



Commerce Corridor Study Implementation Plan

RICHMOND REGIONAL TRANSPORTATION PLANNING ORGANIZATION

The Richmond Regional Transportation Planning Organization (RRTPO) is the federal and state designated metropolitan planning organization that serves as the forum for cooperative transportation decision-making in the Richmond region. The Richmond Regional Planning District Commission (RRPDC) is the contracting agent and staff for the RRTPO.

ACKNOWLEDGEMENT

The Commerce Corridor Study was prepared by Michael Baker International in cooperation with CDM Smith and the Economic Development Research Group (EDRG) on behalf of the Virginia Office of Intermodal Planning and Investment of the Secretary of Transportation and the Richmond Regional Transportation Planning Organization. The report was prepared in consultation with RRTPO staff and representatives of the City of Richmond, Chesterfield County, Henrico County, the Virginia Department of Transportation (VDOT), the Virginia Department of Rail and Public Transportation (DRPT), and the Port of Virginia (POV).

DISCLAIMER

The contents of this report reflect the analysis and findings of Michael Baker International and their consultant team. The RRTPO accepts the accuracy of this work in recognition that the contents do not necessarily reflect the official views or policies of the Federal Highway Administration (FHWA), the Federal Transit Administration (FTA), VDOT or DRPT. This report does not constitute a standard, specification or regulation. The Commerce Corridor Study is the result of a vision and scenario planning exercise to identify future transportation needs and solutions for a sub-regional study area. The Commerce Corridor Study is complementary to the region's adopted metropolitan transportation plan, plan2040. This document is disseminated under the sponsorship of the U.S. Department of Transportation in the interest of information exchange. The United States Government, the Commonwealth of Virginia, the RRPDC, and the RRTPO member organizations assume no liability for the contents or use thereof.

NONDISCRIMINATION

The RRTPO fully complies with the Title VI of the Civil Rights Act of 1964 and related statutes and regulations in all programs and activities. The RRTPO will strive to provide reasonable accommodations and services for persons who require special assistance to participate in this public involvement opportunity. For more information on meeting accessibility, or to obtain a Title VI Complaint Form, see www.richmondregional.org or call the Title VI Coordinator at 804-323-2033.

NO DISCRIMINACIÓN

Aviso de Título VI abreviado al público: El Organización de Planeación Regional de Transporte de Richmond (RRTPO) cumple con el Título VI de la Ley de los Derechos Civiles de 1964 y con los estatutos y regulaciones relacionadas en todos los programas y actividades. RRTPO se esforzara en proveer acomodaciones razonables y servicios para personas que requieran asistencia especial para participar en esta oportunidad pública. Para más información sobre accesibilidad a la reunión o para obtener los documentos de reclamación del Título VI, entre a la página web (www.richmondregional.org) o llame al Coordinador del Título VI en 804-323-2033.



Planning District Commission

Metropolitan Planning Organization

Town of
Ashland
Counties of
Charles City
Chesterfield
Goochland
Hanover
Henrico
New Kent
Powhatan
City of
Richmond

RRTPO AGENDA 10/5/17; ITEM III.D.

COMMERCE CORRIDOR STUDY

Richmond Regional Transportation Planning Organization

On motion of James M. Holland, seconded by Kimberly B. Gray, the Richmond Regional Transportation Planning Organization unanimously approved the following resolution:

RESOLVED, that the Richmond Regional Transportation Planning Organization adopts the Commerce Corridor Study and directs the coordination of project funding applications, planning efforts and initiatives to be advanced through the FY18 and future Unified Planning Work Programs.

This is to certify that the Richmond Regional Transportation Planning Organization approved the above resolution at its meeting held October 5, 2017.

WITNESS:

BY:

Sharon E. Robeson
Program Assistant
Richmond Regional Planning
District Commission

Barbara Schoeb Nelson
Secretary
Richmond Regional Transportation
Planning Organization

TABLE OF CONTENTS

1. Introduction	1
1.1 Regional Collaboration.....	1
1.2 Recent Successes	3
2. Implementation Action Steps	3
3. Project Solutions	6
3.1 Short-Term Criteria	6
3.2 Medium-Term Criteria	6
3.3 Long-Term Criteria	6
4. Project Implementation Briefs.....	9
5. Project Bundling for Grant Applications.....	9
Appendix: Implementation Briefs.....	10

List of Tables

Table 1: Short-Term Project Solutions.....	7
Table 2: Medium-Term Project Solutions.....	8
Table 3: Long-Term Project Solutions.....	8

1. INTRODUCTION

The *Commerce Corridor: Transportation, Connectivity, Accessibility and Economic Opportunity Study* (the Study) is a comprehensive multimodal strategy to address existing and future transportation challenges within the Commerce Corridor. The Commerce Corridor is situated along Commerce Road within the Richmond Marine Terminal (RMT) transportation node and the surrounding I-95 corridor from the James River to Route 10 in Chesterfield County. The Study identifies the development opportunities that will occur if the RMT fulfills its potential and examines the highway and rail transportation needs necessary to maximize connectivity, accessibility, and allow the full economic development potential of the corridor. A Technical Report, under separate cover, documents the research, community outreach, and analyses of the transportation network and economic conditions that led to the development of short-, medium-, and long-term project solutions needed for realization of the Commerce Corridor's potential.

The most challenging aspect of implementing the Study is overcoming obstacles such as acquisition of right-of-way, securing construction and maintenance funding, designing projects that provide access for all users, and meeting environmental standards. Partners must work together to find common ground on project designs, locations, and funding mechanisms. This Implementation Plan outlines the actions the Richmond Regional Transportation Planning Organization (RRTPO) and its partners can work together to fulfill the vision of the Commerce Corridor Study.

Commerce Corridor Statement of the Future

In 2040 the Commerce Corridor will...

- Be a **dynamic, economic engine** for the region that serves as its gateway for commerce.
- Be a **vibrant, intermodal corridor** that provides sustainable, multimodal transportation opportunities.
- Be recognized nationally for its **integrated economic and transportation systems** development.
- Foster continued growth **in quality, well-paying jobs and ladders of opportunity** for the community.

1.1 REGIONAL COLLABORATION

In June 2016, the RRTPO kicked off the Study in partnership with the Virginia Office of Intermodal Planning and Investment (OIPI) and other stakeholders to develop the comprehensive analysis of existing and future transportation needs and the prioritization of infrastructure investments along the Commerce Corridor. In addition to OIPI, the RRTPO partnered with representatives of the City of Richmond, Chesterfield County, Henrico County, Virginia Department of Rail and Public Transportation, Port of Virginia, Virginia Economic Development Partnership, VDOT Richmond District, and VDOT Central Office to prepare this study. Ongoing collaboration and partnership with these agencies is an important necessity for successful implementation of this road map.



The Study incorporated feedback from the agencies mentioned, as well as stakeholders in the region including economic development representatives, private businesses, and local residents. This outreach, coupled with analysis of all modes, provided a comprehensive understanding of the challenges and

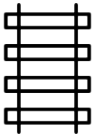
opportunities related to travel and economic growth in the study corridor. The project team gained a wealth of knowledge from the interviews conducted with project stakeholders. Below is a sampling of the diverse topics discussed:



Regional Economic Development Leaders feel workforce housing and training is critical to attracting new industrial businesses.



The major Interstate facilities serving the Study area will experience increased congestion in the future without significant infrastructure investment.



The Class 1 railroads are well below their capacity. Maintenance, rehabilitation and additional crews would be the first focus upon increased rail demand in corridor.



Shippers and carriers (trucks) think in terms of point-to-point travel time and in-terminal 'turn-time'.



The Richmond Marine Terminal has developable acreage and on-terminal warehouses for future on-site tenants.

The Commerce Corridor Study is funded by the Office of Intermodal Planning and Investment. It is in alignment with VTrans2040, Virginia's Statewide Multimodal Long Range Transportation Plan, as well as the RRTPO's Metropolitan Transportation Plan, plan2040.



1.2 RECENT SUCCESSES

The impact of regional collaboration and leadership is evidenced by recent successes in the Commerce Corridor. Capitalizing on investments made by the RRTPO, the Port of Virginia has reported consistent growth of barge cargo volumes passing through RMT. This has resulted in fewer heavy trucks traveling on I-64 from Hampton Roads. Renewed private sector interest in industrial and commercial opportunities in the area around RMT and the broader Commerce Corridor is evidenced by multiple manufacturing and distribution facility projects currently in the development pipeline. As the Commerce Corridor continues to grow into an inland logistics hub of statewide significance, increased freight activity will bring additional stresses to a transportation network already strained to safely and efficiently handle existing passenger and freight volumes.



The Port of Virginia's 40-year lease of the RMT will create new opportunities for the region, but growth is likely to exacerbate existing multimodal transportation system deficiencies. Currently, the Commerce Corridor is experiencing safety, congestion and state of good repair challenges. Insufficient vertical clearances and deficient interchange designs at multiple locations along the corridor limit connectivity and accessibility to key regional freight activity centers as identified in the VTrans2040 Regional Network Needs Assessment. System deficiencies on I-95 and the surrounding road and rail network range from pavement condition, signals and operations, vertical clearances, turning radii and geometrics to capacity constraints.

2. IMPLEMENTATION ACTION STEPS

The results of transportation and economic analyses described in the Commerce Corridor Study Technical Report informed the development of project solutions. Each of the project solutions are in varying degrees of development in terms of design development, cost estimation, funding, and implementation next steps. The following action steps describe how the RRTPO can work with its partners to move forward with implementing the Commerce Corridor project solutions:



- **Identify Project Champions** – The project champion is the person(s) who takes on the role of ensuring everyone involved is on board and behind the ultimate success of the project.
- **Refine Project Development Details and Cost Estimates** – The project solutions have planning level project details and cost estimates. As these solutions move forward in implementation, it is anticipated that project development details and costs will be further refined, as needed.

- **Adopt Projects into RRTPO Plan Documents** – Project solutions of regional significance will be considered for inclusion in the region’s plan2040 Metropolitan Transportation Plan.
- **Identify and Pursue Funding Opportunities** – Several project solutions are currently unfunded. Funding will need to be identified and secured in order to move forward with implementation.
- **Partner with State and Local Jurisdictions** – Implementation of project solutions will rely on partnering with local jurisdictions.
- **Partner with Private Stakeholders** – Some project solutions may rely on partnering with private stakeholders, such as railroad companies, private industry representatives, and businesses.



POTENTIAL FUNDING SOURCES

The following programs are potential sources of funding for project solutions. Where applicable, these have been identified on each solution factsheet:

- ***Fostering Advancements in Shipping and Transportation for Long-term Achievement of National Efficiencies (FASTLANE) Grants:*** A competitive (discretionary) grant program aimed at providing financial assistance to highway, rail, port, and intermodal freight and highway projects of national and regional significance.
- ***Transportation Investment Generating Economic Recovery (TIGER) Grants:*** A competitive (discretionary) grant program aimed at funding road, rail, transit, and port projects that have the potential to achieve critical national objectives.
- ***Congestion Mitigation & Air Quality Improvement Program (CMAQ):*** A program for congestion reduction and air quality improvement projects and programs; funding is only available for areas that do not meet or previously did not meet federal air quality standards.
- ***Highway Safety Improvement Program (HSIP):*** A program for safety-related projects including adding capacity or improving alignment or operations. Projects must be consistent with the state Strategic Highway Safety Plan.
- ***DRPT Rail Industrial Access Fund:*** A fund source that promotes truck diversion by providing grant assistance to connect new or expanding businesses to the freight railroad network. The program supports localities, businesses, or industries seeking access to a common carrier railroad.
- ***DRPT Rail Enhancement Fund:*** A fund source that provides for capital improvements benefiting passenger and freight initiatives. This fund is typically utilized by Class I railroads, the Port of Virginia, and Virginia Railway Express for major capital investments.
- ***DRPT Rail Preservation Fund:*** A fund source that benefits shortline railroads, which provide the “local” network and the “last mile” of service for rail freight to reach its destination.
- ***SMART SCALE:*** A project prioritization process that scores and ranks project applications. SMART SCALE is funded by two main sources; the District Grant Program, which is funding specific to each of the nine VDOT districts and the High Priority Projects Project, which is available statewide.
- ***RSTP:*** A program that provides flexible funding that may be used by MPOs with a population of 200,000 or more for projects to preserve and improve the conditions and performance of any Federal-aid highway, bridge or tunnel projects on any public road, pedestrian and bicycle infrastructure, and transit capital projects.
- ***Local:*** Local jurisdictions may consider including projects in their Capital Improvement Programs.

3. PROJECT SOLUTIONS

The project solutions are organized into short-, medium-, and long-term timeframes based on anticipated implementation considerations such as cost, funding status, and complexity. Criteria for each timeframe are summarized below. The short-, medium-, and long-term solutions are listed in **Tables 1, 2, and 3**. These lists should be utilized as partners decide where to focus staff time and funding.

3.1 SHORT-TERM CRITERIA

Solutions are marked as short-term if the activity could generally be completed within a 10-year timeframe and has at least three of the following attributes:

- Relatively low cost (generally \$0 to \$50m)
- There exists a current need
- Funding is in place
- Not waiting for something else to occur before proceeding (e.g. not waiting on development to occur, federal, state or local approvals required)
- The action would help to market the area for industrial redevelopment
- Project Champion is identified

3.2 MEDIUM-TERM CRITERIA

Solutions are marked as medium-term if the activity could generally occur in the 10 to 20-year timeframe and has at least three of the following attributes:

- Higher cost than short-term solutions & generally up to \$100m
- Solution is not fully funded
- Solution is based on needs identified in the 10 to 20-year timeframe
- Requires more complex project delivery such a multi-jurisdiction, public and private infrastructure, multiple funding sources, federal, state or local approvals
- Waiting for other activities to occur before it makes sense to pursue (e.g. waiting for clarity on nature & intensity of industrial redevelopment, increased rail demand at port)

3.3 LONG-TERM CRITERIA

Solutions are marked as long-term if the activity would realistically occur beyond the 20-year timeframe and has at least two of the following attributes:

- Higher cost than short-term and medium-term solutions and generally above \$100m
- Solution is not fully funded
- Solution is based on needs identified in the 20+ year timeframe
- Requires very complex project delivery such a multi-jurisdiction, public and private infrastructure, multiple funding sources, or significant federal, state or local approvals
- Waiting for other activities to occur before it makes sense to pursue (e.g. waiting for clarity on nature & intensity of industrial redevelopment, increased rail demand at port)

Table 1: Short-Term Project Solutions

Ref #	Short-Term Project Solution
H2.3.1	I-95/Route 10 Interchange (Phase 1)
H2.3.2	I-95/Route 10 Interchange (Phase 2)
H2.4.1	I-95 at Commerce Road Access Study
H2.5.1	I-95/Maury Street Interchange Improvement
H2.6	I-95 Auxiliary Lanes
H3.1	Deepwater Terminal Road Extension
H5.1	Commerce Road Improvements
H5.2	Commerce Road Area Improvements
H6.1	I-95 Operational Study
H6.2	I-95 ITS Improvements
H9.1	RIC/White Oak Traffic Study
H10.1	Route 10 Improvements
H10.2	Meadowville Technology Parkway Widening
H10.3	North Enon Church Road Widening
R9.	Rail Service Expansion
P1.1	RMT Off-Hours Delivery Solutions
P1.2	RMT New Access Point Feasibility Study
P1.3	RMT New Access Point
P1.4	RMT Gate Operations Study
P2.	RMT Inside-the-Gate Rail Operations Study
P3.	Attract On-Site Tenants to RMT
P4.	RMT Intermodal Transfer Improvements
P5.	RMT Business Development and Diversification
M1.	Image & Competitiveness of Commerce Corridor
M2.	Rail Industrial Access Grant Program Expansion
M3.	Intermodal Business Development and Incentives
M4.	RMT & Commerce Road Area Land-Use Plan
M5.1	Local Initiatives for Workforce Access to Jobs
M5.3	Multimodal Connectivity to Jobs
M6.1	Truck Routing and Wayfinding
M6.3	Community Impacts Analysis

Table 2: Medium-Term Project Solutions

Ref #	Medium-Term Project Solution
H1.2	New Market Road (Route 5) Widening
H2.1	I-95/Willis Road Interchange
H2.2	I-95/Willis Road Arterial Improvements
H2.4.2	I-95/Bells Road Interchange Improvement
H2.5.2	I-95/Maury Street Network Improvements
H7.1	Traffic Study for Altria/Dupont Redevelopment
H7.2	Walmsley Boulevard Extension
H8.	Traffic Study for Alleghany Warehouse Redevelopment
H9.2	I-295 Interchanges Traffic Study
H10.4	Meadowville Technology Park Traffic Study
H11	Commerce Road Realignment
R1.1	Richmond Marine Terminal Short-Line Service
R1.2	Deepwater Terminal Rail Lead Extension
R2.2	Deepwater Terminal Industrial Track - New Siding
R3.2	CSX South Yard Improvements
R3.3	Rail Access to Commerce Road Development Sites
R4.	Rail Access to RIC/White Oak Development Sites (CSX)
R5.	Rail Access to Meadowville Development Sites
R6.	Rail Access to RIC/White Oak Development Sites (NS)
R7.	CSX S-Line Crossing Improvements
M5.2	Commerce Corridor Workforce Development Initiative
M6.2	Noise Reduction Strategies

Table 3: Long-Term Project Solutions

Ref #	Long-Term Project Solution
H1.1	I-95/Route 895 Interchange Improvement
H2.4.3	I-95/Bellemeade Road New Interchange
H3.1	Deepwater Terminal Access Improvements
H6.3	I-95 Widening
R2.1	Deepwater Terminal Rail Lead Improvements

Ref #	Long-Term Project Solution
R3.1	CSX S-Line Improvements
R8.	Triple Crossing Improvements

4. PROJECT IMPLEMENTATION BRIEFS

One page factsheets were developed for each individual project solution. The factsheets are standalone snapshots of the implementation status of each project solution and are intended to be regularly updated as the solutions move through the process. Each solution factsheet includes a summary of the need and project, the modal features, a location map, funding and project development information, and implementation status. The individual project solutions sheets are provided in the Appendix and organized by order of reference ID #.

5. PROJECT BUNDLING FOR GRANT APPLICATIONS

This section is forthcoming based on feedback from the RRTPO Board.

APPENDIX: IMPLEMENTATION BRIEFS

Solution Summary

Solution Reference #: H1.1

Need Description: Improved connection from Commerce Corridor to I-64 east corridor and RIC/White Oak area.

Solution Description: Construct missing SB to EB movement at I-95/Route 895.

Local Jurisdiction: Chesterfield County

Timeline: ☐ Short-Term ☐ Medium-Term ☒ Long-Term

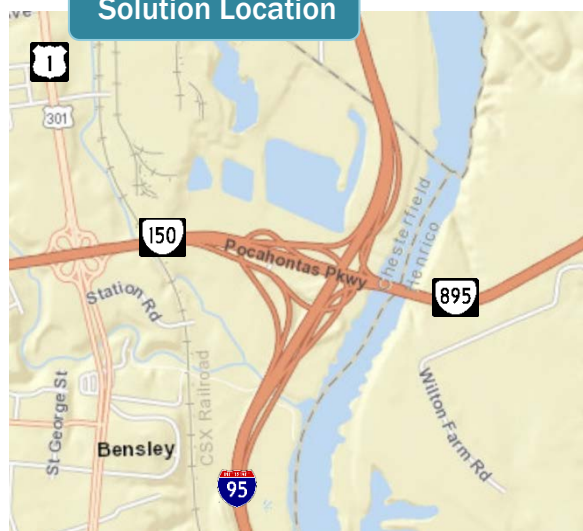
Project Champion: TBD

Solution Features

Mode: ☒ Highway ☐ Rail ☐ Port-Oriented
☐ Other:Type of Asset: ☐ Public ☐ Private ☒ BothROW Required: ☐ No ☒ Yes ☐ Unknown

Detailed Description: Construct missing southbound to eastbound movement at I-95 and Route 895 interchange. Project is complex from an engineering perspective, requiring a new flyover tying into an existing interchange. Additional complexity in permitting and approvals as an interstate highway project that also impacts a privately operated asset in Route 895.

Solution Location



Funding Information and Project Development Details

Estimated Cost (2017 dollars): \$23,309,000 Funding Status: ☐ Funded ☐ Partial Funding ☒ UnfundedAdopted in: ☐ VDOT Six-Year Program ☐ plan2040 Fiscally-Constrained ☐ plan2040 Vision

Potential Funding Sources:

☒ TIGER☐ Local☒ Smart Scale☐ Rail Industrial Access Fund☒ FASTLANE☐ CMAQ☐ HSIP☐ Rail Enhancement Fund☒ Other (Federal)☒ RSTP☐ Other:☐ Rail Preservation Fund

Permits and approvals likely needed:

☒ NEPA☒ IJR/IMR☐ Class 1 RR☐ City/County☐ Other:

Implementation Next Steps:

- 1.) Continue to investigate the feasibility and justification for implementing the project concept
- 2.) Identify project champion upon sufficient justification for the project

Solution Summary

Solution Reference #: H1.2

Need Description: Improved connection from Commerce Corridor to I-64 east corridor and RIC/White Oak area.

Solution Description: Increase capacity of New Market Road (Route 5)

Local Jurisdiction: Henrico County

Timeline: ☐ Short-Term ☒ Medium-Term ☐ Long-Term

Project Champion: Henrico County

Solution Features

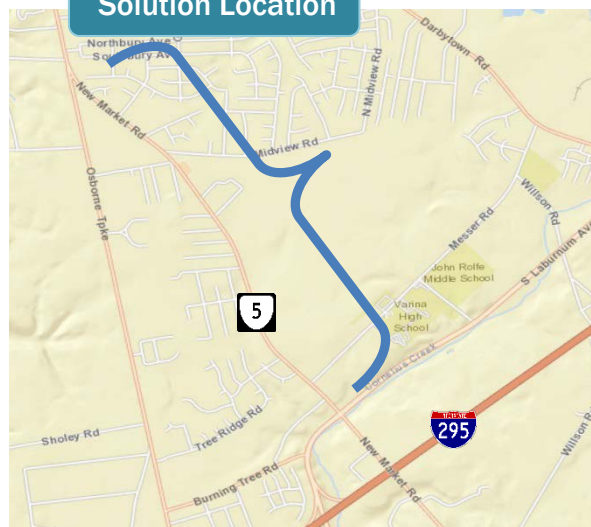
Mode: ☒ Highway ☐ Rail ☐ Port-Oriented
☐ Other:

Type of Asset: ☒ Public ☐ Private ☐ Both

ROW Required: ☐ No ☐ Yes ☒ Unknown

Detailed Description: Increase capacity of the existing two lane section of New Market Road between South Laburnum Avenue and Osborne Turnpike; improvements could take the form of a three-lane or four-lane divided roadway section to be defined by Henrico County.

