

Network for Success

Local Programs Workshop



Tools and Resources for Successful Project Planning

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Project Development and Funding Today

- Funding programs:

- SMART SCALE ←
- Revenue Sharing ←
- Highway Safety Improvement Program ←
- Regional Surface Transportation Program ←
- Congestion Mitigation and Air Quality Program ←
- Transportation Alternatives Program ←
- Regional funding ←
- State of Good Repair

These programs present opportunities for localities and VDOT to partner



Project Development and Funding Today

- Data-driven and performance based
- Concepts and estimates can become projects and budgets very quickly
- Public engagement and decision-making
- Addressing underlying issues and looking for greatest return on investment



CY2018-2021 VDOT Business Plan

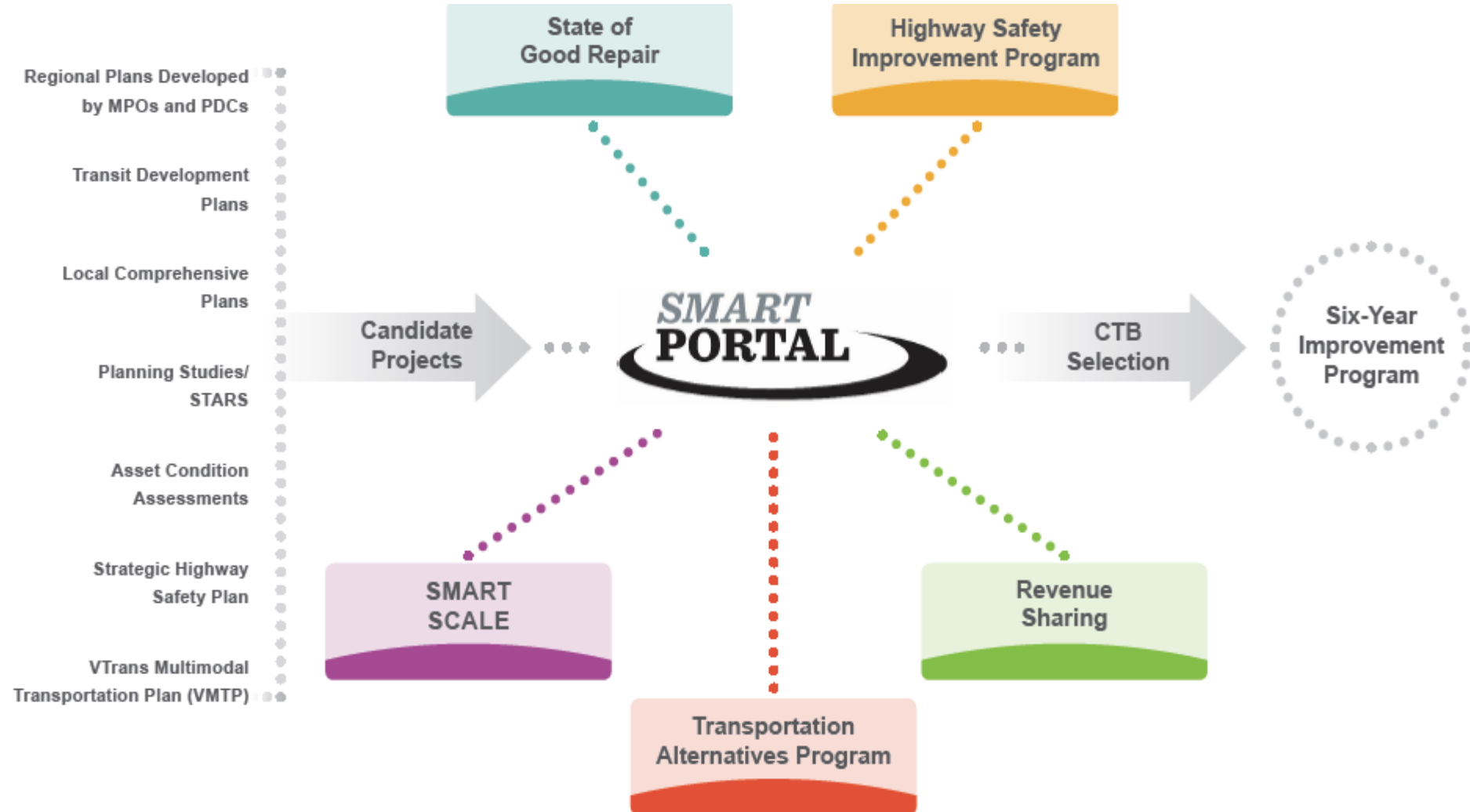
- VDOT has made stakeholder collaboration and public engagement key objectives in improving the project identification process



➤ Improve the project identification process

- 3.1:** Review the project identification process and available funding sources to take into account the changes brought by SMART SCALE. The review will identify ways to incorporate the following:
 - Solicit public input first, prior to developing alternatives
 - Work in a collaborative manner with all stakeholders to develop the right alternative early in the project identification process
 - Develop more accurate scopes, schedules and cost estimates before the project is approved
- 3.2:** Develop an engagement plan that outlines the services that VDOT can offer to localities to assist in the development of their transportation plans.

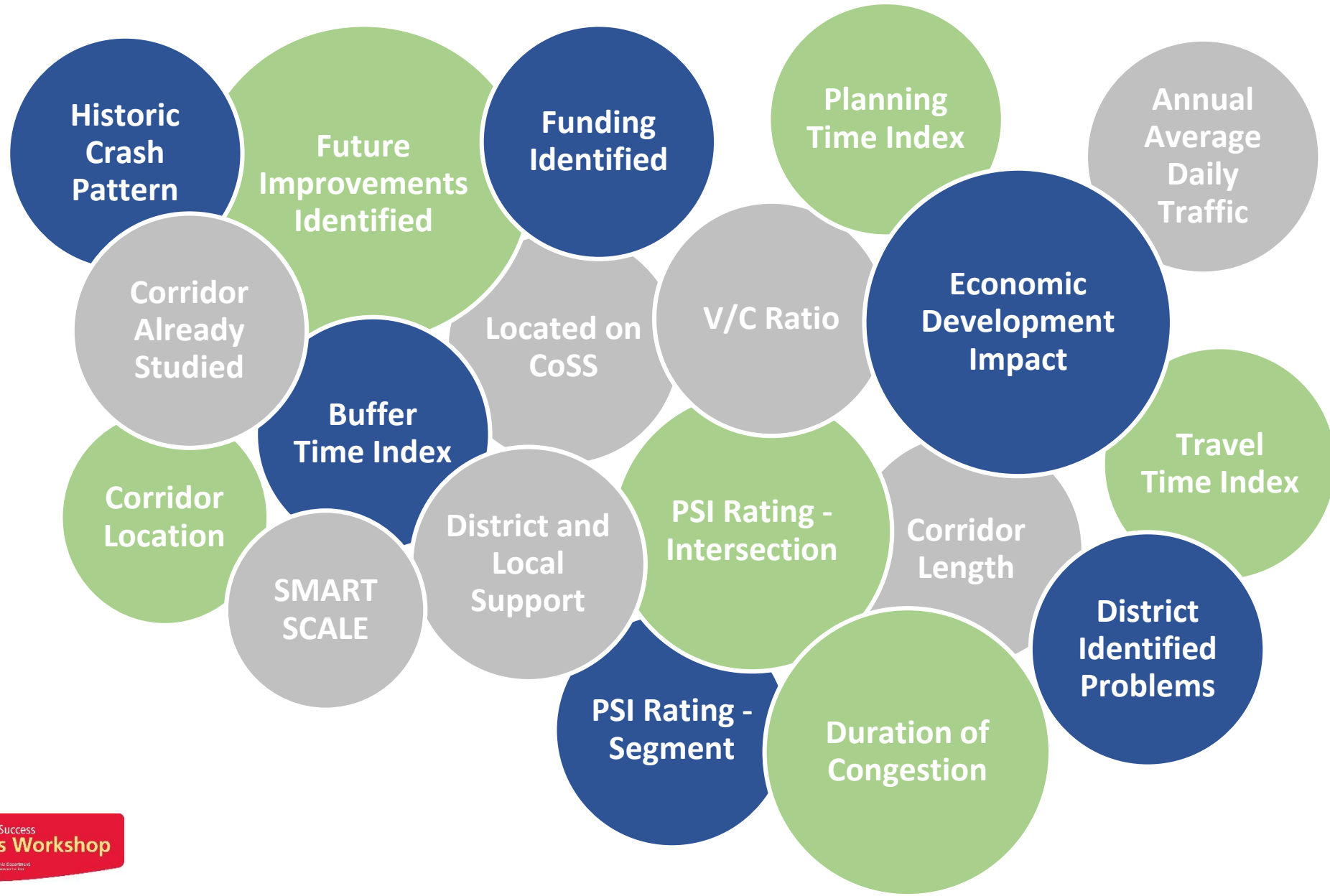
Overall Goal: Developing Candidate Projects



Resources Available to Support Project Development

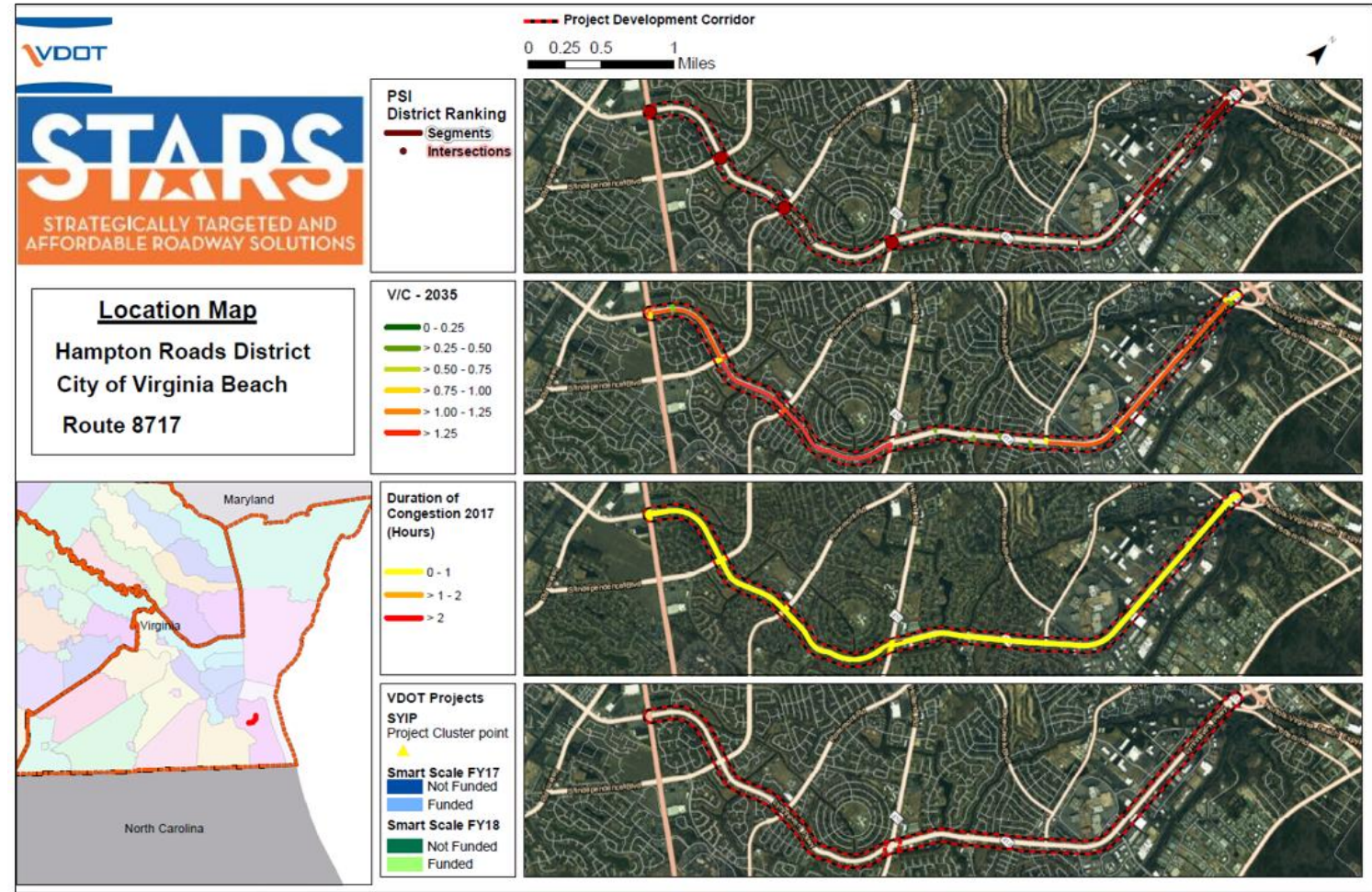
- Data Sources:
 - Crashes/Potential Safety Improvements (VDOT Crash Data)
 - Capacity/Congestion/Counts (VDOT Traffic Data)
 - Travel Time/Speeds (INRIX)
- Resources
 - Pathways for Planning
 - Virtual Public Involvement
- VDOT Programs
 - Arterial Preservation Program
 - Strategically Targeted, Affordable Roadway Solutions (STARS)
 - Corridor Studies
 - Bicycle and Pedestrian Program / Safe Routes to School
 - Transportation Demand Management Program (Park and Ride)

Data Resources:



Data Resources: Supporting Project Development

- SMART SCALE = Data Driven Process
 - VDOT can provide mapping of key performance metrics
 - Correlating SMART SCALE applications to issues is the first step to successful applications
- Using data for other funding programs
 - Not a requirement, but can help
 - Makes applications more defensible

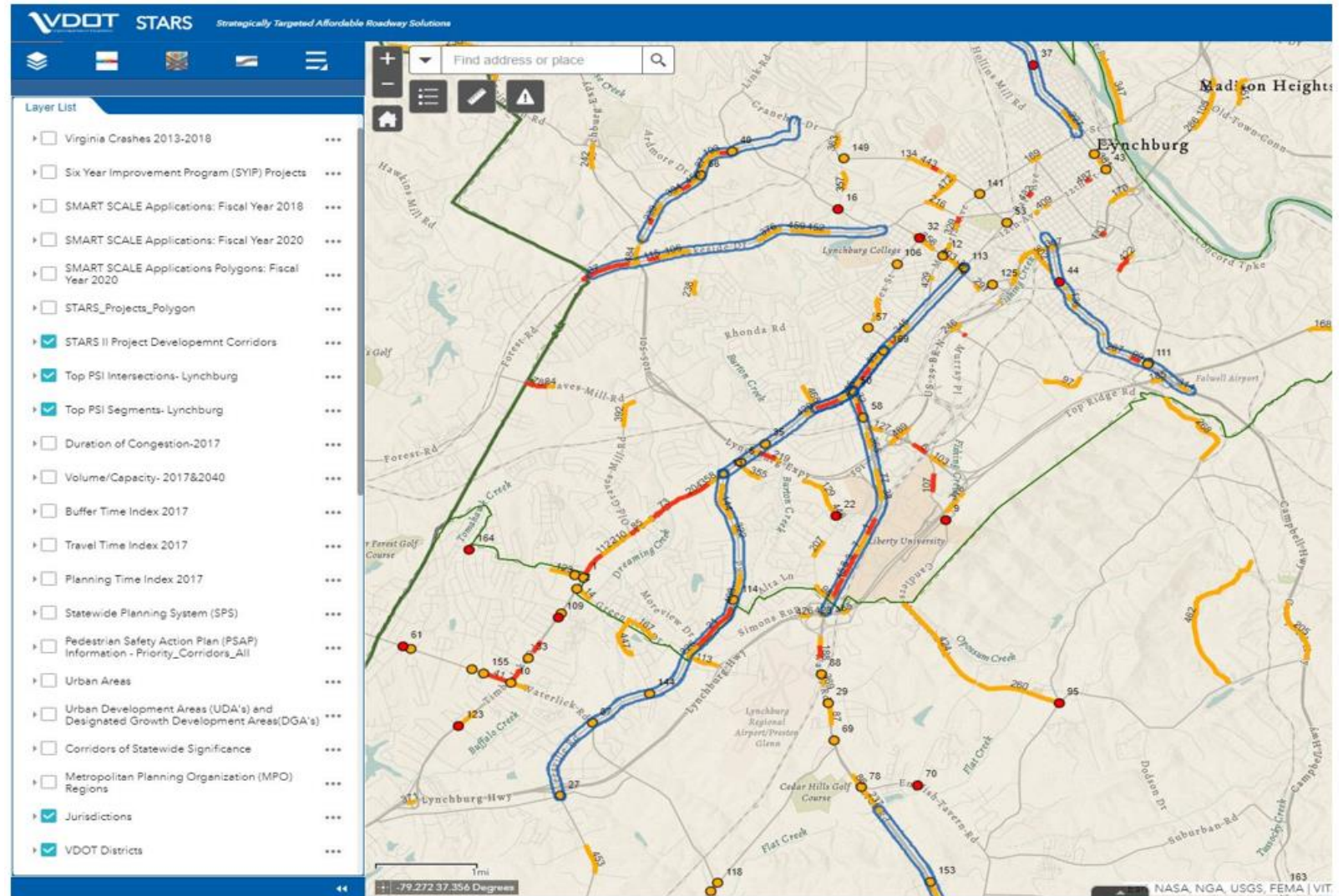


Data Resources: Supporting Project Development

- Information shared at Spring SYIP meetings
- Information is available on ArcGIS Online

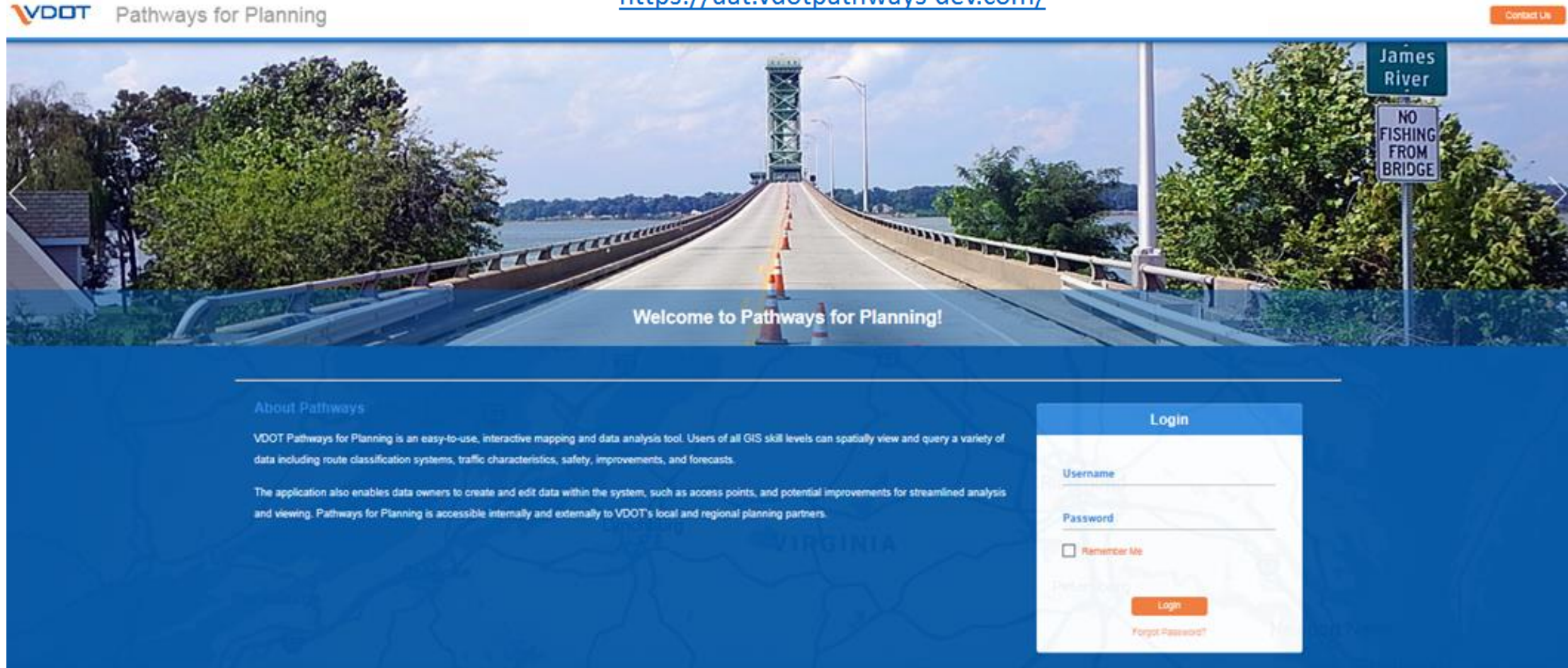
Available for download and use at:

- <https://www.arcgis.com/home/webmap/viewer.html?webmap=2a3bace1b7994f66b33a5f5a7f78ca06>



Data Resources: Pathways 4 Planning

- <https://uat.vdotpathways-dev.com/>



VDOT Pathways for Planning

Contact Us

Welcome to Pathways for Planning!

About Pathways

VDOT Pathways for Planning is an easy-to-use, interactive mapping and data analysis tool. Users of all GIS skill levels can spatially view and query a variety of data including route classification systems, traffic characteristics, safety, improvements, and forecasts.

The application also enables data owners to create and edit data within the system, such as access points, and potential improvements for streamlined analysis and viewing. Pathways for Planning is accessible internally and externally to VDOT's local and regional planning partners.

