



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

**Report No. 47**  
Project No. 0064-M06-032



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Prepared by:

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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 January 22, 2023 – February 18, 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 24<sup>th</sup> of each month.

During this reporting period, project accomplishments included the following:

- South Island Progress:
  - Completed headwall installation.
  - South Island Expansion Cell 1 cofferdam pipe piles to 89%.
  - South Island Expansion Cell 1 cofferdam sheet piles to 71%.
- Tunnel Progress:
  - Precast tunnel segment liner production to 53%.
  - Completed TBM tail shield alignment in Launch Pit.
- North Island Progress:
  - Jet grout break-in/break-out block to 16%.
- Landside Progress:
  - Completed embankment fill for the Blue Crab Substation near Mallory St. Bridge.
  - Completed pile driving at 4<sup>th</sup> View St. bridge Pier 1 for eastbound widening.
- Marine Progress:
  - South eastbound MOT trestle opened to traffic.
  - North Trestle eastbound beams to 62%.
  - North Trestle westbound piles to 24%.
  - South Trestle beams to 8%.

### 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

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### Project Schedule

The last approved schedule for the project is Update 42 (data date: January 22, 2023), and the schedule information in this report reflects this update.

- Contractual Substantial and Final Completion Dates remain unchanged.
- HRCP's Schedule Update 42 is reporting Substantial Completion date of August 31, 2026.
- HRCP's Schedule Update 42 is reporting Final Completion date of October 30, 2026.

### Project Budget

The project budget summary below now includes all incurred to date costs through February 18, 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:             | \$ 1,709,740,291        |
| <b>Remaining project budget:</b> | <b>\$ 2,225,711,350</b> |

- Design-build contract overview:

|  |                         |
|--|-------------------------|
| Design-build contract original amount:         | \$ 3,299,997,227        |
| Net change orders:                             | \$ 4,718,413            |
| Exercised Options:                             | \$ 73,454,414           |
| Design-build contract sum to date:             | \$ 3,378,170,054        |
| Expenditures to date:                          | \$ 1,627,858,340        |
| <b>Remaining design-build contract amount:</b> | <b>\$ 1,750,311,714</b> |

- Design-build progress to date:

|                                 |              |
|---------------------------------|--------------|
| Project Management:             | 56.3%        |
| Design:                         | 89.9%        |
| Physical Construction Progress: | 29.7%        |
| <b>Overall:</b>                 | <b>48.2%</b> |

## Environmental

Environmental updates for this reporting period include:

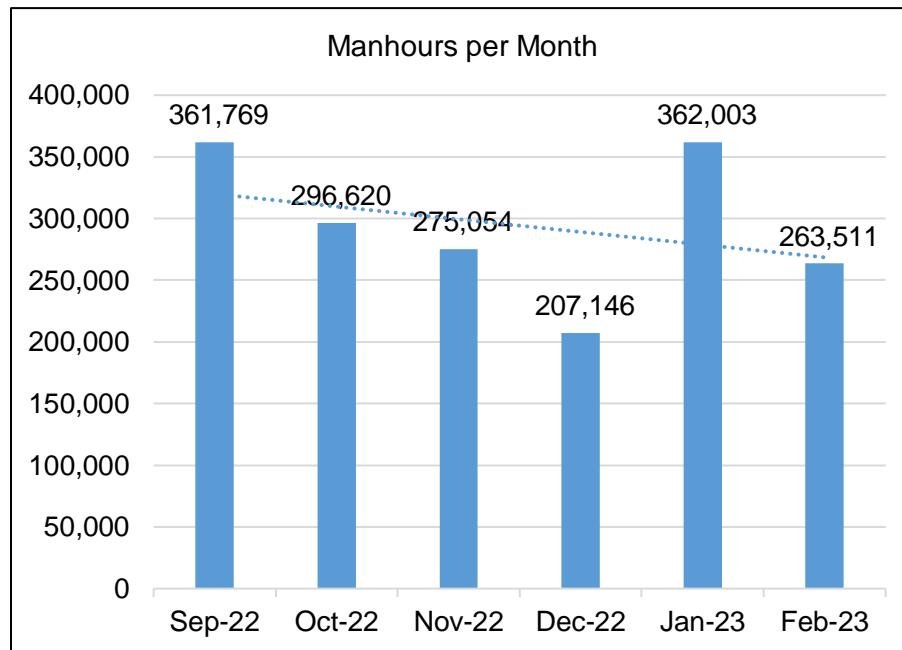
- U.S. Army Corps approved JPA permit modification request #9.

