



October 2023
Monthly Project Report
**I-64 HAMPTON ROADS
BRIDGE-TUNNEL
EXPANSION**

Report No. 55
Project No. 0064-M06-032



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Prepared by:

Virginia Department of Transportation

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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 September 24, 2023 – October 21, 2023. 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:
 - Ballast delivery system installation at the headwall in Cell 1 at 85% complete.
- Tunnel Progress:
 - Excavated 876 ft this period (2,546 ft total excavation) for High Occupancy Toll (HT) tunnel.
- North Island Progress:
 - Jet grout approach plug at 70% complete.
 - Installation of concrete for headwall 44% complete.
 - Installation of rebar for Cell 1 base slab at 75% complete.
- Landside Progress:
 - Completed installation of steel girders at 1st View Street Bridge for eastbound widening.
- Marine Progress:
 - North Trestle eastbound piles 90% complete.
 - North Trestle westbound piles 51% complete.
 - South Trestle eastbound decks 33% complete.
 - South Trestle westbound MOT beams 84% complete.

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 50 (data date: September 24, 2023), and the schedule information in this report reflects this update. Schedule 50 was returned Approved as Noted on October 16, 2023.

- Contractual Substantial and Final Completion Dates remain unchanged.
- HRCP's Schedule Update 50 is reporting Substantial Completion on September 24, 2026.
- HRCP's Schedule Update 50 is reporting Final Completion on November 23, 2026.

Project Budget

The project budget summary below now includes all incurred to date costs through September 23, 2023 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:	\$ 2,052,913,679
Remaining project budget:	\$ 1,882,537,962

- Design-build contract overview:

Design-build contract original amount:	\$ 3,299,997,227
Net change orders:	\$ (10,798,042)
Exercised Options:	\$ 73,454,414
Material Price Adjustments to Date:	\$ 3,143,666
Assessed Liquidated Damages (LD):	\$ (939,000)
Design-build contract sum to date:	\$ 3,364,858,266
Expenditures to date:	\$ 1,954,699,553
Remaining design-build contract amount:	\$ 1,410,158,712

- Design-build progress to date:

Project Management:	69.7%
Design:	91.5%
Physical Construction Progress:	40.5%
Overall:	58.1%

Environmental

Environmental updates for this reporting period include:

- HRCP provided response letters dated September 26 and 29, 2023, addressing correspondence from the U.S. Army Corps of Engineers (USACE), DEQ, and VDOT regarding HRCP's environmental performance and plan for improvement.
- HRCP submitted a post-removal survey of the Cluster 109 mitigation measures to USACE on October 16, 2023.
- DEQ provided comments on September 29, 2023 following their review of the revised Wastewater Treatment Plant Operation & Maintenance Manual. HRCP provided initial responses to DEQ's questions on October 11, 2023.

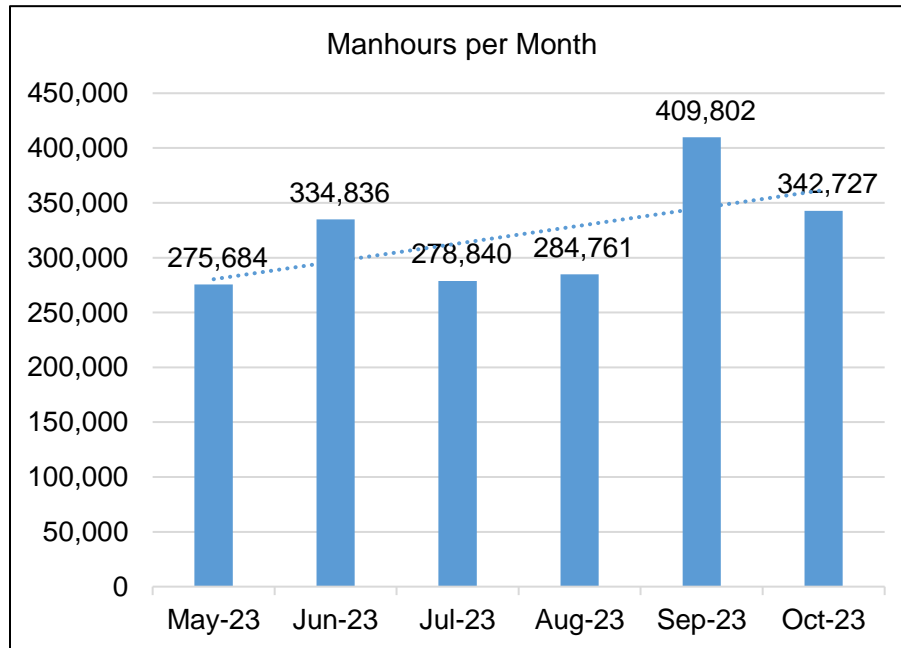
Construction

Summary progress updates for this reporting period include:

- Laneside Roadways
 - Completed placement of asphalt in median between 15th View St. and 13th View St. for westbound widening.
 - Completed retaining wall 407 tie-in to Oastes Creek Abutment A for eastbound widening.
- Marine Works
 - Placed beams at North eastbound permanent trestle (18 installed this period).
 - Drove piles at North westbound permanent trestle (2 installed this period).
 - Drove piles at South westbound permanent trestle (8 installed this period).
 - Placed beams at South westbound MOT trestle (10 installed this period).
- Tunnels and Islands
 - Excavated 876 ft this period (2,546 ft total excavation) for High Occupancy Toll (HT) tunnel.
 - Jet grout approach plug at 70% complete at the North Island.
 - Installation of concrete for headwall at 44% complete at the North Island.
- Laneside Bridges
 - Completed concrete placement of Spans 50, 51, and 79 decks and Spans 51 – 64 parapet wall at Willoughby Bay Bridge for eastbound widening.
 - Began and completed installation of steel girders at 1st View Street Bridge for eastbound widening.
 - Completed concrete placement for backwall at Abutment A at Bay Avenue Bridge for eastbound widening.
 - Completed Bent 20 pile driving and cap installation, and installation of Span 21 girders at Bay Avenue Bridge for eastbound widening.
 - Completed placement of footings and pedestals at Abutment A at Evans Street Bridge for eastbound widening.
 - Completed placement of footing at Abutment B at Bayview Bridge for eastbound widening.