Login

Username

Password

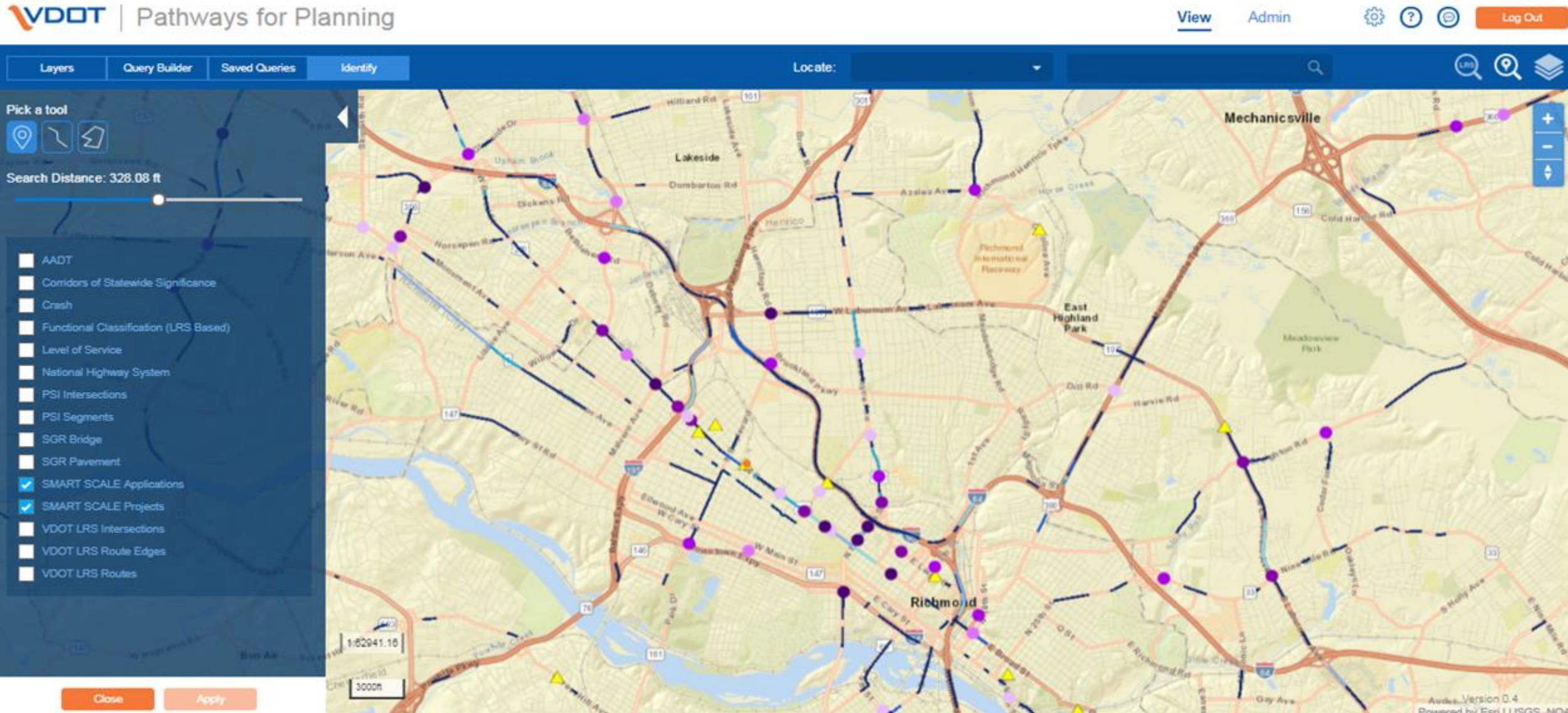
☐ Remember Me

Don't Log In

Login

Forgot Password?

Data Resources: Pathways 4 Planning



Data Resources Supporting Project Development

Takeaways:

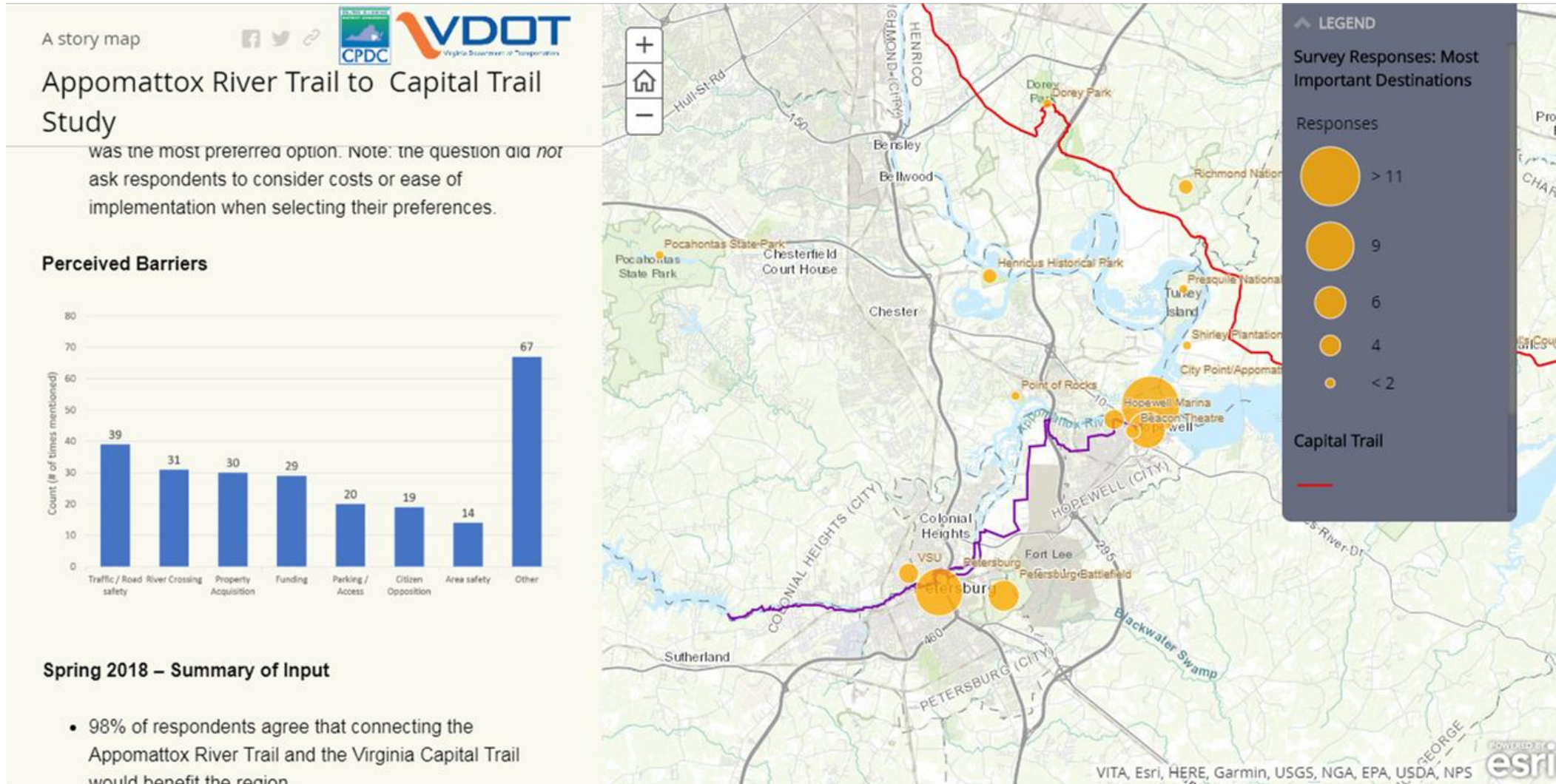
- VDOT is data rich
- Correlating proposed projects with congestion and safety issues is a key first step
- VDOT can assist localities and regions with the next step-analyzing the problems and developing solutions

Resource: Public Engagement

- VDOT has adopted a policy requiring public involvement in all planning studies
- Virtual Public involvement capabilities using MetroQuest software
- Working to boost awareness of studies, information and public meetings via social media






















Virtual Public Involvement



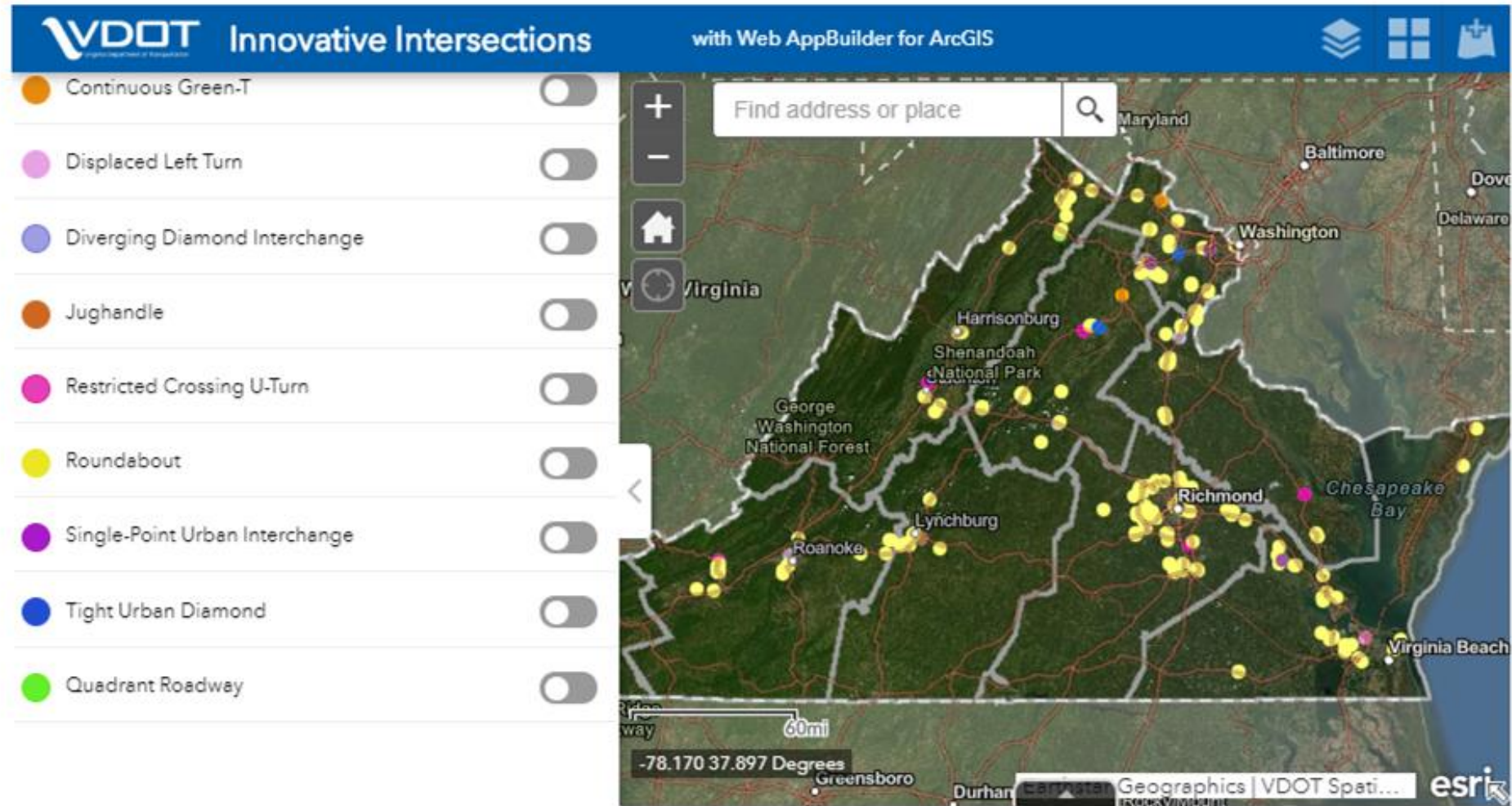
Resource: Innovative Intersections and Interchanges

- <http://www.virginiadot.org/innovativeintersections/>
- Designs that modify vehicle, pedestrian and bicycle movements at conventional intersections to provide new options to reduce delay, increase efficiency and provide safer travel for all road users.

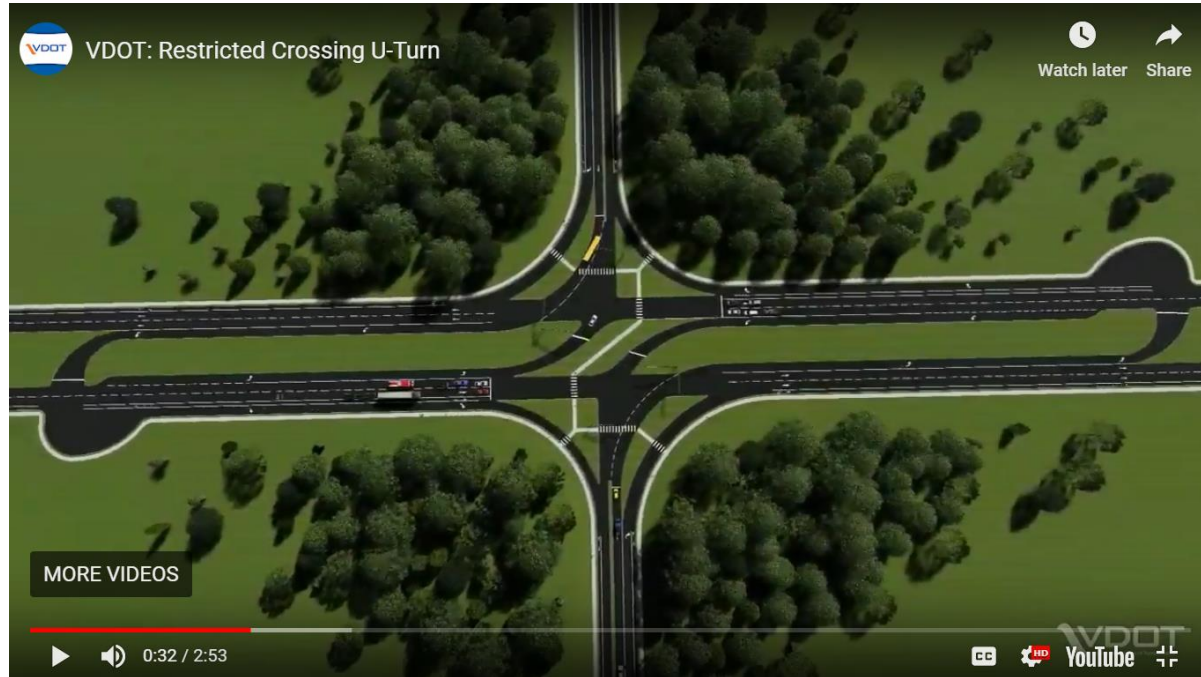
Intersections	
 Bowtie	 Quadrant Roadway (QR)
 Center Turn Overpass	 Restricted Crossing U-Turn (RCUT)
 Continuous Green-T (CGT)	 Roundabout
 Displaced Left Turn (DLT)	 Mini Roundabout
 Echelon	 Single Loop
 Median U-Turn (MUT)	 Split Intersection

Interchanges	
 Contraflow Left	 Michigan Urban Diamond (MUD)
 Displaced Left Turn (DLT) Interchange	 Single-Point Urban Interchange (SPUI)
 Diverging Diamond Interchange (DDI)	 Single Roundabout
 Double Roundabout	

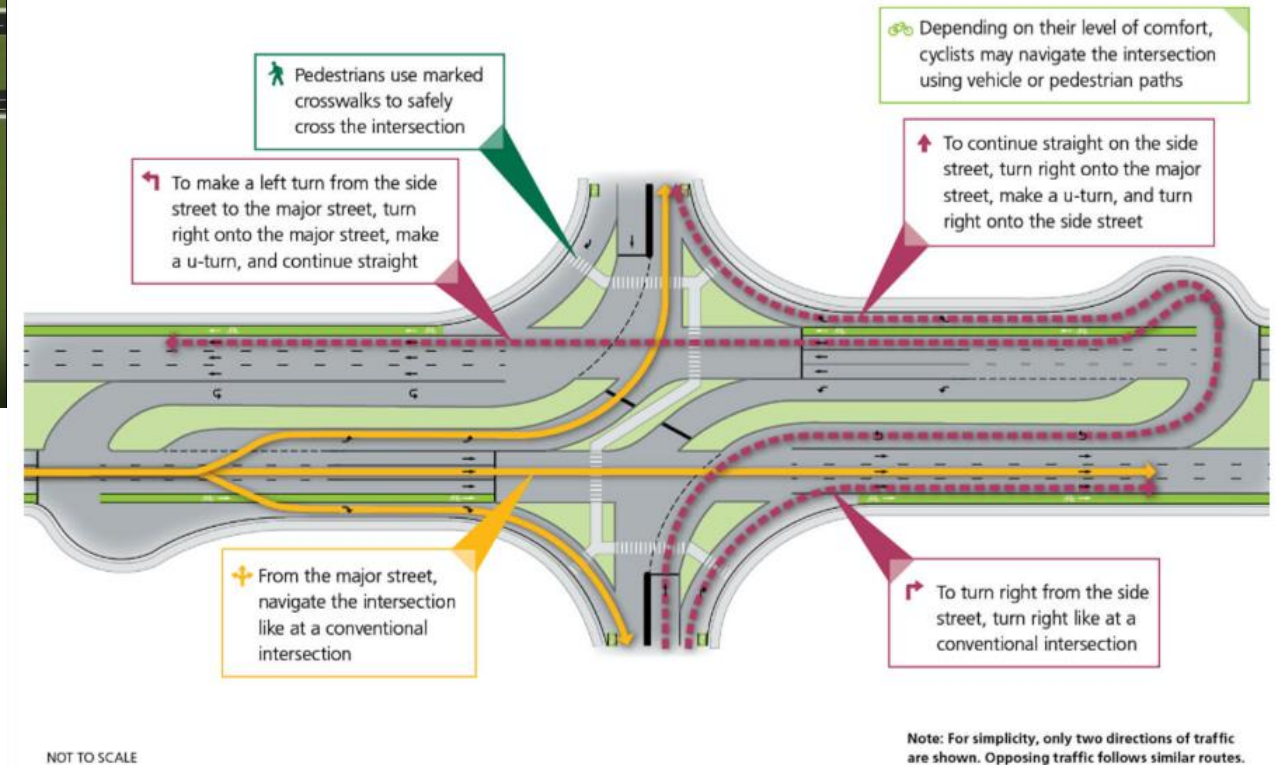
Innovative Intersections Interactive Map



Resources



VJuST VDOT Junction Screening Tool



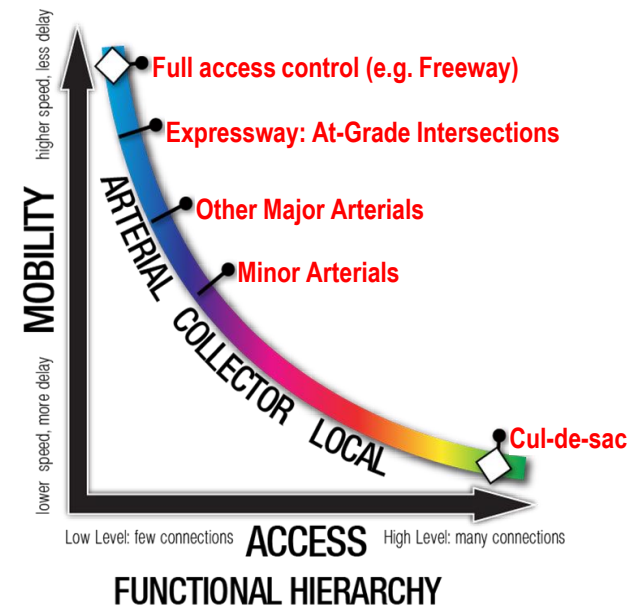
Program Resources:



- Participation is voluntary and can yield significant benefits:
 - Encourages localities and VDOT to adopt a cooperative approach on access
 - Increases safety, throughput and reduces delay- local economic development goals are integrated into each plan
 - Improvements are identified and captured in plans
 - Documentation available for SMART SCALE, RSTP, TAP, HSIP and other funding program applications
 - Concepts are vetted- looking for greatest ROI
 - Program has a high success rate in getting projects funded

Slow Erosion of Safety and Capacity

- Main street character
- Direct access at site level
- Difficult to plan and manage access at the site level
- Traffic signal proliferation
- Promote local economy at the expense of safety, capacity and mobility



ARTERIAL 
PRESERVATION PROGRAM

Why This Matters

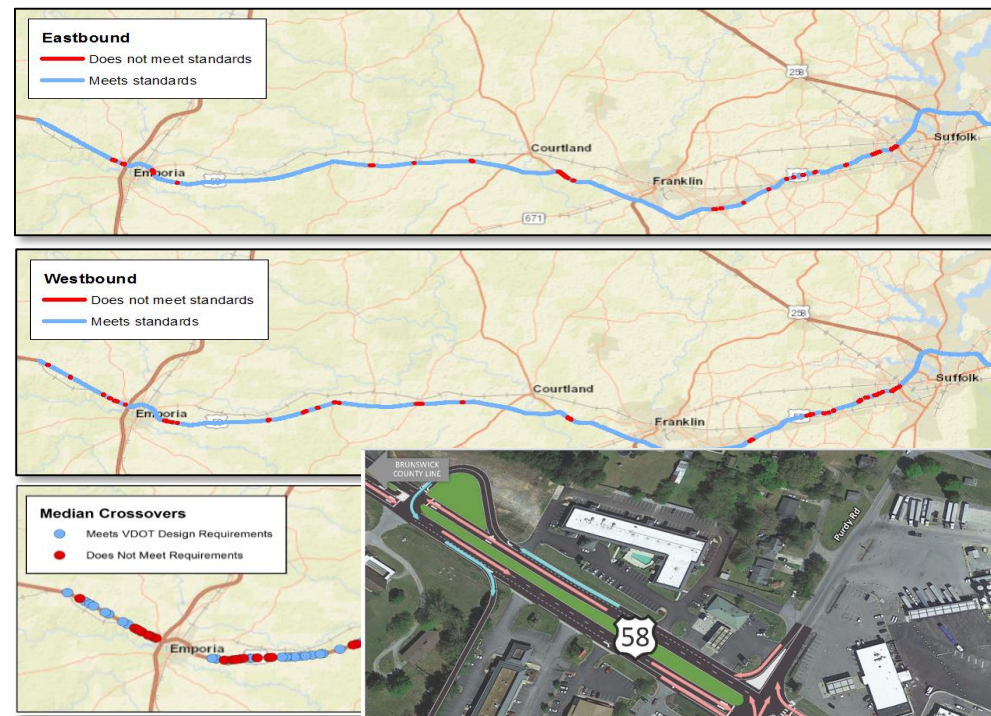
- Degradation of safety and capacity
- Forced to “Buy back” capacity
- Limited funding