## Construction

Progress updates for this reporting period include:

- Landside Roadways
  - Completed drainage jack and bore installation in I-64 median between 13<sup>th</sup> View St. and Willoughby Bay for eastbound widening.
  - Began coping installation along retaining wall 311 between 4<sup>th</sup> View St. and Mason Creek Rd. for eastbound widening.
- Marine Works
  - Set beams at North eastbound permanent trestle (11 installed this period).
  - Placed decks at North eastbound permanent trestle (2.5 installed this period).
  - Drove piles at North westbound permanent trestle (9 installed this period).
  - South eastbound MOT trestle opened to traffic.
  - Placed caps at South eastbound permanent trestle (4 installed this period).
  - Set beams at South eastbound permanent trestle (7 installed this period).
- Tunnels and Islands
  - Completed west (General Purpose) headwall installation on South Island.
  - Completed TBM alignment of tail shield to the middle shield.
  - Began welding TBM tail shield to middle shield.
  - Began installation of TBM thrust frame.
  - Drove pipe piles at South Island Expansion Cell 1 Cofferdam (22 installed this period).
  - Drove sheet piles at South Island Expansion Cell 1 Cofferdam (15 installed this period).
- Landside Bridges
  - Began constructing Abutment footing for Phase 1 Mallory St. bridge replacement.
  - Completed embankment fill for Blue Crab Substation site at Mallory St. bridge Abutment A.
  - Began coping installation for retaining wall BC-02 at Mallory St. bridge Abutment A.
  - Completed pile driving at 4<sup>th</sup> View St. bridge Pier 1 for eastbound widening.
  - Began installation of formwork and rebar for footing at 4<sup>th</sup> View St. bridge Pier 2 to facilitate eastbound widening.
  - Began installation of formwork and rebar for footing at 1<sup>st</sup> View St. bridge Abutment B to facilitate eastbound widening.
  - Began installation of lighting conduit and junction boxes in parapet for Bay Ave. bridge for eastbound widening.
  - Began parapet slipform operations at Bay Ave. bridge for eastbound widening.
  - Began repair/rehabilitation of existing Oastes Creek bridge eastbound.

The number of construction manhours worked each month is provided by HRCP and is current as of February 28, 2023:



**Project Manhours to Date:**  
6,658,567

## Operations

The following operations activities took place during this reporting period:

- Traffic shift onto the new South eastbound MOT trestle on February 18, 2023.
- Long-term detour at 1<sup>st</sup> View St. to facilitate bridge widening.

## 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 February 28, 2023:

- Total Recordable Incidence Rate: 1.53 (National Average: 2.5)
- Lost Time Incidence Rate: 0.18 (National Average 1.6)



## Civil Rights & DBE/SWaM Business Opportunities

HRCP has awarded **327** subcontracts, subconsultant agreements, and purchase orders to certified DBE/SWaM firms on the project. These contract awards represent a total of **\$507.2 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:

- Project site tours to representatives of the USDOT Build America Bureau and Norfolk City Leadership.
- February 2023 newsletter released.
- Update released for I-64 eastbound traffic shift onto new South MOT trestle.

## 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 42 (data date: January 22, 2023), and the schedule information in this report reflects this update. Update 42 projects substantial completion on August 31, 2026, and final completion on October 30, 2026. Contractual Substantial and Final Completion dates remain unchanged.

|                               | Contract Requirement | January 2023 Schedule | Actual       |
|-------------------------------|----------------------|-----------------------|--------------|
| <b>NTP</b>                    |                      | Sep 11, 2020          | Sep 11, 2020 |
| <b>Substantial Completion</b> | Sep 1, 2025          | Aug 31, 2026          |              |
| <b>Final Completion</b>       | Nov 1, 2025          | Oct 30, 2026          |              |

### 2.2 Longest Path

The longest path/critical path in Project Schedule Update 42 is driven by the following activities:

- 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

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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 Schedule Update 42.

### **South Portal**

- South Portal Cut and Cover Structures – Phase 5 and 6
- General Purpose Tunnel – Interior Structures Construction
- South Portal Cell 2 Permanent Structures – Exterior Walls, Interior Walls, Interior Slabs
- South Portal Cell 3 Permanent Structures – Roof Slabs

### **South Island**

- South Island – Slurry Treatment Plant – Complete Filter Press Area, Bi-Component Plant, Utility Surface Piping and Building
- South Island – Slurry Treatment Plant Commissioning
- South Island – Additional Conveyor and Quay Mooring Piles and Fenders
- South Island – Northside Expansion – Clear Cluster 109
- South Island – Vent Building Construction – Phase 1
- South Island – Temporary Private Utilities (Verizon & VDOT/COX)

### **Tunneling**

- Tunneling – Gantry Cradle – Steel and Inverts, Segment Feeder

### **North Island**

- North Portal – Phase 3 and 4 – Tunnel Construction
- North Island – Ventilation Building – Phase 2 Cell 1 – Construction
- North Portal – Cell 1 and 2 Excavation
- North Portal – Mud Slab, Temporary Headwall, and Base Slabs Construction

### **Roadway and Land Bridges**

- Segment 1 Phase 1 – I-64 North Shore Roadway, Drainage, RW103A, RW02, RW105A, and RW108
- Segment 1 – Shore Feeder Medium Voltage Cable Relocation
- Segment 3 Phase 1, 2, 4 – ITS – Lane Use Signals, Overhead Sign Structure, Dynamic Messaging Sign, and Overheight Detector
- Segment 3b Phase 1, 2, 3A – I-64 Willoughby Spit PV Drains/Ground Improvement, Retaining Walls, Drainage, Roadway, Permeant Barrier Wall, and Temporary Lighting
- Segment 3b Phase 4 – 13<sup>th</sup> Avenue Ramp F Construction
- Segment 3d Phase 1, 2A, 3 – Willoughby Bridge to Mason Creek – Median Widening, Retaining Walls, Storm Drainage, Roadway, and Temporary Lighting
- Segment 3d Phase 1 – ITS – Butterfly Structure Construction, Overheight Detector, OHSS
- Segment 3d 4<sup>th</sup> View Ramp H – Surcharge and Ramp Construction

