COMMONWEALTH of VIRGINIA
Commonwealth Transportation Board

Shannon Valentine
Chairperson
1401 East Broad Street
Richmond, Virginia 23219
(804) 786-2701
Fax: (804) 786-2940

COMMONWEALTH TRANSPORTATION BOARD

We are concerned about your health, and we are committed to do all we can to reduce the risk and spread of novel coronavirus. Governor Ralph Northam declared a state of emergency in Virginia on Thursday, March 12 in response to COVID-19. In light of this action, we have decided to conduct the June 2020 Commonwealth Transportation Board (CTB) meeting using electronic communications in accord with Item 4-0.01.g. of Chapter 1283 (2020 Acts of Assembly), as the COVID-19 emergency makes it impracticable or unsafe to assemble in a single location. The purpose of the meeting is to discuss or transact the business statutorily required or necessary to continue operation of the CTB and the discharge of its lawful purposes, duties, and responsibilities.

All board members will be participating remotely. The public may view the meeting via live stream by clicking the "View video" button at the following link: http://www.ctb.virginia.gov/public_meetings/live_stream/default.asp. There will be opportunity for public comment at the beginning of the June 17, 2020 Action meeting which will start upon adjournment of this meeting. Public comment can be submitted by calling the following telephone number 1-252-858-0120 followed by PIN: 437 401 906# when it is announced that public comment will begin. A caller may be placed on hold until others who have called in earlier have had opportunity to speak.

In the event there is an interruption in the broadcast of the meeting, please call (804) 729-6495.

Should you wish to offer comment regarding how meetings using electronic communications technology compare to traditional meetings when the CTB is physically present, you may complete the FOIA Council's Electronic Meetings Public Comment form appearing at the end of this agenda and submit it to the FOIA Council as described on the Form.

WORKSHOP AGENDA
June 17, 2020
9:00 a.m.

1. Virginia COVID-19 Traffic Trends
   Mena Lockwood, Virginia Department of Transportation

2. Route 340 Improvements Clarke County Virginia
   Randy Kiser, Virginia Department of Transportation
### Agenda
Meeting of the Commonwealth Transportation Board
Workshop Session
June 17, 2020

3. **Federal Transportation Grant Anticipation Notes**
   Series 2020
   *Laura Farmer, Virginia Department of Transportation*

4. **SMART SCALE Proposed Budget Increase**
   I-81 Exit 300 Southbound Acceleration Lane Extension
   UPC 111054 – Staunton District
   *Kimberly Pryor, Virginia Department of Transportation*

5. **SMART SCALE Update**
   *Chad Tucker, Office of Intermodal Planning and Investment*

6. **Master Tolling Agreement Update**
   *Stephen Brich, Virginia Department of Transportation*

7. **Hampton Roads Express Lanes Overview**
   *Stephen Brich, Virginia Department of Transportation*

8. **Director’s Items**
   *Jennifer Mitchell, Virginia Department of Rail & Public Transportation*

9. **Commissioner’s Items**
   *Stephen Brich, Virginia Department of Transportation*

10. **Secretary’s Items**
    *Shannon Valentine, Secretary of Transportation*

    # # #
512 Continuous Count Stations
  • 306 Road Sensors (CCS)
  • 206 Non-Intrusive (Radar) Sensors (NCCS)
## Volume Trends

### STATEWIDE DAILY VOLUME CHANGE

<table>
<thead>
<tr>
<th>#</th>
<th>Date</th>
<th>Governor Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>3/12</td>
<td>Declares state of emergency</td>
</tr>
<tr>
<td>2</td>
<td>3/13</td>
<td>Closes schools for two weeks, beginning 3/16</td>
</tr>
<tr>
<td>3</td>
<td>3/17</td>
<td>Advises to avoid non-essential gatherings of more than 10</td>
</tr>
<tr>
<td>4</td>
<td>3/20</td>
<td>State agencies begin process of implementing telework where possible/applicable</td>
</tr>
<tr>
<td>5</td>
<td>3/23</td>
<td>Close - Schools for rest of school yr, Non-essential business, Restaurants; No gathering more than 10</td>
</tr>
<tr>
<td>6</td>
<td>3/25</td>
<td>Directs hospitals to stop elective surgeries</td>
</tr>
<tr>
<td>7</td>
<td>3/30</td>
<td>Issues statewide stay-at-home order until June 10</td>
</tr>
<tr>
<td>8</td>
<td>5/09</td>
<td>Phase One will begin no sooner than Friday, 05/15</td>
</tr>
<tr>
<td>9</td>
<td>5/12</td>
<td>Delays Phase 1 for Northern Virginia Localities till 05/28</td>
</tr>
<tr>
<td>10</td>
<td>5/14</td>
<td>Delays Phase 1 for Accomack County and the City of Richmond till 05/28</td>
</tr>
<tr>
<td>11</td>
<td>5/15</td>
<td>Phase One Begins</td>
</tr>
</tbody>
</table>

---

**Vehicle Type**
- **All Vehicles**
- **Truck**

---

**Graph Notes:**
- **Date:** The dates correspond to the days indicated on the graph.
- **Governor Action:** The actions are listed alongside the corresponding date on the graph.