We need to protect our investments by treating safety and capacity as finite resources



Methodology

- Data Compilation
- Segmentation
 - Step 1: Initial data screening
 - Step 2: Local input refinement
- Traffic Count Data
- Traffic Forecasting
- Alternative Development
- Public Engagement
- Recommendations and Implementation Strategy



Key Components of Every Plan

- Framework Document
- Thorough Public Involvement Process
- Diverse Stakeholder Team
- Focus on “fundable” solutions
- Useful deliverables

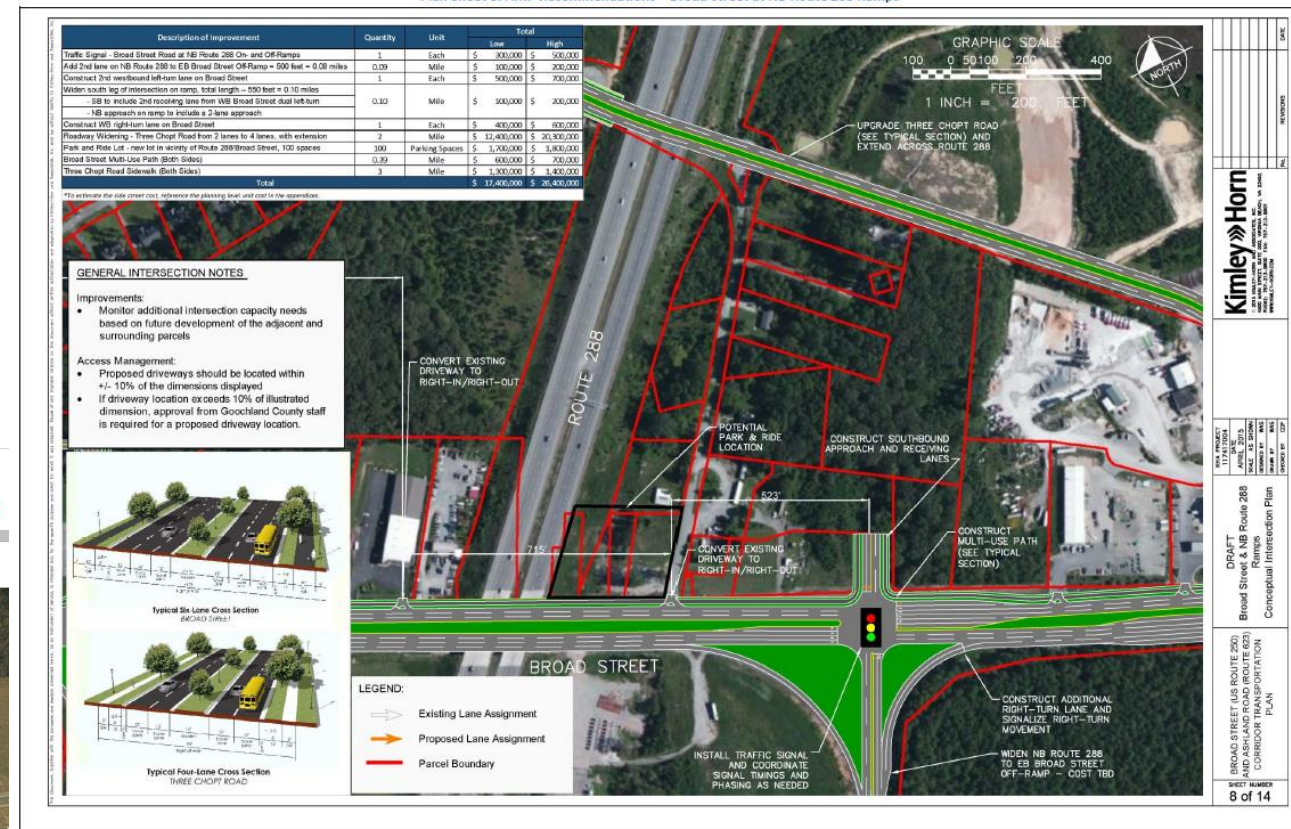
Typical Stakeholder Team

- Local Jurisdiction Planning, Public Works and Economic Development Staff
- VDOT Planning, Traffic Engineering, Land Development, Design and Resident Engineer Staff
- Additional agency representatives such as National Park Service, Transit Agencies, MPO or PDC staff and other relevant stakeholders

Arterial Preservation Program Plans

- Completed Plans
 - Route 250 and Route 623 in Goochland County
 - Route 3 in Spotsylvania County
 - Route 106 in New Kent County
 - US 301 and Route 207 in King George County and Caroline County
 - Route 3 in Orange County
- Plans in Development
 - US 220 from Cave Spring to North Carolina Border
 - US 29 from Route 460 to City of Danville
 - US 460 from I-81 to Nottoway County
 - US 58 in Brunswick County and Mecklenburg County
 - US 58 from City of Emporia to City of Suffolk

Recent Successes



- FY18 and 20 SMART SCALE funding secured on over \$40 M in arterial plan improvements

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Terrell Hughes, PE- VDOT Assistant Director of Planning

Program Resources:



Program to develop solutions to reduce crashes and congestion bottlenecks using a data-driven approach

Crash hotspots
Speed data
AADT data

Use this information
together to identify
locations with safety and
congestion challenges

Overall goal of STARS is to develop solutions that can be programmed in the VDOT Six-Year Improvement Program (SYIP)

Project Readiness Challenge

- Before SMART SCALE, projects could receive funding allocations and project details could be developed during PE phase
- Under SMART SCALE, projects need to be adequately planned and developed
- Project details are needed to 1) understand the scope, 2) develop an accurate cost estimate and 3) calculate the expected benefits
- Change to project scope and/or estimate after it is funded could trigger re-evaluation and rescoreing
- More complex projects require more thorough planning
- Often Overlooked:

Turn Lanes **Stormwater** *Utilities* **Pedestrian Accommodations**
Intersection Improvements **Median Type**
Access Management *Transit Improvements*

STARS Bridging the Gap

- Planning linked to operations/ITS, safety and design
- Develop comprehensive, innovative and cost-efficient transportation solutions
- Localities engaged early in the planning process
- Project risks identified
- Readiness improved for project implementation



The STARS Team

VDOT Districts and Residencies

- Coordinate with localities, MPOs, and PDCs
- Submit STARS applications
- Lead STARS projects

VDOT Central Office

- Provides program oversight, data analysis, and application review
- Provide technical support

Consultants

- Provide project support

Localities / MPOs /PDCs

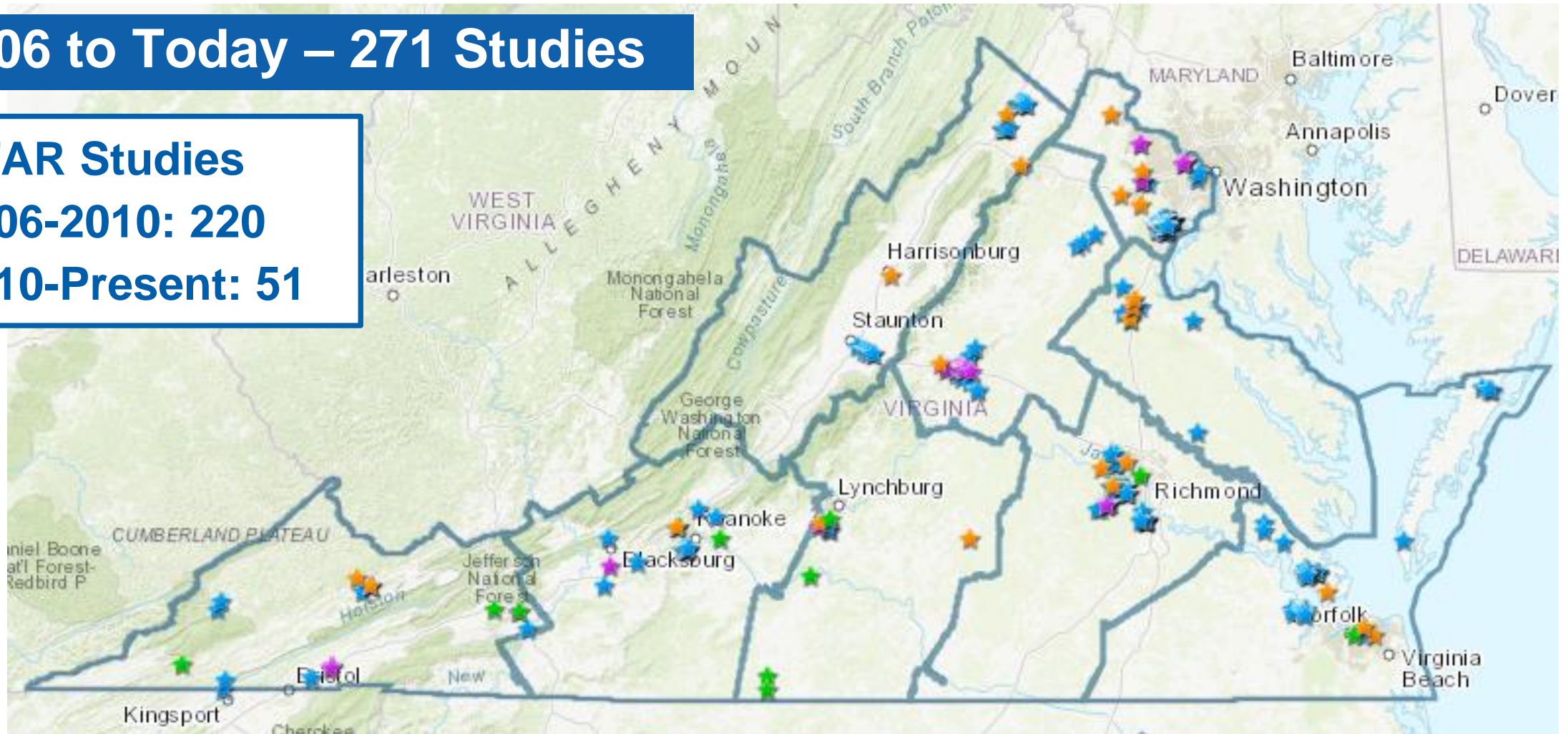
- Participate as a stakeholder



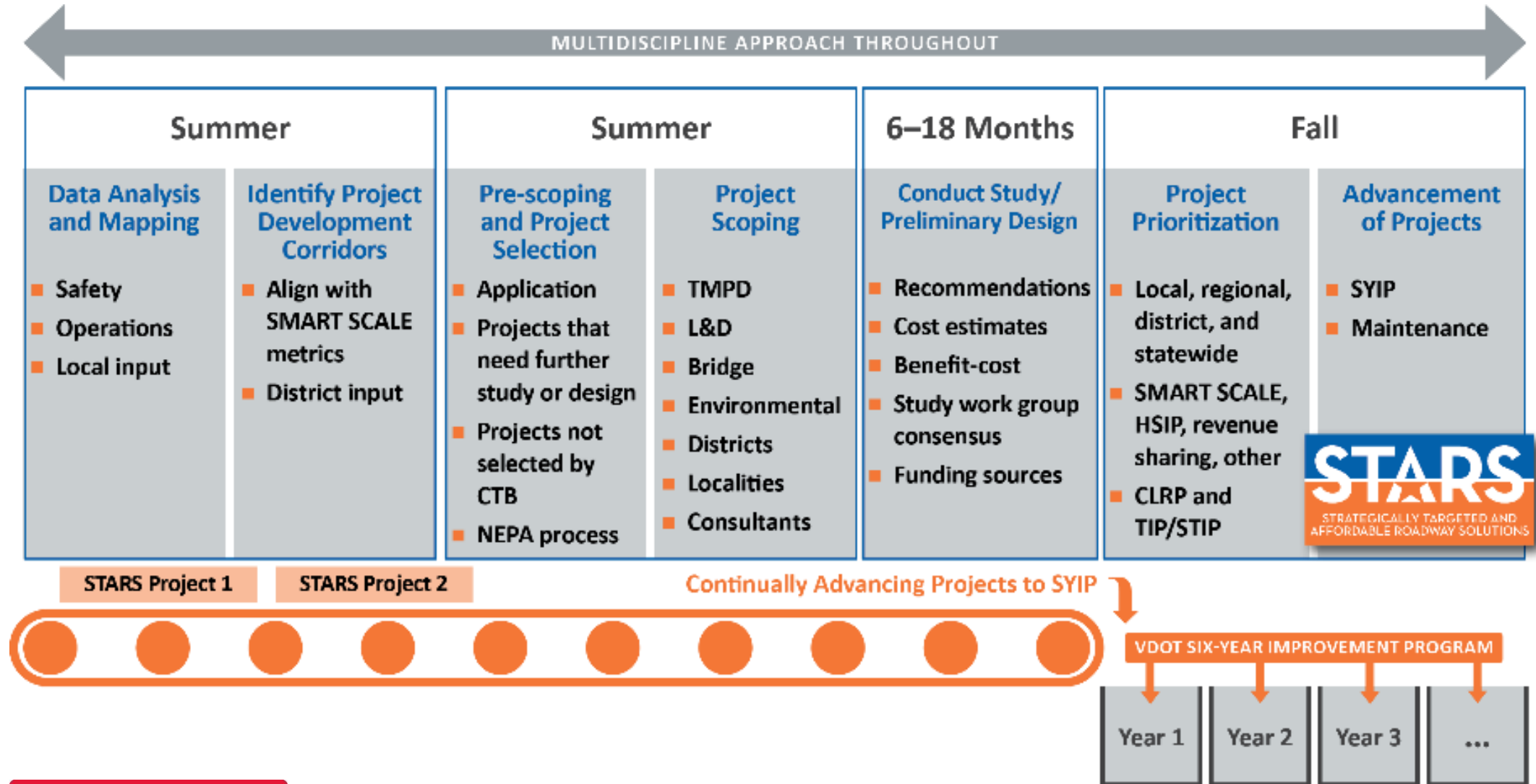
STARS Around Virginia

2006 to Today – 271 Studies

STAR Studies
2006-2010: 220
2010-Present: 51



STARS Project Development Cycle



STARS – Conveying Information Concisely

STARS Project Summary Sheets

The STARS one-page project summary sheets have proven to be an effective tool for summarizing several important project features, especially those factors that are required in many of the potential funding applications.

CONCEPT C – CANDLERS MOUNTAIN ROAD AUXILIARY LANES AND RAMP REALIGNMENT
INSTALL AUXILIARY LANES AND REALIGN NORTHBOUND ENTRANCE RAMP AT CANDLERS MOUNTAIN ROAD INTERCHANGE

IMPACT DESCRIPTION

PROJECT BENEFITS

PROJECT GRAPHIC

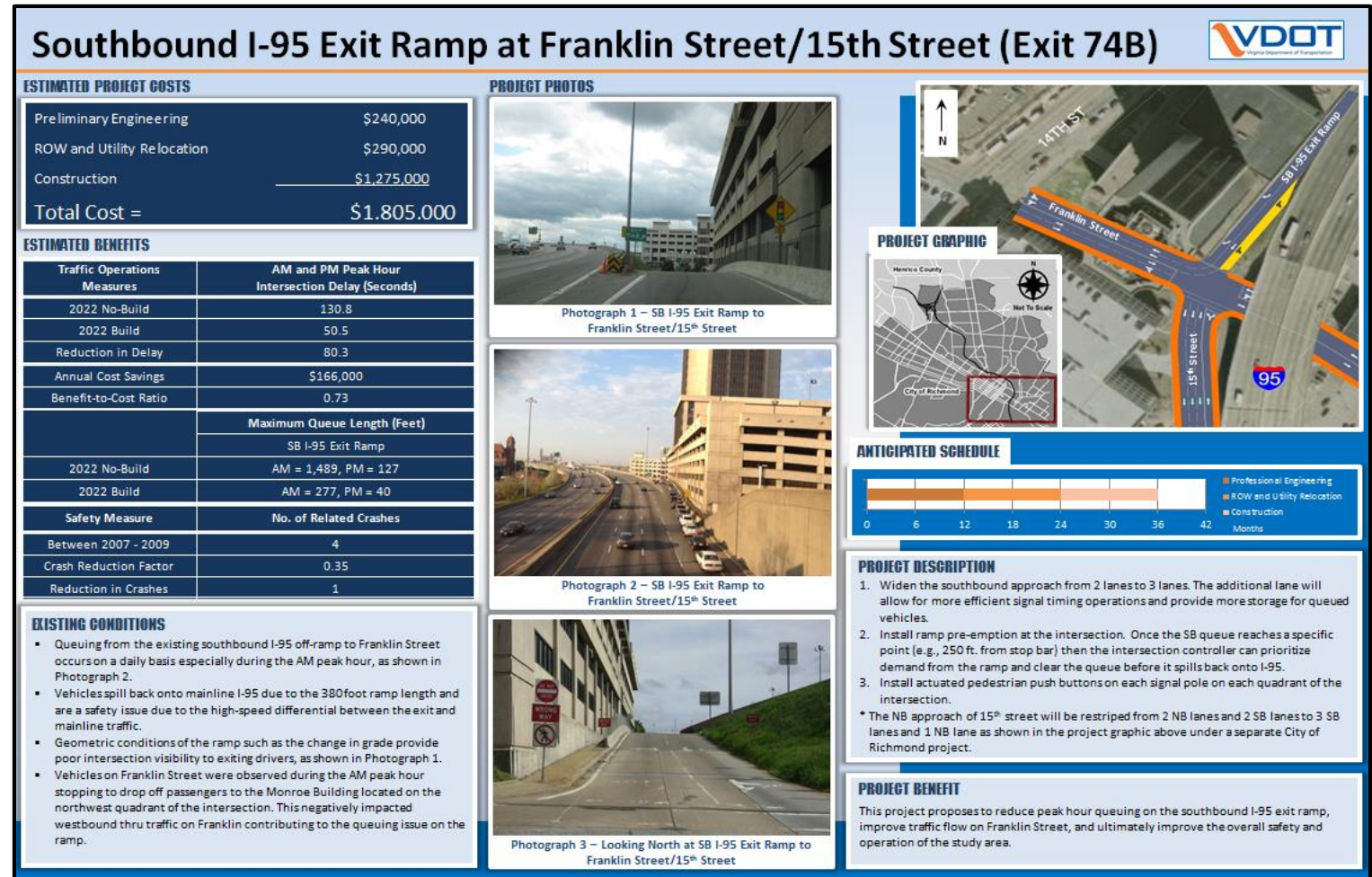
LOCATION MAP

- ★ Key existing safety and/or congestion issues identified
- ★ Project description with a graphical representation of the improvement
- ★ Project schedule summarized in three categories: preliminary engineering, right-of-way and utilities, and construction
- ★ Summarized planning level cost estimate
- ★ Benefits of the project in terms of safety improvement and/or congestion relief

STARS Example

I-95 Southbound Exit 74B

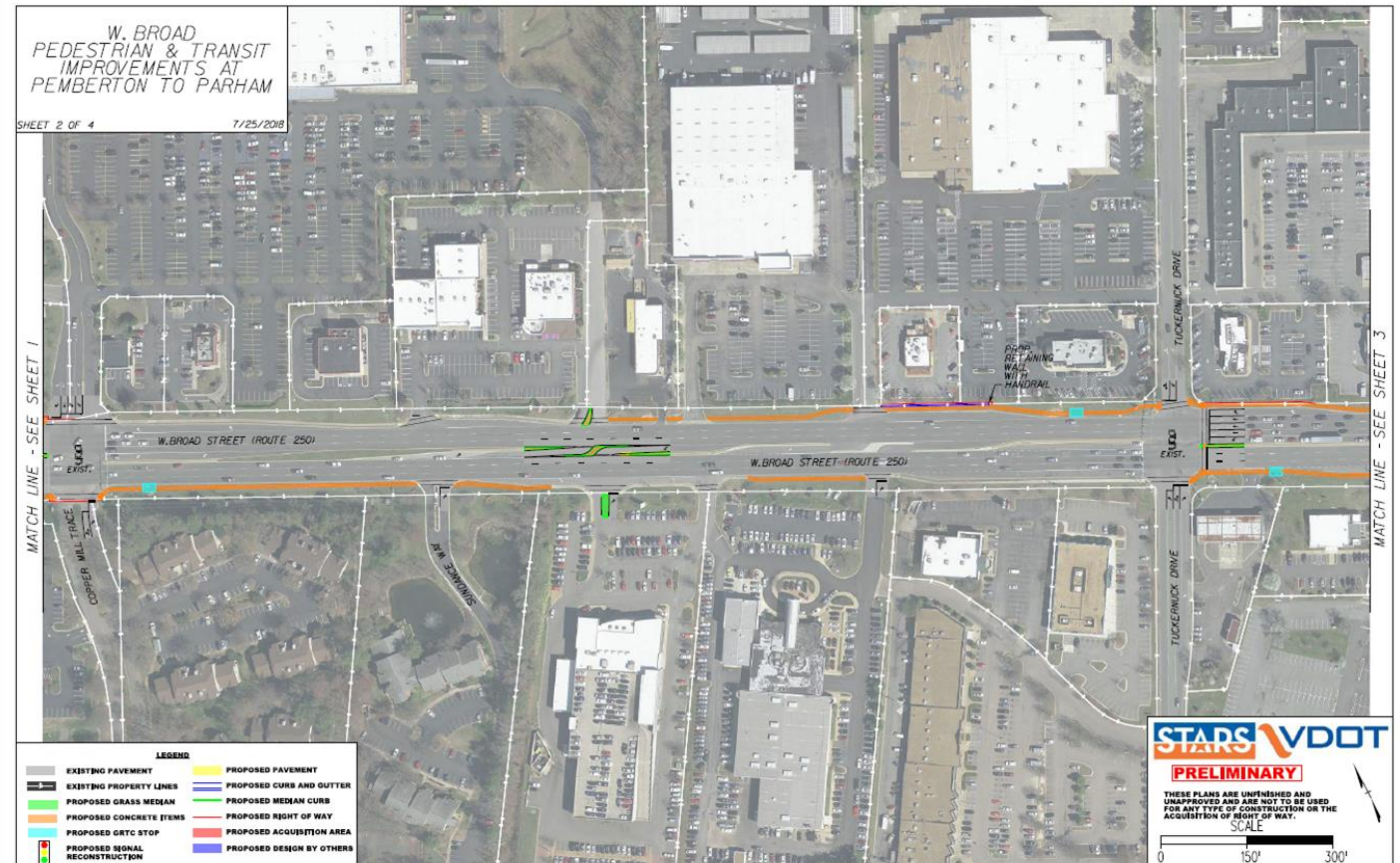
- Adding an additional lane to the I-95 SB off-ramp and restriping 15th Street in the City of Richmond to accommodate the additional lane
- Study coordination between VDOT, City of Richmond, Henrico County, FHWA and GRTC, and RRPDC (PlanRVA)
- Supported successful HB2 (SMART SCALE) funding application