- Completed pile driving at Abutment A at Patrol Road Bridge for eastbound widening.

The number of construction manhours worked each month is provided by HRCP and is current as of October 31, 2023:



Project Manhours to Date:
9,277,438

Operations

The following operations activities took place during this reporting period:

- Short-term lane closure at Mallory westbound for overhead sign structure #12 and installation of drilled shaft foundations.
- Slow rolls and all stops on I-64 for Mallory Bridge girder, overhang, and deck pan installation.
- Lane shift on eastbound I-64 on Willoughby Spit in Norfolk.

Quality

Quality updates for this reporting period include:

- 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

The following safety performance indicator information is provided by HRCP and is current as of October 31, 2023:

- Total Recordable Incidence Rate: 1.64 (National Average: 2.5)
- Lost Time Incidence Rate: 0.26 (National Average 1.6)

Civil Rights & DBE/SWaM Business Opportunities

HRCP has awarded **346** subcontracts, subconsultant agreements, and purchase orders to certified DBE/SWaM firms on the project. These contract awards represent a total of **\$542.2 million** to certified DBE/SWaM firms.

Public Outreach & Media

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

- HRBT Project Director presented at Virginia Governor's Transportation Conference in Northern Virginia.
- Project team hosted an information booth at the NASA Langley Open House in Hampton.

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 50 (data date: September 24, 2023), and the schedule information in this report reflects this update. Contractual Substantial and Final Completion dates remain unchanged.

	Contract Requirement	September 2023 Schedule	Actual
NTP		Sep 11, 2020	Sep 11, 2020
Substantial Completion	Sep 1, 2025	Sep 24, 2026	
Final Completion	Nov 1, 2025	Nov 23, 2026	

2.2 Longest Path

The longest path/critical path in Project Schedule Update 50 is driven by the following activities:

- TBM drive in High Occupancy Toll Tunnel
- TBM U-Turn on North Island
- TBM drive in General Purpose Tunnel
- TBM disassembly in south pit
- General Purpose Tunnel Interior Fit Out – Section 8
- General Purpose Egress Corridor – Fire Life Safety System
- Commissioning – General Purpose Tunnel – Functional Testing
- 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 50.

South Portal

- South Island Expansion – Rectilinear Approach Construction – Cell 1 Mud Slab, Cell 2 Mud Slab, Base Slab, Ballast Concrete, & Exterior Walls
- South Portal – Rectilinear Approach Permanent Structures
- South Portal Cell 1 & 2 Permanent Structures – Exterior Walls, Interior Walls & Slabs, Roof Slabs

South Island

- South Island – Temporary Private Utilities (Verizon & VDOT/Cox)
- Slurry Treatment Plant Disassembly & Demobilization
- South Island Buildings – Ventilation Building, Flood Gate House Building, Inspection Booths, Generator Building, and Fuel & Water Tanks

Tunneling

- Tunneling U-Turn – Preparation, Gantry 3 & 4
- General Purpose Tunnel – Interior Structures Construction

North Portal

- North Portal – Temporary Headwall Construction
- North Portal – Cell 2 Excavation & Strut Installation
- North Portal Cell 1 & 2 Permanent Structures – Cell 2 Mud Slab & Base Slab, Cell 1 & 2 Exterior Walls, Interior Walls & Slabs
- North Portal – Rectilinear Approach Permanent Structures

North Island

- North Island – Temporary Structures – TBM Slab
- North Island Buildings – Generator, Fuel & Water Tanks, Inspection Booth, Garage Building, Ventilation Building, and Flood Gate House Building
- North Island Restoration – Utilities, Paving, Civil Finishes, Signage and Pavement Markings

Roadway and Land Bridges

- Segment 1 Phase 1 – I-64 North Shore Roadway, Waterline Relocation, Drainage, and RW108
- Segment 1 – Shore Feeder Medium Voltage Cable Relocation
- Segment 1, 3, 3b, 3d, & 4 – ITS – Lane Use Signals, Overhead Sign Structure, Dynamic Messaging Sign, and Overheight Detector
- Segment 3b Phase 1, 2, 2A, 3A, 4 – I-64 Willoughby Spit PV Drains/Ground Improvement, Retaining Walls, Drainage, Roadway, and Temporary Lighting
- Segment 3b – Rockfish Substation
- Segment 3b Phase 4 – 13th Avenue Ramp C & F Construction
- Segment 3d Phase 1, 2, 2A, 3 & 4 – Willoughby Bridge to Mason Creek – Median Widening, Retaining Walls, Storm Drainage and Roadway
- Segment 3d 4th View Ramp H & I – Surcharge and Ramp Construction

- Segment 4 Phase 2, 2A, 3, 4, 4A – Norfolk to Navy – Median Widening, Retaining Walls, Storm Drainage, and Roadway
- Mallory Bridge – Phase 1 & 2
- 13th Avenue Bridge – Eastbound Substructure & Superstructure
- 13th Avenue Bridge – Westbound Median Pier 1 & 2, West Bound Rehabilitation – Expansion Joints & Decks
- Willoughby Bay Bridge – Eastbound Superstructure Construction & Rehabilitation, Westbound Substructure, Superstructure Construction & Rehabilitation
- 4th View Bridge – West Bound Rehabilitation
- Mason Creek – East Bound Substructure Construction, West Bound Rehabilitation
- 1st View Bridge – East Bound Substructure Construction, West Bound Rehabilitation
- Bay Avenue Bridge – West Bound Rehabilitation
- Evans Street Bridge – East Bound Substructure Construction & Rehabilitation, West Bound Rehabilitation
- Bay View Bridge – East Bound Substructure & Superstructure Construction, West Bound Rehabilitation
- Oastes Creek Bridge – Westbound Substructure, Superstructure Construction & Rehabilitation