- Segment 4 Phase 2, 3, 4 – Norfolk to Navy – Median Widening, Retaining Walls, Storm Drainage, and Roadway
- Bayville St. Bridge – Eastbound Abutment A, B, and Median Piers Construction
- Willoughby Bay Bridge – Eastbound Lighting and Abutment A Construction
- Willoughby Bay Bridge Stage 1 Phase 2, 3A – Eastbound/Westbound Superstructure Construction
- 4<sup>th</sup> View St. Bridge – Eastbound Abutment B and Median Piers
- Bay Ave. Bridge – Eastbound Ramp BA – Unit 10 Construction
- Bay Ave. Bridge – Westbound Substructure and Superstructure Construction
- Evans St. Bridge – Eastbound Abutment A Construction, Eastbound/Westbound Rehabilitation
- Bayview Blvd. Bridge – Eastbound/Westbound Rehabilitation
- Patrol Rd. Bridge – Eastbound Substructure and Superstructure Construction

### **Trestles**

- North Trestle – Zone 1, 8, 9, and 10 – Substructure and Superstructure Construction
- North Trestle – Eastbound Demolition
- South Island Expansion – Marine Works, Land Works, and Island Expansion
- South Trestle – Zone 1 Abutment D Construction
- South Trestle – Zone 3 Substructure and Superstructure Construction and Lighting
- South Trestle – Zone 5 Superstructure Construction
- South Trestle – Zone 7, 8, and 9 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