---

**Legend:**
- **Percent Change from Last Year:** The graph shows the percentage change from the previous year.
- **Date:** The x-axis represents the date, with specific days marked for clarity.
- **Vehicle Type:** The graph distinguishes between all vehicles and trucks.
Volume Trends
STATEWIDE DAILY VOLUME CHANGE

# Date Governor Action # Date Governor Action
1 3/12 Declares state of emergency 7 3/30 Issues statewide stay-at-home order until June 10
2 3/13 Closes schools for two weeks, beginning 3/16 8 5/09 Phase One will begin no sooner than Friday, 05/15
3 3/17 Advises to avoid non-essential gatherings of more than 10 9 5/12 Delays Phase 1 for Northern Virginia Localities till 05/28
4 3/20 State agencies begin process of implementing telework where possible/applicable 10 5/14 Delays Phase 1 for Accomack County and the City of Richmond till 05/28
5 3/23 Close - Schools for rest of school yr, Non-essential business, Restaurants; No gathering more than 10 11 5/15 Phase One Begins
6 3/25 Directs hospitals to stop elective surgeries
Volume Trends

All Vehicles Volume Change By District (Interstates plus Non-Interstates)

Traffic Volume Change by District

- Lynchburg
- NOVA
- Fredericksburg

<table>
<thead>
<tr>
<th>District</th>
<th>Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bristol</td>
<td>Blue</td>
</tr>
<tr>
<td>Culpeper</td>
<td>Orange</td>
</tr>
<tr>
<td>Fredericksburg</td>
<td>Red</td>
</tr>
<tr>
<td>Hampton Roads</td>
<td>Teal</td>
</tr>
<tr>
<td>Lynchburg</td>
<td>Green</td>
</tr>
<tr>
<td>Northern Virginia</td>
<td>Yellow</td>
</tr>
<tr>
<td>Richmond</td>
<td>Purple</td>
</tr>
<tr>
<td>Salem</td>
<td>Pink</td>
</tr>
<tr>
<td>Staunton</td>
<td>Grey</td>
</tr>
</tbody>
</table>
Volume Trends

All Vehicles and Truck Daily Volume Change Statewide

Traffic Volume Change

Legend:
- Statewide, All Vehicles, Interstate
- Statewide, All Vehicles, Non-Interstate
- Statewide, Truck, Interstate
- Statewide, Truck, Non-Interstate

Interstate Truck

Interstate All Vehicles
Volume Trends

Statewide Peak Period Volume Change for All Vehicles

INTERSTATE
- Road Type, Period of Day
  - Interstate, AM peak (7AM - 9AM)
  - Interstate, PM peak (4PM - 6PM)

Non-INTERSTATE
- Road Type, Period of Day
  - Non-Interstate, AM peak (7AM - 9AM)
  - Non-Interstate, PM peak (4PM - 6PM)

Percent Change from Last Year

- INTERSTATE: 12%
- Non-INTERSTATE: 11%
Volume Trends

Statewide Peak Period Volume Change for Trucks

INTERSTATE
- Interstate, AM peak (7AM - 9AM)
- Interstate, PM peak (4PM - 6PM)

Non-INTERSTATE
- Non-Interstate, AM peak (7AM - 9AM)
- Non-Interstate, PM peak (4PM - 6PM)

Truck Traffic back to 2019 levels

AM and PM Almost Same levels
Volume Trends
All Vehicles Daily Volume in Northern Virginia
Volume Trends

All Vehicles Daily Volume Change in Fredericksburg

Traffic Volume Change by District

Percent Change from Last Year

Date

Fri 02-28
Sun 03-01
Tue 03-03
Thu 03-05
Sat 03-07
Mon 03-09
Wed 03-11
Fri 03-13
Sun 03-15
Tue 03-17
Thu 03-19
Sat 03-21
Mon 03-23
Wed 03-25
Fri 03-27
Sun 03-29
Tue 03-31
Thu 04-02
Sat 04-04
Mon 04-06
Wed 04-08
Fri 04-10
Sun 04-12
Tue 04-14
Thu 04-16
Sat 04-18
Mon 04-20
Wed 04-22
Fri 04-24
Sun 04-26
Tue 04-28
Thu 04-30

Fri 05-01
Sun 05-03
Tue 05-05
Thu 05-07
Sat 05-09
Mon 05-11
Wed 05-13
Fri 05-15
Sun 05-17
Tue 05-19
Thu 05-21
Sat 05-23
Mon 05-25
Wed 05-27
Fri 05-29
Sun 05-31
Tue 06-02
Thu 06-04
Sat 06-06
Mon 06-08
Wed 06-10
Fri 06-12
Sun 06-14
Tue 06-16
Thu 06-18
Sat 06-20
Mon 06-22
Wed 06-24
Fri 06-26
Sun 06-28
Tue 06-30

COVID-19 Traffic Trends | 06/05/2020
Volume Trends
All Vehicles Daily Volume in Fredericksburg

VDOT COVID-19 Traffic Trends | 06/05/2020
Volume Trends

All Vehicles Daily Volume in Fredericksburg

[Graph showing daily volume trends with line charts for different periods and vehicle types]
Volume Trends
All Vehicles Daily Volume Change in Hampton Roads