Trestles

- North Trestle Utilities – Eastbound Temporary MV/ITS Utility and Permanent ITS/SCADA/Fire Alarm, Westbound Conduits & Hangers and Permanent Wet Utilities
- North Trestle Eastbound – Zone 1 – Abutment A, Zone 5 Finishes
- North Trestle Westbound – Zone 7, 8, 9, and 10 – Substructure/Superstructure Construction
- North Trestle – Eastbound and Westbound Demolition
- South Island Expansion – Marine Trestle Works, Land Ramp Works, and Island Expansion
- South Trestle Utilities – Eastbound Private Utility Relocation and Westbound Private Utilities and ITS/SCADA/Fire Alarm System
- South Trestle – Eastbound Zone 1, 2, and 5 Superstructure Construction
- South Trestle – Westbound Zone 7, 8, and 9 – Abutment D, Substructure and Superstructure Construction
- South Trestle – Existing Trestle Demolition

Commissioning and Integration

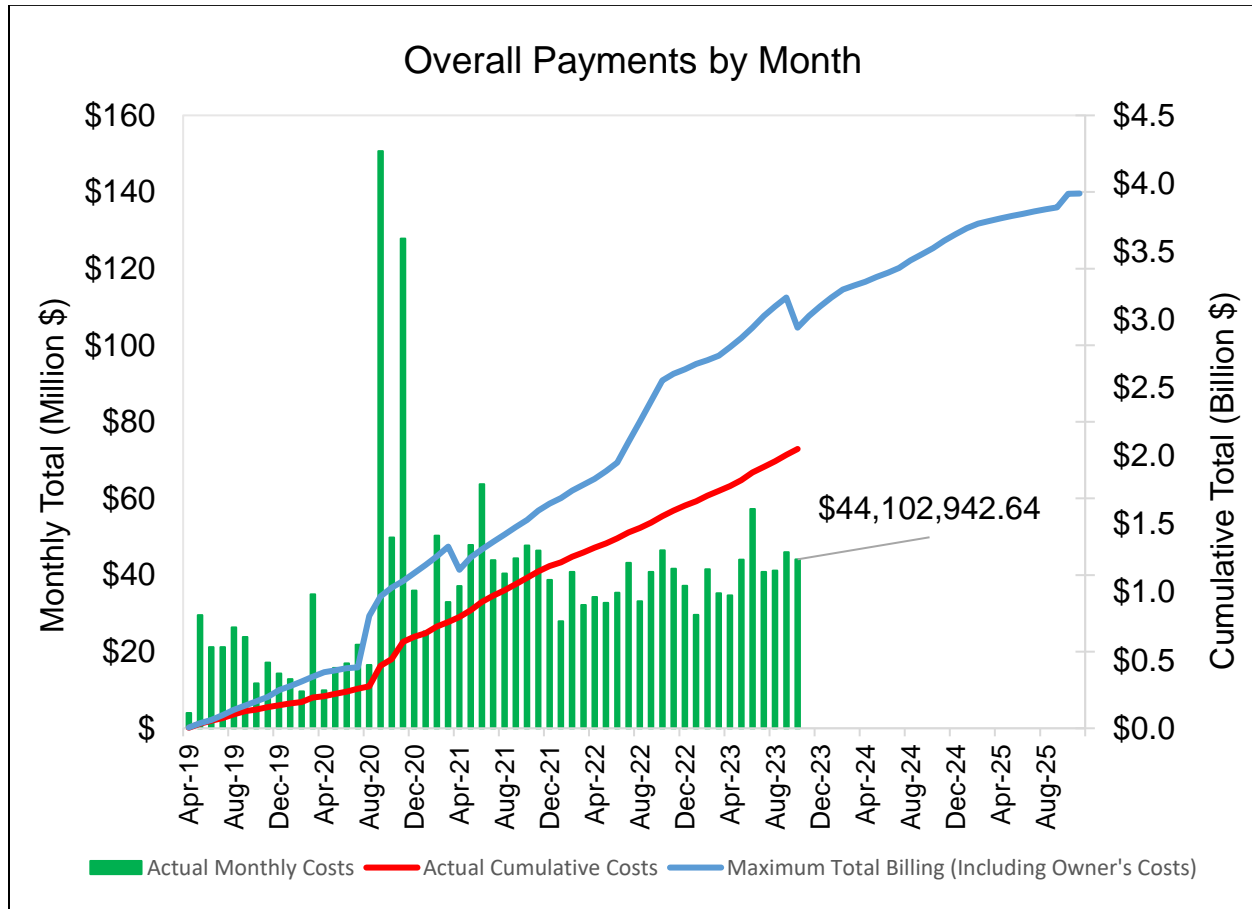
- General Purpose Tunnel – Functional Testing – Low Point Pump Station Drainage, Fire Suppression and Detection, Booster Fans, Lighting
- North Island Buildings – Functional Testing – Mechanical Pressurization
- South Island Buildings – Functional Testing – Electrical Medium Voltage/Low Voltage
- Commissioning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