Solution Location



Funding Information and Project Development Details

Estimated Cost (2017 dollars): \$18,400,000 **Funding Status:** ☐ Funded ☐ Partial Funding ☒ Unfunded

Adopted in: ☐ VDOT Six-Year Program ☐ plan2040 Fiscally-Constrained ☒ plan2040 Vision

Potential Funding Sources:

<input type="checkbox"/> TIGER	<input checked="" type="checkbox"/> Local	<input checked="" type="checkbox"/> Smart Scale	<input type="checkbox"/> Rail Industrial Access Fund
<input type="checkbox"/> FASTLANE	<input type="checkbox"/> CMAQ	<input type="checkbox"/> HSIP	<input type="checkbox"/> Rail Enhancement Fund
<input type="checkbox"/> Other (Federal)	<input checked="" type="checkbox"/> RSTP	<input checked="" type="checkbox"/> Other: Private	<input type="checkbox"/> Rail Preservation Fund

Permits and approvals likely needed:

☒ NEPA ☐ IJR/IMR ☐ Class 1 RR ☒ City/County ☐ Other:

Implementation Next Steps:

- 1.) Continue evaluation of project alternatives as development occurs in the Route 5 corridor.
- 2.) Secure funding to advance implementation of the preferred project alternative.

Solution Summary

Solution Reference #: H2.1

Need Description: Improve access from I-95 to industrial corridor within project study area.

Solution Description: Construct roundabout interchange at I-95 and Willis Road.

Local Jurisdiction: Chesterfield County

Timeline: ☐ Short-Term ☒ Medium-Term ☐ Long-Term

Project Champion: Chesterfield County

Solution Features

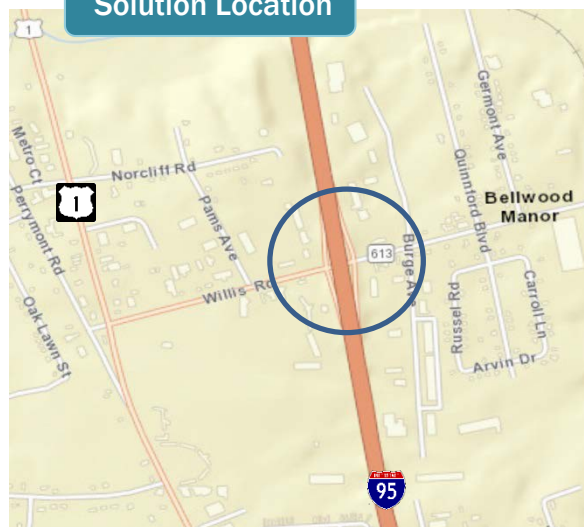
Mode: ☒ Highway ☐ Rail ☐ Port-Oriented
☐ Other:

Type of Asset: ☒ Public ☐ Private ☐ Both

ROW Required: ☐ No ☒ Yes ☐ Unknown

Detailed Description: Improve Interchange function at I-95/Willis Road. Construct roundabout interchange consistent with preferred alternative in I-95 at Willis Road Interchange Modification Report (IMR).

Solution Location



Funding Information and Project Development Details

Estimated Cost (2017 dollars): \$42,286,000 **Funding Status:** ☐ Funded ☐ Partial Funding ☒ Unfunded

Adopted in: ☐ VDOT Six-Year Program ☒ plan2040 Fiscally-Constrained ☐ plan2040 Vision

Potential Funding Sources:

☒ TIGER

☒ Local

☒ Smart Scale

☐ Rail Industrial Access Fund

☒ FASTLANE

☐ CMAQ

☐ HSIP

☐ Rail Enhancement Fund

☒ Other (Federal)

☒ RSTP

☐ Other:

☐ Rail Preservation Fund

Permits and approvals likely needed:

☒ NEPA

☐ IJR/IMR

☐ Class 1 RR

☐ City/County

☐ Other:

Implementation Next Steps:

1.) Secure funding to advance project implementation:

a.) Apply for competitive grant programs, including FY 2019 Smart Scale funding cycle

b.) Consider bundling with other projects in corridor for future FASTLANE funding application

Solution Summary

Solution Reference #: H2.2

Need Description: Improve access from I-95 to industrial corridor within project study area.

Solution Description: Improve arterial access from James River Industrial Park to I-95/Willis Road Interchange.

Local Jurisdiction: Chesterfield County

Timeline: ☐ Short-Term ☒ Medium-Term ☐ Long-Term

Project Champion: Chesterfield County

Solution Features

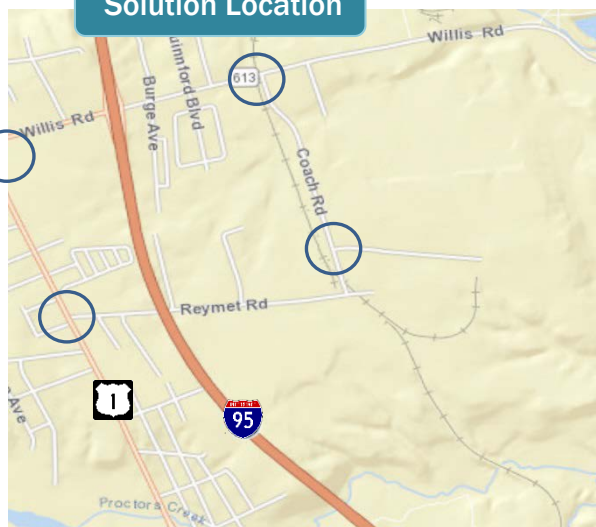
Mode: ☒ Highway ☐ Rail ☐ Port-Oriented
☐ Other:

Type of Asset: ☒ Public ☐ Private ☐ Both

ROW Required: ☐ No ☒ Yes ☐ Unknown

Detailed Description: Improved arterial access to James River Industrial Park from I-95/Willis Road Interchange. Construct arterial improvements consistent with preferred alternative in I-95 at Willis Road Interchange Modification Report including following intersections: Willis Rd. at US 1, Willis Rd. at Coach Rd, Coach Rd. at Battery Brooke Parkway, and US 1 at Reymet Rd.

Solution Location



Funding Information and Project Development Details

Estimated Cost (2017 dollars): \$11,471,000 **Funding Status:** ☐ Funded ☐ Partial Funding ☒ Unfunded

Adopted in: ☐ VDOT Six-Year Program ☐ plan2040 Fiscally-Constrained ☐ plan2040 Vision

Potential Funding Sources:

<input type="checkbox"/> TIGER	<input checked="" type="checkbox"/> Local	<input checked="" type="checkbox"/> Smart Scale	<input type="checkbox"/> Rail Industrial Access Fund
<input type="checkbox"/> FASTLANE	<input checked="" type="checkbox"/> CMAQ	<input checked="" type="checkbox"/> HSIP	<input type="checkbox"/> Rail Enhancement Fund
<input type="checkbox"/> Other (Federal)	<input checked="" type="checkbox"/> RSTP	<input checked="" type="checkbox"/> Other: EDA	<input type="checkbox"/> Rail Preservation Fund

Permits and approvals likely needed:

☒ NEPA ☐ IJR/IMR ☐ Class 1 RR ☐ City/County ☐ Other:

Implementation Next Steps:

1.) Secure funding to advance project implementation:

- a.) Apply for competitive grant programs, including FY 2019 Smart Scale funding cycle
- b.) Consider alternative funding sources such as EDA grants or private funds

Solution Summary

Solution Reference #: H2.3.1

Need Description: Improve access from I-95 to industrial corridor within project study area.

Solution Description: Phase 1 improvements to interchange function at I-95/Route 10.

Local Jurisdiction: Chesterfield County

Timeline: ☒ Short-Term ☐ Medium-Term ☐ Long-Term

Project Champion: Chesterfield County

Solution Features

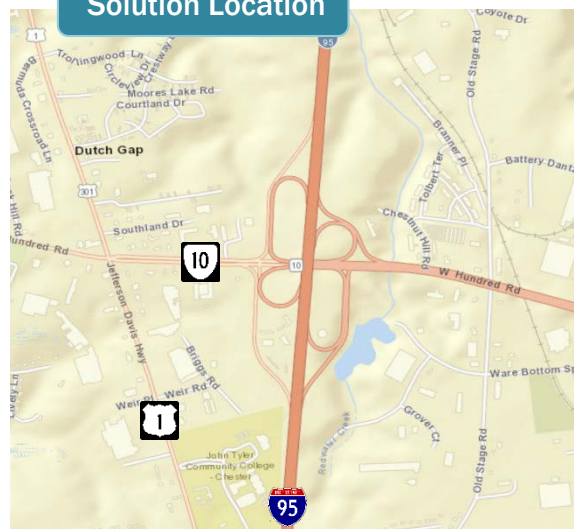
Mode: ☒ Highway ☐ Rail ☐ Port-Oriented
☐ Other:

Type of Asset: ☒ Public ☐ Private ☐ Both

ROW Required: ☐ No ☒ Yes ☐ Unknown

Detailed Description: Phase 1 improvements to interchange function at I-95/Route 10. Improve curve radius on I-95 NB to Route 10 EB off-ramp. Add lane on Route 10 EB from I-95 NB off-ramp to Old Stage Rd to allow free-flow. Add lane on Route 10 WB to I-95 NB ramp. Add 1,800' acceleration lane on I-95 NB. Project fully funded in VDOT SYIP, UPC #109322.

Solution Location



Funding Information and Project Development Details

Estimated Cost (2017 dollars): \$9,057,000 **Funding Status:** ☒ Funded ☐ Partial Funding ☐ Unfunded

Adopted in: ☒ VDOT Six-Year Program ☒ plan2040 Fiscally-Constrained ☐ plan2040 Vision

Potential Funding Sources: *N/A – Fully Funded*

<input type="checkbox"/> TIGER	<input type="checkbox"/> Local	<input type="checkbox"/> Smart Scale	<input type="checkbox"/> Rail Industrial Access Fund
<input type="checkbox"/> FASTLANE	<input type="checkbox"/> CMAQ	<input type="checkbox"/> HSIP	<input type="checkbox"/> Rail Enhancement Fund
<input type="checkbox"/> Other (Federal)	<input type="checkbox"/> RSTP	<input type="checkbox"/> Other:	<input type="checkbox"/> Rail Preservation Fund

Permits and approvals likely needed:

☒ NEPA ☐ IJR/IMR ☐ Class 1 RR ☐ City/County ☐ Other:

Implementation Next Steps:

- 1.) Complete preliminary engineering and right-of-way acquisition (as necessary)
- 2.) Begin construction phase

Solution Summary

Solution Reference #: H2.3.2

Need Description: Improve access from I-95 to industrial corridor within project study area.

Solution Description: Phase 2 improvements to interchange function at I-95/Route 10.

Local Jurisdiction: Chesterfield County

Timeline: ☒ Short-Term ☐ Medium-Term ☐ Long-Term

Project Champion: Chesterfield County

Solution Features

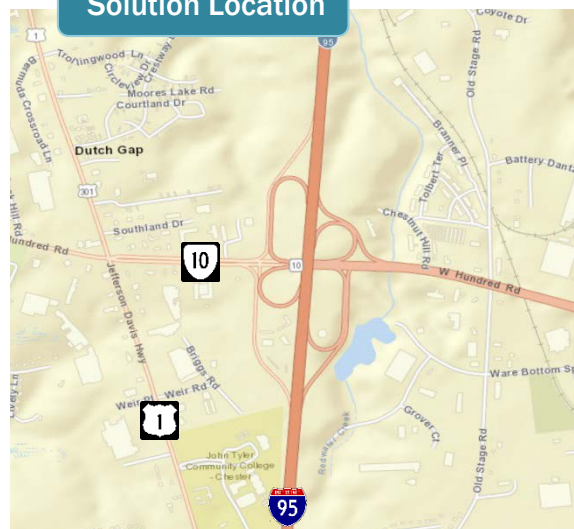
Mode: ☒ Highway ☐ Rail ☐ Port-Oriented
☐ Other:

Type of Asset: ☒ Public ☐ Private ☐ Both

ROW Required: ☐ No ☒ Yes ☐ Unknown

Detailed Description: Phase 2 improvements to interchange function at I-95/Route 10, including removal of loops and signalized ramps.

Solution Location



Funding Information and Project Development Details

Estimated Cost (2017 dollars): \$42,258,000 **Funding Status:** ☐ Funded ☐ Partial Funding ☒ Unfunded

Adopted in: ☐ VDOT Six-Year Program ☐ plan2040 Fiscally-Constrained ☐ plan2040 Vision

Potential Funding Sources:

<input checked="" type="checkbox"/> TIGER	<input type="checkbox"/> Local	<input checked="" type="checkbox"/> Smart Scale	<input type="checkbox"/> Rail Industrial Access Fund
<input checked="" type="checkbox"/> FASTLANE	<input type="checkbox"/> CMAQ	<input type="checkbox"/> HSIP	<input type="checkbox"/> Rail Enhancement Fund
<input type="checkbox"/> Other (Federal)	<input checked="" type="checkbox"/> RSTP	<input type="checkbox"/> Other:	<input type="checkbox"/> Rail Preservation Fund

Permits and approvals likely needed:

☒ NEPA ☐ IJR/IMR ☐ Class 1 RR ☐ City/County ☐ Other:

Implementation Next Steps:

1.) Secure funding to advance project implementation:

- a.) Apply for competitive grant programs, including FY 2019 Smart Scale funding cycle
- b.) Consider bundling with other projects in corridor for future FASTLANE funding application

Solution Summary

Solution Reference #: H2.4.1

Need Description: Improve access from I-95 to industrial corridor within project study area.

Solution Description: Conduct two-phase access study along I-95 adjacent to Commerce Road.

Local Jurisdiction: City of Richmond

Timeline: ☒ Short-Term ☐ Medium-Term ☐ Long-Term

Project Champion(s): VDOT, Richmond Regional TPO and City of Richmond coordinate to secure funding

Solution Features

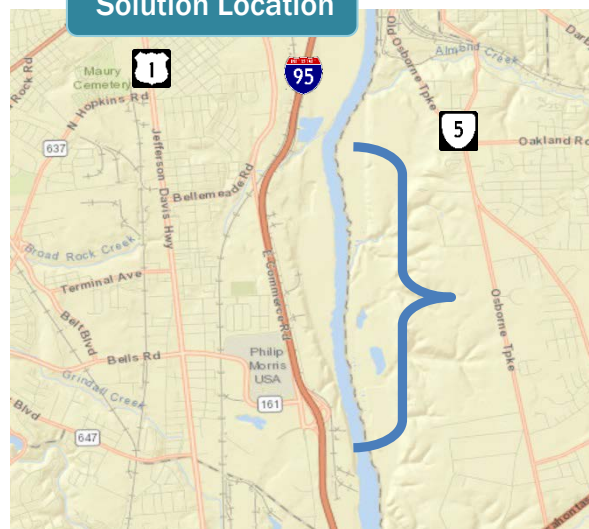
Mode: ☐ Highway ☐ Rail ☐ Port-Oriented
☒ Other: Study/IMR

Type of Asset: ☒ Public ☐ Private ☐ Both

ROW Required: ☐ No ☐ Yes ☒ Unknown

Detailed Description: A.) Phase 1 of the interstate access study would investigate the feasibility and greatest need for new access in Bellemeade area and improved access in Bells Road area. B.) Once preferred solution is established, Phase 2 would deliver either an IMR (Bells Road) or IJR (Bellemeade) to reflect the needed improvement. (see solution H2.4.2 and H2.4.3).

Solution Location



Funding Information and Project Development Details

Estimated Cost (2017 dollars): \$750,000 **Funding Status:** ☐ Funded ☐ Partial Funding ☒ Unfunded

Adopted in: ☐ VDOT Six-Year Program ☐ plan2040 Fiscally-Constrained ☒ plan2040 Vision

Potential Funding Sources:

<input type="checkbox"/> TIGER	<input checked="" type="checkbox"/> Local	<input type="checkbox"/> Smart Scale	<input type="checkbox"/> Rail Industrial Access Fund
<input type="checkbox"/> FASTLANE	<input type="checkbox"/> CMAQ	<input type="checkbox"/> HSIP	<input type="checkbox"/> Rail Enhancement Fund
<input type="checkbox"/> Other (Federal)	<input checked="" type="checkbox"/> RSTP	<input checked="" type="checkbox"/> Other: SPR	<input type="checkbox"/> Rail Preservation Fund

Permits and approvals likely needed:

☐ NEPA ☒ IJR/IMR ☐ Class 1 RR ☐ City/County ☐ Other:

Implementation Next Steps:

1.) Secure funding to conduct two-phase study as described.

Solution Summary

Solution Reference #: H2.4.2

Need Description: Improve access from I-95 to industrial corridor within project study area.

Solution Description: Construct interchange modifications at I-95/Bells Road.

Local Jurisdiction: City of Richmond

Timeline: ☐ Short-Term ☒ Medium-Term ☐ Long-Term

Project Champion: Richmond Regional TPO in coordination with City of Richmond and Port of Virginia

Solution Features

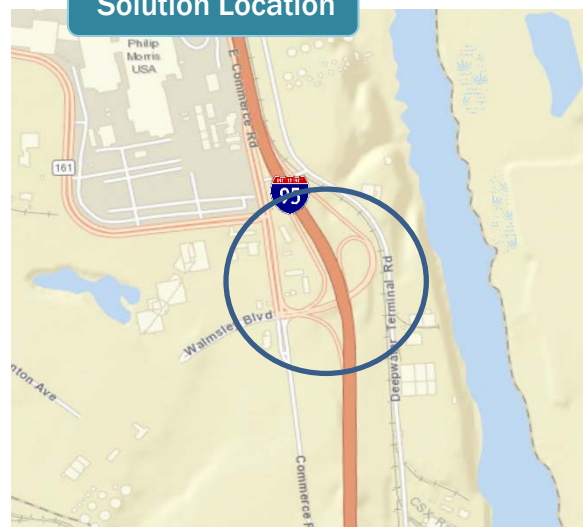
Mode: ☒ Highway ☐ Rail ☐ Port-Oriented
☐ Other:

Type of Asset: ☒ Public ☐ Private ☐ Both

ROW Required: ☐ No ☐ Yes ☒ Unknown

Detailed Description: Construct interchange modifications at I-95/Bells Road area to improve operational performance. Address deficient design of identified ramps and ramp termini approaching Commerce Road as defined by the IMR proposed in solution H2.4.1.

Solution Location



Funding Information and Project Development Details

Estimated Cost (2017 dollars): \$3,210,000 **Funding Status:** ☐ Funded ☐ Partial Funding ☒ Unfunded

Adopted in: ☐ VDOT Six-Year Program ☐ plan2040 Fiscally-Constrained ☐ plan2040 Vision

Potential Funding Sources:

☒ TIGER

☐ Local

☒ Smart Scale

☐ Rail Industrial Access Fund

☒ FASTLANE

☐ CMAQ

☒ HSIP

☐ Rail Enhancement Fund

☒ Other (Federal)

☒ RSTP

☐ Other:

☐ Rail Preservation Fund

Permits and approvals likely needed:

☒ NEPA

☒ IJR/IMR

☐ Class 1 RR

☐ City/County

☐ Other:

Implementation Next Steps:

- 1.) Complete project solution H2.4.1 – Interchange Modification Report (IMR) for I-95/Bells Rd. area
- 2.) Secure funding to advance implementation of project alternative identified in IMR

Solution Summary

Solution Reference #: H2.4.3

Need Description: Improve access from I-95 to industrial corridor within project study area.

Solution Description: Construct new I-95 interchange near Bellemeade Road.

Local Jurisdiction: City of Richmond

Timeline: ☐ Short-Term ☐ Medium-Term ☒ Long-Term

Project Champion: TBD

Solution Features

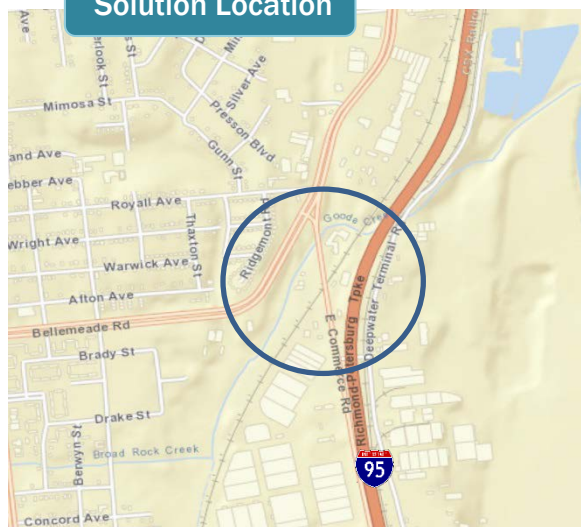
Mode: ☒ Highway ☐ Rail ☐ Port-Oriented
☐ Other:

Type of Asset: ☒ Public ☐ Private ☐ Both

ROW Required: ☐ No ☒ Yes ☐ Unknown

Detailed Description: Construct I-95 interchange (new access point) in Bellemeade Road/Commerce Road area.