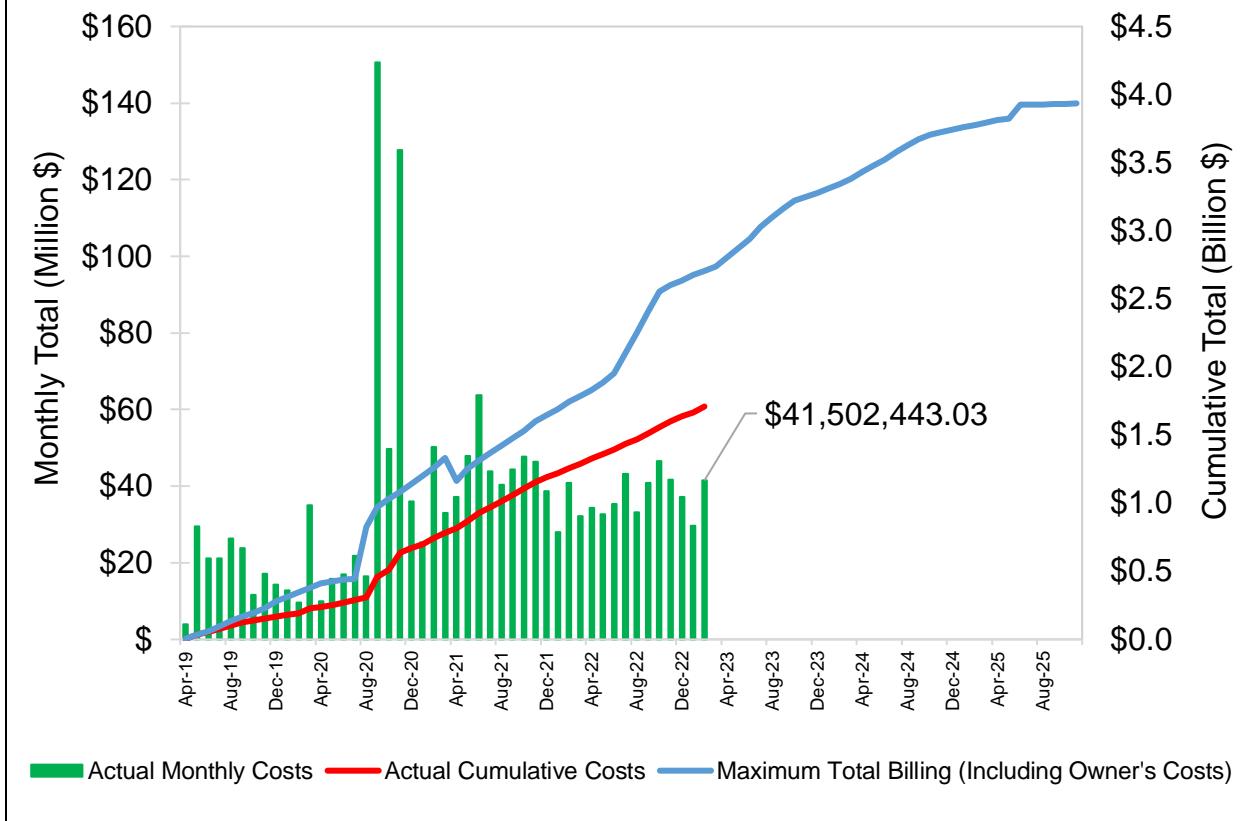
### 3. Project Budget

#### 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: |
|---------------------------------------|---------------------------|---------------------------|---------------------------|---------------------------|------------------------|
| <b><u>Comprehensive Agreement</u></b> |                           |                           |                           |                           |                        |
| <i>Construction</i>                   | \$38,145,284.80           | \$1,603,800,163.50        | \$3,299,997,227.00        | \$1,696,197,063.50        | 48.60%                 |
| <b><u>Owner Costs</u></b>             |                           |                           |                           |                           |                        |
| <i>Administration</i>                 | \$2,066,810.38            | \$69,158,990.63           | \$122,000,000.00          | \$52,841,009.37           | 56.69%                 |
| <i>Right of Way</i>                   | \$14,337.77               | \$8,722,960.53            | \$15,000,000.00           | \$6,277,039.47            | 58.15%                 |
| <i>No-Excuses Incentive</i>           | \$0.00                    | \$0.00                    | \$90,000,000.00           | \$90,000,000.00           | 0.00%                  |
| <i>Contingency</i>                    | \$112,932.62              | \$23,801,107.06           | \$335,000,000.00          | \$311,198,892.94          | 7.10%                  |
| <i>Bridge Repair Work Option</i>      | \$1,163,077.46            | \$4,257,069.65            | \$73,454,413.96           | \$69,197,344.31           | 5.80%                  |
| <b>Total</b>                          | <b>\$41,502,443.03</b>    | <b>\$1,709,740,291.37</b> | <b>\$3,935,451,640.96</b> | <b>\$2,225,711,349.59</b> | <b>43.44%</b>          |

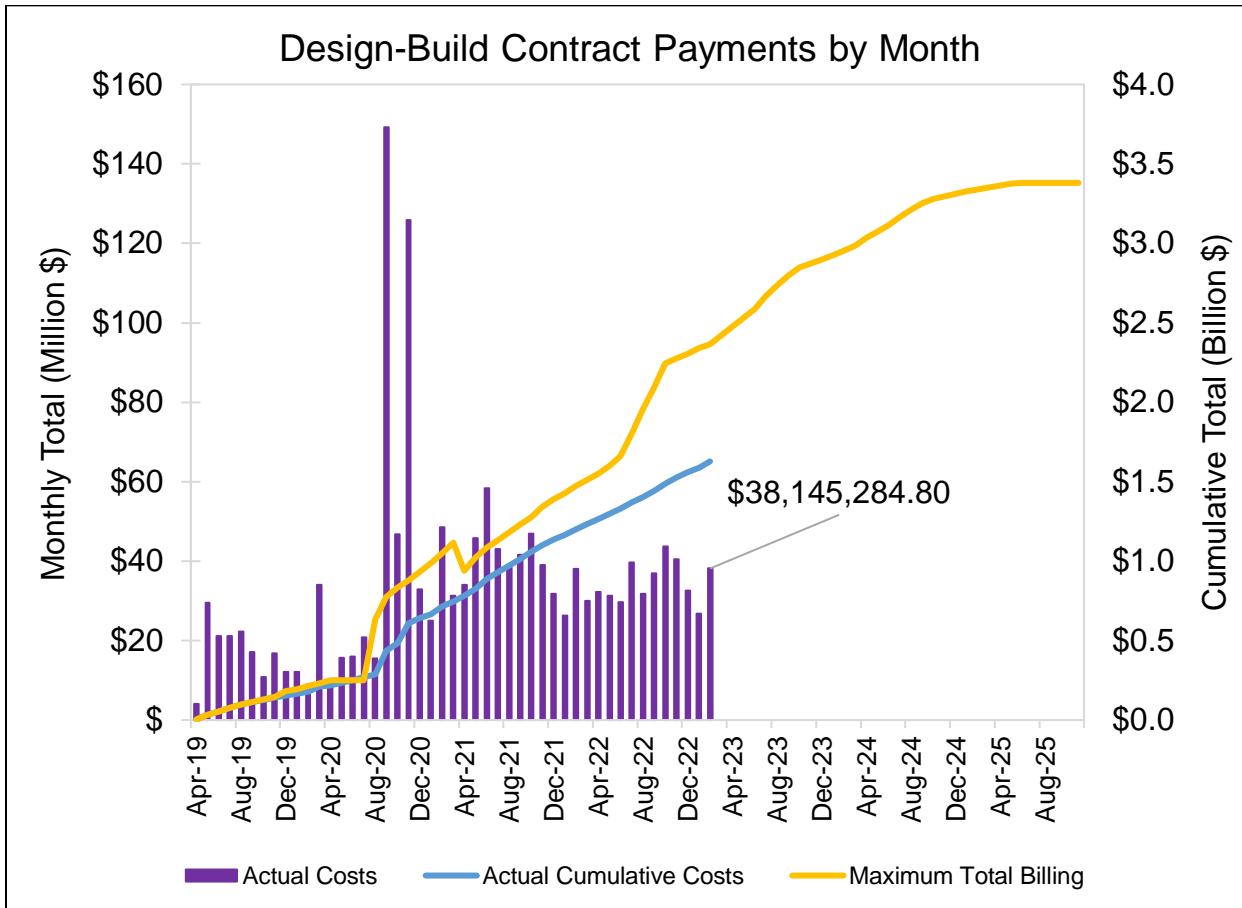
## Overall Payments by Month



\*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.