Traffic Volume Change by District

Percent Change from Last Year

Date

Fri 03-01
Sat 03-02
Sun 03-03
Mon 03-04
Tues 03-05
Wed 03-06
Thu 03-07
Fri 03-08
Sat 03-09
Sun 03-10
Mon 03-11
Tues 03-12
Wed 03-13
Thu 03-14
Fri 03-15
Sat 03-16
Sun 03-17
Mon 03-18
Tues 03-19
Wed 03-20
Thu 03-21
Fri 03-22
Sat 03-23
Sun 03-24
Mon 03-25
Tues 03-26
Wed 03-27
Thu 03-28
Fri 03-29
Sat 03-30
Sun 04-01
Mon 04-02
Tues 04-03
Wed 04-04
Thu 04-05
Fri 04-06
Sat 04-07
Sun 04-08
Mon 04-09
Tues 04-10
Wed 04-11
Thu 04-12
Fri 04-13
Sat 04-14
Sun 04-15
Mon 04-16
Tues 04-17
Wed 04-18
Thu 04-19
Fri 04-20
Sat 04-21
Sun 04-22
Mon 04-23
Tues 04-24
Wed 04-25
Thu 04-26
Fri 04-27
Sat 04-28
Sun 04-29
Mon 04-30
Tues 05-01
Wed 05-02
Thu 05-03
Fri 05-04
Sat 05-05
Sun 05-06
Mon 05-07
Tues 05-08
Wed 05-09
Thu 05-10
Fri 05-11
Sat 05-12
Sun 05-13
Mon 05-14
Tues 05-15
Wed 05-16
Thu 05-17
Fri 05-18
Sat 05-19
Sun 05-20
Mon 05-21
Tues 05-22
Wed 05-23
Thu 05-24
Fri 05-25
Sat 05-26
Sun 05-27
Mon 05-28
Tues 05-29
Wed 05-30
Thu 05-31
 Fri 06-01
Sat 06-02
Sun 06-03
Mon 06-04
Tues 06-05
Wed 06-06
Thu 06-07
Fri 06-08
Sat 06-09
Sun 06-10
Mon 06-11
Tues 06-12
Wed 06-13
Thu 06-14
Fri 06-15
Sat 06-16
Sun 06-17
Mon 06-18
Tues 06-19
Wed 06-20
Thu 06-21
Fri 06-22
Sat 06-23
Sun 06-24
Mon 06-25
Tues 06-26
Wed 06-27
Thu 06-28
Fri 06-29
Sat 06-30
Volume Trends

All Vehicles Daily Volume in Hampton Roads
Volume Trends

All Vehicles Daily Volume Change in Culpeper
Volume Trends

All Vehicles Daily Volume Change in Lynchburg

Traffic Volume Change by District

Lynchburg does not have Interstate
Volume Trends

All Vehicles Daily Volume Change in Staunton

Traffic Volume Change by District

Percent Change from Last Year

Date

District, Road Type
- Staunton, Interstate
- Staunton, Non-Interstate
COVID-19 Traffic Trends

Volume Trends

All Vehicles Daily Volume Change in Bristol
Volume Trends

Volume Change by Jurisdiction

Traffic Volume Change by Jurisdiction in NOVA

Vehicle Type - All

Traffic Volume Change by Jurisdiction in Staunton

Vehicle Type - Car
Speed Trends Based on INRIX Data

Northern Virginia District - Weekday

May 2019 vs May 2020

8-9 AM AM Peak Hour

5-6 PM PM Peak Hour

50th % Speed Maps
- <25 mph
- 25-35 mph
- 35-45 mph
- 45-55 mph
- 55-65 mph
- >65 mph

COVID-19 Traffic Trends | 06/05/2020
Speed Trends Based on INRIX Data

Fredericksburg District - Weekday

May 2019 vs May 2020

7 - 8 AM
AM Peak Hour

5 - 6 PM
PM Peak Hour

50th % Speed Maps
- <25 mph
- 25-35 mph
- 35-45 mph
- 45-55 mph
- 55-65 mph
- >65 mph

©2020 Mapbox © OpenStreetMap

COVID-19 Traffic Trends | 06/05/2020
Speed Trends Based on INRIX Data

Richmond District - Weekday

May 2019

May 2020

8 - 9 AM
AM Peak Hour

5 - 6 PM
PM Peak Hour

50th % Speed Maps
- <25 mph
- 25-35 mph
- 35-45 mph
- 45-55 mph
- 55-65 mph
- >65 mph

© 2020 Mapbox © OpenStreetMap
Speed Trends Based on INRIX Data

Hampton Roads District - Weekday

May 2019

May 2020

7 - 8 AM
AM Peak Hour

4 - 5 PM
PM Peak Hour

50th % Speed Maps
- <25 mph
- 25-35 mph
- 35-45 mph
- 45-55 mph
- 55-65 mph
- >65 mph

© 2020 Mapbox © OpenStreetMap
Weekly Traffic Crash
Statewide All Systems

Weekly Traffic Crashes - from January 1 to May 28

- 2017 - 2019 Avg
- FY 2020
- Percent Change in 7 day Volume

2020 Traffic Crash data is preliminary

Traffic Crashes vs Percent Change in Traffic Volume

VDOT COVID-19 Traffic Trends | 06/05/2020
Questions?