Solution Location



Funding Information and Project Development Details

Estimated Cost (2017 dollars): \$250,000,000 **Funding Status:** ☐ Funded ☐ Partial Funding ☒ Unfunded

Adopted in: ☐ VDOT Six-Year Program ☐ plan2040 Fiscally-Constrained ☐ plan2040 Vision

Potential Funding Sources:

<input checked="" type="checkbox"/> TIGER	<input type="checkbox"/> Local	<input checked="" type="checkbox"/> Smart Scale	<input type="checkbox"/> Rail Industrial Access Fund
<input checked="" type="checkbox"/> FASTLANE	<input type="checkbox"/> CMAQ	<input type="checkbox"/> HSIP	<input type="checkbox"/> Rail Enhancement Fund
<input checked="" type="checkbox"/> Other (Federal)	<input checked="" type="checkbox"/> RSTP	<input type="checkbox"/> Other:	<input type="checkbox"/> Rail Preservation Fund

Permits and approvals likely needed:

☒ NEPA ☒ IJR/IMR ☐ Class 1 RR ☐ City/County ☐ Other:

Implementation Next Steps:

- 1.) Complete project solution H2.4.1 – Interchange Modification Report (IMR) for I-95/Bells Rd. area
 - Provide justification for new Interstate access point at Bellemeade Rd., particularly if prior improvements are made at the Bells Road & Maury Street interchanges (H2.4 & H2.5).
- 2.) Secure funding to advance implementation of Bellemeade project alternative upon IMR/IJR

Solution Summary

Solution Reference #: H2.5.1

Need Description: Improve access from I-95 to industrial corridor within project study area.

Solution Description: Improve interchange function at I-95/Maury Street.

Local Jurisdiction: City of Richmond

Timeline: ☒ Short-Term ☐ Medium-Term ☐ Long-Term

Project Champion: VDOT in coordination with the City of Richmond

Solution Features

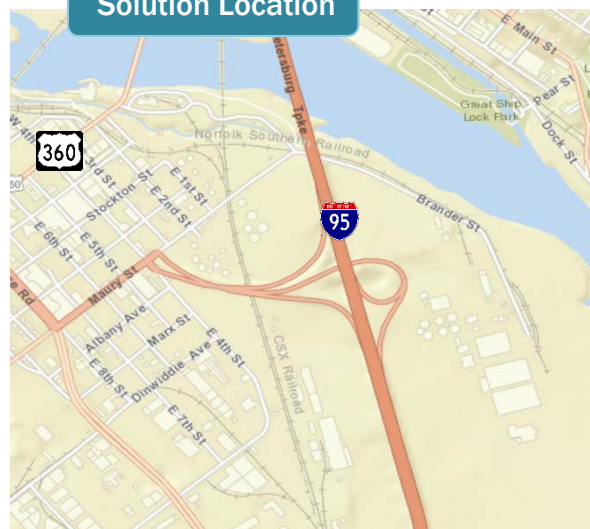
Mode: ☒ Highway ☐ Rail ☐ Port-Oriented
☐ Other:

Type of Asset: ☒ Public ☐ Private ☐ Both

ROW Required: ☐ No ☒ Yes ☐ Unknown

Detailed Description: Improve interchange function at I-95 / Maury Street. Improve and shift the ramps to Maury Street from I-95 and construct single-lane roundabout at the convergence of the ramps, Maury Street and 4th Street consistent with project fully funded in VDOT SYIP. UPC #109321.

Solution Location



Funding Information and Project Development Details

Estimated Cost (2017 dollars): \$8,491,000 **Funding Status:** ☒ Funded ☐ Partial Funding ☐ Unfunded

Adopted in: ☒ VDOT Six-Year Program ☒ plan2040 Fiscally-Constrained ☐ plan2040 Vision

Potential Funding Sources: *N/A – Fully Funded*

☐ TIGER ☐ Local ☐ Smart Scale ☐ Rail Industrial Access Fund
☐ FASTLANE ☐ CMAQ ☐ HSIP ☐ Rail Enhancement Fund
☐ Other (Federal) ☐ RSTP ☐ Other: ☐ Rail Preservation Fund

Permits and approvals likely needed:

☒ NEPA ☐ IJR/IMR ☐ Class 1 RR ☐ City/County ☐ Other:

Implementation Next Steps:

- 1.) Finalize preliminary engineering and right-of-way acquisition (as necessary)
- 2.) Begin construction phase

Solution Summary

Solution Reference #: H2.5.2

Need Description: Improve access from I-95 to industrial corridor within project study area.

Solution Description: Improvements to connectivity and capacity in I-95/Maury Street area.

Local Jurisdiction: City of Richmond

Timeline: ☐ Short-Term ☒ Medium-Term ☐ Long-Term

Project Champion: City of Richmond

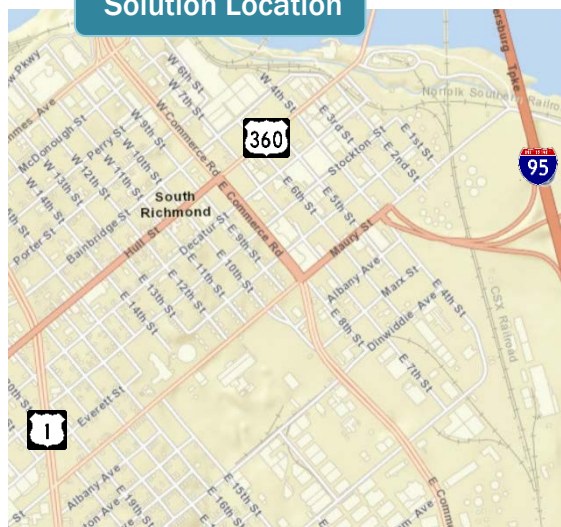
Solution Features

Mode: ☒ Highway ☐ Rail ☐ Port-Oriented
☐ Other:Type of Asset: ☒ Public ☐ Private ☐ BothROW Required: ☐ No ☒ Yes ☐ Unknown

Detailed Description: Improve operations along Maury Street corridor by:

- Widen Maury between I-95 ramps & Commerce (\$2M)**Highest Priority,
- 1st Street improvements between Maury & Hull (\$5M), and
- Concept study for improvements to Maury between Commerce & East 16th St (\$0.03M)

Solution Location



Funding Information and Project Development Details

Estimated Cost (2017 dollars): \$7,030,000 Funding Status: ☐ Funded ☐ Partial Funding ☒ UnfundedAdopted in: ☐ VDOT Six-Year Program ☐ plan2040 Fiscally-Constrained ☐ plan2040 Vision

Potential Funding Sources:

- | | | | |
|---|--|---|--|
| <input type="checkbox"/> TIGER | <input type="checkbox"/> Local | <input checked="" type="checkbox"/> Smart Scale | <input type="checkbox"/> Rail Industrial Access Fund |
| <input type="checkbox"/> FASTLANE | <input type="checkbox"/> CMAQ | <input type="checkbox"/> HSIP | <input type="checkbox"/> Rail Enhancement Fund |
| <input checked="" type="checkbox"/> Other (Federal) | <input checked="" type="checkbox"/> RSTP | <input type="checkbox"/> Other: | <input type="checkbox"/> Rail Preservation Fund |

Permits and approvals likely needed:

- ☐
- NEPA
- ☐
- IJR/IMR
- ☐
- Class 1 RR
- ☒
- City/County
- ☐
- Other:

Implementation Next Steps:

- Secure funding to advance project implementation:
 - Apply for competitive grant programs, including FY 2019 Smart Scale funding cycle

Solution Summary

Solution Reference #: H2.6

Need Description: Improve access from I-95 to industrial corridor within project study area.

Solution Description: Addition of auxiliary lanes on I-95 from Route 288 to Route 10.

Local Jurisdiction: Chesterfield County

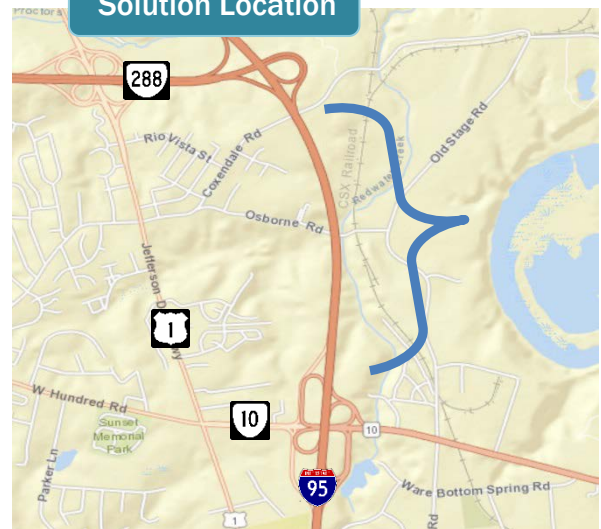
Timeline: ☒ Short-Term ☐ Medium-Term ☐ Long-Term

Project Champion(s): Richmond Regional TPO in coordination with VDOT

Solution Features

Mode: ☒ Highway ☐ Rail ☐ Port-Oriented
☐ Other:Type of Asset: ☒ Public ☐ Private ☐ BothROW Required: ☐ No ☒ Yes ☐ Unknown**Detailed Description:** The addition of auxiliary lanes on I-95 on both the northbound and southbound travel lanes between Route 288 and Route 10, or for approximately 1.2 miles consistent with project fully funded in VDOT SYIP. UPC #111466

Solution Location



Funding Information and Project Development Details

Estimated Cost (2017 dollars): \$28,206,000 Funding Status: ☒ Funded ☐ Partial Funding ☐ UnfundedAdopted in: ☒ VDOT Six-Year Program ☐ plan2040 Fiscally-Constrained ☐ plan2040 VisionPotential Funding Sources: *N/A – Fully Funded*

<input type="checkbox"/> TIGER	<input type="checkbox"/> Local	<input type="checkbox"/> Smart Scale	<input type="checkbox"/> Rail Industrial Access Fund
<input type="checkbox"/> FASTLANE	<input type="checkbox"/> CMAQ	<input type="checkbox"/> HSIP	<input type="checkbox"/> Rail Enhancement Fund
<input type="checkbox"/> Other (Federal)	<input type="checkbox"/> RSTP	<input type="checkbox"/> Other:	<input type="checkbox"/> Rail Preservation Fund

Permits and approvals likely needed:

☒ NEPA ☐ IJR/IMR ☐ Class 1 RR ☐ City/County ☐ Other:

Implementation Next Steps:

- 1.) Complete preliminary engineering and right-of-way acquisition (as necessary)
- 2.) Begin construction phase

Solution Summary

Solution Reference #: H3.1

Need Description: Improve ability to bring larger/oversized cargo to RMT via truck.

Solution Description: Construct 0.7 mile Deepwater Terminal Road extension to Goodes Street.

Local Jurisdiction: City of Richmond

Timeline: ☒ Short-Term ☐ Medium-Term ☐ Long-Term

Project Champion(s): City of Richmond and Port of Virginia

Solution Features

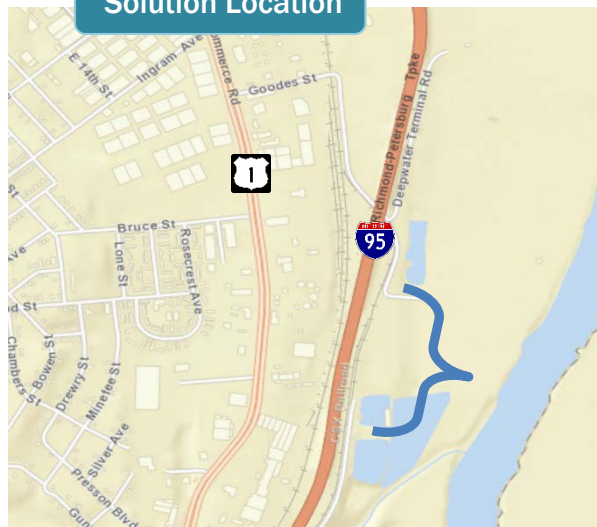
Mode: ☒ Highway ☐ Rail ☐ Port-Oriented
☐ Other:

Type of Asset: ☒ Public ☐ Private ☐ Both

ROW Required: ☐ No ☒ Yes ☐ Unknown

Detailed Description: Construct 0.7 mile Deepwater Terminal Road extension to Goodes Street. UPC #104882 & UPC #104281

Solution Location



Funding Information and Project Development Details

Estimated Cost (2017 dollars): \$4,500,000 **Funding Status:** ☐ Funded ☒ Partial Funding ☐ Unfunded

Adopted in: ☒ VDOT Six-Year Program ☒ plan2040 Fiscally-Constrained ☐ plan2040 Vision

Potential Funding Sources:

<input type="checkbox"/> TIGER	<input checked="" type="checkbox"/> Local	<input checked="" type="checkbox"/> Smart Scale	<input type="checkbox"/> Rail Industrial Access Fund
<input type="checkbox"/> FASTLANE	<input type="checkbox"/> CMAQ	<input type="checkbox"/> HSIP	<input type="checkbox"/> Rail Enhancement Fund
<input type="checkbox"/> Other (Federal)	<input checked="" type="checkbox"/> RSTP	<input checked="" type="checkbox"/> Other: REVSHARE	<input type="checkbox"/> Rail Preservation Fund

Permits and approvals likely needed:

☐ NEPA ☐ IJR/IMR ☐ Class 1 RR ☒ City/County ☐ Other:

Implementation Next Steps:

- 1.) Secure funding to close funding gap
- 2.) Finalize preliminary engineering and right-of-way acquisition (as necessary)
- 2.) Begin construction phase

Solution Summary

Solution Reference #: H3.2

Need Description: Improve ability to bring larger/oversized cargo to RMT via truck.

Solution Description: Improve clearance of two I-95 underpasses between Commerce Road and Deepwater Terminal Road.

Local Jurisdiction: City of Richmond

Timeline: ☐ Short-Term ☐ Medium-Term ☒ Long-Term

Project Champion: TBD

Solution Features

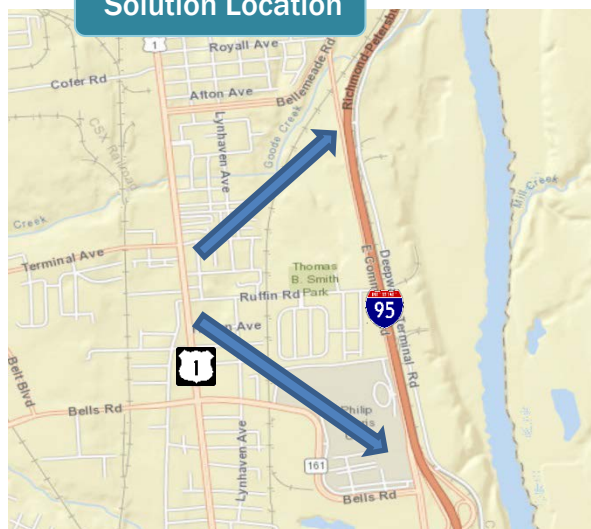
Mode: ☒ Highway ☐ Rail ☐ Port-Oriented
☐ Other:

Type of Asset: ☒ Public ☐ Private ☐ Both

ROW Required: ☐ No ☐ Yes ☒ Unknown

Detailed Description: Increase horizontal and vertical clearance at two I-95 underpass locations that connect Commerce Road to Deepwater Terminal Rd. Vertical (truck) clearance along both Bells Road Access Rd & Commerce Road Access are 14'1".

Solution Location



Funding Information and Project Development Details

Estimated Cost (2017 dollars): \$20,000,000 **Funding Status:** ☐ Funded ☐ Partial Funding ☒ Unfunded

Adopted in: ☐ VDOT Six-Year Program ☐ plan2040 Fiscally-Constrained ☐ plan2040 Vision

Potential Funding Sources:

<input type="checkbox"/> TIGER	<input type="checkbox"/> Local	<input checked="" type="checkbox"/> Smart Scale	<input type="checkbox"/> Rail Industrial Access Fund
<input type="checkbox"/> FASTLANE	<input type="checkbox"/> CMAQ	<input type="checkbox"/> HSIP	<input type="checkbox"/> Rail Enhancement Fund
<input checked="" type="checkbox"/> Other (Federal)	<input checked="" type="checkbox"/> RSTP	<input checked="" type="checkbox"/> Other: SGR	<input type="checkbox"/> Rail Preservation Fund

Permits and approvals likely needed:

☒ NEPA ☐ IJR/IMR ☐ Class 1 RR ☐ City/County ☐ Other:

Implementation Next Steps:

1.) Consider lower cost alternative solutions to vertical clearance issue:

- Construct funded Deepwater Terminal Rd extension to Goodes St. (Solution H3.1).
- Purchase 'low clearance' specialty drayage vehicles to shuttle oversized cargoes from/to RMT and locations west of I-95.

Solution Summary

Solution Reference #: H5.1

Need Description: Improve function and capacity of Commerce Road.

Solution Description: Reconstruct roadway to improve traffic operations.

Local Jurisdiction: City of Richmond

Timeline: ☒ Short-Term ☐ Medium-Term ☐ Long-Term

Project Champion: City of Richmond

Solution Features

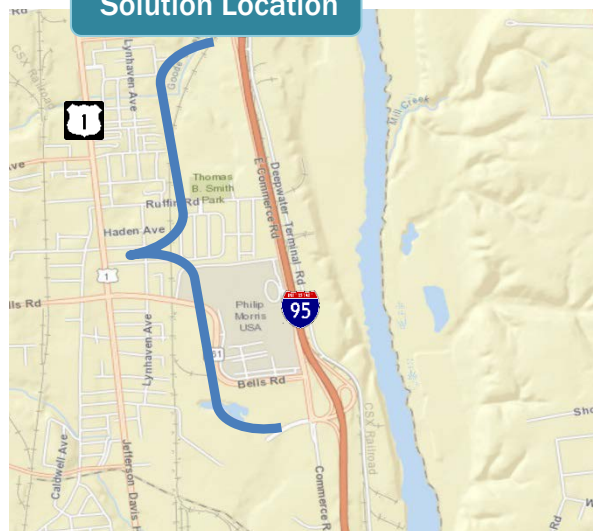
Mode: ☒ Highway ☐ Rail ☐ Port-Oriented
☒ Other: Multimodal/Workforce Access

Type of Asset: ☒ Public ☐ Private ☐ Both

ROW Required: ☐ No ☒ Yes ☐ Unknown

Detailed Description: Reconstruct roadway including protected turn lanes, improved entrance curb radii for industrial traffic, bicycle & pedestrian facilities, corridor-wide access management, and a bridge replacement - UPC #15958. Additionally, pavement rehabilitation or resurfacing of Bells Road Access Road, Deepwater Terminal Road, and Commerce Road Access.

Solution Location



Funding Information and Project Development Details

Estimated Cost (2017 dollars): \$15,899,000 **Funding Status:** ☒ Funded ☐ Partial Funding ☐ Unfunded

Adopted in: ☒ VDOT Six-Year Program ☒ plan2040 Fiscally-Constrained ☐ plan2040 Vision

Potential Funding Sources: *N/A – Fully Funded*

<input type="checkbox"/> TIGER	<input type="checkbox"/> Local	<input type="checkbox"/> Smart Scale	<input type="checkbox"/> Rail Industrial Access Fund
<input type="checkbox"/> FASTLANE	<input type="checkbox"/> CMAQ	<input type="checkbox"/> HSIP	<input type="checkbox"/> Rail Enhancement Fund
<input type="checkbox"/> Other (Federal)	<input type="checkbox"/> RSTP	<input type="checkbox"/> Other:	<input type="checkbox"/> Rail Preservation Fund

Permits and approvals likely needed:

☐ NEPA ☐ IJR/IMR ☐ Class 1 RR ☐ City/County ☐ Other:

Implementation Next Steps:

- 1.) Finalize preliminary engineering and right-of-way acquisition (as necessary)
- 2.) Begin construction phase

Solution Summary

Solution Reference #: H5.2

Need Description: Improve function and capacity of Commerce Road.

Solution Description: Additional Commerce Road area improvements (beyond H5.1).

Local Jurisdiction: City of Richmond

Timeline: ☒ Short-Term ☐ Medium-Term ☐ Long-Term

Project Champion: City of Richmond

Solution Features

Mode: ☒ Highway ☐ Rail ☐ Port-Oriented
☒ Other: Multimodal/Workforce Access

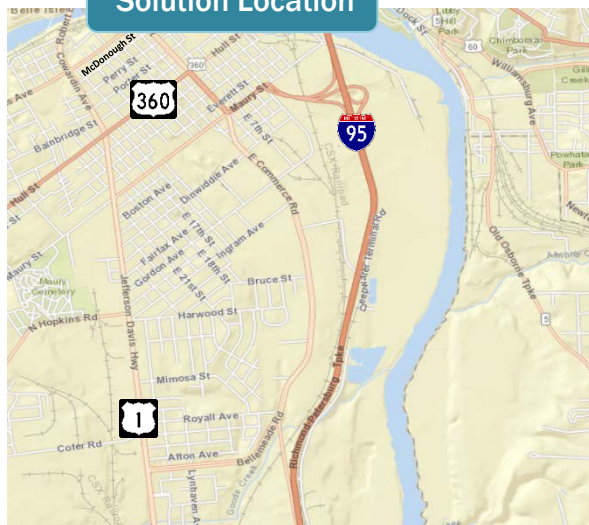
Type of Asset: ☒ Public ☐ Private ☐ Both

ROW Required: ☒ No ☐ Yes ☐ Unknown

Detailed Description: Additional improvements to the operations and multimodal safety along Commerce Road include:

- Operational Enhancements at Hull St intersection (\$1.2M)
- Ped safety curb extensions between McDonough St. & Hull St. (\$0.4M)
- Signal enhancements between Route 1 and Bainbridge Street (\$1M)

Solution Location



Funding Information and Project Development Details

Estimated Cost (2017 dollars): \$2,600,000 **Funding Status:** ☐ Funded ☐ Partial Funding ☒ Unfunded

Adopted in: ☐ VDOT Six-Year Program ☐ plan2040 Fiscally-Constrained ☐ plan2040 Vision

Potential Funding Sources:

- | | | | |
|---|---|---|--|
| <input type="checkbox"/> TIGER | <input checked="" type="checkbox"/> Local | <input checked="" type="checkbox"/> Smart Scale | <input type="checkbox"/> Rail Industrial Access Fund |
| <input type="checkbox"/> FASTLANE | <input checked="" type="checkbox"/> CMAQ | <input checked="" type="checkbox"/> HSIP | <input type="checkbox"/> Rail Enhancement Fund |
| <input checked="" type="checkbox"/> Other (Federal) | <input checked="" type="checkbox"/> RSTP | <input type="checkbox"/> Other: | <input type="checkbox"/> Rail Preservation Fund |

Permits and approvals likely needed:

- ☐ NEPA ☐ IJR/IMR ☐ Class 1 RR ☒ City/County ☐ Other:

Implementation Next Steps:

- Secure funding to advance project implementation:
 - Apply for competitive grant programs, including FY 2019 Smart Scale funding cycle

Solution Summary

Solution Reference #: H6.1

Need Description: Maintain and enhance I-95 mainline capacity.