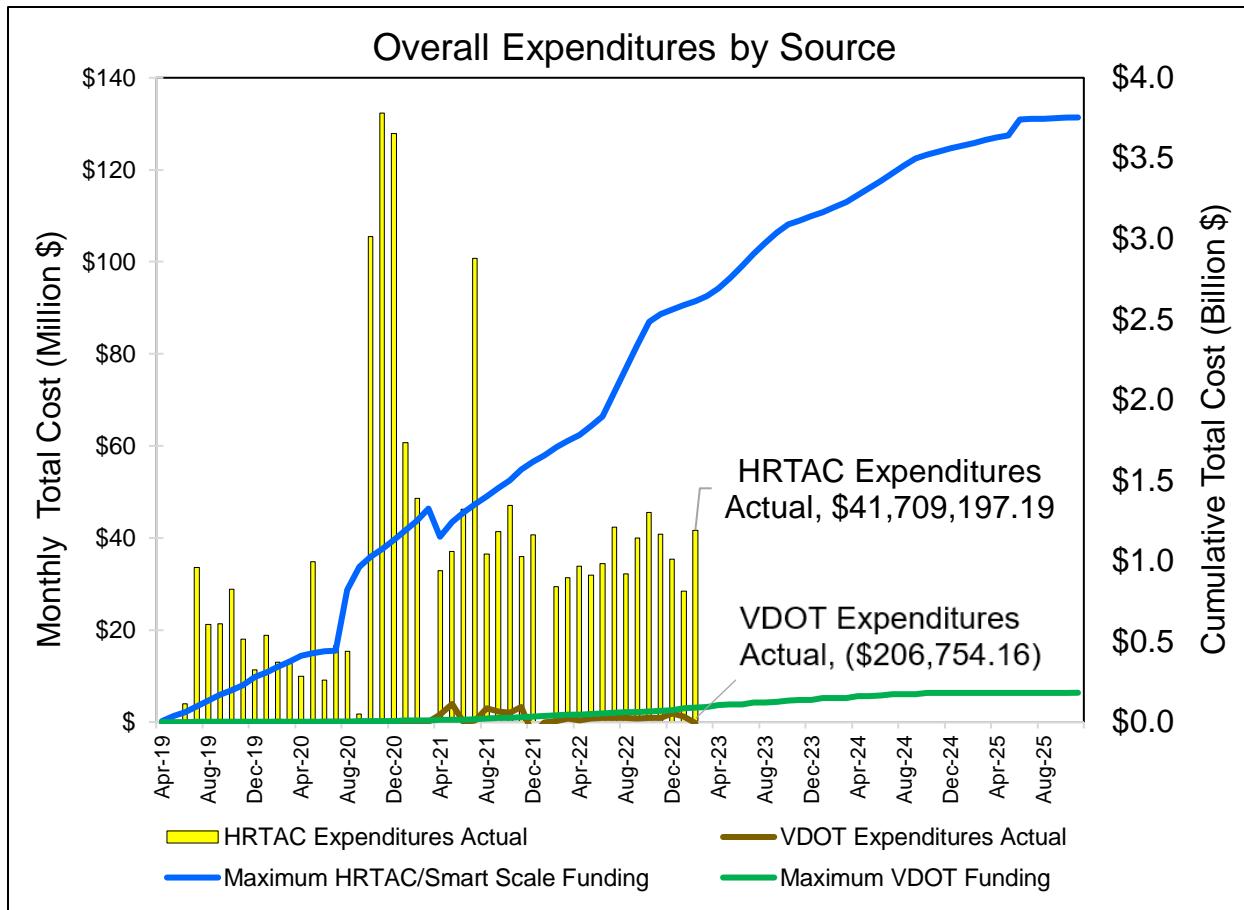
#### 3.3.1 HRTAC and Smart Scale

|                                | Amount Spent this Period: | Total Spent to Date:      | Original Total Budget:    | Total Remaining Budget:   | Percent Spent To-date: |
|--------------------------------|---------------------------|---------------------------|---------------------------|---------------------------|------------------------|
| <b>Comprehensive Agreement</b> |                           |                           |                           |                           |                        |
| Construction                   | \$39,613,370.80           | \$1,587,939,498.74        | \$3,204,569,251.00        | \$1,616,629,752.26        | 49.55%                 |
| <b>Owner Costs</b>             |                           |                           |                           |                           |                        |
| Administration                 | \$1,968,556.00            | \$67,266,666.25           | \$118,472,054.00          | \$51,205,387.75           | 58.78%                 |
| Right of Way                   | \$14,337.77               | \$8,722,960.53            | \$15,000,000.00           | \$6,277,039.47            | 58.15%                 |
| No-Excuses Incentive           | \$0.00                    | \$0.00                    | \$90,000,000.00           | \$90,000,000.00           | 0.00%                  |
| Contingency                    | \$112,932.62              | \$22,816,140.93           | \$325,428,276.00          | \$302,612,135.07          | 7.01%                  |
| <b>Total</b>                   | <b>\$41,709,197.19</b>    | <b>\$1,686,745,266.45</b> | <b>\$3,753,469,581.00</b> | <b>\$2,066,724,314.55</b> | <b>44.94%</b>          |