Mena Lockwood, P.E., Assistant State Traffic Engineer, mena.lockwood@vdot.virginia.gov
ROUTE 340 IMPROVEMENTS
CLARKE COUNTY VIRGINIA

Interstate Agreement to Allow Design and Construction by West Virginia

Commonwealth Transportation Board Briefing

Randy Kiser, P.E.
District Engineer
Staunton District

June 16, 2020
Overview

- Background
- VA Code Section 33.2-221 (B)
- Interstate Agreement with West Virginia

Route 340, looking South from W. Virginia Line
Background

- Existing configuration of U.S. 340 at the Clarke County, Virginia and Jefferson County, West Virginia line.
- West Virginia wishes to construct a 4 lane facility and construct a tie-in to the existing 4 lane facility in Virginia.
- West Virginia to award design build contract in August 2020.
- Anticipated completion – Spring 2024
VA Code 33.2-221(B)

Pursuant VA Code § 33.2-221 (B):

The Board shall have the power and duty to enter into all contracts with other states necessary for the proper coordination of the location, construction, maintenance, improvement, and operation of transportation systems, including the systems of state highways with the highways of such other states, and where necessary, seek the approval of such contracts by the Congress of the United States.
Virginia and West Virginia propose a highway improvement project to improve the existing two-lane section of United States 340, which is between the existing four-lane roadway section in Clarke County, Virginia and the existing four-lane section of the Charles Town Bypass in Jefferson County, West Virginia.

- In Virginia, the length is approximately 0.19 mile.
- In West Virginia, the length is approximately 4.10 miles.
U.S. 340 Improvement Agreement with West Virginia

- West Virginia would be the lead agency who would design and construct the Project under the West Virginia Highways Design Build Program.
- The Design Build Contractor would be responsible for maintenance of the Project during the construction phase.
  - West Virginia shall be responsible for the lead construction supervision of the project and shall provide for construction engineering means, including the review of shop drawings as required.
  - Virginia shall have approval of contractors or materials in that portion of the project situated within Virginia.
  - Virginia and West Virginia will be responsible for the continuing maintenance of their respective sections of the Project once complete.
Virginia and West Virginia shall bear 100% of the cost of construction of their portion of the Project, including any change orders within their respective states.

- The total estimated cost of construction of the project is $35.6 M and only includes design and construction costs.
- In Virginia, the cost share is 4.52% ($1.6 M)
- In West Virginia, the cost share is 95.48%.
- A Right of Way phase is not anticipated for the portion of the work in Virginia.
- Based on Virginia’s cost estimate, Virginia is benefiting from West Virginia’s economy of scale.
U.S. 340 Improvement Agreement with West Virginia

- The agreement states that West Virginia shall invoice Virginia annually beginning on or about July 1, 2020, or after the Project is successfully let and awarded and substantial work is underway/completed in Virginia, whichever occurs later.
  - 1/5 of Virginia’s 4.52% share of the lump sum bid price for a period of up to 5 years.
  - West Virginia will balance bill if completed sooner than 5 years.
Next steps:
VDOT will present CTB with a resolution, authorizing the Commissioner to execute the U.S. 340 Improvement Agreement with West Virginia.
Once the Agreement is executed and the project begins, VDOT will be reimbursing West Virginia for the design and construction costs for the project in Virginia, not to exceed the limits set out in the Agreement.
Once the work is complete and has been inspected and achieves final acceptance by Virginia, Virginia will add the modified mileage into the Primary System of highways for future maintenance.
## Commonwealth Transportation Board: Federal Transportation Grant Anticipation Notes, Series 2020

<table>
<thead>
<tr>
<th>Summary Terms of Offering*</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Issuer</strong></td>
</tr>
<tr>
<td><strong>Projects</strong></td>
</tr>
<tr>
<td><strong>Anticipated Ratings</strong></td>
</tr>
<tr>
<td><strong>Pricing Date</strong></td>
</tr>
<tr>
<td><strong>Security</strong></td>
</tr>
<tr>
<td><strong>Par (in millions)</strong></td>
</tr>
<tr>
<td><strong>Structure</strong></td>
</tr>
<tr>
<td><strong>Final Maturity (years)</strong></td>
</tr>
</tbody>
</table>

* Preliminary and subject to change
Chapter 830 and 868 of the Acts of Assembly of 2011 authorized issuance of $1.2 billion of GARVEEs

Successor program to Federal Highway Reimbursement Anticipation Notes (FRANs) authorized in 2000

Limits outstanding GARVEEs and FRANs to $1.2 billion

Limits maturity to 20 years

Secured first by project specific federal reimbursements and then by:
  • Legally available revenues from TTF
  • Other such funds designated by the General Assembly for such purposes

All FRANs were retired in September 2015

Memorandum of Agreement (MOA) with Federal Highway Administration (FHWA) for GARVEE program was executed in December 2011 and updated in November 2019

Exhibit A of MOA identifies approved GARVEE supported projects and has been amended to incorporate additional projects to be supported by this sale
GARVEE Issues

The CTB has issued six series of GARVEEs from 2012 to 2018
Issuances have totaled just more than $1.3 billion over that period

GARVEEs have supported Downtown and Midtown Tunnels, Martin Luther King Expressway, I-95 Express Lanes, Route 460 Corridor Development Project, I-495 Express Lanes Shoulder Use

Beginning in 2017, GARVEEs have been used to support projects selected through SMART SCALE

Proceeds from the 2020 issue will provide continued support to projects funded previously with GARVEE bonds and 2018 SMART SCALE projects
Debt Service for GARVEE Bonds

Virginia’s GARVEE bonds are secured first by project specific federal reimbursements and then by:
- legally available revenues from the TTF
- other such funds designated by the General Assembly for such purposes