Solution Description: Conduct operational study of I-95 from Willis Road to James River Bridge.

Local Jurisdiction: City of Richmond, Chesterfield County

Timeline: ☒ Short-Term ☐ Medium-Term ☐ Long-Term

Project Champion(s): VDOT and Richmond Regional TPO

Solution Features

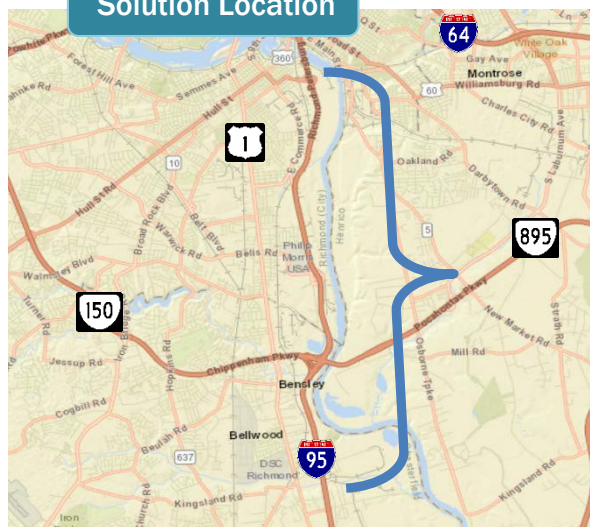
Mode: ☐ Highway ☐ Rail ☐ Port-Oriented
☒ Other: Study

Type of Asset: ☒ Public ☐ Private ☐ Both

ROW Required: ☐ No ☐ Yes ☒ Unknown

Detailed Description: Conduct operational study of I-95 from Willis Road (Exit 64) to James River Bridge to identify improvements that are needed beyond those identified for Need H2. Such solutions can include physical improvements as well as strategies to help divert thru traffic to parallel facilities (I-295) to preserve existing I-95 capacity.

Solution Location



Funding Information and Project Development Details

Estimated Cost (2017 dollars): \$250,000 **Funding Status:** ☐ Funded ☐ Partial Funding ☒ Unfunded

Adopted in: ☐ VDOT Six-Year Program ☐ plan2040 Fiscally-Constrained ☐ plan2040 Vision

Potential Funding Sources:

- | | | | |
|--|--|--|--|
| <input type="checkbox"/> TIGER | <input type="checkbox"/> Local | <input type="checkbox"/> Smart Scale | <input type="checkbox"/> Rail Industrial Access Fund |
| <input type="checkbox"/> FASTLANE | <input type="checkbox"/> CMAQ | <input type="checkbox"/> HSIP | <input type="checkbox"/> Rail Enhancement Fund |
| <input type="checkbox"/> Other (Federal) | <input checked="" type="checkbox"/> RSTP | <input checked="" type="checkbox"/> Other: SPR | <input type="checkbox"/> Rail Preservation Fund |

Permits and approvals likely needed:

- | | | | | |
|-------------------------------|----------------------------------|-------------------------------------|--------------------------------------|---|
| <input type="checkbox"/> NEPA | <input type="checkbox"/> IJR/IMR | <input type="checkbox"/> Class 1 RR | <input type="checkbox"/> City/County | <input checked="" type="checkbox"/> Other: VDOT |
|-------------------------------|----------------------------------|-------------------------------------|--------------------------------------|---|

Implementation Next Steps:

- 1.) Secure funding to conduct operational study of I-95

Solution Summary

Solution Reference #: H6.2

Need Description: Maintain and enhance I-95 mainline capacity.

Solution Description: Implement ITS solutions along I-95.

Local Jurisdiction: City of Richmond, Chesterfield County

Timeline: ☒ Short-Term ☐ Medium-Term ☐ Long-Term

Project Champion: VDOT

Solution Features

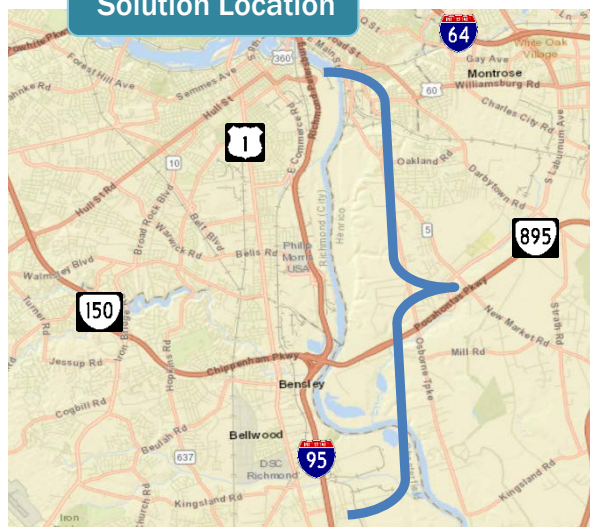
Mode: ☒ Highway ☐ Rail ☐ Port-Oriented
☐ Other:

Type of Asset: ☒ Public ☐ Private ☐ Both

ROW Required: ☐ No ☐ Yes ☒ Unknown

Detailed Description: Implement ITS solutions including cameras and variable message signs along I-95 to improve operations, congestion mitigation and incident management. This is a fully funded project in the VDOT FY 17-22 Six-year Improvement Program at a total cost of \$1.65 million. UPC #107772

Solution Location



Funding Information and Project Development Details

Estimated Cost (2017 dollars): \$1,650,000 **Funding Status:** ☒ Funded ☐ Partial Funding ☐ Unfunded

Adopted in: ☒ VDOT Six-Year Program ☐ plan2040 Fiscally-Constrained ☐ plan2040 Vision

Potential Funding Sources: *N/A – Fully Funded*

- | | | | |
|--|--------------------------------|--------------------------------------|--|
| <input type="checkbox"/> TIGER | <input type="checkbox"/> Local | <input type="checkbox"/> Smart Scale | <input type="checkbox"/> Rail Industrial Access Fund |
| <input type="checkbox"/> FASTLANE | <input type="checkbox"/> CMAQ | <input type="checkbox"/> HSIP | <input type="checkbox"/> Rail Enhancement Fund |
| <input type="checkbox"/> Other (Federal) | <input type="checkbox"/> RSTP | <input type="checkbox"/> Other: | <input type="checkbox"/> Rail Preservation Fund |

Permits and approvals likely needed:

☐ NEPA ☐ IJR/IMR ☐ Class 1 RR ☐ City/County ☐ Other:

Implementation Next Steps:

- 1.) Complete implementation of ITS solutions project

Solution Summary

Solution Reference #: H6.3

Need Description: Maintain and enhance I-95 mainline capacity.

Solution Description: Widen I-95 between Willis Road (Exit 64) and Route 288 (Exit 62).

Local Jurisdiction: Chesterfield County

Timeline: ☐ Short-Term ☐ Medium-Term ☒ Long-Term

Project Champion(s): Richmond Regional TPO in coordination with VDOT

Solution Features

Mode: ☒ Highway ☐ Rail ☐ Port-Oriented
☐ Other:

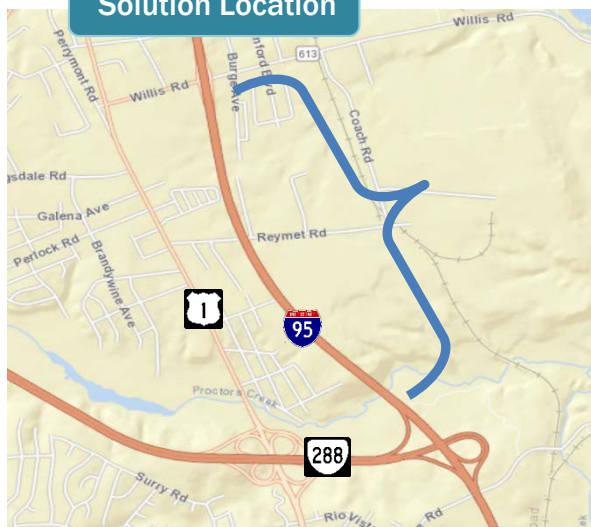
Type of Asset: ☒ Public ☐ Private ☐ Both

ROW Required: ☐ No ☐ Yes ☒ Unknown

Detailed Description: Widen I-95 between Willis Road (Exit 64) and Route 288 (Exit 62).

Improvements include an additional general purpose lane in each direction. Paired with fully funded solution H2.6, the result will be a continuous 4th general purpose lane between Willis Road and Route 10.

Solution Location



Funding Information and Project Development Details

Estimated Cost (2017 dollars): \$14,000,000 **Funding Status:** ☐ Funded ☐ Partial Funding ☒ Unfunded

Adopted in: ☐ VDOT Six-Year Program ☐ plan2040 Fiscally-Constrained ☐ plan2040 Vision

Potential Funding Sources:

<input type="checkbox"/> TIGER	<input type="checkbox"/> Local	<input checked="" type="checkbox"/> Smart Scale	<input type="checkbox"/> Rail Industrial Access Fund
<input checked="" type="checkbox"/> FASTLANE	<input type="checkbox"/> CMAQ	<input type="checkbox"/> HSIP	<input type="checkbox"/> Rail Enhancement Fund
<input checked="" type="checkbox"/> Other (Federal)	<input checked="" type="checkbox"/> RSTP	<input type="checkbox"/> Other:	<input type="checkbox"/> Rail Preservation Fund

Permits and approvals likely needed:

☒ NEPA ☐ IJR/IMR ☐ Class 1 RR ☐ City/County ☐ Other:

Implementation Next Steps:

- 1.) Determine if additional study is required prior to grant application funding requests
- 2.) Secure funding to advance project implementation:
 - a.) Apply for competitive grant programs, including FY 2019 Smart Scale funding cycle
 - b.) Consider bundling with other projects in corridor for future FASTLANE funding application

Solution Summary

Solution Reference #: H7.1

Need Description: Improve truck / auto capacity into and out of Site 1 (Altria / DuPont)

Solution Description: Conduct traffic study for Site 1 (Altria / DuPont)

Local Jurisdiction: City of Richmond

Timeline: ☐ Short-Term ☒ Medium-Term ☐ Long-Term

Project Champion: Private Developer with review by the City of Richmond

Solution Features

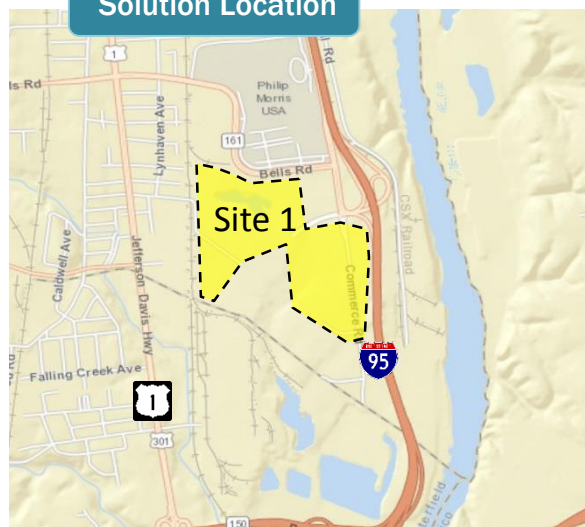
Mode: ☐ Highway ☐ Rail ☐ Port-Oriented
☒ Other: Study

Type of Asset: ☒ Public ☐ Private ☐ Both

ROW Required: ☒ No ☐ Yes ☐ Unknown

Detailed Description: Upon specific redevelopment details at Site 1 (Altria / DuPont), perform necessary traffic study to determine what improvements are needed beyond that included in solution H5. This includes function of Bells Road Access Rd.

Solution Location



Funding Information and Project Development Details

Estimated Cost (2017 dollars): \$50,000 **Funding Status:** ☐ Funded ☐ Partial Funding ☒ Unfunded

Adopted in: ☐ VDOT Six-Year Program ☐ plan2040 Fiscally-Constrained ☐ plan2040 Vision

Potential Funding Sources:

☐ TIGER ☒ Local ☐ Smart Scale ☐ Rail Industrial Access Fund
☐ FASTLANE ☐ CMAQ ☐ HSIP ☐ Rail Enhancement Fund
☐ Other (Federal) ☐ RSTP ☒ Other: Private ☐ Rail Preservation Fund

Permits and approvals likely needed:

☐ NEPA ☐ IJR/IMR ☐ Class 1 RR ☒ City/County ☐ Other:

Implementation Next Steps:

- 1.) Continue outreach and partnership with property owners to facilitate future site redevelopment
- 2.) Secure funding to perform a traffic study for Site 1 (Altria / DuPont) upon development proposal

Solution Summary

Solution Reference #: H7.2

Need Description: Improve truck / auto capacity into and out of Site 1 (Altria / DuPont)

Solution Description: Construct missing link of Walmsley Boulevard.

Local Jurisdiction: City of Richmond

Timeline: ☐ Short-Term ☒ Medium-Term ☐ Long-Term

Project Champion: City of Richmond

Solution Features

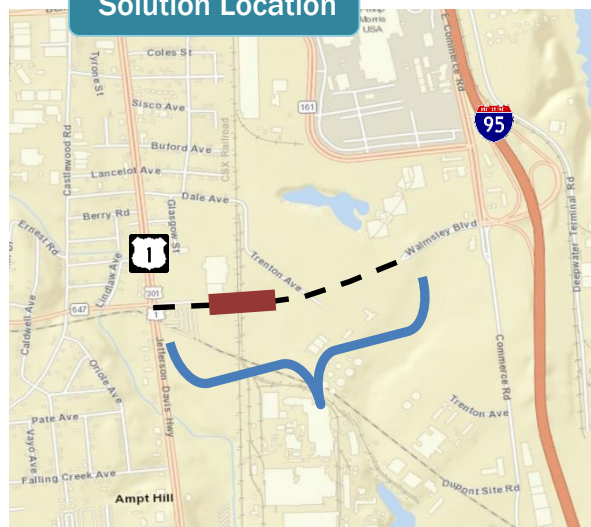
Mode: ☒ Highway ☐ Rail ☐ Port-Oriented
☐ Other:

Type of Asset: ☒ Public ☐ Private ☐ Both

ROW Required: ☐ No ☒ Yes ☐ Unknown

Detailed Description: Construct missing link of Walmsley Boulevard with grade separated crossing of CSX Bellwood Subdivision Line.

Solution Location



Funding Information and Project Development Details

Estimated Cost (2017 dollars): \$12,628,000 **Funding Status:** ☐ Funded ☐ Partial Funding ☒ Unfunded

Adopted in: ☐ VDOT Six-Year Program ☐ plan2040 Fiscally-Constrained ☐ plan2040 Vision

Potential Funding Sources:

<input type="checkbox"/> TIGER	<input checked="" type="checkbox"/> Local	<input checked="" type="checkbox"/> Smart Scale	<input type="checkbox"/> Rail Industrial Access Fund
<input type="checkbox"/> FASTLANE	<input type="checkbox"/> CMAQ	<input type="checkbox"/> HSIP	<input type="checkbox"/> Rail Enhancement Fund
<input type="checkbox"/> Other (Federal)	<input checked="" type="checkbox"/> RSTP	<input checked="" type="checkbox"/> Other: Private	<input type="checkbox"/> Rail Preservation Fund

Permits and approvals likely needed:

☒ NEPA ☐ IJR/IMR ☒ Class 1 RR ☒ City/County ☐ Other:

Implementation Next Steps:

1.) Secure funding for feasibility study/30% design/preliminary engineering – explore partnership with private sector

Solution Summary

Solution Reference #: H8

Need Description: Improve truck / auto capacity into and out of Site 2 (Alleghany Warehouse)

Solution Description: Perform traffic study for Site 2 (Alleghany Warehouse).

Local Jurisdiction: City of Richmond

Timeline: ☐ Short-Term ☒ Medium-Term ☐ Long-Term

Project Champion: Private Developer with review by the City of Richmond

Solution Features

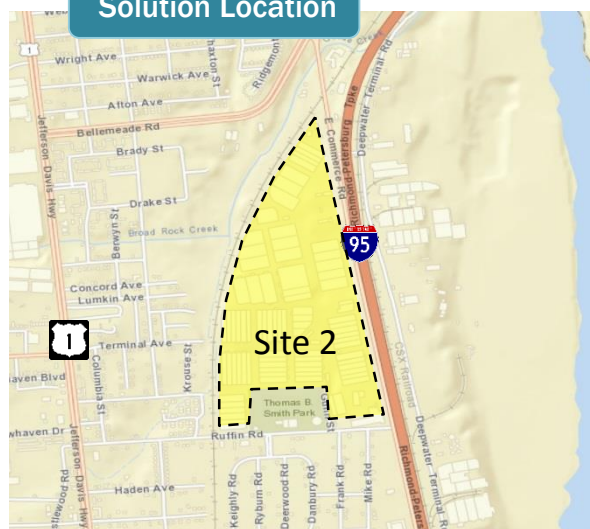
Mode: ☐ Highway ☐ Rail ☐ Port-Oriented
☒ Other: Study

Type of Asset: ☒ Public ☐ Private ☐ Both

ROW Required: ☒ No ☐ Yes ☐ Unknown

Detailed Description: Upon specific redevelopment details at Site 2, perform necessary traffic study to determine what improvements are needed beyond that included in solution H5. This includes function of Commerce Access Rd.

Solution Location



Funding Information and Project Development Details

Estimated Cost (2017 dollars): \$50,000 **Funding Status:** ☐ Funded ☐ Partial Funding ☒ Unfunded

Adopted in: ☐ VDOT Six-Year Program ☐ plan2040 Fiscally-Constrained ☐ plan2040 Vision

Potential Funding Sources:

<input type="checkbox"/> TIGER	<input checked="" type="checkbox"/> Local	<input type="checkbox"/> Smart Scale	<input type="checkbox"/> Rail Industrial Access Fund
<input type="checkbox"/> FASTLANE	<input type="checkbox"/> CMAQ	<input type="checkbox"/> HSIP	<input type="checkbox"/> Rail Enhancement Fund
<input type="checkbox"/> Other (Federal)	<input type="checkbox"/> RSTP	<input checked="" type="checkbox"/> Other: Private	<input type="checkbox"/> Rail Preservation Fund

Permits and approvals likely needed:

☐ NEPA ☐ IJR/IMR ☐ Class 1 RR ☒ City/County ☐ Other:

Implementation Next Steps:

- 1.) Continue outreach and partnership with property owners to facilitate future site redevelopment
- 2.) Secure funding to perform a traffic study for Site 2 (Alleghany) upon development proposal

Solution Summary

Solution Reference #: H9.1

Need Description: Improve truck / auto capacity into and out of Site 3 (RIC / White Oak area)

Solution Description: Perform traffic study of roadways near Site 3 (RIC/White Oak).

Local Jurisdiction: Henrico County

Timeline: ☒ Short-Term ☐ Medium-Term ☐ Long-Term

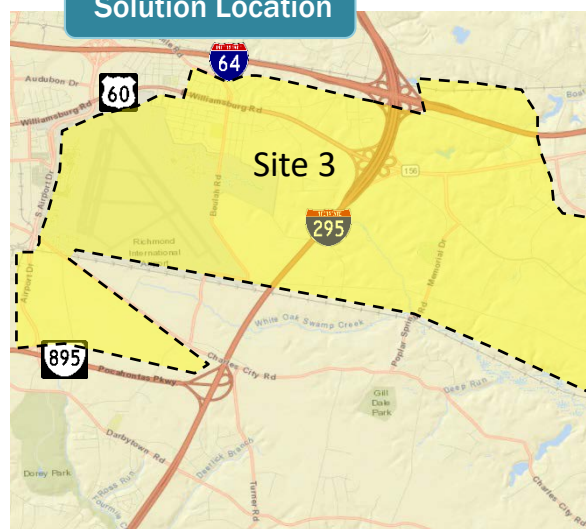
Project Champion: Henrico County

Solution Features

Mode: ☐ Highway ☐ Rail ☐ Port-Oriented
☒ Other: StudyType of Asset: ☒ Public ☐ Private ☐ BothROW Required: ☒ No ☐ Yes ☐ Unknown

Detailed Description: Perform traffic study of the following roadways near the site: East Williamsburg Road, Technology Boulevard, Elko Road, and Airport Drive.

Solution Location



Funding Information and Project Development Details

Estimated Cost (2017 dollars): \$100,000 Funding Status: ☐ Funded ☐ Partial Funding ☒ UnfundedAdopted in: ☐ VDOT Six-Year Program ☐ plan2040 Fiscally-Constrained ☐ plan2040 Vision

Potential Funding Sources:

<input type="checkbox"/> TIGER	<input checked="" type="checkbox"/> Local	<input type="checkbox"/> Smart Scale	<input type="checkbox"/> Rail Industrial Access Fund
<input type="checkbox"/> FASTLANE	<input type="checkbox"/> CMAQ	<input type="checkbox"/> HSIP	<input type="checkbox"/> Rail Enhancement Fund
<input type="checkbox"/> Other (Federal)	<input type="checkbox"/> RSTP	<input checked="" type="checkbox"/> Other: Private	<input type="checkbox"/> Rail Preservation Fund

Permits and approvals likely needed:

☐ NEPA ☐ IJR/IMR ☐ Class 1 RR ☒ City/County ☐ Other:

Implementation Next Steps:

1.) Secure funding to perform traffic impact study

Solution Summary

Solution Reference #: H9.2

Need Description: Improve truck / auto capacity into and out of Site 3 (RIC / White Oak area)

Solution Description: Perform traffic study of I-295 and 4 nearby interchanges.