STARS Example

West Broad Street Pedestrian and Transit Improvements

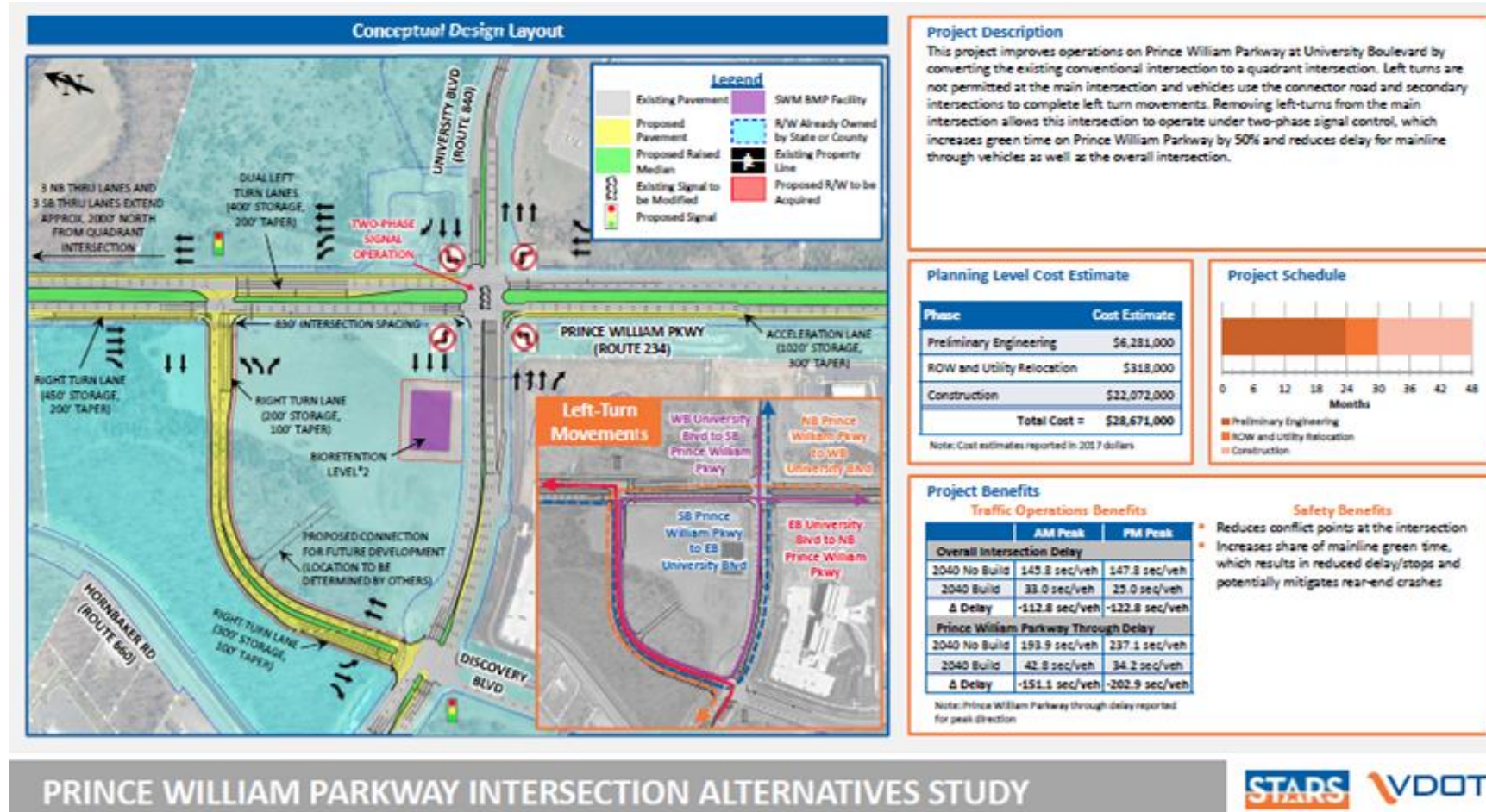
- Sidewalk, access management, and bus transit facility improvements along West Broad Street between Pemberton Road and Parham Road in Henrico County
- Study coordination between VDOT, Henrico County, GRTC, and DRPT
- Supported successful SMART SCALE funding application



STARS Example

Prince William Parkway at University Boulevard

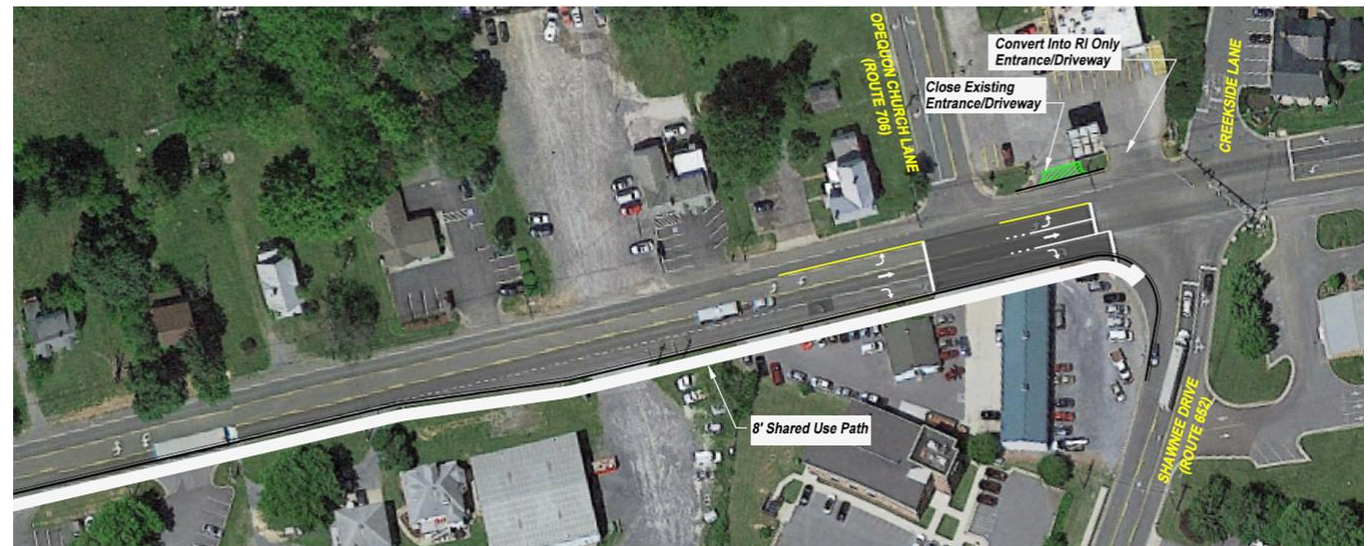
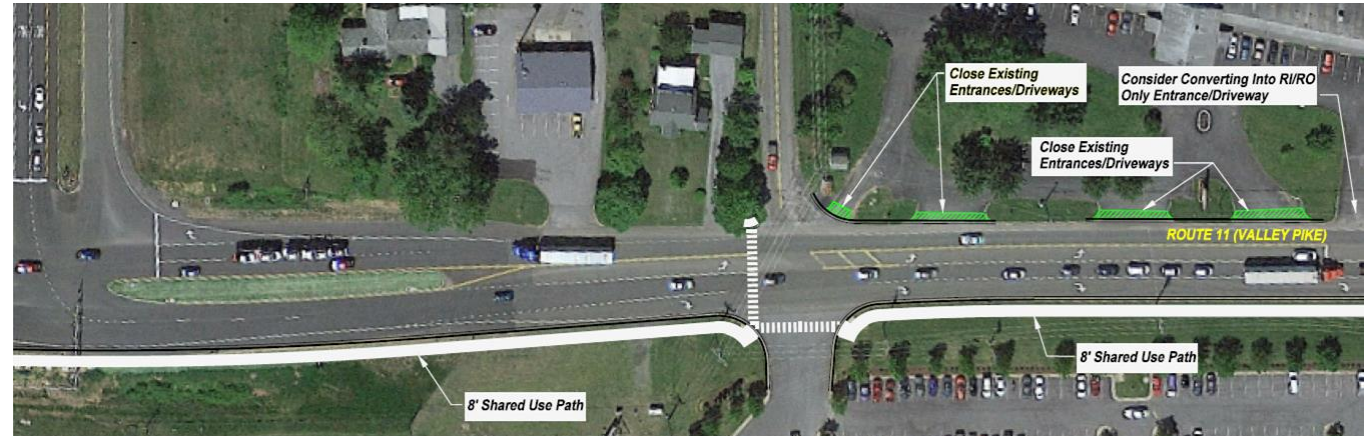
- Innovative Intersections were evaluated and selected as the preferred alternative at multiple locations along Prince William Parkway
- Study coordination between VDOT and Prince William County
- Supported successful NVTa funding application



STARS Example

Route 11 (Valley Pike / Valley Avenue)

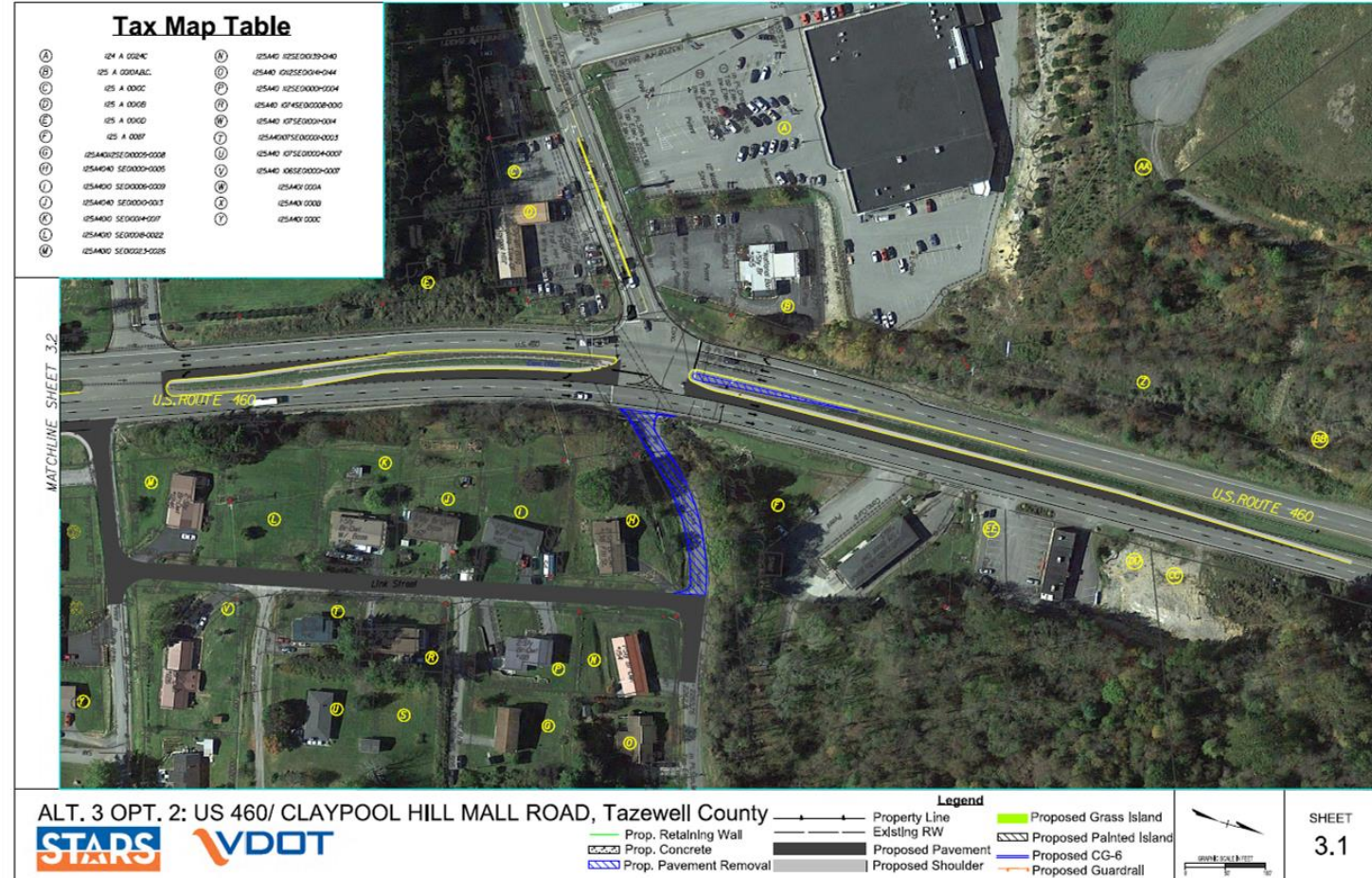
- Access management measures, bicycle and pedestrian accommodations, and intersection improvements
- Study coordination between VDOT, Frederick County, City of Winchester, and WinFred MPO
- Supported successful SMART SCALE funding application



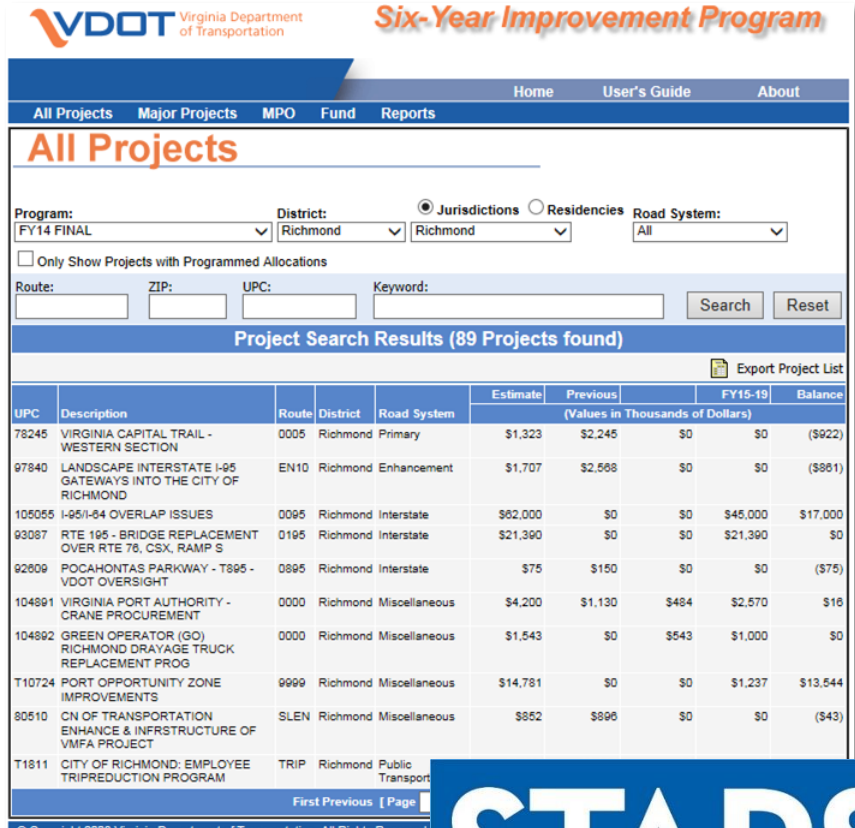
STARS Example

US 460 / Claypool Hill Mall Road

- Intersection improvements and access management improvements
- Study coordination between VDOT, Tazewell County, and Town of Richlands
- Supported successful SMART SCALE funding application



Why are Arterial Preservation and STARS Important to Project Delivery?



VDOT Virginia Department of Transportation **Six-Year Improvement Program**

Home User's Guide About

All Projects Major Projects MPO Fund Reports

All Projects

Program: FY14 FINAL District: Richmond Jurisdictions Residencies Road System: All

☐ Only Show Projects with Programmed Allocations

Route: ZIP: UPC: Keyword: Search Reset

Project Search Results (89 Projects found) Export Project List

UPC	Description	Route	District	Road System	Estimate	Previous	FY15-19	Balance
78245	VIRGINIA CAPITAL TRAIL - WESTERN SECTION	0005	Richmond	Primary	\$1,323	\$2,245	\$0	(\$922)
97840	LANDSCAPE INTERSTATE I-95 GATEWAYS INTO THE CITY OF RICHMOND	EN10	Richmond	Enhancement	\$1,707	\$2,568	\$0	(\$861)
105055	I-95/I-64 OVERLAP ISSUES	0095	Richmond	Interstate	\$62,000	\$0	\$0	\$17,000
93087	RTE 195 - BRIDGE REPLACEMENT OVER RTE 76, CSX, RAMP S	0195	Richmond	Interstate	\$21,390	\$0	\$0	\$21,390
92609	POCAHONTAS PARKWAY - T895 - VDOT OVERSIGHT	0895	Richmond	Interstate	\$75	\$150	\$0	(\$75)
104891	VIRGINIA PORT AUTHORITY - CRANE PROCUREMENT	0000	Richmond	Miscellaneous	\$4,200	\$1,130	\$484	\$2,570
104892	GREEN OPERATOR (GO) RICHMOND DRAYAGE TRUCK REPLACEMENT PROG	0000	Richmond	Miscellaneous	\$1,543	\$0	\$543	\$1,000
T10724	PORT OPPORTUNITY ZONE IMPROVEMENTS	9999	Richmond	Miscellaneous	\$14,781	\$0	\$0	\$1,237
80510	CN OF TRANSPORTATION ENHANCE & INFRASTRUCTURE OF VMFA PROJECT	SLEN	Richmond	Miscellaneous	\$852	\$898	\$0	(\$43)
T1811	CITY OF RICHMOND: EMPLOYEE TRIPREDUCTION PROGRAM	TRIP	Richmond	Public Transport				

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STARS

STRATEGICALLY TARGETED AND AFFORDABLE ROADWAY SOLUTIONS

Network for Success

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VDOT Virginia Department of Transportation

- Data driven process
- Prepares a source of current data
- Develops solutions that can be funded in the SYIP
 - SMART SCALE, HSIP, CMAQ, RSTP, Revenue Sharing
- Improves accuracy of cost estimates and schedules

ARTERIAL 
 PRESERVATION PROGRAM

Program Resource: Statewide Bicycle and Pedestrian Program

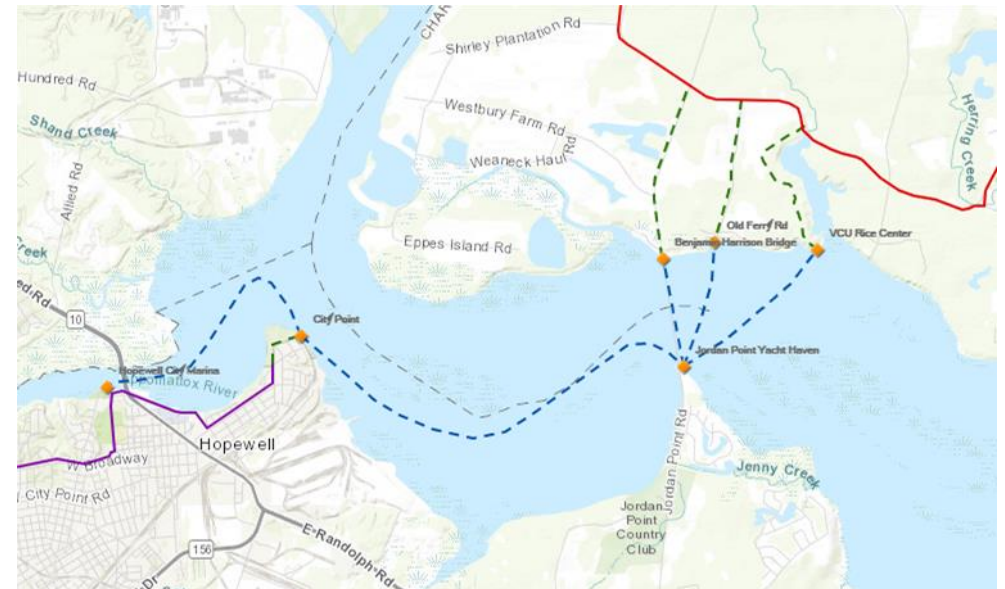
- Virginia Department of Transportation's (VDOT) Bicycle and Pedestrian Program has provided planning assistance to state and local transportation planners since it was established in the late 1970s.
- At VDOT, the program plays a leadership role in advancing bicycle and pedestrian accommodations throughout Virginia.
- <http://www.virginiadot.org/programs/bikeped/default.asp>
- Contact: John Bolecek
 - 804.371.4869
 - john.bolecek@vdot.virginia.gov