Bond issuances are limited:
- Maximum outstanding amount cannot exceed $1.2 billion
- Debt service must have 4x coverage

After this sale:
- Outstanding GARVEEs - $911.7 million (additional revolving authorization provided to SMART SCALE in future years)
- Coverage – greater than 10x

Next sale anticipated for Fall 2021 and is estimated to be $140 million
## Recent GARVEE Transactions
### Pricings (2019 – 2020 YTD)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Additional Security</td>
<td>Stand Alone</td>
<td>Stand Alone</td>
<td>Other lawfully available funds, including State Highway Fund monies</td>
<td>Excess monies available from Commonwealth Transportation Fund (CTF) (1)</td>
<td>State Highway Fund monies (subject to annual appropriation)</td>
<td>Stand Alone</td>
<td>Stand Alone</td>
<td>Availability of certain State Highway Revenues (2) (subject to appropriation)</td>
<td>Stand Alone</td>
<td>Other lawfully available funds, including State Highway Fund (SHF) and Regional Area Road Fund (RARF) monies</td>
<td>Stand Alone</td>
<td>Discretionary Pledge of TTF Revenues and Other Funds (subject to appropriation)</td>
</tr>
<tr>
<td>Par ($MM)</td>
<td>165.215</td>
<td>277.710</td>
<td>180.100</td>
<td>53.500</td>
<td>49.035</td>
<td>123.225</td>
<td>600.000</td>
<td>122.130</td>
<td>102.705</td>
<td>185.000</td>
<td>62.465</td>
<td>75.750</td>
</tr>
<tr>
<td>Final Maturity (Years)</td>
<td>15 Years</td>
<td>15 Years</td>
<td>12 Years</td>
<td>8 Years</td>
<td>11 Years</td>
<td>12 Years</td>
<td>15 Years</td>
<td>18 Years</td>
<td>6 Years</td>
<td>12 Years</td>
<td>15 Years</td>
<td></td>
</tr>
<tr>
<td>All-in Rate(4)</td>
<td>2.68%</td>
<td>1.97%</td>
<td>1.65%</td>
<td>1.89%</td>
<td>2.55%(3)</td>
<td>1.60%</td>
<td>2.40%</td>
<td>3.24%</td>
<td>1.77%</td>
<td>2.33%</td>
<td>2.42%</td>
<td>3.05%</td>
</tr>
</tbody>
</table>

(1) Approximate All-in TIC based on information found in Official Statements  
(2) CTF monies consist primarily of motor vehicle fuel taxes and registration fees collected in the Commonwealth  
(3) Taxable bonds  
(4) Not a legal pledge, but is made available subject to appropriation
Next Steps for Virginia’s Seventh GARVEE Issue

1. CTB Approval (July)
2. Rating Agency Updates (August)
3. Treasury Board Approval (August)
4. Ratings Requests (August)
5. Pricing and Sale (September)
6. Planned Closing (September)
SMART SCALE PROPOSED BUDGET INCREASE
I-81 EXIT 300 SOUTHBOUND ACCELERATION LANE EXTENSION
UPC 111054 – STAUNTON DISTRICT

Commonwealth Transportation Board

Kimberly Pryor – Director, Infrastructure Investment

June 2020
SMART SCALE Policy

CTB Policy for Scope Changes and/or Budget Increases, February 2020

• A project that has been selected for funding must be re-scored and the funding decision re-evaluated if there are significant changes to either the scope or cost of the project, such that the anticipated benefits relative to funding requested would have substantially changed.

• If an estimate increases prior to project advertisement or contract award that exceeds the following thresholds, and the applicant is not covering the increased cost with other funds, Board action is required to approve the budget increase:
  » i. Total Cost Estimate <$5 million: 20% increase in funding requested
  » ii. Total Cost Estimate $5 million to $10 million: $1 million or greater increase in funding requested
  » iii. Total Cost Estimate > $10 million: 10% increase in funding requested; $5 million maximum increase in funding requested
Project Information

I-81 Exit 300 Southbound Acceleration Lane Extension
(UPC 111054)

- Submitted by Northern Shenandoah Valley Regional Commission in Round 2 of SMART SCALE
  - Total Original Project Cost: $3,437,422
  - Total SMART SCALE Request: $3,437,422
  - Request funded with HPP funds

- Project is VDOT administered
  - Construction scheduled to begin FY22

- Original Scope Included:
  - Extend acceleration lane onto I-81 southbound from westbound I-66
  - Widen the existing southbound bridge over Water Plant Road to accommodate the extended lane
Change in Project Design

What changed after Project Selection?