Local Jurisdiction: Henrico County

Timeline: ☐ Short-Term ☒ Medium-Term ☐ Long-Term

Project Champion(s): Henrico County, Richmond Regional TPO and VDOT

Solution Features

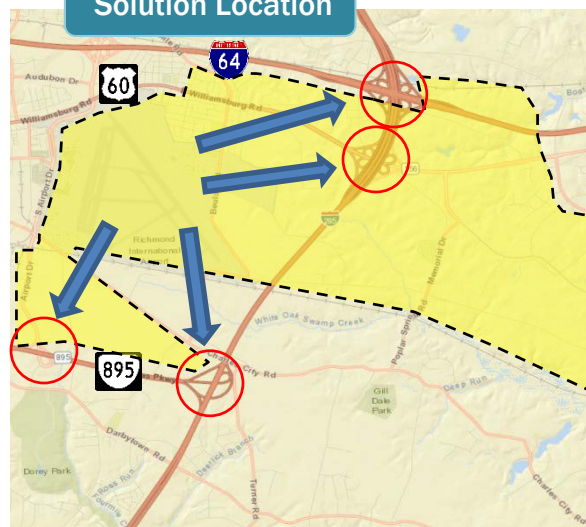
Mode: ☐ Highway ☐ Rail ☐ Port-Oriented
☒ Other: Study

Type of Asset: ☒ Public ☐ Private ☐ Both

ROW Required: ☒ No ☐ Yes ☐ Unknown

Detailed Description: Upon specific industrial development details at Site 3, perform traffic study of the I-295 facility and four nearby interchanges in close proximity to the RIC/White Oak area.

Solution Location



Funding Information and Project Development Details

Estimated Cost (2017 dollars): \$500,000 **Funding Status:** ☐ Funded ☐ Partial Funding ☒ Unfunded

Adopted in: ☐ VDOT Six-Year Program ☐ plan2040 Fiscally-Constrained ☐ plan2040 Vision

Potential Funding Sources:

<input type="checkbox"/> TIGER	<input checked="" type="checkbox"/> Local	<input type="checkbox"/> Smart Scale	<input type="checkbox"/> Rail Industrial Access Fund
<input type="checkbox"/> FASTLANE	<input type="checkbox"/> CMAQ	<input type="checkbox"/> HSIP	<input type="checkbox"/> Rail Enhancement Fund
<input type="checkbox"/> Other (Federal)	<input type="checkbox"/> RSTP	<input checked="" type="checkbox"/> Other: SPR	<input type="checkbox"/> Rail Preservation Fund

Permits and approvals likely needed:

☐ NEPA ☐ IJR/IMR ☐ Class 1 RR ☐ City/County ☐ Other:

Implementation Next Steps:

- 1.) Continue pursuit of development prospects for the RIC/White Oak area
- 2.) Secure funding to perform traffic impact study upon specific and significant development proposals

Solution Summary

Solution Reference #: H10.1

Need Description: Improve truck / auto capacity into and out of Site 4 (Meadowville area)

Solution Description: Improve Route 10 from Bermuda Triangle Rd. through Meadowville Rd/Old Bermuda Hundred Rd.

Local Jurisdiction: Chesterfield County

Timeline: ☒ Short-Term ☐ Medium-Term ☐ Long-Term

Project Champion: Chesterfield County

Solution Features

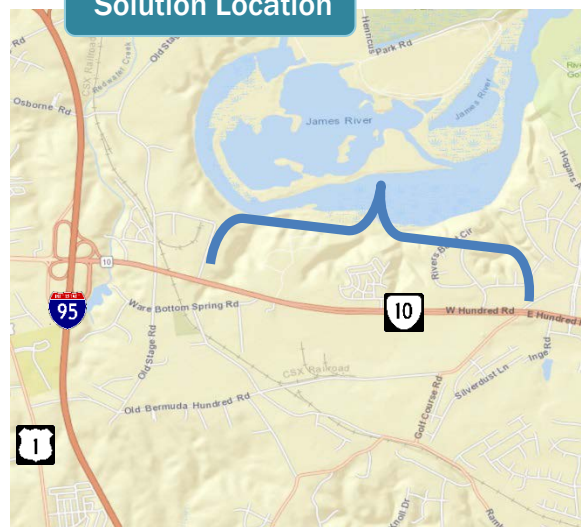
Mode: ☒ Highway ☐ Rail ☐ Port-Oriented
☐ Other:

Type of Asset: ☒ Public ☐ Private ☐ Both

ROW Required: ☐ No ☒ Yes ☐ Unknown

Detailed Description: Construct project to improve safety & operations along Route 10 from Bermuda Triangle Road through Meadowville Road / Old Bermuda Hundred Road. Project UPC #101020 is fully funded in the VDOT SYIP and scheduled for completion in FY 2019.

Solution Location



Funding Information and Project Development Details

Estimated Cost (2017 dollars): \$48,539,000 **Funding Status:** ☒ Funded ☐ Partial Funding ☐ Unfunded

Adopted in: ☒ VDOT Six-Year Program ☒ plan2040 Fiscally-Constrained ☐ plan2040 Vision

Potential Funding Sources: *N/A – Fully Funded*

<input type="checkbox"/> TIGER	<input type="checkbox"/> Local	<input type="checkbox"/> Smart Scale	<input type="checkbox"/> Rail Industrial Access Fund
<input type="checkbox"/> FASTLANE	<input type="checkbox"/> CMAQ	<input type="checkbox"/> HSIP	<input type="checkbox"/> Rail Enhancement Fund
<input type="checkbox"/> Other (Federal)	<input type="checkbox"/> RSTP	<input type="checkbox"/> Other:	<input type="checkbox"/> Rail Preservation Fund

Permits and approvals likely needed:

☒ NEPA ☐ IJR/IMR ☐ Class 1 RR ☒ City/County ☐ Other:

Implementation Next Steps:

- 1.) Preliminary engineering (complete) and right-of-way acquisition (underway)
- 2.) Begin construction phase

Solution Summary

Solution Reference #: H10.2

Need Description: Improve truck / auto capacity into and out of Site 4 (Meadowville area)

Solution Description: Widen Meadowville Technology Parkway to four lanes at the interchange of I-295 to include the construction of a new bridge over I-295.

Local Jurisdiction: Chesterfield County

Timeline: ☒ Short-Term ☐ Medium-Term ☐ Long-Term

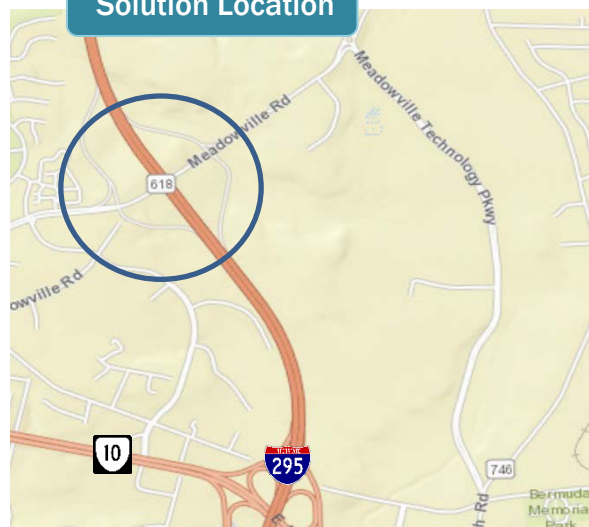
Project Champion: Chesterfield County

Solution Features

Mode: ☒ Highway ☐ Rail ☐ Port-Oriented
☐ Other:Type of Asset: ☒ Public ☐ Private ☐ BothROW Required: ☐ No ☒ Yes ☐ Unknown

Detailed Description: Widen Meadowville Technology Parkway to four lanes at the interchange of I-295 to include the construction of a new bridge over I-295. Sidewalk will be built on a portion of the project.

Solution Location



Funding Information and Project Development Details

Estimated Cost (2017 dollars): \$18,477,000 Funding Status: ☐ Funded ☐ Partial Funding ☒ UnfundedAdopted in: ☐ VDOT Six-Year Program ☒ plan2040 Fiscally-Constrained ☐ plan2040 Vision

Potential Funding Sources:

<input type="checkbox"/> TIGER	<input type="checkbox"/> Local	<input checked="" type="checkbox"/> Smart Scale	<input type="checkbox"/> Rail Industrial Access Fund
<input type="checkbox"/> FASTLANE	<input type="checkbox"/> CMAQ	<input type="checkbox"/> HSIP	<input type="checkbox"/> Rail Enhancement Fund
<input type="checkbox"/> Other (Federal)	<input checked="" type="checkbox"/> RSTP	<input type="checkbox"/> Other:	<input type="checkbox"/> Rail Preservation Fund

Permits and approvals likely needed:

☒ NEPA ☐ IJR/IMR ☐ Class 1 RR ☒ City/County ☐ Other:

Implementation Next Steps:

- 1.) Determine if update to existing IMR is required prior to grant application funding requests
- 2.) Secure funding to advance project implementation:
 - a.) Apply for competitive grant programs, including FY 2019 Smart Scale funding cycle

Solution Summary

Solution Reference #: H10.3

Need Description: Improve truck / auto capacity into and out of Site 4 (Meadowville area)

Solution Description: Widen North Enon Church Road to four lanes from Meadowville Technology Parkway to Route 10 / East Hundred Road.

Local Jurisdiction: Chesterfield County

Timeline: ☒ Short-Term ☐ Medium-Term ☐ Long-Term

Project Champion: Chesterfield County

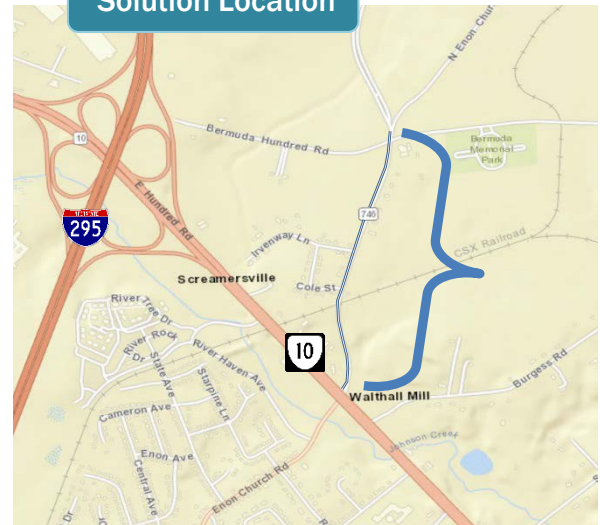
Solution Features

Mode: ☒ Highway ☐ Rail ☐ Port-Oriented
☐ Other:

Type of Asset: ☒ Public ☐ Private ☐ Both
ROW Required: ☐ No ☒ Yes ☐ Unknown

Detailed Description: Widen North Enon Church Road to four lanes from Meadowville Technology Parkway to Route 10 / East Hundred Road. Project is partially funded in VDOT SYIP, UPC #T20005.

Solution Location



Funding Information and Project Development Details

Estimated Cost (2017 dollars): \$12,305,000 **Funding Status:** ☐ Funded ☒ Partial Funding ☐ Unfunded

Adopted in: ☐ VDOT Six-Year Program ☒ plan2040 Fiscally-Constrained ☐ plan2040 Vision

Potential Funding Sources:

<input type="checkbox"/> TIGER	<input type="checkbox"/> Local	<input checked="" type="checkbox"/> Smart Scale	<input type="checkbox"/> Rail Industrial Access Fund
<input type="checkbox"/> FASTLANE	<input type="checkbox"/> CMAQ	<input type="checkbox"/> HSIP	<input type="checkbox"/> Rail Enhancement Fund
<input type="checkbox"/> Other (Federal)	<input checked="" type="checkbox"/> RSTP	<input type="checkbox"/> Other:	<input type="checkbox"/> Rail Preservation Fund

Permits and approvals likely needed:

☒ NEPA ☐ IJR/IMR ☐ Class 1 RR ☐ City/County ☐ Other:

Implementation Next Steps:

- 1.) Pursue additional resources to fully fund project
- 2.) Complete preliminary engineering and right-of-way acquisition (as necessary)
- 3.) Begin construction phase

Solution Summary

Solution Reference #: H10.4

Need Description: Improve truck / auto capacity into and out of Site 4 (Meadowville area)

Solution Description: Perform traffic study on Allied Rd, Meadowville Rd, and East Hundred Rd.

Local Jurisdiction: Chesterfield County

Timeline: ☐ Short-Term ☒ Medium-Term ☐ Long-Term

Project Champion: Chesterfield County

Solution Features

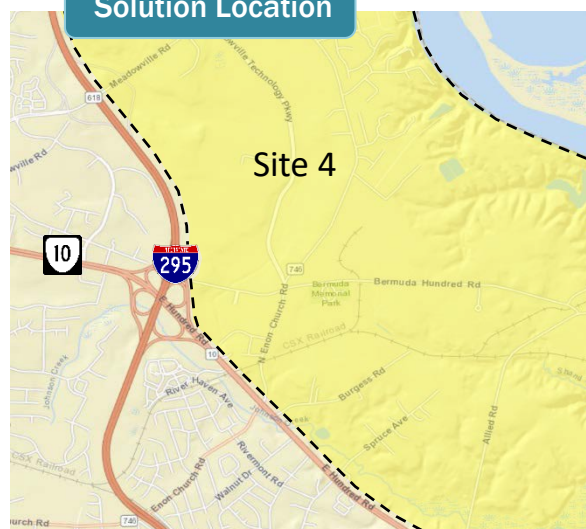
Mode: ☐ Highway ☐ Rail ☐ Port-Oriented
☒ Other: Study

Type of Asset: ☒ Public ☐ Private ☐ Both

ROW Required: ☒ No ☐ Yes ☐ Unknown

Detailed Description: Upon specific development details at Site 4, perform necessary traffic study to determine what area improvements are needed on roadways such as Allied Road, Meadowville Road, and East Hundred Road beyond that included in solution H10.1.

Solution Location



Funding Information and Project Development Details

Estimated Cost (2017 dollars): \$500,000 **Funding Status:** ☐ Funded ☐ Partial Funding ☒ Unfunded

Adopted in: ☐ VDOT Six-Year Program ☐ plan2040 Fiscally-Constrained ☐ plan2040 Vision

Potential Funding Sources:

☐ TIGER ☒ Local ☐ Smart Scale ☐ Rail Industrial Access Fund
☐ FASTLANE ☐ CMAQ ☐ HSIP ☐ Rail Enhancement Fund
☐ Other (Federal) ☐ RSTP ☒ Other: Private ☐ Rail Preservation Fund

Permits and approvals likely needed:

☐ NEPA ☐ IJR/IMR ☐ Class 1 RR ☒ City/County ☐ Other:

Implementation Next Steps:

- 1.) Continue pursuit of development prospects for the Meadowville Tech Park Area
- 2.) Require a traffic impact study be completed upon specific and significant development proposals

Solution Summary

Solution Reference #: H11

Need Description: Improve development potential of Site 1 (Altria / DuPont)

Solution Description: Relocate Commerce Rd. between Walmsley Blvd. and Trenton Ave.

Local Jurisdiction: City of Richmond

Timeline: ☐ Short-Term ☒ Medium-Term ☐ Long-Term

Project Champion: City of Richmond

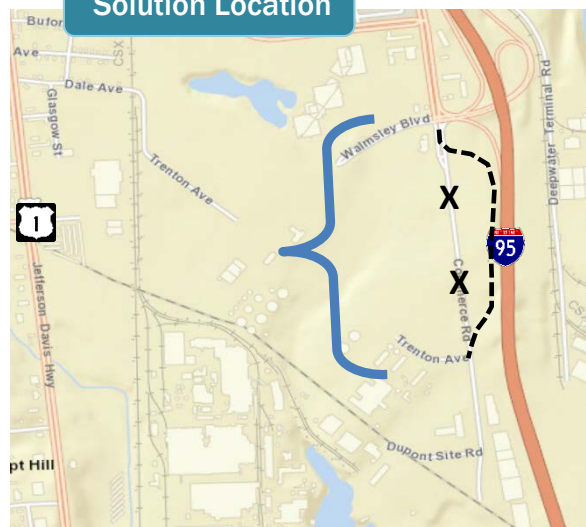
Solution Features

Mode: ☒ Highway ☐ Rail ☐ Port-Oriented
☐ Other:

Type of Asset: ☐ Public ☐ Private ☒ Both
ROW Required: ☐ No ☒ Yes ☐ Unknown

Detailed Description: Relocation of Commerce Road to be adjacent to I-95 between Walmsley Blvd and Trenton Avenue to allow for a larger contiguous land mass for development at Site 1.

Solution Location



Funding Information and Project Development Details

Estimated Cost (2017 dollars): \$2,592,000 **Funding Status:** ☐ Funded ☐ Partial Funding ☒ Unfunded

Adopted in: ☐ VDOT Six-Year Program ☐ plan2040 Fiscally-Constrained ☐ plan2040 Vision

Potential Funding Sources:

<input type="checkbox"/> TIGER	<input checked="" type="checkbox"/> Local	<input checked="" type="checkbox"/> Smart Scale	<input type="checkbox"/> Rail Industrial Access Fund
<input type="checkbox"/> FASTLANE	<input type="checkbox"/> CMAQ	<input type="checkbox"/> HSIP	<input type="checkbox"/> Rail Enhancement Fund
<input type="checkbox"/> Other (Federal)	<input checked="" type="checkbox"/> RSTP	<input checked="" type="checkbox"/> Other: Private	<input type="checkbox"/> Rail Preservation Fund

Permits and approvals likely needed:

☒ NEPA ☐ IJR/IMR ☐ Class 1 RR ☒ City/County ☐ Other:

Implementation Next Steps:

- 1.) Work with property owners to vet feasibility of concept, including receptiveness to land and right-of-way transactions necessary to advance project implementation
- 2.) Secure funding for 30% design/preliminary engineering – explore partnership with private sector

Solution Summary

Solution Reference #: R1.1

Need Description: Enhance cost-competitiveness of rail access to Richmond Marine Terminal.

Solution Description: Implement dual Class I rail access to RMT via short-line service.

Local Jurisdiction: City of Richmond

Timeline: ☐ Short-Term ☒ Medium-Term ☐ Long-Term

Project Champion(s): Port of Virginia

Solution Features

Mode: ☐ Highway ☒ Rail ☒ Port-Oriented
☐ Other:Type of Asset: ☒ Public ☐ Private ☐ BothROW Required: ☐ No ☐ Yes ☒ Unknown

Detailed Description: Implement dual Class I rail access to RMT via short-line service or other legal agreement(s). The rail lead between the RMT and CSX South Yard is owned by the City of Richmond, which grants operating rights via a service contract. The City is currently contracted with CSX to provide rail service, however, an alternative arrangement could be considered in the future.

Solution Location

SHORT
LINE

Funding Information and Project Development Details

Estimated Cost (2017 dollars): TBD

Funding Status: ☐ Funded ☐ Partial Funding ☒ UnfundedAdopted in: ☐ DRPT Six-Year Program ☐ plan2040 Fiscally-Constrained ☐ plan2040 Vision

Potential Funding Sources:

☐ TIGER☐ Local☐ Smart Scale☐ Rail Industrial Access Fund☐ FASTLANE☐ CMAQ☐ HSIP☐ Rail Enhancement Fund☐ Other (Federal)☐ RSTP☒ Other: Private☐ Rail Preservation Fund

Permits and approvals likely needed:

☐ NEPA☐ IJR/IMR☐ Class 1 RR☒ City/County☐ Other:

Implementation Next Steps:

- 1.) Work with potential short-line operators to vet feasibility of concept, including structure of operational agreements and engineering necessary to advance project implementation

Solution Summary

Solution Reference #: R1.2

Need Description: Enhance cost-competitiveness of rail access to Richmond Marine Terminal.

Solution Description: Extend Deepwater Terminal rail lead to industrial sites and connect to NS rail spur.

Local Jurisdiction: City of Richmond

Timeline: ☐ Short-Term ☒ Medium-Term ☐ Long-Term

Project Champion: TBD

Solution Features

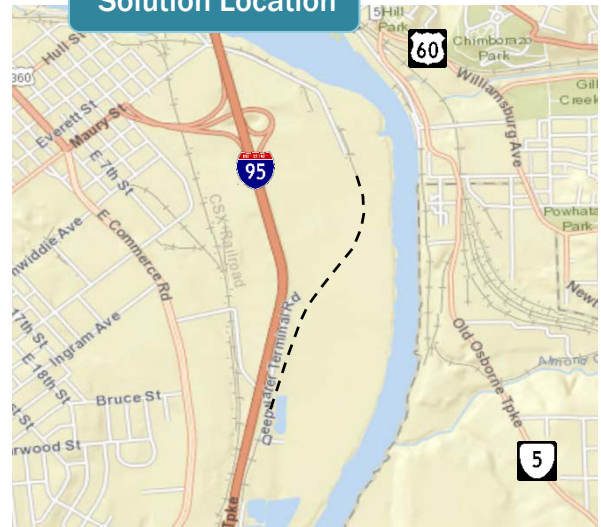
Mode: ☐ Highway ☒ Rail ☒ Port-Oriented
☐ Other:

Type of Asset: ☐ Public ☐ Private ☒ Both

ROW Required: ☐ No ☒ Yes ☐ Unknown

Detailed Description: Extend existing Deepwater Terminal rail lead north of current I-95 underpass connection to CSX South Yard to provide additional rail access to industrial sites as well as connect to the existing Norfolk Southern rail spur (Rocketts Spur) which terminates near the Richmond Wastewater Treatment Plant. Will require roughly 1-mile of new trackage.

Solution Location



Funding Information and Project Development Details

Estimated Cost (2017 dollars): \$1,950,000 **Funding Status:** ☐ Funded ☐ Partial Funding ☒ Unfunded

Adopted in: ☐ DRPT Six-Year Program ☐ plan2040 Fiscally-Constrained ☐ plan2040 Vision

Potential Funding Sources:

☒ TIGER ☐ Local ☒ Smart Scale ☐ Rail Industrial Access Fund
☒ FASTLANE ☒ CMAQ ☐ HSIP ☒ Rail Enhancement Fund
☐ Other (Federal) ☒ RSTP ☒ Other: Private ☐ Rail Preservation Fund

Permits and approvals likely needed:

☒ NEPA ☐ IJR/IMR ☒ Class 1 RR ☒ City/County ☐ Other:

Implementation Next Steps:

- 1.) Work with NS to vet feasibility of concept, including structure of operational agreements and engineering necessary to advance project implementation
- 2.) Identify project champion
- 3.) Secure funding for 30% design/preliminary engineering

Solution Summary

Solution Reference #: R2.1

Need Description: Improvements to Deepwater Terminal Industrial Track lead.