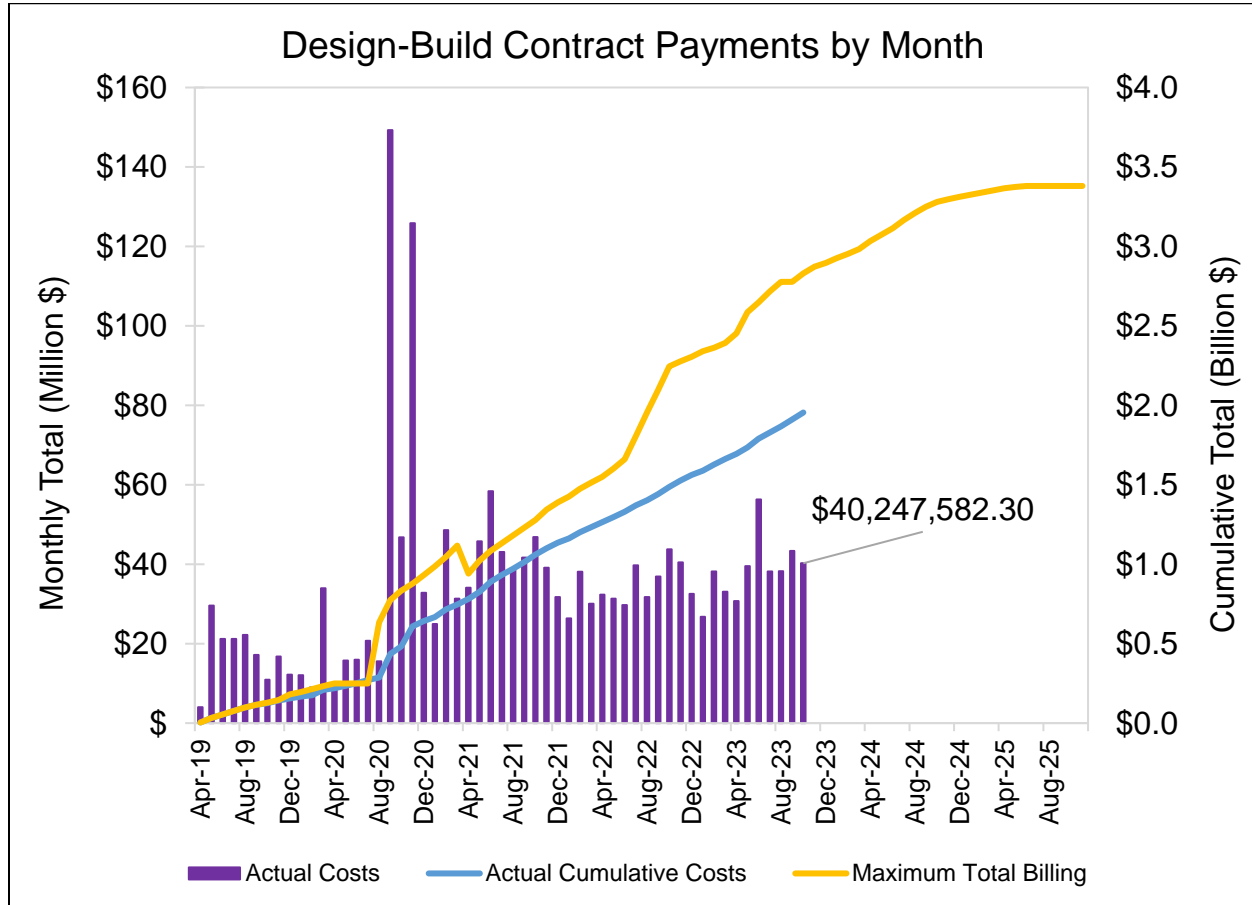
	Amount Spent this Period:	Total Spent to Date:	Original Total Budget:	Total Remaining Budget:	Percent Spent To-date:
<u>Comprehensive Agreement</u>					
<i>Construction</i>	\$40,247,582.30	\$1,923,376,565.06	\$3,299,997,227.00	\$1,376,620,661.94	58.28%
<u>Owner Costs</u>					
<i>Administration</i>	\$732,520.72	\$85,329,026.79	\$122,000,000.00	\$36,670,973.21	69.94%
<i>Right of Way</i>	\$25,785.63	\$8,885,098.87	\$15,000,000.00	\$6,114,901.13	59.23%
<i>No-Excuses Incentive</i>	\$0.00	\$0.00	\$90,000,000.00	\$90,000,000.00	0.00%
<i>Contingency</i>	\$2,896,824.68	\$30,231,589.49	\$335,000,000.00	\$304,768,410.51	9.02%
<i>Bridge Repair Work Option</i>	\$200,229.31	\$5,091,398.69	\$73,454,413.96	\$68,363,015.27	6.93%
<u>Total</u>	\$44,102,942.64	\$2,052,913,678.90	\$3,935,451,640.96	\$1,882,537,962.06	52.16%



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

3.3 Budget by Funding Source

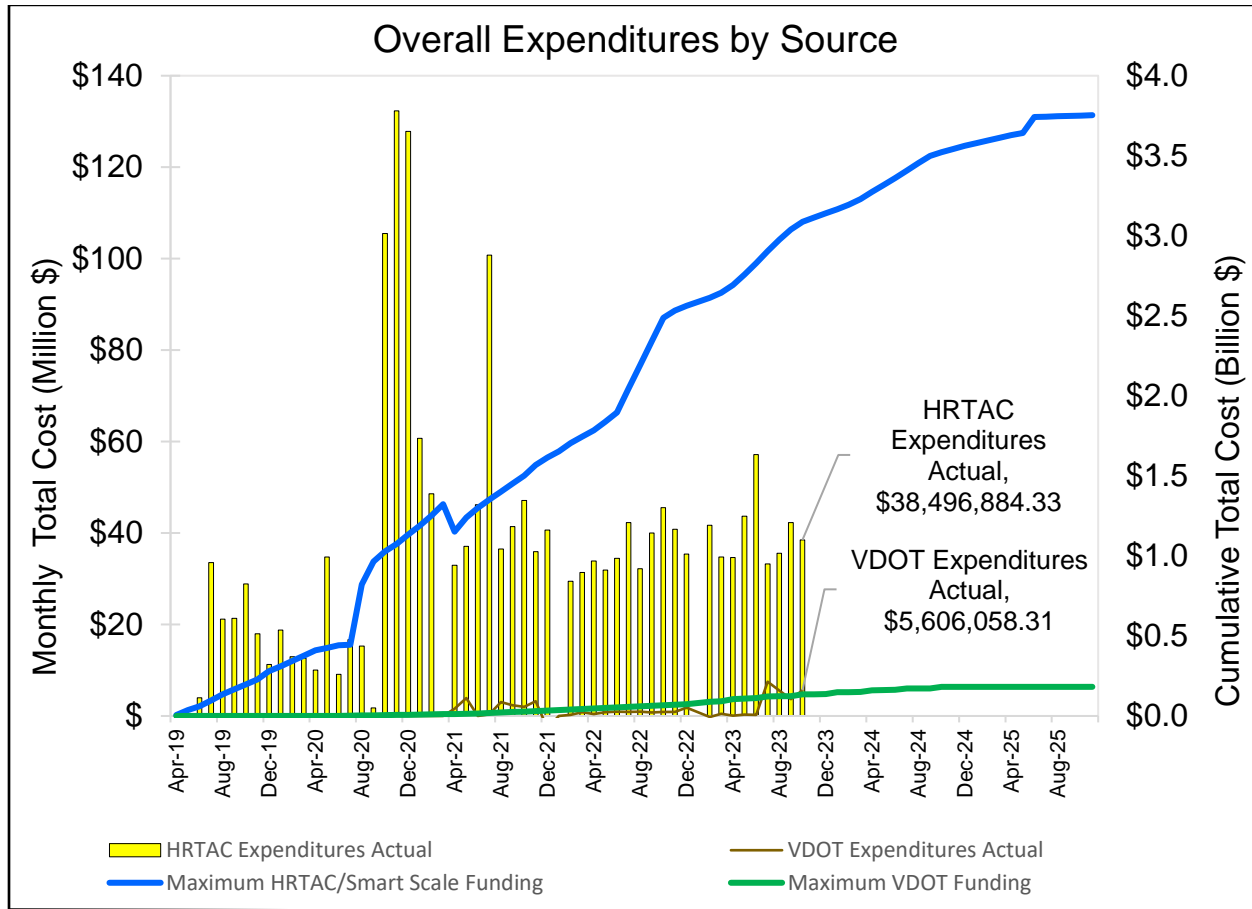
The budget for expenditures by funding source is based on the terms and conditions of Article 3 (Project Funding) and Exhibit 5 of the PAFA. This section outlines planned expenditures of both HRTAC and VDOT funds. The cost curve has been developed based on the monthly maximum cumulative compensation amount in the Comprehensive Agreement and will be updated as HRCF 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:
<u>Comprehensive Agreement</u>					
<i>Construction</i>	\$38,046,714.39	\$1,889,013,744.39	\$3,204,569,251.00	\$1,315,555,506.61	58.95%
<u>Owner Costs</u>					
<i>Administration</i>	\$363,398.63	\$82,435,159.33	\$118,472,054.00	\$36,036,894.67	69.58%
<i>Right of Way</i>	\$25,785.63	\$8,885,098.87	\$15,000,000.00	\$6,114,901.13	59.23%
<i>No-Excuses Incentive</i>	\$0.00	\$0.00	\$90,000,000.00	\$90,000,000.00	0.00%
<i>Contingency</i>	\$60,985.68	\$26,142,951.71	\$325,428,276.00	\$299,285,324.29	8.03%
<u>Total</u>	\$38,496,884.33	\$2,006,476,954.30	\$3,753,469,581.00	\$1,746,992,626.70	53.46%