#### 3.3.2 VDOT

|                                | Amount Spent this Period: | Total Spent to Date:   | Original Total Budget:  | Total Remaining Budget: | Percent Spent To-date: |
|--------------------------------|---------------------------|------------------------|-------------------------|-------------------------|------------------------|
| <b>Comprehensive Agreement</b> |                           |                        |                         |                         |                        |
| Construction                   | (\$1,468,086.00)*         | \$15,860,664.76        | \$95,427,976.00         | \$79,567,311.24         | 16.62%                 |
| <b>Owner Costs</b>             |                           |                        |                         |                         |                        |
| Administration                 | \$98,254.38               | \$1,892,324.38         | \$3,527,946.00          | \$1,635,621.62          | 53.64%                 |
| Right of Way                   | \$0.00                    | \$0.00                 | \$0.00                  | \$0.00                  | 0.00%                  |
| No-Excuses Incentive           | \$0.00                    | \$0.00                 | \$0.00                  | \$0.00                  | 0.00%                  |
| Contingency                    | \$0.00                    | \$984,966.13           | \$9,571,724.00          | \$8,586,757.87          | 10.29%                 |
| Bridge Repair Work Option      | \$1,163,077.46            | \$4,257,069.65         | \$73,454,413.96         | \$69,197,344.31         | 5.80%                  |
| <b>Total</b>                   | <b>(\$206,754.16)</b>     | <b>\$22,995,024.92</b> | <b>\$181,982,059.96</b> | <b>\$158,987,035.04</b> | <b>12.64%</b>          |

\*Construction progress re-allocation to the South Trestle.



### 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 & 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-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-64 | Tolling Infrastructure Proposal Costs                                    | 10/21/2022   | \$ 645,242.40           | 0 days        |
|       |  | <b>TOTAL</b> | <b>\$ 78,172,827.17</b> | <b>0 days</b> |

### 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  | \$ 711.91      | \$ 51,901.56    | December 2022                     |
| Fuel     | \$ 15,509.40   | \$ 231,816.72   | December 2022                     |
| Steel    | \$ 96,711.31   | \$ 2,028,896.89 | August 2022                       |

## 4. Environmental

The following environmental management activities occurred during this reporting period:

**Permits:**

- HRCP submitted North and South Island generator air permit applications to DEQ.

**Marine Mammal Protection:**

- No new activities.

**Bird Mitigation:**

- HRCP continued repairs of passive bird measures in preparation for 2023 migration season.

**Programmatic Agreement:**

- No new activities.

**Archeological Discoveries:**

- 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):

- Drainage installation along I-64 median north of Mallory St.

### I-64 (Segment 3):

- Drainage installation near Willoughby bridge Abutment A for eastbound widening.
- Drainage and panel installation for retaining wall 308 near Willoughby Bay for eastbound widening.
- Completed drainage jack and bore installation in I-64 median between 13<sup>th</sup> View St. and Willoughby Bay for eastbound widening.
- Drainage installation near I-64 off ramp to Bayville St. for eastbound widening.
- Drainage installation near Willoughby Boat Ramp and 13<sup>th</sup> View St. for eastbound widening.
- Drainage installation along I-64 on and off ramps at 4<sup>th</sup> View St. for eastbound widening.
- Embankment installation between 4<sup>th</sup> View St. and Mason Creek Rd. for eastbound widening.
- Began coping installation along retaining wall 311 between 4<sup>th</sup> View St. and Mason Creek Rd. for eastbound widening.

### I-64 (Segment 4):

- Permanent subgrade preparation between Bay Ave. and Evans St. for eastbound widening.



► I-64 EB (Segment 3)  
Placing embankment at  
Retaining Wall 311

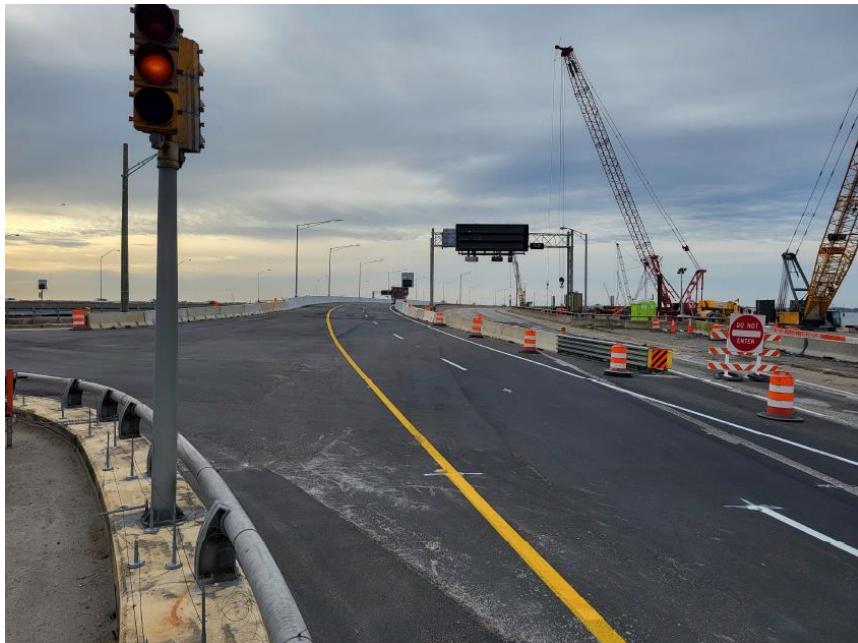
## 5.2 Construction Area 2: Marine Trestle Work

### North Trestle:

- **Eastbound Trestle**
  - 11 beams placed during this period (184 out of 296 total beams placed).
  - 2.5 decks placed during this period (17 out of 36 total decks placed).
- **Westbound Trestle**
  - 9 piles installed during this period (62 out of 261 total piles driven).