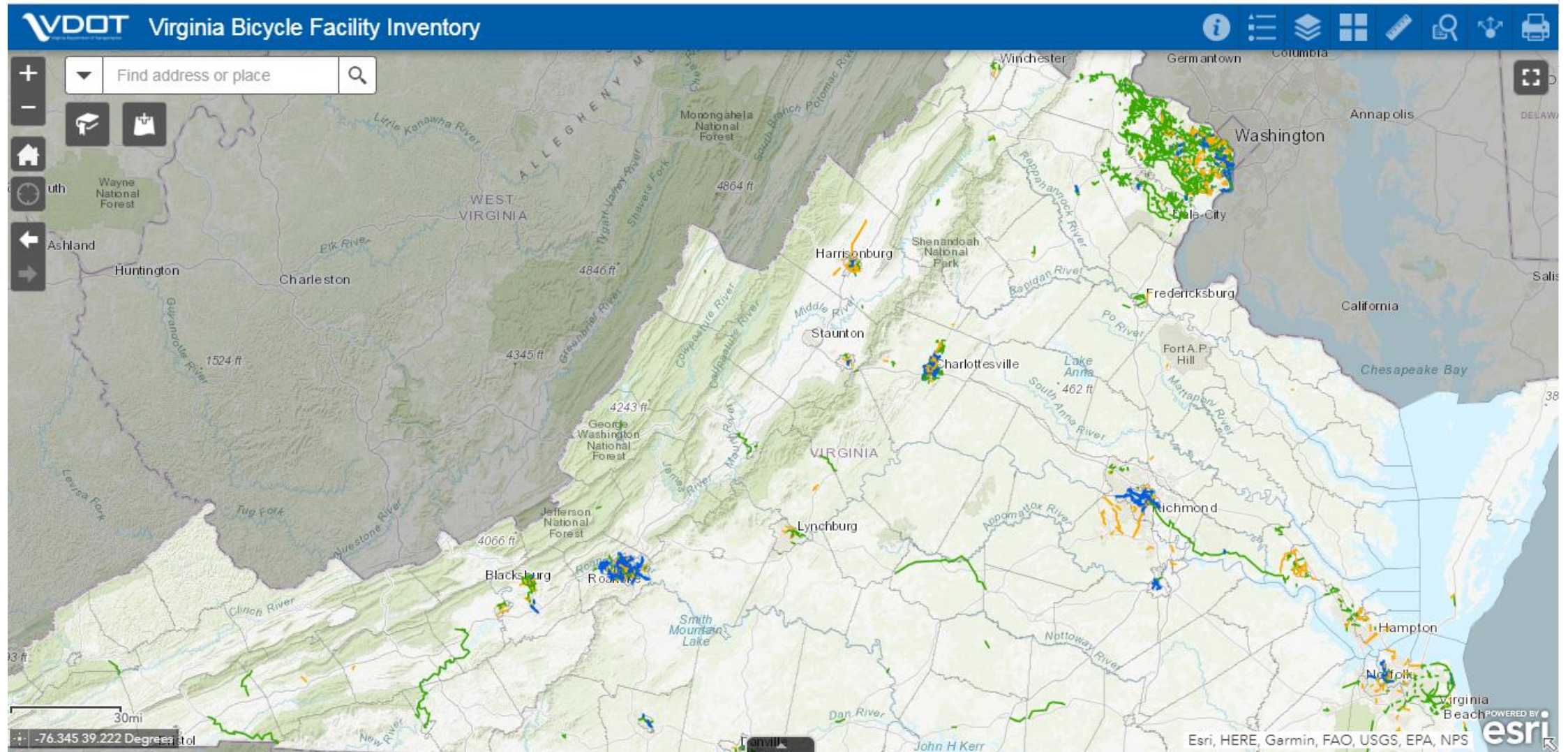
Statewide Bicycle and Pedestrian Program

Statewide Bicycle and Pedestrian Resources

- Technical Assistance
 - Bicycle and pedestrian studies
 - Grant application assistance
 - Studies and realignments of the U.S. Bicycle Route system
 - Bicycle and pedestrian counts on sidewalks, paths, and bike lanes (counter loaner program)
 - Mapping and GIS analysis
 - General Technical Assistance
- Resources
 - Statewide Bicycle and Pedestrian Advisory Committee
 - VDOT Active Transportation Newsletter
 - Bicycle facility inventory in all localities



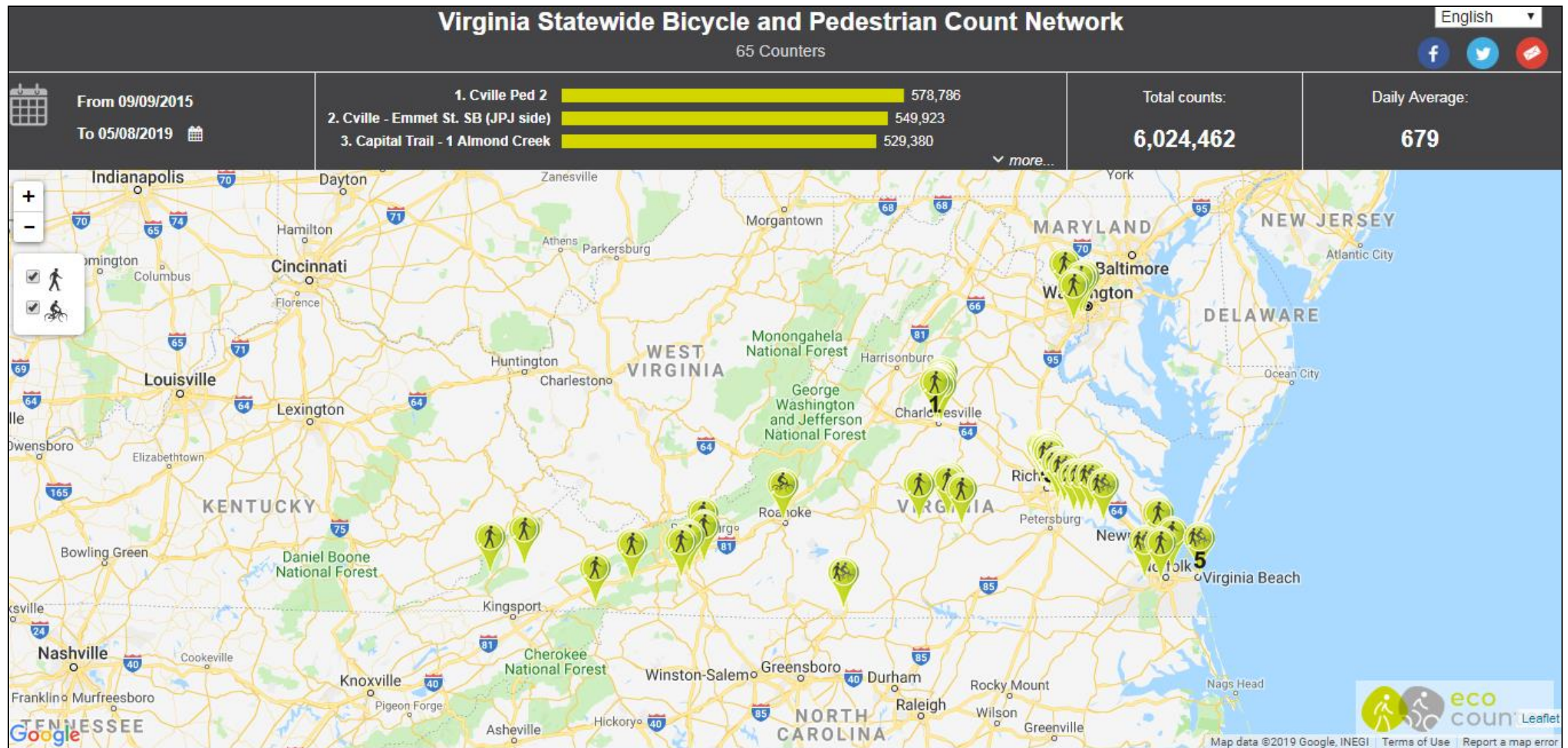
Statewide Bicycle Facility Inventory Interactive Map



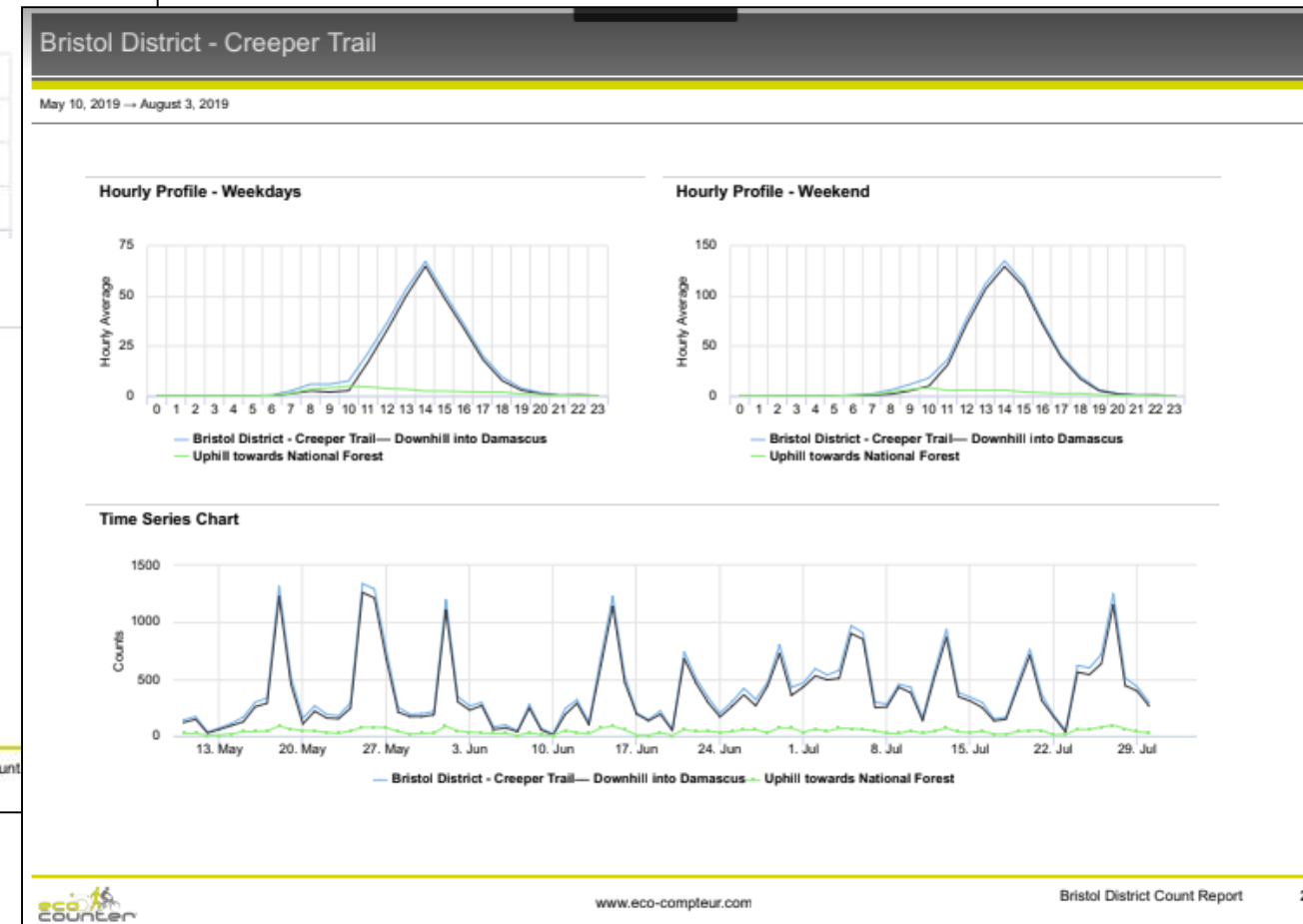
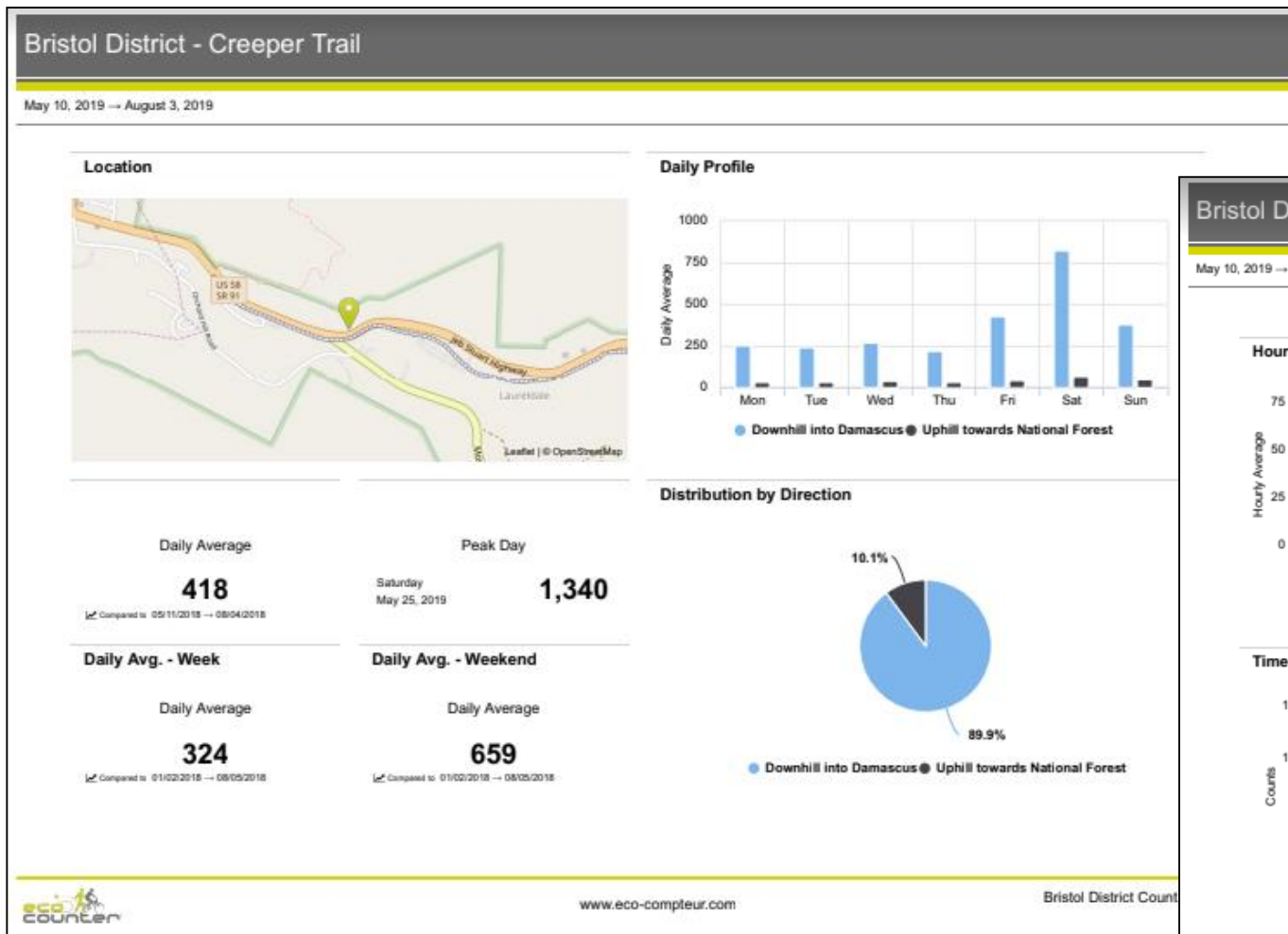
Bicycle and Pedestrian Count Program



Bicycle and Pedestrian Count Program



Bicycle and Pedestrian Count Program



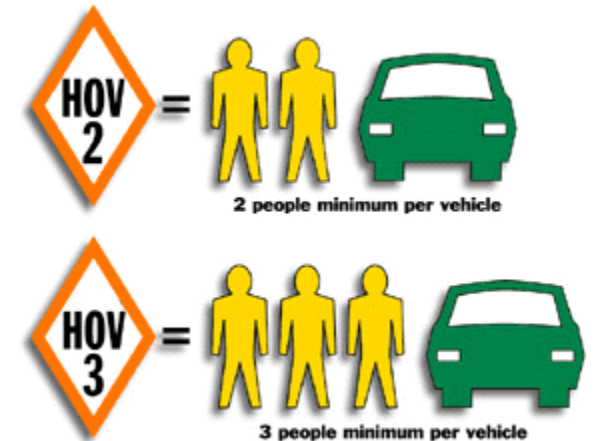
Program Resource: Transportation Demand Management Program

- Goal: Increase use of mode-sharing, park & ride lots, transit, carpooling and vanpooling
- VDOT/DRPT coordination on a variety of solutions outside of traditional operational and capacity improvements.
- <https://www.virginiadot.org/travel/parkride/faqs.asp>
- Contact: Olivia Mobayed
 - 804.786.3092
 - olivia.mobayed@vdot.virginia.gov



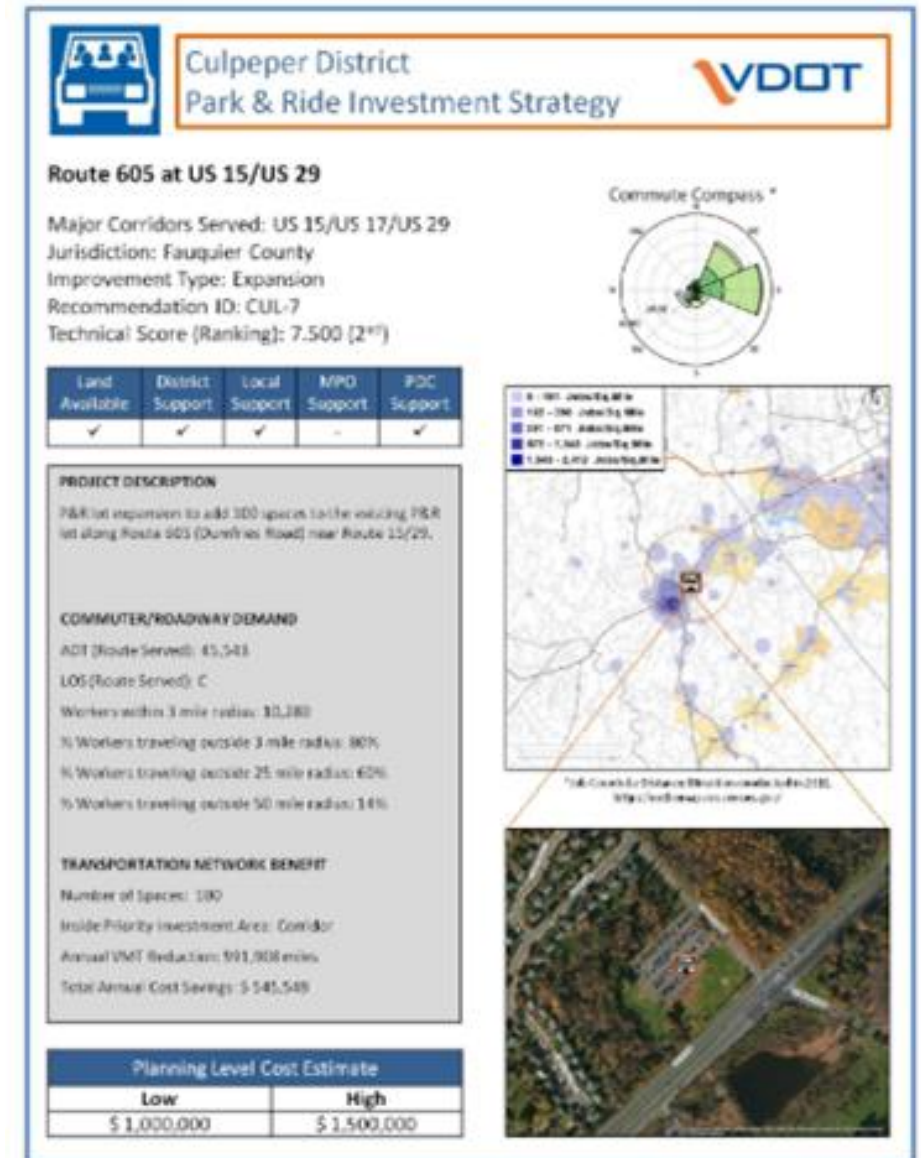
Transportation Demand Management

- Focus Areas
 - Park & Ride Lots
 - High Occupancy Vehicle Lanes
 - Slugging
 - Innovation / Technology
- VDOT/DRPT Coordination
 - Ridesharing
 - Vanpooling
 - Transit
 - Commuter Bus Services
 - Rail / Light-Rail

