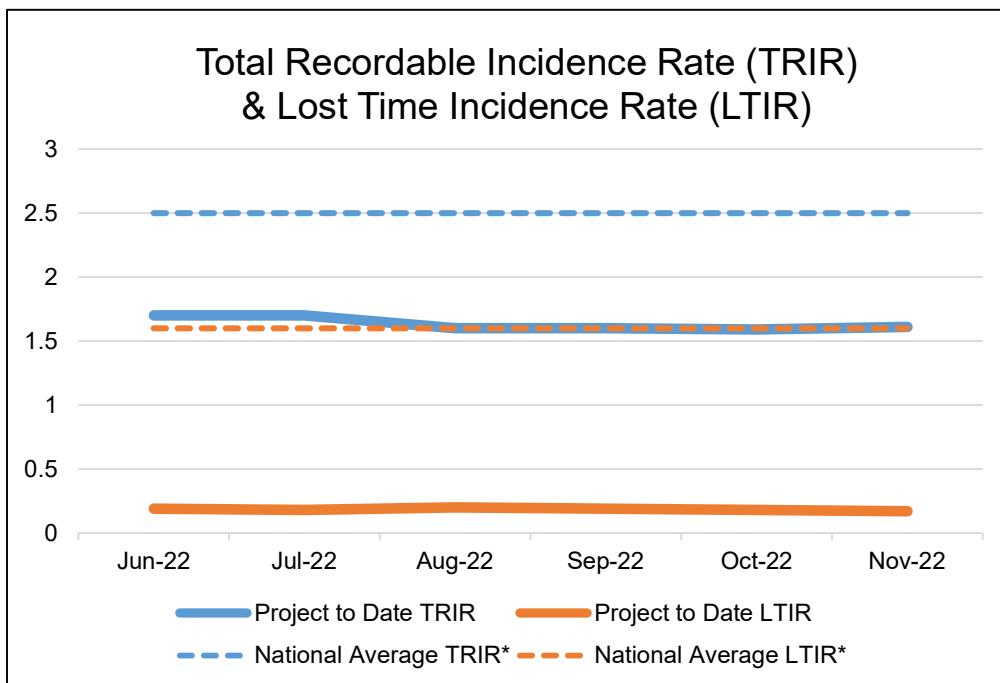
- VDOT continued to conduct routine visits to promote safe work practices throughout the project.

Emergency Response Planning:

- VDOT and HRCP continue collaboration on emergency response planning.

Safety Performance Indicators:

- The following safety performance indicator information is provided by HRCP and is current as of October 31, 2022:



**National averages are from the Bureau of Labor Statistics, US Department of Labor – 2020 Data for Construction Industry, Published November 3, 2021.*

9. Civil Rights & DBE/SWaM Business Opportunities

To date, HRCP awarded **323** subcontracts, subconsultant agreements and purchase orders to certified DBE/SWaM firms. There was a slight increase in contract awards for a total of **\$492.4 million** due to change orders issued to active DBE/SWaM firms on the project. Eighty-one percent (81%) of DBE/SWaM firms are based in Virginia.

Compliance Activities:

- HRCP and VDOT Civil Rights Work Group met on November 15, 2022 for the monthly project and compliance update, which provided an opportunity to discuss the scheduled EEO Contractor Review, prompt payment compliance, and the proposed DBE/SWaM outreach event planned for December 2022.

Workforce Development Activities:

- HRCP continued to make progress towards the 80 participant On-the-Job Training (OJT) contract goal. To date, 26 candidates have completed all required training hours to graduate from the OJT program.
- Employment opportunities were shared at the Hampton Roads Workforce Council's Hampton Roads Fall Career Fair on October 25, 2022.

Business Development Activities:

- VDOT met with HRCP on November 16, 2022 to discuss potential procurement opportunities related to pit/spoils hauling, building construction, and trestle demolition and to discuss upcoming business outreach events within the Hampton Roads region or hosted by our resource partners.
- During this reporting period, other business development and outreach activities included:
 - November 1, 2022 – USDOT Small Business Transportation Resource Center's Regional Transportation Symposium
 - November 9, 2022 – Virginia Asian Chamber of Commerce, 2022 ProcureCon NOVA Buyer Showcase
 - November 10, 2022 – City of Virginia Beach, Minority Business Council's Conference and Expo
 - November 10-12, 2022 – Black Brand's Diamond Weekend
 - November 17, 2022 – Christopher Newport University's SWaM Fair

10. Public Outreach & Media

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

Public Outreach

- October 26-28, 2022 – Governor's Transportation Conference, Virginia Beach Conference Center
 - Project Team hosted a booth for three days at the Conference
 - October 26 – Project Site Tour for Commonwealth Transportation Board
 - October 27 – Presentation to attendees of Governor's Transportation Conference
 - October 27 – Project Site Tour for members of Virginia House of Delegates and Senate
- November 2, 2022 – Presentation to LEAD Peninsula
- November 15, 2022 – Presentation to Kecoughtan High School (STEM Outreach), 107 students in attendance
- November 17, 2022 – Presentation to NASA Langley Contractor Steering Committee
- November 18, 2022 – Presentation to Old Dominion University senior engineering class

Public Materials

- Tunneling progress infographic released
- Fall project update video released (6-minute overview of project shown to site visitors)

Lane Closures/Advisories

- October 28, 2022 – Weekly Lane Closure Report
- November 4, 2022 – Weekly Lane Closure Report
- November 10, 2022 – Weekly Lane Closure Report
- November 18, 2022 – Weekly Lane Closure Report

Media

- Photos on site with Virginia Business (Feature: "Top People to Meet in Hampton Roads")



Visit our website to view more information:

www.hrbtexpansion.org