### South Trestle:

- **Eastbound Trestle**
  - 4 caps placed during this period (23.5 out of 70 total caps placed).
  - 7 beams placed during this period (54 out of 698 total beams placed).



► **South Eastbound MOT Trestle**  
Opened to traffic (view from South Island looking towards Norfolk)

## 5.3 Construction Area 3: Tunnels and Islands

### South Island:

- Completed headwall installation.
- West side slurry wall demolition, excavation, and rebar installation at rectilinear approach capping beams.
- 17% complete for waterproofing launching pit walls.

### South Island Expansion:

- **Cell 1 Cofferdam**
  - 22 pipe piles driven during this period (57 out of 64\* total piles driven).
  - 15 sheet piles driven during this period (46 out of 65\* total piles driven).

### North Island:

- 49% complete for installation of sheet pile for support of excavation at tunnel approaches.
- 64% complete for capping beams overall (receiving pit and approach section).
- Temporary strut installation (level 1) for receiving pit.
- Instrumentation and dewatering well installation in preparation for receiving pit excavation.
- 16% complete for jet grout break-in/break-out block.

### Tunnel:

- 53% complete for precast tunnel segment liner production.
- Completed TBM alignment of tail shield to middle shield; began welding tail shield to middle shield; began installation of TBM thrust frame; partial shift of TBM gantry #1; delivery of segment feeder to South Island (62% complete for TBM assembly).

*\*Totals updated*



◀ **South Island**  
TBM Shield and Gantry  
Cradle

| Total Segments Required: | Conforming Segments Cast To-Date: | Percentage Complete: |
|--------------------------|-----------------------------------|----------------------|
| 21,492                   | 11,357                            | 53%                  |

## 5.4 Construction Area 4: Landside Bridges

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### **Mallory Street Bridge:**

- Began constructing Abutment A footing for Phase 1 bridge replacement.
- Completed embankment fill for Blue Crab Substation site at Abutment A.
- Began coping installation for retaining wall BC-02 at Mallory St. bridge Abutment A.

### **Willoughby Bay Bridge:**

- Continued installation of deck forms and overhangs for eastbound widening.
- Continued demolition of existing parapet and deck overhang for eastbound widening.
- Continued repair/rehabilitation of existing eastbound bridge.

### **4<sup>th</sup> View St Bridge:**

- Completed pile driving at Pier 1 for eastbound widening.
- Began installation of formwork and rebar at Pier 2 footing for eastbound widening.

### **1<sup>st</sup> View Street Bridge:**

- Placed Pier 1 cap concrete for eastbound widening.
- Began installation of formwork and rebar at Abutment B footing for eastbound widening.
- Coating operations for eastbound and westbound bridges.

### **Bay Avenue Bridge:**

- Began installation of lighting conduit and junction boxes in parapet for eastbound widening (ramp).
- Began parapet slipform operations for eastbound widening (ramp).
- Continued approach slab reconstruction and widening operations for eastbound widening (ramp).
- Continued overhang reconstruction for eastbound widening (ramp).
- Continued repair/rehabilitation of existing eastbound bridge (mainline and ramp).

### **Bayview Boulevard Bridge:**

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

### **Oastes Creek Bridge:**

- Continued installation of deck forms and overhangs for eastbound widening.
- Continued demolition of existing pile jackets for eastbound and westbound bridges.
- Placed concrete for end diaphragms at Bents 2 and 3 for eastbound widening.
- Began repair/rehabilitation of existing eastbound bridge.



◀ Willoughby Bay Bridge  
Aerial view

## 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 placement.
- South and North Trestles for temporary conduit installation.
- Willoughby Bay Bridge and South Trestle for temporary lighting installation.
- Striping maintenance throughout project corridor.
- I-64 eastbound and westbound slow rolls for deployment of temporary signal trusses.
- Various locations in Segments 3 and 4 for directional drilling for 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.
- 4<sup>th</sup> View St. in Norfolk traffic shift to facilitate bridge widening.

### **Hampton Lane Shifts:**

- No new activities.

### **Norfolk Lane Shifts:**

- Traffic shift onto the new South eastbound MOT trestle initiated on February 18, 2023.

### **Detours:**

- Long-term detour at West Evans St. to facilitate bridge widening.
- Long-term detour on West Bay Ave. eastbound on-ramps for bridge widening work.
- Long-term detour on Mason Creek Rd. to facilitate bridge widening removed.
- Long-term detour at 1<sup>st</sup> View St. to facilitate bridge widening.

### **Intelligent Transportation System (ITS):**

- Deployed and activated temporary lane-use signal overhead truss structures at Mallory and Willoughby inspection stations.
- Relocated Variable Speed Limit Sign onto new South eastbound MOT trestle.
- Installation of ITS conduit on the South Trestle.
- Installation of Medium Voltage and Communications duct bank on South Shore.

### **Routine Maintenance:**

- HRCP performed routine incident management and maintenance operations within the corridor.
- HRCP continued removing raised pavement markers throughout the 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 were 4 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 fourth quarter of 2022. VDOT finalized review of these submissions.