Solution Description: Improve existing Deepwater Terminal Industrial Track lead.

Local Jurisdiction: City of Richmond

Timeline: ☐ Short-Term ☐ Medium-Term ☒ Long-Term

Project Champion(s): Port of Virginia in coordination with the City of Richmond

Solution Features

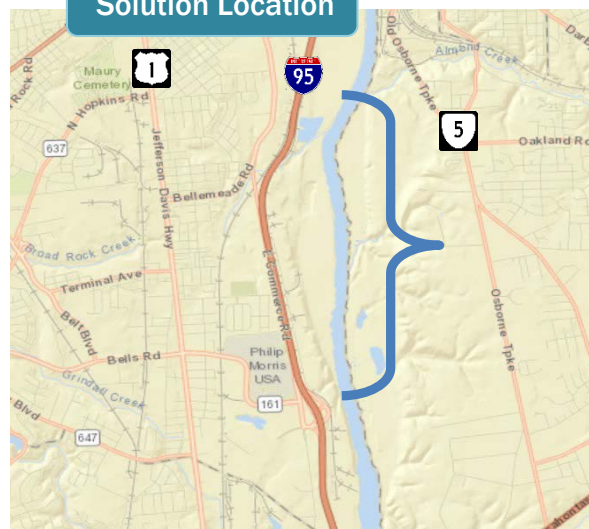
Mode: ☐ Highway ☒ Rail ☒ Port-Oriented
☐ Other:

Type of Asset: ☒ Public ☐ Private ☐ Both

ROW Required: ☐ No ☐ Yes ☒ Unknown

Detailed Description: Further improve physical condition and operational speed of existing Deepwater Terminal Industrial Track lead.

Solution Location



Funding Information and Project Development Details

Estimated Cost (2017 dollars): \$1,500,000 **Funding Status:** ☐ Funded ☐ Partial Funding ☒ Unfunded

Adopted in: ☐ DRPT Six-Year Program ☐ plan2040 Fiscally-Constrained ☐ plan2040 Vision

Potential Funding Sources:

<input type="checkbox"/> TIGER	<input checked="" type="checkbox"/> Local	<input checked="" type="checkbox"/> Smart Scale	<input type="checkbox"/> Rail Industrial Access Fund
<input type="checkbox"/> FASTLANE	<input type="checkbox"/> CMAQ	<input type="checkbox"/> HSIP	<input type="checkbox"/> Rail Enhancement Fund
<input type="checkbox"/> Other (Federal)	<input checked="" type="checkbox"/> RSTP	<input type="checkbox"/> Other:	<input checked="" type="checkbox"/> Rail Preservation Fund

Permits and approvals likely needed:

☐ NEPA ☐ IJR/IMR ☐ Class 1 RR ☒ City/County ☒ Other: Port of Virginia

Implementation Next Steps:

- 1.) Complete current POV-led capital improvement project to rehabilitate this segment of track
- 2.) Monitor and maintain physical condition of track as rail cargo volumes to RMT increase
- 3.) Secure funding for further improvements to physical condition and operational speed of track

Solution Summary

Solution Reference #: R2.2

Need Description: Improvements to Deepwater Terminal Industrial Track lead.

Solution Description: Extend existing or construct new siding along Deepwater Terminal Industrial Track approximately 1-mile north of RMT.

Local Jurisdiction: City of Richmond

Timeline: ☐ Short-Term ☒ Medium-Term ☐ Long-Term

Project Champion: Port of Virginia in coordination with the City of Richmond

Solution Features

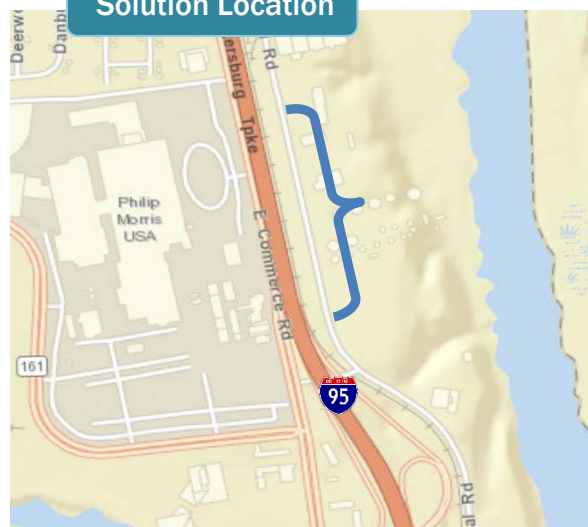
Mode: ☐ Highway ☒ Rail ☒ Port-Oriented
☐ Other:

Type of Asset: ☒ Public ☐ Private ☐ Both

ROW Required: ☐ No ☐ Yes ☒ Unknown

Detailed Description: Extend existing or construct new siding along Deepwater Terminal Industrial Track approximately 1-mile north of RMT in vicinity of Kinder Morgan / Motley's/ Sims Metal.

Solution Location



Funding Information and Project Development Details

Estimated Cost (2017 dollars): \$1,500,000 **Funding Status:** ☐ Funded ☐ Partial Funding ☒ Unfunded

Adopted in: ☐ DRPT Six-Year Program ☐ plan2040 Fiscally-Constrained ☐ plan2040 Vision

Potential Funding Sources:

☐ TIGER ☒ Local ☒ Smart Scale ☐ Rail Industrial Access Fund
☐ FASTLANE ☐ CMAQ ☐ HSIP ☒ Rail Enhancement Fund
☐ Other (Federal) ☒ RSTP ☐ Other: ☐ Rail Preservation Fund

Permits and approvals likely needed:

☐ NEPA ☐ IJR/IMR ☐ Class 1 RR ☒ City/County ☒ Other: Port of Virginia

Implementation Next Steps:

- 1.) Secure funding for 30% design/preliminary engineering
- 2.) Secure funding to advance project implementation:
 - a.) Apply for competitive grant programs, including FY 2019 Smart Scale funding cycle

Solution Summary

Solution Reference #: R3.1

Need Description: Improvements to CSX Bellwood Sub (S-Line)

Solution Description: Construct additional trackage along CSX Bellwood Sub (S-Line) and bridge over the James River.

Local Jurisdiction: City of Richmond, Chesterfield County

Timeline: ☐ Short-Term ☐ Medium-Term ☒ Long-Term

Project Champion(s): DRPT and Richmond Regional TPO

Solution Features

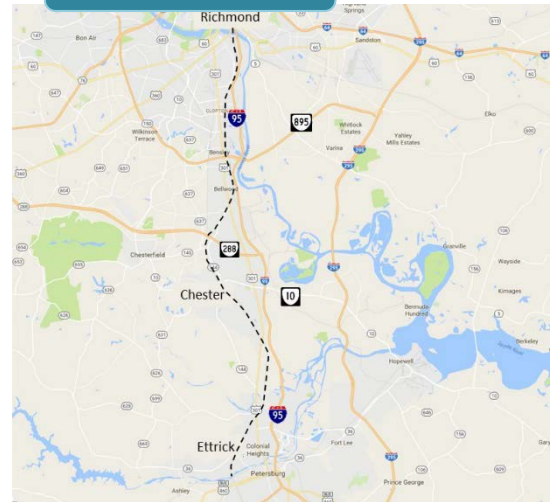
Mode: ☐ Highway ☒ Rail ☐ Port-Oriented
☐ Other:

Type of Asset: ☐ Public ☒ Private ☐ Both

ROW Required: ☐ No ☐ Yes ☒ Unknown

Detailed Description: Construct additional trackage along CSX Bellwood Sub (S-Line) and bridge over James River as contemplated in the Tier II EIS for Richmond-to-Raleigh High Speed Rail and DC2RVA High Speed Rail.

Solution Location



Funding Information and Project Development Details

Estimated Cost (2017 dollars): \$56,250,000 **Funding Status:** ☐ Funded ☐ Partial Funding ☒ Unfunded

Adopted in: ☐ DRPT Six-Year Program ☐ plan2040 Fiscally-Constrained ☐ plan2040 Vision

Potential Funding Sources:

<input checked="" type="checkbox"/> TIGER	<input type="checkbox"/> Local	<input checked="" type="checkbox"/> Smart Scale	<input type="checkbox"/> Rail Industrial Access Fund
<input checked="" type="checkbox"/> FASTLANE	<input checked="" type="checkbox"/> CMAQ	<input type="checkbox"/> HSIP	<input checked="" type="checkbox"/> Rail Enhancement Fund
<input checked="" type="checkbox"/> Other (Federal)	<input checked="" type="checkbox"/> RSTP	<input checked="" type="checkbox"/> Other: IPROC	<input type="checkbox"/> Rail Preservation Fund

Permits and approvals likely needed:

☒ NEPA ☐ IJR/IMR ☒ Class 1 RR ☐ City/County ☒ Other: FRA

Implementation Next Steps:

- 1.) Finalize DC2RVA Tier II EIS and Record of Decision
- 2.) Identify projects of independent utility and incremental improvements to compete for funding
- 3.) Consider amendment to RRTPO plan2040 Vision List to include DC2RVA rail projects as necessary
- 4.) Secure funding to advance project implementation

Solution Summary

Solution Reference #: R3.2

Need Description: Improvements to CSX Bellwood Sub (S-Line)

Solution Description: Construct capacity improvements to CSX South Yard.

Local Jurisdiction: City of Richmond

Timeline: ☐ Short-Term ☒ Medium-Term ☐ Long-Term

Project Champion: CSX

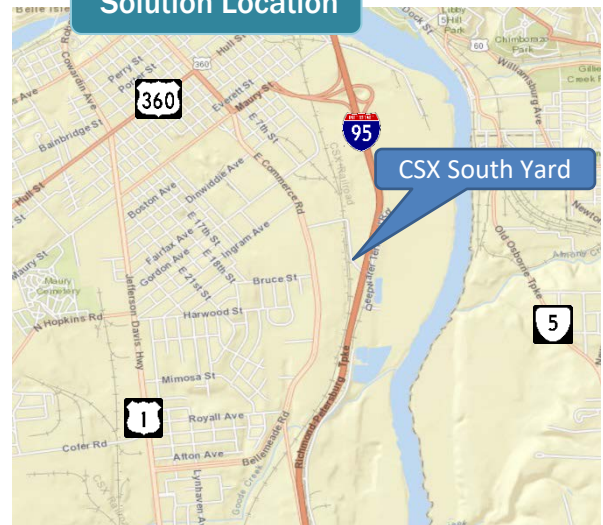
Solution Features

Mode: ☐ Highway ☒ Rail ☐ Port-Oriented
☐ Other:

Type of Asset: ☐ Public ☒ Private ☐ Both
ROW Required: ☐ No ☐ Yes ☒ Unknown

Detailed Description: Construct improvements to CSX South Yard (east of Manchester area) to allow for increased ability to break up long trains and store rail cars and tankers until industrial customers are ready. Current yard is at capacity. These improvements will also allow South Yard to serve as better reliever to Acca (Richmond Yard).

Solution Location



Funding Information and Project Development Details

Estimated Cost (2017 dollars): \$1,800,000 **Funding Status:** ☐ Funded ☐ Partial Funding ☒ Unfunded

Adopted in: ☐ DRPT Six-Year Program ☐ plan2040 Fiscally-Constrained ☐ plan2040 Vision

Potential Funding Sources:

<input type="checkbox"/> TIGER	<input type="checkbox"/> Local	<input type="checkbox"/> Smart Scale	<input type="checkbox"/> Rail Industrial Access Fund
<input type="checkbox"/> FASTLANE	<input type="checkbox"/> CMAQ	<input type="checkbox"/> HSIP	<input checked="" type="checkbox"/> Rail Enhancement Fund
<input type="checkbox"/> Other (Federal)	<input checked="" type="checkbox"/> RSTP	<input checked="" type="checkbox"/> Other: Private	<input type="checkbox"/> Rail Preservation Fund

Permits and approvals likely needed:

☒ NEPA ☐ IJR/IMR ☒ Class 1 RR ☒ City/County ☐ Other:

Implementation Next Steps:

- 1.) Work with CSX to vet feasibility of concept, including engineering necessary to advance project implementation
- 2.) Secure funding for 30% design/preliminary engineering

Solution Summary

Solution Reference #: R3.3

Need Description: Improvements to CSX Bellwood Sub (S-Line)

Solution Description: Construct rail sidings and leads to Site 2 (Alleghany Warehouse) and Site 1 (Altria / DuPont) development areas along Commerce Road.

Local Jurisdiction: City of Richmond

Timeline: ☐ Short-Term ☒ Medium-Term ☐ Long-Term

Project Champion(s): CSX, and Private Developers in coordination with the City of Richmond

Solution Features

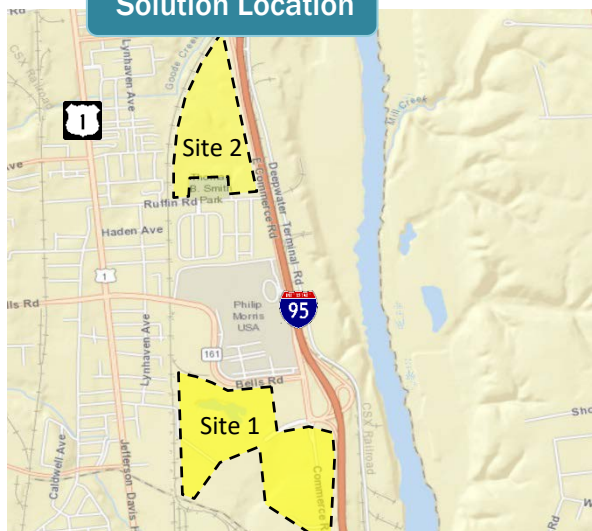
Mode: ☐ Highway ☒ Rail ☐ Port-Oriented
☐ Other:

Type of Asset: ☐ Public ☒ Private ☐ Both

ROW Required: ☐ No ☐ Yes ☒ Unknown

Detailed Description: Construct sidings and leads as needed to provide rail access to Site 2 (Alleghany Warehouse) and Site 1 (Altria / DuPont) development areas along Commerce Road.

Solution Location



Funding Information and Project Development Details

Estimated Cost (2017 dollars): \$2,690,000 **Funding Status:** ☐ Funded ☐ Partial Funding ☒ Unfunded

Adopted in: ☐ DRPT Six-Year Program ☐ plan2040 Fiscally-Constrained ☐ plan2040 Vision

Potential Funding Sources:

☐ TIGER

☒ Local

☐ Smart Scale

☒ Rail Industrial Access Fund

☐ FASTLANE

☐ CMAQ

☐ HSIP

☐ Rail Enhancement Fund

☐ Other (Federal)

☒ RSTP

☒ Other: Private

☐ Rail Preservation Fund

Permits and approvals likely needed:

☐ NEPA

☐ IJR/IMR

☒ Class 1 RR

☒ City/County

☐ Other:

Implementation Next Steps:

- 1.) Continue outreach and partnership with property owners to facilitate future site redevelopment, including the opportunity to accommodate rail-served industry prospects
- 2.) Secure funding for 30% design/preliminary engineering upon rail-served development proposal
- 3.) Secure funding to advance project implementation

Solution Summary

Solution Reference #: R4

Need Description: Improvements to CSX Peninsula Sub line.

Solution Description: Construct rail sidings and leads to Site 3 (RIC/White Oak area).

Local Jurisdiction: Henrico County

Timeline: ☐ Short-Term ☒ Medium-Term ☐ Long-Term

Project Champion(s): Henrico County, CSX, and Private Developers

Solution Features

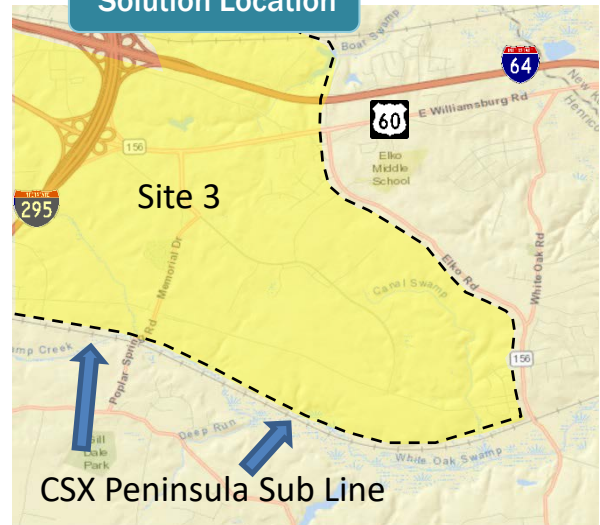
Mode: ☐ Highway ☒ Rail ☐ Port-Oriented
☐ Other:

Type of Asset: ☐ Public ☒ Private ☐ Both

ROW Required: ☐ No ☐ Yes ☒ Unknown

Detailed Description: Construct sidings and leads as needed to provide rail access to select parcels within Site 3 (RIC/White Oak area).

Solution Location



Funding Information and Project Development Details

Estimated Cost (2017 dollars): \$6,000,000 **Funding Status:** ☐ Funded ☐ Partial Funding ☒ Unfunded

Adopted in: ☐ DRPT Six-Year Program ☐ plan2040 Fiscally-Constrained ☐ plan2040 Vision

Potential Funding Sources:

<input type="checkbox"/> TIGER	<input checked="" type="checkbox"/> Local	<input type="checkbox"/> Smart Scale	<input checked="" type="checkbox"/> Rail Industrial Access Fund
<input type="checkbox"/> FASTLANE	<input type="checkbox"/> CMAQ	<input type="checkbox"/> HSIP	<input type="checkbox"/> Rail Enhancement Fund
<input type="checkbox"/> Other (Federal)	<input checked="" type="checkbox"/> RSTP	<input checked="" type="checkbox"/> Other: Private	<input type="checkbox"/> Rail Preservation Fund

Permits and approvals likely needed:

☐ NEPA ☐ IJR/IMR ☒ Class 1 RR ☒ City/County ☐ Other:

Implementation Next Steps:

- 1.) Continue pursuit of development prospects for the RIC/White Oak Area, including the opportunity to accommodate rail-served industrial prospects
- 2.) Secure funding for 30% design/preliminary engineering upon rail-served development proposal
- 3.) Secure funding to advance project implementation

Solution Summary

Solution Reference #: R5

Need Description: Improvements to CSX Bermuda Hundred lead.

Solution Description: Construct rail sidings and leads within Site 4 (Meadowville area).

Local Jurisdiction: Chesterfield County

Timeline: ☐ Short-Term ☒ Medium-Term ☐ Long-Term

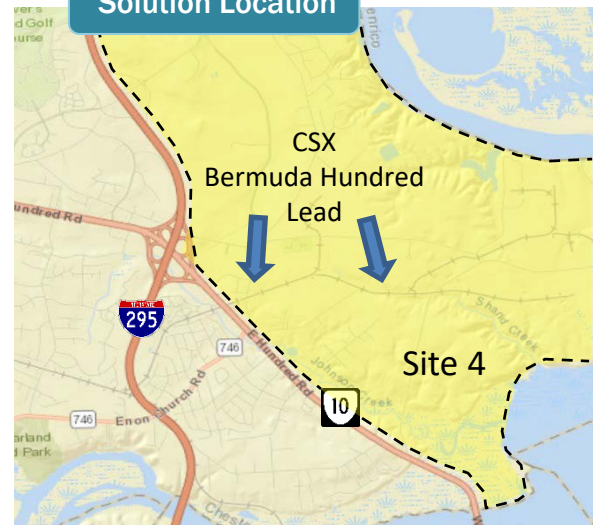
Project Champion(s): Chesterfield County, CSX, and Private Developers

Solution Features

Mode: ☐ Highway ☒ Rail ☐ Port-Oriented
☐ Other:Type of Asset: ☐ Public ☒ Private ☐ BothROW Required: ☐ No ☐ Yes ☒ Unknown

Detailed Description: Construct rail sidings and leads as needed to provide rail access to select parcels within Site 4 (Meadowville area).

Solution Location



Funding Information and Project Development Details

Estimated Cost (2017 dollars): \$3,600,000 Funding Status: ☐ Funded ☐ Partial Funding ☒ UnfundedAdopted in: ☐ DRPT Six-Year Program ☐ plan2040 Fiscally-Constrained ☐ plan2040 Vision

Potential Funding Sources:

<input type="checkbox"/> TIGER	<input checked="" type="checkbox"/> Local	<input type="checkbox"/> Smart Scale	<input checked="" type="checkbox"/> Rail Industrial Access Fund
<input type="checkbox"/> FASTLANE	<input type="checkbox"/> CMAQ	<input type="checkbox"/> HSIP	<input type="checkbox"/> Rail Enhancement Fund
<input type="checkbox"/> Other (Federal)	<input checked="" type="checkbox"/> RSTP	<input checked="" type="checkbox"/> Other: Private	<input type="checkbox"/> Rail Preservation Fund

Permits and approvals likely needed:

☐ NEPA ☐ IJR/IMR ☒ Class 1 RR ☒ City/County ☐ Other:

Implementation Next Steps:

- 1.) Continue pursuit of development prospects for the Meadowville Area, including the opportunity to accommodate rail-served industry prospects
- 2.) Secure funding for 30% design/preliminary engineering upon rail-served development proposal
- 3.) Secure funding to advance project implementation

Solution Summary

Solution Reference #: R6

Need Description: Improvements to NS Burkeville to West Point line.

Solution Description: Construct rail sidings and leads within Site 3 (RIC/White Oak area).