3.3.2 VDOT

	Amount Spent this Period:	Total Spent to Date:	Original Total Budget:	Total Remaining Budget:	Percent Spent To-date:
<u>Comprehensive Agreement</u>					
<i>Construction</i>	\$2,200,867.91	\$34,362,820.67	\$95,427,976.00	\$61,065,155.33	36.01%
<u>Owner Costs</u>					
<i>Administration</i>	\$369,122.09	\$2,893,867.46	\$3,527,946.00	\$634,078.54	82.03%
<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>	\$2,835,839.00	\$4,088,637.78	\$9,571,724.00	\$5,483,086.22	42.72%
<i>Bridge Repair Work Option</i>	\$200,229.31	\$5,091,398.69	\$73,454,413.96	\$68,363,015.27	6.93%
<u>Total</u>	\$5,606,058.31	\$46,436,724.60	\$181,982,059.96	\$135,545,335.36	25.52%



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	HRCF 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	HRCF Senior Representative Change	7/2/2021	\$ -	0 days
CO-50	Change in Precast Form Tolerance & 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-58	Scope Reduction – City of Norfolk	5/16/2023	\$ (18,739,670.82)	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-61	HRELN Tie-In Zero Drainage Spread	11/29/2022	\$ 2,965,469.69	0 days
CO-62	SIP Forms for Marine Bridges	6/28/2022	\$ -	0 days
CO-63	Bridge Repair Item – Insert Plates - New Unit Prices	8/30/2023	\$ -	0 days
CO-64	Tolling Infrastructure Proposal Costs	10/21/2022	\$ 645,242.40	0 days

CO-65	Snowplowable Raised Pavement Markers (SRPMs)	3/3/2023	\$ 256,174.09	0 days
CO-68	Buoyancy Calculations	3/3/2023	\$ -	0 days
CO-69	Change of Department's Senior Representative	4/6/2023	\$ -	0 days
CO-70	Reuse of Existing Pipe 29-26 to 29-31	7/26/2023	\$ (117,734.20)	0 days
CO-71	Addendum to WO-24 Water Supply Line	4/25/2023	\$ -	0 days
CO-72	Bay Avenue Approach Ramp	6/29/2023	\$ 120,053.43	0 days
CO-74	South Island – Asbestos Pipes	7/7/2023	\$ 128,883.51	0 days
CO-78	Steel Escalation Price Adjustments	9/19/2023	\$ 2,835,839.00	0 days
TOTAL			\$ 62,656,372.18	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	\$ 24,575.50	\$ 108,182.98	August 2023
Fuel	\$ 16,420.09	\$ 363,836.66	August 2023
Steel	\$ 19,990.09	\$ 2,671,646.62	April 2023
Total	\$ 60,985.68	\$ 3,143,666.26	

4. Environmental

The following environmental management activities occurred during this reporting period:

Permits:

- HRCP provided a response letter dated September 26, 2023, addressing the Joint Agency letter from USACE, DEQ, and VDOT dated September 6, 2023 regarding HRCP's environmental performance and plan for improvement.
- HRCP provided an additional response letter dated September 29, 2023, addressing USACE comments on September 28, 2023.
- HRCP submitted a post-removal survey of the Cluster 109 mitigation measures to USACE on October 16, 2023.
- DEQ provided comments on September 29, 2023 following their review of the revised Wastewater Treatment Plant Operation & Maintenance Manual. HRCP provided initial responses to DEQ's questions on October 11, 2023.
- HRCP held discussions on October 19, 2023, with Virginia Marine Resources Commission representatives regarding activities proposed as part of JPA Permit Modification 10.
- HRCP forwarded final demolition plans for the Eastbound South Trestle to USACE on October 19, 2023.
- HRCP continued to conduct additional in-house environmental compliance training with work crews from landside, islands, and trestle construction areas.