• Issues were identified related to the bridge widening component of the project
• VDOT Structure and Bridge guidance recommends bridge replacement when one of two conditions prevails:
  1. The presence of reactive aggregate that would lead to alkali-silica reaction (ASR), a condition that causes rapid expansion of concrete in the presence of moisture and compromises any bridge component where it is present
  2. When rehabilitation of a component or the entire structure exceeds 65% of the replacement cost, replacement of the affected component or the entire bridge is warranted
• In this case, both conditions prevail
• Replacement of the bridge is deemed the most appropriate course of action to accommodate the widening
Project Location

Interstate 81 Exit 300 - Improvement Sketch
Warren County, VA
September 20, 2016
Not to Scale
### Project Budget Increase

- **Estimated cost of revised design is $8.5M**
  - Increase of $5.1M or 148% increase
  - Sufficient deallocated HPP funds are available to cover the increase

<table>
<thead>
<tr>
<th></th>
<th>Original Application</th>
<th>Current</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total $</td>
<td>$3.4M</td>
<td>$8.5M</td>
</tr>
<tr>
<td>SMART SCALE $</td>
<td>$3.4 (HPP)</td>
<td>$8.5M (increase of $5.1M)</td>
</tr>
<tr>
<td>Score</td>
<td>11.1</td>
<td>4.5</td>
</tr>
<tr>
<td>Funding Scenario</td>
<td>9/19</td>
<td>16/19</td>
</tr>
<tr>
<td>Expenditures as of 5/28/20</td>
<td>$225,962</td>
<td></td>
</tr>
</tbody>
</table>
Recommendation for Action

• **Approve Budget Increase Request**
  • Fund increase from surplus HPP balances
  • Of available surplus HPP balances, $4,966,206 was released from projects in Staunton District

<table>
<thead>
<tr>
<th>HPP Surplus Funds</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surplus</td>
<td>$46,452,997</td>
</tr>
<tr>
<td>Less Proposed Budget Increase for UPC 111054</td>
<td>$5,097,874</td>
</tr>
<tr>
<td><strong>Total Remaining</strong></td>
<td><strong>$41,355,123</strong></td>
</tr>
</tbody>
</table>
COMMONWEALTH of VIRGINIA
Office of the
SECRETARY of TRANSPORTATION

CTB Update
SMART SCALE Round 4
and
Performance Based Planning Demo
Summary

● Update on current round of SMART SCALE

● Update on Performance Based Planning Pilots
  ○ NOVA
  ○ Culpeper
  ○ Salem
SMART SCALE Round 4

- 484 pre-applications submitted
  - Includes 2 placeholder for CTB
  - $7.5B total project cost

<table>
<thead>
<tr>
<th>District</th>
<th>Total Cost (millions)</th>
<th># of pre-apps</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bristol</td>
<td>$156.6</td>
<td>35</td>
</tr>
<tr>
<td>Culpeper</td>
<td>$389.8</td>
<td>42</td>
</tr>
<tr>
<td>Fredericksburg</td>
<td>$500.5</td>
<td>41</td>
</tr>
<tr>
<td>Hampton Roads</td>
<td>$1,311.3</td>
<td>62</td>
</tr>
<tr>
<td>Lynchburg</td>
<td>$328.2</td>
<td>33</td>
</tr>
<tr>
<td>Northern Virginia</td>
<td>$3,084.4</td>
<td>45</td>
</tr>
<tr>
<td>Richmond</td>
<td>$937.6</td>
<td>98</td>
</tr>
<tr>
<td>Salem</td>
<td>$571.1</td>
<td>66</td>
</tr>
<tr>
<td>Staunton</td>
<td>$227.4</td>
<td>62</td>
</tr>
</tbody>
</table>
Round 4 Pre-Application Stats

Primary Request Type

• Principal Improvement Type
  – Highway: 365
  – Bike/Pedestrian: 96
  – Bus Transit: 14
  – Rail Transit: 2
  – Rail Freight: 1
  – TDM: 6
SMART SCALE Round 4

- No significant issues during pre-app period
- Pre-screening is underway
  - Keys Questions - Does the project meet:
    - VTrans need,
    - Eligibility requirements, and
    - Readiness requirements
- Final full application opens June 19th with submission deadline of August 3rd
Round 4 Flexibility

● Impact of COVID-19

● Need for flexibility on deadlines related to:
  ○ Resolutions of support
  ○ Documentation for leveraged funding
Performance-Based Planning Demo

- Performance based programming
  - SMART SCALE
  - SGR
  - HSIP
- Performance Based Planning/Project Development
  - Rethinking how to solve transportation problems
  - District/DRPT/OIPI examined projects from Round 3 of SMART SCALE to identify candidates - identified projects in Culpeper, NOVA and Salem
Does this decision tree make sense?
Performance-Based Planning

Or is this more logical...

Understand the problem

Develop/Test Solutions
Fairfax County - Braddock Road Phase 1

- Strong project focused on multi-modal improvements
- Included multiple intersection improvements
- Achieved strong Safety, Accessibility, and Environmental Scores
- Low congestion score
- Round 3 request of $79.9M
Fairfax County - Braddock Road Phase 1

- Assessed areas driving higher costs and reduced benefits
- Identified alternatives that met needs through equal or better options - with reduced impacts and costs
- Projected to **reduce cost by 15-20%** and significantly **increase congestion mitigation score**
Performance-Based Planning
Prince William Parkway at Sudley Manor Drive & Wellington Road

Prince William County - Prince William Parkway at Sudley Manor Drive & Wellington Road

- Next intersection downstream from Ball’s Ford intersection
- High traffic & congestion area
- Initial Round 3 project included two grade separations with a Single Point Urban Interchange
- Gas line impacts
- Total cost over $177M
Performance-Based Planning
Prince William Parkway at Sudley Manor Drive & Wellington Road

Prince William County - Prince William Parkway at Sudley Manor Drive & Wellington Road

- Assessed alternative ways to meet the purpose/need of original project
- Developed alternatives that lower cost while still achieving long term benefit and congestion mitigation
- Projected to reduce cost 30-40% and shorten construction time
- **Eliminate two signals** on PWP
Loudoun County - US-15 Lucketts Area