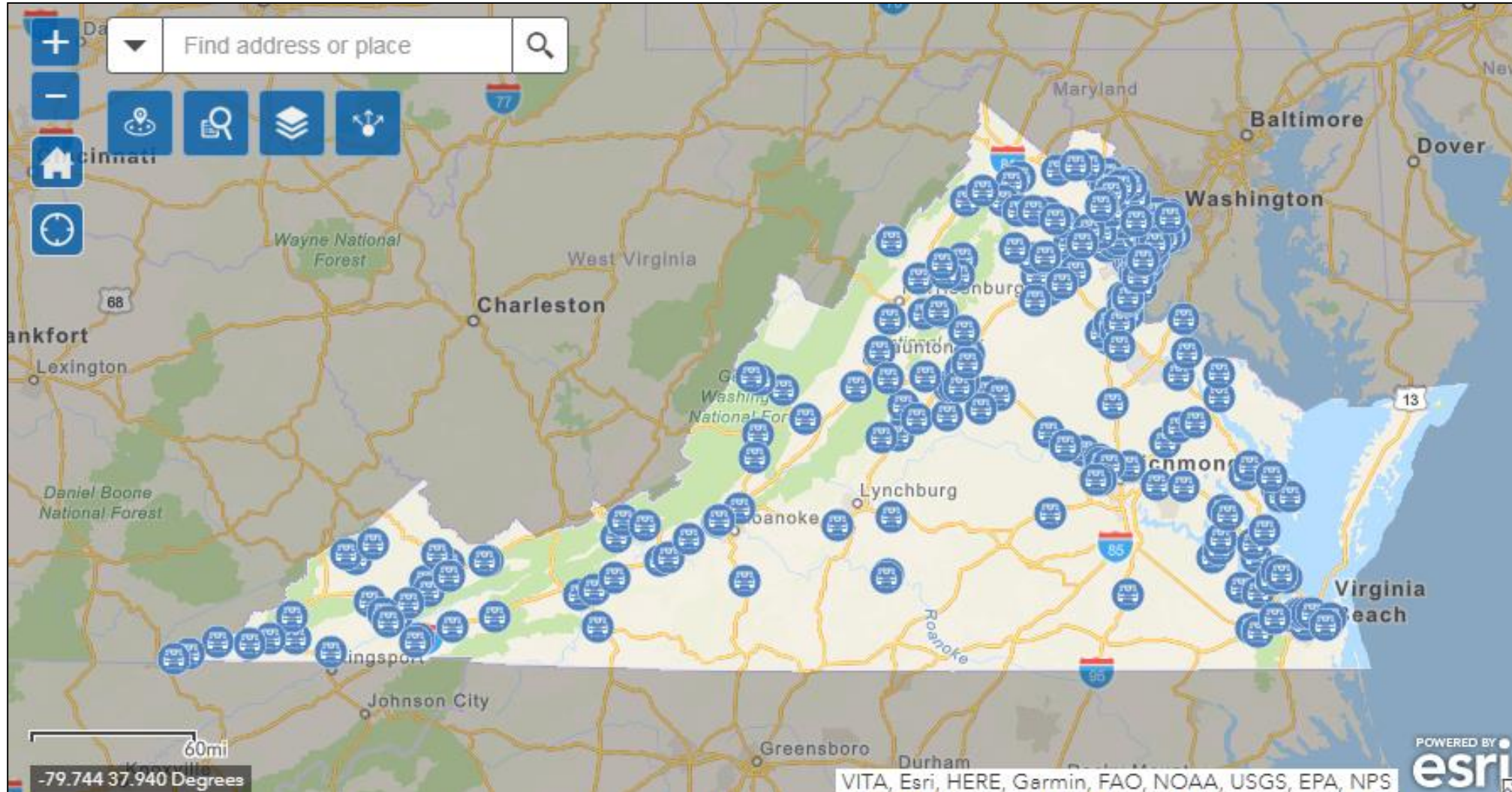


Park & Ride Resources

- Technical Assistance
 - Lot site identification assistance
 - Grant application assistance
 - Demand estimation (in development)
 - Leasing/agreement guidance (in development)
 - General Technical Assistance
- Resources
 - Park & Ride Design Guidelines
 - Park and Ride Investment Strategies
 - Lot and amenity inventory data/existing conditions/photos
 - Historical Lot occupancy and usage data



Park & Ride Lot Interactive Map



Park & Ride Design Guidelines



Include landscaping across approximately 10-20% of the lot

Utilize fixtures that shield the light source to minimize light pollution

Low Density Lot Overview

Program Resource: Safe Routes to School Program

- The purpose of SRTS is to:
 - Enable and encourage children, including those with disabilities, to walk and bicycle to school
 - Make bicycling and walking to school a safer and more appealing transportation alternative, thereby encouraging a healthy and active lifestyle from an early age
 - Facilitate the planning, development, and implementation of projects and activities that will improve safety and reduce traffic, fuel consumption, and air pollution near schools
- http://www.virginiadot.org/programs/ted_Rt2_school_pro.asp
- Contact: Kathy Graham, SRTS Coordinator
 - 804.786.4198
 - katherine.graham@vdot.virginia.gov



Safe Routes to School Resources

- Technical Assistance
 - SRTS Program Manager
 - Three Local Technical Assistance Coordinators (LTAC)
 - Assist local communities, VDOT Districts, and Statewide SRTS program
- Grants
 - Quick Start Mini-Grants
 - Walkabout Mini-Grants
 - Non-infrastructure Grants
- Events
 - Walk to School day and Bike to School Day coordination
 - Crossing Guard Appreciation Day



Mini-Grants



- Quick Start Mini-Grants

- Grants up to \$1000, offered six times per year
- Elementary or middle schools
 - Adult-supervised elementary or middle school groups or clubs
 - Adult-supervised high school groups/clubs that wish to partner with a nearby elementary or middle school
 - Faculty, staff, or parent volunteers at elementary or middle schools
 - Local governments and/or Tribal governments
 - Community-based or private non-profit organizations

- Walkabout Mini-Grants

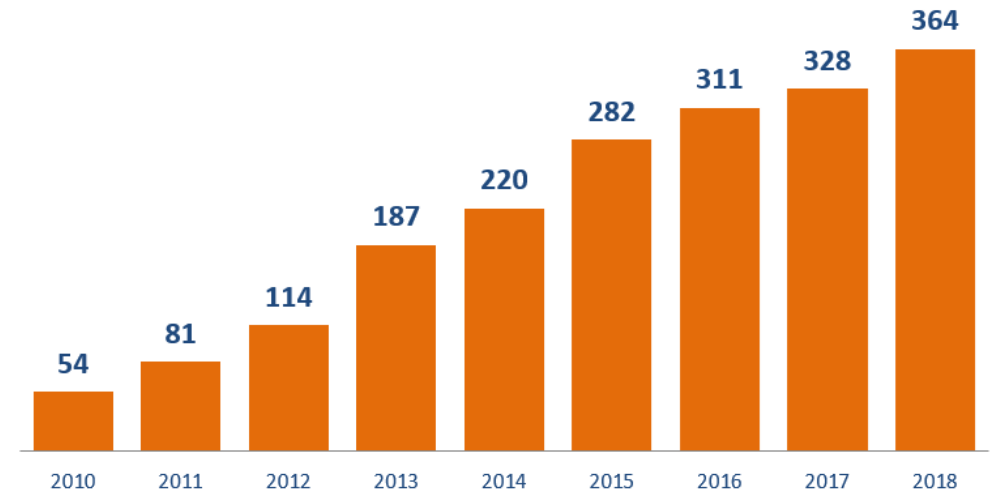
- Grant amounts vary; offered two times per year
- Provides hands-on walking and bicycling infrastructure assessment and written Walkabout Report coordinated by the Local Technical Assistance Coordinator
- Schools (public and private) and school divisions
 - Local governments (cities, counties, or towns)
 - Regional and state agencies working on behalf of a school or schools
 - Non-profit 501(c)(3) organizations working on behalf of a school or schools

Walk to School Day



Bon Air Elementary School

Registered iWalk Events in Virginia



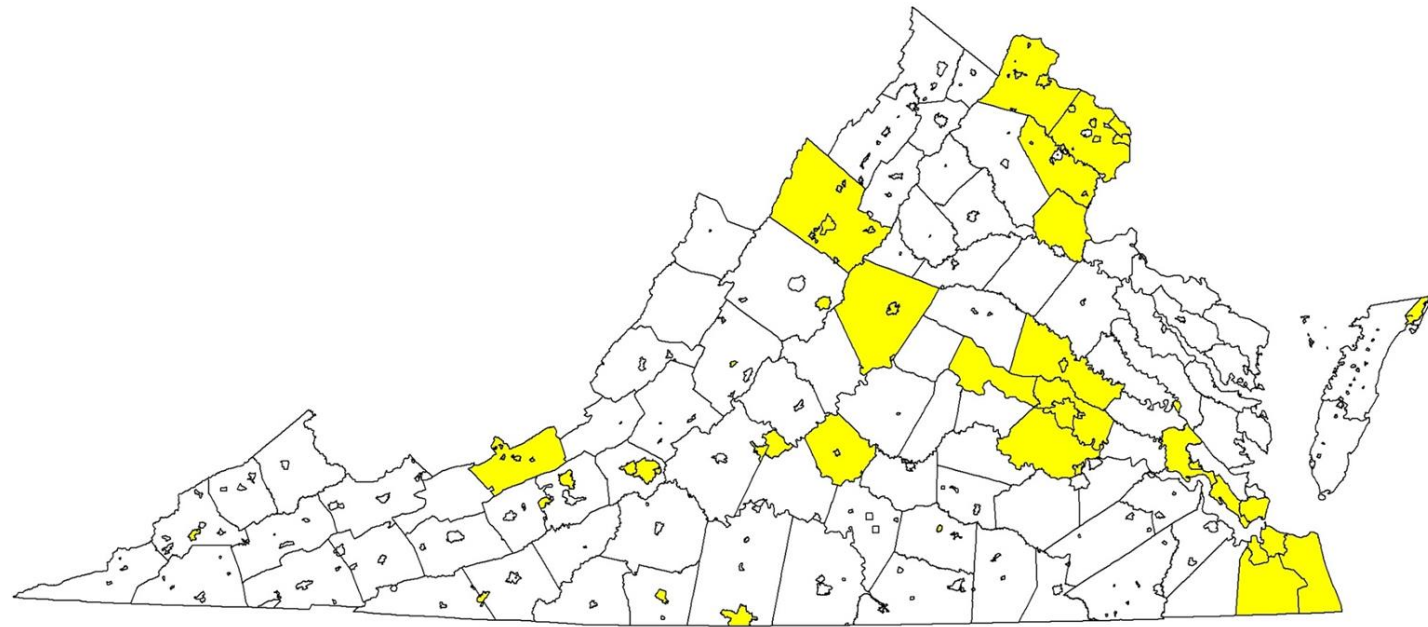
Stuart Elementary School

Safe Routes to School Program

Non-Infrastructure Grants

- \$5,000-\$100,000; one time per year in the spring; minimum of three schools
- 100% funding for first 3 years and then 80/20% split
- Fund education, encouragement, evaluation and enforcement programs and/or SRTS Coordinator to work within a local jurisdiction or school division
- Schools (public and private) and school divisions
- Local governments (cities, counties, or towns)
- Regional and state agencies
- Non-profit 501(c)(3) organizations

Virginia Safe Routes to School Non-Infrastructure Grant Recipients



Organization	Number of Schools	Grant Award	Local Match
Alexandria City PS	16	\$66,460	\$16,615
Arlington County PS	31	\$76,600	\$19,150
Chesterfield County PS	11	\$55,350	\$13,838
City of Charlottesville	10	\$74,500	\$18,625
City of Chesapeake PS	38	\$58,000	\$14,500
City of Galax	3	\$17,110	\$4,278
City of Hampton	10	\$67,000	\$0
City of New port News PS	25	\$82,000	\$20,500
City of Norfolk PS	41	\$87,000	\$21,750
City of Portsmouth PS	12	\$34,500	\$8,625
City of Waynesboro PS	5	\$38,500	\$0
City of Williamsburg/ James City County	7	\$38,000	\$9,500
Fairfax County PS	169	\$75,777	\$18,944
Greater Richmond F4K	7	\$40,000	\$10,000
Loudoun County PS	22	\$68,600	\$17,150
Prince William County PS	30	\$53,800	\$13,450
Rockingham County PS	19	\$38,000	\$9,500
Sentara RMH (Harrisonburg)	8	\$27,815	\$6,954
	464	\$999,012	\$223,379

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Tools and Resources for Successful Project Planning

Chessa Faulkner, PE- Chesterfield County, Senior Engineer

Studies = Funding

- Project Readiness
 - Produce data driven and consensus based recommendations
 - Queue of projects ready for funding
 - Supporting analysis and documentation
- Critical Scope/Application Items
 - Project purpose and need
 - Sketch
 - Estimate
 - Public Involvement
- Ask for Support
 - VDOT (CO, District, Residency)
 - DRPT
 - Regional MPO (Richmond, Tri-Cities)
 - Consultants

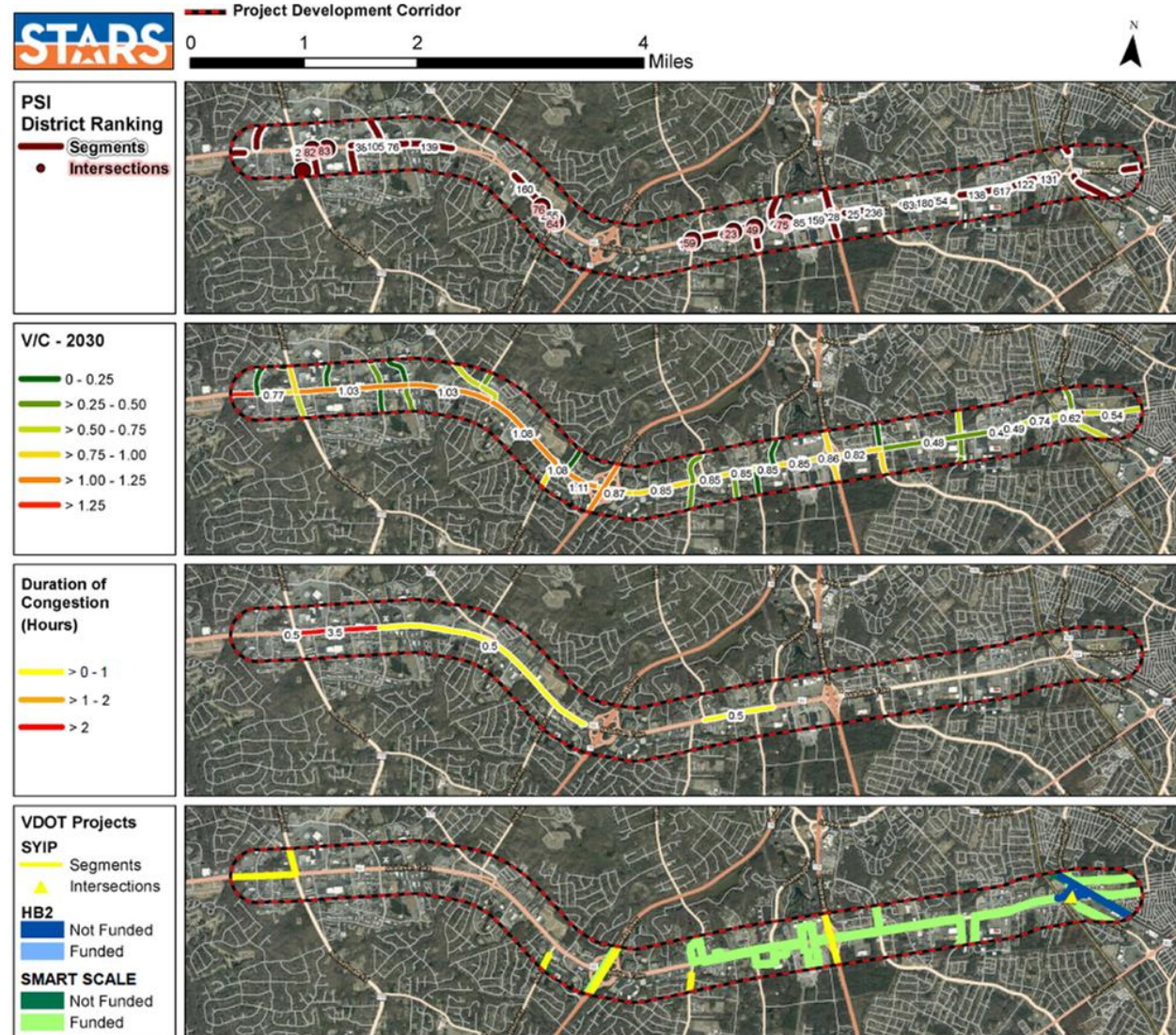


Types of Studies

- VDOT Central Office
 - STARS
 - Arterial Management Plan
- Richmond District
 - Safety studies
 - Alternatives analysis
 - Speed studies, signal justification, etc.
- Chesterfield County
 - County investment
 - SS Round III, ~\$100K
 - Leverage staff expertise
 - Local plans
 - Convey priorities & public support
 - Comprehensive, SAP, Thoroughfare, Bikeways and Trails
- Transit
 - DRPT - RT 1 Transit Demo Grant
 - GRTC - 4 SS applications
- MPO
 - SS Round III – 5 of 10 applications
 - Funded studies, \$1M, RSTP
 - Road Diet Study
 - Countywide Sidewalk Plan
 - Interchange Modification Report
- Regional/Statewide Efforts
 - Stay engaged
 - I-95 Corridor Improvement Plan
 - PNR Investment Strategy
 - VTRANS update

STARS - RT 60 Corridor Study (West)

- Project Development Corridors
 - Safety
 - Operations
 - Funded/Unfunded projects
- Submit study request thru VDOT
- Complete
 - RT 60 Corridor Study (West)
- On-Going
 - RT 60 Corridor Study (East)
 - Powhite/RT 150 Interchange Study
 - RT 288 (US 1 to I-95) Corridor Study
 - RT 1 Bike/Ped Study



STARS - RT 60 Corridor Study (West)

- Quadrant Intersection, \$31M
- SS Round III application

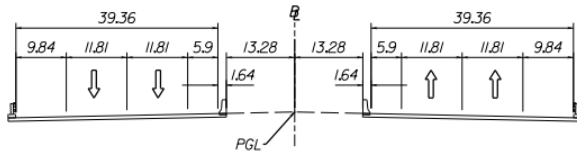


STARS - RT 288 Corridor Improvement Study

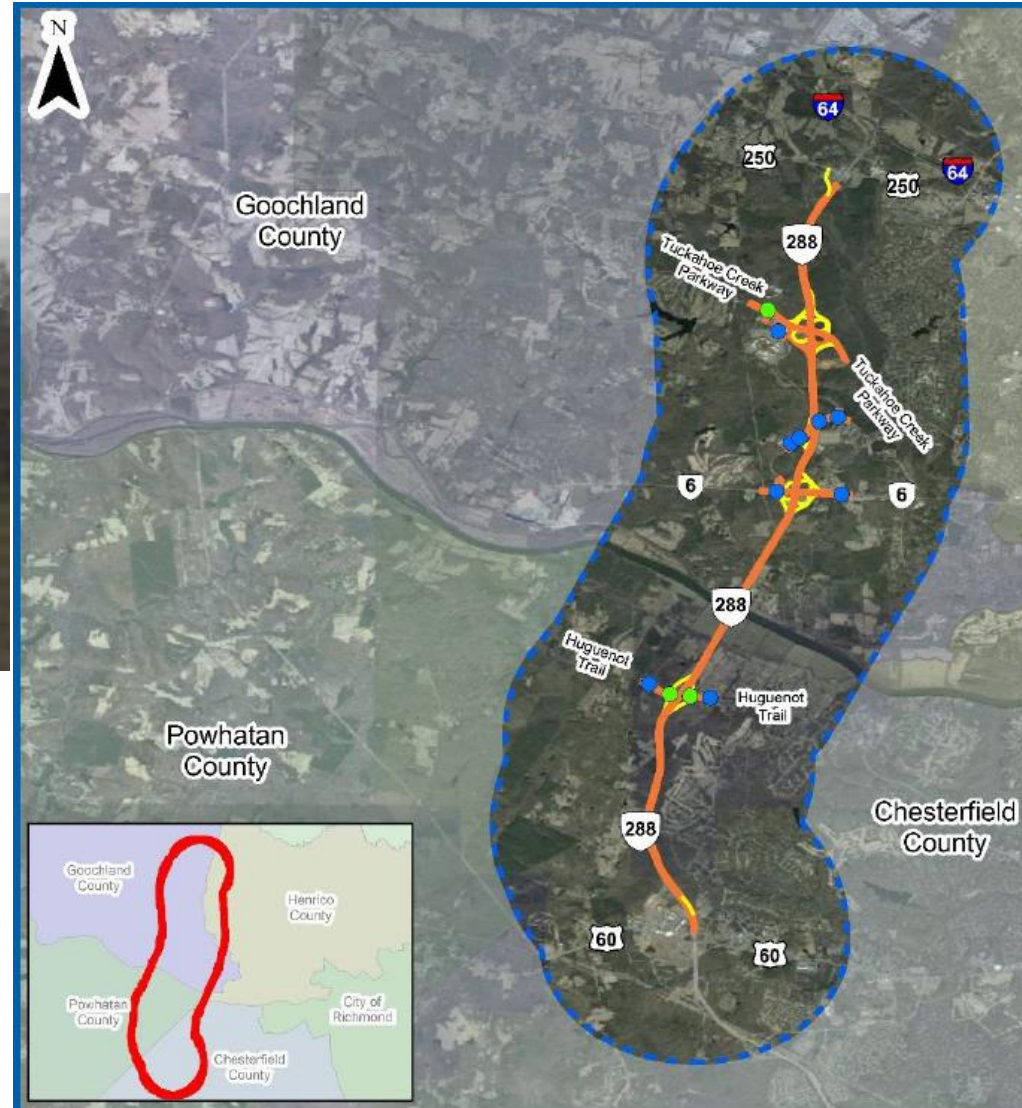
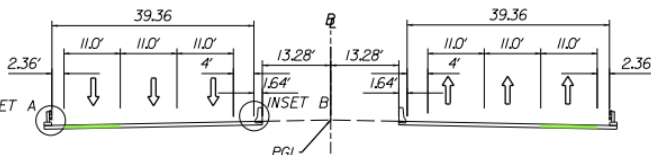
- Cross-jurisdictional solutions
 - Goochland, Powhatan, Chesterfield
- Hard-Shoulder Running, \$20.9M