Marine Mammal Protection:

- No new activities.

Bird Mitigation:

- No new activities.

Programmatic Agreement:

- No new activities.

Archeological Discoveries:

- VDOT notified HRCP on October 19, 2023, that the Department of Historic Resources completed their review of a buried ship anchor recovered near the 4th View ramp, concluding the post-review discovery is an isolated find and not eligible for listing in the National Register of Historic Places.

Protected Species:

- No new activities.

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):

- Continued drainage work in I-64 median in Hampton.
- Began and completed demolition of duct bank along retaining wall 108 at Hampton shoreline for eastbound widening.
- Began panel installation for retaining wall 108 at Hampton shoreline for eastbound widening.

I-64 (Segment 3):

- Began and completed installation of wick drain working platform between 13th View St. and Willoughby Bay Bridge for eastbound widening.
- Began drainage work for sound wall 3-3 along I-64 eastbound between 4th View St. and Mason Creek Rd. for eastbound widening.
- Installed permanent ditches and drainage pipe/structure between 4th View St. and Mason Creek Rd. for eastbound widening.
- Completed placement of asphalt in median between 15th View St. and 13th View St. for westbound widening.
- Completed placement of asphalt and permanent guardrail in median between 13th View St. and Willoughby Bay Bridge for eastbound widening.
- Began and completed placement of asphalt and permanent guardrail in median between Willoughby Bay Bridge and 4th View St. for westbound widening.

I-64 (Segment 4):

- Completed retaining wall 407 tie-in to Oastes Creek Abutment A for eastbound widening.
- Completed drainage work within retaining wall 407 area between Bayview Blvd. Abutment B and Oastes Creek Abutment A.
- Continued grading for embankment between Mason Creek and 1st View bridges for eastbound widening.
- Began drainage work at Patrol Rd.



◀ **Retaining Wall 108
Eastbound**
Panel installation near
Hampton shoreline

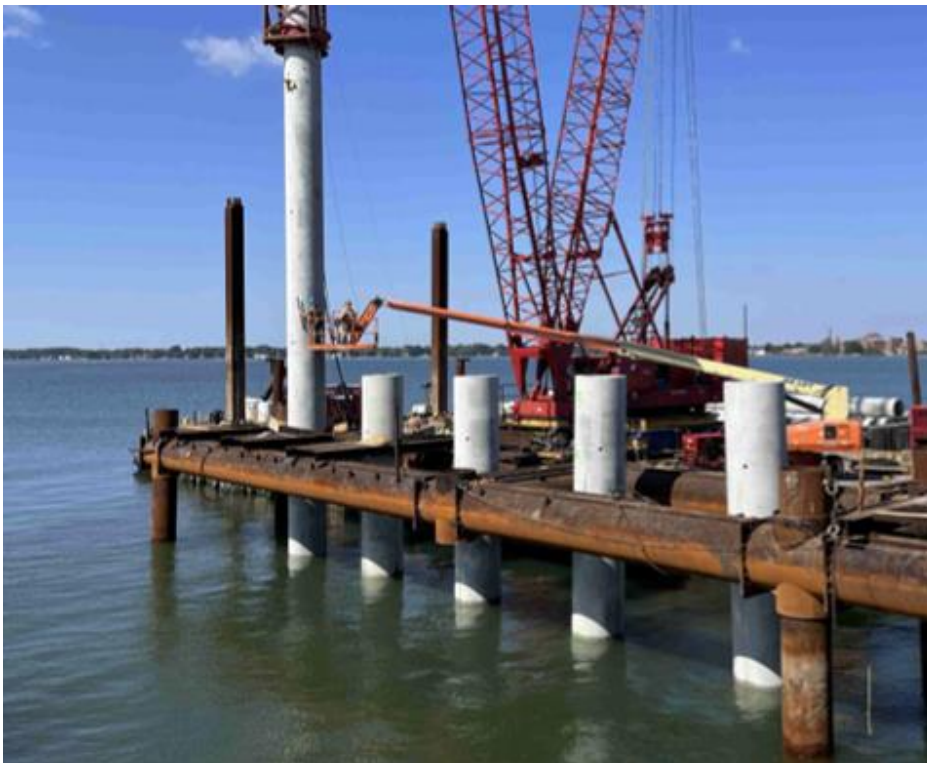
5.2 Construction Area 2: Marine Trestle Work

North Trestle:

- **Eastbound Trestle**
 - 7 piles driven during this period (230 out of 256 total piles driven).
 - 18 beams placed during this period (242 out of 296 total beams placed).
 - 1 deck placed during this period (25.5 out of 36 total decks placed).
- **Westbound Trestle**
 - 2 piles driven during this period (133 out of 261 total piles driven).

South Trestle:

- **Eastbound Trestle**
 - 8 decks placed during this period (17.5 out of 53 total decks placed).
- **Westbound Trestle MOT**
 - 10 beams placed during this period (68 out of 81 total beams placed).
- **Westbound Trestle**
 - 8 piles driven during this period (13 out of 92 total piles driven).
- **HOT Lanes Trestle**
 - 10 beams placed during this period (15 out of 80 total beams placed).
- **Ramp A**
 - 16 piles driven during this period (16 out of 33 total piles driven).
 - 1 cap placed during this period (1 out of 8 total caps placed).
- **Ramp B**
 - 6 piles driven during this period (6 out of 28 total piles driven).



◀ **North Trestle
Eastbound**
Pile driving at Bent 28

5.3 Construction Area 3: Tunnels and Islands

South Island:

- 85% complete for installation of ballast delivery system at headwall in Cell 1 for upcoming placement of roadway ballast material within tunnel.
- 61% complete for installation of additional shear keys for slurry wall.
- Continued installation of struts at rectilinear approach section leading into Cell 3.

North Island:

- 70% complete for jet grout plug at approach section (866 of 1240 total columns).
- 44% complete for headwall concrete placement at Cell 1 of receiving shaft.
- 75% complete for installation of rebar for Cell 1 base slab of receiving shaft.
- 35% complete for installation of level 2 struts in Cell 2.
- 75% complete for installation of rebar for Cell 1 base slab of receiving shaft.