Local Jurisdiction: Henrico County

Timeline: ☐ Short-Term ☒ Medium-Term ☐ Long-Term

Project Champion(s): Henrico County, Norfolk Southern, and Private Developers

Solution Features

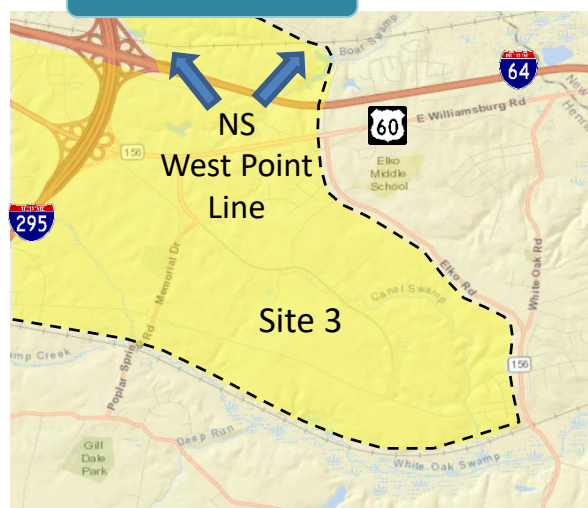
Mode: ☐ Highway ☒ Rail ☐ Port-Oriented
☐ Other:

Type of Asset: ☐ Public ☒ Private ☐ Both

ROW Required: ☐ No ☐ Yes ☒ Unknown

Detailed Description: Construct sidings and leads as needed to provide rail access to select parcels within Site 3 (RIC/White Oak area).

Solution Location



Funding Information and Project Development Details

Estimated Cost (2017 dollars): \$3,000,000 **Funding Status:** ☐ Funded ☐ Partial Funding ☒ Unfunded

Adopted in: ☐ DRPT Six-Year Program ☐ plan2040 Fiscally-Constrained ☐ plan2040 Vision

Potential Funding Sources:

<input type="checkbox"/> TIGER	<input checked="" type="checkbox"/> Local	<input type="checkbox"/> Smart Scale	<input checked="" type="checkbox"/> Rail Industrial Access Fund
<input type="checkbox"/> FASTLANE	<input type="checkbox"/> CMAQ	<input type="checkbox"/> HSIP	<input type="checkbox"/> Rail Enhancement Fund
<input type="checkbox"/> Other (Federal)	<input checked="" type="checkbox"/> RSTP	<input checked="" type="checkbox"/> Other: Private	<input type="checkbox"/> Rail Preservation Fund

Permits and approvals likely needed:

☐ NEPA ☐ IJR/IMR ☒ Class 1 RR ☒ City/County ☐ Other:

Implementation Next Steps:

- 1.) Continue pursuit of development prospects for the RIC/White Oak Area, including the opportunity to accommodate rail-served industry prospects
- 2.) Secure funding for 30% design/preliminary engineering upon rail-served development proposal
- 3.) Secure funding to advance project implementation

Solution Summary

Solution Reference #: R7

Need Description: Limit at-grade rail crossings along key freight roadways and railways.

Solution Description: Grade separate or gate key crossings of the CSX Bellwood Sub (S-line).

Local Jurisdiction: City of Richmond

Timeline: ☐ Short-Term ☒ Medium-Term ☐ Long-Term

Project Champion: DRPT and CSX

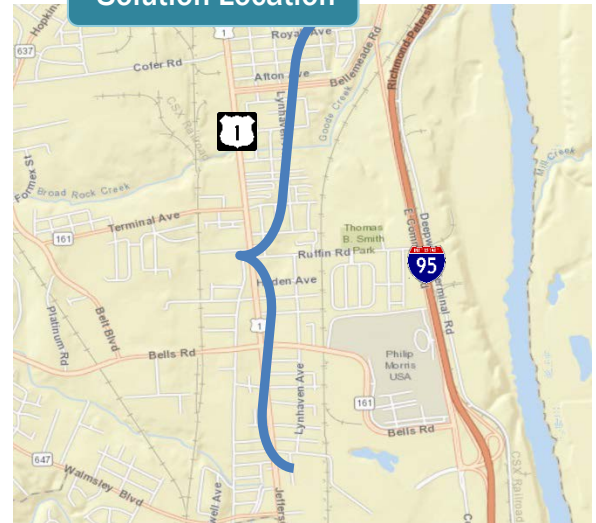
Solution Features

Mode: ☐ Highway ☒ Rail ☐ Port-Oriented
☐ Other:

Type of Asset: ☐ Public ☒ Private ☐ Both
ROW Required: ☐ No ☐ Yes ☒ Unknown

Detailed Description: Grade separate or gate key crossings as they relate to increased usage of the CSX Bellwood Sub (S-line) for both freight & future high-speed rail. Key locations as identified in DC2RVA Tier II EIS may include Maury St, Goodes St, E Commerce Rd, Ruffin Rd, Bells Rd, and Dale Ave.

Solution Location



Funding Information and Project Development Details

Estimated Cost (2017 dollars): \$90,000,000 **Funding Status:** ☐ Funded ☐ Partial Funding ☒ Unfunded

Adopted in: ☐ DRPT Six-Year Program ☐ plan2040 Fiscally-Constrained ☐ plan2040 Vision

Potential Funding Sources:

<input type="checkbox"/> TIGER	<input checked="" type="checkbox"/> Local	<input checked="" type="checkbox"/> Smart Scale	<input type="checkbox"/> Rail Industrial Access Fund
<input type="checkbox"/> FASTLANE	<input checked="" type="checkbox"/> CMAQ	<input checked="" type="checkbox"/> HSIP	<input checked="" type="checkbox"/> Rail Enhancement Fund
<input checked="" type="checkbox"/> Other (Federal)	<input checked="" type="checkbox"/> RSTP	<input type="checkbox"/> Other:	<input type="checkbox"/> Rail Preservation Fund

Permits and approvals likely needed:

☐ NEPA ☐ IJR/IMR ☒ Class 1 RR ☒ City/County ☐ Other:

Implementation Next Steps:

- 1.) Finalize DC2RVA Tier II EIS and Record of Decision
- 2.) Prioritize individual grade-separations and other crossing improvements to compete for funding
- 3.) Secure funding to advance project implementation

Solution Summary

Solution Reference #: R8

Need Description: Ability to bring larger / oversized cargo to RMT via rail.

Solution Description: Increase horizontal and vertical clearance at rail triple crossing.

Local Jurisdiction: City of Richmond

Timeline: ☐ Short-Term ☐ Medium-Term ☒ Long-Term

Project Champion: TBD

Solution Features

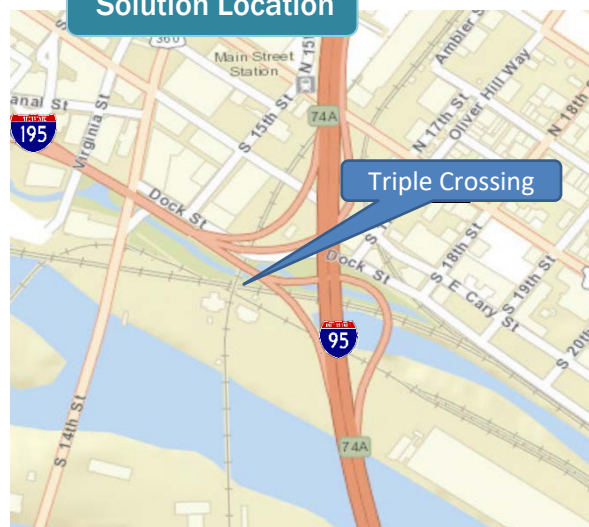
Mode: ☐ Highway ☒ Rail ☐ Port-Oriented
☐ Other:

Type of Asset: ☐ Public ☒ Private ☐ Both

ROW Required: ☐ No ☐ Yes ☒ Unknown

Detailed Description: Increase horizontal and vertical clearance at railroad triple crossing to allow transport of high cube box cars.

Solution Location



Funding Information and Project Development Details

Estimated Cost (2017 dollars): \$50,000,000 **Funding Status:** ☐ Funded ☐ Partial Funding ☒ Unfunded

Adopted in: ☐ DRPT Six-Year Program ☐ plan2040 Fiscally-Constrained ☐ plan2040 Vision

Potential Funding Sources:

<input type="checkbox"/> TIGER	<input type="checkbox"/> Local	<input checked="" type="checkbox"/> Smart Scale	<input type="checkbox"/> Rail Industrial Access Fund
<input type="checkbox"/> FASTLANE	<input type="checkbox"/> CMAQ	<input type="checkbox"/> HSIP	<input checked="" type="checkbox"/> Rail Enhancement Fund
<input type="checkbox"/> Other (Federal)	<input checked="" type="checkbox"/> RSTP	<input type="checkbox"/> Other: Private	<input type="checkbox"/> Rail Preservation Fund

Permits and approvals likely needed:

☒ NEPA ☐ IJR/IMR ☒ Class 1 RR ☒ City/County ☐ Other:

Implementation Next Steps:

- 1.) Continue to investigate the feasibility and justification for implementing the project concept
- 2.) Identify project champion upon sufficient justification for the project

Solution Summary

Solution Reference #: R9

Need Description: Increased ability for Class 1 railroads to accommodate future peak demand.

Solution Description: Add more 'locals' and crews as needed to serve future rail demand.

Local Jurisdiction: City of Richmond, Chesterfield County, Henrico County

Timeline: ☒ Short-Term ☐ Medium-Term ☐ Long-Term

Project Champion: CSX and NS

Solution Features

Mode: ☐ Highway ☒ Rail ☐ Port-Oriented
☐ Other:Type of Asset: ☐ Public ☒ Private ☐ BothROW Required: ☒ No ☐ Yes ☐ Unknown

Detailed Description: Add more 'locals' and crews as needed to serve future rail demand along industrial corridor(s).

Solution Location

CSX

NS

Funding Information and Project Development Details

Estimated Cost (2017 dollars): TBD

Funding Status: ☐ Funded ☐ Partial Funding ☐ UnfundedAdopted in: ☐ VDOT Six-Year Program ☐ plan2040 Fiscally-Constrained ☐ plan2040 Vision

Potential Funding Sources:

☐ TIGER☐ Local☐ Smart Scale☐ Rail Industrial Access Fund☐ FASTLANE☐ CMAQ☐ HSIP☐ Rail Enhancement Fund☐ Other (Federal)☐ RSTP☒ Other: Private☐ Rail Preservation Fund

Permits and approvals likely needed:

☐ NEPA☐ IJR/IMR☒ Class 1 RR☐ City/County☐ Other:

Implementation Next Steps:

1.) Expand capacity with additional local service and crews as warranted by the market

Solution Summary

Solution Reference #: P1.1

Need Description: Improve access to Richmond Marine Terminal.

Solution Description: Increase RMT business hours and/or establish off-hours secure laydown yard(s).

Local Jurisdiction: City of Richmond

Timeline: ☒ Short-Term ☐ Medium-Term ☐ Long-Term

Project Champion: Port of Virginia

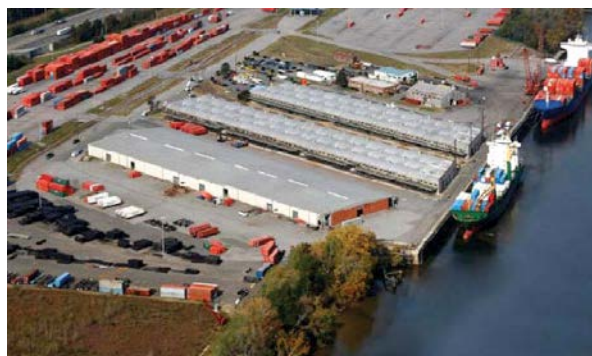
Solution Features

Mode: ☐ Highway ☐ Rail ☒ Port-Oriented
☐ Other:

Type of Asset: ☐ Public ☐ Private ☒ Both
ROW Required: ☐ No ☐ Yes ☒ Unknown

Detailed Description: Increase RMT business hours and/or establish off-hours secure laydown yard(s). This proposal is related to Solutions P1.2 and P1.3 in that vehicular access under I-95 would help facilitate a secure laydown yard just west of I-95 (DuPont property). If P1.2 and P1.3 are unsuccessful, it's possible a secure laydown yard could be located on the same side of I-95 as RMT.

Solution Location



Funding Information and Project Development Details

Estimated Cost (2017 dollars): TBD

Funding Status: ☐ Funded ☐ Partial Funding ☒ Unfunded

Adopted in: ☐ VDOT Six-Year Program ☐ plan2040 Fiscally-Constrained ☐ plan2040 Vision

Potential Funding Sources:

<input type="checkbox"/> TIGER	<input type="checkbox"/> Local	<input type="checkbox"/> Smart Scale	<input type="checkbox"/> Rail Industrial Access Fund
<input type="checkbox"/> FASTLANE	<input type="checkbox"/> CMAQ	<input type="checkbox"/> HSIP	<input type="checkbox"/> Rail Enhancement Fund
<input type="checkbox"/> Other (Federal)	<input checked="" type="checkbox"/> RSTP	<input checked="" type="checkbox"/> Other: POV	<input type="checkbox"/> Rail Preservation Fund

Permits and approvals likely needed:

☐ NEPA ☐ IJR/IMR ☐ Class 1 RR ☒ City/County ☒ Other: Port of Virginia

Implementation Next Steps:

- 1.) Define specific project scope to meet the operational and security objectives at RMT
- 2.) Secure funding to advance project implementation

Solution Summary

Solution Reference #: P1.2

Need Description: Improve access to Richmond Marine Terminal.

Solution Description: Study vehicle access to RMT using existing adjacent I-95 underpass.

Local Jurisdiction: City of Richmond

Timeline: ☒ Short-Term ☐ Medium-Term ☐ Long-Term

Project Champion(s): City of Richmond and Port of Virginia

Solution Features

Mode: ☒ Highway ☐ Rail ☒ Port-Oriented
☒ Other: Study

Type of Asset: ☐ Public ☐ Private ☒ Both
ROW Required: ☐ No ☐ Yes ☒ Unknown

Detailed Description: Conduct study of proposal to allow vehicle traffic to utilize existing underpass of I-95 adjacent to RMT property. This underpass is currently used as a utility corridor and might be able to support vehicle movement if improved. 'Low-clearance' freight movers may be part of solution here. See Solution H3.1. Solution P1.2 also relates to Solution P1.1.

Solution Location



Funding Information and Project Development Details

Estimated Cost (2017 dollars): \$250,000 **Funding Status:** ☐ Funded ☐ Partial Funding ☒ Unfunded

Adopted in: ☐ VDOT Six-Year Program ☐ plan2040 Fiscally-Constrained ☐ plan2040 Vision

Potential Funding Sources:

<input type="checkbox"/> TIGER	<input type="checkbox"/> Local	<input type="checkbox"/> Smart Scale	<input type="checkbox"/> Rail Industrial Access Fund
<input type="checkbox"/> FASTLANE	<input type="checkbox"/> CMAQ	<input type="checkbox"/> HSIP	<input type="checkbox"/> Rail Enhancement Fund
<input type="checkbox"/> Other (Federal)	<input checked="" type="checkbox"/> RSTP	<input checked="" type="checkbox"/> Other: SPR	<input type="checkbox"/> Rail Preservation Fund

Permits and approvals likely needed:

☐ NEPA ☐ IJR/IMR ☐ Class 1 RR ☒ City/County ☒ Other: Port of Virginia

Implementation Next Steps:

- 1.) Secure funding to study feasibility of project, including documentation of engineering, environmental, and legal challenges to project implementation
- 2.) If determined feasible, secure funding to advance project implementation of solution P1.3

Solution Summary

Solution Reference #: P1.3

Need Description: Improve access to Richmond Marine Terminal.

Solution Description: Construct vehicle access under I-95 at current utility crossing to RMT.

Local Jurisdiction: City of Richmond

Timeline: ☒ Short-Term ☐ Medium-Term ☐ Long-Term

Project Champion: TBD

Solution Features

Mode: ☒ Highway ☐ Rail ☒ Port-Oriented
☐ Other:

Type of Asset: ☐ Public ☐ Private ☒ Both

ROW Required: ☐ No ☐ Yes ☒ Unknown

Detailed Description: Construct vehicle access under I-95 at current utility crossing to allow flow of select traffic from Commerce Road to RMT property. See solutions P1.1 and P1.2.

Solution Location



Funding Information and Project Development Details

Estimated Cost (2017 dollars): \$10,000,000 **Funding Status:** ☐ Funded ☐ Partial Funding ☒ Unfunded

Adopted in: ☐ VDOT Six-Year Program ☐ plan2040 Fiscally-Constrained ☐ plan2040 Vision

Potential Funding Sources:

<input type="checkbox"/> TIGER	<input checked="" type="checkbox"/> Local	<input checked="" type="checkbox"/> Smart Scale	<input type="checkbox"/> Rail Industrial Access Fund
<input type="checkbox"/> FASTLANE	<input type="checkbox"/> CMAQ	<input type="checkbox"/> HSIP	<input type="checkbox"/> Rail Enhancement Fund
<input type="checkbox"/> Other (Federal)	<input checked="" type="checkbox"/> RSTP	<input checked="" type="checkbox"/> Other: POV	<input type="checkbox"/> Rail Preservation Fund

Permits and approvals likely needed:

☐ NEPA ☐ IJR/IMR ☐ Class 1 RR ☒ City/County ☒ Other: Port of Virginia

Implementation Next Steps:

- 1.) If determined feasible by solution P1.2, secure funding to advance project implementation

Solution Summary

Solution Reference #: P1.4

Need Description: Improve access to Richmond Marine Terminal.

Solution Description: Conduct study of gate operations at RMT.

Local Jurisdiction: City of Richmond

Timeline: ☒ Short-Term ☐ Medium-Term ☐ Long-Term

Project Champion: Port of Virginia

Solution Features

Mode: ☒ Highway ☐ Rail ☒ Port-Oriented
☒ Other: Study

Type of Asset: ☒ Public ☐ Private ☐ Both

ROW Required: ☒ No ☐ Yes ☐ Unknown

Detailed Description: Conduct study of gate operations at RMT with goal of maintaining gate capacity during times of increased activity via truck and to accommodate future anticipated volumes.

Solution Location



Funding Information and Project Development Details

Estimated Cost (2017 dollars): \$100,000 **Funding Status:** ☐ Funded ☐ Partial Funding ☒ Unfunded

Adopted in: ☐ VDOT Six-Year Program ☐ plan2040 Fiscally-Constrained ☐ plan2040 Vision

Potential Funding Sources:

<input type="checkbox"/> TIGER	<input type="checkbox"/> Local	<input type="checkbox"/> Smart Scale	<input type="checkbox"/> Rail Industrial Access Fund
<input type="checkbox"/> FASTLANE	<input type="checkbox"/> CMAQ	<input type="checkbox"/> HSIP	<input type="checkbox"/> Rail Enhancement Fund
<input type="checkbox"/> Other (Federal)	<input checked="" type="checkbox"/> RSTP	<input checked="" type="checkbox"/> Other: POV	<input type="checkbox"/> Rail Preservation Fund

Permits and approvals likely needed:

☐ NEPA ☐ IJR/IMR ☐ Class 1 RR ☐ City/County ☒ Other: Port of Virginia

Implementation Next Steps:

- 1.) Define specific project scope to meet the operational objectives at RMT
- 2.) Secure funding to advance study
- 3.] Apply for RSTP as a potential funding source in 2017 cycle

Solution Summary

Solution Reference #: P2

Need Description: Increase rail capacity inside the gates of RMT.

Solution Description: Conduct rail operations study inside the RMT facility.

Local Jurisdiction: City of Richmond

Timeline: ☒ Short-Term ☐ Medium-Term ☐ Long-Term

Project Champion: Port of Virginia

Solution Features

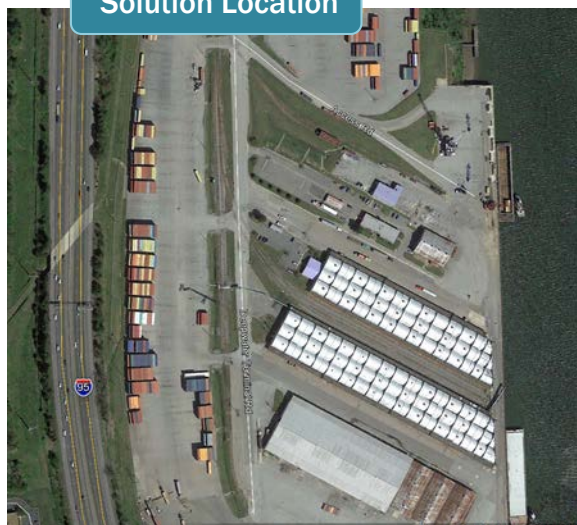
Mode: ☐ Highway ☒ Rail ☒ Port-Oriented
☒ Other: Study

Type of Asset: ☒ Public ☐ Private ☐ Both

ROW Required: ☒ No ☐ Yes ☐ Unknown

Detailed Description: Conduct rail operations study inside the RMT facility to identify most cost-effective investment to improve rail capacity & operations. Study to follow completion of 'Richmond Marine Terminal Rail Improvements' project funded at \$3.24 million in DRPT SYIP.

Solution Location



Funding Information and Project Development Details

Estimated Cost (2017 dollars): \$250,000 **Funding Status:** ☐ Funded ☐ Partial Funding ☒ Unfunded

Adopted in: ☐ DRPT Six-Year Program ☐ plan2040 Fiscally-Constrained ☐ plan2040 Vision

Potential Funding Sources:

☐ TIGER ☐ Local ☐ Smart Scale ☐ Rail Industrial Access Fund
☐ FASTLANE ☐ CMAQ ☐ HSIP ☐ Rail Enhancement Fund
☐ Other (Federal) ☐ RSTP ☒ Other: POV ☐ Rail Preservation Fund

Permits and approvals likely needed:

☐ NEPA ☐ IJR/IMR ☐ Class 1 RR ☐ City/County ☒ Other: Port of Virginia

Implementation Next Steps:

- 1.) Define specific project scope to meet the operational objectives at RMT
- 2.) Secure funding to advance study

Solution Summary

Solution Reference #: P3

Need Description: Increase port activity via on-site tenants.

Solution Description: Develop vacant 14-acres at RMT for users that rely on barge, truck, rail.