EXISTING TYPICAL
ROUTE 288 MAINLINE
JAMES RIVER BRIDGE

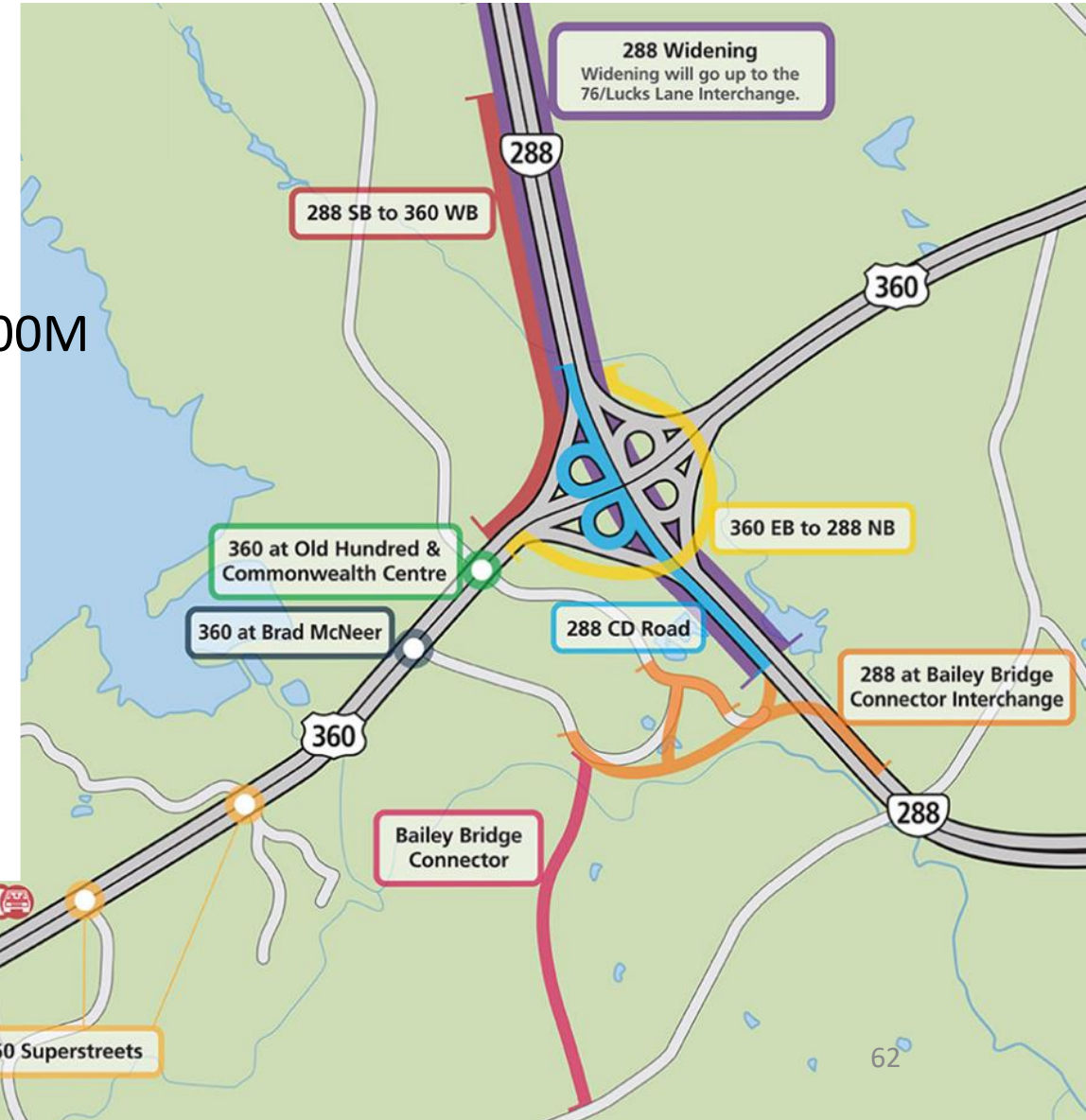


PROPOSED TYPICAL
ROUTE 288 MAINLINE
JAMES RIVER BRIDGE

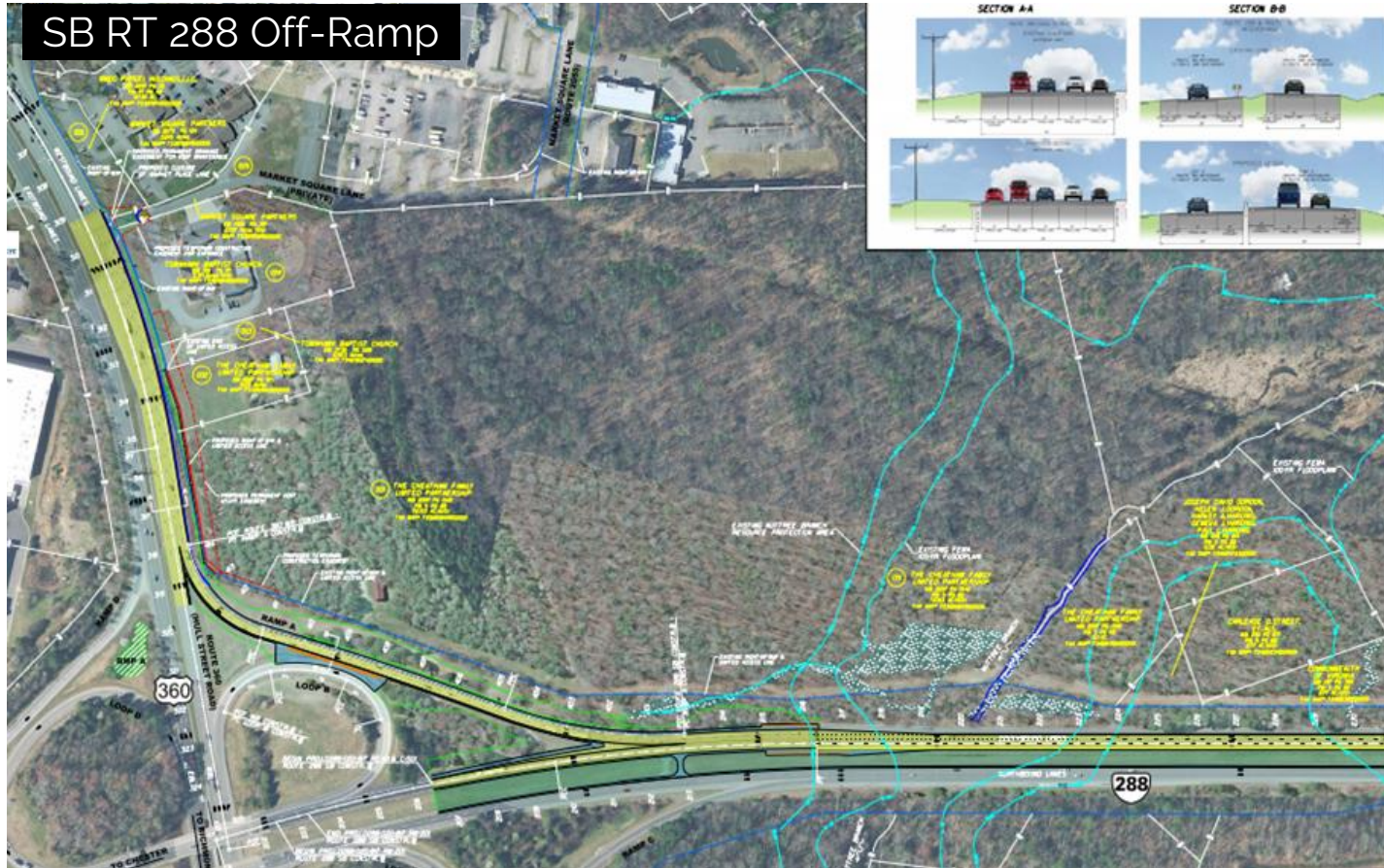


STARS - US 360/RT 288 Interchange Area Study

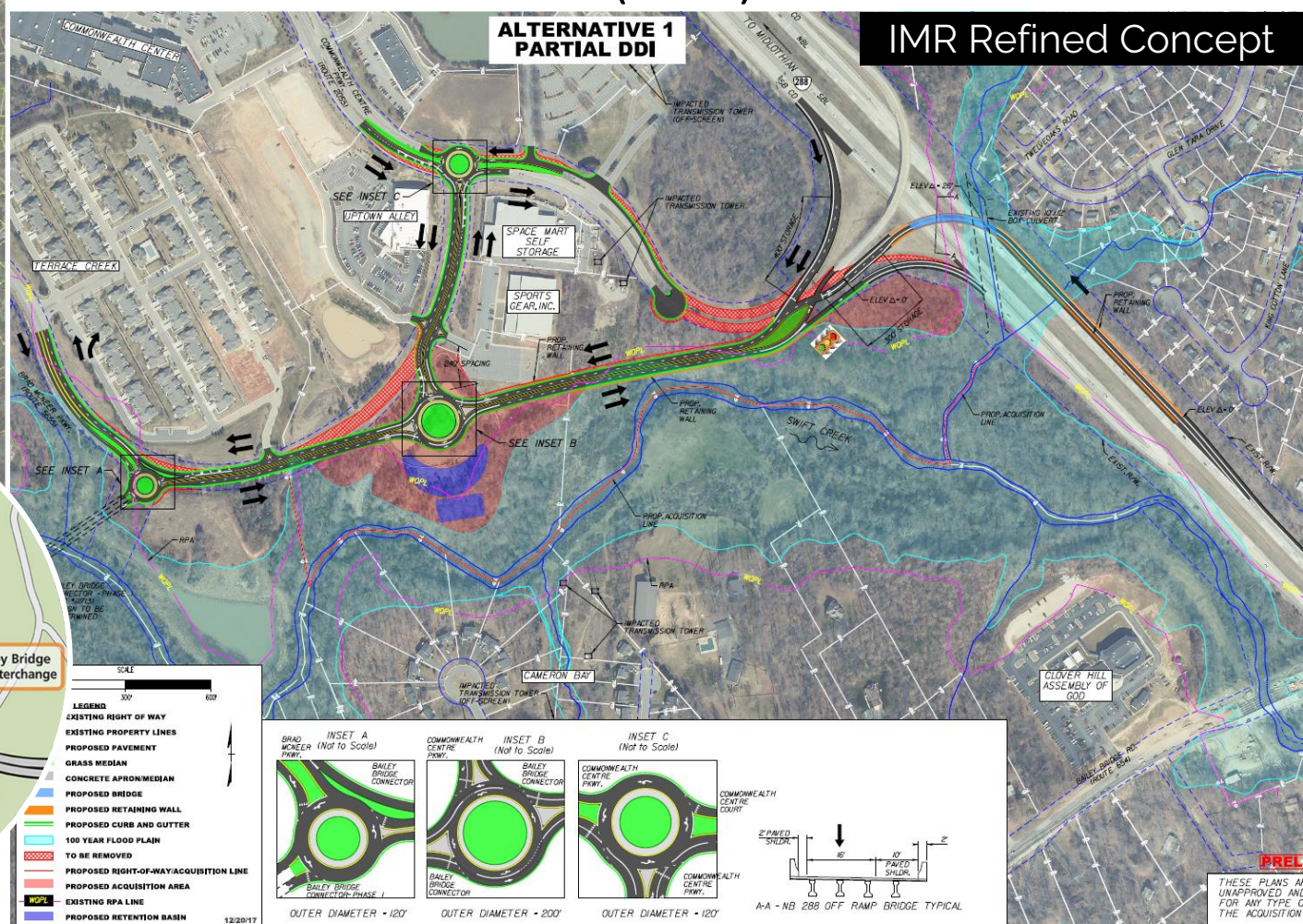
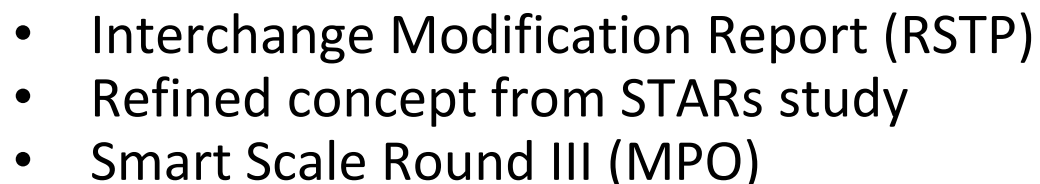
- STARS Pilot (2011)
 - US 360 Corridor - 8 Hot-Spots
 - US 360 at RT 288 Interchange
 - Limited study area -> needed further study
- STARS Interchange Area Study (2016)
 - Masterplan of improvements, 10 projects, +\$300M
 - Smart Scale Round II
 - SB to WB Ramp + PNR Lot, *Funded* \$14.5M
 - Bailey Bridge Connector, *Funded* \$23M
- Smart Scale Round III
 - Superstreets (West)
 - Superstreets (East)
 - RT 288 at BBC Interchange (MPO)
- Interchange Justification Report (2018)



STARS - US 360/RT 288 Interchange Area Study



Network for Success
Local Programs Workshop
VDOT Virginia Department of Transportation



RT 60 at Woolridge Road Intersection Study

- Recommendation from Midlothian SAP
- Gateway into village core
- Coordinated w/VDOT Richmond District
- RCUT, **Funded \$13.2M**, SS Round IV



July 3, 2018

Alternative Intersection Analysis at Route 60 and Woolridge Road

Chesterfield County, VA

Draft Report



Johnson, Mirmiran &
Thompson, Inc.
Richmond, Virginia
Traffic Engineer

JMT Project Number: 17-0127-116
VDOT Central Region Traffic Engineering Contract – Task Order 116
UPC No. 108890; VDOT Contract No. 45921

Submitted to:
Virginia Department of Transportation, Richmond District Traffic Engineering

Roundabout Feasibility Study

- VDOT Richmond District
- Safety and congestion issues
- HSIP Application, B/C ratio < 1.0
- Priority for the County -> submitted application for RSTP

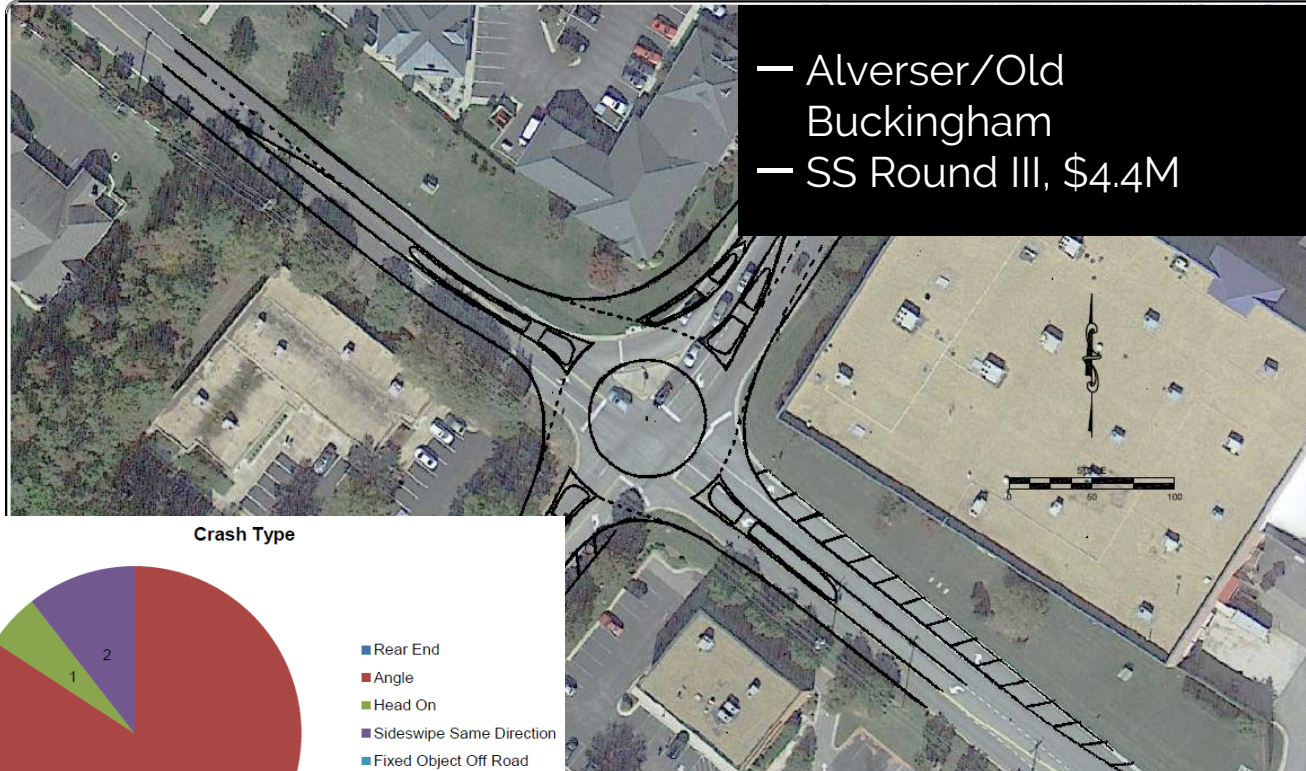
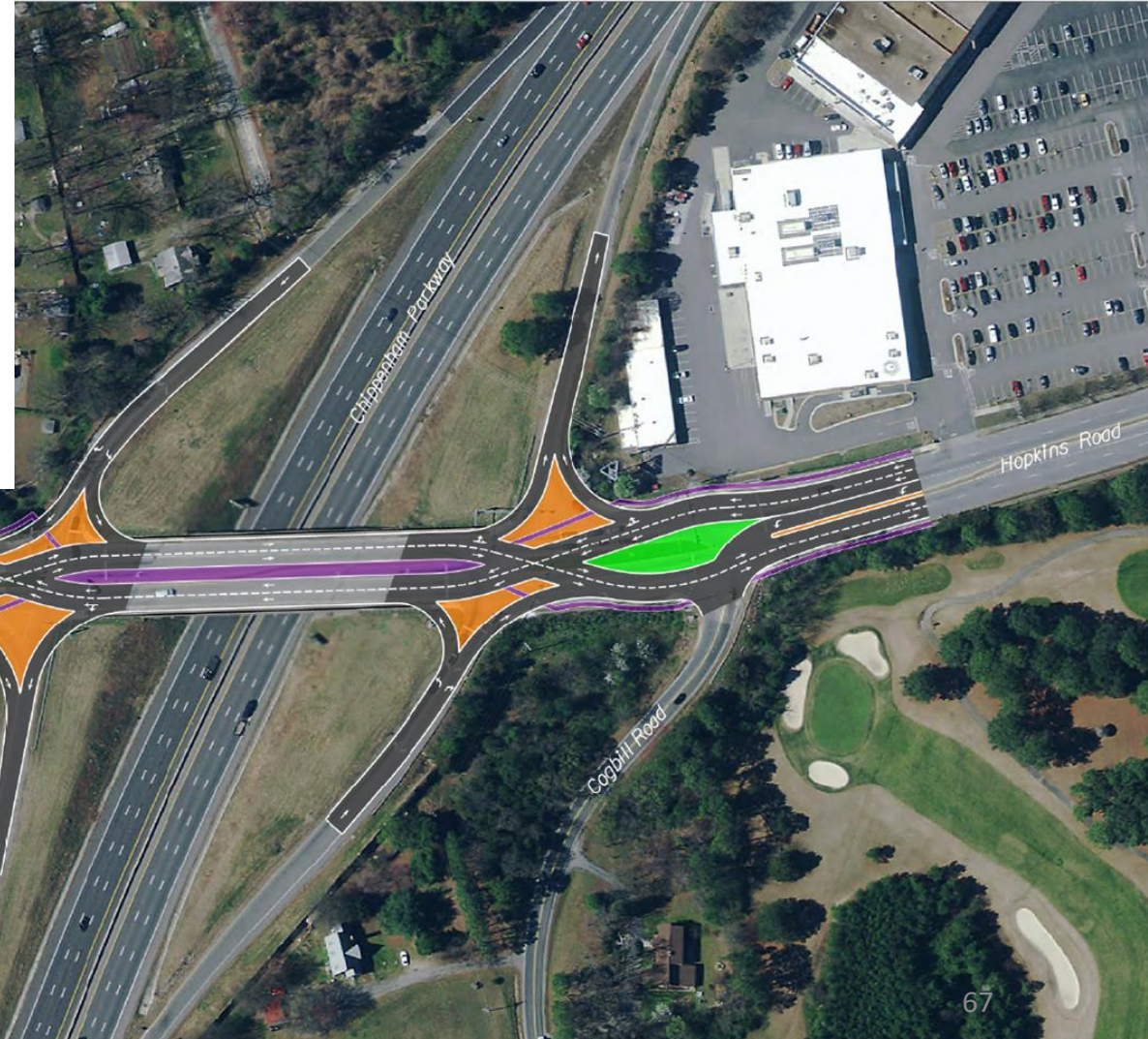


Table 4-1: Crash Summary by Collision Type

Collision Type	2010	2011	2012	2013	2014	Total	%
Rear End	0	0	0	0	1	1	3%
Angle	0	2	4	6	8	20	65%
Head On	1	0	0	1	0	2	6%
Sideswipe - Opposite Direction	0	1	0	0	0	1	3%
Fixed Object - Off Road	0	0	0	1	0	1	3%
Left Turn	1	2	1	1	1	6	19%
Total Crashes	2	5	5	9	10	31	100%