Tunnel:

- 32% complete for High Occupancy Toll (HT) tunnel excavation (2,546 ft out of 7940 total ft excavated).
- 132 concrete tunnel rings installed this period (376 out of 1,194 total rings installed).
- 89% complete for precast tunnel segment liner production.



◀ **South Island**
Assembling ballast delivery system at tunnel entrance

Total Segments Required:	Conforming Segments Cast To-Date:	Percentage Complete:
21,492	19,128	89%

5.4 Construction Area 4: Landside Bridges

Mallory Street Bridge:

- Continued installation of deck overhangs and formwork for eastbound widening.

Bayville/13th View Bridge:

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

Willoughby Bay Bridge:

- Began repair/rehabilitation of existing westbound bridge.
- Continued pile driving at Bents 21 – 24 for westbound widening.
- Completed placement of Spans 50, 51, and 79 decks for eastbound widening.
- Completed placement of Spans 51 – 64 parapet wall for eastbound widening.
- Completed Phase 2 expansion joint reconstruction in Units 18 – 26 for eastbound widening.
- Continued installation of temporary trestle at south end for westbound widening.

4th View Street Bridge:

- Began grading at abutments for slope protection for eastbound widening.

Mason Creek Bridge:

- Continued repair/rehabilitation of existing eastbound and westbound bridges.
- Completed slope protection at Abutment A for eastbound widening.

1st View Street Bridge:

- Completed slope protection at Abutment A for eastbound widening.
- Continued repair/rehabilitation of existing eastbound bridge.
- Began and completed installation of steel girders for eastbound widening.

Bay Avenue Bridge:

- Completed backwall at Abutment A for eastbound widening.
- Continued installation of mainline stay-in-place (SIP) deck forms and overhangs for eastbound widening.
- Began installation of formwork, reinforcing, and concrete for mainline diaphragms for eastbound widening.
- Continued demolition of mainline parapet and deck overhang for eastbound widening.
- Completed Bent 20 pile driving and installation of cap, and installation of Span 21 girders for eastbound widening.

Evans Street Bridge:

- Continued repair/rehabilitation of existing eastbound bridge.
- Completed placement of pedestals at Abutment A for eastbound bridge.

Bayview Boulevard Bridge:

- Continued repair/rehabilitation of existing eastbound and westbound bridges.
- Completed placement of footing at Abutment B for eastbound widening.

Oastes Creek Bridge:

- Began installation of formwork for footing for Abutment A for eastbound widening.

Patrol Road Bridge:

- Completed placement of columns for median pier for westbound widening.
- Completed pile driving at Abutment A for eastbound widening.
- Completed placement of cap for median pier for eastbound widening.



◀ **1st View St.
Bridge**
Setting steel
girder for Span B

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 beam placement as well as concrete placement for piles, caps, and decks.
- North Trestle and South Trestle westbound for concrete pours.
- Willoughby eastbound and westbound for paving.
- Striping maintenance and pavement marker removal throughout project corridor.
- Mallory eastbound and westbound for bridge girder placement.
- Mallory westbound for overhead sign structure #12 drilled shaft foundations.
- Slow rolls and all stops on I-64 for Mallory Bridge girder, overhangs, and deck pan installation.

Long-Term Lane Closures:

- Bay Ave. in Norfolk to facilitate staging-area access 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.
- 4th View St. in Norfolk traffic shift to facilitate bridge widening.
- Patrol Rd. in Norfolk traffic shift to facilitate bridge rehabilitation and widening.
- 13th View St. underpass beneath I-64 reduced to one lane to facilitate utility work. Traffic is controlled by temporary automatic one-lane, two-way traffic control signal.

Norfolk Lane Shifts:

- Lane shift on eastbound I-64 on Willoughby Spit.

Detours:

- Short-term daily detours at W. Bay Avenue on-ramp eastbound to facilitate bridge widening.
- Long-term detour at W. Evans St. to facilitate bridge widening.
- Long-term detour on 1st View St. to facilitate bridge widening.

Intelligent Transportation System (ITS):

- Relocation activities associated with RCU #10 at North Island.
- Installation of ITS and private utility conduit on the North Trestle.

Overhead Sign Structures:

- Installation of overhead sign structure foundations at various locations through corridor.

Routine Maintenance:

- HRCP performed routine incident management / maintenance operations within corridor.
- HRCP continued removing raised pavement markers throughout corridor.

7. Quality

Quality updates for this reporting period include:

Construction Quality Management Plan (CQMP) Updates:

- VDOT reviews CQMP updates as part of final “Released for Construction” (RFC) design packages and “Notice of Design Change” (NDC) packages. There was one package submitted this period and returned to HRCP as Revise and Resubmit.
- HRCP submitted 4th Quarter Update V15 of the CQMP for review. The plan review is ongoing.

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.
- HRCP submitted 4th Quarter Update V22 of the QMSP for review. The plan review is ongoing.

Design Quality Management Plan (DQMP):

- HRCP submitted 4th Quarter Update V19 of the DQMP for review. The plan was reviewed and returned Approved.

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 twenty volumes of Material Book records and is currently auditing two volumes of the 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, with 27 NCRs reviewed 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