### **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 ten 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, with 71 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

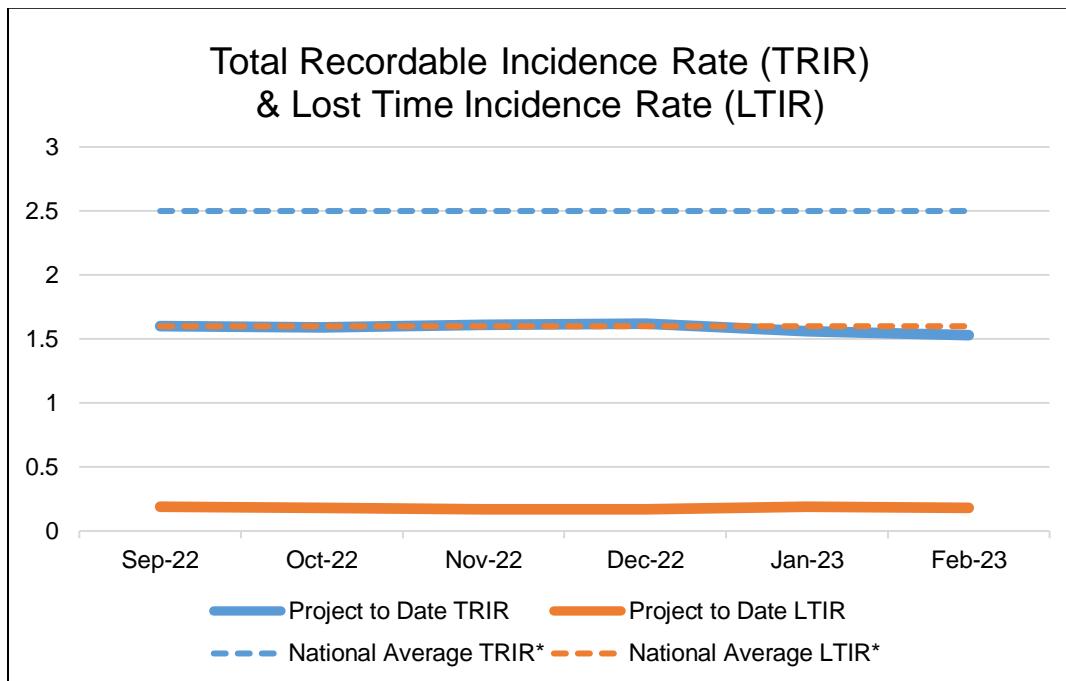
Safety procedures and activities during this reporting period include:

### Safety Site Visits:

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

### Safety Performance Indicators:

- The following safety performance indicator information is provided by HRCP and is current as of February 28, 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 **327** subcontracts, subconsultant agreements and purchase orders to certified DBE/SWaM firms. During this reporting period, there was a slight increase in contract awards for a total of **\$507.2 million**. Currently, 81% of DBE/SWaM firms participating on the project are Virginia-based.

### Compliance Activities:

- HRCP and VDOT met on February 13, 2023 to discuss compliance with prompt payment provisions as identified in the Comprehensive Agreement. HRCP provided updates to its administrative and accounting procedures for paying subcontractors and consultants performing on the project.
- During the prior reporting period, HRCP submitted all required quarterly reports. These reports were reviewed by VDOT and found to be complaint.

### Workforce Development Activities:

- HRCP continued to make progress towards the 80 participant On-the-Job Training (OJT) contract goal. To date, 29 participants have completed all required training hours to graduate from the OJT program, with 11 actively enrolled. Trades include carpenters, welders, field supervisors, excavator operators, pile drivers, mechanics, and skilled laborers.
- Workforce participation represents: 57% minority (27.1% goal); 14% women (6.9% goal).

### Business Development Activities:

- February 2, 2023 – USDOT Small Business Transportation Research Center Coffee with Contractors at Virginia Union University in Richmond
- February 3, 2023 – HRCP Navigate Subcontractor Compliance Orientation
- February 4, 2023 – Virginia Peninsula Community College Professional Development Leadership Workshop for Business Leaders hosted by President Towuanna Porter Brannon
- February 11, 2023 – Conference of Minority Transportation Officials Hampton Roads general monthly membership meeting
- February 16, 2023 – VDOT BOWD Center Actualizing Leadership Webinar

## 10. Public Outreach & Media

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

### Public Outreach

- February 1, 2023 – Project site tour for representatives of USDOT Build America Bureau.
- February 6, 2023 –Presentation at the Phoebus Partnership monthly meeting (virtual).
- February 7, 2023 – Project site tour for Norfolk city leadership (including City Council members Courtney Doyle and John “JP” Paige).
- February 7, 2023 – [HRBT Expansion Project Newsletter](#) distributed.

### Public Materials

- No new activities.

### Lane Closures/Advisories

- January 27, 2023 – Weekly Lane Closure Report
- February 3, 2023 – Weekly Lane Closure Report
- February 10, 2023 – Weekly Lane Closure Report
- February 17, 2023 – Weekly Lane Closure Report
- January 31, 2023 – W. Bay Avenue 24/7 Closure and Detour Press Release
  - [W. Bay Avenue Ramp Closure Extended](#)
- February 16, 2023 – New Traffic Pattern Press Release
  - [Traffic Shift at the HRBT, I-64 East towards Norfolk](#)

### Media

- January 27, 2023 – [New traffic pattern coming for eastbound lanes on HRBT](#)
- February 7, 2023 – [Work on Hampton Roads Bridge-Tunnel Expansion Project continues to progress](#)

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