- High priority safety and congestion area
- Context sensitivity to village/local environment with school and historic considerations - RW constraints
- Strong need for improvements - safety and congestion
- Current long-term solution is to bypass Lucketts
Loudoun County - US-15 Lucketts Area

- Working with District and County on options to reduce costs and impacts while addressing congestion/safety
- Quadrant roadway under evaluation
- Reduced signal phases and conflict points
- Opportunity to relocate school access to quadrant roadway
Performance-Based Planning
Loudoun County - US-15 Lucketts Area

AM Peak Hour Queue Lengths Across the Corridor
2030 No Build vs. 2030 QRI

Decrease in average AM queues
21%
Decrease in maximum AM queues
54%
Comparing 2030 No Build to the 2030 QRI concept

PM Peak Hour Queue Lengths Across the Corridor
2030 No Build vs. 2030 QRI

Decrease in average PM queues
48%
Decrease in maximum AM queues
36%
Comparing 2030 No Build to the 2030 QRI concept
Centreville Road (VA 28) - between Prince William / Fairfax County line at the bridge over Bull Run and Blooms Quarry Lane / Old Centreville Road intersection at the Prince William County / City of Manassas Park line

- High traffic volumes: 2,500-2,700 vehicles per hour in northbound in AM and southbound in the PM
- 100 driveways over 2 miles
- 5 lane cross-section with center two-way left turn only lane
Performance-Based Planning
Route 28 - Centreville Road

Summary of Reported Crashes within Centreville Road Study Area Limits
From 2013 through 2018

Average Annual Crash Rates between 2013 and 2018 ranged from 193 to 242 crashes per 100 million vehicle miles.
- **50 to 78%** higher than Average Annual Crash Rates for Primary Highways in VDOT NOVA District.
- **50 to 88%** higher than Statewide Average Rates
Performance-Based Planning
Route 28 - Centreville Road

Route 28 Bypass
Total Cost: $300M
Existing funding $95M in NVTA funds
Concerns with cost, environmental impacts, ROW impacts, constructability, neighborhood impacts, alignment

Even with a bypass, the existing roadway needs improvements for mobility and safety
Performance-Based Planning
Route 28 - Centreville Road

Able to reduce signal phases and give more time to through traffic

Reduction in conflict points leads to improved safety
Performance-Based Planning
Route 28 - Centreville Road

Significant reduction in delay and increase in throughput

50% reduction in fatal and injury crashes

Current estimate between $30-40M
Performance-Based Planning
Route 460 - Orange Avenue

Background
- 4.8 mile Arterial Preservation effort led by Salem District
- 36 intersections
  - 12 signals
  - 1 emergency
  - 16 unsignalized
  - 7 crossovers
- Round 3 project to widen to 6 lanes from Hollins to Gus Nicks
- Round 3 cost - $77M

Challenge: Preserve existing capacity and get 6-lanes of performance on existing 4-lane facility
Performance-Based Planning
Route 460 - Orange Avenue

50% reduction in delay and improved safety due to signalizing the weave from I-581
Performance-Based Planning
Route 460 - Orange Avenue

44% reduction in delay
78% reduction in conflict points
Performance-Based Planning
Route 460 - Orange Avenue

37% reduction in delay
52% reduction in intersection conflict points
Performance-Based Planning
Route 460 - Orange Avenue

36% reduction in delays; 25% reduction in conflict points

53% reduction in conflict points
Performance-Based Planning
Route 460 - Orange Avenue

2040 As Proposed

- 27% reduction in AM peak delay
- 37% reduction in PM peak delay
- 38% reduction in conflict points which will reduce crashes

Current SMART SCALE applications cover 25 study intersections estimates at $40M
Performance-Based Planning
Route 29 / Hydraulic Road

**Background**

- A **$200M** package was applied for in SMART SCALE Round 3 to address the Route 29 / Hydraulic Road intersection
  - Route 29 / Hydraulic Partial Grade Separation
  - Zan Road Overpass, Hillsdale Drive Extended, Relocated 250 WB Off Ramp and Overpass from Angus Road to Holiday Drive
- Projects did not score well in Round 3
- VDOT District Planning led an effort to cost solution
- **$18M** in funds available to leverage to solutions
Performance-Based Planning
Route 29 / Hydraulic Road

2040 PM peak

- **15% delay and 40% conflict point reduction** at Route 29 / Hydraulic
- **45% delay and 75% conflict point reduction** at Route 29 / Angus Road
- **60% delay and 80% conflict point reduction** at Hydraulic Road / Hillsdale Road

Revised solution package estimated at $25M
Transportation as a System
Assembly Line Illustration

Each station can process
100 widgets per hour

Station 1
Station 2
Station 3

100 widgets completed per hour

Finished Widgets
Transportation as a System
Assembly Line Illustration

Station 1 upgraded and can now process 200 widgets per hour

Viewed as a project:
100% improvement in Station 1 output

Viewed as a System:
0% improvement in system output

Alternative 1
Transportation as a System
Assembly Line Illustration

All 3 stations upgraded to process 125 widgets per hour

Viewed as a System: 25% improvement in system output
MASTER TOLLING AGREEMENT UPDATE
HAMPTON ROADS EXPRESS LANE NETWORK