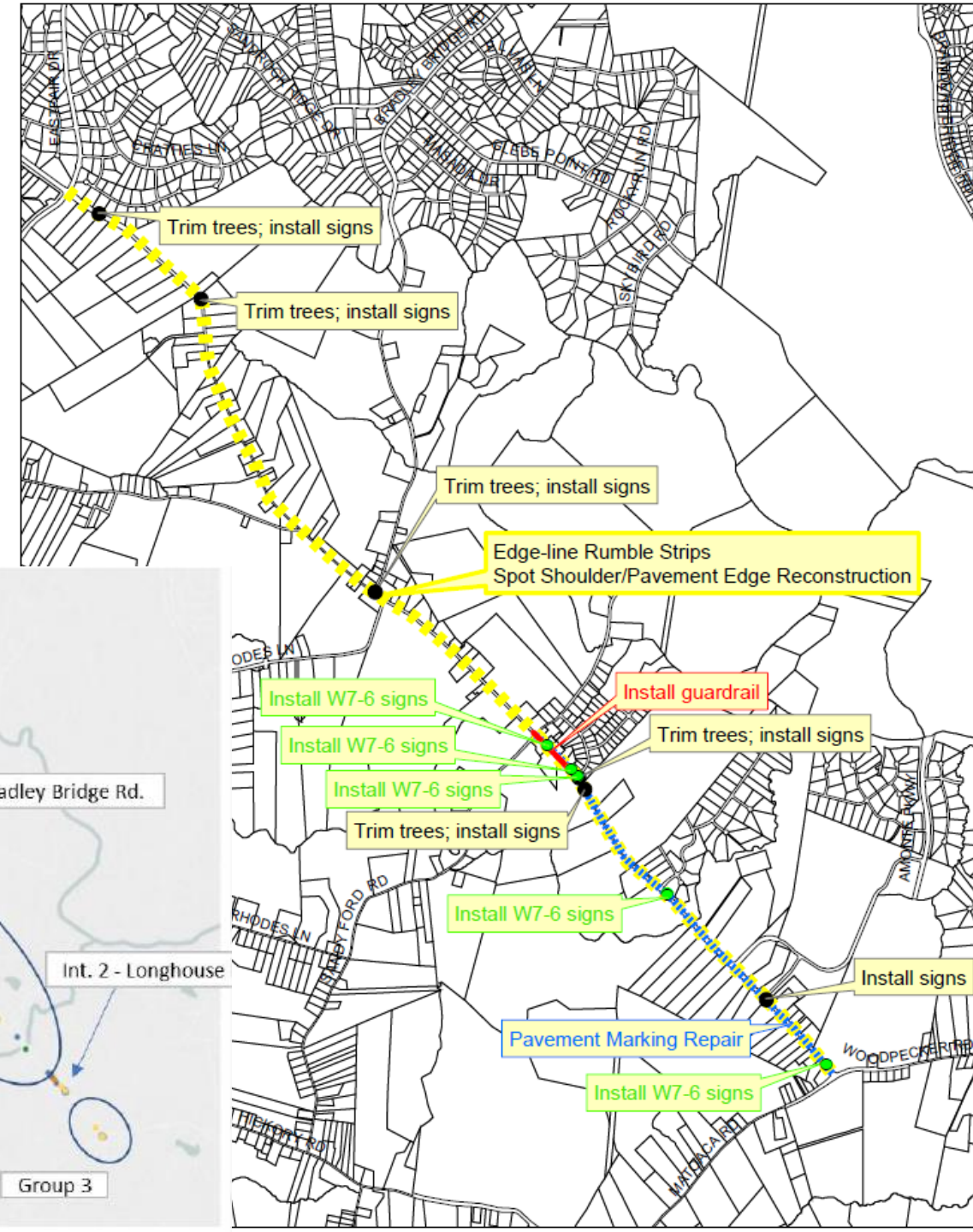
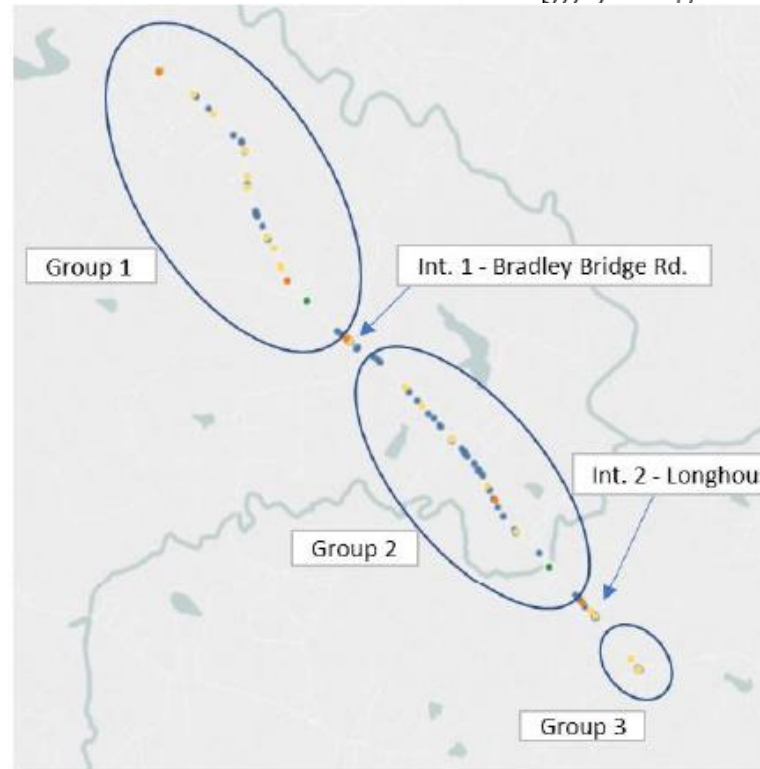
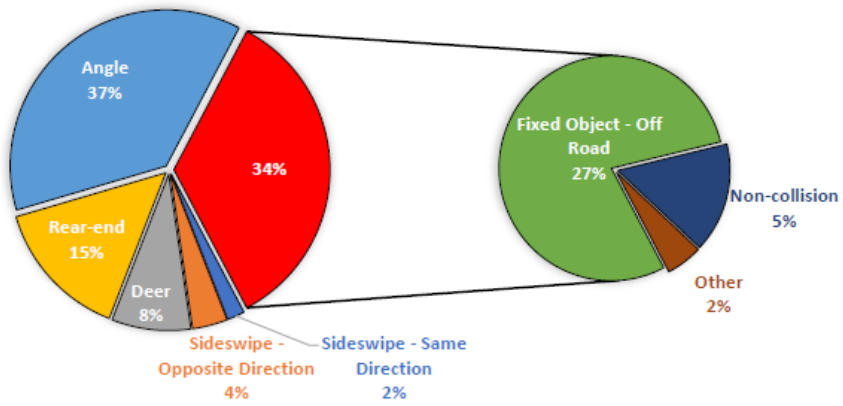
Hopkins Road at Chippenham Parkway

- Revitalization & other area improvements
- County On-Call Consultant – Study
- VDOT Richmond District
 - Involved in the study
 - Provided TMCs (saved ~\$20,000)
- Diverging Diamond Interchange
 - Estimate - \$24.4M
- IMR (Funded, \$500K, RSTP)



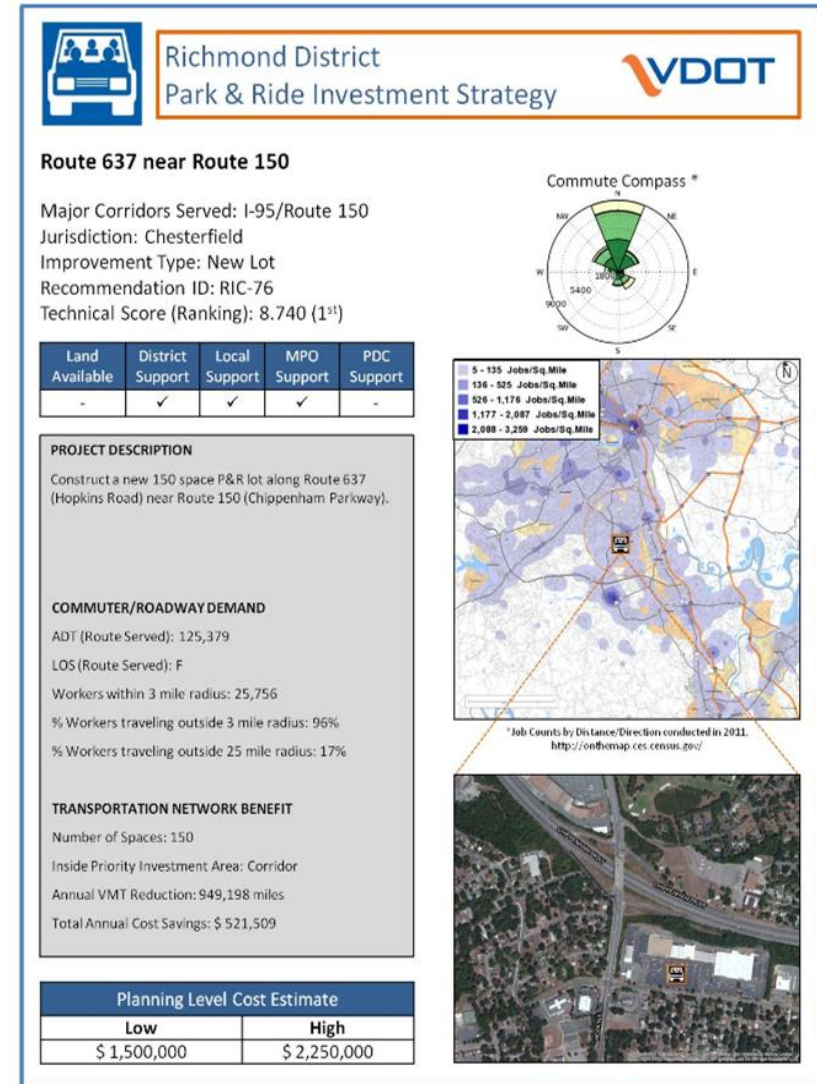
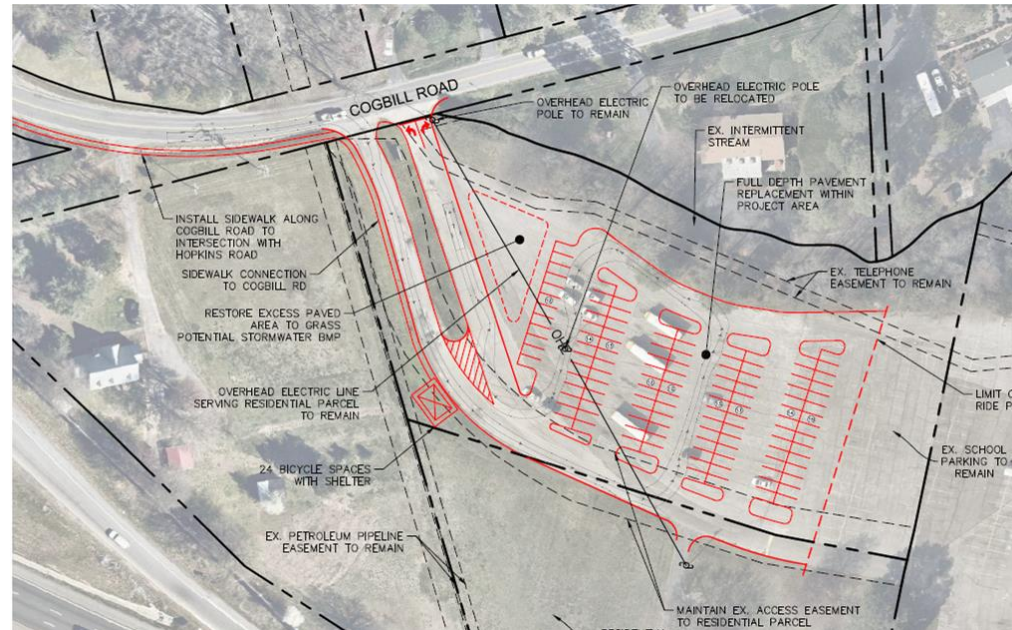
Corridor Safety Study

- Woodpecker Road
 - Cattail Road to Matoaca Road
- VDOT Richmond District
- Low-Cost Safety Improvements
- **Funded \$390,000, RSTP**



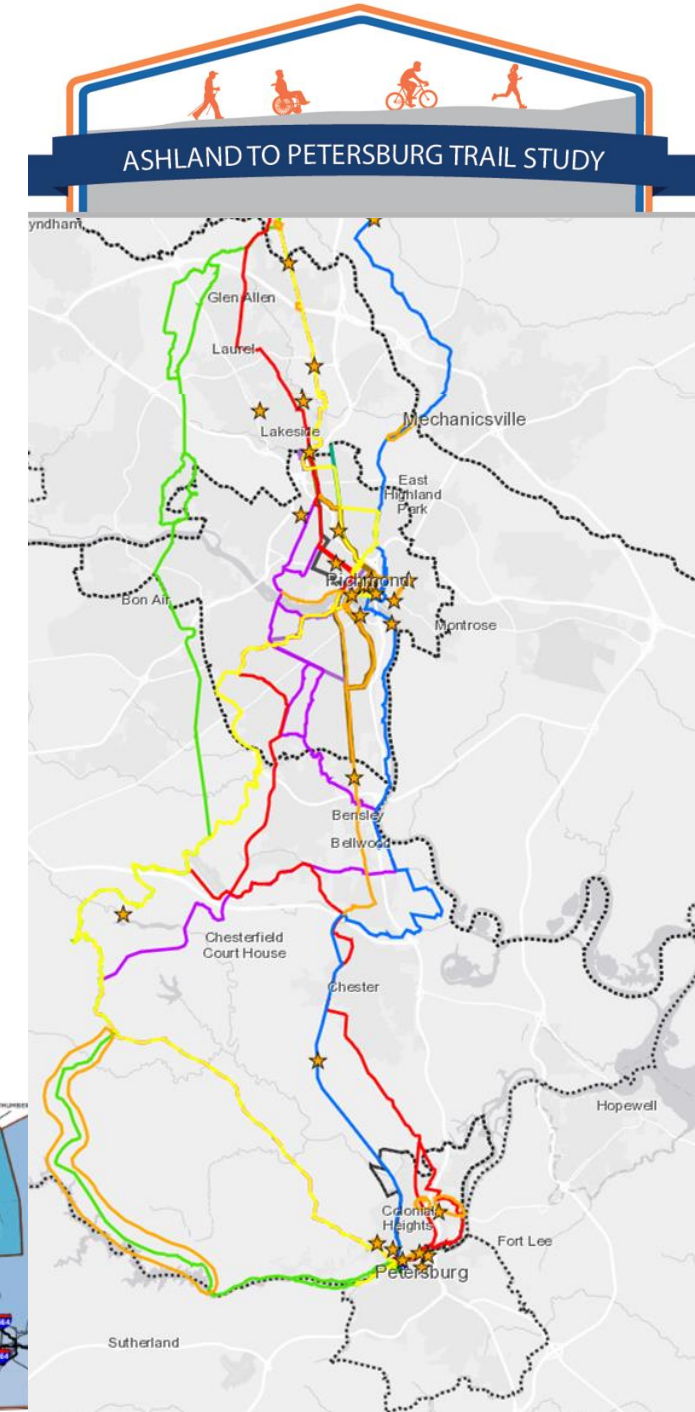
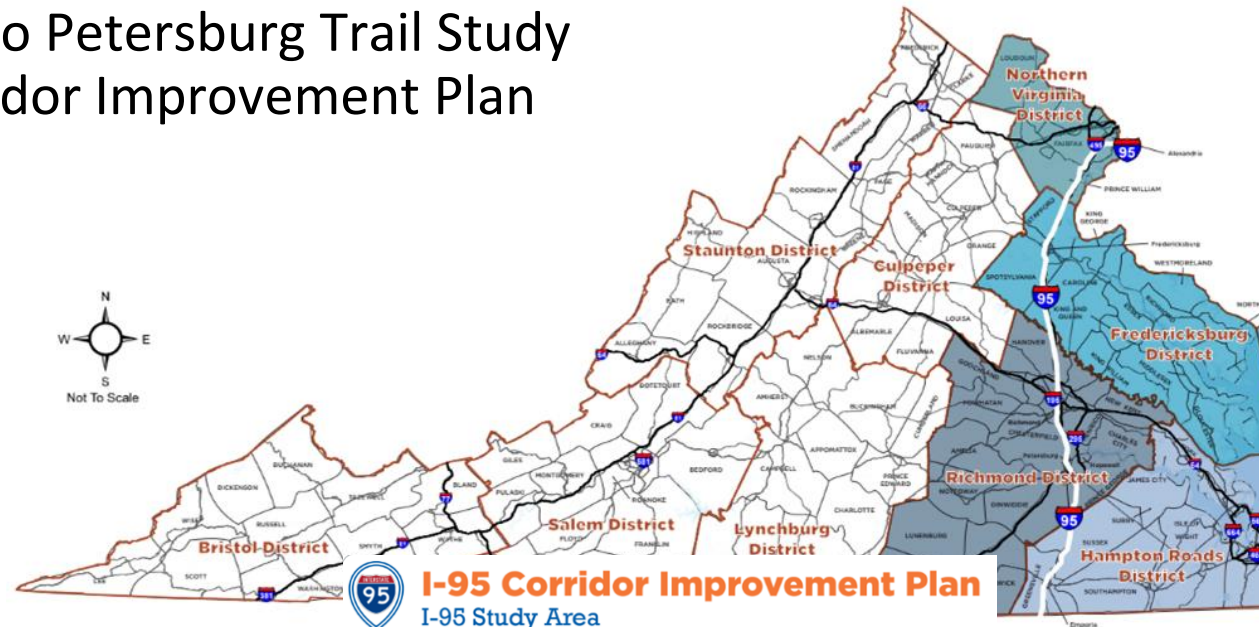
Transportation Demand Management

- VDOT Park & Ride Investment Strategy
 - Leveraged recommendation from statewide effort
 - Modified – County owned property and added sidewalk
 - MPO currently conducting regional PNR study
- Look to include PNR opportunities with other projects
 - **Funded \$2.9M, Smart Scale**



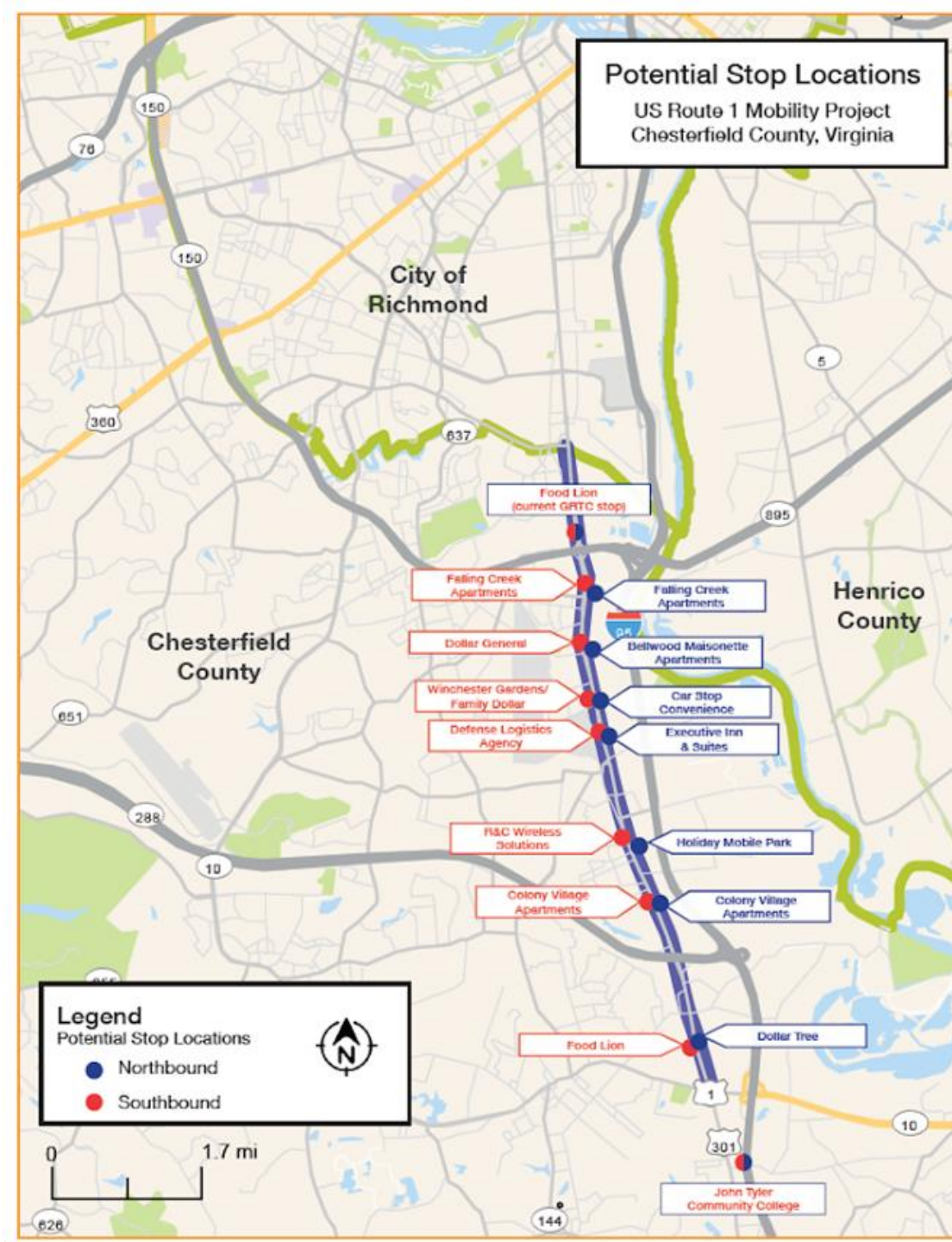
Regional / Statewide Studies

- Stay engaged in regional efforts
- Potential projects identified
 - Application for funding or further study
- Richmond MPO
 - Transit Vision Plan Phase II
 - PNR Investment Strategy
 - Commerce Corridor Study
- OIPI/DRPT/VDOT
 - Ashland to Petersburg Trail Study
 - I-95 Corridor Improvement Plan



Route 1 Transit Service

- Momentum
 - Community interest
 - Corridor bike/ped projects
 - Northern Jeff Davis SAP (2018)
- DRPT
 - Technical Support – Corridor Screening
 - Evaluation of Transit Service Options
 - Consultation on application questions
- County
 - Transit Marketing Assessment Survey
- Transit Demonstration Project
 - \$2 M over 2 years
 - 8 mile corridor, 9 stops
 - New service Spring 2020
- Smart Scale Round IV Application



Takeaways

- Constantly conduct studies to identify solutions
- Understand Funding Application Requirements
 - Sketch
 - Estimate
 - Public involvement
 - Smart Scale - meet VTRAN need
 - Keep up with process/policy changes -> CTB meetings
- Consider internal workload commitment
 - Transportation, Planning, Consultants, Inter-Agency support
- Timeline
 - Spring - start early, initiate study
 - Recommendations by November
 - Account for Board of Supervisor approval of applications
- Build Relationships