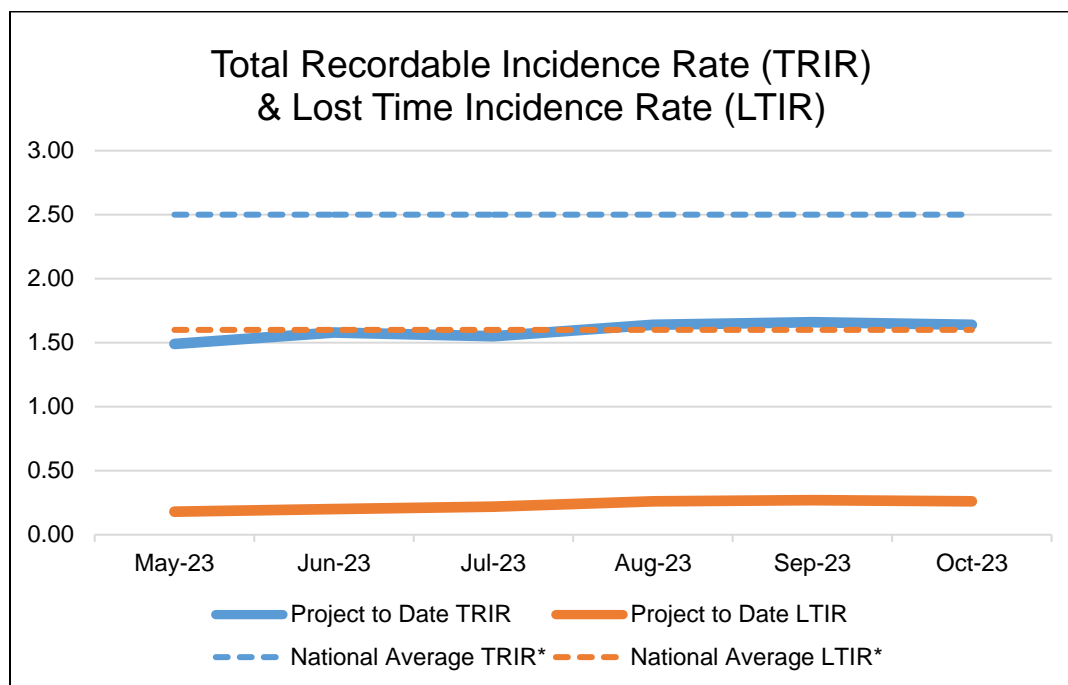
Safety procedures and activities during this reporting period include:

Safety Activities:

- The Hampton and Norfolk Fire Departments have completed Tunnel Rescue Training and are now prepared for mine rescue, with a HRCF crew in place for assistance.
- HRCF continues OSHA 10 and 30 hour training for supervisors and foremen.

Safety Performance Indicators:

- The following safety performance indicator information is provided by HRCF and is current as of October 31, 2023:



**National averages are from the Bureau of Labor Statistics, US Department of Labor – 2021 Data for Construction Industry, Published November 9, 2022.*

9. Civil Rights & DBE/SWaM Business Opportunities

To date, HRCP has awarded **346** subcontracts, subconsultant agreements and purchase orders to certified DBE/SWaM firms. There was an increase in contract awards for a total of **\$542.2 million** due to newly issued agreements and change orders issued to active DBE/SWaM firms on the project. A total of **\$338.3 million** has been paid for work completed by DBE/SWaM firms.

Compliance Activities:

- HRCP and VDOT Civil Rights Work Group met on October 17, 2023 for the monthly project and compliance update.
- During the reporting period, HRCP submitted the quarterly DBE/SWaM Good Faith Efforts Report, DBE/SWaM Utilization Plan, and Workforce Participation Plan. The Design-Builder is compliant with required report submissions.

Workforce Development Activities:

- For this reporting period, HRCP remained at 32 graduates toward a goal of 80 candidates for VDOT/VTCA's On-the-Job Training (OJT) program. There are currently 16 candidates enrolled.
- VDOT participated in the Hampton Public Schools' "My Future, My Journey" Career Exploration Fair held on October 3, 2023. The event included introducing high school students to a wide range of careers, including those in the transportation and construction industries.
- HRCP and VDOT will host the first joint construction hiring expo on October 26, 2023, at the Hampton Roads Workforce Council Resource Center in Norfolk. The event is designed to promote current and upcoming employment opportunities.

Business Development Activities:

- During this reporting period, business development and outreach activities included:
 - September 27, 2023 – VDOT & Accomac Planning District Commission, DBE/SWaM Eastern Shore Outreach Event
 - October 3, 2023 – Black Brand, B-Force Accelerator Business Development Program, Norfolk
 - October 11, 2023 – USDOT Small Business Transportation Resource Center, Coffee with Contractors hosted by Virginia Union University, Richmond
 - October 12, 2023 – VA Asian Chamber of Commerce, ProcureCon Region 757
 - October 13, 2023 – City of Norfolk, Food Business Forum & Vendor Fair

10. Public Outreach & Media

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

Public Outreach

- September 25, 2023 – Project team presented to The Shriners of the Peninsula in York County, Virginia.
- October 6, 2023 – Project team hosted a site visit for college students exploring tunnel-related careers as part of the Underground Construction Association’s “Down for That” program.
- October 18, 2023 – HRBT Project Director presented to the “No Boundaries” group from the Federal Highway Administration at the Hampton Roads District Office.
- October 19, 2023 – HRBT Project Director presented at the Virginia Governor’s Transportation Conference in Northern Virginia.
- October 20, 2023 – Project team hosted an information booth at Norfolk Fleet Week STEM Day at Naval Station Norfolk.
- October 21, 2023 – Project team hosted an information booth at the NASA Langley Open House in Hampton.

Lane Closures/Advisories

- September 26, 2023 – Traffic Advisory: I-64 Mallory Street Bridge Impacts
- September 29, 2023 – Weekly Lane Closure Report
- October 6, 2023 – Weekly Lane Closure Report
- October 13, 2023 – Weekly Lane Closure Report
- October 20, 2023 – Weekly Lane Closure Report

Media

- October 9, 2023 – (Virginia Mercury) State’s financial commitments to Hampton-Roads Bridge-Tunnel expansion could increase with delays
<https://www.virginiamercury.com/blog-va/states-financial-commitments-to-hampton-roads-bridge-tunnel-expansion-could-increase-with-delays/>
- October 17, 2023 – (Infrastructure Junkies Podcast) HRBT Project Director featured in The Bridge that Goes Underwater <https://infrastructurejunkies.com/episodes>
- October 20, 2023 – (WTKR 3) Fleet Fest, STEM Day gives students a behind-the-scenes look at Naval Station Norfolk <https://www.wtkr.com/news/in-the-community/norfolk/fleet-fest-stem-day-give-people-a-behind-the-scenes-look-at-naval-station-norfolk>

Visit our website to view more information:

www.hrbtexpansion.org