Local Jurisdiction: City of Richmond

Timeline: ☒ Short-Term ☐ Medium-Term ☐ Long-Term

Project Champion: Port of Virginia in coordination with the City of Richmond

Solution Features

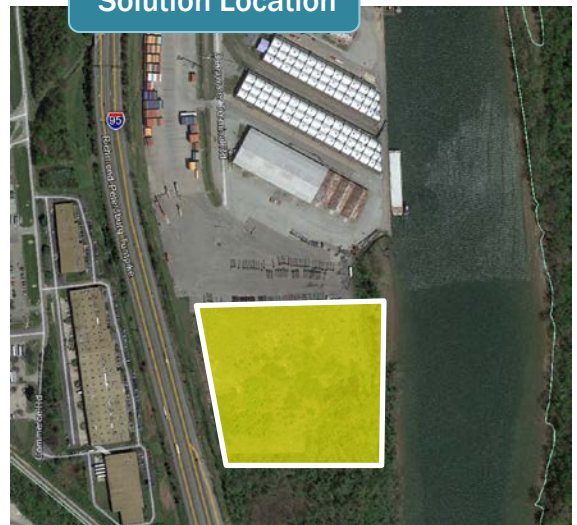
Mode: ☐ Highway ☐ Rail ☒ Port-Oriented
☒ Other: Economic Development

Type of Asset: ☒ Public ☐ Private ☐ Both

ROW Required: ☒ No ☐ Yes ☐ Unknown

Detailed Description: Develop vacant 14-acres for users that rely on barge, truck, rail. Pursue long-term tenant lease agreements for existing on-site warehouse space.

Solution Location



Funding Information and Project Development Details

Estimated Cost (2017 dollars): TBD

Funding Status: ☐ Funded ☐ Partial Funding ☐ Unfunded

Adopted in: ☐ VDOT Six-Year Program ☐ plan2040 Fiscally-Constrained ☐ plan2040 Vision

Potential Funding Sources:

☐ TIGER ☒ Local ☐ Smart Scale ☐ Rail Industrial Access Fund
☐ FASTLANE ☐ CMAQ ☐ HSIP ☐ Rail Enhancement Fund
☐ Other (Federal) ☐ RSTP ☒ Other: POV ☐ Rail Preservation Fund

Permits and approvals likely needed:

☐ NEPA ☐ IJR/IMR ☐ Class 1 RR ☒ City/County ☒ Other: Port of Virginia

Implementation Next Steps:

1.) Continue pursuit of development prospects for 14-acre RMT site and lessees of existing warehouses

Solution Summary

Solution Reference #: P4

Need Description: Improve intermodal transfer performance at RMT.

Solution Description: Re-pave north wharf area, repair dilapidated at-grade rail crossings, replace fender along wharf wall.

Local Jurisdiction: City of Richmond

Timeline: ☒ Short-Term ☐ Medium-Term ☐ Long-Term

Project Champion: Port of Virginia

Solution Features

Mode: ☐ Highway ☐ Rail ☒ Port-Oriented
☐ Other:

Type of Asset: ☒ Public ☐ Private ☐ Both

ROW Required: ☒ No ☐ Yes ☐ Unknown

Detailed Description: Re-pave north wharf area, repair dilapidated at-grade rail crossings, replace fender along wharf wall. UPC #109266

Solution Location



Funding Information and Project Development Details

Estimated Cost (2017 dollars): \$2,050,000 **Funding Status:** ☒ Funded ☐ Partial Funding ☐ Unfunded

Adopted in: ☒ VDOT Six-Year Program ☐ plan2040 Fiscally-Constrained ☐ plan2040 Vision

Potential Funding Sources: *N/A – Fully Funded*

<input type="checkbox"/> TIGER	<input type="checkbox"/> Local	<input type="checkbox"/> Smart Scale	<input type="checkbox"/> Rail Industrial Access Fund
<input type="checkbox"/> FASTLANE	<input type="checkbox"/> CMAQ	<input type="checkbox"/> HSIP	<input type="checkbox"/> Rail Enhancement Fund
<input type="checkbox"/> Other (Federal)	<input type="checkbox"/> RSTP	<input type="checkbox"/> Other:	<input type="checkbox"/> Rail Preservation Fund

Permits and approvals likely needed:

☐ NEPA ☐ IJR/IMR ☐ Class 1 RR ☐ City/County ☐ Other:

Implementation Next Steps:

1.) Finalize construction phase

Solution Summary

Solution Reference #: P5

Need Description: Maximize use of Richmond Marine Terminal.

Solution Description: Seek more balanced and diversified mix of RMT users / modes.

Local Jurisdiction: City of Richmond

Timeline: ☒ Short-Term ☐ Medium-Term ☐ Long-Term

Project Champion: Port of Virginia

Solution Features

Mode: ☐ Highway ☒ Rail ☒ Port-Oriented
☒ Other: Economic DevelopmentType of Asset: ☒ Public ☐ Private ☐ BothROW Required: ☒ No ☐ Yes ☐ Unknown

Detailed Description: Seek more balanced and diversified mix of RMT users / modes (e.g. more rail, customers that keep port busy during slower seasons).

Solution Location

THE PORT OF
VIRGINIA

Funding Information and Project Development Details

Estimated Cost (2017 dollars): TBD

Funding Status: ☐ Funded ☐ Partial Funding ☒ UnfundedAdopted in: ☐ VDOT Six-Year Program ☐ plan2040 Fiscally-Constrained ☐ plan2040 Vision

Potential Funding Sources:

☐ TIGER☐ Local☐ Smart Scale☐ Rail Industrial Access Fund☐ FASTLANE☐ CMAQ☐ HSIP☐ Rail Enhancement Fund☐ Other (Federal)☐ RSTP☒ Other: POV☐ Rail Preservation Fund

Permits and approvals likely needed:

☐ NEPA☐ IJR/IMR☐ Class 1 RR☐ City/County☒ Other: Port of Virginia

Implementation Next Steps:

1.) Continue pursuit of diversified mix of customers and RMT users

Solution Summary

Solution Reference #: M1

Need Description: Improve image & competitiveness of Commerce Corridor.

Solution Description: Seek tax incentives, visual improvements, and improved services.

Local Jurisdiction: City of Richmond, Chesterfield County

Timeline: ☒ Short-Term ☐ Medium-Term ☐ Long-Term

Project Champion(s): City of Richmond, Chesterfield County and Property Owners

Solution Features

Mode: ☐ Highway ☐ Rail ☐ Port-Oriented
☒ Other: Economic Development

Type of Asset: ☐ Public ☐ Private ☒ Both

ROW Required: ☒ No ☐ Yes ☐ Unknown

Detailed Description: Explore branding Commerce Corridor to improve image, recognition and competitiveness. Consider tax incentives and/or establishment of business association to encourage visual improvements in Corridor. Provide for services vital to businesses, including broadband connectivity, access to restaurants and amenities. Improve signage and wayfinding.

Solution Location



Funding Information and Project Development Details

Estimated Cost (2017 dollars): \$4,000,000 **Funding Status:** ☐ Funded ☐ Partial Funding ☒ Unfunded

Adopted in: ☐ VDOT Six-Year Program ☐ plan2040 Fiscally-Constrained ☐ plan2040 Vision

Potential Funding Sources:

<input type="checkbox"/> TIGER	<input checked="" type="checkbox"/> Local	<input type="checkbox"/> Smart Scale	<input type="checkbox"/> Rail Industrial Access Fund
<input type="checkbox"/> FASTLANE	<input type="checkbox"/> CMAQ	<input type="checkbox"/> HSIP	<input type="checkbox"/> Rail Enhancement Fund
<input checked="" type="checkbox"/> Other (Federal)	<input type="checkbox"/> RSTP	<input checked="" type="checkbox"/> Other: Private	<input type="checkbox"/> Rail Preservation Fund

Permits and approvals likely needed:

☐ NEPA ☐ IJR/IMR ☐ Class 1 RR ☒ City/County ☐ Other:

Implementation Next Steps:

- 1.) Coordinate with private sector stakeholders and property owners to understand needs and opportunities of the Corridor from a marketing, visual improvement, and services perspective
- 2.) Secure funding to advance project implementation

Solution Summary

Solution Reference #: M2

Need Description: Increase rail grant funding.

Solution Description: Encourage increased ceiling of Rail Industrial Access Grant program.

Local Jurisdiction: City of Richmond, Chesterfield County, Henrico County

Timeline: ☒ Short-Term ☐ Medium-Term ☐ Long-Term

Project Champion: Richmond Regional TPO

Solution Features

Mode: ☐ Highway ☒ Rail ☐ Port-Oriented
☒ Other: Policy initiative

Type of Asset: ☐ Public ☐ Private ☒ Both

ROW Required: ☒ No ☐ Yes ☐ Unknown

Detailed Description: Encourage increased ceiling of Rail Industrial Access Grant program to allow for Class I railroads to respond quickly to development proposals.

Solution Location



Funding Information and Project Development Details

Estimated Cost (2017 dollars): TBD

Funding Status: ☐ Funded ☐ Partial Funding ☒ Unfunded

Adopted in: ☐ VDOT Six-Year Program ☐ plan2040 Fiscally-Constrained ☐ plan2040 Vision

Potential Funding Sources:

<input type="checkbox"/> TIGER	<input type="checkbox"/> Local	<input type="checkbox"/> Smart Scale	<input type="checkbox"/> Rail Industrial Access Fund
<input type="checkbox"/> FASTLANE	<input type="checkbox"/> CMAQ	<input type="checkbox"/> HSIP	<input type="checkbox"/> Rail Enhancement Fund
<input type="checkbox"/> Other (Federal)	<input type="checkbox"/> RSTP	<input type="checkbox"/> Other:	<input type="checkbox"/> Rail Preservation Fund

Permits and approvals likely needed:

☐ NEPA ☐ IJR/IMR ☐ Class 1 RR ☐ City/County ☒ Other: Richmond Regional TPO

Implementation Next Steps:

1.) Encourage the Commonwealth of Virginia to supplement the Rail Industrial Access Grant program

Solution Summary

Solution Reference #: M3

Need Description: Facilitate intermodal and transload between truck, rail and barge.

Solution Description: Encourage and/or incentivize rail and truck operators to offload at RMT and barge to POV facilities in Hampton Roads.

Local Jurisdiction: City of Richmond

Timeline: ☒ Short-Term ☐ Medium-Term ☐ Long-Term

Project Champion(s): Port of Virginia

Solution Features

Mode: ☐ Highway ☒ Rail ☒ Port-Oriented
☒ Other: Economic Development

Type of Asset: ☒ Public ☐ Private ☐ Both

ROW Required: ☒ No ☐ Yes ☐ Unknown

Detailed Description: Encourage and/or incentivize rail and truck operators to offload at RMT and barge to POV facilities in Hampton Roads.

Solution Location



Funding Information and Project Development Details

Estimated Cost (2017 dollars): TBD

Funding Status: ☐ Funded ☐ Partial Funding ☒ Unfunded

Adopted in: ☐ VDOT Six-Year Program ☐ plan2040 Fiscally-Constrained ☐ plan2040 Vision

Potential Funding Sources:

☐ TIGER ☒ Local

☐ Smart Scale

☐ Rail Industrial Access Fund

☐ FASTLANE ☐ CMAQ

☐ HSIP

☐ Rail Enhancement Fund

☐ Other (Federal) ☐ RSTP

☒ Other: State

☐ Rail Preservation Fund

Permits and approvals likely needed:

☐ NEPA ☐ IJR/IMR

☐ Class 1 RR

☐ City/County

☒ Other: Port of Virginia

Implementation Next Steps:

- 1.) Pursue opportunities to encourage rail-to-barge and truck-to-barge intermodal and transload customers, including incentives

Solution Summary

Solution Reference #: M4

Need Description: Comprehensive Industrial Master Plan for RMT & surrounding area.

Solution Description: Implement master land use plan for RMT and surrounding area.

Local Jurisdiction: City of Richmond

Timeline: ☒ Short-Term ☐ Medium-Term ☐ Long-Term

Project Champion: City of Richmond

Solution Features

Mode: ☐ Highway ☐ Rail ☒ Port-Oriented
☒ Other: StudyType of Asset: ☒ Public ☐ Private ☐ BothROW Required: ☒ No ☐ Yes ☐ Unknown

Detailed Description: Implement master land use planning process to integrate near-terminal development efforts with on-terminal activities, to inventory rail accessible development and redevelopment sites not currently utilizing rail, and to consider residential development pressures on industrial properties in the area.

Solution Location

Master Plan

Funding Information and Project Development Details

Estimated Cost (2017 dollars): \$300,000 Funding Status: ☐ Funded ☐ Partial Funding ☒ UnfundedAdopted in: ☐ VDOT Six-Year Program ☐ plan2040 Fiscally-Constrained ☐ plan2040 Vision

Potential Funding Sources:

<input type="checkbox"/> TIGER	<input checked="" type="checkbox"/> Local	<input type="checkbox"/> Smart Scale	<input type="checkbox"/> Rail Industrial Access Fund
<input type="checkbox"/> FASTLANE	<input type="checkbox"/> CMAQ	<input type="checkbox"/> HSIP	<input type="checkbox"/> Rail Enhancement Fund
<input checked="" type="checkbox"/> Other (Federal)	<input type="checkbox"/> RSTP	<input type="checkbox"/> Other:	<input type="checkbox"/> Rail Preservation Fund

Permits and approvals likely needed:

☐ NEPA ☐ IJR/IMR ☐ Class 1 RR ☒ City/County ☐ Other:

Implementation Next Steps:

- 1.) Define specific project scope to meet the planning objectives of the City of Richmond
- 2.) Secure funding to advance study. Could be conducted as part of City Comp Plan update
- 3.] Consider application under a potential future IDA program (Industrial Development Area)

Solution Summary

Solution Reference #: M5.1

Need Description: Improve multimodal workforce access to jobs.

Solution Description: Plan for housing and transit service in proximity to Sites 1, 2, 3, & 4.

Local Jurisdiction: City of Richmond, Chesterfield County, and Henrico County

Timeline: ☒ Short-Term ☐ Medium-Term ☐ Long-Term

Project Champion(s): City of Richmond, Chesterfield County and Henrico County

Solution Features

Mode: ☐ Highway ☐ Rail ☐ Port-Oriented
☒ Other: Transit/Multimodal

Type of Asset: ☒ Public ☐ Private ☐ Both

ROW Required: ☒ No ☐ Yes ☐ Unknown

Detailed Description: Led by each respective local jurisdiction independently to plan for housing and / or transit service in proximity to the four sites of future increased job activity: Site 1 (Altria/DuPont), Site 2 (Alleghany Warehouse), Site 3 (RIC/White Oak area), and Site 4 (Meadowville area).

Solution Location



Funding Information and Project Development Details

Estimated Cost (2017 dollars): TBD

Funding Status: ☐ Funded ☐ Partial Funding ☒ Unfunded

Adopted in: ☐ VDOT Six-Year Program ☐ plan2040 Fiscally-Constrained ☐ plan2040 Vision

Potential Funding Sources:

☐ TIGER ☒ Local ☐ Smart Scale ☐ Rail Industrial Access Fund
☐ FASTLANE ☐ CMAQ ☐ HSIP ☐ Rail Enhancement Fund
☒ Other (Federal) ☐ RSTP ☐ Other: ☐ Rail Preservation Fund

Permits and approvals likely needed:

☐ NEPA ☐ IJR/IMR ☐ Class 1 RR ☒ City/County ☐ Other:

Implementation Next Steps:

- 1.) Consider implementation of routes identified in Richmond Regional Transit Vision Plan
- 2.) Complete implementation of Richmond Transit Network Plan in City of Richmond
- 3.) Continued development of GRTC Transit Development Plan for Henrico and Chesterfield Counties

Solution Summary

Solution Reference #: M5.2

Need Description: Improve multimodal workforce access to jobs.

Solution Description: Promote workforce training opportunities in the Commerce Corridor.

Local Jurisdiction: City of Richmond, Chesterfield County

Timeline: ☐ Short-Term ☒ Medium-Term ☐ Long-Term

Project Champion: TBD

Solution Features

Mode: ☐ Highway ☐ Rail ☐ Port-Oriented
☒ Other: Workforce Development

Type of Asset: ☐ Public ☐ Private ☒ Both

ROW Required: ☒ No ☐ Yes ☐ Unknown

Detailed Description: Promote the importance of workforce training opportunities in advance of new jobs arriving. Identify champion to spearhead workforce development efforts catered to the needs of businesses in the Commerce Corridor.

Solution Location



Funding Information and Project Development Details

Estimated Cost (2017 dollars): TBD

Funding Status: ☐ Funded ☐ Partial Funding ☒ Unfunded

Adopted in: ☐ VDOT Six-Year Program ☐ plan2040 Fiscally-Constrained ☐ plan2040 Vision

Potential Funding Sources:

☐ TIGER ☒ Local ☐ Smart Scale ☐ Rail Industrial Access Fund
☐ FASTLANE ☐ CMAQ ☐ HSIP ☐ Rail Enhancement Fund
☒ Other (Federal) ☐ RSTP ☒ Other: GO Virginia ☐ Rail Preservation Fund

Permits and approvals likely needed:

☐ NEPA ☐ IJR/IMR ☐ Class 1 RR ☒ City/County ☐ Other:

Implementation Next Steps:

- 1.) Identify project champion to advance and promote workforce development opportunities to serve existing and future businesses of the Commerce Corridor

Solution Summary

Solution Reference #: M5.3

Need Description: Improve multimodal workforce access to jobs.

Solution Description: Improve multimodal connectivity including transit, walk, and bike modes.

Local Jurisdiction: City of Richmond, Chesterfield County

Timeline: ☒ Short-Term ☐ Medium-Term ☐ Long-Term

Project Champion: City of Richmond and Chesterfield County

Solution Features

Mode: ☐ Highway ☐ Rail ☐ Port-Oriented
☒ Other: Transit, Walking, & BikingType of Asset: ☒ Public ☐ Private ☐ BothROW Required: ☐ No ☐ Yes ☒ Unknown**Detailed Description:** Led by each respective local jurisdiction independently to improve multimodal connectivity including transit, walking, and biking modes. Focus efforts on high-impact local priority projects linking areas of existing and future employment to residential areas and workforce.

Solution Location



Funding Information and Project Development Details

Estimated Cost (2017 dollars): \$5,000,000 Funding Status: ☐ Funded ☐ Partial Funding ☒ UnfundedAdopted in: ☐ VDOT Six-Year Program ☐ plan2040 Fiscally-Constrained ☐ plan2040 Vision

Potential Funding Sources:

☐ TIGER☒ Local☒ Smart Scale☐ Rail Industrial Access Fund☐ FASTLANE☒ CMAQ☐ HSIP☐ Rail Enhancement Fund☒ Other (Federal)☒ RSTP☐ Other:☐ Rail Preservation Fund

Permits and approvals likely needed:

☐ NEPA☐ IJR/IMR☐ Class 1 RR☒ City/County☐ Other:

Implementation Next Steps:

- 1.) Identify local priority projects to improve multimodal connectivity to improve workforce access to businesses in the Commerce Corridor
- 2.) Secure funding to advance project implementation

Solution Summary

Solution Reference #: M6.1

Need Description: Reduce community impacts of rail and highway traffic in residential areas.

Solution Description: Improve signage and wayfinding of preferred truck routes.

Local Jurisdiction: City of Richmond, Chesterfield County

Timeline: ☒ Short-Term ☐ Medium-Term ☐ Long-Term

Project Champion(s): Richmond Regional TPO with the assistance of VDOT

Solution Features

Mode: ☒ Highway ☐ Rail ☐ Port-Oriented
☐ Other:

Type of Asset: ☒ Public ☐ Private ☐ Both

ROW Required: ☒ No ☐ Yes ☐ Unknown

Detailed Description: Truck Routing: Designate by signing and wayfinding preferred truck routes to guide heavy vehicles toward roadways better equipped to accommodate their size and to minimize residential interaction/community impacts.

Solution Location



Funding Information and Project Development Details

Estimated Cost (2017 dollars): \$1,000,000 **Funding Status:** ☐ Funded ☐ Partial Funding ☒ Unfunded

Adopted in: ☐ VDOT Six-Year Program ☐ plan2040 Fiscally-Constrained ☐ plan2040 Vision

Potential Funding Sources:

☐ TIGER

☒ Local

☒ Smart Scale

☐ Rail Industrial Access Fund

☐ FASTLANE

☒ CMAQ

☐ HSIP

☐ Rail Enhancement Fund

☒ Other (Federal)

☒ RSTP

☐ Other:

☐ Rail Preservation Fund

Permits and approvals likely needed:

☐ NEPA

☐ IJR/IMR

☐ Class 1 RR

☒ City/County

☐ Other:

Implementation Next Steps:

- 1.) Identify local priority projects to improve truck routing, including possible restrictions, wayfinding and signage
- 2.) Secure funding to advance project implementation

Solution Summary

Solution Reference #: M6.2

Need Description: Reduce community impacts of rail and highway traffic in residential areas.

Solution Description: Implement noise reduction strategies in the Commerce Corridor.

Local Jurisdiction: City of Richmond, Chesterfield County

Timeline: ☐ Short-Term ☒ Medium-Term ☐ Long-Term

Project Champion: TBD

Solution Features

Mode: ☒ Highway ☐ Rail ☐ Port-Oriented
☐ Other:

Type of Asset: ☒ Public ☐ Private ☐ Both

ROW Required: ☒ No ☐ Yes ☐ Unknown

Detailed Description: Implement strategies to minimize freight-generated noise pollution, including technology improvements at at-grade rail crossings to allow trains to advance without sounding horns in or near residential areas. Noise mitigation could also take the form of sound walls at select locations. Cost estimate based on 3-miles of sound walls. Related to Solution R7.

Solution Location



Funding Information and Project Development Details

Estimated Cost (2017 dollars): \$9,500,000 **Funding Status:** ☐ Funded ☐ Partial Funding ☒ Unfunded

Adopted in: ☐ DRPT Six-Year Program ☐ plan2040 Fiscally-Constrained ☐ plan2040 Vision

Potential Funding Sources:

☐ TIGER ☒ Local ☐ Smart Scale ☐ Rail Industrial Access Fund
☐ FASTLANE ☐ CMAQ ☐ HSIP ☒ Rail Enhancement Fund
☒ Other (Federal) ☐ RSTP ☐ Other: ☐ Rail Preservation Fund

Permits and approvals likely needed:

☐ NEPA ☐ IJR/IMR ☐ Class 1 RR ☐ City/County ☐ Other:

Implementation Next Steps:

- 1.) Continue to investigate the feasibility and justification for implementing the project concept
- 2.) Identify project champion upon sufficient justification for the project