Stephen C. Brich, P.E. – VDOT Commissioner

June 17, 2020
Master Tolling Agreement Development

Through the HRBT Project Administration and Funding Agreement (PAFA) VDOT committed to work collaboratively with HRTPO and HRTAC to:

- Find best operational solutions
- Define appropriate tolling policies
- Investigate financial mechanisms available to CTB and HRTAC

While PAFA required Master Tolling Agreement (MTA) with HRTAC by Oct. 31, 2019

- Operations Study finalized in late fall 2019
- Discussion on entity to issue debt extended
  - HB1438 (2020 GA Session) provides authority to HRTAC to impose and collect tolls
Master Tolling Agreement Update

• CTB authorized the execution of HRBT PAFA between HRTAC and VDOT in March 2019
  • Whereby requiring Master Tolling Agreement (MTA)
• MTA execution prior to HRBT full notice to proceed (NTP) issued per HRTAC request
  • Earliest full NTP mid-July 2020
• VDOT and HRTAC have collaboratively developed draft MTA
  • Majority of broad terms agreed to
  • Continue to collaborate on outstanding items
• MTA requires execution from CTB, VDOT and HRTAC
Master Tolling Agreement Major Terms

I-64 Hampton Roads Express Lane (HREL) Network

• Defines the initial HREL
  • I-64 and Jefferson Avenue to I-64/I-264/I-664 Bowers Hill

• Sequencing and implementation
  • Goal is to create a contiguous and continuous network

• Sequencing based on project schedules and operations

• Allows for mutually agreed additions to initial HREL
Master Tolling Agreement Major Terms

Procurement and Completion of HREL
- VDOT responsible for design, right-of-way and construction
- HRTAC participates in procurement
- Continued collaboration on traffic and revenue studies
- Funding of HREL
  - HRTAC funding plan
  - VDOT assistance with TIFIA and other financing
- VDOT continue to own the HREL
Master Tolling Agreement Major Terms

Tolling Operations and Maintenance

- Operations and maintenance performed initially by VDOT then transitioned to HRTAC
  - Earliest transition – High Rise Bridge segment toll day one
  - Latest transition – HRBT toll day one
  - HRTAC may enter into mutually agreeable contract with VDOT to provide tolling O&M

- VDOT responsible for roadway operations and maintenance
  - Includes snow, ice and debris
Master Tolling Agreement Major Terms

Tolling Policy and Procedure

• Designation of the initial HREL as HOT Lanes
• Agree to have HRTAC exercise its tolling authority for HREL
• HRTAC has right and responsibility to set initial tolling policy
  • Hours of operation
  • Toll points
  • Comply with federal + state laws/regulations
  • Allow for safe operations between HOT and adjacent GP lanes
  • Prohibit use of toll booths (Electronic tolling only)
• Toll policy modifications to require review by Toll Policy Committee
  • 6 members (3 HRTAC and 3 Secretary of Transportation appointed)
• Toll rate to be set dynamically based on congestion
• Toll enforcement will be the responsibility of the operator
• Criteria established for Commissioner to suspend tolling
• Express agreement to provide free means of travel along corridor
Master Tolling Agreement Major Terms

- **Toll Revenues and Toll Backed Debt**
  - Establishes priority use of debt proceeds and toll revenues
  - HRTAC to regularly submit financial models
  - Parties agree to cooperate to maximize the proceeds from TIFIA
    - Minimum of $345M debt proceeds applied to HRBT, as stipulated in PAFA

- **Naming rights**
  - Hampton Roads Express Lanes

- **Compensation event**

- **Dispute resolution process**
Master Tolling Agreement Major Terms

- Outstanding Issues to be Resolved
  - Toll Policy Committee dispute resolution
  - Compensation Event
HAMPTON ROADS EXPRESS LANE NETWORK
UPDATE
Background

- Operational Analysis initiated in December 2018
- Presented Results of Analysis and Proposed Scenarios of the HREL Network
  - HRTPO/HRTAC Joint Session September 2019
  - CTB October 2019
Regional Approvals and Authorizations

• HRTPO Approved and Adopted on May 21, 2020
  • “…hereby identifies and adopts the Regional Express Lanes Network…to collectively provide the greatest impact on reducing congestion for the greatest number of citizens residing in Hampton Roads and requests the HRTAC pursue development of a funding, development and implementation plan for the Express Lanes Network to be advanced by HRTAC based on project readiness.”

• HRTAC Special Meeting on May 28, 2020 voted to fund the HREL Network in the FY21-FY26 Plan of Finance – Six Year Operating and Capital Program.
Previous CTB Designation of HOT Lane Segments

- October 19, 2016 – CTB Resolution #2 designated HOT Lanes on Interstate 64 from Interstate 564 to Interstate 264
- September 20, 2017 – CTB Resolution #8 designated HOT Lanes on Interstate 64 from I-664/I-264 Interchange to Interstate 264
- January 10, 2018 – CTB Resolution #12 designated HOT Lanes on Interstate 64 from Interstate 664 to Interstate 564.
Hampton Roads Express Lane Network

Designation of HOT Lanes on I-64 from Jefferson Ave to I-664 will complete the HREL Network as proposed.

- Existing HOV Lane will be converted to HOT
Hampton Roads Express Lane Network

Next Steps:

- Finalize the Master Tolling Agreement
- Collaborate on Tolling Policy with Region
- Complete Traffic and Revenue Study
- Continue to Advance HREL to Construction